



## DEALER COMMUNICATIONS

Harley-Davidson Motor Company

### Dealer Department Routing

<input type="checkbox"/> Dealer Principal	<input type="checkbox"/> General Merchandise	<input type="checkbox"/> Service
<input type="checkbox"/> General Manager	<input type="checkbox"/> Buell	<input type="checkbox"/> Parts
<input type="checkbox"/> Office Manager	<input type="checkbox"/> F&I Manager	_____
<input type="checkbox"/> Vehicle Sales Manager	<input type="checkbox"/> HOG Director	_____

August, 2001

Dear Dealer:

The enclosed 2002 Job Time/Code Manual provides the flat rate time allotments for service and repair of 2002 model year Harley-Davidson vehicles; Please note that we use realistic shop procedures and hand tools in establishing the flat rates and, accordingly, believe that the allotted times are sufficient for a properly trained technician using appropriate techniques, tools and equipment to perform each of the jobs within the flat rate.

As in the past, we encourage utilization of the enclosed forms to identify any flat rate code which you believe should be adjusted.

In addition, Customer Service will be placing greater emphasis on failure analysis and problem cause. To help us accomplish this, we have made changes to the electrical sections of our service manuals, the Job Time/Code Manual, and the condition codes. The technician can follow the diagnostic path in the service manual, correct the problem, and write the appropriate code from the service manual on a work order. The warranty claim can then be filed using the same four-digit code for the condition code as well as the labor code, thus simplifying dealer paperwork.

Success in this effort will require accuracy by dealer technicians and in some cases, more technician reliance on service manuals. We encourage you to review these manuals as they are among the most important tools you will have available to you in proper and accurate transfer of information from the field to Harley-Davidson.

Thank you for your cooperation in this effort. If additional copies of the Job Time/Code Manual are required, they can be ordered under 99997-02 through our Parts and Accessories Division.

Sincerely,

Dawn Zawacki  
Warranty Specialist

Lynn Yunker  
Warranty Specialist



**Harley-Davidson Models**  
**JOB TIME/CODE MANUAL**  
**2002**

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Binder 99998-88  
Contents 99997-02



# GENERAL INFORMATION

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## 2002 MODEL PREFIX

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2002 Model prefixes are listed at the bottom of the first page in each corresponding section. Use the following list to identify each model. Please note: these flat rates apply to 2002 model year vehicles only. They do not apply to any previous model year vehicles.

### Section 1: Softail Models

BHY	FXST	BVB	FXST-I
BJY	FLSTC	BWB	FLSTC-I
BMY	FLSTF	BXB	FLSTF-I
BTY	FXSTB	JAB	FXSTB-I
BSY	FXSTD	JBB	FXSTD-I

BRY	FLSTS	BYB	FLSTS-I
BLY	FXSTS	BZB	FXSTS-I

### Section 2: Sportster Models

CAP	XLH 1200	CHP	XLH 1200 SPORT
CAM	XLH 883	CKM	883R
CEM	XLH 883 HUGGER	CJM	XLH 883 CUSTOM
CGP	XLH 1200 CUSTOM		

### Section 3: FLHT & FLHTC Models

DDV	FLHT
DJV	FLHTC
DGV	FLHTC-SHRINE

### Section 4: FLHTC-I & FLHTCU-I Models

FFW	FLHTC-I
FCW	FLHTCU-I
FLW	FLHTCU-I SHRINE
FGW	FLHTCU-I WITH SIDECAR (JAPAN ONLY)

### Section 5: FL and Dyna Police Models

FMW	FLHTP-I (FUEL INJECTED W/FAIRING)
FHW	FLHP-I (FUEL INJECTED)
FTW	FLHPE-I (CA AND JAPAN)

GKV	FXDP
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### Section 6: Dyna Models

GHV	SUPER GLIDE	GJV	FXDX DYNA SUPER GLIDE SPORT
GDV	FXDL DYNA LOW RIDER	GEV	FXDWG DYNA WIDE GLIDE
GLV	FXDXT DYNA TOURING		

### Section 7: Road King Models

FRW	FLHRC-I
FBW	FLHR-I
FDV	FLHR

### Section 8: Road Glide Models

FPV	FLTR
FSW	FLTRI

### Section 9: CVO Models

PDC	FLHREI
PEV	FXDWG3

## CLAIM TYPE INFORMATION

Each event on a claim requires a claim type code. Claim type codes are defined below:

CLAIM TYPE CODE	CATEGORY	DESCRIPTION
MC	MOTORCYCLE	A claim submitted on a vehicle that is registered to an owner and falls under the normal 12 month unlimited mileage warranty program.
MOC	MOTORCLOTHES	An item that bears the MotorClothes® or Willie G® label. Example: leather jackets, vests, chaps, bottoms. The warranty is one year. The items are further identified by the registration card attached to the garment.
CLO	CLOTHING	An item for other clothing and collectibles. Example: T-shirts, hats, snow domes. Warranty is 30 days.
DFS	DEFECTIVE STOCK	Claims filed to cover new defective stock and parts sold over the counter. This does not include parts shortages which need to be filed on an RMA form.
BAT	BATTERY	Over the counter battery warranty.
GDW	GOODWILL	Out of policy claims. These claims will require an authorization number.
PRD	PRE-DELIVERY	A claim submitted by a dealer, for warranty reimbursement on a new unregistered vehicle.
EMS	EMISSIONS	Claims filed under the 5 year/30,000 KM emissions warranty. This warranty may or may not be applicable to you.
RAD	RADIO	A warranty claim filed for radio only components. Radio component is sent directly to RSI. Submit warranty claim for labor only.
TR	TIRES	Claims filed under the Dunlop Tire warranty program.
DEM	DEMONSTRATOR	A claim submitted on a vehicle that is designated and registered as a demo unit to the dealership

Date \_\_\_\_\_

Harley-Davidson Motor Company  
P.O. Box 653  
Milwaukee, Wisconsin 53201

Attention: Service Communications Dept.

Gentlemen:

Subject: Job Time/Code Manual addition or time change.

Our shop experience has prompted us to request this  job change or  job addition (please check one).

Our time studies were based on this procedure:

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Model & Year	Job Description	Job Time	Job/Code Number (if any)
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Signed \_\_\_\_\_

Dealership \_\_\_\_\_

Address \_\_\_\_\_

City, State, Zip Code \_\_\_\_\_





Date \_\_\_\_\_

Harley-Davidson Motor Company  
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<b>Model &amp; Year</b>	<b>Job Description</b>	<b>Job Time</b>	<b>Job/Code Number (if any)</b>
-------------------------	------------------------	-----------------	---------------------------------

Signed \_\_\_\_\_

Dealership \_\_\_\_\_

Address \_\_\_\_\_

City, State, Zip Code \_\_\_\_\_



Date \_\_\_\_\_

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<b>Model &amp; Year</b>	<b>Job Description</b>	<b>Job Time</b>	<b>Job/Code Number (if any)</b>

Signed \_\_\_\_\_

Dealership \_\_\_\_\_

Address \_\_\_\_\_

City, State, Zip Code \_\_\_\_\_



Date \_\_\_\_\_

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<b>Model &amp; Year</b>	<b>Job Description</b>	<b>Job Time</b>	<b>Job/Code Number (if any)</b>
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Signed \_\_\_\_\_

Dealership \_\_\_\_\_

Address \_\_\_\_\_

City, State, Zip Code \_\_\_\_\_



# TABLE OF CONTENTS

---

## 2002 SOFTAIL MODELS

---

<b>Service</b> .....	<b>1-1</b>
New .....	1-1
Regular .....	1-1
<b>Chassis</b> .....	<b>1-1</b>
Drive .....	1-1
Wheels .....	1-1
Handlebars .....	1-1
Frame/Swing Arm/Front Fork .....	1-2
Brakes .....	1-2
Seats/Fenders/Tanks .....	1-3
Belts Guards .....	1-3
Exhaust System .....	1-3
<b>Engine</b> .....	<b>1-3</b>
General .....	1-3
Cylinder Head .....	1-3
Cylinder and Piston .....	1-4
Cam Cover .....	1-4
Crankcase .....	1-5
Balancer System .....	1-5
Fuel System .....	1-5
Evaporative Emissions System .....	1-6
<b>Drive and Clutch</b> .....	<b>1-6</b>
Drive .....	1-6
Clutch .....	1-6
<b>Transmission</b> .....	<b>1-7</b>
Transmission Case .....	1-7
<b>Electrical - All Models</b> .....	<b>1-7</b>
Charging Circuit .....	1-7
Starter Circuit .....	1-7
Starter Spins, But Does Not Engage; Jackshaft .....	1-8
Turn Signals/Security System .....	1-8
Instruments .....	1-10
Switches .....	1-11
Lights .....	1-11
Battery/Horn .....	1-11
Accessories .....	1-11
<b>Electrical - Carbureted</b> .....	<b>1-12</b>
Ignition System – Carbureted Models Only .....	1-12
<b>Electrical - Fuel Injection</b> .....	<b>1-14</b>

## 2002 SPRINGER SOFTAIL MODELS

---

<b>Service</b> .....	<b>1-21</b>
New .....	1-21
Regular .....	1-21
<b>Chassis</b> .....	<b>1-21</b>
Drive .....	1-21
Wheels .....	1-21
Handlebars .....	1-21
Frame/Swing Arm/Front Fork .....	1-22
Seats/Fenders/Tanks .....	1-22
Belt Guards .....	1-23
Exhaust System .....	1-23

<b>Engine</b> .....	<b>1-23</b>
General .....	1-23
Cylinder Head .....	1-23
Cylinder and Piston .....	1-24
Cam Cover .....	1-24
Crankcase .....	1-24
Balancer System .....	1-25
Fuel System .....	1-25
Evaporative Emissions System .....	1-25
<b>Drive and Clutch</b> .....	<b>1-26</b>
Drive .....	1-26
Clutch .....	1-26
<b>Transmission</b> .....	<b>1-26</b>
Transmission Case .....	1-26
<b>Electrical - All Models</b> .....	<b>1-27</b>
General .....	1-27
Charging Circuit .....	1-27
Starter Circuit .....	1-27
Turn Signals/Security System .....	1-27
Instruments .....	1-29
Electronic Speedometer .....	1-29
Switches .....	1-30
Lights .....	1-30
Battery/Horn .....	1-30
Accessories .....	1-30
<b>Electrical - Carbureted</b> .....	<b>1-31</b>
<b>Electrical - Fuel Injected</b> .....	<b>1-33</b>

## 2002 SPORTSTER MODELS

---

<b>Service</b> .....	<b>2-1</b>
General .....	2-1
Regular .....	2-1
<b>Chassis</b> .....	<b>2-1</b>
Drive .....	2-1
Wheels .....	2-1
Handlebars .....	2-1
Frame/Swing Arm/Front Fork .....	2-2
Seats/Fenders/Tanks .....	2-3
Belt Guards .....	2-3
Exhaust System .....	2-3
<b>Engine</b> .....	<b>2-3</b>
General .....	2-3
Cylinder Head .....	2-3
Cylinder and Piston .....	2-4
Gearcase .....	2-4
Crankcase .....	2-5
Fuel System .....	2-5
Evaporative Emissions System .....	2-5
<b>Drive and Clutch</b> .....	<b>2-6</b>
Drive .....	2-6
Clutch .....	2-6
<b>Transmission</b> .....	<b>2-6</b>
Transmission Case .....	2-6
<b>Electrical</b> .....	<b>2-7</b>

General .....	2-7
Turn Signals .....	2-7
Charging Circuit .....	2-7
Starter Circuit .....	2-7
Instruments .....	2-8
Wiring .....	2-8
Switches .....	2-9
Lights .....	2-9
Ignition System (Except 1200S) .....	2-9
Battery/Horn .....	2-10
Accessories .....	2-10
<b>XLH 1200S Ignition Codes .....</b>	<b>2-10</b>

## 2002 FLHT & FLHTC MODELS

<b>Service .....</b>	<b>3-1</b>
New .....	3-1
Regular .....	3-1
<b>Chassis .....</b>	<b>3-1</b>
Drive .....	3-1
Wheels .....	3-1
Handlebars .....	3-1
Frame/Swing Arm/Front Fork .....	3-2
Brakes .....	3-2
Seats/Fenders/Tanks .....	3-3
Belt Guards .....	3-3
Exhaust System .....	3-3
<b>Engine .....</b>	<b>3-4</b>
General .....	3-4
Cylinder Head .....	3-4
Cylinder and Piston .....	3-4
Cam Cover .....	3-5
Crankcase .....	3-5
Fuel System .....	3-6
Evaporative Emissions System .....	3-6
<b>Drive and Clutch .....</b>	<b>3-6</b>
Drive .....	3-6
Clutch .....	3-6
<b>Transmission .....</b>	<b>3-7</b>
Transmission Case .....	3-7
<b>Electrical .....</b>	<b>3-7</b>
General .....	3-7
Charging Circuit .....	3-7
Starter Circuit .....	3-8
Wiring .....	3-8
Switches .....	3-8
Lights .....	3-9
Turn Signal/Security System .....	3-9
Ignition System .....	3-11
Battery/Horn .....	3-13
Instruments – Includes Diagnosis .....	3-13
<b>Accessories and Sound System .....</b>	<b>3-14</b>
Accessories .....	3-14
Sound System – Diagnosis, Repair .....	3-14
<b>Sidecar .....</b>	<b>3-15</b>
2001 Accessory Sidecar .....	3-15

## 2002 FLHTC-I & FLHTCU-I MODELS

<b>Service .....</b>	<b>4-1</b>
New .....	4-1
Regular .....	4-1
<b>Chassis .....</b>	<b>4-1</b>
Drive .....	4-1
Wheels .....	4-1
Handlebars .....	4-1
Frame/Swing Arm/Front Fork .....	4-2
Brakes .....	4-2
Seats/Fenders/Tanks .....	4-3
Belt Guards .....	4-3
Exhaust System .....	4-3
<b>Engine .....</b>	<b>4-4</b>
General .....	4-4
Cylinder Head .....	4-4
Cylinder and Piston .....	4-4
Cam Cover .....	4-5
Crankcase .....	4-5
Fuel System .....	4-6
Evaporative Emissions System .....	4-6
<b>Drive and Clutch .....</b>	<b>4-6</b>
Drive .....	4-6
Clutch .....	4-6
<b>Transmission .....</b>	<b>4-6</b>
Transmission Case .....	4-6
<b>Electrical .....</b>	<b>4-7</b>
General .....	4-7
Charging Circuit .....	4-7
Starter Circuit .....	4-7
Wiring .....	4-8
Switches .....	4-8
Lights .....	4-9
Turn Signals/Security System .....	4-9
Battery/Horn .....	4-11
Instruments – Includes Diagnosis .....	4-11
Accessories .....	4-11
Sound System – Diagnosis, Repair .....	4-12
Accessories – Cruise Control – Diagnosis, Repair .....	4-13
<b>Sidecars .....</b>	<b>4-13</b>
2001 Ultras with Accessory Sidecar .....	4-13
<b>Fuel Injection .....</b>	<b>4-13</b>

## 2002 FLHTCU-I WITH SIDECAR (JAPAN ONLY)

<b>Service .....</b>	<b>4-21</b>
New .....	4-21
Regular .....	4-21
<b>Chassis .....</b>	<b>4-21</b>
Drive .....	4-21
Wheels .....	4-21
Handlebars .....	4-21
Frame/Swing Arm/Front Fork .....	4-22
Brakes .....	4-22
Seats/Fenders/Tanks .....	4-23
Belt Guards .....	4-23



Exhaust System .....	4-23
<b>Engine .....</b>	<b>4-24</b>
General .....	4-24
Cylinder Head .....	4-24
Cylinder and Piston .....	4-24
Cam Cover .....	4-25
Crankcase .....	4-25
Fuel System .....	4-25
Evaporative Emissions System .....	4-26
<b>Drive and Clutch .....</b>	<b>4-26</b>
Drive .....	4-26
Clutch .....	4-26
<b>Transmission .....</b>	<b>4-26</b>
Transmission Case .....	4-26
<b>Electrical .....</b>	<b>4-27</b>
General .....	4-27
Charging Circuit .....	4-27
Starter Circuit .....	4-27
Wiring .....	4-28
Switches .....	4-28
Lights .....	4-29
Turn Signals/Security System .....	4-29
Battery/Horn .....	4-30
Instruments – Includes Diagnosis .....	4-31
Electronic Speedometer .....	4-31
Accessories .....	4-31
Sound System – Diagnosis, Repair .....	4-32
Accessories – Cruise Control – Diagnosis, Repair .....	4-32
<b>Sidocar .....</b>	<b>4-33</b>
2001 FLHTCU-I with Sidocar .....	4-33
<b>Fuel Injection .....</b>	<b>4-33</b>

## 2002 FL POLICE MODELS

<b>Service .....</b>	<b>5-1</b>
New .....	5-1
Regular .....	5-1
<b>Chassis .....</b>	<b>5-1</b>
Drive .....	5-1
Wheels .....	5-1
Handlebars .....	5-1
Frame/Swing Arm/Front Fork .....	5-2
Brakes .....	5-2
Seats/Fenders/Tanks .....	5-3
Belt Guards .....	5-3
Exhaust System .....	5-3
<b>Engine .....</b>	<b>5-4</b>
General .....	5-4
Cylinder Head .....	5-4
Cylinder and Piston .....	5-4
Cam Cover .....	5-5
Crankcase .....	5-5
Fuel System .....	5-6
Evaporative Emissions System .....	5-6
<b>Drive and Clutch .....</b>	<b>5-6</b>
Drive .....	5-6
Clutch .....	5-6

<b>Transmission .....</b>	<b>5-6</b>
Transmission Case .....	5-6
<b>Electrical .....</b>	<b>5-7</b>
General .....	5-7
Charging Circuit .....	5-7
Starter Circuit .....	5-7
Instruments .....	5-8
Electronic Speedometer .....	5-8
Wiring .....	5-9
Switches .....	5-9
Lights .....	5-9
Turn Signals/Security System .....	5-10
Battery/Horn .....	5-11
Accessories .....	5-11
<b>Fuel Injection .....</b>	<b>5-12</b>

## 2002 DYNA POLICE MODEL

<b>Service .....</b>	<b>5-19</b>
New .....	5-19
Regular .....	5-19
<b>Chassis .....</b>	<b>5-19</b>
Drive .....	5-19
Wheels .....	5-19
Handlebars .....	5-19
Frame/Swing Arm/Front Fork .....	5-20
Brakes .....	5-20
Seats/Fenders/Tank .....	5-21
Belt Guards .....	5-21
Exhaust System .....	5-21
<b>Engine .....</b>	<b>5-21</b>
General .....	5-21
Cylinder Head .....	5-21
Cylinder and Piston .....	5-22
Cam Cover .....	5-22
Crankcase .....	5-23
Fuel System .....	5-23
Evaporative Emissions System .....	5-23
<b>Drive and Clutch .....</b>	<b>5-23</b>
Drive .....	5-23
Clutch .....	5-24
<b>Transmission .....</b>	<b>5-24</b>
Transmission Case .....	5-24
<b>Electrical .....</b>	<b>5-25</b>
General .....	5-25
Charging Circuit .....	5-25
Starter Circuit .....	5-25
Instruments .....	5-25
Electronic Speedometer .....	5-26
Wiring .....	5-26
Switches .....	5-26
Lights .....	5-27
Turn Signals .....	5-27
Ignition .....	5-28
Battery/Horn .....	5-30
<b>Accessories .....</b>	<b>5-30</b>

## 2002 DYNA MODELS

<b>Service</b> .....	<b>6-1</b>
New .....	6-1
Regular .....	6-1
<b>Chassis</b> .....	<b>6-1</b>
Drive .....	6-1
Wheels .....	6-1
Handlebars .....	6-1
Frame/Swing Arm/Front Fork .....	6-2
Brakes .....	6-2
Seats/Fenders/Tanks .....	6-3
Exhaust System .....	6-3
<b>Engine</b> .....	<b>6-4</b>
General .....	6-4
Cylinder Head .....	6-4
Cylinder and Piston .....	6-4
Cam Cover .....	6-5
Crankcase .....	6-5
Fuel System .....	6-6
Evaporative Emissions System .....	6-6
<b>Drive and Clutch</b> .....	<b>6-6</b>
Drive .....	6-6
Clutch .....	6-6
<b>Transmission</b> .....	<b>6-7</b>
TRANSMISSION Case .....	6-7
<b>Electrical</b> .....	<b>6-7</b>
General .....	6-7
Charging Circuit .....	6-7
Starter Circuit .....	6-8
Instruments .....	6-8
Electronic speedometer .....	6-8
Wiring .....	6-9
Switches .....	6-9
Lights .....	6-9
Turn Signals/Security System .....	6-9
Engine Management .....	6-11
Battery/Horn .....	6-13
<b>Accessories</b> .....	<b>6-13</b>

## 2002 ROAD KING MODELS

<b>Service</b> .....	<b>7-1</b>
New .....	7-1
Regular .....	7-1
<b>Chassis</b> .....	<b>7-1</b>
Drive .....	7-1
Wheels .....	7-1
Handlebars .....	7-1
Frame/Swing Arm/Front Fork .....	7-2
Brakes .....	7-2
Seats/Fenders/Tanks .....	7-3
Belt Guards .....	7-3
Exhaust System .....	7-3
<b>Engine</b> .....	<b>7-4</b>
General .....	7-4
Cylinder Head .....	7-4
Cylinder and Piston .....	7-4
Cam Cover .....	7-5

Crankcase .....	7-5
Fuel System .....	7-6
Evaporative Emissions System .....	7-6
<b>Drive and Clutch</b> .....	<b>7-6</b>
Drive .....	7-6
Clutch .....	7-6
<b>Transmission</b> .....	<b>7-7</b>
Transmission Case .....	7-7
<b>Electrical</b> .....	<b>7-7</b>
General .....	7-7
Charging Circuit .....	7-7
Starter Circuit .....	7-8
Instruments .....	7-8
Electronic Speedometer .....	7-8
Wiring .....	7-9
Switches .....	7-9
Lights .....	7-10
Turn Signals/Security System .....	7-10
Ignition System .....	7-12
Battery/Horn .....	7-13
Accessories – Cruise Control – Diagnosis, Repair .....	7-13
Accessories .....	7-14
<b>Fuel Injection</b> .....	<b>7-14</b>

## 2002 FLTR MODEL

<b>Service</b> .....	<b>8-1</b>
New .....	8-1
Regular .....	8-1
<b>Chassis</b> .....	<b>8-1</b>
Drive .....	8-1
Wheels .....	8-1
Handlebars .....	8-1
Frame/Swing Arm/Front Fork .....	8-2
Brakes .....	8-2
Seats/Fenders/Tanks .....	8-3
Belt Guards .....	8-3
Exhaust System .....	8-3
<b>Engine</b> .....	<b>8-3</b>
General .....	8-3
Cylinder Head .....	8-3
Cylinder and Piston .....	8-4
Cam Cover .....	8-4
Crankcase .....	8-5
Fuel System .....	8-5
Evaporative Emissions System .....	8-5
<b>Drive and Clutch</b> .....	<b>8-6</b>
Drive .....	8-6
Clutch .....	8-6
<b>Transmission</b> .....	<b>8-6</b>
Transmission Case .....	8-6
<b>Electrical</b> .....	<b>8-7</b>
General .....	8-7
Charging Circuit .....	8-7
Starter Circuit .....	8-7
Wiring .....	8-7
Switches .....	8-8
Lights .....	8-8
Turn Signals / Security System .....	8-8

Ignition System .....	8-10
Battery/Horn .....	8-12
Instruments (Includes Diagnosis) .....	8-12
Electronic Speedometer .....	8-12
<b>Accessories and Sound System .....</b>	<b>8-13</b>
Accessories .....	8-13
Accessories - Cruise Control Diagnosis, Repair .....	8-13
Sound System .....	8-13
<b>Sidecar .....</b>	<b>8-14</b>
2001 Accessory Sidecar .....	8-14

Lights .....	8-22
Battery/Horn .....	8-23
Turn Signals/Security System .....	8-23
Instruments Includes Diagnosis .....	8-24
Accessories .....	8-25
Sound System Diagnosis, Repair .....	8-25
Accessories – Cruise Control, Diagnosis, Repair .....	8-25
<b>Sidecar .....</b>	<b>8-26</b>
2001 Ultras with Accessory Sidecar .....	8-26
<b>Fuel Injection .....</b>	<b>8-26</b>

## 2002 FLTRI MODEL

<b>Service .....</b>	<b>8-15</b>
New .....	8-15
Regular .....	8-15
<b>Chassis .....</b>	<b>8-15</b>
Drive .....	8-15
Wheels .....	8-15
Handlebars .....	8-15
Frame/Swing Arm/Front Fork .....	8-16
Brakes .....	8-16
Seats/Fenders/Tanks .....	8-17
Belt Guards .....	8-17
Exhaust System .....	8-17
<b>Engine .....</b>	<b>8-17</b>
General .....	8-17
Cylinder Head .....	8-18
Cylinder and Piston .....	8-18
Cam Cover .....	8-19
Crankcase .....	8-19
Fuel System .....	8-19
Evaporative Emissions System .....	8-19
<b>Drive and Clutch .....</b>	<b>8-20</b>
Drive .....	8-20
Clutch .....	8-20
<b>Transmission .....</b>	<b>8-20</b>
Transmission Case .....	8-20
<b>Electrical .....</b>	<b>8-21</b>
General .....	8-21
Charging Circuit .....	8-21
Starter Circuit .....	8-21
Wiring .....	8-21
Switches .....	8-22

## 2002 FLHRSEI MODEL

<b>Service .....</b>	<b>9-1</b>
New .....	9-1
Regular .....	9-1
<b>Chassis .....</b>	<b>9-1</b>
Wheels .....	9-1
Handlebars .....	9-1
Frame/Swing Arm/Front Fork .....	9-1
Brakes .....	9-2
Seats/Fenders/Tanks .....	9-2
Exhaust System .....	9-2
<b>Engine .....</b>	<b>9-3</b>
Cylinder Head .....	9-3
<b>Drive and Clutch .....</b>	<b>9-3</b>
Clutch .....	9-3
<b>Electrical .....</b>	<b>9-3</b>
Wiring .....	9-3
Switches .....	9-3
Lights .....	9-3
Instruments – Includes Diagnosis .....	9-3
Accessories .....	9-3

## 2002 FXDWG3 MODEL

<b>Modified Codes .....</b>	<b>9-5</b>
<b>New Codes .....</b>	<b>9-5</b>

# NOTES

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# 2002 SOFTAIL MODELS

**Table 1-1. Service**

ITEM	DESCRIPTION	BJY, BWB	BHY, BTY, BVB, JAB	BMY, BXB	BSY, JBB	LABOR CODE
<b>NEW</b>						
Set-up and pre-delivery		2.1	2.1	2.1	2.1	---
1,000 mile service		2.0	2.0	2.0	2.0	---
<b>REGULAR</b>						
2,500 mile maintenance		0.5	0.5	0.5	0.5	---
5,000 mile maintenance		2.0	2.0	2.0	2.0	---
7,500 mile maintenance		0.5	0.5	0.5	0.5	---
10,000 mile maintenance		4.3	4.3	4.3	4.3	---

**Table 1-2. Chassis**

ITEM	DESCRIPTION	BJY, BWB	BHY, BTY, BVB, JAB	BMY, BXB	BSY, JBB	LABOR CODE
<b>DRIVE</b>						
Adjust secondary belt		0.3	0.3	0.3	0.3	---
Replace secondary belt		2.6	2.6	2.6	2.6	2011
Replace rear wheel sprocket		0.8	0.8	0.8	0.8	2021
<b>WHEELS</b>						
Replace tire - includes balancing	front	0.5	0.5	0.5	0.5	2106
	rear	0.6	0.6	0.8	0.8	2111
Replace wheel assembly - includes disc and sprocket exchange and balancing	front	0.8	0.8	0.8	0.8	2113
	rear	0.9	0.9	1.1	1.1	2114
Replace rim, hub or spokes	front	2.3	2.3	---	2.3	2116
	rear	2.3	2.3	---	---	2121
Replace wheel bearings	front	0.5	0.5	0.5	0.5	2136
	rear	0.6	0.6	0.6	0.6	2141
True spoked wheel		0.4	0.4	---	0.4	2156
<b>HANDLEBARS</b>						
Replace handlebars		0.5	0.5	0.5	0.5	2206
Replace clutch hand lever		0.2	0.2	0.2	0.2	2221
Replace clutch hand lever bracket		0.2	0.2	0.2	0.2	2226
Replace throttle control		0.4	0.4	0.4	0.4	2231
Replace and adjust throttle control cables	one or both	0.6	0.6	0.6	0.6	2241
Replace both rubber handlebar mounts		0.5	0.5	0.5	0.5	2246
Replace rubber handlebar grip		0.2	0.2	0.2	0.2	2251
Replace handlebar riser	one or both	0.4	0.4	0.4	0.4	2253
Replace handlebar clamp	one or both	0.1	0.1	0.1	0.1	2254

All times listed in hours.

## V.I.N. CODES

BHY	FXST	BVB	FXST-I
BJY	FLSTC	BWB	FLSTC-I
BMY	FLSTF	BXB	FLSTF-I
BTY	FXSTB	JAB	FXSTB-I
BSY	FXSTD	JBB	FXSTD-I

**Table 1-2. Chassis**

ITEM	DESCRIPTION	BJY, BWB	BHY, BTY, BVB, JAB	BMY, BXB	BSY, JBB	LABOR CODE
<b>FRAME/SWING ARM/FRONT FORK</b>						
Replace frame	includes removal and installation of all accessories and motorcycle components	12.4	12.4	12.4	12.4	2306
Replace front fork assembly		2.3	2.2	2.3	2.2	2311
Replace lower fork bracket and stem		2.4	2.3	2.4	2.3	2316
Replace steering head cups and bearings, including bearing adjustment		1.9	1.8	1.9	1.8	2321
Replace upper fork bracket		1.3	1.2	1.3	1.2	2326
Replace fork lock		1.0	0.8	1.0	0.8	2330
Adjust steering head bearing		0.4	0.4	0.4	0.4	---
Change front fork oil		0.5	0.5	0.5	0.7	---
Service fork slider and/or seal – includes removal, disassembly, cleaning, inspection, replacing parts, servicing damper tube, replacing bushings, assembly and installation	one side	0.8	0.7	0.8	0.7	2341
	both sides	1.2	1.1	1.2	1.1	2342
Replace fork side	one side	0.7	0.6	0.7	0.6	2346
	both sides	0.8	0.8	0.8	0.8	2351
Replace fork tube – includes removal, disassembly, cleaning, inspection, replacing parts, servicing damper tube, replacing bushings, assembly and installation	one side	0.8	0.7	0.8	0.7	2356
	both sides	1.2	1.1	1.2	1.1	2361
Replace rear swing arm and/or bearings or rear fork pivot shaft		1.2	1.2	1.2	1.2	2366
Replace rear shock absorber assembly	one side	0.6	0.6	0.6	0.6	2371
	both sides	1.2	1.2	1.2	1.2	2376
Replace shock bushing – includes removing shock	one	0.8	0.8	0.8	0.8	2382
	both	1.6	1.6	1.6	1.6	2383
Replace jiffy stand	spring and/or stand	0.2	0.2	0.2	0.2	2396
	rubber bumper	0.1	0.1	0.1	0.1	2399
<b>BRAKES</b>						
Replace hydraulic brake line – includes filling/bleeding brakes	front	0.4	0.4	0.4	0.4	2406
Replace brake pads	front	0.1	0.1	0.1	0.1	2416
	rear	0.2	0.2	0.2	0.2	2421
Replace brake caliper – includes filling/bleeding brakes	front	0.4	0.4	0.4	0.4	2426
	rear	0.6	0.6	0.6	0.6	2431
Replace brake disc	front	0.3	0.3	0.3	0.3	2436
	rear	0.8	0.8	0.8	0.8	2441
Bleed brake caliper	front	0.2	0.2	0.2	0.2	2442
	rear	0.2	0.2	0.2	0.2	2443
Overhaul brake caliper – includes filling/bleeding brakes	front	0.6	0.6	0.6	0.6	2451
	rear	0.8	0.8	0.8	0.8	2456
Replace master cylinder assembly – includes filling/bleeding brakes	front	0.4	0.4	0.4	0.4	2461
	rear	0.5	0.5	0.5	0.5	2466
Rebuild master cylinder assembly – includes filling/bleeding brakes	front	0.6	0.6	0.6	0.6	2471
	rear	0.6	0.6	0.6	0.6	2476
Replace rear brake pedal		0.3	0.3	0.3	0.3	2492
Replace front brake lever		0.1	0.1	0.1	0.1	2494

**Table 1-2. Chassis**

ITEM	DESCRIPTION	BJY, BWB	BHY, BTY, BVB, JAB	BMV, BVB	BSY, JBB	LABOR CODE
<b>SEATS/FENDERS/TANKS</b>						
Replace seat only		0.1	0.1	0.1	0.1	2506
Replace fender	front	1.1	0.3	0.3	0.3	2526
	rear	0.9	0.8	0.8	0.8	2531
Replace rear fender support – one only		0.3	0.3	0.3	0.3	2536
Replace fuel tank assembly		0.8	0.8	0.8	0.8	2541
Replace fuel tank valve		0.2	0.2	0.2	0.2	2561
Replace oil tank and/or one or more rubber mount(s)		0.9	0.9	0.9	0.9	2566
Replace any single oil hose		0.2	0.2	0.2	0.2	2576
Replace fuel gauge		0.2	0.2	0.3	0.2	2563
Replace fuel gauge sending unit		0.3	0.3	0.3	0.3	2564
Replace license plate bracket		---	---	---	0.4	2590
<b>BELTS GUARDS</b>						
Replace clutch cover and/or O-ring		0.1	0.1	0.1	0.1	2607
Replace debris deflector (belt guard)		0.2	0.2	0.2	0.2	2616
<b>EXHAUST SYSTEM</b>						
Replace complete exhaust system and/or gaskets/inter-connect		0.4	0.4	0.4	0.4	2626
Replace exhaust pipe – dual exhaust system	front	0.3	0.3	0.3	0.3	2631
	rear	0.2	0.2	0.2	0.2	2636
Replace any muffler		0.2	0.2	0.2	0.2	2646
Replace any exhaust shield		0.1	0.1	0.1	0.1	2661

**Table 1-3. Engine**

ITEM	DESCRIPTION	BJY, BWB	BHY, BTY, BVB, JAB	BMV, BVB	BSY, JBB	LABOR CODE
<b>GENERAL</b>						
Remove and install engine	California vehicles only	4.7	4.7	4.7	4.7	3006
Remove and install engine		4.6	4.6	4.6	4.6	3006
Remove and replace oil tank for inspection/contamination		0.9	0.9	0.9	0.9	3009
<b>CYLINDER HEAD</b>						
Recondition cylinder head – includes removal of head and gasket, remove carbon, service valve guides, grind valves and seats, test springs and install head and gaskets.	front head	3.5	3.5	3.5	3.5	3101
	rear head	3.5	3.5	3.5	3.5	3103
	both heads	4.1	4.1	4.1	4.1	3104
Replace cylinder head	one head	2.2	2.2	2.2	2.2	3106
	both heads	2.8	2.8	2.8	2.8	3108
Replace valve seal or spring after cylinder head removal	one seal or spring (intake or exhaust)	0.1	0.1	0.1	0.1	3131
	both seals or springs (intake or exhaust)	0.2	0.2	0.2	0.2	3132

**Table 1-3. Engine**

ITEM	DESCRIPTION	BJY, BWB	BHY, BTY, BVB, JAB	BMV, BVB	BSY, JBB	LABOR CODE
Replace cylinder head gasket/o-ring	front cylinder	1.6	1.6	1.6	1.6	3140
	rear cylinder	1.6	1.6	1.6	1.6	3142
	both cylinders	2.0	2.0	2.0	2.0	3143
Replace rocker arm covers and/or gas-kets	front cylinder	0.7	0.7	0.7	0.7	3144
	rear cylinder	0.7	0.7	0.7	0.7	3145
	both cylinders	0.8	0.8	0.8	0.8	3148
Recondition rocker arms after heads are removed	one head	0.7	0.7	0.7	0.7	3149
	both heads	1.4	1.4	1.4	1.4	3150
Replace lower rocker arm cover/gasket, or rocker arms and /or shafts/rocker arm support	front cylinder	1.1	1.1	1.1	1.1	3147
	rear cylinder	1.1	1.1	1.1	1.1	3152
	both cylinders	1.3	1.3	1.3	1.3	3153
Replace cylinder o-ring/drain o-ring	one cylinder	1.8	1.8	1.8	1.8	3161
	rear cylinder	1.8	1.8	1.8	1.8	3163
	both cylinders	2.2	2.2	2.2	2.2	3168
Replace crankcase umbrella valve	one	1.0	1.0	1.0	1.0	3172
	both	1.1	1.1	1.1	1.1	3174
<b>CYLINDER AND PISTON</b>						
Recondition TOP END - includes disassembly, replacement of piston and sizing cylinder (.005" pistons), replacing piston rings and all items listed under RECONDITION CYLINDER HEAD and assembly.	one piston and cylinder	4.5	4.5	4.5	4.5	3202
	both pistons and cylinders	5.1	5.1	5.1	5.1	3203
Recondition TOP END - includes disassembly, replacement of piston and bore and hone, resizing cylinder (.010" over-size or above), replacing piston rings and all items listed under RECONDITION CYLINDER HEAD and assembly.	one piston and cylinder	4.9	4.9	4.9	4.9	3211
	both pistons and cylinders	5.5	5.5	5.5	5.5	3212
Recondition TOP END - includes disassembly, deglazing cylinder and replacing rings, or replacing cylinder and piston, all items listed under RECONDITIONING CYLINDER HEAD and assembly.	one piston and cylinder	4.3	4.3	4.3	4.3	3207
	both pistons and cylinders	4.9	4.9	4.9	4.9	3208
Replace piston rings - includes deglazing cylinder	one cylinder	2.1	2.1	2.1	2.1	3206
	both cylinders	2.7	2.7	2.7	2.7	3216
Replace piston and piston rings - includes removal of cylinder head and cylinder, fitting new piston with rings, resizing cylinder and assembly	one cylinder	2.7	2.7	2.7	2.7	3221
	both cylinders	3.9	3.9	3.9	3.9	3231
Replace cylinder and piston	one cylinder	2.0	2.0	2.0	2.0	3236
	both cylinders	2.5	2.5	2.5	2.5	3246
Replace upper connecting rod bushing during upper end repair		0.4	0.4	0.4	0.4	3251
Replace one cylinder stud	cylinder removed	0.1	0.1	0.1	0.1	3253
Replace all eight cylinder studs	cylinders removed	0.5	0.5	0.5	0.5	3254
<b>CAM COVER</b>						
Replace lifter cover/gasket or lifter/and, or anti-rotation pin	one or two same cylinder	1.3	1.3	1.3	1.3	3307
	both on both cylinders	1.5	1.5	1.5	1.5	3310
Replace push rod, push rod cover and/or O-ring or quad seal	one or two same cylinder	1.3	1.3	1.3	1.3	3317
	one each cylinder	1.5	1.5	1.5	1.5	3318



Table 1-3. Engine

ITEM	DESCRIPTION	BJY, BWB	BHY, BTY, BVB, JAB	BMV, BVB	BSY, JBB	LABOR CODE
Replace cam cover and/or gasket		0.9	0.9	0.9	0.9	3325
Replace primary cam chain, sprockets and/or fastener		1.0	1.0	1.0	1.0	3327
Replace primary cam chain tensioner		1.0	1.0	1.0	1.0	3328
Replace cam support plate O-rings		2.1	2.1	2.1	2.1	3335
Replace cam support plate		2.1	2.1	2.1	2.1	3337
Replace cam support bearing/cams/secondary cam chain/tensioner		2.3	2.3	2.3	2.3	3338
Replace oil pump and/or O-rings		1.9	1.9	1.9	1.9	3341
Replace cam bearing crankcase	one bearing	2.1	2.1	2.1	2.1	3342
	two bearings	2.2	2.2	2.2	2.2	3343
By pass valve inspection		2.0	2.0	2.0	2.0	3354
<b>CRANKCASE</b>						
Replace crankcases	California vehicles only – includes remove and install engine	7.8	7.8	7.8	7.8	3406
Replace crankcases	includes remove and install engine	7.5	7.5	7.5	7.5	3406
Seal crankcase only		6.5	6.5	6.5	6.5	3407
Replace flywheels	includes remove and install engine	6.6	6.6	6.6	6.6	3411
Replace right side main bearing	California vehicles only	6.1	6.1	6.1	6.1	3412
Replace right side main bearing		6.0	6.0	6.0	6.0	3412
Piston jet/O-ring	one	2.0	2.0	2.0	2.0	3413
	both	2.4	2.4	2.4	2.4	3414
Check flywheel trueness before assembly or after removal		0.1	0.1	0.1	0.1	3420
True flywheels after removal	includes piston removal and reinstallation	0.5	0.5	0.5	0.5	3421
Recondition cylinder heads – head removed (for non-related repairs)	One head	1.0	1.0	1.0	1.0	3425
	both heads	2.0	2.0	2.0	2.0	3426
Replace piston rings	cylinders removed (for non-related repairs – deglaze only)	0.3	0.3	0.3	0.3	3428
Replace pistons	cylinders removed (for non-related repairs) includes resizing cylinders	1.4	1.4	1.4	1.4	3430
<b>BALANCER SYSTEM</b>						
Replace balancer shaft/crankcase bearing		7.6	7.6	7.6	7.6	3450
Replace balancer bearing/support		7.3	7.3	7.3	7.3	3452
Replace balancer system chain		7.2	7.2	7.3	7.2	3454
Replace balancer crankshaft sprocket		7.4	7.4	7.4	7.4	3456
Replace balancer shaft sprocket/nut/spacer		7.1	7.1	7.1	7.1	3458
Replace balancer bracket assembly		7.2	7.2	7.2	7.2	3460
Replace balancer blade guide - front, rear, long		6.8	6.8	6.8	6.8	3462
Replace viton oil interconnect		6.7	6.7	6.7	6.7	3464
<b>FUEL SYSTEM</b>						
Replace air cleaner backing plate		0.2	0.2	0.2	0.2	3501
Replace air cleaner cover		0.1	0.1	0.1	0.1	3502
Replace carburetor*		0.4	0.4	0.4	0.4	3506
Replace induction module seal*		0.7	0.7	0.7	0.7	3510

**Table 1-3. Engine**

ITEM	DESCRIPTION	BJY, BWB	BHY, BTY, BVB, JAB	BMY, BXB	BSY, JBB	LABOR CODE
Replace intake manifold and/or gasket one or both*		0.7	0.7	0.7	0.7	3511
Replace carburetor float valve or jet, or check float level or seal		0.5	0.5	0.5	0.5	3516
Replace accelerator pump		0.5	0.5	0.5	0.5	3521
Replace enrichener cable*		0.4	0.4	0.4	0.4	3523
Replace carburetor diaphragm*		0.5	0.5	0.5	0.5	3524
<b>IMPORTANT NOTE: *Valid only on BJY, BHY, BTY, BMY, AND BSY models (carbureted)</b>						
<b>EVAPORATIVE EMISSIONS SYSTEM</b>						
Replace canister	California vehicles only	0.2	0.2	0.2	0.2	3527
Replace vapor valve		0.1	0.1	0.1	0.1	3528
Replace any one hose		0.1	0.1	0.1	0.1	3529

**Table 1-4. Drive and Clutch**

ITEM	DESCRIPTION	BJY, BWB	BHY, BTY, BVB, JAB	BMY, BXB	BSY, JBB	LABOR CODE
<b>DRIVE</b>						
Adjust primary chain		0.2	0.2	0.2	0.2	---
Replace primary chain		0.9	0.9	0.9	0.9	4002
Replace engine sprocket		0.9	0.9	0.9	0.9	4003
Replace engine sprocket seal		1.2	1.1	1.1	1.1	4005
Replace primary cover		0.4	0.3	0.4	0.3	4007
Replace primary cover gasket		0.4	0.3	0.4	0.3	4009
Replace primary inspection cover and/or O-ring		0.1	0.1	0.1	0.1	4001
Replace inner primary case and/or main-shaft bearing		2.3	2.3	2.3	2.3	4008
<b>CLUTCH</b>						
Adjust clutch		0.2	0.2	0.2	0.2	---
Replace release cable assembly		0.8	0.8	0.8	0.8	4006
Service the clutch	includes disassembly, cleaning, inspection, repair, assembly, and adjustment	1.3	1.3	1.3	1.3	4011
Replace clutch release bearing and/or push rod end		0.4	0.4	0.4	0.4	4016
Replace clutch release mechanism (ball ramp) and/or cover		0.6	0.6	0.6	0.6	4018

**Table 1-5. Transmission**

ITEM	DESCRIPTION	BJY, BWB	BHY, BTY, BVB, JAB	BMY, BXB	BSY, JBB	LABOR CODE
<b>TRANSMISSION CASE</b>						
Replace transmission case		5.1	5.1	5.1	5.1	4304
Replace transmission complete		3.7	3.7	3.7	3.7	4305
Overhaul transmission	includes disassembly, cleaning, inspection, replacing parts (transmission case in frame)	4.6	4.6	4.6	4.6	4306
Replace transmission sprocket		2.2	2.2	2.2	2.2	4309
Replace main drive gear oil seal	in transmission case	2.3	2.3	2.3	2.3	4311
Replace mainshaft oil seal	in main drive gear	2.2	2.2	2.2	2.2	4316
Replace side door gasket		2.8	2.8	2.8	2.8	4321
Replace shifter drum	includes removal and installation	2.2	2.2	2.2	2.2	4331
Replace shifter arm assembly or springs	includes adjusting gear engagement	3.0	3.0	3.0	3.0	4336
Replace transmission top cover and/or gasket	includes oil tank and starter removal	2.0	2.0	2.0	2.0	4341
Replace shifter forks and/or shaft	includes checking gear engagement	0.9	0.9	0.9	0.9	4343
Replace side door bearing	one	3.0	3.0	3.0	3.0	4348
	both	3.1	3.1	3.1	3.1	4351
Replace transmission case countershaft bearing		2.9	2.9	2.9	2.9	4361
Replace main drive gear and/or bearing		3.2	3.2	3.2	3.2	4366
Replace side cover gasket		0.5	0.5	0.5	0.5	4368
Replace shift pedal and/or lever	one or both	0.1	0.1	0.1	0.1	4372
Replace transmission shifter shaft seal		2.2	2.2	2.2	2.2	4390

**Table 1-6. Electrical - All Models**

ITEM	DESCRIPTION	BJY, BWB	BHY, BTY, BVB, JAB	BMY, BXB	BSY, JBB	LABOR CODE
<b>CHARGING CIRCUIT</b>						
Diagnose charging system	regulator inspection	0.1	0.1	0.1	0.1	5306
Diagnose charging system	milliamp draw	0.2	0.2	0.2	0.2	5308
Diagnose charging system	total current draw	0.2	0.2	0.2	0.2	5310
Diagnose charging system	open/grounded stator	1.4	1.2	1.4	1.4	5312
Diagnose system	AC output	1.4	1.2	1.4	1.4	5314
Diagnose charging system	regulator failure	0.5	0.5	0.5	0.5	5315
Diagnose charging system	voltage output	0.5	0.5	0.5	0.5	5316
Diagnose charging system	replace rotor	1.4	1.1	1.4	1.4	5319
Lights and accessories	excluding turn signals	0.3	0.3	0.3	0.3	5016
<b>STARTER CIRCUIT</b>						
Starter inoperative	open/shorted/ground motor	1.6	1.5	1.5	1.5	5817
Starter inoperative	start button	0.9	0.9	0.9	0.9	5818
Starter inoperative	solenoid clicks; poor starter or battery connections	0.1	0.1	0.1	0.1	5822
Starter inoperative	solenoid clicks; poor relay or solenoid connections, or bad relay contacts	0.3	0.3	0.3	0.3	5823

**Table 1-6. Electrical - All Models**

ITEM	DESCRIPTION	BJY, BWB	BHY, BTY, BVB, JAB	BMV, BVB	BSY, JBB	LABOR CODE
Starter inoperative	solenoid clicks; poor starter to battery connections, ground connections, or bad solenoid contacts	0.5	0.5	0.5	0.5	5824
Starter inoperative	damaged motor	1.6	1.5	1.5	1.5	5825
Starter inoperative	relay click; open in relay wiring	0.5	0.5	0.5	0.5	5827
Starter inoperative	nothing clicks; poor relay ground	0.3	0.3	0.3	0.3	5828
Starter inoperative	nothing clicks; short to voltage	0.4	0.4	0.4	0.4	5830
Starter inoperative	nothing clicks; open in wiring to or from starter button	0.6	0.6	0.6	0.6	5831
Starter inoperative	starter relay	0.2	0.2	0.2	0.2	5832
<b>STARTER SPINS, BUT DOES NOT ENGAGE; JACKSHAFT</b>						
Slow starter crank or starter stalls	poor starter to battery connections, ground connections,	0.2	0.2	0.2	0.2	5835
Slow starter crank or starter stalls	binding	0.3	0.3	0.3	0.3	5836
Starter spins	clutch	1.8	1.7	1.7	1.7	5837
Starter Inoperative – nothing clicks	TSM/TSSM	0.4	0.4	0.4	0.4	5838
Replace starter solenoid, contacts	includes starter motor removal	1.8	1.7	1.7	1.7	5845
Starter binding or seal replacement		1.1	1.1	1.1	1.1	5850
Replace starter solenoid coil	includes starter motor removal	1.8	1.7	1.7	1.7	5860
<b>TURN SIGNALS/SECURITY SYSTEM</b>						
Diagnostic check		0.3	0.3	0.3	0.3	6725
Diagnostic check		0.4	0.4	0.4	0.4	6726
Diagnostic check		0.4	0.4	0.4	0.4	6727
Diagnostic check		0.5	0.5	0.5	0.5	6728
No security lamp		0.4	0.4	0.4	0.4	6735
No security lamp		0.4	0.4	0.4	0.4	6736
No security lamp		0.5	0.5	0.5	0.5	6737
No security lamp		0.4	0.4	0.4	0.4	6738
No security lamp		0.3	0.3	0.3	0.3	6739
No security lamp		0.7	0.7	0.7	0.7	6740
No security lamp		0.5	0.5	0.5	0.5	6741
No security lamp		0.4	0.4	0.4	0.4	6742
No security lamp		0.4	0.4	0.4	0.4	6743
No security lamp		0.3	0.3	0.3	0.3	6744
No security lamp		0.4	0.4	0.4	0.4	6745
Security lamp on continuously		0.5	0.5	0.5	0.5	6750
Security lamp on continuously		0.3	0.3	0.3	0.3	6751
Security lamp on continuously		0.3	0.3	0.3	0.3	6752
Fob signal weak		0.1	0.1	0.1	0.1	6755
Fob signal weak		0.1	0.1	0.1	0.1	6756
Fob signal weak		0.6	0.6	0.6	0.6	6757
Turn signal error 1A		0.5	0.5	0.5	0.5	6760
Turn signal error 1A		1.1	1.1	1.1	1.1	6761
Turn signal error 1A		0.2	0.2	0.2	0.2	6762
Turn signal error 1A		0.3	0.3	0.3	0.3	6763
Turn signal error 1A		0.7	0.7	0.7	0.7	6764
Turn signal error 1B		0.3	0.3	0.3	0.3	6767

**Table 1-6. Electrical - All Models**

ITEM	DESCRIPTION	BJY, BWB	BHY, BTY, BVB, JAB	BMY, BXX	BSY, JBB	LABOR CODE
Turn signal error 1B		0.3	0.3	0.3	0.3	6768
Turn signal error 1B		0.4	0.4	0.4	0.4	6769
Turn signal error 1C		0.8	0.8	0.8	0.8	6771
Turn signal error 2A		1.1	1.1	1.1	1.1	6773
Turn signal error 2B		0.6	0.6	0.6	0.6	6777
Turn signal error 2B		0.2	0.2	0.2	0.2	6778
Turn signal error 2B		0.3	0.3	0.3	0.3	6779
Turn signal error 2B		0.6	0.6	0.6	0.6	6780
Turn signal error 2C		0.5	0.5	0.5	0.5	6784
Turn signal error 2C		0.5	0.5	0.5	0.5	6785
Turn signal error 2C		0.7	0.7	0.7	0.7	6786
Turn signal error 3A		0.3	0.3	0.3	0.3	6790
Turn signal error 3A		0.4	0.4	0.4	0.4	6791
Turn signal error 3A		0.5	0.5	0.5	0.5	6792
Turn signal error 3A		0.3	0.3	0.3	0.3	6793
Turn signal error 3B		0.1	0.1	0.1	0.1	6796
Turn signal error 3B		0.3	0.3	0.3	0.3	6797
Turn signal error 3B		0.4	0.4	0.4	0.4	6798
Turn signal error 3B		0.3	0.3	0.3	0.3	6799
Turn signal error 3B		0.4	0.4	0.4	0.4	6800
Turn signal error 3C		0.4	0.4	0.4	0.4	6805
Turn signal error 3C		0.5	0.5	0.5	0.5	6806
Turn signal error 3C		0.3	0.3	0.3	0.3	6807
Turn signal error 3C		0.5	0.5	0.5	0.5	6808
Turn signal error 3D		0.7	0.7	0.7	0.7	6810
Turn signal error 3D		1.1	1.1	1.1	1.1	6811
Turn signal error 3D		0.7	0.7	0.7	0.7	6812
Turn signal error 3D		0.7	0.7	0.7	0.7	6813
Turn signal error 3D		0.7	0.7	0.7	0.7	6814
Turn signal error 3D		1.1	1.1	1.1	1.1	6815
Turn signal error 3D		0.8	0.8	0.8	0.8	6816
Turn signal error 4A		0.2	0.2	0.2	0.2	6820
Turn signal error 4A		0.2	0.2	0.2	0.2	6821
Turn signal error 4A		0.6	0.6	0.6	0.6	6822
Turn signal error 4A		0.5	0.5	0.5	0.5	6823
Turn signal error 4A		0.9	0.9	0.9	0.9	6824
Ignition enable output high		0.3	0.3	0.3	0.3	6827
Ignition enable output high		0.4	0.4	0.4	0.4	6828
Alarm output		0.3	0.3	0.3	0.3	6830
Alarm output		0.4	0.4	0.4	0.4	6831
Alarm output		0.4	0.4	0.4	0.4	6832
Alarm output		0.6	0.6	0.6	0.6	6833
Alarm output		0.3	0.3	0.3	0.3	6834
Alarm output		0.3	0.3	0.3	0.3	6835
Starter output high		0.3	0.3	0.3	0.3	6840
Starter output high		0.2	0.2	0.2	0.2	6841

**Table 1-6. Electrical - All Models**

ITEM	DESCRIPTION	BJY, BWB	BHY, BTY, BVB, JAB	BMY, BXB	BSY, JBB	LABOR CODE
Starter output high		0.4	0.4	0.4	0.4	6842
Accelerometer fault		0.4	0.4	0.4	0.4	6845
Loss of ECM serial data		0.2	0.2	0.2	0.2	6850
Loss of ECM serial data		0.7	0.7	0.7	0.7	6851
Loss of ECM serial data		0.6	0.6	0.6	0.6	6852
Loss of ECM serial data		0.3	0.3	0.3	0.3	6853
Loss of ECM serial data		0.3	0.3	0.3	0.3	6854
<b>INSTRUMENTS</b>						
Replace speedometer	cosmetics only	0.1	0.1	0.1	0.1	6003
Replace console		0.2	0.2	0.2	0.1	6012
Diagnose inoperative, inaccurate or erratic speedometer	switch	0.3	0.3	0.3	0.3	6001
Diagnose inoperative, inaccurate or erratic speedometer		0.1	0.1	0.1	0.1	6002
Diagnose inoperative, inaccurate or erratic speedometer	wiring	0.4	0.4	0.4	0.4	6004
Diagnose inoperative, inaccurate or erratic speedometer	replace	0.4	0.3	0.3	0.3	6006
Diagnose inoperative, inaccurate or erratic speedometer	wiring	0.7	0.6	0.6	0.6	6008
Diagnose inoperative, inaccurate or erratic speedometer	sensor	0.7	0.6	0.6	0.6	6010
Diagnose inoperative, inaccurate or erratic speedometer	open	0.6	0.5	0.5	0.5	6013
Diagnose inoperative, inaccurate or erratic speedometer	LED failure	0.2	0.2	0.2	0.2	6014
Diagnose inoperative, inaccurate or erratic odometer	inoperable	0.2	0.2	0.2	0.2	6020
Diagnose inoperative, inaccurate or erratic speedometer	internal	0.4	0.4	0.4	0.4	6022
Diagnose inoperative, inaccurate or erratic speedometer	power/ground	0.9	0.8	0.8	0.8	6024
Diagnose inoperative inaccurate or erratic speedometer	debris on sensor	0.8	0.7	0.7	0.7	6029
Diagnose inoperative, inaccurate or erratic speedometer	grounded circuit	0.3	0.3	0.3	0.3	6031
Diagnose inoperative, inaccurate or erratic speedometer	fuse	0.1	0.1	0.1	0.1	6032
Replace speedo reset boot		0.1	0.1	0.1	0.1	6043
Replace connector anchor		0.1	0.1	0.1	0.1	5023
Replace main wiring harness		2.1	2.0	2.0	2.0	5026
Replace rear fender wiring harness		0.8	---	---	---	5036
Replace any single wire	light circuit	0.2	0.2	0.2	0.2	5039
	accessory circuit	0.2	0.2	0.2	0.2	5043
Replace electrical box		0.2	0.2	0.2	0.2	5047
Repair/diagnose indicator lamp wiring		0.3	0.3	0.3	0.3	5048
Replace circuit breaker or fuse		0.2	0.2	0.2	0.2	5145
Replace fuse block		0.4	0.3	0.3	0.3	5196

**Table 1-6. Electrical - All Models**

ITEM	DESCRIPTION	BJY, BWB	BHY, BTY, BVB, JAB	BMY, BxB	BSY, JBB	LABOR CODE
<b>SWITCHES</b>						
Replace ignition switch		0.2	0.2	0.2	0.2	5129
Replace rear stoplight switch – includes filling/bleeding brakes		0.4	0.4	0.4	0.4	5141
Replace transmission neutral switch (includes diagnosis and loosening oil tank)		0.6	0.6	0.6	0.6	5157
Replace oil pressure switch (includes diagnosis)		0.3	0.3	0.3	0.3	5161
Replace passing lamp switch	FLSTC	0.1	---	---	---	5167
Replace left upper handlebar switch		0.5	0.5	0.5	0.5	5171
Replace right upper handlebar switch		0.7	0.7	0.7	0.7	5173
Replace front brake light switch		0.6	0.6	0.6	0.6	5176
Replace left upper handlebar switch housing		0.2	0.2	0.2	0.2	5177
Replace left lower handlebar switch housing		0.2	0.2	0.2	0.2	5178
Replace right upper handlebar switch housing		0.2	0.2	0.2	0.2	5179
Replace right lower handlebar switch housing		0.4	0.4	0.4	0.4	5180
<b>LIGHTS</b>						
Replace headlight bracket	includes adjustment	0.2	0.2	0.2	0.2	5181
Replace headlight	includes diagnosis	0.1	0.1	0.1	0.1	5185
Replace headlight housing	includes adjustment	0.5	0.5	0.5	0.5	5189
Replace indicator lamp assembly		0.2	0.2	0.2	0.2	5191
Replace taillamp bulb or lens	includes diagnosis	0.1	0.1	0.1	0.1	5197
Replace taillamp assembly or circuit board		0.2	0.2	0.2	0.1	5215
Replace turn signal light assembly	front	1.0	0.5	0.5	0.5	5201
	rear	0.3	0.3	0.3	0.3	5205
Replace rear turn signal bar		0.3	---	---	---	5207
Replace passing lamp, FLST		0.4	---	---	---	5230
Replace passing lamp bulb	includes diagnosis, FLSTC	0.1	---	---	---	5227
Replace fender tip lamp bulb	includes diagnosis	0.1	---	---	---	5228
Replace passing lamp bracket	FLSTC	0.6	---	---	---	5232
Replace fender tip lamp assembly	front	0.7	---	---	---	5225
	rear	0.1	---	---	---	5229
Replace license plate bracket		---	---	---	0.1	5237
<b>BATTERY/HORN</b>						
Replace the battery		0.3	0.3	0.3	0.3	5705
Replace horn and/or bracket		0.1	0.1	0.1	0.1	5765
<b>ACCESSORIES</b>						
Replace tank trim		0.1	0.1	0.1	0.1	6507

**Table 1-6. Electrical - All Models**

ITEM	DESCRIPTION	BJY, BWB	BHY, BTY, BVB, JAB	BMY, BXB	BSY, JBB	LABOR CODE
Replace sissy bar		0.8	---	---	---	6511
Replace mirror		0.1	0.1	0.1	0.1	6513
Replace backrest		0.2	---	---	---	6515
Replace windshield		0.3	---	---	---	6517
Replace one saddlebag		0.1	---	---	---	6518
Replace one saddlebag bracket		0.2	---	---	---	6519

**Table 1-7. Electrical - Carbureted**

ITEM	DESCRIPTION	BJY	BHY, BTY	BMY	BSY	LABOR CODE
<b>IGNITION SYSTEM – CARBURETED MODELS ONLY</b>						
NOTE: The diagnostic/replacement operations and times listed on the following pages have been created for your use. The codes must be used in conjunction with the repair procedures listed in the Softail Service Manual, Part No. 99482-01 and Electrical Diagnostic Manual, Part No. 99495-01. Remember to use the same four digit code selected for your labor code as your condition code when filing a warranty claim.						
Diagnostic check		0.2	0.2	0.2	0.2	7110
Diagnostic check		0.3	0.3	0.3	0.3	7115
Diagnostic check		0.4	0.4	0.4	0.4	7120
Diagnostic check		0.4	0.3	0.3	0.3	7125
Chart A-1	No check engine lamp	0.4	0.3	0.3	0.3	7130
	No check engine lamp	0.4	0.3	0.3	0.3	7143
	No check engine lamp	0.7	0.6	0.6	0.6	7146
Chart A-2	Check engine lamp on continuously	0.4	0.3	0.3	0.3	7148
	Check engine lamp on continuously	0.2	0.2	0.2	0.2	7150
	Check engine lamp on continuously	0.7	0.6	0.6	0.6	7155
Chart A-3	Engine cranks but will not start	0.2	0.2	0.2	0.2	7180
	Engine cranks but will not start	0.3	0.3	0.3	0.3	7185
	Engine cranks but will not start	0.5	0.5	0.5	0.5	7210
	Engine cranks but will not start	0.5	0.5	0.5	0.5	7215
	Engine cranks but will not start	0.5	0.5	0.5	0.5	7225
	Engine cranks but will not start	0.3	0.3	0.3	0.5	7226
	Engine cranks but will not start	0.3	0.3	0.3	0.3	7227
	Engine cranks but will not start	0.3	0.3	0.3	0.3	7228
	Engine cranks but will not start	0.8	0.8	0.8	0.8	7230
	Engine cranks but will not start	0.5	0.5	0.5	0.5	7231
	Engine cranks but will not start	0.5	0.5	0.5	0.5	7235
	Engine cranks but will not start	0.5	0.5	0.5	0.5	7250
	Engine cranks but will not start	1.3	1.3	1.3	1.3	7255
Chart A-4	No spark, no check engine lamp	0.2	0.2	0.2	0.2	7270
	No spark, no check engine lamp	0.8	0.8	0.8	0.8	7285
	No spark, no check engine lamp	0.8	0.8	0.8	0.8	7291
	No spark, no check engine lamp	0.9	0.9	0.9	0.9	7295
	No spark, no check engine lamp	0.2	0.2	0.2	0.2	7305
	No spark, no check engine lamp	0.4	0.4	0.4	0.4	7310



**Table 1-7. Electrical - Carbureted**

ITEM	DESCRIPTION	BJY	BHY, BTY	BMY	BSY	LABOR CODE
Chart C	Misfire	0.2	0.2	0.2	0.2	7520
	Misfire	0.3	0.3	0.3	0.3	7525
	Misfire	0.3	0.3	0.3	0.3	7535
	Misfire	0.8	0.8	0.8	0.8	7540
	Misfire	0.6	0.6	0.6	0.6	7541
Code-12	Map sensor	0.9	0.8	0.8	0.8	7620
	Map sensor	2.2	2.2	2.2	2.2	7625
	Map sensor	0.8	0.8	0.8	0.8	7630
	Map sensor	0.8	0.7	0.7	0.7	7635
	Map sensor	0.8	0.7	0.7	0.7	7640
	Map sensor	0.6	0.5	0.5	0.5	7641
	Map sensor	0.8	0.7	0.7	0.7	7642
	Map sensor	0.8	0.7	0.7	0.7	7645
	Map sensor	0.8	0.7	0.7	0.7	7650
	Map sensor	0.8	0.7	0.7	0.7	7655
Code-16	Battery voltage test	0.4	0.4	0.4	0.4	7770
	Battery voltage test	0.5	0.5	0.5	0.5	7775
	Battery voltage test	0.9	0.9	0.9	0.9	7776
	Battery voltage test	1.0	0.9	0.9	0.9	7779
	Battery voltage test	0.9	0.9	0.9	0.9	7780
	Battery voltage test	1.4	1.4	1.4	1.4	7781
	Battery voltage test	1.0	1.0	1.0	1.0	7782
	Battery voltage test	1.0	0.9	0.9	0.9	7783
	Battery voltage test	1.2	1.1	1.1	1.1	7784
Code-24 & 25	Ignition coil	0.3	0.3	0.3	0.3	7855
	Ignition coil	0.3	0.3	0.3	0.3	7856
	Ignition coil	0.4	0.4	0.4	0.4	7860
	Ignition coil	0.6	0.6	0.6	0.6	7865
	Ignition coil	0.6	0.6	0.6	0.6	7870
	Ignition coil	0.3	0.3	0.3	0.3	7875
Code-41	Crank position sensor	0.5	0.5	0.5	0.5	7980
	Crank position sensor	0.7	0.7	0.7	0.7	7981
	Crank position sensor	0.6	0.6	0.6	0.6	7982
	Crank position sensor	0.8	0.8	0.8	0.8	7983
	Crank position sensor	0.8	0.7	0.7	0.7	7984
	Crank position sensor	0.7	0.6	0.6	0.6	7985
	Crank position sensor	0.6	0.5	0.5	0.5	7986
	Crank position sensor	0.6	0.5	0.5	0.5	7987
Code-44	Bank angle sensor	0.3	0.2	0.2	0.2	7971
	Bank angle sensor	0.4	0.3	0.3	0.3	7972
	Bank angle sensor	0.5	0.4	0.4	0.4	7973
	Bank angle sensor	0.4	0.3	0.3	0.3	7974
	Bank angle sensor	0.5	0.4	0.4	0.4	7975
	Bank angle sensor	0.4	0.3	0.3	0.3	7976
Codes-52, 53, 54, and 55	Ignition module failure	0.2	0.2	0.2	0.2	7913

**Table 1-8. Electrical - Fuel Injection**

ITEM	DESCRIPTION	BWB	BVB, JAB	BXB	JBB	LABOR CODE
NOTE: The diagnostic/replacement operations and times listed on the following pages have been created for your use. The codes must be used in conjunction with the repair procedures listed in the Softail Service Manual, Part No. 99482-02 and Electrical Diagnostic Manual, Part No. 99498-02. Remember to use the same four digit code selected for your labor code as your condition code when filing a warranty claim.						
Diagnostic check		0.2	0.2	0.2	0.2	7110
Diagnostic check		0.4	0.4	0.4	0.4	7115
Diagnostic check		0.4	0.4	0.4	0.4	7120
Diagnostic check		0.8	0.8	0.8	0.8	7125
Diagnostic check		0.8	0.8	0.8	0.8	7126
No check engine lamp/No ECM Power		0.5	0.5	0.5	0.5	6013
No check engine lamp/No ECM Power		0.6	0.6	0.6	0.6	7130
No check engine lamp/No ECM Power		0.4	0.4	0.4	0.4	7133
No check engine lamp/No ECM Power		0.4	0.4	0.4	0.4	7141
No check engine lamp/No ECM Power		0.1	0.1	0.1	0.1	7142
No check engine lamp/No ECM Power		0.5	0.5	0.5	0.5	7143
No check engine lamp/No ECM Power		0.4	0.4	0.4	0.4	7146
No check engine lamp/No ECM Power		0.5	0.5	0.5	0.5	7270
No check engine lamp/No ECM Power		0.6	0.6	0.6	0.6	7285
No check engine lamp/No ECM Power		0.7	0.7	0.7	0.7	7286
No check engine lamp/No ECM Power		0.7	0.7	0.7	0.7	7287
No check engine lamp/No ECM Power		0.7	0.7	0.7	0.7	7288
No check engine lamp/No ECM Power		0.7	0.7	0.7	0.7	7289
No check engine lamp/No ECM Power		0.4	0.4	0.4	0.4	7290
No check engine lamp/No ECM Power		1.4	1.4	1.4	1.4	7295
No check engine lamp/No ECM Power		0.6	0.6	0.6	0.6	7301
No check engine lamp/No ECM Power		0.1	0.1	0.1	0.1	7302
No check engine lamp/No ECM Power		0.7	0.7	0.7	0.7	7303
No check engine lamp/No ECM Power		0.4	0.4	0.4	0.4	7304
No check engine lamp/No ECM Power		0.6	0.6	0.6	0.6	7305
No check engine lamp/No ECM Power		0.5	0.5	0.5	0.5	7306
No check engine lamp/No ECM Power		0.7	0.7	0.7	0.7	7307
No check engine lamp/No ECM Power		0.6	0.6	0.6	0.6	7308
No check engine lamp/No ECM Power		0.6	0.6	0.6	0.6	7309
No check engine lamp/No ECM Power		0.6	0.6	0.6	0.6	7310
No check engine lamp/No ECM Power		0.3	0.3	0.3	0.3	7320
Check engine lamp on continuously		0.2	0.2	0.2	0.3	7148
Check engine lamp on continuously		0.7	0.7	0.7	0.7	7150
Check engine lamp on continuously		0.3	0.3	0.3	0.4	7155
Check engine lamp on continuously		0.2	0.2	0.2	0.2	7156
Check engine lamp on continuously		0.1	0.1	0.1	0.1	7157
Engine cranks but will not start		0.6	0.6	0.6	0.6	7185
Engine cranks but will not start		0.5	0.5	0.5	0.5	7195
Engine cranks but will not start		0.5	0.5	0.5	0.5	7210
Engine cranks but will not start		0.4	0.4	0.4	0.4	7215
Engine cranks but will not start		0.5	0.5	0.5	0.5	7223
Engine cranks but will not start		0.4	0.4	0.4	0.4	7224
Engine cranks but will not start		0.5	0.5	0.5	0.5	7225
Engine cranks but will not start		0.8	0.8	0.8	0.8	7226

**Table 1-8. Electrical - Fuel Injection**

ITEM	DESCRIPTION	BWB	BVB, JAB	BXB	JBB	LABOR CODE
Engine cranks but will not start		0.7	0.7	0.7	0.7	7227
Engine cranks but will not start		0.5	0.5	0.5	0.5	7228
Engine cranks but will not start		0.5	0.5	0.5	0.5	7230
Engine cranks but will not start		0.6	0.6	0.6	0.6	7231
Engine cranks but will not start		0.5	0.5	0.5	0.5	7235
Engine cranks but will not start		0.9	0.9	0.9	0.9	7251
Fuel system electrical test		0.2	0.2	0.2	0.2	7335
Fuel system electrical test		0.7	0.7	0.7	0.7	7336
Engine cranks but will not start; Fuel system electrical test		0.6	0.6	0.6	0.6	7340
Engine cranks but will not start; Fuel system electrical test		0.5	0.5	0.5	0.5	7355
Fuel system electrical test		0.3	0.3	0.3	0.3	7360
Fuel system electrical test		0.8	0.8	0.8	0.8	7370
Engine cranks but will not start; Fuel system electrical test		0.4	0.4	0.4	0.4	7380
Fuel system electrical test		0.3	0.3	0.3	0.3	7385
Engine cranks but will not start; Fuel system electrical test		0.9	0.9	0.9	0.9	7415
Fuel system electrical test		0.3	0.3	0.3	0.3	7440
Engine cranks but will not start; Fuel system electrical test		0.4	0.4	0.4	0.4	7441
Fuel system electrical test		0.2	0.2	0.2	0.2	7445
Engine cranks but will not start; Fuel system electrical test		0.4	0.4	0.4	0.4	7450
Engine cranks but will not start; Fuel system electrical test		0.7	0.7	0.7	1.0	7992
Engine cranks but will not start; Fuel system electrical test		0.4	0.4	0.4	0.4	7520
Starts, then stalls		0.2	0.2	0.2	0.2	7989
Starts, then stalls		0.3	0.3	0.3	0.3	7990
Starts, then stalls		1.3	1.3	1.3	1.6	7991
Starts, then stalls		0.7	0.7	0.7	1.0	7992
Starts, then stalls		0.6	0.6	0.6	0.6	7993
Starts, then stalls		0.3	0.3	0.3	0.3	7994
Starts, then stalls		0.3	0.3	0.3	0.3	7995
Starts, then stalls		0.3	0.3	0.3	0.3	7996
Starts, then stalls		0.5	0.5	0.5	0.5	7997
Starts, then stalls		0.6	0.6	0.6	0.6	7998
Starts, then stalls		0.5	0.5	0.5	0.5	7999
Starts, then stalls; no DTCs		0.4	0.4	0.4	0.4	7127
Starts, then stalls; no DTCs		0.3	0.3	0.3	0.3	7128
Combustion absent		0.1	0.1	0.1	0.1	7537
Combustion absent		0.2	0.2	0.2	0.2	7538
Combustion absent		0.2	0.2	0.2	0.2	7539
Combustion absent		0.2	0.2	0.2	0.2	7543
Combustion absent		0.4	0.4	0.4	0.4	7544
Combustion absent		0.2	0.2	0.2	0.2	7546
Combustion absent		0.4	0.4	0.4	0.4	7547

**Table 1-8. Electrical - Fuel Injection**

ITEM	DESCRIPTION	BWB	BVB, JAB	BXB	JBB	LABOR CODE
Combustion absent		0.1	0.1	0.1	0.1	7548
Combustion absent		0.1	0.1	0.1	0.1	7549
Fuel pressure test		0.4	0.4	0.4	0.4	7455
Fuel pressure test		0.7	0.7	0.7	0.7	7465
Fuel pressure test		0.7	0.7	0.7	0.7	7470
Fuel pressure test		0.7	0.7	0.7	0.7	7480
Idle air control		1.1	1.1	1.1	1.1	7486
Idle air control		0.5	0.5	0.5	0.5	7490
Idle air control		0.5	0.5	0.5	0.5	7495
Idle air control		0.6	0.6	0.6	0.6	7505
Idle air control		0.5	0.5	0.5	0.5	7510
Idle air control		0.4	0.4	0.4	0.4	7515
Idle air control		0.6	0.6	0.6	0.6	7516
Misfire at idle or under load		0.4	0.4	0.4	0.4	7520
Misfire at idle or under load		0.2	0.2	0.2	0.2	7525
Misfire at idle or under load		0.4	0.4	0.4	0.4	7535
Misfire at idle or under load		0.3	0.3	0.3	0.3	7540
Misfire at idle or under load		0.2	0.2	0.2	0.2	7545
Misfire at idle or under load		0.4	0.4	0.4	0.4	7550
Misfire at idle or under load		0.3	0.3	0.3	0.3	7134
Misfire at idle or under load		0.3	0.3	0.3	0.3	7136
Misfire at idle or under load		0.6	0.6	0.6	0.6	7137
Misfire at idle or under load		0.7	0.7	0.7	0.7	7138
Misfire at idle or under load		0.6	0.6	0.6	0.6	7139
Misfire at idle or under load		0.9	0.9	0.9	1.1	7144
Misfire at idle or under load		0.5	0.5	0.5	0.5	7147
Misfire at idle or under load		0.9	0.9	0.9	0.9	7149
Misfire at idle or under load		0.6	0.6	0.6	0.6	7152
Rough or rolling idle		0.3	0.3	0.3	0.3	7134
Rough or rolling idle		0.3	0.3	0.3	0.3	7136
Rough or rolling idle		0.6	0.6	0.6	0.6	7137
Rough or rolling idle		0.7	0.7	0.7	0.7	7138
Rough or rolling idle		0.6	0.6	0.6	0.6	7139
Rough or rolling idle		0.9	0.9	0.9	1.1	7144
Rough or rolling idle		0.5	0.5	0.5	0.5	7147
Rough or rolling idle		0.9	0.9	0.9	0.9	7149
Rough or rolling idle		0.6	0.6	0.6	0.6	7152
Emits black smoke		2.0	2.0	2.0	2.2	7596
Emits black smoke		2.0	2.0	2.0	2.2	7597
Emits black smoke		2.0	2.0	2.0	2.2	7598
Emits black smoke		2.2	2.2	2.2	2.4	7601
Throttle position sensor		0.5	0.5	0.5	0.5	7555
Throttle position sensor		0.5	0.5	0.5	0.5	7560
Throttle position sensor		0.6	0.6	0.6	0.6	7565
Throttle position sensor		0.4	0.4	0.4	0.4	7570
Throttle position sensor		0.5	0.5	0.5	0.5	7575
Throttle position sensor		0.5	0.5	0.5	0.5	7580

**Table 1-8. Electrical - Fuel Injection**

ITEM	DESCRIPTION	BWB	BVB, JAB	BXB	JBB	LABOR CODE
Throttle position sensor		0.5	0.5	0.5	0.5	7585
Throttle position sensor		0.7	0.7	0.7	0.7	7590
Throttle position sensor		0.3	0.3	0.3	0.3	7595
Throttle position sensor		0.7	0.7	0.7	0.7	7605
Throttle position sensor		0.5	0.5	0.5	0.5	7610
Throttle position sensor		0.8	0.8	0.8	0.8	7615
MAP sensor		0.8	0.8	0.8	0.9	7620
MAP sensor		1.2	1.2	1.2	1.2	7625
MAP sensor		0.3	0.3	0.3	0.3	7630
MAP sensor		0.6	0.6	0.6	0.6	7635
MAP sensor		0.6	0.6	0.6	0.6	7640
MAP sensor		0.6	0.6	0.6	0.6	7641
MAP sensor		0.5	0.5	0.5	0.5	7642
MAP sensor		0.6	0.6	0.6	0.6	7645
MAP sensor		0.6	0.6	0.6	0.6	7650
MAP sensor		0.7	0.7	0.7	0.7	7655
Engine temperature sensor		0.4	0.4	0.4	0.4	7660
Engine temperature sensor		0.9	0.9	0.9	0.9	7665
Engine temperature sensor		0.2	0.2	0.2	0.2	7670
Engine temperature sensor		0.3	0.3	0.3	0.3	7675
Engine temperature sensor		0.4	0.4	0.4	0.4	7680
Engine temperature sensor		0.4	0.4	0.4	0.4	7685
Engine temperature sensor		0.3	0.3	0.3	0.5	7690
Engine temperature sensor		0.5	0.5	0.5	0.5	7695
Engine temperature sensor		0.5	0.5	0.5	0.5	7705
Engine temperature sensor		0.4	0.4	0.4	0.4	7710
Intake air temperature sensor		0.6	0.6	0.6	0.6	7715
Intake air temperature sensor		1.4	1.4	1.4	1.4	7720
Intake air temperature sensor		0.3	0.3	0.3	0.3	7725
Intake air temperature sensor		0.5	0.5	0.5	0.5	7730
Intake air temperature sensor		0.5	0.5	0.5	0.3	7735
Intake air temperature sensor		0.7	0.7	0.7	0.7	7740
Intake air temperature sensor		0.4	0.4	0.4	0.4	7745
Intake air temperature sensor		0.6	0.6	0.6	0.6	7750
Intake air temperature sensor		0.4	0.4	0.4	0.4	7755
Intake air temperature sensor		0.5	0.5	0.5	0.5	7760
Battery voltage test		0.4	0.4	0.4	0.4	7770
Battery voltage test		0.3	0.3	0.3	0.3	7775
Battery voltage test		0.3	0.3	0.3	0.3	7776
Battery voltage test		1.0	0.9	0.9	1.0	7779
Battery voltage test		0.9	0.9	0.9	0.9	7780
Battery voltage test		1.4	1.4	1.4	1.4	7781
Battery voltage test		1.0	1.0	1.0	1.0	7782
Battery voltage test		1.0	0.9	0.9	1.0	7783
Battery voltage test		1.2	1.1	1.1	1.2	7784
Fuel injectors		0.1	0.1	0.1	0.1	7785
Fuel injectors		0.6	0.6	0.6	0.6	7790

**Table 1-8. Electrical - Fuel Injection**

ITEM	DESCRIPTION	BWB	BVB, JAB	BXB	JBB	LABOR CODE
Fuel injectors		0.7	0.7	0.7	0.7	7795
Fuel injectors		0.6	0.6	0.6	0.6	7805
Fuel injectors		0.6	0.6	0.6	0.7	7808
Fuel injectors		0.5	0.5	0.5	0.5	7809
Fuel injectors		0.6	0.6	0.6	0.6	7815
Fuel injectors		0.6	0.6	0.6	0.8	7820
Fuel injectors		0.7	0.7	0.7	0.7	7825
Fuel injectors		0.6	0.6	0.6	0.6	7830
Fuel injectors		0.6	0.6	0.6	0.6	7835
Fuel injectors		0.6	0.6	0.6	0.6	7840
Fuel injectors		0.4	0.4	0.4	0.4	7845
Fuel injectors		0.7	0.7	0.7	0.7	7850
System relay		0.2	0.2	0.2	0.2	7887
System relay		0.3	0.3	0.3	0.3	7888
System relay		0.4	0.4	0.4	0.4	7889
System relay		0.3	0.3	0.3	0.3	7899
System relay		0.3	0.3	0.3	0.3	7900
System relay		0.4	0.4	0.4	0.4	7901
System relay		0.4	0.4	0.4	0.4	7902
System relay		0.3	0.3	0.3	0.3	7903
System relay		0.2	0.2	0.2	0.2	7904
System relay		0.4	0.4	0.4	0.4	7906
System relay		0.7	0.7	0.7	0.7	7907
System relay		0.3	0.3	0.3	0.3	7908
System relay		0.2	0.2	0.2	0.2	7909
System relay		0.3	0.3	0.3	0.3	7911
System relay		0.4	0.4	0.4	0.4	7912
Ignition coil test		0.5	0.5	0.5	0.5	7853
Ignition coil test		0.6	0.6	0.6	0.6	7854
Ignition coil test		0.4	0.4	0.4	0.4	7856
Ignition coil test		0.4	0.4	0.4	0.4	7860
Ignition coil test		0.3	0.3	0.3	0.3	7865
Ignition coil test		0.5	0.5	0.5	0.5	7870
Ignition coil test		0.4	0.4	0.4	0.4	7875
Ignition coil test		0.2	0.2	0.2	0.2	7880
Crank position sensor		0.5	0.5	0.5	0.5	7980
Crank position sensor		0.4	0.4	0.4	0.4	7981
Crank position sensor		0.3	0.3	0.3	0.3	7982
Crank position sensor		0.5	0.5	0.5	0.5	7983
Crank position sensor		0.2	0.2	0.2	0.2	7984
Crank position sensor		0.4	0.4	0.4	0.4	7985
Crank position sensor		0.5	0.5	0.5	0.5	7986
Crank position sensor		0.3	0.3	0.3	0.4	7987
ECM failure		0.3	0.3	0.3	0.3	7913
Vehicle speed signal		0.4	0.4	0.4	0.4	7954
Vehicle speed signal		0.4	0.4	0.4	0.4	7956
Vehicle speed signal		0.5	0.5	0.5	0.5	7957

**Table 1-8. Electrical - Fuel Injection**

ITEM	DESCRIPTION	BWB	BVB, JAB	BXB	JBB	LABOR CODE
Vehicle speed signal		0.3	0.3	0.3	0.3	7958
Vehicle speed signal		0.4	0.4	0.4	0.4	7959
Vehicle speed signal		0.3	0.3	0.3	0.3	7961
Vehicle speed signal		0.4	0.4	0.4	0.4	7962
Vehicle speed signal		0.4	0.4	0.4	0.4	7963
Vehicle speed signal		0.4	0.4	0.4	0.4	7964
Password problem		0.4	0.4	0.4	0.4	6701
Password problem		0.4	0.4	0.4	0.4	6702
Password problem		0.6	0.6	0.6	0.6	6703
Password problem		0.4	0.4	0.4	0.4	6704
Password problem		0.5	0.5	0.5	0.5	6705
Password problem		0.3	0.3	0.3	0.3	6706
Password problem		0.6	0.6	0.6	0.6	6707
Password problem		0.8	0.8	0.8	0.8	6708
Loss of TSM/TSSM serial data		0.4	0.4	0.4	0.4	6715
Loss of TSM/TSSM serial data		0.6	0.6	0.6	0.6	6716
Loss of TSM/TSSM serial data		0.6	0.6	0.6	0.6	6717
Loss of TSM/TSSM serial data		0.5	0.5	0.5	0.5	6718
Loss of TSM/TSSM serial data		0.4	0.4	0.4	0.4	6719

# NOTES

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# 2002 SPRINGER SOFTAIL MODELS

**Table 1-9. Service**

ITEM	DESCRIPTION	BRY, BYB	BLY, BZB	LABOR CODE
<b>NEW</b>				
Set-up and pre-delivery		2.1	2.1	---
500 mile service		2.5	2.5	---
<b>REGULAR</b>				
2,500 mile maintenance		0.5	0.5	---
5,000 mile maintenance		2.0	2.0	---
7,500 mile maintenance		0.5	0.5	---
10,000 mile maintenance		4.3	4.3	---

**Table 1-10. Chassis**

ITEM	DESCRIPTION	BRY, BYB	BLY, BZB	LABOR CODE
<b>DRIVE</b>				
Adjust secondary belt		0.3	0.2	---
Replace secondary belt		2.6	2.6	2011
Replace rear wheel sprocket		0.8	0.8	2021
<b>WHEELS</b>				
Replace tire - includes balancing	front	0.5	0.5	2106
	rear	0.7	0.6	2111
Replace wheel assembly - includes disc & sprocket exchange, and balancing	front	0.8	0.8	2113
	rear	0.9	0.9	2114
Replace rim, hub or spokes	front	2.3	2.3	2116
	rear	2.3	2.3	2121
Replace wheel bearings	front	0.5	0.5	2136
	rear	0.6	0.6	2141
<b>HANDLEBARS</b>				
Replace handlebars		0.5	0.5	2206
Replace clutch hand lever		0.2	0.2	2221
Replace clutch hand lever bracket		0.2	0.2	2226
Replace throttle control		0.4	0.4	2231
Replace and adjust throttle control cable	one or both	0.6	0.6	2241
Replace both rubber handlebar mounts		0.4	0.4	2246
Replace rubber handlebar grip		0.2	0.2	2251
Replace handlebar riser	one	0.2	0.2	2253
Replace handlebar clamp	one or both	0.1	0.1	2254

All times listed in hours.

### V.I.N. CODES

BRY	FLSTS	BYB	FLSTS-I
BLY	FXSTS	BZB	FXSTS-I

**Table 1-10. Chassis**

ITEM	DESCRIPTION	BRY, BYB	BLY, BZB	LABOR CODE
<b>FRAME/SWING ARM/FRONT FORK</b>				
Replace frame – includes removal and installation of all accessories and motorcycle components		12.4	12.4	2306
Replace top fork clamp		0.3	0.3	2309
Replace fork lock		1.1	1.1	2330
Replace steering bearings		2.0	1.4	2332
	Replace rigid fork	2.1	1.5	2334
Replace shock		0.1	0.1	2335
Replace one or more rebound spring(s)		0.3	0.3	2336
Replace upper spring bridge		0.1	0.1	2338
Replace lower (compression) spring or spring reaction rod assembly (one or more) or spring fork		1.8	1.4	2348
Replace lower rocker	one	0.6	0.5	2350
	both	0.7	0.6	2353
Replace rocker bearings (rocker removed)		0.2	0.2	2355
Replace rear swing arm and/or bearings or rear fork pivot shaft		1.4	1.2	2366
Replace rear shock absorber assembly	one side	0.6	0.6	2371
	both sides	1.2	1.2	2376
Replace shock bushing – includes removing shock	one	0.8	0.8	2382
	both	1.6	1.6	2383
Replace jiffy stand	spring and/or stand	0.2	0.2	2396
	rubber bumper	0.1	0.1	2399
<b>Brakes</b>				
Replace hydraulic brake line – includes filling/bleeding brakes	front	0.4	0.4	2406
	rear	0.4	0.4	2411
Replace brake pads	front	0.1	0.1	2416
	rear	0.2	0.2	2421
Replace brake reaction rod		0.8	0.1	2423
Replace brake caliper – includes filling/bleeding brakes	front	0.4	0.4	2426
	rear	0.6	0.6	2431
Replace brake disc	front	0.3	0.3	2436
	rear	0.9	0.8	2441
Bleed brake caliper	front	0.2	0.2	2442
	rear	0.2	0.2	2443
Overhaul brake caliper – includes filling/bleeding brakes	front	0.6	0.6	2451
	rear	0.8	0.8	2456
Replace master cylinder assembly – includes filling/bleeding brakes	front	0.4	0.4	2461
	rear	0.5	0.5	2466
Rebuild master cylinder assembly – includes filling/bleeding brakes	front	0.6	0.6	2471
	rear	0.6	0.6	2476
Replace rear brake pedal		0.3	0.3	2492
Replace front brake lever		0.1	0.1	2494
<b>SEATS/FENDERS/TANKS</b>				
Replace seat only		0.2	0.1	2506
Replace fender	front	0.7	0.3	2526
	rear	0.9	0.8	2531
Replace rear fender support – one only		0.3	0.3	2536

**Table 1-10. Chassis**

ITEM	DESCRIPTION	BRY, BYB	BLY, BZB	LABOR CODE
Replace fuel tank assembly		0.8	0.8	2541
Replace fuel tank valve		0.2	0.2	2561
Replace oil tank and/or one or more rubber mount(s)		0.9	0.9	2566
Replace any single oil hose		0.2	0.2	2576
Replace fuel gauge		0.2	0.2	2563
Replace fuel gauge sending unit		0.3	0.3	2564
<b>BELT GUARDS</b>				
Replace clutch cover and/or O-ring		0.1	0.1	2607
Replace debris deflector (belt guard)		0.2	0.2	2616
<b>EXHAUST SYSTEM</b>				
Replace complete exhaust system and/or gaskets		1.0	0.4	2626
Replace exhaust pipe	right side	1.0	0.3	2631
	left side	0.3	0.2	2636
Replace any muffler		0.1	0.1	2646
Replace any one exhaust shield		0.1	0.1	2661
Replace muffler support		0.2	0.3	2666

**Table 1-11. Engine**

ITEM	DESCRIPTION	BRY, BYB	BLY, BZB	LABOR CODE
<b>GENERAL</b>				
Remove and install engine	California vehicles only	4.7	4.7	3006
Remove and install engine		4.6	4.6	3006
Remove and replace oil tank for inspection/contamination		0.9	0.9	3009
<b>CYLINDER HEAD</b>				
Recondition cylinder head – includes removal of head and gasket, remove carbon, service valve guides, grind valves and seats, test springs and install head and gaskets.	front head	3.5	3.5	3101
	rear head	3.5	3.5	3103
	both heads	4.1	4.1	3104
Replace cylinder head	one head	2.2	2.2	3106
	both heads	2.8	2.8	3108
Replace valve seal or spring after cylinder head removal	one seal or spring (intake or exhaust)	0.1	0.1	3131
	both seals or springs (intake or exhaust)	0.2	0.2	3132
Replace cylinder head gasket/o-ring	front cylinder	1.6	1.6	3140
	rear cylinder	1.6	1.6	3142
	both cylinders	2.0	2.0	3143
Replace rocker arm covers and/or gaskets	front cylinder	0.7	0.7	3144
	rear cylinder	0.7	0.7	3145
	both cylinders	0.8	0.8	3148
Recondition rocker arms after heads are removed	one head	0.7	0.7	3149
	both heads	1.4	1.4	3150
Replace lower rocker arm cover/gasket, or rocker arms and /or shafts/rocker arm support	front cylinder	1.1	1.1	3147
	rear cylinder	1.1	1.1	3152
	both cylinders	1.3	1.3	3153

**Table 1-11. Engine**

ITEM	DESCRIPTION	BRY,BYB	BLY,BZB	LABOR CODE
Replace cylinder o-ring/drain o-ring	one cylinder	1.8	1.8	3161
	rear cylinder	1.8	1.8	3163
	both cylinders	2.2	2.2	3168
Replace crankcase umbrella valve	one	1.0	1.0	3172
	both	1.1	1.1	3174
<b>CYLINDER AND PISTON</b>				
Recondition TOP END - includes disassembly, replacement of piston and sizing cylinder (.005" pistons), replacing piston rings and all items listed under RECONDITION CYLINDER HEAD and assembly.	one piston and cylinder	4.5	4.5	3202
	both pistons and cylinders	5.1	5.1	3203
Recondition TOP END - includes disassembly, replacement of piston and bore and hone, resizing cylinder (.010" oversize or above), replacing piston rings and all items listed under RECONDITION CYLINDER HEAD and assembly.	one piston and cylinder	4.9	4.9	3211
	both pistons and cylinders	5.5	5.5	3212
Recondition TOP END – includes disassembly, deglazing cylinder and replacing rings, or replacing cylinder and piston, all items listed under RECONDITIONING CYLINDER HEAD and assembly.	one piston and cylinder	4.3	4.3	3207
	both pistons and cylinders	4.9	4.9	3208
Replace piston rings – includes deglazing cylinder	one cylinder	2.1	2.1	3206
	both cylinders	2.7	2.7	3216
Replace piston and piston rings – includes removal of cylinder head and cylinder, fitting new piston with rings, resizing cylinder and assembly	one cylinder	2.7	2.7	3221
	both cylinders	3.9	3.9	3231
Replace cylinder and piston	one cylinder	2.0	2.0	3236
	both cylinders	2.5	2.5	3246
Replace upper connecting rod bushing during upper end repair		0.4	0.4	3251
Replace one cylinder stud	cylinder removed	0.1	0.1	3253
Replace all eight cylinder studs	cylinders removed	0.5	0.5	3254
<b>CAM COVER</b>				
Replace lifter cover/gasket or lifter/and, or anti-rotation pin	one or two same cylinder	1.3	1.3	3307
	both on both cylinders	1.5	1.5	3310
Replace push rod, push rod cover and/or O-ring or quad seal	one or two same cylinder	1.3	1.3	3317
	one each cylinder	1.5	1.5	3318
Replace cam cover and/or gasket		0.9	0.9	3325
Replace primary cam chain, sprockets and/or fastener		1.0	1.0	3327
Replace primary cam chain tensioner		1.0	1.0	3328
Replace cam support plate O-rings		2.1	2.1	3335
Replace cam support plate		2.1	2.1	3337
Replace cam support bearing/cams/secondary cam chain/tensioner		2.3	2.3	3338
Replace oil pump and/or O-rings		1.9	1.9	3341
Replace cam bearing crankcase	one bearing	2.1	2.1	3342
	two bearings	2.2	2.2	3343
By pass valve inspection		2.0	2.0	3354
<b>CRANKCASE</b>				
Replace crankcases – California vehicles only	includes remove and install engine	7.8	7.8	3406
Replace crankcases	includes remove and install engine	7.5	7.5	3406

**Table 1-11. Engine**

ITEM	DESCRIPTION	BRY, BYB	BLY, BZB	LABOR CODE
Seal crankcase only		6.5	6.5	3407
Replace flywheels	includes remove and install engine	6.6	6.6	3411
Replace right side main bearing	California vehicles only	6.1	6.1	3412
Replace right side main bearing		6	6.0	3412
Piston jet/O-ring	one	2.0	2.0	3413
	both	2.4	2.4	3414
Check flywheel trueness before assembly or after removal		0.1	0.1	3420
True flywheels after removal	includes piston removal and reinstallation	0.5	0.5	3421
Recondition cylinder heads – head removed (for non-related repairs)	one head	1.0	1.0	3425
	both heads	2.0	2.0	3426
Replace piston rings	cylinders removed (for non-related repairs – deglaze only)	0.3	0.3	3428
Replace pistons	cylinders removed (for non-related repairs – includes resizing cylinders)	1.4	1.4	3430
<b>BALANCER SYSTEM</b>				
Replace balancer shaft/crankcase bearing		7.6	7.6	3450
Replace balancer bearing/support		7.3	7.3	3452
Replace balancer system chain		7.2	7.2	3454
Replace balancer crankshaft sprocket		7.4	7.4	3456
Replace balancer shaft sprocket/nut/spacer		7.1	7.1	3458
Replace balancer bracket assembly		7.2	7.2	3460
Replace balancer blade guide - front, rear, long		6.8	6.8	3462
Replace viton oil interconnect		6.7	6.7	3464
<b>FUEL SYSTEM</b>				
Replace air cleaner backing plate		0.2	0.2	3501
Replace air cleaner cover		0.1	0.1	3502
Replace carburetor*		0.4	0.4	3506
Replace induction module seal*		0.7	0.7	3510
Replace intake manifold and/or gasket	one or both*	0.7	0.7	3511
Replace carburetor float valve or jet, or check float level or seal*		0.5	0.5	3516
Replace accelerator pump		0.5	0.5	3521
Replace enrichener cable*		0.4	0.4	3523
Replace carburetor diaphragm*		0.5	0.5	3524
<b>EVAPORATIVE EMISSIONS SYSTEM</b>				
Replace canister	California vehicles only	0.2	0.2	3527
Replace vapor valve		0.1	0.1	3528
Replace any one hose		0.1	0.1	3529

**Table 1-12. Drive and Clutch**

ITEM	DESCRIPTION	BRY, BYB	BLY, BZB	LABOR CODE
<b>DRIVE</b>				
Adjust primary chain		0.2	0.2	---
Replace primary chain		0.9	0.9	4002
Replace engine sprocket		0.9	0.9	4003
Replace engine sprocket seal		1.1	1.1	4005
Replace primary cover		0.4	0.3	4007
Replace primary cover gasket		0.4	0.3	4009
Replace primary inspection cover and/or O-ring		0.1	0.1	4001
Replace inner primary case and/or mainshaft bearing		2.3	2.3	4008
<b>CLUTCH</b>				
Adjust clutch		0.2	0.2	---
Replace release cable assembly		0.8	0.8	4006
Service the clutch – includes disassembly, cleaning, inspection, repair, assembly, and adjustment		1.3	1.3	4011
Replace clutch release bearing and/or push rod		0.4	0.4	4016
Replace clutch release (ball ramp) and/or cover		0.5	0.6	4018

**Table 1-13. Transmission**

ITEM	DESCRIPTION	BRY, BYB	BLY, BZB	LABOR CODE
<b>TRANSMISSION CASE</b>				
Replace transmission case		5.1	5.1	4304
Replace transmission complete		3.7	3.7	4305
Overhaul transmission	includes disassembly, cleaning, inspection, replacing parts (transmission case in frame), assembly	4.6	4.6	4306
Replace transmission sprocket		2.2	2.2	4309
Replace main drive gear oil seal	in transmission case	2.3	2.3	4311
Replace mainshaft oil seal	in main drive gear	2.2	2.2	4316
Replace side door gasket		2.8	2.8	4321
Replace shifter drum	includes removal and installation	2.2	2.2	4331
Replace shifter arm assembly or springs		3.0	3.0	4336
Replace transmission top cover and/or gasket	includes oil tank and starter removal	2.0	2.0	4341
Replace shifter forks and/or shaft		0.9	0.9	4343
Replace side door bearing	one	3.0	3.0	4348
	both	3.1	3.1	4351
Replace transmission case countershaft bearing		2.9	2.9	4361
Replace main drive gear and/or bearing		3.2	3.2	4366
Replace side cover gasket		0.5	0.5	4368
Replace shift pedal and/or lever	one or both	0.1	0.1	4372
Replace transmission shifter shaft seal		2.2	2.2	4390

**Table 1-14. Electrical - All Models**

ITEM	DESCRIPTION	BRY, BYB	BLY, BZB	LABOR CODE
<b>GENERAL</b>				
Lights and accessories – excluding turn signals		0.3	0.3	5016
<b>CHARGING CIRCUIT</b>				
Diagnose charging system	regulator inspection	0.1	0.1	5306
Diagnose charging system	milliamp draw	0.2	0.2	5308
Diagnose charging system	total current draw	0.2	0.2	5310
Diagnose charging system	open/grounded stator	1.4	1.2	5312
Diagnose system	AC output	1.4	1.2	5314
Diagnose charging system	regulator failure	0.5	0.5	5315
Diagnose charging system	voltage output	0.5	0.5	5316
Diagnose charging system	replace rotor	1.4	1.1	5319
<b>STARTER CIRCUIT</b>				
Starter inoperative	open/shorted/ground motor	1.6	1.5	5817
Starter inoperative	start button	0.9	0.9	5818
Starter inoperative	solenoid clicks; poor starter or battery connections	0.1	0.1	5822
Starter inoperative	solenoid clicks; poor relay or solenoid connections, or bad relay contacts	0.3	0.3	5823
Starter inoperative	solenoid clicks; poor starter to battery connections, ground connections, or bad solenoid contacts	0.5	0.5	5824
Starter inoperative	damaged motor	1.6	1.5	5825
Starter inoperative	relay click; open in relay wiring	0.5	0.5	5827
Starter inoperative	nothing clicks; poor relay ground	0.3	0.3	5828
Starter inoperative	nothing clicks; open in wiring to or from starter button	0.6	0.6	5831
Starter inoperative	nothing clicks; short to voltage	0.4	0.4	5830
Starter inoperative	starter relay	0.2	0.2	5832
Slow starter crank or starter stalls	poor starter to battery connections, ground connections	0.2	0.2	5835
Slow starter crank or starter stalls	binding	0.3	0.3	5836
Starter spins	clutch	1.8	1.7	5837
Starter inoperative	nothing clicks, TSM / TSSM	0.4	0.4	5838
Replace starter solenoid	contacts includes starter motor removal	1.8	1.7	5845
Starter binding		1.1	1.1	5850
Replace starter solenoid coil	includes starter motor removal	1.8	1.7	5860
<b>TURN SIGNALS/SECURITY SYSTEM</b>				
Diagnostic check		0.3	0.3	6725
Diagnostic check		0.4	0.4	6726
Diagnostic check		0.4	0.4	6727
Diagnostic check		0.5	0.5	6728
No security lamp		0.5	0.5	6737
No security lamp		0.4	0.4	6738
No security lamp		0.3	0.3	6739
No security lamp		0.7	0.7	6740
No security lamp		0.5	0.5	6741
No security lamp		0.4	0.4	6742
No security lamp		0.4	0.4	6743

**Table 1-14. Electrical - All Models**

ITEM	DESCRIPTION	BRY,BYB	BLY,BZB	LABOR CODE
No security lamp		0.3	0.3	6744
No security lamp		0.4	0.4	6745
Security lamp on continuously		0.5	0.5	6750
Security lamp on continuously		0.3	0.3	6751
Security lamp on continuously		0.3	0.3	6752
Fob signal weak		0.1	0.1	6755
Fob signal weak		0.1	0.1	6756
Fob signal weak		0.6	0.6	6757
Turn signal error 1A		0.5	0.5	6760
Turn signal error 1A		1.1	1.1	6761
Turn signal error 1A		0.2	0.2	6762
Turn signal error 1A		0.3	0.3	6763
Turn signal error 1A		0.7	0.7	6764
Turn signal error 1B		0.3	0.3	6767
Turn signal error 1B		0.3	0.3	6768
Turn signal error 1B		0.4	0.4	6769
Turn signal error 1C		0.8	0.8	6771
Turn signal error 2A		1.1	1.1	6773
Turn signal error 2B		0.6	0.6	6777
Turn signal error 2B		0.2	0.2	6778
Turn signal error 2B		0.3	0.3	6779
Turn signal error 2B		0.6	0.6	6780
Turn signal error 2C		0.5	0.5	6784
Turn signal error 2C		0.5	0.5	6785
Turn signal error 2C		0.7	0.7	6786
Turn signal error 3A		0.3	0.3	6790
Turn signal error 3A		0.4	0.4	6791
Turn signal error 3A		0.5	0.5	6792
Turn signal error 3A		0.3	0.3	6793
Turn signal error 3B		0.1	0.1	6796
Turn signal error 3B		0.3	0.3	6797
Turn signal error 3B		0.4	0.4	6798
Turn signal error 3B		0.3	0.3	6799
Turn signal error 3B		0.4	0.4	6800
Turn signal error 3C		0.4	0.4	6805
Turn signal error 3C		0.5	0.5	6806
Turn signal error 3C		0.3	0.3	6807
Turn signal error 3C		0.5	0.5	6808
Turn signal error 3D		0.7	0.7	6810
Turn signal error 3D		1.1	1.1	6811
Turn signal error 3D		0.7	0.7	6812
Turn signal error 3D		0.7	0.7	6813
Turn signal error 3D		0.7	0.7	6814
Turn signal error 3D		1.1	1.1	6815
Turn signal error 3D		0.8	0.8	6816
Turn signal error 4A		0.2	0.2	6820
Turn signal error 4A		0.2	0.2	6821



**Table 1-14. Electrical - All Models**

ITEM	DESCRIPTION	BRY, BYB	BLY, BZB	LABOR CODE
Turn signal error 4A		0.6	0.6	6822
Turn signal error 4A		0.5	0.5	6823
Turn signal error 4A		0.9	0.9	6824
Ignition enable output high		0.3	0.3	6827
Ignition enable output high		0.4	0.4	6828
Alarm output		0.3	0.3	6830
Alarm output		0.4	0.4	6831
Alarm output		0.4	0.4	6832
Alarm output		0.6	0.6	6833
Alarm output		0.3	0.3	6834
Alarm output		0.3	0.3	6835
Starter output high		0.3	0.3	6840
Starter output high		0.2	0.2	6841
Starter output high		0.4	0.4	6842
Accelerometer fault		0.4	0.4	6845
Loss of ECM serial data		0.2	0.2	6850
Loss of ECM serial data		0.7	0.7	6851
Loss of ECM serial data		0.6	0.6	6852
Loss of ECM serial data		0.3	0.3	6853
Loss of ECM serial data		0.3	0.3	6854
<b>INSTRUMENTS</b>				
Replace speedometer	cosmetics only	0.1	0.1	6003
Replace console		0.2	0.2	6012
<b>ELECTRONIC SPEEDOMETER</b>				
Diagnose inoperative, inaccurate or erratic speedometer	switch	0.3	0.3	6001
Diagnose inoperative, inaccurate or erratic speedometer		0.1	0.1	6002
Diagnose inoperative, inaccurate or erratic speedometer		0.4	0.4	6004
Diagnose inoperative, inaccurate or erratic speedometer		0.4	0.3	6006
Diagnose inoperative, inaccurate or erratic speedometer		0.7	0.6	6008
Diagnose inoperative, inaccurate or erratic speedometer	sensor	0.7	0.6	6010
Diagnose inoperative, inaccurate or erratic speedometer	open	0.6	0.5	6013
Diagnose inoperative, inaccurate or erratic speedometer	LED failure	0.2	0.2	6014
Diagnose inoperative, inaccurate or erratic speedometer	inoperable	0.2	0.2	6020
Diagnose inoperative, inaccurate or erratic speedometer	internal	0.4	0.4	6022
Diagnose inoperative, inaccurate or erratic speedometer	power/ground	0.9	0.8	6024
Diagnose inoperative, inaccurate or erratic speedometer	debris on sensor	0.8	0.7	6029
Diagnose inoperative, inaccurate or erratic speedometer	grounded circuit	0.3	0.3	6031

**Table 1-14. Electrical - All Models**

ITEM	DESCRIPTION	BRY,BYB	BLY,BZB	LABOR CODE
Diagnose inoperative, inaccurate or erratic speedometer	fuse	0.1	0.1	6032
Replace speedo reset boot		0.1	0.1	6043
Replace connector anchor		0.1	0.1	5023
Replace main wiring harness		2.1	2.0	5026
Replace any single wire	light circuit	0.2	0.2	5039
	accessory circuit	0.2	0.2	5043
Replace electrical box		0.2	0.2	5047
Repair/diagnose indicator lamp wiring		0.3	0.3	5048
Replace circuit breaker or fuse		0.2	0.2	5145
Replace fuse block		0.4	0.3	5196
<b>SWITCHES</b>				
Replace ignition switch		0.2	0.2	5129
Replace rear stoplight switch	includes filling/bleeding brakes	0.4	0.4	5141
Replace transmission neutral switch	includes diagnosis and loosening oil tank	0.6	0.6	5157
Replace oil pressure switch	includes diagnosis	0.3	0.3	5161
Replace passing lamp switch		0.4	---	5167
Replace left upper handlebar switch		0.5	0.5	5171
Replace right upper handlebar switch		0.7	0.7	5173
Replace front brake light switch		0.6	0.6	5175
Replace left upper handlebar switch housing		0.2	0.2	5177
Replace left lower handlebar switch housing		0.2	0.2	5178
Replace right upper handlebar switch housing		0.2	0.2	5179
Replace right lower handlebar switch housing		0.4	0.4	5180
<b>LIGHTS</b>				
Replace headlight bracket	includes adjustment	0.2	0.2	5181
Replace headlight	includes diagnosis	0.1	0.1	5185
Replace headlight housing	includes adjustment	0.5	0.5	5189
Replace indicator lamp assembly		0.2	0.2	5191
Replace taillight light bulb or lens	includes diagnosis	0.1	0.1	5197
Replace tail lamp assembly or circuit board		0.6	0.2	5215
Replace turn signal light assembly	front	0.5	0.5	5201
	rear	0.3	0.3	5205
Replace front fender lamp assembly		0.7	---	5225
Replace passing lamp bulb	includes diagnosis	0.1	---	5227
Replace fender tip lamp bulb	includes diagnosis	0.1	---	5228
Replace passing lamp		0.4	---	5230
Replace passing lamp bracket		0.6	---	5232
<b>BATTERY/HORN</b>				
Replace the battery		0.3	0.3	5705
Replace horn and/or bracket		0.2	0.1	5765
<b>ACCESSORIES</b>				
Replace tank trim		0.1	0.1	6507
Replace mirror		0.1	0.1	6513
Replace one saddlebag		0.1	---	6518
Replace one saddlebag bracket		0.2	---	6519

**Table 1-15. Electrical - Carbureted**

ITEM	DESCRIPTION	BRY	BLY	LABOR CODE
NOTE: The diagnostic/replacement operations and times listed on the following pages have been created for your use. The codes must be used in conjunction with the repair procedures listed in the Softail Service Manual, Part No. 99482-02 and Electrical Diagnostics Manual, Part No. 99498-02. Remember to use the same four digit code selected for your labor code as your condition code when filing a warranty claim.				
Diagnostic check		0.2	0.2	7110
Diagnostic check		0.3	0.3	7115
Diagnostic check		0.4	0.4	7120
Diagnostic check		0.4	0.3	7125
Chart A-1	No check engine lamp	0.4	0.3	7130
	No check engine lamp	0.4	0.3	7143
	No check engine lamp	0.7	0.6	7146
Chart A-2	Check engine lamp on continuously	0.4	0.3	7148
	Check engine lamp on continuously	0.2	0.2	7150
	Check engine lamp on continuously	0.7	0.6	7155
Chart A-3	Engine cranks but will not start	0.2	0.2	7180
	Engine cranks but will not start	0.3	0.3	7185
	Engine cranks but will not start	0.6	0.6	7195
	Engine cranks but will not start	0.5	0.5	7210
	Engine cranks but will not start	0.5	0.5	7215
	Engine cranks but will not start	0.5	0.5	7225
	Engine cranks but will not start	0.3	0.3	7226
	Engine cranks but will not start	0.3	0.3	7227
	Engine cranks but will not start	0.3	0.3	7228
	Engine cranks but will not start	0.8	0.8	7230
	Engine cranks but will not start	0.5	0.5	7231
	Engine cranks but will not start	0.5	0.5	7235
	Engine cranks but will not start	0.5	0.5	7250
	Engine cranks but will not start	1.3	1.3	7255
Chart A-4	No spark, no check engine lamp	0.2	0.2	7270
	No spark, no check engine lamp	0.8	0.8	7285
	No spark, no check engine lamp	0.8	0.8	7291
	No spark, no check engine lamp	0.9	0.9	7295
	No spark, no check engine lamp	0.2	0.2	7305
	No spark, no check engine lamp	0.4	0.4	7310
Chart C	Misfire	0.2	0.2	7520
	Misfire	0.3	0.3	7525
	Misfire	0.3	0.3	7535
	Misfire	0.8	0.8	7540
	Misfire	0.6	0.6	7541

**Table 1-15. Electrical - Carbureted**

ITEM	DESCRIPTION	BRY	BLY	LABOR CODE
Code-12	Map sensor	0.9	0.9	7620
	Map sensor	2.2	2.2	7625
	Map sensor	0.8	0.8	7630
	Map sensor	0.8	0.7	7635
	Map sensor	0.8	0.7	7640
	Map sensor	0.6	0.5	7641
	Map sensor	0.8	0.7	7642
	Map sensor	0.8	0.7	7645
	Map sensor	0.8	0.7	7650
	Map sensor	0.8	0.7	7655
Code-16	Battery voltage test	0.4	0.4	7770
	Battery voltage test	0.5	0.5	7775
	Battery voltage test	0.9	0.9	7776
	Battery voltage test	1.0	0.9	7779
	Battery voltage test	0.9	0.9	7780
	Battery voltage test	1.4	1.4	7781
	Battery voltage test	1.0	1.0	7782
	Battery voltage test	1.0	0.9	7783
	Battery voltage test	1.2	1.1	7784
Code-24 & 25	Ignition coil	0.3	0.3	7855
	Ignition coil	0.3	0.3	7856
	Ignition coil	0.4	0.4	7860
	Ignition coil	0.6	0.6	7865
	Ignition coil	0.6	0.6	7870
	Ignition coil	0.3	0.3	7875
Code-41	Crank position sensor	0.5	0.5	7980
	Crank position sensor	0.7	0.6	7981
	Crank position sensor	0.6	0.6	7982
	Crank position sensor	0.8	0.8	7983
	Crank position sensor	0.8	0.7	7984
	Crank position sensor	0.7	0.6	7985
	Crank position sensor	0.6	0.5	7986
	Crank position sensor	0.6	0.5	7987
Code-44	Bank angle sensor	0.3	0.2	7971
	Bank angle sensor	0.4	0.3	7972
	Bank angle sensor	0.5	0.4	7973
	Bank angle sensor	0.4	0.3	7974
	Bank angle sensor	0.5	0.4	7975
	Bank angle sensor	0.4	0.3	7976
Codes-52, 53, 54, and 55	Ignition module failure	0.2	0.2	7913

**Table 1-16. Electrical - Fuel Injected**

ITEM	DESCRIPTION	BYB	BZB	LABOR CODE
NOTE: The diagnostic/replacement operations and times listed on the following pages have been created for your use. The codes must be used in conjunction with the repair procedures listed in the Softail Service Manual, Part No. 99482-02 and Electrical Diagnostics Manual, Part No. 99498-02. Remember to use the same four digit code selected for your labor code as your condition code when filing a warranty claim.				
Diagnostic check		0.2	0.2	7110
Diagnostic check		0.4	0.4	7115
Diagnostic check		0.4	0.4	7120
Diagnostic check		0.8	0.8	7125
Diagnostic check		0.8	0.8	7126
No check engine lamp/No ECM Power		0.5	0.5	6013
No check engine lamp/No ECM Power		0.6	0.6	7130
No check engine lamp/No ECM Power		0.4	0.4	7133
No check engine lamp/No ECM Power		0.4	0.4	7141
No check engine lamp/No ECM Power		0.1	0.1	7142
No check engine lamp/No ECM Power		0.5	0.5	7143
No check engine lamp/No ECM Power		0.4	0.4	7146
No check engine lamp/No ECM Power		0.5	0.5	7270
No check engine lamp/No ECM Power		0.6	0.6	7285
No check engine lamp/No ECM Power		0.7	0.7	7286
No check engine lamp/No ECM Power		0.7	0.7	7287
No check engine lamp/No ECM Power		0.7	0.7	7288
No check engine lamp/No ECM Power		0.7	0.7	7289
No check engine lamp/No ECM Power		0.4	0.4	7290
No check engine lamp/No ECM Power		1.4	1.4	7295
No check engine lamp/No ECM Power		0.6	0.6	7301
No check engine lamp/No ECM Power		0.1	0.1	7302
No check engine lamp/No ECM Power		0.7	0.7	7303
No check engine lamp/No ECM Power		0.4	0.4	7304
No check engine lamp/No ECM Power		0.6	0.6	7305
No check engine lamp/No ECM Power		0.5	0.5	7306
No check engine lamp/No ECM Power		0.7	0.7	7307
No check engine lamp/No ECM Power		0.6	0.6	7308
No check engine lamp/No ECM Power		0.6	0.6	7309
No check engine lamp/No ECM Power		0.6	0.6	7310
No check engine lamp/No ECM Power		0.3	0.3	7320
Check engine lamp on continuously		0.2	0.2	7148
Check engine lamp on continuously		0.7	0.7	7150
Check engine lamp on continuously		0.3	0.3	7155
Check engine lamp on continuously		0.2	0.2	7156
Check engine lamp on continuously		0.1	0.1	7157
Engine cranks but will not start		0.6	0.6	7185
Engine cranks but will not start		0.5	0.5	7195
Engine cranks but will not start		0.5	0.5	7210
Engine cranks but will not start		0.4	0.4	7215
Engine cranks but will not start		0.5	0.5	7223
Engine cranks but will not start		0.4	0.4	7224
Engine cranks but will not start		0.5	0.5	7225
Engine cranks but will not start		0.8	0.8	7226

**Table 1-16. Electrical - Fuel Injected**

ITEM	DESCRIPTION	BYB	BZB	LABOR CODE
Engine cranks but will not start		0.7	0.7	7227
Engine cranks but will not start		0.5	0.5	7228
Engine cranks but will not start		0.5	0.5	7230
Engine cranks but will not start		0.6	0.6	7231
Engine cranks but will not start		0.5	0.5	7235
Engine cranks but will not start		0.9	0.9	7251
Fuel system electrical test		0.2	0.2	7335
Fuel system electrical test		0.7	0.7	7336
Engine cranks but will not start; Fuel system electrical test		0.6	0.6	7340
Engine cranks but will not start; Fuel system electrical test		0.5	0.5	7355
Fuel system electrical test		0.3	0.3	7360
Fuel system electrical test		0.8	0.8	7370
Engine cranks but will not start; Fuel system electrical test		0.4	0.4	7380
Fuel system electrical test		0.3	0.3	7385
Engine cranks but will not start; Fuel system electrical test		0.9	0.9	7415
Fuel system electrical test		0.3	0.3	7440
Engine cranks but will not start; Fuel system electrical test		0.4	0.4	7441
Fuel system electrical test		0.2	0.2	7445
Engine cranks but will not start; Fuel system electrical test		0.4	0.4	7450
Engine cranks but will not start; Fuel system electrical test		0.7	0.7	7992
Engine cranks but will not start; Fuel system electrical test		0.4	0.4	7520
Starts, then stalls		0.7	0.7	7992
Starts, then stalls		0.6	0.6	7993
Starts, then stalls		0.3	0.3	7994
Starts, then stalls		0.3	0.3	7995
Starts, then stalls		0.3	0.3	7996
Starts, then stalls		0.5	0.5	7997
Starts, then stalls		0.6	0.6	7998
Starts, then stalls		0.5	0.5	7999
Starts, then stalls; no DTCs		0.4	0.4	7127
Starts, then stalls; no DTCs		0.3	0.3	7128
Combustion absent		0.1	0.1	7537
Combustion absent		0.2	0.2	7538
Combustion absent		0.2	0.2	7539
Combustion absent		0.2	0.2	7543
Combustion absent		0.4	0.4	7544
Combustion absent		0.2	0.2	7546
Combustion absent		0.4	0.4	7547
Combustion absent		0.1	0.1	7548
Combustion absent		0.1	0.1	7549
Fuel pressure test		0.4	0.4	7455

**Table 1-16. Electrical - Fuel Injected**

ITEM	DESCRIPTION	BYB	BZB	LABOR CODE
Fuel pressure test		0.7	0.7	7465
Fuel pressure test		0.7	0.7	7470
Fuel pressure test		0.7	0.7	7480
Idle air control		1.1	1.1	7486
Idle air control		0.5	0.5	7490
Idle air control		0.5	0.5	7495
Idle air control		0.6	0.6	7505
Idle air control		0.5	0.5	7510
Idle air control		0.4	0.4	7515
Idle air control		0.6	0.6	7516
Misfire at idle or under load		0.4	0.4	7520
Misfire at idle or under load		0.2	0.2	7525
Misfire at idle or under load		0.4	0.4	7535
Misfire at idle or under load		0.3	0.3	7540
Misfire at idle or under load		0.2	0.2	7545
Misfire at idle or under load		0.4	0.4	7550
Misfire at idle or under load		0.3	0.3	7134
Misfire at idle or under load		0.3	0.3	7136
Misfire at idle or under load		0.6	0.6	7137
Misfire at idle or under load		0.7	0.7	7138
Misfire at idle or under load		0.6	0.6	7139
Misfire at idle or under load		0.9	0.9	7144
Misfire at idle or under load		0.5	0.5	7147
Misfire at idle or under load		0.9	0.9	7149
Misfire at idle or under load		0.6	0.6	7152
Rough or rolling idle		0.3	0.3	7134
Rough or rolling idle		0.3	0.3	7136
Rough or rolling idle		0.6	0.6	7137
Rough or rolling idle		0.7	0.7	7138
Rough or rolling idle		0.6	0.6	7139
Rough or rolling idle		0.9	0.9	7144
Rough or rolling idle		0.5	0.5	7147
Rough or rolling idle		0.9	0.9	7149
Rough or rolling idle		0.6	0.6	7152
Emits black smoke		2.0	2.0	7596
Emits black smoke		2.0	2.0	7597
Emits black smoke		2.0	2.0	7598
Emits black smoke		2.2	2.2	7601
Throttle position sensor		0.5	0.5	7555
Throttle position sensor		0.5	0.5	7560
Throttle position sensor		0.6	0.6	7565
Throttle position sensor		0.4	0.4	7570
Throttle position sensor		0.5	0.5	7575
Throttle position sensor		0.5	0.5	7580
Throttle position sensor		0.5	0.5	7585
Throttle position sensor		0.7	0.7	7590
Throttle position sensor		0.3	0.3	7595

**Table 1-16. Electrical - Fuel Injected**

ITEM	DESCRIPTION	BYB	BZB	LABOR CODE
Throttle position sensor		0.7	0.7	7605
Throttle position sensor		0.5	0.5	7610
Throttle position sensor		0.8	0.8	7615
MAP sensor		0.8	0.8	7620
MAP sensor		1.2	1.2	7625
MAP sensor		0.3	0.3	7630
MAP sensor		0.6	0.6	7635
MAP sensor		0.6	0.6	7640
MAP sensor		0.6	0.6	7641
MAP sensor		0.5	0.5	7642
MAP sensor		0.6	0.6	7645
MAP sensor		0.6	0.6	7650
MAP sensor		0.7	0.7	7655
Engine temperature sensor		0.4	0.4	7660
Engine temperature sensor		0.9	0.9	7665
Engine temperature sensor		0.2	0.2	7670
Engine temperature sensor		0.3	0.3	7675
Engine temperature sensor		0.4	0.4	7680
Engine temperature sensor		0.4	0.4	7685
Engine temperature sensor		0.3	0.3	7690
Engine temperature sensor		0.5	0.5	7695
Engine temperature sensor		0.3	0.3	7705
Engine temperature sensor		0.4	0.4	7710
Intake air temperature sensor		0.6	0.6	7715
Intake air temperature sensor		1.4	1.4	7720
Intake air temperature sensor		0.4	0.4	7725
Intake air temperature sensor		0.4	0.4	7730
Intake air temperature sensor		0.9	0.9	7735
Intake air temperature sensor		0.9	0.9	7740
Intake air temperature sensor		0.4	0.4	7745
Intake air temperature sensor		0.3	0.3	7750
Intake air temperature sensor		0.4	0.4	7755
Intake air temperature sensor		0.4	0.4	7760
Battery voltage test		0.4	0.4	7770
Battery voltage test		0.5	0.5	7775
Battery voltage test		0.9	0.9	7776
Battery voltage test		1.0	0.9	7779
Battery voltage test		0.9	0.9	7780
Battery voltage test		1.4	1.4	7781
Battery voltage test		1.0	1.0	7782
Battery voltage test		1.0	0.9	7783
Battery voltage test		1.2	1.1	7784
Fuel injectors		0.1	0.1	7785
Fuel injectors		0.6	0.6	7790
Fuel injectors		0.7	0.7	7795
Fuel injectors		0.6	0.6	7805
Fuel injectors		0.6	0.6	7808



**Table 1-16. Electrical - Fuel Injected**

ITEM	DESCRIPTION	BYB	BZB	LABOR CODE
Fuel injectors		0.5	0.5	7809
Fuel injectors		0.6	0.6	7815
Fuel injectors		0.6	0.6	7820
Fuel injectors		0.7	0.7	7825
Fuel injectors		0.6	0.6	7830
Fuel injectors		0.6	0.6	7835
Fuel injectors		0.6	0.6	7840
Fuel injectors		0.4	0.4	7845
Fuel injectors		0.7	0.7	7850
System relay		0.2	0.2	7887
System relay		0.3	0.3	7888
System relay		0.4	0.4	7889
System relay		0.3	0.3	7899
System relay		0.3	0.3	7900
System relay		0.4	0.4	7901
System relay		0.4	0.4	7902
System relay		0.3	0.3	7903
System relay		0.2	0.2	7904
System relay		0.4	0.4	7906
System relay		0.7	0.7	7907
System relay		0.3	0.3	7908
System relay		0.2	0.2	7909
System relay		0.3	0.3	7911
System relay		0.4	0.4	7912
Ignition coil test		0.5	0.5	7853
Ignition coil test		0.6	0.6	7854
Ignition coil test		0.4	0.4	7856
Ignition coil test		0.4	0.4	7860
Ignition coil test		0.3	0.3	7865
Ignition coil test		0.5	0.5	7870
Ignition coil test		0.4	0.4	7875
Ignition coil test		0.2	0.2	7880
Crank position sensor		0.5	0.5	7980
Crank position sensor		0.4	0.4	7981
Crank position sensor		0.3	0.3	7982
Crank position sensor		0.5	0.5	7983
Crank position sensor		0.2	0.2	7984
Crank position sensor		0.4	0.4	7985
Crank position sensor		0.5	0.5	7986
Crank position sensor		0.4	0.4	7987
ECM failure		0.3	0.3	7913
Vehicle speed signal		0.4	0.4	7954
Vehicle speed signal		0.4	0.4	7956
Vehicle speed signal		0.5	0.5	7957
Vehicle speed signal		0.3	0.3	7958
Vehicle speed signal		0.4	0.4	7959
Vehicle speed signal		0.3	0.3	7961

**Table 1-16. Electrical - Fuel Injected**

ITEM	DESCRIPTION	BYB	BZB	LABOR CODE
Vehicle speed signal		0.4	0.4	7962
Vehicle speed signal		0.4	0.4	7963
Vehicle speed signal		0.4	0.4	7964
Password problem		0.4	0.4	6701
Password problem		0.4	0.4	6702
Password problem		0.6	0.6	6703
Password problem		0.4	0.4	6704
Password problem		0.5	0.5	6705
Password problem		0.3	0.3	6706
Password problem		0.6	0.6	6707
Password problem		0.8	0.8	6708
Loss of TSM / TSSM serial data		0.4	0.4	6715
Loss of TSM / TSSM serial data		0.6	0.6	6716
Loss of TSM / TSSM serial data		0.6	0.6	6717
Loss of TSM / TSSM serial data		0.5	0.5	6718
Loss of TSM / TSSM serial data		0.4	0.4	6719

# 2002 SPORTSTER MODELS

**Table 2-1. Service**

ITEM	DESCRIPTION	CAM, CEM, CKM	CGP, CJM	CAP	CHP	LABOR CODE
<b>GENERAL</b>						
Set-up and pre-delivery		1.4	1.4	1.4	1.6	---
1,000 mile service		2.1	2.1	2.1	2.1	---
<b>REGULAR</b>						
2,500 mile maintenance		0.5	0.5	0.5	0.5	---
5,000 mile maintenance		2.6	2.6	2.6	2.6	---
7,500 mile maintenance		0.5	0.5	0.5	0.5	---
10,000 mile maintenance		3.8	3.8	3.8	4.2	---

**Table 2-2. Chassis**

ITEM	DESCRIPTION	CAM, CEM, CKM	CGP, CJM	CAP	CHP	LABOR CODE
<b>DRIVE</b>						
Adjust secondary belt		0.2	0.2	0.2	0.2	---
Replace secondary belt		0.7	0.7	0.7	0.7	2011
Replace rear wheel sprocket		0.8	0.8	0.8	0.8	2021
Replace transmission sprocket cover		0.6	0.6	0.6	0.6	2044
<b>WHEELS</b>						
Replace rim, hub or spokes	front	2.2	2.2	2.2	2.2	2116
	rear	2.3	---	2.3	2.3	2121
Replace wheel bearings	front	0.5	0.5	0.5	0.5	2136
	rear	0.6	0.6	0.6	0.6	2141
Replace tire – includes balancing	front	0.5	0.5	0.5	0.5	2106
	rear	0.6	0.6	0.6	0.6	2111
Replace wheel assembly - includes disc and sprocket exchange and balancing	front	0.8	0.8	0.8	0.8	2113
	rear	0.9	0.9	0.9	0.9	2114
<b>HANDLEBARS</b>						
Replace handlebars		0.5	0.8	0.5	0.5	2206
Replace clutch hand lever		0.1	0.1	0.1	0.1	2221
Replace clutch hand lever bracket		0.2	0.2	0.2	0.2	2226
Replace throttle control		0.4	0.4	0.4	0.4	2231
Replace and adjust throttle control cables	one or both	0.6	0.6	0.6	0.6	2241
Replace both rubber handlebar mounts		0.5	0.5	0.5	0.5	2246
Replace rubber handlebar grip		0.2	0.2	0.2	0.2	2251
Replace handlebar riser	one or both	0.4	0.6	0.4	0.4	2253

All times listed in hours.

## V.I.N. CODES

CAP	XLH 1200	CHP	XLH 1200 SPORT
CAM	XLH 883	CKM	883R
CEM	XLH 883 HUGGER	CJM	XLH 883 CUSTOM
CGP	XLH 1200 CUSTOM		

**Table 2-2. Chassis**

ITEM	DESCRIPTION	CAM, CEM, CKM	CGP, CJM	CAP	CHP	LABOR CODE
Replace handlebar clamp	one or both	0.1	0.1	0.1	0.1	2254
Replace handlebar riser cover	front	---	0.1	---	---	2256
	rear	---	0.2	---	---	2258
<b>FRAME/SWING ARM/FRONT FORK</b>						
Replace frame – includes removal and installation of all accessories and motorcycle components		10.0	10.0	10.0	10.0	2306
Replace footpegs		0.1	0.1	0.1	0.1	2307
Replace right side footpeg mount		0.6	0.4	0.6	0.6	2310
Replace left side footpeg mount		0.1	0.4	0.1	0.1	2312
Replace front fork assembly		2.2	2.4	2.2	2.2	2311
Replace lower fork bracket and stem		2.3	2.5	2.3	2.3	2316
Replace steering head cups and bearings, including bearing adjustment		2.2	2.4	2.2	2.2	2321
Replace upper fork bracket		0.6	0.8	0.6	0.6	2318
Adjust steering head bearings		0.4	0.6	0.4	0.4	---
Change front fork oil		0.5	0.5	0.5	1.2	---
Service or replace fork slider and/or seal – includes removal, disassembly, cleaning, inspection, replacing parts, servicing damper tube, replacing bushings, assembly and installation	one side	0.7	0.7	0.7	1.5	2341
	both sides	1.1	1.1	1.1	2.2	2342
Replace fork side	one side	0.5	0.5	0.5	0.5	2346
	both sides	0.8	0.8	0.8	0.8	2351
Replace fork tube	one side	0.6	0.6	0.6	1.0	2356
	both sides	0.9	0.9	0.9	1.6	2361
Replace rear swing arm and/or bearings		2.0	2.0	2.0	2.0	2366
Replace rear shock absorber assembly	one side	0.2	0.2	0.2	0.2	2371
	both sides	0.4	0.4	0.4	0.4	2376
Replace rear shock absorber component(s)	one side	0.3	0.3	0.3	0.3	2381
	both sides	0.6	0.6	0.6	0.6	2386
Replace jiffy stand	spring and/or stand	0.2	0.2	0.2	0.2	2396
	rubber bumper	0.1	0.1	0.1	0.1	2399
Replace hydraulic brake line – includes filling/bleeding brakes	front	0.6	0.6	0.6	0.7	2404
	front (CKM only)	0.7	---	---	---	2404
	rear	0.6	0.6	0.6	0.6	2411
Replace brake pads	front - each caliper	0.1	0.1	0.1	0.1	2416
	rear	0.2	0.2	0.2	0.2	2421
Replace brake caliper – includes filling/bleeding brakes	front - each caliper	0.4	0.4	0.4	0.4	2426
	rear	0.6	0.6	0.6	0.6	2431
Replace brake disc	front	0.3	0.3	0.3	0.3	2436
	both	---	---	---	0.4	2437
	both (CKM only)	0.4	---	---	---	2437
	rear	0.8	0.8	0.8	0.8	2441
Bleed brake caliper – front or rear caliper		0.2	0.2	0.2	0.2	2446

**Table 2-2. Chassis**

ITEM	DESCRIPTION	CAM, CEM, CKM	CGP, CJM	CAP	CHP	LABOR CODE
Overhaul brake caliper – includes filling/bleeding brakes	front - each caliper	0.6	0.6	0.6	0.6	2451
	rear	0.8	0.8	0.8	0.8	2456
Replace master cylinder assembly – includes filling/bleeding brakes	front	0.4	0.4	0.4	0.4	2461
	rear	0.5	0.5	0.5	0.5	2466
Rebuild master cylinder assembly – includes filling/bleeding brakes	front	0.6	0.6	0.6	0.6	2471
	rear	0.7	0.7	0.7	0.7	2476
Replace rear brake pedal		0.5	0.5	0.5	0.5	2492
Replace front brake lever		0.1	0.1	0.1	0.1	2494
<b>SEATS/FENDERS/TANKS</b>						
Replace seat		0.1	0.1	0.1	0.1	2506
Replace fender	front	0.3	0.3	0.3	0.3	2526
	rear	1.3	1.3	1.3	1.3	2531
Replace rear fender support	one	0.3	0.3	0.3	0.3	2536
	both	0.6	0.6	0.6	0.6	2539
Replace fuel tank assembly		0.3	0.3	0.3	0.3	2541
Replace fuel tank valve assembly		0.2	0.2	0.2	0.2	2561
Replace oil tank		0.7	0.7	0.7	0.7	2566
Replace oil tank lines	feed line-oil tank to pump	0.7	0.7	0.7	0.7	2571
	feed line oil pump to filter	0.7	0.7	0.7	0.7	2577
	return line oil pump to tank	0.7	0.7	0.7	0.7	2578
	vent line	0.7	0.7	0.7	0.7	2581
Replace oil filter (other than normal maintenance)		0.1	0.1	0.1	0.1	2582
Replace passenger seat strap		---	0.1	0.1	0.1	2588
<b>BELT GUARDS</b>						
Replace rear belt guard		0.1	0.1	0.1	0.1	2616
Replace debris deflector		0.1	0.1	0.1	0.1	2617
<b>EXHAUST SYSTEM</b>						
Replace complete exhaust system		0.4	0.4	0.4	0.4	2621
Replace any exhaust pipe cover		0.1	0.1	0.1	0.1	2661
Replace one muffler		0.1	0.1	0.1	0.1	2665

**Table 2-3. Engine**

ITEM	DESCRIPTION	CAM, CEM, CKM	CGP, CJM	CAP	CHP	LABOR CODE
<b>GENERAL</b>						
Remove and install engine		3.5	3.5	3.5	3.5	3006
Remove and install engine	California vehicles only	3.6	3.6	3.6	3.6	3004
<b>CYLINDER HEAD</b>						
Recondition cylinder head – includes removal of head and gasket, remove carbon, service valve guides, grind valves and seats, test springs and install head and gaskets.	front cylinder head	3.8	3.8	3.8	3.8	3101
	rear cylinder head	3.8	3.8	3.8	3.8	3103
	both cylinder heads	5.7	5.7	5.7	5.7	3104
Replace cylinder head – includes pushrod gauging	one cylinder head	2.8	2.8	2.8	2.8	3106
	both cylinder heads	3.9	3.9	3.9	3.9	3108

**Table 2-3. Engine**

ITEM	DESCRIPTION	CAM, CEM, CKM	CGP, CJM	CAP	CHP	LABOR CODE
Replace valve seal or spring after head removal	one seal or spring (intake or exhaust)	0.1	0.1	0.1	0.1	3131
	both seals or springs (intake or exhaust)	0.2	0.2	0.2	0.2	3132
Replace cylinder head gasket	front cylinder	2.0	2.0	2.0	2.0	3140
	rear cylinder	2.0	2.0	2.0	2.0	3142
	both cylinders	2.5	2.5	2.5	2.5	3143
Replace rocker arm covers and/or gas-kets	front cylinder	0.9	0.9	0.9	0.9	3144
	rear cylinder	0.9	0.9	0.9	0.9	3145
	both cylinders	1.1	1.1	1.1	1.1	3148
Replace lower rocker cover/gasket, or rocker arms and/or shafts	front cylinder	1.0	1.0	1.0	1.0	3147
	rear cylinder	1.0	1.0	1.0	1.0	3152
	both cylinders	1.6	1.6	1.6	1.6	3153
Recondition rocker arms after heads are removed	one head	0.5	0.5	0.5	0.5	3149
	both heads	1.0	1.0	1.0	1.0	3150
Replace cylinder base gasket	front cylinder	2.6	2.6	2.6	2.6	3161
	rear cylinder	2.6	2.6	2.6	2.6	3163
	both cylinders	3.5	3.5	3.5	3.5	3168
Replace crankcase umbrella valve	one	0.2	0.2	0.2	0.2	3172
	both	0.4	0.4	0.4	0.4	3174
<b>CYLINDER AND PISTON</b>						
Replace piston and resize cylinder – includes disassembly, replacing piston, and sizing cylinder, all items listed under RECONDITION CYLINDER HEAD and assembly – includes gauging pushrods.	one piston and cylinder	5.2	5.2	5.2	5.2	3202
	both pistons and cylinders	7.9	7.9	7.9	7.9	3203
Recondition cylinder and piston – includes disassembly, deglazing cylinder and replacing rings, or replacing cylinder and piston, all items listed under RECONDITION CYLINDER HEAD and assembly – includes pushrod gauging.	one piston and cylinder	4.5	4.5	4.5	4.5	3207
	both pistons and cylinders	7.1	7.1	7.1	7.1	3208
Replace piston rings – includes deglazing cylinder	one cylinder	3.2	3.2	3.2	3.2	3206
	both cylinders	4.1	4.1	4.1	4.1	3216
Replace piston and piston rings – includes removal of cylinder head and cylinder, fitting new piston with rings, resizing cylinder and assembly	one cylinder	3.4	3.4	3.4	3.4	3221
	both cylinders	5.3	5.3	5.3	5.3	3231
Replace cylinder and piston assembly	one cylinder	2.4	2.4	2.4	2.4	3236
	both cylinders	3.1	3.1	3.1	3.1	3246
Replace upper connecting rod bushing during upper end repair		0.4	0.4	0.4	0.4	3251
Replace one cylinder stud	cylinder removed	0.1	0.1	0.1	0.1	3253
<b>GEARCASE</b>						
Replace tappet	one	1.2	1.2	1.2	1.2	3306
	two – same cylinder	1.3	1.3	1.3	1.3	3311
	two – one each cylinder	2.1	2.1	2.1	2.1	3313
Replace push rod, push rod cover and/or O-ring	one	1.1	1.1	1.1	1.1	3316
	two – same cylinder	1.2	1.2	1.2	1.2	3317
	two – one each cylinder	1.8	1.8	1.8	1.8	3318

**Table 2-3. Engine**

ITEM	DESCRIPTION	CAM, CEM, CKM	CGP, CJM	CAP	CHP	LABOR CODE
Replace gearcase cover and/or gasket	includes timing ignition	2.3	2.3	2.3	2.3	3326
Replace ignition timer oil seal	includes timing ignition	0.4	0.4	0.4	0.4	3331
Replace all cam gears	includes timing ignition	2.5	2.5	2.5	2.5	3336
Replace oil pump		0.7	0.7	0.7	0.7	3341
Replace oil pump check valve		0.1	0.1	0.1	0.1	3366
Replace lifter pin O-ring		0.1	0.1	0.1	0.1	3370
Replace cam position rotor	includes checking timing	0.2	0.2	0.2	0.2	5381
<b>CRANKCASE</b>						
Replace crankcases		11.6	11.6	11.6	11.6	3406
Replace flywheels – includes remove and install engine		10.6	10.6	10.6	10.6	3411
Check flywheel trueness after removal		0.1	0.1	0.1	0.1	3420
Check flywheels after removal	includes checking trueness piston removal and reinstallation, if required	0.5	0.5	0.5	0.5	3421
Recondition cylinder heads – head removed (for non-related repairs)	one head	1.8	1.8	1.8	1.8	3425
	both heads	3.3	3.3	3.3	3.3	3426
Replace piston rings	both cylinders removed (for non-related repairs)	0.7	0.7	0.7	0.7	3428
Replace piston and rings – includes over-sizing	both cylinders removed (for non-related repairs)	1.4	1.4	1.4	1.4	3430
<b>FUEL SYSTEM</b>						
Replace air cleaner backing plate		0.2	0.2	0.2	0.2	3501
Replace air cleaner cover		0.1	0.1	0.1	0.1	3502
Replace carburetor		0.3	0.3	0.3	0.3	3506
Replace manifold, inserts or clamps		0.4	0.4	0.4	0.4	3511
Replace carburetor float valve or jet, or check float level or seal		0.3	0.3	0.3	0.3	3516
Replace enrichment cable or plunger		0.2	0.2	0.2	0.2	3523
Replace carburetor diaphragm		0.5	0.5	0.5	0.5	3524
<b>EVAPORATIVE EMISSIONS SYSTEM</b>						
Replace canister		0.1	0.1	0.1	0.1	3527
Replace vapor valve		0.2	0.2	0.2	0.2	3528
Replace any one hose		0.7	0.7	0.7	0.7	3529
Replace air cleaner solenoid	includes testing	0.3	0.3	0.3	0.3	3590

**Table 2-4. Drive and Clutch**

ITEM	DESCRIPTION	CAM, CEM, CKM	CGP, CJM	CAP	CHP	LABOR CODE
<b>DRIVE</b>						
Adjust primary chain		0.1	0.1	0.1	0.1	---
Replace primary inspection cover and/or O-ring		0.1	0.1	0.1	0.1	4001
Replace primary chain		0.8	0.8	0.8	0.8	4002
Replace engine sprocket		0.8	0.8	0.8	0.8	4003
Replace engine sprocket oil seal		0.9	0.9	0.9	0.9	4005
Replace primary cover		0.7	0.7	0.7	0.7	4007
Replace primary gasket		0.5	0.5	0.5	0.5	4009
<b>CLUTCH</b>						
Adjust clutch		0.1	0.1	0.1	0.1	---
Replace clutch release mechanism		0.1	0.1	0.1	0.1	4006
Service the clutch	includes disassembly, cleaning, inspection, repair, assembly and adjustment	1.5	1.5	1.5	1.5	4011
Replace shift lever		0.1	0.1	0.1	0.1	4012
Replace clutch cable		0.2	0.2	0.2	0.2	4013
Replace shifter seal		0.1	0.1	0.1	0.1	4015

**Table 2-5. Transmission**

ITEM	DESCRIPTION	CAM, CEM, CKM	CGP, CJM	CAP	CHP	LABOR CODE
<b>TRANSMISSION CASE</b>						
Overhaul transmission – includes disassembly, removal, cleaning, inspection, replacing parts, assembly and installation		3.2	3.2	3.2	3.2	4306
Replace transmission access cover and/or access door bearing		2.3	2.3	2.3	2.3	4319
Replace shifter drum		1.3	1.3	1.3	1.3	4329
Replace shift linkage and/or spring – includes pawl adjustment		1.1	1.1	1.1	1.1	4332
Replace shifter forks		1.3	1.3	1.3	1.3	4343
Replace transmission case countershaft bearing		1.6	1.6	1.6	1.6	4361
Perform shifter pawl adjustment		1.0	1.0	1.0	1.0	4363
Replace main drive gear and/or bearing		1.8	1.8	1.8	1.8	4366
Replace detent arm and/or spring		0.9	0.9	0.9	0.9	4368
Replace main drive gear quad seal		0.8	0.8	0.8	0.8	4369
Replace main drive gear belt sprocket		0.8	0.8	0.8	0.8	4309
Replace main drive gear seal (in crankcase)		0.9	0.9	0.9	0.9	4311



Table 2-6. Electrical

ITEM	DESCRIPTION	CAM, CEM, CKM	CGP, CJM	CAP	CHP	LABOR CODE
<b>GENERAL</b>						
Lights and accessories – excluding turn signals		0.3	0.3	0.3	0.3	5016
<b>TURN SIGNALS</b>						
Turn signals will not cancel	signal	0.3	0.3	0.3	0.3	5202
Turn signals will not cancel	ground	0.4	0.4	0.4	0.4	5203
Turn signals will not cancel	open/ground	0.4	0.4	0.4	0.4	5204
Turn signals will not cancel	speedo	0.3	0.3	0.3	0.3	5206
Turn signals will not flash	bulb	0.1	0.1	0.1	0.1	5208
Turn signals will not flash right/left	input	0.3	0.3	0.3	0.3	5210
Turn signals will not flash	open	0.3	0.3	0.3	0.3	5211
Turn signals will not flash	open	0.4	0.4	0.4	0.4	5212
Turn signals will not flash	bulb	0.1	0.1	0.1	0.1	5213
Turn signals/flashers inoperable		0.3	0.3	0.3	0.3	5214
Turn signals/flashers inoperable	open	0.4	0.4	0.4	0.4	5216
Turn signals/flashers inoperable	wiring	0.4	0.4	0.4	0.4	5218
Turn signals/flashers inoperable	wiring	0.5	0.5	0.5	0.5	5219
Turn signals/flashers inoperable	switch	0.9	0.9	0.9	0.9	5220
Turn signals/flashers inoperable	fuse	0.2	0.2	0.2	0.2	5222
Turn signals will not cancel	signal ground	0.4	0.4	0.4	0.4	5223
<b>CHARGING CIRCUIT</b>						
Diagnose charging system	regulator inspection	0.1	0.1	0.1	0.1	5306
Diagnose charging system	regulator bleed test	0.4	0.4	0.4	0.4	5307
Diagnose charging system	milliamp draw	0.2	0.2	0.2	0.2	5308
Diagnose charging system	total current draw	0.2	0.2	0.2	0.2	5310
Diagnose charging system	open/grounded stator	1.5	1.5	1.5	1.5	5312
Diagnose system	AC output	1.5	1.5	1.5	1.5	5314
Diagnose charging system	regulator failure	0.4	0.4	0.4	0.4	5315
Diagnose charging system	voltage output	0.4	0.4	0.4	0.4	5316
Diagnose charging system	replace rotor	1.4	1.4	1.4	1.4	5319
<b>STARTER CIRCUIT</b>						
Starter inoperative	open/shorted/ground motor	1.0	1.0	1.0	1.0	5817
Starter inoperative	start button	0.9	0.9	0.9	0.9	5818
Starter inoperative	solenoid clicks; poor starter or battery connections	0.1	0.1	0.1	0.1	5822
Starter inoperative	solenoid clicks; poor relay or solenoid connections, or bad relay contacts	0.2	0.2	0.2	0.1	5823
Starter inoperative	solenoid clicks; poor starter to battery connections, ground connections, or bad solenoid contacts	0.2	0.2	0.2	0.2	5824
Starter inoperative	damaged motor	0.9	0.9	0.9	0.9	5825
Starter inoperative	relay click; open in relay wiring	0.2	0.2	0.2	0.2	5827
Starter inoperative	nothing clicks; poor relay ground	0.2	0.2	0.2	0.2	5828

**Table 2-6. Electrical**

ITEM	DESCRIPTION	CAM, CEM, CKM	CGP, CJM	CAP	CHP	LABOR CODE
Starter inoperative	nothing clicks; open in wiring to or from starter button	0.4	0.4	0.4	0.4	5831
Starter inoperative	starter relay	0.3	0.3	0.3	0.3	5832
Slow starter crank or starter stalls	poor starter to battery connections, ground connections, or bad solenoid contacts	0.2	0.2	0.2	0.2	5835
Slow starter crank or starter stalls	jackshaft binding or defective starter motor	0.3	0.3	0.3	0.3	5836
Starter spins	clutch	1.0	1.0	1.0	1.0	5837
Replace starter solenoid	contacts; includes starter motor removal	1.1	1.1	1.1	1.1	5845
Replace starter solenoid	coil; includes starter motor removal	1.1	1.1	1.1	1.1	5860
<b>INSTRUMENTS</b>						
Replace speedometer	cosmetics only	0.1	0.1	0.1	0.1	6003
Replace tachometer		---	---	0.1	0.1	6009
Diagnose inoperative, inaccurate or erratic speedometer	switch	0.3	0.3	0.3	0.3	6001
Diagnose inoperative, inaccurate or erratic speedometer		0.1	0.1	0.1	0.1	6002
Diagnose inoperative, inaccurate or erratic speedometer	wiring	0.2	0.2	0.2	0.2	6004
Diagnose inoperative, inaccurate or erratic speedometer	replace	0.4	0.4	0.4	0.4	6006
Diagnose inoperative, inaccurate or erratic speedometer	wiring	0.5	0.5	0.5	0.5	6008
Diagnose inoperative, inaccurate or erratic speedometer	sensor	0.6	0.6	0.6	0.6	6010
Diagnose inoperative, inaccurate or erratic speedometer	open	0.5	0.5	0.5	0.5	6013
Diagnose inoperative, inaccurate or erratic speedometer	LED failure	0.2	0.2	0.2	0.2	6014
Diagnose inoperative, inaccurate or erratic speedometer	wires	0.3	0.3	0.3	0.3	6016
Odometer inoperative		0.1	0.1	0.1	0.1	6020
Diagnose inoperative, inaccurate or erratic speedometer	internal	0.4	0.4	0.4	0.4	6022
Diagnose inoperative, inaccurate or erratic speedometer	power/ground	0.4	0.4	0.4	0.4	6024
Diagnose inoperative, inaccurate or erratic speedometer	debris on sensor	0.4	0.4	0.4	0.4	6029
Diagnose inoperative, inaccurate or erratic speedometer	grounded circuit	0.3	0.3	0.3	0.3	6031
Diagnose inoperative, inaccurate or erratic speedometer	fuse	0.1	0.1	0.1	0.1	6032
Replace speedo reset boot		0.1	0.1	0.1	0.1	6043
<b>WIRING</b>						
Replace battery cable	one (negative or positive)	0.3	0.3	0.3	0.3	5024
Replace main wiring harness		2.6	2.6	2.6	2.6	5026
Replace rear fender wiring harness		0.5	0.5	0.5	0.5	5036
Replace any single wire	light circuit	0.2	0.2	0.2	0.2	5039

**Table 2-6. Electrical**

ITEM	DESCRIPTION	CAM, CEM, CKM	CGP, CJM	CAP	CHP	LABOR CODE
Replace any single wire	accessory circuit	0.2	0.2	0.2	0.2	5043
Replace speedometer housing		0.7	0.7	0.7	0.7	5046
Repair/diagnose indicator lamp wiring		0.3	0.3	0.3	0.3	5048
Replace circuit breaker or fuse		0.1	0.1	0.1	0.1	5145
<b>SWITCHES</b>						
Replace ignition switch		0.5	0.5	0.5	0.5	5129
Replace left upper handlebar switch		0.5	0.5	0.5	0.5	5171
Replace right upper handlebar switch		0.7	0.7	0.7	0.7	5173
Replace front brake light switch		0.6	0.6	0.6	0.6	5176
Replace left upper handlebar switch housing		0.2	0.2	0.2	0.2	5177
Replace left lower handlebar switch housing		0.2	0.2	0.2	0.2	5178
Replace right upper handlebar switch housing		0.2	0.2	0.2	0.2	5179
Replace right lower handlebar switch housing		0.4	0.4	0.4	0.4	5180
Replace rear stoplight switch	includes filling/bleeding brakes	0.3	0.3	0.3	0.3	5141
Replace oil pressure switch		0.1	0.1	0.1	0.1	5161
Replace neutral switch		0.8	0.8	0.8	0.8	5165
<b>LIGHTS</b>						
Replace electrical bracket		0.4	0.4	0.4	0.4	5175
Replace headlight bracket	includes adjustment	0.2	0.2	0.2	0.2	5181
Replace headlight	include diagnosis	0.1	0.1	0.1	0.1	5185
Replace headlight housing	includes adjustment	0.7	0.4	0.7	0.7	5189
Replace indicator bulb or lens	include diagnosis	0.1	0.2	0.1	0.1	5190
Replace indicator lamp socket assembly		0.5	0.5	0.5	0.5	5191
Replace single light bulb/lens	include diagnosis	0.1	0.1	0.1	0.1	5197
Replace turn signal light assembly	front	0.7	0.7	0.7	0.7	5201
	rear	0.3	0.3	0.3	0.3	5205
Replace taillight assembly or circuit board		0.2	0.2	0.2	0.2	5215
<b>IGNITION SYSTEM (EXCEPT 1200S)</b>						
Diagnose electronic ignition		0.2	0.2	0.2	---	5001
Diagnose electronic ignition	wire	0.6	0.6	0.6	---	5002
Diagnose electronic ignition	wire	0.4	0.4	0.4	---	5003
Diagnose electronic ignition	wire	0.2	0.2	0.2	---	5004
Diagnose electronic ignition	mechanical	0.3	0.3	0.3	---	5005
Diagnose electronic ignition	wire	0.5	0.5	0.5	---	5007
Replace ignition module	operation	0.9	0.9	0.9	---	5009
Replace coil	resistance	0.2	0.2	0.2	---	5010
Replace coil	operation	0.3	0.3	0.3	---	5012
Replace bank angle sensor		0.3	0.3	0.3	---	5013
Replace cam sensor	operation	0.9	0.9	0.9	---	5369

**Table 2-6. Electrical**

ITEM	DESCRIPTION	CAM, CEM, CKM	CGP, CJM	CAP	CHP	LABOR CODE
Replace V.O.E.S., and or hose	includes checking timing	0.2	0.2	0.2	---	5385
<b>BATTERY/HORN</b>						
Replace the battery		0.3	0.3	0.3	0.3	5705
Replace horn and/or bracket		0.1	0.1	0.1	0.1	5765
<b>ACCESSORIES</b>						
Replace mirror		0.1	0.1	0.1	0.1	6513

**Table 2-7. XLH 1200S Ignition Codes**

ITEM	DESCRIPTION	CHP	LABOR CODE
NOTE: The diagnostic/replacement operations and times listed on the following pages have been created for your use. The codes must be used in conjunction with the repair procedures listed in the XL Service Manual, Part No. 99484-02. Remember to use the same four digit code selected for your labor code as your condition code when filing a warranty claim.			
Diagnostic check		0.1	7110
Diagnostic check		0.3	7115
Diagnostic check		0.4	7120
Diagnostic check		0.3	7125
Chart A-1	No check engine lamp	0.3	7130
	No check engine lamp	0.4	7135
	No check engine lamp	0.3	7143
	No check engine lamp	0.4	7145
Chart A-2	Check engine lamp on continuously	0.4	7148
	Check engine lamp on continuously	0.4	7150
	Check engine lamp on continuously	0.5	7160
	Check engine lamp on continuously	0.5	7165
Chart A-3	Engine cranks but will not start	0.2	7180
	Engine cranks but will not start	0.2	7185
	Engine cranks but will not start	0.5	7210
	Engine cranks but will not start	0.5	7215
	Engine cranks but will not start	0.6	7225
	Engine cranks but will not start	0.4	7226
	Engine cranks but will not start	0.4	7227
	Engine cranks but will not start	0.4	7228
	Engine cranks but will not start	0.6	7240
	Engine cranks but will not start	0.6	7241
	Engine cranks but will not start	0.6	7245
	Engine cranks but will not start	0.4	7250
	Engine cranks but will not start	1.3	7255
	Engine cranks but will not start	0.7	7260
	Engine cranks but will not start	1.3	7265
	Chart A-4	No spark, no check engine lamp	0.3
No spark, no check engine lamp		0.4	7285
No spark, no check engine lamp		0.5	7291
No spark, no check engine lamp		1.0	7295
No spark, no check engine lamp		0.2	7305
No spark, no check engine lamp		0.2	7310

**Table 2-7. XLH 1200S Ignition Codes**

ITEM	DESCRIPTION	CHP	LABOR CODE
Chart C	Misfire	0.1	7520
	Misfire	0.1	7525
	Misfire	0.2	7535
	Misfire	0.5	7540
	Misfire	1.2	7541
Code-12	Map sensor	0.2	7620
	Map sensor	0.6	7625
	Map sensor	0.3	7630
	Map sensor	0.4	7635
	Map sensor	0.4	7640
	Map sensor	0.4	7645
	Map sensor	0.3	7650
	Map sensor	0.5	7655
	Map sensor	0.4	7641
	Map sensor	0.4	7642
Code-16	Battery voltage test	0.3	7770
	Battery voltage test	0.4	7775
	Battery voltage test	0.4	7776
	Battery voltage test	0.4	7780
	Battery voltage test	0.9	7781
	Battery voltage test	0.3	7782
	Battery voltage test	0.8	7783
	Battery voltage test	0.5	7784
	Battery voltage test	0.3	7779
Code-24 & 25	Ignition coil	0.4	7855
	Ignition coil	0.3	7856
	Ignition coil	0.4	7860
	Ignition coil	0.5	7865
	Ignition coil	0.4	7870
	Ignition coil	0.3	7875
Code-35	Tachometer	0.4	7881
	Tachometer	0.4	7882
	Tachometer	0.4	7883
	Tachometer	0.4	7884
	Tachometer	0.4	7886
Code-44	Bank angle sensor	0.1	7971
	Bank angle sensor	0.3	7972
	Bank angle sensor	0.4	7973
	Bank angle sensor	0.3	7974
	Bank angle sensor	0.2	7976
	Bank angle sensor	0.3	7975
Codes-52, 53, 54, and 55	Ignition module failure	0.2	7913

# NOTES

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# 2002 FLHT & FLHTC MODELS

**Table 3-1. Service**

ITEM	DESCRIPTION	DDV	DJV/DGV	LABOR CODE
<b>NEW</b>				
Set-up and pre-delivery		2.5	2.5	---
1,000 mile service		2.5	2.5	---
<b>REGULAR</b>				
2,500 mile maintenance		0.5	0.5	---
5,000 mile maintenance		2.5	2.5	---
7,500 mile maintenance		0.5	0.5	---
10,000 mile maintenance		4.5	4.5	---
20,000 mile maintenance		7.6	7.6	---
50,000 mile maintenance		7.7	7.7	---

**Table 3-2. Chassis**

ITEM	DESCRIPTION	DDV	DJV/DGV	LABOR CODE
<b>DRIVE</b>				
Adjust secondary belt		0.2	0.2	---
Replace secondary belt		3.7	3.7	2011
Replace rear wheel sprocket		0.9	0.9	2021
<b>WHEELS</b>				
Replace tire – includes balancing	front	0.6	0.6	2106
	rear	0.8	0.8	2111
Replace wheel assembly – includes disc and sprocket exchange and balancing	front	0.8	0.8	2113
	rear	1.0	1.0	2114
Replace rim, hub or spokes	front	2.2	2.2	2116
	rear	2.4	2.4	2121
Replace wheel bearings	front	0.6	0.6	2136
	rear	0.8	0.8	2141
True spoked wheel (wheel on vehicle)		0.4	0.4	2156
True laced wheel-includes r/r wheel & tire and time to rebalance	front	1.0	1.0	2157
	rear	1.2	1.2	2158
<b>HANDLEBARS</b>				
Replace handlebars	includes removing radio on FLHTC	1.2	1.2	2206
Replace clutch hand lever		0.2	0.2	2221
Replace clutch hand lever bracket		0.2	0.2	2226
Replace throttle control		0.4	0.4	2231

All times listed in hours.

### V.I.N. CODES

DDV	FLHT
DJV	FLHTC
DGV	FLHTC-SHRINE

**Table 3-2. Chassis**

ITEM	DESCRIPTION	DDV	DJV/DGV	LABOR CODE
Replace and adjust throttle control cables	one or both	0.6	0.6	2241
Replace both rubber handlebar mounts	includes removing radio on FLHTC	1.0	1.0	2246
Replace rubber handlebar grip		0.2	0.2	2251
Replace handlebar riser	one or both – includes loosening radio on FLHTC	1.0	1.0	2253
Replace handlebar clamp	one or both – includes removing radio on FLHTC	0.8	0.8	2254
<b>FRAME/SWING ARM/FRONT FORK</b>				
Replace frame	includes removal and installation of all accessories and motorcycle components	17.0	17.0	2306
Replace front fork assembly	includes removal and installation of upper and lower fork brackets	3.0	3.0	2311
Replace lower fork bracket and stem		3.2	3.2	2316
Replace steering head cups and bearings	including bearing adjustment	3.2	3.2	2321
Replace upper fork bracket		2.7	2.7	2326
Adjust steering head bearings		0.7	0.7	---
Change front fork oil	both sides	2.9	2.9	---
Replace complete lock set		0.4	0.4	2333
Service or replace fork slider and/or seal – includes removal, disassembly, cleaning, inspection, replacing parts, servicing damper tube, replacing bushings, assembly and installation	right side	2.4	2.4	2343
	left side	2.7	2.7	2344
	both sides	2.9	2.9	2342
Replace fork side	one side	1.2	1.2	2346
	both sides	1.5	1.5	2351
Replace fork tube	right side	1.9	1.9	2357
	left side	2.7	2.7	2358
	both sides	2.9	2.9	2361
Replace rear swing arm and/or bearings		1.9	1.9	2366
Replace rear fork pivot shaft		1.0	1.0	2368
Replace rear shock air line		0.1	0.1	2369
Replace rear shock absorber assembly	one side	0.3	0.3	2371
	both sides	0.6	0.6	2376
Replace rear shock absorber component(s)	one side	0.5	0.5	2381
	both sides	0.8	0.8	2386
Replace jiffy stand	complete	0.3	0.3	2391
	spring and/or stand	0.2	0.2	2396
	rubber bumper	0.1	0.1	2399
Replace motor rubber mount	rear left	0.3	0.3	2397
	rear right	0.5	0.5	2395
	front	0.4	0.4	2398
Replace footboard		0.2	0.2	2394
<b>BRAKES</b>				
Replace hydraulic brake line – includes filling/bleeding brakes	front	1.0	1.0	2406
	rear	0.4	0.4	2411
Replace rear master cylinder reservoir hose and/or hose		0.2	0.2	2414
Replace brake pads	front – each caliper	0.1	0.1	2416
	rear	0.2	0.2	2421



**Table 3-2. Chassis**

ITEM	DESCRIPTION	DDV	DJV/DGV	LABOR CODE
Replace brake caliper – includes filling/bleeding brakes	front – each caliper	0.4	0.4	2426
	rear	1.0	1.0	2431
Replace brake disc	front – one side	0.3	0.3	2436
	both sides	0.4	0.4	2437
	rear	1.3	1.3	2441
Bleed brake caliper – one or two front calipers or rear caliper		0.2	0.2	2446
Overhaul brake caliper – includes filling/bleeding brakes	front – each caliper	0.6	0.6	2451
	rear	1.3	1.3	2456
Replace master cylinder assembly – includes filling/bleeding brakes	front	0.4	0.4	2461
	rear	0.5	0.5	2466
Rebuild master cylinder assembly – includes filling/bleeding brakes	front	0.6	0.6	2471
	rear	0.7	0.7	2476
Replace rear brake pedal		0.3	0.3	2492
Replace front brake lever		0.1	0.1	2494
<b>SEATS/FENDERS/TANKS</b>				
Replace seat		0.1	0.1	2506
Replace seat handrail		0.2	0.2	2508
Replace fender	front	1.0	1.0	2526
	rear	1.2	1.2	2531
Replace rear fender support		0.1	0.1	2536
Replace fuel tank assembly		0.8	0.8	2541
Replace fuel tank valve		0.2	0.2	2561
Replace fuel tank gauge		0.5	0.5	2563
Replace fuel tank gauge sending unit		0.5	0.5	2564
Replace any hose		0.3	0.3	2576
Replace oil filter		0.1	0.1	2582
Replace oil filter bracket		0.6	0.6	2584
Replace fuel tank console / instrument panel		0.3	0.3	2553
Replace fuel tank console / rubber molding strip		0.2	0.2	2557
<b>BELT GUARDS</b>				
Replace rear belt guard – debris deflector		0.1	0.1	2616
<b>EXHAUST SYSTEM</b>				
Replace complete exhaust system and/or gaskets		1.0	1.0	2626
Replace exhaust pipe	right side	1.0	1.0	2631
	left side	0.3	0.3	2636
Replace one muffler		0.2	0.2	2646
Replace any one exhaust shield		0.1	0.1	2661
Replace one muffler support		0.2	0.2	2666

**Table 3-3. Engine**

ITEM	DESCRIPTION	DDV	DJV/DGV	LABOR CODE
<b>GENERAL</b>				
Remove and install engine	California vehicles only	4.3	4.3	3006
Remove and install engine		4.2	4.2	3006
Replace and adjust stabilizer	top	0.7	0.7	3005
	front	0.3	0.3	3007
Remove and replace oil pan for inspection/contamination	with engine removed	0.3	0.3	3009
<b>CYLINDER HEAD</b>				
Recondition cylinder head – includes removal of head and gasket, remove carbon, service valve guides, grind valves and seats, test springs and install head and gaskets.	front head	4.2	4.2	3101
	rear head	4.2	4.2	3103
	both heads	4.8	4.8	3104
Replace cylinder head	one head	2.9	2.9	3106
	both heads	3.5	3.5	3108
Replace valve seal or spring after cylinder head removal	one seal or spring (intake or exhaust)	0.1	0.1	3131
	both seals or springs (intake or exhaust)	0.2	0.2	3132
Replace cylinder head gasket/o-ring	front cylinder	2.3	2.3	3140
	rear cylinder	2.3	2.3	3142
	both cylinders	2.7	2.7	3143
Replace rocker arm covers and/or gaskets	front cylinder	0.8	0.8	3144
	rear cylinder	0.8	0.8	3145
	both cylinders	0.9	0.9	3148
Recondition rocker arms after heads are removed	one head	0.7	0.7	3149
	both heads	1.4	1.4	3150
Replace lower rocker arm cover/gasket, or rocker arms and /or shafts/rocker arm support	front cylinder	1.2	1.2	3147
	rear cylinder	1.2	1.2	3152
	both cylinders	1.4	1.4	3153
Replace cylinder o-ring/drain o-ring	front cylinder	2.5	2.5	3161
	rear cylinder	2.5	2.5	3163
	both cylinders	2.9	2.9	3168
Replace crankcase umbrella valve	one	1.1	1.1	3172
	both	1.2	1.2	3174
<b>CYLINDER AND PISTON</b>				
Recondition TOP END - includes disassembly, replacement of piston and sizing cylinder (.005" pistons), replacing piston rings and all items listed under RECONDITION CYLINDER HEAD and assembly.	one piston and cylinder	5.2	5.2	3202
	both pistons and cylinders	5.8	5.8	3203
Recondition TOP END - includes disassembly, replacement of piston and bore and hone, resizing cylinder (.010" oversize or above), replacing piston rings and all items listed under RECONDITION CYLINDER HEAD and assembly.	one piston and cylinder	5.6	5.6	3211
	both pistons and cylinders	6.2	6.2	3212

**Table 3-3. Engine**

ITEM	DESCRIPTION	DDV	DJV/DGV	LABOR CODE
Recondition TOP END – includes disassembly, deglazing cylinder and replacing rings, or replacing cylinder and piston, all items listed under RECONDITIONING CYLINDER HEAD and assembly.	one piston and cylinder	5.0	5.0	3207
	both pistons and cylinders	5.6	5.6	3208
Replace piston rings – includes deglazing cylinder	one cylinder	2.8	2.8	3206
	both cylinders	3.4	3.4	3216
Replace piston and piston rings – includes removal of cylinder head and cylinder, fitting new piston with rings, resizing cylinder and assembly	one cylinder	3.4	3.4	3221
	both cylinders	4.6	4.6	3231
Replace cylinder and piston	one cylinder	2.7	2.7	3236
	both cylinders	3.2	3.2	3246
Replace upper connecting rod bushing during upper end repair		0.4	0.4	3251
Replace one cylinder stud	cylinder removed	0.1	0.1	3253
Replace all eight cylinder studs	cylinders removed	0.5	0.5	3254
<b>CAM COVER</b>				
Replace lifter cover/gasket or lifter/and, or anti-rotation pin	one	1.4	1.4	3307
	both	1.6	1.6	3310
Replace push rod, push rod cover and/or O-ring or quad seal	one or two same cylinder	1.4	1.4	3317
	one each cylinder	1.6	1.6	3318
Replace cam cover and/or gasket		1.6	1.6	3325
Replace primary cam chain, sprockets and/or fastener		1.7	1.7	3327
Replace primary cam chain tensioner		1.7	1.7	3328
Replace cam support plate/O-rings		2.8	2.8	3335
Replace cam support plate		2.8	2.8	3337
Replace cam support bearing/cams/secondary cam chain/tensioner		3.0	3.0	3338
Replace oil pump and/or O-rings		2.6	2.6	3341
Replace cam bearing crankcase	one bearing	2.8	2.8	3342
	two bearings	2.9	2.9	3343
By pass valve inspection		2.7	2.7	3354
<b>CRANKCASE</b>				
Replace crankcases	California vehicles only –includes remove and install engine	7.9	7.9	3406
Replace crankcases	includes remove and install engine	7.8	7.8	3406
Seal crankcase only		7.2	7.2	3407
Replace flywheels	includes remove and install engine	7.3	7.3	3411
Replace right side main bearing	California vehicles only	6.8	6.8	3412
Replace right side main bearing		6.7	6.7	3412
Piston jet/O-ring	one	2.7	2.7	3413
	both	3.1	3.1	3414
Filter housing and or O-rings		0.2	0.2	3415
Replace crankcase vent hose and/or fittings		0.2	0.2	3417
Replace crankcase oil hose and/or fittings	Feed	0.3	0.3	3418
	Return	0.3	0.3	3419

**Table 3-3. Engine**

ITEM	DESCRIPTION	DDV	DJV/DGV	LABOR CODE
Check flywheel trueness before assembly or after removal		0.1	0.1	3420
True flywheels after removal	includes piston removal and reinstallation	0.5	0.5	3421
Recondition cylinder heads – head removed (for non-related repairs)	one head	1.0	1.0	3425
	both heads	2.0	2.0	3426
Replace piston rings	cylinders removed (for non-related repairs – deglaze only)	0.3	0.3	3428
<b>FUEL SYSTEM</b>				
Replace air cleaner backing plate		0.1	0.1	3501
Replace air cleaner cover		0.1	0.1	3502
Replace carburetor		0.4	0.4	3506
Replace intake manifold and/or gasket	one	0.6	0.6	3511
Replace carburetor float valve or jet, or check float level or seal		0.5	0.5	3516
Replace accelerator pump		0.5	0.5	3521
Replace enrichener cable		0.4	0.4	3523
Replace carburetor diaphragm		0.5	0.5	3524
<b>EVAPORATIVE EMISSIONS SYSTEM</b>				
Replace canister		0.1	0.1	3527
Replace vapor valve		0.1	0.1	3528
Replace any one hose		0.1	0.1	3529

**Table 3-4. Drive and Clutch**

ITEM	DESCRIPTION	DDV	DJV/DGV	LABOR CODE
<b>DRIVE</b>				
Adjust primary chain		0.2	0.2	---
Replace primary chain		0.9	0.9	4002
Replace engine sprocket		0.9	0.9	4003
Replace engine sprocket seal		1.3	1.3	4005
Replace primary cover		0.4	0.4	4007
Replace primary cover gasket		0.4	0.4	4009
Replace primary inspection cover and/or O-ring		0.1	0.1	4001
Replace inner primary case and/or mainshaft bearing		2.1	2.1	4008
Replace shift lever sleeve and/or O-ring		0.4	0.4	4010
Replace shifter lever		0.1	0.1	4012
<b>CLUTCH</b>				
Adjust clutch		0.2	0.2	---
Replace release cable assembly		1.5	1.5	4006
Service the clutch	includes disassembly, cleaning, inspection repair, assembly and adjustment	1.3	1.3	4011
Replace clutch release bearing and/or push rod		0.4	0.4	4016
Replace clutch release mechanism (ball ramp) and/or side cover		1.6	1.6	4018

**Table 3-5. Transmission**

ITEM	DESCRIPTION	DDV	DJV/DGV	LABOR CODE
<b>TRANSMISSION CASE</b>				
Replace transmission case		5.3	5.3	4304
Replace transmission complete		4.9	4.9	4305
Overhaul transmission	includes disassembly, cleaning, inspection, replacing parts (transmission case in frame)	4.6	4.6	4306
Replace transmission sprocket		2.2	2.2	4309
Replace main drive gear oil seal	in transmission case	2.3	2.3	4311
Replace mainshaft oil seal	in main drive gear	2.2	2.2	4316
Replace side door gasket		2.8	2.8	4321
Replace shifter drum		0.7	0.7	4331
Replace shifter arm assembly or springs		2.9	2.9	4336
Replace transmission top cover and/or gasket		0.6	0.6	4341
Replace shifter forks and/or shaft		1.8	1.8	4343
Replace side door bearing	one	3.0	3.0	4348
	both	3.1	3.1	4351
Replace transmission case countershaft bearing		2.9	2.9	4361
Replace main drive gear and/or bearing		3.2	3.2	4366
Replace transmission side cover gasket		0.9	0.9	4368
Replace oil pan and/or gasket or baffle	Note: Removal of rear wheel may be necessary	0.9	0.9	4378
Replace oil fill tube and/or cover, and/or gasket		0.4	0.4	4379
Replace transmission shift shaft seal		2.2	2.2	4390

**Table 3-6. Electrical**

ITEM	DESCRIPTION	DDV	DJV/DGV	LABOR CODE
<b>GENERAL</b>				
Check and diagnose the electrical system lights and accessories	excluding turn signals	0.3	0.3	5016
Replace connector housing		0.1	0.1	5022
Replace connector anchor		0.1	0.1	5023
<b>CHARGING CIRCUIT</b>				
Diagnose charging system	regulator inspection	0.1	0.1	5306
Diagnose charging system	regulator bleed	0.9	0.9	5307
Diagnose charging system	milliamp draw	0.2	0.2	5308
Diagnose charging system	total current draw	0.2	0.2	5310
Replace regulator/stator connector		0.2	0.2	5311
Diagnose charging system	open/grounded stator	1.8	1.8	5312
Diagnose charging system	AC output	1.8	1.8	5314
Diagnose charging system	regulator failure	1.0	1.0	5315
Diagnose charging system	voltage output	1.0	1.0	5316
Diagnose charging system	replace rotor	1.3	1.3	5319

**Table 3-6. Electrical**

ITEM	DESCRIPTION	DDV	DJV/DGV	LABOR CODE
<b>STARTER CIRCUIT</b>				
Starter inoperative	open/shorted/grounded motor	1.4	1.4	5817
Starter inoperative	start button	1.0	1.0	5818
Starter inoperative	solenoid clicks; poor starter or battery connections	0.2	0.2	5822
Starter inoperative	solenoid clicks; poor relay or solenoid connections, or bad relay contacts	0.3	0.3	5823
Starter inoperative	solenoid clicks; poor starter to battery connections, ground connections, or bad solenoid contacts	0.2	0.2	5824
Starter inoperative	damaged motor	1.4	1.4	5825
Starter inoperative	relay clicks; open in relay wiring	0.3	0.3	5827
Starter inoperative	nothing clicks; poor relay ground	0.3	0.3	5828
Starter inoperative	no click; short to voltage	0.4	0.4	5830
Starter inoperative	nothing clicks; open in wiring to or from starter button	0.5	0.5	5831
Starter inoperative	starter relay	0.4	0.4	5832
Slow starter crank or starter stalls	poor starter to battery connections, ground connections	0.2	0.2	5835
Slow starter crank or starter stalls	binding	0.3	0.3	5836
Starter spins	clutch	1.5	1.5	5837
Starter inoperative	no click; TSM/TSSM	0.4	0.4	5838
Replace starter solenoid, contacts	includes starter motor removal	1.6	1.6	5845
Starter binding		1.6	1.6	5850
Replace starter solenoid coil	includes starter motor removal	1.6	1.6	5860
<b>WIRING</b>				
Replace main wiring harness		3.6	3.6	5026
Main harness	locate and repair, open/short	0.5	0.5	5028
Replace rear fender wiring harness		0.8	0.8	5036
Replace any single wire	ground wire	0.4	0.4	5038
	light circuit	0.2	0.2	5039
	accessory circuit	0.2	0.2	5043
Repair/diagnose indicator lamp wiring		0.3	0.3	5048
Replace front fender wiring harness		0.9	0.9	5049
Replace ignition wiring harness		1.1	1.1	5050
Replace interconnect harness		0.5	0.5	5052
Interconnect harness	repair short	0.5	0.5	6531
Interconnect harness	repair open	0.5	0.5	6532
Handlebar harness	repair short	0.4	0.4	6551
Handlebar harness	repair open	0.4	0.4	6552
Overlay harness	repair short	0.5	0.5	6560
Overlay harness	repair open	0.5	0.5	6561
<b>SWITCHES</b>				
Replace ignition switch		0.5	0.5	5129
Replace rear stoplight switch		0.5	0.5	5141
Replace fuse		0.2	0.2	5145
Replace main circuit breaker		0.2	0.2	5147
Replace fuse block	one	0.3	0.3	5148

**Table 3-6. Electrical**

ITEM	DESCRIPTION	DDV	DJV/DGV	LABOR CODE
Replace fuse block	two	0.5	0.5	5151
Replace transmission neutral switch	includes diagnosis	0.3	0.3	5157
Replace oil pressure switch	includes diagnosis	0.3	0.3	5161
Replace rear stoplight relay		0.2	0.2	5169
Replace left upper handlebar switch		0.5	0.5	5171
Replace right upper handlebar switch		0.7	0.7	5173
Replace front brake light switch		0.7	0.7	5176
Replace left upper handlebar switch housing		0.2	0.2	5177
Replace left lower handlebar switch housing		0.3	0.3	5178
Replace right upper handlebar switch housing		0.2	0.2	5179
Replace right lower handlebar switch housing		0.7	0.7	5180
Replace handlebar (AM/FM/WB) switch		1.0	1.1	5183
Replace handlebar audio switch		1.0	1.0	5186
Replace any fairing switch		0.4	0.4	5192
<b>LIGHTS</b>				
Replace headlight	includes diagnosis	0.1	0.1	5185
Replace headlight housing	includes adjustment	0.2	0.2	5189
Replace instrument bulb	includes diagnosis	0.2	0.2	5193
Replace taillight bulb or single light bulb or lens	includes diagnosis	0.1	0.1	5197
Replace taillight assembly or circuit board		0.2	0.2	5215
Replace turn signal light assembly	front	0.4	0.4	5201
	rear	0.4	0.4	5205
Replace rear turn signal bar		0.4	0.4	5207
Replace fender tip light bulb or lens, includes diagnosis	front	0.1	0.1	5217
	rear	0.1	0.1	5221
Replace fender tip lamp assembly	front	0.1	0.1	5225
	rear	0.3	0.3	5229
Replace passing lamp bulb	includes diagnosis	0.1	0.1	5227
Replace passing lamp		0.4	0.4	5230
Replace passing lamp bracket		0.7	0.7	5232
Replace King Tour-Pak light bulb or lens	includes diagnosis	---	0.2	5233
Replace King Tour-Pak light assembly		---	0.5	5234
NOTE: All codes include diagnostic time and replacement time if required. The codes must be used in conjunction with the diagnostic/repair procedures listed in the FLT Service Manual, Part No. 99483-02 and Electrical Diagnostics Manual, Part No. 99497-02. Remember to use the same four digit code selected for your labor code as your condition code when filing a warranty claim.				
<b>TURN SIGNAL/SECURITY SYSTEM</b>				
No security lamp		0.5	0.5	6735
No security lamp		0.5	0.5	6736
No security lamp		0.5	0.5	6737
No security lamp		0.5	0.5	6738
No security lamp		0.1	0.1	6739
No security lamp		0.2	0.2	6740
No security lamp		0.3	0.3	6741
No security lamp		0.3	0.3	6742
No security lamp		0.3	0.3	6743
No security lamp		0.2	0.2	6744

**Table 3-6. Electrical**

ITEM	DESCRIPTION	DDV	DJV/DGV	LABOR CODE
No security lamp		0.3	0.3	6745
Security lamp on continuously		0.2	0.2	6750
Security lamp on continuously		0.4	0.4	6751
Security lamp on continuously		0.5	0.5	6752
Turn signal error 2A		0.9	0.9	6773
Turn signal error 2B		0.6	0.6	6777
Turn signal error 2B		0.5	0.5	6778
Turn signal error 2B		0.7	0.7	6779
Turn signal error 2B		0.7	0.7	6780
Turn signal error 2C		0.8	0.8	6784
Turn signal error 2C		0.8	0.8	6785
Turn signal error 2C		1.2	1.2	6786
Turn signal error 3A		0.3	0.3	6790
Turn signal error 3A		0.2	0.2	6791
Turn signal error 3A		0.1	0.1	6792
Turn signal error 3A		0.3	0.3	6793
Turn signal error 3B		0.1	0.1	6796
Turn signal error 3B		0.3	0.3	6797
Turn signal error 3B		0.3	0.3	6798
Turn signal error 3B		0.3	0.3	6799
Turn signal error 3B		0.3	0.3	6800
Turn signal error 3C		0.3	0.3	6805
Turn signal error 3C		0.3	0.3	6806
Turn signal error 3C		0.2	0.2	6807
Turn signal error 3C		0.3	0.3	6808
Turn signal error 3D		0.4	0.4	6810
Turn signal error 3D		0.8	0.8	6811
Turn signal error 3D		0.5	0.5	6812
Turn signal error 3D		0.4	0.4	6813
Turn signal error 3D		0.5	0.5	6814
Turn signal error 3D		0.8	0.8	6815
Turn signal error 3D		0.5	0.5	6816
Turn signal error 4A		0.2	0.2	6820
Turn signal error 4A		0.2	0.2	6821
Turn signal error 4A		0.4	0.4	6822
Turn signal error 4A	Does not include lamp assembly replacement	0.3	0.3	6823
Turn signal error 4A		0.5	0.5	6824
Ignition enable output high		0.3	0.3	6827
Ignition enable output high		0.3	0.3	6828
Alarm output		0.3	0.3	6830
Alarm output		0.3	0.3	6831



**Table 3-6. Electrical**

ITEM	DESCRIPTION	DDV	DJV/DGV	LABOR CODE
Alarm output		0.3	0.3	6832
Alarm output		0.4	0.4	6833
Alarm output		0.3	0.3	6834
Alarm output		0.3	0.3	6835
Starter output high		0.3	0.3	6840
Starter output high		0.2	0.2	6831
Starter output high		0.3	0.3	6842
Accelerometer fault		0.2	0.2	6845
<b>IGNITION SYSTEM</b>				
Diagnostic check		0.2	0.2	7110
Diagnostic check		0.3	0.3	7115
Diagnostic check		0.4	0.4	7120
Diagnostic check		0.3	0.3	7125
Chart A-1	No check engine lamp	0.2	0.2	7130
	No check engine lamp	0.3	0.3	7135
	No check engine lamp	0.3	0.3	7143
	No check engine lamp	0.6	0.6	7145
Chart A-2	Check engine lamp on continuously	0.3	0.3	7148
	Check engine lamp on continuously	0.1	0.1	7150
	Check engine lamp on continuously	0.5	0.5	7160
	Check engine lamp on continuously	0.4	0.4	7165
Chart A-3	Engine cranks but will not start	0.2	0.2	7180
	Engine cranks but will not start	0.2	0.2	7185
	Engine cranks but will not start	0.4	0.4	7210
	Engine cranks but will not start	0.5	0.5	7215
	Engine cranks but will not start	0.6	0.6	7225
	Engine cranks but will not start	0.6	0.6	7226
	Engine cranks but will not start	0.7	0.7	7227
	Engine cranks but will not start	0.7	0.7	7228
	Engine cranks but will not start	1.5	1.5	7230
	Engine cranks but will not start	0.8	0.8	7231
	Engine cranks but will not start	0.7	0.7	7235
	Engine cranks but will not start	0.6	0.6	7245
	Engine cranks but will not start	0.6	0.6	7250
	Engine cranks but will not start	1.9	1.9	7255
Chart A-4	No spark, no check engine lamp	0.3	0.3	7270
	No spark, no check engine lamp	0.4	0.4	7285
	No spark, no check engine lamp	0.5	0.5	7291
	No spark, no check engine lamp	1.0	1.0	7295
	No spark, no check engine lamp	0.2	0.2	7305
	No spark, no check engine lamp	0.4	0.4	7310

**Table 3-6. Electrical**

ITEM	DESCRIPTION	DDV	DJV/DGV	LABOR CODE
Chart C	Misfire	0.2	0.2	7520
	Misfire	0.5	0.5	7525
	Misfire	0.5	0.5	7535
	Misfire	0.6	0.6	7540
	Misfire	0.6	0.6	7541
Code-12	Map sensor	0.2	0.2	7620
	Map sensor	1.7	1.7	7625
	Map sensor	0.6	0.6	7630
	Map sensor	0.4	0.4	7635
	Map sensor	0.4	0.4	7640
	Map sensor	0.4	0.4	7641
	Map sensor	0.4	0.4	7642
	Map sensor	0.5	0.5	7645
	Map sensor	0.7	0.7	7650
	Map sensor	0.6	0.6	7655
Code-16	Battery voltage test	0.4	0.4	7770
	Battery voltage test	0.7	0.7	7775
	Battery voltage test	0.7	0.7	7776
	Battery voltage test	0.9	0.9	7779
	Battery voltage test	0.8	0.8	7780
	Battery voltage test	1.1	1.1	7781
	Battery voltage test	0.8	0.8	7782
	Battery voltage test	1.3	1.3	7783
	Battery voltage test	1.0	1.0	7784
Code-24 & 25	Ignition coil	0.3	0.3	7855
	Ignition coil	0.6	0.6	7856
	Ignition coil	0.3	0.3	7860
	Ignition coil	0.3	0.3	7865
	Ignition coil	0.2	0.2	7870
	Ignition coil	0.3	0.3	7875
Code-35	Tachometer	0.5	0.4	7881
	Tachometer	0.4	0.3	7882
	Tachometer	0.5	0.4	7883
	Tachometer	0.5	0.4	7884
	Tachometer	0.5	0.4	7886
Code-41	Crank position sensor	0.4	0.4	7980
	Crank position sensor	0.9	0.9	7981
	Crank position sensor	0.4	0.4	7982
	Crank position sensor	1.1	1.1	7983
	Crank position sensor	1.1	1.1	7984
	Crank position sensor	1.1	1.1	7985
	Crank position sensor	0.5	0.5	7986
	Crank position sensor	0.5	0.5	7987
	Crank position sensor	0.3	0.3	7988

**Table 3-6. Electrical**

ITEM	DESCRIPTION	DDV	DJV/DGV	LABOR CODE
Code-44	Bank angle sensor	0.2	0.2	7971
	Bank angle sensor	0.3	0.3	7972
	Bank angle sensor	0.4	0.4	7973
	Bank angle sensor	0.2	0.2	7974
	Bank angle sensor	0.3	0.3	7975
	Bank angle sensor	0.2	0.2	7976
Codes-52, 53, 54, and 55	Ignition module failure	0.2	0.2	7913
<b>BATTERY/HORN</b>				
Replace the battery		0.2	0.2	5705
Replace horn and/or bracket		0.1	0.1	5765
Replace battery tray		0.3	0.3	5767
Replace battery cable		0.2	0.2	5769
<b>INSTRUMENTS – INCLUDES DIAGNOSIS</b>				
Replace speedometer	cosmetics only	0.3	0.3	6003
Electronic speedometer:				
Diagnose inoperative, inaccurate or erratic speedometer	switch	0.3	0.3	6001
Diagnose inoperative, inaccurate or erratic speedometer		0.1	0.1	6002
Diagnose inoperative, inaccurate or erratic speedometer	wiring	0.2	0.2	6004
Diagnose inoperative, inaccurate or erratic speedometer	replace	0.5	0.5	6006
Diagnose inoperative, inaccurate or erratic speedometer	wiring	0.4	0.4	6008
Diagnose inoperative, inaccurate or erratic speedometer	sensor	0.5	0.5	6010
Diagnose inoperative, inaccurate or erratic speedometer	open	0.6	0.6	6013
Diagnose inoperative, inaccurate or erratic speedometer	LED failure	0.2	0.2	6014
Diagnose inoperative, inaccurate or erratic speedometer	wires	0.4	0.4	6016
Odometer inoperable		0.2	0.2	6020
Diagnose inoperative, inaccurate or erratic speedometer	internal	0.5	0.5	6022
Diagnose inoperative, inaccurate or erratic speedometer	power/ground	0.5	0.5	6024
Diagnose inoperative, inaccurate, or erratic speedometer	debris or sensor	0.5	0.5	6029
Diagnose inoperative, inaccurate or erratic speedometer	grounded circuit	0.3	0.3	6031
Diagnose inoperative, inaccurate or erratic speedometer	fuse	0.1	0.1	6032
Replace speedo reset boot		0.1	0.1	6043
Replace tachometer		0.3	0.3	6009
Replace indicator panel lens		0.3	0.3	6018
Replace voltmeter or fuel gauge		0.3	0.3	6021
Replace oil pressure or air temperature gauge		0.5	0.5	6026
Replace ambient temperature sensor		---	0.3	6028

**Table 3-7. Accessories and Sound System**

ITEM	DESCRIPTION	DDV	DJV/DGV	LABOR CODE
<b>ACCESSORIES</b>				
Replace windshield		0.1	0.1	6203
Replace inner fairing		1.7	1.8	6209
Replace outer fairing or support brace		0.4	0.4	6255
Replace inner fairing bracket		0.7	0.8	6265
Replace fairing cap		0.3	0.3	6271
Replace chrome fairing skirt		0.2	0.2	6273
Replace saddlebag mounting bracket		0.2	0.2	6253
Replace saddlebag guard		---	0.3	6254
Replace single saddlebag guard rail		0.1	0.2	6256
Replace saddlebag		0.2	0.2	6257
Replace saddlebag lock		0.2	0.2	6259
Replace saddlebag cover	one	0.2	0.2	6260
Replace saddlebag lock or a Tour-Pak lock or latch		0.2	0.2	6261
Replace one saddlebag tether strap		0.1	0.1	6262
Replace one frame sidecover		0.1	0.1	6263
Replace Tour-Pak hinge		---	0.3	6264
Replace nameplate Tour-Pak		---	0.2	6266
Replace Tour-Pak cover		---	0.7	6270
Change lock-set		0.3	0.5	6276
Replace bumper	front	---	0.3	6303
	rear	0.2	0.2	6305
Replace highway bar	front	0.3	0.3	6353
	rear – left	0.3	0.3	6355
	rear – right	0.4	0.4	6357
Replace Tour-Pak mount/luggage rack		0.6	0.7	6453
Replace Tour-Pak	includes lights and brackets, antenna assembly and backrest	---	0.9	6509
Replace mirror		0.1	0.1	6513
Replace backrest		---	0.2	6515
<b>SOUND SYSTEM – DIAGNOSIS, REPAIR</b>				
Replace radio chassis		---	0.4	6601
Replace one front speaker		---	0.3	6605
Replace one speaker grill – front		---	0.2	6607
Replace front antenna lead		---	0.8	6609
Replace antenna mast mount		---	0.2	6611
Complete stereo antenna inspection		---	0.2	6615
Replace stereo antenna mast		---	0.3	6617

**Table 3-8. Sidecar**

ITEM	DESCRIPTION	DDV	DJV/DGV	LABOR CODE
<b>2001 ACCESSORY SIDECAR</b>				
Replace sidecar windshield		0.2	0.2	6901
Replace sidecar fender		0.8	0.8	6904
Replace seat		0.2	0.2	6907
Replace seat cable		0.5	0.5	6910
Replace liner (carpeting)		0.4	0.4	6913
Replace brake pads		0.2	0.2	6926
Replace brake caliper		0.3	0.3	6927
Replace brake disc		0.3	0.3	6929
Replace wheel		0.7	0.7	6931
Replace axle		0.8	0.8	6934
Removal of sidecar for service and reattachment	includes realignment	1.1	1.1	6954
Sidecar alignment		0.8	0.8	6956
Sidecar tub removal		0.3	0.3	6958

# NOTES

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# 2002 FLHTC-I & FLHTCU-I MODELS

**Table 4-1. Service**

ITEM	DESCRIPTION	FFW	FCW/FLW	LABOR CODE
<b>NEW</b>				
Set-up and pre-delivery	includes setting SWR	2.5	2.5	---
1,000 mile service		2.5	2.5	---
<b>REGULAR</b>				
2,500 mile maintenance		0.5	0.5	---
5,000 mile maintenance		2.5	2.5	---
7,500 mile maintenance		0.5	0.5	---
10,000 mile maintenance		4.5	4.5	---
20,000 mile maintenance		7.4	7.4	---
25,000 mile maintenance		3.0	3.0	---
50,000 mile maintenance		7.7	7.7	---

**Table 4-2. Chassis**

ITEM	DESCRIPTION	FFW	FCW/FLW	LABOR CODE
<b>DRIVE</b>				
Adjust secondary belt		0.2	0.2	---
Replace secondary belt		3.7	3.7	2011
Replace rear wheel sprocket		0.9	0.9	2021
<b>WHEELS</b>				
Replace tire and/or wheel assembly - includes balancing	front	0.6	0.6	2106
	rear	0.8	0.8	2111
Replace wheel assembly - includes disc and sprocket exchange and balancing	front	0.8	0.8	2113
	rear	1.0	1.0	2114
Replace rim, hub or spokes	front	2.2	2.2	2116
	rear	2.4	2.4	2121
True laced wheel (wheel on vehicle)		0.4	0.4	2156
True laced wheel - includes r/r wheel & tire and time to rebalance	front	1.0	1.0	2157
	rear	1.2	1.2	2158
Replace wheel bearings and/or adjust bearing end play and/or replace seals	front	0.6	0.6	2136
	rear	0.8	0.8	2141
<b>HANDLEBARS</b>				
Replace handlebars	includes removing radio	1.2	1.2	2206
Replace clutch hand lever		0.2	0.2	2221
Replace clutch hand lever bracket		0.2	0.2	2226

All times listed in hours.

### V.I.N. CODES

FFW	FLHTC-I
FCW	FLHTCU-I
FLW	FLHTCU-I SHRINE

**Table 4-2. Chassis**

ITEM	DESCRIPTION	FFW	FCW/FLW	LABOR CODE
Replace throttle control		0.6	0.6	2231
Replace throttle control cable	one or more - includes all adjustments	1.1	1.1	2241
Replace both rubber handlebar mounts	includes removing radio	1.0	1.0	2246
Replace rubber handlebar grip		0.2	0.2	2251
Replace handlebar riser	one or both - includes loosening radio	1.0	1.0	2253
Replace handlebar clamp	one or both - includes removing radio	0.8	0.8	2254
<b>FRAME/SWING ARM/FRONT FORK</b>				
Replace frame	includes removal and installation of all accessories and motorcycle components	17.5	17.5	2306
Replace front fork assembly	includes removal and installation of upper and lower fork brackets	3.0	3.0	2311
Replace lower fork bracket and stem		3.2	3.2	2316
Replace steering head cups and bearings	including bearing adjustment	3.2	3.2	2321
Replace upper fork bracket		2.7	2.7	2326
Adjust steering head bearings		0.7	0.7	---
Change front fork oil	both sides	2.9	2.9	---
Replace complete lock set		0.4	0.4	2333
Service or replace fork slider and/or seal – includes removal, disassembly, cleaning, inspection, replacing parts, servicing damper tube, replacing bushings, assembly and installation	right side	2.4	2.4	2343
	left side	2.7	2.7	2344
	both sides	2.9	2.9	2342
Replace fork side	one side	1.2	1.2	2346
	both sides	1.5	1.5	2351
Replace fork tube	right side	1.9	1.9	2357
	left side	2.7	2.7	2358
	both sides	2.9	2.9	2361
Replace rear swing arm and/or bearings		1.9	1.9	2366
Replace rear fork pivot shaft		1.0	1.0	2368
Replace rear shock air line		0.1	0.1	2369
Replace rear shock absorber assembly	one side	0.3	0.3	2371
	both sides	0.6	0.6	2376
Replace rear shock absorber component(s)	one side	0.5	0.5	2381
	both sides	0.8	0.8	2386
Replace jiffy stand	complete	0.3	0.3	2391
	spring and/or stand	0.2	0.2	2396
	rubber bumper	0.1	0.1	2399
Replace motor rubber mount	rear left	0.3	0.3	2397
	rear right	0.5	0.5	2395
	front	0.4	0.4	2398
Replace footboard		0.2	0.4	2394
<b>BRAKES</b>				
Replace hydraulic brake line – includes filling/bleeding brakes	front	1.0	1.0	2406
	rear	0.4	0.4	2411
Replace rear master cylinder reservoir and/or hose		0.2	0.2	2414
Replace brake pads	front – each caliper	0.1	0.1	2416
	rear	0.2	0.2	2421
Replace brake caliper – includes filling/bleeding brakes	front – each caliper	0.4	0.4	2426
	rear	1.0	1.0	2431



**Table 4-2. Chassis**

ITEM	DESCRIPTION	FFW	FCW/FLW	LABOR CODE
Replace brake disc	front – one side	0.3	0.3	2436
	front – both sides	0.4	0.4	2437
	rear	1.3	1.3	2441
Bleed brake caliper – one or two front calipers or rear caliper		0.2	0.2	2446
Overhaul brake caliper – includes filling/bleeding brakes	front – each caliper	0.6	0.6	2451
	rear	1.3	1.3	2456
Replace master cylinder assembly – includes filling/bleeding brakes	front	0.4	0.4	2461
	rear	0.5	0.5	2466
Rebuild master cylinder assembly – includes filling/bleeding brakes	front	0.6	0.6	2471
	rear	0.7	0.7	2476
Replace rear brake pedal		0.3	0.3	2492
Replace front brake lever		0.1	0.1	2494
<b>SEATS/FENDERS/TANKS</b>				
Replace seat		0.1	0.1	2506
Replace seat handrail		0.2	0.2	2508
Replace fender	front	1.0	1.0	2526
	rear	1.5	1.5	2531
Replace rear fender support		0.2	0.2	2536
Replace fuel tank assembly		1.2	1.2	2541
Replace fuel tank console/instrument panel		0.3	0.3	2553
Replace fuel tank console rubber mounting strip		0.2	0.2	2557
Replace fuel tank gauge		0.5	0.5	2563
Replace gasoline level sending unit		0.5	0.5	2564
Replace fuel tank check valve assembly		0.6	0.6	2567
Replace any hose		0.3	0.3	2576
Replace oil filter		0.1	0.1	2582
Replace oil filter bracket		0.6	0.6	2584
Replace canopy gasket		0.4	0.4	2570
Replace fuel filter		0.5	0.5	2575
Replace fuel hose inside tank		0.5	0.5	2579
<b>BELT GUARDS</b>				
Replace rear belt guard – debris deflector		0.1	0.1	2616
<b>EXHAUST SYSTEM</b>				
Replace complete exhaust system and/or gaskets		1.0	1.0	2626
Replace exhaust pipe	right side	1.0	1.0	2631
	left side	0.3	0.3	2636
Replace one muffler		0.2	0.2	2646
Replace any one exhaust shield		0.1	0.1	2661
Replace one muffler support		0.2	0.2	2666

**Table 4-3. Engine**

ITEM	DESCRIPTION	FFW	FCW/FLW	LABOR CODE
<b>GENERAL</b>				
Remove and install engine	California vehicles only	4.6	4.9	3006
Remove and install engine		4.5	4.8	3006
Replace and adjust stabilizer	top	0.8	0.8	3005
	front	0.3	0.3	3007
Remove and replace oil pan for inspection/contamination	with engine removed	0.3	0.3	3009
<b>CYLINDER HEAD</b>				
Recondition cylinder head – includes removal of head and gasket, remove carbon, service valve guides, grind valves and seats, test springs and install head and gaskets.	front head	4.5	4.9	3101
	rear head	4.5	4.9	3103
	both heads	5.1	5.5	3104
Replace cylinder head	one head	3.2	3.6	3106
	both heads	3.8	4.2	3108
Replace valve seal or spring after cylinder head removal	one seal or spring (intake or exhaust)	0.1	0.1	3131
	both seals or springs (intake or exhaust)	0.2	0.2	3132
Replace cylinder head gasket/o-ring	front cylinder	2.6	3.0	3140
	rear cylinder	2.6	3.0	3142
	both cylinders	3.0	3.4	3143
Replace rocker arm covers and/or gaskets	front cylinder	0.8	0.8	3144
	rear cylinder	0.8	0.8	3145
	both cylinders	0.9	0.9	3148
Recondition rocker arms after heads are removed	one head	0.7	0.7	3149
	both heads	1.4	1.4	3150
Replace lower rocker arm cover/gasket, or rocker arms and /or shafts/rocker arm support	front cylinder	1.2	1.6	3147
	rear cylinder	1.2	1.6	3152
	both cylinders	1.4	1.8	3153
Replace cylinder o-ring/drain o-ring	front cylinder	2.8	3.2	3161
	rear cylinder	2.8	3.2	3163
	both cylinders	3.2	3.6	3168
Replace crankcase umbrella valve	one	1.1	1.1	3172
	both	1.2	1.2	3174
<b>CYLINDER AND PISTON</b>				
Recondition TOP END - includes disassembly, replacement of piston and sizing cylinder (.005" pistons), replacing piston rings and all items listed under RECONDITION CYLINDER HEAD and assembly.	one piston and cylinder	5.5	5.9	3202
	both pistons and cylinders	6.1	6.5	3203
Recondition TOP END - includes disassembly, replacement of piston and bore and hone, resizing cylinder (.010" oversize or above), replacing piston rings and all items listed under RECONDITION CYLINDER HEAD and assembly.	one piston and cylinder	5.9	6.3	3211
	both pistons and cylinders	6.5	6.9	3212
Recondition TOP END – includes disassembly, deglazing cylinder and replacing rings, or replacing cylinder and piston, all items listed under RECONDITIONING CYLINDER HEAD and assembly.	one piston and cylinder	5.3	5.7	3207
	both pistons and cylinders	5.9	6.3	3208
Replace piston rings – includes deglazing cylinder	one cylinder	3.1	3.5	3206
	both cylinders	3.7	4.1	3216

**Table 4-3. Engine**

ITEM	DESCRIPTION	FFW	FCW/FLW	LABOR CODE
Replace piston and piston rings – includes removal of cylinder head and cylinder, fitting new piston with rings, resizing cylinder and assembly	one cylinder	3.7	4.1	3221
	both cylinders	4.9	5.3	3231
Replace cylinder and piston	one cylinder	3.0	3.4	3236
	both cylinders	3.5	3.9	3246
Replace upper connecting rod bushing during upper end repair		0.4	0.4	3251
Replace one cylinder stud	cylinder removed	0.1	0.1	3253
Replace all eight cylinder studs	cylinders removed	0.5	0.5	3254
<b>CAM COVER</b>				
Replace lifter cover/gasket or lifter/and, or anti-rotation pin	one or two same cylinder	1.4	1.8	3307
	on both cylinders	1.6	2.0	3310
Replace push rod, push rod cover and/or O-ring or quad seal	one or two same cylinder	1.4	1.8	3317
	one each cylinder	1.6	2.0	3318
Replace cam cover and/or gasket		1.6	2.0	3325
Replace primary cam chain, sprockets and/or fastener		1.7	2.1	3327
Replace primary cam chain tensioner		1.7	2.1	3328
Replace cam support plate/O-rings		2.8	3.2	3335
Replace cam support plate		2.8	3.2	3337
Replace cam support bearing/cams/secondary cam chain/tensioner		3.0	3.4	3338
Replace oil pump and/or O-rings		2.6	3.0	3341
Replace cam bearing crankcase	one bearing	2.8	3.2	3342
	two bearings	2.9	3.3	3343
By pass valve inspection		2.7	3.1	3354
<b>CRANKCASE</b>				
Replace crankcases	California vehicles only –includes remove and install engine	8.2	8.6	3406
Replace crankcases	includes remove and install engine	8.1	8.5	3406
Seal crankcase only		7.6	8.0	3407
Replace flywheels	includes remove and install engine	7.6	8.0	3411
Replace right side main bearing	California vehicles only	7.1	7.5	3412
Replace right side main bearing		7.0	7.4	3412
Piston jet/O-ring	one	3.0	3.4	3413
	both	3.4	3.8	3414
Filter housing and or O-rings		0.2	0.2	3415
Replace crankcase vent hose and/or fittings		0.2	0.2	3417
Replace crankcase oil hose and/or fittings	Feed	0.3	0.3	3418
	Return	0.3	0.3	3419
Check flywheel trueness before assembly or after removal		0.1	0.1	3420
True flywheels after removal	includes piston removal and reinstallation	0.5	0.5	3421
Recondition cylinder heads	head removed (for non-related repairs)			
	one head	1.0	1.0	3425
	both heads	2.0	2.0	3426
Replace piston rings	cylinders removed (for non-related repairs – deglaze only)	0.3	0.3	3428

**Table 4-3. Engine**

ITEM	DESCRIPTION	FFW	FCW/FLW	LABOR CODE
<b>FUEL SYSTEM</b>				
Replace air cleaner backing plate		0.2	0.2	3501
Replace air cleaner cover		0.1	0.1	3502
Replace induction module	includes making cruise control adjustment	1.2	1.2	3508
Replace induction module seal		1.2	1.2	3510
Replace external fuel supply hose		0.2	0.2	3514
<b>EVAPORATIVE EMISSIONS SYSTEM</b>				
Replace canister		0.1	0.1	3527
Replace vapor valve		0.1	0.1	3528
Replace any one hose		0.1	0.1	3529

**Table 4-4. Drive and Clutch**

ITEM	DESCRIPTION	FFW	FCW/FLW	LABOR CODE
<b>DRIVE</b>				
Adjust primary chain		0.2	0.2	---
Replace primary chain		0.9	0.9	4002
Replace engine sprocket		0.9	0.9	4003
Replace engine sprocket seal		1.3	1.3	4005
Replace primary cover		0.4	0.4	4007
Replace primary cover gasket		0.4	0.4	4009
Replace primary inspection cover and/or O-ring		0.1	0.1	4001
Replace inner primary case and/or seals or main-shaft bearing		2.1	2.1	4008
<b>CLUTCH</b>				
Adjust clutch		0.2	0.2	---
Replace release cable assembly		1.8	1.8	4006
Service the clutch	includes disassembly, cleaning, inspection repair, assembly and adjustment	1.3	1.3	4011
Replace shift lever	heel or toe shifter	0.1	0.1	4012
Replace clutch release bearing and/or push rod		0.4	0.4	4016
Replace clutch release (ball ramp) and/or side cover		1.6	1.6	4018

**Table 4-5. Transmission**

ITEM	DESCRIPTION	FFW	FCW/FLW	LABOR CODE
<b>TRANSMISSION CASE</b>				
Replace transmission case		5.3	5.3	4304
Replace transmission complete		4.9	4.9	4305
Overhaul transmission	includes disassembly, cleaning, inspection, replacing parts (transmission case in frame)	4.6	4.6	4306
Replace transmission sprocket		2.2	2.2	4309
Replace main drive gear oil seal	in transmission case	2.3	2.3	4311
Replace mainshaft oil seal	in main drive gear	2.2	2.2	4316

**Table 4-5. Transmission**

ITEM	DESCRIPTION	FFW	FCW/FLW	LABOR CODE
Replace side door gasket		2.8	2.8	4321
Replace shifter drum		0.7	0.7	4331
Replace shifter arm assembly or springs		3.0	3.0	4336
Replace transmission top cover and/or gasket		0.6	0.6	4341
Replace shifter forks and/or shaft		0.9	0.9	4343
Replace side door bearing	one	3.0	3.0	4348
	both	3.1	3.1	4351
Replace transmission case countershaft bearing		2.9	2.9	4361
Replace main drive gear and/or bearing		3.2	3.2	4366
Replace transmission side cover gasket		0.9	0.9	4368
Replace oil pan and/or gasket or baffle	Note: Removal of rear wheel may be necessary	0.9	0.9	4378
Replace oil fill tube and/or cover, and/or gasket		0.4	0.4	4379
Replace transmission shift shaft seal		2.2	2.2	4390

**Table 4-6. Electrical**

ITEM	DESCRIPTION	FFW	FCW/FLW	LABOR CODE
<b>GENERAL</b>				
Check and diagnose the electrical system lights and accessories	excluding turn signals	0.3	0.3	5016
Replace connector housing		0.1	0.1	5022
Replace connector anchor		0.1	0.1	5023
<b>CHARGING CIRCUIT</b>				
Diagnose charging system	regulator inspection	0.1	0.1	5306
Diagnose charging system	regulator bleed	0.9	0.9	5307
Diagnose charging system	milliamp draw	0.2	0.2	5308
Diagnose charging system	total current draw	0.2	0.2	5310
Replace regulator/stator connector		0.2	0.2	5311
Diagnose charging system	open grounded stator	1.8	1.8	5312
Diagnose system	AC output	1.8	1.8	5314
Diagnose charging system	regulator failure	1.0	1.0	5315
Diagnose charging system	voltage output	1.0	1.0	5316
Diagnose charging system	replace rotor	1.3	1.3	5319
<b>STARTER CIRCUIT</b>				
Starter inoperative	open/shorted/grounded motor	1.4	1.4	5817
Starter inoperative	start button	1.0	1.0	5818
Starter inoperative	solenoid clicks; poor starter or battery connections	0.2	0.2	5822
Starter inoperative	solenoid clicks; poor relay or solenoid connections, or bad relay contacts	0.3	0.3	5823
Starter inoperative	solenoid clicks; poor starter to battery connections, ground connections, or bad solenoid contacts	0.2	0.2	5824
Starter inoperative	damaged motor	1.4	1.4	5825
Starter inoperative	relay click; open in relay wiring	0.3	0.3	5827
Starter inoperative	nothing clicks; poor relay ground	0.2	0.2	5828

**Table 4-6. Electrical**

ITEM	DESCRIPTION	FFW	FCW/FLW	LABOR CODE
Starter inoperative	nothing clicks; short to voltage	0.3	0.3	5830
Starter inoperative	nothing clicks; open in wiring to or from starter button	0.5	0.5	5831
Starter inoperative	starter relay	0.4	0.4	5832
Slow starter crank or starter stalls	poor starter to battery connections, ground connections, or bad solenoid contacts	0.2	0.2	5835
Slow starter crank or starter stalls	jackshaft binding or defective starter motor	0.3	0.3	5836
Starter spins	clutch	1.5	1.5	5837
Starter inoperative	nothing clicks; TSM/TSSM	0.3	0.3	5838
Replace starter solenoid contacts	includes starter motor removal	1.6	1.6	5845
Starter binding		1.6	1.6	5850
Replace starter solenoid coil	includes starter motor removal	1.6	1.6	5860
<b>WIRING</b>				
Replace main wiring harness		3.6	3.6	5026
Replace ultra overlay		1.8	1.8	5027
Main harness	locate and repair open/short	0.5	0.5	5028
Replace rear fender wiring harness		0.8	0.8	5036
Replace EFI harness		1.7	1.7	5033
Replace any single wire	ground wire	0.4	0.4	5038
	light circuit	0.2	0.2	5039
	accessory circuit	0.2	0.2	5043
Repair/diagnose indicator lamp wiring		0.3	0.3	5048
Replace front fender wiring harness		0.9	0.9	5049
Replace ignition wiring harness		1.1	1.1	5050
Replace inter connect harness		0.5	0.5	5052
Interconnect harness	repair short	0.5	0.5	6531
Interconnect harness	repair open	0.5	0.5	6532
Handlebar harness	repair short	0.4	0.4	6551
Handlebar harness	repair open	0.4	0.4	6552
Overlay harness	repair short	0.5	0.5	6560
Overlay harness	repair open	0.5	0.5	6561
Replace front headset harness		---	0.6	6616
<b>SWITCHES</b>				
Replace ignition switch		0.5	0.5	5129
Replace rear stoplight switch		0.5	0.5	5141
Replace fuse		0.2	0.2	5145
Replace main circuit breaker		0.2	0.2	5147
Replace fuse block	one	0.3	0.3	5148
Replace fuse block	two	0.5	0.5	5151
Replace transmission neutral switch	includes diagnosis	0.3	0.3	5157
Replace oil pressure switch	includes diagnosis	0.3	0.3	5161
Replace rear stoplight relay		0.2	0.2	5169
Replace left handlebar switch		0.5	0.5	5171
Replace right handlebar switch		0.7	0.7	5173
Replace front brake light switch		0.7	0.7	5176
Replace left upper handlebar switch housing		0.2	0.2	5177
Replace left lower handlebar switch housing		0.3	0.3	5178
Replace right upper handlebar switch housing		0.2	0.2	5179

**Table 4-6. Electrical**

ITEM	DESCRIPTION	FFW	FCW/FLW	LABOR CODE
Replace right lower handlebar switch housing		0.7	0.7	5180
Replace handlebar (cruise set) switch		---	1.2	5182
Replace handlebar mode switch		1.1	1.1	5183
Replace handlebar (PTT) switch		---	0.8	5184
Replace handlebar audio switch		1.0	1.0	5186
Replace any fairing switch		0.4	0.5	5192
Replace any console switch		0.6	0.6	6624
Replace passenger switch	volume/PTT switch	---	0.6	6627
<b>LIGHTS</b>				
Replace headlight	includes diagnosis	0.1	0.1	5185
Replace headlight housing	includes adjustment	0.1	0.1	5189
Replace instrument panel bulb	includes diagnosis	0.2	0.2	5193
Replace taillight bulb or single light bulb or lens	includes diagnosis	0.1	0.1	5197
Replace taillight assembly or circuit board		0.2	0.2	5215
Replace turn signal light assembly	front	0.4	0.4	5201
	rear	0.4	0.4	5205
Replace rear turn signal bar		0.4	0.4	5207
Replace fender tip light bulb or lens	front	0.1	0.1	5217
	rear	0.1	0.1	5221
Replace fender tip lamp assembly	front	0.2	0.2	5225
	rear	0.3	0.3	5229
Replace passing lamp bulb		0.1	0.1	5227
Replace passing lamp assembly		0.4	0.4	5230
Replace passing lamp bracket		0.7	0.7	5232
Replace King Tour-Pak light bulb or lens	includes diagnosis	0.2	0.2	5233
Replace King Tour-Pak lower light assembly		0.5	0.5	5234
Replace King Tour-Pak wrap-around light assembly		0.8	0.8	5235
<b>TURN SIGNALS/SECURITY SYSTEM</b>				
No security lamp		0.5	0.5	6735
No security lamp		0.5	0.5	6736
No security lamp		0.5	0.5	6737
No security lamp		0.5	0.5	6738
No security lamp		0.1	0.1	6739
No security lamp		0.2	0.2	6740
No security lamp		0.3	0.3	6741
No security lamp		0.3	0.3	6742
No security lamp		0.3	0.3	6743
No security lamp		0.2	0.2	6744
No security lamp		0.3	0.3	6745
Security lamp on continuously		0.2	0.2	6750
Security lamp on continuously		0.4	0.4	6751
Security lamp on continuously		0.5	0.5	6752
Fob signal weak		0.1	0.1	6755
Fob signal weak		0.1	0.1	6756
Fob signal weak		0.2	0.2	6757
Turn signal error 1A		0.5	0.5	6760

**Table 4-6. Electrical**

ITEM	DESCRIPTION	FFW	FCW/FLW	LABOR CODE
Turn signal error 1A		1.1	1.1	6761
Turn signal error 1A		0.2	0.2	6762
Turn signal error 1A		0.3	0.3	6763
Turn signal error 1A		0.7	0.7	6764
Turn signal error 2A		0.9	0.9	6773
Turn signal error 2B		0.6	0.6	6777
Turn signal error 2B		0.5	0.5	6778
Turn signal error 2B		0.7	0.7	6779
Turn signal error 2B		0.7	0.7	6780
Turn signal error 2C		0.8	0.8	6784
Turn signal error 2C		0.8	0.8	6785
Turn signal error 2C		1.2	1.2	6786
Turn signal error 3A		0.3	0.3	6790
Turn signal error 3A		0.2	0.2	6791
Turn signal error 3A		0.1	0.1	6792
Turn signal error 3A		0.3	0.3	6793
Turn signal error 3B		0.1	0.1	6796
Turn signal error 3B		0.3	0.3	6797
Turn signal error 3B		0.3	0.3	6798
Turn signal error 3B		0.3	0.3	6799
Turn signal error 3B		0.3	0.3	6800
Turn signal error 3C		0.3	0.3	6805
Turn signal error 3C		0.3	0.3	6806
Turn signal error 3C		0.2	0.2	6807
Turn signal error 3C		0.3	0.3	6808
Turn signal error 3D		0.4	0.4	6810
Turn signal error 3D		0.8	0.8	6811
Turn signal error 3D		0.5	0.5	6812
Turn signal error 3D		0.4	0.4	6813
Turn signal error 3D		0.5	0.5	6814
Turn signal error 3D		0.8	0.8	6815
Turn signal error 3D		0.5	0.5	6816
Turn signal error 4A		0.2	0.2	6820
Turn signal error 4A		0.2	0.2	6821
Turn signal error 4A		0.4	0.4	6822
Turn signal error 4A	Does not include lamp assembly replacement	0.3	0.3	6823
Turn signal error 4A		0.5	0.5	6824
Ignition enable output high		0.3	0.3	6827
Ignition enable output high		0.3	0.3	6828
Alarm output		0.3	0.3	6830
Alarm output		0.3	0.3	6831
Alarm output		0.3	0.3	6832
Alarm output		0.4	0.4	6833
Alarm output		0.3	0.3	6834
Alarm output		0.3	0.3	6835
Starter output high		0.3	0.3	6840



**Table 4-6. Electrical**

ITEM	DESCRIPTION	FFW	FCW/FLW	LABOR CODE
Starter output high		0.2	0.2	6841
Starter output high		0.3	0.3	6842
Accelerometer fault		0.2	0.2	6845
<b>BATTERY/HORN</b>				
Replace the battery		0.3	0.3	5705
Replace horn and/or bracket		0.1	0.1	5765
Replace battery tray		0.3	0.3	5767
Replace battery cable		0.2	0.2	5769
<b>INSTRUMENTS – INCLUDES DIAGNOSIS</b>				
Replace speedometer	cosmetics only	0.2	0.2	6003
Electronic speedometer				
Diagnose inoperative, inaccurate or erratic speedometer	switch	0.3	0.3	6001
Diagnose inoperative, inaccurate or erratic speedometer		0.1	0.1	6002
Diagnose inoperative, inaccurate or erratic speedometer	wiring	0.2	0.2	6004
Diagnose inoperative, inaccurate or erratic speedometer	replace	0.5	0.5	6006
Diagnose inoperative, inaccurate or erratic speedometer	wiring	0.4	0.4	6008
Diagnose inoperative, inaccurate or erratic speedometer	sensor	0.5	0.5	6010
Diagnose inoperative, inaccurate or erratic speedometer	open	0.6	0.6	6013
Diagnose inoperative, inaccurate or erratic speedometer	LED failure	0.3	0.3	6014
Diagnose inoperative, inaccurate or erratic speedometer	wires	0.4	0.4	6016
Odometer inoperable		0.3	0.3	6020
Diagnose inoperative, inaccurate or erratic speedometer	internal	0.5	0.5	6022
Diagnose inoperative, inaccurate or erratic speedometer	power/ground	0.5	0.5	6024
Diagnose inoperative, inaccurate, or erratic speedometer	debris or sensor	0.5	0.5	6029
Diagnose inoperative, inaccurate or erratic speedometer	grounded circuit	0.3	0.3	6031
Diagnose inoperative, inaccurate or erratic speedometer	fuse	0.1	0.1	6032
Replace speedo reset boot		0.1	0.1	6043
Replace tachometer		0.3	0.3	6009
Replace voltmeter		0.3	0.3	6021
Replace oil pressure or air temperature gauge		0.5	0.5	6026
Replace ambient temperature sensor		0.3	0.3	6028
Replace low fuel module		0.3	0.3	6030
<b>ACCESSORIES</b>				
Replace windshield		0.1	0.1	6203
Replace one wind deflector		0.1	0.1	6205

**Table 4-6. Electrical**

ITEM	DESCRIPTION	FFW	FCW/FLW	LABOR CODE
Replace instrument panel support housing or inner fairing		1.8	1.9	6209
Replace chrome fairing skirt		0.2	0.2	6273
Replace outer fairing or support brace		0.4	0.4	6255
Replace inner fairing bracket		0.8	0.9	6265
Replace one fairing lower and/or glove compartment		0.2	0.2	6272
Replace saddlebag mounting bracket		0.2	0.2	6253
Replace saddlebag guard	complete	0.3	0.3	6254
Replace a single saddlebag guard rail		0.2	0.2	6256
Replace a saddlebag		0.2	0.2	6257
Replace saddlebag cover	one	0.2	0.2	6260
Replace saddlebag lock		0.2	0.2	6259
Replace one saddlebag tether strap		0.1	0.1	6262
Replace Tour-Pak lock or latch		0.2	0.2	6261
Replace one frame sidecover		0.1	0.1	6263
Replace Tour-Pak hinge		0.3	0.3	6264
Replace Nameplate Tour-Pak		0.2	0.2	6266
Change Lock-set		0.5	0.5	6276
Replace Tour-Pak cover		0.7	0.7	6270
Replace bumper	front	0.3	0.3	6303
	rear	0.2	0.2	6305
Replace highway bar	front	0.6	0.6	6353
	rear – left	0.3	0.3	6355
	rear – right	0.4	0.4	6357
Replace Tour-Pak mount/luggage rack		0.7	0.8	6453
Replace Tour-Pak	includes lights and brackets, antenna assembly, backrest, and rear speakers	0.9	2.6	6509
Replace mirror		0.1	0.1	6513
Replace backrest		0.2	0.2	6515
Replace fairing cap		0.3	0.3	6271
<b>SOUND SYSTEM – DIAGNOSIS, REPAIR</b>				
Replace radio chassis	includes SWR check	0.4	0.4	6601
Replace one front speaker		0.3	0.3	6605
Replace one rear speaker		---	0.2	6606
Replace rear speaker housing	right side	---	0.3	6608
	left side	---	0.3	6610
Replace one speaker grill	front	0.2	0.2	6607
	rear	---	0.1	6612
Replace stereo antenna mast		0.3	0.3	6617
Complete CB antenna inspection	includes checking SWR	---	0.2	6602
Replace front antenna lead		1.8	1.8	6609
Replace antenna mast mount		0.2	0.2	6611
Replace CB antenna mast	includes checking SWR	---	0.3	6613
Replace CB loading coil	includes checking SWR	---	0.3	6618

**Table 4-6. Electrical**

ITEM	DESCRIPTION	FFW	FCW/FLW	LABOR CODE
Replace console switch housing		---	0.3	6623
Replace front headset DIN cover		---	0.3	6619
Replace rear headset DIN cover		---	0.1	6628
<b>ACCESSORIES – CRUISE CONTROL – DIAGNOSIS, REPAIR</b>				
Replace cruise cable		---	0.4	6630
Replace cruise module		---	0.7	6635

**Table 4-7. Sidecars**

ITEM	DESCRIPTION	FFW	FCW/FLW	LABOR CODE
<b>2001 ULTRAS WITH ACCESSORY SIDECAR</b>				
Replace sidecar windshield		0.2	0.2	6901
Replace sidecar fender		0.8	0.8	6904
Replace seat		0.2	0.2	6907
Replace seat cable		0.5	0.5	6910
Replace liner (carpeting)		0.4	0.4	6913
Replace armrest storage pouch		0.2	0.2	6916
Replace armrest		0.2	0.2	6919
Replace handles		0.1	0.1	6922
Replace brake pads		0.2	0.2	6926
Replace brake caliper		0.3	0.3	6927
Replace brake disc		0.3	0.3	6929
Replace wheel		0.7	0.7	6931
Replace axle		0.8	0.8	6934
Repair/replace audio harness		1.0	1.0	6940
Replace speaker		0.5	0.5	6943
Replace speaker pod		0.6	0.6	6946
Replace amplifier		0.6	0.6	6949
Removal of sidecar for service and reattachment	includes realignment	1.1	1.1	6954
Sidecar alignment		0.8	0.8	6956
Sidecar tub removal		0.3	0.3	6958

**Table 4-8. Fuel Injection**

ITEM	DESCRIPTION	FFW	FCW/FLW	LABOR CODE
NOTE: The codes listed below must be used in conjunction with the diagnostic/repair procedures listed in the FLT Service Manual, Part No. 99483-02 and Electrical Diagnostic Manual, Part No. 99497-02. Remember to use the same four digit code selected for your labor code as your condition code when filing a warranty claim.				
Diagnostic check		0.2	0.2	7110
Diagnostic check		0.4	0.4	7115
Diagnostic check		0.4	0.4	7120
Diagnostic check		0.8	0.8	7125
Diagnostic check		0.8	0.8	7126
No check engine lamp/No ECM Power		0.6	0.6	6013
No check engine lamp/No ECM Power		0.7	0.7	7130

**Table 4-8. Fuel Injection**

ITEM	DESCRIPTION	FFW	FCW/FLW	LABOR CODE
No check engine lamp/No ECM Power		0.6	0.6	7133
No check engine lamp/No ECM Power		0.4	0.4	7141
No check engine lamp/No ECM Power		0.1	0.1	7142
No check engine lamp/No ECM Power		0.6	0.6	7143
No check engine lamp/No ECM Power		0.5	0.5	7146
No check engine lamp/No ECM Power		0.6	0.6	7270
No check engine lamp/No ECM Power		0.7	0.7	7285
No check engine lamp/No ECM Power		0.9	0.9	7286
No check engine lamp/No ECM Power		1.2	1.2	7287
No check engine lamp/No ECM Power		0.9	0.9	7288
No check engine lamp/No ECM Power		0.9	0.9	7289
No check engine lamp/No ECM Power		0.5	0.5	7290
No check engine lamp/No ECM Power		1.5	1.5	7295
No check engine lamp/No ECM Power		0.6	0.6	7301
No check engine lamp/No ECM Power		0.1	0.1	7302
No check engine lamp/No ECM Power		0.8	0.8	7303
No check engine lamp/No ECM Power		0.6	0.6	7304
No check engine lamp/No ECM Power		0.6	0.6	7305
No check engine lamp/No ECM Power		0.5	0.5	7306
No check engine lamp/No ECM Power		0.8	0.8	7307
No check engine lamp/No ECM Power		0.7	0.7	7308
No check engine lamp/No ECM Power		0.6	0.6	7309
No check engine lamp/No ECM Power		0.6	0.6	7310
No check engine lamp/No ECM Power		0.3	0.3	7320
Check engine lamp on continuously		0.2	0.2	7148
Check engine lamp on continuously		0.7	0.7	7150
Check engine lamp on continuously		0.3	0.3	7155
Check engine lamp on continuously		0.2	0.2	7156
Check engine lamp on continuously		0.1	0.1	7157
Engine cranks but will not start		0.6	0.6	7185
Engine cranks but will not start		0.5	0.5	7195
Engine cranks but will not start		0.5	0.5	7210
Engine cranks but will not start		0.4	0.4	7215
Engine cranks but will not start		0.5	0.5	7223
Engine cranks but will not start		0.4	0.4	7224
Engine cranks but will not start		0.5	0.5	7225
Engine cranks but will not start		0.8	0.8	7226
Engine cranks but will not start		0.7	0.7	7227
Engine cranks but will not start		0.5	0.5	7228
Engine cranks but will not start		0.5	0.5	7230
Engine cranks but will not start		0.6	0.6	7231
Engine cranks but will not start		0.5	0.5	7235
Engine cranks but will not start		0.9	0.9	7251
Fuel system electrical test		0.2	0.2	7335
Fuel system electrical test		0.7	0.7	7336
Engine cranks but will not start; Fuel system electrical test		0.6	0.6	7340

**Table 4-8. Fuel Injection**

ITEM	DESCRIPTION	FFW	FCW/FLW	LABOR CODE
Engine cranks but will not start; Fuel system electrical test		0.5	0.5	7355
Fuel system electrical test		0.3	0.3	7360
Fuel system electrical test		0.8	0.8	7370
Engine cranks but will not start; Fuel system electrical test		0.4	0.4	7380
Fuel system electrical test		0.3	0.3	7385
Engine cranks but will not start; Fuel system electrical test		0.9	0.9	7415
Fuel system electrical test		0.3	0.3	7440
Engine cranks but will not start; Fuel system electrical test		0.4	0.4	7441
Fuel system electrical test		0.2	0.2	7445
Engine cranks but will not start; Fuel system electrical test		0.4	0.4	7450
Engine cranks but will not start; Fuel system electrical test		0.7	0.7	7992
Engine cranks but will not start; Fuel system electrical test		0.4	0.4	7520
Starts, then stalls		0.7	0.7	7992
Starts, then stalls		0.6	0.6	7993
Starts, then stalls		0.3	0.3	7994
Starts, then stalls		0.3	0.3	7995
Starts, then stalls		0.3	0.3	7996
Starts, then stalls		0.5	0.5	7997
Starts, then stalls		0.6	0.6	7998
Starts, then stalls		0.5	0.5	7999
Starts, then stalls; no DTCs		0.4	0.4	7127
Starts, then stalls; no DTCs		0.3	0.3	7128
Combustion absent		0.1	0.1	7537
Combustion absent		0.2	0.2	7538
Combustion absent		0.2	0.2	7539
Combustion absent		0.2	0.2	7543
Combustion absent		0.4	0.4	7544
Combustion absent		0.2	0.2	7546
Combustion absent		0.4	0.4	7547
Combustion absent		0.1	0.1	7548
Combustion absent		0.1	0.1	7549
Fuel pressure test		0.4	0.4	7455
Fuel pressure test		0.7	0.7	7465
Fuel pressure test		0.7	0.7	7470
Fuel pressure test		0.7	0.7	7480
Idle air control		1.1	1.1	7486
Idle air control		0.5	0.5	7490
Idle air control		0.5	0.5	7495
Idle air control		0.6	0.6	7505
Idle air control		0.5	0.5	7510
Idle air control		0.4	0.4	7515
Idle air control		0.6	0.6	7516

**Table 4-8. Fuel Injection**

ITEM	DESCRIPTION	FFW	FCW/FLW	LABOR CODE
Misfire at idle or under load		0.4	0.4	7520
Misfire at idle or under load		0.2	0.2	7525
Misfire at idle or under load		0.4	0.4	7535
Misfire at idle or under load		0.3	0.3	7540
Misfire at idle or under load		0.2	0.2	7545
Misfire at idle or under load		0.4	0.4	7550
Misfire at idle or under load		0.3	0.3	7134
Misfire at idle or under load		0.3	0.3	7136
Misfire at idle or under load		0.6	0.6	7137
Misfire at idle or under load		0.7	0.7	7138
Misfire at idle or under load		0.6	0.6	7139
Misfire at idle or under load		0.9	0.9	7144
Misfire at idle or under load		0.5	0.5	7147
Misfire at idle or under load		0.9	0.9	7149
Misfire at idle or under load		0.6	0.6	7152
Rough or rolling idle		0.3	0.3	7134
Rough or rolling idle		0.3	0.3	7136
Rough or rolling idle		0.6	0.6	7137
Rough or rolling idle		0.7	0.7	7138
Rough or rolling idle		0.6	0.6	7139
Rough or rolling idle		0.9	0.9	7144
Rough or rolling idle		0.5	0.5	7147
Rough or rolling idle		0.9	0.9	7149
Rough or rolling idle		0.6	0.6	7152
Emits black smoke		2.0	2.0	7596
Emits black smoke		2.0	2.0	7597
Emits black smoke		2.0	2.0	7598
Emits black smoke		2.2	2.2	7601
Throttle position sensor		0.5	0.5	7555
Throttle position sensor		0.5	0.5	7560
Throttle position sensor		0.6	0.6	7565
Throttle position sensor		0.4	0.4	7570
Throttle position sensor		0.5	0.5	7575
Throttle position sensor		0.5	0.5	7580
Throttle position sensor		0.5	0.5	7585
Throttle position sensor		0.7	0.7	7590
Throttle position sensor		0.3	0.3	7595
Throttle position sensor		0.7	0.7	7605
Throttle position sensor		0.5	0.5	7610
Throttle position sensor		0.8	0.8	7615
MAP sensor		0.8	0.8	7620
MAP sensor		1.2	1.2	7625
MAP sensor		0.3	0.3	7630
MAP sensor		0.6	0.6	7635
MAP sensor		0.6	0.6	7640
MAP sensor		0.6	0.6	7641
MAP sensor		0.5	0.5	7642

**Table 4-8. Fuel Injection**

ITEM	DESCRIPTION	FFW	FCW/FLW	LABOR CODE
MAP sensor		0.6	0.6	7645
MAP sensor		0.6	0.6	7650
MAP sensor		0.7	0.7	7655
Engine temperature sensor		0.4	0.4	7660
Engine temperature sensor		0.9	0.9	7665
Engine temperature sensor		0.2	0.2	7670
Engine temperature sensor		0.3	0.3	7675
Engine temperature sensor		0.4	0.4	7680
Engine temperature sensor		0.4	0.4	7685
Engine temperature sensor		0.3	0.3	7690
Engine temperature sensor		0.5	0.5	7695
Engine temperature sensor		0.3	0.3	7705
Engine temperature sensor		0.4	0.4	7710
Intake air temperature sensor		0.6	0.6	7715
Intake air temperature sensor		1.4	1.4	7720
Intake air temperature sensor		0.4	0.4	7725
Intake air temperature sensor		0.4	0.4	7730
Intake air temperature sensor		0.9	0.9	7735
Intake air temperature sensor		0.9	0.9	7740
Intake air temperature sensor		0.4	0.4	7745
Intake air temperature sensor		0.3	0.3	7750
Intake air temperature sensor		0.4	0.4	7755
Intake air temperature sensor		0.4	0.4	7760
Battery voltage test		0.4	0.4	7770
Battery voltage test		0.5	0.5	7775
Battery voltage test		0.9	0.9	7776
Battery voltage test		1.0	0.9	7779
Battery voltage test		0.9	0.9	7780
Battery voltage test		1.4	1.4	7781
Battery voltage test		1.0	1.0	7782
Battery voltage test		1.0	0.9	7783
Battery voltage test		1.2	1.1	7784
Fuel injectors		0.1	0.1	7785
Fuel injectors		0.6	0.6	7790
Fuel injectors		0.7	0.7	7795
Fuel injectors		0.6	0.6	7805
Fuel injectors		0.6	0.6	7808
Fuel injectors		0.5	0.5	7809
Fuel injectors		0.6	0.6	7815
Fuel injectors		0.6	0.6	7820
Fuel injectors		0.7	0.7	7825
Fuel injectors		0.6	0.6	7830
Fuel injectors		0.6	0.6	7835
Fuel injectors		0.6	0.6	7840
Fuel injectors		0.4	0.4	7845
Fuel injectors		0.7	0.7	7850
System relay		0.2	0.2	7887

**Table 4-8. Fuel Injection**

ITEM	DESCRIPTION	FFW	FCW/FLW	LABOR CODE
System relay		0.3	0.3	7888
System relay		0.4	0.4	7889
System relay		0.3	0.3	7899
System relay		0.3	0.3	7900
System relay		0.4	0.4	7901
System relay		0.4	0.4	7902
System relay		0.3	0.3	7903
System relay		0.2	0.2	7904
System relay		0.4	0.4	7906
System relay		0.7	0.7	7907
System relay		0.3	0.3	7908
System relay		0.2	0.2	7909
System relay		0.3	0.3	7911
System relay		0.4	0.4	7912
Ignition coil test		0.5	0.5	7853
Ignition coil test		0.6	0.6	7854
Ignition coil test		0.4	0.4	7856
Ignition coil test		0.4	0.4	7860
Ignition coil test		0.3	0.3	7865
Ignition coil test		0.5	0.5	7870
Ignition coil test		0.4	0.4	7875
Ignition coil test		0.2	0.2	7880
Crank position sensor		0.5	0.5	7980
Crank position sensor		0.4	0.4	7981
Crank position sensor		0.3	0.3	7982
Crank position sensor		0.5	0.5	7983
Crank position sensor		0.2	0.2	7984
Crank position sensor		0.4	0.4	7985
Crank position sensor		0.5	0.5	7986
Crank position sensor		0.4	0.4	7987
ECM failure		0.3	0.3	7913
Vehicle speed signal		0.4	0.4	7954
Vehicle speed signal		0.4	0.4	7956
Vehicle speed signal		0.5	0.5	7957
Vehicle speed signal		0.3	0.3	7958
Vehicle speed signal		0.4	0.4	7959
Vehicle speed signal		0.3	0.3	7961
Vehicle speed signal		0.3	0.3	7962
Vehicle speed signal		0.3	0.3	7963
Vehicle speed signal		0.3	0.3	7964
Password problem		0.4	0.4	6701
Password problem		0.4	0.4	6702
Password problem		0.6	0.6	6703
Password problem		0.4	0.4	6704
Password problem		0.5	0.5	6705
Password problem		0.3	0.3	6706
Password problem		0.6	0.6	6707



**Table 4-8. Fuel Injection**

ITEM	DESCRIPTION	FFW	FCW/FLW	LABOR CODE
Password problem		0.8	0.8	6708
Loss of TSM / TSSM serial data		0.4	0.4	6715
Loss of TSM / TSSM serial data		0.6	0.6	6716
Loss of TSM / TSSM serial data		0.6	0.6	6717
Loss of TSM / TSSM serial data		0.5	0.5	6718
Loss of TSM / TSSM serial data		0.4	0.4	6719

# NOTES

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# 2002 FLHTCU-I WITH SIDECAR (JAPAN ONLY)

**Table 4-9. Service**

ITEM	DESCRIPTION	FGW	LABOR CODE
<b>NEW</b>			
Set-up and pre-delivery	includes setting SWR	6.9	---
1,000 mile service		3.0	---
<b>REGULAR</b>			
2,500 mile maintenance		0.5	---
5,000 mile maintenance		2.5	---
7,500 mile maintenance		0.5	---
10,000 mile maintenance		4.5	---
20,000 mile maintenance		7.4	---
25,000 mile maintenance		3.0	---
50,000 mile maintenance		7.7	---

**Table 4-10. Chassis**

ITEM	DESCRIPTION	FGW	LABOR CODE
<b>DRIVE</b>			
Adjust secondary belt		0.2	---
Replace secondary belt		3.7	2011
Replace rear wheel sprocket		0.9	2021
<b>WHEELS</b>			
Replace tire and/or wheel assembly - includes balancing	front	0.6	2106
	rear	0.8	2111
Replace wheel assembly - includes disc and sprocket exchange and balancing	front	0.8	2113
	rear	1.0	2114
Replace rim, hub or spokes	front	2.2	2116
	rear	2.4	2121
Replace wheel bearings	front	0.6	2136
	rear	0.8	2141
True laced wheel (wheel on vehicle)		0.4	2156
True laced wheel - includes r/r wheel & tire and time to rebalance	front	1.0	2157
	rear	1.2	2158
<b>HANDLEBARS</b>			
Replace handlebars	includes removing radio	1.2	2206
Replace clutch hand lever		0.2	2221
Replace clutch hand lever bracket		0.2	2226
Replace throttle control		0.6	2231
Replace throttle control cable	one or more – includes all adjustments	1.1	2241

All times listed in hours.

**V.I.N. CODES**

FGW	FLHTCU-I WITH SIDECAR (JAPAN ONLY)
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**Table 4-10. Chassis**

ITEM	DESCRIPTION	FGW	LABOR CODE
Replace both rubber handlebar mounts	includes removing radio	1.0	2246
Replace rubber handlebar grip		0.2	2251
Replace handlebar riser	one or both – includes loosening radio	1.0	2253
Replace handlebar clamp	one or both – includes removing radio	0.8	2254
<b>FRAME/SWING ARM/FRONT FORK</b>			
Replace frame	includes removal and installation of all accessories and motorcycle components	17.5	2306
Replace front fork assembly	includes removal and installation of upper and lower fork brackets	3.0	2311
Replace lower fork bracket and stem		3.2	2316
Replace steering head cups and bearings, including bearing adjustment		3.2	2321
Replace upper fork bracket		2.7	2326
Adjust steering head bearings		0.7	---
Change front fork oil	both sides	2.9	---
Service or replace fork slider and/or seal – includes removal, disassembly, cleaning, inspection, replacing parts, servicing damper tube, replacing bushings, assembly, and installation	right side	2.4	2343
	left side	2.7	2344
	both sides	2.9	2342
Replace fork side	one side	1.2	2346
	both sides	1.5	2351
Replace fork tube	right side	1.9	2357
	left side	2.7	2358
	both sides	2.9	2361
Replace rear shock air line		0.1	2369
Replace rear swing arm and/or bearings		1.9	2366
Replace rear fork pivot shaft		1.0	2368
Replace rear shock absorber assembly	one side	0.3	2371
	both sides	0.6	2376
Replace rear shock absorber component(s)	one side	0.5	2381
	both sides	0.8	2386
Replace jiffy stand	complete	0.3	2391
	spring and/or stand	0.2	2396
	rubber bumper	0.1	2399
Replace motor rubber mount	rear left	0.3	2397
	rear right	0.5	2395
	front	0.4	2398
Replace footboard		0.2	2394
<b>BRAKES</b>			
Replace hydraulic brake line – includes filling/bleeding brakes	front	1.0	2406
	rear	0.4	2411
Replace rear master cylinder reservoir hose and/or hose		0.2	2414
Replace brake pads	front – each caliper	0.1	2416
	rear	0.2	2421
Replace brake caliper – includes filling/bleeding brakes	front – each caliper	0.4	2426
	rear	1.0	2431
Replace brake disc	front – one side	0.3	2436
	front – both sides	0.4	2437
	rear	1.3	2441

**Table 4-10. Chassis**

ITEM	DESCRIPTION	FGW	LABOR CODE
Bleed brake caliper – one or two front calipers or rear caliper		0.2	2446
Overhaul brake caliper – includes filling/bleeding brakes	front – each caliper	0.6	2451
	rear	1.3	2456
Replace master cylinder assembly – includes filling/bleeding brakes	front	0.4	2461
	rear	0.5	2466
Rebuild master cylinder assembly – includes filling/bleeding brakes	front	0.6	2471
	rear	0.7	2476
Replace rear brake pedal		0.3	2492
Replace front brake lever		0.1	2494
<b>SEATS/FENDERS/TANKS</b>			
Replace seat	front	0.1	2506
Replace fender	front	1.0	2526
	rear	1.5	2531
Replace rear fender chrome support cover	one only	1.2	2536
Replace fuel tank assembly		0.8	2541
Replace fuel tank console/instrument panel		0.3	2553
Replace fuel tank console rubber mounting strip		0.2	2557
Replace fuel tank gauge		0.5	2563
Replace fuel tank gauge sending unit		0.5	2564
Replace fuel tank check valve assembly		0.6	2567
Replace canopy gasket		0.4	2570
Replace fuel filter		0.5	2575
Replace any hose		0.3	2576
Replace fuel hose inside tank		0.5	2579
Replace oil filter		0.1	2582
Replace oil filter bracket		0.6	2584
<b>BELT GUARDS</b>			
Replace rear belt debris deflector		0.1	2616
Replace belt guard		0.2	2620
<b>EXHAUST SYSTEM</b>			
Replace complete exhaust system and/or gaskets		0.6	2626
Replace exhaust pipe	front	0.3	2631
	rear	0.3	2636
Replace any muffler		0.2	2646
Replace any exhaust shield		0.1	2661
Replace muffler support		0.2	2666

**Table 4-11. Engine**

ITEM	DESCRIPTION	FGW	LABOR CODE
<b>GENERAL</b>			
Remove and install engine	includes removal of side car and reattachment of side car	5.9	3006
Replace and adjust stabilizer	top	0.8	3005
Replace and adjust stabilizer	front	0.3	3007
Remove and replace oil pan for inspection/contamination with engine removed		0.3	3009
<b>CYLINDER HEAD</b>			
Recondition cylinder head – includes removal of head and gasket, remove carbon, service valve guides, grind valves and seats, test springs and install head and gaskets.	front head	4.9	3101
	rear head	4.9	3103
	both heads	5.5	3104
Replace cylinder head	one head	3.6	3106
	both heads	4.2	3108
Replace one valve seal or spring after cylinder head removal	intake or exhaust	0.1	3131
	both seals or springs (intake or exhaust)	0.2	3132
Replace cylinder head gasket/o-ring	front cylinder	3.0	3140
	rear cylinder	3.0	3142
	both cylinders	3.4	3143
Replace rocker arm covers and/or gaskets	front cylinder	0.8	3144
	rear cylinder	0.8	3145
	both cylinders	0.9	3148
Recondition rocker arms after heads are removed	one head	0.7	3149
	both heads	1.4	3150
Replace lower rocker arm cover/gasket, or rocker arms and /or shafts	front cylinder	1.6	3147
	rear cylinder	1.6	3152
	both cylinders	1.8	3153
Replace cylinder o-ring/drain o-ring	front cylinder	3.2	3161
	rear cylinder	3.2	3163
	both cylinders	3.6	3168
Replace crankcase umbrella valve	one	1.1	3172
	both	1.2	3174
<b>CYLINDER AND PISTON</b>			
Recondition TOP END - includes disassembly, replacement of piston and sizing cylinder (.005" pistons), replacing piston rings and all items listed under RECONDITION CYLINDER HEAD and assembly.	one piston and cylinder	5.9	3202
	both pistons and cylinders	6.5	3203
Recondition TOP END - includes disassembly, replacement of piston and bore and hone, resizing cylinder (.010" oversize or above), replacing piston rings and all items listed under RECONDITION CYLINDER HEAD and assembly.	one piston and cylinder	6.3	3211
	both pistons and cylinders	6.9	3212
Recondition TOP END – includes disassembly, deglazing cylinder and replacing rings, or replacing cylinder and piston, all items listed under RECONDITIONING CYLINDER HEAD and assembly.	one piston and cylinder	5.7	3207
	both pistons and cylinders	6.3	3208
Replace piston rings – includes deglazing cylinder	one cylinder	3.5	3206
	both cylinders	4.1	3216

**Table 4-11. Engine**

ITEM	DESCRIPTION	FGW	LABOR CODE
Replace piston and piston rings – includes removal of cylinder head and cylinder, fitting new piston with rings, resizing cylinder and assembly	one cylinder	4.1	3221
	both cylinders	5.3	3231
Replace cylinder and piston	one cylinder	3.4	3236
	both cylinders	3.9	3246
Replace upper connecting rod bushing during upper end repair		0.4	3251
Replace one cylinder stud	cylinder removed	0.1	3253
Replace all eight cylinder studs	cylinders removed	0.5	3254
<b>CAM COVER</b>			
Replace lifter cover/gasket or lifter/and, or anti-rotation pin	one or two same cylinder	1.8	3307
	on both cylinders	2.0	3310
Replace push rod, push rod cover and/or O-ring or quad seal	one or two same cylinder	1.8	3317
	one each cylinder	2.0	3318
Replace cam cover and/or gasket		2.0	3325
Replace primary cam chain, sprockets and/or fastener		2.1	3327
Replace primary cam chain tensioner		2.1	3328
Replace cam support plate		3.2	3337
Replace cam support plate/O-rings		3.2	3335
Replace cam support bearing/cams/secondary cam chain/tensioner		3.4	3338
Replace oil pump and/or O-rings		3.0	3341
Replace cam bearing crankcase	one bearing	3.2	3342
	two bearings	3.3	3343
By pass valve inspection		3.1	3354
<b>CRANKCASE</b>			
Replace crankcases	includes remove and install engine	8.1	3406
Seal crankcase only		7.5	3407
Replace flywheels	includes remove and install engine	7.6	3411
Replace right side main bearing		7.0	3412
Piston jet/O-ring	one	3.0	3413
	both	3.4	3414
Filter housing and or O-rings		0.2	3415
Replace crankcase vent hose and/or fittings		0.2	3417
Replace crankcase oil hose and/or fittings	Feed	0.3	3418
	Return	0.3	3419
Check flywheel trueness before assembly or after removal		0.1	3420
True flywheels after removal	includes piston removal and reinstallation	0.5	3421
Recondition cylinder heads – head removed (for non-related repairs)	one head	1.0	3425
	both heads	2.0	3426
Replace piston rings	cylinders removed (for non-related repairs – deglaze only)	0.3	3428
<b>FUEL SYSTEM</b>			
Replace air cleaner backing plate		0.2	3501
Replace air cleaner cover		0.1	3502
Replace induction module	includes making cruise control cable adjustment	1.2	3508

**Table 4-11. Engine**

ITEM	DESCRIPTION	FGW	LABOR CODE
Replace induction module seal		1.2	3510
Replace external fuel supply hose		0.2	3514
<b>EVAPORATIVE EMISSIONS SYSTEM</b>			
Replace canister		0.1	3527
Replace vapor valve		0.1	3528
Replace any one hose		0.1	3529

**Table 4-12. Drive and Clutch**

ITEM	DESCRIPTION	FGW	LABOR CODE
<b>DRIVE</b>			
Adjust primary chain		0.2	---
Replace primary chain		0.9	4002
Replace engine sprocket		0.9	4003
Replace engine sprocket seal		1.3	4005
Replace primary cover		0.4	4007
Replace primary cover gasket		0.4	4009
Replace primary inspection cover and/or O-ring		0.1	4001
Replace inner primary case &/or seals or bearing		2.1	4008
Replace shift lever sleeve and/or O-ring		0.4	4010
<b>CLUTCH</b>			
Adjust clutch		0.2	---
Replace release cable assembly		1.8	4006
Service the clutch includes disassembly, cleaning, inspection, repair, assembly, and adjustment		1.3	4011
Replace shift lever	heel or toe	0.1	4012
Replace clutch release bearing and/or push rod		0.4	4016
Replace clutch release mechanism (ball ramp) and/or side cover		1.6	4018

**Table 4-13. Transmission**

ITEM	DESCRIPTION	FGW	LABOR CODE
<b>TRANSMISSION CASE</b>			
Replace transmission case		5.3	4304
Replace transmission complete		4.9	4305
Overhaul transmission	includes disassembly, cleaning, inspection, replacing parts (transmission case in frame)	4.6	4306
Replace transmission sprocket		2.2	4309
Replace main drive gear oil seal	in transmission case	2.3	4311
Replace mainshaft oil seal	in main drive gear	2.2	4316
Replace side door gasket		2.8	4321
Replace shifter drum		0.7	4331
Replace shifter arm assembly or springs		2.9	4336
Replace transmission top cover and/or gasket		0.6	4341
Replace shifter forks and/or shaft		1.8	4343



**Table 4-13. Transmission**

ITEM	DESCRIPTION	FGW	LABOR CODE
Replace side door bearing	one	3.0	4348
	both	3.1	4351
Replace transmission case countershaft bearing		2.9	4361
Replace main drive gear and/or bearing		3.2	4366
Replace transmission side cover gasket		0.9	4368
Replace oil pan and/or gasket or baffle	NOTE: Removal of rear wheel may be necessary	0.9	4378
Replace oil fill tube and/or cover, and/or gasket		0.4	4379
Replace transmission shift shaft seal		2.2	4390

**Table 4-14. Electrical**

ITEM	DESCRIPTION	FGW	LABOR CODE
<b>GENERAL</b>			
Check and diagnose the electrical system lights and accessories	excluding turn signals	0.3	5016
Replace connector bearing		0.1	5022
Replace connector anchor		0.1	5023
<b>CHARGING CIRCUIT</b>			
Diagnose charging system	regulator inspection	0.1	5306
Diagnose charging system	failed regulator bleed test	0.9	5307
Diagnose charging system	milliamp draw	0.2	5308
Diagnose charging system	total current draw	0.2	5310
Replace regulator/stator connector		0.2	5311
Diagnose charging system	open or grounded stator	1.8	5312
Diagnose system	AC output	1.8	5314
Diagnose charging system	regulator failure	1.0	5315
Diagnose charging system	voltage output	1.0	5316
Diagnose charging system	replace rotor	1.3	5319
<b>STARTER CIRCUIT</b>			
Starter inoperative	open/shorted/ground motor	1.4	5817
Starter inoperative	start button	1.0	5818
Starter inoperative	solenoid clicks; poor starter or battery connections	0.2	5822
Starter inoperative	solenoid clicks; poor relay or solenoid connections, or bad relay contacts	0.3	5823
Starter inoperative	solenoid clicks; poor starter to battery connections, ground connections, or bad solenoid contacts	0.2	5824
Starter inoperative	damaged motor	1.4	5825
Starter inoperative	relay click; open in relay wiring	0.3	5827
Starter inoperative	nothing clicks; poor relay ground	0.3	5828
Starter inoperative	nothing clicks; short to voltage	0.4	5830
Starter inoperative	nothing clicks; open in wiring to or from starter button	0.5	5831
Starter inoperative	starter relay	0.4	5832
Slow starter crank or starter stalls	poor starter to battery connections, ground connections	0.2	5835
Slow starter crank or starter stalls	binding	0.3	5836

**Table 4-14. Electrical**

ITEM	DESCRIPTION	FGW	LABOR CODE
Starter spins	clutch	1.5	5837
Starter inoperative	nothing clicks; TSM / TSSM	0.4	5838
Replace starter solenoid contacts	includes starter motor removal	1.6	5845
Starter binding		1.6	5850
Replace starter solenoid coil	includes starter motor removal	1.6	5860
<b>WIRING</b>			
Replace main wiring harness		3.6	5026
Replace Ultra overlay		1.8	5027
Main harness	locate and repair, open/short	0.5	5028
Replace EFI harness		1.7	5033
Replace rear fender wiring harness		0.8	5036
Replace any single wire	ground wire	0.4	5038
	light circuit	0.2	5039
	accessory circuit	0.2	5043
Repair/diagnose indicator lamp wiring		0.3	5048
Replace front fender wiring harness		0.9	5049
Replace inter connect harness		0.5	5052
Interconnect harness	repair short	0.5	6531
Interconnect harness	repair open	0.5	6532
Handlebar harness	repair short	0.4	6551
Handlebar harness	repair open	0.4	6552
Overlay harness	repair short	0.5	6560
Overlay harness	repair open	0.5	6561
Replace front headset harness		0.6	6616
<b>SWITCHES</b>			
Replace ignition switch		0.5	5129
Replace fuse		0.2	5145
Replace rear stoplight relay		0.2	5169
Replace left handlebar switch		0.5	5171
Replace right handlebar switch		0.7	5173
Replace front brake light switch		0.7	5176
Replace left upper handlebar switch housing		0.2	5177
Replace left lower handlebar switch housing		0.3	5178
Replace right upper handlebar switch housing		0.2	5179
Replace right lower handlebar switch housing		0.7	5180
Replace handlebar (cruise set) switch		1.2	5182
Replace handlebar mode switch		1.1	5183
Replace handlebar (PTT) switch		0.8	5184
Replace handlebar audio switch		1.0	5186
Replace rear stoplight switch		0.5	5141
Replace main circuit breaker		0.2	5147
Replace fuse block	one	0.3	5148
Replace fuse block	two	0.5	5151
Replace transmission neutral switch	includes diagnosis	0.3	5157
Replace oil pressure switch		0.3	5161
Replace rear stoplight relay		0.2	5169
Replace any fairing switch		0.5	5192
Replace any console switch		0.6	6624

**Table 4-14. Electrical**

ITEM	DESCRIPTION	FGW	LABOR CODE
Replace passenger switch	volume/PTT/mode	0.6	6627
<b>LIGHTS</b>			
Replace headlight	includes diagnosis	0.1	5185
Replace headlight housing	includes adjustment	0.1	5189
Replace instrument panel bulb or lens	includes diagnosis	0.2	5193
Replace taillight bulb or single light bulb or lens	includes diagnosis	0.1	5197
Replace taillight assembly or circuit board		0.2	5215
Replace turn signal light assembly	front	0.4	5201
	rear	0.4	5205
Replace rear turn signal bar		0.4	5207
Replace fender tip light bulb or lens	front	0.1	5217
	rear	0.1	5221
Replace fender tip lamp assembly	front	0.2	5225
	rear	0.3	5229
Replace passing lamp bulb	includes diagnosis	0.1	5227
Replace King Tour-Pak light bulb or lens	includes diagnosis	0.2	5233
Replace King Tour-Pak lower light assembly		0.5	5234
Replace King Tour-Pak wrap-around light assembly		0.8	5235
Replace passing lamp assembly		0.4	5230
Replace passing lamp bracket		0.7	5232
<b>TURN SIGNALS/SECURITY SYSTEM</b>			
No security lamp		0.5	6735
No security lamp		0.5	6736
No security lamp		0.5	6737
No security lamp		0.5	6738
No security lamp		0.1	6739
No security lamp		0.2	6740
No security lamp		0.3	6741
No security lamp		0.3	6742
No security lamp		0.3	6743
No security lamp		0.2	6744
No security lamp		0.3	6745
Security lamp on continuously		0.2	6750
Security lamp on continuously		0.4	6751
Security lamp on continuously		0.5	6752
Fob signal weak		0.1	6755
Fob signal weak		0.1	6756
Fob signal weak		0.2	6757
Turn signal error 1A		0.5	6760
Turn signal error 1A		1.1	6761
Turn signal error 1A		0.2	6762
Turn signal error 1A		0.3	6763
Turn signal error 1A		0.7	6764
Turn signal error 2A		0.9	6773
Turn signal error 2B		0.6	6777
Turn signal error 2B		0.5	6778
Turn signal error 2B		0.7	6779

**Table 4-14. Electrical**

ITEM	DESCRIPTION	FGW	LABOR CODE
Turn signal error 2B		0.7	6780
Turn signal error 2C		0.8	6784
Turn signal error 2C		0.8	6785
Turn signal error 2C		1.2	6786
Turn signal error 3A		0.3	6790
Turn signal error 3A		0.2	6791
Turn signal error 3A		0.1	6792
Turn signal error 3A		0.3	6793
Turn signal error 3B		0.1	6796
Turn signal error 3B		0.3	6797
Turn signal error 3B		0.3	6798
Turn signal error 3B		0.3	6799
Turn signal error 3B		0.3	6800
Turn signal error 3C		0.3	6805
Turn signal error 3C		0.3	6806
Turn signal error 3C		0.2	6807
Turn signal error 3C		0.3	6808
Turn signal error 3D		0.4	6810
Turn signal error 3D		0.8	6811
Turn signal error 3D		0.5	6812
Turn signal error 3D		0.4	6813
Turn signal error 3D		0.5	6814
Turn signal error 3D		0.8	6815
Turn signal error 3D		0.5	6816
Turn signal error 4A		0.2	6820
Turn signal error 4A		0.2	6821
Turn signal error 4A		0.4	6822
Turn signal error 4A		0.3	6823
Turn signal error 4A		0.5	6824
Ignition enable output high		0.3	6827
Ignition enable output high		0.3	6828
Alarm output		0.3	6830
Alarm output		0.3	6831
Alarm output		0.3	6832
Alarm output		0.4	6833
Alarm output		0.3	6834
Alarm output		0.3	6835
Starter output high		0.3	6840
Starter output high		0.2	6841
Starter output high		0.3	6842
Accelerometer		0.2	6845
<b>BATTERY/HORN</b>			
Replace the battery		0.2	5705
Replace horn and/or bracket		0.1	5765
Replace battery tray		0.3	5767
Replace battery cable		0.2	5769

**Table 4-14. Electrical**

ITEM	DESCRIPTION	FGW	LABOR CODE
<b>INSTRUMENTS – INCLUDES DIAGNOSIS</b>			
Replace speedometer	cosmetics only	0.2	6003
<b>ELECTRONIC SPEEDOMETER</b>			
Diagnose inoperative, inaccurate or erratic speedometer	switch	0.3	6001
Diagnose inoperative, inaccurate or erratic speedometer		0.1	6002
Diagnose inoperative, inaccurate or erratic speedometer	wiring	0.2	6004
Diagnose inoperative, inaccurate or erratic speedometer	replace	0.5	6006
Diagnose inoperative, inaccurate or erratic speedometer	wiring	0.4	6008
Diagnose inoperative, inaccurate or erratic speedometer	sensor	0.5	6010
Diagnose inoperative, inaccurate or erratic speedometer	open	0.6	6013
Diagnose inoperative, inaccurate or erratic speedometer	LED failure	0.3	6014
Diagnose inoperative, inaccurate or erratic speedometer	wires	0.4	6016
Odometer inoperable		0.3	6020
Diagnose inoperative, inaccurate or erratic speedometer	internal	0.5	6022
Diagnose inoperative, inaccurate or erratic speedometer	power/ground	0.5	6024
Diagnose inoperative, inaccurate, or erratic speedometer	debris or sensor	0.5	6029
Diagnose inoperative, inaccurate or erratic speedometer	grounded circuit	0.3	6031
Diagnose inoperative, inaccurate or erratic speedometer	fuse	0.1	6032
Replace speedo reset boot		0.1	6043
Replace tachometer		0.3	6009
Replace instrument panel or lens		0.8	6017
Replace instrument housing assembly (tach/speedo)		0.8	6019
Replace voltmeter		0.3	6021
Replace oil pressure or air temperature gauge		0.5	6026
Replace ambient temperature sensor		0.3	6028
<b>ACCESSORIES</b>			
Replace windshield		0.1	6203
Replace one wind deflector		0.1	6205
Replace inner fairing		1.9	6209
Replace outer fairing or support brace		0.6	6255
Replace front fairing bracket		0.9	6265
Replace fairing cap		0.3	6271
Replace chrome fairing skirt		0.4	6273
Replace one fairing lower and/or glove compartment		0.2	6272
Replace saddlebag guard	complete	0.3	6254
Replace a single saddlebag guard rail		0.2	6256

**Table 4-14. Electrical**

ITEM	DESCRIPTION	FGW	LABOR CODE
Replace a saddlebag		0.2	6257
Replace saddlebag mounting bracket or bag guard		0.2	6253
Replace saddlebag cover	one	0.2	6260
Replace saddlebag lock		0.2	6259
Replace one saddlebag tether strap		0.1	6262
Replace Tour-Pak lock or latch		0.2	6261
Replace one frame sidecover		0.1	6263
Replace Tour-Pak hinge		0.3	6264
Replace nameplate Tour-Pak		0.2	6266
Change lock-set		0.5	6276
Replace Tour-Pak cover		0.7	6270
Replace bumper	front	0.3	6303
	rear	0.2	6305
Replace highway bar	front	0.6	6353
	rear – left	0.3	6355
	rear – right	0.4	6357
Replace Tour-Pak mount / luggage rack		0.8	6453
Replace Tour-Pak	includes lights and brackets, antenna assembly, backrest, and rear speakers	2.6	6509
Replace mirror		0.1	6513
Replace backrest		0.2	6515
<b>SOUND SYSTEM – DIAGNOSIS, REPAIR</b>			
Replace radio chassis	includes SWR check	0.4	6601
Complete CB antenna inspection	includes checking SWR	0.2	6602
Replace one front speaker		0.4	6605
Replace one rear speaker		0.6	6606
Replace rear speaker housing	right side	0.3	6608
	left side	0.3	6610
Replace one speaker grill	front	0.2	6607
	rear	0.1	6612
Replace front antenna lead		1.8	6609
Replace antenna mast mount		0.2	6611
Replace CB antenna mast	includes checking SWR	0.3	6613
Replace audio harness		1.8	6614
Replace stereo antenna mast		0.3	6617
Replace CB loading coil	includes checking SWR	0.3	6618
Replace console switch housing		0.3	6623
Replace front headset DIN cover		0.3	6619
Replace rear headset DIN cover		0.1	6628
<b>ACCESSORIES – CRUISE CONTROL – DIAGNOSIS, REPAIR</b>			
Replace cruise cable		0.5	6630
Replace cruise module		0.7	6635

**Table 4-15. Sidecar**

ITEM	DESCRIPTION	FGW	LABOR CODE
<b>2001 FLHTCU-I WITH SIDECAR</b>			
Replace sidecar windshield		0.2	6901
Replace sidecar fender		0.8	6904
Replace seat		0.2	6907
Replace seat cable		0.5	6910
Replace liner (carpeting)		0.4	6913
Replace armrest storage pouch		0.2	6916
Replace armrest		0.2	6919
Replace handles		0.1	6922
Replace brake pads		0.2	6926
Replace brake caliper		0.3	6927
Replace brake disc		0.3	6929
Replace wheel		0.7	6931
Replace axle		0.8	6934
Repair/replace audio harness		1.0	6940
Replace speaker		0.5	6943
Replace speaker pod		0.6	6946
Replace amplifier		0.6	6949
Removal of sidecar for service and reattachment	includes realignment	1.1	6954
Sidecar alignment		0.8	6956
Sidecar tub removal		0.3	6958

**Table 4-16. Fuel Injection**

ITEM	DESCRIPTION	FGW	LABOR CODE
NOTE: The diagnostic/replacement operations and times listed on the following pages have been created for your use. The codes must be used in conjunction with the repair procedures listed in the FLT Service Manual, Part No. 99483-02 and Electrical Diagnostic Manual, Part No. 99497-02. Remember to use the same four digit code selected for your labor code as your condition code when filing a warranty claim.			
Diagnostic check		0.2	7110
Diagnostic check		0.4	7115
Diagnostic check		0.4	7120
Diagnostic check		0.8	7125
Diagnostic check		0.8	7126
No check engine lamp/No ECM Power		0.6	6013
No check engine lamp/No ECM Power		0.7	7130
No check engine lamp/No ECM Power		0.6	7133
No check engine lamp/No ECM Power		0.4	7141
No check engine lamp/No ECM Power		0.1	7142
No check engine lamp/No ECM Power		0.6	7143
No check engine lamp/No ECM Power		0.5	7146
No check engine lamp/No ECM Power		0.6	7270
No check engine lamp/No ECM Power		0.7	7285
No check engine lamp/No ECM Power		0.9	7286
No check engine lamp/No ECM Power		1.2	7287
No check engine lamp/No ECM Power		0.9	7288
No check engine lamp/No ECM Power		0.9	7289

**Table 4-16. Fuel Injection**

ITEM	DESCRIPTION	FGW	LABOR CODE
No check engine lamp/No ECM Power		0.5	7290
No check engine lamp/No ECM Power		1.5	7295
No check engine lamp/No ECM Power		0.6	7301
No check engine lamp/No ECM Power		0.1	7302
No check engine lamp/No ECM Power		0.8	7303
No check engine lamp/No ECM Power		0.6	7304
No check engine lamp/No ECM Power		0.6	7305
No check engine lamp/No ECM Power		0.5	7306
No check engine lamp/No ECM Power		0.8	7307
No check engine lamp/No ECM Power		0.7	7308
No check engine lamp/No ECM Power		0.6	7309
No check engine lamp/No ECM Power		0.6	7310
No check engine lamp/No ECM Power		0.3	7320
Check engine lamp on continuously		0.2	7148
Check engine lamp on continuously		0.7	7150
Check engine lamp on continuously		0.3	7155
Check engine lamp on continuously		0.2	7156
Check engine lamp on continuously		0.1	7157
Engine cranks but will not start		0.6	7185
Engine cranks but will not start		0.5	7195
Engine cranks but will not start		0.5	7210
Engine cranks but will not start		0.4	7215
Engine cranks but will not start		0.5	7223
Engine cranks but will not start		0.4	7224
Engine cranks but will not start		0.5	7225
Engine cranks but will not start		0.8	7226
Engine cranks but will not start		0.7	7227
Engine cranks but will not start		0.5	7228
Engine cranks but will not start		0.5	7230
Engine cranks but will not start		0.6	7231
Engine cranks but will not start		0.5	7235
Engine cranks but will not start		0.9	7251
Fuel system electrical test		0.2	7335
Fuel system electrical test		0.7	7336
Engine cranks but will not start; Fuel system electrical test		0.6	7340
Engine cranks but will not start; Fuel system electrical test		0.5	7355
Fuel system electrical test		0.3	7360
Fuel system electrical test		0.8	7370
Engine cranks but will not start; Fuel system electrical test		0.4	7380
Fuel system electrical test		0.3	7385
Engine cranks but will not start; Fuel system electrical test		0.9	7415
Fuel system electrical test		0.3	7440
Engine cranks but will not start; Fuel system electrical test		0.4	7441
Fuel system electrical test		0.2	7445



**Table 4-16. Fuel Injection**

ITEM	DESCRIPTION	FGW	LABOR CODE
Engine cranks but will not start; Fuel system electrical test		0.4	7450
Engine cranks but will not start; Fuel system electrical test		0.7	7992
Engine cranks but will not start; Fuel system electrical test		0.4	7520
Starts, then stalls		0.7	7992
Starts, then stalls		0.6	7993
Starts, then stalls		0.3	7994
Starts, then stalls		0.3	7995
Starts, then stalls		0.3	7996
Starts, then stalls		0.5	7997
Starts, then stalls		0.6	7998
Starts, then stalls		0.5	7999
Starts, then stalls; no DTCs		0.4	7127
Starts, then stalls; no DTCs		0.3	7128
Combustion absent		0.1	7537
Combustion absent		0.2	7538
Combustion absent		0.2	7539
Combustion absent		0.2	7543
Combustion absent		0.4	7544
Combustion absent		0.2	7546
Combustion absent		0.4	7547
Combustion absent		0.1	7548
Combustion absent		0.1	7549
Fuel pressure test		0.4	7455
Fuel pressure test		0.7	7465
Fuel pressure test		0.7	7470
Fuel pressure test		0.7	7480
Idle air control		1.1	7486
Idle air control		0.5	7490
Idle air control		0.5	7495
Idle air control		0.6	7505
Idle air control		0.5	7510
Idle air control		0.4	7515
Idle air control		0.6	7516
Misfire at idle or under load		0.4	7520
Misfire at idle or under load		0.2	7525
Misfire at idle or under load		0.4	7535
Misfire at idle or under load		0.3	7540
Misfire at idle or under load		0.2	7545
Misfire at idle or under load		0.4	7550
Misfire at idle or under load		0.3	7134
Misfire at idle or under load		0.3	7136
Misfire at idle or under load		0.6	7137
Misfire at idle or under load		0.7	7138
Misfire at idle or under load		0.6	7139
Misfire at idle or under load		0.9	7144
Misfire at idle or under load		0.5	7147

**Table 4-16. Fuel Injection**

ITEM	DESCRIPTION	FGW	LABOR CODE
Misfire at idle or under load		0.9	7149
Misfire at idle or under load		0.6	7152
Rough or rolling idle		0.3	7134
Rough or rolling idle		0.3	7136
Rough or rolling idle		0.6	7137
Rough or rolling idle		0.7	7138
Rough or rolling idle		0.6	7139
Rough or rolling idle		0.9	7144
Rough or rolling idle		0.5	7147
Rough or rolling idle		0.9	7149
Rough or rolling idle		0.6	7152
Emits black smoke		2.0	7596
Emits black smoke		2.0	7597
Emits black smoke		2.0	7598
Emits black smoke		2.2	7601
Throttle position sensor		0.5	7555
Throttle position sensor		0.5	7560
Throttle position sensor		0.6	7565
Throttle position sensor		0.4	7570
Throttle position sensor		0.5	7575
Throttle position sensor		0.5	7580
Throttle position sensor		0.5	7585
Throttle position sensor		0.7	7590
Throttle position sensor		0.3	7595
Throttle position sensor		0.7	7605
Throttle position sensor		0.5	7610
Throttle position sensor		0.8	7615
MAP sensor		0.8	7620
MAP sensor		1.2	7625
MAP sensor		0.3	7630
MAP sensor		0.6	7635
MAP sensor		0.6	7640
MAP sensor		0.6	7641
MAP sensor		0.5	7642
MAP sensor		0.6	7645
MAP sensor		0.6	7650
MAP sensor		0.7	7655
Engine temperature sensor		0.4	7660
Engine temperature sensor		0.9	7665
Engine temperature sensor		0.2	7670
Engine temperature sensor		0.3	7675
Engine temperature sensor		0.4	7680
Engine temperature sensor		0.4	7685
Engine temperature sensor		0.3	7690
Engine temperature sensor		0.5	7695
Engine temperature sensor		0.3	7705
Engine temperature sensor		0.4	7710
Intake air temperature sensor		0.6	7715

**Table 4-16. Fuel Injection**

ITEM	DESCRIPTION	FGW	LABOR CODE
Intake air temperature sensor		1.4	7720
Intake air temperature sensor		0.4	7725
Intake air temperature sensor		0.4	7730
Intake air temperature sensor		0.9	7735
Intake air temperature sensor		0.9	7740
Intake air temperature sensor		0.4	7745
Intake air temperature sensor		0.3	7750
Intake air temperature sensor		0.4	7755
Intake air temperature sensor		0.4	7760
Battery voltage test		0.4	7770
Battery voltage test		0.5	7775
Battery voltage test		0.9	7776
Battery voltage test		1.0	7779
Battery voltage test		0.9	7780
Battery voltage test		1.4	7781
Battery voltage test		1.0	7782
Battery voltage test		1.0	7783
Battery voltage test		1.2	7784
Fuel injectors		0.1	7785
Fuel injectors		0.6	7790
Fuel injectors		0.7	7795
Fuel injectors		0.6	7805
Fuel injectors		0.6	7808
Fuel injectors		0.5	7809
Fuel injectors		0.6	7815
Fuel injectors		0.6	7820
Fuel injectors		0.7	7825
Fuel injectors		0.6	7830
Fuel injectors		0.6	7835
Fuel injectors		0.6	7840
Fuel injectors		0.4	7845
Fuel injectors		0.7	7850
System relay		0.2	7887
System relay		0.3	7888
System relay		0.4	7889
System relay		0.3	7899
System relay		0.3	7900
System relay		0.4	7901
System relay		0.4	7902
System relay		0.3	7903
System relay		0.2	7904
System relay		0.4	7906
System relay		0.7	7907
System relay		0.3	7908
System relay		0.2	7909
System relay		0.3	7911
System relay		0.4	7912
Ignition coil test		0.5	7853

**Table 4-16. Fuel Injection**

ITEM	DESCRIPTION	FGW	LABOR CODE
Ignition coil test		0.6	7854
Ignition coil test		0.4	7856
Ignition coil test		0.4	7860
Ignition coil test		0.3	7865
Ignition coil test		0.5	7870
Ignition coil test		0.4	7875
Ignition coil test		0.2	7880
Crank position sensor		0.5	7980
Crank position sensor		0.4	7981
Crank position sensor		0.3	7982
Crank position sensor		0.5	7983
Crank position sensor		0.2	7984
Crank position sensor		0.4	7985
Crank position sensor		0.5	7986
Crank position sensor		0.4	7987
ECM failure		0.3	7913
Vehicle speed signal		0.4	7954
Vehicle speed signal		0.4	7956
Vehicle speed signal		0.5	7957
Vehicle speed signal		0.3	7958
Vehicle speed signal		0.4	7959
Vehicle speed signal		0.3	7961
Vehicle speed signal		0.3	7962
Vehicle speed signal		0.3	7963
Vehicle speed signal		0.3	7964
Password problem		0.4	6701
Password problem		0.4	6702
Password problem		0.6	6703
Password problem		0.4	6704
Password problem		0.5	6705
Password problem		0.3	6706
Password problem		0.6	6707
Password problem		0.8	6708
Loss of TSM / TSSM serial data		0.4	6715
Loss of TSM / TSSM serial data		0.6	6716
Loss of TSM / TSSM serial data		0.6	6717
Loss of TSM / TSSM serial data		0.5	6718
Loss of TSM / TSSM serial data		0.4	6719

# 2002 FL POLICE MODELS

**Table 5-1. Service**

ITEM	DESCRIPTION	FMW	FHW/FTW	LABOR CODE
<b>NEW</b>				
Set-up and pre-delivery		2.5	2.5	---
1,000 mile service		2.5	2.5	---
<b>REGULAR</b>				
2,500 mile maintenance		0.5	0.5	---
5,000 mile maintenance		2.5	2.5	---
7,500 mile maintenance		0.5	0.5	---
10,000 mile maintenance		4.5	4.5	---
20,000 mile maintenance		7.4	5.2	---
25,000 mile maintenance		3.0	3.0	---
50,000 mile maintenance		7.7	7.7	---

**Table 5-2. Chassis**

ITEM	DESCRIPTION	FMW	FHW/FTW	LABOR CODE
<b>DRIVE</b>				
Adjust secondary belt		0.2	0.2	---
Replace secondary belt		3.7	3.7	2011
Replace rear wheel sprocket		0.9	0.9	2021
<b>WHEELS</b>				
Replace tire - includes balancing	front	0.6	0.6	2106
	rear	0.8	0.8	2111
Replace wheel assembly - includes disc and sprocket exchange and balancing	front	0.8	0.8	2113
	rear	1.0	1.0	2114
Replace wheel bearings	front	0.6	0.6	2136
	rear	0.8	0.8	2143
True laced wheel (wheel on vehicle)		0.4	0.4	2156
True laced wheel - includes r/r wheel and tire and time to rebalance	front	1.0	1.0	2157
	rear	1.2	1.2	2158
Replace rim, hub or spokes	front	2.2	2.2	2116
	rear	2.4	2.4	2121
<b>HANDLEBARS</b>				
Replace handlebars		1.2	1.2	2176
Replace clutch hand lever		0.2	0.2	2221
Replace clutch hand lever bracket		0.2	0.2	2226

All times listed in hours.

### V.I.N. CODES

FMW	FLHTP-I (FUEL INJECTED W/FAIRING)
FHW	FLHP-I (FUEL INJECTED)
FTW	FLHPE-I (CA AND JAPAN)

**Table 5-2. Chassis**

ITEM	DESCRIPTION	FMW	FHW/FTW	LABOR CODE
Replace throttle control		0.4	0.4	2231
Replace and adjust throttle control cables	one or both	0.6	0.6	2241
Replace both rubber handlebar mounts		1.0	1.0	2246
Replace rubber handlebar grip		0.2	0.2	2251
Replace handlebar riser	one or both	1.0	1.0	2253
Replace handlebar clamp	one or both	0.8	0.8	2254
<b>FRAME/SWING ARM/FRONT FORK</b>				
Replace frame	includes removal and installation of all accessories and motorcycle components	17.0	17.5	2306
Replace rear frame section and tag bracket		1.0	1.0	2308
Replace front fork assembly		3.0	3.0	2311
Replace lower fork bracket and stem		3.2	3.2	2316
Replace steering head cups and bearings	including bearing adjustment	3.2	3.2	2321
Replace upper fork bracket		2.7	2.7	2326
Adjust steering head bearings		0.7	0.7	----
Change front fork oil	both sides	2.9	0.7	----
Replace front nacelle		---	0.6	2331
Replace complete lock set		0.4	0.4	2333
Service or replace fork slider and/or seal – includes removal, disassembly, cleaning, inspection, replacing parts, servicing damper tube, replacing bushings, assembly and installation	right side	2.4	1.9	2343
	left side	2.7	1.9	2344
	both sides	2.9	2.3	2342
Replace fork side	one side	1.2	1.2	2346
	both sides	1.5	1.5	2351
Replace fork tube	right side	1.4	1.4	2357
	left side	2.7	1.4	2358
	both sides	2.9	1.7	2361
Replace rear swing arm and/or bearings		1.9	1.9	2366
Replace rear fork pivot shaft		1.0	1.0	2368
Replace rear shock absorber assembly	one side	0.3	0.3	2371
	both sides	0.6	0.6	2376
Replace rear shock air line		0.1	0.1	2369
Replace rear shock absorber component(s)	one side	0.5	0.5	2381
	both sides	0.8	0.8	2386
Replace jiffy stand	complete	0.3	0.3	2391
	spring and/or stand	0.2	0.2	2396
	rubber bumper	0.1	0.1	2399
Replace rubber motor mount	rear right	0.5	0.5	2395
	rear left	0.5	0.5	2397
	front	0.4	0.4	2398
Replace footboard	each	0.2	0.2	2394
<b>BRAKES</b>				
Replace hydraulic brake line – includes filling/bleeding brakes	front	1.0	1.0	2406
	rear	0.4	0.4	2411
Replace rear master cylinder reservoir and/or hose		0.2	0.2	2414
Replace brake pads	front – each caliper	0.1	0.1	2416
	rear	0.2	0.2	2421

**Table 5-2. Chassis**

ITEM	DESCRIPTION	FMW	FHW/FTW	LABOR CODE
Replace brake caliper – includes filling/bleeding brakes	front – each cylinder	0.4	0.4	2426
	rear	1.0	1.0	2431
Replace brake disc	front – one side	0.3	0.3	2436
	front – both sides	0.4	0.4	2437
	rear	1.3	1.3	2441
Bleed brake caliper	one or two front calipers or rear caliper	0.2	0.2	2446
Overhaul brake caliper – includes filling/bleeding brakes	front (each caliper)	0.6	0.6	2451
	rear	1.3	1.3	2456
Replace master cylinder assembly – includes filling/bleeding brakes	front	0.4	0.4	2461
	rear	0.5	0.5	2466
Rebuild master cylinder assembly – includes filling/bleeding brakes	front	0.6	0.6	2471
	rear	0.7	0.7	2476
Replace rear brake pedal		0.3	0.3	2492
Replace front brake lever		0.1	0.1	2494
<b>SEATS/FENDERS/TANKS</b>				
Replace seat and /or spring(s) or hinge bracket		0.2	0.2	2506
Replace top frame cover (solo seat)		0.3	0.3	2510
Replace seat air spring		0.4	0.4	2514
Replace air tank		0.8	0.8	2516
Replace air line		0.5	0.5	2518
Replace fender	front	1.0	1.0	2526
	rear	1.5	1.5	2531
Replace rear fender support	one only	0.1	0.1	2536
Replace fuel tank assembly		1.2	1.2	2541
Replace fuel tank console/instrument panel		0.3	0.3	2553
Replace fuel tank console rubber mounting strip		0.2	0.2	2557
Replace fuel tank console		0.2	0.2	2562
Replace fuel tank gauge		0.5	0.5	2563
Replace fuel gauge sending unit		0.5	0.5	2564
Replace fuel tank check valve assembly		0.6	0.6	2567
Replace canopy gasket		0.4	0.4	2570
Replace fuel filter		0.5	0.5	2575
Replace any hose		0.3	0.3	2576
Replace fuel hose inside tank		0.5	0.5	2579
Replace oil filter		0.1	0.1	2582
Replace oil filter bracket		0.6	0.6	2584
<b>BELT GUARDS</b>				
Replace debris deflector (belt drive)		0.1	0.1	2616
<b>EXHAUST SYSTEM</b>				
Replace complete exhaust system and/or gaskets		1.0	1.0	2626
Replace exhaust pipe	right side/front	1.0	1.0	2631
	left side/rear	0.3	0.3	2636
Replace one muffler		0.2	0.2	2646
Replace any one exhaust shield		0.1	0.1	2661

**Table 5-3. Engine**

ITEM	DESCRIPTION	FMW	FHW/FTW	LABOR CODE
<b>GENERAL</b>				
Remove and install engine		4.5	4.5	3006
Replace and adjust stabilizer	top	0.8	0.8	3005
Replace and adjust stabilizer	front	0.3	0.3	3007
Remove and replace oil pan for inspection/contamination	with engine removed	0.3	0.3	3009
<b>CYLINDER HEAD</b>				
Recondition cylinder head – includes removal of head and gasket, remove carbon, service valve guides, grind valves and seats, test springs and install head and gaskets.	front head	4.5	4.5	3101
	rear head	4.5	4.5	3103
	both heads	5.1	5.1	3104
Replace cylinder head	one head	3.2	3.2	3106
	both heads	3.8	3.8	3108
Replace valve seal or spring after cylinder head removal	one seal or spring (intake or exhaust)	0.1	0.1	3131
	both seals or springs (intake or exhaust)	0.2	0.2	3132
Replace cylinder head gasket/O-ring	front cylinder	2.6	2.6	3140
	rear cylinder	2.6	2.6	3142
	both cylinders	3.0	3.0	3143
Replace rocker arm covers and/or gaskets	front cylinder	0.8	0.8	3144
	rear cylinder	0.8	0.8	3145
	both cylinders	0.9	0.9	3148
Recondition rocker arms after removal	one head	0.7	0.7	3149
	both heads	1.4	1.4	3150
Replace lower rocker arm cover/gasket, or rocker arms and /or shafts	front cylinder	1.2	1.2	3147
	rear cylinder	1.2	1.2	3152
	both heads	1.4	1.4	3153
Replace cylinder O-ring/drain O-ring	front cylinder	2.8	2.8	3161
	rear cylinder	2.8	2.8	3163
	both cylinders	3.2	3.2	3168
Replace crankcase umbrella valve	one	1.1	1.1	3172
	both	1.2	1.2	3174
<b>CYLINDER AND PISTON</b>				
Recondition TOP END – includes disassembly, replacing piston and sizing cylinder (.005" pistons), replacing piston rings and all items listed under RECONDITION CYLINDER HEAD and assembly.	one piston and cylinder	5.5	5.5	3202
	both pistons and cylinders	6.1	6.1	3203
Recondition TOP END – includes disassembly, replacement of piston and bore and hone, resizing cylinder (.010" oversize or above), replacing piston rings and all items listed under RECONDITION CYLINDER HEAD and assembly.	one piston and cylinder	5.9	5.9	3211
	both pistons and cylinders	6.5	6.5	3212
Recondition TOP END – includes disassembly, deglazing cylinder and replacing rings, or replacing cylinder and piston, and all items listed under RECONDITION CYLINDER HEAD and assembly.	one piston and cylinder	5.3	5.3	3207
	both pistons and cylinders	5.9	5.9	3208
Replace piston rings – includes deglazing cylinder	one cylinder	3.1	3.1	3206
	both cylinders	3.7	3.7	3216
Replace piston and piston rings – includes removal of cylinder head and cylinder, fitting new piston with rings, resizing cylinder and assembly	one cylinder	3.7	3.7	3221
	both cylinders	4.9	4.9	3231



**Table 5-3. Engine**

ITEM	DESCRIPTION	FMW	FHW/FTW	LABOR CODE
Replace cylinder and piston	one cylinder	3.0	3.0	3236
	both cylinders	3.5	3.5	3246
Replace upper connecting rod bushing during upper end repair		0.4	0.4	3251
Replace one cylinder stud	cylinder removed	0.1	0.1	3253
Replace all eight cylinder studs	cylinders removed	0.5	0.5	3254
<b>CAM COVER</b>				
Replace lifter cover/gasket or lifter/and, or anti-rotation pin	one or two same cylinder	1.4	1.4	3307
	on both cylinders	1.6	1.6	3310
Replace push rod, push rod cover and/or O-ring or quad seal	one or two same cylinder	1.4	1.4	3317
	one each cylinder	1.6	1.6	3318
Replace cam cover and/or gasket		1.6	1.6	3325
Replace primary cam chain, sprockets and/or fastener		1.7	1.7	3327
Replace primary cam chain tensioner		1.7	1.7	3328
Replace cam support plate/O-rings		2.8	2.8	3335
Replace cam support plate		2.8	2.8	3337
Replace cam support bearing/cams/secondary cam chain/tensioner		3.0	3.0	3338
Replace oil pump and/or O-rings		2.6	2.6	3341
Replace cam bearing crankcase	one bearing	2.8	2.8	3342
	two bearings	2.9	2.9	3343
By-pass valve inspection		2.7	2.7	3354
<b>CRANKCASE</b>				
Replace crankcases	includes remove and install engine	8.1	8.1	3406
Seal crankcase only		7.5	7.5	3407
Replace flywheels	includes remove and install engine	7.6	7.6	3411
Replace right side main bearing		7.0	7.0	3412
Piston jet/O-ring	one	3.0	3.0	3413
	both	3.4	3.4	3414
Filter housing and or O-rings		0.2	0.2	3415
Replace crankcase vent hose and/or fittings		0.2	0.2	3417
Replace crankcase oil hose and/or fittings	Feed	0.3	0.3	3418
	Return	0.3	0.3	3419
Check flywheel trueness before assembly or after removal		0.1	0.1	3420
True flywheels after removal	includes piston removal and reinstallation	0.5	0.5	3421
Recondition cylinder heads – head removed (for non-related repairs)	one head	1.0	1.0	3425
	both heads	2.0	2.0	3426
Replace piston rings	cylinders removed (for non-related repairs – deglaze only)	0.3	0.3	3428

**Table 5-3. Engine**

ITEM	DESCRIPTION	FMW	FHW/FTW	LABOR CODE
<b>FUEL SYSTEM</b>				
Replace air cleaner backing plate		0.2	0.2	3501
Replace air cleaner cover		0.1	0.1	3502
Replace induction module	includes making cruise control adjustment	1.0	1.0	3508
Replace induction module seal		1.0	1.0	3510
Replace external fuel supply/return hose	one or both	0.6	0.6	3514
<b>EVAPORATIVE EMISSIONS SYSTEM</b>				
Replace canister		0.1	---	3527

**Table 5-4. Drive and Clutch**

ITEM	DESCRIPTION	FMW	FHW/FTW	LABOR CODE
<b>DRIVE</b>				
Adjust primary chain		0.2	0.2	----
Replace primary inspection cover and/or O-ring		0.1	0.2	4001
Replace primary chain		0.9	0.9	4002
Replace engine sprocket		0.9	0.9	4003
Replace engine sprocket seal		1.3	1.3	4005
Replace primary cover		0.4	0.4	4007
Replace inner primary case &/or seals or bearing		2.1	2.1	4008
Replace primary cover gasket		0.4	0.4	4009
<b>CLUTCH</b>				
Adjust clutch		0.2	0.2	----
Replace release cable assembly		1.5	1.5	4006
Service the clutch	includes disassembly, cleaning, inspection, repair, assembly, and adjustment	1.3	1.3	4011
Replace shift lever	heel or toe	0.1	0.1	4012
Replace clutch release bearing and/or push rod		0.4	0.4	4016
Replace clutch release (ball ramp) and/or side cover		1.6	1.6	4018

**Table 5-5. Transmission**

ITEM	DESCRIPTION	FMW	FHW/FTW	LABOR CODE
<b>TRANSMISSION CASE</b>				
Replace transmission case		5.3	5.3	4304
Replace transmission	complete	4.9	4.9	4305
Overhaul transmission	includes disassembly, cleaning, inspection, replacing parts (transmission case in frame), assembly	4.6	4.6	4306
Replace transmission sprocket		2.2	2.2	4309
Replace main drive gear oil seal	in transmission case	2.3	2.3	4311
Replace mainshaft oil seal	in main drive gear	2.2	2.2	4316

**Table 5-5. Transmission**

ITEM	DESCRIPTION	FMW	FHW/FTW	LABOR CODE
Replace side door gasket		2.8	2.8	4321
Replace shifter drum		0.7	0.7	4331
Replace shifter arm assembly or springs		3.0	3.0	4336
Replace transmission top cover and/or gasket		0.6	0.6	4341
Replace shifter forks and/or shaft		0.9	0.9	4343
Replace side door bearing	one	3.0	3	4348
	both	3.1	3.1	4351
Replace transmission case countershaft bearing		2.9	2.9	4361
Replace main drive gear and/or bearing		3.2	3.2	4366
Replace transmission side cover gasket		0.9	0.9	4368
Replace oil pan and/or gasket or baffle	Note: Removal of rear wheel may be necessary	0.9	0.9	4378
Replace oil fill tube and/or cover, and/or gasket		0.4	0.4	4379
Replace transmission shifter shaft seal		2.2	2.2	4390

**Table 5-6. Electrical**

ITEM	DESCRIPTION	FMW	FHW/FTW	LABOR CODE
NOTE: All codes include diagnostic time and replacement time if required. The codes must be used in conjunction with the diagnostic/repair procedures listed in the 2002 Service Manual and electrical diagnostic manual, Part No. 99497-02. Remember to use the same four digit code selected for your labor code as your condition code when filing a warranty claim.				
<b>GENERAL</b>				
Check and diagnose the electrical system lights and accessories	excluding turn signals	0.3	0.3	5016
<b>CHARGING CIRCUIT</b>				
Diagnose charging system	regulator inspection	0.1	0.1	5306
Diagnose charging system	failed regulator bleed test	0.9	0.9	5307
Diagnose charging system	excessive milliamp draw	0.2	0.2	5308
Diagnose charging system	total current draw	0.2	0.2	5310
Replace regulator/stator connector		0.2	0.2	5311
Diagnose charging system	open or grounded stator	1.8	1.8	5312
Diagnose system	failed AC output test	1.8	1.8	5314
Diagnose charging system	regulator failure	1.0	1.0	5315
Diagnose charging system	excessive voltage output (regulator)	1.0	1.0	5316
Diagnose charging system	replace rotor	1.3	1.3	5319
<b>STARTER CIRCUIT</b>				
Starter inoperative	open/shorted/ground motor	1.4	1.4	5817
Starter inoperative	start button	1.0	1.0	5818
Starter inoperative	solenoid clicks; poor starter or battery connections	0.2	0.2	5822
Starter inoperative	solenoid clicks; poor relay or solenoid connections, or bad relay contacts	0.3	0.3	5823
Starter inoperative	solenoid clicks; poor starter to battery connections, ground connections, or bad solenoid contacts	0.2	0.2	5824
Starter inoperative	damaged motor	1.4	1.4	5825
Starter inoperative	relay click; open in relay wiring	0.3	0.3	5827
Starter inoperative	nothing clicks; poor relay ground	0.3	0.3	5828

**Table 5-6. Electrical**

ITEM	DESCRIPTION	FMW	FHW/FTW	LABOR CODE
Starter inoperative	nothing clicks; short to voltage	0.4	0.4	5830
Starter inoperative	nothing clicks; open in wiring to or from starter button	0.5	0.5	5831
Starter inoperative	starter relay	0.4	0.4	5832
Slow starter crank or starter stalls	poor starter to battery connections, ground connections	0.2	0.2	5835
Slow starter crank or starter stalls	binding	0.3	0.3	5836
Starter spins	clutch	1.5	1.5	5837
Starter inoperative	nothing clicks; TSM / TSSM	0.4	0.4	5838
Replace starter solenoid	contacts includes starter motor removal	1.6	1.6	5845
Starter binding		1.6	1.6	5850
Replace starter solenoid coil	includes starter motor removal	1.6	1.6	5860
<b>INSTRUMENTS</b>				
Fuel gauge	see Fuel System	---	---	----
Replace speedometer	cosmetics only	0.2	0.2	6003
Replace tachometer		0.2	0.2	6009
Replace voltmeter		0.3	---	6021
Replace indicator panel lens		0.3	---	6018
Replace instrument housing (console)		---	0.3	6019
<b>ELECTRONIC SPEEDOMETER</b>				
Diagnose inoperative, inaccurate or erratic speedometer switch		0.3	0.3	6001
Diagnose inoperative, inaccurate or erratic speedometer		0.1	0.1	6002
Diagnose inoperative, inaccurate or erratic speedometer	wiring	0.2	0.2	6004
Diagnose inoperative, inaccurate or erratic speedometer	replace	0.5	0.5	6006
Diagnose inoperative, inaccurate or erratic speedometer	wiring	0.4	0.5	6008
Diagnose inoperative, inaccurate or erratic speedometer	sensor	0.5	0.5	6010
Diagnose inoperative, inaccurate or erratic speedometer	open	0.6	0.6	6013
Diagnose inoperative, inaccurate or erratic speedometer	LED failure	0.3	0.2	6014
Diagnose inoperative, inaccurate or erratic speedometer	wires	0.4	0.4	6016
Odometer inoperable		0.3	0.2	6020
Diagnose inoperative, inaccurate or erratic speedometer	internal	0.5	0.5	6022
Diagnose inoperative, inaccurate or erratic speedometer	power/ground	0.5	0.5	6024
Diagnose inoperative, inaccurate or erratic speedometer	debris on sensor	0.5	0.5	6029
Diagnose inoperative, inaccurate or erratic speedometer	grounded circuit	0.3	0.3	6031
Diagnose inoperative, inaccurate or erratic speedometer	fuse	0.1	0.1	6032
Replace speedo reset boot		0.1	0.1	6043

**Table 5-6. Electrical**

ITEM	DESCRIPTION	FMW	FHW/FTW	LABOR CODE
<b>WIRING</b>				
Replace connector housing		0.1	0.1	5022
Replace connector anchor		0.1	0.1	5023
Replace main wiring harness		3.6	3.1	5026
Main harness	locate and repair, open/short	0.5	0.5	5028
Interconnect harness	repair short	0.5	0.5	6531
Interconnect harness	repair open	0.5	0.5	6532
Handlebar harness	repair short	0.4	0.4	6551
Handlebar harness	repair open	0.4	0.4	6552
Replace EFI harness		1.7	1.7	5033
Replace rear fender wiring harness		0.8	0.8	5036
Replace any single wire	light circuit	0.2	0.2	5039
	accessory circuit	0.2	0.2	5043
Diagnose/repair indicator lamp wiring		0.3	0.3	5048
Replace front fender wiring harness		0.9	0.9	5049
Replace inter-connect harness		0.5	---	5052
<b>SWITCHES</b>				
Replace ignition switch		0.5	0.2	5129
Replace left handlebar switch		0.5	0.5	5171
Replace right handlebar switch		0.7	0.7	5173
Replace front brake light switch		0.6	0.6	5176
Replace left upper handlebar switch housing		0.2	0.2	5177
Replace left lower handlebar switch housing		0.4	0.4	5178
Replace right upper handlebar switch housing		0.2	0.2	5179
Replace right lower handlebar switch housing		0.7	0.7	5180
Replace pursuit/aux. switch		0.8	0.8	5187
Replace horn/yelp siren switch		0.8	0.8	5188
Replace rear stoplight switch		0.4	0.4	5141
Replace main circuit breaker		0.2	0.2	5145
Replace fuse		0.2	0.2	5147
Replace fuse block	one	0.3	0.3	5148
	two	0.5	0.6	5151
Replace transmission neutral switch	include diagnosis	0.3	0.3	5157
Replace oil pressure switch	include diagnosis	0.3	0.3	5161
Replace clutch lockout switch		0.5	0.5	5168
Replace rear stoplight relay		0.1	0.1	5169
<b>LIGHTS</b>				
Replace headlight	includes diagnosis	0.1	0.1	5185
Replace headlight housing	includes adjustment	0.2	0.2	5189
Replace indicator lamp assembly		---	0.2	5191
Replace instrument bulb	includes diagnosis	0.2	---	5193
Replace rear turn signal light bar		0.4	0.4	5207
Replace taillight bulbs or single light bulb or lens	includes diagnosis	0.1	0.1	5197
Replace taillight assembly or circuit board		0.2	0.2	5215
Replace turn signal light assembly	front	0.4	0.4	5201
	rear	0.4	0.4	5205

**Table 5-6. Electrical**

ITEM	DESCRIPTION	FMW	FHW/FTW	LABOR CODE
Replace fender tip light bulb or lens – includes diagnosis	front	0.1	0.1	5217
	rear	0.1	0.1	5221
Replace fender tip lamp assembly	front	0.2	0.2	5225
	rear	0.3	0.3	5229
Replace passing lamp bulb	includes diagnosis	0.1	0.1	5227
Replace pursuit lamp	front	0.4	0.4	5230
Replace pursuit lamp bracket		0.7	0.7	5232
<b>TURN SIGNALS/SECURITY SYSTEM</b>				
No security lamp		0.4	0.4	6735
No security lamp		0.4	0.4	6736
No security lamp		0.4	0.4	6737
No security lamp		0.4	0.4	6738
No security lamp		0.1	0.1	6739
No security lamp		0.2	0.2	6740
No security lamp		0.3	0.3	6741
No security lamp		0.3	0.3	6742
No security lamp		0.3	0.3	6743
No security lamp		0.2	0.2	6744
No security lamp		0.3	0.3	6745
Security lamp on continuously		0.2	0.2	6750
Security lamp on continuously		0.3	0.3	6751
Security lamp on continuously		0.4	0.4	6752
Fob signal weak		0.1	0.1	6755
Fob signal weak		0.1	0.1	6756
Fob signal weak		0.2	0.2	6757
Turn signal error 1A		0.5	0.5	6760
Turn signal error 1A		1.1	1.1	6761
Turn signal error 1A		0.2	0.2	6762
Turn signal error 1A		0.3	0.3	6763
Turn signal error 1A		0.7	0.7	6764
Turn signal error 2A		0.9	0.9	6773
Turn signal error 2B		0.6	0.6	6777
Turn signal error 2B		0.5	0.5	6778
Turn signal error 2B		0.7	0.7	6779
Turn signal error 2B		0.6	0.6	6780
Turn signal error 2C		0.7	0.7	6784
Turn signal error 2C		0.7	0.7	6785
Turn signal error 2C		1.1	1.1	6786
Turn signal error 3A		0.3	0.3	6790
Turn signal error 3A		0.2	0.2	6791
Turn signal error 3A		0.1	0.1	6792
Turn signal error 3A		0.3	0.3	6793
Turn signal error 3B		0.1	0.1	6796
Turn signal error 3B		0.3	0.3	6797
Turn signal error 3B		0.3	0.3	6798
Turn signal error 3B		0.3	0.3	6799
Turn signal error 3B		0.3	0.3	6800

**Table 5-6. Electrical**

ITEM	DESCRIPTION	FMW	FHW/FTW	LABOR CODE
Turn signal error 3C		0.3	0.3	6805
Turn signal error 3C		0.3	0.3	6806
Turn signal error 3C		0.2	0.2	6807
Turn signal error 3C		0.3	0.3	6808
Turn signal error 3D		0.3	0.3	6810
Turn signal error 3D		0.7	0.7	6811
Turn signal error 3D		0.4	0.4	6812
Turn signal error 3D		0.3	0.3	6813
Turn signal error 3D		0.4	0.4	6814
Turn signal error 3D		0.7	0.7	6815
Turn signal error 3D		0.4	0.4	6816
Turn signal error 4A		0.2	0.2	6820
Turn signal error 4A		0.2	0.2	6821
Turn signal error 4A		0.4	0.4	6822
Turn signal error 4A	Does not include lamp assembly replacement	0.3	0.3	6823
Turn signal error 4A		0.5	0.5	6824
Ignition enable output high		0.3	0.3	6827
Ignition enable output high		0.3	0.3	6828
Alarm output		0.3	0.3	6830
Alarm output		0.3	0.3	6831
Alarm output		0.3	0.3	6832
Alarm output		0.4	0.4	6833
Alarm output		0.3	0.3	6834
Alarm output		0.3	0.3	6835
Starter output high		0.3	0.3	6840
Starter output high		0.2	0.2	6841
Starter output high		0.3	0.3	6842
Accelerometer fault		0.2	0.2	6845
<b>BATTERY/HORN</b>				
Replace the battery		0.2	0.2	5705
Replace horn and/or bracket		0.2	0.2	5765
Replace battery tray		0.3	0.3	5767
<b>ACCESSORIES</b>				
Replace windshield		0.1	0.1	6203
Replace windshield bushing	all or one	---	0.2	6208
Replace inner fairing		1.7	1.4	6209
Replace saddlebag mounting bracket		0.2	0.2	6253
Replace saddlebag guard	complete	0.3	0.3	6254
Replace outer fairing support brace		0.6	---	6255
Replace inner fairing bracket		0.7	---	6265
Replace a single saddlebag guard rail		0.2	0.2	6256
Replace a saddlebag		0.2	0.2	6257
Replace one saddlebag mounting spring		0.3	0.3	6259
Replace saddlebag cover	one	0.2	0.2	6260
Replace saddlebag lock		0.2	0.2	6261
Replace one frame sidecover		0.1	0.1	6263

**Table 5-6. Electrical**

ITEM	DESCRIPTION	FMW	FHW/FTW	LABOR CODE
Replace fairing cap		0.3	---	6271
Replace bumper	front	0.3	0.3	6303
	rear	0.2	0.2	6305
Replace highway bar	front	0.4	0.4	6353
	rear – left	0.5	0.5	6355
	rear– right	0.8	0.4	6357
Replace radio carrier		0.7	0.7	6453
Replace mirror		0.1	0.1	6513
Replace amplifier		0.2	0.2	6521
Replace speaker		0.1	0.1	6523
Replace strobe lamp		0.6	0.6	6526
Repair or replace rear mount		0.3	0.3	6529

**Table 5-7. Fuel Injection**

ITEM	DESCRIPTION	FMW	FHW/FTW	LABOR CODE
NOTE: The diagnostic/replacement operations and times listed on the following pages have been created for your use. The codes must be used in conjunction with the repair procedures listed in the FLT Service Manual, Part No. 99483-02 and Electrical Diagnostic Manual, Part No. 99497-02. Remember to use the same four digit code selected for your labor code as your condition code when filing a warranty claim.				
Diagnostic check		0.2	0.2	7110
Diagnostic check		0.4	0.4	7115
Diagnostic check		0.4	0.4	7120
Diagnostic check		0.8	0.8	7125
Diagnostic check		0.8	0.8	7126
No check engine lamp/No ECM Power		0.6	0.5	6013
No check engine lamp/No ECM Power		0.7	0.6	7130
No check engine lamp/No ECM Power		0.6	0.4	7133
No check engine lamp/No ECM Power		0.4	0.4	7141
No check engine lamp/No ECM Power		0.1	0.1	7142
No check engine lamp/No ECM Power		0.6	0.5	7143
No check engine lamp/No ECM Power		0.5	0.4	7146
No check engine lamp/No ECM Power		0.6	0.5	7270
No check engine lamp/No ECM Power		0.7	0.6	7285
No check engine lamp/No ECM Power		0.9	0.7	7286
No check engine lamp/No ECM Power		1.2	0.8	7287
No check engine lamp/No ECM Power		0.9	0.7	7288
No check engine lamp/No ECM Power		0.9	0.7	7289
No check engine lamp/No ECM Power		0.5	0.4	7290
No check engine lamp/No ECM Power		1.5	1.4	7295
No check engine lamp/No ECM Power		0.6	0.6	7301
No check engine lamp/No ECM Power		0.1	0.1	7302
No check engine lamp/No ECM Power		0.8	0.7	7303
No check engine lamp/No ECM Power		0.6	0.4	7304
No check engine lamp/No ECM Power		0.6	0.6	7305
No check engine lamp/No ECM Power		0.5	0.5	7306
No check engine lamp/No ECM Power		0.8	0.7	7307



**Table 5-7. Fuel Injection**

ITEM	DESCRIPTION	FMW	FHW/FTW	LABOR CODE
No check engine lamp/No ECM Power		0.7	0.6	7308
No check engine lamp/No ECM Power		0.6	0.6	7309
No check engine lamp/No ECM Power		0.6	0.6	7310
No check engine lamp/No ECM Power		0.3	0.3	7320
Check engine lamp on continuously		0.2	0.2	7148
Check engine lamp on continuously		0.7	0.7	7150
Check engine lamp on continuously		0.3	0.3	7155
Check engine lamp on continuously		0.2	0.2	7156
Check engine lamp on continuously		0.1	0.1	7157
Engine cranks but will not start		0.6	0.6	7185
Engine cranks but will not start		0.5	0.5	7195
Engine cranks but will not start		0.5	0.5	7210
Engine cranks but will not start		0.4	0.4	7215
Engine cranks but will not start		0.5	0.5	7223
Engine cranks but will not start		0.4	0.4	7224
Engine cranks but will not start		0.5	0.5	7225
Engine cranks but will not start		0.8	0.8	7226
Engine cranks but will not start		0.7	0.7	7227
Engine cranks but will not start		0.5	0.5	7228
Engine cranks but will not start		0.5	0.5	7230
Engine cranks but will not start		0.6	0.6	7231
Engine cranks but will not start		0.5	0.5	7235
Engine cranks but will not start		0.9	0.9	7251
Fuel system electrical test		0.2	0.2	7335
Fuel system electrical test		0.7	0.7	7336
Engine cranks but will not start; Fuel system electrical test		0.6	0.6	7340
Engine cranks but will not start; Fuel system electrical test		0.5	0.5	7355
Fuel system electrical test		0.3	0.3	7360
Fuel system electrical test		0.8	0.8	7370
Engine cranks but will not start; Fuel system electrical test		0.4	0.4	7380
Fuel system electrical test		0.3	0.3	7385
Engine cranks but will not start; Fuel system electrical test		0.9	0.9	7415
Fuel system electrical test		0.3	0.3	7440
Engine cranks but will not start; Fuel system electrical test		0.4	0.4	7441
Fuel system electrical test		0.2	0.2	7445
Engine cranks but will not start; Fuel system electrical test		0.4	0.4	7450
Engine cranks but will not start; Fuel system electrical test		0.7	0.7	7992
Engine cranks but will not start; Fuel system electrical test		0.4	0.4	7520
Starts, then stalls		0.7	0.7	7992
Starts, then stalls		0.6	0.6	7993
Starts, then stalls		0.3	0.3	7994

**Table 5-7. Fuel Injection**

ITEM	DESCRIPTION	FMW	FHW/FTW	LABOR CODE
Starts, then stalls		0.3	0.3	7995
Starts, then stalls		0.3	0.3	7996
Starts, then stalls		0.5	0.5	7997
Starts, then stalls		0.6	0.6	7998
Starts, then stalls		0.5	0.5	7999
Starts, then stalls; no DTCs		0.4	0.4	7127
Starts, then stalls; no DTCs		0.3	0.3	7128
Combustion absent		0.1	0.1	7537
Combustion absent		0.2	0.2	7538
Combustion absent		0.2	0.2	7539
Combustion absent		0.2	0.2	7543
Combustion absent		0.4	0.4	7544
Combustion absent		0.2	0.2	7546
Combustion absent		0.4	0.4	7547
Combustion absent		0.1	0.1	7548
Combustion absent		0.1	0.1	7549
Fuel pressure test		0.4	0.4	7455
Fuel pressure test		0.7	0.7	7465
Fuel pressure test		0.7	0.7	7470
Fuel pressure test		0.7	0.7	7480
Idle air control		1.1	1.1	7486
Idle air control		0.5	0.5	7490
Idle air control		0.5	0.5	7495
Idle air control		0.6	0.6	7505
Idle air control		0.5	0.5	7510
Idle air control		0.4	0.4	7515
Idle air control		0.6	0.6	7516
Misfire at idle or under load		0.4	0.4	7520
Misfire at idle or under load		0.2	0.2	7525
Misfire at idle or under load		0.4	0.4	7535
Misfire at idle or under load		0.3	0.3	7540
Misfire at idle or under load		0.2	0.2	7545
Misfire at idle or under load		0.4	0.4	7550
Misfire at idle or under load		0.3	0.3	7134
Misfire at idle or under load		0.3	0.3	7136
Misfire at idle or under load		0.6	0.6	7137
Misfire at idle or under load		0.7	0.7	7138
Misfire at idle or under load		0.6	0.6	7139
Misfire at idle or under load		0.9	0.9	7144
Misfire at idle or under load		0.5	0.5	7147
Misfire at idle or under load		0.9	0.9	7149
Misfire at idle or under load		0.6	0.6	7152
Rough or rolling idle		0.3	0.3	7134
Rough or rolling idle		0.3	0.3	7136
Rough or rolling idle		0.6	0.6	7137
Rough or rolling idle		0.7	0.7	7138
Rough or rolling idle		0.6	0.6	7139

**Table 5-7. Fuel Injection**

ITEM	DESCRIPTION	FMW	FHW/FTW	LABOR CODE
Rough or rolling idle		0.9	0.9	7144
Rough or rolling idle		0.5	0.5	7147
Rough or rolling idle		0.9	0.9	7149
Rough or rolling idle		0.6	0.6	7152
Emits black smoke		2.0	2.0	7596
Emits black smoke		2.0	2.0	7597
Emits black smoke		2.0	2.0	7598
Emits black smoke		2.2	2.2	7601
Throttle position sensor		0.5	0.5	7555
Throttle position sensor		0.5	0.5	7560
Throttle position sensor		0.6	0.6	7565
Throttle position sensor		0.4	0.4	7570
Throttle position sensor		0.5	0.5	7575
Throttle position sensor		0.5	0.5	7580
Throttle position sensor		0.5	0.5	7585
Throttle position sensor		0.7	0.7	7590
Throttle position sensor		0.3	0.3	7595
Throttle position sensor		0.7	0.7	7605
Throttle position sensor		0.5	0.5	7610
Throttle position sensor		0.8	0.8	7615
MAP sensor		0.8	0.8	7620
MAP sensor		1.2	1.2	7625
MAP sensor		0.3	0.3	7630
MAP sensor		0.6	0.6	7635
MAP sensor		0.6	0.6	7640
MAP sensor		0.6	0.6	7641
MAP sensor		0.5	0.5	7642
MAP sensor		0.6	0.6	7645
MAP sensor		0.6	0.6	7650
MAP sensor		0.7	0.7	7655
Engine temperature sensor		0.4	0.4	7660
Engine temperature sensor		0.9	0.9	7665
Engine temperature sensor		0.2	0.2	7670
Engine temperature sensor		0.3	0.3	7675
Engine temperature sensor		0.4	0.4	7680
Engine temperature sensor		0.4	0.4	7685
Engine temperature sensor		0.3	0.3	7690
Engine temperature sensor		0.5	0.5	7695
Engine temperature sensor		0.3	0.3	7705
Engine temperature sensor		0.4	0.4	7710
Intake air temperature sensor		0.6	0.6	7715
Intake air temperature sensor		1.4	1.4	7720
Intake air temperature sensor		0.4	0.4	7725
Intake air temperature sensor		0.4	0.4	7730
Intake air temperature sensor		0.9	0.9	7735
Intake air temperature sensor		0.9	0.9	7740
Intake air temperature sensor		0.4	0.4	7745

**Table 5-7. Fuel Injection**

ITEM	DESCRIPTION	FMW	FHW/FTW	LABOR CODE
Intake air temperature sensor		0.3	0.3	7750
Intake air temperature sensor		0.4	0.4	7755
Intake air temperature sensor		0.4	0.4	7760
Battery voltage test		0.4	0.4	7770
Battery voltage test		0.5	0.5	7775
Battery voltage test		0.9	0.9	7776
Battery voltage test		1.0	1.0	7779
Battery voltage test		0.9	0.9	7780
Battery voltage test		1.4	1.4	7781
Battery voltage test		1.0	1.0	7782
Battery voltage test		1.0	1.0	7783
Battery voltage test		1.2	1.2	7784
Fuel injectors		0.1	0.1	7785
Fuel injectors		0.6	0.6	7790
Fuel injectors		0.7	0.7	7795
Fuel injectors		0.6	0.6	7805
Fuel injectors		0.6	0.6	7808
Fuel injectors		0.5	0.5	7809
Fuel injectors		0.6	0.6	7815
Fuel injectors		0.6	0.6	7820
Fuel injectors		0.7	0.7	7825
Fuel injectors		0.6	0.6	7830
Fuel injectors		0.6	0.6	7835
Fuel injectors		0.6	0.6	7840
Fuel injectors		0.4	0.4	7845
Fuel injectors		0.7	0.7	7850
System relay		0.2	0.2	7887
System relay		0.3	0.3	7888
System relay		0.4	0.4	7889
System relay		0.3	0.3	7899
System relay		0.3	0.3	7900
System relay		0.4	0.4	7901
System relay		0.4	0.4	7902
System relay		0.3	0.3	7903
System relay		0.2	0.2	7904
System relay		0.4	0.4	7906
System relay		0.7	0.7	7907
System relay		0.3	0.3	7908
System relay		0.2	0.2	7909
System relay		0.3	0.3	7911
System relay		0.4	0.4	7912
Ignition coil test		0.5	0.5	7853
Ignition coil test		0.6	0.6	7854
Ignition coil test		0.4	0.4	7856
Ignition coil test		0.4	0.4	7860
Ignition coil test		0.3	0.3	7865
Ignition coil test		0.5	0.5	7870

**Table 5-7. Fuel Injection**

ITEM	DESCRIPTION	FMW	FHW/FTW	LABOR CODE
Ignition coil test		0.4	0.4	7875
Ignition coil test		0.2	0.2	7880
Crank position sensor		0.5	0.5	7980
Crank position sensor		0.4	0.4	7981
Crank position sensor		0.3	0.3	7982
Crank position sensor		0.5	0.5	7983
Crank position sensor		0.2	0.2	7984
Crank position sensor		0.4	0.4	7985
Crank position sensor		0.5	0.5	7986
Crank position sensor		0.4	0.4	7987
ECM failure		0.3	0.3	7913
Vehicle speed signal		0.4	0.4	7954
Vehicle speed signal		0.4	0.4	7956
Vehicle speed signal		0.5	0.5	7957
Vehicle speed signal		0.3	0.3	7958
Vehicle speed signal		0.4	0.4	7959
Vehicle speed signal		0.3	0.3	7961
Vehicle speed signal		0.3	0.4	7962
Vehicle speed signal		0.3	0.4	7963
Vehicle speed signal		0.3	0.4	7964
Password problem		0.4	0.4	6701
Password problem		0.4	0.4	6702
Password problem		0.6	0.6	6703
Password problem		0.4	0.4	6704
Password problem		0.5	0.5	6705
Password problem		0.3	0.3	6706
Password problem		0.6	0.6	6707
Password problem		0.8	0.8	6708
Loss of TSM / TSSM serial data		0.4	0.4	6715
Loss of TSM / TSSM serial data		0.6	0.6	6716
Loss of TSM / TSSM serial data		0.6	0.6	6717
Loss of TSM / TSSM serial data		0.5	0.5	6718
Loss of TSM / TSSM serial data		0.4	0.4	6719

# NOTES

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# 2002 DYNA POLICE MODEL

**Table 5-8. Service**

ITEM	DESCRIPTION	GKV	LABOR CODE
<b>NEW</b>			
Set-up and pre-delivery		2.1	---
1,000 mile service		2.0	---
<b>REGULAR</b>			
2,500 mile maintenance		0.5	---
5,000 mile maintenance		2.0	---
7,500 mile maintenance		0.5	---
10,000 mile maintenance		5.0	---

**Table 5-9. Chassis**

ITEM	DESCRIPTION	GKV	LABOR CODE
<b>DRIVE</b>			
Adjust secondary belt		0.2	---
Replace secondary belt		2.1	2011
Replace rear wheel sprocket		0.9	2021
<b>WHEELS</b>			
Replace tire – includes balancing	front	0.6	2106
	rear	0.7	2111
Replace wheel assembly - includes disc and sprocket exchange and balancing	front	0.8	2113
	rear	1.0	2114
Replace rim, hub or spokes	front	2.3	2116
	rear	2.3	2121
Replace wheel bearings	front	0.5	2136
	rear	0.6	2141
True spoked wheel		0.4	2156
<b>HANDLEBARS</b>			
Replace handlebars		0.5	2206
Replace clutch hand lever		0.2	2221
Replace clutch hand lever bracket		0.2	2226
Replace throttle control		0.4	2231
Replace and adjust throttle control cables	one or both	0.6	2241
Replace both rubber handlebar mounts		0.5	2246
Replace rubber handlebar grip		0.2	2251
Replace handlebar riser	one or both	0.4	2253
Replace handlebar clamp	one or both	0.1	2254

All times listed in hours.

**V.I.N. CODES**

GKV	FXDP
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**Table 5-9. Chassis**

ITEM	DESCRIPTION	GKV	LABOR CODE
<b>FRAME/SWING ARM/FRONT FORK</b>			
Replace frame	includes removal and installation of all accessories and motorcycle components	10.5	2306
Replace front fork assembly		2.2	2311
Replace lower fork bracket and stem		2.4	2316
Replace steering head cups and bearings, including bearing adjustment		2.1	2321
Replace upper fork bracket		0.9	2326
Replace fork lock		0.8	2330
Adjust steering head bearings		0.4	---
Change front fork oil		0.5	---
Service or replace fork slider and/or seal – includes removal, disassembly, cleaning, inspection, replacing parts, servicing damper tube, replacing bushings, assembly and installation	one side	0.7	2341
	both sides	1.1	2342
Replace fork side	one side	0.5	2346
	both sides	0.8	2351
Replace fork tube	one side	0.6	2356
	both sides	0.9	2361
Replace rear swing arm and/or bushings		2.0	2366
Replace rear fork pivot shaft		1.0	2368
Replace rear shock absorber assembly	one side	0.3	2371
	both sides	0.5	2376
Replace rear shock absorber component(s)	one side	0.4	2381
	both sides	0.7	2386
Replace floor boards		0.1	2394
Replace jiffy stand	spring and/or stand	0.3	2396
	rubber bumper	0.1	2399
Replace motor rubber mount	rear	0.5	2395
	front	0.2	2398
<b>BRAKES</b>			
Replace hydraulic brake line – includes filling/bleeding brakes	front	0.4	2406
	rear	0.5	2411
Replace rear master cylinder reservoir hose and/or master cylinder fitting		0.4	2414
Replace brake pads	front – each caliper	0.1	2416
	rear	0.3	2421
Replace brake caliper – includes filling/bleeding brakes	front	0.4	2426
	rear	0.7	2431
Replace brake disc	front – one side	0.3	2436
	front – both sides	---	2437
	rear	0.9	2441
Bleed brake caliper	one or two front calipers or rear caliper	0.2	2446
Overhaul brake caliper – includes filling/bleeding brakes	front – each caliper	0.6	2451
	rear	0.9	2456
Replace master cylinder assembly – includes filling/bleeding brakes	front	0.4	2461
	rear	0.5	2466



**Table 5-9. Chassis**

ITEM	DESCRIPTION	GKV	LABOR CODE
Rebuild master cylinder assembly – includes filling/bleeding brakes	front	0.6	2471
	rear	0.7	2476
Replace rear brake pedal		0.3	2492
Replace front brake lever		0.1	2494
<b>SEATS/FENDERS/TANK</b>			
Set-up and pre-delivery		2.1	---
Replace seat	front	0.2	2506
Replace fender	front	0.3	2526
	rear	1.1	2531
Replace fuel tank assembly		1.0	2541
Replace fuel tank valve		0.2	2561
Replace fuel tank gauge and/or console		0.2	2563
Replace fuel tank gauge sending unit		0.4	2564
Replace any hose		0.3	2576
Replace oil filter		0.1	2582
Replace oil filter bracket		0.2	2584
Replace license plate holder		0.2	2590
<b>BELT GUARDS</b>			
Replace debris deflector		0.2	2616
Replace belt guard		0.2	2620
<b>EXHAUST SYSTEM</b>			
Replace complete exhaust system and/or gaskets		0.6	2626
Replace exhaust pipe	front	0.5	2631
	rear	0.3	2636
Replace any muffler		0.2	2646
Replace any exhaust shield		0.1	2661
Replace muffler support		0.2	2666

**Table 5-10. Engine**

ITEM	DESCRIPTION	GKV	LABOR CODE
<b>GENERAL</b>			
Remove and install engine		4.0	3006
Replace and adjust stabilizer	top	0.7	3005
Remove and replace oil pan for inspection/contamination		0.7	3009
<b>CYLINDER HEAD</b>			
Recondition cylinder head – includes removal of head and gasket, remove carbon, service valve guides, grind valves and seats, test springs and install head and gaskets.	front head	3.5	3101
	rear head	3.5	3103
	both heads	4.1	3104
Replace cylinder head	one head	2.2	3106
	both heads	2.8	3108
Replace valve seal or spring after cylinder head removal	one seal or spring (intake or exhaust)	0.1	3131
	both seals or springs (intake or exhaust)	0.2	3132
Replace cylinder head gasket/o-ring	front cylinder	1.6	3140
	rear cylinder	1.6	3142
	both cylinders	2.0	3143

**Table 5-10. Engine**

ITEM	DESCRIPTION	GKV	LABOR CODE
Replace rocker arm covers and/or gaskets	front cylinder	0.7	3144
	rear cylinder	0.7	3145
	both cylinders	0.8	3148
Recondition rocker arms after heads are removed	one head	0.7	3149
	both heads	1.4	3150
Replace lower rocker arm cover/gasket, or rocker arms and /or shafts/rocker arm support	front cylinder	1.1	3147
	rear cylinder	1.1	3152
	both cylinders	1.3	3153
Replace cylinder o-ring/drain o-ring	one cylinder	1.8	3161
	rear cylinder	1.8	3163
	both cylinders	2.2	3168
Replace crankcase umbrella valve	one	1.0	3172
	both	1.1	3174
<b>CYLINDER AND PISTON</b>			
Recondition TOP END - includes disassembly, replacement of piston and sizing cylinder (.005" pistons), replacing piston rings and all items listed under RECONDITION CYLINDER HEAD and assembly.	one piston and cylinder	4.5	3202
	both pistons and cylinders	5.1	3203
Recondition TOP END - includes disassembly, replacement of piston and bore and hone, resizing cylinder (.010" oversize or above), replacing piston rings and all items listed under RECONDITION CYLINDER HEAD and assembly.	one piston and cylinder	4.9	3211
	both pistons and cylinders	5.5	3212
Recondition TOP END – includes disassembly, deglazing cylinder and replacing rings, or replacing cylinder and piston, all items listed under RECONDITIONING CYLINDER HEAD and assembly.	one piston and cylinder	4.3	3207
	both pistons and cylinders	4.9	3208
Replace piston rings – includes deglazing cylinder	one cylinder	2.1	3206
	both cylinders	2.7	3216
Replace piston and piston rings – includes removal of cylinder head and cylinder, fitting new piston with rings, resizing cylinder and assembly	one cylinder	2.7	3221
	both cylinders	3.9	3231
Replace cylinder and piston	one cylinder	2.0	3236
	both cylinders	2.5	3246
Replace upper connecting rod bushing during upper end repair		0.4	3251
Replace one cylinder stud	cylinder removed	0.1	3253
Replace all eight cylinder studs	cylinders removed	0.5	3254
<b>CAM COVER</b>			
Replace lifter cover/gasket or lifter/and, or anti-rotation pin	one	1.3	3307
	both	1.5	3310
Replace push rod, push rod cover and/or O-ring or quad seal	one or two same cylinder	1.3	3317
	one each cylinder	1.5	3318
Replace cam cover and/or gasket		0.9	3325
Replace primary cam chain, sprockets and/or fastener		1.0	3327
Replace primary cam chain tensioner		1.0	3328
Replace cam support plate O-rings		2.1	3335
Replace cam support plate		2.1	3337
Replace cam support bearing/cams/secondary cam chain/tensioner		2.3	3338

**Table 5-10. Engine**

ITEM	DESCRIPTION	GKV	LABOR CODE
Replace oil pump and/or O-rings		1.9	3341
Replace cam bearing crankcase	one bearing	2.1	3342
	two bearings	2.2	3343
By pass valve inspection		2.0	3354
<b>CRANKCASE</b>			
Replace crankcases	includes remove and install engine	7.1	3406
Seal crankcase only		6.5	3407
Replace flywheels	includes remove and install engine	6.6	3411
Replace right side main bearing	California vehicles only	6.1	3412
Replace right side main bearing		6.0	3412
Piston jet/O-ring	one	2.0	3413
	both	2.4	3414
Filter housing and or O-rings		0.2	3415
Check flywheel trueness before assembly or after removal		0.1	3420
True flywheels after removal	includes piston removal and reinstallation	0.5	3421
Recondition cylinder heads – head removed (for non-related repairs)	one head	1.0	3425
	both heads	2.0	3426
Replace piston rings	cylinders removed (for non-related repairs – deglaze only)	0.3	3428
Replace pistons	cylinders removed (for non-related repairs) – includes resizing cylinders	1.4	3430
<b>FUEL SYSTEM</b>			
Replace air cleaner backing plate		0.1	3501
Replace air cleaner cover		0.1	3502
Replace carburetor		0.4	3506
Replace intake manifold and/or gasket	one or both	0.6	3511
Replace carburetor float valve or jet, or check float level or seal		0.5	3516
Replace accelerator pump		0.5	3521
Replace enrichener cable		0.4	3523
Replace carburetor diaphragm		0.5	3524
<b>EVAPORATIVE EMISSIONS SYSTEM</b>			
Replace canister		0.1	3527
Replace vapor valve		0.1	3528
Replace any one hose		0.1	3529

**Table 5-11. Drive and Clutch**

ITEM	DESCRIPTION	GKV	LABOR CODE
<b>DRIVE</b>			
Adjust primary chain		0.2	---
Replace primary chain		0.9	4002
Replace engine sprocket		0.9	4003
Replace engine sprocket seal		1.3	4005
Replace primary cover		0.4	4007
Replace primary cover gasket		0.4	4009
Replace primary inspection cover and/or O-ring		0.1	4001

**Table 5-11. Drive and Clutch**

ITEM	DESCRIPTION	GKV	LABOR CODE
Replace inner primary case and/or mainshaft bearing		2.1	4008
Replace shift lever sleeve and/or O-Ring		0.4	4010
<b>CLUTCH</b>			
Adjust clutch		0.2	---
Replace release cable assembly		0.8	4006
Service the clutch	includes disassembly, cleaning, inspection repair, assembly and adjustment	1.3	4011
Replace shift lever		0.1	4012
Replace clutch release bearing and/or push rod		0.4	4016
Replace clutch release mechanism (ball ramp) and/or side cover		0.6	4018

**Table 5-12. Transmission**

ITEM	DESCRIPTION	GKV	LABOR CODE
<b>TRANSMISSION CASE</b>			
Replace transmission case		5.3	4304
Replace transmission complete		4.9	4305
Overhaul transmission	includes disassembly, cleaning, inspection, replacing parts, assembly (transmission case in frame)	4.6	4306
Replace transmission sprocket		2.2	4309
Replace main drive gear oil seal (in transmission case)		2.3	4311
Replace mainshaft oil seal (in main drive gear)		2.2	4316
Replace side door gasket		2.8	4321
Replace shifter drum	includes removal, adjusting cam spacing and end play, and installation	1.4	4331
Replace shifter arm assembly or springs	includes adjusting gear engagement	3.0	4336
Replace transmission top cover and/or gasket	includes battery tray removal	1.2	4341
Replace shifter forks and/or shaft	includes checking gear engagement	0.9	4343
Replace side door bearing	one	3.0	4348
	both	3.1	4351
Replace transmission case countershaft bearing		2.9	4361
Replace main drive gear and/or bearing		3.2	4366
Replace side cover gasket		0.2	4368
Remove oil pan and/or gasket and/or baffle		0.6	4378
Replace oil fill tube and/or cover and/or gasket		0.3	4379
Replace transmission shift shaft seal		2.2	4390

**Table 5-13. Electrical**

ITEM	DESCRIPTION	GKV	LABOR CODE
NOTE: All codes include diagnostic time and replacement time if required. The codes must be used in conjunction with the diagnostic/repair procedures listed in the DYNA Service Manual, Part No. 99481-02 and Electrical Diagnostic Manual, Part No. 99495-02. Charging diagnostics are in the Dyna Police Supplement, Part No. 99483-02SP. Remember to use the same four digit code selected for your labor code as your condition code when filing a warranty claim.			
<b>GENERAL</b>			
Lights and accessories	excluding turn signals	0.3	5016
<b>CHARGING CIRCUIT</b>			
Diagnose charging system	regulator inspection	0.1	5306
Diagnose charging system	regulator bleed	0.5	5307
Diagnose charging system	milliamp draw	0.2	5308
Diagnose charging system	total current draw	0.2	5310
Diagnose charging system	open/grounded stator	1.2	5312
Diagnose charging system	AC output	1.2	5314
Diagnose charging system	regulator failure	0.7	5315
Diagnose charging system	voltage output	0.7	5316
Diagnose charging system	replace rotor	1.1	5319
<b>STARTER CIRCUIT</b>			
Starter inoperative	open/shorted/ground motor	1.0	5817
Starter inoperative	start button	1.0	5818
Starter inoperative	solenoid clicks; poor starter or battery connections	0.2	5822
Starter inoperative	solenoid clicks; poor relay or solenoid connections, or bad relay contacts	0.3	5823
Starter inoperative	solenoid clicks; poor starter or battery connections, ground connections, or bad solenoid contacts	0.2	5824
Starter inoperative	damaged motor	0.9	5825
Starter inoperative	relay clicks; open in relay wiring	0.2	5827
Starter inoperative	nothing clicks; poor relay ground	0.2	5828
Starter inoperative	nothing clicks; short to voltage	0.3	5830
Starter inoperative	nothing clicks; open in wiring to or from starter button	0.3	5831
Starter inoperative	starter relay	0.4	5832
Slow starter crank or starter stalls	poor starter to battery connections, ground connections	0.2	5835
Slow starter crank or starter stalls	binding	0.3	5836
Starter spins	clutch	1.0	5837
Starter inoperative	nothing clicks; TSM	0.3	5838
Replace starter solenoid contacts	includes starter motor removal	1.1	5845
Starter binding		1.1	5850
Replace starter solenoid coil	includes starter motor removal	1.2	5860
<b>INSTRUMENTS</b>			
Replace speedometer	cosmetics only	0.2	6003
Replace tachometer		0.2	6009
Replace instrument housing assembly (tach./speedo)		0.3	6019

**Table 5-13. Electrical**

ITEM	DESCRIPTION	GKV	LABOR CODE
<b>ELECTRONIC SPEEDOMETER</b>			
Diagnose inoperative, inaccurate or erratic speedometer	switch	0.4	6001
Diagnose inoperative, inaccurate or erratic speedometer		0.2	6002
Diagnose inoperative, inaccurate or erratic speedometer	wiring	0.3	6004
Diagnose inoperative, inaccurate or erratic speedometer	replace	0.7	6006
Diagnose inoperative, inaccurate or erratic speedometer	wiring	0.7	6008
Diagnose inoperative, inaccurate or erratic speedometer	sensor	0.4	6010
Diagnose inoperative, inaccurate or erratic speedometer	open	0.7	6013
Diagnose inoperative, inaccurate or erratic speedometer	LED failure	0.3	6014
Diagnose inoperative, inaccurate or erratic speedometer	wires	0.5	6016
Diagnose inoperative, inaccurate or erratic odometer	inoperable	0.2	6020
Diagnose inoperative, inaccurate or erratic speedometer	internal	0.7	6022
Diagnose inoperative, inaccurate or erratic speedometer	power/ground	0.7	6024
Diagnose inoperative, inaccurate or erratic speedometer	debris on sensor	0.7	6029
Replace speedo reset boot		0.1	6043
<b>WIRING</b>			
Replace connector housing		0.1	5022
Replace connector anchor		0.1	5023
Replace main wiring harness		2.3	5026
Replace any single wire	light circuit	0.2	5039
Replace indicator lamp wiring (includes diagnosis)		0.3	5048
<b>SWITCHES</b>			
Replace ignition switch		0.2	5129
Replace rear stoplight switch		0.4	5141
Replace rear circuit breaker		0.2	5145
Replace fuse		0.2	5147
Replace fuse block	one	0.3	5148
	two	0.6	5151
Replace transmission neutral switch	includes diagnosis	0.3	5157
Replace clutch lockout switch		0.5	5168
Replace rear stoplight relay		0.1	5169
Replace left upper handlebar switch		0.5	5171
Replace right upper handlebar switch		0.7	5173
Replace front brake light switch		0.6	5176
Replace left upper handlebar switch housing		0.2	5177
Replace left lower handlebar switch housing		0.4	5178

**Table 5-13. Electrical**

ITEM	DESCRIPTION	GKV	LABOR CODE
Replace right upper handlebar switch housing		0.2	5179
Replace right lower handlebar switch housing		0.7	5180
Replace pursuit/aux switch		0.8	5187
Replace horn/yelp siren switch		0.8	5188
<b>LIGHTS</b>			
Replace headlight bracket	includes adjustment	0.2	5181
Replace headlight	includes diagnosis	0.1	5185
Replace headlight housing	includes adjustment	0.4	5189
Replace indicator bulb or lens	includes diagnosis	0.1	5190
Replace indicator lamp socket assembly	includes diagnosis	0.5	5191
Replace taillight light bulb or lens	includes diagnosis	0.1	5197
Replace taillight assembly or circuit board		0.2	5215
Replace turn signal light assembly	front	1.0	5201
	rear	0.2	5205
Replace passing lamp bulb	includes diagnosis	0.1	5227
Replace pursuit lamp	front	0.4	5230
Replace pursuit lamp bracket		0.6	5232
<b>TURN SIGNALS</b>			
Turn signal error 2A		0.9	6773
Turn signal error 2B		0.6	6777
Turn signal error 2B		0.5	6778
Turn signal error 2B		0.7	6779
Turn signal error 2B		0.6	6780
Turn signal error 2C		0.7	6784
Turn signal error 2C		0.7	6785
Turn signal error 2C		1.2	6786
Turn signal error 3A		0.3	6790
Turn signal error 3A		0.2	6791
Turn signal error 3A		0.1	6792
Turn signal error 3A		0.3	6793
Turn signal error 3B		0.1	6796
Turn signal error 3B		0.3	6797
Turn signal error 3B		0.3	6798
Turn signal error 3B		0.3	6799
Turn signal error 3B		0.3	6800
Turn signal error 3C		0.3	6805
Turn signal error 3C		0.3	6806
Turn signal error 3C		0.2	6807
Turn signal error 3C		0.3	6808
Turn signal error 3D		0.4	6810
Turn signal error 3D		0.5	6811
Turn signal error 3D		0.4	6812
Turn signal error 3D		0.4	6813
Turn signal error 3D		0.3	6814
Turn signal error 3D		0.5	6815
Turn signal error 3D		0.4	6816
Turn signal error 4A		0.2	6820
Turn signal error 4A		0.3	6821

**Table 5-13. Electrical**

ITEM	DESCRIPTION	GKV	LABOR CODE
Turn signal error 4A		0.5	6822
Turn signal error 4A		0.3	6823
Turn signal error 4A		0.6	6824
Ignition enable output high		0.3	6827
Ignition enable output high		0.3	6828
Starter output high		0.3	6840
Starter output high		0.2	6841
Starter output high		0.3	6842
Accelerometer fault		0.2	6845
<b>IGNITION</b>			
Diagnostic check		0.2	7110
Diagnostic check		0.3	7115
Diagnostic check		0.6	7120
Diagnostic check		0.5	7125
Chart A-1	No check engine lamp	0.5	7130
	No check engine lamp	0.5	7135
	No check engine lamp	0.5	7143
	No check engine lamp	0.5	7145
	No check engine lamp	0.5	7146
Chart A-2	Check engine lamp on continuously	0.5	7148
	Check engine lamp on continuously	0.3	7150
	Check engine lamp on continuously	0.5	7155
	Check engine lamp on continuously	0.5	7160
	Check engine lamp on continuously	0.5	7165
Chart A-3	Engine cranks but will not start	0.2	7180
	Engine cranks but will not start	0.3	7185
	Engine cranks but will not start	0.5	7210
	Engine cranks but will not start	0.5	7215
	Engine cranks but will not start	0.5	7225
	Engine cranks but will not start	0.3	7226
	Engine cranks but will not start	0.3	7227
	Engine cranks but will not start	0.3	7228
	Engine cranks but will not start	1.1	7230
	Engine cranks but will not start	0.5	7231
	Engine cranks but will not start	0.5	7235
	Engine cranks but will not start	0.5	7250
	Engine cranks but will not start	1.3	7255
	Chart A-4	No spark, no check engine lamp	0.2
No spark, no check engine lamp		0.8	7285
No spark, no check engine lamp		0.6	7291
No spark, no check engine lamp		1.3	7295
No spark, no check engine lamp		0.4	7305
No spark, no check engine lamp		0.5	7310
Chart C	Misfire	0.2	7520
	Misfire	0.3	7525
	Misfire	0.3	7535
	Misfire	0.8	7540
	Misfire	0.7	7541



**Table 5-13. Electrical**

ITEM	DESCRIPTION	GKV	LABOR CODE
Code-12	Map sensor	0.7	7620
	Map sensor	1.9	7625
	Map sensor	0.9	7630
	Map sensor	0.3	7635
	Map sensor	0.5	7640
	Map sensor	0.6	7641
	Map sensor	0.5	7642
	Map sensor	0.5	7645
	Map sensor	0.8	7650
	Map sensor	0.5	7655
Code-16	Battery voltage test	0.5	7770
	Battery voltage test	0.5	7775
	Battery voltage test	0.9	7776
	Battery voltage test	1.1	7779
	Battery voltage test	0.9	7780
	Battery voltage test	1.5	7781
	Battery voltage test	1.0	7782
	Battery voltage test	1.3	7783
Code-24 & 25	Ignition coil	0.3	7855
	Ignition coil	0.3	7856
	Ignition coil	0.5	7860
	Ignition coil	0.6	7865
	Ignition coil	0.6	7870
	Ignition coil	0.2	7875
Code-35	Tachometer	0.6	7881
	Tachometer	0.5	7882
	Tachometer	0.6	7883
	Tachometer	0.5	7884
	Tachometer	0.5	7885
Code-41	Crank position sensor	0.5	7980
	Crank position sensor	1.0	7981
	Crank position sensor	0.5	7982
	Crank position sensor	1.3	7983
	Crank position sensor	1.2	7984
	Crank position sensor	1.1	7985
	Crank position sensor	0.6	7986
	Crank position sensor	0.6	7987
Crank position sensor	0.6	7988	

**Table 5-13. Electrical**

ITEM	DESCRIPTION	GKV	LABOR CODE
Code-44	Bank angle sensor	0.2	7971
	Bank angle sensor	0.3	7972
	Bank angle sensor	0.6	7973
	Bank angle sensor	0.5	7974
	Bank angle sensor	0.6	7975
	Bank angle sensor	0.3	7976
Codes-52, 53, 54, and 55	Ignition module failure	0.4	7913
<b>BATTERY/HORN</b>			
Replace the battery		0.3	5705
Replace horn and/or bracket		0.1	5765

**Table 5-14. Accessories**

ITEM	DESCRIPTION	GKV	LABOR CODE
Replace windshield		0.3	6203
Replace saddlebag knob	per side	0.2	6249
Replace saddlebag frame	per side	0.3	6250
Replace highway bar		0.3	6353
Replace mirror		0.1	6513

# 2002 DYNA MODELS

**Table 6-1. Service**

ITEM	DESCRIPTION	GHV	GDV	GLV,GJV	GEV	LABOR CODE
<b>NEW</b>						
Set-up and pre-delivery		2.1	2.1	2.1	2.1	---
1,000 mile service		2.0	2.0	2.0	2.0	---
<b>REGULAR</b>						
2,500 mile maintenance		0.5	0.5	0.5	0.5	---
5,000 mile maintenance		2.0	2.0	2.0	2.0	---
7,500 mile maintenance		0.5	0.5	0.5	0.5	---
10,000 mile maintenance		5.0	5.0	5.0	5.0	---

**Table 6-2. Chassis**

ITEM	DESCRIPTION	GHV	GDV	GLV,GJV	GEV	LABOR CODE
<b>DRIVE</b>						
Adjust secondary belt		0.2	0.2	0.2	0.2	---
Replace secondary belt		2.1	2.1	2.1	2.1	2011
Replace rear wheel sprocket		0.8	0.8	0.8	0.8	2021
<b>WHEELS</b>						
Replace tire – includes balancing	front	0.6	0.6	0.6	0.6	2106
	rear	0.6	0.6	0.6	0.6	2111
Replace wheel assembly - includes disc and sprocket exchange and balancing	front	0.8	0.8	0.8	0.8	2113
	rear	0.9	0.9	0.9	0.9	2114
Replace rim, hub or spokes	front (N/A on GLV, GJV only)	2.3	2.3	2.3	2.2	2116
	rear (N/A on GLV, GJV only)	2.3	2.3	2.3	2.3	2121
Replace wheel bearings	front	0.5	0.5	0.5	0.5	2136
	rear	0.6	0.6	0.6	0.6	2141
True spoked wheel	N/A on GLV, GJV only	0.4	0.4	0.4	0.4	2156
<b>HANDLEBARS</b>						
Replace handlebars		0.5	0.5	0.5	0.5	2206
Replace clutch hand lever		0.2	0.2	0.2	0.2	2221
Replace clutch hand lever bracket		0.2	0.2	0.2	0.2	2226
Replace throttle control		0.4	0.4	0.4	0.4	2231
Replace and adjust throttle control cables	one or both	0.6	0.6	0.6	0.6	2241
Replace both rubber handlebar mounts		0.5	0.5	0.5	0.5	2246
Replace rubber handlebar grip		0.2	0.2	0.2	0.2	2251
Replace handlebar riser	one or both	0.4	0.4	0.4	0.4	2253
Replace handlebar clamp	one or both	0.1	0.1	0.1	0.1	2254

All times listed in hours.

### V.I.N. CODES

GHV	SUPER GLIDE	GJV	FXDX DYNA SUPER GLIDE SPORT
GDV	FXDL DYNA LOW RIDER	GEV	FXDWG DYNA WIDE GLIDE
GLV	FXDXT DYNA TOURING		

**Table 6-2. Chassis**

ITEM	DESCRIPTION	GHV	GDV	GLV,GJV	GEV	LABOR CODE
<b>FRAME/SWING ARM/FRONT FORK</b>						
Replace frame	includes removal and installation of all accessories and motorcycle components	10.0	10.0	10.0	10.0	2306
Replace foot pegs		0.1	0.1	0.1	0.1	2307
Replace foot peg mounts (to frame)		0.2	0.2	0.2	0.2	2308
Replace front fork assembly		2.2	2.2	2.2	2.3	2311
Replace lower fork bracket and stem		2.3	2.3	2.4	2.4	2316
Replace steering head cups and bearings, including bearing adjustment		2.1	2.1	2.2	2.1	2321
Replace upper fork bracket		0.7	0.7	1.0	0.7	2326
Replace fork lock		0.8	0.8	1.0	0.8	2330
Adjust steering head bearings		0.4	0.4	0.4	0.4	---
Change front fork oil		0.5	0.5	0.5	0.5	---
Service or replace fork slider and/or seal – includes removal, disassembly, cleaning, inspection, replacing parts, servicing damper tube, replacing bushings, assembly and installation	one side	0.7	0.7	0.7	0.7	2341
	both sides	1.1	1.1	1.1	1.1	2342
Replace fork side	one side	0.5	0.5	0.5	0.5	2346
	both sides	0.8	0.8	0.8	0.8	2351
Replace fork tube	one side	0.6	0.6	0.6	0.6	2356
	both sides	0.9	0.9	0.9	0.9	2361
Replace rear swing arm and/or bushings		2.0	2.0	2.0	2.0	2366
Replace rear fork pivot shaft		1.0	1.0	1.0	1.0	2368
Replace rear shock absorber assembly	one side	0.2	0.2	0.2	0.2	2371
	both sides	0.4	0.4	0.4	0.4	2376
Replace rear shock absorber component(s)	one side	0.3	0.3	0.3	0.3	2381
	both sides	0.6	0.6	0.6	0.6	2386
Replace jiffy stand	spring and/or stand	0.3	0.3	0.3	0.3	2396
	rubber bumper	0.1	0.1	0.1	0.1	2399
Replace motor rubber mount	rear	0.5	0.5	0.5	0.5	2395
	front	0.2	0.2	0.2	0.2	2398
<b>BRAKES</b>						
Replace hydraulic brake line – includes filling/bleeding brakes	front	0.4	0.4	0.4	0.4	2406
Replace rear master cylinder reservoir hose and/or master cylinder fitting		0.4	0.4	0.4	0.4	2414
Replace brake pads	front – each caliper	0.1	0.1	0.1	0.1	2416
	rear	0.2	0.2	0.2	0.2	2421
Replace brake caliper – includes filling/bleeding brakes	front	0.4	0.4	0.4	0.4	2426
	rear	0.6	0.6	0.6	0.6	2431
Replace brake disc	front – one side	0.3	0.3	0.3	0.3	2436
	front – both sides	---	---	0.4	---	2437
	rear	0.8	0.8	0.8	0.8	2441
Bleed brake caliper	one or two front calipers or rear caliper	0.2	0.2	0.2	0.2	2446

**Table 6-2. Chassis**

ITEM	DESCRIPTION	GHV	GDV	GLV,GJV	GEV	LABOR CODE
Overhaul brake caliper – includes filling/bleeding brakes	front – each caliper	0.6	0.6	0.6	0.6	2451
	rear	0.8	0.8	0.8	0.8	2456
Replace master cylinder assembly – includes filling/bleeding brakes	front	0.4	0.4	0.4	0.4	2461
	rear	0.5	0.5	0.5	0.5	2466
Rebuild master cylinder assembly – includes filling/bleeding brakes	front	0.6	0.6	0.6	0.6	2471
	rear	0.7	0.7	0.7	0.7	2476
Replace rear brake pedal		0.3	0.3	0.3	0.1	2492
Replace front brake lever		0.1	0.1	0.1	0.1	2494
<b>SEATS/FENDERS/TANKS</b>						
Replace seat	front	0.1	0.1	0.1	0.1	2506
Replace fender	front	0.3	0.3	0.3	0.3	2526
Replace fender	rear (includes replacing wire conduit)	1.1	1.1	1.1	1.1	2531
Replace wire conduit		0.2	0.2	0.2	0.2	2533
Replace rear fender chrome support cover	one only	0.4	0.3	0.4	0.3	2536
Replace fuel tank assembly		0.8	0.8	0.8	0.8	2541
Replace fuel tank valve		0.2	0.2	0.2	0.2	2561
Replace fuel tank gauge and/or console		0.2	0.1	0.2	0.3	2563
Replace fuel tank gauge sending unit		0.4	0.3	0.4	0.3	2564
Replace any hose		0.3	0.3	0.3	0.3	2576
Replace oil filter		0.1	0.1	0.1	0.1	2582
Replace oil filter bracket		0.2	0.2	0.2	0.2	2584
Replace license plate holder		0.2	0.2	0.2	0.2	2590
Belt Guards						
Replace debris deflector		0.2	0.2	0.2	0.2	2616
Replace belt guard		0.2	0.2	0.2	0.2	2620
<b>EXHAUST SYSTEM</b>						
Replace complete exhaust system and/or gaskets		0.6	0.6	0.6	0.6	2626
Replace exhaust pipe	front	0.3	0.3	0.3	0.3	2631
	rear	0.3	0.3	0.3	0.3	2636
Replace any muffler		0.2	0.2	0.2	0.2	2646
Replace any exhaust shield		0.1	0.1	0.1	0.1	2661
Replace muffler support		0.2	0.2	0.2	0.2	2666

**Table 6-3. Engine**

ITEM	DESCRIPTION	GHV	GDV	GLV,GJV	GEV	LABOR CODE
<b>GENERAL</b>						
Remove and install engine	California vehicles only	4.1	4.1	4.1	4.1	3006
Remove and install engine		4.0	4.0	4.0	4.0	3006
Replace and adjust stabilizer	top	0.7	0.7	0.7	0.7	3005
Remove and replace oil pan for inspection/contamination		0.7	0.7	0.7	0.7	3009
<b>CYLINDER HEAD</b>						
Recondition cylinder head – includes removal of head and gasket, remove carbon, service valve guides, grind valves and seats, test springs and install head and gaskets.	front head	3.5	3.5	3.5	3.5	3101
	rear head	3.5	3.5	3.5	3.5	3103
	both heads	4.1	4.1	4.1	4.1	3104
Replace cylinder head	one head	2.2	2.2	2.2	2.2	3106
	both heads	2.8	2.8	2.8	2.8	3108
Replace valve seal or spring after cylinder head removal	one seal or spring (intake or exhaust)	0.1	0.1	0.1	0.1	3131
	both seals or springs (intake or exhaust)	0.2	0.2	0.2	0.2	3132
Replace cylinder head gasket/o-ring	front cylinder	1.6	1.6	1.6	1.6	3140
	rear cylinder	1.6	1.6	1.6	1.6	3142
	both cylinders	2.0	2.0	2.0	2.0	3143
Replace rocker arm covers and/or gaskets	front cylinder	0.7	0.7	0.7	0.7	3144
	rear cylinder	0.7	0.7	0.7	0.7	3145
	both cylinders	0.8	0.8	0.8	0.8	3148
Recondition rocker arms after heads are removed	one head	0.7	0.7	0.7	0.7	3149
	both heads	1.4	1.4	1.4	1.4	3150
Replace lower rocker arm cover/gasket, or rocker arms and /or shafts/rocker arm support	front cylinder	1.1	1.1	1.1	1.1	3147
	rear cylinder	1.1	1.1	1.1	1.1	3152
	both cylinders	1.3	1.3	1.3	1.3	3153
Replace cylinder o-ring/drain o-ring	one cylinder	1.8	1.8	1.8	1.8	3161
	rear cylinder	1.8	1.8	1.8	1.8	3163
	both cylinders	2.2	2.2	2.2	2.2	3168
Replace crankcase umbrella valve	one	1.0	1.0	1.0	1.0	3172
	both	1.1	1.1	1.1	1.1	3174
<b>CYLINDER AND PISTON</b>						
Recondition TOP END - includes disassembly, replacement of piston and sizing cylinder (.005" pistons), replacing piston rings and all items listed under RECONDITION CYLINDER HEAD and assembly.	one piston and cylinder	4.5	4.5	4.5	4.5	3202
	both pistons and cylinders	5.1	5.1	5.1	5.1	3203
Recondition TOP END - includes disassembly, replacement of piston and bore and hone, resizing cylinder (.010" over-size or above), replacing piston rings and all items listed under RECONDITION CYLINDER HEAD and assembly.	one piston and cylinder	4.9	4.9	4.9	4.9	3211
	both pistons and cylinders	5.5	5.5	5.5	5.5	3212
Recondition TOP END – includes disassembly, deglazing cylinder and replacing rings, or replacing cylinder and piston, all items listed under RECONDITIONING CYLINDER HEAD and assembly.	one piston and cylinder	4.3	4.3	4.3	4.3	3207
	both pistons and cylinders	4.9	4.9	4.9	4.9	3208

**Table 6-3. Engine**

ITEM	DESCRIPTION	GHV	GDV	GLV,GJV	GEV	LABOR CODE
Replace piston rings – includes deglazing cylinder	one cylinder	2.1	2.1	2.1	2.1	3206
	both cylinders	2.7	2.7	2.7	2.7	3216
Replace piston and piston rings – includes removal of cylinder head and cylinder, fitting new piston with rings, resizing cylinder and assembly	one cylinder	2.7	2.7	2.7	2.7	3221
	both cylinders	3.9	3.9	3.9	3.9	3231
Replace cylinder and piston	one cylinder	2.0	2.0	2.0	2.0	3236
	both cylinders	2.5	2.5	2.5	2.5	3246
Replace upper connecting rod bushing during upper end repair		0.4	0.4	0.4	0.4	3251
Replace one cylinder stud	cylinder removed	0.1	0.1	0.1	0.1	3253
Replace all eight cylinder studs	cylinders removed	0.5	0.5	0.5	0.5	3254
<b>CAM COVER</b>						
Replace lifter cover/gasket or lifter/and, or anti-rotation pin	one	1.3	1.3	1.3	1.3	3307
	both	1.5	1.5	1.5	1.5	3310
Replace push rod, push rod cover and/or O-ring or quad seal	one or two same cylinder	1.3	1.3	1.3	1.3	3317
	one each cylinder	1.5	1.5	1.5	1.5	3318
Replace cam cover and/or gasket		0.9	0.9	0.9	0.9	3325
Replace primary cam chain, sprockets and/or fastener		1.0	1.0	1.0	1.0	3327
Replace primary cam chain tensioner		1.0	1.0	1.0	1.0	3328
Replace cam support plate O-rings		2.1	2.1	2.1	2.1	3335
Replace cam support plate		2.1	2.1	2.1	2.1	3337
Replace cam support bearing/cams/secondary cam chain/tensioner		2.3	2.3	2.3	2.3	3338
Replace oil pump and/or O-rings		1.9	1.9	1.9	1.9	3341
Replace cam bearing crankcase	one bearing	2.1	2.1	2.1	2.1	3342
	two bearings	2.2	2.2	2.2	2.2	3343
By pass valve inspection		2.0	2.0	2.0	2.0	3354
<b>CRANKCASE</b>						
Replace crankcases	California vehicles only – includes remove and install engine	7.2	7.2	7.2	7.2	3406
Replace crankcases	includes remove and install engine	7.1	7.1	7.1	7.1	3406
Seal crankcase only		6.5	6.5	6.5	6.5	3407
Replace flywheels	includes remove and install engine	6.6	6.6	6.6	6.6	3411
Replace right side main bearing	California vehicles only	6.1	6.1	6.1	6.1	3412
Replace right side main bearing		6.0	6.0	6.0	6.0	3412
Piston jet/O-ring	one	2.0	2.0	2.0	2.0	3413
	both	2.4	2.4	2.4	2.4	3414
Filter housing and or O-rings		0.2	0.2	0.2	0.2	3415
Check flywheel trueness before assembly or after removal		0.1	0.1	0.1	0.1	3420

**Table 6-3. Engine**

ITEM	DESCRIPTION	GHV	GDV	GLV,GJV	GEV	LABOR CODE
True flywheels after removal	includes piston removal and reinstallation	0.5	0.5	0.5	0.5	3421
Recondition cylinder heads – head removed (for non-related repairs)	one head	1.0	1.0	1.0	1.0	3425
	both heads	2.0	2.0	2.0	2.0	3426
Replace piston rings	cylinders removed (for non-related repairs – deglaze only)	0.3	0.3	0.3	0.3	3428
Replace pistons	cylinders removed (for non-related repairs) – includes resizing cylinders	1.4	1.4	1.4	1.4	3430
<b>FUEL SYSTEM</b>						
Replace air cleaner backing plate		0.1	0.1	0.1	0.1	3501
Replace air cleaner cover		0.1	0.1	0.1	0.1	3502
Replace carburetor		0.4	0.4	0.4	0.4	3506
Replace intake manifold and/or gasket	one or both	0.6	0.6	0.6	0.6	3511
Replace carburetor float valve or jet, or check float level or seal		0.5	0.5	0.5	0.5	3516
Replace accelerator pump		0.5	0.5	0.5	0.5	3521
Replace enrichener cable		0.4	0.4	0.4	0.4	3523
Replace carburetor diaphragm		0.5	0.5	0.5	0.5	3524
<b>EVAPORATIVE EMISSIONS SYSTEM</b>						
Replace canister		0.1	0.1	0.1	0.1	3527
Replace vapor valve		0.1	0.1	0.1	0.1	3528
Replace any one hose		0.1	0.1	0.1	0.1	3529

**Table 6-4. Drive and Clutch**

ITEM	DESCRIPTION	GHV	GDV	GLV,GJV	GEV	LABOR CODE
<b>DRIVE</b>						
Adjust primary chain		0.2	0.2	0.2	0.2	---
Replace primary chain		0.9	0.9	0.9	0.9	4002
Replace engine sprocket		0.9	0.9	0.9	0.9	4003
Replace engine sprocket seal		1.3	1.3	1.3	1.3	4005
Replace primary cover		0.4	0.4	0.4	0.4	4007
Replace primary cover gasket		0.4	0.4	0.4	0.4	4009
Replace primary inspection cover and/or O-ring		0.1	0.1	0.1	0.1	4001
Replace inner primary case and/or mainshaft bearing		2.1	2.1	2.1	2.1	4008
Replace shift lever sleeve and/or O-Ring		0.4	0.4	0.4	---	4010
<b>CLUTCH</b>						
Adjust clutch		0.2	0.2	0.2	0.2	---
Replace release cable assembly		0.8	0.8	0.8	0.8	4006
Service the clutch	includes disassembly, cleaning, inspection repair, assembly and adjustment	1.3	1.3	1.3	1.3	4011
Replace shift lever		0.1	0.1	0.1	0.1	4012
Replace clutch release bearing and/or push rod		0.4	0.4	0.4	0.4	4016
Replace clutch release mechanism (ball ramp) and/or side cover		0.6	0.6	0.6	0.6	4018



**Table 6-5. Transmission**

ITEM	DESCRIPTION	GHV	GDV	GLV,GJV	GEV	LABOR CODE
<b>TRANSMISSION CASE</b>						
Replace transmission case		5.3	5.3	5.3	5.3	4304
Replace transmission complete		4.9	4.9	4.9	4.9	4305
Overhaul transmission	includes disassembly, cleaning, inspection, replacing parts, assembly (transmission case in frame)	4.6	4.6	4.6	4.6	4306
Replace transmission sprocket		2.2	2.2	2.2	2.2	4309
Replace main drive gear oil seal (in transmission case)		2.3	2.3	2.3	2.3	4311
Replace mainshaft oil seal (in main drive gear)		2.2	2.2	2.2	2.2	4316
Replace side door gasket		2.8	2.8	2.8	2.8	4321
Replace shifter drum	includes removal, adjusting cam spacing and end play, and installation	1.4	1.4	1.4	1.4	4331
Replace shifter arm assembly or springs	includes adjusting gear engagement	3.0	3.0	3.0	3.0	4336
Replace transmission top cover and/or gasket	includes battery tray removal	1.2	1.2	1.2	1.2	4341
Replace shifter forks and/or shaft	includes checking gear engagement	0.9	0.9	0.9	0.9	4343
Replace side door bearing	one	3.0	3.0	3.0	3.0	4348
	both	3.1	3.1	3.1	3.1	4351
Replace transmission case countershaft bearing		2.9	2.9	2.9	2.9	4361
Replace main drive gear and/or bearing		3.2	3.2	3.2	3.2	4366
Replace side cover gasket		0.2	0.2	0.2	0.2	4368
Remove oil pan and/or gasket and/or baffle		0.6	0.6	0.6	0.6	4378
Replace oil fill tube and/or cover and/or gasket		0.3	0.3	0.3	0.3	4379
Perform shifter pawl adjustment		0.1	0.1	0.1	0.1	4381
Replace transmission shift shaft seal		2.2	2.2	2.2	2.2	4390

**Table 6-6. Electrical**

ITEM	DESCRIPTION	GHV	GDV	GLV,GJV	GEV	LABOR CODE
<b>GENERAL</b>						
Lights and accessories	excluding turn signals	0.3	0.3	0.3	0.3	5016
<b>CHARGING CIRCUIT</b>						
Diagnose charging system	regulator inspection	0.1	0.1	0.1	0.1	5306
Diagnose charging system	regulator bleed	0.5	0.5	0.5	0.5	5307
Diagnose charging system	milliamp draw	0.2	0.2	0.2	0.2	5308
Diagnose charging system	total current draw	0.2	0.2	0.2	0.2	5310
Diagnose charging system	open/grounded stator	1.2	1.2	1.2	1.2	5312

**Table 6-6. Electrical**

ITEM	DESCRIPTION	GHV	GDV	GLV,GJV	GEV	LABOR CODE
Diagnose charging system	AC output	1.2	1.2	1.2	1.2	5314
Diagnose charging system	regulator failure	0.7	0.7	0.7	0.7	5315
Diagnose charging system	voltage output	0.7	0.7	0.7	0.7	5316
Diagnose charging system	replace rotor	1.1	1.1	1.1	1.1	5319
<b>STARTER CIRCUIT</b>						
Starter inoperative	open/shorted/ground motor	1.0	1.0	1.0	1.0	5817
Starter inoperative	start button	1.0	1.0	1.0	1.0	5818
Starter inoperative	solenoid clicks; poor starter or battery connections	0.2	0.2	0.2	0.2	5822
Starter inoperative	solenoid clicks; poor relay or solenoid connections, or bad relay contacts	0.3	0.3	0.3	0.3	5823
Starter inoperative	solenoid clicks; poor starter or battery connections, ground connections, or bad solenoid contacts	0.2	0.2	0.2	0.2	5824
Starter inoperative	damaged motor	0.9	0.9	0.9	0.9	5825
Starter inoperative	relay clicks; open in relay wiring	0.2	0.2	0.2	0.2	5827
<b>INSTRUMENTS</b>						
Replace speedometer	cosmetics only	0.1	0.1	0.2	0.1	6003
Replace tachometer		---	0.1	0.2	---	6009
Replace instrument housing assembly (tach./speedo)		0.2	0.2	0.3	0.2	6019
<b>ELECTRONIC SPEEDOMETER</b>						
Diagnose inoperative, inaccurate or erratic speedometer	switch	0.3	0.3	0.4	0.3	6001
Diagnose inoperative, inaccurate or erratic speedometer		0.1	0.1	0.2	0.1	6002
Diagnose inoperative, inaccurate or erratic speedometer	wiring	0.3	0.3	0.3	0.3	6004
Diagnose inoperative, inaccurate or erratic speedometer	replace	0.6	0.6	0.7	0.6	6006
Diagnose inoperative, inaccurate or erratic speedometer	wiring	0.7	0.7	0.7	0.7	6008
Diagnose inoperative, inaccurate or erratic speedometer	sensor	0.4	0.4	0.4	0.4	6010
Diagnose inoperative, inaccurate or erratic speedometer	open	0.7	0.7	0.7	0.7	6013
Diagnose inoperative, inaccurate or erratic speedometer	LED failure	0.2	0.2	0.3	0.2	6014
Diagnose inoperative, inaccurate or erratic speedometer	wires	0.5	0.5	0.5	0.5	6016
Diagnose inoperative, inaccurate or erratic odometer	inoperable	0.1	0.1	0.2	0.1	6020
Diagnose inoperative, inaccurate or erratic speedometer	internal	0.6	0.6	0.7	0.6	6022
Diagnose inoperative, inaccurate or erratic speedometer	power/ground	0.6	0.6	0.7	0.6	6024
Diagnose inoperative, inaccurate or erratic speedometer	debris on sensor	0.6	0.6	0.7	0.6	6029
Diagnose inoperative, inaccurate or erratic speedometer	grounded circuit	0.3	0.3	0.3	0.3	6031

**Table 6-6. Electrical**

ITEM	DESCRIPTION	GHV	GDV	GLV,GJV	GEV	LABOR CODE
Diagnose inoperative, inaccurate or erratic speedometer	fuse	0.1	0.1	0.1	0.1	6032
Replace speedo reset boot		0.1	0.1	0.1	0.1	6043
<b>WIRING</b>						
Replace connector housing		0.1	0.1	0.1	0.1	5022
Replace connector anchor		0.1	0.1	0.1	0.1	5023
Replace main wiring harness		2.3	2.3	2.3	2.4	5026
Replace any single wire	light circuit	0.2	0.2	0.2	0.2	5039
Replace speedometer wiring harness		0.8	0.8	0.9	---	5046
Replace indicator lamp wiring (includes diagnosis)		0.3	0.3	0.3	0.3	5048
<b>SWITCHES</b>						
Replace ignition switch		0.3	0.3	0.3	0.2	5129
Replace left upper handlebar switch		0.5	0.5	0.5	0.5	5171
Replace right upper handlebar switch		0.7	0.7	0.7	0.7	5173
Replace front brake light switch		0.6	0.6	0.6	0.6	5176
Replace left upper handlebar switch housing		0.2	0.2	0.2	0.2	5177
Replace left lower handlebar switch housing		0.2	0.2	0.2	0.2	5178
Replace right upper handlebar switch housing		0.2	0.2	0.2	0.2	5179
Replace right lower handlebar switch housing		0.4	0.4	0.4	0.4	5180
Replace rear stoplight switch		0.4	0.2	0.4	0.2	5141
Replace circuit breaker		0.2	0.2	0.2	0.2	5145
Replace circuit breaker block		0.4	0.4	0.4	0.4	5148
Replace transmission neutral switch	includes diagnosis	0.3	0.3	0.3	0.3	5157
Replace oil pressure switch	includes diagnosis	0.3	0.3	0.3	0.3	5161
<b>LIGHTS</b>						
Replace headlight bracket	includes adjustment	0.3	0.2	0.3	0.2	5181
Replace headlight	includes diagnosis	0.1	0.1	0.1	0.1	5185
Replace headlight housing	includes adjustment	0.4	0.4	0.5	0.4	5189
Replace indicator bulb or lens	includes diagnosis	0.1	0.1	0.1	0.1	5190
Replace indicator lamp socket assembly	includes diagnosis	0.5	0.5	0.6	0.2	5191
Replace taillight light bulb or lens	includes diagnosis	0.1	0.1	0.1	0.1	5197
Replace taillight assembly or circuit board		0.2	0.2	0.2	0.2	5215
Replace turn signal light assembly	front	0.7	0.7	0.7	0.7	5201
	rear	0.3	0.3	0.3	0.3	5205
<b>TURN SIGNALS/SECURITY SYSTEM</b>						
No security lamp		0.3	0.3	0.3	0.3	6735
No security lamp		0.3	0.3	0.3	0.3	6736
No security lamp		0.3	0.3	0.3	0.3	6737
No security lamp		0.4	0.4	0.4	0.4	6738
No security lamp		0.1	0.1	0.1	0.1	6739
No security lamp		0.3	0.3	0.3	0.3	6740
No security lamp		0.4	0.4	0.4	0.4	6741

**Table 6-6. Electrical**

ITEM	DESCRIPTION	GHV	GDV	GLV,GJV	GEV	LABOR CODE
No security lamp		0.2	0.2	0.2	0.2	6742
No security lamp		0.3	0.3	0.3	0.3	6743
No security lamp		0.2	0.2	0.2	0.2	6744
No security lamp		0.3	0.3	0.3	0.3	6745
Security lamp on continuously		0.2	0.2	0.2	0.2	6750
Security lamp on continuously		0.2	0.2	0.2	0.2	6751
Security lamp on continuously		0.3	0.3	0.3	0.3	6752
Fob signal weak		0.1	0.1	0.1	0.1	6755
Fob signal weak		0.1	0.1	0.1	0.1	6756
Fob signal weak		0.2	0.2	0.2	0.2	6757
Turn signal error 2A		0.9	0.9	0.9	0.9	6773
Turn signal error 2B		0.6	0.6	0.6	0.6	6777
Turn signal error 2B		0.5	0.5	0.5	0.5	6778
Turn signal error 2B		0.7	0.7	0.7	0.7	6779
Turn signal error 2B		0.6	0.6	0.6	0.6	6780
Turn signal error 2C		0.7	0.7	0.7	0.7	6784
Turn signal error 2C		0.7	0.7	0.7	0.7	6785
Turn signal error 2C		1.2	1.2	1.2	1.2	6786
Turn signal error 3A		0.3	0.3	0.3	0.3	6790
Turn signal error 3A		0.2	0.2	0.2	0.2	6791
Turn signal error 3A		0.1	0.1	0.1	0.1	6792
Turn signal error 3A		0.3	0.3	0.3	0.3	6793
Turn signal error 3B		0.1	0.1	0.1	0.1	6796
Turn signal error 3B		0.3	0.3	0.3	0.3	6797
Turn signal error 3B		0.3	0.3	0.3	0.3	6798
Turn signal error 3B		0.3	0.3	0.3	0.3	6799
Turn signal error 3B		0.3	0.3	0.3	0.3	6800
Turn signal error 3C		0.3	0.3	0.3	0.3	6805
Turn signal error 3C		0.3	0.3	0.3	0.3	6806
Turn signal error 3C		0.2	0.2	0.2	0.2	6807
Turn signal error 3C		0.3	0.3	0.3	0.3	6808
Turn signal error 3D		0.6	0.6	0.6	0.6	6810
Turn signal error 3D		0.7	0.7	0.7	0.7	6811
Turn signal error 3D		0.6	0.6	0.6	0.6	6812
Turn signal error 3D		0.6	0.6	0.6	0.6	6813
Turn signal error 3D		0.5	0.5	0.5	0.5	6814
Turn signal error 3D		0.7	0.7	0.7	0.7	6815
Turn signal error 3D		0.6	0.6	0.6	0.6	6816
Turn signal error 4A		0.2	0.2	0.2	0.2	6820
Turn signal error 4A		0.3	0.3	0.3	0.3	6821
Turn signal error 4A		0.5	0.5	0.5	0.5	6822
Turn signal error 4A		0.3	0.3	0.3	0.3	6823
Turn signal error 4A		0.6	0.6	0.6	0.6	6824
Ignition enable output high		0.3	0.3	0.3	0.3	6827
Ignition enable output high		0.3	0.3	0.3	0.3	6828
Alarm output		0.3	0.3	0.3	0.3	6830
Alarm output		0.3	0.3	0.3	0.3	6831

**Table 6-6. Electrical**

ITEM	DESCRIPTION	GHV	GDV	GLV,GJV	GEV	LABOR CODE
Alarm output		0.3	0.3	0.3	0.3	6832
Alarm output		0.4	0.4	0.4	0.4	6833
Alarm output		0.3	0.3	0.3	0.3	6834
Alarm output		0.3	0.3	0.3	0.3	6835
Starter output high		0.3	0.3	0.3	0.3	6840
Starter output high		0.2	0.2	0.2	0.2	6841
Starter output high		0.3	0.3	0.3	0.3	6842
Accelerometer fault		0.2	0.2	0.2	0.2	6845
<b>ENGINE MANAGEMENT</b>						
NOTE: All codes include diagnostic time and replacement time if required. The codes must be used in conjunction with the diagnostic/repair procedures listed in the Dyna Service Manual, Part No.99481-02 and Electrical Diagnostic Manual, Part No. 99496-02. Remember to use the same four digit code selected for your labor code as your condition code when filing a warranty claim.						
Diagnostic check						
Diagnostic check		0.2	0.2	0.2	0.2	7110
Diagnostic check		0.3	0.3	0.3	0.3	7115
Diagnostic check		0.6	0.6	0.6	0.6	7120
Diagnostic check		0.5	0.5	0.5	0.5	7125
Chart A-1	No check engine lamp	0.5	0.5	0.5	0.5	7130
	No check engine lamp	0.5	0.5	0.5	0.5	7135
	No check engine lamp	0.5	0.5	0.5	0.5	7143
	No check engine lamp	0.5	0.5	0.5	0.5	7145
	No check engine lamp	0.5	0.5	0.5	0.5	7146
Chart A-2	Check engine lamp on continuously	0.5	0.5	0.5	0.5	7148
	Check engine lamp on continuously	0.3	0.3	0.3	0.3	7150
	Check engine lamp on continuously	0.5	0.5	0.5	0.5	7155
	Check engine lamp on continuously	0.5	0.5	0.5	0.5	7160
	Check engine lamp on continuously	0.5	0.5	0.5	0.5	7165
Chart A-3	Engine cranks but will not start	0.2	0.2	0.2	0.2	7180
	Engine cranks but will not start	0.3	0.3	0.3	0.3	7185
	Engine cranks but will not start	0.5	0.5	0.5	0.5	7210
	Engine cranks but will not start	0.5	0.5	0.5	0.5	7215
	Engine cranks but will not start	0.5	0.5	0.5	0.5	7225
	Engine cranks but will not start	0.3	0.3	0.3	0.3	7226
	Engine cranks but will not start	0.3	0.3	0.3	0.3	7227
	Engine cranks but will not start	0.3	0.3	0.3	0.3	7228
	Engine cranks but will not start	1.1	1.1	1.1	1.1	7230
	Engine cranks but will not start	0.5	0.5	0.5	0.5	7231
	Engine cranks but will not start	0.5	0.5	0.5	0.5	7235
	Engine cranks but will not start	0.5	0.5	0.5	0.5	7250
	Engine cranks but will not start	1.3	1.3	1.3	1.3	7255
	Chart A-4	No spark, no check engine lamp	0.2	0.2	0.2	0.2
No spark, no check engine lamp		0.8	0.8	0.8	0.8	7285
No spark, no check engine lamp		0.6	0.6	0.6	0.6	7291
No spark, no check engine lamp		1.3	1.3	1.3	1.3	7295
No spark, no check engine lamp		0.4	0.4	0.4	0.4	7305
No spark, no check engine lamp		0.5	0.5	0.5	0.5	7310

**Table 6-6. Electrical**

ITEM	DESCRIPTION	GHV	GDV	GLV,GJV	GEV	LABOR CODE
Chart C	Misfire	0.2	0.2	0.2	0.2	7520
	Misfire	0.3	0.3	0.3	0.3	7525
	Misfire	0.3	0.3	0.3	0.3	7535
	Misfire	0.8	0.8	0.8	0.8	7540
	Misfire	0.7	0.7	0.7	0.7	7541
Code-12	Map sensor	0.7	0.7	0.7	0.7	7620
	Map sensor	1.9	1.9	1.9	1.9	7625
	Map sensor	0.9	0.9	0.9	0.9	7630
	Map sensor	0.3	0.3	0.3	0.3	7635
	Map sensor	0.5	0.5	0.5	0.5	7640
	Map sensor	0.6	0.6	0.6	0.6	7641
	Map sensor	0.5	0.5	0.5	0.5	7642
	Map sensor	0.5	0.5	0.5	0.5	7645
	Map sensor	0.8	0.8	0.8	0.8	7650
	Map sensor	0.5	0.5	0.5	0.5	7655
Code-16	Battery voltage test	0.5	0.5	0.5	0.5	7770
	Battery voltage test	0.5	0.5	0.5	0.5	7775
	Battery voltage test	0.9	0.9	0.9	0.9	7776
	Battery voltage test	1.1	1.1	1.1	1.1	7779
	Battery voltage test	0.9	0.9	0.9	0.9	7780
	Battery voltage test	1.5	1.5	1.5	1.5	7781
	Battery voltage test	1.0	1.0	1.0	1.0	7782
	Battery voltage test	1.3	1.3	1.3	1.2	7783
	Battery voltage test	1.2	1.2	1.2	1.2	7784
Code-24 & 25	Ignition coil	0.3	0.3	0.3	0.3	7855
	Ignition coil	0.3	0.3	0.3	0.3	7856
	Ignition coil	0.5	0.5	0.5	0.5	7860
	Ignition coil	0.6	0.6	0.6	0.6	7865
	Ignition coil	0.6	0.6	0.6	0.6	7870
	Ignition coil	0.2	0.2	0.2	0.2	7875
Code-35	Tachometer	---	0.6	0.6	---	7881
	Tachometer	---	0.5	0.5	---	7882
	Tachometer	---	0.5	0.6	---	7883
	Tachometer	---	0.5	0.5	---	7884
	Tachometer	---	0.5	0.5	---	7885
Code-41	Crank position sensor	0.5	0.5	0.5	0.5	7980
	Crank position sensor	1.0	1.0	1.0	1.0	7981
	Crank position sensor	0.5	0.5	0.5	0.5	7982
	Crank position sensor	1.3	1.3	1.3	1.3	7983
	Crank position sensor	1.2	1.2	1.2	1.2	7984
	Crank position sensor	1.1	1.1	1.1	1.1	7985
	Crank position sensor	0.6	0.6	0.6	0.6	7986
	Crank position sensor	0.6	0.6	0.6	0.6	7987
	Crank position sensor	0.6	0.6	0.6	0.6	7988

**Table 6-6. Electrical**

ITEM	DESCRIPTION	GHV	GDV	GLV,GJV	GEV	LABOR CODE
Code-44	Bank angle sensor	0.2	0.2	0.2	0.2	7971
	Bank angle sensor	0.3	0.3	0.3	0.3	7972
	Bank angle sensor	0.6	0.6	0.6	0.6	7973
	Bank angle sensor	0.5	0.5	0.5	0.5	7974
	Bank angle sensor	0.6	0.6	0.6	0.6	7975
	Bank angle sensor	0.3	0.3	0.3	0.3	7976
Codes-52, 53, 54, and 55	Ignition module failure	0.4	0.4	0.4	0.4	7913
<b>BATTERY/HORN</b>						
	Replace the battery	0.3	0.3	0.3	0.3	5705
	Replace horn and/or bracket	0.1	0.1	0.1	0.1	5765

**Table 6-7. Accessories**

ITEM	DESCRIPTION	GHV	GDV	GLV,GJV	GEV	LABOR CODE
Replace windshield	GLV only	---	---	0.1	---	6203
Replace w/s adjustment assembly	GLV only	---	---	0.4	---	6211
Replace w/s gearbox assembly	GLV only	---	---	0.7	---	6212
Replace saddlebag knob	per side GLV only	---	---	0.1	---	6249
Replace saddlebag frame	per side GLV only	---	---	0.2	---	6250
Replace plastic bushing in saddlebag frame	1 bag GLV only	---	---	0.1	---	6251
Replace fairing	GLV only	---	---	0.2	---	6255
Replace electrical and/or coil cover		---	0.1	---	0.1	6263
Replace fairing mounts	GLV only	---	---	0.6	---	6279
Replace sissy bar		---	---	---	0.4	6511
Replace mirror		0.1	0.1	0.1	0.1	6513
Replace backrest		---	---	---	0.2	6515

# NOTES

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# 2002 ROAD KING MODELS

**Table 7-1. Service**

ITEM	DESCRIPTION	FRW/FBW	FDV	LABOR CODE
<b>NEW</b>				
Set-up and pre-delivery		2.5	2.5	---
1,000 mile service		2.5	2.5	---
<b>REGULAR</b>				
2,500 mile maintenance		0.5	0.5	---
5,000 mile maintenance		2.5	2.5	
7,500 mile maintenance		0.5	0.5	---
10,000 mile maintenance		4.5	4.5	---
20,000 mile maintenance		5.2	5.4	---
25,000 mile maintenance		3.0	2.5	---
50,000 mile maintenance		7.7	7.7	---

**Table 7-2. Chassis**

ITEM	DESCRIPTION	FRW/FBW	FDV	LABOR CODE
<b>DRIVE</b>				
Adjust secondary belt		0.2	0.2	---
Replace secondary belt		3.7	3.7	2011
Replace rear wheel sprocket		0.9	0.9	2021
<b>WHEELS</b>				
Replace tire - includes balancing	front	0.6	0.6	2106
	rear	0.8	0.8	2111
Replace wheel assembly - includes disc and sprocket exchange and balancing	front	0.8	0.8	2113
	rear	1.0	1.0	2114
Replace rim, hub or spokes	front	2.2	2.2	2116
	rear	2.4	2.4	2121
Replace wheel bearings	front	0.6	0.6	2136
	rear	0.8	0.8	2141
True laced wheel (wheel on vehicle)		0.4	0.4	2156
True laced wheel - includes r/r wheel & tire and time to rebalance	front	1.0	1.0	2157
	rear	1.2	1.2	2158
<b>HANDLEBARS</b>				
Replace handlebars		1.2	1.2	2206
Replace clutch hand lever		0.2	0.2	2221
Replace clutch hand lever bracket		0.2	0.2	2226

All times listed in hours.

**V.I.N. CODES**

FRW	FLHRC-I
FBW	FLHR-I
FDV	FLHR

**Table 7-2. Chassis**

ITEM	DESCRIPTION	FRW/FBW	FDV	LABOR CODE
Replace throttle control		0.4	0.4	2231
Replace and adjust throttle control cables	one or both	0.6	0.6	2241
Replace both rubber handlebar mounts		1.0	1.0	2246
Replace rubber handlebar grip		0.2	0.2	2251
Replace handlebar riser	one or both	1.0	1.0	2253
Replace handlebar clamp	one or both	0.8	0.8	2254
<b>FRAME/SWING ARM/FRONT FORK</b>				
Replace frame	includes removal and installation of all accessories and motorcycle components	17.5	17.0	2306
Replace front fork assembly		3.0	3.0	2311
Replace lower fork bracket and stem		3.2	3.2	2316
Replace steering head cups and bearings, including bearing adjustment		3.2	3.2	2321
Replace upper fork bracket		2.7	2.7	2326
Replace fork lock		0.3	0.3	2329
Adjust steering head bearings		0.7	0.7	---
Change front fork oil		0.7	0.7	---
Replace front nacelle		0.6	0.6	2331
Service or replace fork slider and/or seal – includes removal, disassembly, cleaning, inspection, replacing parts, servicing damper tube, replacing bushings, assembly and installation	one side	1.9	1.9	2341
	both sides	2.3	2.3	2342
Replace fork side	one side	1.2	1.2	2346
	both sides	1.5	1.5	2351
Replace fork tube	one side	1.4	1.4	2356
	both sides	1.7	1.7	2361
Replace rear swing arm and/or bearings		1.9	1.9	2366
Replace rear fork pivot shaft		1.0	1.0	2368
Replace rear shock air line		0.1	0.1	2369
Replace rear shock absorber assembly	one side	0.3	0.3	2371
	both sides	0.6	0.6	2376
Replace rear shock absorber component(s)	one side	0.5	0.5	2381
	both sides	0.8	0.8	2386
Replace jiffy stand	complete	0.3	0.3	2391
	spring and/or stand	0.2	0.2	2396
	rubber bumper	0.1	0.1	2399
Replace motor rubber mount	rear left	0.3	0.3	2397
	rear right	0.5	0.5	2395
	front	0.4	0.4	2398
Replace footboard		0.2	0.2	2394
<b>BRAKES</b>				
Replace hydraulic brake line – includes filling/bleeding brakes	front	1.0	1.0	2406
	rear	0.4	0.4	2411
Replace rear master cylinder reservoir hose and/or hose		0.2	0.2	2414
Replace brake pads	front – each caliper	0.1	0.1	2416
	rear	0.2	0.2	2421
Replace brake caliper – includes filling/bleeding brakes	front – each caliper	0.4	0.4	2426
	rear	1.0	1.0	2431

**Table 7-2. Chassis**

ITEM	DESCRIPTION	FRW/FBW	FDV	LABOR CODE
Replace brake disc	front – one side	0.3	0.3	2436
	front – both sides	0.4	0.4	2437
	rear	1.3	1.3	2441
Bleed brake caliper – one or two front calipers or rear caliper		0.2	0.2	2446
Overhaul brake caliper – includes filling/bleeding brakes	front – each caliper	0.6	0.6	2451
	rear	1.3	1.3	2456
Replace master cylinder assembly – includes filling/bleeding brakes	front	0.4	0.4	2461
	rear	0.5	0.5	2466
Rebuild master cylinder assembly – includes filling/bleeding brakes	front	0.6	0.6	2471
	rear	0.7	0.7	2476
Replace rear brake pedal		0.3	0.3	2492
Replace front brake lever		0.1	0.1	2494
<b>SEATS/FENDERS/TANKS</b>				
Replace seat		0.2	0.2	2506
Replace fender	front	1.0	1.0	2526
	rear	1.2	1.2	2531
Replace rear fender support		0.1	0.1	2536
Replace fuel tank assembly		1.2	0.8	2541
Replace fuel tank console / instrument panel		0.3	0.3	2553
Replace fuel tank console rubber molding strip		0.2	0.2	2557
Replace fuel tank valve		---	0.2	2561
Replace fuel tank gauge		0.3	0.3	2563
Replace fuel tank gauge sending unit		0.5	0.3	2564
Replace fuel tank check valve assembly		0.6	---	2567
Replace canopy gasket		0.4	---	2570
Replace fuel filter		0.5	---	2575
Replace any hose		0.3	0.3	2576
Replace fuel hose inside tank		0.5	---	2579
Replace oil filter		0.1	0.1	2582
Replace oil filter bracket		0.6	0.6	2584
<b>BELT GUARDS</b>				
Replace rear belt guard – debris deflector		0.1	0.1	2616
<b>EXHAUST SYSTEM</b>				
Replace complete exhaust system and/or gaskets		1.0	1.0	2626
Replace exhaust pipe	right side	1.0	1.0	2631
	left side	0.3	0.3	2636
Replace one muffler		0.2	0.2	2646
Replace any one exhaust shield		0.1	0.1	2661
Replace one muffler support		0.2	0.2	2666

**Table 7-3. Engine**

ITEM	DESCRIPTION	FRW/FBW	FDV	LABOR CODE
<b>GENERAL</b>				
Remove and install engine	California vehicles only	4.6	4.3	3006
Remove and install engine		4.5	4.2	3006
Replace and adjust stabilizer	top	0.8	0.8	3005
	front	0.3	0.3	3007
Remove and replace oil pan for inspection/contamination	with engine removed	0.3	0.3	3009
<b>CYLINDER HEAD</b>				
Recondition cylinder head – includes removal of head and gasket, remove carbon, service valve guides, grind valves and seats, test springs and install head and gaskets.	front head	4.5	4.2	3101
	rear head	4.5	4.2	3103
	both heads	5.1	4.8	3104
Replace cylinder head	one head	3.2	2.9	3106
	both heads	3.8	3.5	3108
Replace valve seal or spring after cylinder head removal	one seal or spring (intake or exhaust)	0.1	0.1	3131
	both seals or springs (intake or exhaust)	0.2	0.2	3132
	front cylinder	2.6	2.3	3140
Replace cylinder head gasket/O-ring	rear cylinder	2.6	2.3	3142
	both cylinders	3.0	2.7	3143
Replace rocker arm covers and/or gaskets	front cylinder	0.8	0.8	3144
	rear cylinder	0.8	0.8	3145
	both cylinders	0.9	0.9	3148
Recondition rocker arms after heads are removed	one head	0.7	0.7	3149
	both heads	1.4	1.4	3150
Replace lower rocker arm cover/gasket, or rocker arms and /or shafts/rocker arm support	front cylinder	1.2	1.2	3147
	rear cylinder	1.2	1.2	3152
	both cylinders	1.4	1.4	3153
Replace cylinder O-ring/drain O-ring	front cylinder	2.8	2.5	3161
	rear cylinder	2.8	2.5	3163
	both cylinders	3.2	2.9	3168
Replace crankcase umbrella valve	one	1.1	1.1	3172
	both	1.2	1.2	3174
<b>CYLINDER AND PISTON</b>				
Recondition TOP END - includes disassembly, replacement of piston and sizing cylinder (.005" pistons), replacing piston rings and all items listed under RECONDITION CYLINDER HEAD and assembly.	one piston and cylinder	5.5	5.2	3202
	both pistons and cylinders	6.1	5.8	3203
Recondition TOP END - includes disassembly, replacement of piston and bore and hone, resizing cylinder (.010" oversize or above), replacing piston rings and all items listed under RECONDITION CYLINDER HEAD and assembly.	one piston and cylinder	5.9	5.6	3211
	both pistons and cylinders	6.5	6.2	3212
Recondition TOP END – includes disassembly, deglazing cylinder and replacing rings, or replacing cylinder and piston, all items listed under RECONDITIONING CYLINDER HEAD and assembly.	one piston and cylinder	5.3	5.0	3207
	both pistons and cylinders	5.9	5.6	3208
Replace piston rings – includes deglazing cylinder	one cylinder	3.1	2.8	3206
	both cylinders	3.7	3.4	3216

**Table 7-3. Engine**

ITEM	DESCRIPTION	FRW/FBW	FDV	LABOR CODE
Replace piston and piston rings – includes removal of cylinder head and cylinder, fitting new piston with rings, resizing cylinder and assembly	one cylinder	3.7	3.4	3221
	both cylinders	4.9	4.6	3231
Replace cylinder and piston	one cylinder	3.0	2.7	3236
	both cylinders	3.5	3.2	3246
Replace upper connecting rod bushing during upper end repair		0.4	0.4	3251
Replace one cylinder stud	cylinder removed	0.1	0.1	3253
Replace all eight cylinder studs	cylinders removed	0.5	0.5	3254
<b>CAM COVER</b>				
Replace lifter cover/gasket or lifter/and, or anti-rotation pin	one or two same cylinder	1.4	1.4	3307
	on both cylinders	1.6	1.6	3310
Replace push rod, push rod cover and/or O-ring or quad seal	one or two same cylinder	1.4	1.4	3317
	one each cylinder	1.6	1.6	3318
Replace cam cover and/or gasket		1.6	1.6	3325
Replace primary cam chain, sprockets and/or fastener		1.7	1.7	3327
Replace primary cam chain tensioner		1.7	1.7	3328
Replace cam support plate/O-rings		2.8	2.8	3335
Replace cam support plate		2.8	2.8	3337
Replace cam support bearing/cams/secondary cam chain/tensioner		3.0	3.0	3338
Replace oil pump and/or O-rings		2.6	2.6	3341
Replace cam bearing crankcase	one bearing	2.8	2.8	3342
	two bearings	2.9	2.9	3343
By pass valve inspection		2.7	2.7	3354
<b>CRANKCASE</b>				
Replace crankcases	California vehicles only –includes remove and install engine	8.2	7.9	3406
Replace crankcases	includes remove and install engine	8.1	7.8	3406
Seal crankcase only		7.5	7.5	3407
Replace flywheels	includes remove and install engine	7.6	7.3	3411
Replace right side main bearing	California vehicles only	7.1	6.8	3412
Replace right side main bearing		7.0	6.7	3412
Piston jet/O-ring	one	3.0	2.7	3413
	both	3.4	3.1	3414
Filter housing and or O-rings		0.2	0.2	3415
Replace crankcase vent hose and/or fittings		0.2	0.2	3417
Replace crankcase oil hose and/or fittings	Feed	0.3	0.3	3418
	Return	0.3	0.3	3419
Check flywheel trueness before assembly or after removal		0.1	0.1	3420
True flywheels after removal	includes piston removal and reinstallation	0.5	0.5	3421
Recondition cylinder heads – head removed (for non-related repairs)	one head	1.0	1.0	3425
	both heads	2.0	2.0	3426
Replace piston rings	cylinders removed (for non-related repairs – deglaze only)	0.3	0.3	3428

**Table 7-3. Engine**

ITEM	DESCRIPTION	FRW/FBW	FDV	LABOR CODE
<b>FUEL SYSTEM</b>				
Replace air cleaner backing plate		0.2	0.2	3501
Replace air cleaner cover		0.1	0.1	3502
Replace carburetor		---	---	3506
Replace induction module	includes making cruise control adjustment	1.2	---	3508
Replace induction module seal		1.2	---	3510
Replace intake manifold and/or seal		---	0.6	3511
Replace external fuel supply hose		0.2	0.6	3514
Replace carburetor float valve or jet, or check float level or seal		---	0.5	3516
Replace accelerator pump		---	0.5	3521
Replace enrichener cable		---	0.4	3523
Replace carburetor diaphragm		---	0.5	3524
<b>EVAPORATIVE EMISSIONS SYSTEM</b>				
Replace canister		0.1	0.1	3527
Replace vapor valve		0.1	0.1	3528
Replace any one hose		0.1	0.1	3529

**Table 7-4. Drive and Clutch**

ITEM	DESCRIPTION	FRW/FBW	FDV	LABOR CODE
<b>DRIVE</b>				
Adjust primary chain		0.2	0	---
Replace primary chain		0.9	0.9	4002
Replace engine sprocket		0.9	0.9	4003
Replace engine sprocket seal		1.3	1.3	4005
Replace primary cover		0.4	0.4	4007
Replace primary cover gasket		0.4	0.4	4009
Replace primary inspection cover and/or O-ring		0.1	0.1	4001
Replace inner primary case &/or seals or bearing		2.1	2.1	4008
<b>CLUTCH</b>				
Adjust clutch		0.2	0.2	---
Replace release cable assembly		1.2	1.2	4006
Service the clutch	includes disassembly, cleaning, inspection repair, assembly and adjustment	1.3	1.3	4011
Replace shift lever	heel or toe	0.1	0.1	4012
Replace clutch release bearing and/or push rod		0.4	0.4	4016
Replace clutch release (ball ramp) and/or side cover		1.6	1.6	4018

**Table 7-5. Transmission**

ITEM	DESCRIPTION	FRW/FBW	FDV	LABOR CODE
<b>TRANSMISSION CASE</b>				
Replace transmission case		5.3	5.3	4304
Replace transmission complete		4.9	4.9	4305
Overhaul transmission	includes disassembly, cleaning, inspection, replacing parts (transmission case in frame)	4.6	4.6	4306
Replace transmission sprocket		2.2	2.2	4309
Replace main drive gear oil seal	in transmission case	2.3	2.3	4311
Replace mainshaft oil seal	in main drive gear	2.2	2.2	4316
Replace side door gasket		2.8	2.8	4321
Replace shifter drum		0.7	0.7	4331
Replace shifter arm assembly or springs		3.0	3.0	4336
Replace transmission top cover and/or gasket		0.6	0.6	4341
Replace shifter forks and/or shaft		0.9	0.9	4343
Replace side door bearing	one	3.0	3.0	4348
	both	3.1	3.1	4351
Replace transmission case countershaft bearing		2.9	2.9	4361
Replace main drive gear and/or bearing		3.2	3.2	4366
Replace transmission side cover gasket		0.9	0.9	4368
Replace oil pan and/or gasket or baffle	NOTE: removal of rear wheel may be necessary	0.9	0.9	4378
Replace oil fill tube and/or cover, and/or gasket		0.4	0.4	4379
Replace transmission shifter seal		2.2	2.2	4390

**Table 7-6. Electrical**

ITEM	DESCRIPTION	FRW	FBW	FDV	LABOR CODE
NOTE: All codes include diagnostic time and replacement time if required. The codes must be used in conjunction with the diagnostic/repair procedures listed in the 2002 Service Manual, Part No. 99483-02 and Electrical Diagnostic Manual, Part No. 99497-02. Remember to use the same four digit code selected for your labor code as your condition code when filing a warranty claim.					
<b>GENERAL</b>					
Check and diagnose the electrical system lights and accessories	excluding turn signals	0.3	0.3	0.3	5016
Replace connector housing		0.1	0.1	0.1	5022
Replace connector anchor		0.1	0.1	0.1	5023
<b>CHARGING CIRCUIT</b>					
Diagnose charging system	regulator inspection	0.1	0.1	0.1	5306
Diagnose charging system	regulator bleed	0.9	0.9	0.9	5307
Diagnose charging system	milliamp draw	0.2	0.2	0.2	5308
Diagnose charging system	total current draw	0.2	0.2	0.2	5310
Replace regulator/stator connector		0.2	0.2	0.2	5311
Diagnose charging system	open/grounded stator	1.8	1.8	1.8	5312
Diagnose charging system	AC output	1.8	1.8	1.8	5314
Diagnose charging system	regulator failure	1.0	1.0	1.0	5315
Diagnose charging system	voltage output	1.0	1.0	1.0	5316
Diagnose charging system	replace rotor	1.3	1.3	1.3	5319

**Table 7-6. Electrical**

ITEM	DESCRIPTION	FRW	FBW	FDV	LABOR CODE
<b>STARTER CIRCUIT</b>					
Starter inoperative	open/shorted/grounded motor	1.4	1.4	1.4	5817
Starter inoperative	start button	1.0	1.0	1.0	5818
Starter inoperative	solenoid clicks; poor starter or battery connections	0.2	0.2	0.2	5822
Starter inoperative	solenoid clicks; poor relay or solenoid connections, or bad relay contacts	0.3	0.3	0.3	5823
Starter inoperative	solenoid clicks; poor starter to battery connections, ground connections, or bad solenoid contacts	0.2	0.2	0.2	5824
Starter inoperative	damaged motor	1.4	1.4	1.4	5825
Starter inoperative	relay click; open in relay wiring	0.3	0.3	0.3	5827
Starter inoperative	nothing clicks; poor relay ground	0.3	0.3	0.3	5828
Starter inoperative	nothing clicks; short to voltage	0.4	0.4	0.4	5830
Starter inoperative	nothing clicks; open in wiring to or from starter button	0.5	0.5	0.5	5831
Starter inoperative	starter relay	0.4	0.4	0.4	5832
Slow starter crank or starter stalls; poor starter to battery connections, ground connections		0.2	0.2	0.2	5835
Slow starter crank or starter stalls	binding	0.3	0.3	0.3	5836
Starter spins	clutch	1.5	1.5	1.5	5837
Starter inoperative	nothing clicks; TSM/TSSM	0.4	0.4	0.4	5838
Replace starter solenoid, contacts	includes starter motor removal	1.6	1.6	1.6	5845
Starter binding		1.6	1.6	1.6	5850
Replace starter solenoid	coil, includes starter motor removal	1.6	1.6	1.6	5860
<b>INSTRUMENTS</b>					
Fuel gauge	see Fuel System	---	---	---	----
Replace speedometer	cosmetics only	0.2	0.2	0.2	6003
Replace instrument housing (console)		0.3	0.3	0.3	6019
<b>ELECTRONIC SPEEDOMETER</b>					
Diagnose inoperative, inaccurate or erratic speedometer	switch	0.3	0.3	0.3	6001
Diagnose inoperative, inaccurate or erratic speedometer		0.1	0.1	0.1	6002
Diagnose inoperative, inaccurate or erratic speedometer	wiring	0.2	0.2	0.2	6004
Diagnose inoperative, inaccurate or erratic speedometer	replace	0.5	0.5	0.5	6006
Diagnose inoperative, inaccurate or erratic speedometer	wiring	0.3	0.3	0.3	6008
Diagnose inoperative, inaccurate or erratic speedometer	sensor	0.5	0.5	0.5	6010
Diagnose inoperative, inaccurate or erratic speedometer	open	0.6	0.6	0.6	6013
Diagnose inoperative, inaccurate or erratic speedometer	LED failure	0.2	0.2	0.2	6014
Diagnose inoperative, inaccurate or erratic speedometer	wires	0.4	0.4	0.4	6016
Odometer inoperable		0.2	0.2	0.2	6020



**Table 7-6. Electrical**

ITEM	DESCRIPTION	FRW	FBW	FDV	LABOR CODE
Diagnose inoperative, inaccurate or erratic speedometer	internal	0.5	0.5	0.5	6022
Diagnose inoperative, inaccurate or erratic speedometer	power/ground	0.5	0.5	0.5	6024
Diagnose inoperative, inaccurate, or erratic speedometer	debris or sensor	0.5	0.5	0.5	6029
Diagnose inoperative, inaccurate or erratic speedometer	grounded circuit	0.3	0.3	0.3	6031
Diagnose inoperative, inaccurate or erratic speedometer	fuse	0.1	0.1	0.1	6032
Replace speedo reset boot		0.1	0.1	0.1	6043
<b>WIRING</b>					
Replace FLHR main wiring harness		3.1	3.1	3.1	5026
Main harness	locate and repair, open/short	0.5	---	---	5028
Replace EFI harness		1.7	1.7	---	5033
Replace rear fender wiring harness		0.8	0.8	0.8	5036
Replace any single wire	light circuit	0.2	0.2	0.2	5039
	accessory circuit	0.2	0.2	0.2	5043
Repair/diagnose indicator lamp wiring		0.3	0.3	0.3	5048
Replace front fender wiring harness		---	---	0.9	5049
Replace ignition wiring harness		---	---	1.1	5050
Handlebar harness	repair short	0.4	0.4	0.4	6551
Handlebar harness	repair open	0.4	0.4	0.4	6552
<b>SWITCHES</b>					
Replace ignition switch		0.3	0.3	0.3	5129
Replace rear stoplight switch		0.4	0.4	0.4	5141
Replace fuse		0.2	0.2	0.2	5145
Replace main circuit breaker		0.2	0.2	0.2	5147
Replace fuse block		0.3	0.3	0.3	5148
Replace transmission neutral switch	includes diagnosis	0.3	0.3	0.3	5157
Replace oil pressure switch	includes diagnosis	0.3	0.3	0.3	5161
Replace spot lamp switch		0.2	0.2	0.1	5167
Replace rear stoplight relay		0.1	0.1	0.1	5169
Replace left handlebar switch		0.5	0.5	0.5	5171
Replace right handlebar switch		0.7	0.7	0.7	5173
Replace front brake light switch		0.6	0.6	0.6	5176
Replace left upper handlebar switch housing		0.2	0.2	0.2	5177
Replace left lower handlebar switch housing		0.2	0.2	0.2	5178
Replace right upper handlebar switch housing		0.2	0.2	0.2	5179
Replace right lower handlebar switch housing		0.7	0.7	0.4	5180
Replace handlebar cruise set/res. switch or lamp		0.7	---	---	5182
Replace handlebar cruise on/off switch or lamp		0.5	---	---	5128

**Table 7-6. Electrical**

ITEM	DESCRIPTION	FRW	FBW	FDV	LABOR CODE
<b>LIGHTS</b>					
Replace headlight	includes diagnosis	0.1	0.1	0.1	5185
Replace headlight housing	includes adjustment	0.2	0.2	0.2	5189
Replace indicator lamp assembly		0.2	0.2	0.2	5191
Replace taillight bulb or single light bulb or lens	includes diagnosis	0.1	0.1	0.1	5197
Replace tail lamp assembly or circuit board		0.2	0.2	0.2	5215
Replace turn signal light assembly	front	0.4	0.4	0.4	5201
	rear	0.4	0.4	0.4	5205
Replace rear turn signal bar		0.4	0.4	0.4	5207
Replace fender tip light bulb or lens, includes diagnosis	front	---	---	0.1	5217
	rear	---	---	0.1	5221
Replace fender tip lamp assembly	front	---	---	0.2	5225
	rear	---	---	0.3	5229
Replace passing lamp bulb	includes diagnosis	0.1	0.1	0.1	5227
Replace passing lamp		0.4	0.4	0.4	5230
Replace passing lamp bracket		0.7	0.7	0.7	5232
<b>TURN SIGNALS/SECURITY SYSTEM</b>					
No security lamp		0.4	0.4	0.4	6735
No security lamp		0.4	0.4	0.4	6736
No security lamp		0.4	0.4	0.4	6737
No security lamp		0.4	0.4	0.4	6738
No security lamp		0.1	0.1	0.1	6739
No security lamp		0.2	0.2	0.2	6740
No security lamp		0.3	0.3	0.3	6741
No security lamp		0.3	0.3	0.3	6742
No security lamp		0.3	0.3	0.3	6743
No security lamp		0.2	0.2	0.2	6744
No security lamp		0.3	0.3	0.3	6745
Security lamp on continuously		0.2	0.2	0.2	6750
Security lamp on continuously		0.3	0.3	0.3	6751
Security lamp on continuously		0.4	0.4	0.4	6752
Fob signal weak		0.1	0.1	0.1	6755
Fob signal weak		0.1	0.1	0.1	6756
Fob signal weak		0.2	0.2	0.2	6757
Turn signal error 1A		0.5	0.5	---	6760
Turn signal error 1A		1.1	1.1	---	6761
Turn signal error 1A		0.2	0.2	---	6762
Turn signal error 1A		0.3	0.3	---	6763
Turn signal error 1A		0.7	0.7	---	6764
Turn signal error 2A		0.9	0.9	0.9	6773
Turn signal error 2B		0.6	0.6	0.6	6777
Turn signal error 2B		0.5	0.5	0.5	6778
Turn signal error 2B		0.7	0.7	0.7	6779
Turn signal error 2B		0.6	0.6	0.6	6780
Turn signal error 2C		0.7	0.7	0.7	6784
Turn signal error 2C		0.7	0.7	0.7	6785

**Table 7-6. Electrical**

ITEM	DESCRIPTION	FRW	FBW	FDV	LABOR CODE
Turn signal error 2C		1.1	1.1	1.1	6786
Turn signal error 3A		0.3	0.3	0.3	6790
Turn signal error 3A		0.2	0.2	0.2	6791
Turn signal error 3A		0.1	0.1	0.1	6792
Turn signal error 3A		0.3	0.3	0.3	6793
Turn signal error 3B		0.1	0.1	0.1	6796
Turn signal error 3B		0.3	0.3	0.3	6797
Turn signal error 3B		0.3	0.3	0.3	6798
Turn signal error 3B		0.3	0.3	0.3	6799
Turn signal error 3B		0.3	0.3	0.3	6800
Turn signal error 3C		0.3	0.3	0.3	6805
Turn signal error 3C		0.3	0.3	0.3	6806
Turn signal error 3C		0.2	0.2	0.2	6807
Turn signal error 3C		0.3	0.3	0.3	6808
Turn signal error 3D		0.3	0.3	0.3	6810
Turn signal error 3D		0.7	0.7	0.7	6811
Turn signal error 3D		0.4	0.4	0.4	6812
Turn signal error 3D		0.3	0.3	0.3	6813
Turn signal error 3D		0.4	0.4	0.4	6814
Turn signal error 3D		0.7	0.7	0.7	6815
Turn signal error 3D		0.4	0.4	0.4	6816
Turn signal error 3D		0.4	0.4	0.4	6810
Turn signal error 3D		0.7	0.7	0.7	6811
Turn signal error 3D		0.4	0.4	0.4	6812
Turn signal error 3D		0.3	0.3	0.3	6813
Turn signal error 3D		0.4	0.4	0.4	6814
Turn signal error 3D		0.7	0.7	0.7	6815
Turn signal error 3D		0.4	0.4	0.4	6816
Turn signal error 4A		0.2	0.2	0.2	6820
Turn signal error 4A		0.2	0.2	0.2	6821
Turn signal error 4A		0.4	0.4	0.4	6822
Turn signal error 4A	Does not include lamp assembly replacement	0.3	0.3	0.3	6823
Turn signal error 4A		0.5	0.5	0.5	6824
Ignition enable output high		0.3	0.3	0.3	6827
Ignition enable output high		0.3	0.3	0.3	6828
Alarm output		0.3	0.3	0.3	6830
Alarm output		0.3	0.3	0.3	6831
Alarm output		0.3	0.3	0.3	6832
Alarm output		0.4	0.4	0.4	6833
Alarm output		0.3	0.3	0.3	6834
Alarm output		0.3	0.3	0.3	6835
Starter output high		0.3	0.3	0.3	6840
Starter output high		0.2	0.2	0.2	6841
Starter output high		0.3	0.3	0.3	6842
Starter output high		0.3	0.3	0.3	6842
Accelerometer fault		0.2	0.2	0.2	6845

**Table 7-6. Electrical**

ITEM	DESCRIPTION	FRW	FBW	FDV	LABOR CODE
<b>IGNITION SYSTEM</b>					
Diagnostic check		---	---	0.2	7110
Diagnostic check		---	---	0.3	7115
Diagnostic check		---	---	0.6	7120
Diagnostic check		---	---	0.5	7125
Chart A-1	No check engine lamp	---	---	0.4	7130
	No check engine lamp	---	---	0.4	7135
	No check engine lamp	---	---	0.5	7143
	No check engine lamp	---	---	0.4	7145
Chart A-2	Check engine lamp on continuously	---	---	0.3	7148
	Check engine lamp on continuously	---	---	0.1	7150
	Check engine lamp on continuously	---	---	0.5	7160
	Check engine lamp on continuously	---	---	0.4	7165
Chart A-3	Engine cranks but will not start	---	---	0.2	7180
	Engine cranks but will not start	---	---	0.2	7185
	Engine cranks but will not start	---	---	0.4	7210
	Engine cranks but will not start	---	---	0.5	7215
	Engine cranks but will not start	---	---	0.6	7225
	Engine cranks but will not start	---	---	0.6	7226
	Engine cranks but will not start	---	---	0.7	7227
	Engine cranks but will not start	---	---	0.7	7228
	Engine cranks but will not start	---	---	1.5	7230
	Engine cranks but will not start	---	---	0.8	7231
	Engine cranks but will not start	---	---	0.7	7235
	Engine cranks but will not start	---	---	0.6	7250
	Engine cranks but will not start	---	---	1.9	7255
	Chart A-4	No spark, no check engine lamp	---	---	0.3
No spark, no check engine lamp		---	---	0.4	7285
No spark, no check engine lamp		---	---	0.5	7291
No spark, no check engine lamp		---	---	1.0	7295
No spark, no check engine lamp		---	---	0.2	7305
No spark, no check engine lamp		---	---	0.4	7310
Chart C	Misfire	---	---	0.2	7520
	Misfire	---	---	0.5	7525
	Misfire	---	---	0.5	7535
	Misfire	---	---	0.6	7540
	Misfire	---	---	0.6	7541
Code-12	Map sensor	---	---	0.2	7620
	Map sensor	---	---	1.7	7625
	Map sensor	---	---	0.6	7630
	Map sensor	---	---	0.4	7635
	Map sensor	---	---	0.4	7640
	Map sensor	---	---	0.4	7641
	Map sensor	---	---	0.4	7642
	Map sensor	---	---	0.5	7645
	Map sensor	---	---	0.7	7650
	Map sensor	---	---	0.6	7655

**Table 7-6. Electrical**

ITEM	DESCRIPTION	FRW	FBW	FDV	LABOR CODE
Code-16	Battery voltage test	---	---	0.4	7770
	Battery voltage test	---	---	0.7	7775
	Battery voltage test	---	---	0.7	7776
	Battery voltage test	---	---	0.9	7779
	Battery voltage test	---	---	0.8	7780
	Battery voltage test	---	---	1.1	7781
	Battery voltage test	---	---	1.0	7782
	Battery voltage test	---	---	1.0	7783
	Battery voltage test	---	---	0.9	7784
Code-24 & 25	Ignition coil	---	---	0.3	7855
	Ignition coil	---	---	0.6	7856
	Ignition coil	---	---	0.3	7860
	Ignition coil	---	---	0.3	7865
	Ignition coil	---	---	0.2	7870
	Ignition coil	---	---	0.3	7875
Code-35	Tachometer	---	---	0.4	7881
	Tachometer	---	---	0.3	7882
	Tachometer	---	---	0.4	7883
	Tachometer	---	---	0.4	7884
	Tachometer	---	---	0.5	7886
Code-41	Crank position sensor	---	---	0.4	7980
	Crank position sensor	---	---	0.9	7981
	Crank position sensor	---	---	0.4	7982
	Crank position sensor	---	---	1.1	7983
	Crank position sensor	---	---	1.1	7984
	Crank position sensor	---	---	1.1	7985
	Crank position sensor	---	---	0.5	7986
	Crank position sensor	---	---	0.5	7987
	Crank position sensor	---	---	0.3	7988
Code-44	Bank angle sensor	---	---	0.2	7971
	Bank angle sensor	---	---	0.3	7972
	Bank angle sensor	---	---	0.4	7973
	Bank angle sensor	---	---	0.2	7974
	Bank angle sensor	---	---	0.3	7975
	Bank angle sensor	---	---	0.2	7976
	Bank angle sensor	---	---	0.2	7977
Code-52, 53 and 55	Ignition module failure	---	---	0.2	7913
<b>BATTERY/HORN</b>					
	Replace the battery	0.3	0.3	0.3	5705
	Replace horn and/or bracket	0.2	0.2	0.2	5765
	Replace battery tray	0.3	0.3	0.3	5767
	Replace battery cable	0.2	0.2	0.2	5769
<b>ACCESSORIES – CRUISE CONTROL – DIAGNOSIS, REPAIR</b>					
	Replace cruise cable	0.5	---	---	6630
	Replace cruise module	0.7	---	---	6635

**Table 7-6. Electrical**

ITEM	DESCRIPTION	FRW	FBW	FDV	LABOR CODE
<b>ACCESSORIES</b>					
Replace windshield		0.1	0.1	0.1	6203
Replace windshield bushing	all or one	0.2	0.2	0.2	6208
Replace spring clip on windshield		0.2	0.2	0.2	6210
Replace saddlebag mounting bracket		0.2	0.2	0.2	6253
Replace saddlebag guard		0.3	0.3	0.3	6254
Replace saddlebag		0.2	0.2	0.2	6257
Replace saddlebag lock		---	---	0.2	6259
Replace saddlebag cover	one	0.2	0.2	0.2	6260
Replace saddlebag lock or latch		0.2	0.2	0.2	6261
Replace one saddlebag tether strap		---	---	0.1	6262
Replace one frame sidecover		0.1	0.1	0.1	6263
Replace fender tip	front	0.1	0.1	---	6302
	rear	0.1	0.1	---	6304
Replace bumper	rear	---	---	0.2	6305
Replace highway bar	front	0.3	0.3	0.3	6353
	rear-left	0.3	0.3	0.3	6355
	rear-right	0.4	0.4	0.4	6357
Replace mirror		0.1	0.1	0.1	6513

**Table 7-7. Fuel Injection**

ITEM	DESCRIPTION	FRW/FBW	LABOR CODE
NOTE: All codes include diagnostic time and replacement time if required. The codes must be used in conjunction with the diagnostic/repair procedures listed in the 2002 Service Manual, Part No. 99483-02 and Electrical Diagnostic Manual, Part No. 99497-02. Remember to use the same four digit code selected for your labor code as your condition code when filing a warranty claim.			
Diagnostic check		0.2	7110
Diagnostic check		0.4	7115
Diagnostic check		0.4	7120
Diagnostic check		0.8	7125
Diagnostic check		0.8	7126
No check engine lamp/No ECM Power		0.5	6013
No check engine lamp/No ECM Power		0.6	7130
No check engine lamp/No ECM Power		0.4	7133
No check engine lamp/No ECM Power		0.4	7141
No check engine lamp/No ECM Power		0.1	7142
No check engine lamp/No ECM Power		0.5	7143
No check engine lamp/No ECM Power		0.4	7146
No check engine lamp/No ECM Power		0.5	7270
No check engine lamp/No ECM Power		0.6	7285
No check engine lamp/No ECM Power		0.7	7286
No check engine lamp/No ECM Power		0.8	7287
No check engine lamp/No ECM Power		0.7	7288
No check engine lamp/No ECM Power		0.7	7289
No check engine lamp/No ECM Power		0.4	7290
No check engine lamp/No ECM Power		1.4	7295
No check engine lamp/No ECM Power		0.6	7301

**Table 7-7. Fuel Injection**

ITEM	DESCRIPTION	FRW/FBW	LABOR CODE
No check engine lamp/No ECM Power		0.1	7302
No check engine lamp/No ECM Power		0.7	7303
No check engine lamp/No ECM Power		0.4	7304
No check engine lamp/No ECM Power		0.6	7305
No check engine lamp/No ECM Power		0.5	7306
No check engine lamp/No ECM Power		0.7	7307
No check engine lamp/No ECM Power		0.6	7308
No check engine lamp/No ECM Power		0.6	7309
No check engine lamp/No ECM Power		0.6	7310
No check engine lamp/No ECM Power		0.3	7320
Check engine lamp on continuously		0.2	7148
Check engine lamp on continuously		0.7	7150
Check engine lamp on continuously		0.3	7155
Check engine lamp on continuously		0.2	7156
Check engine lamp on continuously		0.1	7157
Engine cranks but will not start		0.6	7185
Engine cranks but will not start		0.5	7195
Engine cranks but will not start		0.5	7210
Engine cranks but will not start		0.4	7215
Engine cranks but will not start		0.5	7223
Engine cranks but will not start		0.4	7224
Engine cranks but will not start		0.5	7225
Engine cranks but will not start		0.8	7226
Engine cranks but will not start		0.7	7227
Engine cranks but will not start		0.5	7228
Engine cranks but will not start		0.5	7230
Engine cranks but will not start		0.6	7231
Engine cranks but will not start		0.5	7235
Engine cranks but will not start		0.9	7251
Fuel system electrical test		0.2	7335
Fuel system electrical test		0.7	7336
Engine cranks but will not start; Fuel system electrical test		0.6	7340
Engine cranks but will not start; Fuel system electrical test		0.5	7355
Fuel system electrical test		0.3	7360
Fuel system electrical test		0.8	7370
Engine cranks but will not start; Fuel system electrical test		0.4	7380
Fuel system electrical test		0.3	7385
Engine cranks but will not start; Fuel system electrical test		0.9	7415
Fuel system electrical test		0.3	7440
Engine cranks but will not start; Fuel system electrical test		0.4	7441
Fuel system electrical test		0.2	7445
Engine cranks but will not start; Fuel system electrical test		0.4	7450
Engine cranks but will not start; Fuel system electrical test		0.7	7992

**Table 7-7. Fuel Injection**

ITEM	DESCRIPTION	FRW/FBW	LABOR CODE
Engine cranks but will not start; Fuel system electrical test		0.4	7520
Starts, then stalls		0.7	7992
Starts, then stalls		0.6	7993
Starts, then stalls		0.3	7994
Starts, then stalls		0.3	7995
Starts, then stalls		0.3	7996
Starts, then stalls		0.5	7997
Starts, then stalls		0.6	7998
Starts, then stalls		0.5	7999
Starts, then stalls; no DTCs		0.4	7127
Starts, then stalls; no DTCs		0.3	7128
Combustion absent		0.1	7537
Combustion absent		0.2	7538
Combustion absent		0.2	7539
Combustion absent		0.2	7543
Combustion absent		0.4	7544
Combustion absent		0.2	7546
Combustion absent		0.4	7547
Combustion absent		0.1	7548
Combustion absent		0.1	7549
Fuel pressure test		0.4	7455
Fuel pressure test		0.7	7465
Fuel pressure test		0.7	7470
Fuel pressure test		0.7	7480
Idle air control		1.1	7486
Idle air control		0.5	7490
Idle air control		0.5	7495
Idle air control		0.6	7505
Idle air control		0.5	7510
Idle air control		0.4	7515
Idle air control		0.6	7516
Misfire at idle or under load		0.4	7520
Misfire at idle or under load		0.2	7525
Misfire at idle or under load		0.4	7535
Misfire at idle or under load		0.3	7540
Misfire at idle or under load		0.2	7545
Misfire at idle or under load		0.4	7550
Misfire at idle or under load		0.3	7134
Misfire at idle or under load		0.3	7136
Misfire at idle or under load		0.6	7137
Misfire at idle or under load		0.7	7138
Misfire at idle or under load		0.6	7139
Misfire at idle or under load		0.9	7144
Misfire at idle or under load		0.5	7147
Misfire at idle or under load		0.9	7149
Misfire at idle or under load		0.6	7152
Rough or rolling idle		0.3	7134



**Table 7-7. Fuel Injection**

ITEM	DESCRIPTION	FRW/FBW	LABOR CODE
Rough or rolling idle		0.3	7136
Rough or rolling idle		0.6	7137
Rough or rolling idle		0.7	7138
Rough or rolling idle		0.6	7139
Rough or rolling idle		0.9	7144
Rough or rolling idle		0.5	7147
Rough or rolling idle		0.9	7149
Rough or rolling idle		0.6	7152
Emits black smoke		2.0	7596
Emits black smoke		2.0	7597
Emits black smoke		2.0	7598
Emits black smoke		2.2	7601
Throttle position sensor		0.5	7555
Throttle position sensor		0.5	7560
Throttle position sensor		0.6	7565
Throttle position sensor		0.4	7570
Throttle position sensor		0.5	7575
Throttle position sensor		0.5	7580
Throttle position sensor		0.5	7585
Throttle position sensor		0.7	7590
Throttle position sensor		0.3	7595
Throttle position sensor		0.7	7605
Throttle position sensor		0.5	7610
Throttle position sensor		0.8	7615
MAP sensor		0.8	7620
MAP sensor		1.2	7625
MAP sensor		0.3	7630
MAP sensor		0.6	7635
MAP sensor		0.6	7640
MAP sensor		0.6	7641
MAP sensor		0.5	7642
MAP sensor		0.6	7645
MAP sensor		0.6	7650
MAP sensor		0.7	7655
Engine temperature sensor		0.4	7660
Engine temperature sensor		0.9	7665
Engine temperature sensor		0.2	7670
Engine temperature sensor		0.3	7675
Engine temperature sensor		0.4	7680
Engine temperature sensor		0.4	7685
Engine temperature sensor		0.3	7690
Engine temperature sensor		0.5	7695
Engine temperature sensor		0.3	7705
Engine temperature sensor		0.4	7710
Intake air temperature sensor		0.6	7715
Intake air temperature sensor		1.4	7720
Intake air temperature sensor		0.4	7725
Intake air temperature sensor		0.4	7730

**Table 7-7. Fuel Injection**

ITEM	DESCRIPTION	FRW/FBW	LABOR CODE
Intake air temperature sensor		0.9	7735
Intake air temperature sensor		0.9	7740
Intake air temperature sensor		0.4	7745
Intake air temperature sensor		0.3	7750
Intake air temperature sensor		0.4	7755
Intake air temperature sensor		0.4	7760
Battery voltage test		0.4	7770
Battery voltage test		0.5	7775
Battery voltage test		0.9	7776
Battery voltage test		1.0	7779
Battery voltage test		0.9	7780
Battery voltage test		1.4	7781
Battery voltage test		1.0	7782
Battery voltage test		1.0	7783
Battery voltage test		1.2	7784
Fuel injectors		0.1	7785
Fuel injectors		0.6	7790
Fuel injectors		0.7	7795
Fuel injectors		0.6	7805
Fuel injectors		0.6	7808
Fuel injectors		0.5	7809
Fuel injectors		0.6	7815
Fuel injectors		0.6	7820
Fuel injectors		0.7	7825
Fuel injectors		0.6	7830
Fuel injectors		0.6	7835
Fuel injectors		0.6	7840
Fuel injectors		0.4	7845
Fuel injectors		0.7	7850
System relay		0.2	7887
System relay		0.3	7888
System relay		0.4	7889
System relay		0.3	7899
System relay		0.3	7900
System relay		0.4	7901
System relay		0.4	7902
System relay		0.3	7903
System relay		0.2	7904
System relay		0.4	7906
System relay		0.7	7907
System relay		0.3	7908
System relay		0.2	7909
System relay		0.3	7911
System relay		0.4	7912
Ignition coil test		0.5	7853
Ignition coil test		0.6	7854
Ignition coil test		0.4	7856
Ignition coil test		0.4	7860

**Table 7-7. Fuel Injection**

ITEM	DESCRIPTION	FRW/FBW	LABOR CODE
Ignition coil test		0.3	7865
Ignition coil test		0.5	7870
Ignition coil test		0.4	7875
Ignition coil test		0.2	7880
Crank position sensor		0.5	7980
Crank position sensor		0.4	7981
Crank position sensor		0.3	7982
Crank position sensor		0.5	7983
Crank position sensor		0.2	7984
Crank position sensor		0.4	7985
Crank position sensor		0.5	7986
Crank position sensor		0.4	7987
ECM failure		0.3	7913
Vehicle speed signal		0.4	7954
Vehicle speed signal		0.4	7956
Vehicle speed signal		0.5	7957
Vehicle speed signal		0.3	7958
Vehicle speed signal		0.4	7959
Vehicle speed signal		0.3	7961
Vehicle speed signal		0.4	7962
Vehicle speed signal		0.4	7963
Vehicle speed signal		0.4	7964
Password problem		0.4	6701
Password problem		0.4	6702
Password problem		0.6	6703
Password problem		0.4	6704
Password problem		0.5	6705
Password problem		0.3	6706
Password problem		0.6	6707
Password problem		0.8	6708
Loss of TSM / TSSM serial data		0.4	6715
Loss of TSM / TSSM serial data		0.6	6716
Loss of TSM / TSSM serial data		0.6	6717
Loss of TSM / TSSM serial data		0.5	6718
Loss of TSM / TSSM serial data		0.4	6719

# NOTES

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# 2002 FLTR MODEL

**Table 8-1. Service**

ITEM	DESCRIPTION	FPV	LABOR CODE
<b>NEW</b>			
Set-up and pre-delivery	includes setting SWR	2.5	---
1,000 mile service		2.5	---
<b>REGULAR</b>			
2,500 mile maintenance		0.5	---
5,000 mile maintenance		2.5	---
7,500 mile maintenance		0.5	---
10,000 mile maintenance		4.5	---
20,000 mile maintenance		7.6	---
50,000 mile maintenance		7.7	---

**Table 8-2. Chassis**

ITEM	DESCRIPTION	FPV	LABOR CODE
<b>DRIVE</b>			
Adjust secondary belt		0.2	---
Replace secondary belt		3.7	2011
Replace rear wheel sprocket		0.9	2021
<b>WHEELS</b>			
Replace tire and/or wheel assembly - includes balancing	front	0.6	2106
	rear	0.8	2111
Replace wheel assembly - includes disc and sprocket exchange and balancing	front	0.8	2113
	rear	1.0	2114
Replace rim, hub or spokes	front	2.2	2116
	rear	2.4	2121
Replace wheel bearings	front	0.6	2136
	rear	0.8	2141
True laced wheel (wheel on vehicle)		0.4	2156
True laced wheel - includes r/r wheel & tire and time to rebalance	front	1.0	2157
	rear	1.2	2158
<b>HANDLEBARS</b>			
Replace handlebars		1.0	2206
Replace clutch hand lever		0.2	2221
Replace clutch hand lever bracket		0.2	2226
Replace throttle control		0.4	2231
Replace and adjust throttle control cables	one or both	0.6	2241
Replace both rubber handlebar mounts		1.0	2246

All times listed in hours.

**V.I.N. CODES**

FPV	FLTR
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**Table 8-2. Chassis**

ITEM	DESCRIPTION	FPV	LABOR CODE
Replace rubber handlebar grip		0.2	2251
Replace handlebar riser	one or both	1.0	2253
Replace handlebar clamp	one or both	0.8	2254
<b>FRAME/SWING ARM/FRONT FORK</b>			
Replace frame – includes removal and installation of all accessories and motorcycle components		17.0	2306
Replace front fork assembly		3.0	2311
Replace lower fork bracket and stem		3.2	2316
Replace steering head cups and bearings, including bearing adjustment		3.2	2321
Replace upper fork bracket		2.7	2326
Adjust steering head bearings		0.7	---
Change front fork oil	both sides	2.5	---
Replace complete lock set		0.4	2333
Service or replace fork slider and/or seal – includes removal, disassembly, cleaning, inspection, replacing parts, servicing damper tube, replacing bushings, assembly and installation	right side	2.0	2343
	left	2.3	2344
	both sides	2.5	2342
Replace fork side	one side	1.2	2346
	both sides	1.5	2351
Replace fork tube	right side	1.5	2357
	left side	2.3	2358
	both sides	2.5	2361
Replace rear swing arm and/or bearings		1.9	2366
Replace rear fork pivot shaft		1.0	2368
Replace rear shock air line		0.1	2369
Replace rear shock absorber assembly	one side	0.3	2371
	both sides	0.6	2376
Replace rear shock absorber component(s)	one side	0.5	2381
	both sides	0.8	2386
Replace jiffy stand	complete	0.3	2391
	spring and/or stand	0.2	2396
	rubber bumper	0.1	2399
Replace motor rubber mount	rear left	0.3	2397
	rear right	0.5	2395
	front	0.4	2398
Replace footboard		0.2	2394
<b>BRAKES</b>			
Replace hydraulic brake line – includes filling/bleeding brakes	front	1.0	2406
	rear	0.4	2411
Replace rear master cylinder reservoir and/or hose		0.2	2414
Replace brake pads	front – each caliper	0.1	2416
	rear	0.2	2421
Replace brake caliper – includes filling/bleeding brakes	front – each caliper	0.4	2426
	rear	1.0	2431
Replace brake disc	front – one side	0.3	2436
	front – both sides	0.4	2437
	rear	1.3	2441
Bleed brake caliper	one or two front calipers or rear caliper	0.2	2446

**Table 8-2. Chassis**

ITEM	DESCRIPTION	FPV	LABOR CODE
Overhaul brake caliper – includes filling/bleeding brakes	front – each caliper	0.6	2451
	rear	1.3	2456
Replace master cylinder assembly – includes filling/bleeding brakes	front	0.4	2461
	rear	0.5	2466
Rebuild master cylinder assembly – includes filling/bleeding brakes	front	0.6	2471
	rear	0.7	2476
Replace rear brake pedal		0.3	2492
Replace front brake lever		0.1	2494
<b>SEATS/FENDERS/TANKS</b>			
Replace seat		0.1	2506
Replace fender	front	1.0	2526
	rear	1.2	2531
Replace rear fender support		0.1	2536
Replace fuel tank assembly		0.8	2541
Replace fuel tank console / instrument panel		0.3	2553
Replace fuel tank console / rubber mounting strip		0.2	2557
Replace fuel tank valve		0.2	2561
Replace fuel tank gauge		0.5	2563
Replace fuel tank gauge sending unit		0.5	2564
Replace any hose		0.3	2576
Replace oil filter		0.1	2582
Replace oil filter bracket		0.6	2584
<b>BELT GUARDS</b>			
Replace rear belt guard – debris deflector		0.1	2616
<b>EXHAUST SYSTEM</b>			
Replace complete exhaust system and/or gaskets		1.0	2626
Replace exhaust pipe	right side	1.0	2631
	left side	0.3	2636
Replace one muffler		0.2	2646
Replace any one exhaust shield		0.1	2661
Replace one muffler support		0.2	2666

**Table 8-3. Engine**

ITEM	DESCRIPTION	FPV	LABOR CODE
<b>GENERAL</b>			
Remove and install engine	California vehicles only	4.3	3006
Remove and install engine		4.2	3006
Replace and adjust stabilizer	top	0.8	3005
Replace and adjust stabilizer	bottom	0.3	3007
Remove and replace oil pan for inspection/contamination	with engine removed	0.3	3009
<b>CYLINDER HEAD</b>			
Recondition cylinder head – includes removal of head and gasket, remove carbon, service valve guides, grind valves and seats, test springs and install head and gaskets.	front head	4.2	3101
	rear head	4.2	3103
	both heads	4.8	3104

**Table 8-3. Engine**

ITEM	DESCRIPTION	FPV	LABOR CODE
Replace cylinder head	one head	2.9	3106
	both heads	3.5	3108
Replace valve seal or spring after cylinder head removal	one seal or spring (intake or exhaust)	0.1	3131
	both seals or springs (intake or exhaust)	0.2	3132
Replace cylinder head gasket/O-ring	front cylinder	2.3	3140
	rear cylinder	2.3	3142
	both cylinders	2.7	3143
Replace rocker arm covers and/or gaskets	front cylinder	0.8	3144
	rear cylinder	0.8	3145
	both cylinders	0.9	3148
Recondition rocker arms after heads are removed	one head	0.7	3149
	both heads	1.4	3150
Replace lower rocker arm cover/gasket, or rocker arms and /or shafts/rocker arm support	front cylinder	1.2	3147
	rear cylinder	1.2	3152
	both cylinders	1.4	3153
Replace cylinder O-ring/drain O-ring	front cylinder	2.5	3161
	rear cylinder	2.5	3163
	both cylinders	2.9	3168
Replace crankcase umbrella valve	one	1.1	3172
	both	1.2	3174
<b>CYLINDER AND PISTON</b>			
Recondition TOP END - includes disassembly, replacement of piston and sizing cylinder (.005" pistons), replacing piston rings and all items listed under RECONDITION CYLINDER HEAD and assembly.	one piston and cylinder	5.2	3202
	both pistons and cylinders	5.8	3203
Recondition TOP END - includes disassembly, replacement of piston and bore and hone, resizing cylinder (.010" oversize or above), replacing piston rings and all items listed under RECONDITION CYLINDER HEAD and assembly.	one piston and cylinder	5.6	3211
	both pistons and cylinders	6.2	3212
Recondition TOP END – includes disassembly, deglazing cylinder and replacing rings, or replacing cylinder and piston, all items listed under RECONDITIONING CYLINDER HEAD and assembly.	one piston and cylinder	5.0	3207
	both pistons and cylinders	5.6	3208
Replace piston rings – includes deglazing cylinder	one cylinder	2.8	3206
	both cylinders	3.4	3216
Replace piston and piston rings – includes removal of cylinder head and cylinder, fitting new piston with rings, resizing cylinder and assembly	one cylinder	3.4	3221
	both cylinders	4.6	3231
Replace cylinder and piston	one cylinder	2.7	3236
	both cylinders	3.2	3246
Replace upper connecting rod bushing during upper end repair		0.4	3251
Replace one cylinder stud	cylinder removed	0.1	3253
Replace all eight cylinder studs	cylinders removed	0.5	3254
<b>CAM COVER</b>			
Replace lifter cover/gasket or lifter/and, or anti-rotation pin	one or two same cylinder	1.4	3307
	on both cylinders	1.6	3310
Replace push rod, push rod cover and/or O-ring or quad seal	one or two same cylinder	1.4	3317
	one each cylinder	1.6	3318



**Table 8-3. Engine**

ITEM	DESCRIPTION	FPV	LABOR CODE
Replace cam cover and/or gasket		1.6	3325
Replace primary cam chain, sprockets and/or fastener		1.7	3327
Replace primary cam chain tensioner		1.7	3328
Replace cam support plate/O-rings		2.8	3335
Replace cam support plate		2.8	3337
Replace cam support bearing/cams/secondary cam			
chain/tensioner		3.0	3338
Replace oil pump and/or O-rings		2.6	3341
Replace cam bearing crankcase	one bearing	2.8	3342
	two bearings	2.9	3343
By pass valve inspection		2.7	3354
<b>CRANKCASE</b>			
Replace crankcases	California vehicles only –includes remove and install engine	7.9	3406
Replace crankcases	includes remove and install engine	7.8	3406
Seal crankcase only		6.7	3407
Replace flywheels	includes remove and install engine	7.3	3411
Replace right side main bearing	California vehicles only	6.8	3412
Replace right side main bearing		6.7	3412
Piston jet/O-ring	one	2.7	3413
	both	3.1	3414
Filter housing and or O-rings		0.2	3415
Replace crankcase vent hose and/or fittings		0.2	3417
Replace crankcase oil hose and/or fittings	Feed	0.3	3418
	Return	0.3	3419
Check flywheel trueness before assembly or after removal		0.1	3420
True flywheels after removal	includes piston removal and reinstallation	0.5	3421
Recondition cylinder heads – head removed (for non-related repairs)	one head	1.0	3425
	both heads	2.0	3426
Replace piston rings	cylinders removed (for non-related repairs – deglaze only)	0.3	3428
<b>FUEL SYSTEM</b>			
Replace air cleaner backing plate		0.2	3501
Replace air cleaner cover		0.1	3502
Replace carburetor		0.4	3506
Replace intake manifold and/or seal	one or both	0.6	3511
Replace carburetor float valve or jet, or check float level or seal		0.5	3516
Replace accelerator pump		0.5	3521
Replace enrichener cable		0.4	3523
Replace carburetor diaphragm		0.5	3524
<b>EVAPORATIVE EMISSIONS SYSTEM</b>			
Replace canister		0.1	3527
Replace vapor valve		0.1	3528
Replace any one hose		0.1	3529

**Table 8-4. Drive and Clutch**

ITEM	DESCRIPTION	FPV	LABOR CODE
<b>DRIVE</b>			
Adjust primary chain		0.2	---
Replace primary chain		0.9	4002
Replace engine sprocket		0.9	4003
Replace engine sprocket seal		1.3	4005
Replace primary cover		0.4	4007
Replace primary cover gasket		0.4	4009
Replace primary inspection cover and/or O-ring		0.1	4001
Replace inner primary case &/or seals or bearing		2.1	4008
<b>CLUTCH</b>			
Adjust clutch		0.2	---
Replace release cable assembly		1.2	4006
Service the clutch	includes disassembly, cleaning, inspection repair, assembly and adjustment	1.3	4011
Replace shift lever	heel or toe	0.1	4012
Replace clutch release bearing and/or push rod		0.4	4016
Replace clutch release (ball ramp) and/or side cover		1.6	4018

**Table 8-5. Transmission**

ITEM	DESCRIPTION	FPV	LABOR CODE
<b>TRANSMISSION CASE</b>			
Replace transmission case		5.3	4304
Replace transmission complete		4.9	4305
Overhaul transmission	includes disassembly, cleaning, inspection, replacing parts (transmission case in frame)	4.6	4306
Replace transmission sprocket		2.2	4309
Replace main drive gear oil seal	in transmission case	2.3	4311
Replace mainshaft oil seal	in main drive gear	2.2	4316
Replace side door gasket		2.8	4321
Replace shifter drum		0.7	4331
Replace shifter arm assembly or springs		2.9	4336
Replace transmission top cover and/or gasket		0.6	4341
Replace shifter forks and/or shaft		1.8	4343
Replace side door bearing	one	3.0	4348
	both	3.1	4351
Replace transmission case countershaft bearing		2.9	4361
Replace main drive gear and/or bearing		3.2	4366
Replace transmission side cover gasket		0.9	4368
Replace oil pan and/or gasket or baffle	Note: removal of rear wheel may be necessary	0.9	4378
Replace oil fill tube and/or cover, and/or gasket		0.4	4379
Replace transmission shift shaft seal		2.2	4390

**Table 8-6. Electrical**

ITEM	DESCRIPTION	FPV	LABOR CODE
NOTE: All codes include diagnostic time and replacement time if required. The codes must be used in conjunction with the diagnostic/repair procedures listed in the FLT Service Manual, Part No. 99483-02 and Diagnostic Manual, Part No. 99497-02. Remember to use the same four digit code selected for your labor code as your condition code when filing a warranty claim.			
<b>GENERAL</b>			
Check and diagnose the electrical system lights and accessories	excluding turn signals	0.3	5016
Replace connector housing		0.1	5022
Replace connector anchor		0.1	5023
<b>CHARGING CIRCUIT</b>			
Diagnose charging system	regulator inspection	0.1	5306
Diagnose charging system	regulator bleed	0.9	5307
Diagnose charging system	milliamp draw	0.2	5308
Diagnose charging system	total current draw	0.2	5310
Replace regulator/stator connector		0.2	5311
Diagnose charging system	open grounded stator	1.8	5312
Diagnose system	AC output	1.8	5314
Diagnose charging system	regulator failure	1.0	5315
Diagnose charging system	voltage output	1.0	5316
Diagnose charging system	replace rotor	1.3	5319
<b>STARTER CIRCUIT</b>			
Starter inoperative	open/shorted/grounded motor	1.4	5817
Starter inoperative	start button	1.0	5818
Starter inoperative	solenoid clicks; poor starter or battery connections	0.2	5822
Starter inoperative	solenoid clicks; poor relay or solenoid connections, or bad relay contacts	0.3	5823
Starter inoperative	solenoid clicks; poor starter to battery connections, ground connections, or bad solenoid contacts	0.2	5824
Starter inoperative	damaged motor	1.4	5825
Starter inoperative	relay clicks; open in relay wiring	0.3	5827
Starter inoperative	nothing clicks; poor relay ground	0.3	5828
Starter inoperative	nothing clicks; short to voltage	0.4	5830
Starter inoperative	nothing clicks; open in wiring to or from starter button	0.5	5831
<b>WIRING</b>			
Replace main wiring harness		3.6	5026
Main harness	locate and repair open/short	0.5	5028
Replace rear fender wiring harness		0.8	5036
Replace any single wire	ground wire	0.4	5038
	light circuit	0.2	5039
	accessory circuit	0.2	5043
Repair/diagnose indicator lamp wiring		0.3	5048
Replace ignition wiring harness		1.1	5050
Replace inter connect harness		0.5	5052
Interconnect harness	repair short	0.5	6531
Interconnect harness	repair open	0.5	6532
Handlebar harness	repair short	0.4	6551
Handlebar harness	repair open	0.4	6552

**Table 8-6. Electrical**

ITEM	DESCRIPTION	FPV	LABOR CODE
Overlay harness	repair short	0.5	6560
Overlay harness	repair open	0.5	6561
Jumper harness	accessory switch to interconnect	0.6	6562
<b>SWITCHES</b>			
Replace ignition switch		0.5	5129
Replace rear stoplight switch		0.5	5141
Replace fuse		0.2	5145
Replace main circuit breaker		0.2	5147
Replace fuse block-one		0.3	5148
Replace fuse block-two		0.5	5151
Replace transmission neutral switch	includes diagnosis	0.3	5157
Replace oil pressure switch	includes diagnosis	0.3	5161
Replace rear stoplight relay		0.2	5169
Replace left upper handlebar switch		0.5	5171
Replace right upper handlebar switch		0.7	5173
Replace front brake light switch		0.7	5176
Replace left upper handlebar switch housing		0.2	5177
Replace left lower handlebar switch housing		0.3	5178
Replace right upper handlebar switch housing		0.2	5179
Replace right lower handlebar switch housing		0.7	5180
Replace (cruise) set switch		1.2	5182
Replace handlebar mode switch		1.1	5183
Replace handlebar audio switch		1.0	5186
Replace any fairing switch		0.4	5192
<b>LIGHTS</b>			
Replace headlight	includes diagnosis	0.3	5185
Replace headlight housing	includes adjustment	0.4	5189
Replace instrument panel bulb	includes diagnosis	0.2	5193
Replace taillight bulb or single light bulb or lens	includes diagnosis	0.1	5197
Replace taillight assembly or circuit board		0.2	5215
Replace turn signal light assembly	front	0.4	5201
	rear	0.4	5205
Replace rear turn signal bar		0.4	5207
Replace fender tip light bulb or lens	includes diagnosis rear	0.1	5221
Replace fender tip lamp assembly	rear	0.3	5229
<b>TURN SIGNALS / SECURITY SYSTEM</b>			
No security lamp		0.5	6735
No security lamp		0.5	6736
No security lamp		0.5	6737
No security lamp		0.5	6738
No security lamp		0.1	6739
No security lamp		0.2	6740
No security lamp		0.3	6741
No security lamp		0.3	6742
No security lamp		0.3	6743
No security lamp		0.2	6744
No security lamp		0.3	6745
Security lamp on continuously		0.2	6750

**Table 8-6. Electrical**

ITEM	DESCRIPTION	FPV	LABOR CODE
Security lamp on continuously		0.4	6751
Security lamp on continuously		0.5	6752
Fob signal weak		0.1	6755
Fob signal weak		0.1	6756
Fob signal weak		0.2	6757
Turn signal error 2A		0.9	6773
Turn signal error 2B		0.6	6777
Turn signal error 2B		0.5	6778
Turn signal error 2B		0.7	6779
Turn signal error 2B		0.7	6780
Turn signal error 2C		0.8	6784
Turn signal error 2C		0.8	6785
Turn signal error 2C		1.2	6786
Turn signal error 3A		0.3	6790
Turn signal error 3A		0.2	6791
Turn signal error 3A		0.1	6792
Turn signal error 3A		0.3	6793
Turn signal error 3B		0.1	6796
Turn signal error 3B		0.3	6797
Turn signal error 3B		0.3	6798
Turn signal error 3B		0.3	6798
Turn signal error 3B		0.3	6800
Turn signal error 3C		0.3	6805
Turn signal error 3C		0.3	6806
Turn signal error 3C		0.2	6807
Turn signal error 3C		0.3	6808
Turn signal error 3D		0.4	6810
Turn signal error 3D		0.8	6811
Turn signal error 3D		0.5	6812
Turn signal error 3D		0.4	6813
Turn signal error 3D		0.5	6814
Turn signal error 3D		0.8	6815
Turn signal error 3D		0.5	6816
Turn signal error 4A		0.2	6820
Turn signal error 4A		0.2	6821
Turn signal error 4A		0.4	6822
Turn signal error 4A		0.3	6823
Turn signal error 4A		0.5	6824
Ignition enable output high		0.3	6827
Ignition enable output high		0.3	6828
Alarm output		0.3	6830
Alarm output		0.3	6831
Alarm output		0.3	6832
Alarm output		0.4	6833
Alarm output		0.3	6834
Alarm output		0.3	6835
Starter output high		0.3	6840
Starter output high		0.2	6841

**Table 8-6. Electrical**

ITEM	DESCRIPTION	FPV	LABOR CODE
Starter output high		0.3	6842
Accelerometer		0.2	6845
<b>IGNITION SYSTEM</b>			
NOTE: The diagnostic/replacement operations and times listed on the following pages have been created for your use. The codes must be used in conjunction with the repair procedures listed in the FLT Service Manual, Part No. 99483-02 and Electrical Diagnostic Manual, Part No. 99497-02. Remember to use the same four digit code selected for your labor code as your condition code when filing a warranty claim.			
Diagnostic check		0.2	7110
Diagnostic check		0.3	7115
Diagnostic check		0.4	7120
Diagnostic check		0.3	7125
Chart A-1	No check engine lamp	0.2	7130
	No check engine lamp	0.3	7135
	No check engine lamp	0.3	7143
	No check engine lamp	0.5	7145
Chart A-2	Check engine lamp on continuously	0.3	7148
	Check engine lamp on continuously	0.1	7150
	Check engine lamp on continuously	0.5	7160
	Check engine lamp on continuously	0.4	7165
Chart A-3	Engine cranks but will not start	0.2	7180
	Engine cranks but will not start	0.2	7185
	Engine cranks but will not start	0.4	7210
	Engine cranks but will not start	0.5	7215
	Engine cranks but will not start	0.6	7225
	Engine cranks but will not start	0.6	7226
	Engine cranks but will not start	0.7	7227
	Engine cranks but will not start	0.7	7228
	Engine cranks but will not start	1.5	7230
	Engine cranks but will not start	0.8	7231
	Engine cranks but will not start	0.7	7235
	Engine cranks but will not start	0.6	7250
	Engine cranks but will not start	1.9	7255
	Chart A-4	No spark, no check engine lamp	0.3
No spark, no check engine lamp		0.4	7285
No spark, no check engine lamp		0.5	7291
No spark, no check engine lamp		1.0	7295
No spark, no check engine lamp		0.2	7305
No spark, no check engine lamp		0.4	7310
Chart C	Misfire	0.2	7520
	Misfire	0.5	7525
	Misfire	0.5	7535
	Misfire	0.6	7540
	Misfire	0.6	7541

**Table 8-6. Electrical**

ITEM	DESCRIPTION	FPV	LABOR CODE
Code-12	Map sensor	0.2	7620
	Map sensor	1.7	7625
	Map sensor	0.6	7630
	Map sensor	0.4	7635
	Map sensor	0.4	7640
	Map sensor	0.5	7641
	Map sensor	0.4	7642
	Map sensor	0.5	7645
	Map sensor	0.7	7650
	Map sensor	0.6	7655
Code-16	Battery voltage test	0.4	7770
	Battery voltage test	0.7	7775
	Battery voltage test	0.7	7776
	Battery voltage test	0.9	7779
	Battery voltage test	0.8	7780
	Battery voltage test	1.1	7781
	Battery voltage test	0.8	7782
	Battery voltage test	1.3	7783
Code-24 & 25	Ignition coil	0.3	7855
	Ignition coil	0.6	7856
	Ignition coil	0.3	7860
	Ignition coil	0.3	7865
	Ignition coil	0.2	7870
	Ignition coil	0.3	7875
Code-35	Tachometer	0.5	7881
	Tachometer	0.4	7882
	Tachometer	0.5	7883
	Tachometer	0.5	7884
	Tachometer	0.5	7886
Code-41	Crank position sensor	0.4	7980
	Crank position sensor	0.9	7981
	Crank position sensor	0.4	7982
	Crank position sensor	1.1	7983
	Crank position sensor	1.1	7984
	Crank position sensor	1.1	7985
	Crank position sensor	0.5	7986
	Crank position sensor	0.5	7987
Code-44	Bank angle sensor	0.2	7971
	Bank angle sensor	0.3	7972
	Bank angle sensor	0.4	7973
	Bank angle sensor	0.2	7974
	Bank angle sensor	0.3	7975
	Bank angle sensor	0.2	7976
Code-52, 53 and 55	Ignition module failure	0.2	7913

**Table 8-6. Electrical**

ITEM	DESCRIPTION	FPV	LABOR CODE
<b>BATTERY/HORN</b>			
Replace the battery	includes activating	0.3	5705
Replace horn and/or bracket		0.1	5765
Replace battery tray		0.3	5767
Replace battery cable		0.2	5769
<b>INSTRUMENTS (INCLUDES DIAGNOSIS)</b>			
Replace speedometer	cosmetics only	0.2	6003
<b>ELECTRONIC SPEEDOMETER</b>			
Diagnose inoperative, inaccurate or erratic speedometer	switch	0.3	6001
Diagnose inoperative, inaccurate or erratic speedometer		0.1	6002
Diagnose inoperative, inaccurate or erratic speedometer	wiring	0.2	6004
Diagnose inoperative, inaccurate or erratic speedometer	replace	0.5	6006
Diagnose inoperative, inaccurate or erratic speedometer	wiring	0.4	6008
Diagnose inoperative, inaccurate or erratic speedometer	sensor	0.5	6010
Diagnose inoperative, inaccurate or erratic speedometer	open	0.6	6013
Diagnose inoperative, inaccurate or erratic speedometer	LED failure	0.2	6014
Diagnose inoperative, inaccurate or erratic speedometer	wires	0.4	6016
Odometer inoperable		0.2	6020
Diagnose inoperative, inaccurate or erratic speedometer	internal	0.5	6022
Diagnose inoperative, inaccurate or erratic	speedometer power/ground	0.5	6024
Diagnose inoperative, inaccurate, or erratic speedometer	debris or sensor	0.5	6029
Diagnose inoperative, inaccurate or erratic speedometer	grounded circuit	0.3	6031
Diagnose inoperative, inaccurate or erratic speedometer	fuse	0.1	6032
Replace speedo reset boot		0.1	6043
Replace tachometer		0.3	6009
Replace indicator panel lens		0.3	6018
Replace voltmeter		0.3	6021
Replace oil pressure or air temperature gauge		0.3	6026
Replace speedometer/tachometer cover		0.3	6027



**Table 8-7. Accessories and Sound System**

ITEM	DESCRIPTION	FPV	LABOR CODE
<b>ACCESSORIES</b>			
Replace windshield		0.1	6203
Replace inner fairing		1.8	6209
Remove outer fairing/diagnosis		0.2	6252
Replace saddlebag mounting bracket		0.2	6253
Replace saddlebag guard	complete	0.3	6254
Replace outer fairing		0.4	6255
Replace a single saddlebag guard rail		0.2	6256
Replace a saddlebag		0.2	6257
Replace saddlebag lock		0.2	6259
Replace saddlebag cover	one	0.2	6260
Replace one saddlebag tether strap		0.1	6262
Replace one frame sidecover		0.1	6263
Replace inner fairing bracket		1.0	6265
Replace instrument nacelle		0.4	6267
Replace plastic sticker/instrument nacelle		0.1	6268
Replace outer headlight lens		0.1	6269
Change lock-set		0.5	6276
Replace highway bar	front	0.6	6353
	rear - left	0.3	6355
	rear - right	0.4	6357
Replace Tour-Pak mount/luggage rack		0.7	6453
Replace mirror		0.1	6513
<b>ACCESSORIES - CRUISE CONTROL DIAGNOSIS, REPAIR</b>			
No set switch	Chart A	0.3	6637
No resume switch	Chart B	0.3	6639
No cruise lamp	Chart C	0.3	6641
No cruise power	Chart D	0.3	6643
No power from cruise enable	Chart E	0.5	6645
Constant brake light input	Chart F-1	0.2	6647
No front or rear brake light input	Chart F-2	0.3	6649
Diagnose throttle switch in put	Chart G	0.2	6651
No speedometer input	Chart H	0.8	6653
No tachometer input	Chart I	0.4	6655
Replace cruise cable		0.4	6630
Replace cruise module		0.7	6635
<b>SOUND SYSTEM</b>			
Replace radio chassis		0.4	6601
Replace one front speaker		0.3	6605
Replace one speaker grill	front	0.2	6607
Replace stereo antenna mast		0.3	6617
Replace front antenna lead		0.8	6609
Replace antenna mast mount		0.2	6611

**Table 8-8. Sidecar**

ITEM	DESCRIPTION	FPV	LABOR CODE
<b>2001 ACCESSORY SIDECAR</b>			
Replace sidecar windshield		0.2	6901
Replace sidecar fender		0.8	6904
Replace seat		0.2	6907
Replace seat cable		0.5	6910
Replace liner (carpeting)		0.4	6913
Replace brake pads		0.2	6926
Replace brake caliper		0.3	6927
Replace brake disc		0.3	6929
Replace wheel		0.7	6931
Replace axle		0.8	6934
Removal of sidecar for service and reattachment	includes realignment	1.1	6954
Sidecar alignment		0.8	6956
Sidecar tub removal		0.3	6958

# 2002 FLTRI MODEL

**Table 8-9. Service**

ITEM	DESCRIPTION	FSW	LABOR CODE
<b>NEW</b>			
Set-up and pre-delivery	includes setting SWR	2.5	---
1,000 mile service		2.5	---
<b>REGULAR</b>			
2,500 mile maintenance		0.5	---
5,000 mile maintenance		2.5	---
7,500 mile maintenance		0.5	---
10,000 mile maintenance		4.5	---
20,000 mile maintenance		7.4	---
25,000 mile maintenance		3.0	---
50,000 mile maintenance		7.7	---

**Table 8-10. Chassis**

ITEM	DESCRIPTION	FSW	LABOR CODE
<b>DRIVE</b>			
Adjust secondary belt		0.2	---
Replace secondary belt		3.7	2011
Replace rear wheel sprocket		0.9	2021
<b>WHEELS</b>			
Replace tire and/or wheel assembly - includes balancing	front	0.6	2106
	rear	0.8	2111
Replace wheel assembly - includes disc and sprocket exchange and balancing	front	0.8	2113
	rear	1.0	2114
Replace rim, hub or spokes	front	2.2	2116
	rear	2.4	2121
True laced wheel (wheel on vehicle)		0.4	2156
True laced wheel - includes r/r wheel & tire and time to rebalance	front	1.0	2157
	rear	1.2	2158
Replace wheel bearings	front	0.6	2136
	rear	0.8	2141
<b>HANDLEBARS</b>			
Replace handlebars		1.0	2206
Replace clutch hand lever		0.2	2221
Replace clutch hand lever bracket		0.2	2226
Replace throttle control		0.6	2231
Replace throttle control cable	one or more - includes all adjustments	1.1	2241
Replace both rubber handlebar mounts		1.0	2246

All times listed in hours.

**V.I.N. CODES**

FSW	FLTRI
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**Table 8-10. Chassis**

ITEM	DESCRIPTION	FSW	LABOR CODE
Replace rubber handlebar grip		0.2	2251
Replace handlebar riser	one or both	1.0	2253
Replace handlebar clamp	one or both	0.8	2254
<b>FRAME/SWING ARM/FRONT FORK</b>			
Replace frame	includes removal and installation of all accessories and motorcycle components	17.5	2306
Replace front fork assembly		3.0	2311
Replace lower fork bracket and stem		3.2	2316
Replace steering head cups and bearings, including bearing adjustment		3.2	2321
Replace upper fork bracket		2.7	2326
Adjust steering head bearings		0.7	---
Change front fork oil	both sides	2.5	---
Replace complete lock set		0.4	2333
Service or replace fork slider and/or seal – includes removal, disassembly, cleaning, inspection, replacing parts, servicing damper tube, replacing bushings, assembly and installation	right side	2.0	2343
	left side	2.3	2344
	both sides	2.5	2342
Replace fork side	one side	1.2	2346
	both sides	1.5	2351
Replace fork tube	right side	1.5	2357
	left side	2.3	2358
	both sides	2.5	2361
Replace rear swing arm and/or bearings		1.9	2366
Replace rear fork pivot shaft		1.0	2368
Replace rear shock air line		0.1	2369
Replace rear shock absorber assembly	one side	0.3	2371
	both sides	0.6	2376
Replace rear shock absorber component(s)	one side	0.5	2381
	both sides	0.8	2386
Replace jiffy stand	complete	0.3	2391
	spring and/or stand	0.2	2396
	rubber bumper	0.1	2399
Replace motor rubber mount	rear left	0.3	2397
	rear right	0.5	2395
	front	0.4	2398
Replace footboard		0.2	2394
<b>BRAKES</b>			
Replace hydraulic brake line – includes filling/bleeding brakes	front	1.0	2406
	rear	0.4	2411
Replace rear master cylinder reservoir and/or hose		0.2	2414
Replace brake pads	front – each caliper	0.1	2416
	rear	0.2	2421
Replace brake caliper – includes filling/bleeding brakes	front – each caliper	0.4	2426
	rear	1.0	2431
Replace brake disc	front – one side	0.3	2436
	front – both sides	0.4	2437
	rear	1.3	2441

**Table 8-10. Chassis**

ITEM	DESCRIPTION	FSW	LABOR CODE
Bleed brake caliper – one or two front calipers or rear caliper		0.2	2446
Overhaul brake caliper – includes filling/bleeding brakes	front – each caliper	0.6	2451
	rear	1.3	2456
Replace master cylinder assembly – includes filling/bleeding brakes	front	0.4	2461
	rear	0.5	2466
Rebuild master cylinder assembly – includes filling/bleeding brakes	front	0.6	2471
	rear	0.7	2476
Replace rear brake pedal		0.3	2492
Replace front brake lever		0.1	2494
<b>SEATS/FENDERS/TANKS</b>			
Replace seat		0.1	2506
Replace fender	front	1.0	2526
	rear	1.2	2531
Replace rear fender support		0.4	2536
Replace fuel tank assembly		1.2	2541
Replace fuel tank console/instrument panel		0.3	2553
Replace fuel tank console rubber mounting strip		0.2	2557
Replace fuel tank gauge		0.5	2563
Replace fuel tank gauge sending unit		0.5	2564
Replace fuel tank check valve assembly		0.6	2567
Replace canopy gasket		0.4	2570
Replace fuel filter		0.5	2575
Replace any hose		0.3	2576
Replace fuel hose inside tank		0.5	2579
Replace oil filter		0.1	2582
Replace oil filter bracket		0.6	2584
<b>BELT GUARDS</b>			
Replace rear belt guard – debris deflector		0.1	2616
<b>EXHAUST SYSTEM</b>			
Replace complete exhaust system and/or gaskets		0.6	2626
Replace exhaust pipe	right side	0.3	2631
	left side	0.3	2636
Replace one muffler		0.2	2646
Replace any one exhaust shield		0.1	2661
Replace one muffler support		0.2	2666

**Table 8-11. Engine**

ITEM	DESCRIPTION	FSW	LABOR CODE
<b>GENERAL</b>			
Remove and install engine	California vehicles only	4.6	3006
Remove and install engine		4.5	3006
Replace and adjust stabilizer	top	0.8	3005
Replace and adjust stabilizer	front	0.3	3007
Remove and replace oil pan for inspection/contamination	with engine removed	0.3	3009

**Table 8-11. Engine**

ITEM	DESCRIPTION	FSW	LABOR CODE
<b>CYLINDER HEAD</b>			
Recondition cylinder head – includes removal of head and gasket, remove carbon, service valve guides, grind valves and seats, test springs and install head and gaskets.	front head	4.5	3101
	rear head	4.5	3103
	both heads	5.1	3104
Replace cylinder head	one head	3.2	3106
	both heads	3.8	3108
Replace valve seal or spring after cylinder head removal	one seal or spring (intake or exhaust)	0.1	3131
	both seals or springs (intake or exhaust)	0.2	3132
Replace cylinder head gasket/o-ring	front cylinder	2.6	3140
	rear cylinder	2.6	3142
	both cylinders	3.0	3143
Replace rocker arm covers and/or gaskets	front cylinder	0.8	3144
	rear cylinder	0.8	3145
	both cylinders	0.9	3148
Recondition rocker arms after heads are removed	one head	0.7	3149
	both heads	1.4	3150
Replace lower rocker arm cover/gasket, or rocker arms and /or shafts/rocker arm support	front cylinder	1.2	3147
	rear cylinder	1.2	3152
	both cylinders	1.4	3153
Replace cylinder o-ring/drain o-ring	front cylinder	2.8	3161
	rear cylinder	2.8	3163
	both cylinders	3.2	3168
Replace crankcase umbrella valve	one	1.1	3172
	both	1.2	3174
<b>CYLINDER AND PISTON</b>			
Recondition TOP END - includes disassembly, replacement of piston and sizing cylinder (.005" pistons), replacing piston rings and all items listed under RECONDITION CYLINDER HEAD and assembly.	one piston and cylinder	5.5	3202
	both pistons and cylinders	6.1	3203
Recondition TOP END - includes disassembly, replacement of piston and bore and hone, resizing cylinder (.010" oversize or above), replacing piston rings and all items listed under RECONDITION CYLINDER HEAD and assembly.	one piston and cylinder	5.9	3211
	both pistons and cylinders	6.5	3212
Recondition TOP END – includes disassembly, deglazing cylinder and replacing rings, or replacing cylinder and piston, all items listed under RECONDITIONING CYLINDER HEAD and assembly.	one piston and cylinder	5.3	3207
	both pistons and cylinders	5.9	3208
Replace piston rings – includes deglazing cylinder	one cylinder	3.1	3206
	both cylinders	3.7	3216
Replace piston and piston rings – includes removal of cylinder head and cylinder, fitting new piston with rings, resizing cylinder and assembly	one cylinder	3.7	3221
	both cylinders	4.9	3231
Replace cylinder and piston	one cylinder	3.0	3236
	both cylinders	3.5	3246
Replace upper connecting rod bushing during upper end repair		0.4	3251
Replace one cylinder stud	cylinder removed	0.1	3253
Replace all eight cylinder studs	cylinders removed	0.5	3254

**Table 8-11. Engine**

ITEM	DESCRIPTION	FSW	LABOR CODE
<b>CAM COVER</b>			
Replace lifter cover/gasket or lifter/and, or anti-rotation pin	one or two same cylinder	1.4	3307
	on both cylinders	1.6	3310
Replace push rod, push rod cover and/or O-ring or quad seal	one or two same cylinder	1.4	3317
	one each cylinder	1.6	3318
Replace cam cover and/or gasket		1.6	3325
Replace primary cam chain, sprockets and/or fastener		1.7	3327
Replace primary cam chain tensioner		1.7	3328
Replace cam support plate/O-rings		2.8	3335
Replace cam support plate		2.8	3337
Replace cam support bearing/cams/secondary cam chain/tensioner		3.0	3338
Replace oil pump and/or O-rings		2.6	3341
Replace cam bearing crankcase	one bearing	2.8	3342
	two bearings	2.9	3343
By pass valve inspection		2.7	3354
<b>CRANKCASE</b>			
Replace crankcases	California vehicles only –includes remove and install engine	8.2	3406
Replace crankcases	includes remove and install engine	8.1	3406
Seal crankcase only		7.5	3407
Replace flywheels	includes remove and install engine	7.6	3411
Replace right side main bearing	California vehicles only	7.1	3412
Replace right side main bearing		7.0	3412
Piston jet/O-ring	one	3.0	3413
	both	3.4	3414
Filter housing and or O-rings		0.2	3415
Replace crankcase vent hose and/or fittings		0.2	3417
Replace crankcase oil hose and/or fittings	Feed	0.3	3418
	Return	0.3	3419
Check flywheel trueness before assembly or after removal		0.1	3420
True flywheels after removal	includes piston removal and reinstallation	0.5	3421
Recondition cylinder heads – head removed (for non-related repairs)	one head	1.0	3425
	both heads	2.0	3426
Replace piston rings	cylinders removed (for non-related repairs – deglaze only)	0.3	3428
<b>FUEL SYSTEM</b>			
Replace air cleaner backing plate		0.2	3501
Replace air cleaner cover		0.1	3502
Replace induction module	includes making cruise control cable adjustment	1.0	3508
Replace induction module seal		1.0	3510
Replace exhaust fuel supply/return hose	one or both	0.6	3514
<b>EVAPORATIVE EMISSIONS SYSTEM</b>			
Replace canister		0.1	3527
Replace vapor valve		0.1	3528
Replace any one hose		0.1	3529

**Table 8-12. Drive and Clutch**

ITEM	DESCRIPTION	FSW	LABOR CODE
<b>DRIVE</b>			
Adjust primary chain		0.2	---
Replace primary chain		0.9	4002
Replace engine sprocket		0.9	4003
Replace engine sprocket seal		1.3	4005
Replace primary cover		0.4	4007
Replace primary cover gasket		0.4	4009
Replace primary inspection cover and/or O-ring		0.1	4001
Replace inner primary case &/or seals or bearing		2.1	4008
<b>CLUTCH</b>			
Adjust clutch		0.2	---
Replace release cable assembly		1.2	4006
Service the clutch	includes disassembly, cleaning, inspection repair, assembly and adjustment	1.3	4011
Replace shift lever	heel or toe	0.1	4012
Replace clutch release bearing and/or push rod		0.4	4016
Replace clutch release (ball ramp) and/or side cover		1.6	4018

**Table 8-13. Transmission**

ITEM	DESCRIPTION	FSW	LABOR CODE
<b>TRANSMISSION CASE</b>			
Replace transmission case		5.3	4304
Replace transmission complete		4.9	4305
Overhaul transmission	includes disassembly, cleaning, inspection, replacing parts (transmission case in frame)	4.6	4306
Replace transmission sprocket		2.2	4309
Replace main drive gear oil seal (in transmission case)		2.3	4311
Replace mainshaft oil seal (in main drive gear)		2.2	4316
Replace side door gasket		2.8	4321
Replace shifter drum		0.7	4331
Replace shifter arm assembly or springs		2.9	4336
Replace transmission top cover and/or gasket		0.6	4341
Replace shifter forks and/or shaft		1.8	4343
Replace side door bearing	one	3.0	4348
	both	3.1	4351
Replace transmission case countershaft bearing		2.9	4361
Replace main drive gear and/or bearing		3.2	4366
Replace transmission side cover gasket		0.9	4368
Replace oil pan and/or gasket or baffle	Note: removal of rear wheel may be necessary	0.9	4378
Replace oil fill tube and/or cover, and/or gasket		0.4	4379
Replace transmission shift shaft seal		2.2	4390



**Table 8-14. Electrical**

ITEM	DESCRIPTION	FSW	LABOR CODE
NOTE: All codes include diagnostic time and replacement time if required. The codes must be used in conjunction with the diagnostic/repair procedures listed in the FLT Service Manual, Part No. 99483-02 and Electrical Diagnostic Manual, Part No. 99497-02. Remember to use the same four digit code selected for your labor code as your condition code when filing a warranty claim.			
<b>GENERAL</b>			
Check and diagnose the electrical system lights and accessories	excluding turn signals	0.3	5016
Replace connector housing		0.1	5022
Replace connector anchor		0.1	5023
<b>CHARGING CIRCUIT</b>			
Diagnose charging system	regulator inspection	0.1	5306
Diagnose charging system	regulator bleed	0.9	5307
Diagnose charging system	milliamp draw	0.2	5308
Diagnose charging system	total current draw	0.2	5310
Replace regulator/stator connector		0.2	5311
Diagnose charging system	open grounded stator	1.8	5312
Diagnose system	AC output	1.8	5314
Diagnose charging system	regulator failure	1.0	5315
Diagnose charging system	voltage output	1.0	5316
Diagnose charging system	replace rotor	1.3	5319
<b>STARTER CIRCUIT</b>			
Starter inoperative	open/shorted/grounded motor	1.4	5817
Starter inoperative	start button	1.0	5818
Starter inoperative	solenoid clicks; poor starter or battery connections	0.2	5822
Starter inoperative	solenoid clicks; poor relay or solenoid connections, or bad relay contacts	0.3	5823
Starter inoperative	solenoid clicks; poor starter to battery connections, ground connections, or bad solenoid contacts	0.2	5824
Starter inoperative	damaged motor	1.4	5825
Starter inoperative	relay click; open in relay wiring	0.3	5827
Starter inoperative	nothing clicks; poor relay ground	0.3	5828
Starter inoperative	nothing clicks; short to voltage	0.4	5830
Starter inoperative	nothing clicks; open in wiring to or from starter button	0.5	5831
Starter inoperative	starter relay	0.4	5832
Slow starter crank or starter stalls	poor starter to battery connections, ground connections, or bad solenoid contacts	0.2	5835
Slow starter crank or starter stalls	jackshaft binding or defective starter motor	0.3	5836
Starter spins	clutch	1.5	5837
Starter inoperative	nothing clicks; TSM / TSSM	0.4	5838
Replace starter solenoid contacts	includes starter motor removal	1.6	5845
Starter binding		1.6	5850
Replace starter solenoid coil	includes starter motor removal	1.6	5860
<b>WIRING</b>			
Replace main wiring harness		3.6	5026
Replace ultra overlay		1.8	5027
Main harness	locate and repair open/short	0.5	5028

**Table 8-14. Electrical**

ITEM	DESCRIPTION	FSW	LABOR CODE
Replace rear fender wiring harness		0.8	5036
Replace ECM harness		1.7	5033
Replace sensor harness		1.3	5035
Replace any single wire	ground wire	0.4	5038
	light circuit	0.2	5039
	accessory circuit	0.2	5043
Repair/diagnose indicator lamp wiring		0.3	5048
Replace ignition wiring harness		1.1	5050
Replace inter connect harness		0.5	5052
Interconnect harness	repair short	0.5	6531
Interconnect harness	repair open	0.5	6532
Handlebar harness	repair short	0.4	6551
Handlebar harness	repair open	0.4	6552
Overlay harness	repair short	0.5	6560
Overlay harness	repair open	0.5	6561
Jumper harness	accessory switch to interconnect	0.6	6562
<b>SWITCHES</b>			
Replace ignition switch		0.5	5129
Replace rear stoplight switch		0.5	5141
Replace fuse		0.2	5145
Replace main circuit breaker		0.2	5147
Replace fuse block	one	0.3	5148
Replace fuse block	two	0.5	5151
Replace transmission neutral switch	includes diagnosis	0.3	5157
Replace oil pressure switch	includes diagnosis	0.3	5161
Replace rear stoplight relay		0.2	5169
Replace left handlebar switch		0.5	5171
Replace right handlebar switch		0.7	5173
Replace front brake light switch		0.7	5176
Replace left upper handlebar switch housing		0.2	5177
Replace left lower handlebar switch housing		0.3	5178
Replace right upper handlebar switch housing		0.2	5179
Replace right lower handlebar switch housing		0.7	5180
Replace handlebar (cruise set) switch		1.2	5182
Replace handlebar mode switch		1.1	5183
Replace handlebar (PTT) switch		---	5184
Replace handlebar audio switch		1.0	5186
Replace any fairing switch		0.4	5192
<b>LIGHTS</b>			
Replace headlight	includes diagnosis	0.3	5185
Replace headlight housing	includes adjustment	0.4	5189
Replace instrument panel bulb	includes diagnosis	0.2	5193
Replace taillight bulb or single light bulb or lens	includes diagnosis	0.1	5197
Replace turn signal light assembly	front	0.4	5201
	rear	0.4	5205
Replace rear turn signal bar		0.4	5207
Replace tail lamp assembly or circuit board		0.2	5215
Replace fender tip light bulb or lens	rear	0.1	5221

**Table 8-14. Electrical**

ITEM	DESCRIPTION	FSW	LABOR CODE
Replace fender tip lamp assembly	rear	0.3	5229
<b>BATTERY/HORN</b>			
Replace the battery		0.3	5705
Replace horn and/or bracket		0.1	5765
Replace battery tray		0.3	5767
Replace battery cable		0.2	5769
<b>TURN SIGNALS/SECURITY SYSTEM</b>			
No security lamp		0.5	6735
No security lamp		0.5	6736
No security lamp		0.5	6737
No security lamp		0.5	6738
No security lamp		0.1	6739
No security lamp		0.2	6740
No security lamp		0.3	6741
No security lamp		0.3	6742
No security lamp		0.3	6743
No security lamp		0.2	6744
No security lamp		0.3	6745
Security lamp on continuously		0.2	6750
Security lamp on continuously		0.4	6751
Security lamp on continuously		0.5	6752
Fob signal weak		0.1	6755
Fob signal weak		0.1	6756
Fob signal weak		0.2	6757
Turn signal error 1A		0.5	6760
Turn signal error 1A		1.1	6761
Turn signal error 1A		0.2	6762
Turn signal error 1A		0.3	6763
Turn signal error 1A		0.7	6764
Turn signal error 2A		0.9	6773
Turn signal error 2B		0.6	6777
Turn signal error 2B		0.5	6778
Turn signal error 2B		0.7	6779
Turn signal error 2B		0.7	6780
Turn signal error 2C		0.8	6784
Turn signal error 2C		0.8	6785
Turn signal error 2C		1.2	6786
Turn signal error 3A		0.3	6790
Turn signal error 3A		0.2	6791
Turn signal error 3A		0.1	6792
Turn signal error 3A		0.3	6793
Turn signal error 3B		0.1	6796
Turn signal error 3B		0.3	6797
Turn signal error 3B		0.3	6798
Turn signal error 3B		0.3	6798
Turn signal error 3B		0.3	6800
Turn signal error 3C		0.3	6805
Turn signal error 3C		0.3	6806

**Table 8-14. Electrical**

ITEM	DESCRIPTION	FSW	LABOR CODE
Turn signal error 3C		0.2	6807
Turn signal error 3C		0.3	6808
Turn signal error 3D		0.4	6810
Turn signal error 3D		0.8	6811
Turn signal error 3D		0.5	6812
Turn signal error 3D		0.4	6813
Turn signal error 3D		0.5	6814
Turn signal error 3D		0.8	6815
Turn signal error 3D		0.5	6816
Turn signal error 4A		0.2	6820
Turn signal error 4A		0.2	6821
Turn signal error 4A		0.4	6822
Turn signal error 4A	Does not include lamp assembly replacement	0.3	6823
Turn signal error 4A		0.5	6824
Ignition enable output high		0.3	6827
Ignition enable output high		0.3	6828
Alarm output		0.3	6830
Alarm output		0.3	6831
Alarm output		0.3	6832
Alarm output		0.4	6833
Alarm output		0.3	6834
Alarm output		0.3	6835
Starter output high		0.3	6840
Starter output high		0.2	6841
Starter output high		0.3	6842
Accelerometer		0.2	6845
<b>INSTRUMENTS INCLUDES DIAGNOSIS</b>			
Replace speedometer	cosmetics only	0.2	6003
Diagnose inoperative, inaccurate or erratic speedometer	switch	0.3	6001
Diagnose inoperative, inaccurate or erratic speedometer		0.1	6002
Diagnose inoperative, inaccurate or erratic speedometer	wiring	0.2	6004
Diagnose inoperative, inaccurate or erratic speedometer	replace	0.5	6006
Diagnose inoperative, inaccurate or erratic speedometer	wiring	0.3	6008
Diagnose inoperative, inaccurate or erratic speedometer	sensor	0.5	6010
Diagnose inoperative, inaccurate or erratic speedometer	open	0.6	6013
Diagnose inoperative, inaccurate or erratic speedometer	LED failure	0.2	6014
Diagnose inoperative, inaccurate or erratic speedometer	wires	0.4	6016
Odometer inoperable		0.2	6020
Diagnose inoperative, inaccurate or erratic speedometer	internal	0.5	6022

**Table 8-14. Electrical**

ITEM	DESCRIPTION	FSW	LABOR CODE
Diagnose inoperative, inaccurate or erratic speedometer	power/ground	0.5	6024
Diagnose inoperative, inaccurate, or erratic speedometer	debris or sensor	0.5	6029
Diagnose inoperative, inaccurate or erratic speedometer	grounded circuit	0.3	6031
Diagnose inoperative, inaccurate or erratic speedometer	fuse	0.1	6032
Replace speedo reset boot		0.1	6043
Replace tachometer		0.3	6009
Replace voltmeter		0.3	6021
Replace oil pressure or air temperature gauge		0.3	6026
Replace speedometer/tachometer cover		0.3	6027
Replace ambient temperature sensor		0.3	6028
Replace low fuel module		0.3	6030
<b>ACCESSORIES</b>			
Replace windshield		0.1	6203
Replace inner fairing		1.8	6209
Remove outer fairing/diagnosis		0.2	6252
Replace saddlebag mounting bracket		0.2	6253
Replace saddlebag guard	complete	0.3	6254
Replace outer fairing		0.4	6255
Replace a single saddlebag guard rail		0.2	6256
Replace a saddlebag		0.2	6257
Replace saddlebag lock		0.2	6259
Replace saddlebag cover	one	0.2	6260
Replace one saddlebag tether strap		0.1	6262
Replace one frame sidecover		0.1	6263
Replace inner fairing bracket		0.1	6265
Replace instrument Nacelle		0.4	6267
Replace plastic sticker/instrument Nacelle		0.1	6268
Replace outer headlight lens		0.1	6269
Change Lock-set		0.5	6276
Replace highway bar	front	0.6	6353
	rear - left	0.3	6355
	rear - right	0.4	6357
Replace Tour-Pak mount/luggage rack		0.7	6453
Replace mirror		0.1	6513
<b>SOUND SYSTEM DIAGNOSIS, REPAIR</b>			
Replace radio chassis		0.4	6601
Replace one front speaker		0.3	6605
Replace one speaker grill	front	0.2	6607
Replace stereo antenna mast		0.3	6617
Replace front antenna lead		1.8	6609
Replace antenna mast mount		0.2	6611
<b>ACCESSORIES – CRUISE CONTROL, DIAGNOSIS, REPAIR</b>			
Replace cruise cable		0.4	6630
Replace cruise module		0.7	6635

**Table 8-15. Sidecar**

ITEM	DESCRIPTION	FSW	LABOR CODE
<b>2001 ULTRAS WITH ACCESSORY SIDECAR</b>			
Replace sidecar windshield		0.2	6901
Replace sidecar fender		0.8	6904
Replace seat		0.2	6907
Replace seat cable		0.5	6910
Replace liner (carpeting)		0.4	6913
Replace armrest storage pouch		0.2	6916
Replace armrest		0.2	6919
Replace handles		0.1	6922
Replace brake pads		0.2	6926
Replace brake caliper		0.3	6927
Replace brake disc		0.3	6929
Replace wheel		0.7	6931
Replace axle		0.8	6934
Repair/replace audio harness		1.0	6940
Replace speaker		0.5	6943
Replace speaker pod		0.6	6946
Replace amplifier		0.6	6949
Removal of sidecar for service and reattachment	includes realignment	1.1	6954
Sidecar alignment		0.8	6956
Sidecar tub removal		0.3	6958

**Table 8-16. Fuel Injection**

ITEM	DESCRIPTION	FSW	LABOR CODE
NOTE: The codes listed below must be used in conjunction with the diagnostic/repair procedures listed in the FLT Service Manual, Part No. 99483-02 and Electrical Diagnostic Manual, Part No. 99497-02. Remember to use the same four digit code selected for your labor code as your condition code when filing a warranty claim.			
Diagnostic Check		0.2	7110
Diagnostic Check		0.4	7115
Diagnostic Check		0.4	7120
Diagnostic Check		0.8	7125
Diagnostic Check		0.8	7126
No check engine lamp/No ECM Power		0.6	6013
No check engine lamp/No ECM Power		0.7	7130
No check engine lamp/No ECM Power		0.6	7133
No check engine lamp/No ECM Power		0.4	7141
No check engine lamp/No ECM Power		0.1	7142
No check engine lamp/No ECM Power		0.6	7143
No check engine lamp/No ECM Power		0.5	7146
No check engine lamp/No ECM Power		0.6	7270
No check engine lamp/No ECM Power		0.7	7285
No check engine lamp/No ECM Power		0.9	7286
No check engine lamp/No ECM Power		1.2	7287
No check engine lamp/No ECM Power		0.9	7288
No check engine lamp/No ECM Power		0.9	7289

**Table 8-16. Fuel Injection**

ITEM	DESCRIPTION	FSW	LABOR CODE
No check engine lamp/No ECM Power		0.5	7290
No check engine lamp/No ECM Power		1.5	7295
No check engine lamp/No ECM Power		0.6	7301
No check engine lamp/No ECM Power		0.1	7302
No check engine lamp/No ECM Power		0.8	7303
No check engine lamp/No ECM Power		0.6	7304
No check engine lamp/No ECM Power		0.6	7305
No check engine lamp/No ECM Power		0.5	7306
No check engine lamp/No ECM Power		0.8	7307
No check engine lamp/No ECM Power		0.7	7308
No check engine lamp/No ECM Power		0.6	7309
No check engine lamp/No ECM Power		0.6	7310
No check engine lamp/No ECM Power		0.3	7320
Check engine lamp on continuously		0.2	7148
Check engine lamp on continuously		0.7	7150
Check engine lamp on continuously		0.3	7155
Check engine lamp on continuously		0.2	7156
Check engine lamp on continuously		0.1	7157
Engine cranks but will not start		0.6	7185
Engine cranks but will not start		0.5	7195
Engine cranks but will not start		0.5	7210
Engine cranks but will not start		0.4	7215
Engine cranks but will not start		0.5	7223
Engine cranks but will not start		0.4	7224
Engine cranks but will not start		0.5	7225
Engine cranks but will not start		0.8	7226
Engine cranks but will not start		0.7	7227
Engine cranks but will not start		0.5	7228
Engine cranks but will not start		0.5	7230
Engine cranks but will not start		0.6	7231
Engine cranks but will not start		0.5	7235
Engine cranks but will not start		0.9	7251
Fuel system electrical test		0.2	7335
Fuel system electrical test		0.7	7336
Engine cranks but will not start; Fuel system electrical test		0.6	7340
Engine cranks but will not start; Fuel system electrical test		0.5	7355
Fuel system electrical test		0.3	7360
Fuel system electrical test		0.8	7370
Engine cranks but will not start; Fuel system electrical test		0.4	7380
Fuel system electrical test		0.3	7385
Engine cranks but will not start; Fuel system electrical test		0.9	7415
Fuel system electrical test		0.3	7440
Engine cranks but will not start; Fuel system electrical test		0.4	7441
Fuel system electrical test		0.2	7445

**Table 8-16. Fuel Injection**

ITEM	DESCRIPTION	FSW	LABOR CODE
Engine cranks but will not start; Fuel system electrical test		0.4	7450
Engine cranks but will not start; Fuel system electrical test		0.7	7992
Engine cranks but will not start; Fuel system electrical test		0.4	7520
Starts, then stalls		0.7	7992
Starts, then stalls		0.6	7993
Starts, then stalls		0.3	7994
Starts, then stalls		0.3	7995
Starts, then stalls		0.3	7996
Starts, then stalls		0.5	7997
Starts, then stalls		0.6	7998
Starts, then stalls		0.5	7999
Starts, then stalls; no DTCs		0.4	7127
Starts, then stalls; no DTCs		0.3	7128
Combustion absent		0.1	7537
Combustion absent		0.2	7538
Combustion absent		0.2	7539
Combustion absent		0.2	7543
Combustion absent		0.4	7544
Combustion absent		0.2	7546
Combustion absent		0.4	7547
Combustion absent		0.1	7548
Combustion absent		0.1	7549
Fuel pressure test		0.4	7455
Fuel pressure test		0.7	7465
Fuel pressure test		0.7	7470
Fuel pressure test		0.7	7480
Idle air control		1.1	7486
Idle air control		0.5	7490
Idle air control		0.5	7495
Idle air control		0.6	7505
Idle air control		0.5	7510
Idle air control		0.4	7515
Idle air control		0.6	7516
Misfire at idle or under load		0.4	7520
Misfire at idle or under load		0.2	7525
Misfire at idle or under load		0.4	7535
Misfire at idle or under load		0.3	7540
Misfire at idle or under load		0.2	7545
Misfire at idle or under load		0.4	7550
Misfire at idle or under load		0.3	7134
Misfire at idle or under load		0.3	7136
Misfire at idle or under load		0.6	7137
Misfire at idle or under load		0.7	7138
Misfire at idle or under load		0.6	7139
Misfire at idle or under load		0.9	7144
Misfire at idle or under load		0.5	7147



**Table 8-16. Fuel Injection**

ITEM	DESCRIPTION	FSW	LABOR CODE
Misfire at idle or under load		0.9	7149
Misfire at idle or under load		0.6	7152
Rough or rolling idle		0.3	7134
Rough or rolling idle		0.3	7136
Rough or rolling idle		0.6	7137
Rough or rolling idle		0.7	7138
Rough or rolling idle		0.6	7139
Rough or rolling idle		0.9	7144
Rough or rolling idle		0.5	7147
Rough or rolling idle		0.9	7149
Rough or rolling idle		0.6	7152
Emits black smoke		2.0	7596
Emits black smoke		2.0	7597
Emits black smoke		2.0	7598
Emits black smoke		2.2	7601
Throttle position sensor		0.5	7555
Throttle position sensor		0.5	7560
Throttle position sensor		0.6	7565
Throttle position sensor		0.4	7570
Throttle position sensor		0.5	7575
Throttle position sensor		0.5	7580
Throttle position sensor		0.5	7585
Throttle position sensor		0.7	7590
Throttle position sensor		0.3	7595
Throttle position sensor		0.7	7605
Throttle position sensor		0.5	7610
Throttle position sensor		0.8	7615
MAP sensor		0.8	7620
MAP sensor		1.2	7625
MAP sensor		0.3	7630
MAP sensor		0.6	7635
MAP sensor		0.6	7640
MAP sensor		0.6	7641
MAP sensor		0.5	7642
MAP sensor		0.6	7645
MAP sensor		0.6	7650
MAP sensor		0.7	7655
Engine temperature sensor		0.4	7660
Engine temperature sensor		0.9	7665
Engine temperature sensor		0.2	7670
Engine temperature sensor		0.3	7675
Engine temperature sensor		0.4	7680
Engine temperature sensor		0.4	7685
Engine temperature sensor		0.3	7690
Engine temperature sensor		0.5	7695
Engine temperature sensor		0.3	7705
Engine temperature sensor		0.4	7710
Intake air temperature sensor		0.6	7715

**Table 8-16. Fuel Injection**

ITEM	DESCRIPTION	FSW	LABOR CODE
Intake air temperature sensor		1.4	7720
Intake air temperature sensor		0.4	7725
Intake air temperature sensor		0.4	7730
Intake air temperature sensor		0.9	7735
Intake air temperature sensor		0.9	7740
Intake air temperature sensor		0.4	7745
Intake air temperature sensor		0.3	7750
Intake air temperature sensor		0.4	7755
Intake air temperature sensor		0.4	7760
Battery voltage test		0.4	7770
Battery voltage test		0.5	7775
Battery voltage test		0.9	7776
Battery voltage test		1.0	7779
Battery voltage test		0.9	7780
Battery voltage test		1.4	7781
Battery voltage test		1.0	7782
Battery voltage test		1.0	7783
Battery voltage test		1.2	7784
Fuel injectors		0.1	7785
Fuel injectors		0.6	7790
Fuel injectors		0.7	7795
Fuel injectors		0.6	7805
Fuel injectors		0.6	7808
Fuel injectors		0.5	7809
Fuel injectors		0.6	7815
Fuel injectors		0.6	7820
Fuel injectors		0.7	7825
Fuel injectors		0.6	7830
Fuel injectors		0.6	7835
Fuel injectors		0.6	7840
Fuel injectors		0.4	7845
Fuel injectors		0.7	7850
System relay		0.2	7887
System relay		0.3	7888
System relay		0.4	7889
System relay		0.3	7899
System relay		0.3	7900
System relay		0.4	7901
System relay		0.4	7902
System relay		0.3	7903
System relay		0.2	7904
System relay		0.4	7906
System relay		0.7	7907
System relay		0.3	7908
System relay		0.2	7909
System relay		0.3	7911
System relay		0.4	7912
Ignition coil test		0.5	7853

**Table 8-16. Fuel Injection**

ITEM	DESCRIPTION	FSW	LABOR CODE
Ignition coil test		0.6	7854
Ignition coil test		0.4	7856
Ignition coil test		0.4	7860
Ignition coil test		0.3	7865
Ignition coil test		0.5	7870
Ignition coil test		0.4	7875
Ignition coil test		0.2	7880
Crank position sensor		0.5	7980
Crank position sensor		0.4	7981
Crank position sensor		0.3	7982
Crank position sensor		0.5	7983
Crank position sensor		0.2	7984
Crank position sensor		0.4	7985
Crank position sensor		0.5	7986
Crank position sensor		0.4	7987
ECM failure		0.3	7913
Vehicle speed signal		0.4	7954
Vehicle speed signal		0.4	7956
Vehicle speed signal		0.5	7957
Vehicle speed signal		0.3	7958
Vehicle speed signal		0.4	7959
Vehicle speed signal		0.3	7961
Vehicle speed signal		0.3	7962
Vehicle speed signal		0.3	7963
Vehicle speed signal		0.3	7964
Password problem		0.4	6701
Password problem		0.4	6702
Password problem		0.6	6703
Password problem		0.4	6704
Password problem		0.5	6705
Password problem		0.3	6706
Password problem		0.6	6707
Password problem		0.8	6708
Loss of TSM / TSSM serial data		0.4	6715
Loss of TSM / TSSM serial data		0.6	6716
Loss of TSM / TSSM serial data		0.6	6717
Loss of TSM / TSSM serial data		0.5	6718
Loss of TSM / TSSM serial data		0.4	6719

# NOTES

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# 2002 FLHRSEI MODEL

**Table 9-1. Service**

ITEM	DESCRIPTION	PDC	LABOR CODE
<b>NEW</b>			
Set-up and pre-delivery		3.0	---
1,000 mile service		2.5	---
<b>REGULAR</b>			
2,500 mile maintenance		0.5	---
5,000 mile maintenance		2.5	---
7,500 mile maintenance		0.5	---
10,000 mile maintenance		4.5	---
20,000 mile maintenance		5.2	---
25,000 mile maintenance		3.0	---
50,000 mile maintenance		7.7	---

**Table 9-2. Chassis**

ITEM	DESCRIPTION	PDC	LABOR CODE
<b>WHEELS</b>			
Replace axle covers	add to FRW wheel service times	0.1	2112
<b>HANDLEBARS</b>			
Replace handlebars		2.1	2206
Replace throttle control cable	one or more - includes all adjustments	0.7	2241
Replace handlebar cover		0.3	2209
Replace both rubber handlebar mounts		1.1	2246
Replace handlebar riser	one or both	1.1	2253
Replace handlebar clamp	one or both	0.9	2254
<b>FRAME/SWING ARM/FRONT FORK</b>			
Replace front fork assembly		3.1	2311
Replace lower fork bracket and stem		3.3	2316
Replace steering head cups and bearings, including bearing adjustment		3.3	2321
Replace upper fork bracket		2.8	2326
Adjust steering head bearings		0.8	---
Change front fork oil		0.8	---
Replace fork lock		0.4	2329
Replace front nacelle		0.8	2331

All times listed in hours.

## V.I.N. CODES

PDC	FLHRSEI
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Use the labor codes for FLHRC-I Road King Classic model (FRW), except for the service procedures listed in this section.

**Table 9-2. Chassis**

ITEM	DESCRIPTION	PDC	LABOR CODE
Service or replace fork slider and/or seal – includes removal, disassembly, cleaning, inspection, replacing parts, servicing damper tube, replacing bushings, assembly and installation	one side	2.0	2341
	both sides	2.4	2342
Replace fork side	one side	1.3	2346
	both sides	1.6	2351
Replace fork tube	one side	1.5	2356
	both sides	1.8	2361
Replace footboard / R&R footpegs		0.2	2394
Replace shift lever peg		0.1	2392
<b>BRAKES</b>			
Replace brake pads	front – each caliper	0.1	2416
	rear	0.3	2421
Replace brake disc	front – one side	0.3	2436
	both sides	0.4	2437
	rear	1.3	2441
Replace rear brake pedal		0.3	2492
Replace rear brake pedal / cover		0.1	2496
<b>SEATS/FENDERS/TANKS</b>			
Replace seat		0.3	2506
Replace rider backrest		0.2	2509
Replace rider backrest bracket		0.2	2511
Replace passenger backrest		0.1	6515
Replace passenger backrest mounts / bushings	all or one	0.3	2513
Replace fender	front	1.0	2526
	rear	1.4	2531
Replace rear fender emblem		0.2	2534
Replace rear fender support		0.6	2536
Replace fuel tank assembly		1.3	2541
Replace fuel tank console / instrument panel		0.4	2553
Replace fuel tank console rubber molding strip		0.3	2557
Replace gasoline level sending unit		0.6	2564
<b>EXHAUST SYSTEM</b>			
Replace complete exhaust system and/or gaskets		1.0	2626
Replace exhaust pipe	right side	1.0	2631
	left side	0.3	2636
Replace one muffler		0.2	2646
Replace one muffler end		0.1	2647
Replace one muffler heat shield		0.1	2649
Replace any one exhaust shield		0.1	2661
Replace one muffler support		0.2	2666

**Table 9-3. Engine**

ITEM	DESCRIPTION	PDC	LABOR CODE
<b>CYLINDER HEAD</b>			
Replace head bolt covers	all 4, add to FBW cylinder head service times	0.2	3109
Replace head bolt cover	one	0.1	3110

**Table 9-4. Drive and Clutch**

ITEM	DESCRIPTION	PDC	LABOR CODE
<b>CLUTCH</b>			
Replace release cable assembly		1.3	4006

**Table 9-5. Electrical**

ITEM	DESCRIPTION	PDC	LABOR CODE
<b>WIRING</b>			
Repair/diagnose indicator lamp wiring		0.3	5048
Handlebar harness	repair short	2.1	6551
Handlebar harness	repair open	2.1	6552
<b>SWITCHES</b>			
Replace ignition switch		0.6	5129
<b>LIGHTS</b>			
Replace indicator lamp assembly	includes diagnosis	0.3	5191
Replace turn signal light assembly	front	0.9	5201
	rear - one side	0.7	5205
	rear - both sides	0.9	5238
Replace rear turn signal bar		0.8	5207
<b>INSTRUMENTS – INCLUDES DIAGNOSIS</b>			
Replace tachometer		0.3	6009
Replace tachometer cover		0.3	6027
<b>ACCESSORIES</b>			
Replace windshield		0.1	6203
Replace windshield bushing	all or one	0.2	6208
Replace spring clip on windshield		0.2	6210
Replace one saddlebag filler strip		0.1	6278
Replace air cleaner insert / emblem		0.1	6280

# NOTES

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# 2002 FXDWG3 MODEL

**Table 9-6. Modified Codes**

ITEM	DESCRIPTION	PEV	LABOR CODE
Replace tire	rear	0.7	2111
Replace wheel	rear	1.0	2114
Replace wheel bearings	rear	0.7	2141
Replace front fork assembly		2.5	2311
Replace lower fork bracket and stem		2.6	2316
Replace steering head cups and bearings	including bearing adjustment	2.3	2321
Replace rear swing arm and/or bushings		2.1	2366
Replace brake caliper - includes filling/bleeding brakes	rear	0.7	2431
Replace rear brake disc		0.9	2441
Overhaul brake caliper - includes filling/bleeding brakes	rear	0.9	2456
Replace fuel tank gauge and/or console		0.4	2563
Replace canister		0.3	3527
Replace any one hose		0.3	3529
Replace headlight bracket	includes adjustment	0.4	5181
Replace headlight	includes diagnosis	0.3	5185
Replace headlight housing	includes adjustment	0.6	5189
Replace indicator bulb or lens	includes diagnosis	0.3	5190

**Table 9-7. New Codes**

ITEM	DESCRIPTION	PEV	LABOR CODE
Replace spoiler		0.2	6501
Replace front axle cover	(one of both)	0.1	6502
Replace rear axle cover	one	0.2	6503
	both	0.4	6504
Replace headlight fairing		0.2	6255

All times listed in hours.

## V.I.N. CODES

PEV	FXDWG3
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Use the labor codes for FXDWG Dyna Wide Glide model (GEV), except for the service procedures listed in this section.

# NOTES

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