



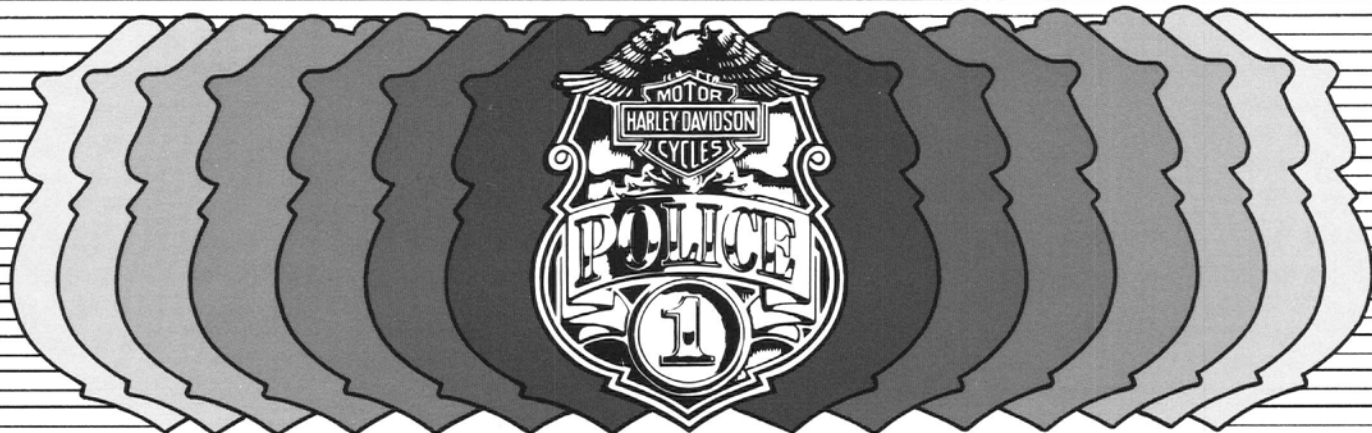
Harley-Davidson, Inc.

# OWNER'S MANUAL

## POLICE MODELS — FLHTP, FXRP

1990

Part No. 99478-90



## **IMPORTANT NOTICE!**

Statements in this manual preceded by the following words are of special significance:

### **WARNING**

**Means there is the possibility of personal injury to yourself or others.**

### **CAUTION**

**Means there is the possibility of damage to the vehicle.**

### *NOTE*

*Other information of particular importance has been placed in italic type.*

We recommend you take special notice of these items.

# YOUR OWNER'S MANUAL

Welcome to the Harley-Davidson Motorcycling Family! Your new Harley-Davidson motorcycle is designed and manufactured to be the finest in its field. Your Harley-Davidson motorcycle conforms to all applicable U.S. Federal Motor Vehicle Safety Standards and U.S. Environmental Protection Agency regulations effective on the date of manufacture.

This manual has been prepared to acquaint you with the operation, care and maintenance of your motorcycle, and to provide you with important safety information. Follow these instructions carefully for maximum motorcycle performance and for your personal motorcycling safety and pleasure.

Your Owner's Manual contains instructions for operation and maintenance. Major repairs are covered in the Harley-Davidson Service Manual. Such major repairs require the attention of a skilled technician and the use of special tools and equipment. Your Harley-Davidson dealer has the facilities, experience and genuine Harley-Davidson parts necessary to properly render this valuable service. We recommend that any emission system maintenance be performed by an authorized Harley-Davidson dealer.

## WE CARE ABOUT YOU

When enjoying your Harley-Davidson motorcycle, be sure to ride safely, defensively and within the limits of the law. Ride with your headlamp on, always wear a helmet, proper eyewear and protective clothing, and insist your passenger does too. Never ride while under the influence of alcohol or drugs. Know your Harley® and read your Owner's Manual cover to cover. Protect your privilege to ride by joining the American Motorcyclist Association.

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## SAFE OPERATING RULES

Before operating your new motorcycle it is your responsibility to read and follow operating and maintenance instructions in this manual, and follow these basic rules for your personal safety.

- Know and respect the rule of the road (see RULES OF THE ROAD). Also read and observe the MOTORCYCLE SAFETY booklets that come with this Owner's Manual. You should also read and know the contents of the MOTORCYCLE HANDBOOK for your state.
- Use only genuine Harley-Davidson approved parts and accessories.
- Gasoline is extremely flammable and is explosive under certain conditions. Refuel in a well ventilated area with the engine turned off. Do not smoke or allow open flames or sparks when refueling or servicing the fuel system. Always close the fuel supply valve when the engine is not running to prevent flooding of the carburetor and the surrounding area with gasoline. Do not fill fuel tank above the bottom of the filler neck insert. Leave air space to allow for fuel expansion.
- Motorcycle exhaust contains poisonous carbon monoxide gas. Do not inhale exhaust gases and never run the engine in a closed garage or confined area.
- Before starting engine, check for proper operation of brake, clutch, shifter, throttle controls, correct fuel and oil supply.
- A new motorcycle must be operated according to special break-in procedure. (See BREAK-IN — THE FIRST 500 MILES.)
- Operate motorcycle only at moderate speed and out of traffic until you have become thoroughly familiar with its operation and handling characteristics under all conditions. If you are an inexperienced rider we recommend that you obtain information and training in correct motorcycle riding technique.
- Do not exceed the legal speed limit or drive too fast for existing conditions. Always reduce speed when poor driving conditions exist. High speed increases the influence of any other condition affecting stability and possibility of loss of control.

- Pay strict attention to road surfaces and wind conditions. Any two wheeled vehicle may be subject to upsetting forces. Wind blasts from passing trucks, holes in the pavement, rough road surfaces, rider control error, etc., may influence the handling characteristics of your motorcycle. Should this happen, reduce speed and guide the motorcycle with a relaxed grip to a controlled condition. Do not brake abruptly or force the handlebar because this may aggravate an unstable condition. New riders should gain experience under various conditions while driving at moderate speeds.
- Operate your motorcycle defensively. Remember a motorcycle does not afford the same protection as an automobile in an accident. One of the most common accident situations occurs when the driver of the other vehicle fails to see or recognize a motorcycle and turns left into the on-coming motorcyclist. Operate only with headlamp on.
- Wear an approved helmet, clothing and footwear suited to motorcycle riding. Bright or light colors are best for greater visibility in traffic, especially at night. Avoid loose, flowing garments and scarves.
- The exhaust pipes and mufflers get very hot when the engine is running and remain too hot to touch for some time after the engine is turned off. Wear clothing that will completely cover the legs when riding. Avoid contact with the exhaust system.
- Do not carry passengers. Harley-Davidson police motorcycles are designed for solo riders only.
- Do not allow others under any circumstances to operate your motorcycle unless you are certain that they are experienced, licensed riders and are familiar with the operation of your particular motorcycle.
- When leaving motorcycle unattended, lock the steering head and remove ignition key from switch. Protect your motorcycle against theft.
- Safe motorcycle operation requires mental awareness and good judgment combined with a defensive driving attitude. Don't allow fatigue, alcohol or drugs to endanger your safety or the safety of others.
- Maintain your motorcycle in proper operating condition in accordance with the MAINTENANCE INTERVALS in this Owner's Manual. Particularly important to motorcycle stability is the tire inflation pressure, tread condition, and proper adjustment of wheel bearings and steering head bearings. Do not operate motorcycle with a loose, worn or damaged steering system or front and rear suspension system because handling will be adversely affected. Contact your dealer for repair of steering or suspension system wear or damage.

- Be sure all equipment required by federal, state, and local law is installed and in good operating condition.
- Maintain proper tire pressure and wheel and tire balance. Improper tire and wheel balance and abnormal tread wear can cause poor handling. Inspect your tires periodically. Replace tires with approved tires only. (See your Harley-Davidson dealer.)
- Do not exceed the Gross Vehicle Weight Rating of your motorcycle. Maximum allowable vehicle weights with rider and passenger are specified on the Identification Label affixed to your vehicle. Overloading, particularly at the rear of a motorcycle, can cause instability. Carefully check any approved accessories for the maximum weight capacities.
- Do not tow a trailer.
- Regularly inspect shock absorbers and front forks. Worn parts can affect stability. If you have questions as to how these should function, see your Harley-Davidson dealer.
- Keep hazardous substances such as brake and battery fluids and cleaning compounds away from eyes and skin and out of mouth. Keep all hazardous substances out of the reach of children.
- Consult your dealer regarding any questions you may have about your motorcycle. Should any abnormality occur in the operation of your motorcycle, immediately contact your Harley-Davidson dealer for correction of the problem. Continued operation of a misperforming motorcycle will probably aggravate an initial problem, cause repairs to be more costly and perhaps affect your personal safety.
- California vehicles, equipped with Evaporative Emission Controls, have a plugged carburetor overflow fitting. The fuel supply valve on the vehicle should be turned off when the vehicle is not operating. If the fuel supply valve is not turned off when the vehicle is not operating, fuel can drain into the engine, dilute the engine oil and cause engine damage.
- Do not tow a disabled motorcycle with another vehicle. The steering and handling of the disabled motorcycle will be impaired because of the force on the tow line. Impaired handling can cause loss of control and possible personal injury. If a disabled motorcycle must be transported, use a truck or trailer.



## RULES OF THE ROAD

- Keep on the right side of the road centerline when meeting other vehicles coming in the opposite direction. Ride to left of center of your lane to avoid possible oily pavement.
- Always sound your horn, actuate your turn signals and pass on the left side when passing other vehicles going in the same direction. Never try to pass another vehicle going in the same direction at street intersections, on curves, or when going up or down a hill.
- At street intersections give the right-of-way to the vehicle on your right. Do not presume too much when you have the right-of-way; the other driver may not know you have it.
- Always signal when preparing to stop, turn, or pass.
- All traffic signs, including those used for the control of traffic at intersections, should be obeyed promptly and to the letter. SLOW DOWN signs near schools and caution signs at railroad crossings should always be observed and your actions governed accordingly.
- When intending to turn to the left, give signal at least 100 feet before reaching the turning point. Move over to the center line of the street (unless local rules require otherwise), slow down, enter the intersection of the street and then turn carefully to the left.
- Never anticipate a traffic light. When a change is indicated from GO to STOP (or vice versa) in the traffic control systems at intersections, await the change.
- While turning either right or left, watch for pedestrians as well as vehicles.

- Do not leave the curb or parking area without signaling and being sure that your way is clear to enter moving traffic. A moving line of traffic has the right-of-way.
- Be sure that your license plate is installed in the position specified by law and that it is clearly visible under all conditions. Keep it clean.
- Ride at a safe speed — a speed consistent with the type of highway you are on, and always note whether the road is dry, oily, icy or wet. Each varying condition on the highway means adjusting your speed and driving habits accordingly.

## **ACCESSORIES AND CARGO**

### **WARNING**

The addition of accessories and additional weight to this motorcycle can affect the motorcycle's stability, handling characteristics, and safe operating speed. Because Harley-Davidson cannot test and make specific recommendations concerning every accessory or combination of accessories sold, the rider must be responsible for safe operation of the motorcycle when installing accessories or hauling additional weight. The following guidelines should be used when equipping a motorcycle and carrying passengers and cargo.

1. The Gross Vehicle Weight Rating (GVWR) is shown on the information plate located on the frame steering head. GVWR is the sum of the weight of the motorcycle and accessories and the maximum weight of the rider, passenger and cargo that may be safely carried. Do not tow a trailer with this motorcycle. Do not exceed the Gross Vehicle Weight Rating as indicated on the frame label. Overloading the motorcycle or towing a trailer will cause unstable handling and reduced braking efficiency which could result in an accident and personal injury.
2. Keep cargo weight concentrated close to the motorcycle and as low as possible to minimize the change in the motorcycle's center of gravity. Distribute weight evenly on both sides of the vehicle and do not load bulky items too far behind the rider or add weight to the handlebars or front forks. Do not exceed 15 pounds maximum load on each saddlebag.
3. Luggage racks are designed for lightweight items — do not overload racks.
4. Be sure cargo is secure and will not shift while riding. Recheck load periodically.
5. Accessories that change the operator's riding position may increase reaction time and affect handling.
6. Additional electrical equipment may overload the motorcycle's electrical system and cause an unsafe operating condition.
7. Large surfaces such as fairings, windshields, backrests, and luggage racks can adversely affect handling. These items should be designed and approved by Harley-Davidson specifically for the motorcycle model and be properly installed.
8. The front and rear guard may provide limited leg protection and cosmetic vehicle protection under unique circumstances (i.e., fall to the side while stopped, very slow speed slide). It is not intended to provide protection in a collision with another vehicle or other object.

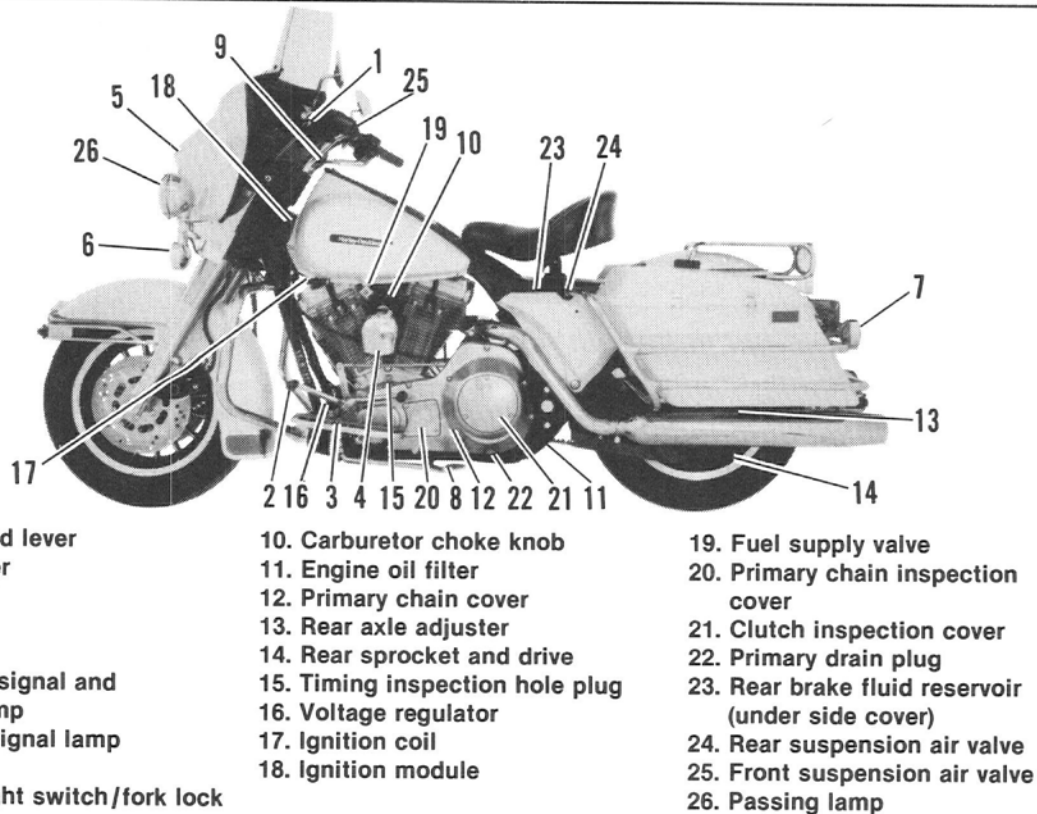


Figure 1. FLHTP — Left Side View (Typical)

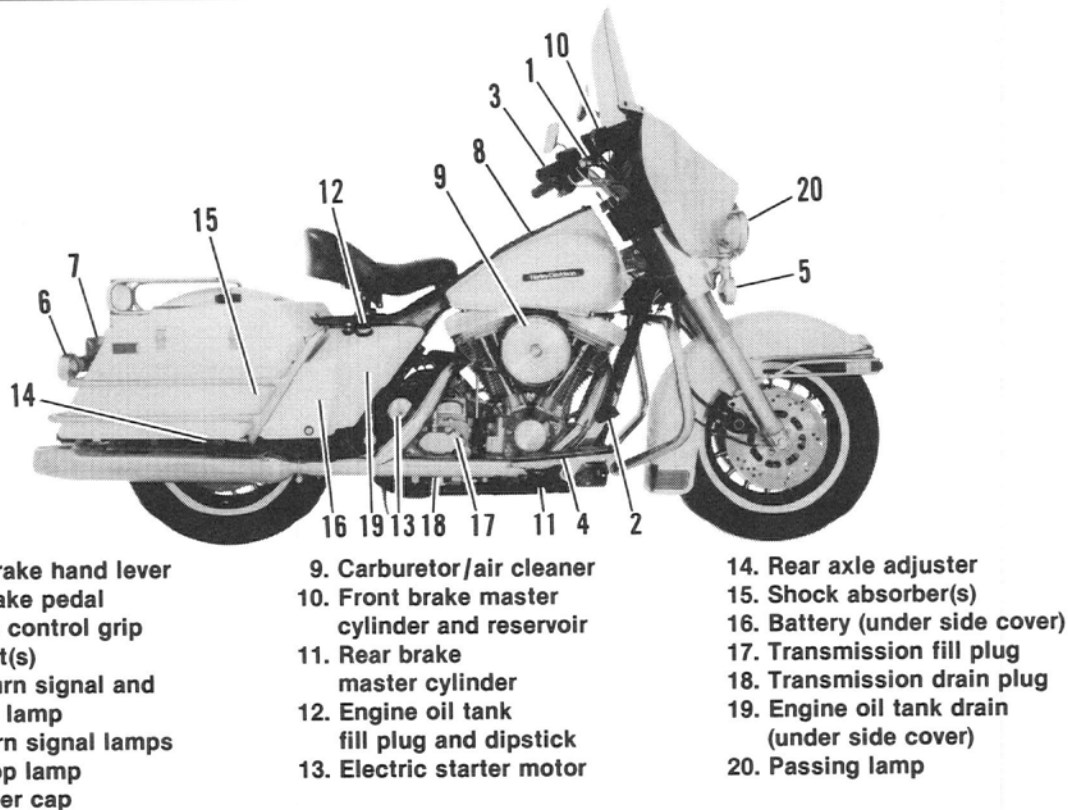
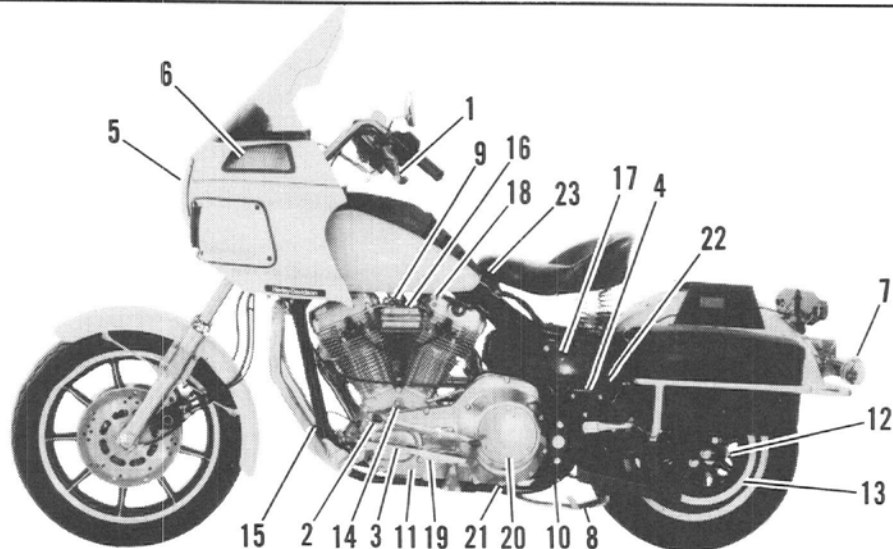


Figure 2. FLHTP — Right Side View (Typical)



1. Clutch hand lever
2. Gear shifter
3. Footrest(s)
4. Horn
5. Headlamp
6. Front turn signal and running lamp
7. Rear turn signal lamp
8. Jiffy stand

9. Carburetor choke knob
10. Engine oil filter
11. Primary chain cover
12. Rear axle adjuster
13. Rear sprocket and drive
14. Timing inspection hole plug
15. Voltage regulator
16. Ignition coil

17. Ignition module
18. Fuel supply valve
19. Primary chain inspection cover
20. Clutch inspection cover
21. Primary drain plug
22. Engine oil tank drain hose
23. Seat release

Figure 3. FXRP with Fairing — Left Side View (Typical)

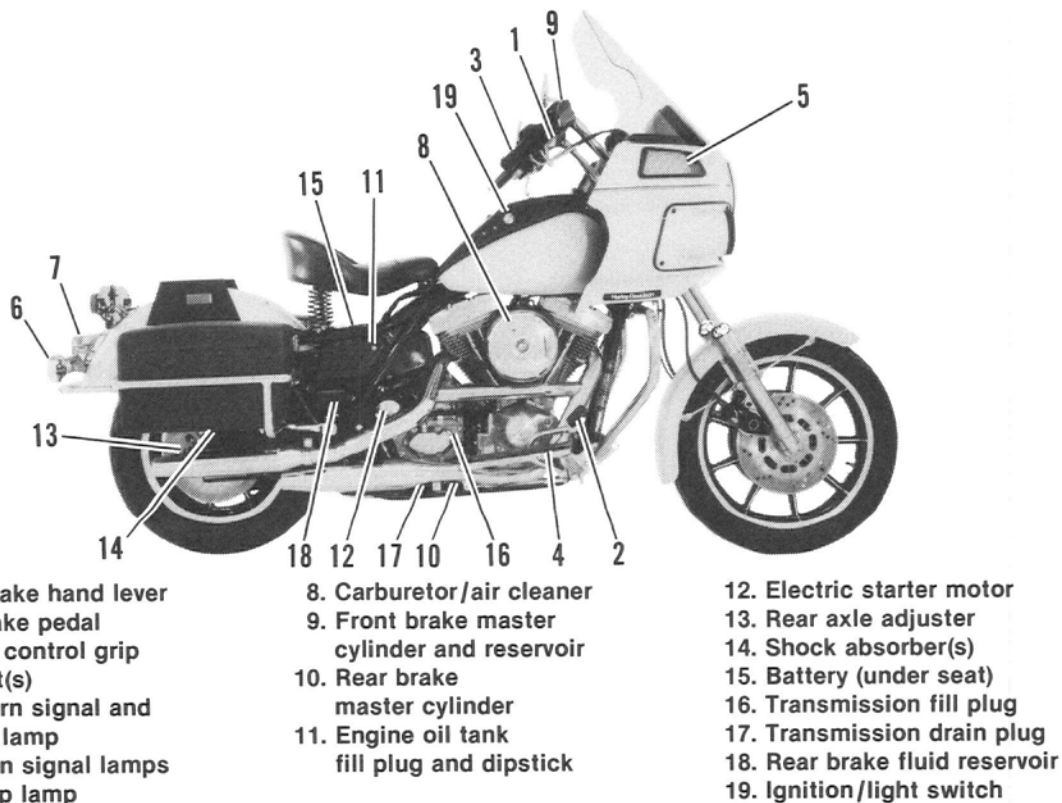
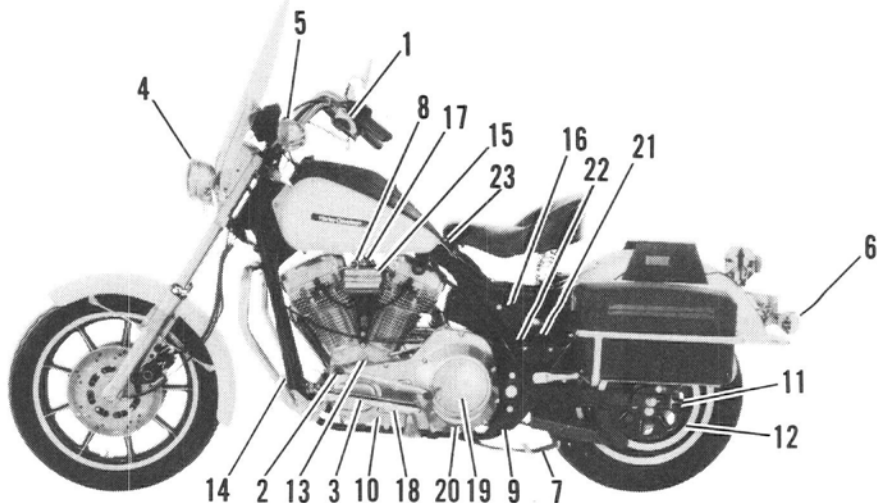


Figure 4. FXRP with Fairing — Right Side View (Typical)



- |                          |                                 |                                    |
|--------------------------|---------------------------------|------------------------------------|
| 1. Clutch hand lever     | 9. Engine oil filter            | 17. Fuel supply valve              |
| 2. Gear shifter          | 10. Primary chain cover         | 18. Primary chain inspection cover |
| 3. Footrest(s)           | 11. Rear axle adjuster          | 19. Clutch inspection cover        |
| 4. Headlamp              | 12. Rear sprocket and drive     | 20. Primary drain plug             |
| 5. Front turn signal     | 13. Timing inspection hole plug | 21. Oil tank drain hose            |
| 6. Rear turn signal lamp | 14. Voltage regulator           | 22. Horn                           |
| 7. Jiffy stand           | 15. Ignition coil               | 23. Seat Release                   |
| 8. Carburetor choke knob | 16. Ignition module             |                                    |

Figure 5. FXRP with Windshield — Left Side View (Typical)



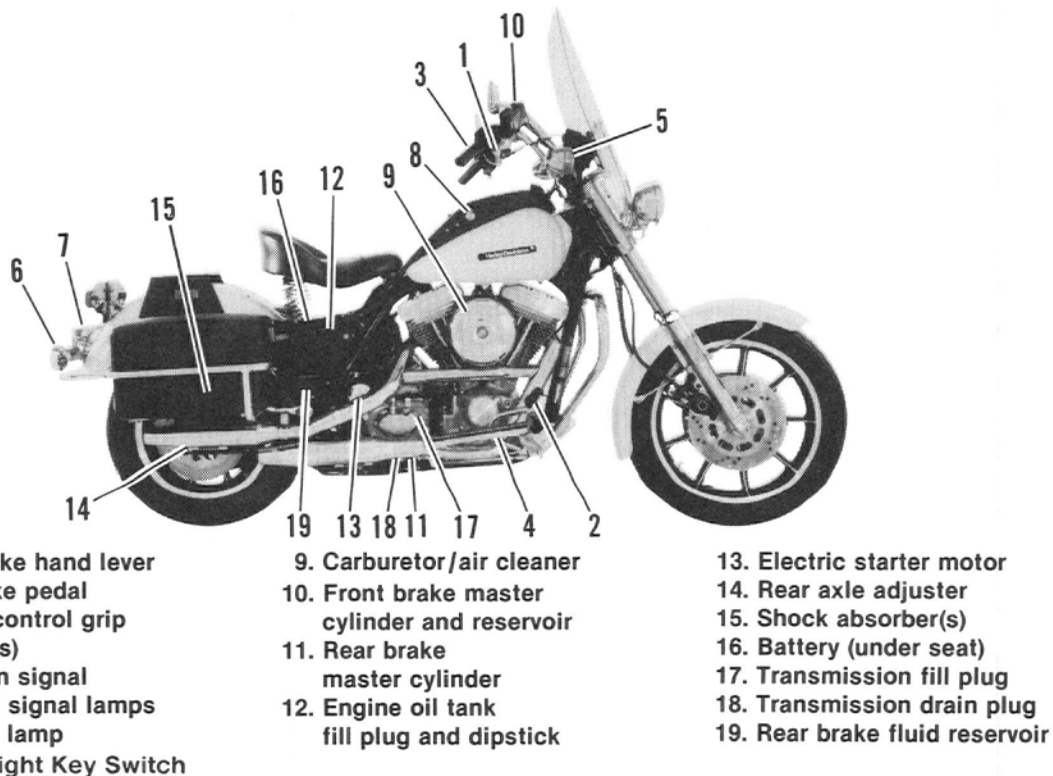


Figure 6. FXRP with Windshield — Right Side View (Typical)

# NOTES

## IGNITION/LIGHT KEY SWITCH

### CAUTION

Do not modify ignition switch wiring to permit motorcycle operation with headlamp off.

### FLHTP

See Figure 7. The ignition/light switch is located below the instrument panel. To unlock the switch and the front fork, insert the key and turn it counterclockwise. Turn lever to the OFF position. Remove the key after the switch is unlocked.

Both the ignition and lights operate when the switch is in the IGNITION and LIGHTS position as required by law in some localities. The ACCESS position operates accessories only.

A front fork lock is incorporated in the ignition switch. Lock the ignition and front fork as follows:

### WARNING

Do not attempt to operate locking mechanism while motorcycle is in motion.

1. Be sure motorcycle and engine are stopped.

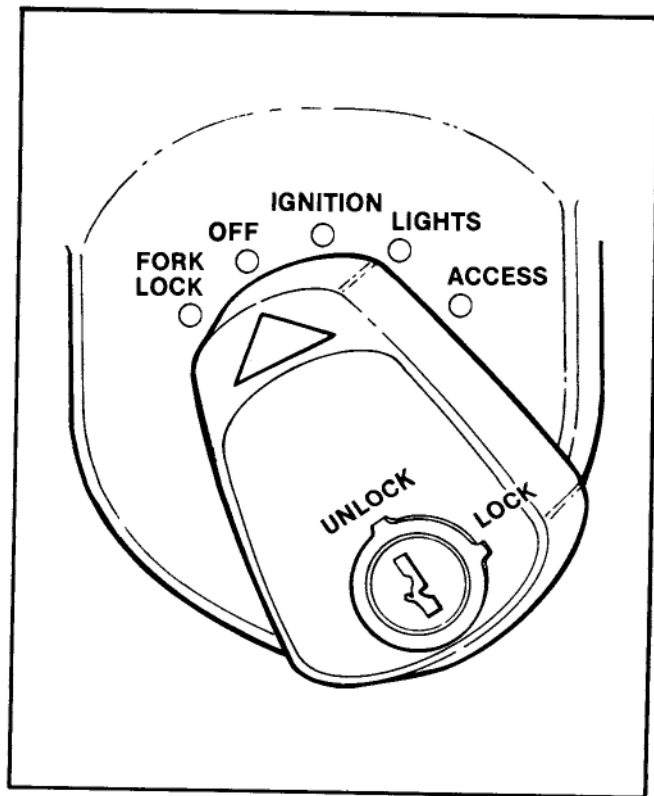


Figure 7. Ignition/Light Switch — FLHTP

2. Be sure that the jiffy stand is down and that the motorcycle is on a level, firm surface.
3. Inert key in switch.
4. Push down on lever and turn it to the left to the FORK LOCK position. Turn the key to the right to the LOCK position.
5. Turn handlebars to the left until lock clicks and remove the key.

To protect yourself, always lock the forks and remove the key when the motorcycle is left unattended. Make a record of the key number so that it can be replaced in case of loss.

## FXRP

See Figure 8. The ignition/light switch (2) is located on the right side of the fuel tank console. From OFF vertical position, there are two positions forward for ignition and lights. All devices are operational in both positions. For U.S.A. operation, both positions operate ignition and lights, with standard wiring, as required by law. Key can be removed to lock switch in OFF position.

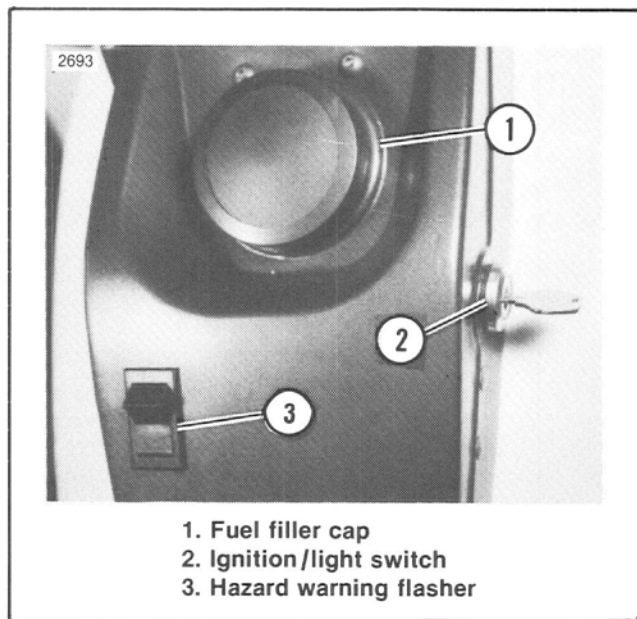


Figure 8. Ignition/Light Switch and Fuel Filler Cap — FXRP

### NOTE

*The hazard warning flasher and horn (normal mode) are operational with the ignition/light switch in the OFF position.*

## ELECTRIC STARTER

See Figure 9. The starter switch (6) is located on the right handlebar. With ignition on, engine stop switch (7) in "RUN" position and transmission in neutral, push switch to operate starter motor.

### CAUTION

**Do not operate starter motor continuously for more than 15 seconds to avoid damage to components.**

## ENGINE STOP SWITCH

See Figure 9. Switch (7) on right handlebar turns ignition on or off and should be used at all times to stop the engine, especially in an emergency. To stop engine, push switch to position marked OFF. Turn ignition/light switch to position marked OFF and remove key before parking or leaving vehicle.

### NOTE

*Clutch adjustment can be checked at this point. Refer to the Service Manual.*

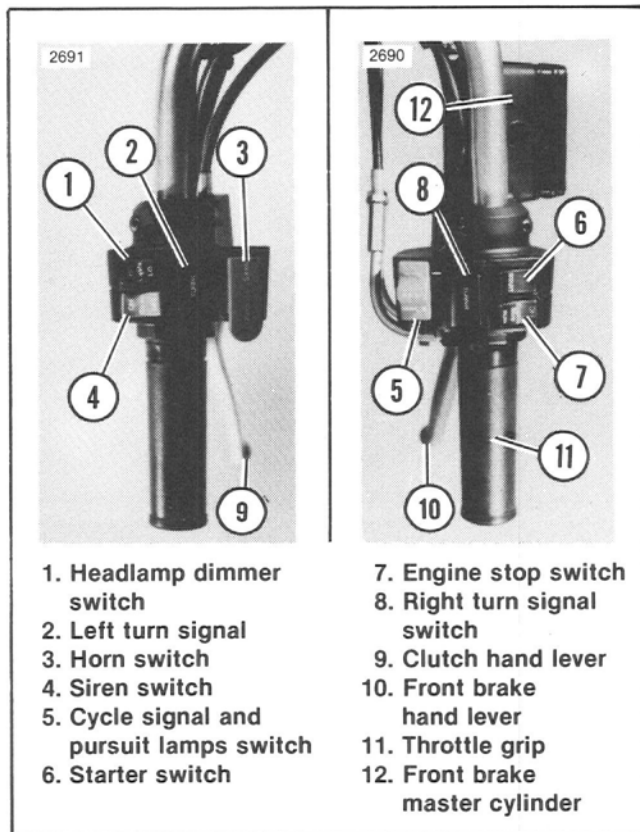


Figure 9. Handlebar Controls

## THROTTLE CONTROL GRIP

See Figure 9. The throttle control grip (11) is located on the right handlebar control group. Turn control grip clockwise to close throttle; turn control grip counterclockwise to open throttle.

A spring loaded friction adjusting screw is located at the bottom of the throttle grip clamp on all models except Ultras. Unscrew the knob (13) so throttle returns to idle position when hand is removed from throttle grip. Screw the knob in to increase friction on grip to provide a damping effect on throttle motion. This reduces rider fatigue on long trips, where steady speeds are maintained. The throttle friction screw **should not** be used under normal stop and go operating conditions.

### WARNING

**Do not overtighten the friction adjustment screw. Operation with the friction screw overtightened is not recommended because of the possible hazard involved when the engine will not return to idle automatically in an emergency.**

## ENRICHENER

### CONSTANT VELOCITY (C.V.) CARBURETOR ENRICHENER - ALL MODELS

A constant velocity carburetor uses an "enrichener" instead of a "choke". An enrichener is operated almost the same way as a choke. There are two differences:

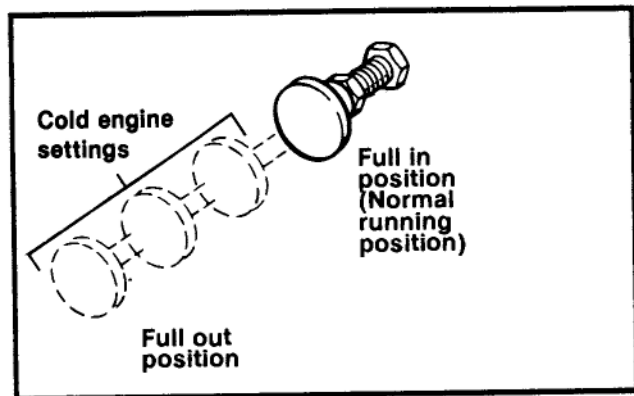


Figure 10. Setting the Enrichener

1. When starting a cold engine, the throttle control **MUST BE CLOSED** for the enrichener to work properly.
2. The enrichener does not have detents. The enrichener knob position adjusts from full in to full out.

See Figure 3. Engine speed increases as the enrichener knob is pulled out. By moving the enrichener knob, you adjust the air/fuel mixture to start a cold or warm engine.

Pull enrichener knob all the way out for cold engine starting. Change the enrichener knob position between full out or full in as the situation requires.

### NOTE

See *OPERATION* for detailed C.V. carburetor operation.

## CLUTCH HAND LEVER

### WARNING

Be sure fingers are not positioned between hand control levers and handlebar grips or operation of vehicle could be impaired.

See Figure 9. The clutch hand lever (9) is located on the left handlebar where it may be easily operated with the fingers of the left hand. Pull lever in against handlebar grip to disengage clutch; release the lever slowly to its outward position to engage clutch.

## GEAR SHIFTER

See Figure 11. The gear shifter is located on the left side, where it may be operated conveniently with the toe of the left foot.

### NOTE

*Police motorcycles have a "heel-toe" shifter lever. With this shift lever, upshifts can be made with the heel of the left foot. Downshifts can be made with the toe.*

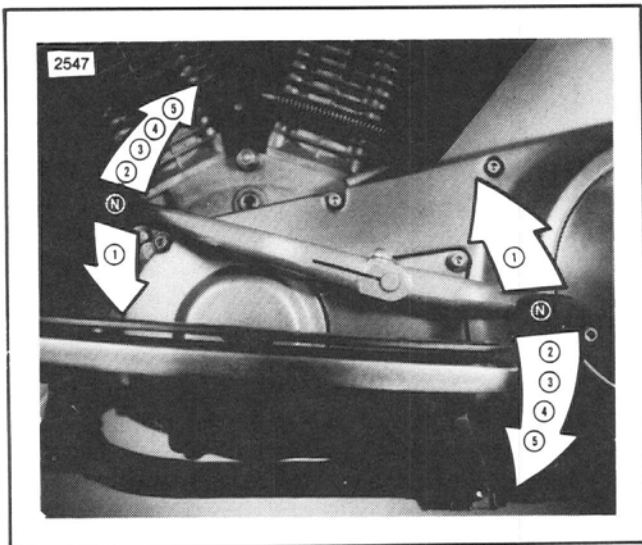


Figure 11. Heel and Toe Shifter

1. To start moving with motorcycle upright and engine idling, pull the clutch lever (located on left handlebar) to fully disengage clutch. Push shifter lever down firmly but gently to end of its travel to engage first gear. Release the clutch lever slowly to engage the clutch and at the same time, open throttle gradually.

- Engage second gear after the motorcycle has run a few yards as follows: close the throttle, disengage the clutch and lift the gear shifter up to the end of its travel. Engage the clutch and operate the throttle gradually. Repeat the same operation to engage third, fourth and fifth gears.
- To shift to lower gears, reverse the movement of the gear shifter, disengaging the clutch completely before each gear change and only partially closing the throttle so that the engine will not drag when clutch is again engaged. Keep in mind that by pushing the heel down on the gear shifter lever, a higher gear is engaged; by pushing the toe down on the gear shifter lever, a lower gear is engaged. When stopping, operate gear shift until neutral is reached. Note that neutral is 1/2 stroke up from first gear.

**NOTE**

*Because of shift drum design, it is not possible to locate neutral from second.*

**CAUTION**

**Do not shift gears without fully disengaging the clutch.**  
For correct operation of your motorcycle under average conditions, the following shifting points are recommended:

<b>Gear Change</b>	<b>Speed</b>
<b>Acceleration (Upshift)</b>	
First to Second	15 mph
Second to Third	25 mph
Third to Fourth	40 mph
Fourth to Fifth	50 mph
<b>Deceleration (Downshift)</b>	
Fifth to Fourth	40 mph or less
Fourth to Third	30 mph or less
Third to Second	20 mph or less
Second to First	10 mph or less

To obtain maximum acceleration during a pursuit condition, the following maximum speed in each gear may be used.

<b>Gear</b>	<b>Maximum Speed</b>
First	37 mph
Second	54 mph
Third	75 mph
Fourth	98 mph
Fifth	Varies with conditions



## WARNING

When shifting to lower gears with the motorcycle in motion, do not downshift at speeds higher than those listed in the table. Shifting to lower gears when speed is too high may severely damage the transmission or cause the rear wheel to lose traction.

Shift to neutral before stopping engine. Neutral can only be reached from first gear. Shifting mechanism can be damaged by shifting gears while engine is stopped.

## NOTE

*Always start motorcycle in motion in first gear.*

When engine speed decreases, as in climbing a hill or running at a reduced speed, change from a higher gear to the next lower gear by partially closing the throttle so that the engine accelerates as soon as the clutch lever is pulled.

## BRAKES

See Figures 12, 13. The brake pedal controls the rear wheel brake and is located on the right side where it is operated by the right foot. See Figure 9. The brake hand lever (10) controls the front wheel brake and is located on the right handlebar, where it is operated by the fingers of the right hand.

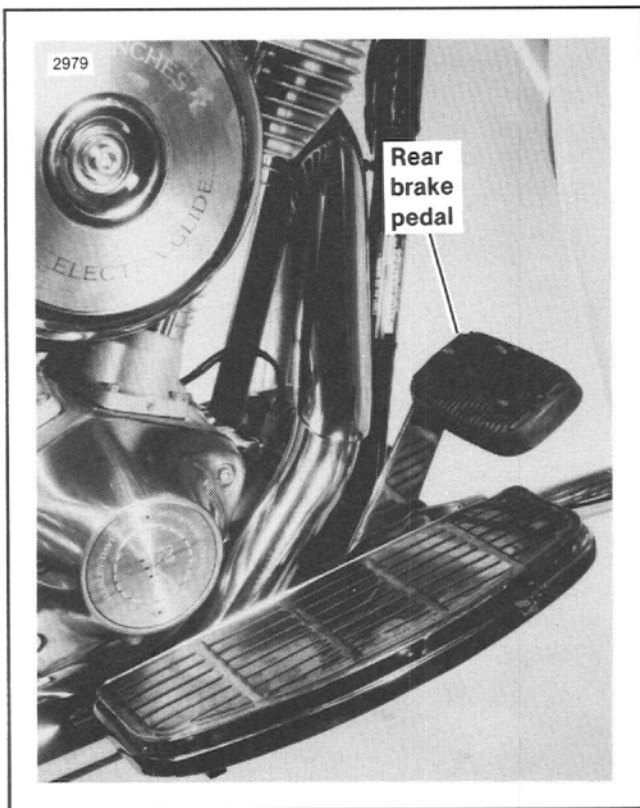


Figure 12. Rear Brake Pedal — FLHTP

Brakes should be applied uniformly and gradually to prevent wheels from locking. A balance between rear and front braking is generally best. Begin braking with the rear brake and then apply the front brake lightly as more braking force is needed.

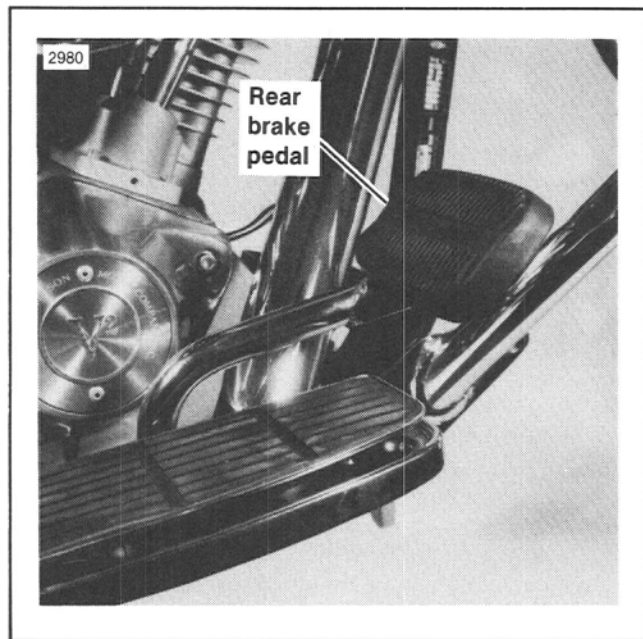


Figure 13. Rear Brake Pedal — FXRP

## WARNING

**Do not apply either brake strongly enough to lock the wheel because this may cause the wheel to skid with possible loss of control of the motorcycle.**

## TURN SIGNAL SWITCHES

See Figure 9. Right handlebar turn switch (8) operates the right front and right rear flashing lamps. Left handlebar turn switch (2) operates the left front and left rear flashing lamps. Front turn signal lamps also function as running lamps.

On FXRP models the lamps will flash only while signal switches are depressed.

## FLHTP Models

The FLT Models' turn signal switches are controlled by a small microprocessor which gets its operation information from the speedometer and turn signal switches.

Momentarily depress the desired turn signal switch. The turn signal lamps will begin and continue flashing. When the microprocessor senses enough forward movement (a time period of approximately 10 seconds) from the speedometer, it cancels the turn signal lamps. If you are not moving forward, (for example; stopped at a stoplight) the turn signals will flash indefinitely.

## HEADLAMP DIMMER SWITCH

See Figure 9. The headlamp dimmer switch (1) on the left handlebar controls the headlamp high and low beams.

High beam indicator light remains lit when high beam is on.

## SIREN SWITCH

See Figure 9. The siren switch (4) is located on the left handlebar. The siren switch is used in combination with the horn switch (3) to activate the siren. The three procedures for operating the siren are as follows:

1st Procedure: Put the siren switch in the OFF position. Depress the forward side of the horn switch labeled SIREN. This will produce intermittent bursts of the “yelp” mode.

2nd Procedure: Placing siren switch in the ON position will produce the continuous “wail” mode.

3rd Procedure: Put the siren switch in the ON position, producing the continuous “wail” mode. Depress the horn switch intermittently to change to the “yelp” mode.

## HORN SWITCH

See Figure 9. The horn is operated by the horn switch (3) on the left handlebar. Refer to the SIREN SWITCH pre-

viously covered for the siren modes controlled by the horn switch.

### **WARNING**

**The horn (normal mode) is only operational when the siren switch is in the “OFF” position.**

## **CYCLE SIGNAL AND PURSUIT LAMP SWITCH**

See Figure 9. The cycle signal and pursuit lamps switch (5) is located on the right handlebar. The two procedures for operating this switch are as follows:

- 1st Procedure: The first position forward labeled AUX will operate the cycle signal lamp (if the vehicle is so equipped).
- 2nd Procedure: The second position forward labeled PURS will operate both the cycle signal lamp and the alternate flashing pursuit lamps.

## **INDICATOR LIGHTS**

See Figures 14, 15, 16. The red oil pressure indicator light is located on the instrument panel and is marked OIL. Light will go on when the ignition/light switch is turned on before starting the engine. After the engine has started, light should go off.

If the oil signal light fails to go off at speeds above idling, it is usually because of an empty oil tank or a diluted oil supply. In freezing weather the oil feed line may clog with ice and sludge, preventing circulation of the oil. A grounded oil signal switch wire, faulty signal switch, or trouble with the oil pump will also cause the light to stay on.

### **CAUTION**

**If the oil pressure indicator light fails to go off, always check the oil supply first. If oil supply is normal and the light still does not operate normally, stop the engine at**

once and do not drive further until the trouble is located and the necessary repairs are made.

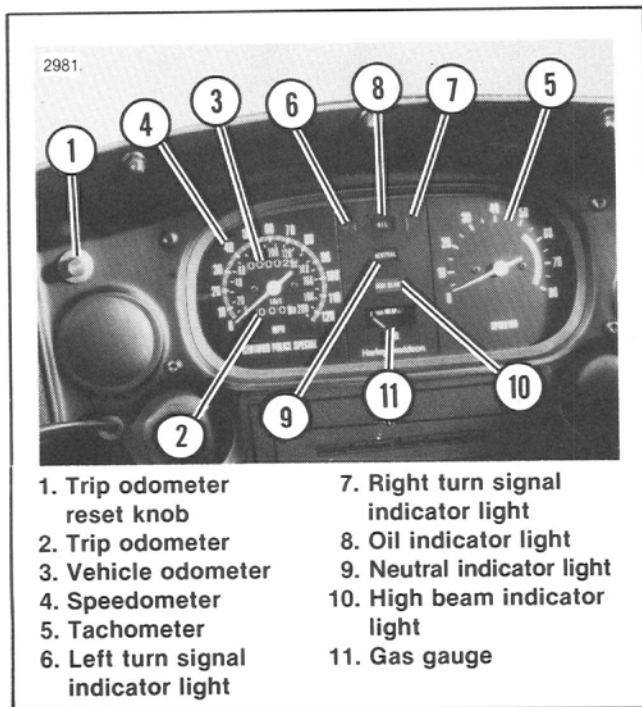


Figure 14. Indicator Lights and Gauges — FLHTP

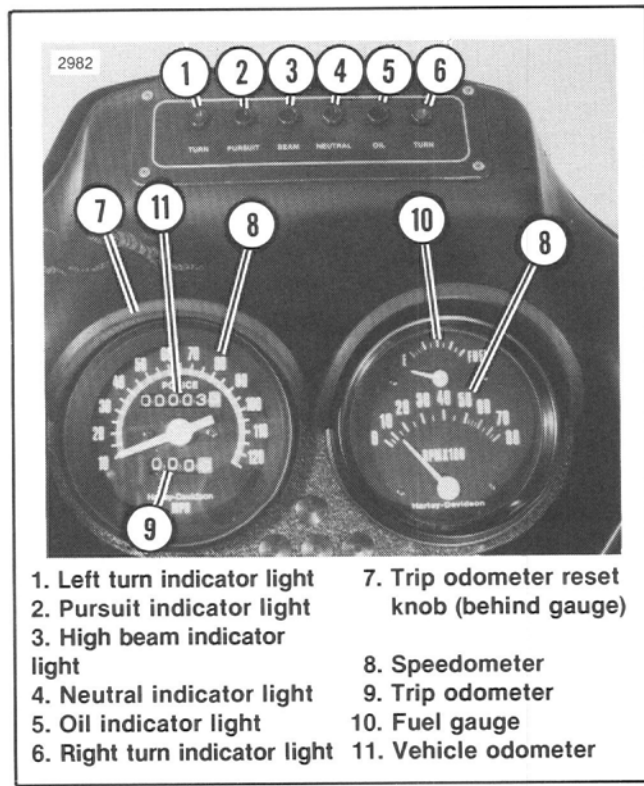


Figure 15. Indicator Lights and Gauges — FXRP (Fairing)

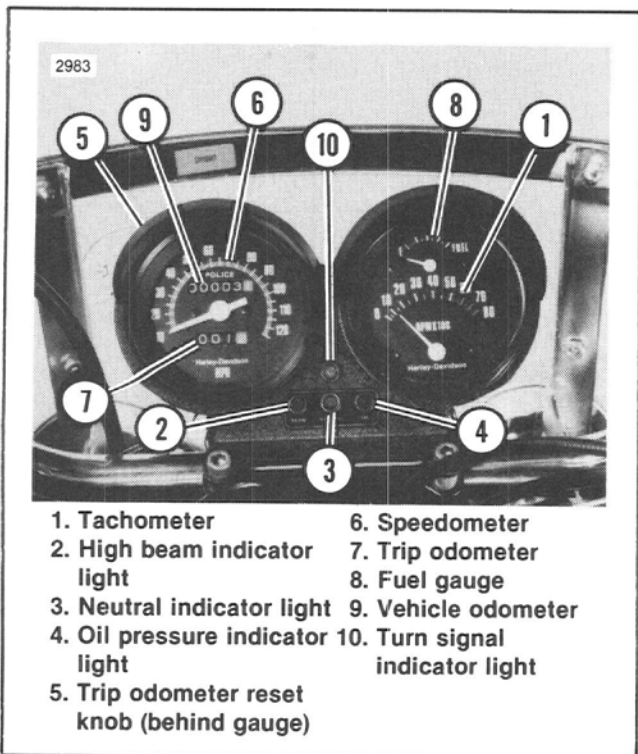


Figure 16. Indicator Lights and Gauges — FXRP (Windshield)

The yellow TURN indicator will flash when turn signals are activated.

The green neutral light indicates when the transmission is in neutral.

The blue high beam light indicates when the headlamp is on high beam.

The red pursuit light (if applicable) indicates when pursuit lamps are operating.

## HAZARD WARNING FLASHER SWITCH

See Figure 8. The FXRP hazard warning flasher switch (3) is located on the lower left top surface of the fuel tank console. Flipping the switch operates all four flashing turn signal lamps at the same time. Directional turn signal switches are not operational with hazard warning flasher in the "ON" position.

The FLHTP hazard warning flasher operates all four turn signal lamps at the same time. It is controlled by the turn signal switch microprocessor. The hazard warning flasher will operate when the ignition switch is in the ignition, lights or access position.

Turn on the hazard warning 4-way flasher by momentarily (approximately  $\frac{3}{4}$  second) depressing BOTH turn signal switches at once. Turn off the 4-way flasher the same way.

#### NOTE

*Hazard warning flasher will operate with ignition/light switch in the "OFF" position.*

## SPEEDOMETER/ODOMETER

See Figures 14, 15, 16. The speedometer registers miles per hour of forward speed and the number of miles the vehicle has traveled.

The trip odometer may be used to record distances on trips or mileage between service intervals. To reset the trip odometer to zero, turn the reset knob counterclockwise.

## TACHOMETER

See Figures 14, 15, 16. The tachometer registers the engine speed in revolutions per minute (rpm).

#### CAUTION

**Do not operate the engine at rpm in the red zone. Lower the rpm by upshifting to a higher gear or reducing the amount of throttle feed.**

## MIRRORS

Adjust the mirrors to clearly reflect the area behind the motorcycle.

#### NOTE

*Adjust mirrors so you can see a small portion of your shoulders in each mirror. This will help you establish the relative distance of vehicles to the rear of your vehicle.*

## JIFFY STAND

See Figure 17. The jiffy stand is located on the left side of the motorcycle and swings outward to support the motorcycle for parking.

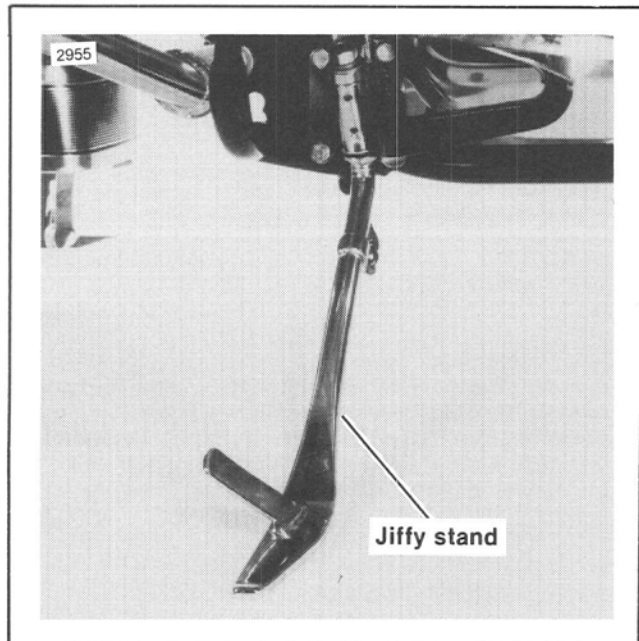


Figure 17. Jiffy Stand

## CAUTION

**Always park the motorcycle on a level, firm surface.**

## WARNING

**Be sure jiffy stand is fully retracted before riding the motorcycle. If jiffy stand is not fully retracted during vehicle operation, it could contact the road surface causing a momentary disturbance before retracting. This momentary disturbance could distract the rider possibly causing loss of vehicle control.**

## STEERING LOCK

### FLHTP

A steering lock is incorporated in the ignition/light switch mechanism. See IGNITION/LIGHT SWITCH.

### FXRP

See Figure 18. The steering lock is located on the lower front fork bracket. Turning fork to the left aligns hole in bracket with hole in steering head. A high strength padlock should be used to lock the fork in this position to discourage unauthorized use or theft when parking your motorcycle.



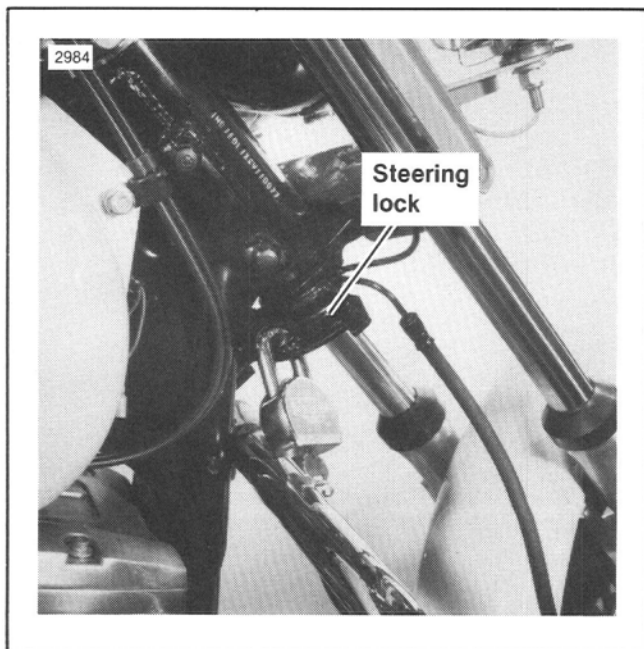


Figure 18. Steering Lock — FXRP

## FUEL SUPPLY VALVE

See Figure 19. The fuel supply valve is located under the

fuel tank. Fuel supply to carburetor is shut off when handle is in horizontal position. Turning the handle down to vertical position turns on main fuel supply; turning handle up to vertical position turns on reserve supply.

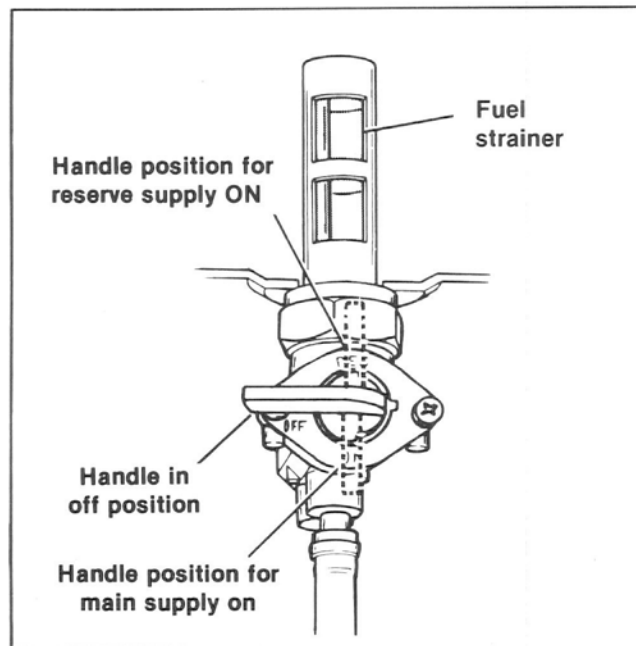


Figure 19. Fuel Supply Valve

## WARNING

Valve should always be closed when engine is not running to prevent accidentally flooding engine or surroundings with gasoline.

## NOTE

To always maintain a reserve supply, do not operate the motorcycle with the valve in the RESERVE position after refueling.

## FUEL FILLER CAP

### FLHTP

See Figure 20. The fuel filler cap is located underneath the door in the center of the fuel tank. To open it, insert the ignition switch key in the lock, turn it to the left and then lift up. To remove the fuel cap, turn counterclockwise.

The fuel filler cap compartment has an overflow drain. The hose from the drain exits behind the transmission.

After fuel filler cap is fully closed, close door, turn key to the right and remove it.

## WARNING

Remove fuel filler cap slowly. Fill fuel tank slowly to prevent spillage. Do not overfill. Do not fill above the bot-

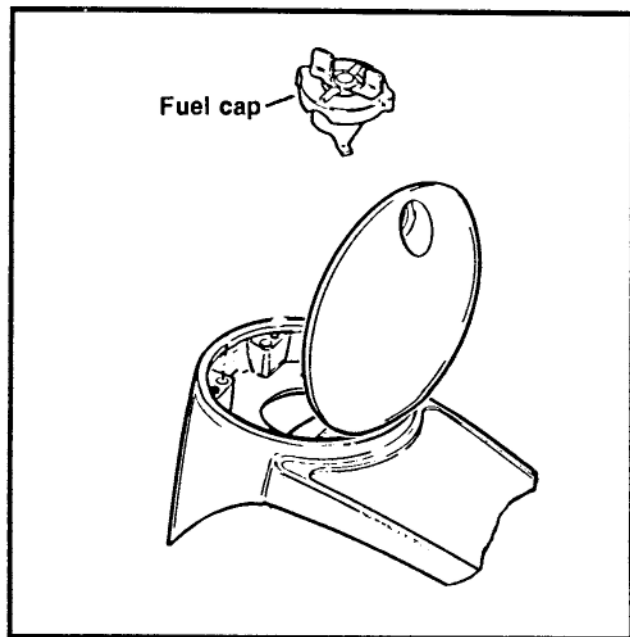


Figure 20. Fuel Filler Cap – FLHTP

tom of the filler neck insert. Leave air space to allow for fuel expansion. Expansion can cause an overfilled tank to overflow gasoline through the filler cap onto surrounding areas. After refueling, be sure filler cap is securely tightened.

## CAUTION

**Gasohol spills can stain the paint on your Harley-Davidson.**

### NOTE

*FLHTP filler caps are located beneath a door and do not have a ratchet action. The filler cap should be fully closed before closing fuel door.*

## FXRP

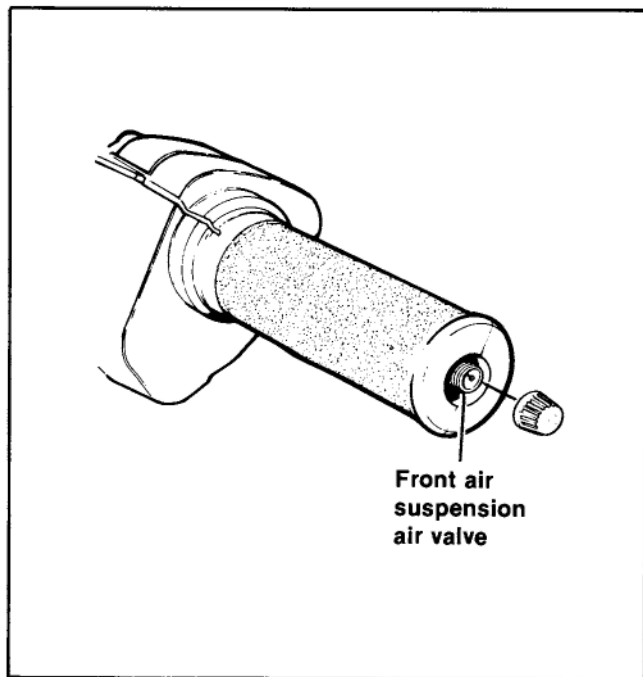
See Figure 8. The fuel filler cap (1) is located in the center of the fuel tank console. To open, turn cap counterclockwise and lift up. To close, turn clockwise until the cap clicks. The ratchet action of the fuel cap prevents overtightening.

## ADJUSTABLE AIR SUSPENSION

The FLHTP model features front and rear air adjustable suspension. Air pressure may be varied to suit your own personal comfort. Lower pressure gives a softer ride and high pressure gives a firmer ride.

See Figure 21. This front air suspension features Harley-Davidson's unique Anti-Dive System (patent pending). The purpose of this system is to reduce the amount of front fork compression while braking. The amount of anti-dive is automatically set as the air pressure in the system is adjusted. Higher pressure allows less front

fork compression (more anti-dive). Lower pressure allows more front fork compression (less anti-dive).



**Figure 21. Front Air Suspension Adjustment Valve — FLHTP**

The front air pressure is adjusted by adding or removing air from the air valve located at the end of the left handlebar.

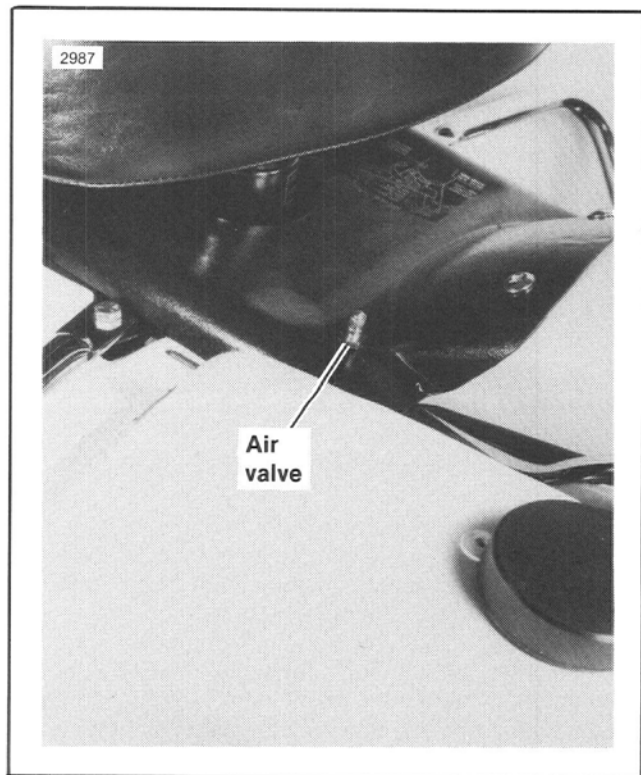
The chart below shows recommended pressures for your riding comfort:

FLHTP		
<u>TYPE OF RIDE</u>	<u>AMOUNT OF ANTI-DIVE</u>	<u>psi</u>
Firm	Stiff	20
Normal	Normal	15
Soft	Soft	10

**NOTE**

*Pressures over 25 psi or less than 10 psi are not recommended.*

See Figure 22. The rear air suspension is adjusted by adding or removing air from the air valve located to the rear and below the seat. Refer to the following chart for the correct air pressure.



**Figure 22. Rear Air Suspension Adjustment Valve - 1988 and Earlier FLHTP**

LOADING	FLHTP AIR SHOCK ABSORBER RECOMMENDED PRESSURE (PSI)
RIDER	0-5
RIDER & MAXIMUM RECOMMENDED LUGGAGE	10

RECOMMENDED PRESSURES MAY BE ADJUSTED FOR RIDER PREFERENCE. DO NOT EXCEED 20 PSI.

### CAUTION

**Maximum air pressure of this system is 40 psi. Air components fill rapidly. To avoid possible damage to components, use low air line pressure. Pressure in front forks and air shocks should be checked weekly if in daily use or before each trip if used occasionally.**

### NOTE

*A no-loss air gauge should be used to accurately measure air pressure. Use low line air pressure or a hand air pump to add air. An Air Suspension Gauge with a hand air pump attached is available at your Harley-Davidson dealer.*

## REAR SHOCK ABSORBER SPRING ADJUSTMENT

### FXRP

The FXRP rear shock absorber springs can be adjusted to five positions for the weight the motorcycle is to carry. The average weight solo rider would use the extended spring position (off cam or first cam step). A heavy solo rider might require the position with springs slightly compressed (second cam step); a larger than average rider and heavy equipment may require the more compressed spring position (third to fifth cam step).

See Figure 23. To adjust the rear shock absorber, turn spring adjusting cam to desired position with spanner wrench. Both spring adjusting cams must be adjusted to the same position. When returning to off-cam position, cams should be backed off in opposite direction.

### WARNING

**Both shock absorber spring adjusting cams must be adjusted to the same position. Not having the cams adjusted to the same position could cause handling difficulties.**

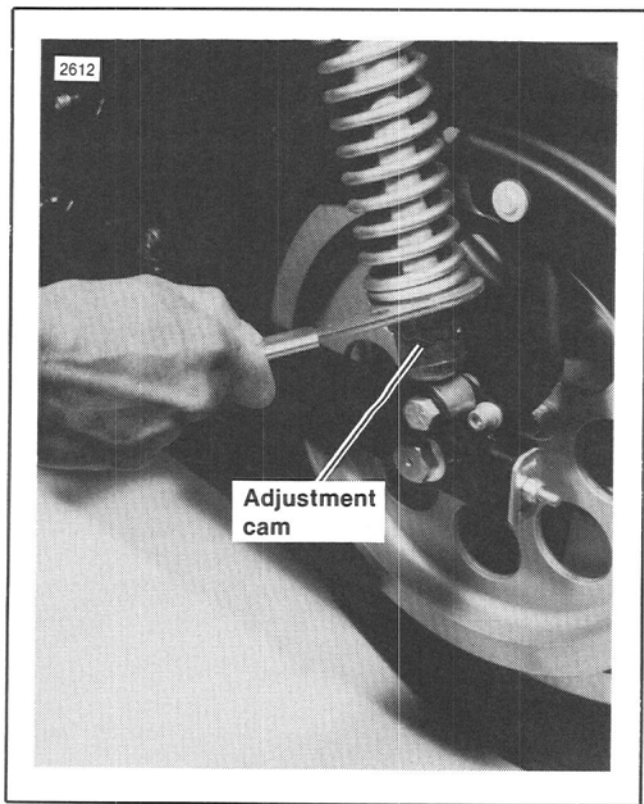


Figure 23. Rear Shock Absorber Adjustment — FXRP

## SOLO SEAT

### FLHTP

See Figure 24. The FLHTP solo seat has three adjustments for rider comfort.

1. The seat rests on an air adjustable shock absorber. Add or remove air from 0-50 psi as desired.

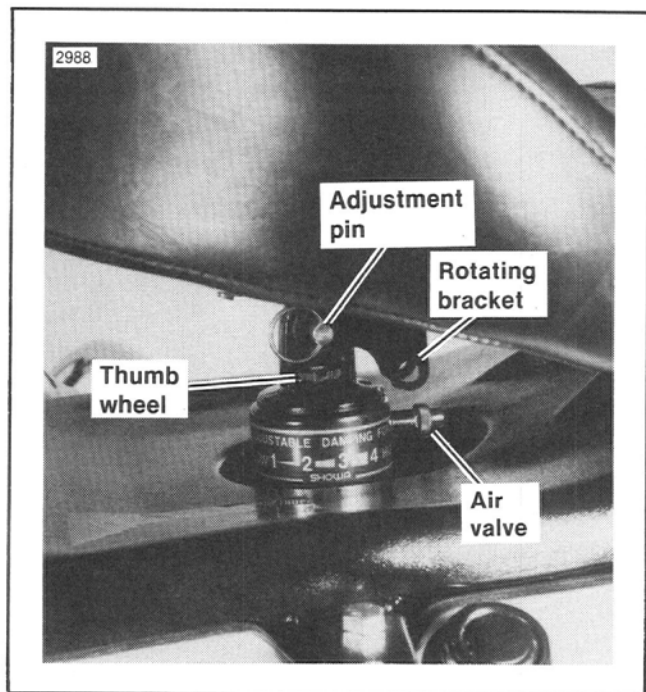
#### CAUTION

**Maximum air pressure of the air shock is 50 psi. Air components fill rapidly. To avoid possible damage to components, use low air line pressure.**

#### NOTE

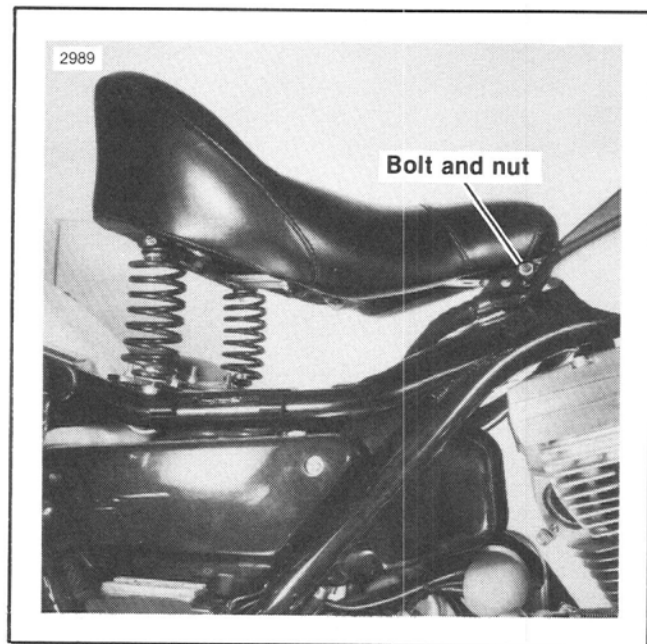
*A no-loss air gauge should be used to accurately measure air pressure. Use low line air pressure or a hand air pump to add air. An Air Suspension Gauge with a hand air pump attached is available at your Harley-Davidson dealer.*

2. The seat mount on shock absorber shaft has two positions. Remove pin, rotate bracket and adjust to desired position. Install pin.



**Figure 24. Solo Seat — FLHTP**

3. The shock absorber damping can be adjusted to one of four positions. Rotate the thumbwheel to desired setting; the first setting is the softest and the fourth setting is the firmest.



**Figure 25. Solo Seat — FXRP**

## **FXRP**

See Figure 25. The FXRP solo seat may be adjusted as follows:

1. Remove the nut and bolt at the front bracket.
2. Position the seat to the hole desired and insert the nut and bolt through the holes in the seat and front bracket. Putting the bolt in the rear hole will move the seat backward and tilt the front of the seat slightly downward. Putting the bolt in the forward hole will position the seat forward and raise the front of the seat to a level position.

The seat may be removed by removing the nut and bolt and then sliding the bottom of both springs forward while lifting upward.

*NOTE*

*Different spring rate springs are available. See your Harley-Davidson dealer.*

## SADDLEBAGS

### FLHTP

See Figure 26. To open, rotate knob on top of saddlebag lid counterclockwise and lift. Lid will open outwards. To close, close lid and rotate knob clockwise until it stops.

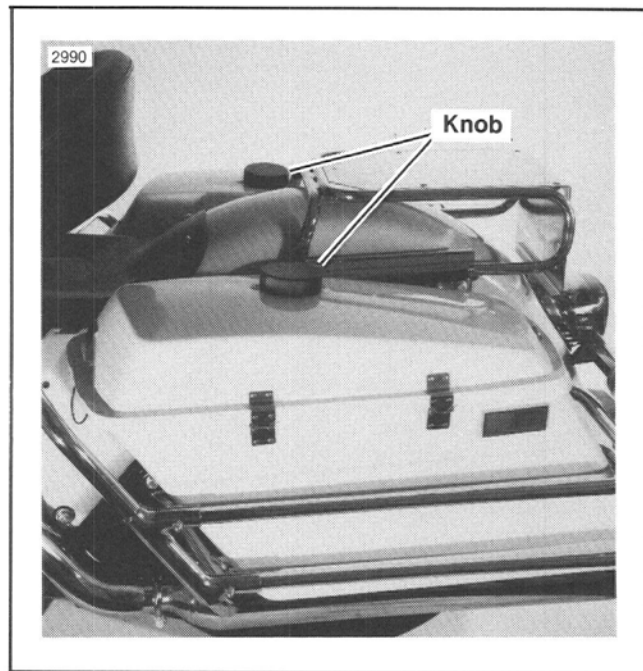


Figure 26. Saddlebags — FLHTP

### WARNING

**Maximum recommended load for each saddlebag is 15 lbs.**



## FXRP

See Figure 27. The FXRP saddlebag covers have locks at the front and rear. To open the saddlebag covers, do the following:

1. Unlock both locks with a full turn of the key.
2. Lift up on the outside edge of both drawcatches to unlatch locks.
3. Lift upward on inner edge of cover (cover is hinged on outside edge).

To close saddlebags, be sure drawcatches are both in open position, close cover and press drawcatches down. To lock, turn key one full turn.

### WARNING

Maximum recommended load for each saddlebag is 15 lbs.

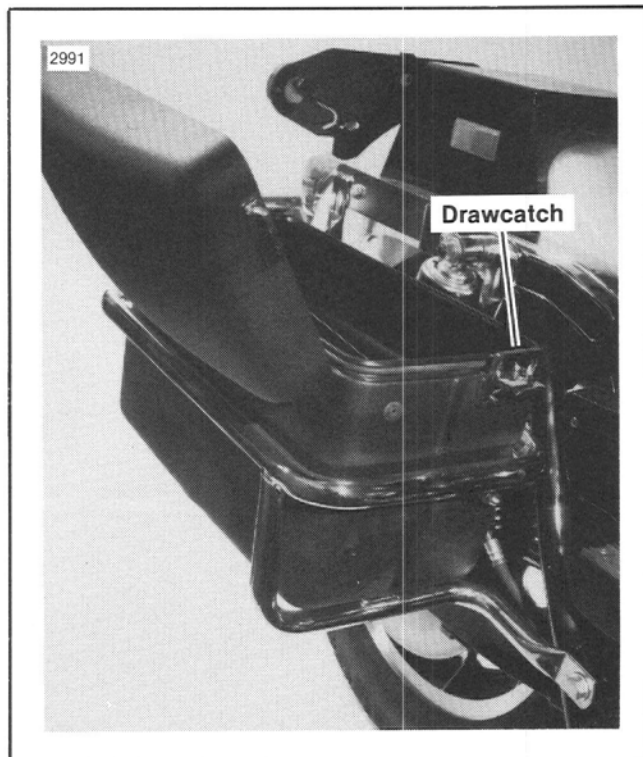


Figure 27. Saddlebags — FXRP

## MICROPHONE INPUT JACK

The input jack for a microphone is located on the console, facing forward. A microphone and audio amplifier can provide an effective mobile Public Address System. Both devices are optional equipment.

Audio gain must be checked and adjusted to eliminate feedback prior to installing the microphone in service.

### NOTE

*Microphone will interrupt siren operation in any mode.*

## OPERATING RECOMMENDATIONS

### CAUTION

**Do not run the engine at extremely high RPM with clutch disengaged or transmission in neutral. Do not exceed 5400 rpm under any conditions. Do not exceed maximum recommended safe engine speed. Do not idle the engine unnecessarily for more than a few minutes with motorcycle standing still.**

An engine run long distances at high speed must be given closer than ordinary attention to avoid overheating and possible consequent damage. Have the engine checked regularly and keep it well tuned. This applies particularly to a motorcycle equipped with windshield and splash shields or lap apron.

### WARNING

**When riding on wet roads or under rainy conditions, braking efficiency is greatly reduced. Caution must be used when applying the brakes, accelerating or turning. This is especially true immediately after the rain begins and the oil from the road surface combines with the water.**

When descending a long, steep grade, downshift and use engine compression together with intermittent application of both brakes to slow the motorcycle. Avoid continuous use of brakes which may cause overheating of the brakes and reduced efficiency.

Do not coast for a long distance with the engine off because the transmission is properly lubricated only when the engine is running.

## BREAK-IN — THE FIRST 500 MILES

The sound design, quality materials, and workmanship that is built into your new Harley-Davidson will give you optimum performance right from the start. However, for the first 500 miles, to wear-in critical parts, observe the

few simple driving rules below. This will assure future performance and durability.

1. During the first 50 miles, keep the engine speed below 2500 rpm in any gear.
2. Up to 500 miles, vary the engine speed, avoiding any steady speed for long distances. Engine speed up to 3000 rpm is permissible in any gear.
3. Avoid fast starts at wide open throttle. Drive slowly until engine warms up.
4. Avoid running the engine at extremely low rpm in higher gears.

## PRE-RIDING CHECK LIST

### WARNING

Read **CONTROLS AND INDICATORS** section before riding your motorcycle.

Before riding your motorcycle at any time, make a general inspection to be sure that it is in safe riding condition.

1. Check amount of fuel in tank and add fuel if required.

### WARNING

**Fill fuel tank slowly to prevent fuel spillage. Do not fill above the bottom of filler neck insert. Leave air space to allow for fuel expansion. Expansion can cause an overflowed tank to overflow fuel through the filler cap vent to surrounding areas. After refueling, be sure filler cap is securely tightened.**

2. Check oil tank oil level. See **MAINTENANCE AND LUBRICATION** section.
3. Check controls to be sure they are operating properly; operate the front and rear brakes, throttle, clutch and shifter.
4. Check steering for smoothness by turning the handlebars through the full operating range.
5. Check tire pressure. Incorrect pressure will result in poor riding characteristics and can affect handling and stability. See **TIRE DATA**, for correct inflation pressures to use.

6. Check all electrical equipment and switches including the stoplamp, turn signals and horn for proper operation.
7. Check for any fuel, oil or hydraulic fluid leaks.
8. Check rear belt adjustment. Service as necessary.

## STARTING THE ENGINE

### WARNING

Before starting engine, always shift transmission to neutral to prevent accidental movement which could possibly cause damage to motorcycle and/or personal injury.

### CAUTION

Never accelerate the engine above 2500 RPM immediately after a cold start. The engine should be allowed to run slowly for 15-30 seconds. This will allow the engine to warm up and let oil reach all surfaces needing lubrication. Extended idling with enricher in the full out position for a period longer than 30 seconds is not recommended.

### WARNING

Be sure jiffy stand is fully retracted before riding the motorcycle. If jiffy stand is not fully retracted during vehicle operation, it could contact the road surface causing a momentary disturbance before retracting. This momentary disturbance could distract the rider, possibly causing loss of vehicle control.

### NOTE

*Engine stop switch on the right handlebar control group must be in RUN (ignition on) position to start engine.*

### CAUTION

**You must pay close attention to the vehicle's warm-up time. Either excessive or insufficient use of the enricher may cause poor performance, erratic idle, poor fuel economy and spark plug fouling.**

### NOTE

*The following starting and operating instructions for all Harley-Davidson motorcycles are recommendations. They may be modified for individual vehicles.*

### COOL ENGINE

#### Outside Temperature Cooler than 50°

**BE SURE THROTTLE IS CLOSED.** Pull enricher knob to full out position. Turn the ignition switch on and press starter switch to operate the electric starter.

See Figure 10. After initial 15-30 second warm-up, ride for 5 minutes or 3 miles with enricher knob in full out position. After 5 minutes or 3 miles, push the enricher knob in to the 1/2 way position. Ride 2 minutes or 2 miles. After 2 minutes or 2 miles, push the enricher knob fully in.

### COOL ENGINE

#### Outside Temperature Warmer than 50°

**BE SURE THROTTLE IS CLOSED.** Pull enricher knob to full out position. Turn the ignition switch on and press starter switch to operate the electric starter.

See Figure 10. After initial 15-30 second warm-up, ride for 3 minutes or 2 miles with enrichener knob in full out position. After 3 minutes or 2 miles, push the enrichener knob in to the  $\frac{1}{2}$  way position. Ride 2 minutes or 2 miles. After 2 minutes or 2 miles, push the enrichener knob fully in.

### **WARM OR HOT ENGINE**

Open throttle  $\frac{1}{8}$  -  $\frac{1}{4}$ . Turn on ignition switch and operate electric starter. **DO NOT USE ENRICHENER.**

#### *NOTE*

*If the engine does not start after a few turns or if one cylinder fires weakly but engine does not start, it is usually because of an over-rich (flooded) condition. This is especially true of a hot engine. If the engine is flooded, push enrichener knob in all the way, turn ignition on and operate starter with throttle wide open. **DO NOT "pump" the throttle while turning over the engine.***

### **STOPPING THE ENGINE**

See Figure 9. Stop the engine by turning off the engine stop switch (7) on right handlebar, then turn off the ignition key switch. If the engine should be stalled or stopped in any way, turn off the key switch at once to prevent battery discharge.

### **SHIFTING GEARS**

See Figure 11. Pushing lever all the way down (full stroke) shifts transmission to the next lower gear, while lifting lever all the way up (full stroke) shifts transmis-

sion into the next higher gear. The operator must release lever after each gear change to allow lever to return to its central position before another gear change can be made.

Neutral position is between first (low) and second gears. First gear is the last gear position that can be found by pushing lever full strokes downward. To shift from first gear to neutral, lift lever half its full stroke.

With the motorcycle standing still and the engine not running, it usually will be necessary to roll the motorcycle backward and forward with the clutch fully disengaged while maintaining a slight pressure on the foot shift lever before a shift from one gear to another can be made. Even with the engine running and the motorcycle standing still, difficulty may be experienced in shifting gears. This difficulty arises when transmission gears are not turning and shifting parts are not lined up to permit engagement. When this difficulty is experienced, *do not under any circumstances*, attempt to force the shift. The results of such abuse will be a damaged or broken shifter mechanism. Either roll the motorcycle as indicated above, or if the engine is running, engage the clutch very slightly while applying light pressure to the shifter lever to make the shift. Both of these procedures set transmission gears in motion and then the shift can be made easily. See GEAR SHIFTER in the CONTROLS AND INDICATORS section.

## SAFE OPERATING MAINTENANCE

Good maintenance means a safe machine. A careful check of certain equipment must be made after periods of storage and frequently between the regular service intervals to determine if additional maintenance is necessary.

The following items should be checked:

1. Tires for correct pressure, abrasions or cuts.
2. Belt for proper tension.
3. Brakes, steering and throttle for responsiveness.
4. Brake fluid level and condition. Hydraulic lines and fittings for leaks. Also, check brake pads and discs for wear.
5. Cables for fraying or crimping and free operation.
6. Engine oil, transmission, and primary chaincase fluid levels.
7. Headlight, taillight, brake light, and directional light operation.

## BREAK-IN MAINTENANCE

### NOTE

*The performance of new motorcycle initial service is re-*

*quired to keep your new motorcycle warranty in force, and to assure proper emissions system operation.*

After a new motorcycle has been driven its first 500 miles, the motorcycle should be taken to the dealer from whom it was purchased for initial service operations. If it is impossible to take the motorcycle to a dealer at the mileage intervals mentioned, the owner should at least perform the following service or arrange to have it done. Take the motorcycle to the dealer for more complete servicing as soon as it is convenient to do so.

### WARNING

**Stop the engine and support the motorcycle securely before performing all service procedures. Service should be performed using proper tools, in an adequately lighted and ventilated work area.**

**When working on the motorcycle, do not support motorcycle by placing supports under the brake pedal. Damage to the brake system could occur causing possible malfunction and personal injury.**

### WARNING

**For your personal welfare, all the listed service and maintenance recommendations should be performed. Lack of regular maintenance, at the suggested intervals may affect the safe operation of your motorcycle.**

## CHECK AT FIRST 500 MILES

1. Change engine oil.
2. Replace oil filter.
3. Clean tappet oil screen.\*
4. Change primary chaincase lubricant and clean magnetic drain plug.
5. Inspect air cleaner and service as required.
6. Check and adjust primary chain.
7. Check clutch adjustment.
8. Check rear brake pedal height adjustment.
9. Inspect brake pad linings and discs for wear.
10. Check brake fluid level and condition.
11. Inspect oil lines and brake system for leaks.
12. Lubricate the following: front brake handlever, throttle control cables, clutch control cable and handlever.

### CAUTION

**DO NOT lubricate the enrichener cable on C.V. carburetors.**

13. Check operation of throttle and enrichener controls.
14. Check engine low and high idle speed adjustment.
15. Check battery electrolyte level; check and clean connections.
16. Check operation of all electrical equipment and switches.

### CAUTION

**Do not attempt to tighten engine head bolts. Re-tightening can cause engine damage.**

17. Check tightness of all fasteners, except engine head bolts.
18. Check vehicle alignment.
19. Check stabilizer links\* and engine mounts.
20. Check tire pressure and inspect tread.
21. Check wheel spoke tightness.\*
22. Check rear fork pivot nut tightness.\*
23. Check and adjust rear drive belt or chain.
24. Change transmission lubricant and clean magnetic drain plug.\*
25. Inspect fuel valve, lines and fittings for leaks.
26. Clean fuel tank filter screen.
27. Check front fork bearing adjustment.
28. Check and adjust air suspension system.\*
29. Road test.

\*If applicable.

## REGULAR SERVICE INTERVALS

Regular lubrication and maintenance will help keep your new Harley-Davidson operating at peak performance. Your Harley-Davidson dealer knows best how to service your motorcycle with factory approved methods and equipment assuring you of thorough and competent workmanship.



### REGULAR MAINTENANCE INTERVALS

ODOMETER READING (miles)	SERVICE OPERATIONS (see chart code below)																					
	Pre-ride	500	2,500	5,000	7,500	10,000	12,500	15,000	17,500	20,000	22,500	25,000	27,500	30,000	32,500	35,000	37,500	40,000	42,500	45,000	47,500	50,000
Engine oil*	I	R	I	R	I	R	I	R	I	R	I	R	I	R	I	R	I	R	I	R	I	R
Oil filter		R		R		R		R		R		R		R		R		R		R		R
Air cleaner		IL		IL		IL		IL		R		IL		IL		IL		R		IL		IL
Tappet oil screen		I		I		I		I		I		I		I		I		I		I		I
Rear belt	I	A	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Primary chain		I		I		I		I		I		I		I		I		I		I		I
Primary chaincase lubricant		R		R		R		R		R		R		R		R		R		R		R
Battery fluid level, connections*		I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Rear brake pedal height adjustment		I		I		I		I		I		I		I		I		I		I		I
Brake pad linings and discs for wear		I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Brake fluid level and condition*		I		I		I		R		I		I		R		I		I		R		I
Clutch adjustment		A		A		A		A		A		A		A		A		A		A		A
Fuel valve, lines and fittings for leaks		I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Front brake hand lever, throttle control cables, choke control cable, clutch control cable and hand lever		L		L		L		L		L		L		L		L		L		L		L
All fasteners except engine head bolts		T		T		T		T		T		T		T		T		T		T		T
Tire pressure. Inspect tire for wear/damage	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I

\*Also perform prior to storage, or annually

**Chart Code:**

- I — Inspect, and if necessary correct, clean or replace.
- A — Adjust.
- R — Replace or change.

- T — Tighten to proper torque.
- L — Lubricate with specified lubricant.
- X — Perform.

### REGULAR MAINTENANCE INTERVALS (CONT'D)

ODOMETER READING (miles)	Pre-ride	500	2,500	5,000	7,500	10,000	12,500	15,000	17,500	20,000	22,500	25,000	27,500	30,000	32,500	35,000	37,500	40,000	42,500	45,000	47,500	50,000
SERVICE OPERATIONS (see chart code below)																						
Engine low and fast idle speed adjustment	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Operation of throttle and choke controls	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Operation of all electrical equipment and switches	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Ignition timing and vacuum operated electric switch (V.O.E.S.)		I		I		I		I		I		I		I		I		I		I		I
Spark plugs				I		R		I		R		I		R		I		R		I		R
Transmission lubricant*		R	I	R	I	R	I	R	I	R	I	R	I	R	I	R	I	R	I	R	I	R
Rear fork pivot shaft and engine mounts		I		I		I		I		I		I		I		I		I		I		I
Stabilizer links										R								R				
Front fork bearing adjustment		I		I		IL		I		IL		I		IL		I		IL		I		IL
Condition of rear shock absorbers, and air suspension		I		I		I		I		R		I		I		I		R		I		I
Throttle control grip sleeve, speedometer cable, swing arm bearings		L		L		L		L		L		L		L		L		L		L		L
Rear brake pedal pivot		L		I		L		I		L		I		L		I		L		I		L
Condition of rear brake caliper mounting pins and boots				IL		IL		IL		IL		IL		IL		IL		IL		IL		IL
Wheel bearings*						IL				IL				IL				IL				IL
Front fork oil						R				R				R				R				R
Road test		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

\*Also perform prior to storage, or annually

**Chart Code:**

- I — Inspect, and if necessary correct, clean or replace.
- A — Adjust.
- R — Replace or change.

- T — Tighten to proper torque.
- L — Lubricate with specified lubricant.
- X — Perform.

## NOTE

*The performance of regular service operations is required to keep your new motorcycle warranty in force. The use of other than Harley-Davidson approved parts and service procedures may void the warranty. Any alterations to the emission system components, such as the carburetor and exhaust system, may be in violation of Federal and State laws.*

## ENGINE LUBRICATION

Engine oil is a major factor in the performance and service life of the engine. Use the proper grade of oil for the lowest temperature expected before the next oil change. Refer to chart below. Your Harley-Davidson dealer has the proper grade oil to suit your requirements.

Use Harley-Davidson MULTIGRADE OIL for normal and severe usage in air temperatures between 10° F and 100° F. For other conditions, or if MULTIGRADE is not available, use oils as shown in the chart below.

RECOMMENDED ENGINE OILS				
Harley-Davidson Type	Viscosity	Harley-Davidson Rating	Ambient Temperature (F)	Cold Weather Starts Below 50° F.
H.D. Multigrade	SAE20W50	HD 240	Above 20° to 100°	Excellent
H.D. Regular Heavy	SAE50	HD 240	Above 60° to 100°	Poor
H.D. Extra Heavy	Grade 60	HD 240	Above 80° to 100° F. +	Poor

## CHECKING OIL LEVEL

See Figures 28, 29 and 30. Engine oil level should be checked only when engine is at normal operating temperature. The engine will require a longer warm up period in colder weather. The motorcycle should be driven to ensure oil is hot and normal operating oil pressure is achieved. When the above conditions are met, turn the engine off. Position motorcycle STRAIGHT UP and completely level for FLHTP model. For FXRP, position motorcycle on jiffy stand.

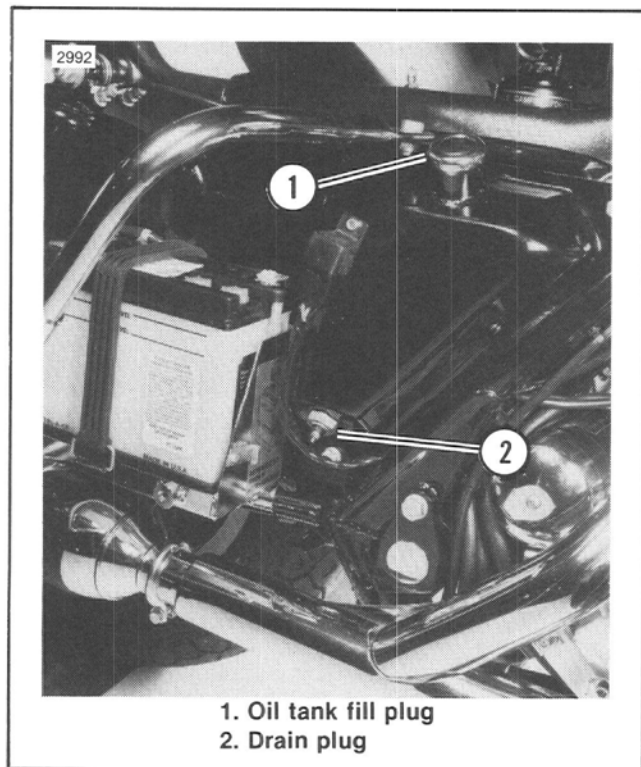


Figure 28. Oil Tank — FLHTP

See Figures 29 and 30. The oil tank fill plug is located on the right side of the FLHTP model and under the seat of the FXR. It is a friction fit in the filler neck. Remove it by pulling straight out with a rocking or twisting motion. The plug has a dipstick attached to indicate oil level in the tank.

#### CAUTION

**Do not allow oil level to fall below lower mark on dipstick. do not overfill oil tank. Overfilling may cause oil carryover to the air cleaner.**

Wipe off dipstick and insert into tank with plug pushed completely into filler neck. Remove and note oil level. See Figure 30. If oil level is down to or below lower mark on dipstick add only enough oil to bring level to upper mark on dipstick. Do not fill above upper mark on dipstick.

Remove oil tank fill plug and **CHECK OIL SUPPLY WHENEVER REFUELING** motorcycle.

#### CAUTION

**Do not switch brands indiscriminately because some oils interact chemically when mixed. Use of inferior oils or non-detergent oils can damage the engine.**

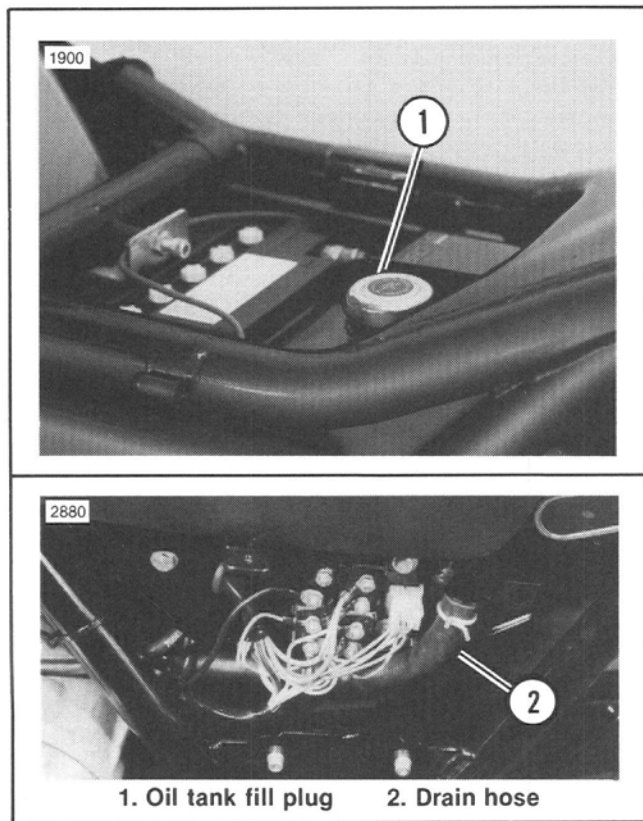


Figure 29. Oil Tank and Drain Hose — FXRP

Oil should be changed after the first 500 miles for a new engine, and thereafter, annually or at 5000 mile intervals in normal service at warm or moderate temperatures. Oil change intervals should be shorter in cold weather — see WINTER LUBRICATION. See Figure 28 for FLHTP drain plug location. See Figure 29 for FXRP drain hose location. On FXRP model, compress ends of wire hose clamp to expand clamp and move clamp off the hose stud. Pull hose off stud and drain oil into container. Removing the oil fill plug will speed up oil flow.

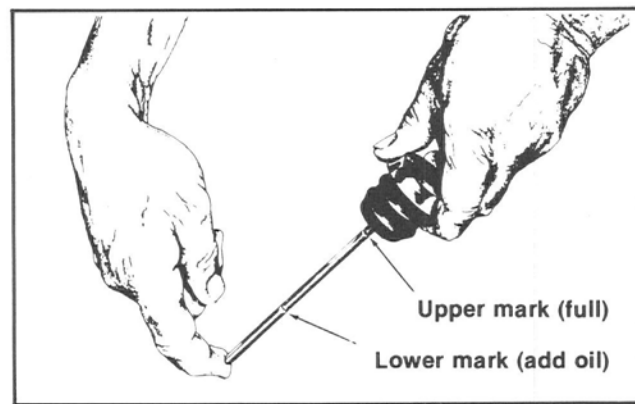


Figure 30. Oil Level Dipstick

## WARNING

**After reconnecting hose to hose stud on frame, be sure to install hose clamp, on hose, over hose stud. Failure to do so could cause rapid loss of engine oil and rear wheel traction.**

Completely drain oil tank of used oil and refill with fresh oil. If service is extremely hard or on dusty roads, drain and refill at shorter intervals. Draining should be done after a ride while oil is hot. It is not necessary to drain the crankcase because it does not accumulate used oil.

At the time of the first 500 mile oil change, and at least every second oil change thereafter, thoroughly flush and clean out tank to remove any sediment and sludge that may have accumulated. Your dealer has facilities for quick flushing and cleaning of oil tank. The oil filter should be replaced every time the oil is changed.

## CAUTION

**When draining and refilling the oil tank or transmission, be careful that dirt and debris does not get into case or oil tank. Do not allow draining lubricants to get on rear wheel, tire, or brake components.**

## OIL FILTER

See Figure 31. Oil filter is located underneath the motorcycle, behind the transmission.

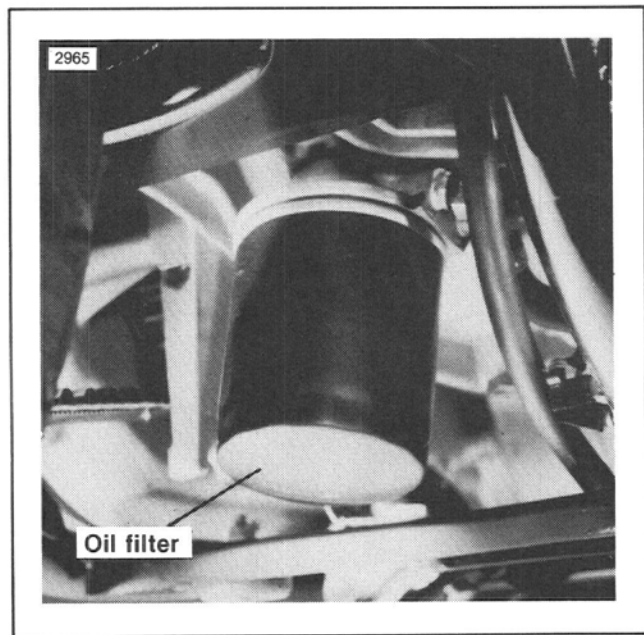


Figure 31. Oil Filter

Completely drain oil tank before removing oil filter. Clean filter gasket contact surface on mounting plate. Surface should be smooth and free of any debris or old gasket material. Apply a thin film of oil to gasket contact surface on mounting plate and to gasket on new oil filter.

Screw filter onto adapter until gasket contacts plate surface. Apply another 1/4 to 1/2 turn by hand.

#### CAUTION

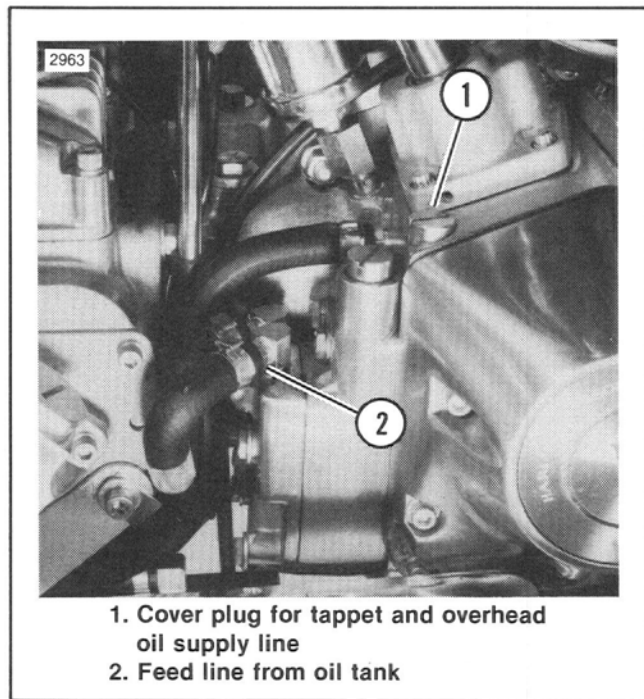
Do not overtighten. Overtightening will cause leakage at the gasket surface.

#### WARNING

Be sure no oil gets on rear tire or brake components when changing the filter.

### Tappet Oil Filter Screen

See Figure 32. Overhead and tappet oil filter screen (1) is located in crankcase above the oil pump. Unscrew slotted plug, remove and clean or replace screen. Closed end of screen faces up.



1. Cover plug for tappet and overhead oil supply line
2. Feed line from oil tank

Figure 32. Tappet Oil Filter Screen

## WINTER LUBRICATION

Combustion in any engine produces water vapor. When

starting and warming up in cold weather, much of the vapor condenses to water on relatively cool metal surfaces. If engine is driven enough to get the crankcase thoroughly warmed up, most of this water is again vaporized and blown out through the breather. However, a moderately driven engine, making only short runs now and then and seldom being thoroughly warmed up, is likely to accumulate an increasing amount of water in the oil tank. This water will, in freezing weather, become slush or ice, and if allowed to accumulate too long, will block oil lines and damage the engine. Water mixed with oil for some time forms sludge that is harmful to the engine and causes undue wear of the various working parts.

Therefore, winter oil change interval should be shorter than normal for all engines, and any engine used only for short runs, particularly in commercial service, must have oil drained frequently along with a thorough tank flush-out to remove any water and sludge, before new oil is put in tank. The farther below freezing the temperature drops, the shorter the oil change interval should be.

## TRANSMISSION LUBRICATION

See Figure 33. Remove transmission lubricant filler plug from front of right side transmission cover. Use Harley-Davidson TRANSMISSION LUBRICANT, Part No. 99892-84. Check lubricant level before each ride or at each refueling. Add lubricant if necessary and fill to top

mark on dipstick. The transmission lubricant capacity is approximately 1 pt. The motorcycle should be standing STRAIGHT UP, not leaning on jiffy stand, when adding lubricant to transmission. Drain transmission and refill to correct level with fresh, clean lubricant after the first 500 miles, and thereafter annually or every 5000 miles, whichever comes first. If transmission should become submerged in water, drain immediately and refill to proper level.

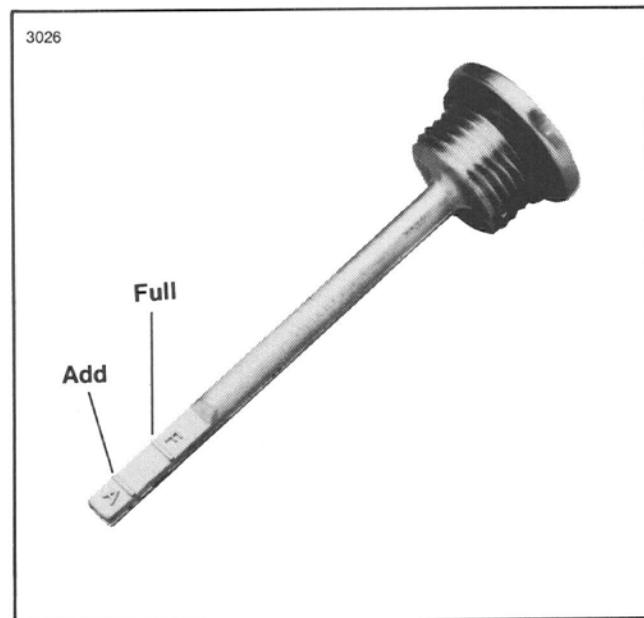


Figure 33. Transmission Dipstick



The transmission drain plug is located underneath the transmission, in the middle of the case. When reinstalling the drain plug, tighten it to 7 ft-lbs torque.

### CAUTION

**Do not overtighten drain plug. When draining and refilling the transmission, be careful that dirt and debris does not get into the case. Do not allow draining lubricant to get on rear wheel or tire.**

## PRIMARY CHAINCASE LUBRICANT

Lubrication is a major factor in the performance and service life of clutch components. Use Harley-Davidson PRIMARY CHAINCASE LUBRICANT, Part No. 99887-84 for all operating temperatures.

Chaincase lubricant should be changed initially at 500 miles and every 5000 miles thereafter. Chaincase capacity is approximately 1-1/2 quarts.

### Primary Chaincase Lubricant Level

1. Position motorcycle STRAIGHT UP and level.
2. See Figure 34. Remove screws and washers that secure clutch inspection cover.
3. Remove clutch inspection cover carefully, to avoid damaging O-ring or finish on cover.
4. Primary chaincase lubricant should be level with bottom of clutch inspection opening.

### NOTE

*Clutch adjustment can be checked at this point. Refer to the Owner's Maintenance Guide or Service Manual.*

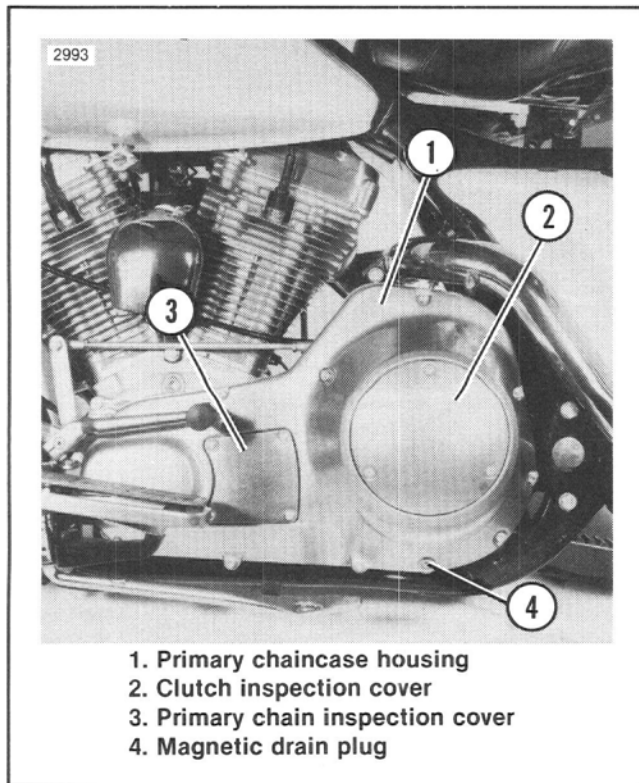


Figure 34. Primary Drive Housing

#### CAUTION

Replace O-ring to avoid chaincase lubricant leakage.

5. Replace clutch inspection cover and secure with screws and new washers. Tighten to 4-6 ft-lbs torque. Do not overtighten.

#### CAUTION

When draining or refilling with lubricant, do not allow dirt or debris to enter chaincase. Do not allow lubricant to drain on rear wheel, tire, or brake components.

#### NOTE

*Whenever draining chaincase lubricant, inspect and clean chaincase magnetic drain plug.*

Check primary lubricant level and clutch adjustment every 5000 miles. We recommend your Harley-Davidson dealer perform these services for you.

## Primary Chaincase Magnetic Drain Plug

See Figure 34. The primary chaincase magnetic drain plug is located at bottom of the primary housing at the rear. Unscrew plug and remove foreign material from end of plug. This should be done when primary chaincase lubricant is changed initially at 500 miles and every 5000 miles thereafter.

## PRIMARY CHAIN INSPECTION

The adjustment of the front chain should be checked after the first 500 miles and at 5000 mile intervals thereafter. Adjust the chain if necessary. If chain is allowed to run too loose, it will cause the motorcycle to jerk when running at low speed, and both chain and sprockets will wear excessively.

When the front chain adjustment is checked at 5000

mile intervals also check clutch adjustment and primary chaincase lubricant.

### WARNING

**To avoid possible personal injury, DO NOT operate the motorcycle without the primary drive cover in place.**

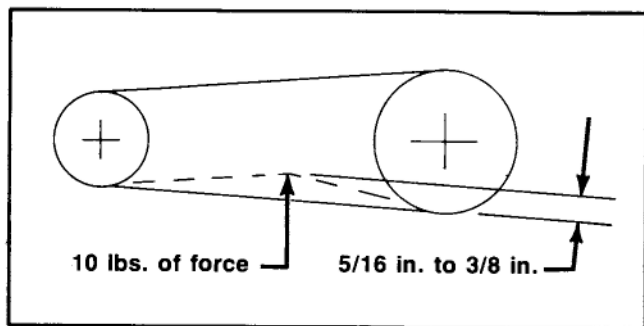
Inspect chain occasionally for links in bad condition. If any are found, replace the entire chain.

## REAR DRIVE BELT

The secondary belt inner tooth surface has a thin coating of polyethylene lubricant. During initial operation this coating will wear off as it is burnished into the belt fabric. This is a normal condition and not an indication of belt wear.

Belt tension should be adjusted after the first 500 miles and inspected every 2500 miles thereafter.

See Figure 35. When 10 lbs. of force is applied at the mid-point of the belt's bottom strand, deflection should equal  $5/16 - 3/8$  in. with rear wheel on the ground and one rider sitting on the motorcycle.



**Figure 35. Belt Tension**

## Rear Belt Adjustment

A properly adjusted belt should have  $5/16 - 3/8$  in. upward movement midway between the transmission sprocket and the rear wheel sprocket when pushing against the belt with Belt Tension Gauge, Part No. HD-35381.

1. Loosen axle nut on right side.
2. With the motorcycle upright and one rider sitting on it, turn the axle adjuster nuts on both sides of the rear wheel an equal number of turns to keep the rear wheel in alignment. See Service Manual for VEHICLE ALIGNMENT.
3. With  $5/16$  in. to  $3/8$  in. total free upward movement established in belt with 10 lbs of force applied midway between sprockets, tighten axle nut to 60 - 65 ft-lbs torque.
4. Check rear brake caliper position on rear brake disc. Disc should run true within brake caliper.

### **WARNING**

**Misalignment of rear wheel and/or brake caliper could cause rear brake disc to bind-up resulting in severe damage and/or personal injury.**

## CHASSIS LUBRICATION

### Greasing

1. Use recommended wheel bearing grease for steering head bearings and wheel bearings. Use a multi-purpose chassis grease for other applications.
2. Repack front and rear wheel bearings every 10,000 miles (more often in wet conditions), or yearly if operated under winter conditions. Replace seals and axle spacers if they show any wear or distortion.
3. Remove and lubricate handlebar throttle control grip sleeve with fresh graphite every 5000 miles, once each year, or when operation indicates lubrication is necessary.
4. Every 5000 miles lubricate front brake handlebar, throttle control cables, speedometer drive cable and clutch control cable and handlebar.
5. Grease the rear brake pedal pivot every 5000 miles at the fitting.
6. Grease shifter pivot every 5000 miles at the fitting.

### Oil Applications

All control connections and parts as indicated in the REGULAR MAINTENANCE INTERVAL CHART should be oiled regularly, particularly after washing motorcycle or driving in wet weather.

### Front Fork Oil

Drain front fork oil and refill every 10,000 miles or annually. If fork does not appear to be working properly or an appreciable amount of oil leakage should develop, attention should be given by a Harley-Davidson dealer. Incorrect recoil action will result if there is insufficient oil in either side of fork.

## FUEL STRAINER

See Figure 19. A screen type fuel strainer is located on top of the fuel supply valve inside the fuel tank. Check the fuel valve, lines and fittings for leakage as part of the pre-ride inspection. Screen should be cleaned after the first 500 miles and every 5000 miles thereafter.

## AIR CLEANER

Carburetor air cleaner is equipped with a plastic foam air filter element which is oil saturated.

See Figure 36. Remove air cleaner cover and inspect filter element at least every 5000 miles, or more often under dusty conditions. The need for servicing is indicated by the appearance of the outside surface of the filter. Filter should be cleaned and re-oiled if a film of dirt has built up covering the surface pores, or if light spots show on the surface, which means that dust is drying out the oil. A dark appearance is normal, as long as pores in the filter remain open and covered with an oil film.

1. To clean filter, remove it from screen and wash it in a non-flammable petroleum solvent or detergent and water. Allow to dry thoroughly.
2. Evenly apply 1 to 1½ tablespoons of engine oil to the filter element with an atomizer or work that amount of oil into the filter element by hand. There should be no excess.

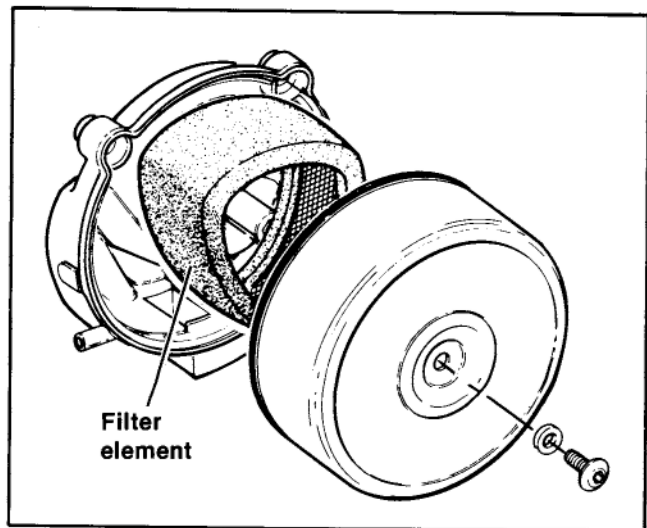


Figure 36. Air Cleaner

3. Replace element on screen so that the grooves are toward screen, and re-install on engine.

### CAUTION

**Do not run engine without filter element in place. Debris could be drawn into engine, causing damage.**

## CARBURETOR

The carburetor has been specifically designed for emissions control operation. All jets are fixed at the factory.

Carburetor controls include throttle, enricher and low idle speed adjusting screw. Operation should be checked and adjusted after the first 500 miles and every 5000 miles thereafter.

### CAUTION

**Operation at higher altitudes (approximately 4000 ft. elevation) may require carburetor modifications for best engine performance. See your Harley-Davidson dealer.**

We recommend that any carburetor service be performed by your Harley-Davidson dealer.

## SPARK PLUGS

Check the spark plugs every 5000 miles and replace if necessary. Replace the spark plugs every 10,000 miles on all models.

Disconnect spark plug cables from plugs by pulling on the molded connector caps. Connection is the simple snap-on type.

### CAUTION

**Do not pull on wires since this may damage the internal conductor causing high resistance and reduction in firing voltage.**

Before installing spark plugs, the gap should be checked and adjusted if necessary to 0.038 - 0.043 in. Be sure that your motorcycle has the correct spark plug: Harley-Davidson 5R6A.

### CAUTION

**Spark plugs must be tightened to 18 to 22 ft-lbs. torque in the cylinder heads for proper heat transfer. If a torque wrench is not available, tighten new plugs finger tight and tighten an additional one quarter turn with a spark plug wrench.**

## IGNITION TIMING

Ignition timing is preset at the factory. Spark timing is advanced electronically as engine speed increases to suit starting, low speed and high speed requirements.

Ignition timing should be checked every 5000 miles. If ignition timing is not correct, see your Harley-Davidson dealer.

## HYDRAULIC TAPPETS

Tappets are self-adjusting, hydraulic type. They automatically adjust length to compensate for engine expansion and valve mechanism wear, and thus keep the valve mechanism free of lash when the engine is running.

When starting an engine which has been shut off even for a few minutes, the valve mechanism may tend to be slightly noisy until the hydraulic units completely refill with oil. If at any time, other than for a short period immediately after engine is started, valve mechanism becomes abnormally noisy, it is an indication that one or more of the hydraulic units may not be functioning properly. Always check the lubricating oil supply in the oil tank first, since normal circulation of oil through the engine is necessary for proper operation of the hydraulic units. If there is oil in the tank, the units may not be functioning properly because of dirt in the oil supply passages leading to the lifter units. See Figure 32. Inspect and clean tappet oil supply filter screen. See your Harley-Davidson dealer for service.

## CLUTCH

Adjustment of the clutch and oiling of the clutch control cable is required every 5000 miles to compensate for lining wear. The need for attention to clutch and controls is indicated by the clutch slipping under load, or dragging in released position. In any case, the first thing to be checked is the adjustment of control cable. See your Harley-Davidson dealer for proper service.

### CAUTION

**Avoid slipping clutch. This will prolong clutch plate life.**

### NOTE

*The clutch hand lever should have approximately 1/8 - 3/16 in. free play before disengaging the clutch.*

### WARNING

**After extended periods of storage and prior to starting vehicle, place transmission in gear, disengage clutch and push vehicle back and forth a few times to ensure proper clutch disengagement.**



## BRAKES

### WARNING

Because brake performance is a critical safety item, brake system servicing requires special tools, correct replacement parts and procedures. We recommend that you see your Harley-Davidson dealer for these services.

Every 5000 miles, check fluid level in front brake master cylinder and rear brake fluid reservoir. Check all hydraulic lines, connections and calipers for leaks. Use only DOT 5 HYDRAULIC BRAKE FLUID which is approved for use in hydraulic brake systems.

### WARNING

Brake fluid causes eye irritation. Avoid eye contact. In case of eye contact, flush eyes with plenty of water and obtain medical attention. KEEP BRAKE FLUID OUT OF THE REACH OF CHILDREN.

### WARNING

Brake pads must be inspected for wear every 2500 miles. Failure to replace pads when necessary could result in brake malfunction and personal injury. If you ride under adverse conditions, steep hills, heavy traffic, etc., or if you tend to use the rear brake only, more frequent

inspection at 1000 miles or less will be necessary. We do not recommend using the rear brake only.

See Figure 37. Visual inspection of brake pads can be made without removing the caliper by viewing the lower rear area of each caliper with the aid of a flashlight. Always replace brake pads in pairs. If this routine maintenance is ignored, loss in braking performance and brake system component damage could occur.

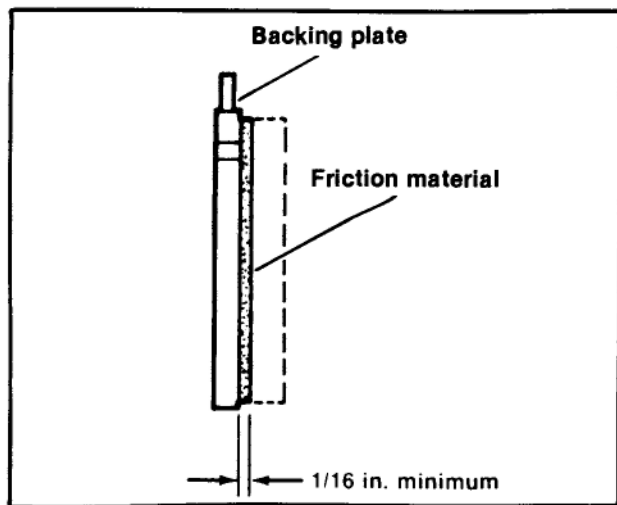


Figure 37. Brake Pad — Side View

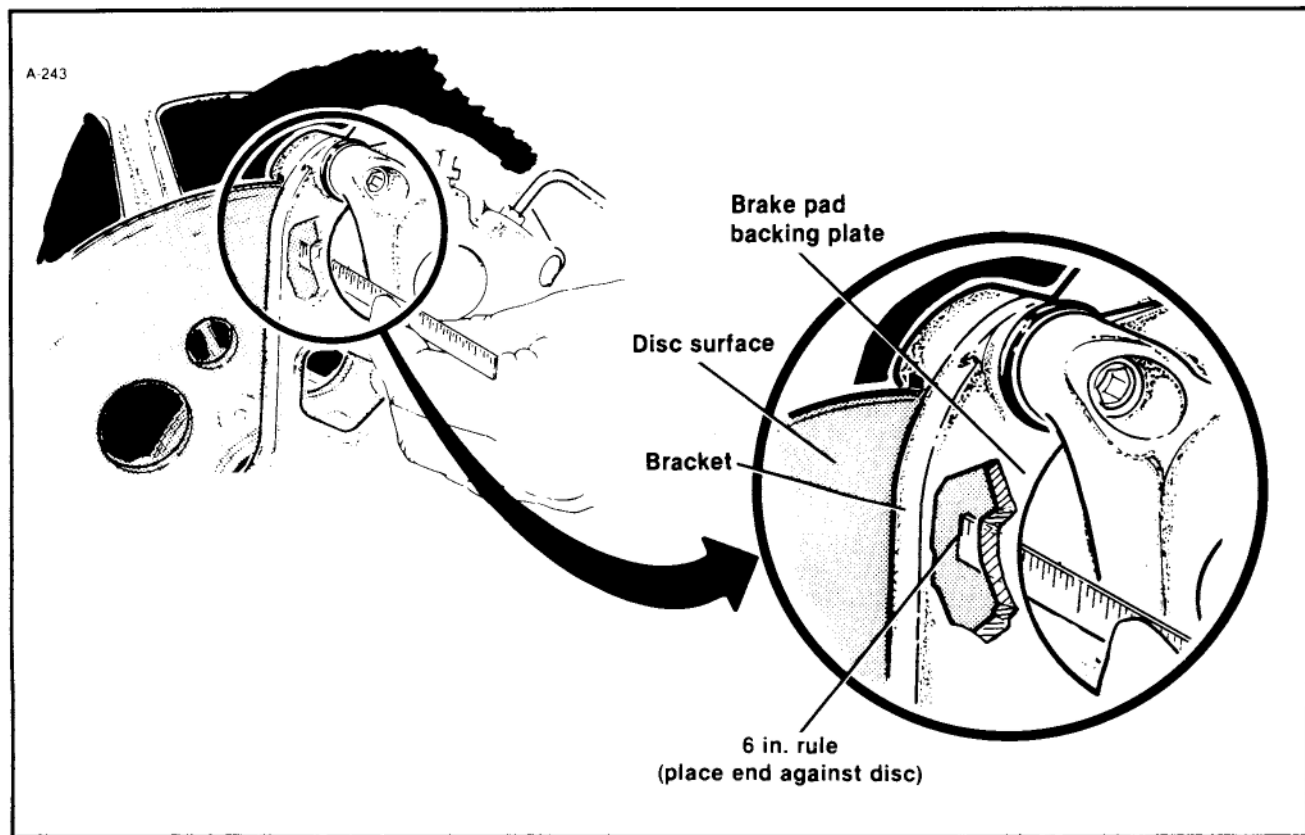
See Figure 38. The rear brake outer pad on all models can be measured from the caliper bracket side using a 6 in. rule. Place the rule against the brake disc through the space alongside the caliper. The outer surface of the brake pad backing plate should measure 1/4 in. or more away from the brake disc. **If it measures less than 1/4 in.,**

**replace both brake pads immediately.**

*NOTE*

*This 1/4 in. dimension includes the thickness of the backing plate plus a minimum 1/16 in. for friction material.*

A-243



**Figure 38. Measuring Rear Brake Outer Pad (Typical)**

## WHEEL BEARINGS

Bearings should be repacked at 10,000 mile intervals, prior to storage, or yearly if operated in winter weather. Use wheel bearing grease and new seals. Excessive play or roughness indicates worn bearings and they will require replacement.

**one at the top of the engine. Do not change the adjustment of the links. Changing the adjustment as little as 1/3 turn will adversely affect motorcycle stability.**

**Major alignment should only be performed by your Harley-Davidson dealer or service center using Service Manual procedures.**

The stabilizer links must be replaced at 20,000 mile intervals. The engine mounts should be checked for wear or damage according to Service Manual procedures after the first 500 miles and every 5,000 miles thereafter. See your Harley-Davidson dealer or the service center for these services.

Alignment of the wheels should be checked whenever the rear wheel is removed and reinstalled or when the drive belt is replaced or adjusted.

## VEHICLE ALIGNMENT

### WARNING

**The alignment of the wheels is critical. Vehicle stability is adversely affected if wheels are out of alignment. Major alignment of the front and rear wheel is controlled by two stabilizer links, one at the front of the engine and**

## TIRES

### NOTE

*The FXRP is equipped with tires capable of remaining on the rim at moderate speeds with tires depressurized.*

Care should be taken to keep tires properly inflated. See TIRE DATA, for correct cold tire inflation pressures. Check before riding when tires are cold. Do not over-inflate tires.

#### **WARNING**

**Improper tire inflation will cause abnormal tread wear and could result in unstable handling. Under-inflation could result in the tire slipping on the rim.**

Check inflation pressure and inspect tread for punctures, cuts, breaks, etc., at least weekly if in daily use; or before trips, if used occasionally.

#### **WARNING**

**Riding with excessively worn, unbalanced or improperly inflated tires is hazardous and will adversely affect traction, steering, handling, and braking.**

**Same as original equipment tires must be used. Other tires will not fit correctly and may be hazardous to use.**

**Because tires, tubes and wheels are critical safety items, and servicing of these items requires special tools and skills, we recommend you see your Harley-Davidson dealer for these services.**

## **Flat Tire Repair**

#### **WARNING**

**Tire replacement must be performed by a Harley-Davidson dealer or the service center following Service Manual Supplement procedures because of the following critical elements:**

- 1. Special mounting procedures**
- 2. Limited clearances at rear drive belt guard and fender braces.**
- 3. Vehicle alignment.**

#### **WARNING**

- Do not attempt to use damaged or punctured and repaired tire(s). Once a motorcycle tire has been damaged or punctured, it is unsafe to use.**
- A tire can be severely damaged and not show the damage externally. If you strike an object, such as a curb, at speed, internal damage may result which is not visible from the outside. Always remove and carefully inspect the inside as well as the outside of the tire for damage. A damaged tire can fail, causing personal injury.**

## **SHOCK ABSORBERS**

Shock absorbers and rubber bushings should be inspected every 5000 miles for leaks and bushing deterioration.

## FRONT FORK BEARINGS

### WARNING

Front fork bearing adjustment is critical. Improperly adjusted bearings will adversely affect motorcycle handling and stability. It is recommended that fork bearing adjustments and lubrication be performed by your Harley-Davidson dealer or service center.

Check front fork for proper bearing adjustment at 500 miles and every 5000 miles thereafter. Raise the front end of motorcycle off the floor. Be sure front fork turns freely without any binding or interference and that there is no appreciable front to rear fork shake indicating excessive bearing looseness. If necessary, steering head bearings should be adjusted according to Service Manual procedure.

## REAR FORK PIVOT SHAFT

The rear fork is isolated from the motorcycle frame by a system of rubber mounts. The tightness of the rear fork pivot shaft should be checked after the first 500 miles and every 5000 miles thereafter.

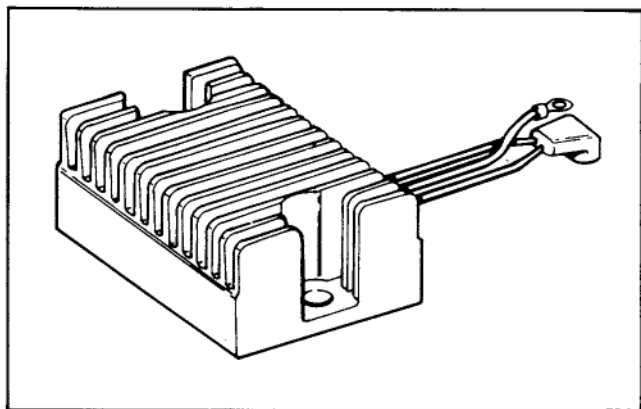


Figure 39. Rectifier/Regulator

## ALTERNATOR CHARGING RATE AND RECTIFIER/REGULATOR

See Figure 39. The alternator output is controlled and changed to direct current by the rectifier/regulator located at the front of the engine. The rectifier/regulator increases charging rate when battery is low or lamps are lighted, decreases charging rate when no lamps are lighted and when battery charge is up. This unit requires no interval attention. Should any electrical system trouble be experienced that might be traceable to the alternator or rectifier/regulator, the motorcycle should be taken to your Harley-Davidson dealer who has the necessary electrical testing equipment.

## BATTERY

See Figures 40 and 41. It is the care given a battery, rather than the time and miles of service, which is most important in determining its life.

Inspect the level of the battery solution at least once a week during motorcycle operation, adding pure distilled water as often as necessary to keep the solution above the plates. Check the battery solution level after the first 500 miles and every 2500 miles thereafter. If the motorcycle is not used for an extended period of time, check solution level before placing in service.

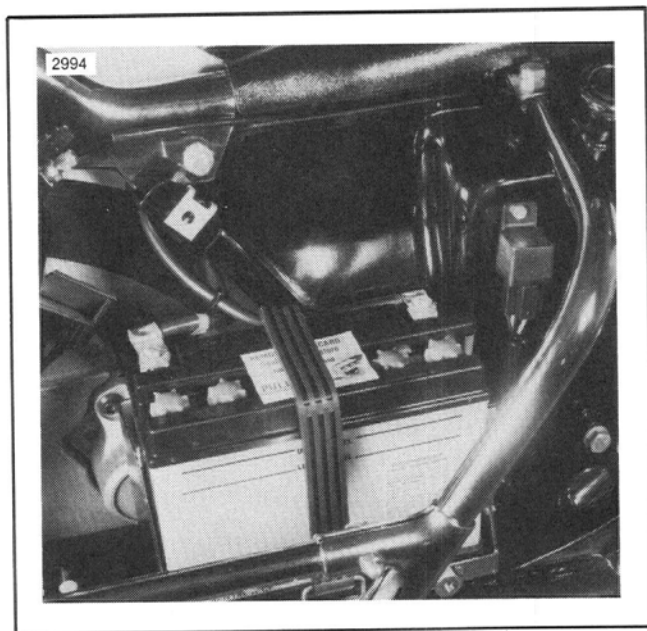


Figure 40. Battery — FLHTP

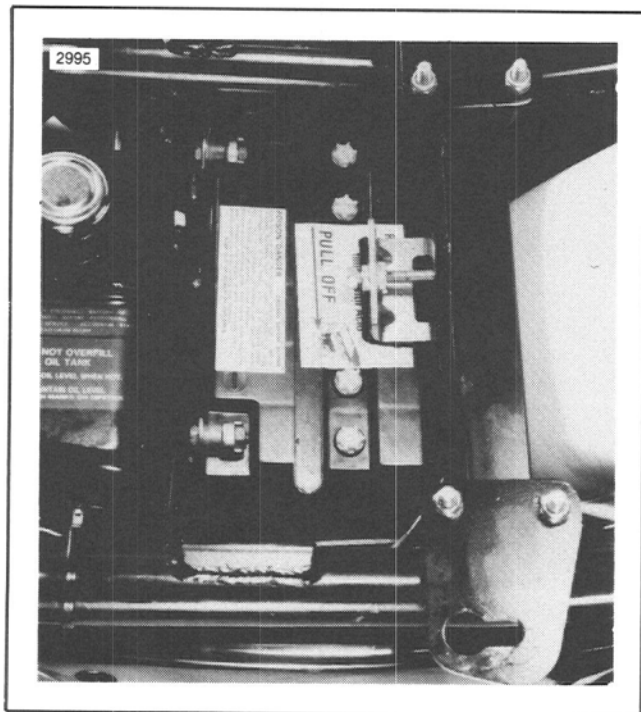


Figure 41. Battery — FXRP

Remove the seat or sidecover and battery filler plugs.

With a hydrometer or syringe, add distilled water to each cell to raise level of solution between upper and lower level limits shown on battery. Battery should be on a flat and level surface to ensure proper filling.

Clean connections and check tightness every 2500 miles.

#### CAUTION

If battery is filled to a higher level than specified, some of the solution will be forced out through the vent tube when battery is charging. This will not only weaken the solution, but may also damage parts near the battery. Keep battery clean and lightly coat terminals with petroleum jelly to prevent corrosion. Do not overtighten terminal connections. To prevent battery case damage caused by pressure build-up, be sure vent tube is properly routed and not kinked or obstructed.

#### WARNING

Batteries contain sulfuric acid which can cause severe burns. Avoid contact with skin, eyes or clothing.

#### ANTIDOTE

External — flush with water.



**Internal — Drink large quantities of water followed by milk of magnesia, vegetable oil, or beaten eggs. Call doctor immediately.**

### **WARNING**

**Batteries produce explosive hydrogen gas at all times — especially when being charged. Keep cigarettes, open flame, and sparks away from the battery at all times. Ventilate area when charging battery. Always protect hands and protect eyes with shield or goggles when working near a battery or acid. KEEP BATTERIES AND ACID OUT OF THE REACH OF CHILDREN!**

## **CIRCUIT BREAKERS**

To protect the motorcycle wiring, there are four circuit breakers: main, lighting, accessory, and ignition.

Each of these breakers is self-resetting and automatically returns steady power to the circuit when an electrical fault that causes it to trip is found and corrected. If the electrical fault is not found and corrected, the breaker cycles on and off causing the motorcycle to operate erratically. In these circumstances, the battery will lose its charge.

For electrical problems, see your Harley-Davidson

dealer who has necessary parts and equipment to perform electrical services.

## **HEADLAMP**

The FLHTP and FXRP fairing version headlamp is a replaceable bulb type, not a sealed beam unit. The bulb is made of quartz glass filled with halogen gas. This quartz halogen bulb is very delicate and must be handled with care.

### **CAUTION**

**Never touch the quartz glass bulb with your fingers. Finger prints will etch the glass and cause the bulb to fail. Always wrap the bulb in paper or a clean dry cloth during handling.**

### **WARNING**

**The bulb contains Halogen gas under pressure. Handle bulb carefully and wear eye protection to avoid possible personal injury.**

The FXRP windshield version headlamp is the sealed beam type, replaced from the front of the motorcycle. When replacement is required, use only the specified sealed beam unit available from your Harley-Davidson dealer. An improper wattage sealed beam unit may cause charging system problems.

## JUMP STARTING PROCEDURE

Harley-Davidson does not recommend jump-starting a vehicle, however we realize that there may be circumstances when it is done. Therefore, we suggest jump-starting be done as follows:

### WARNING

**When making connections, be sure the jumper cable clamps do not accidentally touch each other or anything else, except battery terminals or appropriate ground.**

### WARNING

**Do not smoke or allow sparks while performing this procedure. Smoking or sparks could cause an explosion.**

### NOTE

*This procedure presumes the BOOSTER battery is in another vehicle.*

### WARNING

**Be sure the vehicles are not touching. Metallic parts contact between the two vehicles will cause a common ground which could ignite the gasoline in the tanks.**

### CAUTION

**Be sure radio (if equipped) is turned off. A voltage surge will erase or damage the radio memory circuits.**

### CAUTION

**All Harley-Davidson motorcycles have a 12 Volt battery and a 12 Volt system. Be sure the booster vehicle has a 12 Volt system or electrical components may be damaged.**

1. Turn off all unnecessary lights and accessories.

## POSITIVE CABLE

2. See Figure 40. Connect one end of a jumper cable to the DISCHARGED battery positive (+) terminal.
3. Connect the other end of the same cable to the BOOSTER battery positive (+) terminal.

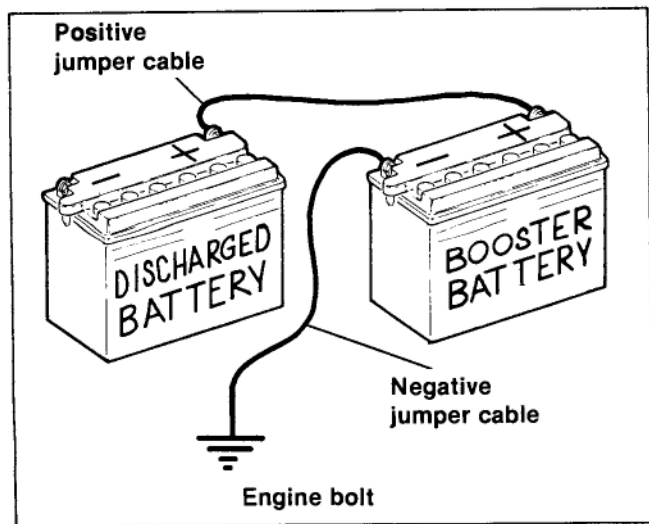


Figure 42. Jump Start Cable Connections

## NEGATIVE CABLE

4. Connect one end of a jumper cable to the BOOSTER battery negative (-) terminal.

### WARNING

- Do not connect negative cable to or near the discharged battery negative terminal. If you do, a spark could cause an explosion.
  - Suggested spot for ground cable connection is the ENGINE CASE BOLTS.
  - Be sure you do not connect the negative cable near the battery vent tube. A spark could cause an explosion.
  - Do not connect the negative cable to painted or chrome parts. They will become discolored at the attachment point.
5. Connect other end of the same cable to a safe ground, (away from the DISCHARGED battery).
  6. Start motorcycle.
  7. Disconnect cables in reverse order of steps 2, 3, 4, 5. That is: steps 5, 4, 3, 2.

## GENERAL

The following checklist of possible operating troubles and their probable causes will be helpful in keeping your motorcycle in good operating condition. More than one of these conditions may be causing the trouble and all should be carefully checked.

### WARNING

**The troubleshooting section of this Owner's Manual is intended solely as a guide to diagnosing problems. Carefully read the appropriate sections of this manual before performing any work. Repair and maintenance operations not listed in this Owner's Manual are in the service manual and should be performed by your Harley-Davidson dealer.**

## ENGINE

### Starter Does Not Operate or Does Not Turn Engine Over

1. Engine run switch in "OFF" position.
2. Ignition switch not on.

3. Discharged battery or loose or corroded connections (solenoid chatters).

### Engine Turns Over But Does Not Start

1. Fuel tank empty.
2. Fuel valve turned off.
3. Fuel valve or filter clogged.
4. Discharged battery or loose or broken battery terminal connections.
5. Fouled spark plugs.
6. Spark plug cables in bad condition and shorting or cable connections loose.
7. Ignition timing badly out of adjustment.
8. Loose wire connection at coil or battery connection.
9. Engine flooded with fuel as a result of overchoking.\*
10. Engine oil too heavy (winter operation).
11. Throttle opened while enrichener is used.

### Starts Hard

1. Spark plugs in bad condition, have improper gap or are partially fouled.
2. Spark plug cables in bad condition and leaking.
3. Battery nearly discharged.
4. Loose wire connection at one of the battery terminals or at coil.

5. Carburetor control not adjusted correctly.
6. Engine oil too heavy (winter operation).
7. Ignition not timed properly. See dealer.
8. Fuel tank cap bent or plugged, or carburetor fuel line closed off, restricting fuel flow.
9. Water or dirt in fuel system and carburetor.
10. Air leak at intake manifold.

### Starts But Runs Irregularly or Misses

1. Spark plugs in bad condition or partially fouled.
2. Spark plug cables in bad condition and leaking.
3. Spark plug gap too close or too wide.
4. Battery nearly discharged.
5. Damaged wire or loose connection at battery terminals or coils.
6. Intermittent short circuit due to damaged wire insulation.
7. Water or dirt in fuel system, carburetor or filter.
8. Fuel tank cap vent plugged or carburetor vent line closed off.
9. Carburetor controls misadjusted.
10. Air leak at intake manifold or air cleaner.

### A Spark Plug Fouls Repeatedly

1. Incorrect spark plug for the kind of service.

2. Piston rings badly worn or broken. See dealer.
3. Fuel mixture too rich.
4. Valve guides badly worn. See dealer.

### Pre-ignition or Detonation (Knocks or Pings)

1. Excessive carbon deposit on piston head or in combustion chamber.
2. Incorrect spark plug for the kind of service.
3. Ignition timing advanced. See dealer.
4. Fuel octane rating too low.

### Overheats

1. Insufficient oil supply or oil not circulating.
2. Heavy carbon deposit. See dealer.
3. Ignition timing retarded. See dealer.

### Excessive Vibration

1. Stabilizer links worn or loose.\* See dealer.
2. Rubber mounts loose.\* See dealer.
3. Rear fork pivot shaft nuts loose.\* See dealer.
4. Front engine mounting bolts loose.\* See dealer.
5. Engine to transmission mounting bolts loose.\* See dealer.

6. Broken frame. See dealer.
7. Front or rear chain/belt badly worn or links tight as a result of insufficient lubrication.\*
8. Wheels and/or tires damaged. See dealer.
9. Internal engine problem. See dealer.
10. Vehicle not properly aligned. See dealer.

\* If applicable.

## LUBRICATION SYSTEM

### Oil Does Not Return to Oil Tank

1. Oil tank empty.
2. Restricted oil lines or fittings.
3. Restricted oil filter.

### Engine Uses Too Much Oil or Smokes Excessively

1. Piston rings badly worn or broken. See dealer.
2. Valve guides worn. See dealer.

### Engine Leaks Oil From Cases, Push Rods, Hoses

1. Loose parts. See dealer.
2. Imperfect seal at gaskets, push rod cover, washers, etc. See dealer.
3. Restricted oil return line to tank. See dealer.
4. Restricted breather hose to air cleaner. See dealer.

## ELECTRICAL SYSTEM

### Alternator Does Not Charge

1. Module not grounded. See dealer.
2. Engine ground wire loose or broken.\* See dealer.
3. Loose or broken wires in charging circuit. See dealer.

### Alternator Charge Rate is Below Normal

1. Weak battery.
2. Loose or corroded connections.

\*If applicable.

## **CARBURETOR**

### **Carburetor Floods**

1. Excessive "pumping" of hand throttle grip.

## **TRANSMISSION**

### **Transmission Shifts Hard**

1. Bent shifter rod. See dealer.
2. Transmission shifting mechanism needs adjustment.\* See dealer.

### **Transmission Jumps Out of Gear**

1. Shifter rod improperly adjusted. See dealer.
2. Shifter forks (inside transmission) improperly adjusted. See dealer.
3. Worn shifter engagement dogs in transmission. See dealer.

### **Clutch Slips**

1. Clutch controls improperly adjusted. See dealer.
2. Worn friction discs. See dealer.
3. Insufficient clutch spring tension. See dealer.

### **Clutch Drags or Does Not Release**

1. Clutch controls improperly adjusted. See dealer.
2. Insufficient clutch spring tension. See dealer.
3. Clutch discs warped. See dealer.

### **Clutch Chatters**

1. Friction discs or steel discs worn or warped. See dealer.

\*If applicable.

## **BRAKES**

### **Brakes Do Not Hold Normally**

1. Master cylinder low on fluid. See dealer.
2. Brake line contains air bubbles. See dealer.
3. Master or wheel cylinder piston worn. See dealer.
4. Brake pads contaminated with grease or oil. See dealer.
5. Brake pads badly worn (1/16 in. minimum lining thickness). See dealer.
6. Brake disc badly worn or warped. See dealer.
7. Brake fades due to heat build up — brake pads dragging or excessive braking. See dealer.
8. Brake drags — insufficient brake pedal or hand lever free play. See dealer.

## BULB CHART — FLHTP

LAMP DESCRIPTION (ALL LAMPS 12 V)	NUMBER OF BULBS REQUIRED	CURRENT DRAW (AMPERAGE)	HARLEY-DAVIDSON PART NUMBER
Headlamp High Beam Low Beam	1	3.9 3.9	67697-81
Tail and Stop Lamp Tail Lamp Stop Lamp	1	3 2.1	68165-64
Turn Signal Lamps Front Rear Pursuit Lamps	2 2 2	2.1 2.1 2.34	68165-64 68681-85A 68727-64A
Fender Tip Lamps	2	2	53439-79
Instrument Panel Lamps	9	1	71099-74

**NOTE**

Contact Whelen Engineering for Cycle signal Lamp replacement bulbs.

- Phone: 203/526-9504



## BULB CHART — FXRP

LAMP DESCRIPTION (ALL LAMPS 12 V)	NUMBER OF BULBS REQUIRED	CURRENT DRAW (AMPERAGE)	HARLEY-DAVIDSON PART NUMBER	
			WINDSHIELD	FAIRING
Headlamp High Beam Low Beam	1	3.9 3.9	67698-81A	67697-81
Tail and Stop Lamp Tail Lamp Stop Lamp	1	0.59 2.1	68165-64	68165-64
Turn Signal Lamps Front — Turn Signal Rear — Turn Signal	2 2	2.1 2.1	68572-64A 68572-64A	68165-64 68572-64A
Instrument Lamps Turn Signal Indicator High Beam Indicator Neutral Indicator Oil Pressure Indicator Pursuit Lamp Indicator Speedometer Fuel Gauge/Tachometer Pursuit Lamps License Plate Lamps	2 1 1 1 1 1 2 2 2	0.08 0.04 0.08 0.08 0.80 0.27 0.12 2.34 0.19	68468-86 68597-86 68574-86 68489-86 68429-84 71090-64 67136-85 68727-64A 59989-84	68468-86 68597-86 68574-86 68489-86 68429-84 71090-64 67136-85 68727-64A 59989-84

## GENERAL MAINTENANCE

Chrome and aluminum parts must be maintained regularly to ensure that they retain their original shine and luster. Several of these service procedures are outlined in the Service Manual. See the SERVICE LITERATURE list following the WARRANTY information. Care should be taken to keep your new Harley-Davidson motorcycle cleaned and waxed as often as possible to inhibit rust and corrosion.

## STORAGE

If your motorcycle will not be operated for several months, such as during the winter season, there are several things which should be done to protect parts

against corrosion, preserve the battery and to prevent the build-up of gum and varnish in the carburetor.

This work should be performed by your local Harley-Davidson dealer or other qualified mechanic following Service Manual procedures.

Complete storage instructions are found in the Service Manual available through your local Harley-Davidson dealer.

## WARNING

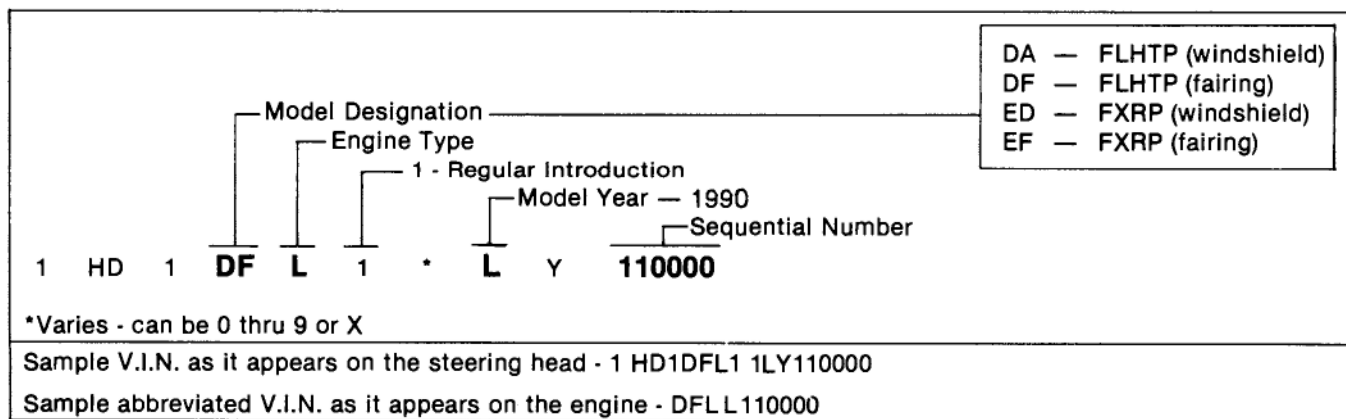
**After extended periods of storage and prior to starting vehicle, place transmission in gear, disengage clutch and push vehicle back and forth a few times to ensure proper clutch disengagement.**

## VEHICLE IDENTIFICATION NUMBER (V.I.N.)

The full 17 digit serial, or Vehicle Identification Number (V.I.N.) is stamped on the steering head and on a label located on the right front frame downtube. An abbreviated V.I.N. is stamped on the left side crankcase at the base of the front cylinder.

### NOTE

*Always give one of these numbers when ordering parts or making any inquiry about your motorcycle.*



# NOTES

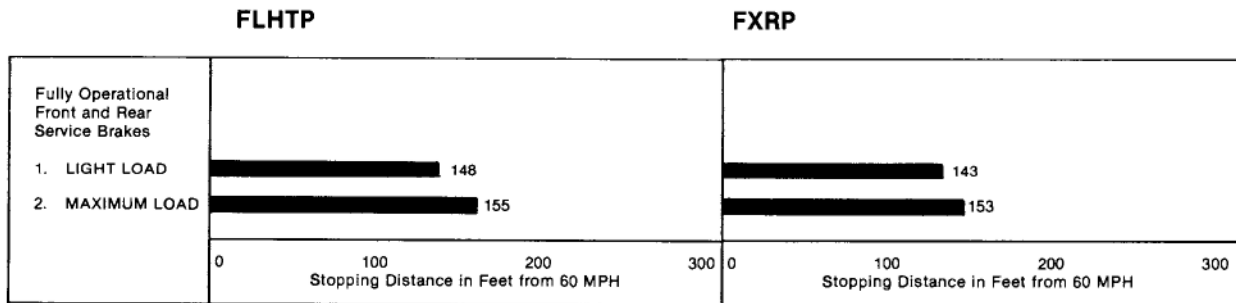
# STOPPING DISTANCE

Required by Federal Consumer Information Regulations.

Notice: The information presented represents results obtainable by skilled drivers under controlled road and

vehicle conditions, and the information may not be correct under other conditions.

These figures indicate braking performance that can be met or exceeded by the vehicle to which it applies, without locking the wheels, under different conditions or loading.



1. Light Load Vehicle Weight . . . . . includes  
200 lb. driver - no accessories.
2. Maximum Loaded Vehicle Weight . . . . . includes  
300 lb. driver and passenger  
load plus full accessory equipment.

## DIMENSIONS (in.)

	FLHTP	FXRP
Wheel Base .....	62.94	64.70
Overall Length .....	94.25	94.20
Overall Width .....	39	35.50
Road Clearance .....	5.12	6
Overall Height .....	61	59
Saddle Height .....	28	30

## WEIGHT (lbs.)

	FLHTP	FXRP
<b>DRY WEIGHT</b>		
(as shipped from the factory) .....	722	650
GVWR .....	1197	1085
GAWR — Front .....	427	390
GAWR — Rear .....	770	695

**NOTE**

*Windshield versions have lower DRY WEIGHTS; FLHTP equipped with windshield — 700 lbs., FXRP equipped with windshield — 630 lbs.*

**NOTE**

*Gross Vehicle Weight Rating (GVWR) (maximum allowable loaded vehicle weight) and corresponding Gross Axle Weight Ratings (GAWR) are given on a label located on the front frame downtube.*

## CAPACITIES (U.S.)

	FLHTP	FXRP
<b>Fuel Tank</b>		
(gallons)		
Total .....	5	4.20
Reserve .....	0.70	0.40
<b>Oil Tank (Quarts)</b>		
w/filter .....	4	3
<b>Transmission (Pints)</b>	1	1
<b>Front Fork — Each</b>		
(Ounces) .....	7.75	11.5
<b>Primary Chaincase</b>		
(Quarts) .....	1.50	1.50

## ENGINE

Number of Cylinders .....	2
Type .....	4-Cycle, 45 Degree V-Type
Compression Ratio .....	8.5 to 1

Horse power — rpm	Bore in. (mm)	Stroke in. (mm)	Displacement cu. in. (cc)	Torque lb-ft — rpm
FLHTP				
72/5000	3.498 (88.8)	4.25 (108.0)	81.6 (1338.6)	82/3600
FXRP				
69/5000	3.498 (88.8)	4.25 (108.0)	81.6 (1338.6)	80/4000

## IGNITION SYSTEM

Spark Plugs  
Type .....Harley-Davidson, No. 5R6A  
Size .....14 mm x 3/4 in. reach  
Gap .....0.038 to 0.043 in.

## TRANSMISSION

Type .....Constant Mesh, Foot Shift  
Speeds .....5 Forward

## NUMBER OF SPROCKET TEETH

Engine .....24  
Clutch .....37  
Transmission .....33  
Rear Wheel .....70

## OVERALL GEAR RATIOS

First (Low) Gear .....10.93    Third Gear .....5.40  
Second Gear .....7.45    Fourth Gear .....4.16  
Fifth Gear .....3.37

## TIRE DATA

Tire size, manufacturer's description and inflation pressure are listed below:

TIRE LOCATION	SIZE	MANUFACTURER'S DESIGNATION	TIRE PRESSURE PSI (Cold)
---------------	------	----------------------------	--------------------------

### FLHTP

Front	MT90-16	Dunlop K291T - ribbed	36
Rear	MT90-16	Dunlop K291T	36

### FXRP

Front	MM90S-19	Dunlop K181 PT	30
Rear	MT90S-16	Dunlop K181 PT	32

## FUEL

Use a good quality leaded or unleaded gasoline (at least 87 pump octane). Octane rating is usually found on the pump.

### CAUTION

**Using gasoline that has an alcohol additive, such as methanol, may cause fuel system rubber components' failure and/or engine damage.**

### WARNING

**Remove fuel filler cap slowly. Fill fuel tank slowly to prevent spillage. Do not overfill. Do not fill above the bottom of the filler neck insert. Leave air space to allow for fuel expansion. Expansion can cause an overfilled tank to overflow gasoline through the filler cap onto surrounding areas. After refueling, be sure fuel filler cap is securely tightened.**

### CAUTION

**Gasohol spills can stain the paint on your Harley-Davidson.**

The engines in these vehicles have been designed specifically to achieve optimum fuel economy within exhaust emission controls. Ignition characteristics have been developed to provide maximum engine performance and reliability.

Today's service station pumps are increasingly of the higher capacity variety. With the high flow of gasoline into a motorcycle tank, air entrapment and pressurization is a possibility. The pressurized air may force gasoline to escape through whatever opening is available within the filler tube. This may not only soil clothing, but may create a potential fire hazard.

## GUARDS

Front and rear chrome guards come as standard equipment on these vehicles.

### WARNING

**Guards may provide limited leg and cosmetic vehicle protection under unique circumstances (i.e., fall to the side while stopped, very slow speed slide). They are not made nor intended to provide protection in a collision with another vehicle or an object.**



## OWNER'S IDENTIFICATION CARD

A permanent Owner's Identification Card is issued to Harley-Davidson new motorcycle owners when we receive the completed warranty registration form.

The Owner's Identification Card is a permanent record showing proof of ownership for your police department and gives all of the information necessary for you and your dealer to simplify and expedite service and obtain parts and accessories.

Keep this card with your other fleet vehicle papers, since it is required by your Harley-Davidson dealer for any warranty service performed on your motorcycle.

If you have any questions regarding service or warranty, we recommend that you contact your Harley-Davidson dealer for assistance.

## WARRANTY AND MAINTENANCE

This Owner's Manual contains your new motorcycle warranty and a number of tear-out service coupons.

The approved service and maintenance procedures on each coupon and the mileage intervals cover items

which are the owner's responsibility to have serviced. All of the specified maintenance services must be performed to keep your warranty in force. Dealer charges for the recommended service procedures are nominal.

Bring this Owner's Manual along when you visit your dealer at the specified mileages to have your motorcycle inspected and serviced. Have the owner record stubs dated and signed for required proof of service during the warranty period. The dealer records should be retained by the dealer, or owner, as a record of proper maintenance. Also keep other receipts covering any service or maintenance performed. These records should be transferred to each subsequent owner.

### WARNING

**We caution you against the use of certain non-standard parts such as after-market and custom made extended front forks which may adversely affect performance and handling, and could cause an accident with possible injury to yourself or others. Removing factory installed standard parts may also affect performance and cause an injury. The use of any non-standard parts including mufflers may void your warranty according to terms of the warranty. DO NOT modify or alter the motorcycle from factory specifications.**

## EPA NOISE REGULATIONS

EPA noise regulations require that the following statements be included in the Owner's Manual.

**TAMPERING WITH NOISE CONTROL SYSTEM PROHIBITED:** Federal law prohibits the following acts or the causing thereof: (1) The removal or rendering inoperative by any person other than for purposes of maintenance repair, or replacement of any device or element of design incorporated into any new vehicle for the purpose of noise control prior to its sale or delivery to the ultimate purchaser or while it is in use, or (2) the use of the vehicle after such device or element of design has been removed or rendered inoperative by any person.

AMONG THOSE ACTS PRESUMED TO CONSTITUTE TAMPERING ARE THE ACTS LISTED BELOW.

1. Replacing the muffler(s) and/or the entire exhaust system with parts not certified to be noise legal for street use.
2. Removing or modifying the muffler internal baffles in any way.
3. Replacing the air intake/cleaner assembly with one not certified to be noise legal for street use.

4. Modifying the air intake/cleaner assembly in such a way as to make the vehicle no longer noise legal for street use.

Harley-Davidson recommends that any and all noise related maintenance be done by an authorized Harley-Davidson dealer using genuine Harley-Davidson parts.

### IMPORTANT

**If you move from your present address, or sell your motorcycle, please fill out and mail the post card at the back of this manual.**

## WARRANTY/SERVICE INFORMATION

Your selling dealer is responsible for providing the warranty repair work on your motorcycle.

For normal service work or warranty work under the above conditions, you may obtain the name and location of your nearest Harley-Davidson dealer by calling **1-800-558-2001** (toll free), in any state except Wisconsin, Alaska, and Hawaii. In Wisconsin, call **1-800-242-3102** (toll free). Service is 24 hours a day, 365 days per year.

## HARLEY-DAVIDSON LIMITED WARRANTY (12 MONTHS/UNLIMITED MILEAGE)

*Harley-Davidson warrants to the first retail purchaser and his authorized transferees of our new 1990 model motorcycles/sidecars that our Selling Dealer will repair or replace without charge any parts (except tires, maintenance items and battery under certain conditions) found under normal use in the U.S.A. or Canada to be defective in factory materials or workmanship, and upon the following terms and conditions:*

### DURATION AND TRANSFER

1. The duration of this limited warranty is twelve months, measured from the date of initial retail purchase from an authorized Harley-Davidson Selling Dealer, with no mileage limitation.
2. Any unexpired portion of this limited warranty may be transferred, with written authorization, upon the resale of the motorcycle/sidecar during the first 12 months of ownership. To obtain authorization, a transfer application must be filed with Harley-Davidson together with a fee of \$25.00 to cover administrative costs, and the motorcycle/sidecar must pass inspection by one of our participating Dealers. The customer is responsible for any charge incurred for work performed by the Dealer beyond the inspection procedure itself. (See your Owner's Manual for complete details.)

### OWNER OBLIGATIONS

1. To qualify for warranty protection, you and the Selling Dealer must complete the Warranty Registration Form and return it to us within 10 days after delivery. We will then send you an Owner- Warranty Identification Card.
2. To obtain warranty service, return your motorcycle/sidecar at your expense within the warranty period to the Selling Dealer, or to any other authorized Dealer if you have moved a long distance, are touring a long distance, or need emergency service. You must be able to present your Owner-Warranty Identification Card and/or Owner's Manual upon our Dealer's request. Our Dealer should be able to provide warranty service

during his normal business hours and as soon as possible, depending upon his service department's workload and the availability of necessary parts.

### EXCLUSIONS

This warranty will not apply to any motorcycle/sidecar as follows:

1. Which has not been operated or maintained as specified in the Owner's Manual.
2. Which has been abused, altered outside of original factory specifications, improperly stored or used "off the highway", for racing or competition of any other kind.
3. Which has had the odometer removed or tampered with.

### OTHER LIMITATIONS

This warranty does not cover:

1. Parts and labor for normal maintenance as recommended in the Owner's Manual, including such items as the following: lubrication, oil and filter change, fuel system cleaning, battery maintenance, engine tune-up, spark plugs, brake, clutch and chain/belt adjustment (including chain replacement).
2. Seats, saddlebags, paint, chrome, or trim deterioration caused by ordinary wear and tear, exposure or improper maintenance.
3. Motorcycle battery after the first 6 months following the date of original retail motorcycle

purchase, however, if your battery is found to be defective, within the terms of this limited warranty, between the seventh through twelfth months, you will be charged for the full cost of our dealer's installation labor and for the cost of the battery's replacement, on a pro-rated basis. (See your dealer for complete details.)

### IMPORTANT/READ CAREFULLY

1. Our Dealers are independently owned and operated and may sell other products. Because of this, HARLEY-DAVIDSON IS NOT RESPONSIBLE FOR THE SAFETY, QUALITY, OR SUITABILITY OF ANY NON-HARLEY-DAVIDSON PART, ACCESSORY OR DESIGN MODIFICATION INCLUDING LABOR WHICH MAY BE SOLD AND/OR INSTALLED BY OUR DEALERS.
2. THERE IS NO OTHER EXPRESS WARRANTY (OTHER THAN EMISSIONS AND NOISE WARRANTIES) ON THE MOTORCYCLE. ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS IS LIMITED TO THE DURATION OF THIS WARRANTY.
3. TO THE FULLEST EXTENT ALLOWED BY LAW, HARLEY-DAVIDSON AND ITS DEALERS SHALL NOT BE LIABLE FOR LOSS OF USE, INCONVENIENCE, LOST TIME, COMMERCIAL LOSS OR OTHER INCIDENTAL OR CONSEQUENTIAL DAMAGES.

Some states do not allow the exclusion or limitation of incidental or consequential damages or limitations on how long an implied warranty lasts, so the above limitations and exclusions may not apply to you. This warranty gives you specific legal rights, and you may have other rights which vary from state to state.



## **HARLEY-DAVIDSON EMISSION CONTROL SYSTEM WARRANTY**

The following warranty applies to the emission control system and is in addition to the LIMITED WARRANTY, and NOISE CONTROL SYSTEM WARRANTY.

Harley-Davidson, Inc., warrants to the first owner and each subsequent owner that his vehicle is designed and built so as to conform at the time of sale with applicable regulations of the U.S. Environmental Protection Agency (as tested following F-76 Drive-By test procedure) at the time of manufacture and that it is free from defects in materials and workmanship which cause his motorcycle not to meet U.S. Environmental Protection Agency Standards within 1 year or 3,730 miles (6,000 kilometers) whichever occurs first.

The warranty period shall begin on the date the motorcycle is delivered to the first retail purchaser or, if the motorcycle is placed in service as a demonstrator or company vehicle prior to sale at retail, on the date it is first placed in service.

### **THE FOLLOWING ITEMS ARE NOT COVERED BY THE EMISSION CONTROL SYSTEM WARRANTY**

1. Failures which arise as a result of misuse, alterations, accident or non-performance of maintenance as specified in the Owner's Manual.
2. The replacement of parts (such as spark plugs, fuel and oil filters, etc.) used in required maintenance.
3. Loss of time, inconvenience, loss of motorcycle use or other consequential damages.
4. Any motorcycle on which the odometer mileage has been changed so that the mileage cannot be determined.

### **RECOMMENDATIONS FOR REQUIRED MAINTENANCE**

IT IS RECOMMENDED THAT ANY EMISSION SYSTEM MAINTENANCE BE PERFORMED BY AN AUTHORIZED HARLEY-DAVIDSON DEALER USING GENUINE HARLEY-DAVIDSON REPLACEMENT PARTS. THE MAINTENANCE, REPLACEMENT OR REPAIR OF THE EMISSION CONTROL SYSTEM MAY BE PERFORMED BY ANY OTHER QUALIFIED SERVICE OUTLET OR INDIVIDUAL. NON-GENUINE PARTS MAY BE USED ONLY IF SUCH PARTS ARE CERTIFIED TO COMPLY WITH U.S. ENVIRONMENTAL PROTECTION AGENCY STANDARDS.

**HARLEY-DAVIDSON, INC., P.O. Box 653 Milwaukee, Wisconsin 53201 U.S.A.**

## **HARLEY-DAVIDSON NOISE CONTROL SYSTEM WARRANTY**

The following warranty applies to the noise control system and is in addition to the LIMITED WARRANTY, and EMIS-  
SION CONTROL SYSTEM WARRANTY.

Harley-Davidson, Inc., warrants to the first owner and each subsequent owner that his vehicle is designed and built so as to conform at the time of sale with applicable regulations of the U.S. Federal Environmental Protection Agency at the time of manufacture and that it is free from defects in materials and workmanship which cause his motorcycle not to meet U.S. Environmental Protection Agency Standards within 5 years or 18,641 miles (30,000 kilometers) whichever occurs first.

The warranty period shall begin on the date the motorcycle is delivered to the first retail purchaser or, if the motorcycle is placed in service as a demonstrator or company vehicle prior to sale at retail, on the date it is first placed in service.

### **THE FOLLOWING ITEMS ARE NOT COVERED BY THE NOISE CONTROL SYSTEM WARRANTY**

1. Failures which arise as a result of misuse, alterations, or accident as specified in the Owner's Manual.
2. Replacing, removing, or modifying any portion of the NOISE CONTROL SYSTEM (consisting of the exhaust system and air intake/cleaner assembly) with parts not certified to be noise legal for street use.
3. Loss of time, inconvenience, loss of motorcycle use or other consequential damages.
4. Any motorcycle on which the odometer mileage has been changed so that the mileage cannot be determined.

### **RECOMMENDATIONS FOR REQUIRED MAINTENANCE**

IT IS RECOMMENDED THAT ANY NOISE SYSTEM MAINTENANCE BE PERFORMED BY AN AUTHORIZED HARLEY-DAVIDSON DEALER USING GENUINE HARLEY-DAVIDSON REPLACEMENT PARTS. THE MAINTENANCE, REPLACEMENT OR REPAIR OF THE NOISE CONTROL SYSTEM MAY BE PERFORMED BY ANY OTHER QUALIFIED SERVICE OUTLET OR INDIVIDUAL. NON-GENUINE PARTS MAY BE USED ONLY IF SUCH PARTS ARE CERTIFIED TO COMPLY WITH U.S. ENVIRONMENTAL PROTECTION AGENCY STANDARDS.

**HARLEY-DAVIDSON, INC., P.O. Box 653 Milwaukee, Wisconsin 53201 U.S.A.**

**500 MILE**  
(800 km)  
**MAINTENANCE**

\_\_\_\_\_

**Date**

\_\_\_\_\_

**Mileage**

\_\_\_\_\_

**Dealer (or other) Signature**

**OWNER RECORD**

**500 MILE**  
(800 km)  
**MAINTENANCE**

You are authorized to perform the applicable maintenance and lubrication services listed on the back of this coupon. These services are to be performed at your regular rates and paid for by me, the owner. I also authorize you to road test this motorcycle for proper operation.

\_\_\_\_\_

**Owner's Signature**

\_\_\_\_\_

**VIN**

**Date** \_\_\_\_\_ **Mileage** \_\_\_\_\_

**DEALER RECORD**

## 500 MILE MAINTENANCE

1. Change engine oil.
2. Replace oil filter.
3. Clean tappet oil screen.
4. Change primary chaincase lubricant and clean magnetic drain plug.
5. Check and adjust chain/ belt.
6. Inspect air cleaner and service as required.
7. Check battery electrolyte level. Check and clean battery connections.
8. Check rear brake pedal adjustment.
9. Inspect brake pads and discs for wear.
10. Check brake fluid reservoir levels and condition.
11. Inspect oil lines and brake system for leaks.
12. Lubricate the following: front brake handlever, throttle control cables, choke control cable, clutch control cable and handlever.
13. Check operation of throttle and choke controls.
14. Check clutch adjustment.
15. Grease the foot shift lever bearings.\*
16. Check tightness of all fasteners except engine head bolts.
17. Check tire pressure and inspect tread.
18. Check engine low and fast idle speed adjustment.
19. Inspect fuel valve, lines and fittings for leaks.
20. Clean fuel tank filter screen.
21. Change transmission lubricant and clean magnetic drain plug.
22. Check operation of all electrical equipment and switches.
23. Change front fork oil.
24. Check front fork bearing adjustment.
25. Check stabilizer links and engine mounts.
26. Check air suspension-pressure, operation and leakage.\*
27. Road test.

\*If applicable.

## 500 MILE MAINTENANCE

1. Change engine oil.
2. Replace oil filter.
3. Clean tappet oil screen.
4. Change primary chaincase lubricant and clean magnetic drain plug.
5. Check and adjust chain/ belt.
6. Inspect air cleaner and service as required.
7. Check battery electrolyte level. Check and clean battery connections.
8. Check rear brake pedal adjustment.
9. Inspect brake pads and discs for wear.
10. Check brake fluid reservoir levels and condition.
11. Inspect oil lines and brake system for leaks.
12. Lubricate the following: front brake handlever, throttle control cables, choke control cable, clutch control cable and handlever.
13. Check operation of throttle and choke controls.
14. Check clutch adjustment.
15. Grease the foot shift lever bearings.\*
16. Check tightness of all fasteners except engine head bolts.
17. Check tire pressure and inspect tread.
18. Check engine low and fast idle speed adjustment.
19. Inspect fuel valve, lines and fittings for leaks.
20. Clean fuel tank filter screen.
21. Change transmission lubricant and clean magnetic drain plug.
22. Check operation of all electrical equipment and switches.
23. Change front fork oil.
24. Check front fork bearing adjustment.
25. Check stabilizer links and engine mounts.
26. Check air suspension-pressure, operation and leakage.\*
27. Road test.

\*If applicable.



**2500 MILE**  
(4000 km)  
**MAINTENANCE**

\_\_\_\_\_  
**Date**

\_\_\_\_\_  
**Mileage**

\_\_\_\_\_  
**Dealer (or other) Signature**

**OWNER RECORD**

**2500 MILE**  
(4000 km)  
**MAINTENANCE**

You are authorized to perform the applicable maintenance and lubrication services listed on the back of this coupon. These services are to be performed at your regular rates and paid for by me, the owner. I also authorize you to road test this motorcycle for proper operation.

\_\_\_\_\_  
**Owner's Signature**

\_\_\_\_\_  
**VIN**

**Date** \_\_\_\_\_ **Mileage** \_\_\_\_\_

**DEALER RECORD**

## 2500 MILE MAINTENANCE

1. Inspect engine oil.
2. Inspect rear chain/belt.
3. Inspect battery fluid level and connections.
4. Inspect brake pads and discs for wear.
5. Inspect fuel valve, lines and fittings for leaks.
6. Inspect tire pressure and inspect tread.
7. Inspect operation of throttle and choke controls.
8. Inspect operation of all electrical equipment and switches.
9. Inspect transmission lubricant.
10. Check stabilizer links and engine mounts.
11. Road test.

✓

## 2500 MILE MAINTENANCE

1. Inspect engine oil.
2. Inspect rear chain/belt.
3. Inspect battery fluid level and connections.
4. Inspect brake pads and discs for wear.
5. Inspect fuel valve, lines and fittings for leaks.
6. Inspect tire pressure and inspect tread.
7. Inspect operation of throttle and choke controls.
8. Inspect operation of all electrical equipment and switches.
9. Inspect transmission lubricant.
10. Check stabilizer links and engine mounts.
11. Road test.

✓

**5000 MILE**  
(8000 km)  
**MAINTENANCE**

\_\_\_\_\_  
**Date**

\_\_\_\_\_  
**Mileage**

\_\_\_\_\_  
**Dealer (or other) Signature**

**OWNER RECORD**

**5000 MILE**  
(8000 km)  
**MAINTENANCE**

You are authorized to perform the applicable maintenance and lubrication services listed on the back of this coupon. These services are to be performed at your regular rates and paid for by me, the owner. I also authorize you to road test this motorcycle for proper operation.

\_\_\_\_\_  
**Owner's Signature**

\_\_\_\_\_  
**VIN**

**Date** \_\_\_\_\_ **Mileage** \_\_\_\_\_

**DEALER RECORD**

## 5000 MILE MAINTENANCE

- |                                                                                                                                       |                                     |
|---------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|
| 1. Change engine oil.                                                                                                                 | <input checked="" type="checkbox"/> |
| 2. Replace oil filter.                                                                                                                | <input type="checkbox"/>            |
| 3. Clean tappet oil screen.                                                                                                           | <input type="checkbox"/>            |
| 4. Change primary chaincase lubricant and clean magnetic drain plug.                                                                  | <input type="checkbox"/>            |
| 5. Check and adjust chain / belt.                                                                                                     | <input type="checkbox"/>            |
| 6. Inspect air cleaner and service as required.                                                                                       | <input type="checkbox"/>            |
| 7. Check battery electrolyte level. Check and clean battery connections.                                                              | <input type="checkbox"/>            |
| 8. Check rear brake pedal adjustment.                                                                                                 | <input type="checkbox"/>            |
| 9. Inspect brake pads and discs for wear.                                                                                             | <input type="checkbox"/>            |
| 10. Check brake fluid reservoir levels and condition.                                                                                 | <input type="checkbox"/>            |
| 11. Inspect oil lines and brake system for leaks.                                                                                     | <input type="checkbox"/>            |
| 12. Lubricate the following: front brake handlever, throttle control cables, choke control cable, clutch control cable and handlever. | <input type="checkbox"/>            |
| 13. Check operation of throttle and choke controls.                                                                                   | <input type="checkbox"/>            |
| 14. Check clutch adjustment.                                                                                                          | <input type="checkbox"/>            |
| 15. Grease the foot shift/brake lever bearings* and speedometer cable.                                                                | <input type="checkbox"/>            |
| 16. Check tightness of all fasteners except engine head bolts.                                                                        | <input type="checkbox"/>            |
| 17. Check tire pressure and inspect tread.                                                                                            | <input type="checkbox"/>            |
| 18. Check engine low and fast idle speed adjustment.                                                                                  | <input type="checkbox"/>            |
| 19. Inspect fuel valve, lines and fittings for leaks.                                                                                 | <input type="checkbox"/>            |
| 20. Clean fuel tank filter screen.                                                                                                    | <input type="checkbox"/>            |
| 21. Check operation of all electrical equipment and switches.                                                                         | <input type="checkbox"/>            |
| 22. Check front fork bearing adjustment.                                                                                              | <input type="checkbox"/>            |
| 23. Check ignition timing and vacuum hose.                                                                                            | <input type="checkbox"/>            |
| 24. Change transmission lubricant and clean the magnetic drain plug.                                                                  | <input type="checkbox"/>            |
| 25. Change spark plugs.                                                                                                               | <input type="checkbox"/>            |
| 26. Check condition of rear shock absorbers.                                                                                          | <input type="checkbox"/>            |
| 27. Check engine mounts.                                                                                                              | <input type="checkbox"/>            |
| 28. Check air suspension-pressure, operation and leakage.*                                                                            | <input type="checkbox"/>            |
| 29. Road test.                                                                                                                        | <input type="checkbox"/>            |

\* If applicable.

## 5000 MILE MAINTENANCE

- |                                                                                                                                       |                                     |
|---------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|
| 1. Change engine oil.                                                                                                                 | <input checked="" type="checkbox"/> |
| 2. Replace oil filter.                                                                                                                | <input type="checkbox"/>            |
| 3. Clean tappet oil screen.                                                                                                           | <input type="checkbox"/>            |
| 4. Change primary chaincase lubricant and clean magnetic drain plug.                                                                  | <input type="checkbox"/>            |
| 5. Check and adjust chain / belt.                                                                                                     | <input type="checkbox"/>            |
| 6. Inspect air cleaner and service as required.                                                                                       | <input type="checkbox"/>            |
| 7. Check battery electrolyte level. Check and clean battery connections.                                                              | <input type="checkbox"/>            |
| 8. Check rear brake pedal adjustment.                                                                                                 | <input type="checkbox"/>            |
| 9. Inspect brake pads and discs for wear.                                                                                             | <input type="checkbox"/>            |
| 10. Check brake fluid reservoir levels and condition.                                                                                 | <input type="checkbox"/>            |
| 11. Inspect oil lines and brake system for leaks.                                                                                     | <input type="checkbox"/>            |
| 12. Lubricate the following: front brake handlever, throttle control cables, choke control cable, clutch control cable and handlever. | <input type="checkbox"/>            |
| 13. Check operation of throttle and choke controls.                                                                                   | <input type="checkbox"/>            |
| 14. Check clutch adjustment.                                                                                                          | <input type="checkbox"/>            |
| 15. Grease the foot shift/brake lever bearings* and speedometer cable.                                                                | <input type="checkbox"/>            |
| 16. Check tightness of all fasteners except engine head bolts.                                                                        | <input type="checkbox"/>            |
| 17. Check tire pressure and inspect tread.                                                                                            | <input type="checkbox"/>            |
| 18. Check engine low and fast idle speed adjustment.                                                                                  | <input type="checkbox"/>            |
| 19. Inspect fuel valve, lines and fittings for leaks.                                                                                 | <input type="checkbox"/>            |
| 20. Clean fuel tank filter screen.                                                                                                    | <input type="checkbox"/>            |
| 21. Check operation of all electrical equipment and switches.                                                                         | <input type="checkbox"/>            |
| 22. Check front fork bearing adjustment.                                                                                              | <input type="checkbox"/>            |
| 23. Check ignition timing and vacuum hose.                                                                                            | <input type="checkbox"/>            |
| 24. Change transmission lubricant and clean the magnetic drain plug.                                                                  | <input type="checkbox"/>            |
| 25. Change spark plugs.                                                                                                               | <input type="checkbox"/>            |
| 26. Check condition of rear shock absorbers.                                                                                          | <input type="checkbox"/>            |
| 27. Check engine mounts.                                                                                                              | <input type="checkbox"/>            |
| 28. Check air suspension-pressure, operation and leakage.*                                                                            | <input type="checkbox"/>            |
| 29. Road test.                                                                                                                        | <input type="checkbox"/>            |

\* If applicable.

**7500 MILE**  
(12000 km)  
**MAINTENANCE**

\_\_\_\_\_ **Date**

\_\_\_\_\_ **Mileage**

\_\_\_\_\_ **Dealer (or other) Signature**

**OWNER RECORD**

**7500 MILE**  
(12000 km)  
**MAINTENANCE**

You are authorized to perform the applicable maintenance and lubrication services listed on the back of this coupon. These services are to be performed at your regular rates and paid for by me, the owner. I also authorize you to road test this motorcycle for proper operation.

\_\_\_\_\_ **Owner's Signature**

\_\_\_\_\_ **VIN**

**Date** \_\_\_\_\_ **Mileage** \_\_\_\_\_

**DEALER RECORD**

## 7500 MILE MAINTENANCE

1. Inspect engine oil.
2. Inspect rear chain/belt.
3. Inspect battery fluid level and connections.
4. Inspect brake pads and discs for wear.
5. Inspect fuel valve, lines and fittings for leaks.
6. Inspect tire pressure and inspect tread.
7. Inspect operation of throttle and choke controls.
8. Inspect operation of all electrical equipment and switches.
9. Inspect transmission lubricant.
10. Check stabilizer links and engine mounts.
11. Road test.

## 7500 MILE MAINTENANCE

1. Inspect engine oil.
2. Inspect rear chain/belt.
3. Inspect battery fluid level and connections.
4. Inspect brake pads and discs for wear.
5. Inspect fuel valve, lines and fittings for leaks.
6. Inspect tire pressure and inspect tread.
7. Inspect operation of throttle and choke controls.
8. Inspect operation of all electrical equipment and switches.
9. Inspect transmission lubricant.
10. Check stabilizer links and engine mounts.
11. Road test.

**10,000 MILE**  
(16,000 km)  
**MAINTENANCE**

\_\_\_\_\_

**Date**

\_\_\_\_\_

**Mileage**

\_\_\_\_\_

**Dealer (or other) Signature**

**OWNER RECORD**

**10,000 MILE**  
(16,000 km)  
**MAINTENANCE**

You are authorized to perform the applicable maintenance and lubrication services listed on the back of this coupon. These services are to be performed at your regular rates and paid for by me, the owner. I also authorize you to road test this motorcycle for proper operation.

\_\_\_\_\_

**Owner's Signature**

\_\_\_\_\_

**VIN**

**Date** \_\_\_\_\_ **Mileage** \_\_\_\_\_

**DEALER RECORD**

## 10,000 MILE MAINTENANCE

1. Change engine oil.
2. Replace oil filter.
3. Clean tappet oil screen.
4. Change primary chaincase lubricant and clean magnetic drain plug.
5. Check and adjust chain/belt.
6. Inspect air cleaner and service as required.
7. Check battery electrolyte level. Check and clean battery connections.
8. Check rear brake pedal adjustment.
9. Inspect brake pads and discs for wear.
10. Check brake fluid reservoir levels and condition.
11. Inspect oil lines and brake system for leaks.
12. Lubricate the following: front brake handlever, throttle control cables, choke control cable, clutch control cable and handlever.
13. Check operation of throttle and choke controls.
14. Check clutch adjustment.
15. Grease the foot shift/brake lever bearings\* and speedometer cable.
16. Check tightness of all fasteners except engine head bolts.
17. Check tire pressure and inspect tread.
18. Check engine low and fast idle speed adjustment.
19. Inspect fuel valve, lines and fittings for leaks.
20. Clean fuel tank filter screen.
21. Check operation of all electrical equipment and switches.
22. Check front fork bearing adjustment, and lubricate bearings.
23. Check ignition timing and vacuum hose.
24. Change transmission lubricant and clean the magnetic drain plug.
25. Change spark plugs.
26. Check condition of rear shock absorbers.
27. Repack wheel bearings with grease.
28. Change front fork oil.
29. Check stabilizer links and engine mounts.
30. Check air suspension-pressure, operation and leakage.\*
31. Road test.

\*If applicable.

## 10,000 MILE MAINTENANCE

1. Change engine oil.
2. Replace oil filter.
3. Clean tappet oil screen.
4. Change primary chaincase lubricant and clean magnetic drain plug.
5. Check and adjust chain/belt.
6. Inspect air cleaner and service as required.
7. Check battery electrolyte level. Check and clean battery connections.
8. Check rear brake pedal adjustment.
9. Inspect brake pads and discs for wear.
10. Check brake fluid reservoir levels and condition.
11. Inspect oil lines and brake system for leaks.
12. Lubricate the following: front brake handlever, throttle control cables, choke control cable, clutch control cable and handlever.
13. Check operation of throttle and choke controls.
14. Check clutch adjustment.
15. Grease the foot shift/brake lever bearings\* and speedometer cable.
16. Check tightness of all fasteners except engine head bolts.
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22. Check front fork bearing adjustment, and lubricate bearings.
23. Check ignition timing and vacuum hose.
24. Change transmission lubricant and clean the magnetic drain plug.
25. Change spark plugs.
26. Check condition of rear shock absorbers.
27. Repack wheel bearings with grease.
28. Change front fork oil.
29. Check stabilizer links and engine mounts.
30. Check air suspension-pressure, operation and leakage.\*
31. Road test.

\*If applicable.



## SERVICE LITERATURE

For further maintenance and service information, refer to the publications listed below. Each is available (Fall 1990) through your Harley-Davidson dealer.:

Publication	Part Number
Police Models Service Supplement .....	99483-90SP
Police Models Parts Catalog .....	99454-90

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# NOTES

**IMPORTANT INFORMATION**

If you move from your present address at any time after purchasing your new Harley-Davidson, or if you sell it to anyone, please fill out the attached card and mail immediately. This will provide us with an accurate registration record as required by Federal law.

Thank You!

VEHICLE VIN \_\_\_\_\_ CRANKCASE NO. \_\_\_\_\_

OWNER'S NAME \_\_\_\_\_

OLD ADDRESS \_\_\_\_\_ APT. NO. \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP CODE \_\_\_\_\_

DEALER NUMBER \_\_\_\_\_ DATE OF DELIVERY \_\_\_\_\_

MO. - DAY - YEAR

DEALER'S NAME \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP CODE \_\_\_\_\_

MY NEW ADDRESS IS:

NEW ADDRESS \_\_\_\_\_ APT. NO. \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP CODE \_\_\_\_\_

MY MOTORCYCLE HAS BEEN SOLD TO:

NEW OWNER'S NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_ APT. NO. \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP CODE \_\_\_\_\_

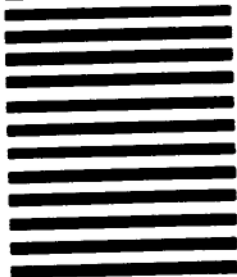


**BUSINESS REPLY CARD**  
FIRST CLASS PERMIT NO 1183 MILWAUKEE, WI

POSTAGE WILL BE PAID BY ADDRESSEE

HARLEY-DAVIDSON, INC.  
POST OFFICE BOX 653  
MILWAUKEE, WISCONSIN 53201

NO POSTAGE  
NECESSARY  
IF MAILED  
IN THE  
UNITED STATES



## PATENT NOTICE

Harley-Davidson products are manufactured under one or more of the following patents: U.S. Patents — 2986162, 2987934, 2998809, 3116089, 3144631, 3144860, 3226994, 3229792, 3434887, 3559773, 8673359, 3709317, Des. 225,626.

To the best knowledge of Harley-Davidson, Inc., the material contained herein is accurate as of the date this publication was approved for printing. Harley-Davidson, Inc., reserves the right to change specifications, equipment, or designs at any time without notice and without incurring obligation.

HARLEY-DAVIDSON, INC.



**Harley-Davidson, Inc.**  
Technical Communications Dept.  
Milwaukee, WI 53201