



Harley-Davidson, Inc.

# OWNER'S MANUAL POLICE MODELS — FLHTP, FXRP

1992

Part No. 99478-92





## 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 rules 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. Remove fuel filler cap slowly. 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.
- 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.
- 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 formal 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 footgear 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.

- When carrying passengers, it is your responsibility to instruct them on proper riding procedures. (See Riding Tips for Motorcyclist included in your Owner's Kit.)
- 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. Vehicles equipped with a sound system should have the volume adjusted to a nondistracting level before operating vehicle.
- Maintain your motorcycle in proper operating condition in accordance with the MAINTENANCE INTERVALS chart 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.
- The front and/or rear guard(s) may provide limited leg protection 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.
- The quality fasteners used in Harley-Davidson motorcycles have specific strength, finish and type requirements to perform properly in the assembly and its environment. Use only genuine Harley-Davidson replacement fasteners, tightened to the proper torque. Substitution could cause fastener failure which may result in personal injury.



- 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, signal at least 100 feet before reaching the turning point. Move over to the centerline 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 carrying additional weight. The following guidelines should be used when equipping a motorcycle and carrying passengers and cargo.

- 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.



## IGNITION/LIGHT KEY SWITCH

### CAUTION

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

### FLHTP

See Figure 1. 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.

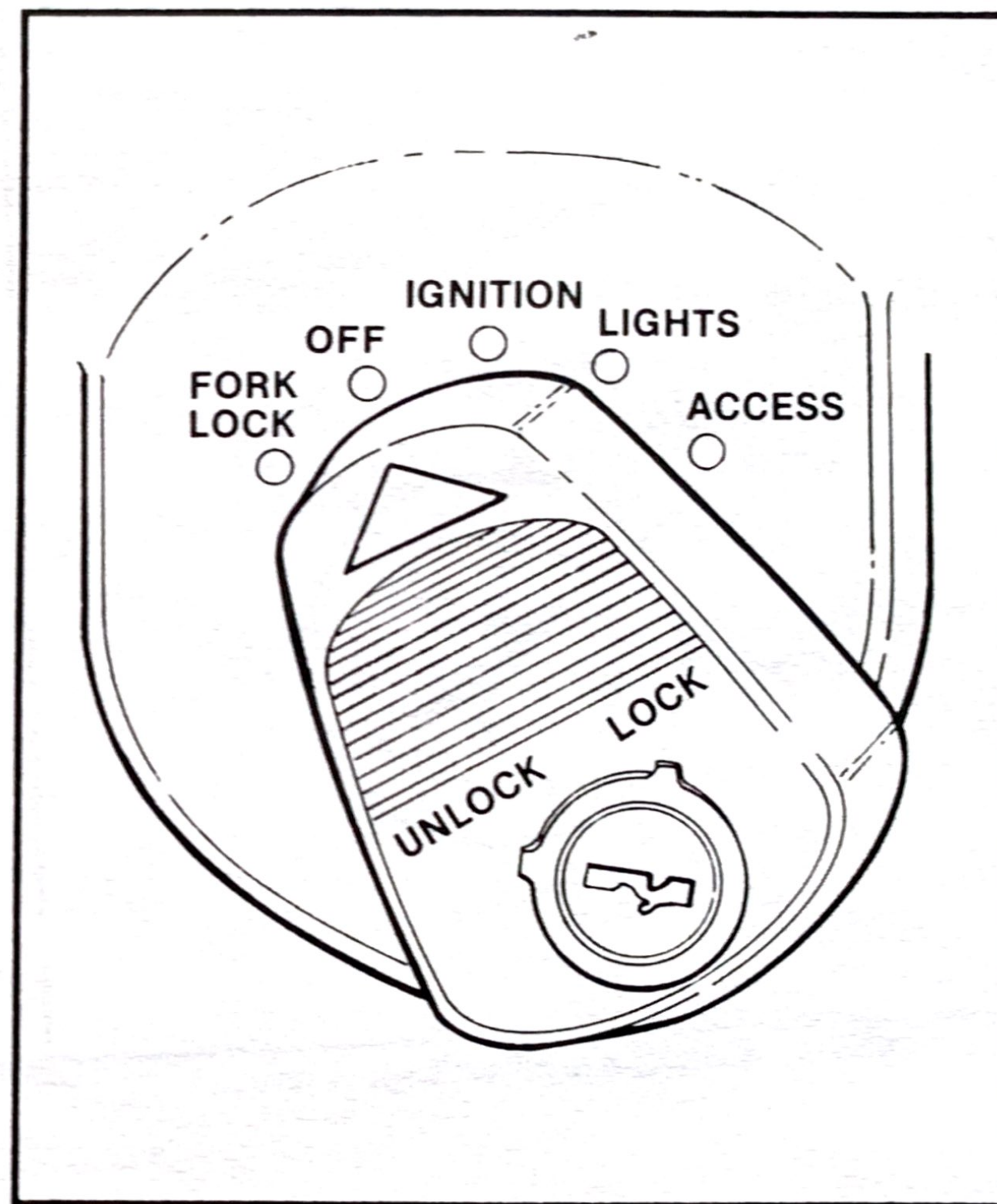


Figure 1. Ignition/Light Switch - FLHTP



2. Be sure that the jiffy stand is down and that the motorcycle is on a level, firm surface.
3. Insert 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 the case of loss.

## FXRP

See Figures 2, 9 and 10. The ignition/light switch is located on the instrument panel bracket. From OFF vertical position there are two positions forward for ignition and lights. First position is accessories, second is lights and ignition. For U.S.A. key can be removed to lock switch in OFF position.

### NOTE

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

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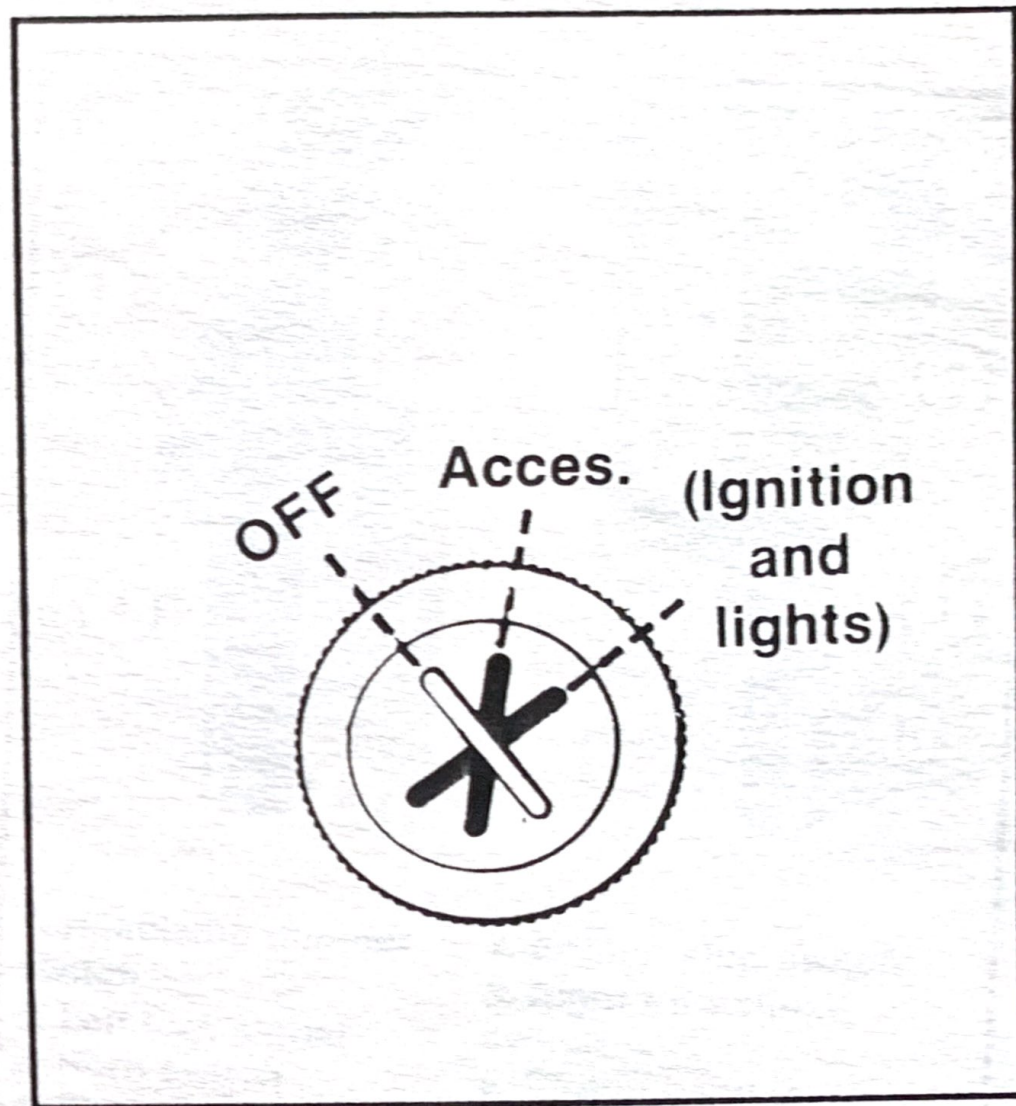


Figure 2. Ignition/Light Switch - FXRP



## NOTE

All vehicles are equipped with a clutch/starter lockout. The starter will not operate unless the clutch is disengaged (clutch lever pulled in).

## ELECTRIC STARTER

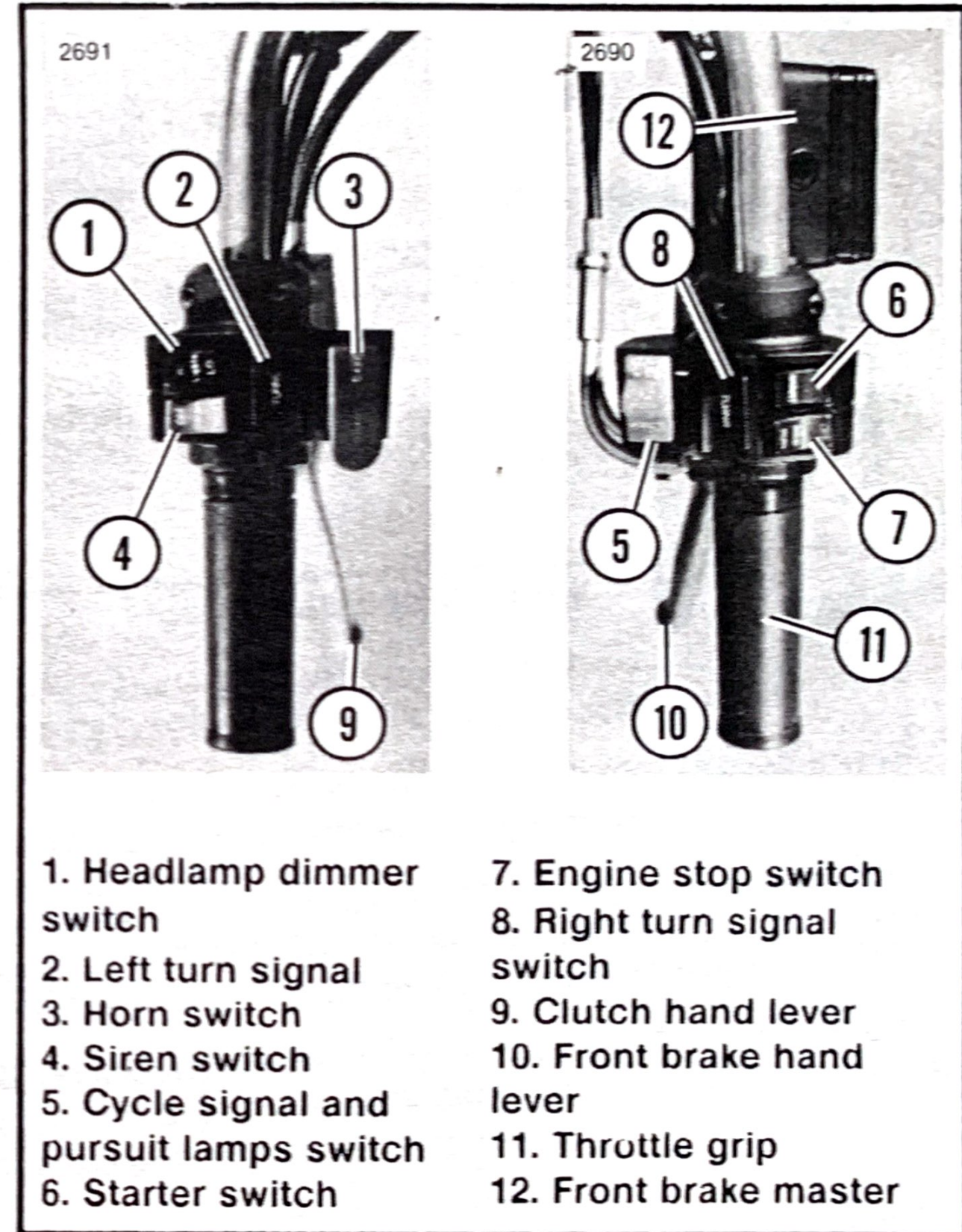
See Figure 3. The starter switch (6) is located on the right handlebar. With ignition on, engine stop switch (7) in "RUN" position and transmission in neutral, push switch to operate starter motor.

## CAUTION

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

## ENGINE STOP SWITCH

See Figure 3. Stop 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.



1. Headlamp dimmer switch
2. Left turn signal
3. Horn switch
4. Siren switch
5. Cycle signal and pursuit lamps switch
6. Starter switch

7. Engine stop switch
8. Right turn signal switch
9. Clutch hand lever
10. Front brake hand lever
11. Throttle grip
12. Front brake master

Figure 3. Handlebar Controls



## THROTTLE CONTROL GRIP

See Figure 3. 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. 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 (Figure 4)

### 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:

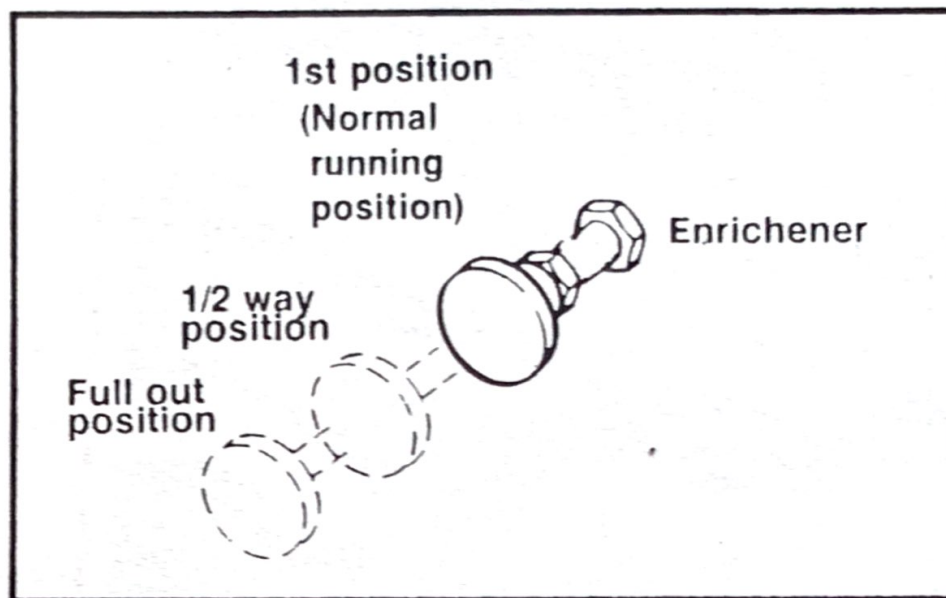


Figure 4. Setting the Enrichener

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 3. 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 5. 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.*

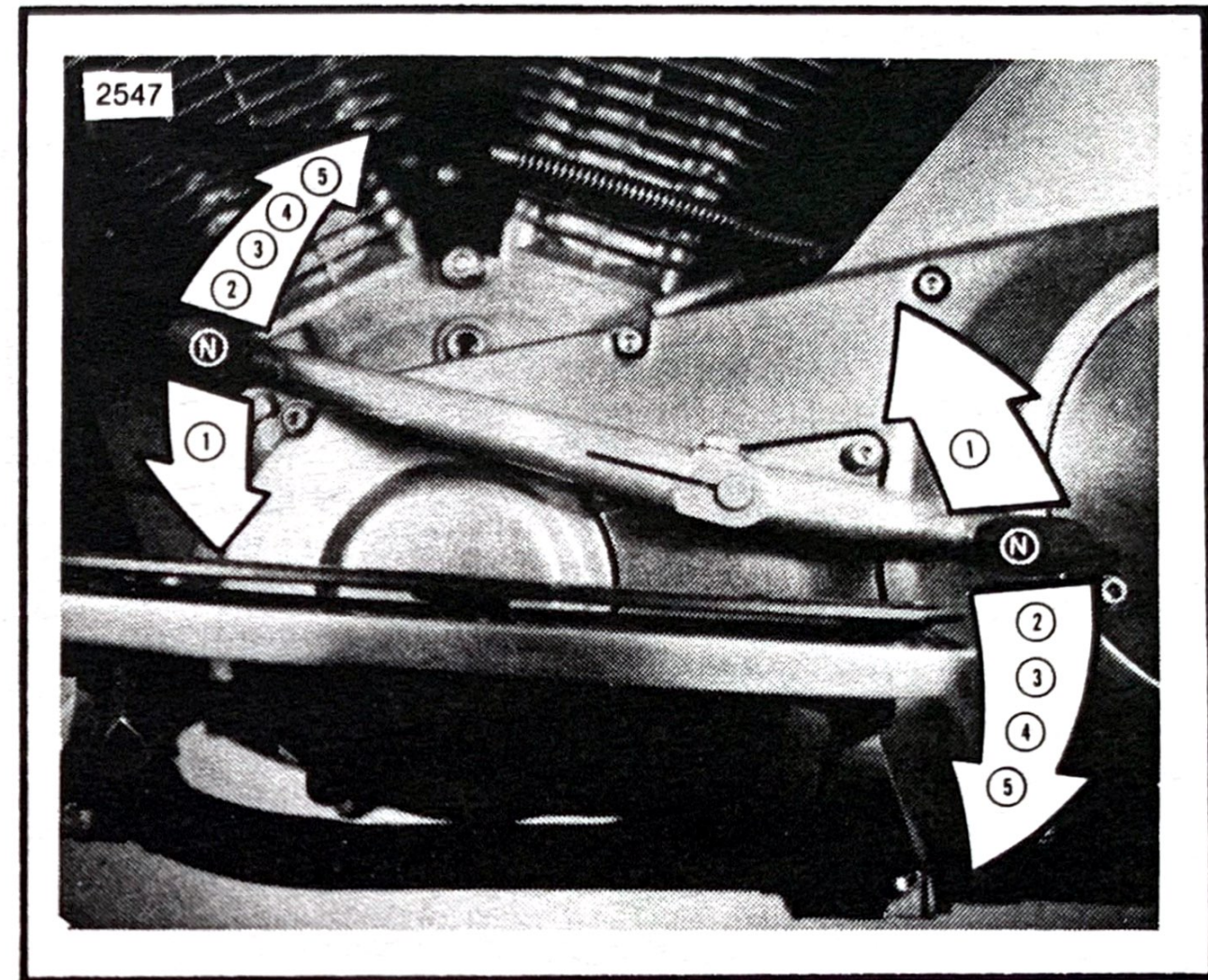


Figure 5. Heel and Toe Shifter

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.



2. 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.
  
3. 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 Second to Third Third to Fourth Fourth to Fifth	15 mph (25 km/h) 25 mph (40 km/h) 40 mph (65 km/h) 50 mph (80 km/h)
<b>Deceleration (Downshift)</b> Fifth to Fourth Fourth to Third Third to Second Second to First	40 mph (64 km/h) or less 30 mph (50 km/h) or less 20 mph (30 km/h) or less 10 mph (15 km/h) or less

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

<b>GEAR CHANGE</b>	<b>SPEED</b>
<b>Acceleration (Upshift)</b> First to Second Second to Third Third to Fourth Fourth to Fifth	37 mph (25 km/h) 54 mph (40 km/h) 75 mph (65 km/h) 98 mph (80 km/h)



## 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 6, 7. 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.

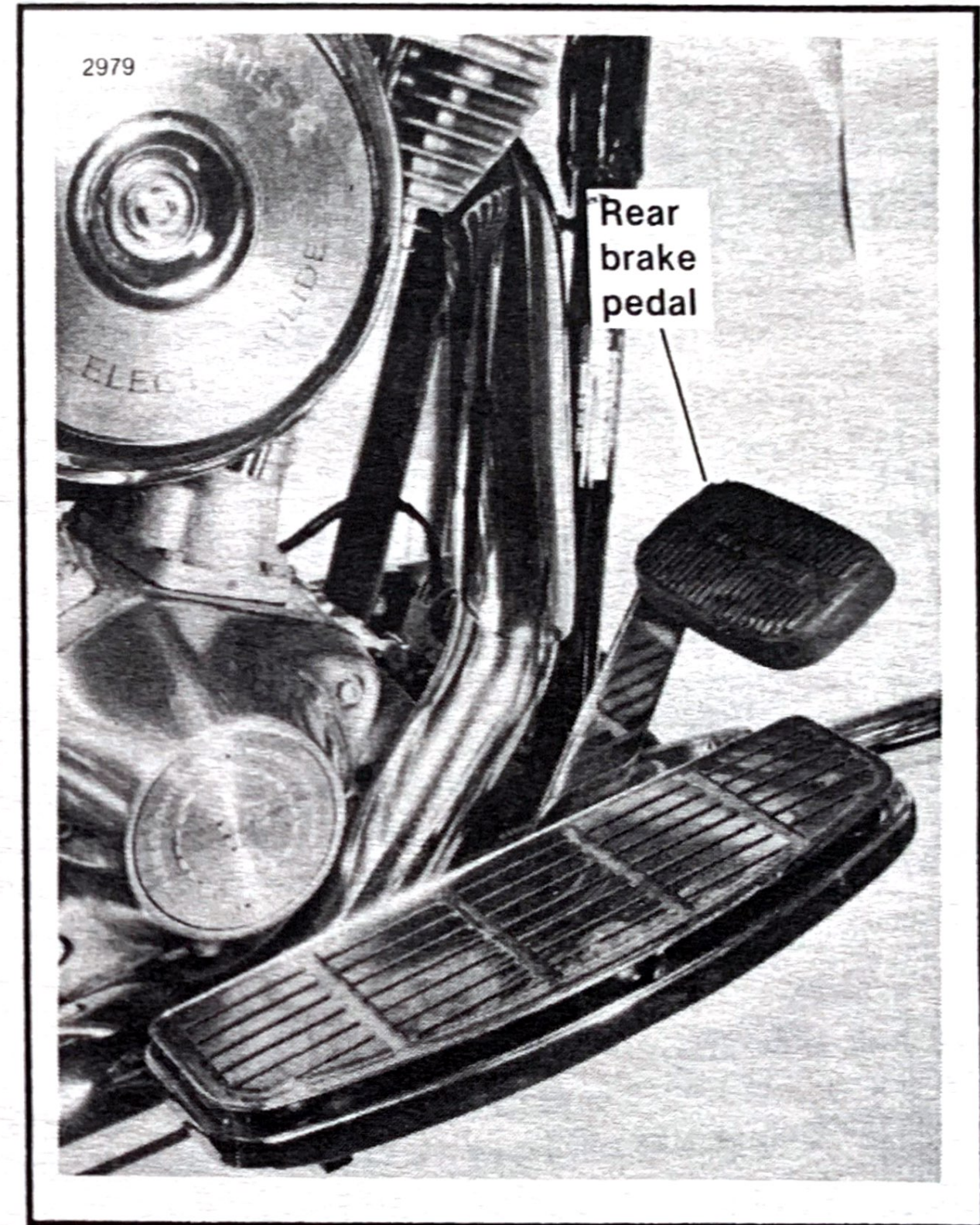


Figure 6. Rear Brake Pedal - FLHTP



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.

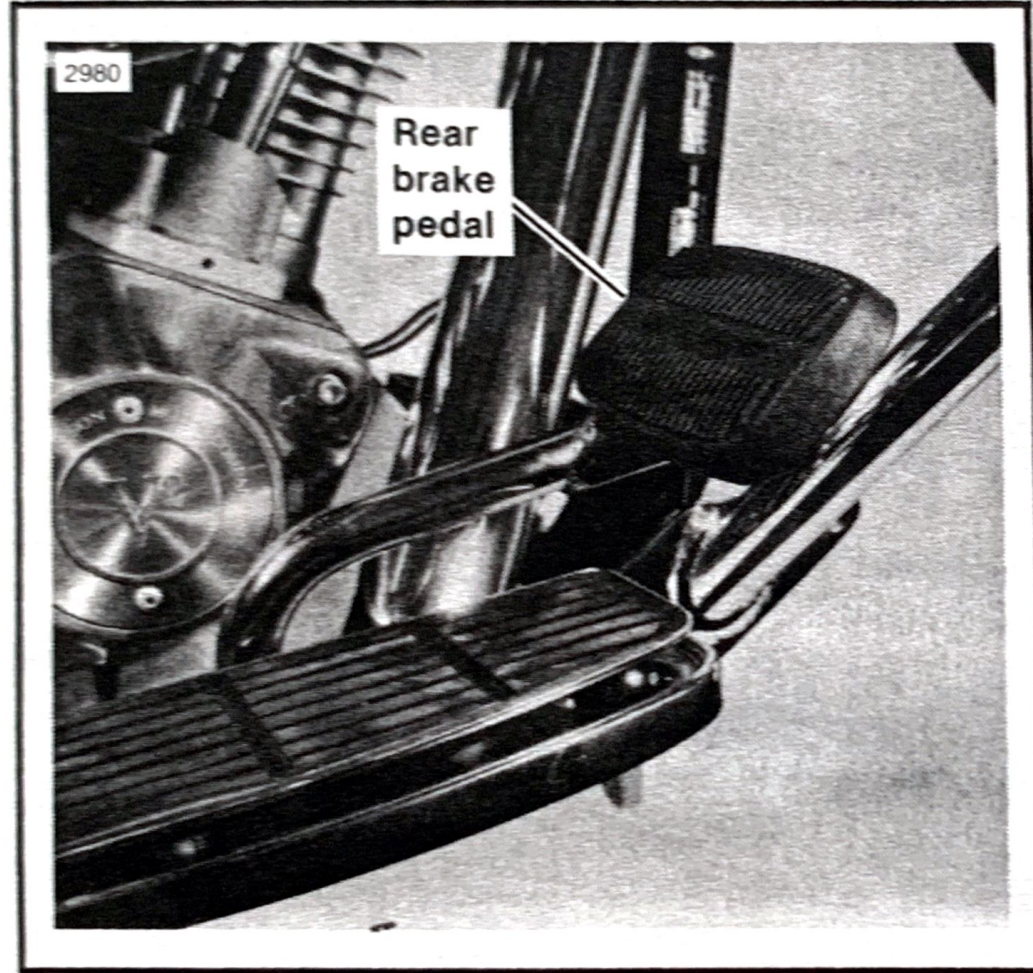


Figure 7. Rear Brake Pedal - FXRP

## 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

### Turn Signal Switch Operation

The 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.

## NOTE

*If you are signaling to turn in one direction and you depress the switch for the opposite turn signal, the first signal is canceled and the opposite side begins flashing.*

If you want to stop the lamps from flashing, briefly depress the turn signal switch a second time. The turn signal lamps will stop flashing.



## HEADLAMP DIMMER SWITCH

See Figure 3. 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 3. 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 3. The horn is operated by the horn switch (3) on the left handlebar. Refer to the SIREN SWITCH previously 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 3. 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 8, 9, 10. 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 made.

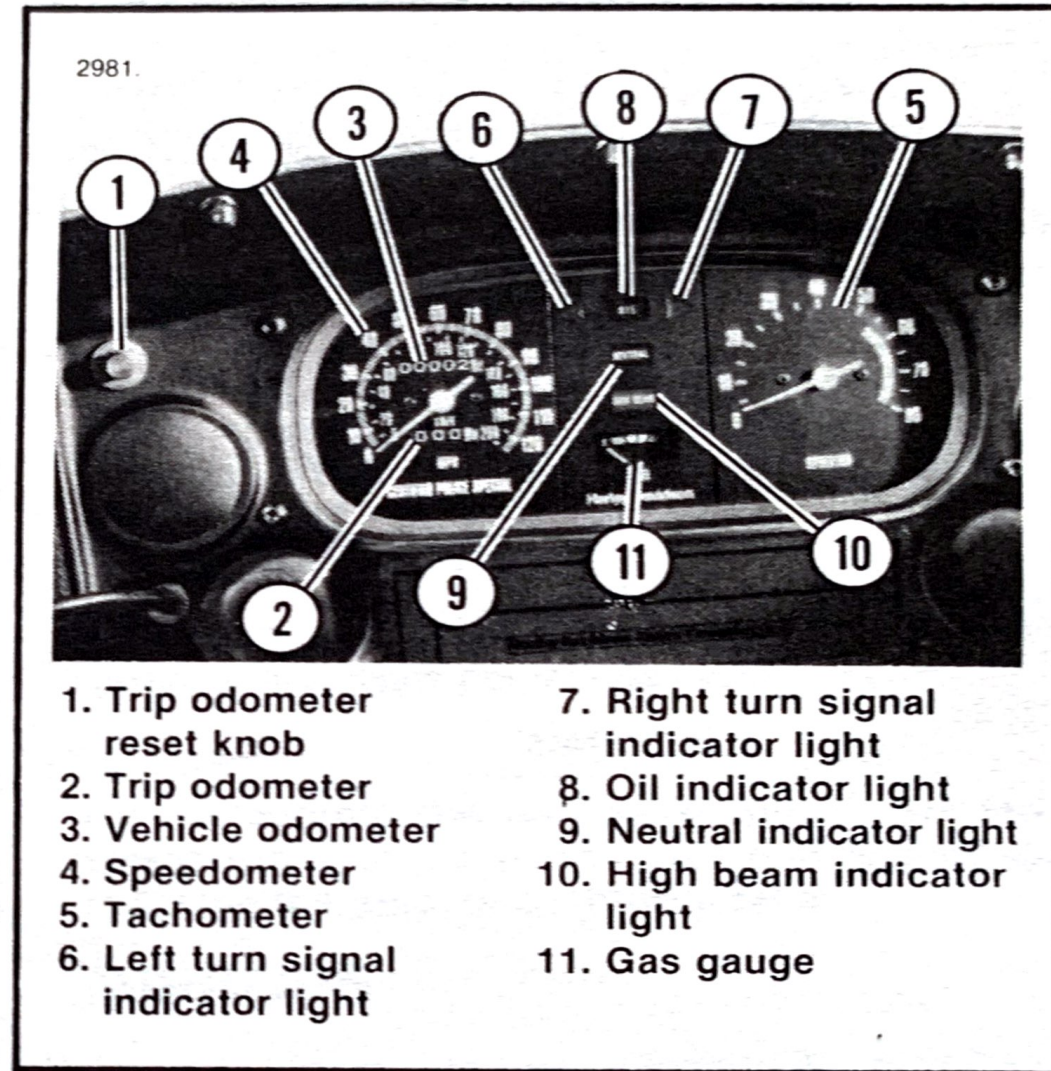


Figure 8. Indicator Lights and Gauges - FLHTP



The green 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 4-WAY FLASHER (Turn Signal Switches)**

The hazard warning 4-way 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 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 8, 9, 10. 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 8, 9, 10. 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 11. The jiffy stand is located on the left side of the motorcycle and swings outward to support the motorcycle for parking.

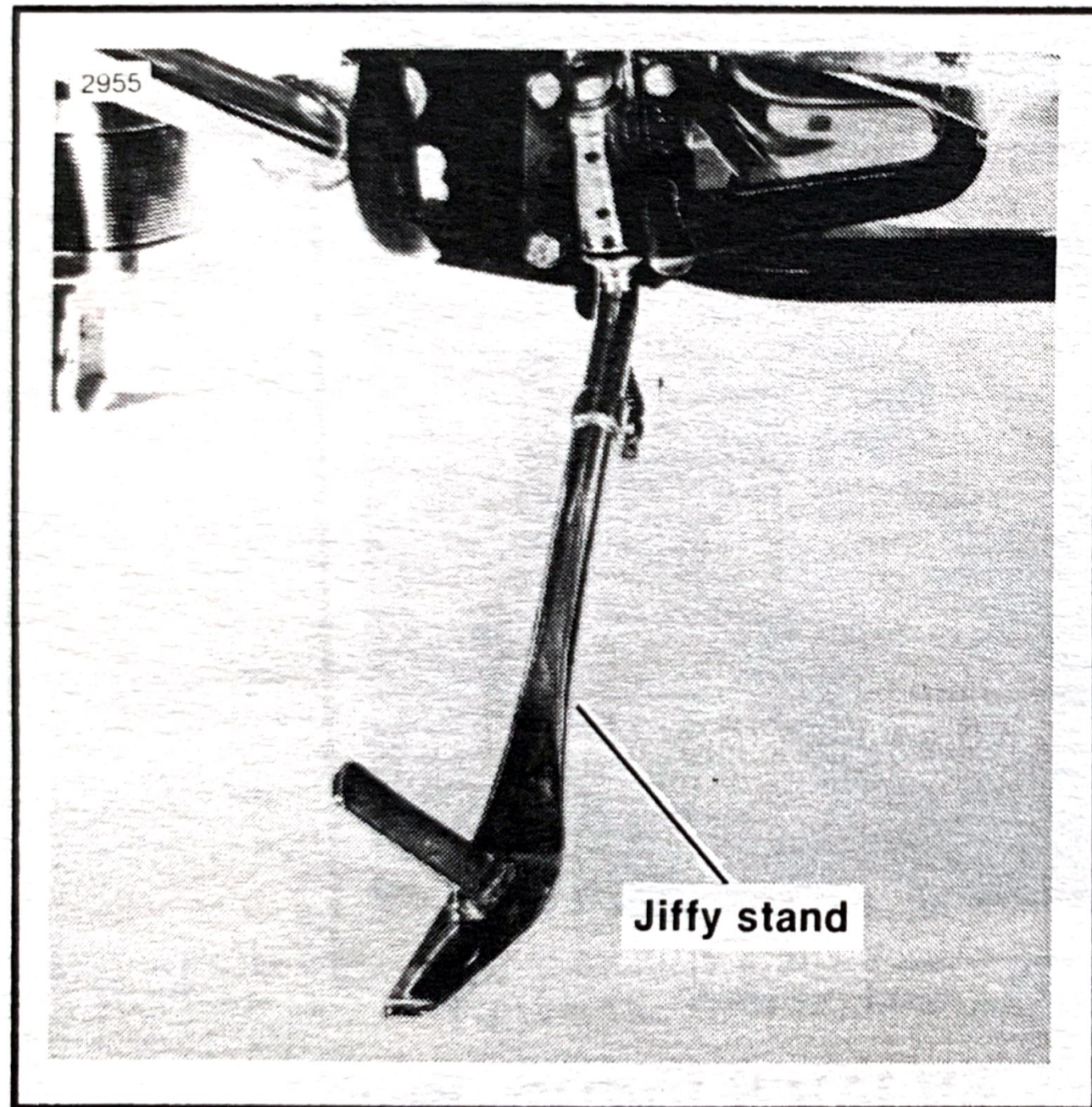


Figure 11. Jiffy Stand

### 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 12. The steering lock is locked 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.



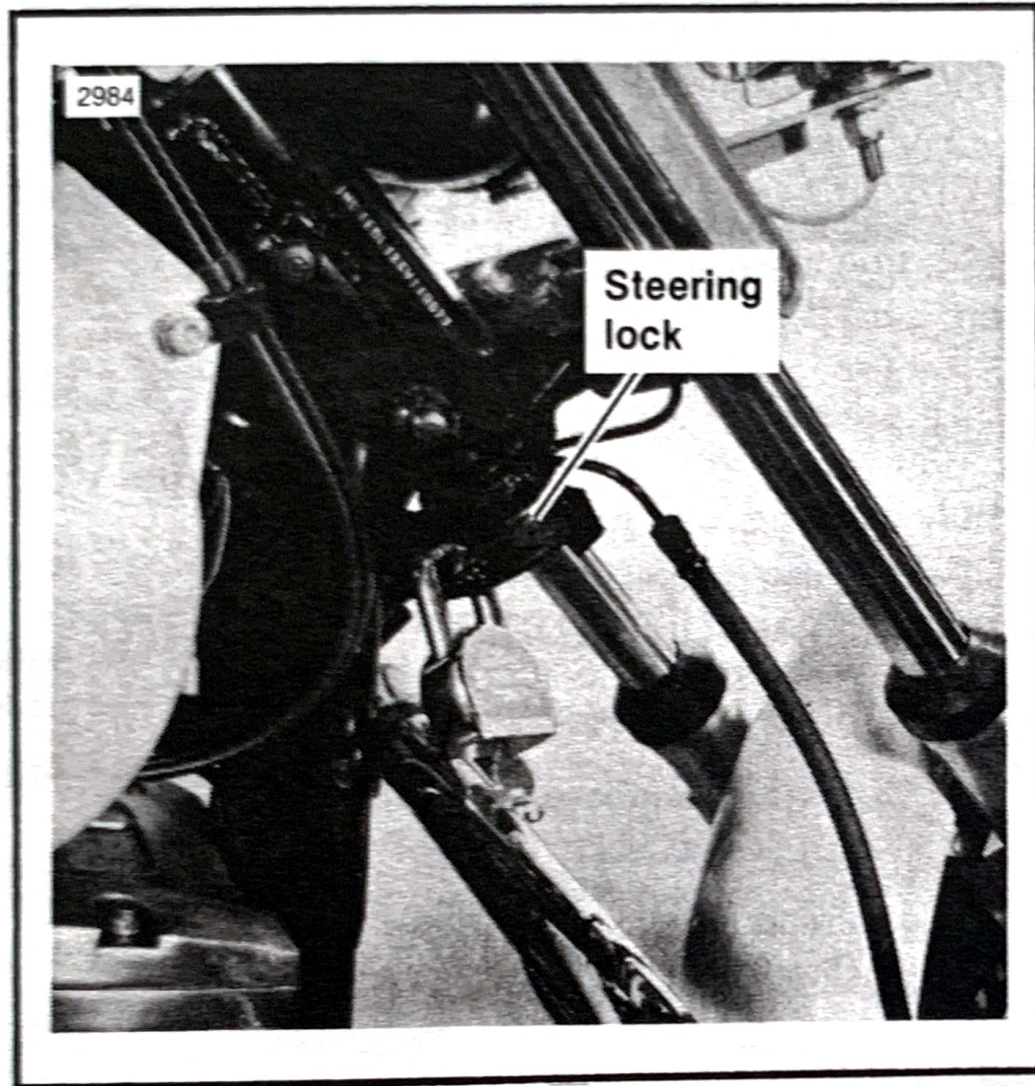


Figure 12. Steering Lock - FXRP (Typical)

## FUEL SUPPLY VALVE

See Figure 13. 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.

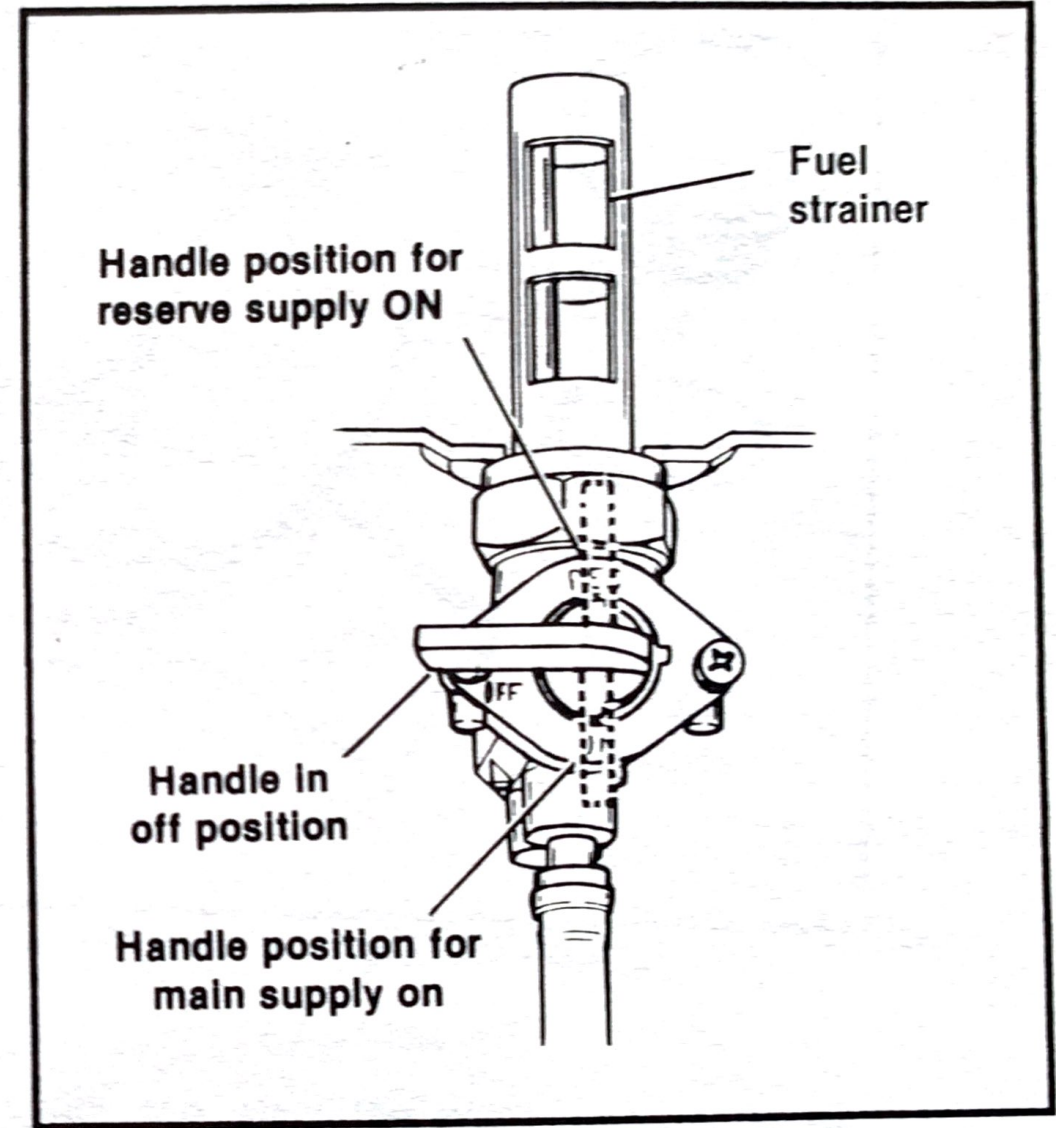


Figure 13. Fuel Supply Valve



## 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 14. 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 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 filler cap is securely tightened.

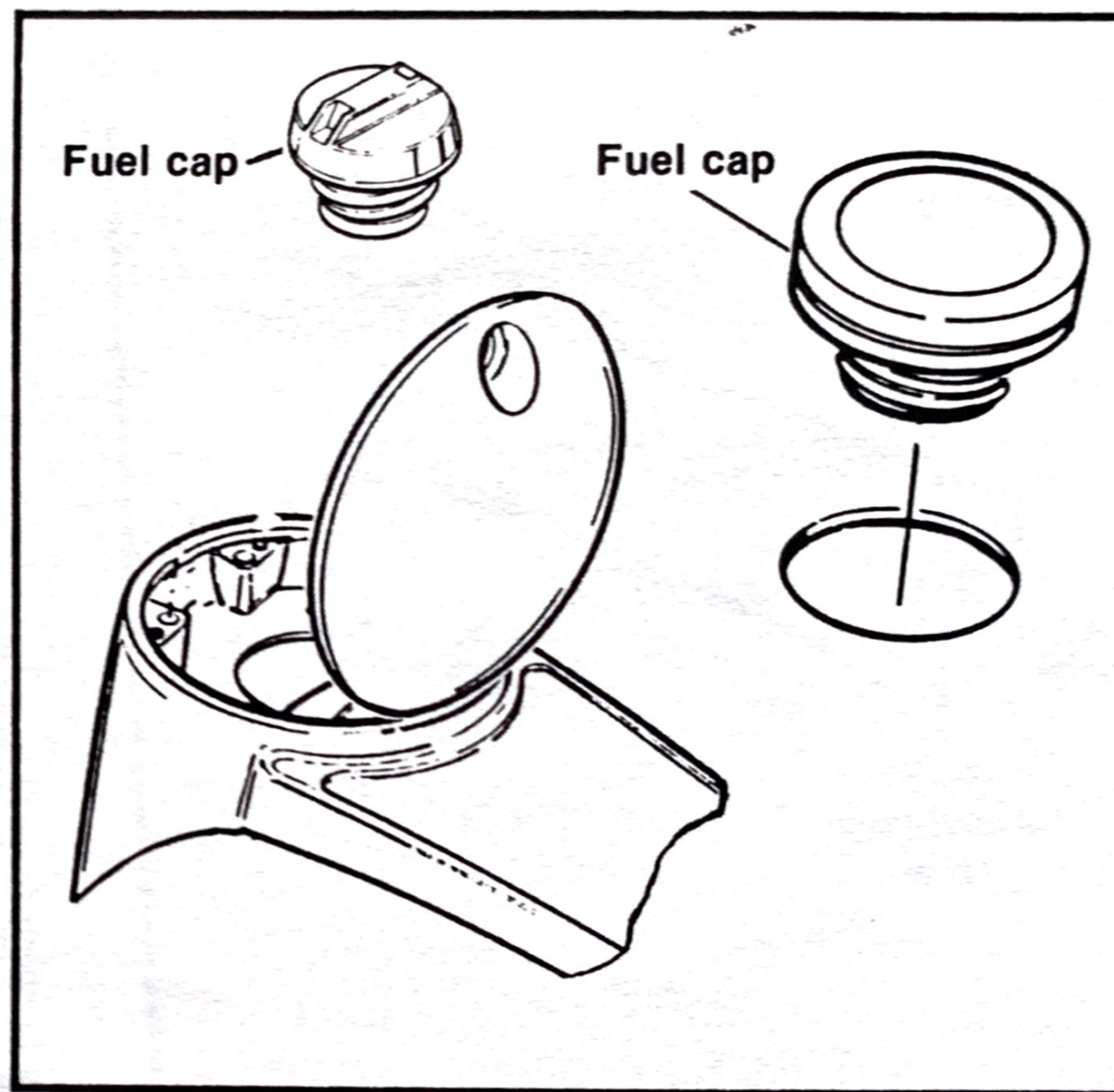


Figure 14. Fuel Filler Cap

## CAUTION

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



## NOTE

*FLHTP filler caps are located beneath a door. The filler cap should be fully closed before closing fuel filler door.*

## FXRP

See Figure 14. The fuel filler cap 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 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 15. 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).

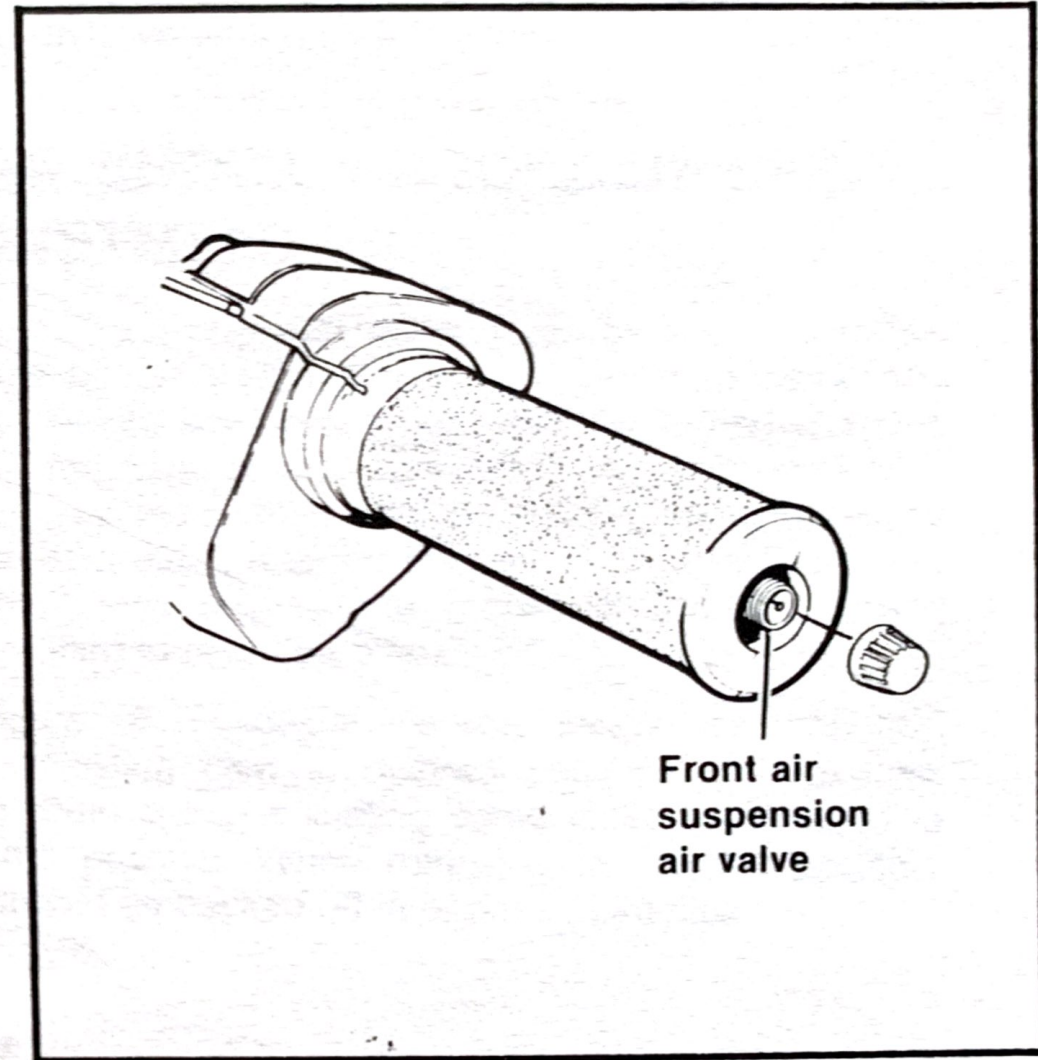


Figure 15. Front Air Suspension Adjustment Valve - FLHTP



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

TYPE OF RIDE	AMOUNT OF ANTI-DIVE	PSI
Firm	Stiff	20
Normal	Normal	15
Soft	Soft	10

### NOTE

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

The 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 16. 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.

VOOR: ~~13~~ 16 PSI AT REST

ACKT.: ~~20~~ 10

SEAT: 18

Helifer max 10



## 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.

## SOLO SEAT FLHTP

See Figure 17. 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.

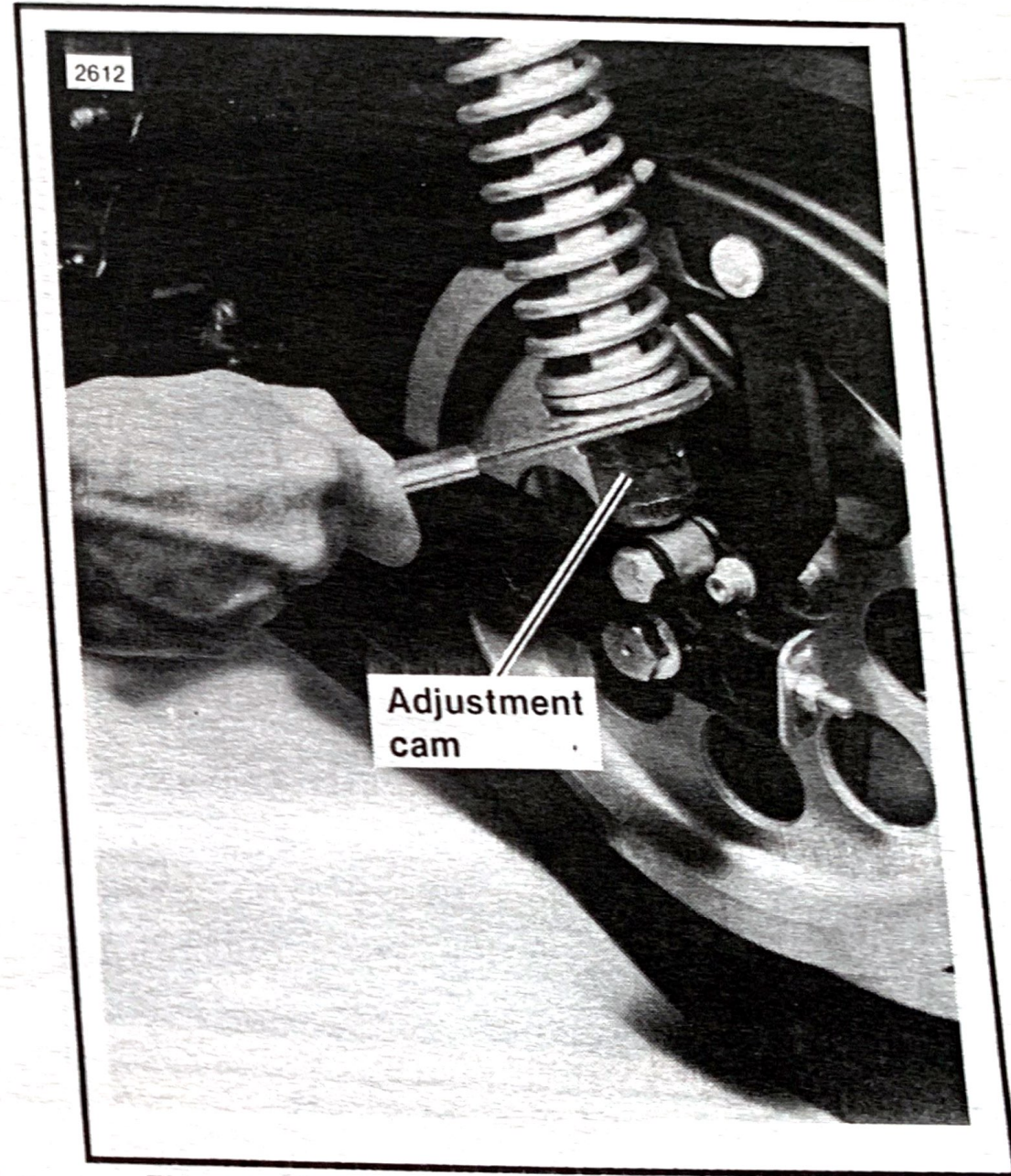


Figure 16. Rear Shock Absorber Adjustment -  
(Typical)



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.

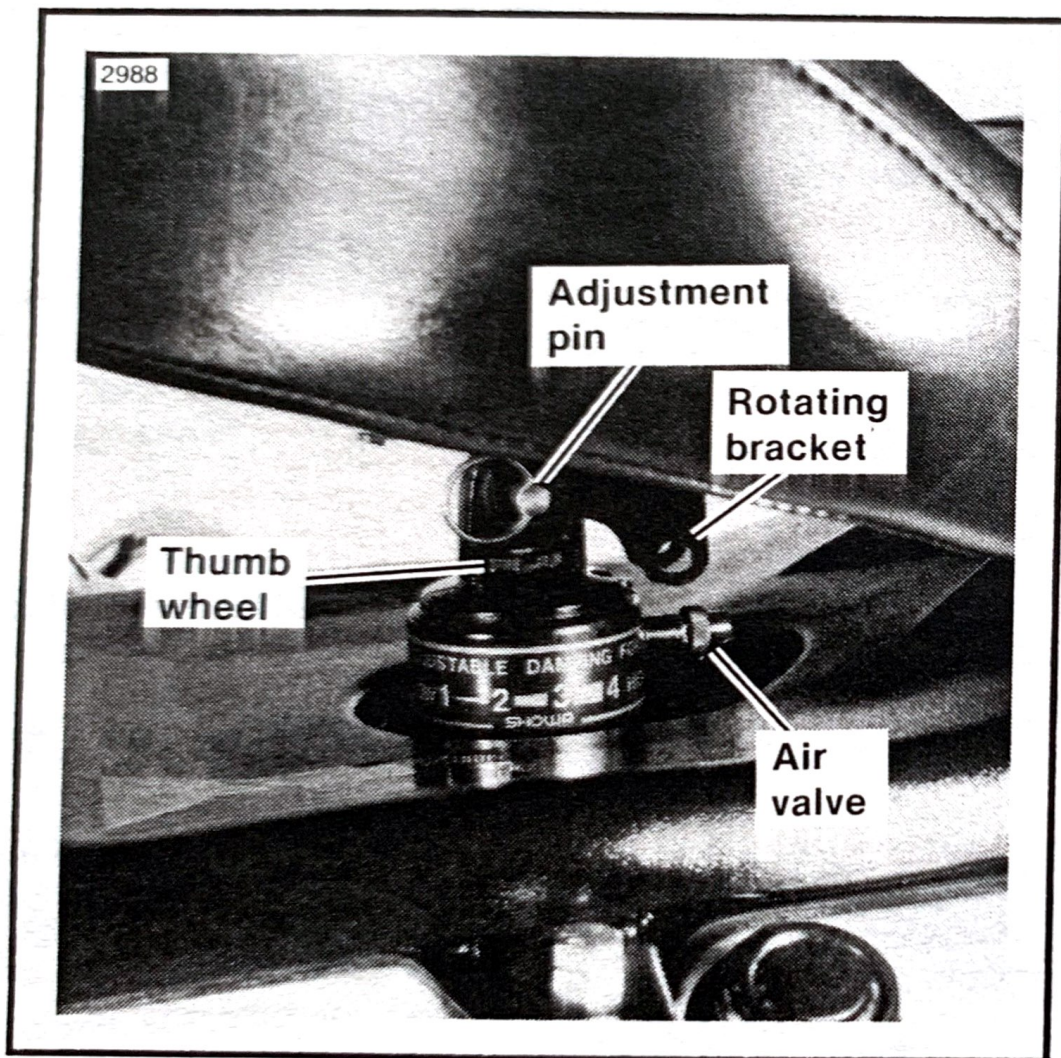


Figure 17. Solo Seat - FLHTP

## FXRP

See Figure 18. The FXRP solo seat may be adjusted as follows:

1. Remove the nut and bolt at the front bracket.

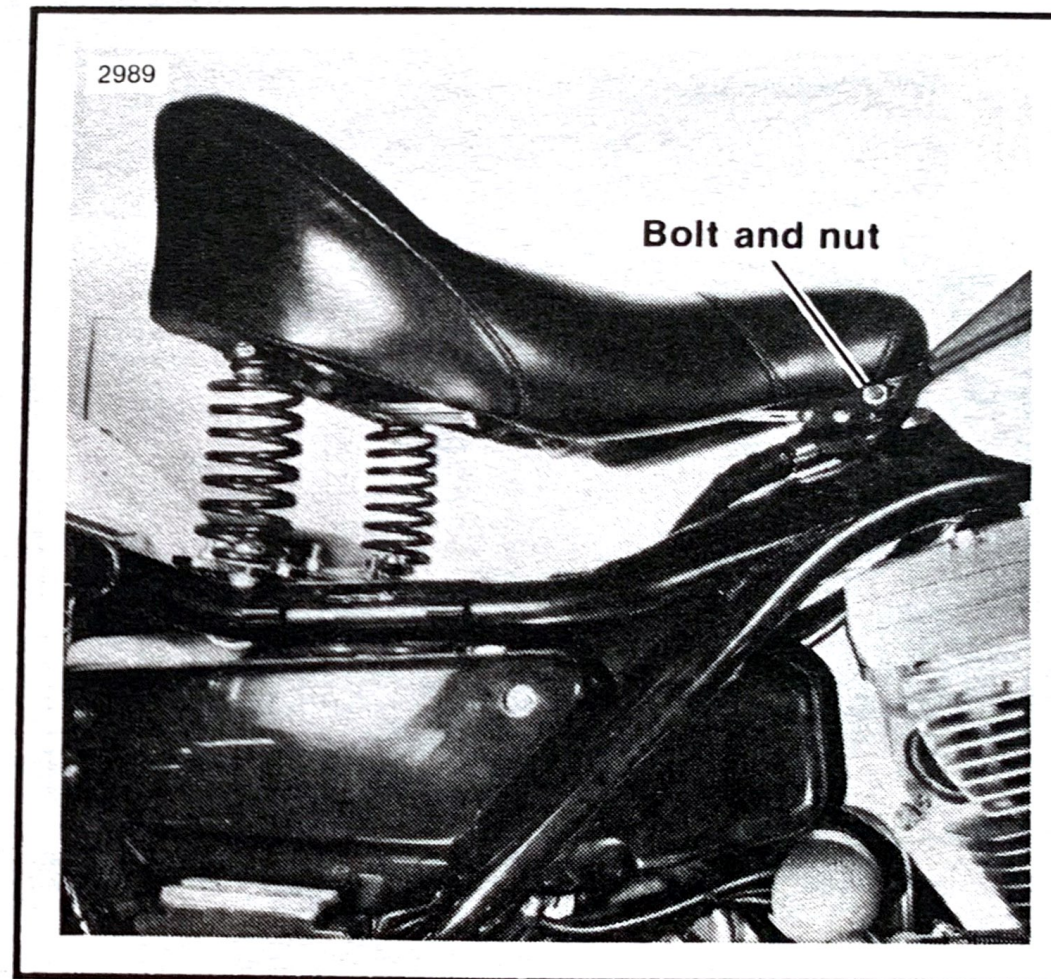


Figure 18. Solo Seat - FXRP



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 19. 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.

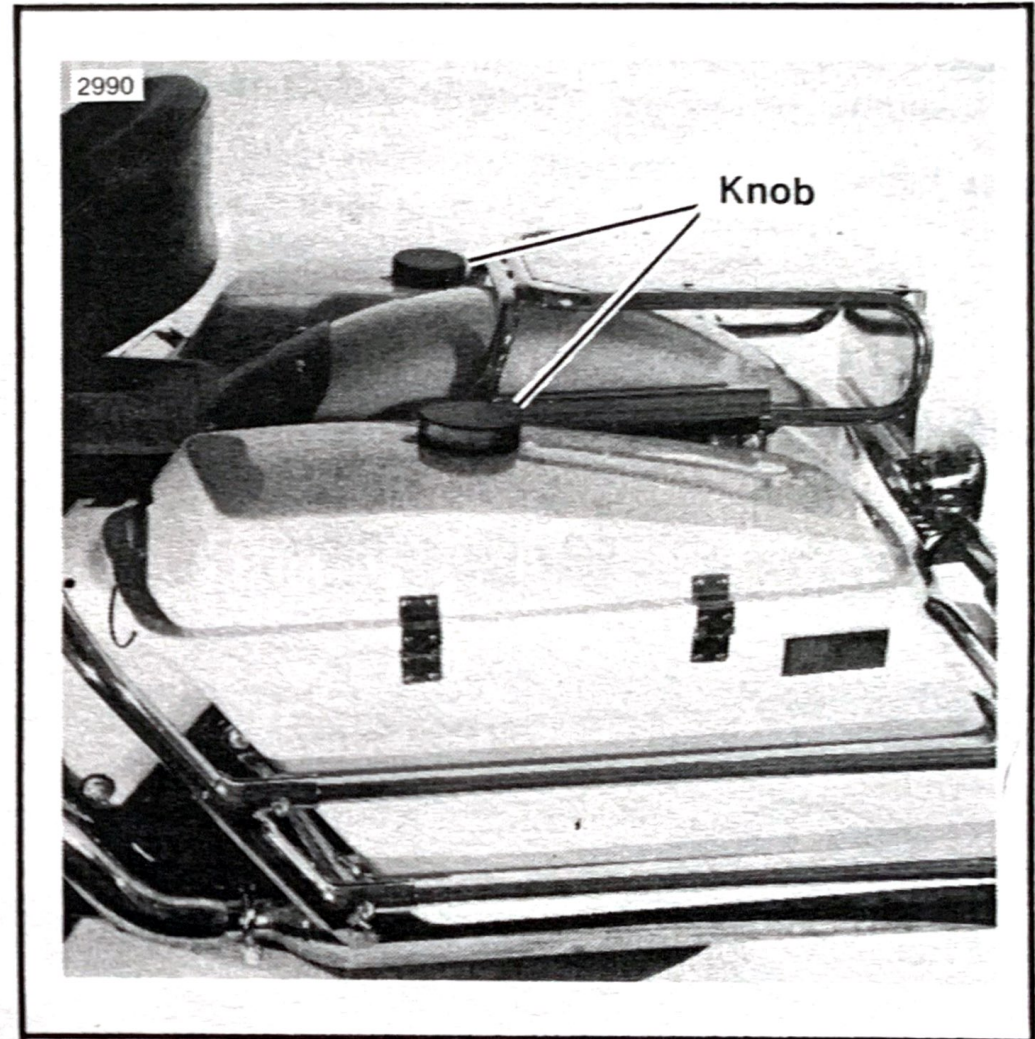


Figure 19. Saddlebags - FLHTP

MAX 15 lbs



## MICROPHONE INPUT JACK

**FLHTP Models:** An input jack for a microphone is located on the inner fairing (fairing models) or on the headlamp nacelle (windshield models).

**FXRP Models:** 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. See Service Manual.

### 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 overfilled 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 enrichener 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.*
- *Clutch must be disengaged (clutch lever pulled in) to start the engine.*

#### CAUTION

**You must pay close attention to the vehicle's warm-up time. Either excessive or insufficient use of the enrichener 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 enrichener knob to full out position. Turn the ignition switch on and press starter switch to operate the electric starter.

See Figure 4. After initial 15-30 second warm-up, ride for 5 minutes or 3 miles with enrichener knob in full out position. After 5 minutes or 3 miles, push the enrichener knob in to

the 1/2 way position. Ride 2 minutes or 2 miles. After 2 minutes or 2 miles, push the enrichener knob fully in.

### COOL ENGINE

#### Outside Temperature Warmer than 50°

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

See Figure 4. 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 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 1/8 - 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 3. 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 5. 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 transmission 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 required 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.
5. 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. Retightening 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.\*
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 MAINTENANCE 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

<b>ODOMETER READING (miles)</b> <b>SERVICE OPERATIONS</b> (see chart code below)	P r e i d e	5 0 0	2 5 0 0	5 0 0 0	7 5 0 0	1 0 0 0 0	1 2 5 0 0	1 5 0 0 0	1 7 5 0 0	2 0 0 0 0	2 2 5 0 0	2 5 0 0 0	2 7 5 0 0	3 0 0 0 0	3 2 5 0 0	3 5 0 0 0	3 7 5 0 0	4 0 0 0 0	4 2 5 0 0	4 5 0 0 0	4 7 5 0 0	5 0 0 0 0
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		I		I		I		I		I		I		I		I		I		I		I
Tappet oil screen		I		I		I		I		I		I		I		I		I		I		I
Rear belt	I	A		IA		IA		IA		IA		IA		IA		IA		IA		IA		IA
Primary chain		I		I		I		I		I		I		I		I		I		I		I
Clutch adjustment		A		A		A		A		A		A		A		A		A		A		A
Primary chaincase lubricant		R		R		R		R		R		R		R		R		R		R		R
Transmission lubricant*		R	I	R	I	R	I	R	I	R	I	R	I	R	I	R	I	R	I	R	I	R
Brake fluid level and condition*		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
Condition of rear brake caliper mounting pins and boots				IL		IL		IL		IL		IL		IL		IL		IL		IL		IL
Grease fittings (2), shift and brake lever pivots, rear brake linkage				IL		IL		IL		IL		IL		IL		IL		IL		IL		IL
Front brake hand lever**, throttle control cables, clutch control cable (& hand lever**)		L		L		L		L		L		L		L		L		L		L		L
Throttle control grip sleeve, speedometer cable		L		L		L		L		L		L		L		L		L		L		L
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
Fuel Tank Filter Screen				I		I		I		I		I		I		I		I		I		I

\*Also perform prior to storage, or annually.

\*\*If applicable.

Chart Code:

I - Inspect, & 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) SERVICE OPERATIONS (see chart code below)	P r i d e	5 0 0	2 5 0 0	5 0 0 0	7 5 0 0	1 0 0 0	1 2 5 0 0	1 5 0 0 0	1 7 5 0 0	2 0 0 0	2 2 5 0 0	2 5 0 0 0	2 7 5 0 0	3 0 0 0	3 2 5 0 0	3 5 0 0 0	3 7 5 0 0	4 0 0 0	4 2 5 0 0	4 5 0 0 0	4 7 5 0 0	5 0 0 0
Engine idle speed	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 enricher controls	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
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
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
Air suspension components**		I		I		I		I		I		I		I		I		I		I		I
Condition of rear shock absorbers		I		I		I		I		I		I		I		I		I		I		I
Rear fork pivot nut		I		I		I		I		I		I		I		I		I		I		I
Front fork oil*						R				R				R				R				R
Front fork bearing adjustment		I		I		IL		I		IL		I		IL		I		IL		I		IL
Wheel bearings*						IL				IL				IL				IL				IL
Tire pressure and 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
Engine mounts		I		I		I		I		I		I		I		I		I		I		I
Stabilizer links		I				I				I				I				I				I
Vehicle alignment				I		I				I				I				I				I
All fasteners except engine head bolts		T		T		T		T		T		T		T		T		T		T		T
Jiffy stand		L		L		L		L		L		L		L		L		L		L		L
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.

\*\*If applicable.

Chart Code:

I - Inspect, & 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. Multi-grade	SAE 20W50	HD 240	Above 20° to 100°	Excellent
H.D. Regular Heavy	SAE 50	HD 240	Above 60° to 100°	Poor
H.D. Extra Heavy	SAE 60	HD 240	Above 80° to 100°	Poor

## CHECK OIL LEVEL

See Figures 21, 22 and 23. 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.



See Figures 22 and 23. 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.

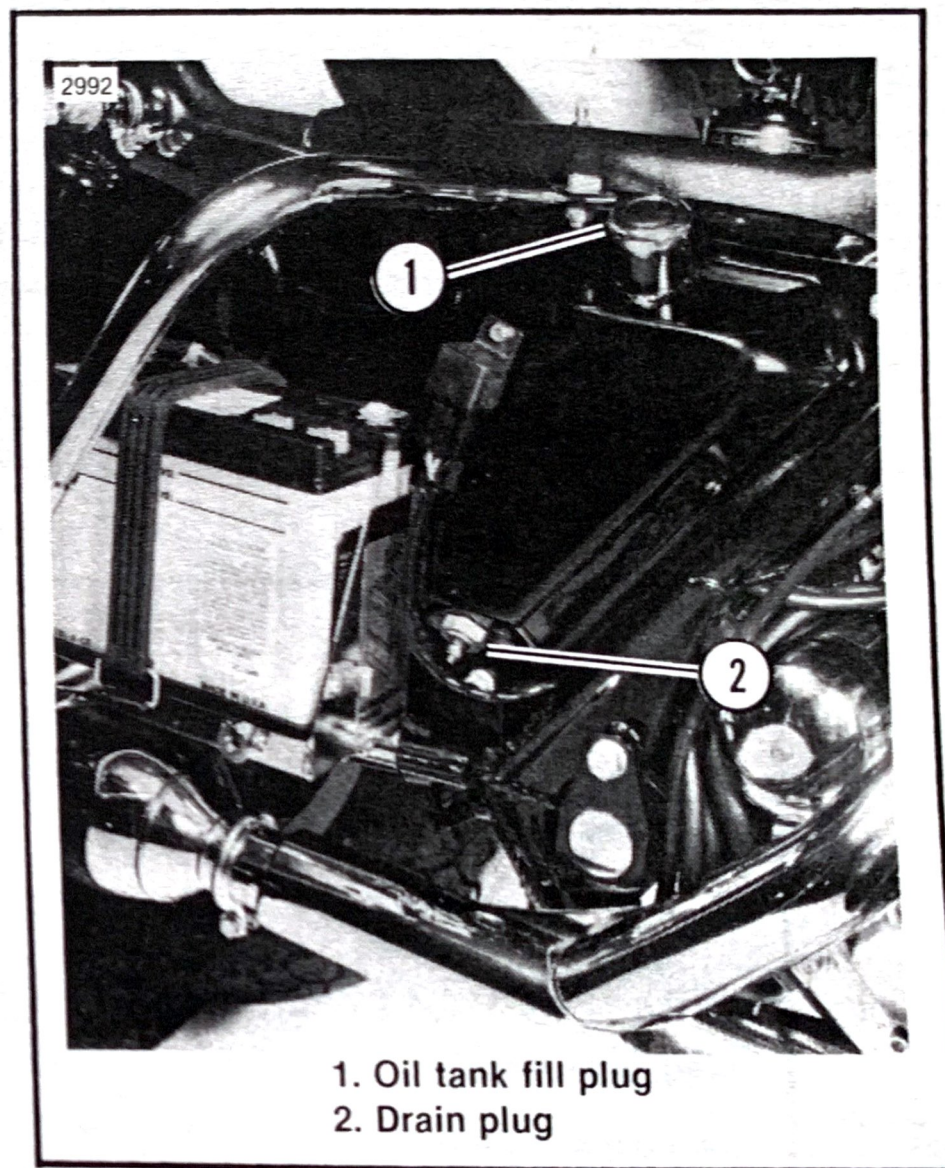
### CAUTION

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.

### CAUTION

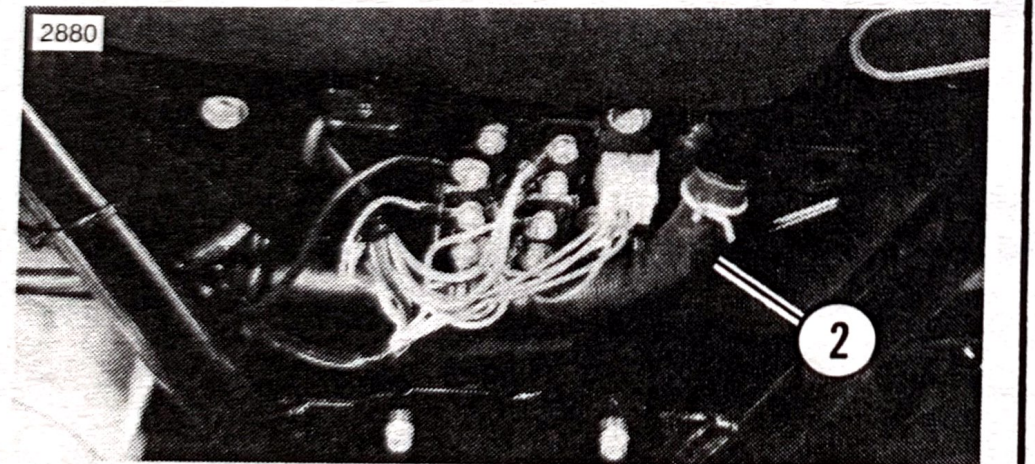
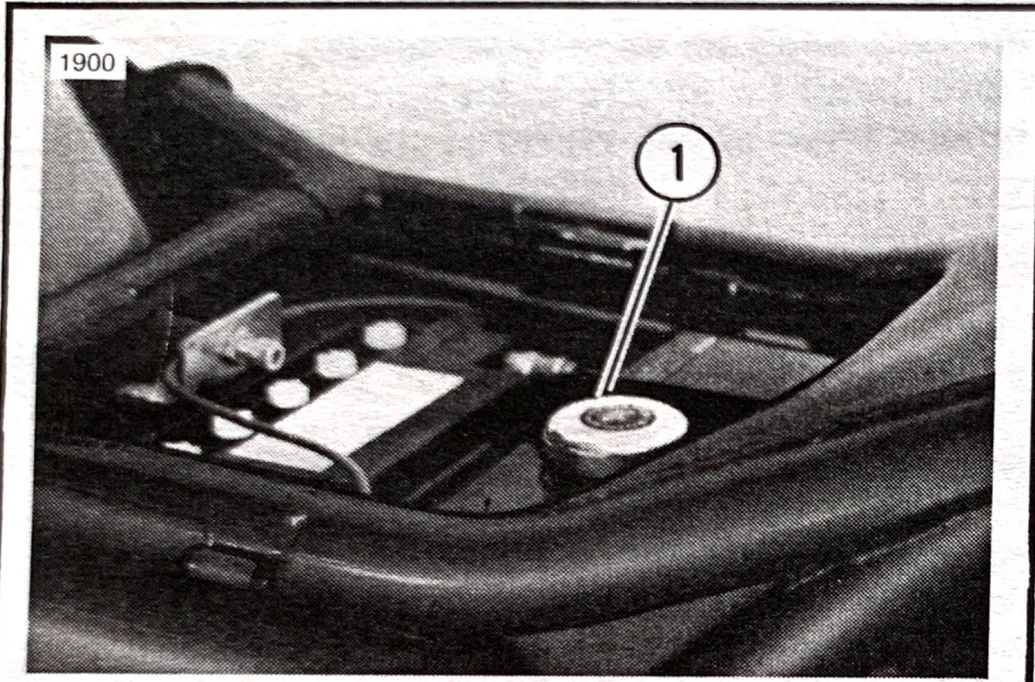
Do not switch brands indiscriminately because some oils interact chemically when mixed. Use of inferior oils or non-detergent oils can damage the engine.



1. Oil tank fill plug
2. Drain plug

Figure 21. Oil Tank - FLHTP





1. Oil tank fill plug      2. Drain hose

Figure 22. 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 21 for FLHTP drain plug location. See Figure 22 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.

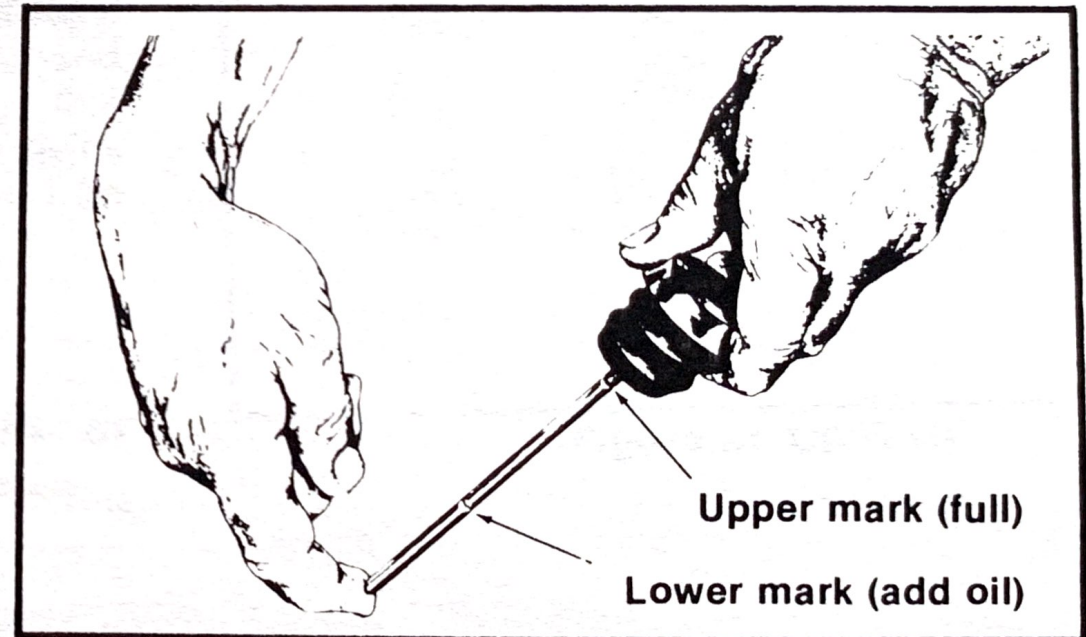


Figure 23. Oil Level Dipstick



## 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 33. Oil filters are located on an oil filter mount in front of the engine.

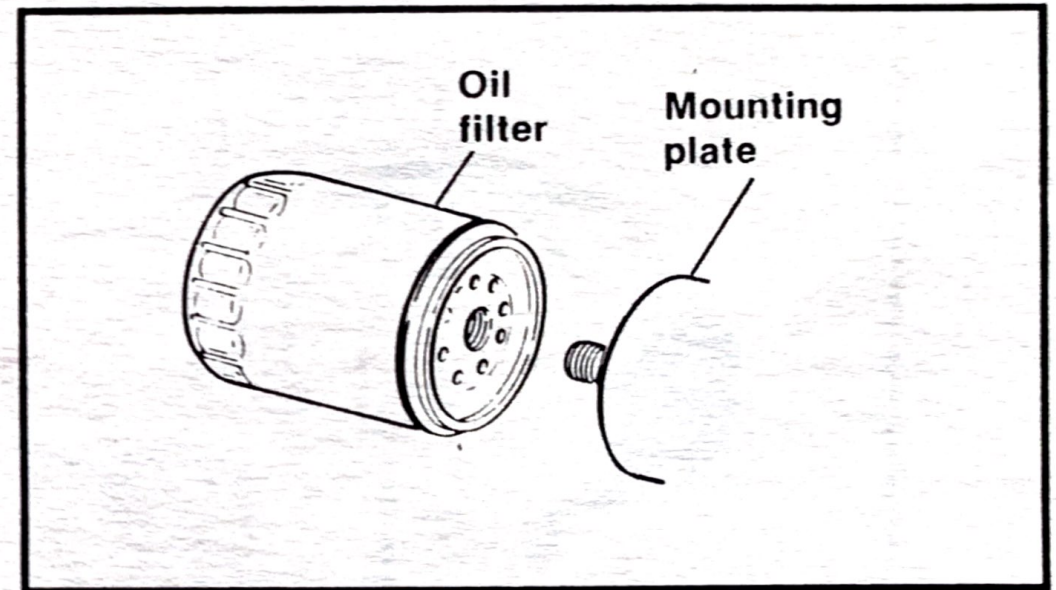


Figure 24. Oil Filter



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

The tappet oil filter screen is located in the crankcase above the oil pump. Your dealer will inspect the screen every 5000 miles. Oil screen is installed with closed end up.

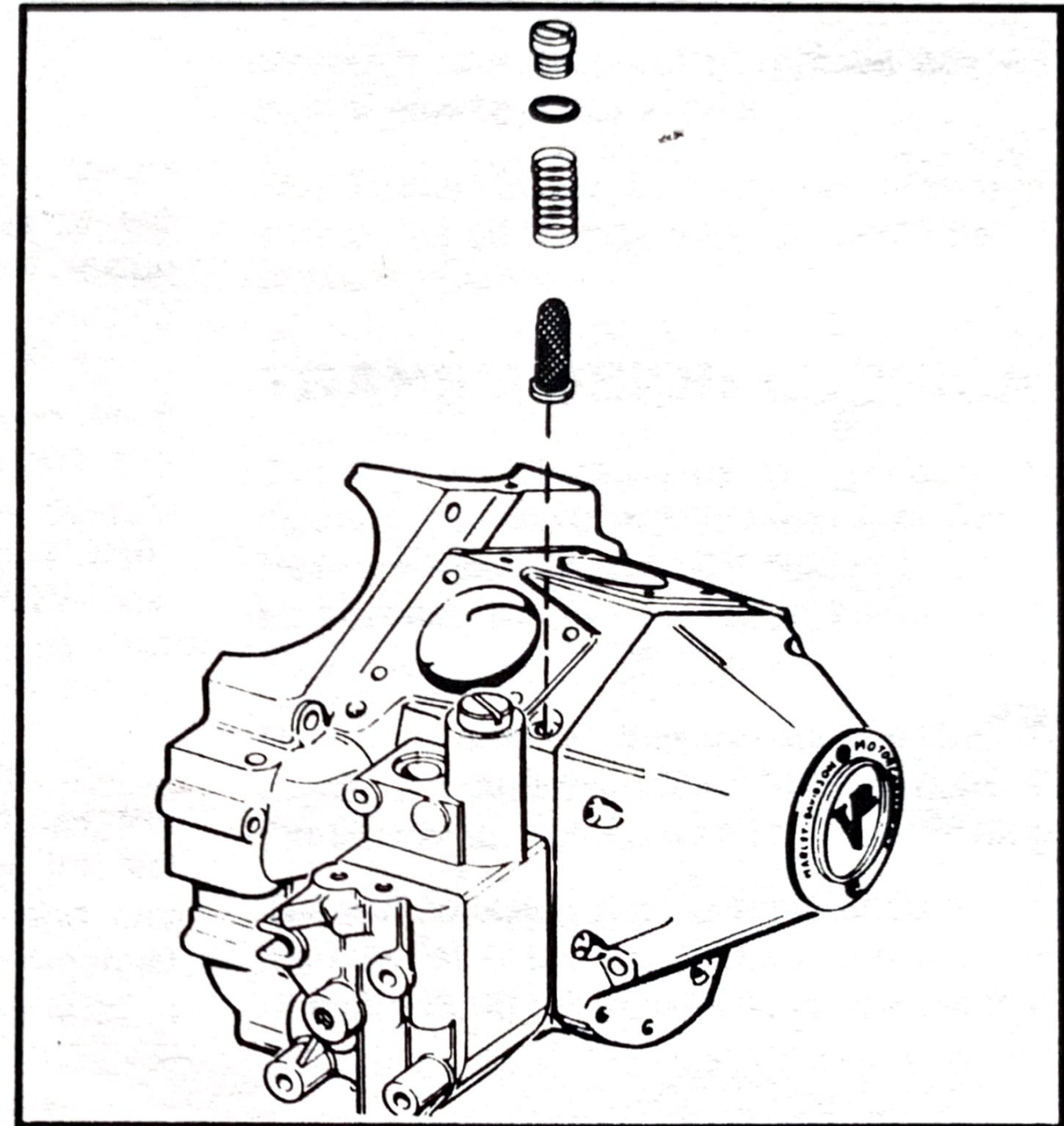


Figure 25, Tappet Oil Filter Screen

*Motorblok ali filterje*



## 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 26. Remove the threaded filler plug. Clean dipstick. Put dipstick back into hole, but do not screw in. Remove dipstick and take reading. Lubricant level should be between the two marks on the dipstick. Add lubricant if necessary.

Do not overfill or leakage may occur. The transmission capacity is approximately 20-24 ounces. When reinstalling the filler plug, tighten it to 25-75 in-lbs (finger tight).

The transmission should be drained and refilled with fresh lubricant after the first 500 miles and there after seasonally or every 5000 miles, whichever comes first.



### NOTE

Keep motorcycle upright for a short period of time to equalize lubricant level in the transmission compartments.

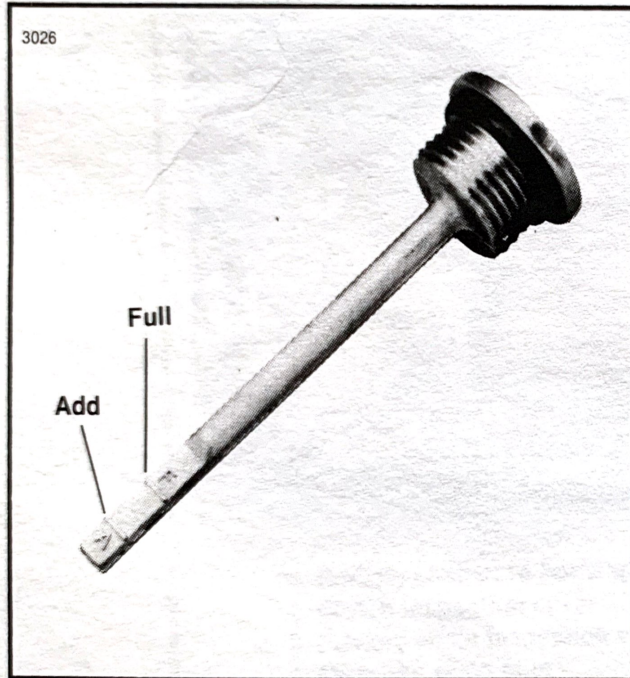


Figure 26. Transmission Dipstick

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 38 - 44 ounces.

### Primary Chaincase Lubricant Level

1. Position motorcycle STRAIGHT UP and level.
2. See Figure 27. Remove screws and washers that secure clutch inspection cover.
3. Remove clutch inspection cover carefully, to avoid damaging O-ring or finish on cover.



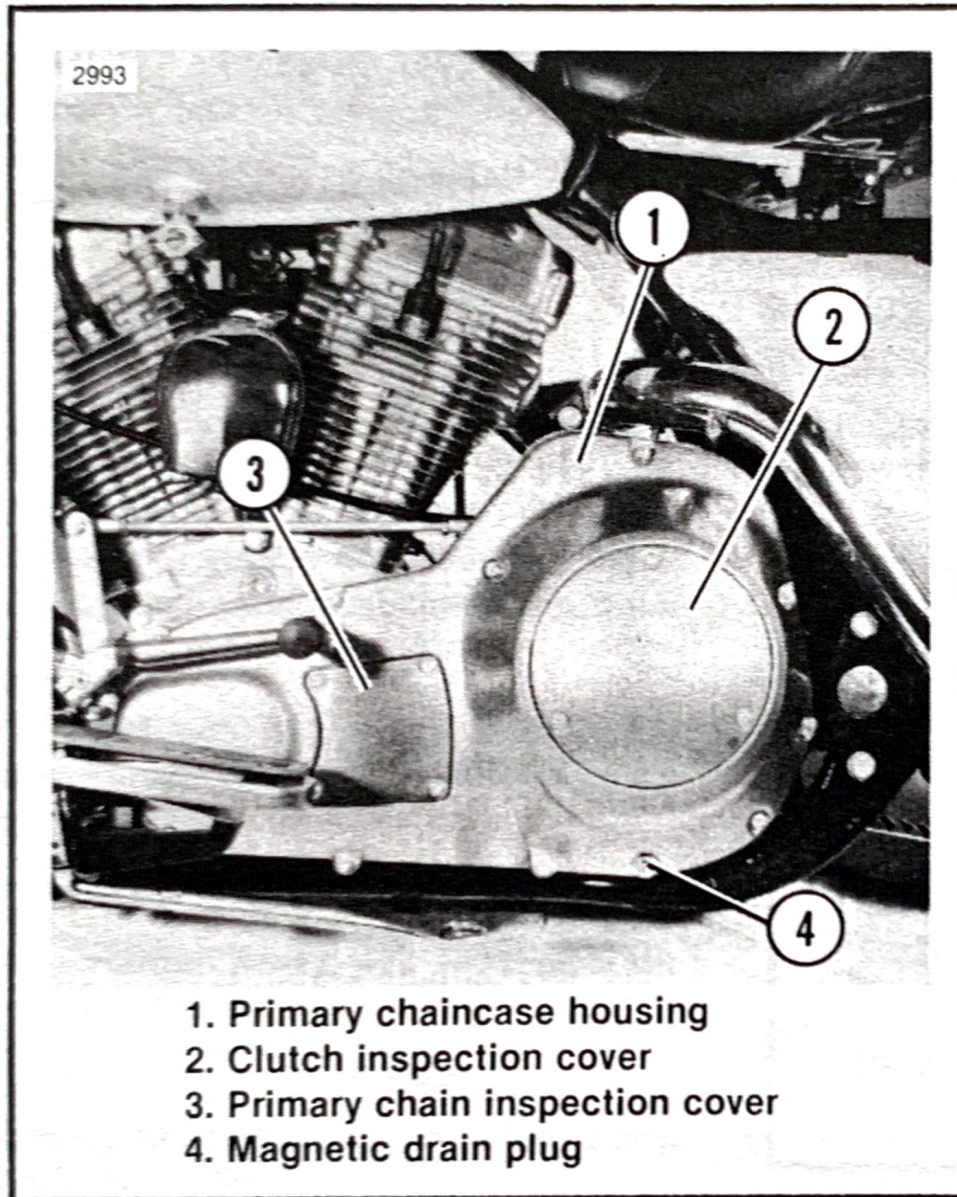


Figure 27. Primary Drive Housing

4. Primary chaincase lubricant should be level with bottom of clutch diaphragm spring.

**NOTE**

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

**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 27. 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 28. When 10 lbs. of force is applied at the midpoint 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.

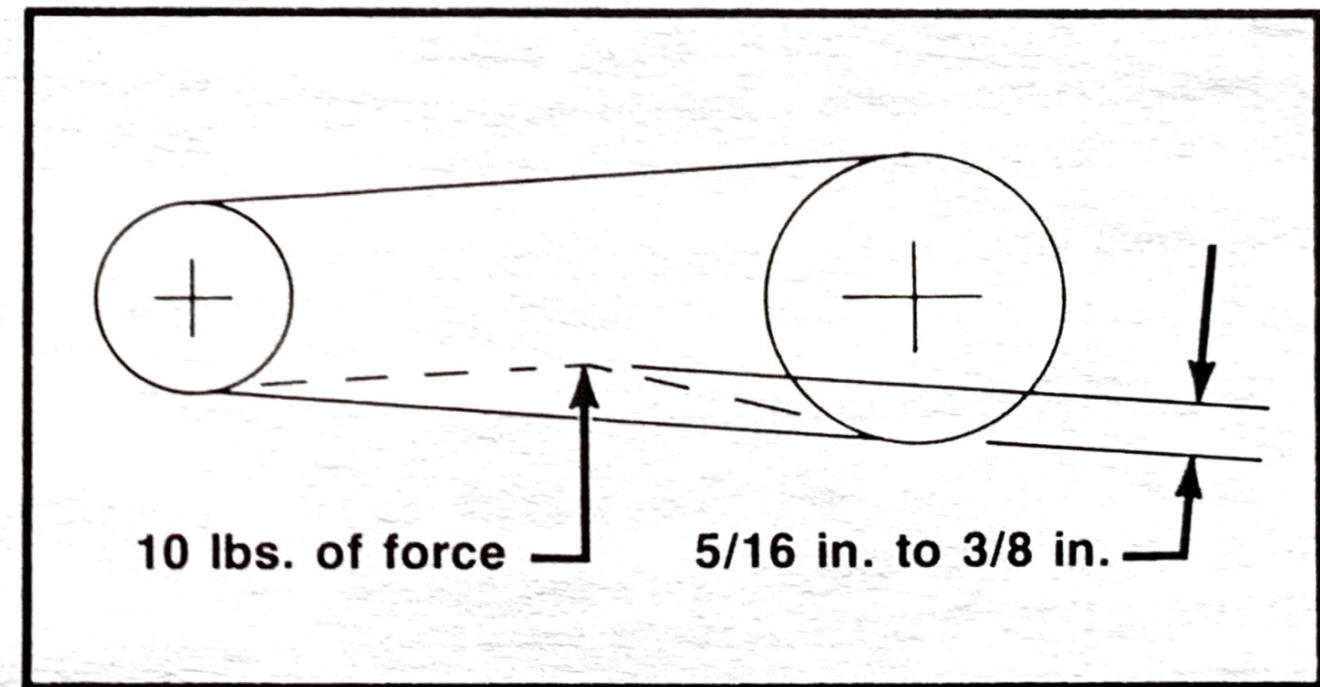


Figure 28. Belt Tension



## 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 13. 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 checked after the first 500 miles and every 2500 miles thereafter.

## AIR CLEANER (Figure 29)

The air cleaner is a paper/wire mesh air filter element.

Remove air cleaner cover and inspect filter element at least every 5000 miles, or more often under dusty conditions.

### WARNING

Low pressure air can blow debris into your face and eyes. Always wear eye protection or a face shield when using pressurized air.

The paper/wire mesh air filter element should be washed in luke warm water with a mild detergent. Allow filter to either air dry or blow it dry, from the inside, with low pressure air. Do not use an air cleaner filter oil on the Harley-Davidson paper/wire mesh air filter element.

### CAUTION

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

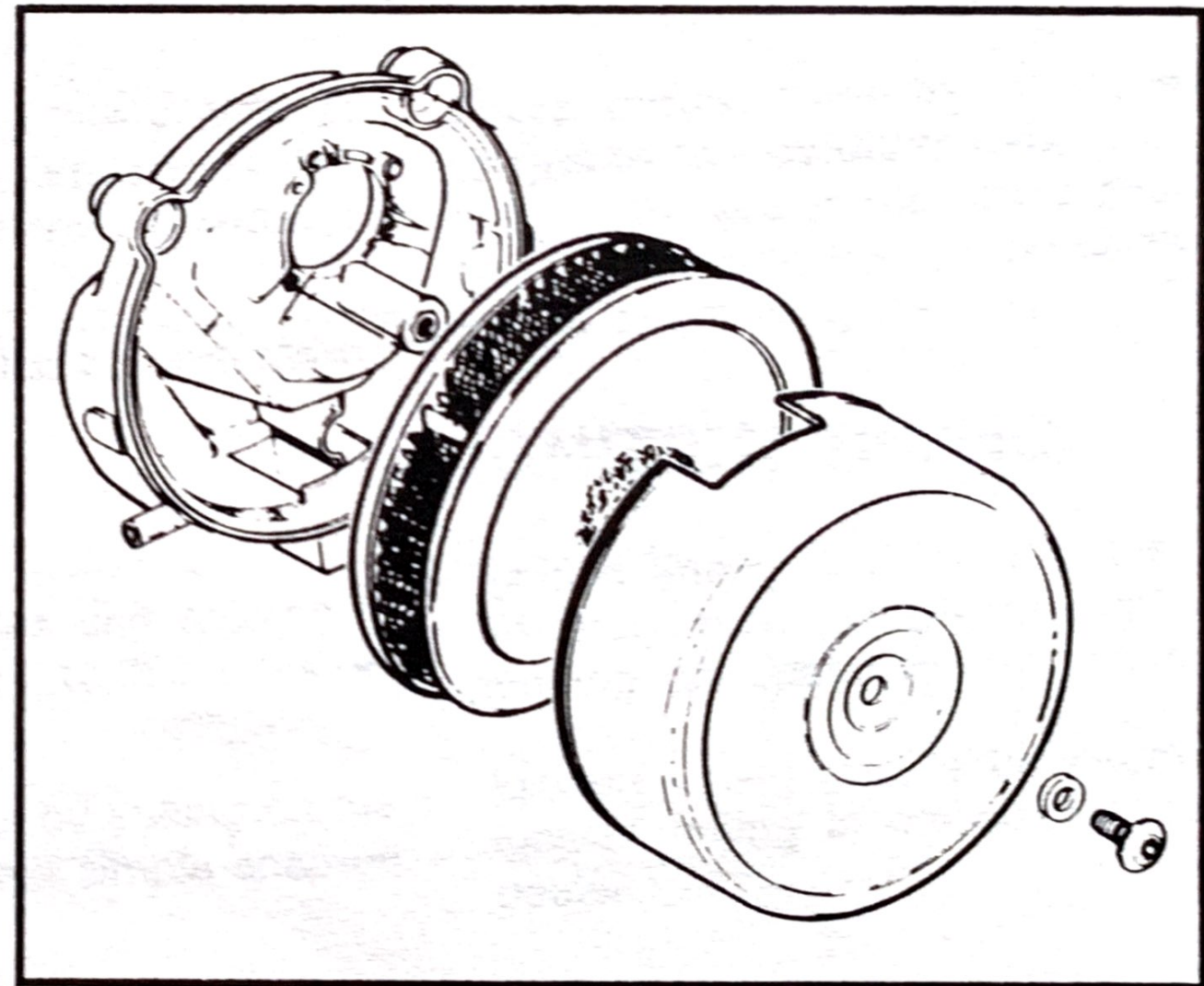


Figure 29. Air Cleaner



## CARBURETOR

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

Carburetor controls include throttle, enrichener 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.

0.9652 - 0.10922 <sup>cm</sup>  
0.96 - 1.03 mm

### 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 as additional one quarter turn with a spark plug wrench.

## IGNITION TIMING

Ignition timing is present 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 1/16 - 1/8 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 30. 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.

See Figure 31. The rear brake outer pad on all models can

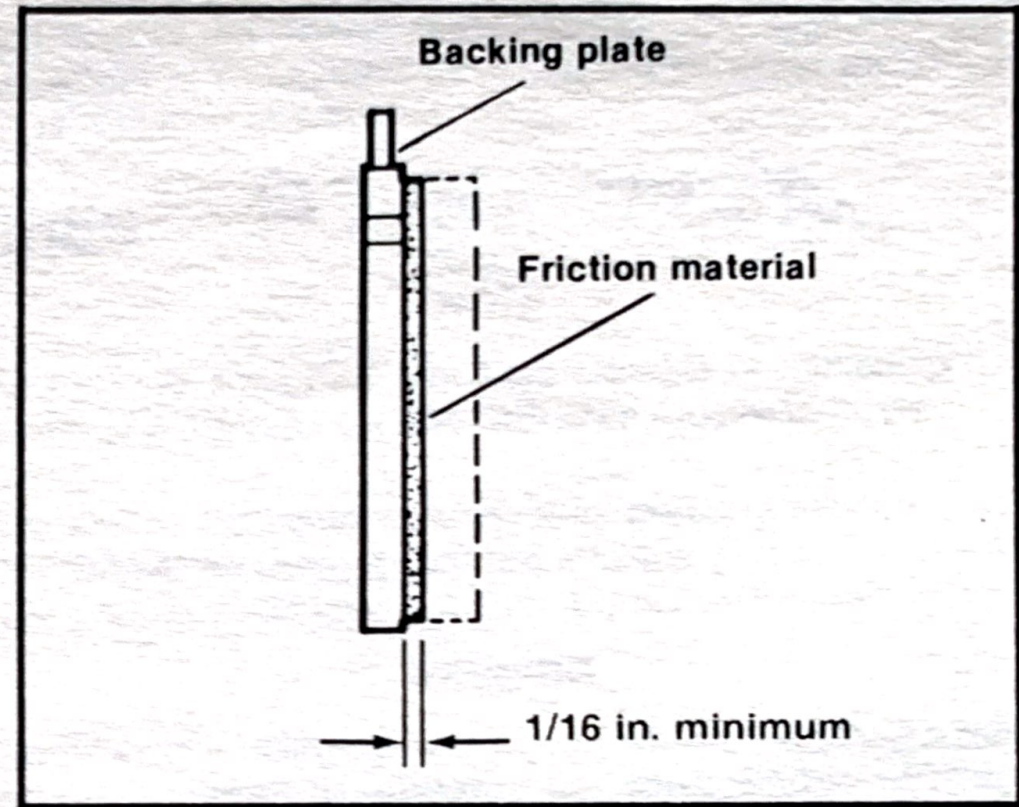


Figure 30. Brake Pad - Side View

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.*



## WHEEL BEARINGS

Bearings should be replaced 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.

## 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 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.

## TIRES

A3 Bar 1/2, 6 Bar

### NOTE

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

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.
- 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.

## ALTERNATOR CHARGING RATE AND RECTIFIER/REGULATOR

See Figure 32. 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.

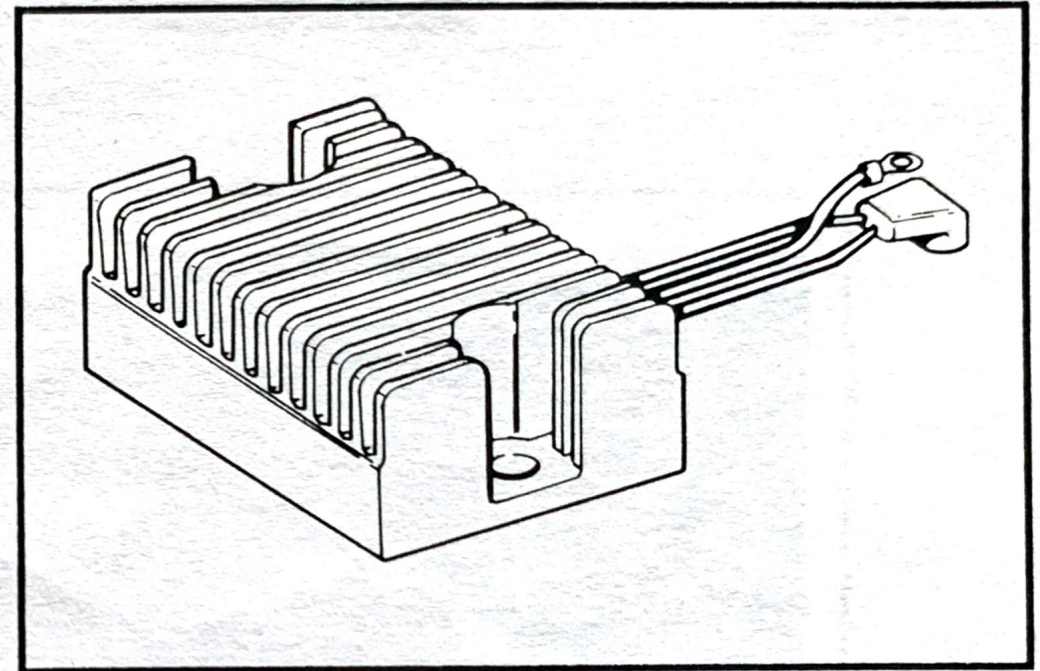


Figure 32. Rectifier/Regulator



## BATTERY

See Figures 33 and 34. 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.

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.

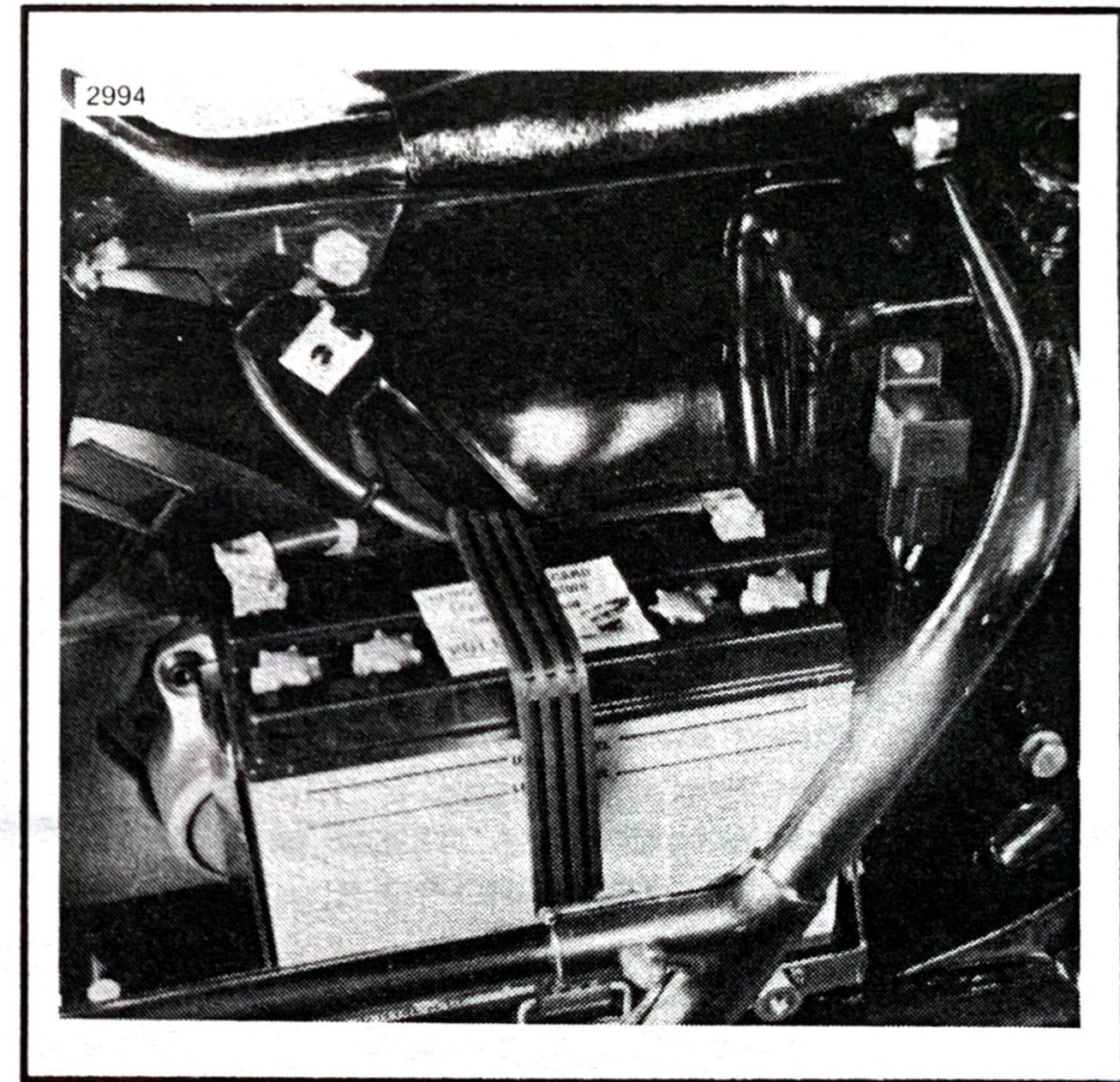


Figure 33. Battery - FLHTP



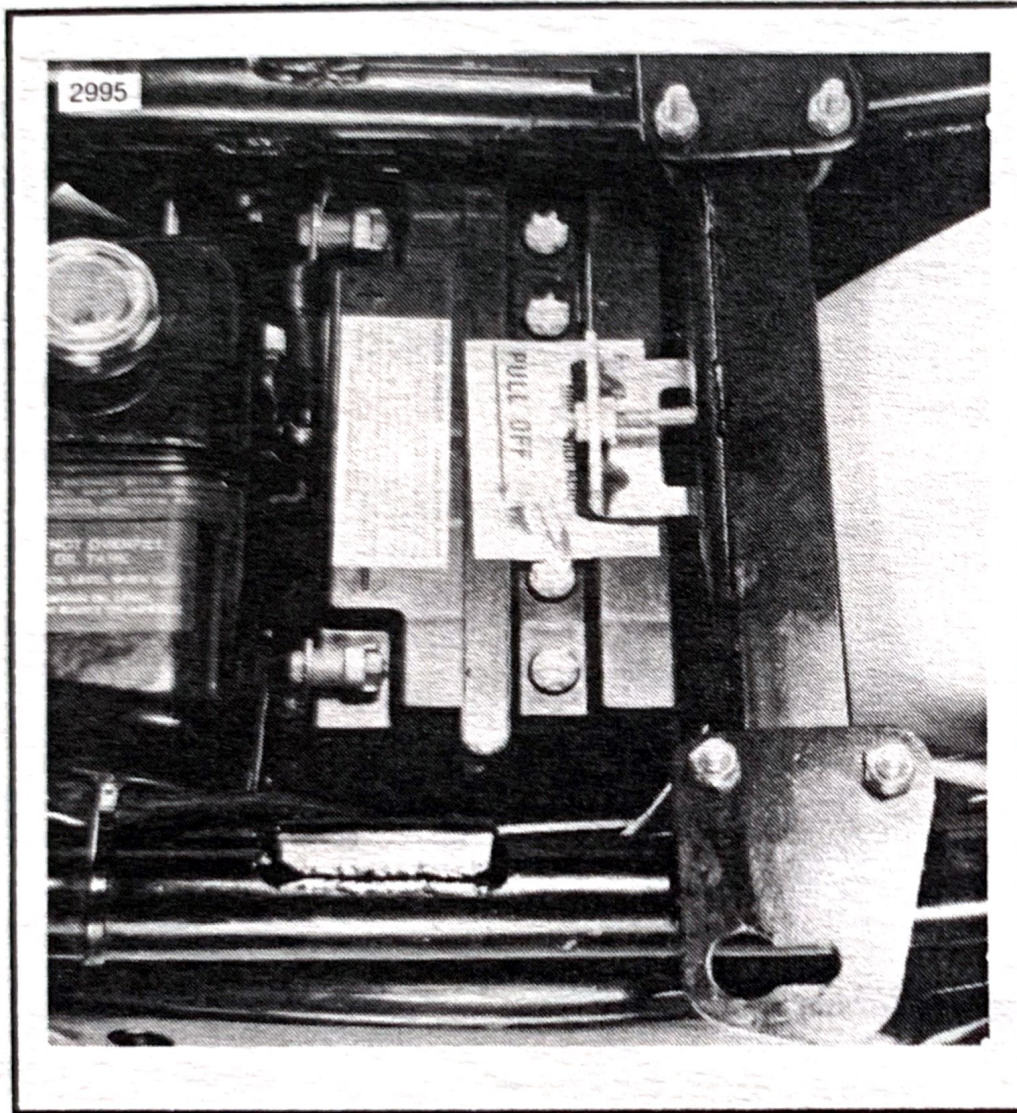


Figure 34. Battery - FXRP

### 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!**



## 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 also may 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.

## Battery Sulfation

Battery sulfation is the usual reason batteries stop holding an electrical charge.

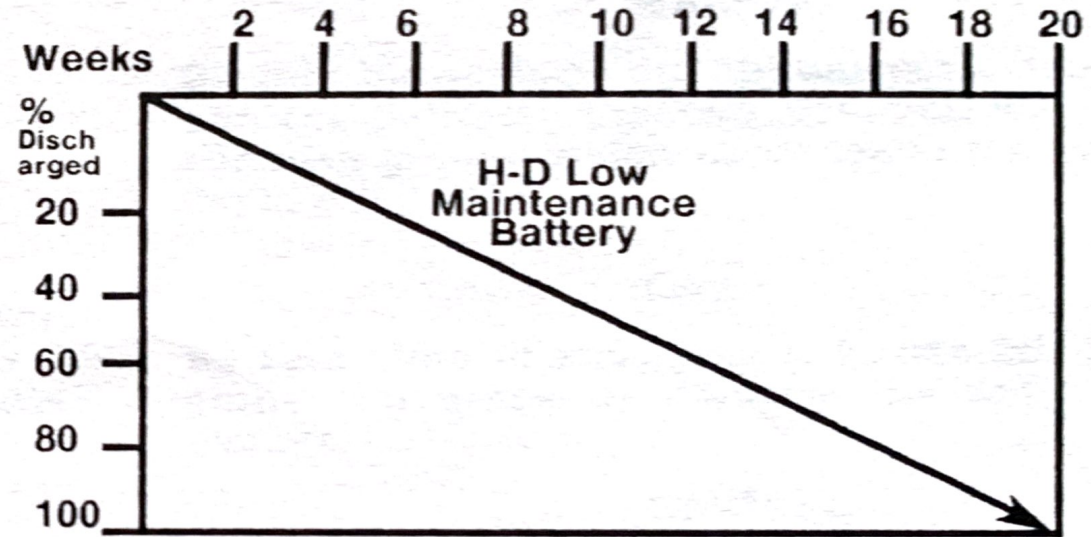
Sulfation occurs when a battery stands in a discharged condition (low specific gravity of electrolyte) over a period of time or when the battery plates are exposed to the air because of low electrolyte level.

This causes the active lead materials to crystallize, permanently damaging the affected area. When this happens the battery will not hold a charge, and it cannot be restored to full capacity.

It is not true that the battery is no longer discharging when the motorcycle is parked and the ignition is turned off. There are two possible ways for the battery to discharge itself.

1. Self Discharge: This is normal and occurs because the battery discharges internally. See Table 14. Batteries discharge continuously at a rate depending on the ambient temperature and the battery's state of charge.

**Table 14. Battery Self Discharge Rate at 77° F**



2. Current drain: This occurs through electrical accessories that require continuous electricity, such as radio memories, clocks, etc. The current drain of each motorcycle is different depending on the model, model year and what electrical accessories it has.



To reduce battery self discharge, remove and store the battery in a cool, (not freezing) dry place when the motorcycle is being stored.

#### **CAUTION**

The more discharged a battery is, the more easily it can freeze.

## **JUMP STARTING PROCEDURE**

Harley-Davidson does not recommend jump-starting a motorcycle, 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 electrical system. Be sure the 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 35. 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.

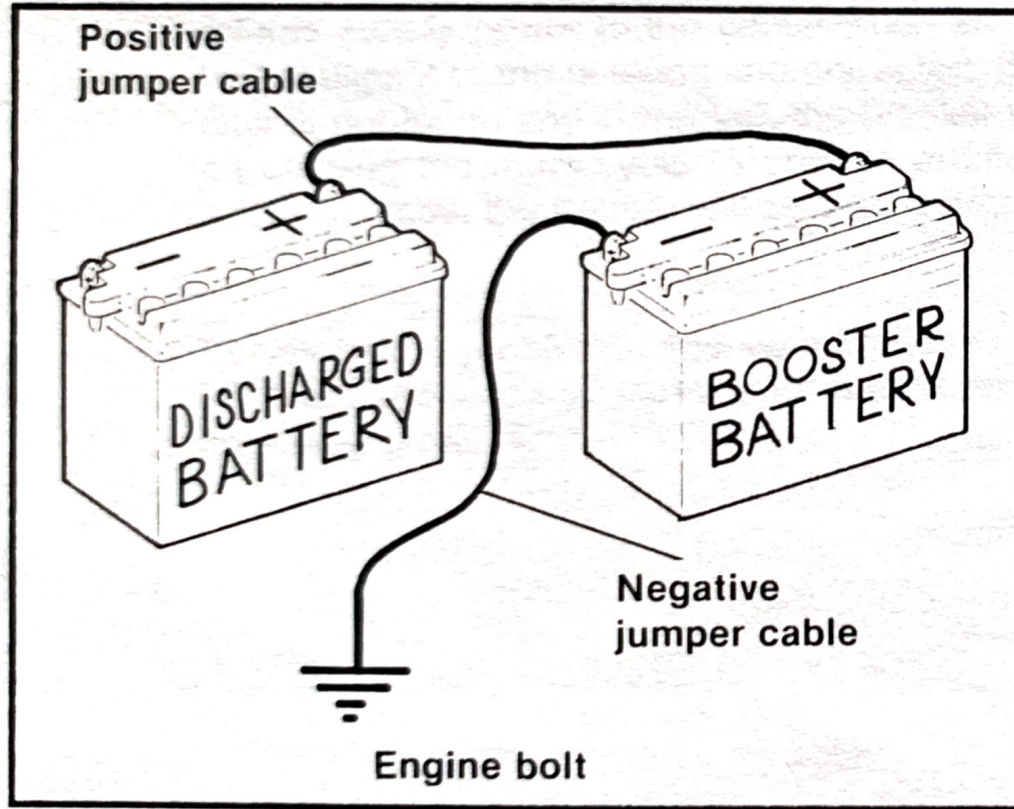


Figure 35. Jump Start Cable Connections

### NEGATIVE CABLE

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

### WARNING

- Suggested spot for ground cable connection is the ENGINE CASE BOLTS.
  - Do not connect negative cable to or near the discharged battery negative terminal. If you do, a spark could cause an explosion.
  - 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.



## CIRCUIT BREAKERS

To protect the motorcycle wiring, there are four or five circuit breakers: main, lighting, accessory, and ignition (and brake lamp relay, FLHTP models).

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 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.**



## WINDSHIELD MAINTENANCE

### CAUTION

- DO NOT use liquid windshield "protectors" on your windshield. Although they may work well on automobile safety glass, Harley-Davidson cannot ensure the results when used on Lexan® Harley-Davidson or other, less durable or less expensive, types of motorcycle windshields.
- DO NOT use benzine, paint thinner, gasoline or any other types of harsh cleaner. They will damage the windshield surface.

### NOTE

*Covering the windshield with a clean, wet cloth for approximately 15-20 minutes before washing will make dried bug removal much easier.*

Use mild soap and warm water to wash the windshield. Wipe dry with a soft, clean towel.

## GENERAL MAINTENANCE

Chrome and aluminum parts must be maintained regularly to ensure that they retain their original shine and luster. Care should be taken to keep your new Harley-Davidson motorcycle cleaned and waxed as often as possible to inhibit rust and corrosion.

## STORAGE

### WARNING

Proper long-term storage is important for the safe, trouble-free operation of your Harley-Davidson motorcycle. Should you choose not to perform these tasks yourself, contact your Harley-Davidson dealer. He has the trained technicians who can complete the work according to Service Manual procedures using proper tools and equipment.

### Placing Motorcycle In Storage

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

### WARNING

**Fuel is flammable, Do not store motorcycle having gasoline in tank within the home or garage where open flames, pilot lights, sparks or electric motors are present.**

- Make a list of everything you do and fasten it to a handgrip. When you take the motorcycle out of storage, this list will be your reference/check-list to get your motorcycle in operating condition.
1. Warm motorcycle to operating temperature; change oil and turn engine over to circulate the new oil.



2. Fill fuel tank and add a gasoline stabilizer. Use one of the commercially available gasoline stabilizers, following the manufacturer's instructions. Run the engine until the gasoline stabilizer has had a chance to reach the carburetor float bowl. Turn fuel supply valve off.
3. Adjust the chains/belts.
4. Check tire inflation. Adjust to proper inflation pressure.
5. Wash and wax painted and chrome surfaces.
6. See BATTERY for proper battery care. Remove battery from the motorcycle and charge. Store the battery above freezing temperatures, trickle charge once a month and keep the electrolyte level above the plates.

#### **WARNING**

**Keep battery away from areas that may have sparks or flames. A spark could cause an explosion.**

8. If motorcycle is to be covered, use a material such as light canvas, that will breathe. Plastic materials that do not breathe promote the formation of condensation.

### **Removal From Storage**

#### **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.**

1. See BATTERY for proper battery care. Be sure plates are covered by electrolyte before charging. Fill the battery with distilled water to the proper level. Charge and install it.
2. Remove and inspect the spark plugs. Replace if necessary.
3. Clean and oil the air cleaner element.
4. Start the engine and run until it reaches normal operating temperature. Turn off engine.
5. Check amount of oil in the oil tank. Check the transmission lubricant level.
6. Check controls to be sure they are operating properly. Operate the front and rear brakes, throttle, clutch and shifter.
7. Check steering for smoothness by turning the handlebars through the full operating range.
8. Check tire pressure. Incorrect pressure will result in poor riding characteristics and can affect handling and stability.
9. Check all electrical equipment and switches including the stoplamp, turn signals and horn for proper operation.
10. Check for any fuel, oil or brake fluid leaks.



## 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).
4. Clutch lever not pulled in.

### 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 connections loose or in bad condition and shorting .
7. Loose or corroded wire or cable connection(s) at coil or battery.
8. Engine flooded with fuel as a result of overenrichening.
9. Engine oil too heavy (winter operation).

### Starts Hard

1. Spark plugs in bad condition or have improper gap or are partially fouled.
2. Spark plug cables in bad condition and leaking.
3. Battery nearly discharged.
4. Loose wire or cable connection(s) at one of the battery terminals or at coil.
5. Carburetor not adjusted correctly.



6. Engine oil too heavy (winter operation).
7. Ignition not timed properly. See dealer.
8. Fuel tank cap bent or plugged (incorrect or after-market gas cap), or carburetor fuel line closed off, restricting fuel flow.
9. Water or dirt in fuel system and carburetor.

### **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, filter, or carburetor.

### **A Spark Plug Fouls Repeatedly**

1. Excessive enrichener use.
2. Fuel mixture too rich.

3. Incorrect spark plug.

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

1. Incorrect fuel.
2. Incorrect spark plug for the kind of service.
3. Excessive enrichener use.

### **Overheats**

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

### **Excessive Vibration**

1. Stabilizer links worn or loose.\* See dealer.
2. Engine isolation 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. 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. See dealer.
3. Restricted oil filter. 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 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.

## 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 because of heat build up. Excessive braking or brake pads dragging. See dealer.
8. Brake drags. Insufficient hand lever free play. See dealer.



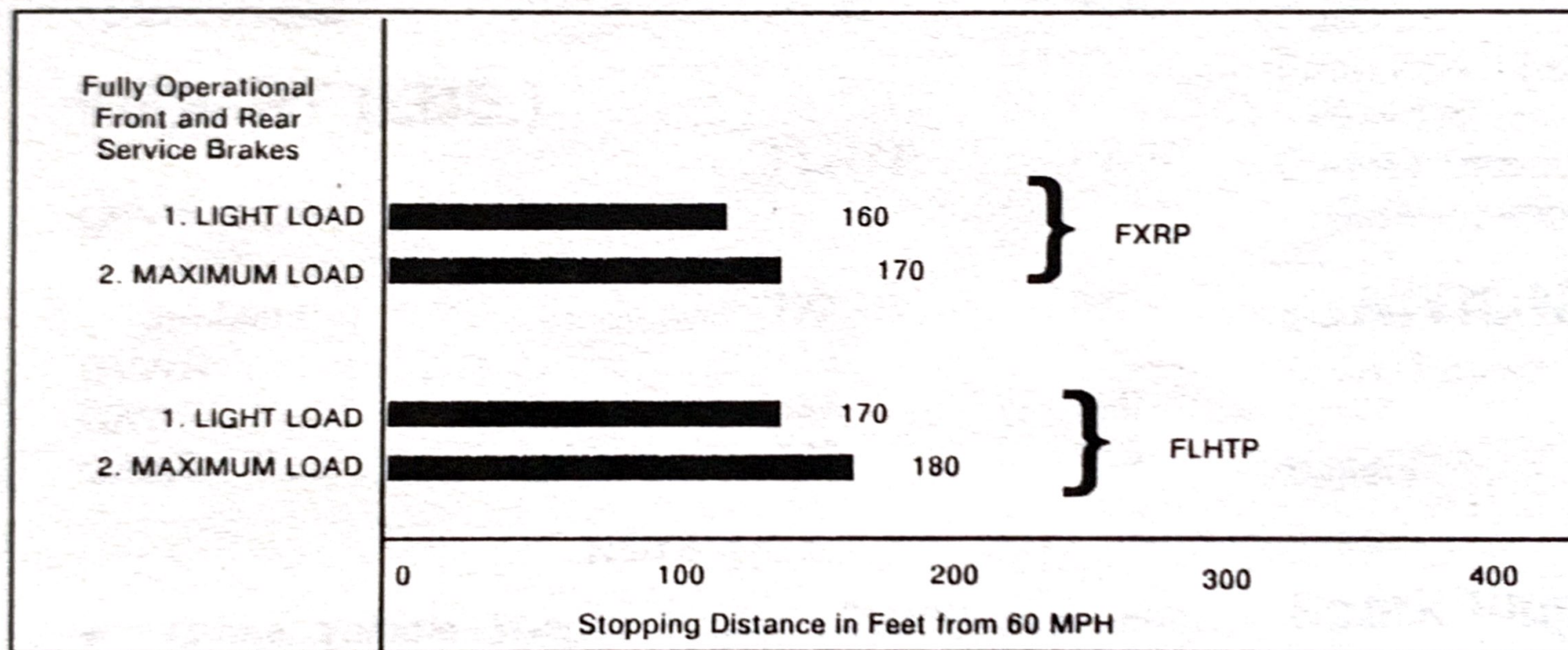
# STOPPING DISTANCE

Description of vehicle: Harley-Davidson 1992 FLHTP and FXRP models.

Required by Federal Consumer Information Regulations.

Notice: The information presented represents results obtainable by skilled riders under controlled road and vehicle conditions, 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 of loading.



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



## DIMENSIONS (IN.)

	FLHTP	FXRP
Wheel Base .....	62.94	64.70
Overall Length .....	94.25	94.20
Overall Width .....	39.0	34.50
Road Clearance .....	5.12	6.00
Overall Height .....	61.00	59.00
Saddle Height .....	28.00	30.00

## WEIGHT (LBS.)

	FLHTP	FXRP
<b>DRY WEIGHT</b>		
(as shipped from the factory) .....	722	640
GVWR .....	1197	1085
GAWR - Front .....	427	390
GAWR - Rear .....	770	695

### 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 frame down tube.
- Windshield versions have lower DRY WEIGHTS; FLHTP equipped with windshield - 700 lbs., FXRP equipped with windshield - 630 lbs.

## CAPACITIES (U.S.)

	FLHTP	FXRP
Fuel Tank (Gallons)		
Total .....	5	3.8
Reserve .....	0.9	0.4
Oil Tank (Quarts)		
w/filter .....	4	3.0
Transmission (Ounces, approx.) .....	20-24	20-24
Front Fork - Each (Ounces, wet) .....	7.75	10.5
Primary Chaincase (Ounces, approx.) .....	38-4438-44	

## IGNITION SYSTEM

Spark Timing ... Start .....	TDC
1800-2800 RPM .....	35° BTDC
Battery .....	12 Volt, 22 amp. hr. FXRP - 19 amp. hr.

## Spark Plugs

Type .....	HD-5R6A ✓
Size .....	14mm
Gap .....	0.038-0.043 in.

CHAMPION RN 11 YC

OF  
CHAMPION H.O.T. PLUGS.  
# 2404



## 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)	82.5@4000
FXRP 69.5@5000	3.498 (88.8)	4.25 (108.0)	81.6 (1338.6)	80@4000

## TRANSMISSION

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

## NUMBER OF SPROCKET TEETH

Engine ..... 24  
 Clutch ..... 37  
 Transmission ..... 32  
 Rear Wheel ..... 70

KEIHIN 38MM. 476A.

## OVERALL GEAR RATIOS

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

## TIRE DATA

### WARNING

For your personal safety, tires, rims and air valves must be correctly matched to wheel rims. See your Harley-Davidson dealer. Mismatching tires, tubes, rims and air valves may result in damage to the tire bead during mounting or may allow the tire to slip on the rim, possibly causing tire failure. In addition, using tires other than those specified may adversely affect motorcycle stability. Use only tube tires on all Harley-Davidson laced (wire spoked) wheels and tubeless type tires on all Harley-Davidson cast and disc wheels. Protective rubber rim strips must be used with tube type tires when mounted on laced (wire spoked) wheels. Tire sizes are molded on the tire sidewall. Tube sizes are printed on the tube.

DUNLOP

MT-90 B16-71H



### WARNING

Dunlop front and rear tires for Harley-Davidson motorcycles are not the same. They are not interchangeable. Use the front tire **ONLY** for a front tire. **DO NOT** put a rear tire on the front of a vehicle.

1992 VEHICLES DUNLOP TIRES ONLY	TIRE PRESSURE PSI (COLD)	
	FRONT	REAR
<b>FLHTP</b> Solo Rider	36 <b>2,5</b>	36 <b>2,5</b>
	36 <b>2,5</b>	40 <b>2,8</b>
<b>FXRP</b> Solo Rider	30	36
	30	40

### WARNING

Maximum inflation pressure must not exceed specification on tire sidewall.

### 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.



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.

## **GASOLINE/ALCOHOL BLENDS**

Your motorcycle was designed to obtain the best performance and efficiency using unleaded gasoline. Some fuel suppliers sell gasoline/alcohol blends as a fuel. The type and amount of alcohol added to the fuel is important.

- **DO NOT USE GASOLINES CONTAINING METHANOL.** Using gasoline/Methanol blends will result in starting and driveability deterioration and damage to critical fuel system components.
- Gasolines containing METHYL TERTIARY BUTYL ETHER (MTBE): Gasoline/MTBE blends are a mixture of gasoline and as much as 15% MTBE. Gasoline/MTBE blends can be used in your motorcycle.

- **ETHANOL** (grain alcohol) is a mixture of 10% ethanol and 90% unleaded gasoline. It is identified as "gasohol", "ethanol enhanced", or "contains ethanol". Gasoline/ethanol blends can be used in your motorcycle.

Because of their generally higher volatility, these blends may adversely affect the starting, driveability and fuel efficiency of your motorcycle. If you experience these problems, Harley-Davidson recommends you operate your motorcycle on straight, unleaded gasoline.

## **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.**



## 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		3.90 2.73	67697-81
Tail and Stop Lamp Tail Lamp Stop lamp	1	3 2.10	68168-89
Turn signal Lamps Front Rear	2 2	2.10 2.10	68168-89 68572-64B
Pursuit Lamps	2	2.34	68727-64A
Fender Tip Lamps	2	2.0	53439-79
Instrument Panel Lamps	9	1.0	71099-74

**NOTE**

*Contact Whelen Engineering for Cycle Signal Lamp replacement bulbs.*

- *Phone 203/526-9504*



## 500 MILE MAINTENANCE

- 1. Change engine oil & oil filter.
- 2. Inspect air cleaner and service as required.
- 3. Change primary chaincase lubricant and clean magnetic drain plug.
- 4. Check clutch adjustment.
- 5. Change transmission lubricant and clean magnetic drain plug.
- 6. Check and adjust chains/belt.
- 7. Lube the foot shift/brake lever bearings and speedometer cable.
- 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, throttle, clutch control cable (and handlever\*).
- 13. Check, adjust operation of enrichener.
- 14. Inspect fuel valve, lines and fittings for leaks.
- 15. Check tire pressure and inspect tread.
- 16. Check battery electrolyte level and clean battery connections.
- 17. Check operation of all electrical equipment and switches.
- 18. Check shock absorbers.
- 19. Check rear fork pivot nut.
- 20. Check air suspension - pressure, operation and leakage.
- 21. Check stabilizer links and engine mounts.
- 22. Check tightness of all fasteners except engine head bolts.
- 23. Check engine idle speed adjustment.
- 24. Road test.

\*If required

## 500 MILE MAINTENANCE

- 1. Change engine oil & oil filter.
- 2. Inspect air cleaner and service as required.
- 3. Change primary chaincase lubricant and clean magnetic drain plug.
- 4. Check clutch adjustment.
- 5. Change transmission lubricant and clean magnetic drain plug.
- 6. Check and adjust chains/belt.
- 7. Lube the foot shift/brake lever bearings and speedometer cable.
- 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, throttle, clutch control cable (and handlever\*).
- 13. Check, adjust operation of enrichener.
- 14. Inspect fuel valve, lines and fittings for leaks.
- 15. Check tire pressure and inspect tread.
- 16. Check battery electrolyte level and clean battery connections.
- 17. Check operation of all electrical equipment and switches.
- 18. Check shock absorbers.
- 19. Check rear fork pivot nut.
- 20. Check air suspension - pressure, operation and leakage.
- 21. Check stabilizer links and engine mounts.
- 22. Check tightness of all fasteners except engine head bolts.
- 23. Check engine idle speed adjustment.
- 24. Road test.

\*If required



## 2500 MILE MAINTENANCE

- 1. Inspect engine oil.
- 2. Inspect rear belt.
- 3. Inspect transmission lubricant.
- 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 enrichener controls.
- 8. Inspect operation of all electrical equipment and switches.
- 9. Inspect battery fluid level and connections.
- 10. Check stabilizer links and engine mounts.
- 11. Road test.

## 2500 MILE MAINTENANCE

- 1. Inspect engine oil.
- 2. Inspect rear belt.
- 3. Inspect transmission lubricant.
- 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 enrichener controls.
- 8. Inspect operation of all electrical equipment and switches.
- 9. Inspect battery fluid level and connections.
- 10. Check stabilizer links and engine mounts.
- 11. Road test.



## 5000 MILE MAINTENANCE

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

\*If required

## 5000 MILE MAINTENANCE

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

\*If required



## 7500 MILE MAINTENANCE

- 1. Inspect engine oil.
- 2. Inspect rear chain/belt.
- 3. Inspect transmission lubricant.
- 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 enrichener controls.
- 8. Inspect operation of all electrical equipment and switches.
- 9. Inspect battery fluid level and connections.
- 10. Check stabilizer links and engine mounts.
- 11. Road test.

## 7500 MILE MAINTENANCE

- 1. Inspect engine oil.
- 2. Inspect rear chain/belt.
- 3. Inspect transmission lubricant.
- 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 enrichener controls.
- 8. Inspect operation of all electrical equipment and switches.
- 9. Inspect battery fluid level and connections.
- 10. Check stabilizer links and engine mounts.
- 11. Road test.



## 10,000 MILE MAINTENANCE

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

\*If required

## 10,000 MILE MAINTENANCE

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

\*If required