AWARNING

Be sure tires are properly inflated, balanced and have adequate tread. Inspect your tires regularly and see a Harley-Davidson dealer for replacements. Riding with excessively worn, unbalanced or under-inflated tires can adversely affect stability and handling, which could result in death or serious injury. (00014a)

Check tire condition and pressure. Incorrect pressure will
result in poor riding characteristics and can affect handling
and stability. Refer to tire specifications for correct inflation
pressure to use.

AWARNING

Be sure headlamp, tail and stop lamp and turn signals are operating properly before riding. Poor visibility of rider to other motorists can result in death or serious injury. (00478b)

- Check all electrical equipment and switches including the headlamp, stop lamp, turn signals and horn for proper operation.
- 8. Check for any fuel, oil or hydraulic fluid leaks.
- 9. Check secondary belt for wear or damage.

10. Service your motorcycle as necessary.

STARTING THE ENGINE: FLHTCUSE3

General

CAUTION

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. Failure to comply can result in engine damage. (00181a)

The engine is equipped with Electronic Sequential Port Fuel Injection (ESPFI). The amount of fuel delivered to the engine is electronically control by the Engine Control Module (ECM). Do not roll the throttle before starting. Rolling the throttle before starting the motorcycle is unnecessary.

Starting

AWARNING

Shift transmission to neutral before starting engine to prevent accidental movement, which could result in death or serious injury. (00044a)

Turn ignition/headlamp key switch to IGNITION position. Do not roll the throttle.

NOTE

The engine lamp will light for approximately 4 seconds and you will hear the fuel pump purr for approximately 2 seconds as it operates to fill the fuel lines with gasoline.

- See Figure 40. Turn the OFF/RUN switch to RUN position.
- Raise the jiffy stand (required for international models).
- Squeeze the clutch lever in against the hand grip.

NOTE

To activate the starting system, the clutch interlock circuitry requires the clutch be disengaged, clutch lever pulled in against left handgrip, and/or the transmission be shifted to the neutral position (green neutral lamp lit).

- Press the starter button to start the motorcycle.
- When the engine has started, you can operate your motorcycle as you normally would after raising the jiffy stand.

NOTE

If the fuel tank becomes completely dry, it may take a few seconds longer to start the motorcycle after filling the tank. It is not necessary to take any extra measure before starting the motorcycle.

Automatic Compression Release (ACR)

The FLHTCUSE3 is equipped with an Automatic Compression Release (ACR). During starting, a small auxiliary valve in the cylinder head is opened automatically by the ECM. The open valve releases the air compressed in the cylinder heads and allows the starter motor to turn the high compression engine over at a faster rate to aid starting.

After starting and during normal operation, the ACR valves remain closed.

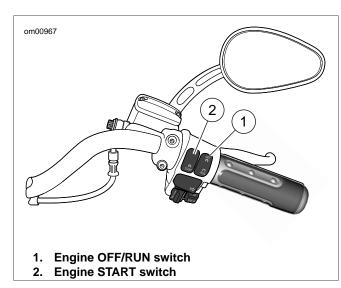


Figure 40. Right Handlebar Controls: FLHTCUSE3

ENGINE IDLE TEMPERATURE MANAGEMENT SYSTEM

For those riders who frequently find themselves in riding conditions where the vehicle is subjected to prolonged idle condi-

tions, an optional dealer enabled engine calibration is available. This calibration offers limited rear cylinder cooling with the vehicle stopped while the engine is left at idle. This option is available for original equipment engine calibrations only. See your dealer for details.

CRUISE CONTROL: FLHTCUSE3

Operation

The cruise control is designed to be safely operated with minimum movement by the rider and all rider control actions are natural and easy.

NOTES

- The rider always over-rides and controls the system.
- The system will not work at vehicle speeds below 30 mph (48 km/h) or above 85 mph (137 km/h).
- The system is managed by a small computer. The tachometer provides information to disengage the system if the engine RPM suddenly increases.
- Besides the computer, the system has other components: a stepper-motor (controlled by the computer), which operates the throttle during CRUISE operation, a clutch which disengages the stepper-motor during non-cruise

- operation and several internal switches, all sending information to the computer.
- The system will allow rider to increase speed 10 mph (16 km/h) or more (depending on how hard the rider rolls on the throttle and the condition of the bike) over the SET point before deactivating. This feature allows the rider to momentarily increase speed, if necessary. Rolling on the throttle to greatly increase speed may deactivate the system.

Engaging Cruise Control

- See Figure 41. Rock the CRUISE/SPOT rocker switch on the inner fairing cap forward to ON. The orange light in the CRUISE/SPOT switch will illuminate and the cruise control icon in the tachometer face will illuminate orange.
- With the motorcycle traveling at the desired cruise speed of 30-85 mph (48-137 km/h), momentarily push the RESUME/SET switch on the right handlebar to SET. After a delay of about 1-1/2 seconds, the icon in the tachometer face will turn green to indicate the selected cruising speed is locked in.

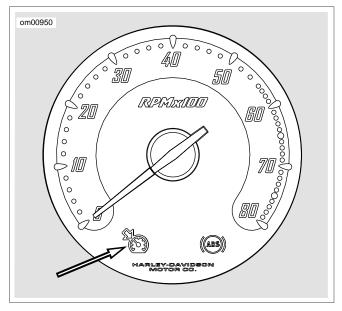


Figure 41. Cruise Control Icon in Tachometer Face

Disengaging Cruise Control

The cruise control automatically disengages whenever the cruise control module receives one of the following inputs:

- Front and/or rear brake is applied.
- Throttle is rolled back or closed, thereby actuating idle cable roll-off (disengage) switch.
- Motorcycle clutch is disengaged (module senses too great an increase in RPM).
- 4. Vehicle speed is out of the operating range.

NOTE

Rolling on the throttle more than 10 mph (16 km/h) above the set speed may also deactivate the cruise control.

When the cruise is disengaged, the green engaged cruise icon on the face of the tachometer changes to orange. The orange cruise icon remains ON until the CRUISE/SPOT rocker switch on the inner fairing cap is rocked forward to disengage cruise.

However, should you decide to SET a cruise speed, RESUME last set speed, ACCELERATE or DECELERATE, simply press the RESUME/SET switch.

Resuming Cruise Speed

If the system is disengaged using one of the methods described under DISENGAGING CRUISE CONTROL, the system is still ON should you decide to RESUME the set speed. To accomplish this, simply press the RESUME/SET switch to RESUME.

NOTE

The computer will hold the SET speed in memory for the RESUME function. If the vehicle speed drops more than 15 mph (72 km/h) below the SET speed, speed can no longer be RESUMED. If cruise operation is still desired, press the RESUME/SET switch to SET to reset the cruise speed.

Accelerating Above Cruise Speed

- With the cruise speed set, momentarily press the RESUME/SET switch to RESUME to increase the speed by 1 mph (1.6 km/h).
- Pressing and holding the RESUME/SET switch at RESUME will cause the system to continue to increase speed in increments of approximately 1 mph (1.6 km/h) until the switch is released. There is a delay of about 2 seconds before the speed increases.

Decelerating Cruise Control

- With the cruise speed set, momentarily press the RESUME/SET switch to SET to reduce the speed by 1 mph (1.6 km/h).
- Pressing and holding the RESUME/SET switch at SET will cause the system to continue to reduce speed in increments of approximately 1 mph (1.6 km/h) until the switch is released. There is a delay of about 2 seconds before the speed decreases.

Deactivating Cruise Control

Rock the CRUISE/SPOT rocker switch forward. The orange light on the switch will go out to indicate the system is OFF.

NOTES

System will NOT work if:

 An uphill grade is so long and/or steep; the throttle cables are pulled their full length when the system tries to main-

- tain vehicle speed. This feature prevents stretching the cables.
- Rider operates bike at vehicle speeds below 30 mph (48 km/h) or above 85 mph (137 km/h).
- Throttle cables are too tight. See dealer.
- Brake lamps are on constantly. See dealer.

STOPPING THE ENGINE

- Stop the engine by turning OFF the engine stop switch on right handlebar.
- Turn OFF the ignition/headlamp key switch. If the engine should be stalled or stopped in any way, turn off the ignition/headlamp key switch at once to prevent battery discharge.

SHIFTING GEARS: FLHTCUSE3

Getting Started

CAUTION

The clutch must be fully disengaged before attempting a gear shift. Failure to fully disengage the clutch can result in equipment damage. (00182a)

Gear shift pattern is first gear down, next five gears up.

NOTE

Always start engine with transmission in neutral. Always start motorcycle forward motion from first gear.

- With motorcycle engine running and jiffy stand retracted, pull the clutch hand lever in against handlebar grip to fully disengage clutch.
- 2. Push the foot shift lever down to end of its travel and release. The transmission is now in first gear.
- To start forward motion, release the clutch lever slowly to engage the clutch and at the same time, open throttle gradually.

Upshift (Acceleration)

Refer to Table 24. Engage second gear after the motorcycle has reached at the appropriate shifting speed.

Table 24. Upshift (Acceleration) Gear Speeds: Six Speed

GEAR CHANGE	MPH	KPH
First to second	15	25
Second to third	25	40
Third to fourth	35	55
Fourth to fifth	45	70
Fifth to sixth	55	85

- Close the throttle.
- 2. Disengage the clutch (pull clutch lever in).
- See Figure 42. Lift the gear shift lever up to the end of its travel and release.
- Engage the clutch (release clutch lever) and gradually open the throttle.
- 5. Repeat the previous steps to engage third, fourth, fifth, and sixth gears.

NOTES

- Disengage the clutch completely before each gear change.
- Partially close the throttle so the engine will not drag when clutch is again engaged (clutch lever released).

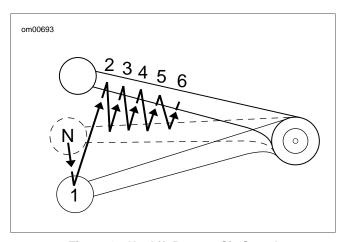


Figure 42. Upshift Pattern: Six Speed

Downshift (Deceleration)

AWARNING

Do not downshift at speeds higher than those listed in the Changing Gear Speeds table. Shifting to lower gears when speed is too high can cause the rear wheel to lose traction and lead to loss of vehicle control, which could result in death or serious injury. (00045a)

Gear shift pattern is first gear down; next five gears up. Refer to Table 25 for shifting speeds.

Table 25. Downshift (Deceleration) Gear Speeds: Six **Speed**

GEAR CHANGE	MPH	KPH
Sixth to fifth	50	80
Fifth to fourth	40	65
Fourth to third	30	50
Third to second	20	30
Second to first	10	15

NOTE

The shifting points shown in the tables are a recommendation. Vehicle owners may determine that their own individual shifting patterns may differ than those stated and are additionally appropriate for individual riding styles.

See Figure 43. When engine speed decreases, as in climbing a hill or running at a reduced speed, shift to the next lower gear while partially closing the throttle so the engine accelerates as soon as the clutch lever is released.

NOTES

- Disengage the clutch completely before each gear change.
- Partially close the throttle so the engine will not drag when clutch is again engaged (clutch lever released).

CAUTION

Shift to neutral before stopping engine. Shifting mechanism can be damaged by shifting gears while engine is stopped. (00183a)

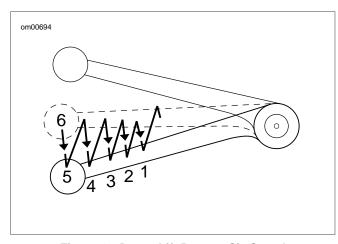


Figure 43. Downshift Pattern: Six Speed

SAFE OPERATING MAINTENANCE

AWARNING

Perform the service and maintenance operations as indicated in the regular service interval table. Lack of regular maintenance at the recommended intervals can affect the safe operation of your motorcycle, which could result in death or serious injury. (00010a)

Good maintenance creates a safe motorcycle. A careful check of certain equipment must be made after periods of storage. Also, frequently inspect the motorcycle between the regular service intervals to determine if additional maintenance is necessary.

Check the following items:

- 1. Tires for correct pressure, abrasions or cuts.
- 2. Belt and primary chain for proper tension, wear or damage.
- Brakes, steering and throttle for responsiveness and freedom from binding.
- 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 and primary chaincase/transmission fluid levels.

Headlamp, tail lamp, brake lamp and turn signals for proper 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.

Refer to Table 32. After a new motorcycle has been ridden its first 1000 miles (1600 kilometers), it should be taken to an authorized Harley-Davidson dealer for initial service operations.

ENGINE LUBRICATION: SYNTHETIC OIL

Engine oil is a major factor in the performance and service life of the engine. Always use the proper grade of oil for the lowest temperature expected before the next scheduled oil change. Your authorized dealer has the proper oil to suit your requirements.

Your motorcycle comes equipped with Screamin' Eagle® SYN3 Synthetic Motorcycle Lubricant. If SYN3 is not available and addition of motor oil is required, the first choice would be to add H-D 360 SAE 20W50 to the SYN3 for engine lubrication. Although H-D 360 is compatible with SYN3, we suggest the mixture of the fluids be changed as soon as possible.

If H-D 360 is not available, the second choice would be to add an acceptable diesel engine oil. We again suggest the mixture of the fluids be changed as soon as possible. DO NOT add diesel engine oil to the primary chaincase or transmission.

To switch lubricant to H-D 360, completely drain the SYN3 before filling with H-D 360. A residual amount of fluid will remain. It is not required to flush out the residual fluid.

CAUTION

Do not switch lubricant brands indiscriminately because some lubricants interact chemically when mixed. Use of inferior lubricants can damage the engine. (00184a)

Refer to Table 26. If it is necessary to add oil and Screamin' Eagle SYN3 Synthetic Motorcycle Lubricant is not available, use an oil certified for diesel engines. Acceptable diesel engine oil designations include: CF-4, CG-4, CH-4 and CI-4.

The preferred viscosities for the diesel engine oils in descending order are: 20W50, 15W40 and 10W40.

At the first opportunity, see an authorized dealer to change back to 100 percent Harley-Davidson oil.

Table 26. Recommended Synthetic Engine Oils

H-D TYPE	VISCOSITY	H-D RATING	LOWEST AMBIENT TEMPERATURE	COLD WEATHER STARTS BELOW 50° F (10° C)
Screamin' Eagle SYN3 Synthetic Motorcycle Lubricant	SAE 20W50	HD 360	Above 40° F (4° C)	Excellent
H-D Multi-grade	SAE 10W40	HD 360	Below 40° F (4° C)	Excellent
H-D Multi-grade	SAE 20W50	HD 360	Above 40° F (4° C)	Good
H-D Regular Heavy	SAE 50	HD 360	Above 60° F (16° C)	Poor
H-D Extra Heavy	SAE 60	HD 360	Above 80° F (27° C)	Poor

CHECKING OIL LEVEL: FLHTCUSE3

CAUTION

Oil level cannot be accurately measured on a cold engine. For pre-ride inspection, with motorcycle leaning on jiffy stand on level ground, oil should register on dipstick between arrows when engine is cold. Do not add oil to bring the level to the FULL mark on a COLD engine. (00185a)

For dipstick location, see Figure 44.

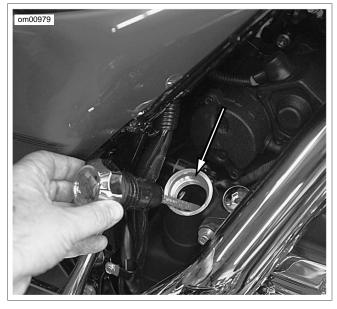


Figure 44. Oil Dipstick Location: FLHTCUSE3

Oil Level Cold Check

As part of the preride inspection, perform engine oil level **COLD CHECK** as follows:

- With the motorcycle resting on the jiffy stand on level ground, unthread the filler plug cap to remove the dipstick.
- Wipe off the dipstick. Insert it back into the oil pan and thread the plug cap completely into the fill spout.
- See Figure 45. Remove the dipstick and verify the level of the oil. The correct oil level should register between the two arrows (1) on the dipstick.
- If oil level is at or below the lower arrow, add only enough oil to bring the level to the middle of the two marks on the dipstick.

NOTE

The reverse side of the dipstick measures oil levels on Harley-Davidson models equipped with a sidecar. For the FLHT-CUSE3, be sure the oil level measurement is taken on the side of the dipstick marked with the HOT FULL and ADD QT arrows and cross hatched scale.

Oil Level Hot Check

Perform engine oil level **HOT CHECK** as follows:

- 1. Ride motorcycle until engine is at normal operating temperature.
- 2. With the vehicle resting on the jiffy stand on level ground, allow engine to idle for 1-2 minutes. Turn engine off.
- Unthread the filler plug to remove the dipstick.
- Insert it back into the oil pan and thread the plug completely into the fill spout.
- See Figure 45. Remove the dipstick and note the level of the oil. Add only enough oil to bring the level to the FULL mark (2). Do not overfill.

NOTE

Refer to Table 26. Use only recommended oil specified in MAINTENANCE AND LUBRICATION, Engine Lubrication: Synthetic Oil.

- Return the dipstick to the filler and thread-in the filler plug.
- Start engine and carefully check for oil leaks around drain plug and oil filter.

Engine oil level should be checked only when engine is at normal operating temperature.

NOTE

The engine will require a longer warm up period in colder weather.

CAUTION

Do not allow hot oil level to fall below Add/Fill mark on dipstick. Doing so can result in equipment damage and/or equipment malfunction. (00189a)

CAUTION

Do not overfill oil tank. Doing so can result in oil carryover to the air cleaner leading to equipment damage and/or equipment malfunction. (00190a)

- Check engine oil supply at each complete fuel refill.
- Refer to Table 32. Oil should be changed at specified intervals in normal service at warm or moderate temperatures.
- Oil change intervals should be shorter in cold weather or severe operating conditions. See MAINTENANCE AND LUBRICATION, Winter Lubrication.

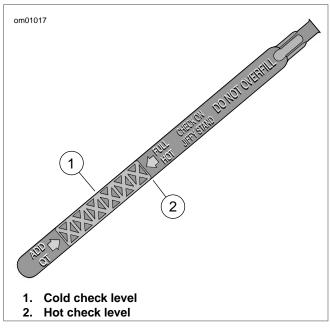


Figure 45. Engine Oil Level: FLHTCUSE3

CHANGING OIL AND OIL FILTER: FLHTCUSE3

CAUTION

Do not switch lubricant brands indiscriminately because some lubricants interact chemically when mixed. Use of inferior lubricants can damage the engine. (00184a)

Twin Cam equipped motorcycles require the premium oil filter (Part No. 63798-99A Chrome or Part No. 63731-99A Black).

Refer to Table 32. Oil should be changed after the first 1000 miles (1600 kilometers) for a new engine and at regular intervals in normal service at warm or moderate temperatures.

- Ride motorcycle until engine is warmed up to normal operating temperature. Turn engine off.
- Locate oil filler plug/dipstick on right side of vehicle at top of transmission case. Unthread cap to remove the oil filler plug/dipstick.
- See Figure 50. Locate oil drain plug at front left side of the oil pan. Remove the oil drain plug. Do not remove the allen plug. Allow oil to drain completely.

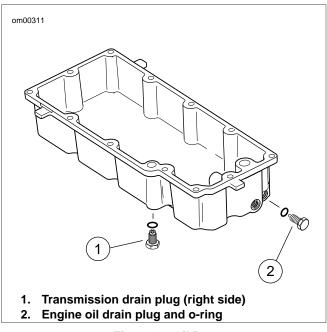


Figure 46. Oil Pan

Inspect the oil drain plug o-ring for cuts, tears or signs of deterioration. Replace as necessary.

AWARNING

Be sure that no lubricants or fluids get on tires, wheels or brakes when changing fluid. Traction can be adversely affected, which could result in loss of control of the motorcycle and death or serious injury. (00047d)

CAUTION

Use Harley-Davidson OIL FILTER WRENCH for filter removal. This tool can prevent damage to crankshaft position sensor and/or sensor cable, (00192a)

- See Figure 46. Remove the oil filter using the OIL FILTER WRENCH (Part No. HD-42311 or HD-44067A). The tool allows easy removal of the oil filter without risk of damage to the crankshaft position sensor or cable.
- Place the jaws of the wrench over the oil filter with the tool oriented vertically. Using a 3/8 inch drive with a 4 inch extension, turn wrench in a counterclockwise direction. Do not use with air tools.
- Clean the oil filter mount flange of any old gasket material.

NOTE

Dispose of oil and oil filter in accordance with local regulations.

See Figure 48. Lubricate gasket with clean engine oil and install new oil filter on filter mount. Hand tighten oil filter 1/2-3/4 turn after gasket first contacts filter mounting surface. Do **not** use oil filter wrench for filter installation.

NOTE

Use of the Premium 10 micron synthetic media oil filter is highly recommended. Order Chrome (Part No. 63798-99A) or Black (Part No. 63731-99a).

- Install engine oil drain plug and tighten to 14-21 ft-lbs (19.0-28.5 Nm).
- 10. Refer to Table 26. With motorcycle resting on jiffy stand, initially add 3.5 U.S. quarts (3.3 liters) engine oil. Use the proper grade of oil for the lowest temperature expected before the next oil change.
- 11. Return the dipstick to the filler and thread-in the filler plug.

- 12. Verify proper oil level. See MAINTENANCE AND LUBRI-CATION, Checking Oil Level: FLHTCUSE3.
 - a. Check engine oil level using COLD CHECK procedure.
 - Start engine and carefully check for oil leaks around drain plug and oil filter.
 - Check engine oil level using **HOT CHECK** procedure.

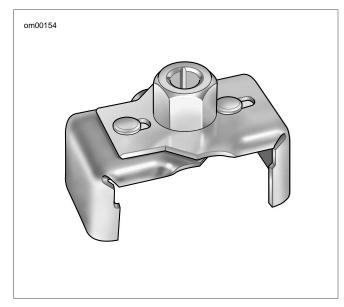


Figure 47. Oil Filter Wrench (Part No. HD-42311)

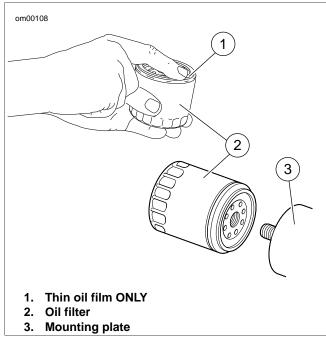


Figure 48. Applying Thin Oil Film

WINTER LUBRICATION

In colder climates, the engine oil should be changed often. If motorcycle is used frequently for short trips, less than 15 miles (24 kilometers), in ambient temperatures below 60° F (16° C), oil change intervals should be reduced to 1500 miles (2400 kilometers). Motorcycles used only for short runs must have a thorough tank flush-out before new oil is put in. The tank flushout should be performed by an authorized dealer or qualified technician.

NOTE

The further below freezing the temperature drops, the shorter the oil change interval should be.

Water vapor is a normal by-product of combustion in any engine. During cold weather operation, some of the water vapor condenses to liquid form on the cool metal surfaces inside the engine. In freezing weather this water will become slush or ice and, if allowed to accumulate too long, may block the oil lines and cause damage to the engine.

If the engine is run frequently and allowed to thoroughly warm up, most of this water will become vapor again and will be blown out through the crankcase breather.

If the engine is not run frequently and allowed to thoroughly warm up, this water will accumulate, mix with the engine oil and form a sludge that is harmful to the engine.

OIL COOLER: FLHTCUSE3

The FLHTCUSE3 is equipped with a factory installed oil cooler. Always keep the cooler clean and free from dirt and debris. This will help maintain maximum cooling efficiency.

TRANSMISSION LUBRICATION: FLHTCUSE3

General

The transmission lubricant level should be checked monthly.

Your motorcycle comes equipped with Screamin' Eagle SYN3 Synthetic Motorcycle Lubricant. For transmission lubrication, it is not recommended to mix SYN3 with other lubricant products.

Refer to Table 32. The transmission should be drained and refilled with fresh lubricant at specified intervals.

NOTE

When checking the transmission lubricant level, motorcycle should be leaning on the jiffy stand.

Check Lubricant Level

- 1. Ride motorcycle until engine is warmed up to normal operating temperature.
- 2. When the engine reaches normal operating temperature, turn the engine off and lean the motorcycle on its sidestand.
- See Figure 49. Unthread and remove the filler plug/dipstick.
- 4. See Figure 50. Wipe off filler plug/dipstick and place it back in the filler hole. Do not thread in. (Dipstick should rest on threads of the case.)
- Remove the plug/dipstick and check the level. The lubricant level should lie between the A (ADD) and F (FULL) marks on the dipstick.

WARNING

Be sure that no lubricants or fluids get on tires, wheels or brakes when changing fluid. Traction can be adversely affected, which could result in loss of control of the motorcycle and death or serious injury. (00047d)

CAUTION

When draining or adding lubricant, do not allow dirt, debris or other contaminants to enter the engine. (00198a)

- If the lubricant level is below the A (ADD) mark, add lubricant. Do not overfill. If the lubricant level is above the F (FULL) mark, leakage may occur. The transmission fluid capacity is approximately 32 fl. oz. (0.946 liters).
 - a. When filling the transmission, use Screamin' Eagle SYN3 Synthetic Motorcycle Lubricant.
 - If SYN3 is not available and addition of lubricant is required, SYN3 must be completely drained before using other lubricant products. A residual amount of fluid will remain. It is not required to flush out the residual fluid.
- Inspect o-ring for tears or damage. Replace if required. Wipe any foreign material from plug.
- Install threaded filler plug/dipstick and tighten clockwise to 25-75 in-lbs (2.8-8.5 Nm).



Figure 49. Transmission Filler Plug/Dipstick: FLHTCUSE3

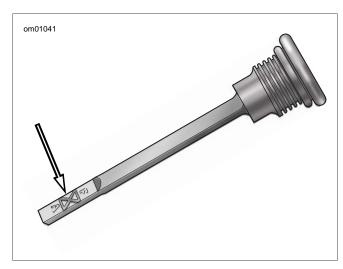


Figure 50. Transmission Filler Plug/Dipstick Lubricant Level

Changing Transmission Fluid

See Figure 49. Remove the threaded filler plug/dipstick.

2. See Figure 50. Remove transmission drain plug from the right side of the oil pan and drain lubricant into a suitable container.

CAUTION

When draining or adding lubricant, do not allow dirt, debris or other contaminants to enter the engine. (00198a)

AWARNING

Be sure that no lubricants or fluids get on tires, wheels or brakes when changing fluid. Traction can be adversely affected, which could result in loss of control of the motorcycle and death or serious injury. (00047d)

NOTE

Dispose of transmission lubricant in accordance with local regulations.

- 3. Inspect o-ring for tears or damage on the drain plug. Replace if required. Wipe any foreign material from plug.
- 4. Install drain plug and tighten to 14-21 ft-lbs (19.0-28.5 Nm). Fill the transmission with 20-24 fl. oz. (0.59-0.71 liters) of Harley-Davidson Screamin' Eagle SYN3 Synthetic Motorcycle Lubricant.

NOTE

After adding fluid, check the lubrication level. Do not overfill or leakage may occur. The transmission fluid capacity is approximately 32 fl. oz. (0.946 liters).

- 5. Install threaded filler/check plug and tighten clockwise to 25-75 in-lbs (2.8-8.5 Nm).
- 6. Start engine and carefully check for oil leaks around drain plug.

PRIMARY CHAINCASE LUBRICATION: SYNTHETIC OIL

Lubrication is a major factor in the performance and service life of the clutch components. Use the appropriate Harley-Davidson chaincase lubricant for all operating temperatures.

Your motorcycle comes equipped with Screamin' Eagle SYN3 Synthetic Motorcycle Lubricant. If SYN3 is not available and addition of lubricant to the primary chaincase is required, the first choice would be to add H-D Primary Chaincase Lubricant. Although H-D Primary Chaincase Lubricant is compatible with SYN3, we suggest the mixture of the fluids be changed as soon as possible.

NOTE

For model specific information regarding the primary chaincase capacity, refer to the appropriate Service Manual or see a Harley-Davidson dealer.

CHAINCASE I UBRICANT: TOURING **MODELS**

General

Refer to Table 32. The chaincase lubricant should be drained and refilled with fresh lubricant at specified intervals.

NOTE

When checking the chaincase lubricant, motorcycle should be standing STRAIGHT UP, not leaning on the jiffy stand. Keep motorcycle upright for a short period of time to equalize lubricant level in the chaincase compartment.

Check Lubricant Level

- 1. Ride motorcycle until engine is warmed up to normal operating temperature.
- 2. When the engine reaches normal operating temperature, turn the engine off and position motorcycle STRAIGHT UP and LEVEL.

- See Figure 51 Remove five screws (2) (with captive washers) to free clutch inspection cover (1) from primary chaincase cover.
- Remove gasket and discard.
- Pour the proper amount and type of primary chaincase lubricant in through the clutch inspection cover opening, if required.
- Refer to procedure in Changing Chaincase Lubricant to install gasket and clutch inspection cover.

CAUTION

Do not overfill the primary chaincase with lubricant. Overfilling can cause rough clutch engagement, incomplete disengagement, clutch drag and/or difficulty in finding neutral at engine idle. (00199b)

NOTE

Use only GENUINE Harley-Davidson FORMULA+TRANSMIS-SION AND PRIMARY CHAINCASE LUBRICANT (Part No. 99851-05 quart).

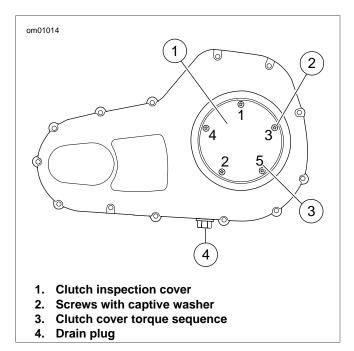


Figure 51. Primary Chaincase Cover

Changing Chaincase Lubricant

CAUTION

When draining or adding lubricant, do not allow dirt, debris or other contaminants to enter the engine, (00198a)

- Ride motorcycle until engine is warmed up to normal operating temperature.
- See Figure 51 and Figure 53. Remove magnetic drain plug at bottom of primary chaincase cover. Drain lubricant into suitable container.

NOTE

Dispose of chaincase lubricant in accordance with local requlations.

- See Figure 52. Remove five screws (with captive washers) to free clutch inspection cover from primary chaincase cover.
- Clean drain plug. Remove debris from magnet and inspect o-ring for cuts, tears, or signs of deterioration. Replace as necessary. Install drain plug and tighten to 14-21 ft-lbs (19.0-28.5 Nm). If plug has accumulated excess debris, inspect the condition of chaincase components.

5. Pour the appropriate amount of GENUINE Harley-Davidson FORMULA+ TRANSMISSION AND PRIMARY CHAINCASE LUBRICANT (Part No. 99851-05 quart) in through the clutch inspection cover opening. A wet primary change will require 38 fl. oz. (1177 ml). A dry fill after complete disassembly of the primary requires 45 fl. oz. (1330 ml).

CAUTION

Do not overfill the primary chaincase with lubricant. Overfilling can cause rough clutch engagement, incomplete disengagement, clutch drag and/or difficulty in finding neutral at engine idle. (00199b)

CAUTION

When draining or adding lubricant, do not allow dirt, debris or other contaminants to enter the engine. (00198a)

AWARNING

Be sure that no lubricants or fluids get on tires, wheels or brakes when changing fluid. Traction can be adversely affected, which could result in loss of control of the motorcycle and death or serious injury. (00047d)

NOTE

Use only GENUINE Harley-Davidson FORMULA+ TRANSMIS-SION AND PRIMARY CHAINCASE LUBRICANT (Part No. 99851-05 quart).

- Install clutch inspection cover and new gasket as follows:
 - Thoroughly wipe all lubricant from the cover mounting surface and groove in chaincase.
 - b. Position gasket in groove in primary chaincase cover and press each of the nubs on gasket into the groove. The nubs will retain the seal in position.
 - Insert screw (with captive washer) through clutch inspection cover and thread it into the top cover screw hole.
 - Start the remaining four screws (with captive washers).
 - Tighten screws to 84-108 in-lbs (9.5-12.2 Nm). Follow torque sequence shown in Figure 51.

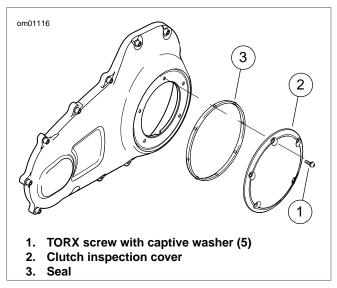


Figure 52. Clutch Cover

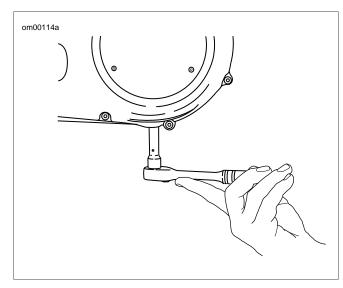


Figure 53. Removing Chaincase Drain Plug

REAR DRIVE BELT: FLHTCUSE3

The inner tooth surface of the rear drive belt 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.

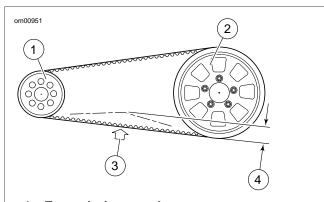
Belt tension is set at the factory and should be checked after the first 1000 miles (1600 kilometers) and at regular intervals thereafter.

See Figure 54. With 10 PSI in the rear shocks, the rear wheel on the ground and the motorcycle on its jiffy stand, use the BELT TENSION GAUGE (Part No. HD-35381-3) to apply 10 lbs. (4.5 kg) of force at the loosest spot on the belt. At room temperature with transmission in neutral, belt deflection should be 3/8-7/16 in. (9.6-11.1 mm). If belt tension adjustment is necessary, see a Harley-Davidson dealer or follow the instructions given in the Service Manual.

Check rear brake caliper position on rear brake disc. Disc should run true within brake caliper.

AWARNING

Be sure wheel and brake caliper are aligned. Riding with a misaligned wheel or brake caliper can cause the brake disc to bind and lead to loss of control, which could result in death or serious injury. (00050a)



- **Transmission sprocket**
- Rear wheel sprocket
- Force of 10 lbs (4.5 kg)
- Belt deflection

Figure 54. Drive Belt Deflection: FLHTCUSE3

CHASSIS I UBRICATION

Refer to Table 32 for all maintenance schedules.

CAUTION

Do not switch lubricant brands indiscriminately because some lubricants interact chemically when mixed. Use of inferior lubricants can damage the engine. (00184a)

- 1. Use recommended special purpose grease for steering head bearings. Use a multipurpose chassis grease for other applications.
- 2. Remove and lubricate handlebar throttle control grip sleeve with fresh graphite at proper intervals.
- 3. Lubricate throttle control cables and clutch control cable at proper intervals.
- 4. Lubricate front brake hand lever and clutch control hand lever only if necessary.
- Inspect rear fork pivot shaft bearings.
- 6. Pack the steering head bearings with fresh grease at proper intervals.
- 7. Lubricate the jiffy stand mechanism with LOCTITE AEROSOL ANTI-SEIZE at proper intervals.

NOTE

For model specific information regarding the chassis lubrication, refer to the appropriate Service Manual or see a Harley-Davidson dealer.

OIL APPLICATIONS

Refer to Table 32 for all control connections and parts. Vehicle should be oiled at regular intervals, particularly after washing motorcycle or driving in wet weather.

FRONT FORK OIL

Refer to Table 32. Have a Harley-Davidson dealer drain the front fork oil and refill at proper intervals. If fork does not appear to be working properly or an appreciable amount of oil leakage should develop, see a Harley-Davidson dealer. If there is insufficient oil in either side of fork, the rebound action will be incorrect.

FUEL FILTER

EFI Models Only

Fuel injected motorcycles have a fuel filter attached to the fuel pump.

NOTE

For model specific information regarding fuel filter maintenance. refer to the appropriate Service Manual or see a Harley-Davidson dealer.

HYDRAULIC CLUTCH: FLHTCUSE3

The clutch is hydraulically actuated. Squeezing the left hand lever causes the clutch master cylinder to apply pressure to the clutch actuation cylinder mounted in the trans right side cover. The actuation cylinder push rod extends and contacts the clutch release bearing to release the clutch.

Refer to Table 32. Check the fluid level as follows:

- Stand the motorcycle upright (not leaning on the jiffy stand) on a level surface, turn handlebar so the top of the clutch master cylinder is level.
- Clean all dirt and debris from the clutch master cylinder cover. Remove the two clutch master cylinder cover screws and remove the cover.
- Verify the fluid level in the clutch master cylinder reservoir is at the FULL LEVEL mark at the top of the ledge on the rear inside wall of the reservoir. If the fluid level is low, add D.O.T. 4 HYDRAULIC BRAKE FLUID (Part No. 99953-99A) approved for clutch system use and available from a Harley-Davidson dealer.

NOTE

Do not overfill the clutch master cylinder reservoir. As the clutch friction discs wear, the piston in the clutch cylinder will force fluid back into the reservoir which could cause fluid overflow.

CAUTION

D.O.T. 4 hydraulic brake fluid is used in the hydraulic clutch. Do not use other types of fluids as they are not compatible and could cause equipment damage. (00353a)

CAUTION

Do NOT allow dirt or debris to enter the master cylinder reservoir. Dirt or debris in the reservoir can cause improper operation and equipment damage. (00205b)

ACAUTION

Direct contact of D.O.T. 4 brake fluid with eyes can cause irritation. Avoid eye contact. In case of eye contact flush with large amounts of water and get medical attention. Swallowing large amounts of D.O.T. 4 brake fluid can cause digestive discomfort. If swallowed, obtain medical attention. Use in well ventilated area, KEEP OUT OF REACH OF CHILDREN. (00240a)

Inspect the clutch master cylinder cover gasket for rips, cuts, cracks, or other signs of damage. Replace the gasket if necessary. Carefully place the cover and cover gasket on the master cylinder reservoir and secure with the two cover screws. Tighten the screws to 6-8 in-lbs (0.68-0.90 Nm).

NOTE

If the fluid level in the clutch master cylinder reservoir is correct but the clutch does not operate properly, refer to the service manual or see a Harley-Davidson dealer for service.

HYDRAULIC LIFTERS

The hydraulic lifters are self-adjusting. They automatically adjust length to compensate for engine expansion and valve mechanism wear. This keeps the valve mechanism free of lash when the engine is running.

When starting an engine which has been turned off even for a few minutes, the valve mechanism may be slightly noisy until the hydraulic units completely refill with oil. If at any time the valve mechanism becomes abnormally noisy, other than for a short period immediately after engine is started, it is an indication that one or more of the hydraulic units may not be functioning properly.

Always check the 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 a Harley-Davidson dealer for service.

FRONT FORK BEARINGS

WARNING

Adjustments to front fork bearings should be performed by a Harley-Davidson dealer. Improperly adjusted bearings can adversely affect handling and stability, which could result in death or serious injury. (00051a)

Refer to Table 32. Check front fork for proper bearing adjustment and lubricate bearings at proper intervals.

With motorcycle front end raised 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. Steering head bearings should be adjusted according to Service Manual procedure, if necessary.

REAR FORK PIVOT SHAFT

Refer to Table 32. Check the tightness of the rear fork pivot shaft fastener at proper intervals.

NOTE

For model specific information regarding the rear fork pivot shaft, refer to the appropriate Service Manual or see a Harley-Davidson dealer.

BRAKES: TOURING MODELS

WARNING

Inspect brake pads for wear at service maintenance intervals. If you ride under adverse conditions (steep hills. heavy traffic, etc.), inspect more frequently. Excessively worn brake pads can lead to brake failure, which could result in death or serious injury. (00052a)

NOTES

- Master cylinder cover specifies correct brake fluid.
- When adding or changing brake fluid, be sure to use only the type specified for your motorcycle.
- Use only Harley-Davidson D.O.T. 4 HYDRAULIC BRAKE FLUID (Part No. 99953-99A).
- Do not mix D.O.T. 4 with D.O.T. 5 brake fluid.
- Refer to Table 32. Check brake pads and brake discs for wear at proper intervals.
- Check the fluid level in the master cylinder reservoirs at proper intervals.
- If level is low, clean dirt and debris from reservoir cover before removing.

CAUTION

D.O.T. 4 brake fluid will damage painted and body panel surfaces it comes in contact with. Always use caution and protect surfaces from spills whenever brake work is performed. Failure to comply can result in cosmetic damage. (00239b)

ACAUTION

Direct contact of D.O.T. 4 brake fluid with eyes can cause irritation. Avoid eye contact. In case of eye contact flush with large amounts of water and get medical attention. Swallowing large amounts of D.O.T. 4 brake fluid can cause digestive discomfort. If swallowed, obtain medical attention. Use in well ventilated area, KEEP OUT OF REACH OF **CHILDREN.** (00240a)

4. Add D.O.T. 4 HYDRAULIC BRAKE FLUID (Part No. 99953-99A) if necessary.

NOTE

Use only D.O.T. 4 HYDRAULIC BRAKE FLUID (Part No. 99953-99A) approved for brake system use and available from vour Harley-Davidson dealer.

Harley-Davidson has provided your new motorcycle with the optimum brake pad friction material available. It is selected to give the best performance possible under dry, wet and high operating temperature conditions. It exceeds all regulatory requirements currently in effect. However, during some braking conditions you may experience noise. This is normal for this friction material.

AWARNING

Brakes are a critical safety component. Contact a Harley-Davidson dealer for brake repair or replacement. Improperly serviced brakes can adversely affect brake performance, which could result in death or serious injury. (00054a)

See Figure 55. Visual inspection of brake pads can be made without removing the caliper. View the lower area of each caliper with a flashlight.

AWARNING

Perform routine scheduled brake maintenance. Lack of maintenance at recommended intervals can adversely affect brake performance, which could result in death or serious injury. (00055a)

AWARNING

Always replace brake pads in complete sets for correct and safe brake operation. Improper brake operation could result in death or serious injury. (00111a)

The rear brake outer pad on all models can be measured from the caliper bracket side using a thin plastic 6.0 in. (152.4 mm)

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 0.016 in. (0.4 mm) or more away from the brake disc.

NOTES

- If the brake pad friction material is 0.016 in. (0.4 mm) thick or less, the pads must be replaced immediately.
- Always replace brake pads in pairs.

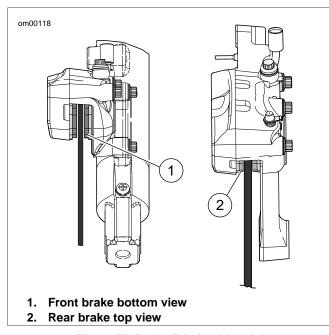


Figure 55. Brake Friction Material

TIRES

See SPECIFICATIONS, Specifications: 2008 FLHTCUSE3 for tire pressures and sizes.

- Be sure to keep tires properly inflated.
- Follow tire data for correct cold tire inflation pressures.
- Check before riding when tires are cold.
- Do not over-inflate tires.

AWARNING

Do not inflate tire beyond maximum pressure as specified on sidewall. Over inflated tires can blow out, which could result in death or serious injury. (00027a)

AWARNING

Match tires, tubes, air valves and caps to the correct wheel rim. Contact a Harley-Davidson dealer. Mismatching can result in damage to the tire bead, allow tire slippage on the rim or cause tire failure, which could result in death or serious injury. (00023a)

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

AWARNING

Be sure tires are properly inflated, balanced and have adequate tread. Inspect your tires regularly and see a Harley-Davidson dealer for replacements. Riding with excessively worn, unbalanced or under-inflated tires can adversely affect stability and handling, which could result in death or serious injury. (00014a)

Same as original equipment tires should be used. Other tires may not fit correctly, could adversely affect handling, and may be hazardous to use

AWARNING

Tires are a critical safety component. Contact a Harley-Davidson dealer for tire repair or replacement. Improper tire service can adversely affect stability and handling, which could result in death or serious injury. (00057a)

WARNING

Replace punctured or damaged tires. In some cases, small punctures in the tread area may be repaired from within the demounted tire by a Harley-Davidson dealer. Speed should NOT exceed 50 mph (80 km/h) for the first 24 hours after repair, and the repaired tire should NEVER be used over 80 mph (130 km/h). Failure to follow this warning could result in death or serious injury. (00015a)

AWARNING

Striking an object, such as a curb, can cause internal tire damage. If an object is struck, remove and inspect both the inside and outside of the tire. A damaged tire can adversely affect stability and handling, which could result in death or serious injury. (00058a)

TIRE REPLACEMENT

Inspection

AWARNING

Harley-Davidson tires are equipped with wear bars that run horizontally across the tread. When wear bars become visible and only 1/32 in. (0.8 mm) tread depth remains, replace tire immediately. Using a worn tire can adversely affect stability and handling, which could result in death or serious injury. Use only Harley-Davidson approved replacement tires. (00090b)

See Figure 56. Arrows on tire sidewalls pinpoint location of wear bar indicators.

Tread wear indicator bars will appear on tire tread surfaces when 1/32 in. (0.8 mm) or less of tire tread remains. See Figure 57. Always replace tires before the tread wear indicator bars appear.

When To Replace Tires

New tires are needed if any of the following conditions exist:

Tread wear indicator bars become visible on the tread surfaces.

- 2. Tire cords or fabric become visible through cracked sidewalls, snags or deep cuts.
- A bump, bulge or split in the tire.
- Puncture, cut or other damage to the tire that cannot be repaired.

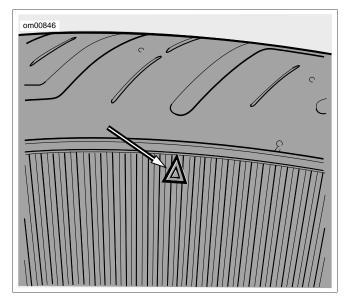


Figure 56. Tire Sidewall Wear Bar Locator

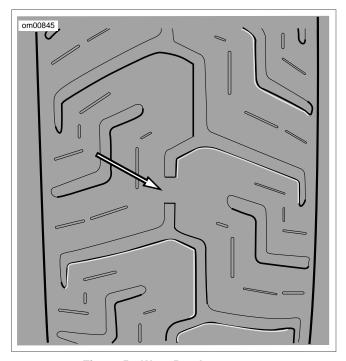


Figure 57. Wear Bar Appearance

VEHICLE ALIGNMENT

Isolation Mounted Engine Models

Refer to Table 32. Vehicle alignment should be checked at regular intervals. This includes whenever the rear wheel is removed and installed or when the rear drive belt is adjusted. The stabilizer links and engine mounts should be checked for wear according to Service Manual procedures at proper intervals.

Vehicle alignment is important. Vehicle stability is adversely affected if wheels are out of alignment. Major alignment of the front and rear wheel is partially controlled by one stabilizer link at the top of the engine. See a Harley-Davidson dealer for this service.

AWARNING

Do not change stabilizer link adjustment. Changing adjustment can adversely affect stability, which could result in death or serious injury. (00059a)

AWARNING

Only a Harley-Davidson dealer should perform vehicle alignment. Improper alignment can adversely affect stability and handling, which could result in death or serious iniury. (00060a)

SHOCK ABSORBERS

Refer to Table 32. Inspect shock absorbers and rubber bushings for leaks and bushing deterioration at proper intervals.

SPARK PLUGS

Refer to Table 32. Check the spark plugs at proper intervals.

ACAUTION

Do NOT pull on any electrical wires. Pulling on electrical wires may damage the internal conductor causing high resistance, which may result in minor or moderate injury. (00168a)

Disconnect spark plug cables from plugs by pulling on the molded connector caps. To reconnect, simply snap-on spark plug cables to tops of spark plugs.

Refer to Table 4 before servicing spark plugs.

- 1. Check spark plug type. Only use those spark plugs specified for your model motorcycle.
- Check spark plug gap against table specifications.
- Always tighten to the proper torque. Spark plugs must be tightened to the torque specified for proper heat transfer.

NOTE

If a torque wrench is not available, tighten plugs finger tight and then tighten an additional one quarter turn with a spark plug wrench.

IGNITION

The engine in your motorcycle has been designed specifically to achieve optimum fuel economy within exhaust emission controls. Factory programmed ignition characteristics provide maximum engine performance and driveability.

AIR CLEANER

See Figure 58. The engine air cleaner is a paper/wire mesh air filter element.

Refer to Table 32. Remove air cleaner cover and inspect filter element at proper intervals. Under dusty conditions, inspect more often.

The paper/wire mesh air filter element should be washed in luke warm water with a mild detergent.

AWARNING

Compressed air can pierce the skin and flying debris from compressed air could cause serious eye injury. Wear safety glasses when working with compressed air. Never use your hand to check for air leaks or to determine air flow rates. (00061a)

- 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

Install air filter before running engine. Failure to do so can draw debris into the engine and could result in engine damage. (00207a)

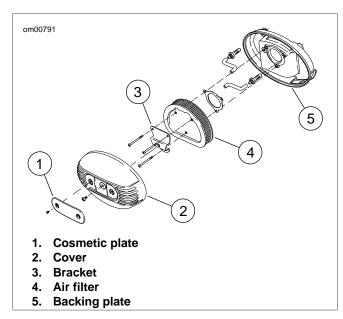


Figure 58. Air Cleaner

HEADLAMPS: FLHTCUSE3

The headlamp assembly uses a separate replaceable quartz halogen bulb for the low beam and the high beam. Refer to Table 13 and see a service manual for more details.

To replace the bulbs:

- See Figure 59. Remove the small fastener and the headlamp door.
- 2. See Figure 60. Remove the 3 screws and the reflector/lens retaining ring (1).
- 3. Support the reflector/lens and remove the wire harness connectors from the bulb connectors.
- 4. Quarter turn the connector to remove a bulb from the reflector/lens.
- 5. Quarter turn a new bulb to lock the bulb in the reflector/lens. and mate the wiring harness connectors to the bulb connectors.
- 6. Set the reflector/lens up to the adjustment ring matching the square tabs to the square recesses in the ring.
- 7. Align the three taps on the retaining ring with the threaded holes on the adjustment ring and tighten to hold the reflector/lens in place.

Replace the headlamp door and tighten the fastener.

NOTE

Refer to MAINTENANCE AND LUBRICATION, Headlamp Alignment: FLHTCUSE3 if the headlamp beam requires adjustment.

CAUTION

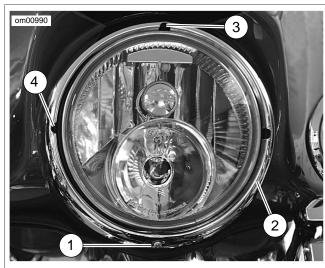
When replacement is required, use only the specified sealed beam unit or bulb, available from a Harley-Davidson dealer. An improper wattage sealed beam or bulb, can cause charging system problems. (00209a)

CAUTION

Never touch the quartz bulb. Fingerprints will etch the glass and decrease bulb life. Grab the bulb with paper or a clean, dry cloth. Failure to do so could result in bulb damage. (00210a)

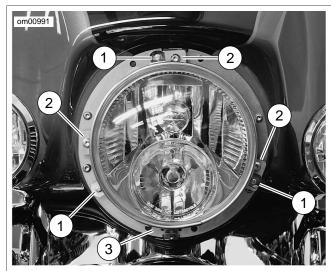
AWARNING

Handle bulb carefully and wear eye protection. Bulb contains gas under pressure, which, if not handled carefully, could cause serious eye injury. (00062b)



- 1. Fastener
- Headlamp door (chrome ring)
- Vertical adjustment
- Horizontal adjustment

Figure 59. Headlamp Door: FLHTCUSE3



- Retaining ring fastener
- Headlamp adjusting screw
- Headlamp door fastener threads

Figure 60. Headlamp Retaining Ring: FLHTCUSE3

HEADI AMP ALIGNMENT: FLHTCUSE3

Check Alignment

AWARNING

The automatic-on headlamp feature provides increased visibility of the rider to other motorists. Be sure headlamp is on at all times. Poor visibility of rider to other motorists can result in death or serious injury. (00030b)

- Verify correct front and rear tire inflation pressure. Refer to Table 12.
- 2. Place the motorcycle on a level floor or pavement in an area with minimum light.
- See Figure 61. Point the front of the motorcycle toward a screen or wall which is 25 feet (7.6 meters) from where patch of front tire contacts floor (i.e. - directly below front axle).
- Draw a horizontal line on screen or wall (1) that is exactly the same height above the floor as the headlamp center.
- Have a person whose weight is roughly the same as that of the principal rider sit on the motorcycle seat. The weight of the rider will compress the vehicle suspension slightly.

- Stand the motorcycle upright with both tires resting on the floor and with the front wheel held in straight alignment (directly forward).
- 7. Turn the ignition/headlamp key switch to IGNITION. Rock the headlamp dimmer switch on the left handlebar to HI (high) beam.
- Verify and correct headlamp adjustment if necessary.
 - a. Check the light beam for proper height alignment. The center of the main beam of light should be even with the horizontal line on the screen or wall.
 - b. Check the light beam for proper lateral alignment. The main beam of light should be directed straight ahead (i.e., equal area of light to right and left of center).

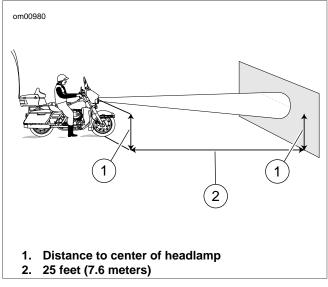


Figure 61. Check Headlamp Alignment: FLHTCUSE3

Adjust Headlamp

NOTE

Headlamp adjustment can be performed without removing the headlamp door (chrome ring).

- Insert Phillips screwdriver between headlamp housing and rubber gasket.
- See Figure 59. Adjust beam.
 - Turn the vertical adjusting screw (3) to adjust headlamp vertically.
 - Turn the horizontal adjusting screw (4) to adjust headlamp horizontally.

TURN SIGNAL BULB REPLACEMENT: **BULLET STYLE**

- See Figure 62. Insert a coin or the blade of a small screwdriver into the notch at the bottom of the lens cap. Carefully twist until the lens cap pops out of the lamp housing.
- Push in bulb and rotate counterclockwise. Pull bulb from socket.

- 3. Inspect condition of electrical contacts in socket. If necessary, clean with a small wire brush and electrical contact cleaner.
- Coat base of **new** bulb with ELECTRICAL CONTACT GREASE (Part No. 99861-90).
- Orient index pins on **new** bulb with pin guides inside bulb socket. Push bulb in and turn clockwise to lock in place.
- Snap lens cap back into the lamp holder. Rotate lens to position notch at bottom of lamp.

AWARNING

Be sure that all lights and switches operate properly before operating motorcycle. Low visibility of rider can result in death or serious injury. (00316a)

Turn ignition on and test for proper turn signal operation.

NOTE

If the turn signal or running lamp will not light after replacing a bulb, check the wiring, the ground at the socket and/or the switch.

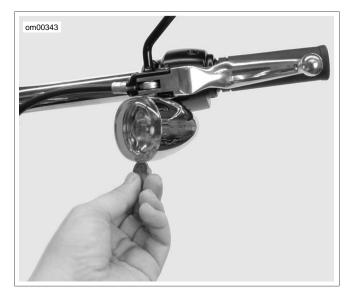


Figure 62. Lens Cap Notch

TAIL LAMP BULB REPLACEMENT: STANDARD STYLE

See Figure 63. Make certain ignition switch is turned off.

Remove two screws and lens from base.

NOTE

For ease of bulb removal, the 4-Pin multilock connector can be removed from circuit board.

- Remove (pull) bulb assembly from lens. Remove bulb from socket.
- 4. Coat base of **new** bulb with ELECTRICAL CONTACT GREASE (Part No. 99861-90). Install new bulb in socket.
- Install (push) bulb assembly to lens.
- If removed connect 4-Pin multilock connector to circuit board.
- 7. Install lens to base with two screws. Tighten screws to 20-24 in-lbs (2.3-2.7 Nm).

AWARNING

Be sure that all lights and switches operate properly before operating motorcycle. Low visibility of rider can result in death or serious injury. (00316a)

Turn ignition on and test for proper tail lamp operation.

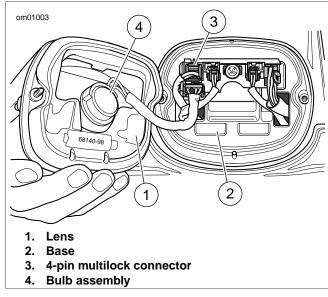


Figure 63. Tail Lamp Assembly: Standard Style

ALTERNATOR/VOLTAGE REGULATOR

Charging Rate

The alternator output is controlled and changed to direct current by the voltage regulator.

- The voltage regulator increases charging rate when battery is low or lamps are lit.
- The voltage regulator decreases charging rate when battery charge is up.

CAUTION

It is possible to overload your motorcycle's charging system by adding too many electrical accessories. If your combined electrical accessories operating at any one time consume more electrical current than your vehicle's charging system can produce, the electrical consumption can discharge the battery and cause vehicle electrical system damage. See a Harley-Davidson dealer for advice about the amount of current consumed by additional electrical accessories, or for necessary wiring changes. (00211b)

A battery voltage LED in the instruments will light up when voltage is either too low or too high.

NOTES

- This unit requires no interval attention. If any electrical system trouble is experienced that might be traceable to the alternator or voltage regulator, the motorcycle should be taken to a Harley-Davidson dealer who has the necessary electrical testing equipment to give the required attention.
- For model specific information regarding the voltage regulator, refer to the appropriate Service Manual or see a Harley-Davidson dealer.

BATTERY: GENERAL

Type

Your motorcycle uses a permanently sealed, maintenancefree, lead/calcium and sulfuric acid battery. All batteries are shipped precharged and ready to be put into service. Do not attempt to open the battery for any reason.

Table 27. Antidotes for Battery Acid

CONTACT	TREATMENT
External	Flush with water.
Internal	Drink large quantities of milk or water, followed by milk of magnesia, vegetable oil or beaten eggs. Get immediate medical attention.
Eyes	Flush with water. Get immediate medical attention.

AWARNING

Batteries contain sulfuric acid, which could cause severe burns to eyes and skin. Wear a protective face shield, rubberized gloves and protective clothing when working with batteries. KEEP BATTERIES AWAY FROM CHILDREN. (00063a)

AWARNING

Explosive hydrogen gas, which escapes during charging, could cause death or serious injury. Charge battery in a well-ventilated area. Keep open flames, electrical sparks and smoking materials away from battery at all times. **KEEP BATTERIES AWAY FROM CHILDREN. (00065a)**

AWARNING

Batteries, battery posts, terminals and related accessories contain lead and lead compounds, and other chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. Wash hands after handling. (00019d)

AWARNING

Never remove warning label attached to top of battery. Failure to read and understand all precautions contained in warning, could result in death or serious injury. (00064a)



Figure 64. Battery Warning Label



Figure 65. Battery Warning Label

Voltmeter Test

Refer to Table 28. The voltmeter test provides a general indicator of battery condition. Check the voltage of the battery to verify that it is in a 100 percent fully charged condition. If the open circuit (disconnected) voltage reading is below 12.6V, charge the battery and then re-check the voltage after the battery has set for one to two hours.

Table 28. Voltmeter Test

READING IN VOLTS	PERCENT OF CHARGE			
12.7	100			
12.6	75			
12.3	50			
12.0	25			
11.8	0			

Cleaning and Inspection

Battery top must be clean and dry. Dirt and electrolyte on top of the battery can cause battery to self-discharge.

- Clean battery top.
- Clean cable connectors and battery terminals using a wire brush or fine grit sandpaper to remove any oxidation.
- Inspect and clean the battery screws, clamps and cables. Check for breakage, loose connections and corrosion.

- Check the battery posts for melting or damage caused by overtightening.
- Inspect the battery for discoloration, a raised top or a warped or distorted case. This might indicate that the battery has been frozen, overheated or overcharged.
- Inspect the battery case for cracks or leaks.

Charging

Never charge a battery without first reviewing the instructions for the charger being used. In addition to the manufacturer's instructions, follow these general safety precautions.

Charge the battery if any of the following conditions exist:

- Vehicle lamps appear dim.
- Electric starter sounds weak.
- Battery has not been used for an extended period of time.

AWARNING

Explosive hydrogen gas, which escapes during charging, could cause death or serious injury. Charge battery in a well-ventilated area. Keep open flames, electrical sparks and smoking materials away from battery at all times. **KEEP BATTERIES AWAY FROM CHILDREN. (00065a)**

WARNING

Batteries contain sulfuric acid, which could cause severe burns to eyes and skin. Wear a protective face shield, rubberized gloves and protective clothing when working with batteries, KEEP BATTERIES AWAY FROM CHILDREN. (00063a)

- 1. Perform a voltmeter test to determine the state of charge. If battery needs to be charged, proceed to the next step.
- Place the battery on a level surface.

AWARNING

Unplug or turn OFF battery charger before connecting charger cables to battery. Connecting cables with charger ON can cause a spark and battery explosion, which could result in death or serious injury. (00066a)

AWARNING

Connect positive (+) battery cable first. If positive (+) cable should contact ground with negative (-) cable connected, the resulting sparks can cause a battery explosion, which could result in death or serious injury, (00068a)

AWARNING

Disconnect negative (-) battery cable first. If positive (+) cable should contact ground with negative (-) cable connected, the resulting sparks can cause a battery explosion, which could result in death or serious injury. (00049a)

CAUTION

Do not reverse the charger connections described in the following steps or the charging system of the motorcycle could be damaged. (00214a)

NOTES

- The figures listed in the Amp-hour table assume that the battery is charging at room temperature. If warmer than room temperature, use a slightly shorter charging time. If colder, use a slightly longer charging time.
- The use of constant current chargers to charge sealed maintenance free batteries is not recommended. Any overcharge will cause dry-out and premature battery failure. If a constant current charger is the only type available, do not exceed the charge times listed in Table 29 and do not continue charging the battery if it gets hot. When charging, never exceed 15 volts.

- 3. Connect the red battery charger lead to positive (+) terminal of the battery.
- 4. Connect the black battery charger lead to negative (-) terminal of the battery.

NOTE

If the battery is still in the vehicle, connect the negative lead to the chassis ground. Make sure that the ignition and all electrical accessories are turned off.

Step away from the battery and turn on the charger.

AWARNING

Unplug or turn OFF battery charger before disconnecting charger cables from battery. Disconnecting clamps with charger ON can cause a spark and battery explosion, which could result in death or serious injury. (00067a)

- After the battery is fully charged, turn OFF the charger and disconnect the black battery charger lead to the negative (-) terminal of the battery.
- Disconnect the red battery charger lead to the positive (+) terminal of the battery.
- Mark the charging date on the battery.

Table 29. 28 Amp-Hour Battery Charging Rate/Times

READING (VOLTS)	PERCENT OF CHARGE	3 AMP CHARGER	6 AMP CHARGER	10 AMP CHARGER	20 AMP CHARGER
12.7	100	-	-	-	-
12.6	75	2.5 hours	1.25 hours	45 minutes	25 minutes
12.3	50	5 hours	2.5 hours	1.5 hours	50 minutes
12.0	25	7.5 hours	3.75 hours	2.25 hours	70 minutes
11.8	0	10 hours	5 hours	3 hours	1.5 hours

Storage

CAUTION

Turn engine over a few times to be sure there is no oil in the crankcase and that all oil has been pumped back into the oil tank. Stop engine and re-check oil level. Failure to do so can result in engine damage. (00071a)

CAUTION

Do not allow battery to completely discharge. The electrolyte in a discharged battery will freeze. The more discharged a battery is, the more easily it can freeze and crack the battery case. (00218a)

If the motorcycle will not be operated for several months, such as during the winter season, remove the battery from the motorcycle and fully charge.

If the motorcycle is to be stored with the battery installed, it will be necessary to connect a battery tender to maintain charge. See an authorized dealer for more information.

Self-discharge is a normal condition and occurs continuously. The rate of self-discharge depends on the ambient temperature and the battery's state of charge.

- Batteries discharge at a faster rate at higher ambient temperatures.
- To reduce the self-discharge rate, store battery in a cool (not freezing), dry place.
- Charge the battery every month if stored at temperatures below 60° F (16° C).
- Charge the battery more frequently if stored in a warm area above 60° F (16° C).

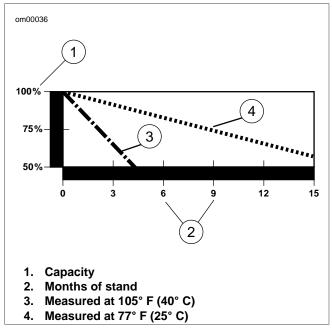


Figure 66. Effective Rate of Temperature on Battery **Self-discharging Rate**

BATTERY: TOURING MODELS

Disconnection and Removal

Remove seat.

NOTE

The ECM caddy has an opening in the front right corner allowing access to the negative battery terminal.

- See Figure 67. Press latches (2) away from the ECM (1) and detach from ECM caddy (3).
- Remove fastener (4) from rear of ECM caddy.
- Remove ECM caddy from battery compartment.

WARNING

Disconnect negative (-) battery cable first. If positive (+) cable should contact ground with negative (-) cable connected, the resulting sparks can cause a battery explosion, which could result in death or serious injury. (00049a)

- See Figure 68. Unthread bolt and remove battery negative cable (black) from battery negative (-) terminal.
- Unthread bolt and remove battery positive cable (red) from battery positive (+) terminal.

7. Pull up on strap to lift battery out from compartment.

Installation and Connection

CAUTION

Connect the cables to the correct battery terminals. Failure to do so could result in damage to the motorcycle electrical system. (00215a)

AWARNING

Connect positive (+) battery cable first. If positive (+) cable should contact ground with negative (-) cable connected, the resulting sparks can cause a battery explosion, which could result in death or serious injury. (00068a)

WARNING

Do not allow positive (+) battery cable to contact ground with negative (-) cable connected. Resulting sparks can cause a battery explosion, which could result in death or serious injury. (00069a)

NOTE

Make sure strap is inside compartment under battery. The strap handle should remain outside the compartment.

1. See Figure 68. Place the fully charged battery into compartment with terminals toward the front of the vehicle. Lay strap handle over top of battery.

CAUTION

Do not over-tighten bolts on battery terminals. Use recommended torque values. Over-tightening battery terminal bolts could result in damage to battery terminals. (00216a)

- Insert bolt through battery positive cable (+) (red) into threaded hole of battery positive (+) terminal.
- Tighten bolt to 60-96 in-lbs (6.8-10.8 Nm).
- Insert bolt through battery negative cable (black) into threaded hole of battery negative (-) terminal.
- Tighten bolt to 60-96 in-lbs (6.8-10.8 Nm).

CAUTION

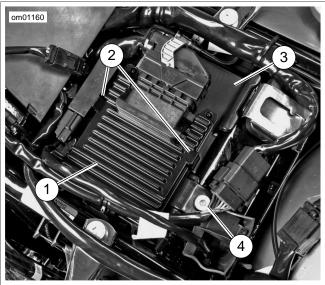
Keep battery clean and lightly coat terminals with petroleum jelly to prevent corrosion. Failure to do so could result in damage to battery terminals. (00217a)

- Apply a light coat of petroleum jelly or corrosion retardant material to both battery terminals.
- See Figure 67. Install ECM caddy over battery compartment. Tighten fastener to 15-20 ft-lbs (20-27 Nm).
- Align ECM with latches on caddy. Snap ECM into place and slide to left side of vehicle until ECM rests against bracket on left side of caddy and rests on guide pins. The negative battery terminal should be visible through the caddy.

AWARNING

After installing seat, pull upward on seat to be sure it is locked in position. While riding, a loose seat can shift causing loss of control, which could result in death or serious injury. (00070b)

Install seat.



- Electronic control module (ECM)
- Latches
- **ECM** caddy
- **ECM** caddy fastener

Figure 67. ECM Caddy: Touring Models

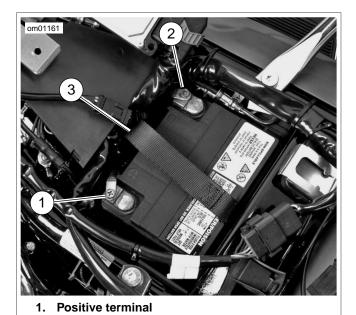


Figure 68. Battery Compartment: Touring Models

Negative terminal

Battery strap

JUMP STARTING

Harley-Davidson does not recommend jump-starting a motorcycle. However, there may be circumstances when it is necessary to do so. Therefore, we suggest jump-starting be performed as follows:

WARNING

Be sure jumper cables touch only appropriate battery terminals or ground. Allowing jumper cables to touch each other can result in sparks and a battery explosion, which could result in death or serious injury. (00072a)

AWARNING

Explosive hydrogen gas, which escapes during charging, could cause death or serious injury. Charge battery in a well-ventilated area. Keep open flames, electrical sparks and smoking materials away from battery at all times. **KEEP BATTERIES AWAY FROM CHILDREN. (00065a)**

CAUTION

Harley-Davidson motorcycles have a 12 Volt battery. Be sure the booster vehicle has a 12 Volt system. Failure to do so could result in vehicle damage. (00220a)

NOTE

This procedure presumes the BOOSTER battery is in another vehicle.

1. Turn off all unnecessary lamps and accessories.

Positive Cable

- See Figure 69. Connect one end of a jumper cable to the DISCHARGED battery positive (+) terminal (1).
- Connect the other end of the same cable to the BOOSTER battery positive (+) terminal (2).

Negative Cable

AWARNING

Do not connect negative (-) cable to or near the discharged battery negative (-) terminal. Doing so could cause a spark and explosion, which could result in death or serious injury. (00073a)

4. Connect one end of a jumper cable to the BOOSTER battery negative (-) terminal (3).

CAUTION

Do not connect the negative (-) cable to painted or chrome parts. Doing so could result in discoloration at the attachment point. (00221a)

- Connect other end of the same cable (4) to a safe ground, (away from the DISCHARGED battery).
- Start motorcycle.
- Disconnect cables in reverse order of steps 2, 3, 4, 5. That is: steps 5, 4, 3, 2.

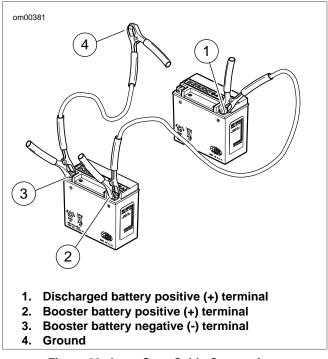


Figure 69. Jump Start Cable Connections

FLECTRICAL PROTECTION: FLHTCUSE3

System Fuse Removal

CAUTION

Do not skip any steps for fuse replacement. Skipping fuse replacement steps can result in damage to the sound system and/or other motorcycle systems. (00223a)

Fuses are located under left side cover.

For electrical problems, it is best to see a Harley-Davidson dealer who has necessary parts and equipment to perform electrical services.

NOTE

Removal of side covers during electrical service requires no tools. Gently pull side cover to remove. Align barbed studs on side cover with grommets in frame and push to install.

- Place the ignition/headlamp key switch in the OFF position.
- Remove left saddlebag and side cover.
- Press latch on bottom of fuse block cover and swing bottom of the cover out. Remove the cover.

NOTE

The fuse block cover has a fuse puller attachment that may be used to remove fuses.

4. See Figure 70 and refer to Table 30. Remove fuse and inspect the element.

CAUTION

Always use replacement fuses that are of the correct type and amperage rating. Use of incorrect fuses can result in damage to electrical systems. (00222a)

Replace the fuse if the element is burned or broken.

NOTE

Automotive type ATO fuses are used for replacements. Two spare fuses can be found in the fuse block.

- Insert the top of the fuse block cover in upper retainer and press bottom of cover to snap into place.
- Install left side cover and saddlebag.

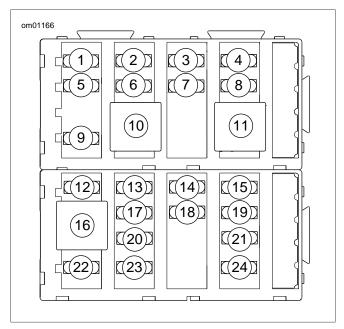


Figure 70. Fuses: FLHTCUSE3

Table 30. Fuses: FLHTCUSE3

ITEM	FUSE	ITEM	FUSE	ITEM	FUSE	ITEM	FUSE
1	Brake (15 amp)	2	Accessory (15 amp)	3	P&A (15 amp)	4	Radio power (15 amp)
5	Radio memory (15 amp)	6	Battery (15 amp)	7	ECM power (15 amp)	8	Power lock (15 amp)
9	Fuel pump (15 amp)	10	System relay	11	Start relay	12	P&A ignition (2A max)
13	Instruments (15 amp)	14	Ignition (15 amp)	15	Engine control (15 amp)	16	Brake relay
17	Headlamp (15 amp)	18	Lights (15 amp)	19	Spare (5 amp)	20	Heated grips (5 amp)
21	Spare (15 amp)	22	ABS (30 amp)	23	Amplifier (30 amp)	24	Spare (30 amp)

Maxi-Fuse

See Figure 71. A 40 amp maxi-fuse is located at the right side of the fuse block. The maxi-fuse protects the electrical components in the vehicle.

NOTE

Removal of the maxi-fuse will disable all systems except the starter motor/solenoid.

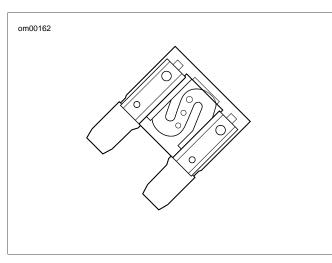


Figure 71. Maxi-Fuse

REMOTE CONTROL GARAGE DOOR **OPENER: FLHTCUSE3**

FCC Notices

NOTE

Changes or modifications to this unit not expressly approved by the manufacturer could void the user's authority to operate the equipment.

This equipment has been tested and found to comply with the limits for Class B digital devices pursuant to Part 15, Subpart B of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential environment. This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures.

- Reorient or relocate the receiving antenna.
- Increase the distance between the equipment and the receiver.

- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult dealer or experienced radio/TV technician for help.

Install the Receiver

- Unplug the power cord from the garage door drive unit to prevent door activation during installation.
- Find an unswitched 110V power outlet in the garage that is located either highest in the garage, or the closest to the front of the garage, or both. Locate the Harley-Davidson remote control garage door opener receiver here.

NOTES

- With some brands of garage door opener systems, it may be necessary to plug in the Harley-Davidson receiver at a location some distance from the door opener. If the Harley-Davidson receiver is plugged in too close to the original opener receiver, effective transmission range may be significantly reduced on both systems.
- Opener may not function properly with steel buildings.

- Find the two garage door activation switch terminals on one of these locations.
 - The existing wall mounted, hand wired garage door opener button.
 - The garage door drive unit to which the garage door opener button is connected.
- Fasten the stripped end of the Harley-Davidson garage door opener receiver wires to the door opener terminals that activate the door opener drive unit. Refer to the door opener manufacturer's documentation for terminal locations and connections.

NOTE

Do not remove original wires from the original connections on the door opener button or on the drive unit terminals.

- Assemble and install the garage door opener button in its original location.
- Route the Harley-Davidson garage door opener receiver wires connected in Step 4 to the power outlet selected in Step 2.
- 7. See Figure 72. Plug the connector on the Harley-Davidson garage door opener receiver wires into the receptacle (1) on the back of the Harley-Davidson garage door opener receiver.

- Plug the garage door opener receiver into the selected power outlet.
- Plug the power cord from the garage door drive unit into the power outlet.
- 10. Press the wall mounted garage door opener button to set the button operation.

Program the Receiver and Transmitter

The receiver must be programmed to receive the transmitter frequency. This process may require two people depending on how far apart the receiver and transmitter are during the programming process.

- 1. Check that a red light is visible on the front of the Harley-Davidson garage door opener receiver, indicating power to the receiver.
- See Figure 72. Press and hold the Set button (3) on the Harley-Davidson garage door opener receiver. The LED (2) blinks continuously while the Set button is pressed.
- Set the motorcycle ignition switch to IGN. Switch the headlamp beam switch using one of these sequences.

When the receiver receives a signal from the transmitter, the LED on the transmitter turns off.

- Starting from Low beam, switch High, then Low.
- Starting from High beam, switch Low, then High.
- Release the Set button on the receiver.

NOTE

Clear all obstructions away from between the transmitter and receiver before testing the operation of the garage door opener.

Test the garage door opener, high beam, and low beam headlamp operation.

NOTE

When the transmitter is activated by toggling the headlamp switch, the red LED on the transmitter illuminates for one second to indicate that the transmitter is functioning correctly.

Set the motorcycle ignition switch to OFF.

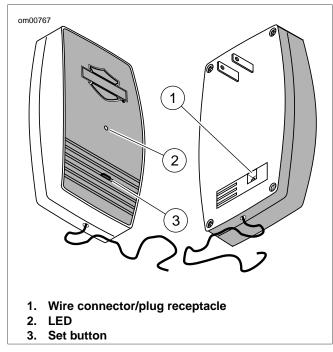


Figure 72. Garage Door Opener Receiver: FLHTCUSE3

SEAT: FLHTCUSE3

NOTE

The heated seat will automatically shut off after an hour and a half of continuous operation to prevent overheating. To reset the seat, park the motorcycle and turn the ignition key to OFF for 5 minutes before restarting.

Removal

CAUTION

Detach passenger seat strap before removing seat. Failure to do so can result in damage to rear fender paint. (00225a)

- Open right saddlebag cover and remove fastener from seat strap bracket.
- 2. Pull upward on strap to free it from slot in bracket. Move passenger seat strap to side of seat.
- 3. Remove mounting fastener to detach seat mounting bracket from top of rear fender.
- 4. See Figure 73. Push seat rearward to free tongue from slot in the seat.
- 5. Separate the seat connector half from the power connector half.

Remove seat.

Installation

- 1. Mate the heated seat connector half to the power connector half found in the frame backbone Y in front of the battery.
- See Figure 74. Place seat on frame backbone.
- See Figure 73. Firmly push front of seat downward and rearward until tongue engages slot in seat.
- 4. Push seat forward until rear fender seat retention nut is centered in hole of mounting bracket.
- Install seat mounting fastener. Tighten to 20-40 ft-lbs (2.3-4.5 Nm).

NOTE

If the seat retention nut is damaged or lost, see service manual for instructions.

AWARNING

After installing seat, pull upward on seat to be sure it is locked in position. While riding, a loose seat can shift causing loss of control, which could result in death or serious injury. (00070b)

- 6. See Figure 75. Install end of seat strap in slot of seat strap bracket. Install seat strap bracket fastener. Tighten to 48-72 in-lbs (5.4-8.1 Nm).
- 7. Pull up on seat to verify that it is properly secured.



Figure 73. Seat Tongue: Touring Models

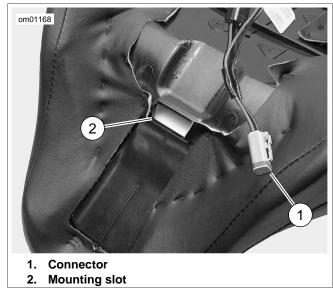


Figure 74. Seat: FLHTCUSE3

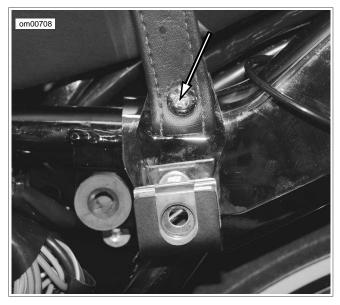


Figure 75. Seat Strap Bracket Fastener: FLHTCUSE3

RIDER BACKREST: FI HTCUSE3

Removal

- 1. Spread the seat covering at the base of the backrest exposing the two spring loaded support arms.
- 2. See Figure 76. Using two hands, squeeze the spring loaded support arms together.
- Pull upward to remove the backrest from the bracket.

Installation

- 1. Spread the seat opening to expose the keyed backrest support bracket.
- 2. Squeeze together the two spring loaded support arms on the backrest.
- See Figure 77. Insert the support arms into the keyed support bracket. Select one of three height adjustment holes.
- 4. Test to assure the seat is secured into the bracket.

NOTE

The backrest is spring loaded to assist the passenger in getting on and off the vehicle.

Adjustment

Height Adjustment: Select one of three sets of holes in the bracket to fit the backrest to the rider.

Tilt (Angle) Adjustment: Locate the set screw behind the eyelet in the back of the backrest. To set an angle that fits the rider, use a 3/16 in. Allen wrench to loose, adjust and tighten the screw to fix the angle of the backrest.

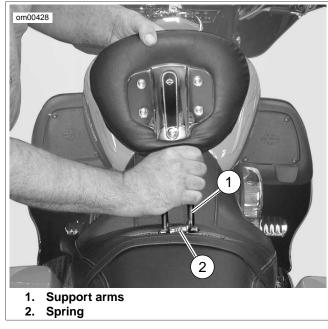


Figure 76. Rider Backrest Installation: FLHTCUSE3

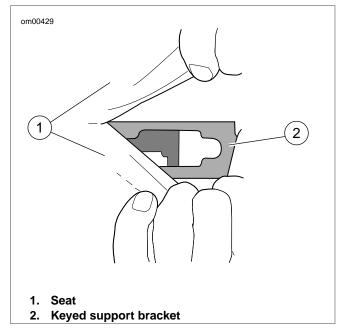


Figure 77. Rider Backrest Mounting Bracket: FLHTCUSE3

RADIO/CB ANTENNA REPLACEMENT: FLHTCUSE3

Replacing Antenna

- See Figure 78. Pull the protective rubber boot (1) off of the antenna mast (2).
- With 2 mm allen wrench (3), remove lower setscrew.
- Unscrew antenna mast from chassis mount.
- Fit rubber boot to replacement antenna.
- Screw replacement antenna onto Tour-Pak mount.
- Install and tighten the set screw.



Figure 78. Radio Antenna: FLHTCUSE3

MOTORCYCI F STORAGE

Placing Motorcycle in Storage

CAUTION

Proper storage is important for the trouble-free operation of your motorcycle. See your Owner's Manual for storage recommendations or see a Harley-Davidson dealer. Improper storage procedures can lead to equipment damage. (00046a)

If the motorcycle will not be operated for several months, such as during the winter season, there are several tasks which should be performed. These steps will protect parts against corrosion, preserve the battery and prevent the build-up of gum and varnish in the fuel system.

AWARNING

Do not store motorcycle with gasoline in tank within the home or garage where open flames, pilot lights, sparks or electric motors are present. Gasoline is extremely flammable and highly explosive, which could result in death or serious injury. (00003a)

NOTE

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/checklist to get your motorcycle in operating condition.

- Fill fuel tank and add a gasoline stabilizer. Use one of the commercially available gasoline stabilizers and follow the manufacturer's instructions.
- 2. Warm motorcycle to operating temperature. Change oil and turn engine over to circulate the new oil.
- Check and adjust belt if necessary.
- Check tire inflation. Adjust to proper inflation pressure.
- To protect the vehicle's body panels, engine, chassis and wheels from corrosion, follow the cosmetic care procedures described in the Accessory Maintenance section of this owner's manual prior to storage.
- Prepare battery for winter storage. See MAINTENANCE AND LUBRICATION, Battery: General.

AWARNING

Explosive hydrogen gas, which escapes during charging. could cause death or serious injury. Charge battery in a well-ventilated area. Keep open flames, electrical sparks and smoking materials away from battery at all times. **KEEP BATTERIES AWAY FROM CHILDREN. (00065a)**

- If the motorcycle is to be stored with security system armed, it will be necessary to connect a Battery Tender to maintain battery charge. If security system will not be armed and a Battery Tender is not available, either:
 - Disconnect negative battery cable.
 - Remove Maxi-fuse (if applicable).
- 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.

Removing Motorcycle From Storage

AWARNING

The clutch failing to disengage can cause loss of control, which could result in death or serious injury. Prior to starting after extended periods of storage, place transmission in gear and push vehicle back and forth several times to assure proper clutch disengagement. (00075a)

- 1. See MAINTENANCE AND LUBRICATION, Battery: General for proper battery care. Charge and install the battery.
- 2. Remove and inspect the spark plugs. Replace if necessary.
- Clean the air cleaner element.
- Start the engine and run until it reaches normal operating temperature. Turn off engine.
- Check amount of oil in the oil tank.
- Check the transmission lubricant level.
- 7. Check controls to be sure they are operating properly. Operate the front and rear brakes, throttle, clutch and shifter.

Check steering for smoothness by turning the handlebars through the full operating range.

WARNING

Be sure tires are properly inflated, balanced and have adequate tread. Inspect your tires regularly and see a Harley-Davidson dealer for replacements. Riding with excessively worn, unbalanced or under-inflated tires can adversely affect stability and handling, which could result in death or serious injury. (00014a)

- Check tire pressure. Incorrect pressure will result in poor riding characteristics and can affect handling and stability.
- 10. Check all electrical equipment and switches including the stop lamp, turn signals and horn for proper operation.
- 11. Check for any fuel, oil or brake fluid leaks.

CAUTION

Turn engine over a few times to be sure there is no oil in the crankcase and that all oil has been pumped back into the oil tank. Stop engine and re-check oil level. Failure to do so can result in engine damage. (00071a)

GENERAL MAINTENANCE

Maintain chrome and aluminum regularly to check that they retain their original shine and luster. Take care to keep your new Harley-Davidson motorcycle cleaned and waxed as often as possible to inhibit rust and corrosion.

CLEANING YOUR MOTORCYCLE

To aid you in keeping your motorcycle clean, see your Harley-Davidson dealer for cleaning, polishing and waxing products.

Harley-Davidson recommends the following products:

- SUNWASH® (Part No. 94659-98): for general cleaning/washing of all surfaces.
- BUG REMOVER (Part No. 94657-98): for removing bugs from all surface finishes.
- HARLEY® SPRAY CLEANER (Part No. 99817-99): all purpose cleaner and quick detailer for metal surfaces.
- HARLEY GLOSS® (Part No. 94627-98): all purpose surface protectant provides UV protection and a gloss finish.
- Swirl & Scratch Treatment (Part No. 94655-98): a compound that removes fine scratches and swirls.

AWARNING

Observe warnings on labels of cleaning compounds. Failure to follow warnings could result in death or serious injury. (00076a)

AWARNING

Do not wash brake discs with cleaners containing chlorine or silicone. Cleaners containing chlorine and silicone can impair brake function, which could result in death or serious injury. (00077a)

CAUTION

Do not use pressure washers to clean wheel bearings, sprocket bearings, steering head bearings and swingarm pivot bearings. Doing so can result in equipment damage. (00489b)

LEATHER CARE

NOTE

Many Harley-Davidson accessories and seats are either made of leather or have leather inserts. Natural materials age differently and require different care than man-made materials. Seat covers and panels made of leather will gain "character", such as wrinkles, with age. Leather is porous and organic and each leather product will settle into its own distinct form with use. Your leather product will mature into its own custom shape and style from the sun, rain and the miles. This maturing is natural and will enhance the custom quality of your Harley-Davidson motorcycle.

Leather must be periodically cleaned and treated to maintain its appearance and extend its life. Clean and treat leather once a season or more frequently under adverse conditions.

CAUTION

Do not use bleach or detergents containing bleach on saddlebags, seats, tank panels or painted surfaces. Doing so can result in equipment damage. (00229a)

- Do not use ordinary soap to clean leather or fur. It could dry or remove the oils from the leather.
- Use ONLY a good quality saddle soap to clean leather. Be sure you rinse saddle soap off thoroughly before treating leather.
- Never try to dry leather quickly, using artificial means. Always let leather dry naturally, at room temperature.
- Vacuum or blow dust off.

- Thoroughly clean leather with a good quality saddle soap, following manufacturer's directions. Rinse thoroughly with clean sponge or cloth and water. Allow leather to dry.
- Once leather is dry, treat with a good quality leather treatment, such as LEATHERCARE (Part No. 98261-91).
- 4. Always allow leather to dry completely before using.

PAINT LEAFING GRAPHICS

The handcrafted process of metal leafing yields a highly reflective surface that catches the eve as no other material does. Due to metallic leafing being a natural material, however, the individual sheets impart to the gilded surface unique characteristics.

Acceptable natural characteristics (examples):

- Leaf seam and leaf color variance
- Leaf patch
- Leaf texture
- Leaf low spot (burnish void)
- Gathering (wrinkles)

WHEEL CARE: FLHTCUSE3

Your motorcycle has chrome plated wheels. Damage from harsh chemicals, acid based wheel cleaners, brake dust and lack of maintenance can occur. Regular washing and the use of a corrosion protectant will help to maintain their original appearance. Harley-Davidson WHEEL AND TIRE CLEANER (Part No. 94658-98) is recommended for cleaning wheels and tires. Then use HARLEY GLOSS (Part No. 94627-98) to protect the wheel surfaces.

NOTES

- It is imperative that the wheels are cared for weekly to guard against pitting and corrosion.
- Corrosion of these components is not considered to be a defect in materials or workmanship.

Harley-Davidson recommends the following products:

- WHEEL AND TIRE CLEANER (Part No. 94658-98): cleaner/degreaser for wheels, tires and engine.
- HARLEY GLOSS (Part No. 94627-98): all purpose surface protection the provides UV protection and a gloss finish.

See a Harley-Davidson dealer for cleaning, polishing and waxing products.

WINDSHIFI DS

CAUTION

Harley-Davidson windshields are made of Lexan. Lexan is a more durable and distortion-resistant material than other types of motorcycle windshield material, but still requires attention and care to maintain. Failure to maintain Lexan properly can result in damage to the windshield. (00230a)

CAUTION

Do not use harsh chemicals including rain sheeting products on Harley-Davidson windshields. They can cause dulling or hazing. If you want to use a windshield protectant on your windshield, try Harley Glaze Polish and Sealant (00231a)

CAUTION

Do not use benzine, paint thinner, gasoline or any other type of harsh cleaner on the windshield. Doing so will damage the windshield surface. (00232a)

NOTES

- To remove minor surface scratches use NOVUS® No. 2 SCRATCH REMOVER (Part No. 99836-94T).
- Covering the windshield with a clean, wet cloth for approximately 15-20 minutes before washing will make dried bug removal easier.
- Use mild soap and warm water to wash the windshield.
- Wipe dry with a soft, clean towel.

NOTE

To treat your Lexan windshield with water repellent use WINDSHIELD WATER REPELLENT TREATMENT (Part No. 99841-02).

MISCELLANEOUS LUBRICATION

Hinges, Latches, Etc.

Lubricate the rub points of latches and hinges using either Lubit-8 Tufoil (Part No. 94968-85TV) or Tri-flow as required.

Lubricate the fingers on the saddlebag latches where they engage the hinge.

TROUBLESHOOTING: GENERAL

AWARNING

The troubleshooting section of the Owner's Manual is a guide to diagnose problems. Read the service manual before performing any work. Improper repair and/or maintenance could result in death or serious injury. (00080a)

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 trouble and should be carefully checked.

ENGINE: FLHTCUSE3

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).
- Jiffy stand not in retracted position (required for international models only).
- Blown fuse.

Engine Turns Over But Does Not Start

- 1. Fuel tank empty.
- Discharged battery or loose or broken battery terminal connections.
- 3. Fouled spark plugs.
- Spark plug cable connections loose or in bad condition and shorting.
- Loose or corroded wire or cable connection(s) at coil or battery.
- 6. Fuel pump inoperative. See dealer.

Starts Hard

- Spark plugs in bad condition, have improper gap, or are partially fouled.
- 2. Spark plug cables in bad condition and leaking.
- 3. Battery nearly discharged.
- 4. Loose wire or cable connection(s) at one of the battery terminals or at coil.
- 5. Engine oil too heavy (winter operation).
- 6. Water or dirt in fuel system.
- 7. Fuel pump inoperative. See dealer.

8. Check ACR operation. See dealer.

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.
- Damaged wire or loose connection at battery terminals or coils.
- Intermittent short circuit due to damaged wire insulation. See dealer.
- 7. Water or dirt in fuel system, filter or carburetor.
- 8. Fuel vent system plugged. See dealer.
- 9. One or more injectors fouled. See dealer.

A Spark Plug Fouls Repeatedly

Incorrect spark plug.

Pre-ignition or Detonation (Knocks or Pings)

- Incorrect fuel.
- Incorrect spark plug for the kind of service.

Overheats

- Insufficient oil supply or oil not circulating.
- 2. Heavy carbon deposit from lugging engine. See dealer.
- Insufficient air flow over cylinder heads during extended periods of idling or parade duty.

Excessive Vibration

- 1. Rear fork pivot shaft nuts loose. See dealer.
- 2. Front engine mounting bolts loose. See dealer.
- 3. Engine to transmission mounting bolts loose. See dealer.
- Broken frame. See dealer.
- Front chain or links tight as a result of insufficient lubrication or belt badly worn.
- 6. Wheels and/or tires damaged. See dealer.
- Vehicle not properly aligned. See dealer.

ELECTRICAL SYSTEM

Alternator Does Not Charge

1. Module not grounded. See dealer.

- Engine ground wire loose or broken. See dealer.
- Loose or broken wires in charging circuit. See dealer.

Alternator Charge Rate is Below Normal

- Weak battery.
- Excessive use of add-on accessories.
- Loose or corroded connections.
- Extensive periods of idling or low speed riding.

TRANSMISSION

Transmission Shifts Hard

Bent shifter rod. See dealer.

Transmission Jumps Out of Gear

Worn shifter dogs in transmission. See dealer.

Clutch Slips

- Worn friction discs. See dealer.
- Insufficient clutch spring tension. See dealer.

Clutch Drags or Does Not Release

- Primary chaincase overfilled.
- Clutch discs warped. See dealer.

Clutch Chatters

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

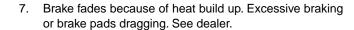
BRAKES

ABS System Behavior

- 1. ABS lamp does not shut off above 3 mph (5 km/h). See dealer.
- Other ABS symptoms. Refer to Table 16.

Brakes Do Not Hold Normally

- Master cylinder low on fluid. See dealer.
- Brake line contains air bubbles. See dealer.
- Master or wheel cylinder piston worn. See dealer.
- Brake pads contaminated with grease or oil. See dealer.
- Brake pads badly worn. See dealer. 5.
- Brake disc badly worn or warped. See dealer.



8. Brake drags. Insufficient hand lever free play. See dealer.

WARRANTY AND MAINTENANCE

This Owner's Manual contains your new motorcycle warranty.

It is the owner's responsibility to follow the scheduled mileage intervals as specified; all of the specified maintenance services must be performed to keep your warranty valid.

- Make an appointment with a Harley-Davidson dealer for inspection and service just before you have ridden 1000 miles (1600 kilometers).
- Bring this Owner's Manual with you when you visit your dealer to have your motorcycle inspected and serviced.
- Have the dealer technician sign at the proper mileage interval. The records should be retained by the owner as proof of proper maintenance.
- Keep receipts covering any parts, service or maintenance performed. These records should be transferred to each subsequent owner.

AWARNING

Do not use aftermarket parts and custom made front forks which can adversely affect performance and handling. Removing or altering factory installed parts can adversely affect performance and could result in death or serious injury. (00001a)

Harley-Davidson dealerships are independently owned and operated and may sell parts and accessories that are not manufactured or approved by Harley-Davidson. Therefore, you should understand that we are not and cannot be responsible for the quality, suitability, or safety of any non-Harley-Davidson part, accessory or design modification, including labor, which may be sold and/or installed by our dealers.

KEEPING IT ALL HARLEY-DAVIDSON

- 1. Keep your Harley-Davidson completely Harley-Davidson.
- Insist that your dealer uses only Genuine replacement parts to keep your Harley-Davidson motorcycle and its warranty intact.

Exacting design and stringent testing ensure performance and warranty coverage. Again, insist on Genuine parts for your genuine Harley-Davidson motorcycle.

NOTE

Installing off-road or competition parts to enhance performance may void all or part of your new motorcycle warranty. See the Harley-Davidson Limited Warranty in this manual or a Harley-Davidson dealer for details.

CAUTION

It is possible to overload your motorcycle's charging system by adding too many electrical accessories. If your combined electrical accessories operating at any one time consume more electrical current than your vehicle's charging system can produce, the electrical consumption can discharge the battery and cause vehicle electrical system damage. See a Harley-Davidson dealer for advice about the amount of current consumed by additional electrical accessories, or for necessary wiring changes. (00211b)

IMPORTANT MOVING INFORMATION

If you move from your present address, or sell your motorcycle, please fill out and mail the post card at the back of this manual. This is necessary in the event that the Company needs to contact the owner concerning information that could affect the safe operation of this motorcycle.

CALIFORNIA EVAPORATIVE EMISSION CONTROLS: 2008 MODELS

All new model year 2008 Harley-Davidson motorcycles sold in the State of California are equipped with an evaporative emission control system. This system is designed to meet the CARB regulations in effect at the time of manufacture.

The system requires a small amount of maintenance. Periodic inspection is required to make sure hoses are properly routed, not kinked or blocked and that all fittings are secure. Mounting hardware should also be checked periodically for tightness.

EPA NOISE REGULATIONS IN THE UNITED STATES

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

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

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

Replacing the muffler(s) and/or the entire exhaust system with parts not certified to be noise legal for street use.

- Removing or modifying the muffler internal baffles in any way.
- Replacing the air intake/cleaner assembly with one not certified to be noise legal for street use.
- Modifying the air intake/cleaner assembly in such a way as to make the vehicle no longer noise legal for street use.

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

WARRANTY/SERVICE INFORMATION

Any authorized Harley-Davidson dealer is responsible for providing the warranty repair work on your motorcycle. If you have any questions regarding warranty obligations contact your selling dealer.

For normal service work or warranty work under the above conditions, you may obtain the name and location of your nearest U.S. Harley-Davidson dealer by calling 1-800-490-9635 (toll free), in any state except Alaska and Hawaii.

NOTE

The number shown above is accessible only with a touch-tone phone in the United States.

REPORTING SAFFTY DEFECTS IN UNITED **STATES**

Safety defects must be reported to the National Highway Traffic Safety Administration (NHTSA) and Harley-Davidson.

NHTSA Statement

If you believe that your vehicle has a defect which could cause a crash or could cause injury or death, you should immediately inform the National Highway Traffic Safety Administration (NHTSA) in addition to notifying Harley-Davidson.

If NHTSA receives similar complaints, it may open an investigation, and if it finds that a safety defect exists in a group of vehicles, it may order a recall and remedy campaign. However, NHTSA cannot become involved in individual problems between you, your dealer, or Harley-Davidson.

To contact NHTSA, refer to Table 31.

Table 31. NHTSA Contacts

ITEM	DATA
Phone	Call the Auto Safety Hot Line toll-free at 1-888-DASH-2DOT
Mail	U.S. Department of Transportation, National Highway Traffic Safety Administration, Office of Defects Investigation, NVS-210, 400 7th Street S.W., Washington, D.C. 20590
Web site	www.nhtsa.dot.gov

You can also obtain other information about motor vehicle safety from the hot line.

OWNER TRANSFER IDENTIFICATION FORM

When purchasing a pre-owned Harley-Davidson or Buell, we encourage you to submit an Owner Transfer Notification Form.

It is critical that new owner information is communicated to Harley-Davidson. New owner information is required to be on file with Harley-Davidson to transfer an Extended Service Plan Contract. Harley-Davidson is also required by the National Traffic and Motor Vehicle Safety Act to notify all owners in the event of a recall. The form may be obtained at any Harley-Davidson dealer.

REQUIRED DOCUMENTATION FOR IMPORTED MOTORCYCLES

If a Harley-Davidson is imported into the United States, additional documentation is required to be eligible for the United States Manufacturer's Limited Warranty. A Harley-Davidson dealer can provide a form explaining the requirements.

2008 HARLEY-DAVIDSON MOTORCYCLE LIMITED WARRANTY

24 Months/Unlimited Miles

Harley-Davidson warrants for any new 2008 Harley-Davidson motorcycle/sidecar that an authorized Harley-Davidson dealer will repair or replace without charge any parts found under normal use to be defective in factory materials or workmanship. Such repair and replacement will be Harley-Davidson's sole obligation and the customer's sole remedy under this warranty.

THERE IS NO OTHER EXPRESS WARRANTY (OTHER THAN THE SEPARATE EMISSIONS AND NOISE WARRANTIES) ON THE MOTORCYCLE. ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE IS LIMITED TO THE DURATION OF THIS WARRANTY.

Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

TO THE FULLEST EXTENT ALLOWED BY LAW, HARLEY-DAVIDSON AND ITS DEALERS SHALL NOT BE LIABLE FOR LOSS OF USE, INCONVENIENCE, LOST TIME, COMMERCIAL LOSS OR OTHER INCIDENTAL OR CONSEQUENTIAL DAMAGES. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you

specific legal rights, and you may have other rights which vary from state to state.

The following terms and conditions apply to this warranty:

Duration

- The duration of this limited warranty is twenty four months, starting from the earlier of (a) the date of initial retail purchase and delivery from an authorized Harley-Davidson dealer, or (b) the third anniversary of the last day of the model year of the motorcycle/sidecar. Your dealer will submit an electronic Sales and Warranty Registration form to initiate your warranty.
- 2. Any unexpired portion of this limited warranty will be transferred to subsequent owners, upon the resale of the motorcycle/sidecar during the warranty period.

Owner's Obligations

To obtain warranty service, return your motorcycle/sidecar at your expense within the warranty period to an authorized dealer. Our dealer should be able to provide warranty service during normal business hours and as soon as possible, depending upon the workload of the dealer's service department and the availability of necessary parts.

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

Exclusions

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

- Which has not been operated or maintained as specified in the Owner's Manual.
- Which has been abused, misused, improperly stored, used "off the highway," or used for racing or competition of any kind.
- Which is not manufactured to comply with the laws of the market in which it is registered.
- Installing off-road or competition parts to enhance performance may void all or part of your new motorcycle warranty. See a Harley-Davidson dealer for details.

Other Limitations

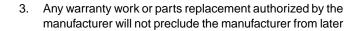
This warranty does not cover:

Parts and labor for normal maintenance as recommended in the Owner's Manual, or the replacement of parts due to normal wear and tear including such items as the following: tires, lubrication, oil and filter change, fuel system cleaning, battery maintenance, engine tune-up, spark plugs, brake, clutch and chain/belt adjustment (including chain replacement).

- 2. Cosmetic concerns that arise as a result of owner abuse, lack of proper maintenance or environmental conditions (except concerns that result from defects in material or workmanship, which are covered by this warranty for the duration of the warranty period).
- 3. Any cosmetic condition existing at the time of retail delivery that has not been documented by the selling dealer prior to retail delivery.
- Defects or damage to the motorcycle caused by alterations outside of Harley-Davidson factory specifications.

Important: Read Carefully

- Our dealers are independently owned and operated and may sell other products. Because of this, HARLEY-DAVIDSON IS NOT RESPONSIBLE FOR THE SAFETY. QUALITY, OR SUITABILITY OF ANY NON-HARLEY-DAVIDSON PART, ACCESSORY OR DESIGN MODIFI-CATION INCLUDING LABOR WHICH MAY BE SOLD AND/OR INSTALLED BY OUR DEALERS.
- This warranty is a contract between you and the manufacturer. It is separate and apart from any warranty you may receive or purchase from the dealer. The dealer is not authorized to alter, modify, or in any way change the terms and conditions of this warranty.



relying on any exclusion where applicable.

2008 HARLEY-DAVIDSON MOTORCYCLE NOISE CONTROL SYSTEM LIMITED WARRANTY

The following warranty applies to the noise control system, is in addition to the MOTORCYCLE LIMITED WARRANTY and EMISSION CONTROL SYSTEM LIMITED WARRANTY, and applies only to motorcycles sold in the U.S.

Harley-Davidson Motor Company warrants that this vehicle is designed and built so as to conform at the time of sale with applicable regulations of the U.S. Environmental Protection Agency (as tested following F-76 Drive-By test procedure) and that it is free from defects in materials and workmanship which would cause this motorcycle not to meet U.S. Environmental Protection Agency Standards within 1 year or 3,730 miles (6,000 kilometers) whichever expires first. Any unexpired portion of this limited warranty will be transferred to subsequent owners, upon the resale of the motorcycle during the warranty period.

THERE IS NO OTHER EXPRESS WARRANTY (OTHER THAN THE SEPARATE MOTORCYCLE AND EMISSIONS WARRANTIES) ON THE MOTORCYCLE. ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE IS LIMITED TO THE DURATION OF THIS WARRANTY.

Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

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

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

- 1. Failures which arise as a result of misuse, alterations, or accident as specified in the Owner's Manual.
- Replacing, removing, or modifying any portion of the NOISE CONTROL SYSTEM (consisting of the exhaust system and air intake/cleaner assembly) with parts not certified to be legal for street use.
- Any motorcycle on which the odometer mileage has been changed so that the mileage cannot be determined.
- 4. TO THE FULLEST EXTENT ALLOWED BY LAW, HARLEY-DAVIDSON AND ITS DEALERS SHALL NOT BE LIABLE FOR LOSS OF USE, INCONVENIENCE, LOST TIME, COMMERCIAL LOSS OR OTHER INCI-DENTAL OR CONSEQUENTIAL DAMAGES.

Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

Other Rights

This warranty gives you specific legal rights, and you may have other rights which vary from state to state.

Recommendations for Required Maintenance

It is recommended that any noise system maintenance be performed by an authorized Harley-Davidson dealer using genuine Harley-Davidson replacement parts. The maintenance, replacement or repair of the noise control system may be performed by any other qualified service outlet or individual. Nongenuine parts may be used only if such parts are certified to comply with U.S. Environmental Protection Agency Standards.

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

2008 HARLEY-DAVIDSON EMISSION CONTROL SYSTEM LIMITED WARRANTY

The following warranty applies to the emission control system, is in addition to the LIMITED MOTORCYCLE WARRANTY and NOISE CONTROL SYSTEM LIMITED WARRANTY, and applies only to motorcycles sold in the U.S.

Harley-Davidson Motor Company warrants that this vehicle is designed and built so as to conform at the time of sale with applicable regulations of the U.S. Federal Environmental Protection Agency, and that it is free from defects in materials and workmanship which would cause this motorcycle not to meet U.S. Environmental Protection Agency Standards within 5 years or 18,641 miles (30,000 kilometers) whichever expires first. Any unexpired portion of this limited warranty will be transferred to subsequent owners, upon the resale of the motorcycle during the warranty period.

THERE IS NO OTHER EXPRESS WARRANTY (OTHER THAN THE SEPARATE MOTORCYCLE AND NOISE WARRANTIES) ON THE MOTORCYCLE. ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE IS LIMITED TO THE DURATION OF THIS WARRANTY.

Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

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

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

- Failures which arise as a result of misuse, alterations, accident or non-performance of maintenance as specified in the Owner's Manual.
- The replacement of parts (such as spark plugs, fuel and oil filters, etc.) used in required maintenance.
- Any motorcycle on which the odometer mileage has been changed so that the mileage cannot be determined.
- 4. TO THE FULLEST EXTENT ALLOWED BY LAW, HARLEY-DAVIDSON AND ITS DEALERS SHALL NOT BE LIABLE FOR LOSS OF USE, INCONVENIENCE, LOST TIME, COMMERCIAL LOSS OR OTHER INCIDENTAL OR CONSEQUENTIAL DAMAGES.

Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

Other Rights

This warranty gives you specific legal rights, and you may have other rights which vary from state to state.

Recommendations for Required Maintenance

It is recommended that any emission system maintenance be performed by an authorized Harley-Davidson dealer using genuine Harley-Davidson replacement parts. The maintenance, replacement or repair of the emissions control system may be performed by any other qualified service outlet or individual. Non-genuine parts may be used only if such parts are certified to comply with U.S. Environmental Protection Agency Standards.

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

2008 LIMITED RADIO WARRANTY

Harley-Davidson Motor Company warrants that this Harley-Davidson radio will be free from factory defects in material and workmanship, under normal use and service, for a period of twenty four (24) months starting from the earlier of (a) the date of initial retail purchase of the motorcycle/sidecar on which the radio is installed, or (b) the third anniversary of the last day of the model year of the motorcycle/sidecar on which the radio is installed. Any unexpired portion of this limited warranty will be transferred to subsequent owners, upon the resale of the motorcycle during the warranty period. If the motorcycle/sidecar was used as a demonstrator, then the warranty period may have started and/or expired prior to the initial retail sale. See a Harley-Davidson Dealer for details.

This warranty does not cover defects or damage due to abuse, misuse or improper installation, or any radio on a motorcycle which has been registered with Harley-Davidson Motor Company as a collector's vehicle. See a Harley-Davidson dealer for details.

To obtain warranty service, return your motorcycle/sidecar with sound system intact, at your expense, within the warranty period to the selling dealer, or to any other authorized dealer if you have moved a long distance, or are touring a long distance. Our dealer should be able to provide warranty service during his normal business hours and as soon as possible,

depending upon his service department's workload and the availability of necessary parts.

The remedy for breach of this warranty is expressly limited to the repair or replacement, without charge for parts and labor, of any part that proves to be defective, AND DOES NOT EXTEND TO LIABILITY FOR CONSEQUENTIAL DAMAGES, COSTS OR EXPENSES, INCLUDING LOSS OF TIME, INCONVENIENCE OR LOSS OF USE OF THE VEHICLE, RESULTING FROM ANY PART THAT PROVES TO BE DEFECTIVE.

THERE IS NO OTHER EXPRESS WARRANTY ON THE RADIO. ANY IMPLIED WARRANTY RELATING TO THIS RADIO, INCLUDING WARRANTIES OR MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, IS EXPRESSLY LIMITED TO TWENTY FOUR (24) MONTHS, THE DURATION OF THIS WARRANTY.

(Some states do not allow the limitation of the length of an implied warranty or the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you.)

Other Rights

This warranty gives you specific legal rights, and you may have other rights which vary from state to state in the United States.

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

REGULAR SERVICE INTERVALS

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

NOTES

- Refer to Table 32. Regular maintenance interval operations are 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.
- Refer to Table 33. When servicing your motorcycle, bring this owner's manual to the dealership and complete information needed in the blank columns listed.

AWARNING

Perform the service and maintenance operations as indicated in the regular service interval table. Lack of regular maintenance at the recommended intervals can affect the safe operation of your motorcycle, which could result in death or serious injury. (00010a)

AWARNING

If you operate your motorcycle under adverse conditions (severe cold, extreme heat, very dusty environment, very bad roads, through standing water, etc.), you should perform the regular maintenance intervals more frequently to ensure the safe operation of your motorcycle. Failure to maintain your motorcycle could result in death or serious injury. (00094a)

Table 32. Regular Service Intervals: 2008 FLHTCUSE3

ITEM SERVICED	PROCEDURE	1000 MI. 1600 KM	5000 MI. 8000 KM	10,000 MI. 16,000 KM	15,000 MI. 24,000 KM	20,000 MI. 32,000 KM	25,000 MI. 40,000 KM	NOTES
Engine oil and filter	Replace	Х	Х	Х	Х	Х	Х	
Oil lines and brake system	Inspect for leaks	Х	Х	Х	Х	Х	Х	1
Air cleaner	Inspect, service as required	Х	Х	Х	Х	Х	Х	
Tires	Check pressure, inspect tread	Х	Х	Х	Х	Х	Х	

Table 32. Regular Service Intervals: 2008 FLHTCUSE3

ITEM SERVICED	PROCEDURE	1000 MI. 1600 KM	5000 MI. 8000 KM	10,000 MI. 16,000 KM	15,000 MI. 24,000 KM	20,000 MI. 32,000 KM	25,000 MI. 40,000 KM	NOTES
Wheel spokes	Check tightness	Х	Х			Х		1
Primary chaincase lubricant	Replace	Х		Х		Х		
Transmission lubricant	Replace	Х				Х		
Rear belt and sprockets	Inspect, adjust belt	X	Х	Х	Х	Х	Х	1
Rear wheel sprocket isolators	Inspect for wear							5
Brake and clutch controls	Check, adjust and lubricate	Х	Х	Х	Х	Х	Х	1
Jiffy stand	Inspect and lubricate	X	Х	Х	Х	Х	Х	1
Fuel lines and fittings	Inspect for leaks	Х	Х	Х	Х	Х	Х	1
Fuel tank filter	Replace						Х	1
Brake fluid	Check levels and condition	Х	Х	Х	Х	Х	Х	4
Brake pads and discs	Inspect for wear	Х	Х	Х	Х	Х	Х	
Spark plugs	Inspect	X	Х	Х	Х		Х	
	Replace					Х		
Electrical equipment and switches	Check operation	Х	Х	Х	Х	Х	Х	
Front fork oil	Replace							1, 2
Steering head bearings	Lubricate	X		Х		Х		2
	Adjust						Х	1

Table 32. Regular Service Intervals: 2008 FLHTCUSE3

ITEM SERVICED	PROCEDURE	1000 MI. 1600 KM	5000 MI. 8000 KM	10,000 MI. 16,000 KM	15,000 MI. 24,000 KM	20,000 MI. 32,000 KM	25,000 MI. 40,000 KM	NOTES
Air suspension	Check pressure, operation and leakage	Х	Х	Х	Х	Х	Х	1
Windshield bushings (if applicable)	Inspect			Х		Х		1
Fuel door, Tour-Pak, saddle- bags	Lubricate hinges and latches	Х	Х	Х	Х	Х	Х	
Critical fasteners	Check tightness	Х		Х		Х		1
Engine mounts and sta- blizers	Inspect			Х		Х		1
Battery	Check battery and clean connections							3
Exhaust system	Inspect for leaks, cracks, and loose or missing fasteners or heat shields	Х	Х	Х	Х	Х	Х	3
Road test	Verify component and system functions	Х	Х	Х	Х	Х	Х	
NOTES:	1. Should be performed by an authorized Harley-Davidson dealer, unless you have the proper tools, service data and are mechanically qualified. 2. Disassemble, lubricate and inspect every 50,000 miles (80,000 kilometers). 3. Perform annually. 4. Change D.O.T. 4 and flush brake system every two years. 5. Perform at each rear tire change.							

Table 33. Owner's Maintenance Records

SERVICE MILE INTERVAL	DATE	DEALER NUMBER	TECHNICIAN NAME	TECHNICIAN SIGNATURE
1000 MI (1600 KM)				
5000 MI (8000 KM)				
10,000 MI (16,000 KM)				
15,000 MI (24,000 KM)				
20,000 MI (32,000 KM)				
25,000 MI (40,000 KM)				
30,000 MI (48,000 KM)				
35,000 MI (56,000 KM)				
40,000 MI (64,000 KM)				
45,000 MI (72,000 KM)				
50,000 MI (80,000 KM)				

SERVICE LITERATURE

Refer to Table 34. Visit any Harley-Davidson dealer or go to www.harley-davidson.com to purchase a service or parts manual for your motorcycle. Factory authorized manuals are the most complete and detailed source of information outside of your Harley-Davidson dealer.

Table 34. Service Literature: 2008 FLHTCUSE3

DOCUMENT	LANGUAGE	PART NUMBER
Touring Models Service Manual	English	99483-08
FLHTCUSE3 Service Manual Supplement	English	99500-08
FLHTCUSE3 Service Manual Supplement	French	99500-08F
FLHTCUSE3 Service Manual Supplement	German	99500-08G
FLHTCUSE3 Service Manual Supplement	Spanish	99500-08S
FLHTCUSE3 Service Manual Supplement	Italian	99500-081
Touring Models Electrical Diagnostics Manual	English	99497-08
Touring Models Service and Electrical Diagnostics Manual	French	99483-08F
Touring Models Service and Electrical Diagnostics Manual	German	99483-08G
Touring Models Service and Electrical Diagnostics Manual	Spanish	99483-08S
Touring Models Service and Electrical Diagnostics Manual	Italian	99483-081
FLHTCUSE3 Parts Catalog	English	99428-08

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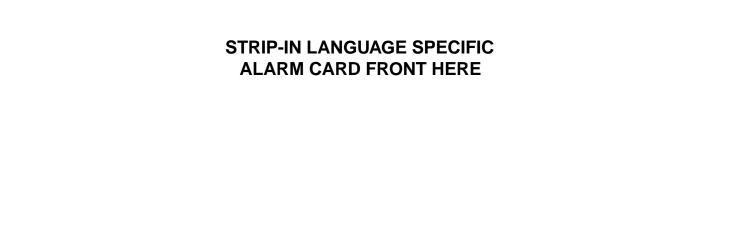
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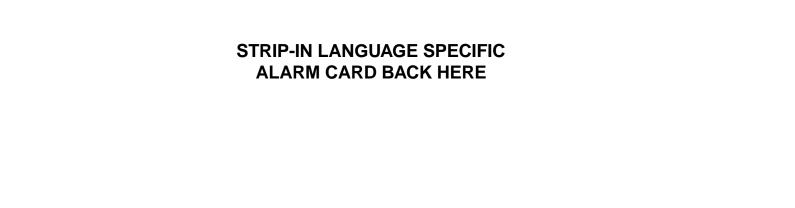
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Thank You!

ADDRESS:

CITY:

VEHICLE V.I.N.:	HICLE V.I.N.:		CRANKCASE NO.:	
OWNER'S NAME:		•		
OLD ADDRESS:		APT. NO.:		
CITY:	STA	TE:	ZIP CODE:	
DEALER NUMBER:	DEL	IVERY DATE	::	
DEALER'S NAME:	'			
CITY:	STA	TE:	ZIP CODE:	
MY NEW ADDRESS IS:				
EW ADDRESS:		APT. NO.:		
CITY:	STA	TE:	ZIP CODE:	
MY MOTORCYCLE SOLD TO:				
NEW OWNER'S NAME:			DATE OF SALE:	

STATE:

APT. NO.:

ZIP CODE:

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