

HARLEY-DAVIDSON STREET™ MODELS

2020 HARLEY-DAVIDSON® OWNER'S MANUAL



Harley-Davidson Motor Company
Service Communications
Milwaukee WI 53208 USA

2020 HARLEY-DAVIDSON® OWNER'S MANUAL
HARLEY-DAVIDSON STREET™ MODELS - 94000754



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 **WARNING:** Operating, servicing and maintaining a passenger vehicle or off-road vehicle can expose you to chemicals including engine exhaust, carbon monoxide, phthalates, and lead, which are known to the State of California to cause cancer and birth defects or other reproductive harm. To minimize exposure, avoid breathing exhaust, do not idle the engine except as necessary, service your vehicle in a well-ventilated area and wear gloves or wash your hands frequently when servicing your vehicle. For more information go to www.P65Warnings.ca.gov/passenger-vehicle

 **WARNING:** This product can expose you to chemicals including lead and lead compounds, which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information, go to www.P65Warnings.ca.gov


 **WARNING:** Crude oil, gasoline, diesel fuel and petroleum products can expose you to chemicals, including toluene and benzene, which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov



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NOTES



YOUR OWNER'S MANUAL

We Care About You

Welcome to the Harley-Davidson Motorcycling Family! When enjoying your Harley-Davidson motorcycle, be sure to ride safely, respectfully and within the limits of the law. Always wear a helmet, proper eyewear and protective clothing, and insist your passenger does too. Never ride while under the influence of alcohol or drugs. Know your Harley and read and understand your owner's manual from cover to cover.

This manual has been prepared to acquaint you with the operation, care and maintenance of your motorcycle and to provide you with important safety information. Follow these instructions carefully for maximum motorcycle performance and for your personal motorcycling safety and pleasure. Your Owner's Manual contains instructions for operation and minor maintenance. Major repairs are covered in the Harley-Davidson Service Manual. Such major repairs require the attention of a skilled technician and the use of special tools and equipment. Your Harley-Davidson dealer has the facilities, experience and Genuine Harley-Davidson parts necessary to properly render this valuable service. We recommend that any emission system maintenance be performed by an authorized Harley-Davidson dealer.

Attend a rider safety course. To enroll in a Harley-Davidson Riding Academy course, call 1-414-343-4056 (U.S.) or visit

www.harley-davidson.com/learn2ride. In the United States, for information about Motorcycle Safety Foundation rider courses, call 1-800-446-9227 or visit www.msf-usa.org.

United States Owners

Your Harley-Davidson motorcycle conforms to all applicable U.S. Federal Motor Vehicle Safety Standards and U.S. Environmental Protection Agency regulations effective on the date of manufacture. Protect your privilege to ride by joining the American Motorcyclist Association. Visit www.ama-cycle.org for more information.

Harley-Davidson reserves the right to change specifications, equipment or designs at any time without notice and without incurring obligation.

CUSTOMER SERVICE ASSISTANCE

Most sales or service issues are resolved at the dealership.

1. Discuss your problem with the appropriate personnel at the dealership in the Sales, Service or Parts area. If that proves unsuccessful, speak to the owner of the dealership or the general manager.

2. If you cannot resolve the issue with the dealership, contact the Harley-Davidson Customer Support Center. Harley-Davidson Motor Company Attention: Harley-Davidson Customer Support Center P.O. Box 653 Milwaukee, Wisconsin 53201 1-800-258-2464 (U.S. only) 1-414-343-4056

For customers outside the US, contact your local Harley-Davidson market office, call 1-414-343-4056 or visit harley-davidson.com.

Table 1. Vehicle and Personal Data

| PERSONAL INFORMATION | DEALER INFORMATION |
|--------------------------------|--------------------|
| Date of Purchase: | |
| Name: | Name: |
| Address: | Address: |
| Address: | Address: |
| Vehicle Identification Number: | Sales Contact: |
| Key Number: | Service Contact: |

SAFETY DEFINITIONS

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

⚠ WARNING

WARNING indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury. (00119a)

⚠ CAUTION

CAUTION indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. (00139a)

NOTICE

NOTICE indicates a potentially hazardous situation which, if not avoided, may result in property damage. (00140b)

NOTE

Refers to important information and is placed in italic type. It is recommended that you take special notice of these items.

SAFE OPERATING RULES

⚠ WARNING

Motorcycles are different from other vehicles. They operate, steer, handle and brake differently. Unskilled or improper use could result in loss of control, death or serious injury.

- Take a rider training course.
- Read owner's manual before riding, adding accessories or servicing.
- Wear a helmet, eye protection and protective clothing.
- Never tow a trailer.

(00556d)

Harley-Davidson Motorcycles Are for On-Road Use Only

This motorcycle is not equipped with a spark arrester. This motorcycle is designed to be used only on the road. Operation on off-road usage in some areas may be illegal. Obey local laws and regulations.

General

⚠ WARNING

Consult a Harley-Davidson dealer regarding any questions or problems that occur in the operation of your motorcycle. Failure to do so can aggravate an initial problem, cause costly repairs, cause an accident and could result in death or serious injury. (00020a)

- Make sure all equipment required by federal, state and local law is installed and in good operating condition.
- Know and respect the rules of the road. Read the safety information that is provided by your state or regional traffic authority.
- In the United States, read the RIDING TIPS booklet that is provided with this owner's manual. Read the MOTORCYCLE HANDBOOK which is made available by your state or regional traffic authority.
- Protect your motorcycle against theft. Lock the front fork. Remove the key when parking your motorcycle.

⚠ WARNING

Do not add sidecar to this motorcycle. Operating motorcycle with sidecar can cause loss of vehicle control, which could result in death or serious injury. (00590d)

Operation

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

- Before starting the engine, review the Pre-Ride Checklist (Page 29).

⚠ WARNING

Striking an object, such as a curb or pothole can cause internal tire damage. If an object is struck, have the tire inspected immediately inside and out by a Harley-Davidson dealer. A damaged tire can fail while riding and adversely affect stability and handling, which could result in death or serious injury. (00058b)

⚠ WARNING

Travel at speeds appropriate for road and conditions and never travel faster than posted speed limit. Excessive speed can cause loss of vehicle control, which could result in death or serious injury. (00008a)

- Do not exceed the legal speed limit or drive too fast for existing conditions. Always reduce speed when poor driving conditions exist. High speed increases the influence of any other condition affecting stability and increases the possibility of loss of control.

- Pay strict attention to road surfaces and wind conditions and keep both hands on the handlebar grips at all times when riding the motorcycle. Any two wheeled vehicle may be subject to upsetting forces such as wind blasts from passing trucks, holes in the pavement, rough road surfaces, rider control error, etc. These forces may influence the handling characteristics of your motorcycle. If this happens, reduce speed and guide the motorcycle with a relaxed grip to a controlled condition. Do not brake abruptly or force the handlebar. This may aggravate an unstable condition.
- New riders should gain experience under various conditions while riding at moderate speeds.
- Operate your motorcycle defensively. In an accident, a motorcycle does not afford the same protection as an automobile.
- It is the rider's responsibility to instruct passengers on proper riding procedures.
- Do not allow other individuals to operate the motorcycle unless they are experienced, licensed riders and are thoroughly familiar with the operation of the motorcycle.

⚠ WARNING

Front and/or rear guard(s) can provide limited leg and cosmetic vehicle protection under unique circumstances. (Fall over while stopped, very slow speed slide.) It is not made or intended to provide protection from bodily injury in a collision with another vehicle or any other object. (00022b)

Steering and Handling

⚠ WARNING

Do not operate vehicle with forks locked. Locking the forks restricts the vehicle's turning ability, which could result in death or serious injury. (00035a)

⚠ WARNING

Regularly inspect shock absorbers and front forks. Replace leaking, damaged or worn parts that can adversely affect stability and handling, which could result in death or serious injury. (00012a)

⚠ WARNING

Do not operate motorcycle with loose, worn or damaged steering or suspension systems. Contact a Harley-Davidson dealer for repairs. Loose, worn or damaged steering or suspension components can adversely affect stability and handling, which could result in death or serious injury. (00011a)

⚠ WARNING

Do not open storage compartments while riding. Distractions while riding can lead to loss of control, which could result in death or serious injury. (00082a)

⚠ WARNING

When riding on wet roads, brake efficiency and traction are greatly reduced. Failure to use care when braking, accelerating or turning on wet roads can cause loss of control, which could result in death or serious injury. (00041a)

Accessories and Cargo

⚠ WARNING

Do not exceed the motorcycle's Gross Vehicle Weight Rating (GVWR) or Gross Axle Weight Rating (GAWR). Exceeding these weight ratings can lead to component failure and adversely affect stability, handling and performance, which could result in death or serious injury. (00016f)

- GVWR is the sum of the weight of the motorcycle, accessories and the maximum weight of the rider, passenger and cargo that can be safely carried.
- The GVWR is shown on the information label, located on the frame steering head or the frame downtube.
- GAWR is the maximum amount of weight that can be safely carried on each end of the motorcycle.
- For GVWR and GAWR, front and rear. See Specifications (Page 25).
- Keep cargo weight concentrated close to the motorcycle and as low as possible.
- Distribute weight evenly on both sides of the vehicle.
- Do not load bulky items too far behind the rider or add weight to the handlebars or front forks.

- Do not exceed maximum specified load in each saddlebag (if equipped).
- Luggage racks (if equipped) are designed for lightweight items. Do not overload racks.
- Make sure cargo is secure. Make sure the cargo will not shift while riding and check the cargo periodically. Accessories that change the operator's riding position may increase reaction time and affect handling of the motorcycle.
- Large surfaces such as fairings, windshields, backrests and luggage racks (if equipped) can adversely affect on stability and handling.

Tires

⚠ WARNING

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

⚠ WARNING

Replace punctured or damaged tires. In some cases, small punctures in the tread area may be repaired from within the removed 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 (129 km/h). Failure to follow this warning could lead to tire failure and result in death or serious injury. (00015b)

Towing and Trailing

⚠ WARNING

Do not pull a trailer with a motorcycle. Pulling a trailer can cause tire overload, damage and failure, reduced braking performance, and adversely affect stability and handling, which could result in death or serious injury. (00018c)

⚠ WARNING

Do not tow a disabled motorcycle. Towing can adversely affect stability and handling, which could result in death or serious injury. (00017a)

Never tow a trailer.

Fuel and Exhaust

⚠ WARNING

Stop the engine when refueling or servicing the fuel system. Do not smoke or allow open flame or sparks near gasoline. Gasoline is extremely flammable and highly explosive, which could result in death or serious injury. (00002a)

⚠ WARNING

Avoid spills. Slowly remove filler cap. Do not fill above bottom of filler neck insert, leaving air space for fuel expansion. Secure filler cap after refueling. Gasoline is extremely flammable and highly explosive, which could result in death or serious injury. (00028a)

- Refuel in a well-ventilated area with the engine off.
- Remove the fuel filler cap slowly.
- Do not fill fuel tank above the bottom of the filler neck insert. Leave air space to allow for fuel expansion.
- If fuel tank was completely drained, add at least 1 gal (3.79 L) of gas.

⚠ WARNING

Avoid contact with exhaust system and wear protective clothing that completely covers legs while riding. Exhaust pipes and mufflers get very hot when engine is running and remain too hot to touch, even after engine is turned off. Failure to wear protective clothing could result in burns or other serious injury. (00009a)

⚠ WARNING

Do not run motorcycle in a closed garage or confined area. Inhaling motorcycle exhaust, which contains poisonous carbon monoxide gas, could result in death or serious injury. (00005a)

⚠ WARNING

Engine exhaust from this product contains chemicals known to the State of California to cause cancer, and birth defects or other reproductive harm. (00004f)

Brakes

⚠ WARNING

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)

⚠ WARNING

Apply front and rear brakes evenly. Favoring one brake accelerates wear and reduces braking efficiency. Operation with excessively worn brakes can lead to brake failure, which could result in death or serious injury. (00135a)

⚠ WARNING

Contact with DOT 4 brake fluid can have serious health effects. Failure to wear proper skin and eye protection could result in death or serious injury.

- If inhaled: Keep calm, remove to fresh air, seek medical attention.
- If on skin: Remove contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. If irritation develops, seek medical attention.
- If in eyes: Wash affected eyes for at least 15 minutes under running water with eye lids held open. If irritation develops, seek medical attention.
- If swallowed: Rinse mouth and then drink plenty of water. Do not induce vomiting. Immediate medical attention required.
- See Safety Data Sheet (SDS) for more details available at sds.harley-davidson.com

(00240d)

⚠ WARNING

DOT 4 brake fluid absorbs moisture from the atmosphere over time, changing the properties of the fluid. Check brake fluid moisture content at every service interval or annually (whichever comes first). Flush and replace the brake fluid every two years, or sooner if moisture content is 3% or greater. Failure to flush and replace fluid can adversely affect braking, which could result in death or serious injury. (06304b)

To ensure the brake system is performing to design, check the moisture content of the brake fluid at every service interval or at least annually using a DOT 4 brake fluid moisture tester (part number HD-48497-A or equivalent) following the instructions included with the tool. Flush DOT 4 fluid every 2 years or sooner if the brake system fluid test shows moisture content is 3% or greater.

Harley-Davidson recommends using Harley-Davidson Platinum Label DOT 4 Brake Fluid because of its superior moisture and corrosion inhibiting properties

Battery

⚠ WARNING

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. (00019e)

⚠ 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)

NOTICE

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

Hazardous Materials

⚠ CAUTION

Prolonged or repeated contact with used motor oil may be harmful to skin and could cause skin cancer. Promptly wash affected areas with soap and water. (00358b)

Maintenance

⚠ WARNING

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)

- A new motorcycle must be operated according to the special break-in procedure. See Break-in Riding Rules (Page 30).
- Proper care and maintenance, including tire pressure, tire condition, tread depth and proper adjustment to steering head bearings are important to stability and safe operation of the motorcycle. See Service Records (Page 165).

Parts and Accessories

⚠ WARNING

Harley-Davidson parts and accessories are designed for Harley-Davidson motorcycles. Using non-Harley-Davidson parts or accessories can adversely affect performance, stability or handling, which could result in death or serious injury. (00001b)

- Use only Harley-Davidson approved parts and accessories. Use of certain other manufacturer's performance parts will void your new motorcycle warranty. See your Harley-Davidson dealer for details.

⚠ WARNING

Use Harley-Davidson replacement fasteners. Aftermarket fasteners can adversely affect performance, which could result in death or serious injury. (00013a)

- See your Harley-Davidson service manual for proper torque values.
- Aftermarket fasteners may not have the specific property requirements to perform properly.

⚠ WARNING

See the Accessories and Cargo section in your owner's manual. Improper cargo loading or accessory installation can cause component failure and adversely affect stability, handling and performance, which could result in death or serious injury. (00021b)

- Harley-Davidson Motor Company cannot test and make specific recommendations concerning every accessory or combination of accessories sold. Therefore, the rider must be responsible for safe operation of the motorcycle when installing accessories or carrying additional weight.
- Additional electrical equipment may overload the electrical system possibly resulting in electrical system and/or component failure.

ANTI-LOCK BRAKE SYSTEM (ABS)

⚠ WARNING

If ABS lamp continues flashing at speeds greater than 3 mph (5 km/h) or remains on continuously, the ABS is not operating. The standard brake system is operational, but wheel lock up can occur. Contact a Harley-Davidson Dealer to have ABS repaired. A locked wheel will skid and can cause loss of vehicle control, which could result in death or serious injury. (00361b)

⚠ WARNING

ABS cannot prevent lockup of rear wheel due to engine braking. ABS will not aid in cornering or on loose/uneven surfaces. A locked wheel will skid and can cause loss of vehicle control, which could result in death or serious injury. (00362a)

To operate motorcycles equipped with an anti-lock brake system, see Brake System (Page 71).

RULES OF THE ROAD

- Always sound your horn, use your turn signals and exercise caution when passing other vehicles going in the same direction. Never pass going in the same direction at street intersections, on curves or when going up or down a hill.
- At street intersections, give the right-of-way. Do not presume you have the right-of-way, as the other driver may not know that it is your turn.
- Always signal when preparing to stop, turn or pass.
- Promptly obey all traffic signs, including those signs used for the control of traffic at intersections. Always obey traffic signs near schools and at railroad crossings.

- When intending to turn, signal at least 100 ft (30.5 m) before reaching the turning point. If turning across an intersection, move over to the centerline of the street (unless local rules require otherwise). Slow down when entering the intersection and turn carefully.
- Never anticipate a traffic light. When a change is indicated from GO to STOP (or STOP to GO), slow down and wait for the light to change. Never run through a yellow or red traffic light.
- While turning, watch for pedestrians, animals, as well as vehicles.
- Do not leave the curb or parking area without signaling. Make sure that your way is clear to enter moving traffic. A moving line of traffic always has the right-of-way.
- Make sure that your license plate is installed in the position specified by law. Make sure that your license plate is always clearly visible. Keep the license plate clean.
- Ride at a safe speed that is consistent with the type of highway you are on. Pay strict attention to whether the road is dry, oily, icy or wet.

- Watch for debris such as leaves or loose gravel.
- Weather and traffic conditions on the highway dictate adjusting your speed and driving habits accordingly.

NOISE CONTROL SYSTEM

Tampering

Removal or replacement of any noise control system component may be prohibited by law. This prohibition includes modifications made prior to vehicle sale or delivery to the ultimate purchaser. Use of a vehicle on which noise control system components have been removed or rendered inoperative may also be prohibited by law.

LABELS

See Figure 1 for safety and maintenance labels which were on the vehicle when new. Refer to Table 2.

NOTE

Replacement labels can be purchased for your motorcycle. See a Harley-Davidson dealer. Some labels are available in different languages for destinations outside the United States.

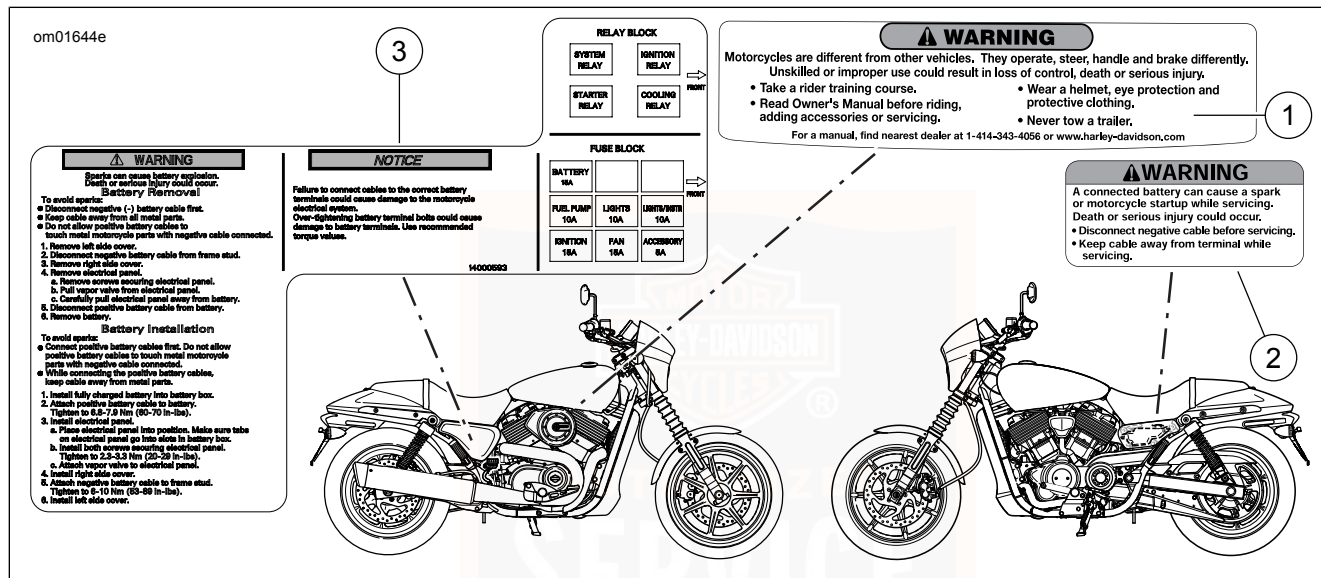


Figure 1. Labels

Table 2. Labels

| ITEM | PART NUMBER | DESCRIPTION | TEXT |
|------|---|--|---|
| 1 | 29147-07 (Harley-Davidson Street [®] 500 (XG500)/Harley-Davidson Street [®] 750 (XG750)) 29108-08 (Street Rod [™] (XG750A)) | General warning | <p>WARNING: Motorcycles are different from other vehicles. They operate, steer, handle and brake differently. Unskilled or improper use could result in loss of control, death or serious injury.</p> <ul style="list-style-type: none"> • Take a rider training course. • Read Owner's Manual before riding, adding accessories or servicing. • Wear a helmet, eye protection and protective clothing. • Never tow a trailer. <p>For a manual, find nearest dealer at 1-414-343-4056 or www.harley-davidson.com</p> |
| 2 | 15368-01A | Battery warning | <p>WARNING: A connected battery can cause a spark or motorcycle startup while servicing. Death or serious injury could occur.</p> <ul style="list-style-type: none"> • Disconnect negative cable before servicing. • Keep cable away from terminal while servicing. |
| 3 | 14001175 | Battery warning/Removal and Installation | <p>WARNING: Sparks can cause battery explosion. Death or serious injury could occur. To avoid sparks:</p> <ul style="list-style-type: none"> • Disconnect negative cable first. • Keep cable away all metal parts. • Do not allow positive battery cable to touch metal motorcycle parts with negative cable connected. |

NOTES



VEHICLE IDENTIFICATION NUMBER (VIN)

General

See Figure 3. A unique 17-digit serial or Vehicle Identification Number (VIN) is assigned to each motorcycle. Refer to Table 3.

Location

See Figure 2. The full 17-digit VIN is stamped on the right side of the frame near the steering head. In some destinations, a printed VIN label is also attached on the front downtube.

Abbreviated VIN

An abbreviated VIN showing the vehicle model, engine type, model year, and sequential number is stamped on the left side of the crankcase between the engine cylinders.

NOTE

Always give the full 17-digit Vehicle Identification Number when ordering parts or making any inquiry about your motorcycle.

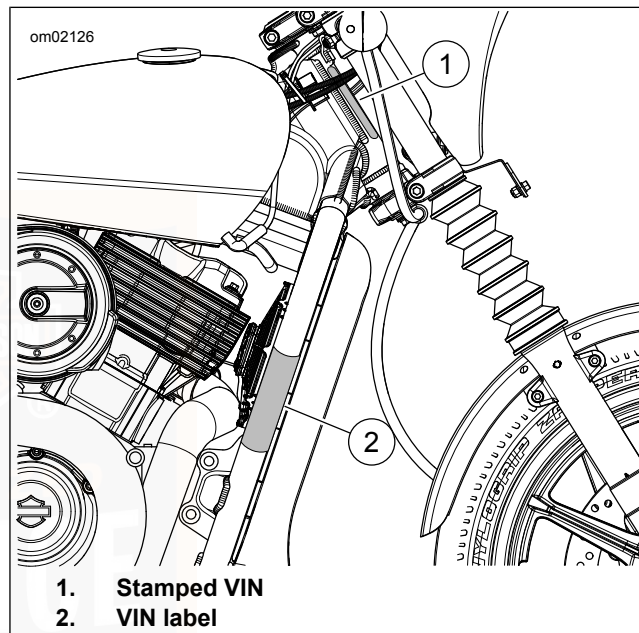


Figure 2. VIN Locations

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨
1HD 4 NA A 1 3 L B 555000

Figure 3. Typical Harley-Davidson VIN: 2020 Street Models

Table 3. Harley-Davidson VIN Breakdown: 2020 Street Models

| POSITION | DESCRIPTION | POSSIBLE VALUES |
|----------|-------------------------------|--|
| 1 | World manufacturer identifier | 1HD=Originally manufactured in the United States 5HD=Originally manufactured in the United States for sale outside the United States MEG=Originally manufactured in India MLY=Originally manufactured in Thailand |
| 2 | Motorcycle type | 4=Middleweight motorcycle (351 cm ³ to 900 cm ³) |
| 3 | Model | See VIN model table |
| 4 | Engine type | A=Revolution X™ 500 cm ³ liquid-cooled, fuel-injected B=Revolution X™ 750 cm ³ liquid-cooled, fuel-injected G=High Output Revolution X™ 750 cm ³ liquid-cooled, fuel-injected |

Table 3. Harley-Davidson VIN Breakdown: 2020 Street Models

| POSITION | DESCRIPTION | POSSIBLE VALUES |
|----------|---|--|
| 5 | Configuration/calibration, introduction | 1=Domestic (DOM) 2=California (CAL) 3=Canada (CAN) 4=HDI 5=Japan (JPN) 6=Australia (AUS) 7=Brazil (BRZ) 8=Asia Pacific (APC) 9=India (IND) 0=ASEAN (AZN) A=China (CHN) |
| 6 | VIN check digit | Can be 0-9 or X |
| 7 | Model year | L=2020 |
| 8 | Assembly plant | B=York, PA U.S.A. D=H-D Brazil-Manaus, Brazil (CKD) N=Haryana India (Bawal District Rewari) S=Tasit, Pluagdang, Rayong, Thailand |
| 9 | Sequential number | Varies |

Table 4. VIN Model Codes: Street Models

| CODE | MODEL | CODE | MODEL |
|------|---|------|----------------------------------|
| NA | Harley-Davidson Street [®] 500 (XG500) | NC | Street Rod [™] (XG750A) |
| NB | Harley-Davidson Street [®] 750 (XG750) | | |

MODELS AND FEATURES

Some models, features or configurations shown in this manual may not be available in all markets.

PRIMARY CONTROLS AND SERVICE COMPONENTS

Familiarize yourself with the location of all the controls and service components on your motorcycle.

NOTE

Illustrations are for general reference only. Controls and service components shown are general locations and

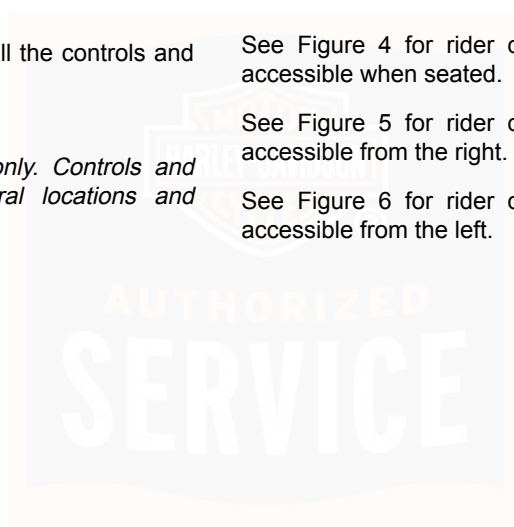
representations that do not show a specific model of motorcycle.

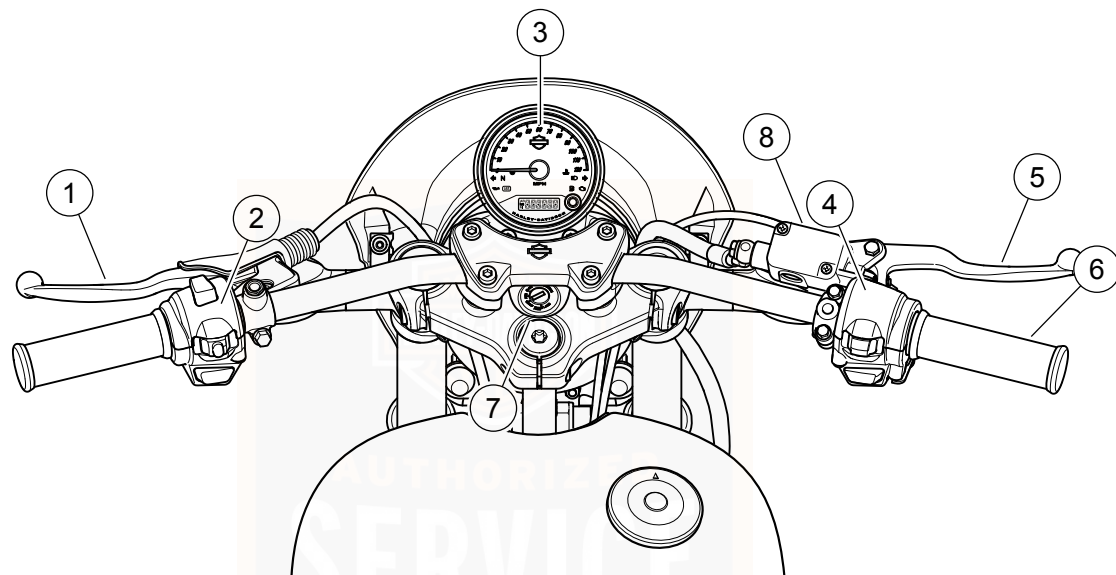
Harley-Davidson reserves the right to change specifications, equipment or designs at any time without notice and without incurring obligation.

See Figure 4 for rider controls and service components accessible when seated.

See Figure 5 for rider controls and service components accessible from the right.

See Figure 6 for rider controls and service components accessible from the left.

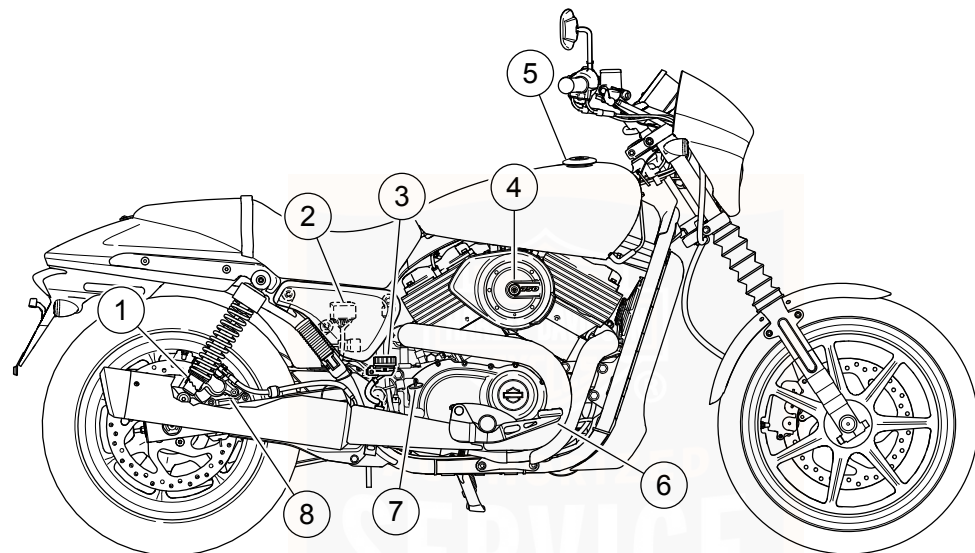




- 1. Clutch hand lever
- 2. Left hand control module
- 3. Speedometer/odometer
- 4. Right hand control module

- 5. Front brake lever
- 6. Throttle twist grip
- 7. Ignition switch
- 8. Front brake fluid reservoir

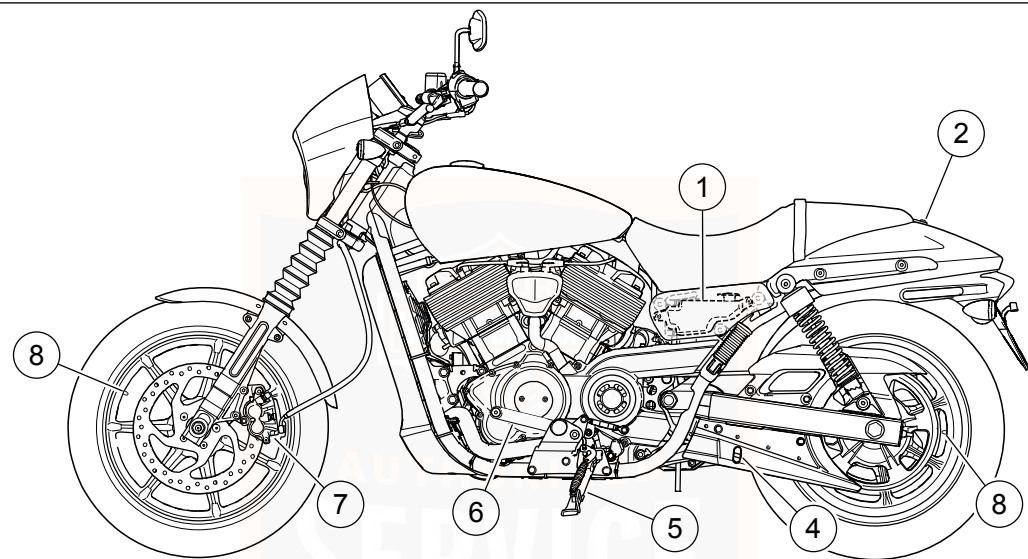
Figure 4. Controls and Service Components (Typical)



- 1. Shock absorber preload collar
- 2. Fuse block/main fuse (under side cover)
- 3. Rear brake fluid reservoir
- 4. Air cleaner

- 5. Gas cap
- 6. Rear brake pedal
- 7. Oil filler dipstick
- 8. Rear brake caliper

Figure 5. Controls and Service Components (Typical)



- | | |
|---|------------------------|
| 1. Coolant overflow bottle (under side cover) | 5. Jiffy stand |
| 2. Seat retention screw | 6. Gear shift lever |
| 3. Shock absorber preload collar | 7. Front brake caliper |
| 4. Belt tension window | 8. Air pressure valve |

Figure 6. Controls and Service Components (Typical)

NOTES



SPECIFICATIONS

NOTE

- Specifications in this publication may not match those of official certification in some markets due to timing of publication printing, variance in testing methods, and/or motorcycle differences. Customers seeking officially recognized regulatory specifications for their motorcycle should refer to certification documents and/or contact their respective dealer or distributor.

- Harley-Davidson reserves the right to change specifications, equipment or designs at any time without notice and without incurring obligation.

Tires

Table 5. Tires and Tire Pressure

| MODEL | MOUNT | SIZE | SPECIFIED TIRE | PRESSURE (COLD 68 °F (20 °C)) | |
|--|-------|-------|--|-------------------------------------|-----|
| | | | | kPa | psi |
| Harley-Davidson Street® 500 (XG500), Harley-Davidson Street® 750 (XG750) | Front | 17 in | MRF Zapper (India only): 100/80-17 M/C 52H | 207 | 30 |
| Harley-Davidson Street® 500 (XG500), Harley-Davidson Street® 750 (XG750) | Rear | 15 in | MRF Zapper (India only): 150/70-15 M/C 67H | 276 | 40 |

Table 5. Tires and Tire Pressure

| MODEL | MOUNT | SIZE | SPECIFIED TIRE | PRESSURE (COLD 68 °F (20 °C)) | |
|--|-------|-------|--|-------------------------------------|-----|
| | | | | kPa | psi |
| Harley-Davidson Street® 500 (XG500), Harley-Davidson Street® 750 (XG750) | Front | 17 in | Michelin Scorchers 11: 100/80-17 M/C 52H | 234 | 34 |
| Harley-Davidson Street® 500 (XG500), Harley-Davidson Street® 750 (XG750) | Rear | 15 in | Michelin Scorchers 11: 140/75R15 M/C 65H | 290 | 42 |
| Street Rod™ (XG750A) | Front | 17 in | Michelin Scorchers 21: 120/70R17 M/C 58V | 248 | 36 |
| Street Rod™ (XG750A) | Rear | 17 in | Michelin Scorchers 21: 160/60R17 M/C 69V | 290 | 42 |
| Street Rod™ (XG750A) | Front | 17 in | MRF REVZ-FH1 (India only): 120/70R17 M/C 58H | 248 | 36 |
| Street Rod™ (XG750A) | Rear | 17 in | MRF REVZ-H (India only): 160/60R17 M/C 69H | 290 | 42 |

⚠ WARNING

Harley-Davidson recommends the use of its specified tires. Harley-Davidson vehicles are not designed for operation with non-specified tires, including snow, moped and other special-use tires. Use of non-specified tires can adversely affect stability, handling or braking and lead to loss of vehicle control, which could result in death or serious injury. (00024d)

Weights and Dimensions

Table 6. Weights

| ITEM | Harley-Davidson Street [®] 500 (XG500) | | Harley-Davidson Street [®] 750 (XG750) | | Street Rod [™] (XG750A) | |
|---|--|-----|--|-----|----------------------------------|-----|
| | kg | lb | kg | lb | kg | lb |
| Running weight ⁽¹⁾ | 233 | 514 | 233 | 514 | 238 | 525 |
| Maximum added weight allowed ⁽²⁾ | 198 | 436 | 198 | 436 | 193 | 425 |
| GVWR | 431 | 950 | 431 | 950 | 431 | 950 |
| GAWR front ⁽²⁾ | 145 | 320 | 145 | 320 | 159 | 350 |
| GAWR rear ⁽²⁾ | 286 | 630 | 286 | 630 | 272 | 600 |

(1) The total weight of the motorcycle as delivered with all oil/fluids and approximately 90% of fuel.

(2) The total weight of accessories, cargo, riding gear, passenger and rider cannot exceed this weight.

Table 7. Dimensions

| ITEM | Harley-Davidson Street [®] 500 (XG500) | | Harley-Davidson Street [®] 750 (XG750) | | Street Rod [™] (XG750A) | |
|----------------------------|--|------|--|------|----------------------------------|------|
| | mm | in | mm | in | mm | in |
| Overall length | 2215 | 87.2 | 2215 | 87.2 | 2130 | 83.9 |
| Overall width | 840 | 33.1 | 840 | 33.1 | 870 | 34.3 |
| Wheelbase | 1520 | 59.8 | 1520 | 59.8 | 1510 | 59.4 |
| Ground clearance | 145 | 5.7 | 145 | 5.7 | 205 | 8.1 |
| Seat height ⁽¹⁾ | 654 | 25.7 | 654 | 25.7 | 757 | 29.8 |

(1) With 180 lb (81.7 kg) rider on seat.

Capacities

Table 8. Capacities

| ITEM | CAPACITY | |
|----------------------------------|----------|---------|
| | METRIC | U.S. |
| Fuel tank | 13.1 L | 3.5 gal |
| Low fuel indicator (approximate) | 3.1 L | 0.8 gal |
| Engine oil (wet) | 3.1 L | 3.3 qt |
| Engine oil (dry) | 3.3 L | 3.5 qt |
| Coolant | 1.3 L | 1.4 qt |

Engine and Transmission

Table 9. Revolution X Engine Specifications

| ITEM | Harley-Davidson Street [®] 500 (XG500) | Harley-Davidson Street [®] 750 (XG750) | Street Rod [™] (XG750A) |
|-------------------|---|---|----------------------------------|
| Cylinders | 2 | | |
| Type | 60 degree, liquid cooled V-Type | | |
| Compression ratio | 10.5:1 | 11.0:1 | 12.0:1 |
| Bore | 2.72 in (69 mm) | 3.35 in (85 mm) | |
| Stroke | 2.60 in (66 mm) | | |

Table 9. Revolution X Engine Specifications

| ITEM | Harley-Davidson Street [®] 500 (XG500) | Harley-Davidson Street [®] 750 (XG750) | Street Rod [™] (XG750A) |
|--------------------|---|---|----------------------------------|
| Displacement | 494 cm ³ (30 in ³) | 749 cm ³ (46 in ³) | |
| Lubrication system | Pressurized, wet sump | | |

Table 10. Transmission Specifications

| ITEM | SPECIFICATION |
|--------|---------------------------|
| Type | Constant mesh, foot shift |
| Speeds | 6 forward |

Electrical

Table 11. Electrical Specifications

| ITEM | SPECIFICATION |
|-------------------|--|
| Ignition timing | Not adjustable |
| Battery | 12 V, 12 Ah, 225 CCA sealed and maintenance-free |
| Charging system | Three-phase, 35 A system (17.7 A @ 1000 rpm) |
| Spark plug size | 10 mm |
| Spark plug gap | 0.8-0.9 mm 0.031-0.035 in |
| Spark plug torque | 10-12 Nm 89-106 in-lbs |

REMOVING MOTORCYCLE FROM STORAGE

1. Charge and install the battery. See Battery Maintenance (Page 114).
2. Inspect spark plugs. See Replacing Spark Plugs (Page 110).
3. Inspect air filter and replace if necessary. See Inspecting Air Filter (Page 108).
4. Inspect drive belt and sprocket. See Check Drive Belt Deflection (Page 95).
5. Perform the items in the Pre-Ride Checklist (Page 29).

PRE-RIDE CHECKLIST

1. Check the amount of fuel in the tank. Add fuel if required. See Filling the Fuel Tank (Page 31).
2. Adjust mirrors to proper riding positions. See Adjusting Mirrors (Page 43).
3. Check the engine oil level. See Check Engine Oil Level (Page 92).
4. Check the coolant level (if equipped). See Coolant (Page 104).

5. Check brake fluid level. See Checking Brake Fluid Level and Changing Brake Fluid (Page 101).
6. Inspect brake pads and discs for wear. See Inspecting Brake Pads and Discs (Page 99).
7. Check the hand and foot controls to be sure they are operating properly. Operate the front and rear brakes, throttle, clutch and shifter. See Operation (Page 59).
8. Inspect brake lines for wear or damage.
9. Check steering for smoothness by turning the handlebar through the full operating range.

▲ WARNING

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

10. Check tire condition, pressure and motorcycle loading. Refer to Checking Tire Pressure and Inspecting Tires (Page 37) for correct tire inflation pressure and motorcycle weight allowances.
11. Check rear shock settings. Adjust if necessary. See Adjusting Shock Absorbers (Page 44).
12. Check for any fuel, oil or hydraulic fluid leaks.
13. Check drive belt for wear or damage.

⚠ WARNING

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)

14. Check all electrical equipment and switches including the stop lamp, turn signals and horn for proper operation.
15. Service your motorcycle as necessary.

BREAK-IN RIDING RULES

The First 500 Miles (800 Kilometers)

The sound design, quality materials, and workmanship that are built into your new Harley-Davidson will give you optimum performance right from the start.

To allow your engine to wear-in its critical parts, we recommend that you observe the riding rules provided below for the first 500 mi (800 km).

1. During the first 50 mi (80 km) of riding, keep the engine speed below 3000 rpm in any gear. Do not lug the engine by running or accelerating at very low rpm, or by running at high rpm longer than needed for shifting or passing.
2. Up to 500 mi (800 km), vary the engine speed and avoid operating at any steady engine speed for long periods. Engine speed up to 3500 rpm in any gear is permissible.
3. Drive slowly and avoid fast starts at wide open throttle until the engine has warmed up.
4. Avoid lugging the engine by not running the engine at very low speeds in higher gears.
5. Avoid hard braking. Break-in new brakes with moderate use for the first 100 mi (160 km).

FILLING THE FUEL TANK

⚠ WARNING

Avoid spills. Slowly remove filler cap. Do not fill above bottom of filler neck insert, leaving air space for fuel expansion. Secure filler cap after refueling. Gasoline is extremely flammable and highly explosive, which could result in death or serious injury. (00028a)

⚠ WARNING

Use care when refueling. Pressurized air in fuel tank can force gasoline to escape through filler tube. Gasoline is extremely flammable and highly explosive, which could result in death or serious injury. (00029a)

Removing Fuel Filler Cap

NOTE

The cap pops up as the key is turned.

1. See Figure 7. Insert the ignition key into the key slot (2).
2. Turn the key clockwise.
3. Remove the filler cap.

NOTICE

Do not spill fuel onto the motorcycle while refueling. Immediately wipe up fuel spills on your motorcycle. Fuel can cause damage to cosmetic surfaces. (00147b)

4. Fill the tank. Use only recommended fuel. See Fuel System Information (Page 33). Do not overfill the fuel tank. Insert the pump nozzle into the filler hole. Do not fill the tank beyond the bottom of the filler neck. See Figure 8. A warm engine, the sun or extreme temperatures can cause the fuel to expand. Fuel can spill out of the tank and damage the finish. See Safe Operating Rules (Page 3).

Installing Fuel Filler Cap

⚠ WARNING

Do not use aftermarket fuel caps. Aftermarket fuel caps may fit improperly and leak, which could lead to death or serious injury. See a Harley-Davidson dealer for approved fuel caps. (00034a)

NOTE

The arrow on the cap points to an index tab on the cap. The index tab aligns with a slot in the fuel opening in the tank.

1. Ensure the key is fully seated into the cap prior to re-installation.
2. Install the fuel filler cap with alignment arrow (1) pointing toward the front.
3. Press down around the cap to compress the cap spring. You may hear 2 audible clicks as the cap locks in place.
4. Turn the key counterclockwise to lock the cap and remove the key.

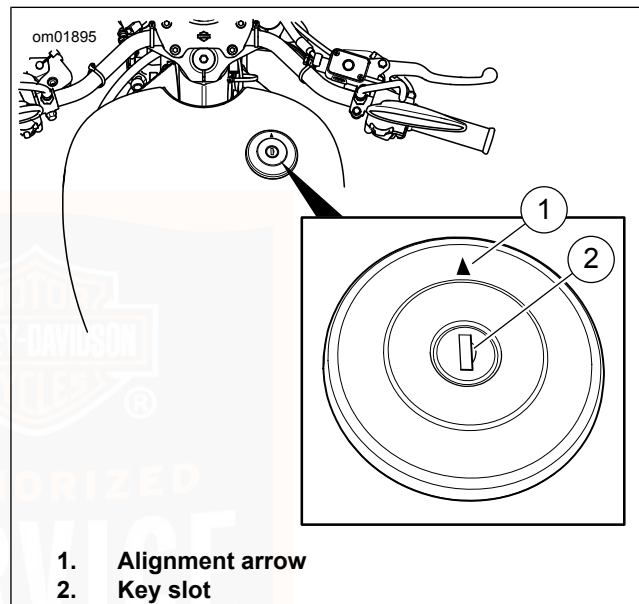


Figure 7. Fuel Filler Cap

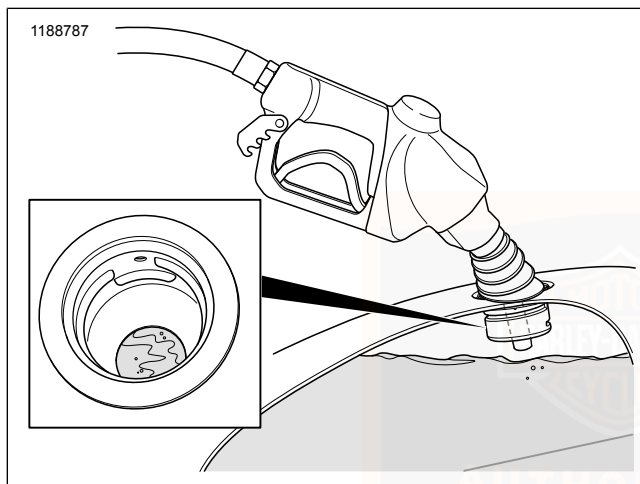


Figure 8. Fuel Level below Filler Neck

FUEL SYSTEM INFORMATION

Gasoline

Your motorcycle was designed to get the best performance and efficiency using unleaded gasoline. Most gasoline is blended with alcohol and/or ether to create oxygenated blends. The type and amount of alcohol or ether added to the fuel is important.

NOTICE

Do not use gasoline that contains methanol. Doing so can result in fuel system component failure, engine damage and/or equipment malfunction. (00148a)

NOTICE

Use only unleaded fuel in catalytic converter-equipped motorcycles. Using leaded fuel will damage the emission control system. (00150c)




- ETHANOL fuel is a mixture of ethanol (grain alcohol) and unleaded gasoline and can have an impact on fuel mileage.
- REFORMULATED OR OXYGENATED GASOLINES (RFG) describes gasoline blends that are specifically designed to burn cleaner than other types of gasoline. This results in fewer tailpipe emissions. They are also formulated to reduce evaporative losses to the environment. Reformulated gasolines use additives to oxygenate the gas. Your motorcycle will run normally using this type of fuel. Harley-Davidson recommends using it whenever possible as an aid to cleaner air in our environment.
- Some gasoline blends might adversely affect starting, driveability or fuel efficiency. If any of these problems are experienced, try a different brand of gasoline or gasoline with a higher octane blend.

Table 12. Octane Rating

| SPECIFICATION | CONFIGURATION | RATING |
|----------------------|-------------------------------------|---------------|
| Pump Octane (R+M)/2 | Street Rod™ (XG750A) | 91 (95 RON) |
| | Harley-Davidson Street® 500 (XG500) | 87 (91 RON) |
| | Harley-Davidson Street® 750 (XG750) | |



Table 13. Fuel Specification

| Common Identifier | Specification | Rating |
|---|-----------------------------|--|
| MTBE | Methyl Tertiary Butyl Ether | Gasoline/METHYL TERTIARY BUTYL ETHER (MTBE) blends are a mixture of gasoline and as much as 15 percent MTBE. Gasoline/MTBE blends use in your motorcycle is approved. |
| Methanol | Methanol or Racing Fuel | Do not use racing fuel or fuel containing methanol; use of these fuels will damage the fuel system. |
|  | 5 Percent Ethanol | Fuels with an ethanol content of up to 5 percent (E5) may be used in your motorcycle without affecting vehicle performance. |
|  | 10 Percent Ethanol | Fuels with an ethanol content of up to 10 percent (E10) may be used in your motorcycle without affecting vehicle performance. United States customers: The United States' Clean Air Act prohibits the use of gasoline blends containing greater than 10% ethanol in motorcycles. |
| | 22 Percent Ethanol | Fuel in the Brazilian market has ethanol content which ranges from 21-27.5%. H-D Motorcycles configured for Brazil are equipped with engine control calibrations developed to work properly with these fuels. Use of fuels with high ethanol content in H-D motorcycles intended for other regulatory markets may result in poor drivability, setting of the check engine light and potential engine damage. |
|  | 85 Percent Ethanol | Do not use fuel containing 85 percent ethanol. Use of these fuels will damage the fuel system and may lead to engine damage. |

Catalytic Converter

Vehicles in some markets are equipped with catalytic converters.

NOTICE

Do not operate catalytic converter-equipped vehicle with engine misfire. If you operate the vehicle under this condition, the exhaust will become abnormally hot, which can cause vehicle damage, including emission control loss. (00149c)

ABS BRAKE SYSTEM IDENTIFICATION

Identification

See Figure 9. Models with the ABS option can be identified by a wheel speed sensor on the left side of the front wheel.

See Figure 10. Models with ABS will also have an ABS module (EHCU).

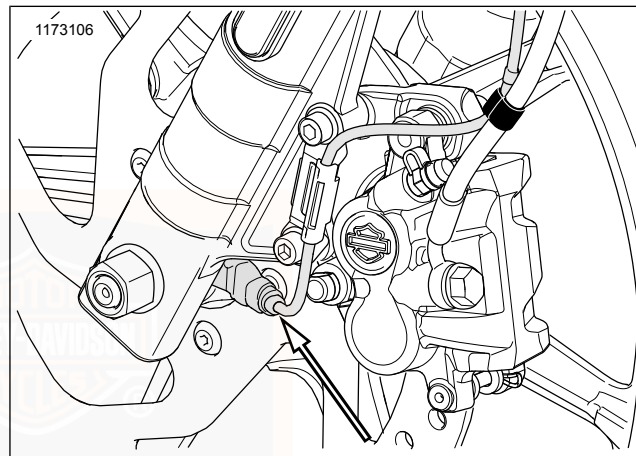


Figure 9. Wheel Speed Sensor (ABS identification)

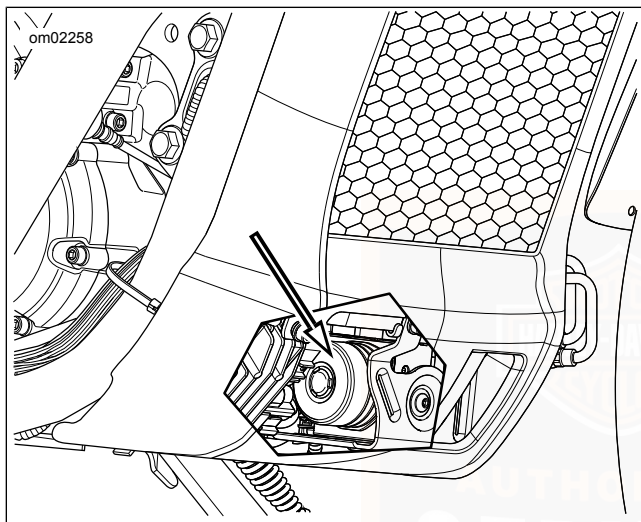


Figure 10. ABS Module (EHCU) (located behind radiator)

CHECKING TIRE PRESSURE AND INSPECTING TIRES

General Information

⚠ WARNING

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

⚠ WARNING

Harley-Davidson front and rear tires are not the same. Interchanging front and rear tires can cause tire failure, which could result in death or serious injury. (00026a)

Tire Pressure

⚠ WARNING

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

Tire pressures should be set using information in Table 14 and Table 15. Tires are considered Cold Tires if the vehicle has not been recently ridden. The tire pressure increases as the tire warms. Tires can warm due to both riding and high ambient air temperatures. Tires can remain warm for up to 2 hours after riding. For the most accurate reading, check tire pressures with a good gauge before riding while the tires are cold.

Check tire pressure:

- As part of the pre-ride checklist.
- At every scheduled service interval.

For Cold Tires with an Ambient Air Temp of 68 °F (20 °C) or less: Refer to Table 14.

Table 14. Tires and Tire Pressure

| MODEL | MOUNT | SIZE | SPECIFIED TIRE | PRESSURE (COLD 68 °F (20 °C)) | |
|--|-------|-------|--|-------------------------------------|-----|
| | | | | kPa | psi |
| Harley-Davidson Street® 500 (XG500), Harley-Davidson Street® 750 (XG750) | Front | 17 in | MRF Zapper (India only): 100/80-17 M/C 52H | 207 | 30 |
| Harley-Davidson Street® 500 (XG500), Harley-Davidson Street® 750 (XG750) | Rear | 15 in | MRF Zapper (India only): 150/70-15 M/C 67H | 276 | 40 |
| Harley-Davidson Street® 500 (XG500), Harley-Davidson Street® 750 (XG750) | Front | 17 in | Michelin Scorcher 11: 100/80-17 M/C 52H | 234 | 34 |

Table 14. Tires and Tire Pressure

| MODEL | MOUNT | SIZE | SPECIFIED TIRE | PRESSURE (COLD 68 °F (20 °C)) | |
|--|-------|-------|--|-------------------------------------|-----|
| | | | | kPa | psi |
| Harley-Davidson Street® 500 (XG500), Harley-Davidson Street® 750 (XG750) | Rear | 15 in | Michelin Scorchers 11: 140/75R15 M/C 65H | 290 | 42 |
| Street Rod™ (XG750A) | Front | 17 in | Michelin Scorchers 21: 120/70R17 M/C 58V | 248 | 36 |
| Street Rod™ (XG750A) | Rear | 17 in | Michelin Scorchers 21: 160/60R17 M/C 69V | 290 | 42 |
| Street Rod™ (XG750A) | Front | 17 in | MRF REVZ-FH1 (India only): 120/70R17 M/C 58H | 248 | 36 |
| Street Rod™ (XG750A) | Rear | 17 in | MRF REVZ-H (India only): 160/60R17 M/C 69H | 290 | 42 |

For Cold Tires with an Ambient Air Temp higher than 68 °F (20 °C): Refer to the first column in Table 15 to determine the tire pressure adjustments. For example: If the motorcycle has not been ridden for 2 hours or more and the ambient temperature is 88 °F (31 °C), the recommended front and rear pressures are Table 14 pressures plus 2 psi (14 kPa).

Tires warm due to riding which increases the tire pressure. If the vehicle has been recently ridden, refer to the second column in Table 15 to determine the tire pressure adjustment. For example: If the motorcycle has been recently ridden and

the ambient temperature is 88 °F (31 °C), the recommended front and rear pressures are the Table 14 pressures plus 7 psi (48 kPa).

If a tire pressure adjustment is made when the vehicle has been recently ridden, re-adjust the tire pressure per recommendations when the tires have cooled. Tires can remain warm for up to 2 hours after riding.

Harley-Davidson does not perform any testing with only nitrogen in tires. Harley-Davidson neither recommends nor discourages the use of pure nitrogen to inflate tires.

Table 15. Tire Pressure Adjustment

| AMBIENT AIR TEMPERATURE | MOTORCYCLE NOT RIDDEN FOR 2 HOURS OR MORE: ADD TO FRONT AND REAR PRESSURES IN TABLE 1 | MOTORCYCLE RECENTLY RIDDEN: ADD TO FRONT AND REAR PRESSURES IN TABLE 1 |
|--------------------------------|--|---|
| 68 °F (20 °C) or less | 0 psi (0 kPa) | 5 psi (34 kPa) |
| 79 °F (26 °C) | 1 psi (7 kPa) | 6 psi (41 kPa) |
| 88 °F (31 °C) | 2 psi (14 kPa) | 7 psi (48 kPa) |
| 99 °F (37 °C) | 3 psi (21 kPa) | 8 psi (55 kPa) |
| 108 °F (42 °C) or higher | 4 psi (28 kPa) | 9 psi (62 kPa) |

Inspecting Tires

⚠ WARNING

Replace tire immediately with a Harley-Davidson specified tire when wear bars become visible or only 1/32 in (1 mm) tread depth remains. Riding with a worn tire could result in death or serious injury. (00090c)

Check tire tread:

- As part of the pre-ride checklist.
- At every scheduled service interval.

1. Inspect each tire for punctures, cuts and breaks.

Harley-Davidson tires are equipped with wear bars that run horizontally across the tread.

A tire is considered worn when the wear bars are visible or if only 0.031 in (0.8 mm) tread depth remains. A worn tire can:

- Be more easily damaged leading to tire failure.
- Provide reduced traction.
- Adversely affect stability and handling.

See Figure 11 and Figure 12. Always replace tires before the tread wear bars appear.

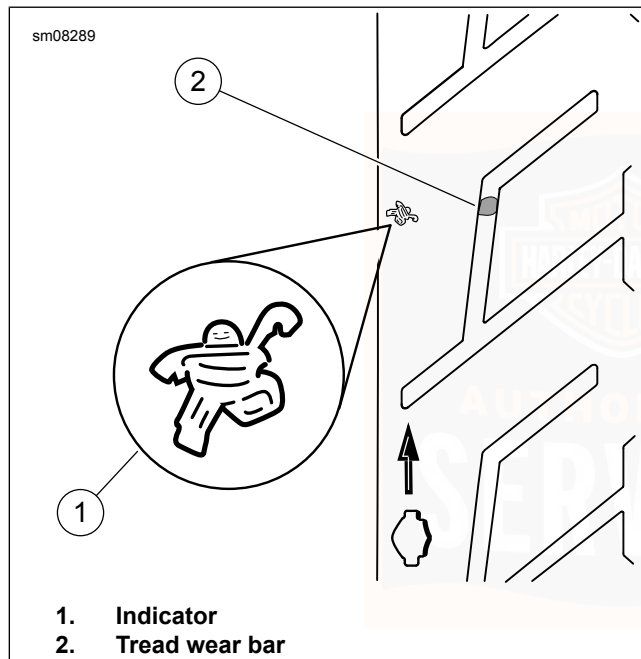


Figure 11. Tread Wear Indicator: Michelin Tires

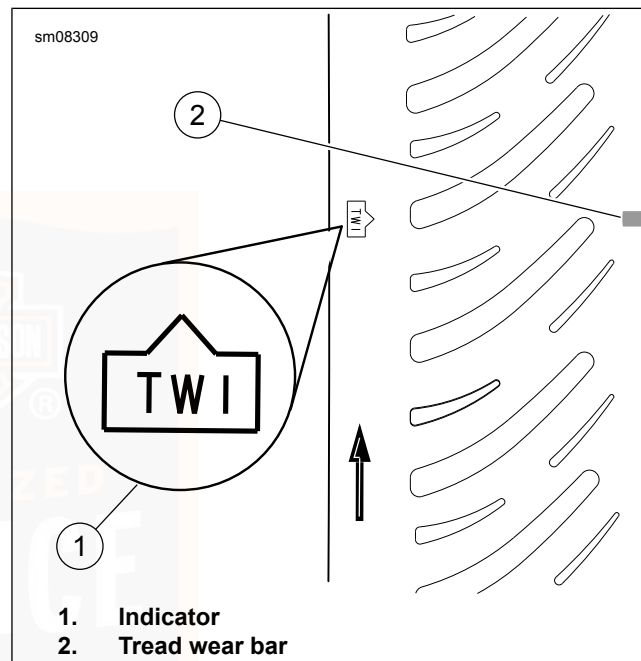


Figure 12. Tread Wear Indicator: MRF Tires

Replacing Tires

⚠ WARNING

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

Harley-Davidson recommends the use of its specified tires. Harley-Davidson vehicles are not designed for operation with non-specified tires, including snow, moped and other special-use tires. Use of non-specified tires can adversely affect stability, handling or braking and lead to loss of vehicle control, which could result in death or serious injury. (00024d)

⚠ WARNING

Only install original equipment tire valves and valve caps. A valve, or valve and cap combination, that is too long or too heavy can strike adjacent components and damage the valve, causing rapid tire deflation. Rapid tire deflation can cause loss of vehicle control, which could result in death or serious injury. (00281a)

⚠ WARNING

Replace punctured or damaged tires. In some cases, small punctures in the tread area may be repaired from within the removed 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 (129 km/h). Failure to follow this warning could lead to tire failure and result in death or serious injury. (00015b)

⚠ WARNING

Replace tire immediately with a Harley-Davidson specified tire when wear bars become visible or only 1/32 in (1 mm) tread depth remains. Riding with a worn tire could result in death or serious injury. (00090c)

New tires are needed if any of the following conditions exist (refer to for the specified replacement tires):

- Tread wear bars become visible on the tread surfaces.
- Tire cords or fabric become visible through cracked sidewalls, snags or deep cuts.
- Bumps, bulges or slits in the tire.
- Punctures, cuts, or other damage to the tire that cannot be repaired.

When installing tires on rims, do not rely on tread design to determine direction of rotation. Always be sure the rotational arrows molded into the sidewalls point in the direction of rotation when the vehicle is moving forward.

ADJUSTING MIRRORS

⚠ WARNING

Objects in mirrors are closer than they appear. Use caution when judging distance of objects in mirrors. Failure to judge correct distances could result in death or serious injury. (00033a)

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

OPERATING JIFFY STAND

Location

⚠ WARNING

Always park motorcycle on a level, firm surface. An unbalanced motorcycle can fall over, which could result in death or serious injury. (00039a)

⚠ WARNING

The jiffy stand locks when placed in the full forward (down) position with vehicle weight on it. If the jiffy stand is not in the full forward (down) position with vehicle weight on it, the vehicle can fall over which could result in death or serious injury. (00006a)

⚠ WARNING

Be sure jiffy stand is fully retracted before riding. If jiffy stand is not fully retracted, it can contact the road surface causing a loss of vehicle control, which could result in death or serious injury. (00007a)

NOTE

When parking your motorcycle on a grade, place the transmission in gear after turning off the engine.

See Figure 6. The jiffy stand is located on the left side of the motorcycle.

Jiffy Stand Switch: International Models

Some international models have a jiffy stand interlock switch.

The motorcycle will start and run with the jiffy stand down while the transmission is in neutral. If the jiffy stand is down and the transmission in gear, engaging the clutch stalls the

motorcycle. Raising the jiffy stand or putting the transmission in neutral will permit the engine to run.

While the motorcycle is in motion at speeds greater than 15km/h (10mph), lowering the jiffy stand will not stop the engine.

ADJUSTING SHOCK ABSORBERS

General

Adjust the rear shock absorber spring preload for the weight the motorcycle is to carry. Notice the adjustment settings as you turn the collar.

Adjust both shocks the same number of turns.

Adjustment

⚠ WARNING

Adjust both shock absorbers equally. Improper adjustment can adversely affect stability and handling, which could result in death or serious injury. (00036b)

NOTICE

Do not turn the shock absorber adjustment collar clockwise beyond adjustment setting 5. Doing so may result in equipment damage. (00166b)

NOTE

See Figure 13. Do not turn the preload cam from position five (5) to position one (1) or from position one (1) to position five (5).

1. Put the spanner wrench around the lower collar of the shock absorber.
 - a. **Harley-Davidson Street 500 (XG500), Harley-Davidson Street 750 (XG750):** Use SPANNER WRENCH (PART NUMBER: HD-51439).
 - b. **Street Rod (XG750A):** Use SPANNER WRENCH (PART NUMBER: HD-52313)
2. Turn the spring adjusting cam to the desired position. When returning to off-cam position, back the cams off in the opposite direction.
 - a. Turn the collar toward higher numbers to increase the preload. Refer to Table 16.
 - b. Turn the collar toward the lower numbers to decrease the preload.

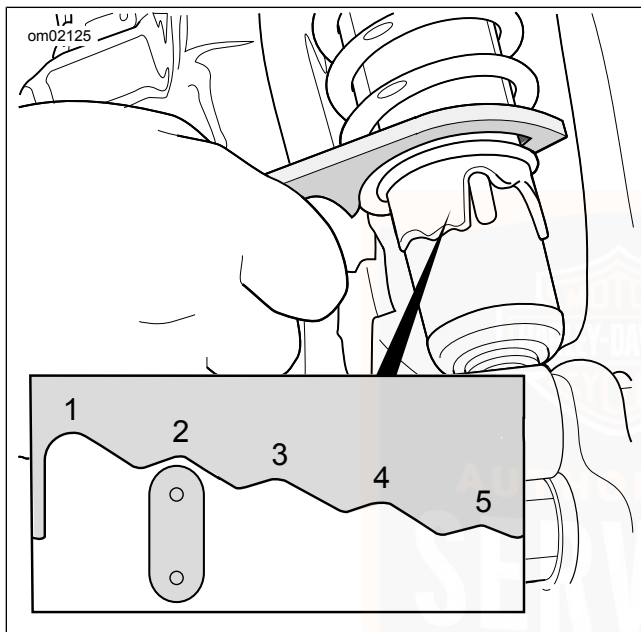


Figure 13. Shock Absorber Preload Adjustment

Table 16. Recommended Shock Preload: Harley-Davidson Street 500 (XG500), Harley-Davidson Street 750 (XG750)

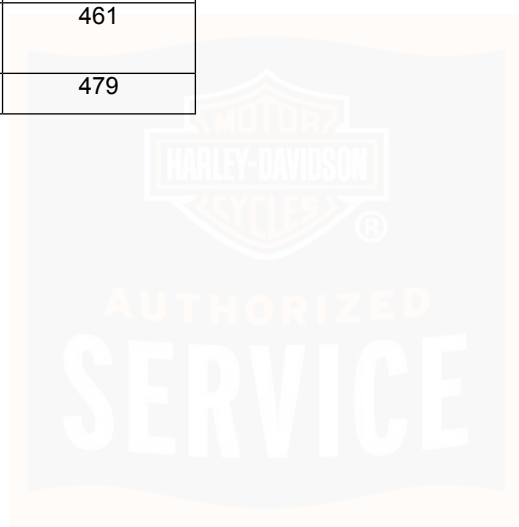
| LOAD* | POSITION |
|--|----------|
| Less than 165 lb (75 kg) | 1 |
| 165–195 lb (75–89 kg) | 2 |
| 195–225 lb (89–102 kg) | 3 |
| 225–255 lb (102–116 kg) | 4 |
| 255 lb (116 kg) to maximum added weight allowed. | 5 |
| * Add the weight of the rider, passenger, riding gear, accessories, and cargo. | |

Table 17. Recommended Shock Preload: Street Rod (XG750A)

| LOAD* | POSITION |
|--|----------|
| Less than 180 lb (82 kg) | 1 |
| 180–210 lb (82–95 kg) | 2 |
| 210–240 lb (95–109 kg) | 3 |
| 240–270 lb (109–122 kg) | 4 |
| 270 lb (122 kg) to maximum added weight allowed. | 5 |
| * Add the weight of the rider, passenger, riding gear, accessories, and cargo. | |

Table 18. Maximum Added Weight Allowed

| MODEL | MAX LOAD | |
|--|----------|-----|
| | kg | lb |
| Harley-Davidson Street [®] 500 (XG500) | 209 | 461 |
| Harley-Davidson Street [®] 750 (XG750) | 209 | 461 |
| Street Rod [™] (XG750A) | 218 | 479 |



SECURITY SYSTEM

Components

The security system consists of a control module, a hands-free antenna mounted on the motorcycle and a hands-free fob carried by the rider. The security system lamp in the speedometer face indicates when security is armed or disarmed.

See Arming and Disarming (Page 52).

Options

See a Harley-Davidson dealer or www.harley-davidson.com for security system options.

SECURITY SYSTEM FOB

Assigning Fob

See Figure 14. Key fobs are electronically assigned to the security system by a Harley-Davidson dealer. Only two fobs can be assigned at any one time.

Purchase replacement fobs from a Harley-Davidson dealer. The fobs can only be assigned to an individual motorcycle by a trained Harley-Davidson technician.

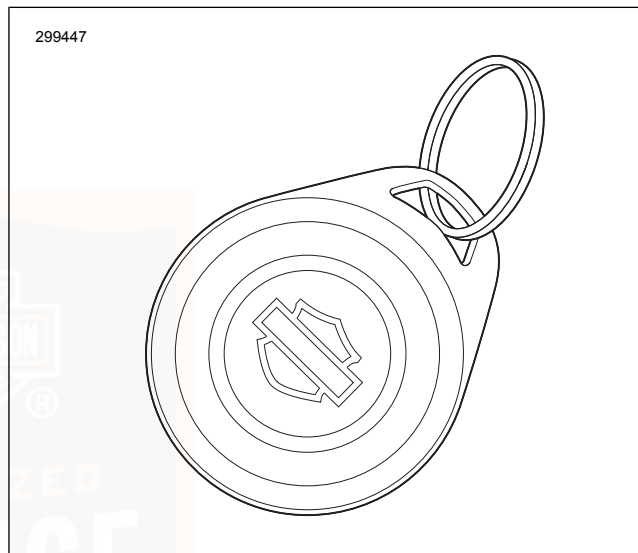


Figure 14. Fob: Security System

NOTE

- The module will arm only if the fob has been assigned by a Harley-Davidson dealer and a Personal Identification Number (PIN) has been entered in the system. Record the PIN on the Personal Information page in the front of this Owner's Manual and on the removable wallet card.

- If the fob is misplaced or fails, the rider can refer to the wallet card and use the PIN to manually disarm the system. See *Arming and Disarming (Page 52)* and *Troubleshooting (Page 56)*.
- The rider can change the PIN at any time. See *Personal Identification Number (PIN) (Page 49)*.

Fob Battery

Replace the fob battery every year.

NOTE

- The reusable label found on the fob packaging lists the serial number of the fob. For reference, affix the label to a blank **"NOTES"** page in this Owner's Manual.
- See Figure 15. The serial number of the fob is also found on the inside of the fob.

1. See Figure 15. To open the fob, turn a thin blade in the slot (1).
2. Remove the battery (2) and discard in accordance with local regulations.
3. Install a **new** battery (Panasonic CR2032 or equivalent) with the positive side down.
4. Align the two halves of the fob. Snap the halves together.

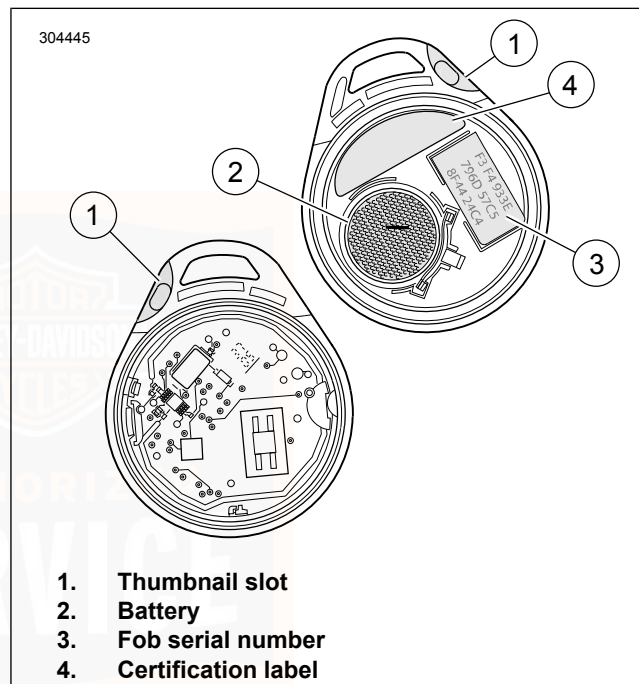


Figure 15. Fob Battery

Riding with a Fob

- Always carry the fob when riding, loading, fueling, moving, parking or servicing the motorcycle.
- Do not leave the fob attached to the handlebars or store the fob in a luggage compartment. Unintentionally leaving the fob with the motorcycle when it is parked prevents the system from activating the alarm.
- Do not ride with the fob stored in a metal case or with the fob closer than 76 mm (3.0 in) to a mobile phone, PDA, display or other electronic device. Any electromagnetic interference may prevent the fob from disarming the system.
- For added security, always lock the fork and remove the key when parked. If the fob is within range and the motorcycle is unlocked, tampering with the motorcycle will not activate the alarm.

Riding without a Fob

If the motorcycle is ridden without the fob in acceptable proximity, the odometer window temporarily displays "NO FOB." To restart a motorcycle without a fob, disarm the security system with the PIN.

PERSONAL IDENTIFICATION NUMBER (PIN)

The personal identification number (PIN) is a number that can be used to disarm the security system. Use the PIN in case the assigned fob is misplaced, fails or if the fob cannot communicate with the motorcycle because of electromagnetic interference.

A PIN is a five-digit number (1-9, no zeros).

Changing the PIN

The rider can change the PIN at any time. Refer to Table 19.

Table 19. Changing the PIN

| STEP NO. | ACTION | WAIT FOR CONFIRMATION | NOTES |
|----------|--|-----------------------|-------|
| 1 | Select a 5-digit (1 thru 9) PIN and record on the wallet card from Owner's Manual. | | |
| 2 | With an assigned fob present, turn the OFF/RUN switch to RUN . | | |

Table 19. Changing the PIN

| STEP NO. | ACTION | WAIT FOR CONFIRMATION | NOTES |
|-----------------|---|---|--------------|
| 3 | Cycle the OFF/RUN switch twice: OFF - RUN - OFF - RUN. | | |
| 4 | Press left turn signal switch 2 times . | ENTER PIN scrolls through the odometer window. | |
| 5 | Press right turn signal switch 1 time and release. | Turn signals will flash 3 times. Current PIN will appear in odometer. The first digit will be flashing. | |
| 6 | Enter first digit of new PIN by pressing and releasing the left turn signal switch until the selected digit appears. | | |
| 7 | Press right turn signal switch 1 time and release. | The new digit will replace the current in odometer window. | |
| 8 | Enter second digit of selected PIN by pressing and releasing the left turn signal switch until the selected digit is present. | | |
| 9 | Press right turn signal switch 1 time and release. | The new digit will replace the current in odometer window. | |
| 10 | Enter third digit of the selected PIN by pressing and releasing the left turn signal switch until the selected digit is present. | | |
| 11 | Press right turn switch 1 time and release. | The new digit will replace the current in odometer window. | |

Table 19. Changing the PIN

| STEP NO. | ACTION | WAIT FOR CONFIRMATION | NOTES |
|----------|--|--|--|
| 12 | Enter fourth digit of new PIN by pressing and releasing the left turn signal switch until the selected digit is present. | | |
| 13 | Press right turn switch 1 time and release. | The new digit will replace the current in odometer window. | |
| 14 | Enter fifth digit of the new PIN by pressing and releasing the left turn signal switch until the selected digit is present. | | |
| 15 | Press right turn switch 1 time and release. | The new digit will replace the current in odometer window. | |
| 16 | Push the OFF/RUN switch to OFF . | | Pushing the OFF/RUN switch to OFF stores the new PIN in the module. |

SECURITY STATUS INDICATOR

See Figure 16. The security lamp in the speedometer face indicates the status of the security system.

- **Armed:** The lamp blinks every few seconds when the system is armed.
- **Disarmed:** The lamp will turn off when the system disarms.
- **Warning/Alarm:** The lamp will stay lit when in a warning or alarm state. The system is still armed.

- **Fob Locator:** The lamp will flash quickly when attempting to locate and connect with the fob.
- **Service:** See a Harley-Davidson dealer if the lamp remains lit continuously.

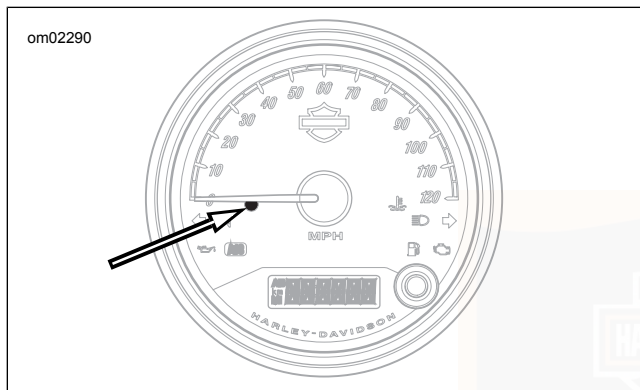


Figure 16. Security Indicator Lamp

ARMING AND DISARMING

Armed

When the motorcycle is parked, motionless and the ignition switch set to OFF, the security system arms automatically within 5 seconds. Whether the fob is present or not, the system will arm.

On arming, the turn signals flash twice and the siren (if equipped and in chirp mode) chirps twice. While armed, the indicator in the speedometer face flashes every few seconds.

52 SECURITY SYSTEM

Disarmed

Fob: An armed security system is automatically disarmed when the fob is present and the ignition switch is set to IGNITION.

NOTE

Movement like lifting the motorcycle off of its jiffy stand or a NO FOB condition, will cause the system to electronically seek the presence of the fob. If the fob is present, the system disarms. See Instruments (Page 62).

When the system disarms, the siren (if equipped and in chirp mode) chirps once and the security indicator lamp flashes fast for several seconds then turns off.

Once disarmed, the rider can ride or move the motorcycle for parking, storage or service without setting off the alarm.

Disarming with a PIN

If the fob is misplaced or if the fob fails to communicate, the system can be disarmed with the Personal Identification Number (PIN).

NOTE

If a mistake is made while entering the PIN, turn ignition OFF then back to IGNITION before another attempt.

1. See Figure 17. While the security indicator lamp is flashing, turn the ignition switch to IGNITION. The odometer window displays ENTER PIN.
2. Press and release the odometer toggle button. The first digit space flashes.
3. Input five digits of the PIN.
 - a. Press and release the odometer toggle button to cycle the digit in the PIN.
 - b. Press and hold the odometer toggle button for 1.5 seconds to enter the number. The display cycles to the next digit in the PIN.
 - c. Repeat until all five digits of the PIN have been entered.

NOTE

- If the digit cycles past 9, the digit starts over at 1.
 - If any of the digits do not match assigned PIN, the security system is activated.
4. The vehicle is disarmed and ready to start.

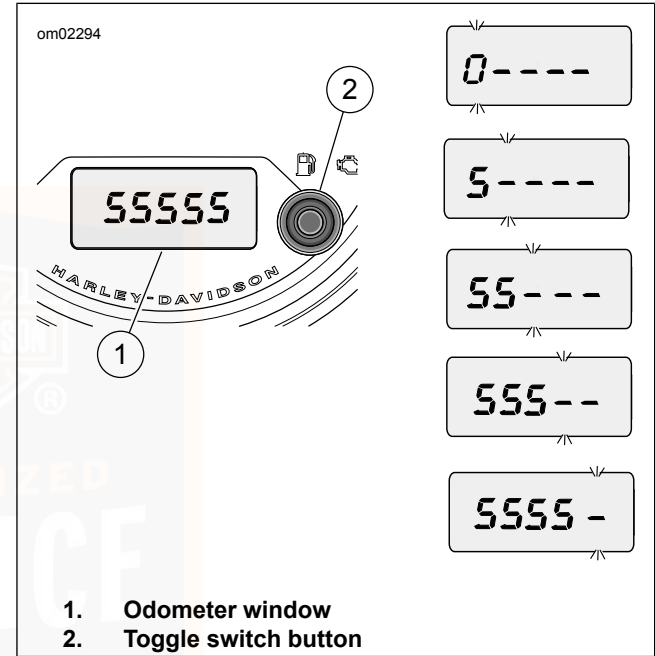


Figure 17. Inputting the PIN (Sample PIN Shown)

ALARM

Warnings

Once armed, if the motorcycle is moved or lifted up off of its jiffy stand and the fob is not present, the alarm will warn the operator with three alternate flashes of the turn signals and a chirp of the siren.

Within four seconds, if the motorcycle is back on its jiffy stand and no further motion is detected, the system will remain armed without activating the alarm.

If the motorcycle motion continues, the system will issue a second warning four seconds after the first.

NOTE

During warnings and alarms, the starter motor and the ignition circuits remain disabled.

Alarm Activation

If the security system is still detecting motion after a second warning, the system will activate the alarm.

When activated, the security system will:

- Alternately flash the four turn signals.
- Sound the siren (if equipped).

Duration: The alarm will stop within 30 seconds and if no motion is detected, the alarm will not restart.

However, if motorcycle motion continues the system will repeat the 30 second alarm and recheck for motion. The alarm will repeat this 30 second alarm cycle for five minutes (10 cycles) or until the alarm is deactivated.

NOTE

The alarm will also activate the LED, vibration or audible modes of an optionally purchased Harley-Davidson Security Pager. The range of a pager can be up to 0.5 mi (0.8 km). See a Harley-Davidson dealer for details.

Alarm Deactivation

Key fob: Bring the fob to the motorcycle. After the module identifies that the fob is present, the system will terminate the alarm.

PIN entry: Enter the PIN to deactivate the alarm. If an error is made while entering the PIN, wait until the alarm is between cycles to enter the PIN.

SIREN CHIRP MODE (CONFIRMATION)

Chirp Mode

Vehicles with a siren can be set to chirp upon arming and disarming. In chirp mode, the siren sounds two chirps when arming, and a single chirp when disarming.

Chirpless Mode

In chirpless mode, the siren does not chirp on arming or disarming.

The siren still provides warning chirps and sounds the alarm if the motorcycle is moved without the fob present.

Switching Modes

Perform the following to switch between chirp and chirpless modes.

1. With security fob present, set the ignition switch to IGNITION.
2. When the security lamp turns off, set the ignition switch to OFF.
3. When the security lamp turns off (but before the turn signals flash twice), immediately set the ignition switch to IGNITION.

4. When the security lamp turns off, immediately set the ignition switch to OFF.
5. When the security lamp turns off (but before the turn signals flash twice), immediately set the ignition switch to IGNITION. The system changes mode. The siren chirps or remains silent accordingly.

TRANSPORT MODE

It is possible to arm the security system without enabling the motion detector for one ignition cycle. The motorcycle can be moved in an armed state. The motorcycle cannot be turned on or started while in transport mode until the fob is present.

To Enter Transport Mode

1. With security fob present, set the ignition switch to IGNITION.
2. Set the ignition switch to OFF.
3. Press the odometer toggle button within 3 seconds.
4. Following a single flash, the turn signals flash three times to indicate that the system is armed in transport mode.

To Exit Transport Mode

With the fob present, set the ignition switch to ignition to disarm the system and exit transport mode.

STORAGE AND SERVICE DEPARTMENTS

Long-Term Parking

To maintain arming, store the fob beyond the range of the antenna. The antenna range is approximately 1.5 m (5 ft). Have the fob present before moving parked motorcycle.

If the motorcycle will not be operated for several months, such as during the winter season, see Storing Motorcycle (Page 86).

Service Departments

When the motorcycle is left at a Harley-Davidson dealer, there are two options:

1. Leave an assigned fob with the dealer.
2. To maintain possession of the fob, ask the dealer to disable the system for service (service mode) before leaving the dealership.

DISCONNECTING POWER

All Models

When disconnecting the battery or removing the main fuse, perform the following steps.

1. Verify that the fob is present.

2. Turn the ignition switch to IGNITION.
3. Pull the main fuse from its holder.
4. Disconnect the battery if needed.

NOTE

Place the ignition switch in the OFF position before installing the main fuse.

TROUBLESHOOTING

Security Lamp

If the security lamp stays illuminated while riding, see a Harley-Davidson dealer.

Fob

If the security system continues to actuate warnings and alarms with the fob present, check for:

1. **Electromagnetic interference:** Other electronic devices, power lines, or other electromagnetic sources can cause the security system to operate inconsistently.
 - a. Verify that the fob is not in a metal enclosure or within 3.0 in (76 mm) of any other electronic devices.
 - b. Place the fob on the seat and set the ignition switch to IGNITION. After the system disarms, return the fob to a convenient location.

- c. Move motorcycle at least 15 ft (5 m) from the spot of interference.
 2. **Discharged fob battery:** Use the PIN to disarm the system. Replace the battery. See Security System Fob (Page 47).
 3. **Damaged fob:** Use the PIN to disarm the motorcycle. Replacement fobs are available for purchase from a Harley-Davidson dealer.
- If the siren enters the self-driven mode where it is powered from the siren's internal 9 volt battery, the turn signal lamps may or may not alternately flash. If the security module activates the siren, the turn signal lamps will alternately flash. If the siren has been armed and a security event occurs, and the siren is in self-driven mode, the siren will alarm 20-30 seconds and then turn off for 5-10 seconds. This alarm cycle will be repeated ten times if the siren is in the self-driven mode.

Siren (If equipped)

- If the siren does not chirp two or three times on a valid arming command from the security module, the siren is either in the Chirpless Mode, not connected, not working, or the siren wiring was opened or shorted while the siren was disarmed.
- If the siren is armed and the internal siren battery is dead, shorted, disconnected, or has been charging for a period longer than 24 hours, the siren will respond with three chirps on arming instead of two.
- The internal siren battery may not charge if the vehicle's battery is less than 12.5 volts.

NOTES



CONTROLS, INSTRUMENTS AND SWITCHES

Clutch Hand Lever

⚠ WARNING

Do not position fingers between hand control lever and handlebar grip. Improper hand positioning can impair control lever operation and cause loss of vehicle control, which could result in death or serious injury. (00032a)

See Figure 4. The clutch hand lever (1) is operated with the fingers of the left hand. See Shifting Gears (Page 74).

Gear Shift Lever

See Figure 18. The gear shift lever is operated with the left foot. Neutral is found between first and second gear in the six speed shift pattern. See Shifting Gears (Page 74).

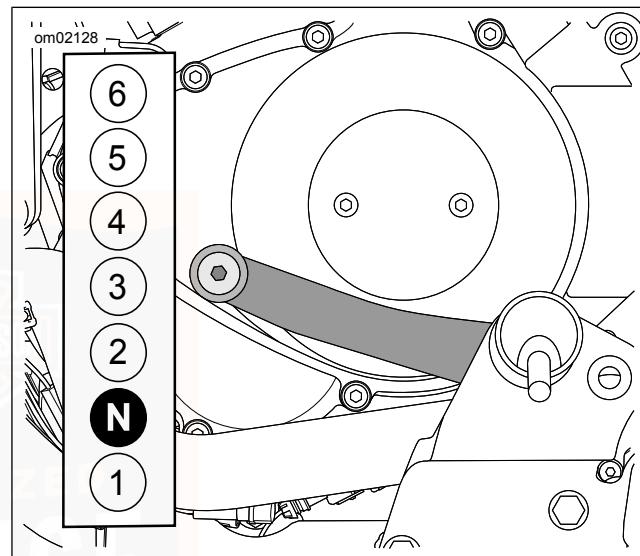


Figure 18. Shift Pattern and Shift Lever

Left-Hand Control Module

See Figure 4. Operate the switches on the left hand control module (2) with the thumb of the left hand. See Left Hand Control Switches (Page 66).

Speedometer/Odometer

See Figure 4. The current road speed is displayed in the speedometer (3). The accumulated mileage and individual trip mileage is displayed in the odometer window in the face of the speedometer. See Instruments (Page 62).

Right-Hand Control Module

See Figure 4. Operate the switches on the right hand control module (4) with the thumb of the right hand. See Right Hand Control Switches (Page 67).

Brakes

⚠ WARNING

Do not position fingers between hand control lever and handlebar grip. Improper hand positioning can impair control lever operation and cause loss of vehicle control, which could result in death or serious injury. (00032a)

Front brake lever: See Figure 4. The front brake lever (5) controls the front brake. Operate hand lever with fingers of right hand.

Rear brake pedal: See Figure 5. The rear brake pedal (6) activates the rear wheel brake. Operate rear brake pedal with right foot.

⚠ WARNING

Do not apply brake strongly enough to lock the wheel. A locked wheel will skid and can cause loss of vehicle control, which could result in death or serious injury. (00053a)

Apply brakes evenly to prevent wheels from locking up. A balance between rear and front brake is best.

Throttle Twist Grip

Accelerate: See Figure 4. Slowly twist throttle twist grip (6) backward (toward rear of motorcycle) to open the throttle.

Decelerate: Slowly twist throttle control grip forward (toward the front) to close the throttle.

Ignition Switch

NOTE

The headlamp and tail lamps operate when the switch is in the IGNITION position.

See Figure 4. Unlock the ignition switch (7) with the ignition key. Rotate the switch to the desired position. Refer to Table 20.

To start the engine, see Starting the Engine (Page 68).

Fork Lock

NOTICE

Turn the ignition switch to the OFF position before locking the motorcycle. Leaving the switch in the ACC position will keep the instrument lights on and result in a discharged battery. (00492b)

NOTICE

Protect your vehicle against theft. After parking your motorcycle, lock the steering head and ignition switch. Failure to lock your motorcycle can result in theft and/or equipment damage. (00491c)

See Figure 19. Park your motorcycle. Use the fork lock to discourage theft or unauthorized use. Refer to Table 20.

1. Turn the fork full left.
2. Insert the key into the switch.
3. Push the key in and turn to LOCK.
4. Remove the key.
5. To unlock fork, insert key, push and turn to OFF position. Remove key.

6. Check steering for proper operation by turning the handlebars through the full operating range. Handlebars should turn smoothly without binding.

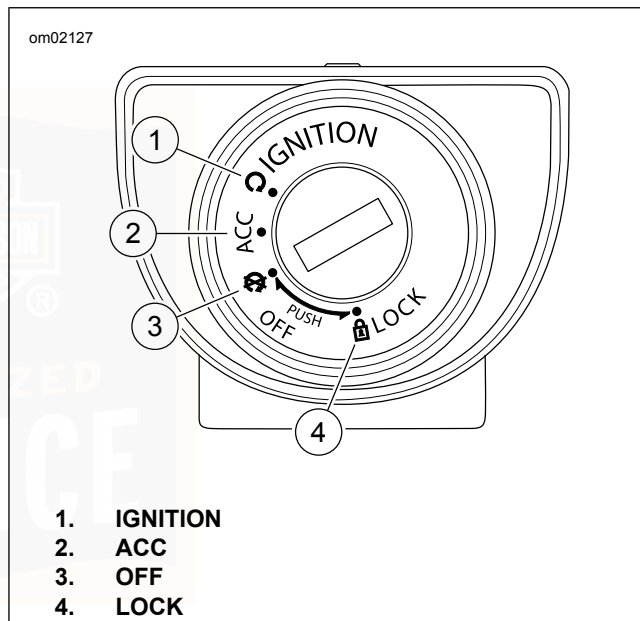






Figure 19. Ignition and Fork Lock Switch

Table 20. Ignition Switch and Fork Lock

| SWITCH | NAME | FUNCTION |
|---|----------|--|
| ACC | ACC | Turns on accessories. Instrument lamps are on. Brake lamp and horn can be activated. |
|  | IGNITION | Turns on ignition, lamps and accessories. The engine will start and run. |
|  | LOCK | Front fork locked. |
|  | OFF | Turns off ignition, lamps and accessories. Motorcycle is turned off and cannot be started. |
|  | PUSH | Push to lock the front fork. |

INSTRUMENTS

Speedometer

See Figure 20. The speedometer is calibrated in miles per hour, (mph) (1), kilometer per hour (km/h) (3) or in dual miles per hour (mph) and kilometers per hour (km/h) (2).

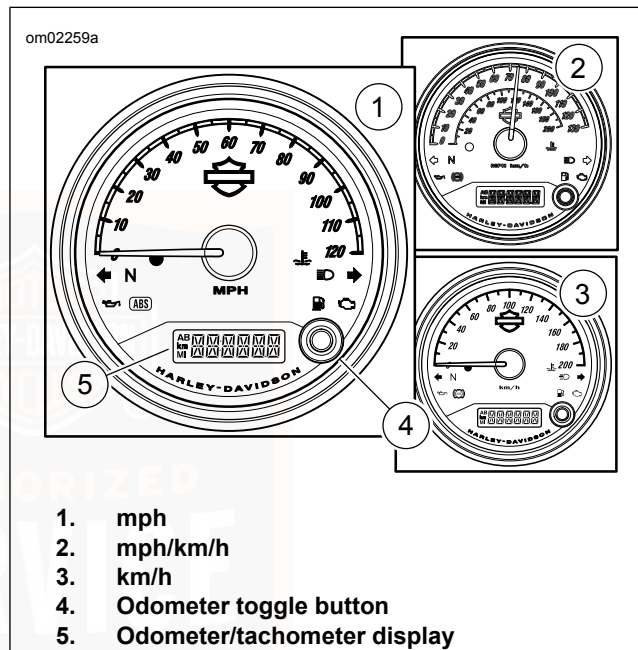


Figure 20. Speedometer/Tachometer

Gear/Tachometer

See Figure 21. With the ignition on, press and release the toggle switch button to toggle through the odometer displays to the gear/tachometer display (5). The display shows the

current gear selection and the engine speed in revolutions per minute (rpm).

NOTE

The gear selection number only changes to match the current gear when the motorcycle is moving.

Odometer: Mileage, Trip A, Trip B

See Figure 21. With the ignition on, press and release the toggle switch button (2) to toggle between the odometer (1), trip odometer A (3) and trip odometer B (4).

To reset a trip odometer to zero, press and hold the toggle switch button.

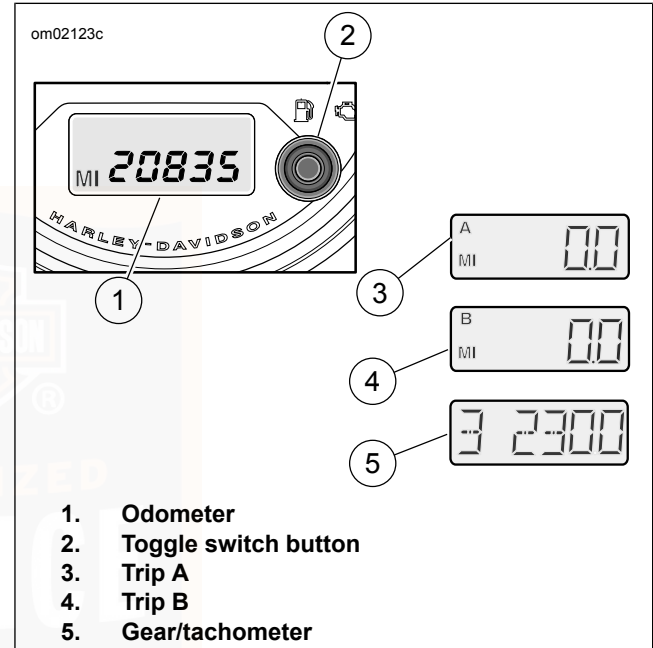


Figure 21. Gear/Tachometer/Odometer

Odometer Messages

Low Fuel Trip Meter (LF): See Figure 22. When the low fuel indicator illuminates in the speedometer face, a low fuel

message (LF) (1) appears in the odometer window with a mileage number. See Indicators (Page 70).

The displayed mileage is not the remaining fuel mileage, it is a count up display. The displayed LF mileage indicates the point the low fuel indicator activated.

Tip (tiP): See Figure 22. When the motorcycle is tipped over, the work "tiP" (2) appears in the odometer window. The engine does not restart until the ignition is reset.

To reset, pick up the motorcycle and cycle the ignition switch OFF-IGNITION.

Fob Low Battery (FOB LOW BATT): See Figure 22. If the battery in the security fob is low, the message "FOB LOW BATT" (3) will scroll in the odometer window. Change the fob battery. See Security System Fob (Page 47)

Transport Mode Active (tSPORT MODE ACTIVE): See Figure 22. The security system is in the transport mode when the "tSPORT MODE ACTIVE" message (4) will scroll in the odometer window. See Transport Mode (Page 55).

No Fob (NO FOB): See Figure 22. When the system cannot communicate with the fob, this message (5) is displayed. See Troubleshooting (Page 56).

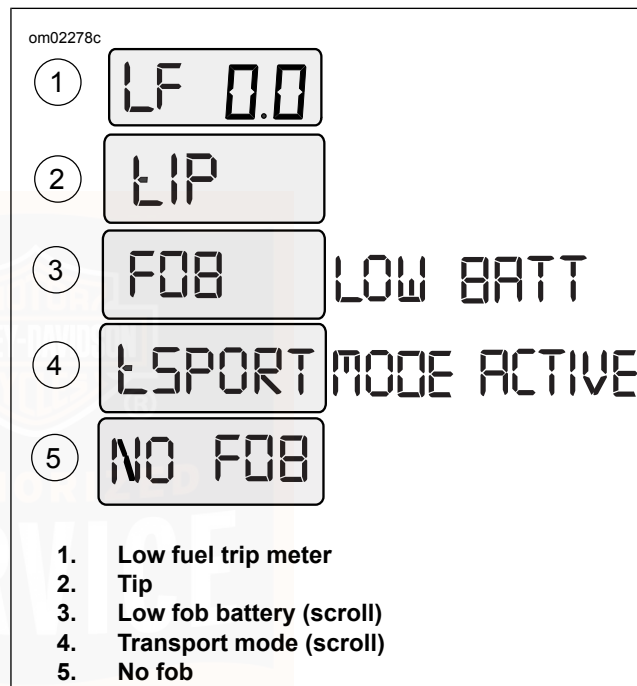


Figure 22. Odometer Window Messages

Clock

See Figure 23. With the ignition on, press and release the toggle switch button to toggle through the odometer displays to the time display.

To set the time:

1. Press and hold the toggle switch button until 12h (2) begins blinking in the odometer display. Release the toggle.
2. Press and release the toggle once (3) to advance to a blinking 24h or military style display. Each press and release of the toggle, switches the display between 12h and 24h.
3. When the desired time style is displayed, press and hold the toggle (4) until the hours are blinking.
4. Press and release the toggle repeatedly (5) to advance the hours.
5. When the correct hour is displayed, press and hold the toggle until the minutes (6) start blinking.
6. Press and release the toggle switch button repeatedly to advance the minutes display (7).
7. When the correct minute is displayed, press and hold the toggle until the minutes stop blinking.

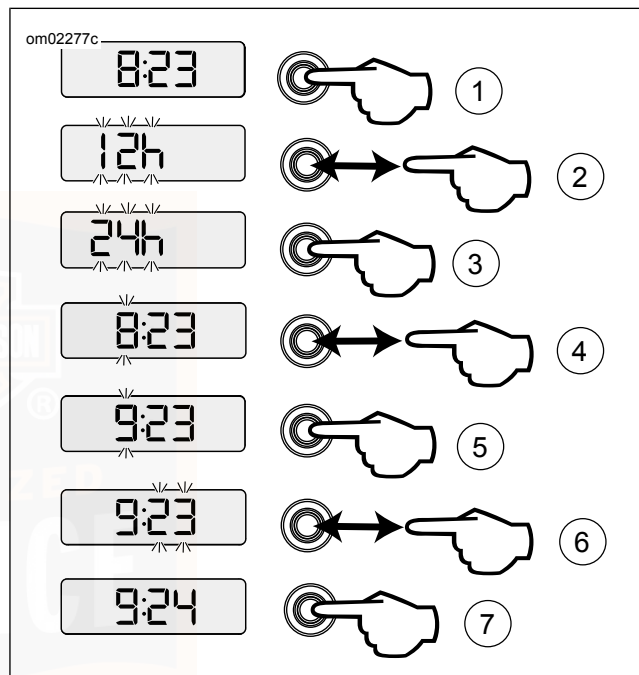


Figure 23. Setting the Clock

LEFT HAND CONTROL SWITCHES

High Beam

WARNING

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)

See Figure 24. Press the high beam switch (1) to select the headlamp high beam. The high beam indicator illuminates when the high beam is on. Refer to Table 21.

Low Beam

See Figure 24. Press the low beam switch (2) to select the headlamp low beam. Refer to Table 21.

Left Turn

See Figure 24. Press the turn signal switch left to activate the left turn signal. The signal flashes until it is manually canceled. To cancel, push the center button to center detent. Refer to Table 21.

Right Turn

See Figure 24. Press the turn signal switch right to activate the right turn signal. The signal flashes until it is manually canceled. To cancel, push the center button to center detent. Refer to Table 21.

Horn

See Figure 24. Press the horn switch to sound the horn. Refer to Table 21.

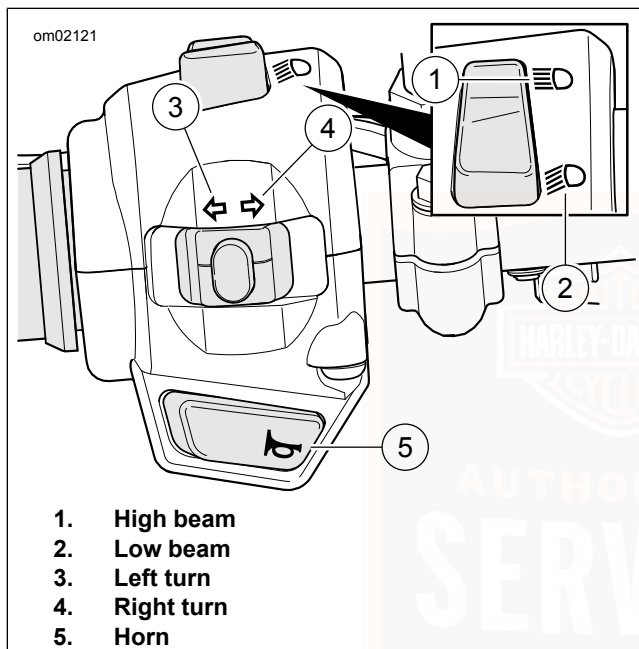


Figure 24. Left Hand Control Switches

Table 21. Left Hand Control Switches

| SWITCH | NAME | FUNCTION |
|--------|------------|--|
| | High beam | Press the switch to switch the headlamp to high beam. |
| | Low beam | Press the switch to switch the headlamp to low beam. |
| | Left turn | Press the switch to the left to activate the left turn signal. |
| | Right turn | Press the switch to the right to activate the right turn signal. |
| | Horn | Press the switch to sound the horn. |

RIGHT HAND CONTROL SWITCHES

Off

See Figure 25. Press the off/run switch to off (1) to turn off the engine. With the off/run switch in the off position, the engine cannot start or run. With the off/run switch in the run position, the engine starts and runs. Refer to Table 22.

Run

See Figure 25. Press the off/run switch to run (2) to turn on the electrical circuits to the engine. With the off/run switch in the run (2) position, the engine starts and runs. Refer to Table 22.

Start

See Figure 25. With the off/run switch in run, press the start switch (3) to start the engine. Refer to Table 22.

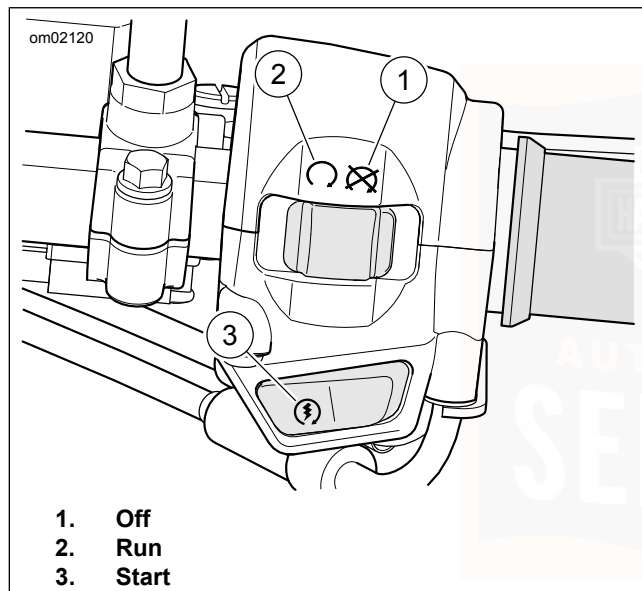


Figure 25. Right Hand Control Switches

Table 22. Right Hand Control Switches

| SWITCH | NAME | FUNCTION |
|--------|-------|---|
| | Run | Press the switch to the run position to allow the engine to run. |
| | Off | Press the switch to the off position to stop the engine or to prevent the engine from starting. |
| | Start | Press the switch to start the engine. |

STARTING THE ENGINE

⚠ WARNING

Before starting engine, be sure throttle control will snap back to idle position when released. A throttle control that prevents engine from automatically returning to idle can lead to loss of control, which could result in death or serious injury. (00390a)

1. Verify that the motorcycle is in neutral.
2. Press the engine off/run switch to the run position.

NOTE

The engine lamp will light for approximately 4 seconds and the fuel pump will run for approximately 2 seconds.

3. Turn ignition switch to IGNITION. Do not twist the throttle.
4. Squeeze the clutch lever in against the handgrip.

NOTE

If engine does not start, verify engine off/run switch is in run position.

5. Press the start switch.

NOTICE

The engine should be allowed to run slowly for 30-60 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. (00181b)

6. Raise the jiffy stand before beginning forward movement.

STARTING AFTER TIPOVER

⚠ WARNING

If tip occurs, check all controls for proper operation. Restricted control movement can adversely affect the performance of the brakes, clutch or ability to shift, which could result in loss of vehicle control and death or serious injury. (00350a)

After a tipover, reset the ignition before starting the engine.

1. Set the motorcycle upright.
2. Reset the ignition by turning the ignition switch OFF-IGNITION.

STOPPING THE ENGINE

1. Push the off/run switch to off.
2. Turn ignition switch to off.

NOTE

If the engine stalls or stops for any reason, turn the ignition switch off to prevent battery discharge.

INDICATORS

See Figure 26. Indicator lights in the speedometer face illuminate to indicate the status of the associated motorcycle function. Refer to Table 23.

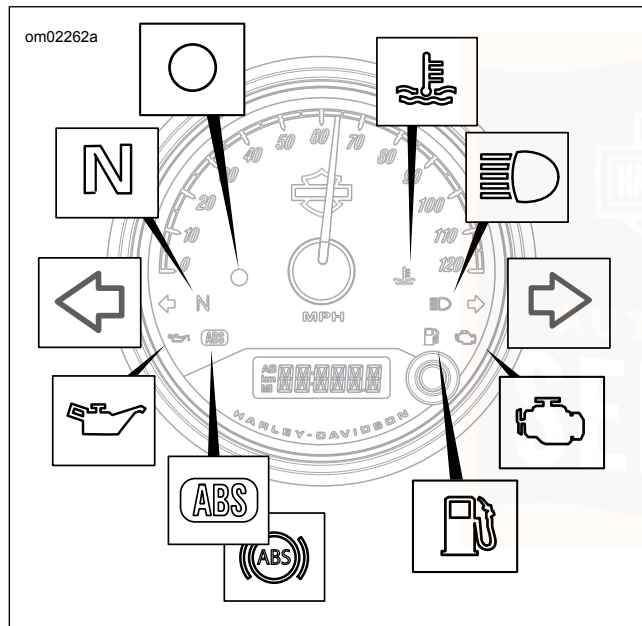





Figure 26. Indicator Lights

Table 23. Indicator Lights

| ICON | NAME | FUNCTION |
|------|---------------------|---|
| | Security system | <ul style="list-style-type: none"> A flash every three seconds indicates that the security system is armed. Disarmed, the lamp remains illuminated for four seconds before turning off. If continuously illuminated, see a Harley-Davidson dealer. |
| | Neutral | Illuminates when transmission is in neutral. |
| | Left turn | Flashes when turn signal switch is activated for a left turn. Push center button on turn signal switch to cancel. |
| | Oil pressure | If indicator remains lit, stop engine and check oil level. |
| | ABS | Flashes until 3 mph (5 km/h) and ABS becomes operational. |
| | Coolant temperature | Illuminates when temperature exceeds a safe maximum. |
| | High beam | Illuminates when high beams are on. To switch to low beam, press the low beam switch. |

Table 23. Indicator Lights

| ICON | NAME | FUNCTION |
|---|--------------|---|
|  | Right turn | Flashes when turn signal switch is activated for a right turn. Push center button on turn signal switch to cancel. |
|  | Check engine | <ul style="list-style-type: none"> • Illuminates briefly when ignition switch is in IGNITION or ACC position. • If indicator illuminates at any other time, see a Harley-Davidson dealer for diagnostic assistance. |
|  | Low fuel | <ul style="list-style-type: none"> • Illuminates when fuel level is at approximately 0.8 USgal (3.1 L) or less. Fill with recommended fuel as soon as possible. • May remain illuminated up to 3 minutes after refueling. • See a Harley-Davidson dealer if lamp flashes continuously. |

BRAKE SYSTEM

Front Brake Lever

⚠ WARNING

Do not position fingers between hand control lever and handlebar grip. Improper hand positioning can impair control lever operation and cause loss of vehicle control, which could result in death or serious injury. (00032a)

The front brake hand lever controls the front wheel brake and is located on the right handlebar. Operate the hand lever with the fingers of the right hand.

Rear Brake Pedal

The rear brake pedal controls the rear wheel brake and is located on the right side. Operate the rear brake pedal with the right foot.

Non-ABS Brake System

Apply brakes uniformly and evenly to prevent wheels from locking. Use front and rear brakes equally for best results.

▲ WARNING

Do not apply brake strongly enough to lock the wheel. A locked wheel will skid and can cause loss of vehicle control, which could result in death or serious injury. (00053a)

Anti-lock Brake System (ABS)

The optional Harley-Davidson anti-lock brake system assists the rider in maintaining control when braking in a straight-line emergency situation. ABS operates independently on front and rear brakes to keep the wheels rolling and prevent uncontrolled wheel lock-ups either on dry pavement or on slick surfaces such as gravel, leaves or when riding in wet conditions.

How ABS Works

The ABS monitors sensors at the front and rear wheels to determine wheel speed. If the system detects one or both wheels are slowing down too quickly, which indicates they are close to locking, the ABS reacts. If the deceleration rate does not match a criteria stored in memory, the ABS also reacts. The system rapidly opens and closes valves to modulate the brake caliper pressure utilizing only the brake lever/pedal pressure being applied by the rider. During ABS activation, the system provides the electronic equivalent of

manually pumping the brakes. ABS is capable of cycling up to seven times per second.

The rider will recognize ABS activation by the slight pulsing sensation in the hand lever or the rear brake pedal. The pulsing sensation may also be accompanied by a clicking sound from the ABS module. Both are the result of normal operation. Refer to Table 24.

For more information visit www.harley-davidson.com/abs.

How To Use ABS

While an advantage in emergency braking, ABS is not a substitute for safe riding. The safest way to stop a motorcycle is upright with both wheels straight.

Harley-Davidson ABS is a manual assist system. When stopping in an emergency stopping situation, maintain pressure on the brakes through all ABS events. Do not modulate or "pump" the brake controls. The wheels will not lock until the end of the stop when motorcycle speed reaches approximately 4 mph (6 km/h) and ABS is no longer needed.

⚠ WARNING

ABS cannot prevent lockup of rear wheel due to engine braking. ABS will not aid in cornering or on loose/uneven surfaces. A locked wheel will skid and can cause loss of vehicle control, which could result in death or serious injury. (00362a)

ABS: Tires and Wheels

Motorcycles equipped with ABS must always use Harley-Davidson tires and wheels. The ABS monitors the rotational speed of the wheels through individual wheel speed sensors. Changing to different diameter wheels or different-sized tires can alter the rotational speed. This can upset the calibration of the ABS and have an adverse effect on its ability to detect and prevent uncontrolled wheel lockups. Operating at tire pressures other than those specified in Checking Tire Pressure and Inspecting Tires (Page 37) can reduce ABS braking performance.

Table 24. ABS Symptoms and Conditions

| SYMPTOM | CONDITION |
|--|---|
| ABS lamp continuously lit | ABS malfunction detected. See a Harley-Davidson dealer for service. |
| ABS lamp flashing | This indicates a normal self-diagnostics process when the motorcycle is first turned on and the speed is under 3 mph (5 km/h). ABS is not operational until the lamp turns off. If the lamp continues flashing at speeds greater than 3 mph (5 km/h), see a Harley-Davidson dealer for service. |
| Pulsing brake lever or pedal during an ABS event | Normal condition. |
| Clicking sound during an ABS event | Normal condition. |
| "Surge" sensation while braking | Normal condition. This is most noticeable when braking with one brake (front only or rear only). Result of a reduction in deceleration which can be caused by cracks or bumps in road, engine braking (high engine RPMs causing the rear wheel to slow down), hard braking at slow speeds, and other conditions. This is due to ABS modulating caliper brake pressure to prevent uncontrolled wheel lock. |

Table 24. ABS Symptoms and Conditions

| SYMPTOM | CONDITION |
|------------------------------------|---|
| Temporarily stiff rear brake pedal | Normal condition. Engine braking (high engine RPMs causing the rear wheel to slow down) or down shifting can activate ABS. If applying the rear brake at the same time or immediately after, the ABS may be closing a valve to prevent pressure to the rear brake. This is due to ABS modulating caliper brake pressure to prevent uncontrolled wheel lock. |
| Tire chirp | Normal condition. Depending on surface, tire can chirp without locking the wheel. |
| Black mark on pavement | Normal condition. Depending on surface, tire can leave a black mark without locking the wheel. |
| Wheel lock at low speed | Normal condition. ABS does not activate on front wheel below 3 mph (5 km/h) or on rear wheel below 5 mph (8 km/h). |

SHIFTING GEARS

Finding Neutral

NOTE

If the gears do not disengage when the engine is off, with the clutch engaged rock the motorcycle backward and forward while pressing or lifting the shift lever.

Neutral is between first and second gear. Select neutral by either a half lift from first gear or a half press from second gear.

Starting from a Stop

NOTICE

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

NOTE

Partially open the throttle so the engine does not drag when the clutch lever is released.

1. With the engine running and the jiffy stand retracted, squeeze the clutch lever in against the handlebar grip to disengage the clutch.

NOTE

Always start forward motion in first gear.

2. Press the gear shift lever down to end of its travel and release. The transmission is now in first gear.
3. Ease out the clutch lever and at the same time, gradually open the throttle.

Upshift (Acceleration)

NOTE

Disengage the clutch completely before each gear change.

See Figure 27. Shift to the next higher gear when the motorcycle reaches the shifting speed. Refer to Table 25.

1. Close the throttle.
2. Slowly pull clutch hand lever in against handlebar grip to fully disengage clutch.
3. Lift the gear shift lever up to the end of its travel and release.
4. Ease out the clutch lever and, at the same time, gradually open the throttle.
5. Repeat the previous steps to engage remaining gears.

Table 25. Recommended Upshift Speeds

| GEAR CHANGE | mph | km/h |
|-----------------|-----|------|
| 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 |

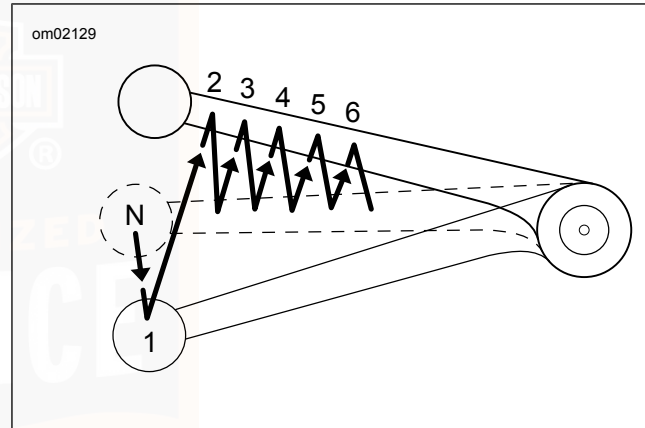


Figure 27. Upshift Pattern

Downshift (Deceleration)

▲ WARNING

Do not downshift at speeds higher than those listed. 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. (00045b)

See Figure 28. When engine speed decreases, as when climbing a hill or slowing for a turn, shift to the next lower gear. Refer to Table 26.

1. Close the throttle.
2. Slowly pull clutch hand lever in against handlebar grip to fully disengage clutch.
3. Press the gear shift lever down to the end of its travel and release.
4. Ease out the clutch lever and gradually open the throttle.
5. Repeat the previous steps to engage remaining gears.

NOTICE

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

The gear shifter mechanism permits shifting the transmission to neutral from either first or second gear.

Table 26. Recommended Downshift Speeds

| GEAR CHANGE | mph | km/h |
|-----------------|-----|------|
| 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 |

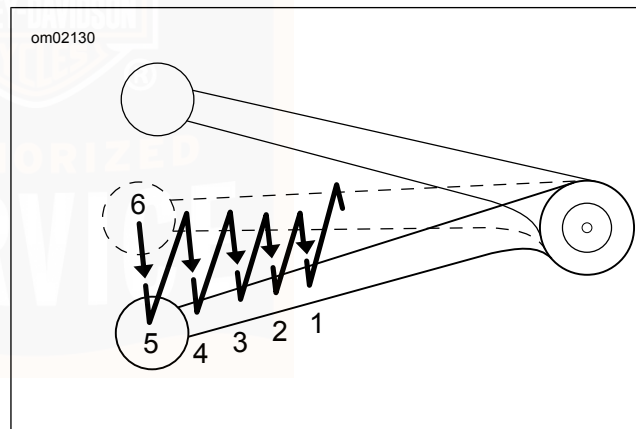


Figure 28. Downshift Pattern

GENUINE MOTOR PARTS AND ACCESSORIES

Stop at your Harley-Davidson dealer to pick up a copy of the Genuine Motor Parts and Accessories catalog or go to **www.harley-davidson.com** to view thousands of Genuine Motor Accessories that are available for Harley-Davidson motorcycles.

The website includes the following tools and resources for accessorizing and personalizing your motorcycle.

Online Catalog

The full Genuine Motor Parts and Accessories catalog is available online in PDF format. The catalog includes hundreds of pages of Harley-Davidson accessories and maintenance products.

Shop for Your Bike

Browse through categories of accessories and options available specifically for your motorcycle. View product descriptions, pricing, fitment and online instruction sheets for many of the available products.

CLEANING AND GENERAL CARE

- Harley-Davidson cleaning products are tested extensively for use on motorcycle surfaces. These products are formulated to be compatible with one another. See a Harley-Davidson dealer to purchase recommended cleaning products. Refer to Table 27 and Table 28.
- Care, cleaning and protection of the vehicle surfaces is the responsibility of the owner.
- Clean and protect the cosmetic surfaces on your motorcycle as often as possible to inhibit rust and corrosion.
- Some painted finishes and other surfaces may be scratched if gravel, dirt or grime are rubbed across the surface during washing. Use clean towels and avoid rubbing sediment across gloss finishes.
- Do not use paper towels, cloth diapers or other materials with nylon fibers which can cause fine scratches to surfaces.
- For repair of scratched surfaces, see a Harley-Davidson dealer.

⚠ WARNING

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

▲ WARNING

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)

NOTICE

Do not use a pressure washer to clean motorcycle. Using a pressure washer can result in equipment damage. (00489c)

NOTICE

Use of abrasive products or powered buffing equipment will cause permanent cosmetic damage to body panels. Use only recommended products and techniques outlined in this manual to avoid damaging body panels. (00245b)

Cleaning Wheels and Tires

NOTE

Corrosion to wheels is not considered to be a defect in materials or workmanship.

- Wheels can corrode or be cosmetically damaged if they are not properly cleaned, polished and preserved.
- Harley-Davidson recommends that wheels be cared for weekly.
- Keep wheels clean from harsh chemicals, acid-based wheel cleaners, salt, and accumulated brake dust.
- After washing wheels with WHEEL & TIRE CLEANER, use the polish and sealing products according to the type of wheels on your motorcycle. Refer to Table 27.

Radiator

See Cleaning Radiator (Page 105) for important information regarding the cleaning of the radiator.

RECOMMENDED CLEANING PRODUCTS

The following products are recommended for Harley-Davidson motorcycles, parts and accessories. Your motorcycle may not have all the components shown in the tables.

Table 27. Recommended Cleaning and Care Products

| PRODUCT PART NO. | PURPOSE | FRAME | BODY PANELS | WHEELS | DENIM FINISH | OTHER |
|--|--|---------------|------------------------|---------------|-------------------------|---------------------------|
| BARE ALUMINUM WHEEL PROTECTANT - INDIVIDU- AL WIPES 93600063 | Corrosion control for bare aluminum surfaces. | No | No | Yes | No | "Burst" collection |
| BARE METAL POLISH 93600028 (U.S.) 93600083 (Non-U.S.) | Polishes non-clear coated polished aluminum or polished stainless steel surfaces. | As applicable | | | | |
| BLACK LEATHER REJUVENATOR 93600033 (U.S.) 93600081 (Non-U.S.) | Rejuvenates black leather products so they look brand new. | No | No | No | No | Black leather goods |
| BOOT MARK REMOVER 93600001 (U.S.) 93600069 (Non-U.S.) | Removes boot marks from chrome exhaust components. | No | No | No | No | Exhaust system |
| BUG REMOVER 93600022 (U.S.) 93600075 (Non-U.S.) | Removes bugs from metal, plastic or painted surfaces. Also available as individual wipes (97400-10). | Yes | Yes | Yes | Yes | |
| CHROME CLEAN & SHINE 93600031 (U.S.) 93600082 (Non-U.S.) | Shines chrome-plated surfaces and cleans brushed aluminum or stainless steel surfaces. | As applicable | | | | |
| DENIM PAINT CLEANER 93600064 (U.S.) 93600078 (Non-U.S.) | Waterless quick cleaner and detailer. | Yes | Yes | Yes | Yes | |

Table 27. Recommended Cleaning and Care Products

| PRODUCT PART NO. | PURPOSE | FRAME | BODY PANELS | WHEELS | DENIM FINISH | OTHER |
|--|--|--------------|------------------------|---------------|-------------------------|-----------------------|
| ENGINE BRIGHTENER 93600002 (U.S.) 93600068 (Non-U.S.) | Rejuvenates wrinkle black engine finish. | No | No | No | No | Wrinkle black engines |
| GLAZE POLY SEALANT 93600026 (U.S.) 93600079 (Non-U.S.) | Provides a protective barrier for glossy paint surfaces and chrome. | Yes | Yes | As applicable | No | |
| GLOSS DETAILER 93600062 (U.S.) 93600073 (Non-U.S.) | Produces high gloss with UV protection. Allows chrome to breathe, unlike wax. Good for windshields. Also available as individual wipes (97401-10). | Yes | Yes | Yes | No | |
| HARLEY TRAVEL CARE KIT 93600007 | Travel size cleaning and care products. (Not for use on denim finishes.) | Yes | Yes | Yes | No | |
| LEATHER PROTECTANT 93600034 (U.S.) 93600080 (Non-U.S.) | Weatherproofs and preserves leather products. | No | No | No | No | Leather goods |
| QUICK WASH 93600012 (U.S.) 93600071 (Non-U.S.) | A quick wash for a lightly soiled motorcycle. Cleans all surfaces, sheeting action prevents spots. | Yes | Yes | Yes | Yes | |
| SCRATCH & SWIRL REPAIR 93600025 (U.S.) 93600074 (Non-U.S.) | Removes fine scratches and swirls. | Yes | Yes | No | No | |

Table 27. Recommended Cleaning and Care Products

| PRODUCT PART NO. | PURPOSE | FRAME | BODY PANELS | WHEELS | DENIM FINISH | OTHER |
|--|---|--------------|------------------------|---------------|-------------------------|---|
| SEAT, SADDLEBAG & TRIM CLEANER 93600010 | Cleans and conditions vinyl, leather and plastic. Use on seats, saddlebags, inner fairings and any other trim. | No | No | No | No | Seats, saddlebags and trim |
| SPRAY CLEANER & POLISH 93600029 (U.S.) 93600084 (Non-U.S.) | Aerosol quick cleaner and detailer. Reduces static attraction to dust. Works great for removing bugs. | Yes | Yes | Yes | No | |
| SUNWASH BIKE SOAP 93600023 (U.S.) 93600077 (Non-U.S.) | Thorough washing of all surfaces with a wash mitt. Reduces hard water spots when washing a motorcycle in the sun. | Yes | Yes | Yes | Yes | |
| WHEEL & TIRE CLEANER 93600024 (U.S.) 93600076 (Non-U.S.) | Removes brake dust and road grime from wheels, tires and whitewalls. Do not use on frames or anodized parts. | No | No | Yes | No | Black-coated exhaust pipes and mufflers |
| WINDSHIELD CLEANER 93600067 | Quick windshield cleaner in convenient single use wipe. | Yes | Yes | No | No | Windshield |

Table 28. Recommended Surface Care Products

| PRODUCT PART NO. | PURPOSE |
|--|---|
| BUG EATER SPONGE 93600110 | When paired with water and BUG REMOVER, the BUG EATER SPONGE breaks down and dissolves baked on bugs and road grime. |
| CLEANING BRUSH KIT 94844-10 | Brush kit for detailing your motorcycle. |
| DETAILING SWABS 93600107 | Large cotton swabs for cleaning crevices and detailed surfaces. |
| DISPOSABLE DETAILING SOFT CLOTH 93600114 | Non-absorbent cloth for applying and buffing SWIRL & SCRATCH REPAIR and GLAZE POLY SEALANT to painted surfaces or chrome. |
| HARLEY WASH BUCKET 94811-10 | Wash bucket with apron to hold your supplies. Includes GRIT GUARD insert. |
| HOG BLASTER MOTORCYCLE DRYER 94651-09 (120 V) 94865-09 (220 V) | Blows a stream of warm dry filtered air. Reduces streaks and water spots. |
| MICROFIBER DETAILING CLOTH 94663-02 | Highly absorbent detailing cloth for polishing and sealing. Contains no nylon fibers. |
| SYNTHETIC DRYING CHAMOIS 94791-01 | Extra-absorbent, non-streaking synthetic towel for drying. Dampen towel and wring out before using for greatest absorbency. |
| WASH MITT 94760-99 | Absorbent wool-blended washing mitten. |
| WHEEL & SPOKE BRUSH 43078-99 | Cone-shaped scrub brush for wheels. |

Table 29. Wheel Polish and Sealing Products

| WHEELS | PRODUCT | DESCRIPTION |
|--------------------------------------|--------------------------------|---|
| Anodized | GLAZE POLY SEALANT | Cleans surface, removes fine scratches. Provides a breathable sealant against acid, chemicals, salt and brake dust. |
| | GLOSS DETAILER | Seals and protects against harsh chemicals, salt and other sediments to prevent corrosion. |
| Bare aluminum | BARE ALUMINUM WHEEL PROTECTANT | Creates a protective coating for bare aluminum wheels to prevent oxidation. Individual wipe. |
| Chrome | CHROME CLEAN & SHINE | Non-abrasive cleaner to brighten chrome wheels. |
| | GLOSS DETAILER | Seals and protects against harsh chemicals, salt and other sediments to prevent oxidation. |
| Polished aluminum or stainless steel | BARE METAL POLISH | Microabrasive polish to refurbish polished wheels. Do not use on chrome. |

WASHING THE MOTORCYCLE

Use only recommended cleaning and care products. Refer to Table 27 and Table 28.

NOTE

During rinsing and washing, avoid direct spray on electrical components and any luggage or saddlebag sealing areas (if equipped). Avoid spraying water under leather saddlebag covers (if equipped).

Preparation

1. Allow motorcycle to cool before rinsing or washing. Spraying water on hot surfaces can leave water spots and mineral deposits.
2. Rinse the motorcycle from the bottom up.
3. To loosen dried bugs or hardened dirt, allow surfaces to soak under a damp towel.

Cleaning Wheels and Tires

1. Rinse wheel and tire surfaces. Avoid splashing brake dust on chrome or painted parts.
2. Apply WHEEL & TIRE CLEANER. Allow cleaner to set for one minute.
3. Clean the wheel with a BUG EATER SPONGE or WHEEL & SPOKE BRUSH. Thoroughly scrub all brake dust and other sediments off the wheel. Accumulated brake dust can trap moisture and dirt, which leads to wheel corrosion.
4. Rinse well.

Washing the Motorcycle

NOTE

See the appropriate instructions in this section for cleaning leather, denim (flat) finishes, windshields or other special surfaces.

1. If necessary, use BUG REMOVER to remove bug splatters.
 - a. Rinse the affected surfaces during preparation.
 - b. Spray the area with BUG REMOVER.
 - c. Wait one minute while the BUG REMOVER penetrates the bug splatters.

- d. Use the BUG EATER SPONGE while washing to easily remove bugs.

2. Prepare the wash.
 - a. Fill a HARLEY WASH BUCKET with clean water.
 - b. Add SUNWASH BIKE SOAP, following the directions on the package.
 - c. Soak the WASH MITT and/or a BUG EATER SPONGE in the SUNWASH solution.
3. Wash all surfaces starting at the top working down toward the ground.
4. Rinse the motorcycle twice in both directions:
 - a. Rinse from the bottom up.
 - b. Rinse from the top down.

Drying the Motorcycle

1. Dry the surfaces from the top down using a SYNTHETIC DRYING CHAMOIS or a HOG BLASTER MOTORCYCLE DRYER. Avoid using any type of forced air on speakers or other sensitive components.
2. Dampen chamois in clean water and wring out the excess. The chamois is more absorbent when wet.
3. Wipe across the vehicle surface.

4. Repeat as necessary until surface is dry.

Polishing and Sealing

NOTE

If motorcycle has denim finish, skip the Polishing and Sealing procedure.

1. Apply GLAZE POLY SEALANT with a DISPOSABLE DETAILING SOFT CLOTH or MICROFIBER DETAILING CLOTH, following the instructions on the package.
2. Buff with a DISPOSABLE DETAILING SOFT CLOTH.
3. Polish and seal the wheels to prevent corrosion.

LEATHER AND VINYL CARE

NOTICE

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.

Leather, vinyl and other synthetic surfaces must be periodically cleaned and treated to maintain its appearance and extend its life. Clean and treat these surfaces once a season or more frequently under adverse conditions.

These surfaces are not designed for long-term exposure to inclement weather. Protect these surfaces with a Harley-Davidson Seat Rain Cover or Motorcycle Storage Cover (sold separately).

1. Vacuum or blow dust off surface.
2. Thoroughly clean surfaces with SEAT, SADDLEBAG & TRIM CLEANER, following directions on the bottle.
3. Allow the material to dry naturally and completely at room temperature before applying other products to the material. Do not use artificial means to dry the material quickly.
4. For leather only, rejuvenate faded black surfaces with BLACK LEATHER REJUVENATOR, and apply LEATHER PROTECTANT to weatherproof and preserve the leather.

NOTE

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

DENIM FINISH

Some motorcycles have a denim (flat or matte) finish. The denim finish has qualities which differ from high gloss finishes on all other Harley-Davidson motorcycles. Like denim fabric, denim paint will burnish or mar with age and use, thus adding character and personality to the finish. For recommended products, refer to Table 27.

- If scratched, the color coat of paint does nick/scuff and these marks cannot be rubbed out.
- If polished, the finish will become less matte and more glossy over time.

Cleaning Denim Finish

For Light deposits: Use DENIM PAINT CLEANER and a SOFTCLOTH.

For heavier deposits: Use either SUNWASH BIKE SOAP and a clean H-D WASH MITT or QUICK WASH. Rinse thoroughly with clean water.

EXHAUST CARE

Allow exhaust components to cool before cleaning.

For chrome exhaust surfaces, apply Boot Mark Remover to remove boot marks, melted plastic or asphalt resin. Allow the

gel to set for a few minutes, scrape off the melted material, and rinse clean.

For black-coated exhaust surfaces, apply Wheel & Tire Cleaner while motorcycle is wet during washing. Wipe or scrub exhaust surfaces and rinse clean.

NOTE

There is no warranty on exhaust pipes and mufflers with regard to any discoloration. Blueing is caused by tuning characteristics, cam timing, over-heating, and so on. It is not caused by defective manufacturing.

STORING MOTORCYCLE

If the motorcycle will not be operated for several months, take steps to protect the motorcycle. Always protect parts against corrosion, preserve the battery and prevent the build-up of gum and varnish in the fuel before storage.

Make a list of everything you do and fasten it to a handlebar grip. When you take the motorcycle out of storage, this list is your reference/checklist to get your motorcycle in operating condition.

⚠ WARNING

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)

1. Fill fuel tank. 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. See Change Oil and Oil Filter (Page 93).
3. Prepare battery for storage. See Battery Maintenance (Page 114).
4. Check and fill the cooling system. See Coolant (Page 104).
5. To protect the body panels, engine, chassis and wheels from corrosion, follow the cosmetic care procedures before storage. See Cleaning and General Care (Page 77).
6. Cover the motorcycle with a material such as light canvas that breathes. Plastic materials that do not breathe promote condensation and corrosion.

NOTES



MAINTENANCE

⚠ WARNING

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)

⚠ WARNING

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)

Service your motorcycle at the regular service intervals. Road conditions like dust, rain or riding styles can require servicing the motorcycle at more frequent intervals. See Service Intervals and Records (Page 165).

Though some of these procedures can be performed with a minimum of tools, always consult your Harley-Davidson dealer for updates. Remember, your authorized Harley-Davidson dealer always services your motorcycle with the latest factory approved methods and equipment.

Record each service to maintain the new motorcycle warranty. See Service Records (Page 165).

BREAK-IN MAINTENANCE

NOTE

The performance of new motorcycle initial service is required to keep your new motorcycle warranty in force and for proper emissions system operation.

After a new motorcycle has been ridden 1000 mi (1,600 km), visit an authorized Harley-Davidson dealer for initial service. Refer to Service Records (Page 165).

PREPARING THE MOTORCYCLE FOR MAINTENANCE

⚠ WARNING

Be sure to check capacity rating and condition of hoists, slings, chains and cables before use. Exceeding capacity ratings or using lifting devices that are in poor condition can lead to an accident, which could result in death or serious injury. (00466c)

NOTE

Always support a motorcycle that is being serviced with blocks or stands.

Setting Motorcycle Upright

1. Place motorcycle upright on a level surface or suitable lift, if available.
2. Verify that the motorcycle is level.
3. Secure with tie-downs.

DISPOSAL AND RECYCLING

Help protect our environment! Many communities maintain facilities for recycling used fluids, plastics and metals. Dispose of or recycle used oil, lubricants, fuel, coolant, brake fluid and batteries in accordance with local regulations. Many Harley-Davidson parts and accessories are made of plastics and metals which can also be recycled.

ENGINE LUBRICATION

Engine Lubrication

⚠ CAUTION

Prolonged or repeated contact with used motor oil may be harmful to skin and could cause skin cancer. Promptly wash affected areas with soap and water. (00358b)

⚠ CAUTION

If engine oil is swallowed, do not induce vomiting. Contact a physician immediately. In case of contact with eyes, immediately flush with water. Contact a physician if irritation persists. (00357d)

NOTICE

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

Always use the proper grade of oil for the lowest temperature expected before the next scheduled oil change. Refer to Table 30.

This motorcycle was originally equipped with GENUINE HARLEY-DAVIDSON H-D 360 MOTORCYCLE OIL 20W50. H-D 360 is the preferred oil under normal operating conditions. If operation under extreme cold or heat are expected, refer to Table 30 for alternative choices.

If necessary and H-D 360 is not available, add oil certified for diesel engines. Acceptable designations include: CH-4, CI-4 and CJ-4. The preferred viscosities, 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 30. Recommended Engine Oils

| TYPE | VISCOSITY | LOWEST AMBIENT TEMPERATURE | COLD-WEATHER STARTS BELOW 50 °F (10 °C) |
|--|-----------|----------------------------|---|
| Screamin' Eagle SYN3 Full Synthetic Motorcycle Lubricant | SAE 20W50 | Above 30.2 °F (-1 °C) | Excellent |
| Genuine Harley-Davidson H-D 360 Motorcycle Oil | SAE 20W50 | Above 39.2 °F (4 °C) | Good |
| Genuine Harley-Davidson H-D 360 Motorcycle Oil | SAE 50 | Above 60.8 °F (16 °C) | Poor |
| Genuine Harley-Davidson H-D 360 Motorcycle Oil | SAE 60 | Above 80.6 °F (27 °C) | Poor |

Low Temperature Lubrication

Change engine oil often in colder climates. If motorcycle is frequently ridden less than 15 mi (24 km), in ambient temperatures below 60 °F (16 °C), reduce oil change intervals to 1500 mi (2,400 km).

NOTE

Lower ambient temperatures require more frequent oil changes.

Water vapor is a normal by-product of combustion. During cold-weather operation, some water vapor condenses to liquid form on the cool surfaces inside the engine. In freezing

weather, this water becomes slush or ice. If the engine is not warmed to operating temperature, accumulated slush or ice blocks the oil lines and causes engine damage. Over time, water will accumulate, mix with the engine oil and form a sludge that is harmful to the engine.

If the engine is allowed to warm to normal operating temperature, most of the water evaporates and exits through the crankcase breather.

CHECK ENGINE OIL LEVEL

NOTICE

If the oil pressure indicator lamp remains lit, always check the oil supply first. If the oil supply is normal and the lamp is still lit, stop the engine at once and do not ride further until the trouble is located and the necessary repairs are made. Failure to do so may result in engine damage. (00157a)

Oil Level Cold Check

1. Set vehicle upright. See Preparing the Motorcycle for Maintenance (Page 89).
2. See Figure 29. Remove dipstick (1) and wipe clean.
3. Insert the dipstick and tighten.
4. Remove the dipstick. Verify that there is oil on the dipstick.
5. If oil is not visible, add only enough oil to bring the level to the bottom of the dipstick. See Engine Lubrication (Page 90).

Oil Level Hot Check

NOTICE

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)

NOTICE

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

1. Run motorcycle until engine is at normal operating temperature.
2. Set vehicle upright.
3. See Figure 29. Remove dipstick (1) and wipe clean.
4. Insert the dipstick and tighten.
5. Remove the dipstick. Verify that the oil level is within the "X" mark on the dipstick.
6. If oil level is below the "X" mark, add only enough oil to bring the level to the "X" mark. See Engine Lubrication (Page 90).

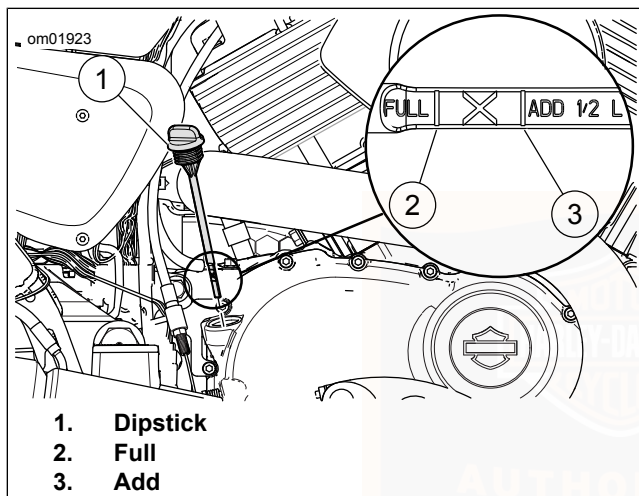


Figure 29. Engine Oil Level
CHANGE OIL AND OIL FILTER

⚠ 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)

1. Run motorcycle until engine is at normal operating temperature.
2. Turn off engine.

NOTE

Engine oil is hot when removing drain plug.

3. See Figure 30. Remove the engine oil drain plug. Discard O-ring.
4. Allow oil to drain completely. Dispose of waste properly.

NOTE

It is not necessary to disconnect the regulator connectors.

5. Remove the radiator shroud. See Cleaning Radiator (Page 105).
6. See Figure 31. Remove the regulator bolt and washer (1). Support the regulator as necessary.
7. Remove the oil filter (3) with.
Special Tool: OIL FILTER WRENCH (HD-51453)
8. Discard filter.

9. Clean the oil filter mount flange of any old gasket material.

NOTE

Do not use oil filter wrench for installation.

10. Lubricate gasket of **new** oil filter with clean engine oil.

11. Install **new** oil filter (3). Hand-tighten oil filter one-half to three-quarters of a turn after gasket initially contacts the filter mounting surface.

12. Install the regulator with the bolt and washer. Tighten.

Torque: 80–97 **in-lbs** (9–11 N·m) *Regulator fastener*

13. Install engine oil drain plug and **new** O-ring. Tighten.

Torque: 15–18 ft-lbs (20–25 N·m) *Engine oil drain plug*

NOTICE

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

14. Initially add engine oil. See Engine Lubrication (Page 90).

Volume: 2.5 qt (2.4 L)

15. Perform engine oil level **cold check**. See Check Engine Oil Level (Page 92).

16. Start engine and carefully check for oil leaks around drain plug and oil filter.

17. Install radiator shroud. See Cleaning Radiator (Page 105).

18. Perform engine oil level **hot check**. See Check Engine Oil Level (Page 92).

19. Add more oil as required.

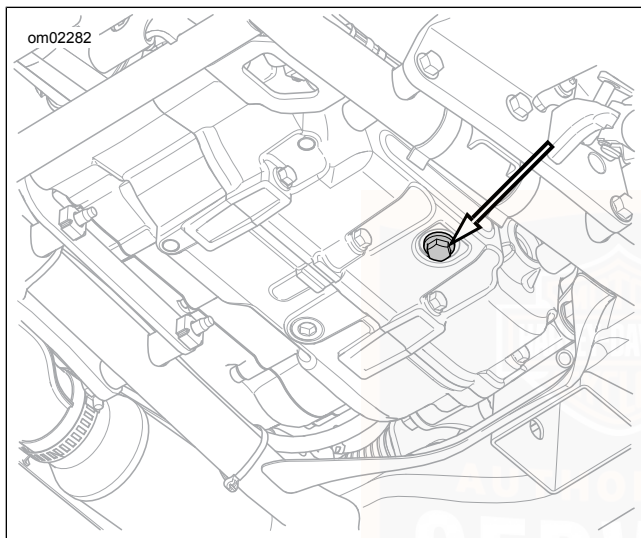


Figure 30. Engine Oil Drain Plug

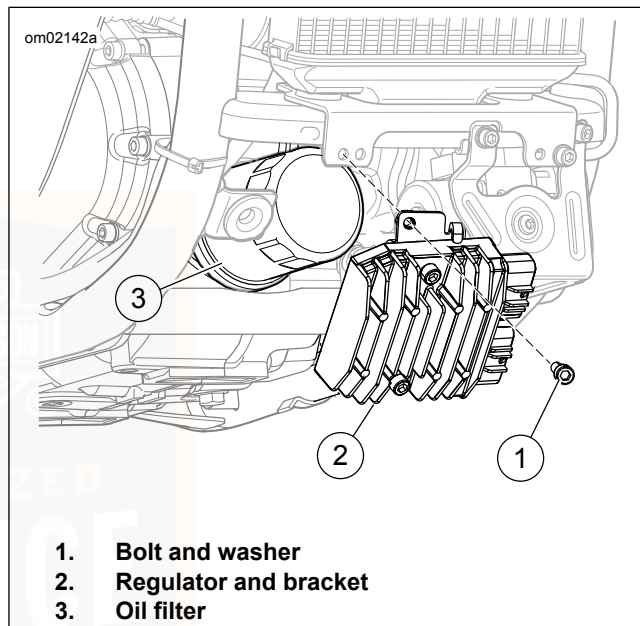


Figure 31. Engine Oil Filter and Regulator
CHECK DRIVE BELT DEFLECTION

NOTE

Always use BELT TENSION GAUGE (PART NUMBER: HD-35381-A) to measure belt deflection. Failure to use tension gauge may cause under-tensioned belts. Loose belts can fail

due to "ratcheting" (jumping a tooth) which causes tensile cord crimping and breakage.

Check deflection:

- With transmission in neutral.
- With motorcycle at ambient temperature.
- With motorcycle upright or on jiffy stand with rear wheel on the ground.
- With the vehicle unladen: no rider, no luggage and empty saddlebags.

⚠ WARNING

To prevent accidental vehicle start-up, which could cause death or serious injury, remove main fuse before proceeding. (00251b)

1. Disarm security system. Remove main fuse. See Fuses (Page 122).

NOTE

*When adjusting a **new** belt, rotate rear wheel a few revolutions prior to setting the tension.*

2. Shift transmission to neutral.

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3. See Figure 32. Measure belt deflection using:
Special Tool: BELT TENSION GAUGE (HD-35381-A)
 - a. Slide O-ring (4) to zero mark (3).
 - b. **Models equipped with belt deflection window:** Fit belt cradle (2) against bottom of drive belt in line with belt deflection window.
 - c. **All other models:** Fit belt cradle (2) against bottom of drive belt halfway between drive pulleys.
 - d. Press upward on knob (6) until O-ring slides down to 10 lb (4.54 kg) mark (5) and hold steady.
4. Measure belt deflection:
 - a. **Models equipped with belt deflection window:** See Figure 34. Measure belt deflection as viewed through belt deflection viewing window while holding gauge steady. Each deflection graduation is approximately 1/16 in (1.6 mm)
 - b. **All other models:** See Figure 33. Measure amount of deflection (4) while holding gauge steady.

NOTE

Set to the lower (tightest) specification if the belt has less than 1,600 km (1000 mi).

5. Compare with specifications. Refer to Table 31. If not within specifications, see a Harley-Davidson dealer.
6. Install main fuse.

Table 31. Belt Deflection Specifications*

| MODELS | mm | in |
|---|-----------|-----------|
| Harley-Davidson Street [®] 500 (XG500) | 12.7-15.9 | 0.50-0.62 |
| Harley-Davidson Street [®] 750 (XG750) | 12.7-15.9 | 0.50-0.62 |
| Street Rod [™] (XG750A) | 12.7-15.9 | 0.50-0.62 |

* Deflection measured at 10 lb (4.5 kg) tension.

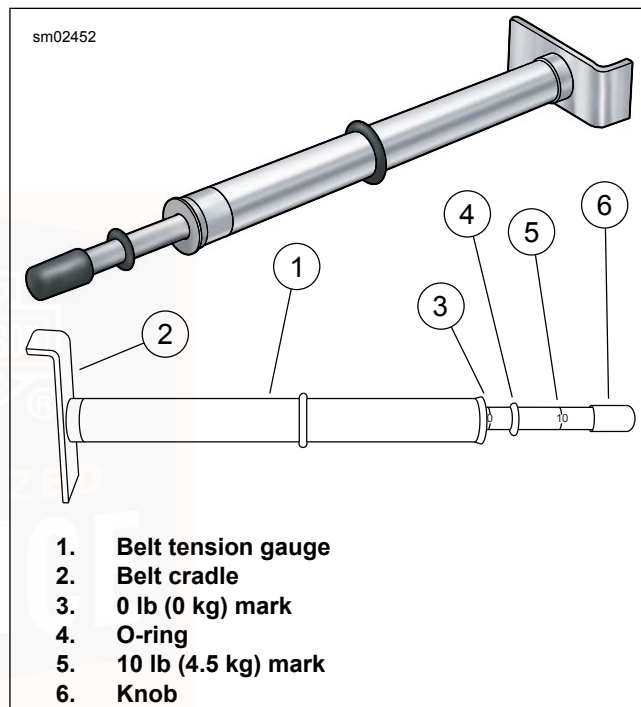


Figure 32. Belt Tension Gauge

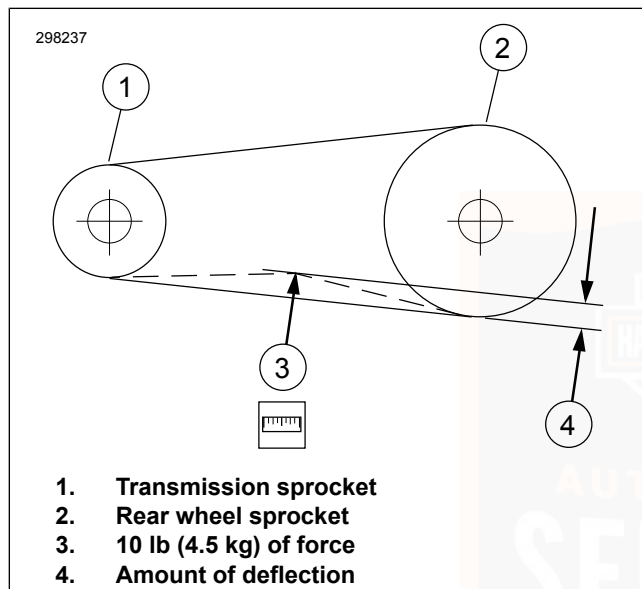


Figure 33. Checking Belt Deflection

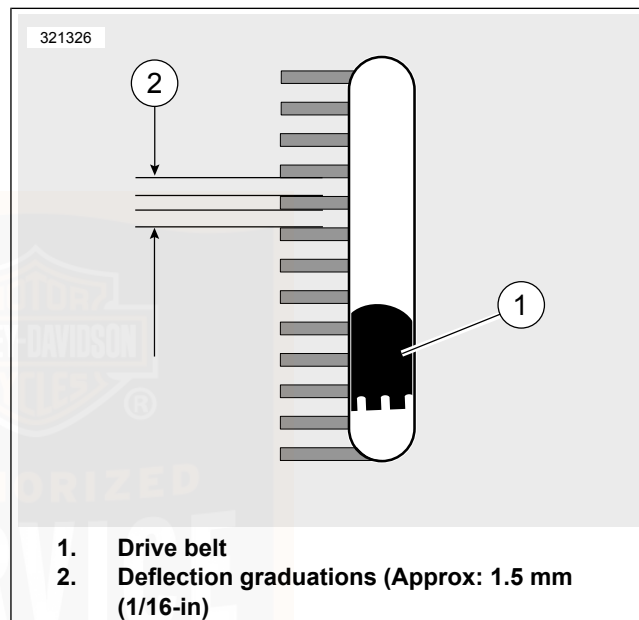


Figure 34. Belt Deflection Window

MISCELLANEOUS LUBRICATION

For all maintenance schedules see Service Intervals and Records (Page 165).

For specific information for lubricating the following items, see the service manual or a Harley-Davidson dealer.

- Throttle cables

NOTICE

The clutch control cable must be oiled and adjusted periodically to compensate for lining wear. See **MAINTENANCE SCHEDULING** in this manual. Failure to oil and adjust the clutch control cable can result in equipment damage. (00203b)

- Clutch and brake cables
- Brake and clutch hand controls
- Steering head bearing
- Jiffy stand
- Front and rear brake caliper pins and bushings

LUBRICATING FUEL CAP LOCK

Lubricate fuel cap lock with HARLEY LUBE.

CHECKING AND ADJUSTING THROTTLE CABLES

Check throttle cables for damage, wear or abrasions.

See a Harley-Davidson dealer for service.

CHECKING CLUTCH AND BRAKE CONTROLS

Clutch Hand Lever

The clutch hand lever should move smoothly through its full range.

See a Harley-Davidson dealer for service.

Brake Hand Lever

- The brake hand lever should move smoothly through its full range.
- Verify the brake hand lever has a firm feel when applied.

See a Harley-Davidson dealer for service.

INSPECTING BRAKE PADS AND DISCS

Brake Pads

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.

▲ WARNING

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

1. Check the brake disc as it spins. The disc should run true in the brake caliper.
2. See Figure 35. Measure the thickness of the brake pad friction material.

NOTE

The pads do not necessarily wear evenly. The grooves on the brake pads are no longer visible when the pads are near the end of service life.

3. Refer to Table 32. If the brake pad friction material is at the minimum thickness or less, replace the pads. Always replace brake pads in pairs. See a Harley-Davidson dealer.

Table 32. Brake Specifications

| MINIMUM THICKNESS | mm | in |
|-------------------|-----|-------|
| Brake pads | 0.5 | 0.020 |
| Front brake disc | 5.4 | 0.213 |
| Rear brake disc | 5.4 | 0.213 |

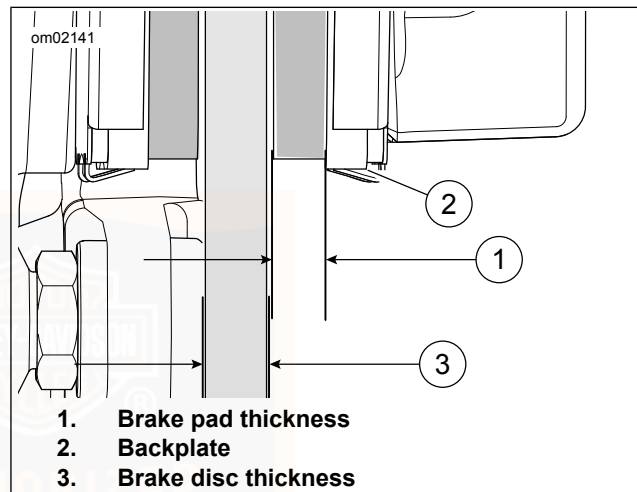


Figure 35. Brake Thickness

Brake Disc

1. Refer to Table 32. Check brake disc thickness and compare to value indicated in table.
2. Replace if necessary. See a Harley-Davidson dealer.

CHECKING BRAKE FLUID LEVEL AND CHANGING BRAKE FLUID

NOTE

- At every service, check moisture content of fluid using DOT 4 BRAKE FLUID MOISTURE TESTER (PART NUMBER: HD-48497-A). Follow the instructions included with tool.
- Flush brake system and replace DOT 4 fluid every two years or sooner if brake fluid test shows moisture content is 3% or greater.
- Do not add or remove fluid from the brake system to compensate for normal wear. Reservoir volume is adequate to provide fluid to the wear limits of the pads and discs.
- Fluid level in reservoir will decrease with brake wear. If fluid level is low, check brake pads and discs for wear. See *Inspecting Brake Pads and Discs* (Page 99).

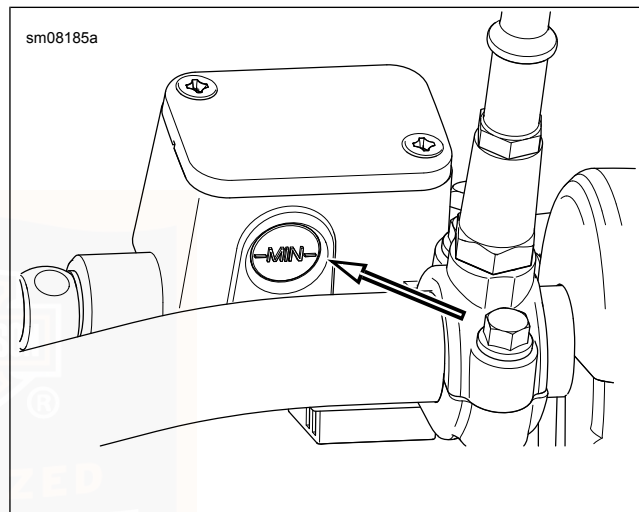


Figure 36. Front Master Cylinder Reservoir Sight Glass

Checking Brake Fluid Level

1. Set motorcycle upright. Verify that the fluid in the reservoir is level. See *Preparing the Motorcycle for Maintenance* (Page 89).
2. **Front:** See Figure 36. Check level in front reservoir sight glass. Level must be above MIN.
3. **Rear:** See Figure 37. Check level on side of rear brake reservoir. Level must be above MIN.

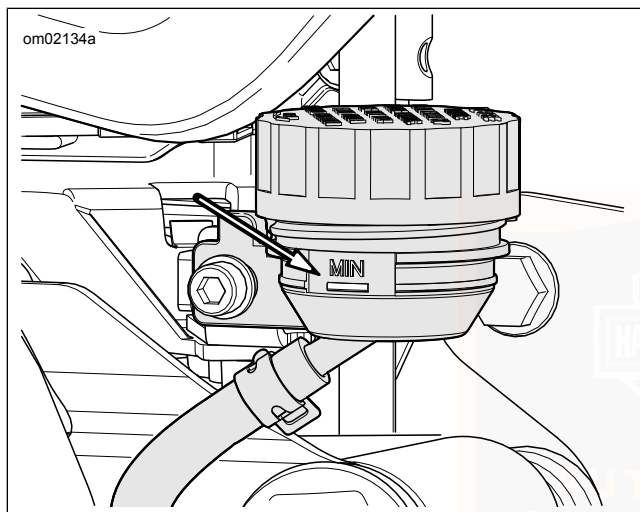


Figure 37. Rear Master Cylinder Reservoir MIN Level

Changing Brake Fluid

⚠ WARNING

Contact with DOT 4 brake fluid can have serious health effects. Failure to wear proper skin and eye protection could result in death or serious injury.

- If inhaled: Keep calm, remove to fresh air, seek medical attention.
- If on skin: Remove contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. If irritation develops, seek medical attention.
- If in eyes: Wash affected eyes for at least 15 minutes under running water with eye lids held open. If irritation develops, seek medical attention.
- If swallowed: Rinse mouth and then drink plenty of water. Do not induce vomiting. Immediate medical attention required.
- See Safety Data Sheet (SDS) for more details available at sds.harley-davidson.com

(00240d)

⚠ WARNING

DOT 4 brake fluid absorbs moisture from the atmosphere over time, changing the properties of the fluid. Check brake fluid moisture content at every service interval or annually (whichever comes first). Flush and replace the brake fluid every two years, or sooner if moisture content is 3% or greater. Failure to flush and replace fluid can adversely affect braking, which could result in death or serious injury. (06304b)

NOTICE

DOT 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. (00239c)

To ensure the brake system is performing to design, check the moisture content of the brake fluid at every service interval or at least annually using a DOT 4 brake fluid moisture tester (part number HD-48497-A or equivalent) following the instructions included with the tool. Flush DOT 4 fluid every 2 years or sooner if the brake system fluid test shows moisture content is 3% or greater.

Harley-Davidson recommends using Harley-Davidson Platinum Label DOT 4 Brake Fluid because of its superior moisture and corrosion inhibiting properties

CHECKING SYSTEMS FOR LEAKS OR ABRASIONS

Check all lines and hoses for leaks, damage or abrasions. For the appropriate intervals see Service Intervals and Records (Page 165).

- Fuel system and fuel lines
- Cooling system and coolant hoses
- Brake system and brake lines

MECHANICAL CLUTCH

NOTICE

The clutch control cable must be oiled and adjusted periodically to compensate for lining wear. See MAINTENANCE SCHEDULING in this manual. Failure to oil and adjust the clutch control cable can result in equipment damage. (00203b)

Adjust the clutch control cable at specified intervals. Refer to Service Records (Page 165).

If the clutch slips under load or drags when released, the control cable may need to be adjusted or clutch service may need to be performed. See a Harley-Davidson dealer for service.

INSPECTING VALVE LASH

See a Harley-Davidson dealer for valve lash inspection and adjustment.

COOLANT

General

NOTICE

Use only Genuine Harley-Davidson Extended Life Antifreeze and Coolant. Use of other coolants/mixtures may lead to motorcycle damage. (00179c)

GENUINE HARLEY-DAVIDSON EXTENDED LIFE ANTIFREEZE AND COOLANT is pre-diluted and ready to use full strength. It provides temperature protection to -34° F (-36.7° C). DO NOT add water.

NOTICE

De-ionized water must be used with the antifreeze in the cooling system. Hard water can cause scale accumulation in water passages which reduces cooling system efficiency, leading to overheating and motorcycle damage. (00195b)

If GENUINE HARLEY-DAVIDSON EXTENDED LIFE ANTIFREEZE AND COOLANT is unavailable, a mixture of de-ionized water and ethylene glycol-based antifreeze may be used. At the first opportunity, change back to GENUINE HARLEY-DAVIDSON EXTENDED LIFE ANTIFREEZE AND COOLANT.

Checking Coolant Level

1. Position motorcycle upright. See Preparing the Motorcycle for Maintenance (Page 89).
2. Allow engine to cool.
3. Remove left side cover. See Side Covers (Page 113).
4. See Figure 38. Check that coolant level is at or slightly above the "COLD FILL" line (2).

NOTE

If the coolant bottle is empty when the engine is cold, inspect the system for leaks. Repair as needed. Fill system with coolant and purge any trapped air.

5. If level is below "COLD FILL" line on tank, remove overflow tank cap (1).
6. Add GENUINE HARLEY-DAVIDSON EXTENDED LIFE ANTIFREEZE AND COOLANT until fluid level reaches, or is slightly above the "COLD FILL" line.
7. Install overflow tank cap.

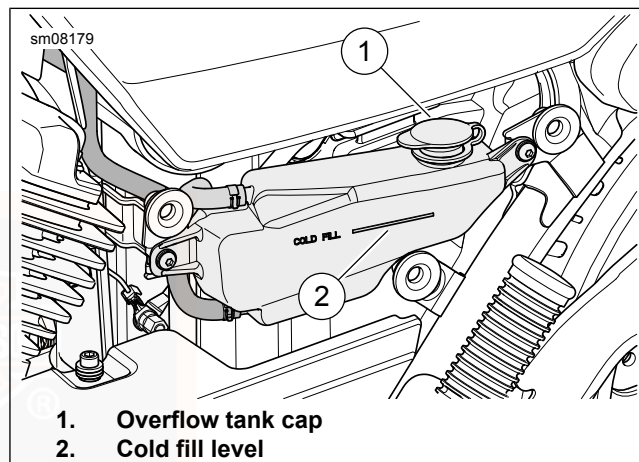


Figure 38. Coolant Overflow Tank
CLEANING RADIATOR

⚠ CAUTION

At operating temperature, radiators and oil coolers contain hot fluids. Contact with a radiator or oil cooler can result in minor or moderate burns. (00141b)

1. See Figure 39. Remove screws (5) and washers (4).
2. Remove radiator shroud (3) from mounting tab (1).

NOTICE

Using a pressure washer to clean radiators or oil coolers can damage cooling fins and reduce airflow. Reduced airflow can lead to overheating, resulting in motorcycle damage. (00056c)

NOTICE

Clean the inlet surface of the radiator regularly. Leaves and other debris can collect on the radiator surface and degrade radiator performance which could lead to overheating and motorcycle damage. (00197d)

3. Clean debris from radiator fins (2).
4. Align top of radiator shroud to mounting tab.
5. Install washers and screws. Tighten to 80–97 in-lbs (9–11 N·m).

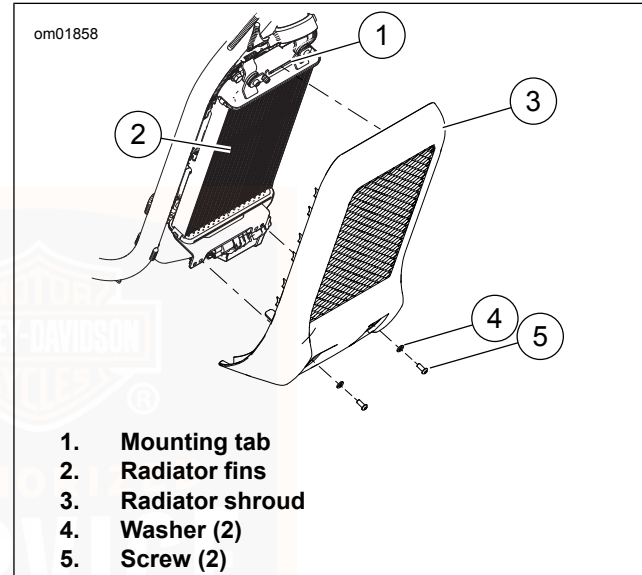


Figure 39. Radiator Shroud

REPLACING COOLANT

See a Harley-Davidson dealer for coolant replacement.

CHECKING FOR EXHAUST LEAKS

Refer to Service Records (Page 165) for all maintenance schedules.

1. Check exhaust system for obvious signs of leakage such as carbon marks or marks at pipe joints.
 - a. Check for loose or missing fasteners.
 - b. Check for fractured pipe clamps or brackets.
 - c. Check for loose or fractured exhaust shields.
2. Correct any detected leaks. See a Harley-Davidson dealer.

MAINTAINING FRONT FORK

⚠ WARNING

Regularly inspect shock absorbers and front forks. Replace leaking, damaged or worn parts that can adversely affect stability and handling, which could result in death or serious injury. (00012a)

Have a Harley-Davidson dealer drain the front fork oil and refill at proper intervals.

Rebound action of the fork will be impaired if the fork oil level is low.

If fork does not appear to be working properly or a significant oil leak should develop, see a Harley-Davidson dealer.

Refer to Service Records (Page 165) for all maintenance schedules.

ADJUSTING STEERING HEAD BEARINGS

⚠ WARNING

Adjustments to steering head 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. (00051b)

Refer to Service Records (Page 165) for all maintenance schedules.

See a Harley-Davidson dealer to adjust the steering head bearings.

INSPECTING REAR FORK BEARING

See a Harley-Davidson dealer for rear fork bearing inspection.

SHOCK ABSORBERS

Inspect shock absorbers and rubber bushings for leaks and bushing deterioration at proper intervals.

⚠ WARNING

Shock absorber cannot be serviced. Attempting service can cause an explosion, which could result in death or serious injury. (00602d)

- Do not refill, disassemble, puncture or expose shock to flames.
- Replacement and disposal should only be done by an authorized Harley-Davidson dealer.

INSPECTING AIR FILTER

Harley-Davidson Street 500 (XG500), Harley-Davidson Street 750 (XG750)

1. See Figure 40. Remove screw (1).
2. Remove cover (2).
3. Remove nuts (3).
4. Remove bracket (4).
5. Remove filter element (5).
6. Hold the filter element up to a strong light source. The element is sufficiently clean when light is uniformly visible through the media.
7. If necessary, discard filter element. Install a **new** filter element.

8. Install filter element (5).

9. Install bracket (4).

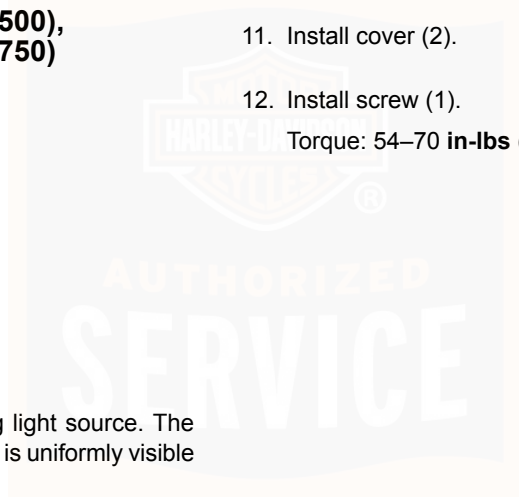
10. Install nuts (3).

Torque: 54–70 **in-lbs** (6–8 N·m) *Air filter bracket nuts*

11. Install cover (2).

12. Install screw (1).

Torque: 54–70 **in-lbs** (6–8 N·m) *Air filter cover screw*



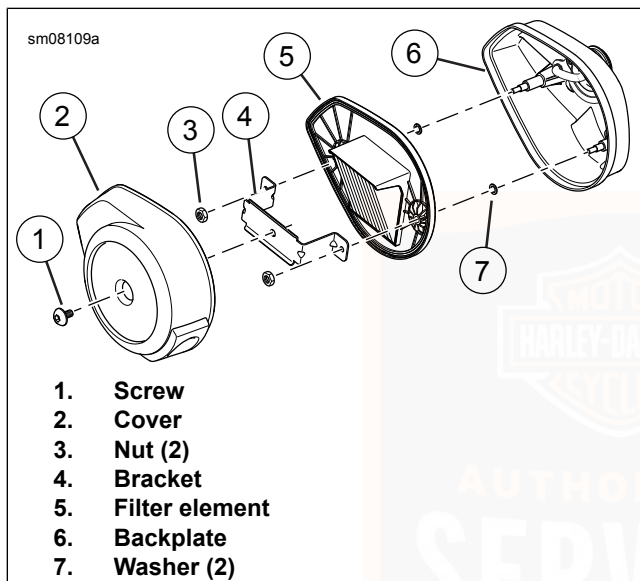


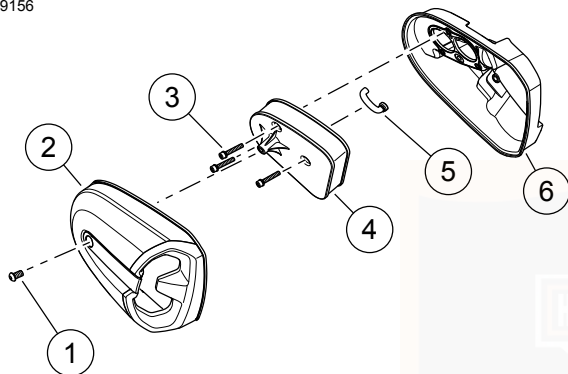
Figure 40. Air Cleaner: Harley-Davidson Street 500 (XG500), Harley-Davidson Street 750 (XG750)

Street Rod (XG750A)

1. See Figure 41. Remove cover screw (1).
2. Remove cover (2).

3. Remove air filter screws (3).
4. Remove air filter element (4).
5. Hold the air filter element up to a strong light source. The element is sufficiently clean when light is uniformly visible through the media.
6. If necessary, discard air filter element. Install a **new** element.
 - a. If discarding, remove breather hose (5) from air filter element and install into **new** element.
7. Install air filter element (5).
8. Install air filter screws (3).
Torque: 44–62 **in-lbs** (5–7 N·m) *Air filter screws*
9. Install cover (2).
10. Install cover screw (1).
Torque: 53–71 **in-lbs** (6–8 N·m) *Air filter cover screw*

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1. Screw
2. Cover
3. Screw (3)
4. Air filter
5. Hose, breather
6. Backplate

Figure 41. Air Cleaner: Street Rod (XG750A)

CLEANING BATTERY

See Battery Maintenance (Page 114) for cleaning instructions.

REPLACING SPARK PLUGS

Replace the spark plugs at specified mileage intervals. See Service Records (Page 165).

⚠ WARNING

Disconnecting spark plug cable with engine running can result in electric shock and death or serious injury. (00464b)

⚠ CAUTION

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)

Refer to Table 11 for spark plug specifications.

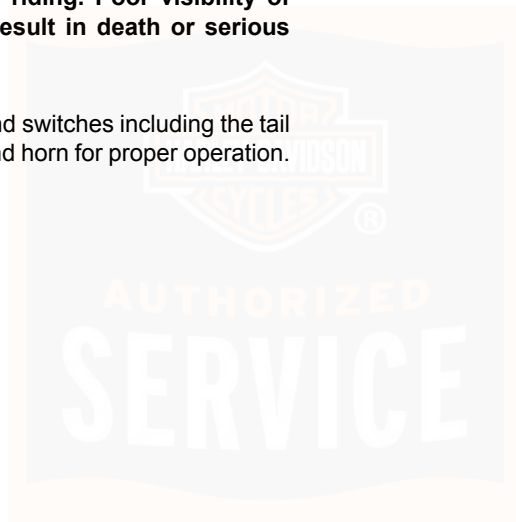
1. Disconnect spark plug cables from plugs by pulling up on the molded connector caps.
2. Check spark plug type. Only use those spark plugs specified for your model motorcycle.
3. Check spark plug gap against specifications table.
4. Always tighten to the proper torque.
5. Connect each molded connector cap until the cap snaps firmly into place over the spark plug.

CHECKING ELECTRICAL EQUIPMENT AND SWITCHES

⚠ WARNING

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 tail lamps, turn signals, headlamp and horn for proper operation.



NOTES



SIDE COVERS

See Figure 42. The procedure for removing the side cover is the same for the left and right sides.

1. **Remove:** Pull side cover (1) to release posts from grommets (2).
2. **Install:** Align side cover posts with grommets (2).
3. Press side cover until posts are fully seated in grommets.

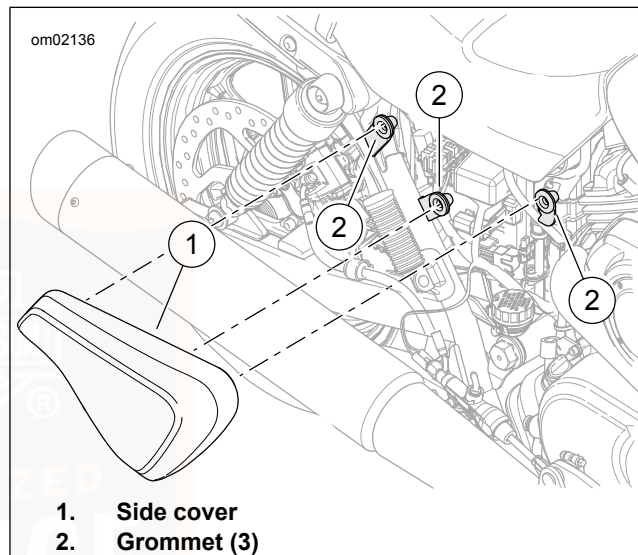


Figure 42. Right Side Cover

BATTERY TENDER CONNECTOR

See Figure 43. Maintaining the battery between rides and while stored can maintain battery charge and extend the life of the battery. Connect the battery tender connector to a battery tender during storage or to a battery charger if the battery voltage drops below specification. See Battery Maintenance (Page 114).

See Side Covers (Page 113). Remove the left side cover to access the connector. Remove the connector cap. Connect the battery through the connector to an automatic, constant monitoring battery charger/tender. The connector is compatible with all Harley-Davidson battery tender/chargers.

When removing the tender/charger, replace the connector cap to prevent moisture damage when not in use. Properly stow connector back under side cover.

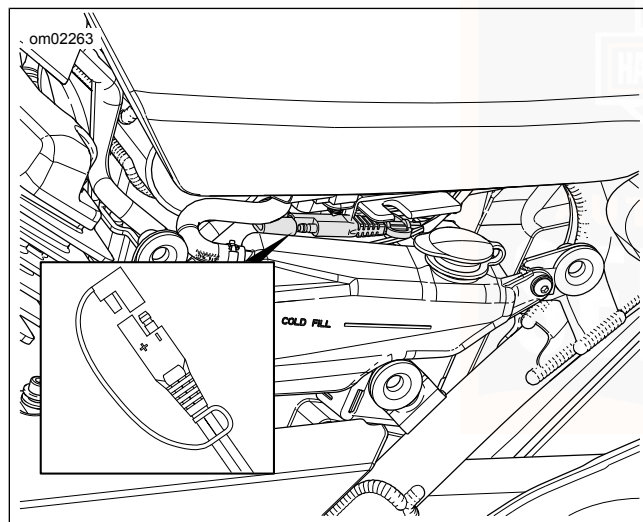


Figure 43. Battery Tender Connector

BATTERY MAINTENANCE

Battery Safety

⚠ 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)

⚠ WARNING

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, 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. (00019e)

⚠ WARNING

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

Absorbed Glass Mat (AGM) Battery Charging Information

The motorcycle has a permanently sealed, maintenance-free Absorbed Glass Mat (AGM) battery design that is superior to conventional flooded lead acid batteries. This battery design will provide many years of dependable service when the proper battery charging equipment and storage procedures are used. Because of the sealed, nonspillable battery design, an automatic, constant monitoring battery charger/tender with a charging rate of 5 amps or less at less than 14.6 volts is recommended to prevent overcharging conditions that will dry out the cells of the battery. Constant current battery chargers (including trickle chargers) are not recommended and can damage AGM batteries. Do not attempt to open the battery for any reason.

A Harley-Davidson constant monitoring battery charger or tender is recommended to maintain a full charge between rides or when your motorcycle will not be ridden for more than two weeks. The best practice is installing the charger/tender any time the motorcycle is not in use. Harley-Davidson offers a variety of fully automatic charger/tenders (North American

and international versions available). These battery charger/tenders include a quick disconnect cable, allowing easy connection to charge the battery without disassembly of the motorcycle.

Lack of regular battery charging or use of constant current battery chargers may void battery warranty.

Cleaning and Inspecting

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

1. Clean top of battery.
2. Clean cable connectors and battery terminals using a wire brush or fine grit sandpaper to remove any oxidation.
3. Inspect and clean the battery screws, clamps and cables. Check for breakage, loose connections and corrosion.
4. Check the battery posts for melting or damage caused by over-tightening.
5. Inspect the battery for discoloration, a raised top or a warped or distorted case. Any of these conditions indicate that the battery has been frozen, overheated or overcharged.
6. Inspect the battery case for cracks or leaks.

Charging and Storing the Battery

A battery that is left in the motorcycle can either self-discharge or discharge from parasitic loads. Parasitic loads occur from things like diode leakage and maintaining computer memory. A battery that is removed from the motorcycle can also self-discharge. It is not necessary to remove battery from vehicle for storage.

- Batteries self-discharge at a faster rate at higher ambient temperatures.
- To reduce the self-discharge rate, store battery in a cool, dry place.

An automatic, constant monitoring battery charger/tender with a charging rate of 5 amps or less at less than 14.6 volts is recommended. The use of constant current chargers (including trickle chargers) to charge sealed AGM batteries is not recommended. Any overcharge will cause dry-out and premature battery failure. Never charge a battery without first reviewing the instructions for the charger being used. In addition to the manufacturer's instructions, follow the general safety precautions.

Charge the battery when:

- Motorcycle lights appear dim.
- Electric starter sounds weak.
- Battery has not been used for two weeks or more.

116 Service Procedures

⚠ WARNING

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)

NOTE

Make sure that the ignition and all electrical accessories are turned off.

Always follow charging instructions supplied with the charger/tender.

1. With battery in the motorcycle.
 - a. Connect battery charger/tender lead to motorcycle battery tender connector. See Battery Tender Connector (Page 113).
 - b. When charging is completed turn OFF the charger. Disconnect the motorcycle battery tender connector.
2. With battery removed from motorcycle.
 - a. Place the battery on a level surface.

- b. Connect battery charger/tender lead to battery connector adapter lead supplied with the battery charger/tender.

NOTICE

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

- c. Connect the red battery charger lead to the positive terminal of the battery.
- d. Connect the black battery charger lead to the negative terminal of the battery.
- e. Step away from the battery and turn on the charger.

⚠ WARNING

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)

- f. When charging is completed turn OFF the charger. Disconnect the black battery charger lead. Disconnect the red battery charger lead.

BATTERY REPLACEMENT

Removing the Battery

1. Remove left and right side covers. See Side Covers (Page 113).
2. Remove seat. See Seat (Page 132).
3. Remove main fuse. See Fuses (Page 122).
4. **For California, Asia-Pacific, England, HDI and India models only:** See Figure 44. Remove purge solenoid.
 - a. Disconnect purge solenoid connector (2).
 - b. Remove solenoid-to-induction module and canister-to-solenoid lines (3 and 4) from purge solenoid (1).
5. See Figure 45. Pull vapor valve (1) from clip (2).
6. Move the vapor valve and lines aside.
7. See Figure 46. Remove front belt guard.
 - a. Remove screws and washers (2).
 - b. Remove front belt guard (1).

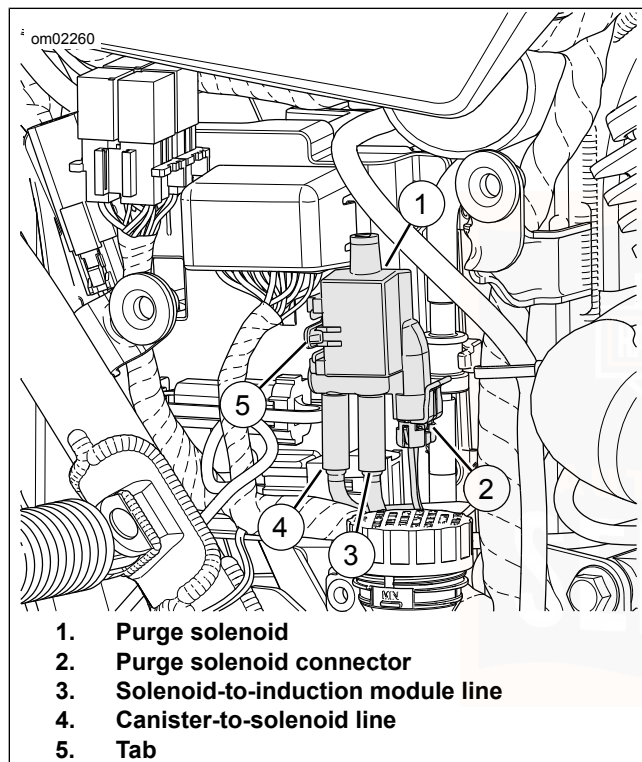


Figure 44. Purge Solenoid

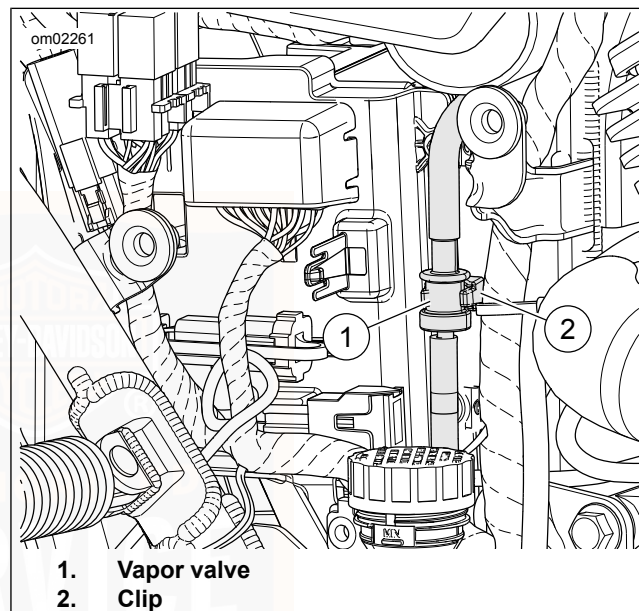


Figure 45. Vapor Valve

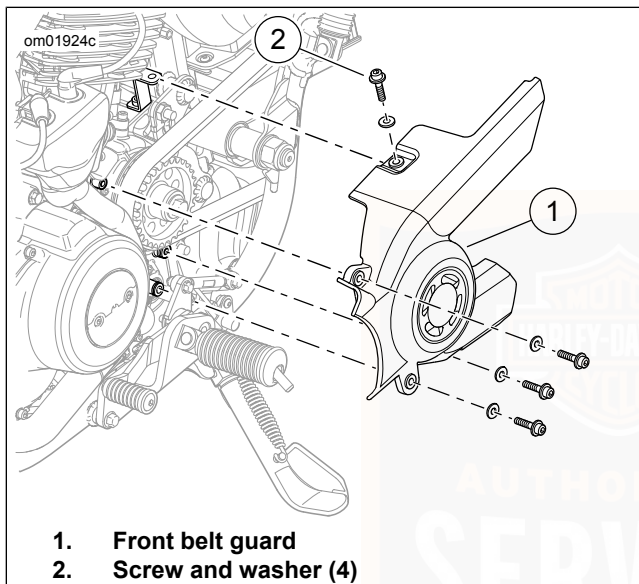


Figure 46. Front Belt Guard

8. See Figure 47. Remove electrical panel.
 - a. Remove screws (3).
 - b. Carefully pull electrical panel (1) away from battery.

⚠ 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)

9. See Figure 48. Disconnect negative battery cable (1) from ground stud (2).
10. See Figure 47. Disconnect positive battery cable (5) from battery.
11. Remove battery.
12. Disconnect negative battery cable.

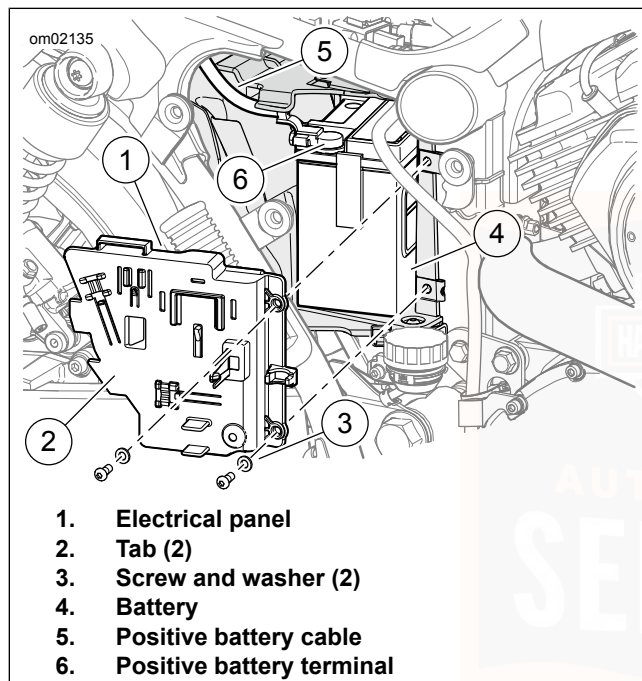


Figure 47. Battery

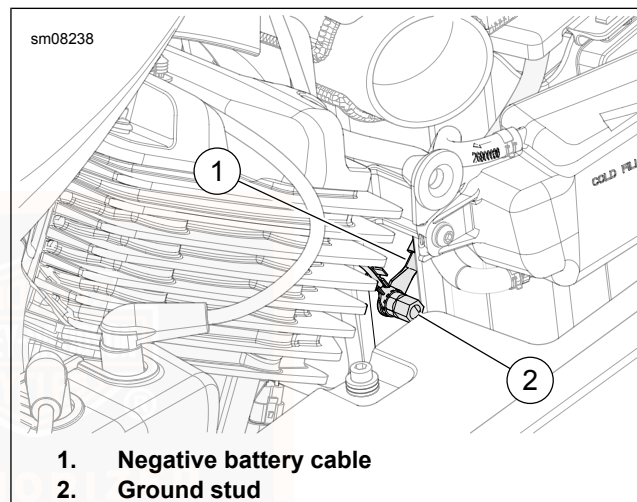


Figure 48. Battery Ground Cable

Installing Battery

⚠ WARNING

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)

NOTICE

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

1. Install negative battery cable to negative battery terminal.
Torque: 60–70 **in-lbs** (6.8–7.9 N·m) *Negative battery terminal*
2. Route negative cable through battery box.
3. See Figure 47. Install battery (4) in battery box.
4. Connect the positive battery cable (5) to the positive battery terminal (6).
Torque: 60–70 **in-lbs** (6.8–7.9 N·m) *Positive battery terminal*
5. See Figure 48. Connect negative battery cable (1) to ground stud (2).
Torque: 54–66 **in-lbs** (6–7.5 N·m) *Ground stud*
6. See Figure 47. Install electrical panel.
7. Verify electrical panel tabs (2) are inserted into slots.

8. Install screws (3).

Torque: 47–57 **in-lbs** (5.3–6.5 N·m) *Electrical panel screws*

9. See Figure 46. Position front belt guard (1). Install screws and washers (2).

Torque: 54–70 **in-lbs** (6–8 N·m) *Belt guard screws*

⚠ WARNING

Excessive pressure can build in the fuel tank if vapor valve is not mounted vertically with long fitting to top. Leaks due to excessive pressure can cause a fire or explosion, which could result in death or serious injury. (00265a)

10. See Figure 45. Press vapor valve (1) into clip (2).

11. **For California, Asia-Pacific, England, HDI and India Models Only:** See Figure 44. Install purge solenoid.

- a. Install purge solenoid (1).
- b. Install solenoid-to-induction module and canister-to-solenoid lines (3 and 4).
- c. Connect purge solenoid connector (2).

12. Install main fuse. See Fuses (Page 122).

13. Install seat. See Seat (Page 132).

14. Install side covers. See Side Covers (Page 113).

FUSES

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

NOTE

- Fuses do not reset.
- Only replace a fuse with a fuse of the same rating.
- Use only automotive type ATO fuses as replacements.

Main Fuse

NOTE

The amperage of the main fuse is 40A.

Remove the main fuse whenever you perform maintenance on your motorcycle.

1. Turn ignition off.
2. Remove right side cover. See Side Covers (Page 113).

3. See Figure 49. Remove the main fuse (2).
4. Install the fuse when maintenance is complete.

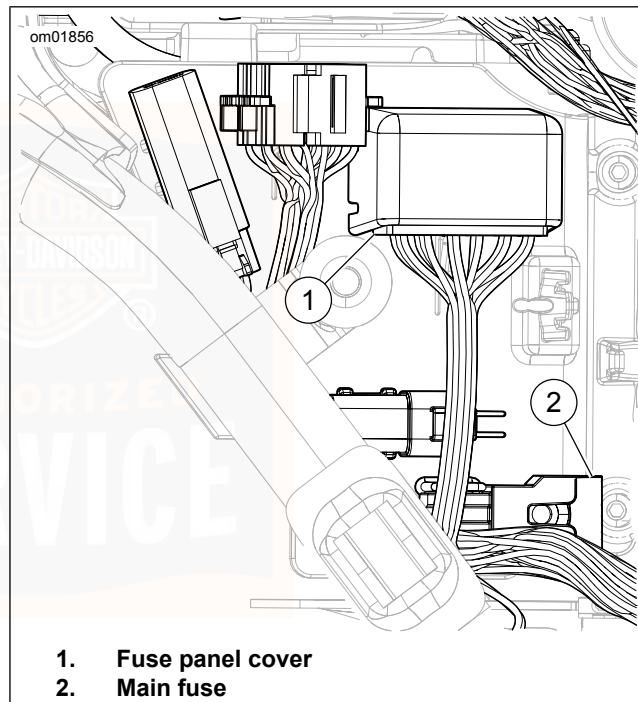


Figure 49. Fuse Panel and Main Fuse Location

Replacing Fuses

1. Turn ignition off.
2. Remove right side cover. See Side Covers (Page 113).
3. See Figure 49. Remove the fuse panel (1) cover.
4. See Figure 50. Remove the suspect fuse and inspect the element. Replace the fuse if the element is burned or separated. Refer to Table 33.
5. Install the fuse panel cover so the tabs snap into place.
6. Install right side cover.

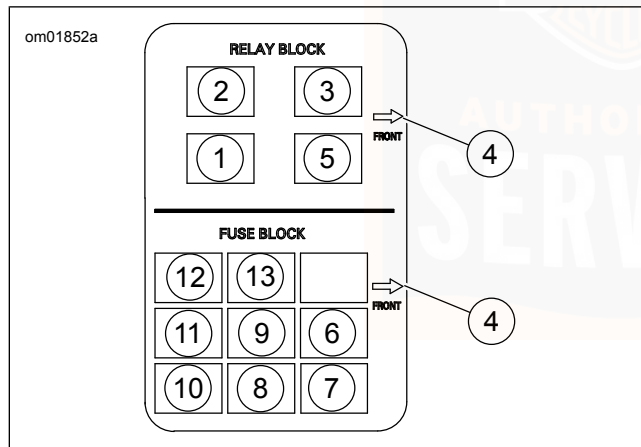


Figure 50. Relay and Fuse Identification

Table 33. Relay and Fuse Identification

| ITEM | DESCRIPTION |
|------|------------------------------------|
| 1 | System relay |
| 2 | Starter relay |
| 3 | Cooling relay |
| 4 | Front of vehicle |
| 5 | Ignition relay |
| 6 | Lights and instruments fuse - 10 A |
| 7 | Accessory fuse - 5 A |
| 8 | Fan fuse - 15 A |
| 9 | Lights fuse - 10 A |
| 10 | Ignition fuse - 15 A |
| 11 | Fuel pump fuse - 10 A |
| 12 | Battery fuse - 5 A |
| 13 | Security fuse - 10 A |

Relays

If you suspect an issue with a relay, see the service manual, electric diagnostic manual or an authorized dealer.

HEADLAMP

Checking Headlamp Alignment

1. Check tire pressure. Refer to Checking Tire Pressure and Inspecting Tires (Page 37).

2. Adjust rear shocks for the rider and intended load. See Adjusting Shock Absorbers (Page 44).
3. Fill fuel tank or add an equal amount of ballast.

NOTE

Choose a wall in minimum light.

4. See Figure 51. Park the motorcycle in a line (1) perpendicular to the wall.
5. Position motorcycle with front axle 25 ft (7.6 m) from wall.
6. Draw a vertical line (2) on the wall.
7. Point the front wheel straight forward at the wall.
8. Measure the distance (4) from the floor to the center of the high beam bulb.
9. Activate high beam. Verify headlamp alignment.
10. Adjust if necessary.

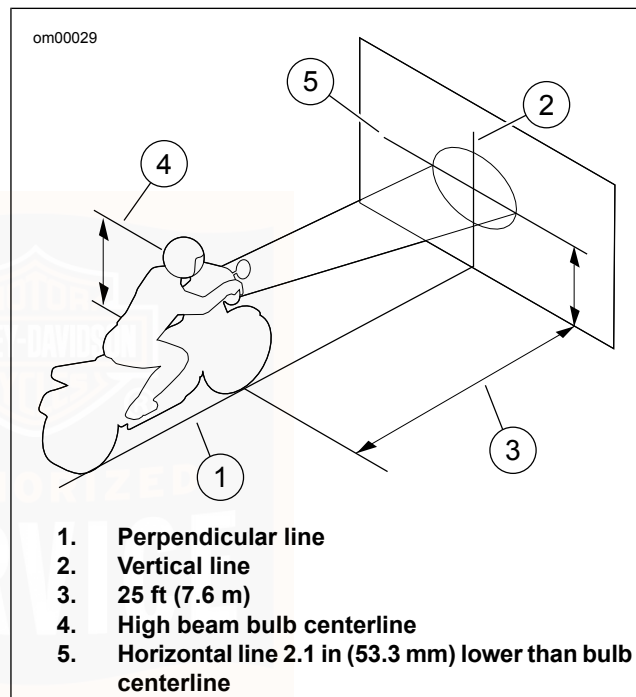


Figure 51. Checking Headlamp Alignment

Adjusting Headlamp

Set Horizontal Adjustment

1. **Harley-Davidson Street 500 (XG500), Harley-Davidson Street 750 (XG750):** Remove speed screen.
 - a. See Figure 52. Remove speed screen screws (1) and washers (2).
 - b. Pull speed screen away from upper speed screen bracket (4).
 - c. Pull speed screen away from lower speed screen bracket (5).
2. **Street Rod (XG750A):** Remove speed screen.
 - a. See Figure 53. Pull speed screen (2) away from speed screen bracket (1).
3. See Figure 54. Loosen horizontal adjustment locknut (1).
4. Direct light beam straight ahead.
5. Tighten horizontal adjustment locknut.
Torque: 20–24 ft-lbs (27.5–32.5 N·m) *Headlamp horizontal locknut*
6. See Figure 53. Align posts of speed screen (3) with grommets.
7. **Harley-Davidson Street 500 (XG500), Harley-Davidson Street 750 (XG750):** Install speed screen.
 - a. Install speed screen onto lower speed screen bracket (5).
 - b. Align speed screen to upper speed screen bracket (4).
 - c. Install washers (2) and screws (1).
Torque: 20–29 **in-lbs** (2.3–3.3 N·m) *Speed screen screw*
8. **Street Rod (XG750A):** Install speed screen.
 - a. See Figure 53. Align speed screen post to grommets and push.

NOTE

Perform all adjustments before installing speed screen.

Set Vertical Adjustment

1. See Figure 54. Loosen locknut (1) for vertical adjustment bolt (2)
2. Aim headlamp at horizontal line on wall.
3. Tighten vertical adjustment locknut.

Torque: 15–19 ft-lbs (20.6–25.5 N·m) *Headlamp vertical adjustment locknut*

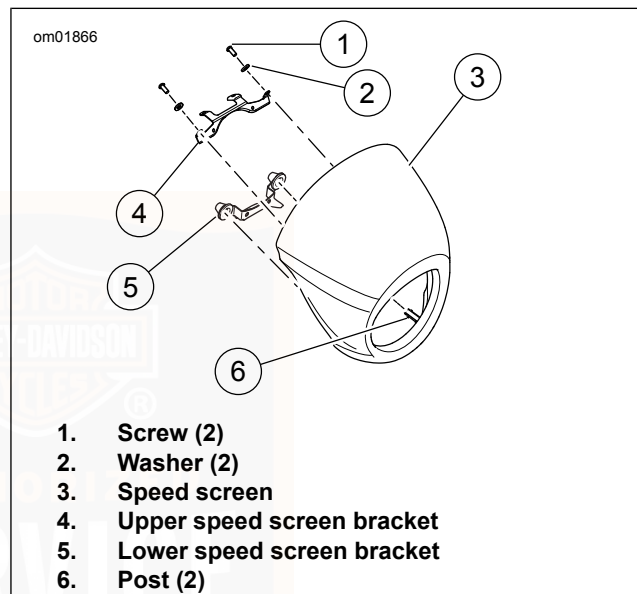


Figure 52. Headlamp Speed Screen: Harley-Davidson Street 500 (XG500), Harley-Davidson Street 750 (XG750)

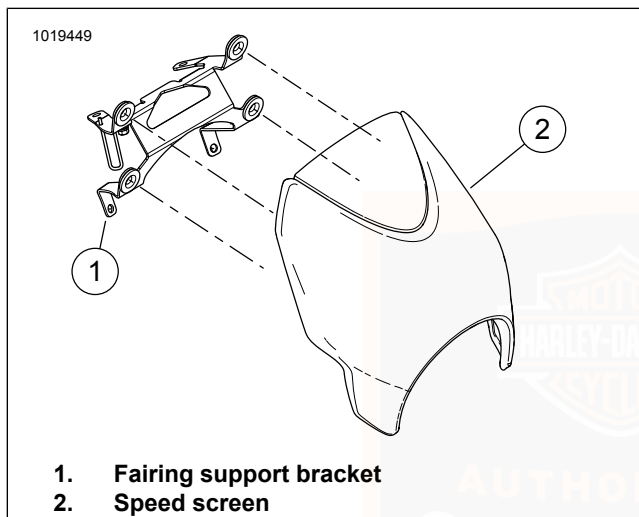


Figure 53. Headlamp Speed Screen: Street Rod (XG750A)

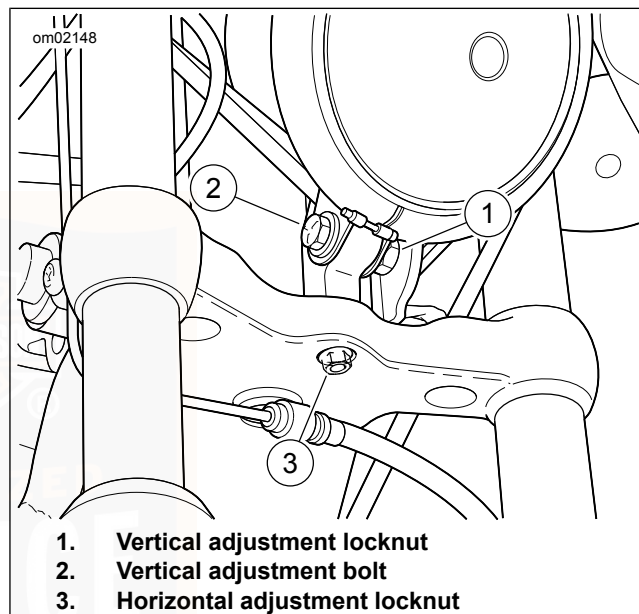


Figure 54. Headlamp Adjustment

Replacing Headlamp or Position Bulb

⚠ WARNING

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)

Remove

1. Remove main fuse. See Fuses (Page 122).
2. Remove speed screen. See Figure 52 and Figure 53.
3. See Figure 55. Remove lens assembly (5).
 - a. Remove screws (6).
 - b. Remove lens assembly.
 - c. Disconnect headlamp and position lamp connectors.
4. Remove boot (1).
5. See Figure 56. Unlock retainer clip (3).
 - a. Push down on retainer clip on both sides of the locking tab (2).
 - b. See Figure 57. Move retainer clip outward to the unlocked positions (1).
 - c. See Figure 58. Pivot retainer clip upward 45°.
6. Remove headlamp bulb.

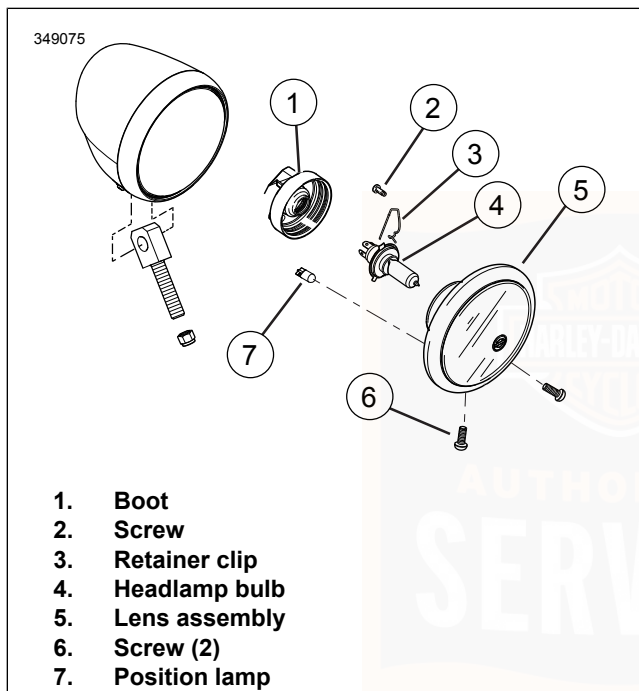


Figure 55. Headlamp Bulb

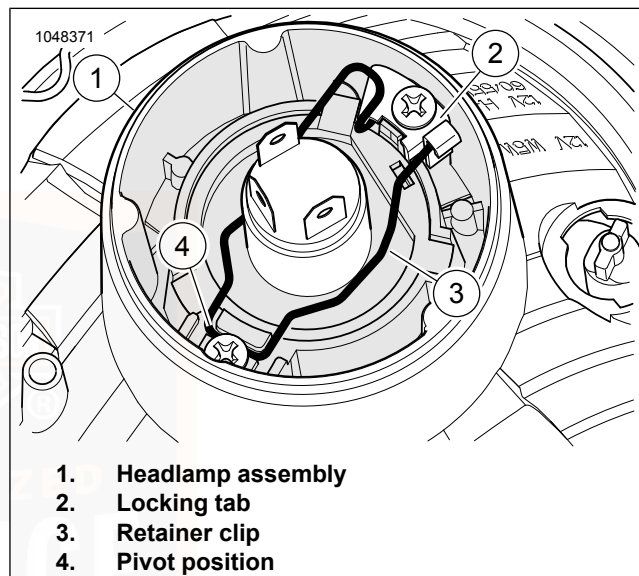


Figure 56. Headlamp Retainer Clip Locked

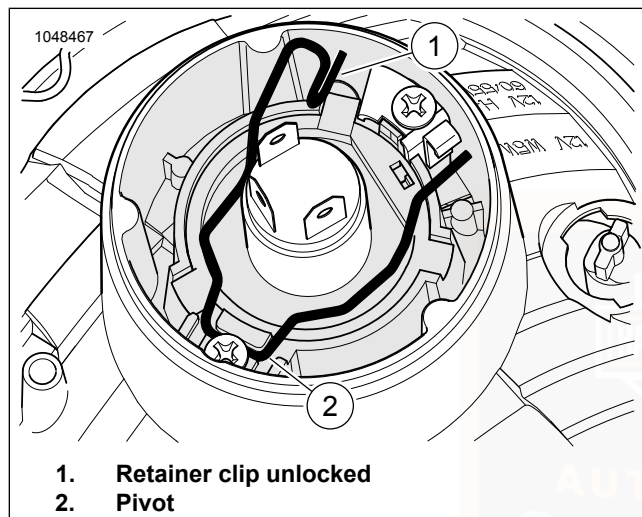


Figure 57. Retainer Clip Unlocked

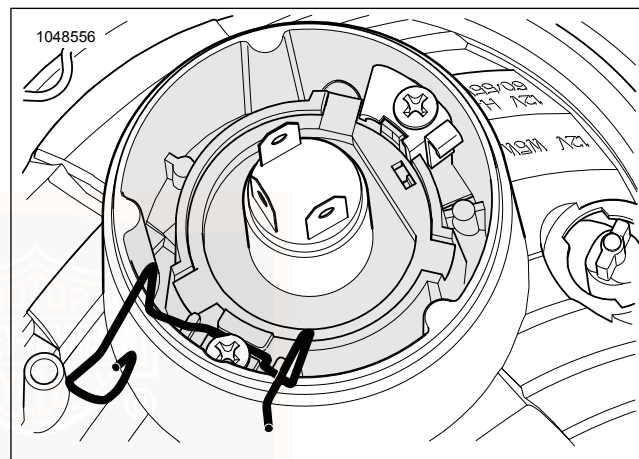


Figure 58. Headlamp Retainer clip Open

Install

NOTICE

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

1. See Figure 55. Install headlamp bulb (4).
 - a. Align headlamp bulb tabs with tabs on lens assembly (5).
 - b. Install headlamp bulb.
2. Lock retainer clip.
 - a. See Figure 57. Pivot retainer clip downward 45°.
 - b. Push down on retainer clip.
 - c. See Figure 58. Move the retainer clip inward to the locked positions.
3. See Figure 55. Install lens assembly (5).
 - a. Install boot (1).
 - b. Connect headlamp and position lamp connectors.
 - c. Install lens assembly (5).
 - d. Install screws (6). Tighten.
Torque: 16–21 **in-lbs** (1.8–2.4 N·m) *Headlamp screw*

4. Install speed screen. See Figure 52 and Figure 53.
5. Install main fuse. See Fuses (Page 122).

⚠ WARNING

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

6. Check operation of all lamps.

TAIL LAMP BULB REPLACEMENT: LED

The tail lamp is an LED assembly. Replace the tail lamp as a unit. See a Harley-Davidson dealer.

TURN SIGNAL BULB REPLACEMENT: INCANDESCENT

Replacing Turn Signal Bulb

1. See Figure 59. Insert coin in notch. Carefully twist until the lens cap pops out of the lamp housing.
2. While pushing bulb in, rotate counterclockwise to remove. Remove bulb.

3. Inspect condition of electrical contacts in socket. If necessary, clean with a small wire brush and electrical contact cleaner.
4. Apply ELECTRICAL CONTACT LUBRICANT to the contacts in socket and at bottom of the **new** bulb.
5. Align pins on **new** bulb with guides in bulb socket. Push and rotate **new** bulb clockwise into socket.
6. With the notch at the bottom, snap the lens cap onto the lamp housing.

⚠ WARNING

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

7. Check operation of all lamps.

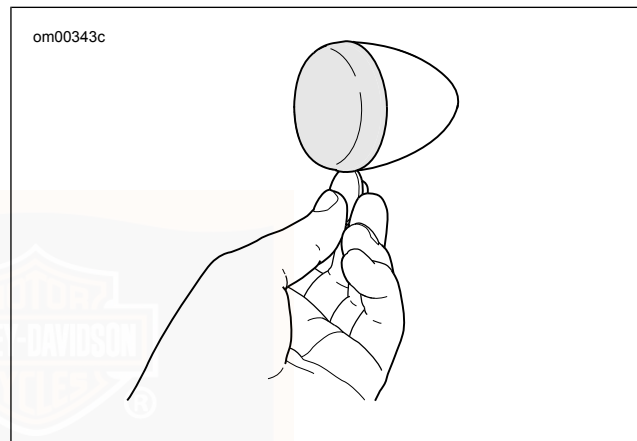


Figure 59. Remove Lens

TURN SIGNAL BULB REPLACEMENT: LED

The LED turn signal lamp is a sealed assembly. Replace the turn signal lamp as a unit. See a Harley-Davidson dealer.

SEAT

**Seat: Harley-Davidson Street 500 (XG500),
Harley-Davidson Street 750 (XG750)**

Removing Seat

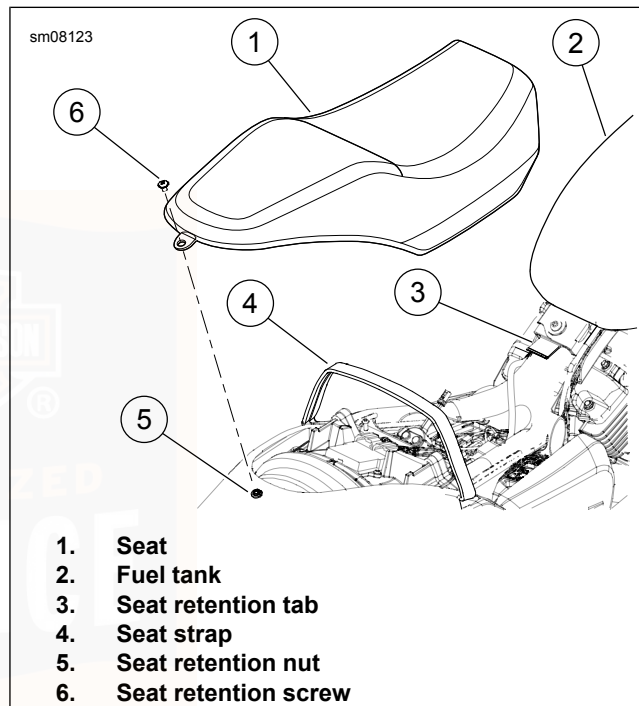
1. See Figure 60. Remove seat retention screw (6).

2. Slide seat (1) rearward to release from seat retention tab (3).
3. Slide seat forward and above fuel tank (2).
4. Pull seat forward through seat strap (4).

Installing Seat

1. See Figure 60. Insert rear of seat (1) through seat strap (4).
2. Slide seat forward and on to seat retention tab (3).
3. Install seat retention screw (6).

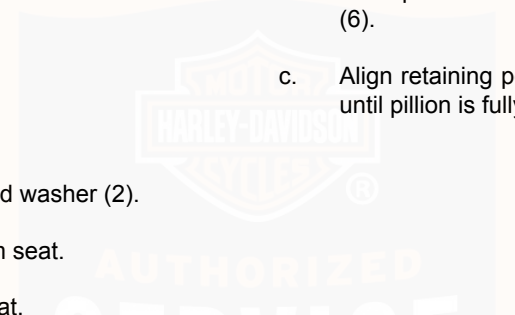
Torque: 20–40 **in-lbs** (2.3–4.5 N·m) *Seat retention screw*



**Figure 60. Seat: Harley-Davidson Street 500 (XG500),
Harley-Davidson Street 750 (XG750)**

Seat: Street Rod (XG750A)

Removing Seat

1. See Figure 61. Remove passenger pillion (1).
 - a. Lift rear of passenger pillion to release pillion from retaining post (7).
 - b. Slide pillion rearward to remove.
 2. Remove seat (3).
 - a. Remove seat retention screw and washer (2).
 - b. Position seat strap (5) away from seat.
 - c. Slide seat rearward. Remove seat.
- 

2. Position seat strap (5) over rear of seat (3).

3. Install passenger pillion (1).

- a. Place passenger pillion (1) at rear of seat (3).
- b. Slide pillion forward engaging two tabs into slots (6).
- c. Align retaining post (7) and grommet. Push down until pillion is fully seated.

Installing Seat

1. See Figure 61. Install seat (3).
 - a. Slide seat forward and on to seat retention tab (4).
 - b. Install the seat retention screw and washer (2).
Torque: 80–97 **in-lbs** (9–11 N·m) *Seat retention screw and washer*

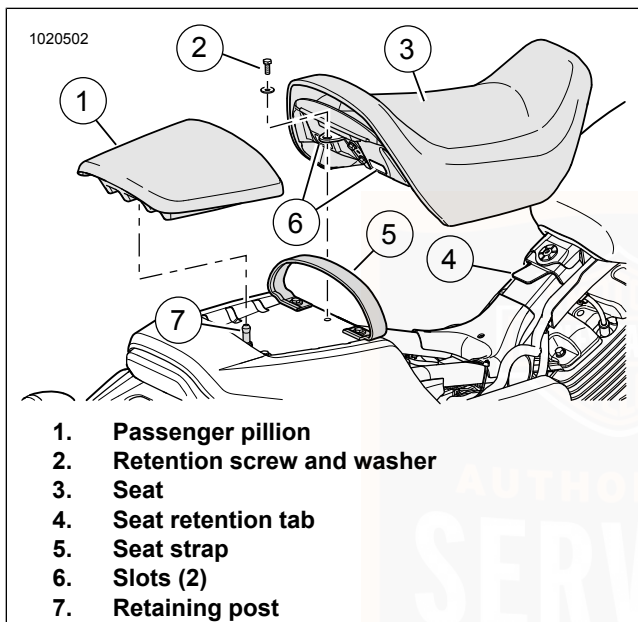


Figure 61. Seat: Street Rod (XG750A)

NOTES



TROUBLESHOOTING: GENERAL

⚠ WARNING

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)

Use the following checklists for troubleshooting. Carefully check each cause because more than one condition can cause trouble.

ENGINE

Starter Does Not Operate or Does Not Turn Engine Over

1. Engine off/run switch in off position.
2. Ignition switch not on.
3. Discharged battery or loose or corroded connections (solenoid chatters).
4. Clutch lever not squeezed against handlebar or transmission not in neutral.
5. Failed fuse.

Engine Turns Over But Does Not Start

1. Engine off/run switch in off position.
2. Fuel tank empty.
3. Fuel filter clogged.
4. Discharged battery or loose or damaged battery terminal connections.
5. Fouled spark plugs.
6. Spark plug coil connections loose or in bad condition and shorting.
7. Loose or corroded wire or cable connections at coil or battery.
8. Fuel pump inoperative.
9. Failed fuse.

Starts Hard

1. Spark plugs in bad condition, have improper gap or are partially fouled.
2. Battery nearly discharged.
3. Loose wire or cable connections at one of the battery terminals or at coil.
4. Engine oil too heavy (cold-weather operation).

5. Fuel tank vent plugged or fuel line closed off, restricting fuel flow.
6. Water or dirt in fuel system.
7. Fuel pump inoperative.

Starts But Runs Irregularly or Misses

1. Spark plugs in bad condition or partially fouled.
2. Spark plug gap too close or too wide.
3. Battery nearly discharged.
4. Damaged wire or loose connection at battery terminals or coils.
5. Intermittent short circuit due to damaged wire insulation.
6. Water or dirt in fuel system, filter or carburetor.
7. Fuel vent system plugged. See dealer.
8. One or more injectors fouled.

A Spark Plug Fouls Repeatedly

1. Incorrect spark plug.

Pre-ignition or Detonation (Knocks or Pings)

1. Incorrect fuel.
2. Incorrect spark plug for the kind of service.

Overheats

1. Insufficient oil supply or oil not circulating.
2. Heavy carbon deposit from lugging engine. See dealer.

Excessive Vibration

1. Rear fork pivot shaft nuts loose. See dealer.
2. Front engine mounting bolts loose. See dealer.
3. Damaged frame. See dealer.
4. Belt badly worn.
5. Wheels and/or tires damaged. See dealer.
6. Vehicle not properly aligned. See dealer.

Engine Oil Not Circulating (Oil Pressure Lamp Lit)

1. Insufficient or diluted oil supply.
2. Oil feed clogged with ice and sludge in freezing weather.
3. Grounded oil signal switch wire. See dealer.
4. Damaged or improperly installed check valve. See dealer.
5. Oil pump problem. See dealer.

COOLING SYSTEM

Overheats

1. Low coolant level or improper coolant.
2. Cooling fans not operating.
3. Air flow through the radiator is obstructed.
4. Blocked coolant passages.
5. Temperature gauge malfunction.
6. Radiator cap problem.
7. Thermostat malfunction.

ELECTRICAL SYSTEM

Alternator Does Not Charge

1. Regulator not grounded. See dealer.
2. Engine ground wire loose or damaged. See dealer.
3. Loose or damaged wires in charging circuit. See dealer.

Alternator Charge Rate is Below Normal

1. Weak battery.
2. Excessive use of add-on accessories.
3. Loose or corroded connections.

4. Extensive periods of idling or low speed riding.

TRANSMISSION

Transmission Shifts Hard

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

Transmission Jumps Out of Gear

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

Clutch Slips

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

Clutch Drags or Does Not Release

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

3. Clutch discs warped. See dealer.

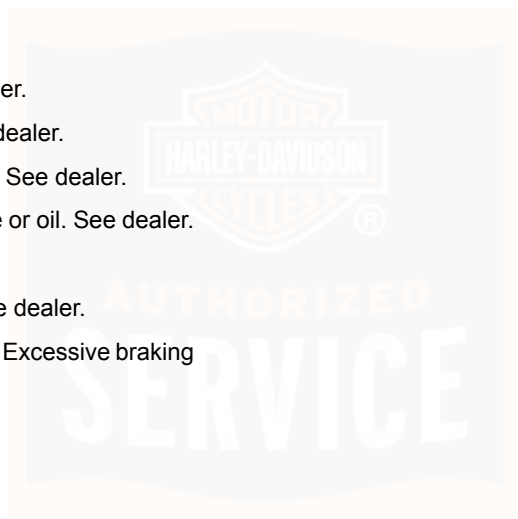
Clutch Chatters

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

BRAKES

Brakes Do Not Hold Normally

1. Master cylinder low on fluid. See dealer.
2. Brake line contains air bubbles. See dealer.
3. Master or wheel cylinder piston worn. See dealer.
4. Brake pads contaminated with grease or oil. See dealer.
5. Brake pads badly worn. See dealer.
6. Brake disc badly worn or warped. See dealer.
7. Brake fades because of heat build up. Excessive braking or brake pads dragging. See dealer.
8. Brake drags. See dealer.



WARRANTY AND MAINTENANCE

This owner's manual contains your new motorcycle limited warranty and your owner's maintenance record.

It is your responsibility as the owner to follow the maintenance schedule at the mileage intervals as specified in the owner's manual. All of the specified maintenance services must be performed on schedule to keep your limited warranty valid.

Some countries, states or other locations may require all regular maintenance and service work to be done by an authorized Harley-Davidson dealer for your limited warranty to remain in effect. Check with your authorized Harley-Davidson dealer for local requirements.

1. Make an appointment with a Harley-Davidson dealer for inspection and service prior to the first 1000 mi (1,600 km), and as soon as possible after any issue arises.
2. Bring this owner's manual with you when you visit your authorized Harley-Davidson dealer to have your motorcycle inspected and serviced.
3. Have the dealer technician sign the maintenance record in the owner's manual at the proper mileage interval. These records should be retained by the owner as proof of proper maintenance.

4. Keep receipts covering any parts, service or maintenance performed.

These records should be transferred to each subsequent owner.

Use only Harley-Davidson approved parts and accessories that have been designed, tested and approved for your model and model year motorcycle.

Use of aftermarket performance parts may void all or parts of your limited warranty. See an authorized Harley-Davidson dealer for details.

Harley-Davidson authorized dealerships are independently owned and operated and may sell and install parts and accessories that are not manufactured or approved by Harley-Davidson for use on your motorcycle. Therefore, you should understand that Harley-Davidson is 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 authorized Harley-Davidson dealerships.

KEEPING IT ALL HARLEY-DAVIDSON

Genuine Harley-Davidson parts are engineered and tested specifically for use on your motorcycle. Insist that your authorized Harley-Davidson dealer uses only genuine Harley-Davidson replacement parts and accessories to keep

your Harley-Davidson motorcycle and its limited warranty intact. Not all Harley-Davidson parts and accessories are appropriate for your model or model year motorcycle.

NOTICE

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

NOTE

Installing off-road or competition parts to enhance performance may void all or parts of your limited warranty. See the Harley-Davidson Motorcycle Limited Warranty in this owner's manual or an authorized Harley-Davidson dealer for details.

EPA NOISE REGULATIONS IN THE UNITED STATES

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

EPA Regulations

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

AMONG THOSE ACTS PRESUMED TO CONSTITUTE TAMPERING ARE THE FOLLOWING:

1. Replacing the muffler(s) and/or the entire exhaust system with parts not certified to be noise legal for street use.
2. Removing or modifying the muffler internal baffles in any way.
3. Replacing the air intake/cleaner assembly with one not certified to be noise legal for street use.
4. Modifying the air intake/cleaner assembly in such a way as to make the vehicle no longer noise legal for street use.

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

WARRANTY/SERVICE INFORMATION

Any authorized Harley-Davidson dealer may provide warranty repair work on your motorcycle. The fact that an authorized Harley-Davidson dealership performs warranty repairs does not create an agency relationship between Harley-Davidson and the authorized dealership. If you have any questions regarding warranty obligations contact your authorized Harley-Davidson dealer.

For normal service work or warranty work under the above conditions, you may obtain the name and location of your nearest U.S. authorized Harley-Davidson dealer by calling 1-800-258-2464 (U.S. only). To find dealers worldwide, see www.harley-davidson.com.

REPORTING SAFETY DEFECTS IN THE 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 motorcycle 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 motorcycles, it may order a recall and remedy campaign. However, NHTSA cannot become involved in individual problems between you, your authorized Harley-Davidson dealer, or Harley-Davidson.

You can contact NHTSA through the following means. Additional information about motor vehicle safety is available through the website.

Telephone: Vehicle Safety Hotline (toll-free) at 1-888-327-4236 (TTY: 1-800-424-9153).

Website: www.safercar.gov

Address: Administrator, NHTSA, 400 Seventh Street SW, Washington, DC 20590

REPORTING SAFETY CONCERNS IN CANADA

Safety concerns may be reported to the Canadian Department of Transportation and Harley-Davidson.

You can contact the Canadian Department of Transportation through the following means.

Mailing Address:

Transport Canada - ASFAD

330 Sparks Street

Ottawa, ON

K1A 0N5

Telephone: 819-994-3328 (Gatineau-Ottawa area or internationally)

Toll free: 1-800-333-0510 (in Canada)

Online:

<http://www.tc.gc.ca/recalls>

REQUIRED DOCUMENTATION FOR IMPORTED MOTORCYCLES

If a Harley-Davidson motorcycle is imported into the United States, additional documentation is required for that motorcycle to be eligible for the United States Harley-Davidson Motorcycle Limited Warranty. An authorized Harley-Davidson dealer can provide a form explaining the requirements.

OWNER CONTACT INFORMATION

If you move from your present address, sell your motorcycle, or purchase a pre-owned Harley-Davidson motorcycle, see

an authorized Harley-Davidson dealer to update your owner contact information.

This will provide Harley-Davidson with an accurate registration (as required by law in some countries), and will allow Harley-Davidson to notify you in the event of a recall or product program.

The rights and benefits conferred upon you and the obligations of Harley-Davidson as set forth herein are separate and distinct from any rights and duties set forth in any service contract you may have purchased from a dealership and/or third-party insurance company. Harley-Davidson does not authorize any entity to expand Harley-Davidson's warranty obligations in connection with your motorcycle or this limited warranty.

When updating your contact information, your authorized Harley-Davidson dealer will need your Vehicle Identification Number (VIN), odometer mileage, and date of vehicle transfer (if applicable).

QUESTIONS AND CONCERNS

If you have questions or concerns regarding the performance of your motorcycle or the application of the limited warranty described here, or are not satisfied with the service you are receiving from an authorized Harley-Davidson dealership, do the following:

1. Contact the selling and/or servicing dealership and speak to the sales and/or service manager.
2. If your concern cannot be addressed to your satisfaction by the dealership, contact the Harley-Davidson Customer Support Center by mailing your concern to the following address or calling the phone number below.

In the U.S., state warranty laws, often referred to as lemon laws, may provide you with certain rights not specifically mentioned here. To the extent allowed by your state, Harley-Davidson requests that you first send written notification of any defect or warranty non-conformity that you have experienced with your motorcycle to Harley-Davidson. Harley-Davidson appreciates the opportunity to investigate your concerns and restore your satisfaction in your motorcycle by making the necessary repairs consistent with the terms of Harley-Davidson's limited warranty. Harley-Davidson requests that you send your complaint to the Harley-Davidson Customer Support Center.

- Harley-Davidson Motor Company Attention:
Harley-Davidson Customer Support Center P.O. Box 653
Milwaukee, Wisconsin 53201 1-800-258-2464 (U.S. only)
1-414-343-4056

This warranty does not mean that each Harley-Davidson motorcycle is free from defects. Defects may be unintentionally introduced into motorcycles during the design and manufacturing processes and such defects could result in the

need for repairs. For this reason, Harley-Davidson provides the Limited Warranty in order to remedy any such defects that result in a component malfunction or failure during the warranty period. The remedy under this written warranty, and any implied warranty, is limited to repair, replacement or adjustment of the defective part. This exclusive remedy shall not be deemed to have failed its essential purpose so long as Harley-Davidson, through its authorized dealers, is willing and able to repair, replace or adjust defective parts in the prescribed manner. Harley-Davidson's liability, if any, shall in no event exceed the cost of correcting any defect as herein provided and upon expiration of this warranty, any such liability shall terminate.

NOTES



2020 HARLEY-DAVIDSON LIMITED MOTORCYCLE WARRANTY

24 Months/Unlimited Miles

Harley-Davidson warrants for any new 2020 Harley-Davidson motorcycle 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 or replacement of defective parts will be Harley-Davidson's sole obligation and your sole and exclusive remedy under this limited warranty. This limited warranty applies only for the duration identified below.

No person, including Harley-Davidson dealers, may modify, extend or waive any part of this warranty.

As a condition of this warranty, you are responsible for properly using, maintaining, and caring for your motorcycle as outlined in your Owner Manual. Harley-Davidson recommends that you maintain copies of all maintenance records and receipts.

THERE IS NO OTHER EXPRESS WARRANTY (OTHER THAN THE SEPARATE EMISSIONS, NOISE, AND RADIO LIMITED WARRANTIES) ON THE MOTORCYCLE. Any implied warranty of merchantability or fitness for particular purpose is limited to the duration of the express warranty, or to the duration set forth in your state's warranty statutes,

whichever is shorter. Any implied warranty is not transferred to subsequent purchasers/buyers of the motorcycle.

The implied warranty of fitness for a particular purpose does not apply if your motorcycle is used for racing, even if the motorcycle is equipped for racing.

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, NEITHER HARLEY-DAVIDSON NOR ITS AUTHORIZED DEALERS SHALL BE LIABLE FOR LOSS OF TIME, INCONVENIENCE, LOSS OF MOTORCYCLE USE, COMMERCIAL LOSS OR ANY OTHER INCIDENTAL OR CONSEQUENTIAL DAMAGES.

Harley-Davidson and your dealer are not responsible for any time or income that you lose, any inconvenience, the loss of your transportation or use of your motorcycle, the cost of a rental motorcycle, fuel, travel, meals, or lodging, or for any other incidental or consequential damages you may have.

Punitive, exemplary, or multiple damages may not be recovered unless applicable law prohibits their disclaimer. You may not bring any warranty-related claim as a class representative, a private attorney general, a member of a class of claimants or in any other representative capacity. Harley-Davidson shall not be liable for any damages caused

by delay in delivery or furnishing of any products and/or services.

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 also have other rights which vary from state to state.

The following terms and conditions apply to this limited warranty:

Duration

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

Owner's Obligations

To obtain warranty service, return your motorcycle at your expense within the limited warranty period to an authorized Harley-Davidson dealer. The authorized Harley-Davidson dealer should be able to provide warranty service during normal business hours, depending upon the workload of the authorized dealer's service department and the availability of necessary parts.

Exclusions

This limited warranty will not apply to any motorcycle.

1. Which has not been operated or maintained as specified in the owner's manual.
2. Which has been abused, neglected, misused, improperly stored, used "off the highway," or used for racing or competition of any kind.
3. Which is not manufactured to comply with the laws of the market in which it is registered.

4. Which has off-road or competition parts installed to enhance performance, a trailer hitch, or has other unapproved modifications (even if these modifications include genuine Harley-Davidson parts and accessories that are not approved for use on your motorcycle). These modifications may void all or parts of your new motorcycle limited warranty. See an authorized Harley-Davidson dealer for details.
 5. Which has been subjected to an act of God, war, riot, insurrection, nuclear contamination, natural disasters, including, but not limited to, lightning, forest fires, dust storms, hail storms, ice storms, earthquakes, or floods, or other circumstances out of Harley-Davidson's control.
 6. Which has been in an accident or collision or has been dropped or struck.
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 factory materials or workmanship, which are covered by this limited warranty for the duration of the limited warranty period).
 3. Any cosmetic condition existing at the time of retail delivery that has not been documented by the authorized Harley-Davidson selling dealer prior to retail delivery.
 4. Defects or damage to the motorcycle caused by alterations outside of Harley-Davidson's factory specifications or caused by alterations or use of parts or accessories not approved for the make and model year of your motorcycle.
 5. Damage caused by installation or use of non-Harley-Davidson components, even those installed by an authorized Harley-Davidson dealership, that cause a Harley-Davidson part to fail. Examples include, but are not limited to performance-enhancing powertrain components or software, exhaust systems, trailer hitches, non-approved tires, lowering kits, handlebars, and add-ons connected to the factory electrical system.
 6. **United States customers:** Defects or damage impacting the functionality of powertrain components in a motorcycle that has been tuned using a tuner or calibration that was not covered by a California ARB Executive Order or otherwise approved by EPA.

Other Limitations

This limited warranty does not cover:

1. 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, but not limited to, the following: light bulbs, tires, lubrication, oil and filter change, fuel system cleaning, battery maintenance, engine tune-up, spark plugs, brake, clutch, chain/belt adjustment and chain replacement.

Important: Read Carefully

1. Authorized Harley-Davidson dealers are independently owned and operated and may sell non-Harley-Davidson products. Because of this, HARLEY-DAVIDSON IS NOT RESPONSIBLE FOR THE SAFETY, QUALITY, OR SUITABILITY OF ANY NON-HARLEY-DAVIDSON PART, ACCESSORY OR DESIGN MODIFICATION INCLUDING, BUT NOT LIMITED TO, LABOR WHICH MAY BE SOLD AND/OR INSTALLED BY AUTHORIZED HARLEY-DAVIDSON DEALERS.
2. This limited warranty is a contract between you and Harley-Davidson. It is separate and apart from any warranty you may receive or purchase from an authorized Harley-Davidson dealer. An authorized Harley-Davidson dealer is not authorized to alter, modify, expand, or in any way change the terms and conditions of this limited warranty.
3. Any warranty work or parts replacement authorized by Harley-Davidson will not preclude Harley-Davidson from later relying on any exclusion where applicable.
4. Harley-Davidson and its authorized dealers reserve the right to modify or service motorcycles designed and manufactured by Harley-Davidson at any time without incurring any additional obligation to make the same alteration or change to a motorcycle previously built and sold. Harley-Davidson reserves the right to provide post-warranty repairs, conduct repair campaigns, offer good-will or customer satisfaction repairs or extend the warranty coverage for certain motorcycles at its sole discretion. Said repairs or extensions of warranty coverage in no way obligates Harley-Davidson to provide similar accommodations to other owners of similar motorcycles. Sometimes Harley-Davidson may offer a special adjustment program to pay all or part of the cost of certain repairs beyond the terms of your limited warranty. Check with your authorized Harley-Davidson dealer to learn whether such programs are available to you. Your state may prohibit these types of offers, in which case, they may not be available to you.
5. The fact that a part is labeled or branded Harley-Davidson does not necessarily make it appropriate or warranted for the make and model of your motorcycle. The use of parts not designed and tested for your motorcycle may have negative consequences on the performance of your motorcycle and may create conditions not covered by this limited warranty.

2020 AUSTRALIA/NEW ZEALAND HARLEY-DAVIDSON MOTORCYCLE LIMITED WARRANTY

24 Months/Unlimited Miles

This motorcycle limited warranty, referred to below as the "H-D Motorcycle Warranty" applies to all persons who purchase a new 2020 or prior-model Harley-Davidson motorcycle in Australia and New Zealand only after 1st January 2019.

Your Consumer Rights

The benefits given to you under this H-D Motorcycle Warranty are additional to, and do not detract from, other rights and remedies that you may have in respect of the motorcycle under Australian and New Zealand laws, including consumer protection laws.

In Australia, our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

In New Zealand, our goods also come with guarantees that cannot be excluded under the New Zealand Consumer Guarantees Act.

Warranty

This H-D Motorcycle Warranty, is provided by **Harley-Davidson, Motor Company**, P.O. Box 653, Milwaukee, Wisconsin 53201, U.S.A, phone: +1 (414) 343-4056, ("Harley-Davidson").

Harley-Davidson warrants for any new 2020 Harley-Davidson motorcycle that an authorised Harley-Davidson dealer will repair or replace without charge any parts found to be defective in factory materials or workmanship under normal use during the warranty period set out below.

Such repair or replacement of parts will be Harley-Davidson's sole obligation and your sole remedy under this H-D Motorcycle Warranty, however you may have other rights under Australian and New Zealand laws, as described above.

Note: Goods presented for repair may be replaced by refurbished goods of the same type rather than being repaired. Refurbished parts may be used to repair goods.

The following terms and conditions apply to this H-D Motorcycle Warranty:

Warranty Period

The duration of this H-D Motorcycle Warranty is twenty-four months, starting from the earlier of:

(a) the date of delivery by an authorised Harley-Davidson dealer to the first retail purchaser; or

(b) the third anniversary of the last day of the model year of the motorcycle (if not sold to a retail purchaser before that date).

Your authorised Harley-Davidson dealer will submit an electronic Sales and Warranty Registration form to initiate your H-D Motorcycle Warranty.

Note: If the motorcycle was used as a demonstrator or company motorcycle, then the warranty period may have started and/or expired prior to the initial retail sale. See an authorised Harley-Davidson dealer for details.

Any unexpired portion of this H-D Motorcycle Warranty will be transferred to subsequent owners, upon the resale of the motorcycle during the warranty period. See the OWNER CONTACT INFORMATION section of the Owner's Manual for information regarding notification of ownership changes.

Obtaining Warranty Service

To obtain warranty service, return your motorcycle at your expense within the warranty period to an authorised dealer.

152 Limited Motorcycle Warranty (Australia)

Harley-Davidson's network of authorised dealers is large, and continues to expand. To find current contact information for your nearest authorised dealer, visit our website at www.h-d.com.au.

The authorised Harley-Davidson dealer should be able to provide warranty service during normal business hours and as soon as possible, depending upon the workload of the authorised dealer's service department and the availability of necessary parts

You are responsible for collecting the motorcycle from the authorized dealer once the warranty service has been completed, at your expense.

Exclusions

This H-D Motorcycle Warranty will not apply to any motorcycle (or part or accessory):

1. Which has not been operated or maintained as specified in the Owner's Manual.
2. Which has been abused, neglected, misused, improperly stored, used "off the highway," or used for racing or competition of any kind.
3. Which was not originally manufactured for use or sold in Australia and New Zealand and/or does not comply with Australian and New Zealand homologation requirements.

4. Which has off-road or competition parts installed to enhance performance, or has unapproved modifications. These modifications may void all or part of your new H-D Motorcycle Warranty. See an authorised Harley-Davidson dealer for details.
5. Where damage is caused by, or Harley-Davidson is unable to honour this H-D Motorcycle Warranty due to, acts of God, war, riot, insurrection, natural disasters, including, but not limited to, nuclear contamination, lightning, forest fires, dust storms, hail storms, ice storms, earthquakes, floods, or other circumstances out of Harley-Davidson's control.
6. Which has been in an accident, collision, dropped or struck.

Note: Even though this H-D Motorcycle Warranty does not apply in the circumstances set out above, you may still have rights under Australian and New Zealand laws, including the Australian Consumer Law in such circumstances.

Other Limitations

This H-D Motorcycle Warranty does not cover:

1. Parts and accessories not manufactured by Harley-Davidson, or any damage caused to the motorcycle by the installation of such parts and accessories, even if such parts and accessories are installed on the motorcycle at the date of initial retail purchase. A separate third party warranty may apply to such parts and accessories. See an authorised Harley-Davidson dealer for details.
2. Parts and labour for normal maintenance as recommended in the Owner's Manual, or the replacement of parts due to normal wear and tear including, but not limited to, the following: light bulbs, tyres, lubrication, oil and filter change, fuel system cleaning, battery maintenance, engine tune-up, spark plugs, brake, clutch, chain/belt adjustment and chain replacement.
3. Cosmetic or other concerns that arise as a result of owner abuse, lack of proper maintenance or environmental conditions (except concerns that result from defects in factory materials or workmanship, which are covered by this H-D Motorcycle Warranty for the duration of the warranty period).
4. Any cosmetic condition existing at the time of retail delivery that has not been documented by the authorised Harley-Davidson selling dealer prior to retail delivery.

5. Defects or damage to the motorcycle caused by alterations outside of Harley-Davidson's factory specifications, including the installation of competition or closed course parts and accessories and the addition of loads and stresses to the motorcycle above those recommended by Harley-Davidson.
6. Damage caused by installation or use of non-Harley-Davidson components, even those installed by an authorised dealership, that cause a Harley-Davidson part to fail. Examples include, but are not limited to performance-enhancing powertrain components or software, exhaust systems, non-approved tyres, lowering kits, handlebars, add-ons connected to the factory electrical system, tow bars, etc.

Note: Even though this H-D Motorcycle Warranty does not cover the circumstances set out above, you may still have rights under Australian and New Zealand laws, including the Australian Consumer Law.

Important: Read Carefully

1. Authorised Harley-Davidson dealers are independently owned and operated and may sell non-Harley-Davidson products. Because of this, HARLEY-DAVIDSON IS NOT RESPONSIBLE FOR THE SAFETY, QUALITY, OR SUITABILITY OF ANY NON-HARLEY-DAVIDSON PART, ACCESSORY OR DESIGN MODIFICATION WHICH MAY BE SOLD AND/OR INSTALLED BY AUTHORISED HARLEY-DAVIDSON DEALERS OR LABOUR CARRIED OUT BY DEALERS.
2. This H-D Motorcycle Warranty is a contract between you and Harley-Davidson. It is separate and apart from any warranty you may receive or purchase from an authorised Harley-Davidson dealer. An authorised Harley-Davidson dealer is not authorised to alter, modify, or in any way change the terms and conditions of this H-D Motorcycle Warranty.

Any warranty work or parts replacement authorised by Harley-Davidson will not preclude Harley-Davidson from later relying on any exclusion where Harley-Davidson later becomes aware that an exclusion applied or the warranty claim did not otherwise comply with the terms of this H-D Motorcycle Warranty.

2020 HARLEY-DAVIDSON MOTORCYCLE NOISE CONTROL SYSTEM LIMITED WARRANTY

The following limited 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 Harley-Davidson motorcycles sold in the U.S.

Harley-Davidson warrants to the first owner and each subsequent owner that this motorcycle 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 factory materials and workmanship which can cause this motorcycle not to meet U.S. Environmental Protection Agency Standards within one (1) year from initial retail purchase and delivery from an authorized Harley-Davidson dealer or one (1) year from the [second] anniversary of the last day of the model year of the motorcycle, or 3730 mi (6,000 km) whichever occurs first. Any unexpired portion of this limited warranty will be transferred to subsequent owners, upon the resale of the motorcycle during the limited warranty period. If the motorcycle was used as a demonstrator or company motorcycle, then the limited warranty period may have started and/or expired prior to the initial retail sale. See an authorized Harley-Davidson dealer for details.

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

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

The limited 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 motorcycle 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 LIMITED WARRANTY

1. Failures which arise as a result of misuse, alteration, or non-performance of maintenance as specified in the Owner's Manual.
2. Replacing, removing, or modifying any portion of the NOISE CONTROL SYSTEM (consisting of the exhaust system and air intake/cleaner assembly) with parts not certified to be noise legal for street use.
3. 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, NEITHER HARLEY-DAVIDSON NOR ITS AUTHORIZED DEALERS SHALL BE LIABLE FOR LOSS OF TIME, INCONVENIENCE, LOSS OF MOTORCYCLE USE, 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 limited 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. Non-genuine Harley-Davidson parts may be used only if such parts are certified to comply with U.S. Environmental Protection Agency Standards.

2020 HARLEY-DAVIDSON EMISSION CONTROL SYSTEM LIMITED WARRANTY

USA Owners 49 State Limited Emissions Warranty

The following limited warranty applies to the emission control system, is in addition to the MOTORCYCLE LIMITED WARRANTY and NOISE CONTROL SYSTEM LIMITED WARRANTY, and applies only to Harley-Davidson motorcycles certified for sale, registered, and normally operated in the U.S. Refer to the CALIFORNIA EMISSIONS CONTROL WARRANTY STATEMENT for additional warranty provisions applicable to California motorcycles.

Harley-Davidson Motor Company warrants to the first owner and each subsequent owner that this vehicle is designed, built, and equipped so as to conform at the time of sale with applicable regulations under section 7521 of Title 42 of the United States Code, and that it is free from defects in materials and workmanship which would cause this motorcycle to fail to conform with applicable regulations for five (5) years from the initial retail purchase and delivery from an authorized Harley-Davidson dealer (or five (5) years from the date the motorcycle is first placed in service, if it is first placed in service as a "demonstrator" or "company" motorcycle prior to delivery), or 18641 mi (30,000 km), whichever occurs 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 LIMITED 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 limited 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 motorcycle 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 LIMITED WARRANTY

1. Failures which arise as a result of misuse, tampering, alterations, accident, acts of nature, or improper or inadequate maintenance as specified in the Owner's Manual.
2. Required maintenance services (as specified in the Owner's Manual) and the replacement of parts (such as spark plugs, fuel and oil filters, etc.) used in required maintenance.

Limited Emission Warranty 157

3. 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, NEITHER HARLEY-DAVIDSON NOR ITS AUTHORIZED DEALERS SHALL BE LIABLE FOR LOSS OF TIME, INCONVENIENCE, TOWING OF THE VEHICLE, LOSS OF MOTORCYCLE USE, 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.

Items Covered by this Emission Warranty

The emission control system warranty may cover the following parts if the defect is deemed to be emissions-related:

- Air cleaner assembly
- Cam shaft
- Spark plug
- Ignition coil
- Ignition wires
- Vapor valve
- Catalytic converter

- Crankcase breather
- MAP sensor
- TMAP sensor
- Intake air temperature sensor
- Throttle position sensor
- Fuel injectors
- Induction module or throttle body
- Engine temperature sensor
- Electronic control unit
- Oxygen sensors

Fuel Tank (non-cosmetic failures only)

- Leaks
- Fuel vapor separator
- Fuel cap

If used on the above: hoses, clamps, fittings, tubing, sealing gaskets and mounting hardware.

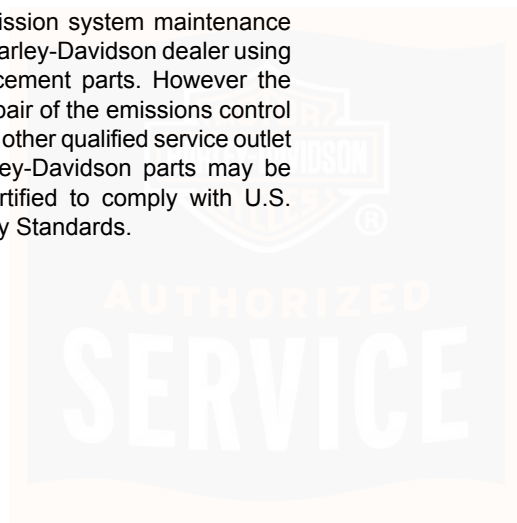
Detailed instructions for proper maintenance and use of this motorcycle, including the time and/or mileage intervals at which such maintenance is to be performed, may be found in this Owner's Manual under Service Records (Page 165).

Other Rights

This limited 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. However the maintenance, replacement or repair of the emissions control system may be performed by any other qualified service outlet or individual. Non-genuine Harley-Davidson parts may be used only if such parts are certified to comply with U.S. Environmental Protection Agency Standards.



NOTES



CALIFORNIA EMISSIONS CONTROL WARRANTY STATEMENT

USA Owners California Limited Emissions Warranty

Your Warranty Rights and Obligations

The California Air Resources Board and Harley-Davidson Motor Company are pleased to explain the emission control system warranty on your new motorcycle. In California, new motor vehicles must be designed, built and equipped to meet the State's stringent anti-smog standards. Harley-Davidson Motor Company must warrant the emission control system on your motorcycle for the periods of time listed below provided there has been no abuse, unapproved modification, neglect or improper maintenance of your motorcycle.

Your emission control system may include parts such as the carburetor or fuel-injection system, the ignition system, catalytic converter, and engine computer. Also included may be hoses, connectors and other emission-related assemblies.

Where a warrantable condition exists, within the warranty period noted below, your authorized Harley-Davidson dealer will repair your motorcycle at no cost to you including diagnosis, parts and labor.

Manufacturer's Warranty Coverage

For a period of use of five years or 18641 mi (30,000 km), whichever first occurs, beginning on the date the motorcycle is delivered to the ultimate purchaser or, if the motorcycle is placed in service as a demonstrator or company motorcycle prior to sale at retail, the date it is first placed in service.

If any emission related part on your motorcycle is defective, the part will be repaired or replaced by Harley-Davidson Motor Company. This is your emission control system DEFECTS WARRANTY.

Owner's Warranty Responsibilities

As the motorcycle owner, you are responsible for the performance of the required maintenance listed in your Owner's Manual. Harley-Davidson recommends that you retain all receipts covering maintenance on your motorcycle, but Harley-Davidson cannot deny emissions warranty coverage solely for the lack of receipts or for your failure to ensure the performance of all scheduled maintenance.

You are responsible for presenting your motorcycle to an authorized Harley-Davidson dealer as soon as a problem exists. The warranty repairs should be completed in a reasonable amount of time, not to exceed 30 days.

As the motorcycle owner, you should also be aware that Harley-Davidson may deny you warranty coverage if your

motorcycle or a part has failed due to abuse, neglect, improper maintenance or unapproved modifications.

If you have any questions regarding your warranty rights and responsibilities, you should contact Harley-Davidson Customer Service Department at 1-800-258-2464 (U.S. only) or 1-414-343-4056, or the California Air Resources Board at 9528 Telstar Ave., El Monte, California 91731.

Additional Warranty Terms

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

The emission control system of each new Harley-Davidson motorcycle was designed, built and tested using only Genuine Harley-Davidson parts and with these parts the motorcycle is certified as being in conformity with California emission control regulations.

We recommend that you take your motorcycle to an authorized Harley-Davidson dealer for repairs under this warranty. The dealer has factory-trained mechanics and genuine Harley-Davidson parts. However, in the case of an "emergency" (as defined below), you could have repairs performed at any available service establishment or by the owner, using any replacement part. An authorized Harley-Davidson dealer not being reasonably available, or a

part not being available within a reasonable time period (not to exceed 30 days from the time the motorcycle is initially presented to a Harley-Davidson dealer for repair) constitutes an emergency. Harley-Davidson will reimburse the owner for such repairs, including diagnosis, only if it is established that the repairs are covered under this emission warranty. Harley-Davidson's parts reimbursement, however, will not exceed our suggested retail price for all warranted parts replaced and our labor reimbursement will be limited to our recommended time allowances for emission system repairs at the geographically appropriate hourly labor rate.

To obtain reimbursement from Harley-Davidson for such emergency repairs, you must keep all failed parts and original receipts, so you can present them to an authorized Harley-Davidson dealer for inspection. Harley-Davidson recommends that you bring your motorcycle to an authorized dealer for inspection to ensure that the emergency repairs were done properly.

Remember: Use of non-Harley-Davidson replacement parts may impair the effectiveness of the emission control system or otherwise damage your motorcycle. If other than genuine Harley-Davidson parts are used for maintenance, replacement or repair of components affecting emission control, you should obtain written assurances that such non-Harley-Davidson parts are warranted by their manufacturer to be equal in quality to Genuine Harley-Davidson parts in both performance and durability. The use of non-Harley-Davidson replacement parts

does not invalidate the existing warranty, if any, on other Harley-Davidson components unless the non-Harley-Davidson parts cause damage to warranted parts or result in the creation of an emissions non-compliant motorcycle. However, HARLEY-DAVIDSON ASSUMES NO LIABILITY UNDER THIS WARRANTY WITH RESPECT TO ANY PARTS WHICH ARE NOT GENUINE HARLEY-DAVIDSON PARTS, unless Harley-Davidson parts cause damage to non-genuine Harley-Davidson parts.

What Is Covered by this Emission Warranty

The emission control system warranty covers the following "warranted parts" only:

- Air cleaner assembly
- Cam shaft
- Spark plug
- Ignition coil
- Ignition wires
- Vapor valve
- Catalytic converter
- Crankcase breather
- MAP sensor
- TMAP sensor

- Intake air temperature sensor
- Throttle position sensor
- Fuel injectors
- Induction module or throttle body
- Engine temperature sensor
- Electronic control unit
- Oxygen sensors
- Carbon canister
- Purge control valve

Fuel Tank (non-cosmetic failures only)

- Leaks
- Fuel vapor separator
- Fuel cap

If used on the above: hoses, clamps, fittings, tubing, sealing gaskets and mounting hardware.

What Is Not Covered by this Emission Warranty

The emission control system warranty does not cover:

Malfunctions in any "warranted parts" caused by any of the following: abuse, misuse, unapproved modification or

alteration, tampering, disconnection, or improper or inadequate maintenance. The warranty also does not cover replacement of listed parts in the event that the vehicle has been rendered emissions non-compliant in the state of California through actions noted above.

Damage resulting from accident, acts of nature or other events beyond the control of Harley-Davidson.

The repair or replacement of "warranted parts" which are scheduled for replacement prior to 18641 mi (30,000 km), once these parts have been replaced at the first replacement interval as part of required maintenance services.

Repairs and services performed by anyone other than an authorized Harley-Davidson Dealer (except in case of emergency as defined above).

Loss of time, inconvenience, loss of use of the motorcycle, towing of the vehicle, or commercial loss and/or consequential damages.

Repairs on any motorcycle of which odometer mileage has been changed so that mileage cannot be readily determined.

SERVICE RECORDS

Regular Service Intervals

Service must be performed at specified intervals to keep your Harley-Davidson motorcycle operating at peak performance. Refer to Table 34.

NOTE

- The use of parts and service procedures other than Harley-Davidson approved parts and service procedures may void the limited warranty. Any alterations to the emission system components, such as the intake and exhaust system, may be in violation of motor vehicle laws.
- Some countries, such as Brazil, may require all regular maintenance to be performed by an authorized Harley-Davidson dealer for your limited warranty to remain in effect. Check with your authorized Harley-Davidson dealer.
- Some countries, such as Brazil, may require additional annual (or semi-annual) regular maintenance steps to be performed to keep your limited warranty in effect and/or comply with vehicle regulations. Check with your authorized Harley-Davidson dealer as well as the motorcycle regulations in your country.
- After completing the final service interval, repeat the service schedule starting at the 8000 km (5000 mi) interval.
- Whenever a vehicle is in for maintenance, always check for and complete recalls and open product programs.
- Whenever a vehicle is in for maintenance, always verify that the latest calibration is installed.

Table 34. Regular Service Intervals: Harley-Davidson Street Models

| ITEM SERVICED | 1000 mi 1600 km | 5000 mi 8000 km | 10000 mi 16000 km | 15000 mi 24000 km | 20000 mi 32000 km | 25000 mi 40000 km | 30000 mi 48000 km | 35000 mi 56000 km | 40000 mi 64000 km | 45000 mi 72000 km | 50000 mi 80000 km | NOTES |
|---|--------------------|--------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|-------|
| Replace engine oil and filter | X | X | X | X | X | X | X | X | X | X | X | 1 |
| Check front tire pressure, inspect tread | X | X | X | X | X | X | X | X | X | X | X | 1 |
| Check front brake pads and discs for wear | X | X | X | X | X | X | X | X | X | X | X | |

Table 34. Regular Service Intervals: Harley-Davidson Street Models

| ITEM SERVICED | 1000 mi 1600 km | 5000 mi 8000 km | 10000 mi 16000 km | 15000 mi 24000 km | 20000 mi 32000 km | 25000 mi 40000 km | 30000 mi 48000 km | 35000 mi 56000 km | 40000 mi 64000 km | 45000 mi 72000 km | 50000 mi 80000 km | NOTES |
|---|---|--------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|-------|
| Inspect and lubricate front brake caliper pins and bushings | X | X | X | X | X | X | X | X | X | X | X | 2 |
| Check front brake system for leaks, contact or abrasion | X | X | X | X | X | X | X | X | X | X | X | 1 |
| Repair front brake system as necessary | X | X | X | X | X | X | X | X | X | X | X | 2 |
| Check front brake fluid level | X | X | X | X | X | X | X | X | X | X | X | |
| Check DOT4 front brake fluid for moisture | X | X | X | X | X | X | X | X | X | X | X | 1, 2 |
| Check and adjust throttle cables | X | X | X | X | X | X | X | X | X | X | X | 2 |
| Lubricate throttle cables | X | X | X | X | X | X | X | X | X | X | X | 2 |
| Check and adjust brake and clutch controls | X | X | X | X | X | X | X | X | X | X | X | 2 |
| Lubricate brake and clutch controls | X | X | X | X | X | X | X | X | X | X | X | 2 |
| Rebuild front forks and replace fork oil | | | | | | | | | | | X | 2 |
| Adjust steering head bearings | X | | | | X | | | | X | | | 2 |
| Lubricate steering head bearings | | | | | X | | | | X | | | 2 |
| Clean radiator | X | X | X | X | X | X | X | X | X | X | X | |
| Check cooling system for leaks and check clamps for tightness | X | X | X | X | X | X | X | X | X | X | X | |
| Check coolant level | X | X | X | X | X | X | X | X | X | X | X | |
| Check coolant freeze point | X | X | X | X | X | X | X | X | X | X | X | 2 |
| Coolant | Replace coolant every 30000 mi (48,000 km). | | | | | | | | | | | 2 |

Table 34. Regular Service Intervals: Harley-Davidson Street Models

| ITEM SERVICED | 1000 mi 1600 km | 5000 mi 8000 km | 10000 mi 16000 km | 15000 mi 24000 km | 20000 mi 32000 km | 25000 mi 40000 km | 30000 mi 48000 km | 35000 mi 56000 km | 40000 mi 64000 km | 45000 mi 72000 km | 50000 mi 80000 km | NOTES |
|--|--|--------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|-------|
| Check fuel lines and fittings for leaks, contact or abrasion | X | X | X | X | X | X | X | X | X | X | X | 1 |
| Repair fuel lines and fittings as necessary | X | X | X | X | X | X | X | X | X | X | X | 2 |
| Check and lubricate jiffy stand | X | X | X | X | X | X | X | X | X | X | X | 2, 3 |
| Clean and lubricate shift and brake levers, inspect for wear | | | | | X | | | | X | | | 2 |
| Inspect rear fork bearing | | | | | X | | | | X | | | 2 |
| Inspect drive belt and sprockets, adjust belt | X | X | X | X | X | X | X | X | X | X | X | 2 |
| Check rear tire pressure, inspect tread | X | X | X | X | X | X | X | X | X | X | X | 1 |
| Inspect rear shock absorber bushings for wear and cracks | | | | | X | | | | X | | | 2 |
| Check rear brake pads and disc for wear | X | X | X | X | X | X | X | X | X | X | X | 1 |
| Check rear brake system for leaks, contact or abrasion | X | X | X | X | X | X | X | X | X | X | X | 1 |
| Repair rear brake system as necessary | X | X | X | X | X | X | X | X | X | X | X | 2 |
| Inspect rear brake caliper and lubricate pins and bushings | X | X | X | X | X | X | X | X | X | X | X | 2 |
| Check rear brake fluid level | X | X | X | X | X | X | X | X | X | X | X | |
| Check DOT4 rear brake fluid for moisture | X | X | X | X | X | X | X | X | X | X | X | |
| Brake system | Flush brake system and replace DOT 4 hydraulic brake fluid every two years or sooner if moisture content is 3% or greater. | | | | | | | | | | | 2 |

Table 34. Regular Service Intervals: Harley-Davidson Street Models

| ITEM SERVICED | 1000 mi 1600 km | 5000 mi 8000 km | 10000 mi 16000 km | 15000 mi 24000 km | 20000 mi 32000 km | 25000 mi 40000 km | 30000 mi 48000 km | 35000 mi 56000 km | 40000 mi 64000 km | 45000 mi 72000 km | 50000 mi 80000 km | NOTES |
|--|---|--------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|-------|
| Check exhaust system for leaks, cracks and loose or missing fasteners or exhaust shields | X | X | X | X | X | X | X | X | X | X | X | 1, 3 |
| Repair exhaust system as necessary | X | X | X | X | X | X | X | X | X | X | X | 2 |
| Inspect air cleaner filter, service as required | X | X | X | X | X | X | X | X | X | X | X | 3 |
| Lubricate fuel cap lock | X | X | X | X | X | X | X | X | X | X | X | 3 |
| Inspect valve lash, adjust if necessary | | | | X | | | X | | | X | | 2, 4 |
| Battery | Check battery, terminal torque and clean connections annually. | | | | | | | | | | | 1 |
| Spark plugs | Replace spark plugs every two years or every 30000 mi (48,000 km), whichever comes first. | | | | | | | | | | | |
| Check operation of electrical equipment and switches | X | X | X | X | X | X | X | X | X | X | X | |
| Road test to verify component and system functions | X | X | X | X | X | X | X | X | X | X | X | |
| NOTES: | 1. Perform annually or at specified intervals, whichever comes first. 2. Should be performed by an authorized Harley-Davidson dealer, unless you have the proper tools, service data and are mechanically qualified. 3. Perform maintenance more frequently in severe riding conditions (such as extreme temperatures, dusty environments, mountainous or rough roads, long storage conditions, short runs, heavy stop/go traffic or poor fuel quality). 4. Could vary with frequency of operation and riding style. | | | | | | | | | | | |

Maintenance Records

Maintain a record of this service to keep your new motorcycle limited warranty in force. Refer to Table 35.

Table 35. Owner's Maintenance Records

| SERVICE MILE INTERVAL | DATE | DEALER NUMBER | TECHNICIAN NAME | TECHNICIAN SIGNATURE |
|-----------------------|------|------------------|-----------------|----------------------|
| 1,000 mi (1,600 km) | | | | |
| 5,000 mi (8,000 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) | | | | |

NOTES



ACRONYMS AND ABBREVIATIONS

Table 36. Acronyms and Measurement Symbols

| ITEM | DEFINITION |
|-----------------|---|
| A | Amperes |
| ABS | Anti-lock braking system |
| AC | Alternating current |
| AGM | Absorbed glass mat (battery) |
| Ah | Ampere-hour |
| BCM | Body control module |
| °C | Celsius (Centigrade) |
| CCA | Cold cranking amps |
| cm | Centimeters |
| cm ³ | Cubic centimeters (cc) |
| CVO | Custom vehicle operations |
| DC | Direct current |
| DLC | Data link connector |
| DOM | Domestic |
| DTC | Diagnostic trouble code |
| ECM | Electronic control module |
| EHCUC | Electro hydraulic control unit |
| EITMS | Engine idle temperature management system |
| EHCUC | Electro hydraulic control unit |
| ETC | Electronic throttle control |
| EV | Electric vehicle |
| EVAP | Evaporative emissions control system |

Table 36. Acronyms and Measurement Symbols

| ITEM | DEFINITION |
|-----------------|---------------------------------------|
| EVPT | Electric vehicle power-train |
| EVSE | Electric vehicle supply equipment |
| °F | Fahrenheit |
| fl oz | Fluid ounce |
| ft | Feet |
| ft-lbs | Foot pounds |
| FTP | Flash to pass |
| g | Gram |
| gal | Gallon |
| GAWR | Gross axle weight rating |
| GND | Ground (electrical) |
| GPS | Global positioning system |
| GVWR | Gross vehicle weight rating |
| H-DSSS | Harley-Davidson smart security system |
| HCU | Hydraulic control unit |
| HDI | Harley-Davidson International |
| HV | High voltage |
| Hz | Hertz |
| IGN | Ignition light/key switch position |
| IMU | Inertia measurement unit |
| in | inch |
| in ³ | Cubic inch |
| in-lbs | Inch pounds |
| kg | Kilogram |
| km | Kilometer |

Table 36. Acronyms and Measurement Symbols

| ITEM | DEFINITION |
|----------|--------------------------------|
| km/h | Kilometers per hour |
| kPa | Kilopascal |
| kW | Kilowatt |
| L | Liter |
| lb | Pounds |
| LED | Light emitting diode |
| LV | Low voltage |
| mA | Milliampere |
| mi | Mile |
| MIL | Malfunction indicator lamp |
| Min | Minimum |
| mL | Milliliter |
| mm | Millimeter |
| mph | Miles per hour |
| ms | Millisecond |
| Nm | Newton-meter |
| OBC | On board charger |
| oz | Ounce |
| P&A | Parts and Accessories |
| PA | Public address |
| Part No. | Part number |
| PIN | Personal identification number |
| PPE | Personal protective equipment |
| psi | Pounds per square inch |
| qt | Quart |

Table 36. Acronyms and Measurement Symbols

| ITEM | DEFINITION |
|------|------------------------------------|
| RDRS | Reflex defensive rider systems |
| RESS | Rechargeable energy storage system |
| rpm | Revolutions per minute |
| SDS | Safety data sheet |
| SoC | State of charge |
| SoH | State of health |
| SW | Software |
| TCS | Traction control system |
| TPMS | Tire pressure monitoring system |
| USB | Universal serial bus |
| V | Volt |
| VAC | Volts of alternating current |
| VDC | Volts of direct current |
| VIN | Vehicle identification number |
| VR | Voice recognition |
| W | Watt |
| Wh | Watt-hour |

H-D U.S.A., LLC TRADEMARK INFORMATION

Bar & Shield, Boom!, Breakout, Cruise Drive, CVO, Digital Tech, Digital Technician, Digital Technician II, Electra Glide, Evolution, Fat Bob, Fat Boy, Forty-Eight, FXDR 114, Glaze, Gloss, H-D, H-Dnet.com, Harley, Harley-Davidson, HD, Heritage Softail, Iron 1200, Iron 883, Low Rider,

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