All text, photographs, and illustrations in this handbook are based on the most current product information available at the time of publication. Product improvements or other changes may result in differences between this handbook and the motorcycle. Excelsior-Henderson reserves the right to make production changes at any time, without notice and without incurring any obligation to make the same or similar changes to motorcycles previously built.

EXCELSIOR-HENDERSON MOTORCYCLE MANUFACTURING COMPANY
805 HANLON DRIVE · BELLE PLAINE, MINNESOTA 56011 · TELE: 612.873.7000/FAX: 612.873.7030

Introduction

This *Handbook* has been prepared exclusively for the Excelsior-Henderson™ Dealer Network, and is designed to be used with the Excelsior-Henderson *Certificate of Vehicle Setup & Predelivery* (document part no. 6999-0067).

1. Vehicle Setup is written specifically for the Dealer Service Technician, and includes detailed instructions essential to proper Setup of Excelsior-Henderson motorcycles.

2. Owner Predelivery is designed to assist the Dealer Sales Staff in safely orienting the new Owner with their Excelsior-Henderson motorcycle.

We recommend that you refer to the following information often, as it will assist you in making sure that specific procedures are not overlooked.

Time is money, and we respect your time. We have made each of the steps in this *Handbook* simple and complete to reduce the need to search for additional information elsewhere.

To ensure customer safety and satisfaction, please read this *Handbook* thoroughly before you Setup and Predeliver an Excelsior-Henderson motorcycle.

Special Symbols And Terms

The hazard symbol indicates a potential hazard to yourself, others, or the motorcycle. Pay special attention to information in the *Handbook* that begins with this symbol.

The following terms have special meaning in the *Handbook.* Be certain you understand the meaning of each term, as the terms communicate important information about the motorcycle and its operation and maintenance.

⚠ WARNING

- Indicates a potential hazard that could injure you or others.

⚠ Caution

- Indicates a potential hazard that could damage the motorcycle.

Notice

- Emphasizes important information that might otherwise be overlooked.

☑ The checked box symbol is used throughout this Handbook to indicate the completion of a specific procedure, and to remind you to mark the appropriate box on the *Certificate Of Vehicle Setup & Predelivery.*

Dealer Support

North/Northeast Regional Sales

PH 1-612-873-7032

FAX 1-612-873-7030

West/Northwest Regional Sales

Phone: 1-612-873-7031

Fax: 1-612-873-7030

South/Southwest Regional Sales

Phone: 1-612-873-7033

Fax: 1-612-873-7030

Ordering

Fax: 1-800-873-8121

Technical

Phone: 1-800-873-4957

Fax: 1-612-873-5951

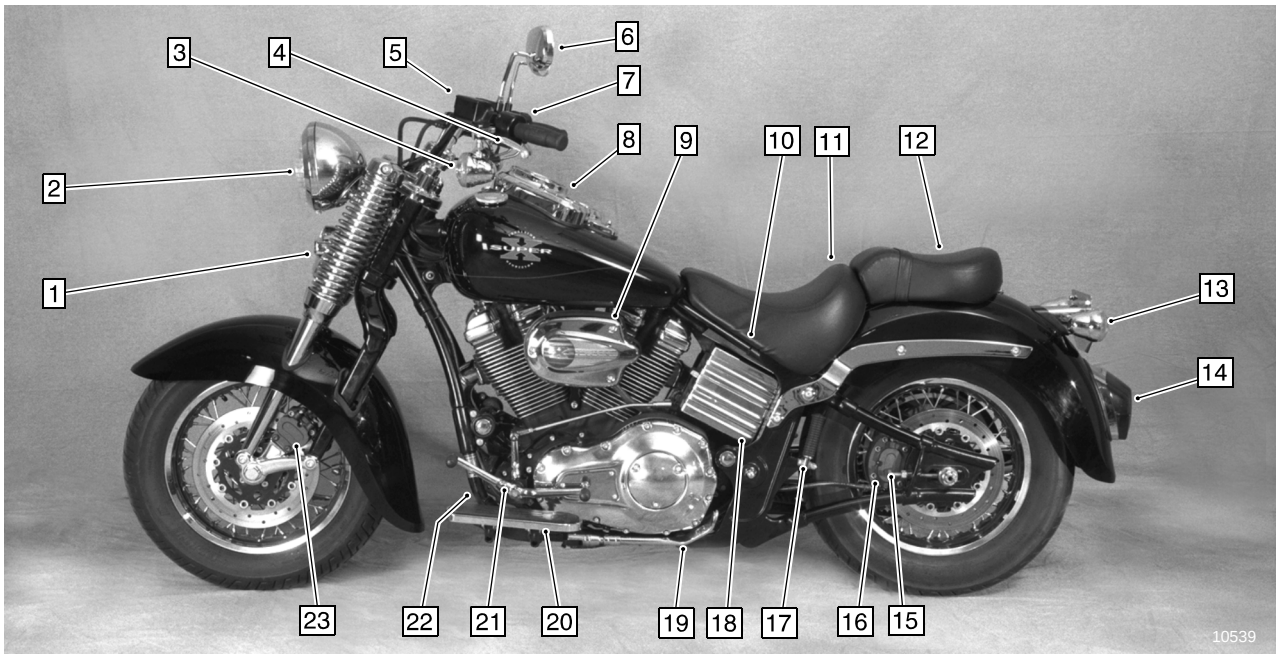
Warranty

Phone: 1-612-873-7034

Fax: 1-612-873-5951

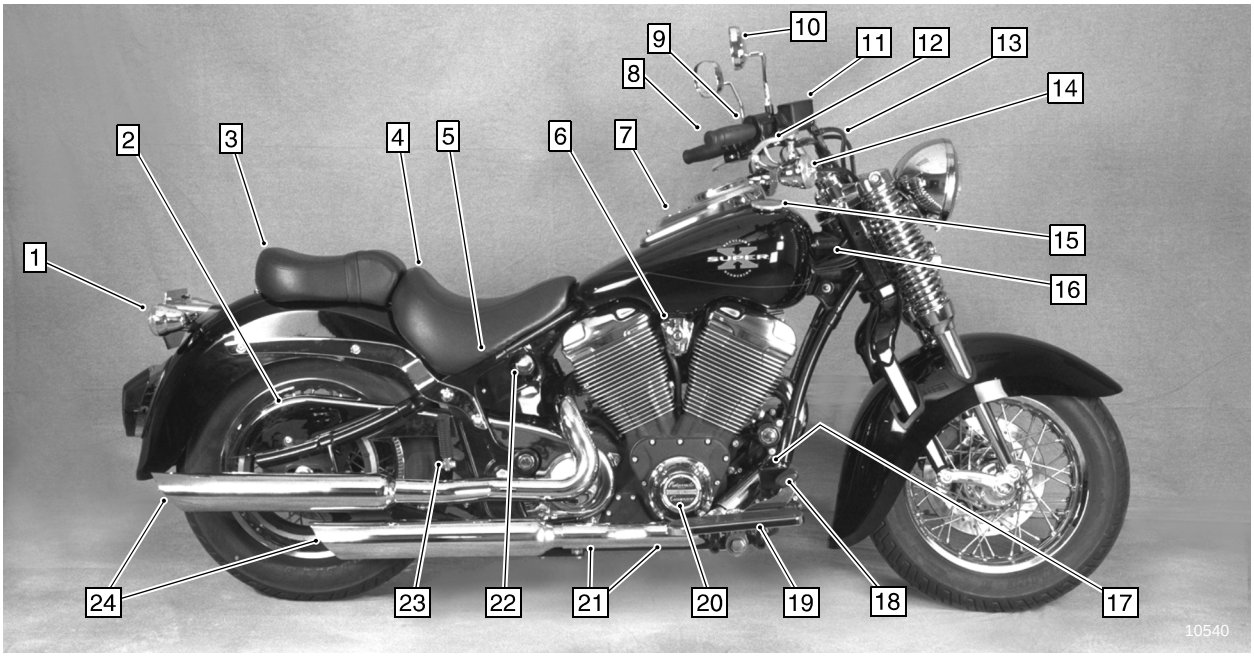
Consumer Support

Phone: 1-612-873-5800



Super X™ - left side view

1. HORN
2. HEADLAMP
3. FRONT LEFT TURN SIGNAL/ RUNNING LIGHT
4. CLUTCH LEVER
5. CLUTCH FLUID RESERVOIR
6. LEFT MIRROR
7. LEFT HANDLEBAR CONTROLS
8. INSTRUMENT POD
9. AIR FILTER
10. FUSES (UNDER SADDLE)
11. RIDER'S SADDLE
12. TANDEM SADDLE
13. LEFT REAR TURN SIGNAL
14. TAIL LIGHT
15. REAR AXLE ADJUSTER (ONE EACH SIDE)
16. REAR BRAKE CALIPER
17. PASSENGER FOOTREST
18. BATTERY
19. SIDESTAND
20. RIDER FOOTREST
21. GEAR SHIFT PEDAL
22. EVAPORATIVE CANISTER (CALIFORNIA MODEL ONLY)
23. FRONT BRAKE CALIPER



Super X - right side view

1. RIGHT REAR TURN SIGNAL
2. DRIVE BELT (UNDER GUARD)
3. TANDEM SADDLE
4. RIDER'S SADDLE
5. REAR SHOCK ABSORBER (UNDER SADDLE)
6. MAIN SWITCH
7. INSTRUMENT POD
8. THROTTLE CONTROL GRIP
9. RIGHT HANDLEBAR CONTROLS
10. RIGHT MIRROR
11. FRONT BRAKE FLUID RESERVOIR
12. FRONT BRAKE LEVER
13. THROTTLE CABLES
14. FRONT RIGHT TURN SIGNAL/ RUNNING LIGHT
15. FUEL CAP
16. FORK LOCK
17. REAR BRAKE FLUID RESERVOIR
18. REAR BRAKE PEDAL
19. RIDER FOOTREST
20. ENGINE OIL FILTER COVER
21. ENGINE OIL DRAIN PLUGS (UNDER ENGINE)
22. ENGINE OIL FILL CAP AND DIPSTICK
23. PASSENGER FOOTREST
24. EXHAUST MUFFLERS

1. Vehicle Setup

General Information

Damage to the motorcycle can occur from the time the motorcycle leaves the factory until it is delivered. Excelsior-Henderson wants to help you protect your investment and smooth out any bumps in the road. Please pay special attention to the following general information.

Moving the Crate

The Excelsior-Henderson motorcycle shipping crate is designed to be lifted from a truck or trailer by fork lift from the end marked “Fork This End” **only**. Once removed from the truck or trailer, the crate may be lifted by fork lift from either side or the end marked “Fork This End”.

Signing the Bill Of Lading

Open each packing crate and inspect the motorcycle(s) in the presence of the delivery driver **before** the delivery vehicle leaves your Dealership.

Notice

- The Carrier’s responsibility ends when the Bill of Lading is signed.
- Claims against the carrier must be filed at the time of delivery.

Replacement Parts

Replace any items that may have been damaged during shipment or setup with Genuine Excelsior-Henderson replacement parts only.

Modifications

⚠ WARNING

- Do not disable or alter the exhaust, evaporative, or fuel systems on the motorcycle to circumvent federal, state or local regulations. Environmental and safety systems or devices must be left intact as designed and manufactured. Changes to the exhaust, evaporative, or fuel systems may void the motorcycles warranty.
- Do not modify the automatic headlight “ON” feature of the motorcycle. Any deliberate action to disable or alter this system may contribute to an accident and result in personal injury.

Fastener Information

When performing the different setup procedures, keep an eye out for loose or missing fasteners.

If it becomes necessary to retighten a fastener (see Torque Specifications page 1-32).

Notice

- All fasteners come tightened to the correct torque from the factory. If you do not see a problem with a fastener, it should not be disturbed.
- Some Genuine Excelsior-Henderson threaded fasteners are coated with a thread-locking patch. After removing and reinstalling the fastener 2 or 3 times, the thread-locking patch wears away and the fastener should be replaced with the same genuine Excelsior-Henderson fastener.

Dealer Installed Accessories

For model year 1999, all Excelsior-Henderson accessories installed by the Dealer at the time of vehicle delivery are warranted for 12 months. Excelsior-Henderson accessories installed by the Owner at any time, or those installed by the Dealer after vehicle delivery are warranted for 90 days.

Special Tools

Rear wheel alignment gauge - - - - Part No. EH-6999-0037
Belt tension gauge - - - - - - - - - Part No. EH-6999-0038
Rear shock adjusting wrench - - - - Part No. EH-6999-0029

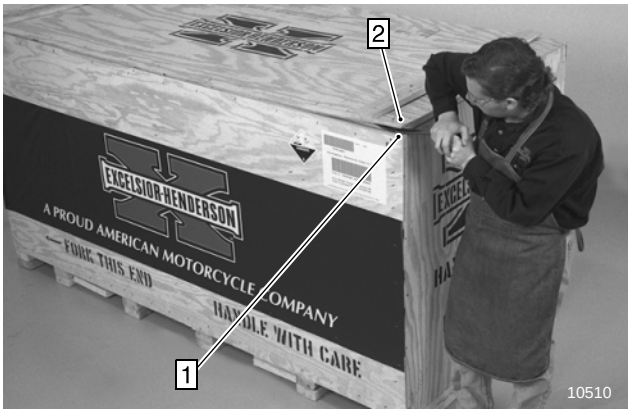
Opening the Crate

Use a flat pry bar to remove the packing crate top.

1. Start the pry bar under any corner of the crate top. Work all around the crate top until all the fasteners and the top are completely loose.
2. Remove the packing crate top.

⚠ Caution

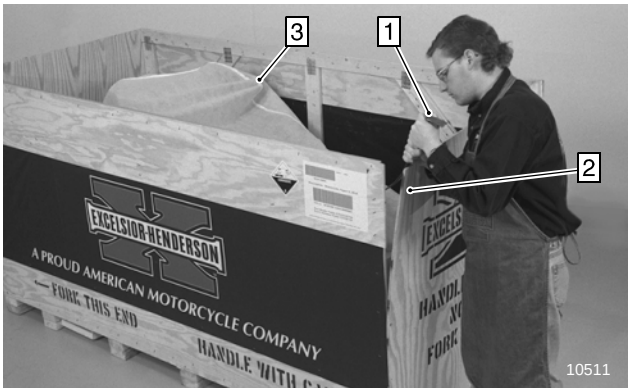
Make sure the top of the crate does not drop into the crate, damaging the motorcycle.



1. FLAT PRY BAR
2. CRATE TOP

3. Using the pry bar, start at the top corner of either side of the packing crate back (rear of motorcycle). Work your way down to the bottom of the crate until all the fasteners and side are completely loose. Repeat this procedure for the opposite side.
4. Complete the removal of the crate back by loosening the fasteners and bottom edge of the crate back.
5. Remove the protective dust cover. The dust cover should be given to the Owner when the bike is delivered.

☑



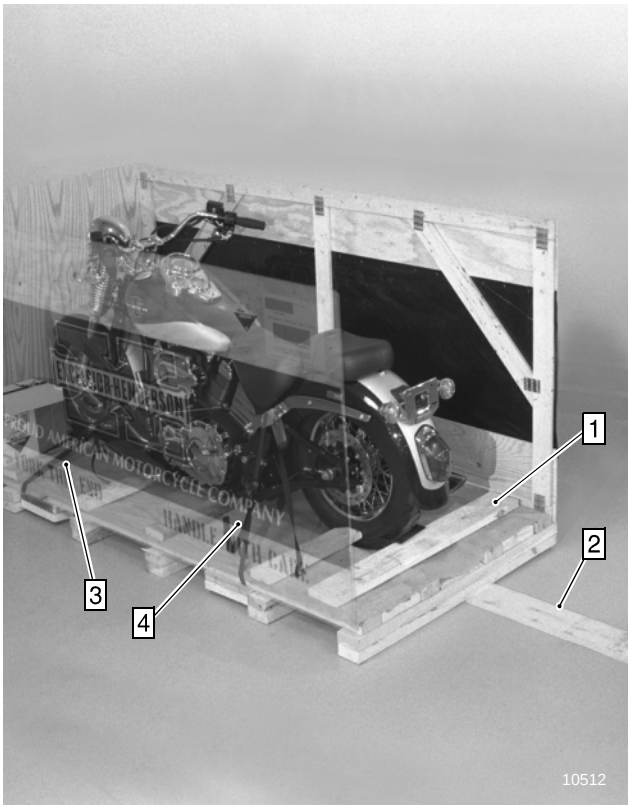
1. FLAT PRY BAR
2. CRATE BACK
3. PROTECTIVE COVER

Remove Motorcycle

1. Remove the mounting screws from the board behind the rear wheel of the motorcycle. This board is installed to hold the motorcycle in place during shipping.
2. Remove the board from the packing crate. Use this board as a ramp when removing the motorcycle from the crate.
3. Line up the board with the rear wheel behind the crate.
4. Check the pallet to make sure there are no nails, staples or screws protruding from the pallet bottom that could puncture the tires.
5. Mount the motorcycle.
6. Release or cut the front tie-down straps.
7. Release or cut the rear tie-down straps.

⚠ Caution

Use care when releasing tie-down straps. The motorcycle's front and rear suspension are secured in a compressed state for shipment. When the straps are released or cut they will unwind or release rapidly. This will cause the motorcycle to rise and pitch to the opposite side.



1. BOARD (BEFORE REMOVAL)
2. BOARD (ALIGNED WITH WHEEL)
3. FRONT TIE-DOWN STRAP
4. REAR TIE-DOWN STRAP

8. Pump the front and rear brakes 3 to 4 times to make sure they have hydraulic pressure.
9. Pull in the clutch lever.
10. Carefully roll the bike backwards, out of the crate.
11. Park the motorcycle on a flat, firm surface.

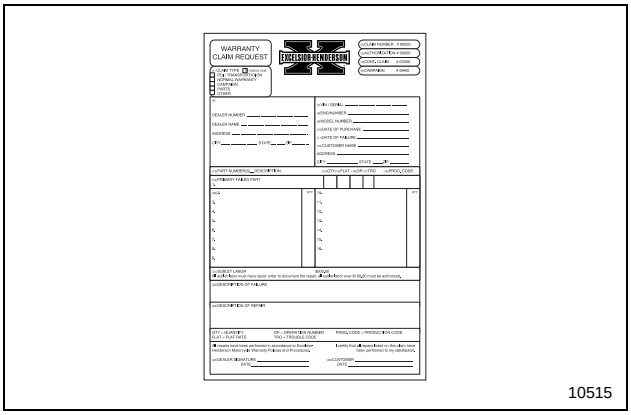
Initial Motorcycle Inspection

1. Verify that the Packing List matches the information on the U.P.C. label attached to the packing crate. Make sure both documents match the Vehicle Identification Number (V.I.N.) of the motorcycle.
2. Visually inspect the motorcycle to make sure that no damage occurred during packing for shipment or during unpacking from shipment.

1. PACKING LIST
2. U.P.C. CODE
3. V.I.N. NUMBER

If any damage to the motorcycle is discovered, you must submit a warranty claim request form to receive a credit from the factory. Be sure to include an accurate description of the damage, and its effect on the motorcycle. (i.e. damage to front brake line - front brake system leaks).

☑



1. WARRANTY CLAIM REQUEST FORM

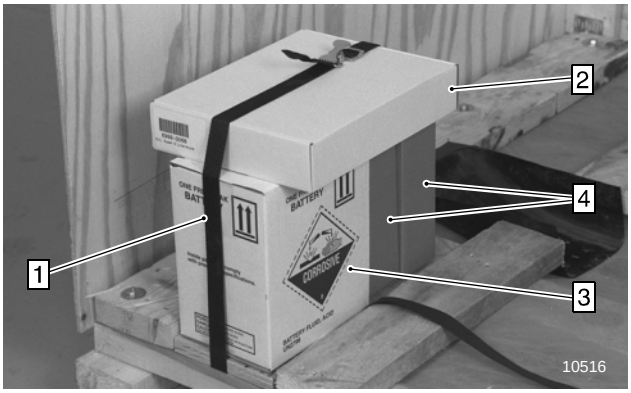
Remove Separate Components

The motorcycle is shipped with the following separately packaged components:

- Literature Kit
- Battery
- Mirrors

Release the tie-down strap and move all the items into your work area.

☑



1. TIE-DOWN STRAP
2. LITERATURE KIT
3. BATTERY
4. MIRRORS

Sidestand

1. Make sure the sidestand locks in the extended (down) position, holds firmly in the stored (up) position and moves freely between both positions.

2. Set the sidestand in the extended position. Turn the handle bars fully to the left. Lean the motorcycle to the left until the sidestand is in the locked and parked position.

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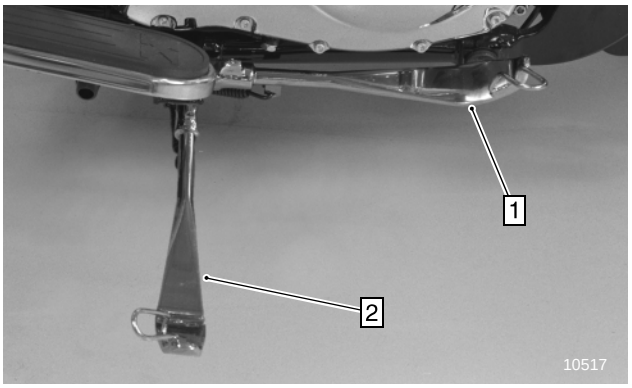


1. STORED (UP) POSITION
2. EXTENDED (DOWN) POSITION

Battery

The battery is supplied dry. It must be filled and properly charged before it is put into service. Do not fill the battery with electrolyte until it is to be placed into service.

We recommended you have fully charged batteries on hand since it requires approximately 16 hours to fully charge a battery. If you do not have charged batteries on hand, start charging the battery as soon as possible.

⚠ WARNING

- ACID IS POISONOUS
  - Contains sulfuric acid. Ventilate the area when filling or charging batteries.
- ACID CAN CAUSE SEVERE BURNS
  - Shield eyes, protect skin and clothing when handling acid or working near any batteries.
- Keep sparks and open flames away from batteries during filling or charging.

Antidote:

- EXTERNAL - Flush with water.
- INTERNAL - Drink large quantities of water or milk. Follow with milk of magnesia, beaten eggs, or vegetable oil and get prompt medical attention.
- EYES - Flush with water for 15 minutes and get prompt medical attention.

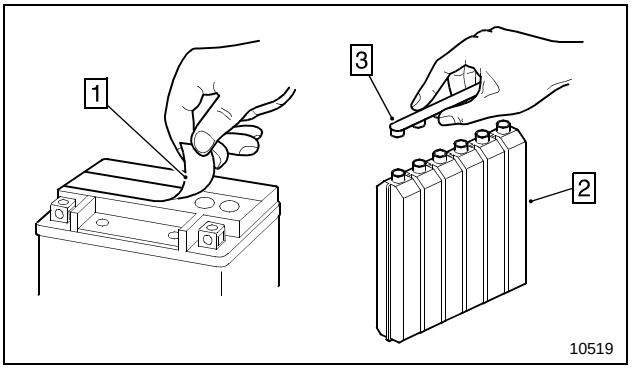
Fill Battery

1. Place the battery on a level surface.

2. Remove the sealing strip from the battery filler ports.

3. Remove the electrolyte container from the protective vinyl bag.

4. Detach the cap strip from the container and save it. The cap strip will be used to plug the battery filler ports after the battery is filled.



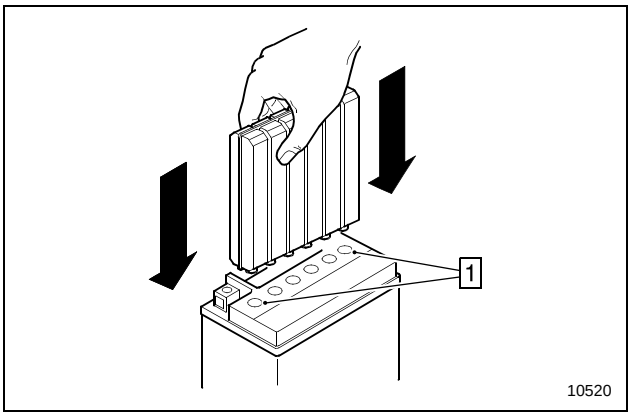
1. SEALING STRIP
2. ELECTROLYTE CONTAINER
3. CAP STRIP

5. Align the sealed openings of the electrolyte container with the battery filler ports.

6. Push the container down firmly to break the seals of the electrolyte container. The electrolyte should start to flow from the container.

⚠ Caution

Do not peel or pierce the six sealed openings of the electrolyte container by hand.The battery filler ports are designed to pierce the seals when the container is pushed into the filler ports.



1. FILLER PORTS

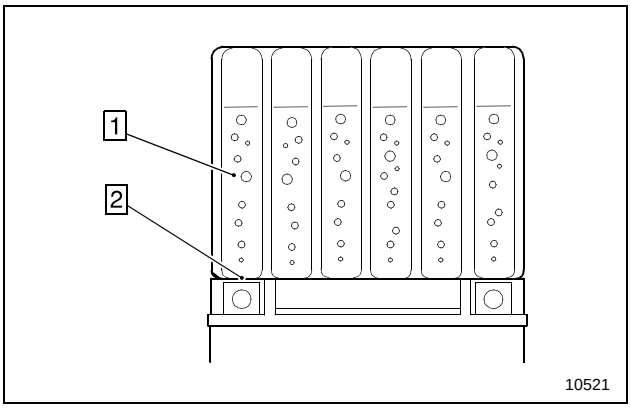
7. Make sure air bubbles are coming up from all of the filler ports on the battery. If no air bubbles are coming up from a filler port, tap the bottom of the container two or three times.

Notice

Tipping or tilting the electrolyte container during filling may stop the flow of electrolyte.

⚠ Caution

Removing the container from the battery during filling may cause the electrolyte to spill.

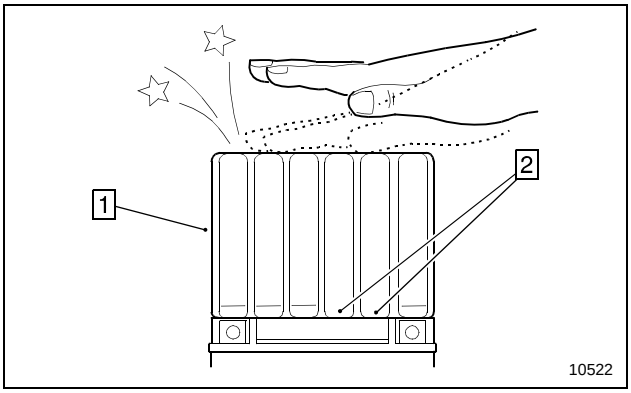


1. AIR BUBBLES 2. FILLER PORT

8. Make sure all of the electrolyte in each bottle section has emptied into the cells of the battery.

9. Tap each bottle section to remove any remaining electrolyte. Make sure each bottle section is completely empty and the corresponding cells of the battery are filled before removing the container from the battery.

10. Remove the electrolyte container from the battery. Rinse empty container sections with water before disposing of the container.



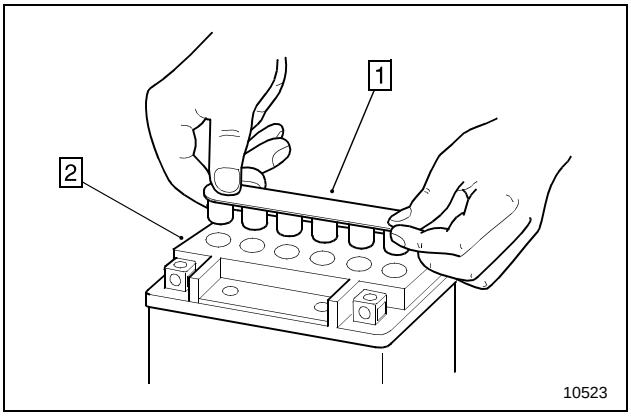
1. ELECTROLYTE CONTAINER 2. EMPTY CELLS

11. Install the cap strip into the filler ports of the battery. When correctly installed, the cap strip should fit tightly and be level with the top of the battery.

⚠ Caution

Once the battery is filled and sealed, never remove any caps, the cap strip, or try to add water to the battery.

12. Let the battery sit for at least 30 minutes before charging to allow the plates and separators to absorb all of the acid. There is should be no flowing acid in the battery.



1. CAP STRIP 2. TOP OF BATTERY

Charge Battery

Use a 12 volt 1 amp charger and charge the battery at the rate shown. If a taper or trickle charger is used, charging times will be longer.

Notice

You can quick charge the battery with a constant current charger. Charge at a rate of 9.0 amps for 1 hour.

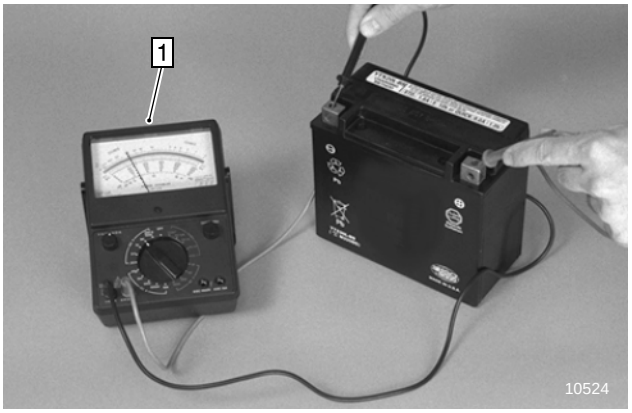
If the battery gets hot to the touch, stop charging immediately. Allow the battery to cool down before resuming charging.

Battery Type	Charging Rate	*Time of Charge Using 1 Amp Charger
YTX20L-BS	1.8 AMPS	16 HOURS

*Charging rate will vary depending on type of charger used

Allow the battery to sit 1-2 hours before measuring the voltage. Battery voltage must be checked before putting the battery into service.

The battery should produce a minimum of 12.8 volts after charging. If voltage is not 12.8 volts or more, repeat the charging cycle.

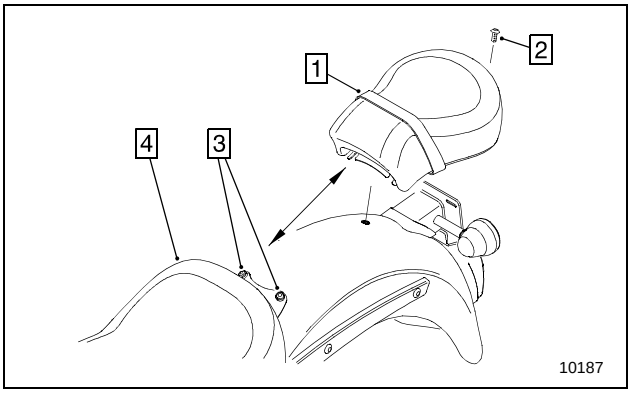


1. VOLTMETER

Remove Saddles

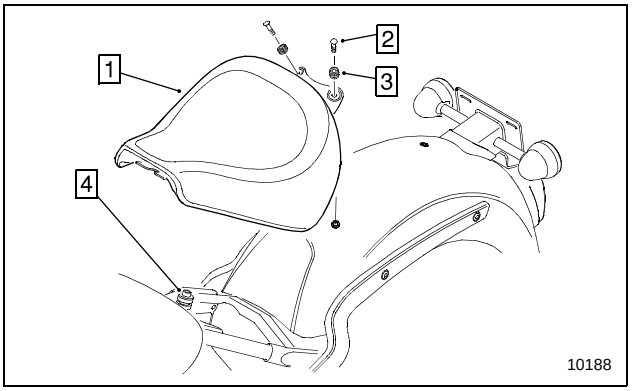
To gain better access to the battery wires and terminals, we recommend removing the motorcycle saddles before installing the battery.

1. Remove the tandem saddle screw.
2. Lift the back of the tandem saddle slightly and pull it to the rear, out from the tandem saddle posts.



1. TANDEM SADDLE
2. TANDEM SADDLE SCREW
3. TANDEM SADDLE POSTS
4. RIDER'S SADDLE

3. Remove the rider's saddle screws and tandem saddle posts.
4. Lift the back of the rider's saddle slightly and pull it to the rear, out from the rider's saddle post.



1. RIDER'S SADDLE
2. RIDER'S SADDLE SCREW
3. TANDEM SADDLE POST
4. RIDER'S SADDLE POST

Install Battery

Before installing the battery, make sure it is fully charged, clean and dry. If necessary, clean any oxidation from the cable connectors or battery terminals with a wire brush.

1. Remove the battery box cover strap and the battery box cover from the motorcycle.
2. Remove the terminal protection label and place the battery in the battery box with the terminals facing outward.
3. Connect the positive (+) battery cable (black with a plastic boot covering a red sleeve and the connector).
4. Connect the negative (–) cable (black with an exposed connector).

⚠ WARNING

- Connecting the negative cable first can produce spark or electric shock that could result in damage or injury.
- Connecting the battery cables to the wrong terminals can damage the electrical system.

5. Apply a thin coat of grease to the cable connectors.
6. Install the battery box cover and the battery box cover strap.

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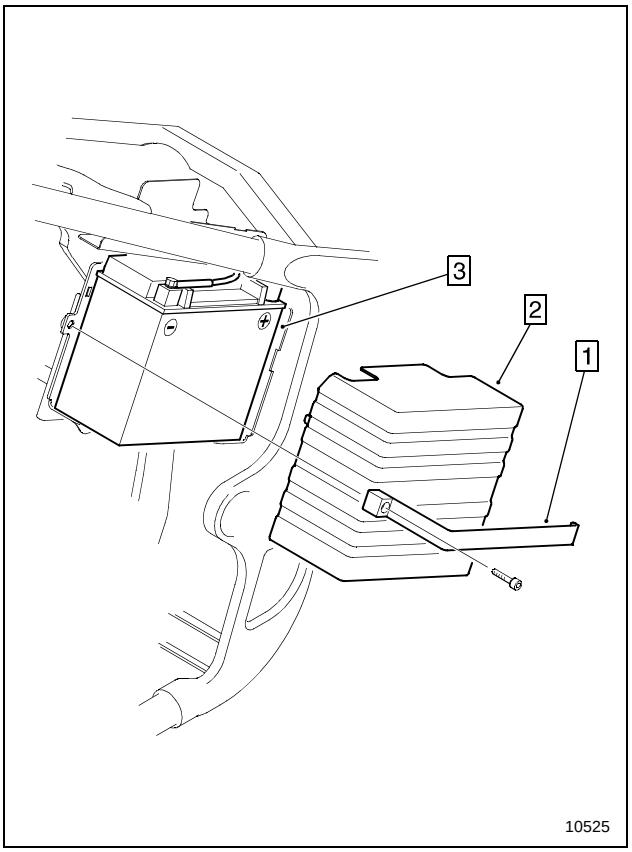
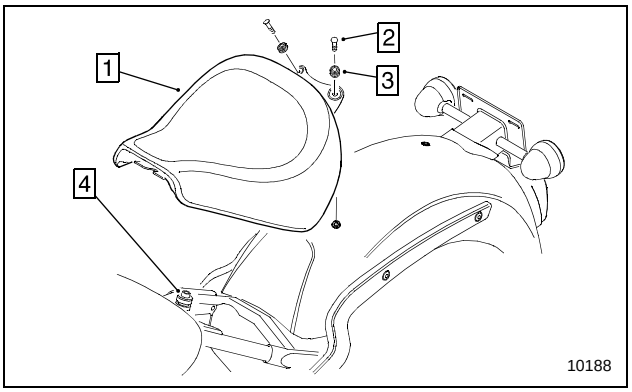


1. BATTERY BOX COVER STRAP
2. BATTERY BOX COVER
3. BATTERY

Install Saddles

1. Slide the front of the rider's saddle into the rider's saddle post at the rear of the fuel tank.
2. Install the tandem saddle posts and the rider's saddle screws.



1. RIDER'S SADDLE
2. RIDER'S SADDLE SCREW
3. TANDEM SADDLE POSTS
4. RIDER'S SADDLE POST

3. Slide the front of the tandem saddle into the tandem saddle posts at the rear of the rider's saddle.
4. Install the tandem saddle screw.
5. Check the tandem saddle strap to make sure it is secure.

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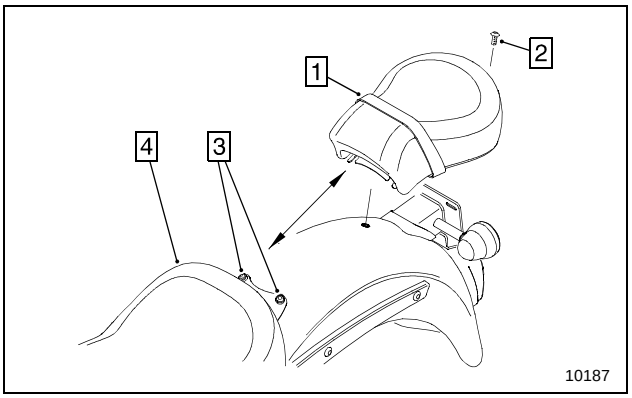


1. TANDEM SADDLE
2. TANDEM SADDLE SCREW
3. TANDEM SADDLE POSTS
4. RIDES SADDLE

Tires

Check and adjust the front and rear tire pressure. Normal air pressure for front and rear tires is 36 psi (cold) for loads up to 200 lbs. and 40 psi (cold) on the rear tire only for loads from 200 lbs. up to 440 lbs.

☑

Spokes

Inspect both wheels for loose, bent, broken, or missing spokes. To identify loose spokes, grasp each spoke and try to move it side to side or up and down. All spokes should be equally tight and have the same amount of flex. Tighten loose spokes or replace bent, broken, or missing spokes. *See the motorcycle's Service Handbook.*

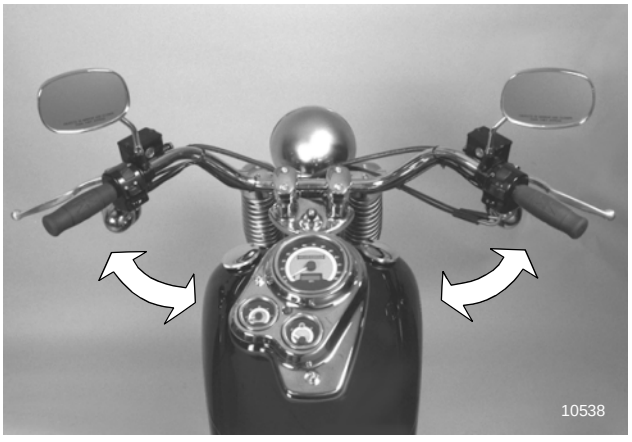
⚠ WARNING

Spokes adjusted or replaced improperly could distort the wheel, making the motorcycle difficult to handle causing the rider to lose control of the motorcycle.

☑

Steering Head

1. Mount the motorcycle and bring it to an upright position. Turn the handlebars from side to side (stop to stop). The action should be smooth but not loose. There should be no interference from the wires, control cables, or turn signals.



2. Position the motorcycle on level ground in an upright position. Raise the front wheel off the ground with an appropriate motorcycle lift or by placing a block of wood or steel securely under the frame.

3. With the front wheel straight, hold the lower end of the front forks near the axle and try to move the forks forward and backward. The forks should have no freeplay (forward and backward movement).

4. If any freeplay is present, the steering head bearings should be adjusted. *See the motorcycle's Service Handbook.*

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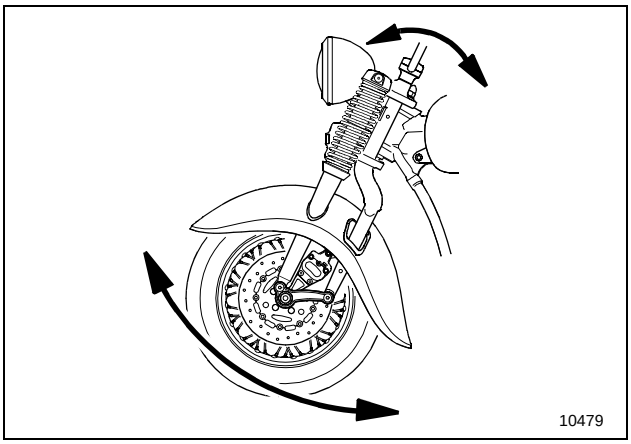

Fork Lock

1. Turn the handlebars fully to the left. Insert the key into the fork lock and turn it clockwise. Remove the key and make sure the handlebars are locked.

2. Reinsert the key and turn it counterclockwise. Remove the key and make sure the handlebars turn freely from side to side.

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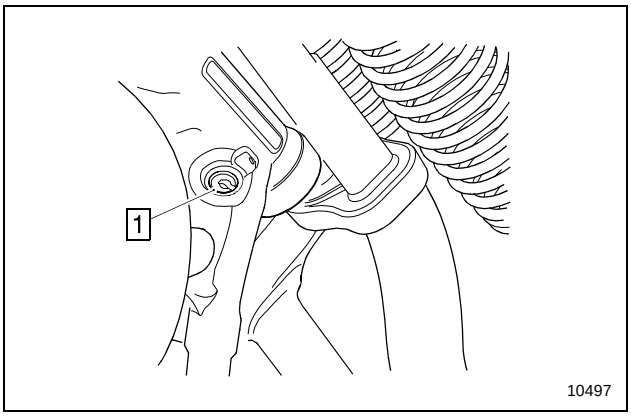


1. FORK LOCK

Install Mirrors

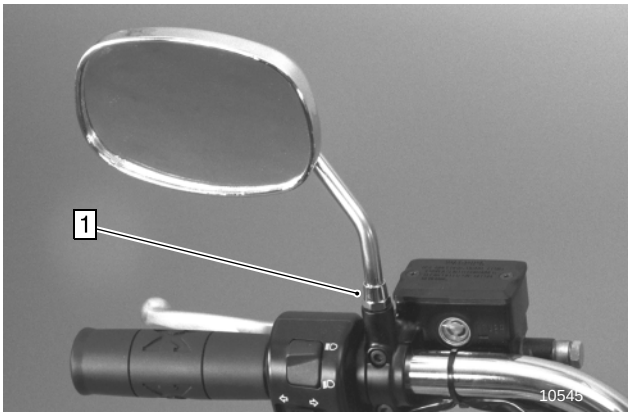
1. To install both right and left mirrors, insert the threaded end of the mirror into the threaded receiver on either right or left hydraulic fluid reservoirs.

2. Thread each mirror all the way into the receiver, then back each mirror out until it faces the rear of the motorcycle.

3. Tighten the locking nut on the mirror shaft to lock the mirror in place.

4. Adjust the mirrors as necessary.

☑



1. LOCKING NUT

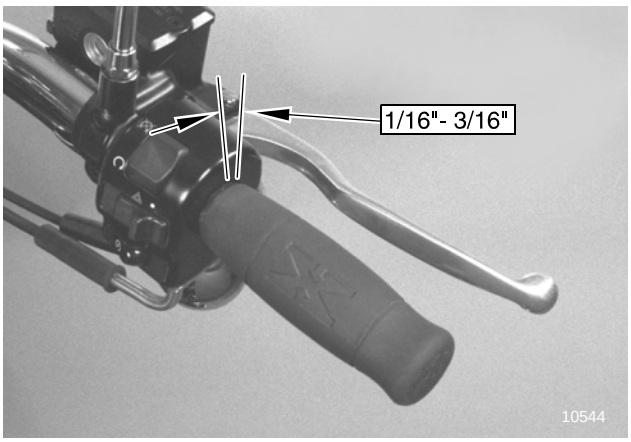
Throttle

Throttle Control Grip and Cables

1. Rotate the throttle control grip. It should rotate smoothly from its rest position to its completely open position and back again. It should return to its rest position quickly when released.

2. Throttle freeplay — the amount of throttle control grip movement from the rest position to the point of cable resistance should be between 1/16" and 3/16".

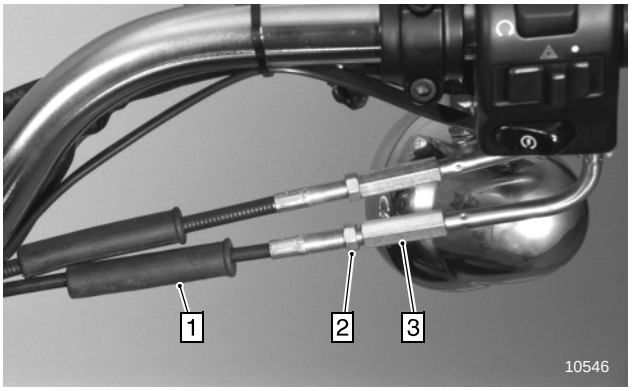
3. Adjust throttle freeplay as necessary.



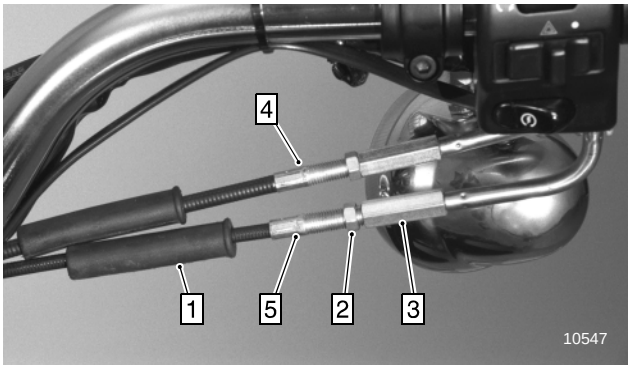
Adjust Throttle Freeplay

1. Slide the rubber covers off both cable adjusters, and loosen both adjuster jam nuts.
2. Turn both cable adjusters into the cable as far as possible.
3. Turn the cable adjuster on the throttle opening cable out until the throttle freeplay is between 1/16” and 3/16”.
4. Hold the throttle control grip at the fully closed position and turn the cable adjuster on the throttle closing cable out until resistance is felt.
5. Tighten the adjuster jam nuts on both cables, and reinstall both rubber covers.

☑



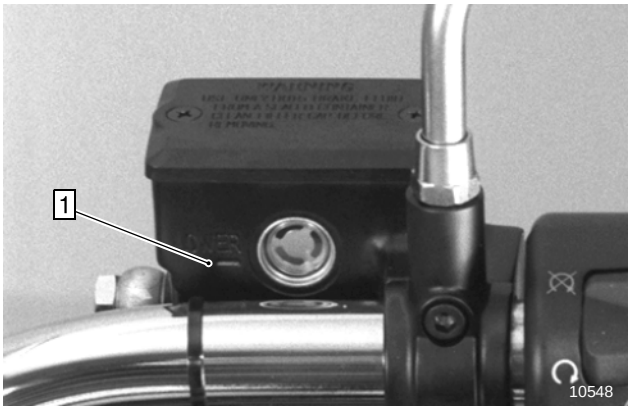
1. RUBBER COVER
2. ADJUSTER JAM NUT
3. CABLE ADJUSTER



1. RUBBER COVER
2. ADJUSTER JAM NUT
3. CABLE ADJUSTER
4. OPENING CABLE
5. CLOSING CABLE

Front Brake

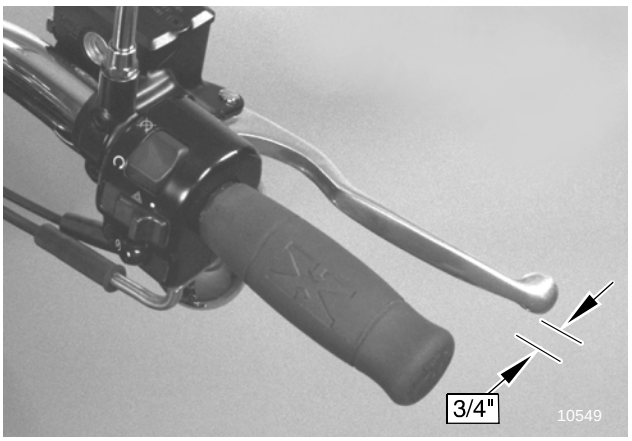
1. Inspect all hoses and hose connections for dampness or stains from leaking or dried hydraulic fluid.
2. Bring the motorcycle to an upright position. Turn the handlebars until the reservoir is horizontal.
3. The fluid should be clear and at a level above the “Lower” marking on the reservoir. Add hydraulic fluid if necessary, (see Adding Hydraulic Fluid page 1-13).



1. LOWER MARK

4. Squeeze the front brake lever toward the handlebar and release it. It should move freely and smoothly and should return to its rest position quickly when released. You should feel a firm resistance in the lever within 3/4” of lever travel. If the brake lever does not function as described, *see the motorcycle’s Service Handbook.*

☑

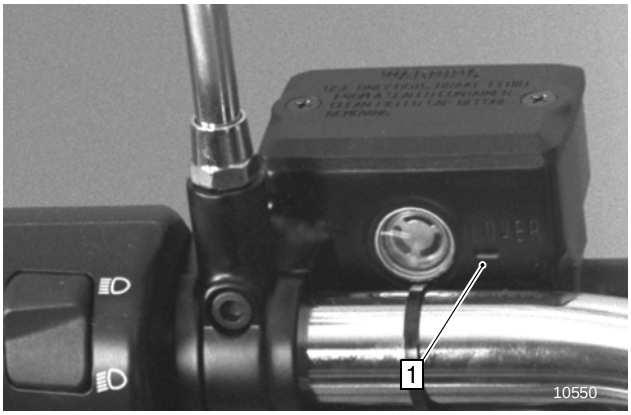


Clutch

1. Inspect all hoses and hose connections for dampness or stains from leaking or dried hydraulic fluid.

2. Bring the motorcycle to an upright position. Turn the handlebars until the reservoir is horizontal.

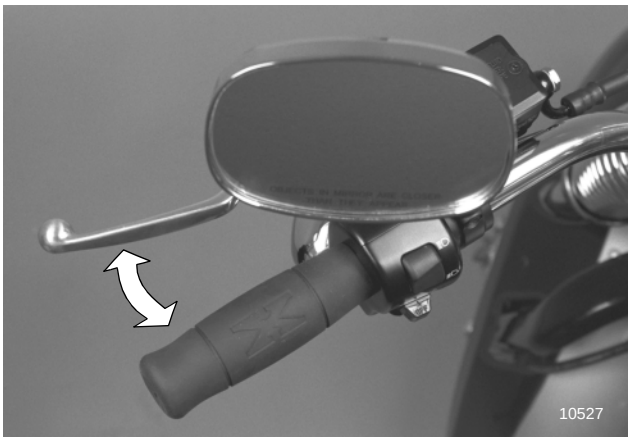
3. View the hydraulic fluid through the sight glass. The fluid should be clear and at a level above the “Lower” marking on the reservoir. Add hydraulic fluid if necessary, (see Adding Hydraulic Fluid page 1-13).



1. LOWER MARK

4. Squeeze the clutch lever toward the handlebar and release it. It should move freely and smoothly and should return to its rest position quickly when released. If the clutch lever does not travel all the way to the handlebar, *see the motorcycle’s Service Handbook.*

☑

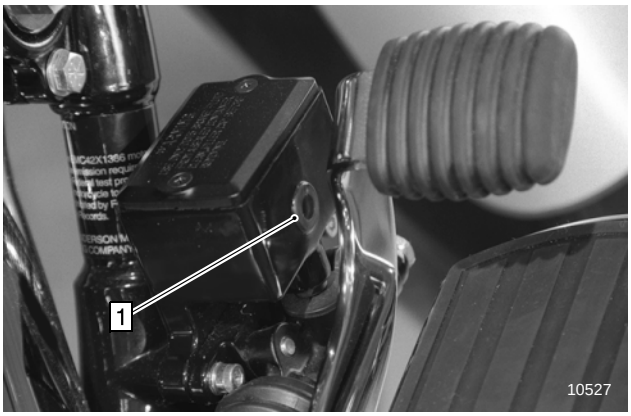


Rear Brake

1. Inspect all hoses and hose connections for dampness or stains from leaking or dried hydraulic fluid.

2. Bring the motorcycle to an upright position with an appropriate motorcycle lift or a block of wood or steel placed securely under the frame.

3. View the hydraulic fluid through the sight glass. The fluid should be clear and at a level above the sight glass on the reservoir. Add hydraulic fluid if necessary, (see Adding Hydraulic Fluid page 1-13).



1. LOWER MARK

4. Press and release the rear brake pedal. It should move freely and smoothly and should return to its rest position quickly when you release it. You should feel a firm resistance in the lever within 3/4” of lever travel. If the brake pedal does not function as described, *see the motorcycle’s Service Handbook.*

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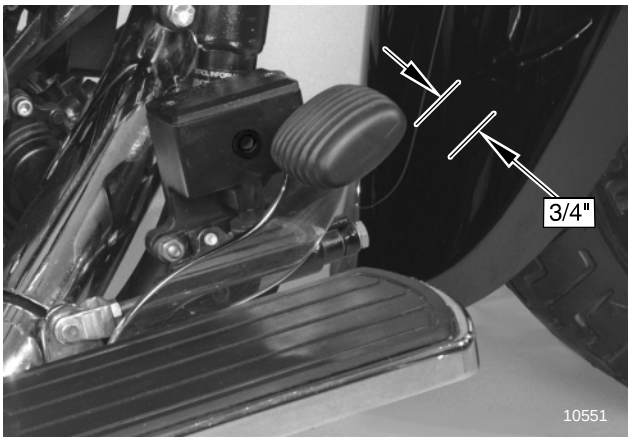
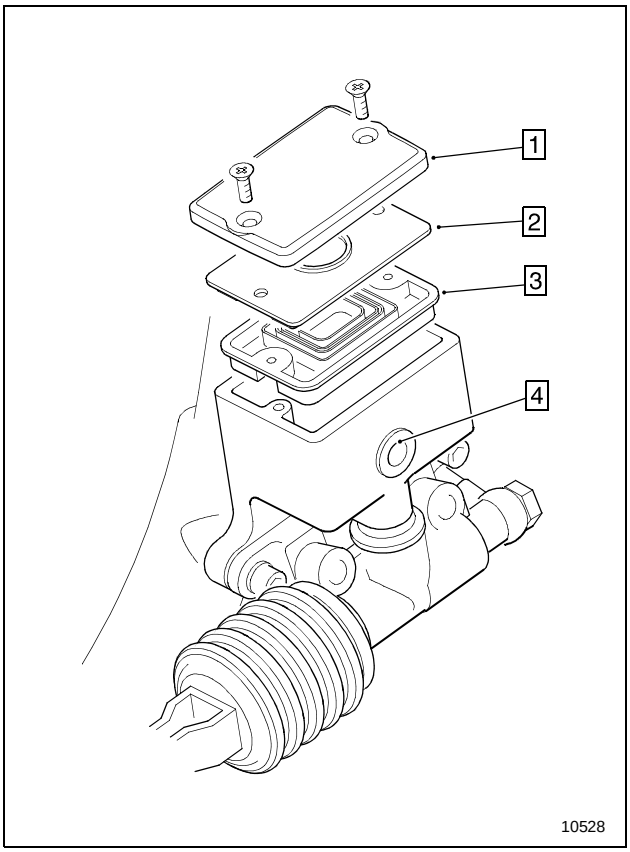


Adding Hydraulic Fluid

1. Wipe the area around the reservoir cover clean.
2. Wipe the hydraulic fluid container clean.
3. Remove the reservoir cover, gasket plate, and gasket.
4. Carefully add enough fluid to bring the level above the sight glass on the reservoir.
5. Reinstall the reservoir gasket, gasket plate, and cover.

⚠ WARNING

- Use only DOT 5 hydraulic fluid from a sealed, clean container. Using the wrong hydraulic fluid, or allowing contaminants into the hydraulic system, can damage the system seals, resulting in a system failure and the rider could lose control of the motorcycle.
- Do not operate any hydraulic system while its reservoir cover is removed. Fluid could overflow from the reservoir and cause air to enter the fluid system. Air in the hydraulic fluid system could cause a system malfunction and the rider could lose control of the motorcycle.
- Hydraulic fluid can cause irritation to skin and eyes, and can be harmful if swallowed. If hydraulic fluid is swallowed, induce vomiting and call a doctor. In case of contact with skin or eyes, flush with water.



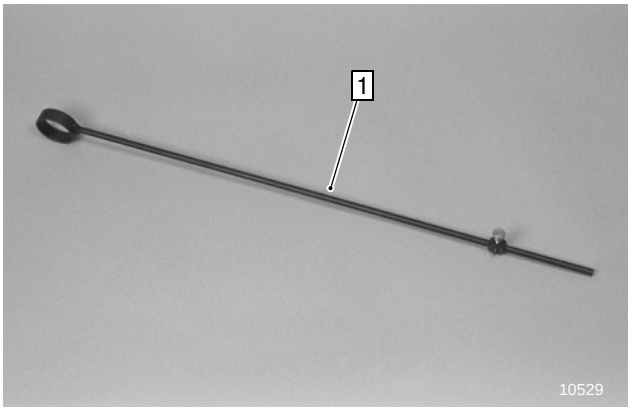
1. RESERVOIR COVER
2. GASKET PLATE
3. GASKET
4. SIGHT GLASS

Rear Wheel Alignment

Notice

Checking the rear wheel alignment involves using the Excelsior-Henderson rear wheel alignment gauge, part no. EH-6999-0037.

A skewed rear axle can damage the drive belt, causing it to fail. Rear wheel alignment is also critical to drive belt tension and should be checked to make sure the rear wheel is in proper alignment.



1. ALIGNMENT GAUGE

Check Rear Wheel Alignment

1. Place the open end of the rear wheel alignment gauge over either swing cage pivot bolt.
2. Loosen the pointer thumb screw and slide the pointer along the rod until pointer tip rests in the center dimple of the rear axle. Tighten the pointer thumb screw.
3. Move the alignment gauge to the same location on the other side of the motorcycle. If the rear axle is the same distance from the swing cage pivot bolt on both sides of the motorcycle, the rear wheel is in proper alignment.

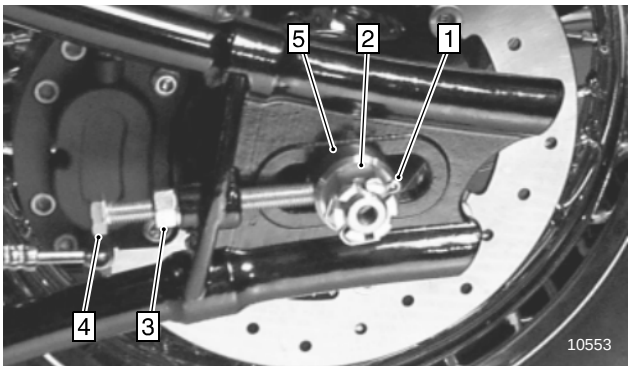
1. ALIGNMENT GAUGE
2. SWING CAGE PIVOT BOLT
3. POINTER

Adjust Rear Wheel Alignment

Notice

Adjusting the rear wheel alignment involves using the Excelsior-Henderson rear wheel alignment gauge, part no. EH-6999-0037.

1. Remove and discard the rear axle cotter pin.
2. Loosen the rear axle castle nut enough to allow the rear axle to slide back and forth in the swing cage.



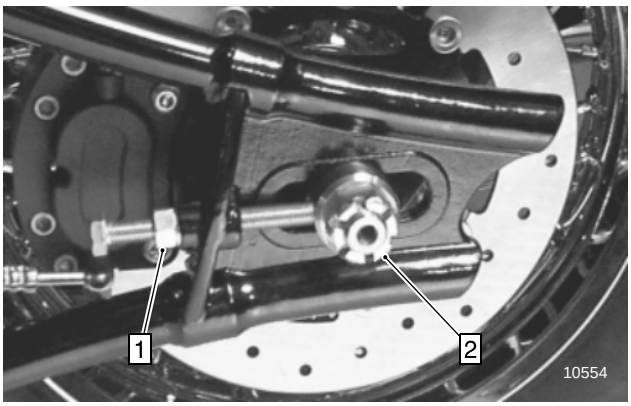
1. COTTER PIN
2. CASTLE NUT
3. ADJUSTER JAM NUT
4. REAR AXLE ADJUSTER
5. ADJUSTER COLLAR

3. Place the open end of the rear wheel alignment gauge over either swing cage pivot bolt.
4. Loosen the pointer thumb screw and slide the pointer along the rod until pointer tip rests in the center dimple of the rear axle. Tighten the pointer thumb screw.
5. Move the alignment gauge to the opposite location on the other side of the motorcycle.
6. Loosen the adjuster jam nuts.

1. ALIGNMENT GAUGE
2. POINTER

7. Turn the rear axle adjuster in or out until the dimple in the rear axle aligns with the pointer tip. Make sure the rear axle adjusters are seated against the adjuster collars.
8. Repeat steps 1-4 on alternate sides of the wheel until the distance from the swing cage pivot bolt to the rear axle center dimple is equal on both sides of the motorcycle.
9. Check the drive belt tension and adjust it if necessary (see Check Drive Belt Tension page 1-15).
10. Tighten the adjuster jam nuts.
11. Tighten the rear axle castle nut.

Torque: 111 ft-lbs



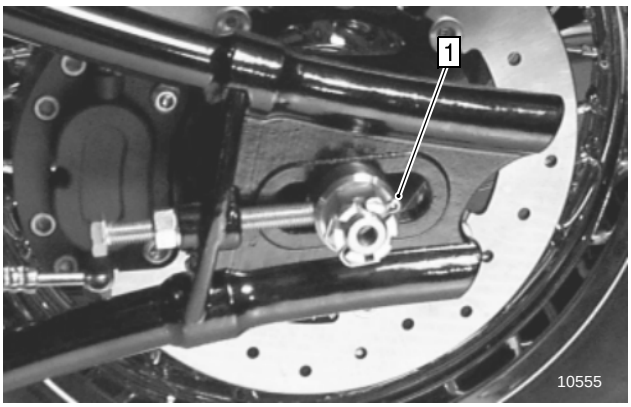
1. ADJUSTER JAM NUT
2. CASTLE NUT

12. Recheck drive belt tension, and install a new rear axle cotter pin.

⚠ WARNING

Do not reuse a cotter pin because it may fail, causing the rear wheel to loosen and the rider to lose control of the motorcycle.

☑

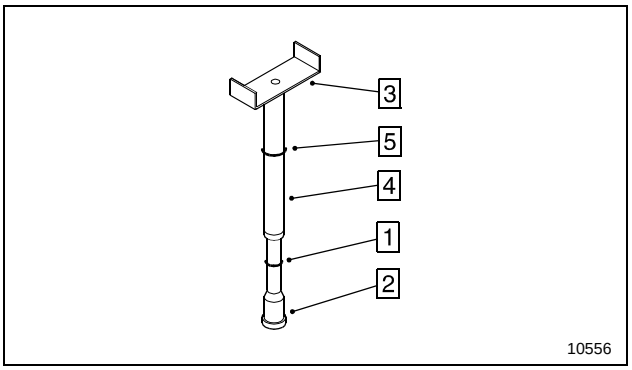


1. COTTER PIN

Drive Belt Tension

Notice

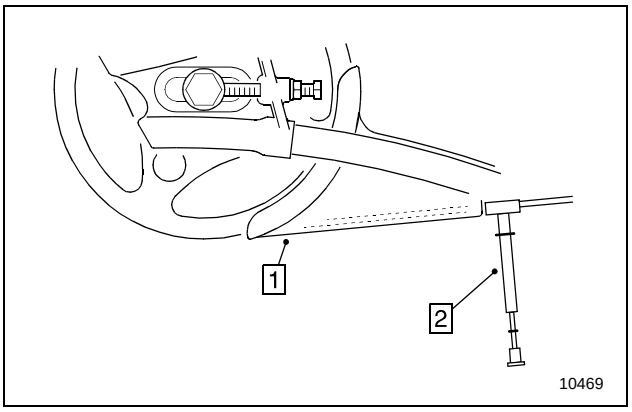
Checking the drive belt tension involves using the Excelsior-Henderson belt tension gauge, part no. EH-6999-0038. This procedure can be performed from either the right or left side of the motorcycle.



1. SMALL O-RING
2. PLUNGER
3. BASE OF BRACKET
4. BODY
5. LARGE O-RING

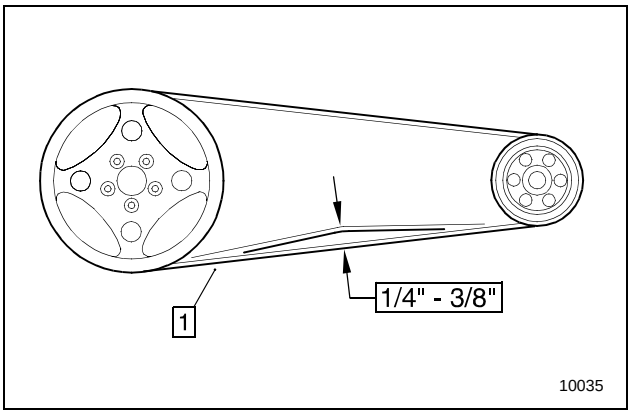
Check Drive Belt Tension

1. Mount the motorcycle and bring it to an upright position.
2. Position the small O-ring on the belt tension gauge directly over the 10 lb. mark on the plunger.
3. Have an assistant complete steps 4–5.
4. Place the base of the tension gauge bracket squarely against the lower strand of the drive belt at the front of the lower belt guard. On the lower belt guard, mark the position of the base of the tension gauge bracket. This mark represents *zero force.*



1. LOWER BELT GUARD
2. TENSION GAUGE

5. Push the plunger upward until the small O-ring touches the tension gauge body. Make sure the tension gauge is seated squarely against the drive belt, and move the large O-ring until it aligns with the *zero force* mark you made on the lower belt guard.
6. Remove the belt tension gauge and measure the distance between the base of the tension gauge bracket and the large O-ring. If the measurement is between 1/4” and 3/8”, the drive belt tension is correct.
7. Adjust belt tension as necessary.

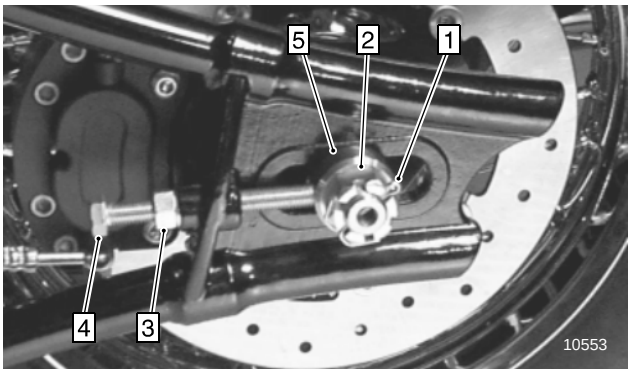


1. DRIVE BELT

Adjust Drive Belt Tension

1. Remove and discard the rear axle cotter pin. Loosen the rear axle castle nut enough to allow the rear axle to slide back and forth in the swing cage.
2. Turn both rear axle adjusters an equal amount until the drive belt tension is correct, making sure the adjusters are firmly seated against the adjuster collars.
3. Tighten the adjuster jam nuts.
4. Tighten the rear axle castle nut.

Torque: 111 ft.-lbs



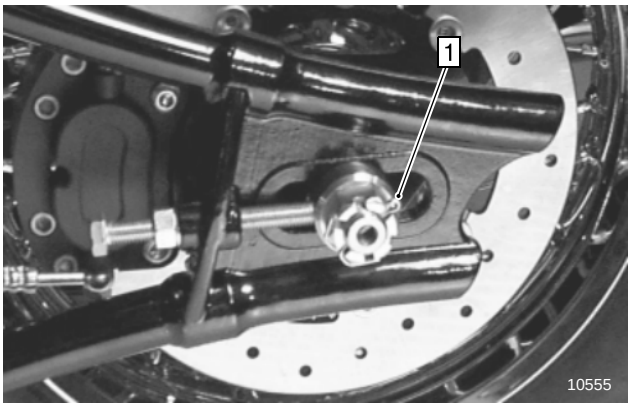
1. COTTER PIN
2. CASTLE NUT
3. ADJUSTER JAM NUT
4. REAR AXLE ADJUSTER
5. ADJUSTER COLLAR

5. Recheck drive belt tension, and install a new rear axle cotter pin.

⚠ WARNING

Do not reuse a cotter pin because it may fail, causing the wheel to loosen and the rider to lose control of the motorcycle.

☑



1. COTTER PIN

Engine Oil

The motorcycle comes from the factory filled with the correct amount of 15W-40 mineral based break-in oil. No additional oil should be required for starting and road testing the motorcycle.

The oil level should be checked while the engine is at it's normal operating temperature. Since you will be road testing the motorcycle later in the vehicle setup (consequently heating the engine to normal operating temperature) instructions for checking the oil level follow the Road Test.

Low Fuel Indicator

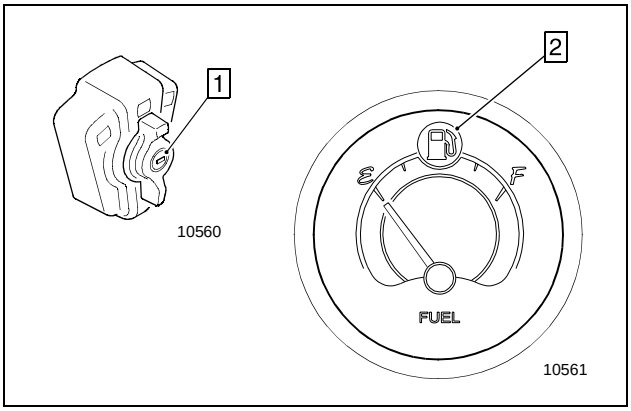
Check the low fuel indicator before filling the motorcycle with fuel. There must be less than 1 gallon of fuel in the tank to actuate the low fuel indicator.

1. Insert the key into the main switch and turn the key to the unlocked (horizontal) position and remove the key.

2. Turn the main switch to the **Acc** (Accessories) position. The low fuel level indicator should illuminate.

3. Turn the main switch to the **Off** position.

☑



1. UNLOCKED
2. LOW FUEL INDICATOR

Fuel Tank

Fill the motorcycle with the recommended fuel (see Super X Specifications page 1-30) and check the fuel system for leaks.

1. With the motorcycle on the sidestand and on level ground, remove the right fuel cap.

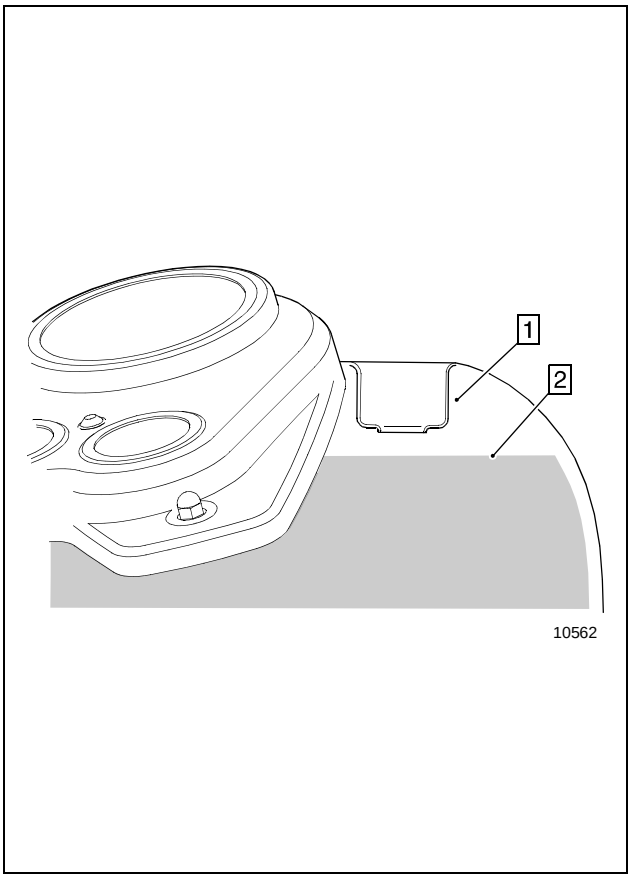
2. Fill the fuel tank to a level aprox. 3/4” below the bottom of the fuel filler insert.

⚠ WARNING

- Overfilling the fuel tank may cause fuel to overflow when it expands.
- Fuel may leak from an improperly sealed or tightened fuel cap. Tighten the fuel cap until you hear one or more distinct clicks. Be certain the fuel cap is properly sealed and tightened before starting the engine.

⚠ Caution

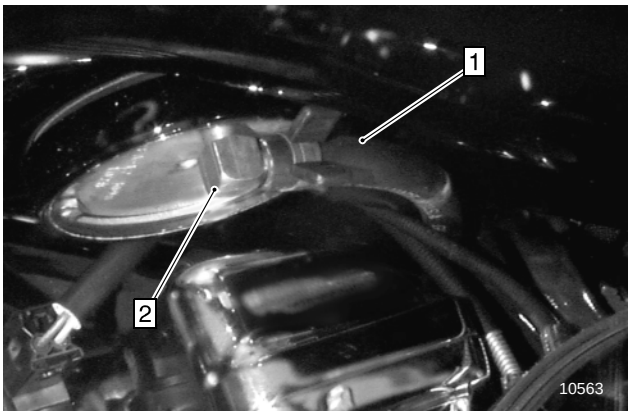
Fuel can damage painted surfaces and plastic parts. Wipe spilled fuel immediately from the motorcycle using a clean, dry, soft cloth.



1. FUEL FILLER INSERT 2. FUEL FILL HEIGHT

3. Inspect the fuel hose and its connection to the fuel pump and to the fuel rail. Check for dampness or stains from leaking or dried fuel.

☑



1. FUEL HOSE 2. FUEL PUMP

Evaporative Control System

(California Only)

Visually inspect all hoses and connections. Make sure all connections are tight. Also, inspect the evaporative canister to make sure it has not been damaged.

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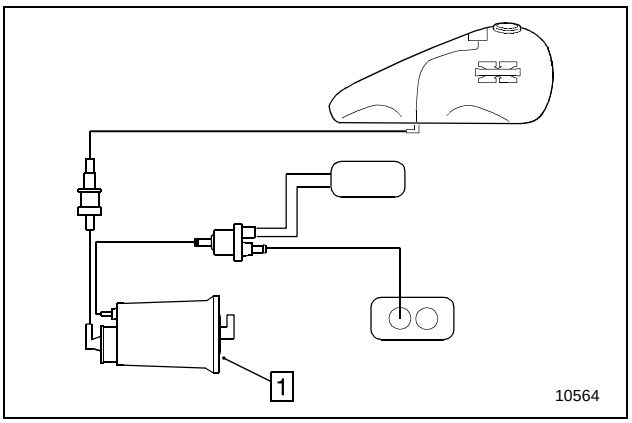
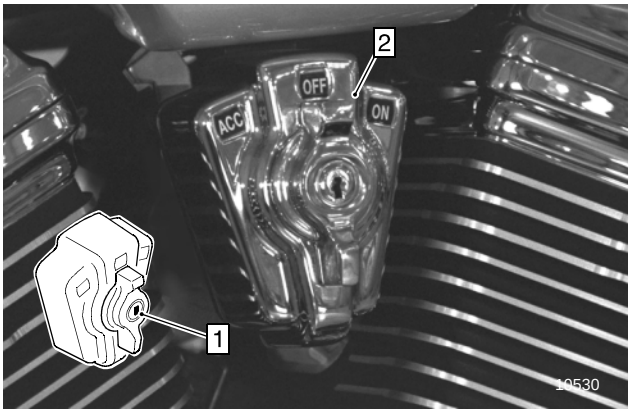


1. EVAPORATIVE CANISTER

Electrical Components

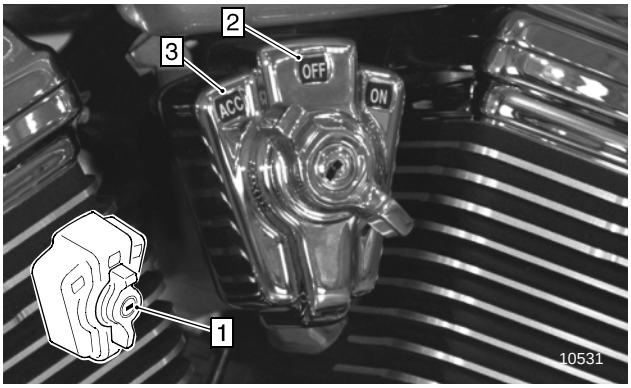
Main Switch

1. Insert the key into the main switch and turn the key to the locked (vertical) position and remove the key.
2. Move the indicator to the **On**, **Acc**, and **Off** positions. All electrical circuits should remain inactive during this operation.



1. LOCKED
2. INDICATOR

3. Insert the key into the main switch and turn the key to the unlocked (horizontal) position and remove the key.
4. With the main switch unlocked and in the **Off** position, all electrical circuits should be inactive.
5. Turn the indicator to the **Acc** position. When the main switch is unlocked and in the **Acc** position, all lighting circuits are energized. You can activate all switch and button-operated controls except the electric starter button.



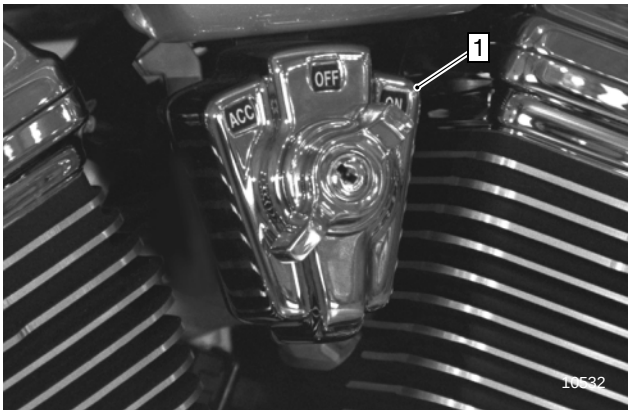
1. UNLOCKED
2. **OFF** POSITION
3. **ACC** POSITION

6. Turn the indicator to the **On** position. When the main switch is unlocked and in the **On** position, all electrical circuits are energized including the electric starter button.

⚠ Caution

Do not start the engine until all the electrical components have been checked.

☑



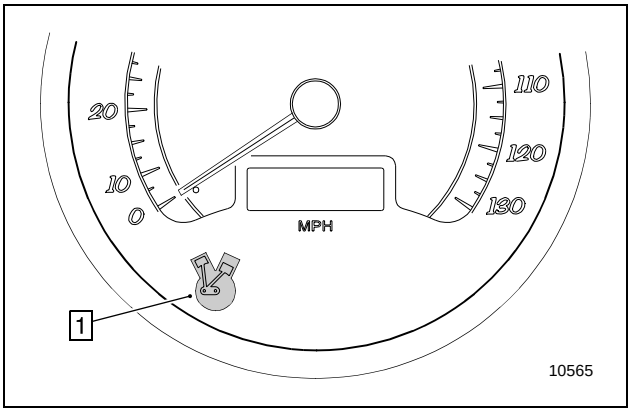
1. **ON** POSITION

Indicator Lights

There are six indicator lights on the speedometer face.

Check Engine Indicator

1. With the main switch unlocked, turn it to the **On** position. Set the engine stop/run switch on the right handlebar controls to the **Run** position. The check engine indicator should illuminate.
2. Set the engine stop/run switch to the **Stop** position, and turn the main switch to the **Acc** position.



1. CHECK ENGINE INDICATOR

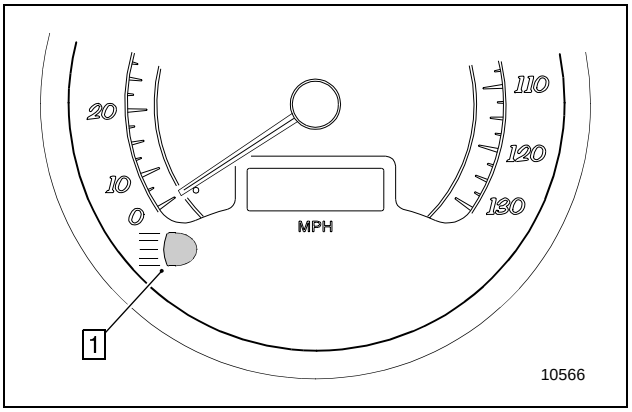
Notice

Check the remainder of the indicator lights with the main switch in the **Acc** position. When you have completed these checks return the main switch to the **Off** position.

1. **ACC** POSITION

Headlamp High Beam Indicator

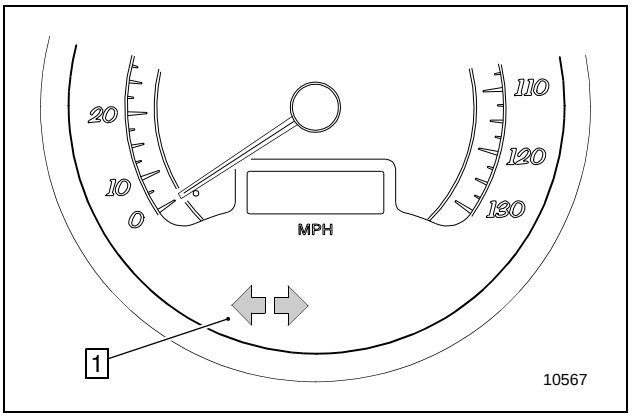
1. Set the headlamp dimmer switch to high beam position. The headlamp high beam indicator should illuminate.
2. Set the headlamp dimmer switch to the low beam position.



1. HIGH BEAM INDICATOR

Turn Signal Indicator

1. Push and release the turn signal switch to the right or left. The turn signal indicator should flash.
2. Push the turn signal switch in toward the handlebar to cancel the turn signals.
3. Push and release the turn signal switch to the opposite direction. The turn signal indicator should flash.
4. Push the turn signal switch in toward the handlebar to cancel the turn signals.



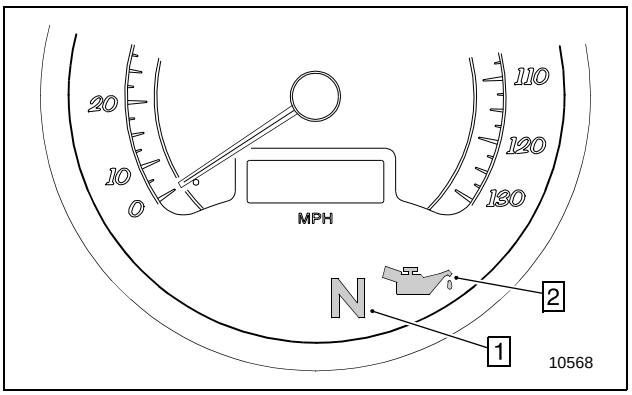
1. TURN SIGNAL INDICATOR

Neutral Indicator

Make sure the transmission is in neutral. The neutral indicator should be illuminated.

Low Oil Pressure Indicator

The low oil indicator should be illuminated.



1. NEUTRAL INDICATOR
2. LOW OIL PRESSURE INDICATOR

Low Battery Voltage Indicator

The low battery voltage indicator should **not** be illuminated.

Notice

The low battery voltage indicator illuminates only when the battery voltage drops below the minimum of 10.0 volts (± 1 volt).

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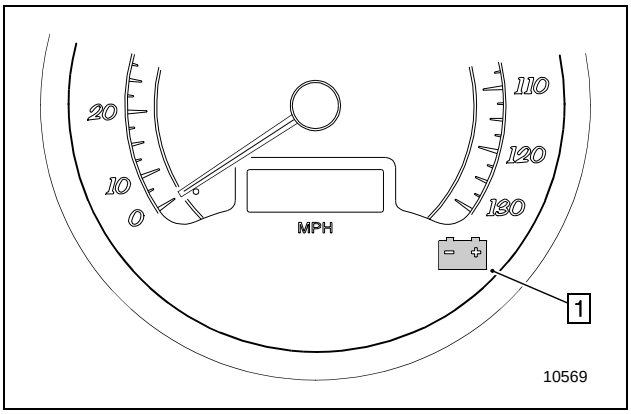
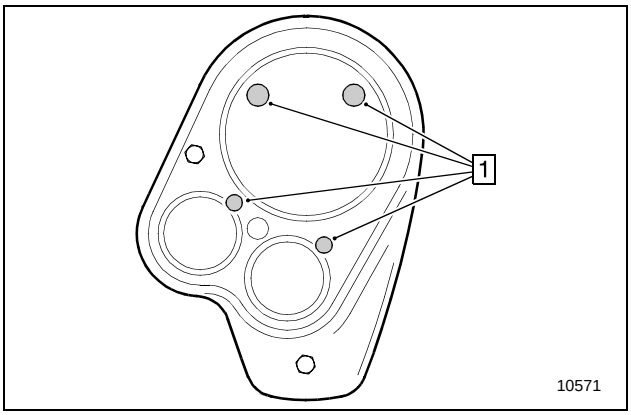


1. LOW BATTERY VOLTAGE INDICATOR

Instrument Pod Lights

The four instrument pod lights located behind the gauge faces should be illuminated.

☑



1. INSTRUMENT POD LIGHTS

Odometer/Trip Meter

A single, digital display on the speedometer face indicates either the odometer or the trip meter mileage.

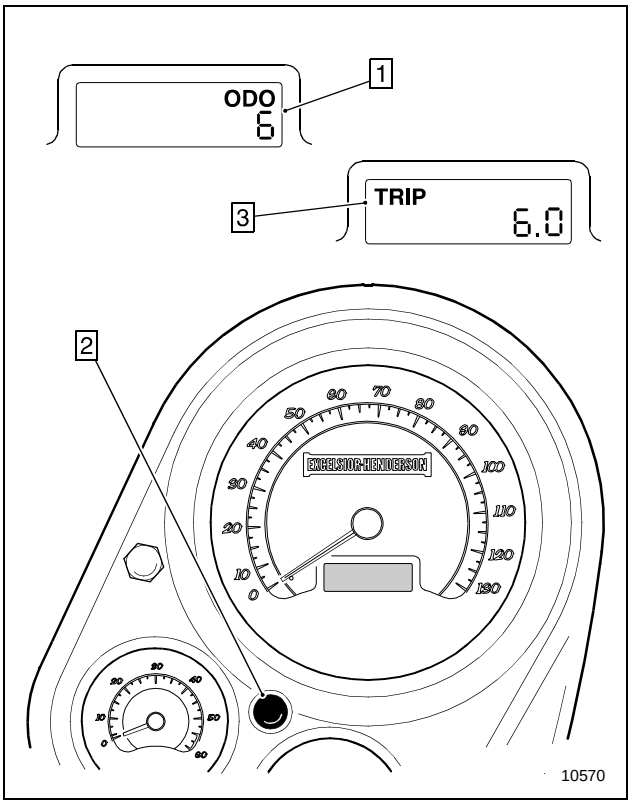
The odometer/trip meter function button toggles the digital display between the odometer mileage and the trip meter mileage. The odometer/trip meter function button also resets the trip meter.

1. All the display digits should be clearly visible and **ODO** should appear as part of the display.

2. Press and release the odometer/trip meter function button. The trip meter display should be clearly visible and **TRIP** should appear as part of the display.

3. Press and hold the odometer/trip meter function button for two seconds. The trip meter display should reset.

☑

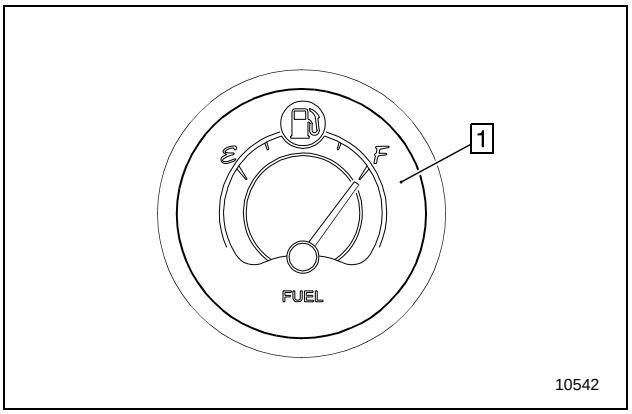


1. DIGITAL DISPLAY (ODOMETER MILEAGE)
2. ODOMETER/TRIP METER FUNCTION BUTTON
3. DIGITAL DISPLAY (TRIP MILEAGE)

Fuel Gauge

The fuel gauge needle should be at the **F** mark on the gauge.

☑

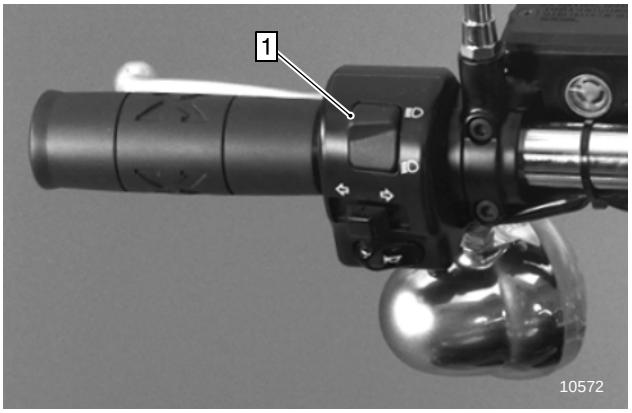


1. FUEL GAUGE

Headlamp

1. Check the headlamp to see that it is on.
2. Set the headlamp dimmer switch to the high beam position. The headlamp brightness should increase.
3. Return the headlamp dimmer switch to the low beam position. The headlamp brightness should decrease.

☑

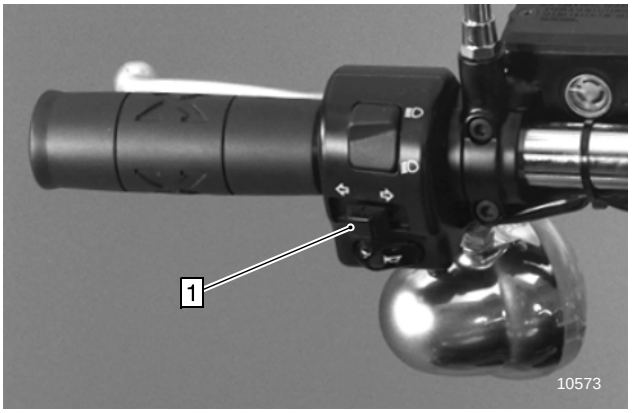


1. HEADLAMP DIMMER SWITCH

Turn Signals

1. Move the turn signal switch to the left. The front and rear left turn signal lights should flash.
2. Push the turn signal switch in toward the handlebar to cancel the turn signals.
3. Move the turn signal switch to the right. The front and rear right turn signal lights should flash.
4. Push the turn signal switch in toward the handlebar to cancel the turn signals.

☑

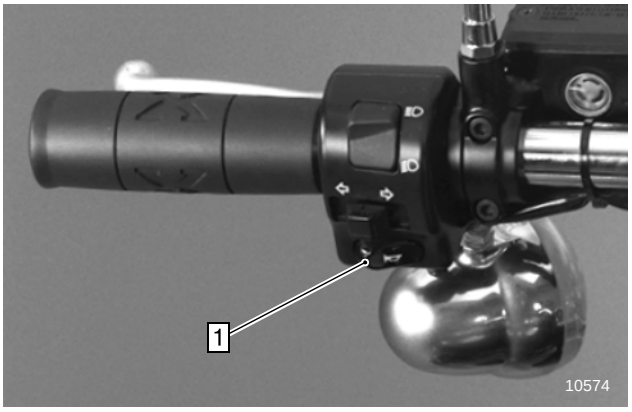


1. TURN SIGNAL SWITCH

Horn

Press and release the horn button. The horn should respond instantly with a loud and clear sound.

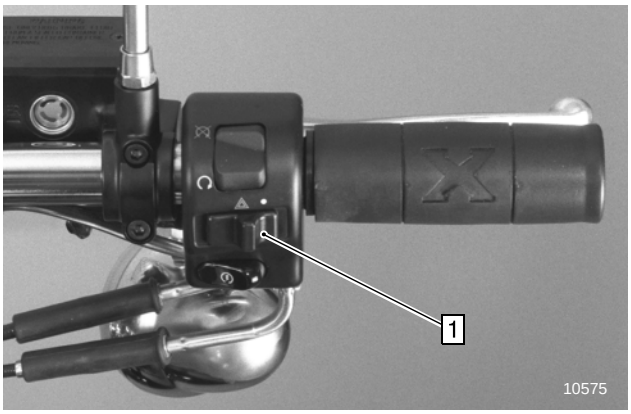
☑



1. HORN BUTTON

Emergency Flashers

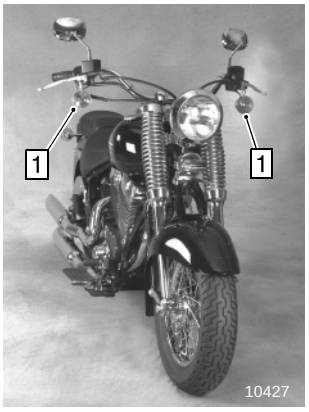
1. Slide the emergency flasher switch to the left. All four turn signals should flash.
2. Slide the switch to the right to cancel the emergency flashers.



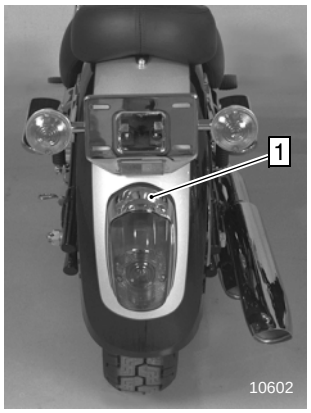
1. EMERGENCY FLASHER SWITCH

Running Lights

The two amber front running lights and the tail light should be illuminated. The licence plate light should also be illuminated.



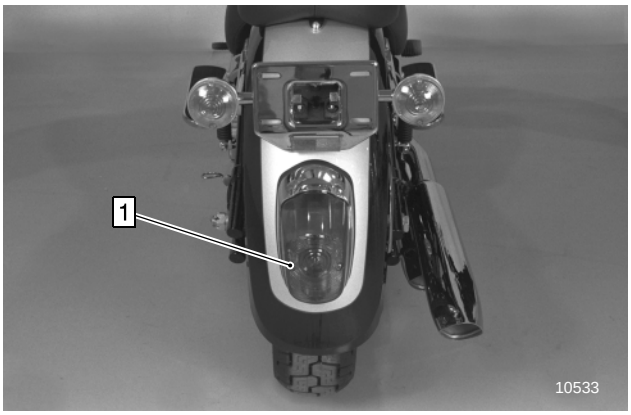
1. RUNNING LIGHTS



2. LICENSE PLATE LIGHT

Brake Light

1. Apply slight pressure to the front brake lever. The tail light brightness should increase.
2. Apply slight pressure to the rear brake pedal. The tail light brightness should increase.



1. TAIL LIGHT

Starting the Engine

The motorcycle has a closed loop, port sequential, fuel injection system. The system adjusts the fuel mixture and the ignition timing based on combustion efficiency. The ECM makes all adjustments necessary for starting and running the engine in all temperatures and other ambient conditions.

Use the following procedure to start the motorcycle and check the specific components indicated.

Electric Starter

1. Turn the main switch to the **On** position.

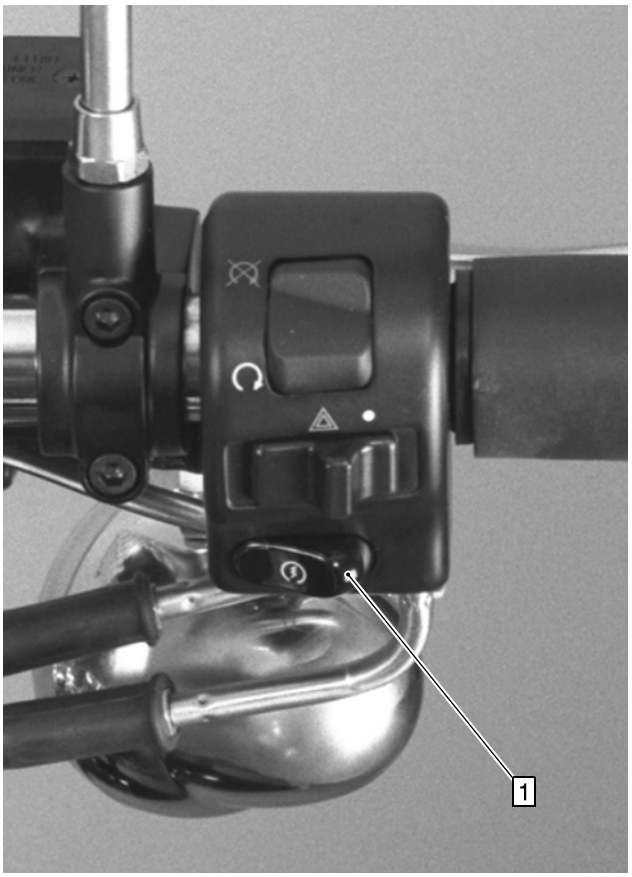
2. Set the engine stop/run switch to the **Run** position. You should hear the fuel pump momentarily as it pressurizes the fuel system.

3. With the transmission in neutral and the throttle in the closed position, press and hold the electric starter button for several seconds until the engine starts. Listen to make sure the electric starter disengages after the engine starts.

Notice

If the engine does not start within a few seconds after pressing the starter button, release the button and wait several seconds. Then press and hold the starter button again. Hold the starter button for as short a time as possible to minimize battery drain and avoid over heating the starter. Do not hold the starter button in for more than 10 seconds at any time.

☑

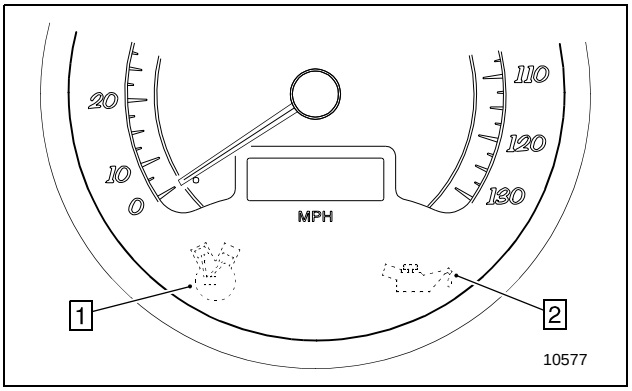


1. ELECTRIC STARTER BUTTON

Indicator Lights - OFF

After the engine starts the check engine indicator and low oil pressure indicator should go out.

☑



1. CHECK ENGINE INDICATOR
2. LOW OIL PRESSURE INDICATOR

Engine Idle - Tachometer

1. After the engine starts, the engine should run at a high idle speed of approximately 1,500 R.P.M.

2. After reaching normal operating temperature, the engine should run at a normal idle speed of approximately 950 R.P.M.

3. Use the tachometer in the instrument pod to verify the engine R.P.M., and to make sure the tachometer is functioning correctly.

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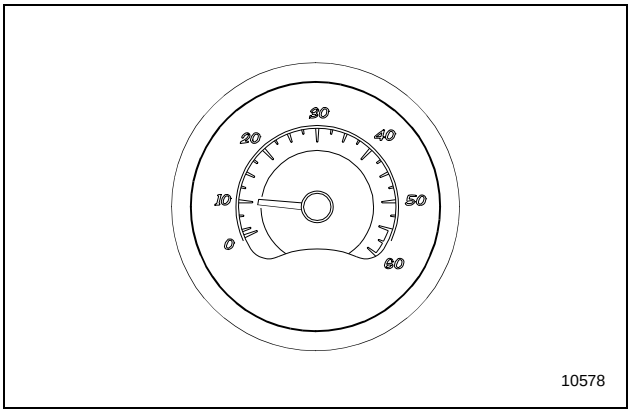
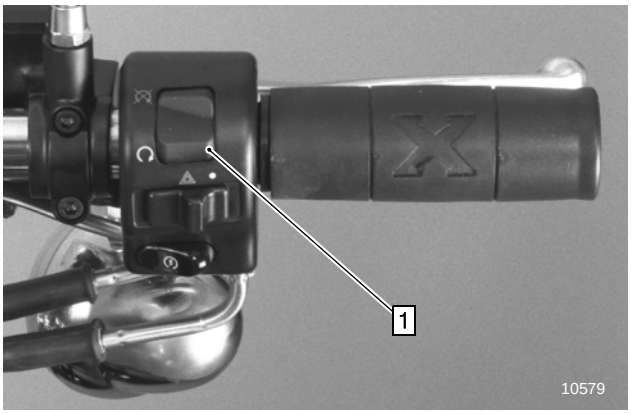


1. TACHOMETER

Engine Stop/Run Switch

1. With the engine running, set the engine stop/run switch to the **Stop** position. The engine should stop running immediately.
2. Turn the main switch to the **Off** position.



1. ENGINE RUN STOP SWITCH

Road Test

During the first 500 miles of operation, critical parts require special wear-in procedures so they seat and mate properly. Use the following rules for operation during the road test to ensure the engine's long-term performance and durability.

- Vary the engine speed.
- Do not keep a steady engine speed for an extended time.
- Do not exceed 70 m.p.h. during the test ride.
- Select gears that prevent lugging a new engine.

Within these limitations, the engine can be run at speeds up to 3000 rpm.

Protective Apparel

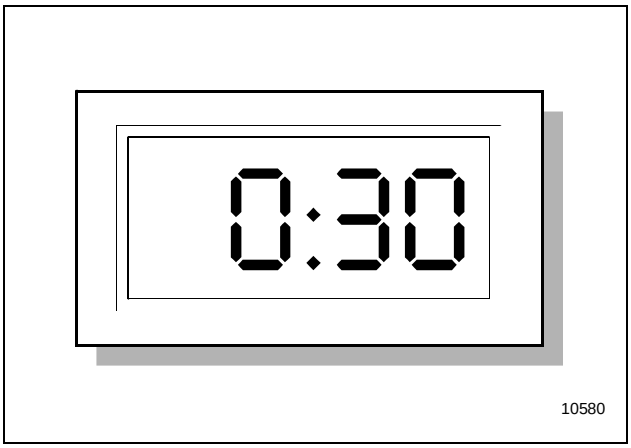
We respect your right to make your own choices. However, we recommend that you wear an approved helmet, eye protection gloves, boots, and a jacket to prevent or reduce your chance of injury in case of a fall during the road test.

Some state laws require that you wear an approved helmet, eye protection, or both. Eye protection reduces the chance that your vision could be impaired by wind or by airborne particles and objects.

The combination of your boots and pants should completely cover your legs, ankles, and feet, protecting you from engine and exhaust system heat.

Engine Operation

1. Start the engine (see Starting the Engine page 1-22).
2. Allow the engine to idle for about 30 seconds. To prevent putting the engine under load before the engine oil reaches all areas requiring lubrication, do not rev the engine or put the transmission in gear during this period.
3. Twist and release the throttle. The engine should respond instantaneously.
4. Check for any unusual engine vibration or noise while running the engine at a variety of different R.P.M's.



Clutch Operation

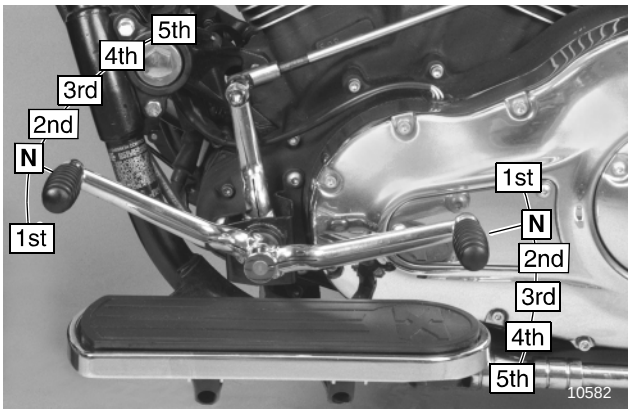
1. With the engine running at idle speed, pull in the front brake lever (engage brake) and pull in the clutch lever (disengage clutch).
2. Push the shift lever down until you feel it drop into first gear.
3. Release the front brake lever.
4. Release the clutch lever as you open the throttle. As the clutch begins to engage, the motorcycle will begin to move forward.

5. Pull in the clutch lever, and return the shift lever to neutral.
6. Release the clutch lever.
7. Repeat steps 1-6 a few times until you are satisfied that the clutch is fully engaging and disengaging the transmission.

☑

Transmission Operation

The motorcycle is equipped with a five-speed transmission and a heel-toe shift pedal. To shift to a higher gear, press down on the rear pedal with your heel or lift up on the front pedal with your toe. To shift to a lower gear, press down on the front pedal with your toe.



1. GEAR PATTERN

1. With the engine running at idle speed and the transmission in neutral, pull in the front brake lever (engage brake) and pull in the clutch lever (disengage clutch).
2. Push the shift lever down until you feel it drop into first gear.
3. Release the front brake lever.
4. Simultaneously release the clutch lever as you open the throttle. As the clutch engages, the motorcycle will move forward.

Upshifting

1. To shift to the next higher gear, accelerate to the recommended shift point.
2. Close the throttle and pull in the clutch lever.
3. Press down on the rear pedal with your heel or lift up on the front pedal with your toe, until you feel the transmission move into the next gear.
4. Release the clutch lever as you apply the throttle.

⚠ WARNING

The clutch must be fully disengaged before you attempt to shift gears. Forced shifting (shifting without the clutch disengaged) may damage the engine, transmission, and drive train, causing you to lose control of the motorcycle.

Upshift (Acceleration) Gear Change	Upshift Speed
1st to 2nd	20 mph
2nd to 3rd	30 mph
3rd to 4th	40 mph
4th to 5th	55 mph

1. UPSHIFT POINTS (DURING BREAK-IN)

Downshifting

1. To shift to a lower gear, pull in the clutch lever and close the throttle.
2. Shift into the next lower gear and release the clutch lever as you open the throttle.

⚠ WARNING

- Downshifting at a speed in excess of the recommended downshift point may severely damage the transmission or cause the rear wheel to lose traction. In either case, you could lose control of the motorcycle. It could also result in engine damage from running the engine too fast. Reduce your speed before downshifting and do not downshift at speeds above the recommended shift points.
- Downshifting abruptly on wet, rough, loose, or slippery surfaces can cause the motorcycle to loose traction. This can cause you to lose control of the motorcycle. When downshifting on such surfaces, release the clutch lever very gradually.
- Downshifting in a curve may cause the rear wheel to lose traction, which could cause you to lose control of the motorcycle. Downshift before you enter a curve.

Downshift (Deceleration) Gear Change	Downshift Speed
5th to 4th	45 mph
4th to 3rd	35 mph
3rd to 2nd	25 mph
2nd to 1st	20 mph

1. DOWNSHIFT POINTS (DURING BREAK-IN)

The transmission should shift upward and downward smoothly through all the gears.

Run the motorcycle through all of the gears a number of times, and check for any unusual transmission vibration or noise while in each gear.

☑

Brake Operation

1. While riding the motorcycle, close the throttle and apply the front and rear brakes evenly. Applying slightly more front brake than rear brake generally gives you the best braking performance.

2. The front and rear brakes should operate smoothly and quietly, allowing you to stop the motorcycle safely and quickly.

⚠ WARNING

- Applying either brake so strongly that the wheel loses traction may cause you to lose control of the motorcycle.
- Braking hard on wet, rough, loose, or slippery surfaces can cause the motorcycle to loose traction, and you could lose control of the motorcycle. Apply the brakes lightly on such surfaces.
- Braking while in a curve can cause you to lose control of the motorcycle. Brake before entering a curve.

☑

Motorcycle Handling

During the road test, pay special attention to the operation of the following components:

- Drive Belt - runs quietly and free from excessive vibration
- Front Suspension - moves smoothly, absorbs impacts without unnecessary friction or sticking
- Rear Suspension - moves smoothly, absorbs impacts without unnecessary friction or sticking
- Wheels - little or no radial or lateral movement, rotation is smooth and without interference

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Speedometer/Odometer Function

1. During the road test, make sure the speedometer needle moves and reacts appropriately to changes in speed.
2. Make sure either the odometer or the trip meter display advances as you ride.

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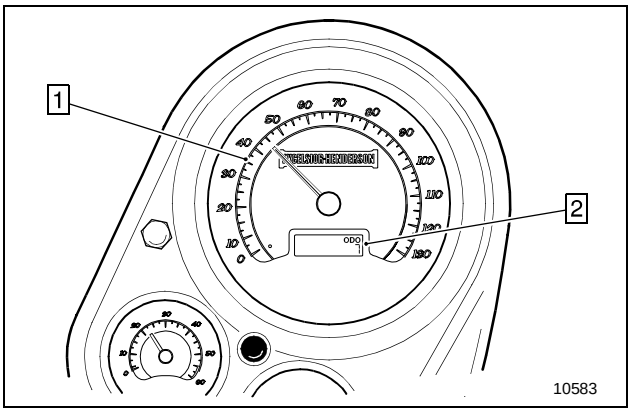

1. SPEEDOMETER
2. ODOMETER DISPLAY

Engine Oil Level

1. With the engine at normal operating temperature, mount the motorcycle and bring it to an upright position on level ground.
2. With the transmission in neutral, start and run the engine at 2500 - 3000 rpm for 30 seconds. Shut the engine off while the motorcycle is in the upright position.
3. Rest the motorcycle on the sidestand and on level ground. Remove the oil filler cap and wipe the dipstick clean. Reinstall the dipstick and turn the cap clockwise until it seats.

1. FILLER CAP AND DIPSTICK

4. Remove the dipstick again and note the oil level.
5. If necessary, add or remove oil to bring the level into the area on the dipstick above the ADD mark and below the appropriate MAX. mark. Repeat steps 3-4 each time you adjust the oil level.

If you need to add any oil, use only a 15W-40 API-rated SF or SG grade mineral based oil.

⚠ WARNING

Do not operate the motorcycle with the oil level above the appropriate MAX. mark or below the ADD mark. Operating the engine with too much or too little oil can cause serious engine damage or engine seizure, resulting in the rider losing control of the motorcycle.

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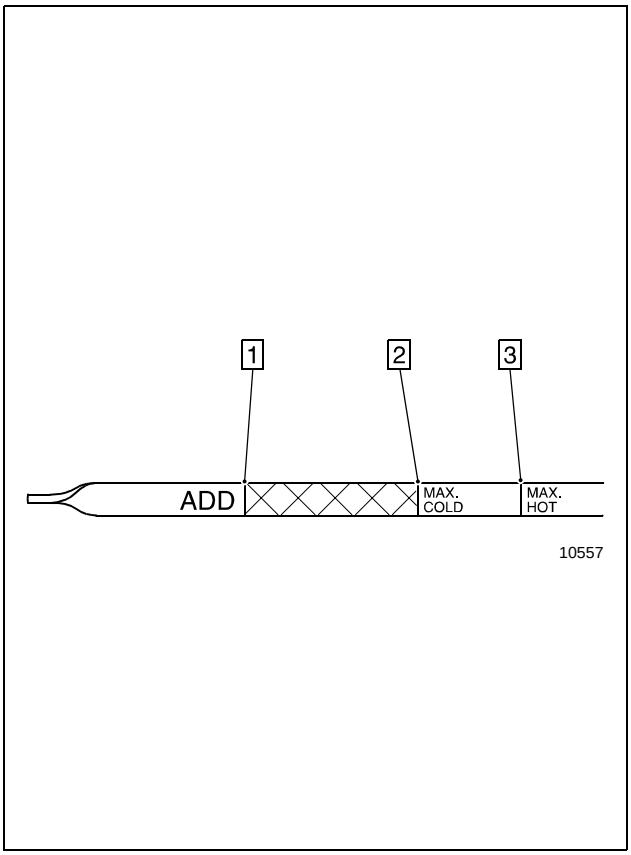

1. **ADD** MARK
2. **MAX.** COLD MARK
3. **MAX**. HOT MARK

Cleaning the Motorcycle

Before washing the motorcycle, make sure the engine and exhaust pipes are cool.

Wash the motorcycle indoors or in the shade to prevent water spotting.

1. Rinse off as much dirt as possible with low pressure water.

⚠ Caution

- Do not spray or allow water to come into contact with electrical components or connectors. Electrical components may be damaged by contact with water.
- Use as little water as possible when washing near the air cleaner or the exhaust pipe openings. An excessively wet air cleaner or water in the exhaust pipes may cause the engine to start and run poorly.

2. Wash the entire motorcycle using a soft cloth or sponge soaked in a solution of mild detergent and warm water. Apply minimal pressure as you wash; let the detergent do the cleaning. Excessive washing pressure may cause dirt, sand, or other foreign materials on the motorcycle to scratch the finish.

3. Rinse the motorcycle with water running at low pressure.

4. Dry all components thoroughly before starting the engine.

5. Start the engine and let it idle for a few minutes.

6. Make sure the brakes are functioning properly before riding.

Notice

Excessively wet brake pads or discs may diminish braking effectiveness. Dry these components thoroughly before using the motorcycle.

☑

Super X Specifications

Dimensions

Overall length . . . . . 92.5"
Overall width . . . . . 39.5"
Overall height . . . . . 52.5"
Saddle height . . . . . 26.5"
Wheelbase . . . . . 62.9"
Ground clearance . . . . . 5.9"

Weight

Dry weight . . . . . 647 lbs
Gross Vehicle Weight Rating (GVWR) . . . . . 1140 lbs
Gross Axle Weight Rating
front . . . . . 394 lbs
rear . . . . . 746 lbs

Engine

Type . . . . . 50° X-Twin™
Number of cylinders 2
Bore . . . . . 3.66"
Stroke . . . . . 4.02"
Displacement . . . . . 85 cu. in.
Compression ratio 9.2:1
Fuel system . . . . . port sequential, closed loop EFI
Starting system . . . . . electric
Lubrication system . . . . . pressure, dual scavenge
Air cleaner . . . . . dry paper/wire mesh

Transmission

Type . . . . . 5 speed, constant mesh
Primary reduction system . . . . . wet multi-gear drive
Primary reduction ratio 1.75:1
Gear shift pattern . . . . . 1 down, 4 up
Gear ratios:
1st 2.53:1
2nd 1.77:1
3rd 1.35:1
4th 1.00:1
5th 0.80:1
Clutch . . . . . wet multi-disc
Drive belt . . . . . high performance synchronous

Chassis

Frame type . . . . . tubular steel, double cradle
Front suspension . . . . leading link, double strut system
Rear suspension . . . . . adjustable, gas charged system
Caster angle . . . . . 30°
Trail . . . . . 6.25"
Steering angle . . . . . ±43°
Turning radius . . . . . 7.6'
Brakes (diameter X width):
Front . . . 11.5" X 0.236" floating disc, 4 piston caliper
Rear . . . . 11.5" X 0.236" floating disc, 4 piston caliper

Wheels

Type:
Front . . . . . stainless steel 40 spoke
Rear . . . . . stainless steel 40 spoke
Size:
Front . . . . . 3.0 X 16
Rear . . . . . 3.5 X 16

Tires

Type . . . . . tube
Size:
Front MT90HB16
Rear MU90HB16
Manufacturer and model . . . . . Dunlop 491 Elite II
Maximum load:
Front . . . . . 770 lbs
Rear . . . . . 930 lbs
Air pressure (up to 200 lb. load):
Front . . . . . 36 psi (cold)
Rear . . . . . 36 psi (cold)
Air pressure (200 lb. – 440 lb. load):
Front . . . . . 36 psi (cold)
Rear . . . . . 40 psi (cold)

Electrical

Ignition system:
Type . . . . . inductive coil
Timing . . . . . ECM-driven
Spark plug:
Type . . . . . Excelsior-Henderson part no. 3199-0030
Gap . . . . . 0.035 in.
Battery . . . . . sealed 18AH
Generator . . . . . 35 amp regulator
Light bulbs (voltage, wattage X quantity):
Headlamp . . . . . halogen sealed beam, ANSI #H6024
Running light/Front turn signal . . . . . ANSI #198
Rear turn signal . . . . . ANSI #199
Tail/brake light . . . . . ANSI #198
License plate light . . . . . ANSI #193
Speedometer . . . . . ANSI #161
Tachometer . . . . . ANSI #74
Fuel gauge . . . . . ANSI #74
Instrument Pod Indicators:
Headlamp high beam . . . . . ANSI #74
Check engine . . . . . ANSI #74
Turn signal . . . . . ANSI #74
Neutral . . . . . ANSI #74
Low oil pressure . . . . . ANSI #74
Low battery voltage . . . . . LED
Low fuel . . . . . ANSI #74
Fuses:
Auxiliary lights . . . . . 10 amps
Fuel pump . . . . . 10 amps
EFI . . . . . 15 amps
Lights . . . . . 15 amps
Horn . . . . . 10 amps
Ignition . . . . . 5 amps

Super X Specifications (continued)

Fluids

Capacities:

Fuel tank . . . . . 5.75 gal
Engine oil (with filter) . . . . . 4 qt.
Brake and clutch fluid . . . . . DOT 5 hydraulic fluid

Fuel:

unleaded gasoline only, 92 pump octane minimum

- DO NOT USE GASOLINE CONTAINING METHANOL. Using gasoline/methanol blends can result in poor starting and engine operation, and may damage critical fuel system components.
- Gasoline containing up to 15% Methyl Tertiary Butyl Ether (MTBE) can be used.
- Gasoline containing up to 10% Ethanol can be used.
- Gasoline that has been Reformulated or Oxygenated can be used.

Engine oil:

Classification . . . . . API-rated SF or SG
Viscosity (first 500 miles) . . . . . 15W-40 (+40°F)
Viscosity (after 500 miles) . . . . . 20W-50 (+40°F)
Viscosity (after 500 miles) . . . . . 10W-40 (below 40°F)

⚠ Caution

Do not combine mineral-base and synthetic oil in the crankcase at the same time, as this can cause serious engine damage.

Super X Torque Specifications

Engine Fasteners:

Spark plug . . . . . 15 ft-lbs
Upper cam cover screw . . . . . 12 ft-lbs
Air cleaner cover screw . . . . . 8 ft-lbs
Air cleaner element screw . . . . . 8 ft-lbs
Throttle body bracket screw . . . . . 8 ft-lbs
Exhaust flange nut . . . . . 20 ft-lbs
Exhaust clamp . . . . . 55 ft-lbs
Heat shield clamp . . . . . 8 ft-lbs
Muffler mounting screw . . . . . 30 ft-lbs
Timing gear cover screw . . . . . 8 ft-lbs
Oil filter cover screw . . . . . 8 ft-lbs
Oil pump cover screw . . . . . 8 ft-lbs
Crankcase:
  3/8-16 . . . . . 25 ft-lbs
  5/16-18 . . . . . 18 ft-lbs
Oil drain plugs . . . . . 30 ft-lbs
Starter motor mounting screw . . . . . 8 ft-lbs
Starter terminal nut . . . . . 5 ft-lbs
Primary drive cover screw . . . . . 8 ft-lbs
Primary drive cover insert screw . . . . . 8 ft-lbs
Clutch access cover screw . . . . . 8 ft-lbs

Chassis Fasteners:

Front engine flange to frame . . . . . 20 ft-lbs
Front engine brackets to frame:
  3/8-16 . . . . . 35 ft-lbs
  5/16-18 . . . . . 20 ft-lbs
Rear engine mount rod to engine . . . . . 60 ft-lbs
Isolation mount to engine (front & rear) . . . . . 55 ft-lbs
Isolation mount cap nut . . . . . 50 ft-lbs
Footboard support screw . . . . . 25 ft-lbs
Footboard pivot screw . . . . . 8 ft-lbs
Passenger foot peg post screw . . . . . 50 ft-lbs
Passenger foot peg pivot screw . . . . . 25 ft-lbs
Shifter bracket screw . . . . . 14 ft-lbs
Shifter lever pinch screw . . . . . 8 ft-lbs
Shifter rod acorn nut . . . . . 25 ft-lbs
Rear brake master cylinder adapter screw . . . . . 10 ft-lbs
Rear brake master cylinder screw . . . . . 18 ft-lbs
Rear brake reservoir screw . . . . . 18 ft-lbs
Rear brake pedal post . . . . . 50 ft-lbs
Swing cage pivot:
  Bolt . . . . . 158 ft-lbs
  Nut . . . . . 79 ft-lbs
Rear shock absorber . . . . . 72 ft-lbs
Battery cover strap screw . . . . . 7 ft-lbs
Voltage regulator screw . . . . . 7 ft-lbs
Rear electronics cover screw . . . . . 7 ft-lbs
Electronics/oil fill cover screw . . . . . 7 ft-lbs
Main switch bracket screw . . . . . 7 ft-lbs
Main switch screw . . . . . 7 ft-lbs
Rear axle nut . . . . . 111 ft-lbs
Rear brake caliper bracket screw . . . . . 35 ft-lbs
Rear brake rotor screw . . . . . 50 ft-lbs
Rear sprocket screw . . . . . 55 ft-lbs
Front axle bolt . . . . . 79 ft-lbs
Front brake caliper bracket screw . . . . . 35 ft-lbs
Front caliper rod . . . . . 30 ft-lbs
Front caliper rod bracket screw . . . . . 35 ft-lbs
Front brake rotor screw . . . . . 50 ft-lbs
Front hub cap screw . . . . . 10 ft-lbs
Rocker pivot screw . . . . . 25 ft-lbs
Rocker pinch screw . . . . . 18 ft-lbs
Front strut pivot shaft screw . . . . . 55 ft-lbs
Front strut cap screw . . . . . 10 ft-lbs
Top triple clamp acorn nut . . . . . 25 ft-lbs
Handlebar riser post . . . . . 50 ft-lbs
Handlebar riser screw . . . . . 17 ft-lbs
Handlebar riser cap screw . . . . . 17 ft-lbs
Hydraulic reservoir clamp screw . . . . . 10 ft-lbs
Hydraulic line banjo bolt . . . . . 18 ft-lbs
Switch cluster mounting screw . . . . . 20 in-lbs
Throttle cable retainer screw . . . . . 20 in-lbs
Headlamp/horn bracket screw . . . . . 10 ft-lbs
Horn screw . . . . . 22 in-lbs
Headlamp post screw . . . . . 25 ft-lbs
Headlamp mounting screw . . . . . 35 ft-lbs
Front fender screw . . . . . 35 ft-lbs
Instrument pod mounting screw . . . . . 12 ft-lbs
Fuel tank mounting screw . . . . . 20 ft-lbs
Rider seat screw . . . . . 18 ft-lbs
Tandem seat screw . . . . . 18 ft-lbs
Rear fender support screw . . . . . 50 ft-lbs
Rear fender screw . . . . . 35 ft-lbs
Rear fender extension:
  Nut . . . . . 10 ft-lbs
  Screw . . . . . 7 ft-lbs
License plate bracket screw . . . . . 7 ft-lbs
Tail light housing screw . . . . . 5 ft-lbs
Front belt guard screw . . . . . 7 ft-lbs
Rear upper belt guard . . . . . 18 ft-lbs
Rear lower belt guard . . . . . 5 ft-lbs

NOTES

NOTES

2. Owner Predelivery

General Information

The following information is provided to assist the Dealer Sales Representative. Please use this chapter as a guide to guarantee delivery of all the necessary items and information associated with the new motorcycle. Helping the new Owner enjoy their new motorcycle quickly and safely is to everybody's best interests. The additional time spent with the new Owner during this orientation builds goodwill and strengthens your relationship.

Both the Dealer Sales Representative and the new Owner should use the spaces provided on the *Certificate of Vehicle Setup & Predelivery* to indicate completion of each step of the Owner Predelivery process.

Vehicle Literature Kit

Please open the Literature Kit and discuss each item individually.

WARNING - Read Before You Ride

This eye catching “Warning Sign” is a friendly reminder, prompting the new Owner to read all the information provided in the literature kit. It asks that special attention be given to information found in the *Rider’s Handbook.*

☑ ☑

10585

You and Your Motorcycle - Riding Tips

The booklet includes important tips that can help the new Owner ride safely. It should take an average reader about 30 minutes to read the entire document carefully, and it may be the most valuable half-hour the new Owner has ever had.

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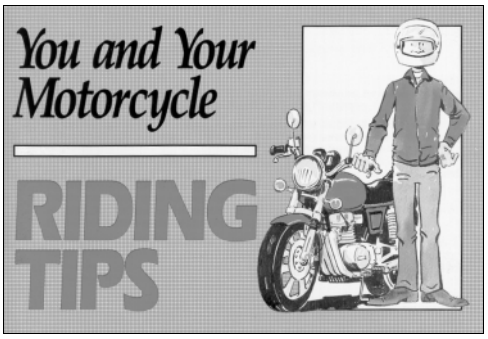

10586

RiderCourse® Pamphlet

The pamphlet introduces the new Owner to the Motorcycle Safety Foundation’s *RiderCourse*. Information about both the Beginner and the Experienced courses are discussed. The toll-free *RiderCourse* locator number is also provided.

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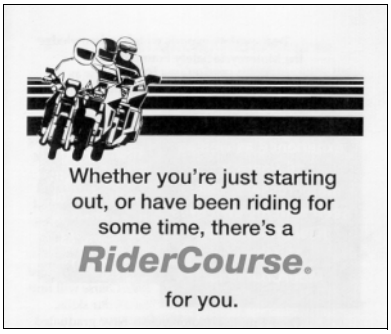

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Notice of Motorcycle Patents

In addition to the patent information on the motorcycle, a document announcing that certain features of the motorcycle are protected by various United States Patents is included in the Literature Kit. Please present this document to the new Owner.

Dunlop® *Tire Care Booklet*

In addition to providing tire maintenance and care information, this booklet contains Dunlop's Limited Warranty and Warranty Registration Card.

The Dealer is required to fill in the following areas of the registration card:

- D.O.T. Tire Identification Numbers
- Dealer's Address
- Name of Dealer that sold the tire (enter Excelsior-Henderson Motorcycle Manufacturing Co.)

The new Owner should complete the registration card and send it to Dunlop to activate the warranty as soon as possible.

10588

Rider's Warranty & Service Records

This booklet is the business end of the Literature Kit. It includes:

- The Excelsior-Henderson Limited Warranty
- The Noise Control System Warranty and Regulations
- The Emission Control System Warranty
- The California Emission Control System Warranty
- A service record checklist and note page for each recommended service interval
- Warranty Transfer and Address Update cards

10589

The Excelsior-Henderson Limited Warranty

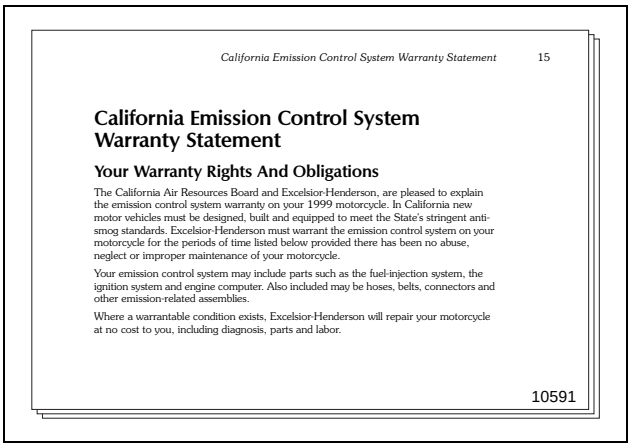
Please take the time to explain the following elements of the Excelsior-Henderson Limited Warranty to the new Owner:

- Warranty period
- Owner obligations
- Warranty duration and transferability
- Exclusions and limitations to the warranty

10590

California Emission Control System Warranty

Dealers delivering motorcycles equipped with the California Emission Control System, are asked to explain the basic elements of the California Emission Control System Warranty to the new Owner.



Accessories Limited Warranty

If you or any of your staff install Excelsior-Henderson™ brand accessories on a 1999 model motorcycle prior to delivery, please discard the ninety (90) day Accessories Limited Warranty card supplied with the accessory kit.

Attach the twelve (12) month Accessories Limited Warranty label found in the motorcycle's Literature Kit to the inside front cover of the new Owner's *Rider's Warranty & Service Records* booklet.

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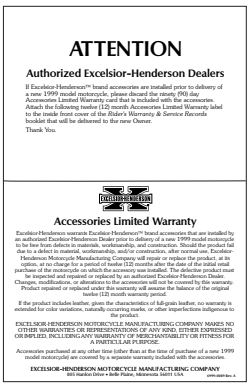

10603

Rider's Handbook™

The Excelsior-Henderson *Rider's Handbook* is the new Owner's primary reference book. In addition to the information needed to safely operate and maintain the motorcycle, it contains a special section of Excelsior-Henderson history to help familiarize the new Owner with the brand.

☑ ☑

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Notice

- All the information you need to complete the remainder of Owner Predelivery is in the *Rider's Handbook*. Referring to it throughout the orientation familiarizes the new Owner with the *Rider's Handbook* and demonstrates its practical purpose.

Visual Inspection

Make sure the motorcycle is in excellent condition before the new Owner takes possession. This step should help prevent Excelsior-Henderson and its Dealer network from incurring any fraudulent warranty expenses.

☑ ☑

Instruments and Controls

Please address the location and demonstrate the operation of each item described in the *Product Description* and *Instruments and Controls* chapters of the *Rider's Handbook*.

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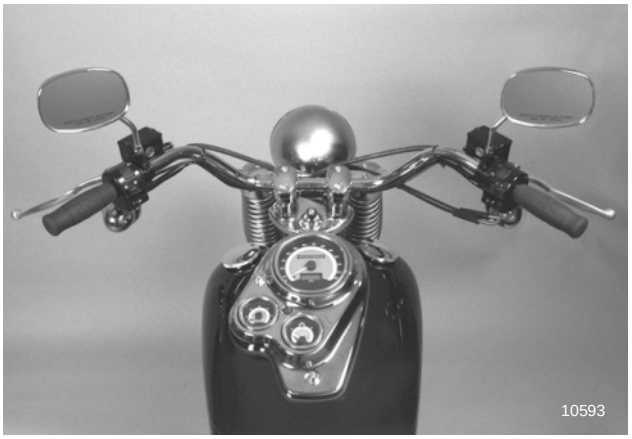

Adjust Rear Suspension

Help the new Owner experience a great ride right from the start. Adjust the rear suspension to fit the new Owner's riding needs. Refer to the *Rear Suspension Adjustment* section of the *Instruments and Controls* chapter of the *Rider's Handbook* for settings and procedures.

Notice

- This procedure involves using the Excelsior-Henderson rear shock adjusting wrench, part no. EH-6999-0029, which is designed specifically for changing the preload adjuster setting.

☑ ☑

Fuses

Before replacing the saddles, point out the location of the electrical system fuses to the new Owner.

If no suspension adjustments are needed and the saddles are not removed, all fuse information can be found in the *Electrical Equipment* section of the *Maintenance* chapter of the *Rider's Handbook.*

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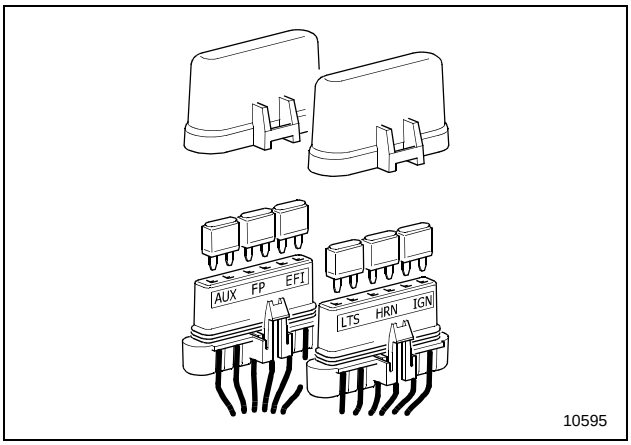

Adjust Operator's Controls

The following items may be adjusted slightly to improve Rider comfort:

- Handlebars and mirrors
- Gear shift pedal
- Rear brake pedal

Refer to the *motorcycle's Service Handbook* for additional information.

☑ ☑

Keys

Before presenting the new Owner with the motorcycle keys, record the key identification number on the *Certificate of Vehicle Setup & Predelivery.*

The Owner must provide the key identification number when ordering replacement keys.

Fill in or merely point out the space provided in the *Specifications* chapter of the *Rider's Handbook* for recording the key identification number. Space for recording the vehicle and engine identification numbers is also provided.

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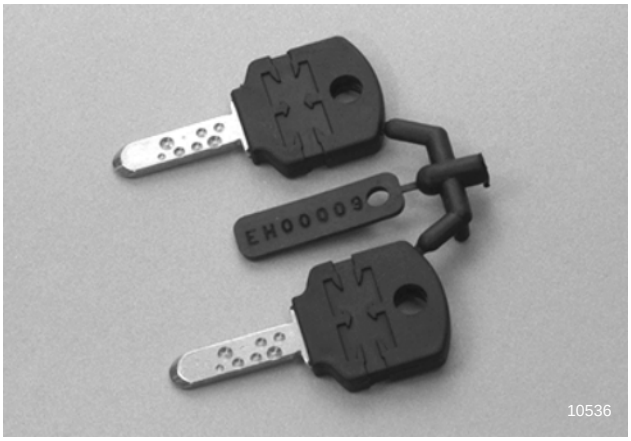

Pre-Operation Check

Refer the new Owner to the *Pre-Operation Check* chapter of the *Rider's Handbook* and reinforce the importance of checking over the motorcycle before each ride.

Assure the new Owner that with a little practice, this check will only take a few minutes, and may prevent serious damage or injury.

☑ ☑

Break-in & Maintenance

Please inform the new Owner that during the first 500 miles, critical parts require special wear-in procedures to ensure long-term performance and durability. Refer to the *Operating During Break-In Period* section of the *Operating and Riding* chapter of the *Rider's Handbook*.

In addition, regular service is required to keep the motorcycle in top working condition. Regular service increases the motorcycle's durability, safety, and dependability, and provides greater riding pleasure.

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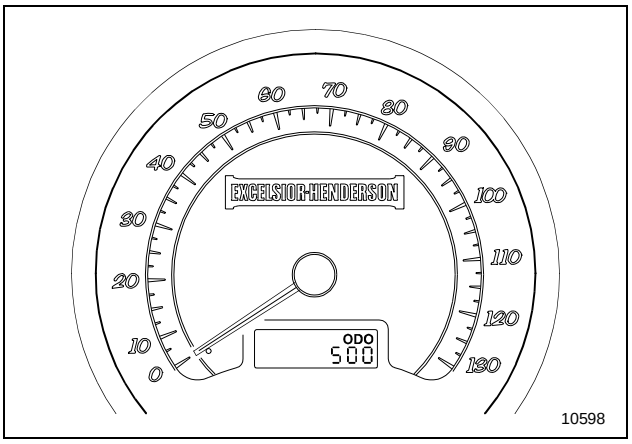

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500 Mile Service

We understand how busy your Service Department can get during the riding season. Take good care of the new Excelsior-Henderson Owner by recommending that they think ahead, and schedule their first 500 mile break-in maintenance appointment NOW.

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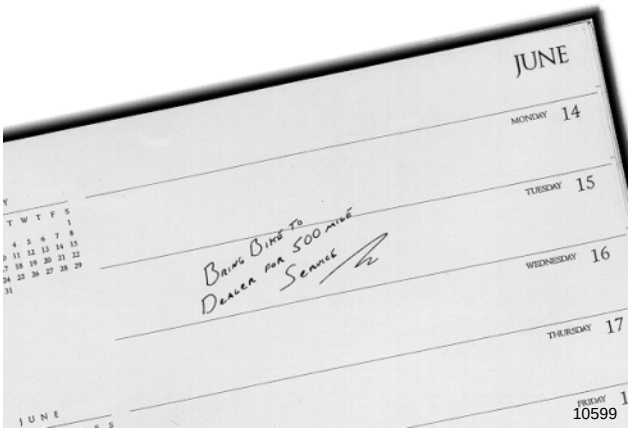

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Motorcycle Dust Cover

The dust cover used to ship the motorcycle in the crate is reusable, and should be given to the new Owner for use until a more durable cover can be obtained.

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