

Operation and Riding

This section describes how to operate the Super X motorcycle for best performance and longevity, including:

- motorcycle break-in period
- starting the engine
- shifting gears
- accelerating
- braking
- stopping the engine
- parking

For safe operation and riding, see *Safety Information*, beginning on page 5.

Operating During Break-In Period (First 500 Miles)

Your new Super X is designed and built with premium-quality materials and expert craftsmanship, providing optimum performance from the first mile. During the first 500 miles, critical parts require special wear-in procedures so they seat and mate properly. Use the following rules for operation during the first 500 miles to ensure your engine's long-term performance and durability.

During the first 500 miles:

- Vary the engine speed. Do not keep a steady engine speed for an extended time.
- Do not exceed 70 mph. Within this limitation, you can run the engine at speeds up to 3000 rpm. Select gears that prevent lugging the engine.

At 500 miles:

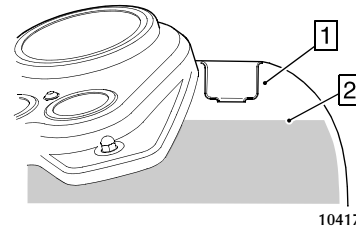
Perform the break-in maintenance after you've ridden your new Super X 500 miles. This maintenance is one of the most important services your motorcycle requires and should be performed by an authorized Excelsior-Henderson Dealer. Break-in maintenance includes servicing all adjustments, tightening all fasteners, and changing engine oil. Performing this maintenance at the required mileage point helps the engine maintain top performance for its entire service life.

Fueling and Fuel Fill Height

Fuel the Super X with the sidestand down and on level ground. Use only the recommended fuel (see “Fuel Specifications,” page 238). Fill the fuel tank to a level about 3/4” below the bottom of the fuel filler insert.

⚠ WARNING

- Do not allow gasoline to come into contact with a hot engine or exhaust system. This could cause a fire. Immediately wipe, or rinse with water, gasoline spilled on any part of the Super X or the surrounding area.
- Do not fill the fuel tank above the fuel filler insert. Overfilling the fuel tank may cause fuel to overflow when it expands.
- Fuel may leak from an improperly seated or tightened fuel cap. Tighten the fuel cap until you hear one or more distinct clicks. Be certain the fuel cap is properly seated and tightened before starting the engine.



1. Fuel filler insert
2. Fuel fill height

⚠ Caution

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

Starting the Engine

WARNING

Before you start the engine, shift the transmission to neutral (see “Shifting Gears,” page 84) to prevent a sudden, accidental movement that could injure you or others.

The Super X has a port sequential fuel injection system. There is no choke or fuel shutoff valve. The Engine Control Module (ECM) makes all adjustments necessary for starting and running the engine in all temperatures and other ambient conditions.

Notice

Start the motorcycle with the throttle closed (throttle control grip in the idle speed position), as the ECM adjusts the fuel flow needed to start the engine.

Follow these steps to start the Super X:

1. Perform the pre-operation check described in *Pre-Operation Check*, beginning on page 63. If you are carrying cargo, inspect cargo restraints for tightness.
2. Unlock the fork lock.

3. Unlock the main switch, remove the key, and set the indicator to the **On** position (see “Main Switch,” page 38).

The low oil pressure indicator illuminates. The neutral indicator illuminates if the transmission is in neutral.

4. Engage the front brake, mount the motorcycle, and place the sidestand in the stored (up) position. If the neutral indicator is not illuminated, shift the transmission to neutral (see “Shifting Gears,” page 84).

If the neutral indicator still does not illuminate, see “Neutral Indicator,” page 42.

5. Set the engine stop/run switch to the run position.

The check engine indicator illuminates. You should hear the fuel pump momentarily as it pressurizes the fuel system.

6. Leaving the throttle closed, press and hold the electric starter button for several seconds until the engine starts.

Caution

Allow the engine to idle for about 30 seconds after a cold or a warm start; do not rev the engine or put the transmission in gear during this idling period. This allows the oil to reach all areas requiring lubrication before the engine is put under load.

If the engine does not start within a few seconds after you press 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 do not push the starter button for more than 10 seconds at any one time.

If either the check engine indicator or the low oil pressure indicator does not go out after the engine starts, stop the engine. See either “Check Engine Indicator,” page 41 or “Low Oil Pressure Indicator,” page 42.

Jump-Starting

Although not recommended, we realize that in an emergency situation jump-starting the motorcycle may be necessary. Please use the following procedure when jump-starting the motorcycle.

⚠ WARNING

The battery may contain explosive gases.

- Keep sparks, cigarettes, or any flame away from the battery.
 - Avoid creating sparks by making sure the jumper cable clamps do not come into contact with anything other than the battery terminals or a safe ground.
-

1. Remove the battery box cover strap and the battery box cover. Slide the rubber boot off of the positive (+) terminal.
2. Connect the jumper cables in the following order:

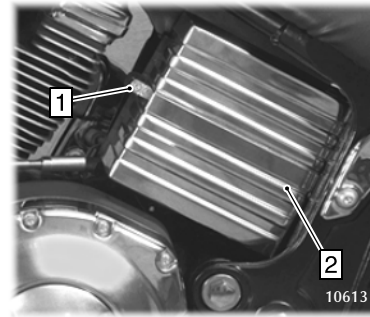
One end of a jumper cable to the positive (+) terminal of the discharged battery.

The other end of the same cable to the positive (+) terminal of the booster battery.

One end of a second jumper cable to the negative terminal of the booster battery.

The other end of the same cable to a safe ground on the motorcycle being jump-started. The best place to safely ground the Super X is to the front cylinder exhaust stud

3. Start the motorcycle.
4. Disconnect the jumper cables in reverse order
5. Slide the rubber boot over the positive terminal and reinstall the battery cover strap and cover.
6. Properly charge or replace the discharged battery as soon as possible (see "Battery," page 119).



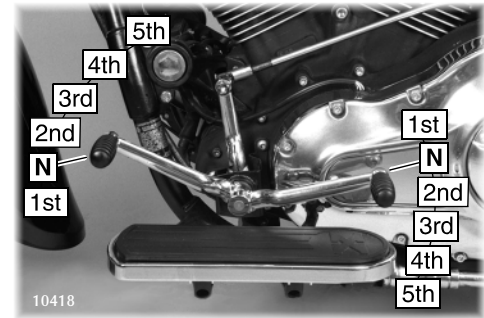
1. Battery cover strap
2. Battery cover

Shifting Gears

⚠ WARNING

The clutch must be fully disengaged (clutch lever pulled completely in toward the handlebars) 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.

The Super X is equipped with a five-speed transmission. The gear pattern is shown in the illustration to the right. The Super X has a heel-toe shift pedal which allows you to shift to a higher gear by depressing the rear of the pedal with your heel or by lifting the front of the pedal with your toe. To shift to a lower gear, depress the front of the pedal with your toe.



Neutral position is between first and second gear. The transmission is in neutral when the motorcycle moves forward or backward freely while the clutch is engaged. With the main switch set to either **On** or **Acc**, the neutral indicator illuminates when the transmission is in neutral.

To engage first gear, start the engine (see “Starting the Engine,” page 80). With the engine at idle speed, engage the front brake (squeeze the brake lever) and

disengage the clutch (squeeze the clutch lever). Push the shift pedal down until you feel it stop in first gear. Disengage the front brake (release the brake lever). Simultaneously moving both the clutch lever and the throttle control grip with a smooth, gentle motion, gradually engage the clutch (release the clutch lever) and open the throttle (roll the throttle control grip toward you). As the clutch begins to engage, the motorcycle begins to move forward.

To shift to the next higher gear, accelerate smoothly and easily to the recommended shift point (see “Recommended Shift Points,” page 87). With a quick motion, simultaneously close the throttle completely and disengage the clutch. Raise the shift pedal with your toe, or depress it with your heel, until you feel it stop at the next gear. Simultaneously moving both the clutch lever and the throttle with a smooth, gentle motion, gradually release the clutch lever and open the throttle.

Within the recommended speed ranges (see “Recommended Shift Points,” page 87), you can downshift (shift to a lower gear) to slow the motorcycle or to increase the available power. You may want to downshift when climbing a hill or passing. Downshifting also helps to decrease your speed when combined with closing the throttle.

To shift to a lower gear, simultaneously pull in the clutch lever and close the throttle. Shift into the next lower gear and simultaneously release the clutch lever and 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 at excessive rpm. Reduce speed before downshifting and do not downshift at a speed above that in the table of recommended shift points.

⚠ WARNING

Downshifting abruptly on wet, rough, loose, or slippery surfaces can cause the motorcycle to skid. This can cause you to lose control of the motorcycle. When downshifting while passing over such surfaces, release the clutch lever very gradually.

⚠ WARNING

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.

Recommended Shift Points

The following table shows the appropriate speed at which to shift up and shift down to each gear.

Recommended Shift Points (during break-in period)

Upshift (Acceleration) Gear Change	Upshift Speed	Downshift (Deceleration) Gear Change	Downshift Speed
1st to 2nd	20 mph	5th to 4th	45 mph
2nd to 3rd	30 mph	4th to 3rd	35 mph
3rd to 4th	40 mph	3rd to 2nd	25 mph
4th to 5th	55 mph	2nd to 1st	15 mph

Recommended Shift Points (after break-in period)

Upshift (Acceleration) Gear Change	Upshift Speed	Downshift (Deceleration) Gear Change	Downshift Speed
1st to 2nd	15 mph	5th to 4th	50 mph
2nd to 3rd	25 mph	4th to 3rd	40 mph
3rd to 4th	35 mph	3rd to 2nd	30 mph
4th to 5th	50 mph	2nd to 1st	20 mph

Accelerating

Caution

Do not accelerate beyond 2500 rpm while the engine is cold. To maximize engine life and performance, allow the engine to warm up fully before accelerating beyond 2500 rpm.

To accelerate, open the throttle (roll the throttle control grip toward you). For even acceleration, open the throttle with a smooth, continuous motion. When you reach the recommended speed for upshifting, shift up one gear according to the instructions in “Shifting Gears,” page 84. The more quickly you open the throttle, the more quickly the motorcycle accelerates.

WARNING

- Abrupt acceleration can cause your body to shift suddenly toward the rear of the motorcycle. This may cause you to lose control of the motorcycle.
 - Accelerating abruptly on wet, rough, loose, or slippery surfaces can cause you to lose control of the motorcycle. When accelerating on such surfaces, whether you are at a stop or already in motion, open the throttle gradually.
-

Braking

To slow the motorcycle with the brakes, close the throttle and apply the front and rear brakes evenly. As the motorcycle slows, either disengage the clutch or downshift each time your speed reaches a downshift point. Applying slightly more front brake than rear brake generally gives you the best braking performance. Do not apply the brakes so forcefully or quickly that either wheel stops rotating. Leave sufficient distance so you can apply the brakes gradually if you need to stop.

WARNING

- Do not apply either brake so strongly that the wheel stops rotating. This may cause you to lose control of the motorcycle.
 - Braking hard on wet, rough, loose, or slippery surfaces can cause the motorcycle to skid, 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.
-

Stopping the Engine

Before stopping the engine, bring the motorcycle to a complete stop either in neutral or with the clutch disengaged. Once the motorcycle is at a complete stop, if it is not already in neutral, shift into neutral. To stop the engine, set the engine stop/run switch to the stop position and turn the main switch indicator to the **Off** position.

WARNING

- Stopping the engine while the motorcycle is in motion and the transmission is engaged may damage the engine and the transmission or cause the rear wheel to lose traction. In either case, you may lose control of the motorcycle.
 - If the motorcycle is in motion and the engine stops on its own, guide the motorcycle to a safe location off the road and away from traffic.
-

Parking

When parking the motorcycle, choose a flat, firm surface. Bring the motorcycle to a complete stop and, with the transmission in neutral, stop the engine. Set the main switch indicator to **Off**. Fully extend the sidestand, turn the handlebars fully to the left, and lean the motorcycle to the left until the sidestand locks. Lock the main switch and the fork lock, and take the key with you.

WARNING

Moving or operating the motorcycle with the forks locked severely restricts steering and can cause you to drop or lose control of the motorcycle.

If you must park on a slope, point the motorcycle toward the top of the slope. Put the transmission in gear and park the motorcycle so that it is stable when it rests on the sidestand.

If you must park on a soft surface, use a sidestand footrest under the foot of the sidestand to provide a firm surface. The sidestand footrest must be strong enough and large enough to support the motorcycle's weight without sinking into the parking surface. Many motorcyclists carry a sidestand footrest.

⚠ Caution

Asphalt pavement can become soft in hot weather. The sidestand can sink into soft asphalt until the motorcycle falls over. When parking on asphalt in hot weather, use a sidestand footrest under the foot of the sidestand to prevent the sidestand from sinking into the asphalt.

⚠ WARNING

A hot engine or hot exhaust pipes can be hazardous. The engine and exhaust pipes are hot for some time after the engine is stopped. Touching the engine or exhaust pipes while hot can cause serious burns. Allowing flammable materials to contact a hot engine or exhaust pipes may cause a fire. Park the motorcycle where people will not touch the engine or exhaust pipes and where it is not near flammable materials.

Notes: