

FUEL FILTER UPGRADE KIT

General

This kit is designed to upgrade the fuel filter to a new model and is for use all 1999 Buell Lightning X1 and Thunderbolt S3 motorcycles with the exception of the S3 models built for the Japanese market.

Kit contents:

QTY	DESCRIPTION	PART NO.
1	Bracket, Fuel Filter Support	62343-99Y
4	Hose Clamp	62049-94YA
2	Wire Ties	69560-94Y
1	Fuel Filter	

Installation

A Service Manual for your motorcycle is available from your Buell dealer.

For 1999 Lightning X1 Models

⚠ WARNING

To prevent accidental startup of the motorcycle and possible personal injury, always disconnect the negative battery cable when working on a motorcycle. If the positive cable should contact ground with the negative cable installed, the resulting sparks may cause a battery explosion which could result in death or serious injury.

1. Disconnect negative battery cable.

⚠ WARNING

The gasoline in the fuel supply line downstream of the fuel pump is under high pressure (49 psi [338 kPa]). To avoid an uncontrolled discharge or spray of gasoline, always purge the system of high pressure gasoline before removing fuel tank. Gasoline is extremely flammable and highly explosive. Inadequate safety precautions could result in death or serious injury.

CAUTION

Use caution when removing the fuel tank. If the tank cover should contact other chassis parts, the finish may be damaged.

2. See the applicable Service Manual. Purge the fuel line and remove the fuel tank.

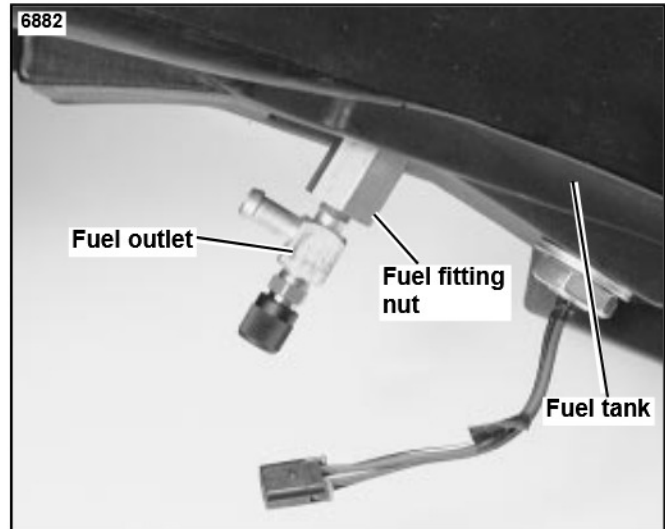


Figure 1. Fuel Outlet Fitting, Original Setup

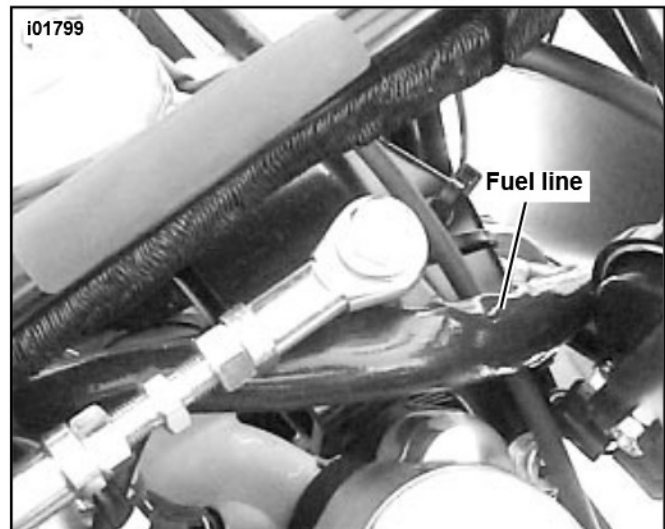


Figure 2. Fuel Line Routing

⚠ WARNING

A small amount of gasoline will drain from the fuel line when the filter is removed. Thoroughly wipe up any spilled fuel immediately. Dispose of rags in a suitable manner. Gasoline is extremely flammable and highly explosive. Inadequate safety precautions could result in death or serious injury.

3. See applicable Service Manual and remove the fuel filter and fuel lines. Discard filter and fuel lines but retain sheathing.

CAUTION

Do not rotate fuel fitting by rotating the fitting nut. Damage to the fuel pump connection may occur.

- See Figure 1. Rotate the fuel outlet approximately 180° by tightening the fuel outlet into the fuel fitting nut, while securely holding the nut. The fitting should point toward the rear of the motorcycle (opposite of the way shown).

CAUTION

Be sure to push the fuel line all the way onto the fuel rail connection. Position hose clamp on straight section of fitting, clear of barb, and properly tighten the clamp.

- See Figure 2. Cut a piece of bulk fuel line (Part No. 63521-95) to 10-1/2 in. Attach fuel line, with a hose clamp, to the fuel rail and tighten clamp. Slide the sheathing onto the hose and route hose as shown.

- See Figure 3. Using the wire ties, attach the fuel filter to the bracket with the filter's ridge on the middle slot of the bracket. Verify that the flow arrow on the filter is pointing towards front of vehicle.

CAUTION

- Ensure that the hose is not contacting any sharp engine, frame or harness component. If it does the hose could be damaged.

- Be sure to push the fuel line all the way onto the fuel fitting. Position hose clamp on straight section of fitting, clear of barb, and properly tighten the clamp.

- Slide a hose clamp on the 10-1/2 in. hose, attach the discharge fitting of the filter onto the hose and tighten the clamp. Ensure that it is not contacting any sharp engine, frame or harness components.

- See Figure 4. Remove the rear cylinder head bolt and washer. Discard washer.

- Install the fuel filter and bracket onto the bolt. Apply LOCTITE THREADLOCKER 262 (red) to the three bottom threads of the bolt.

- Reinstall the bolt into the cylinder head and torque to 30-33 ft-lbs (40.7-44.7 Nm).

CAUTION

Be sure to push the fuel line all the way onto the fuel fitting. Position hose clamp on straight section of fitting, clear of barb, and properly tighten the clamp.

- See Figure 5. Cut a piece of bulk fuel line (Part No. 63521-95) to 7 in. Attach the line to the fuel tank fuel outlet fitting with a hose clamp and tighten clamp.

- Slide a hose clamp onto the 7 in. hose, attach the hose to the filter's inlet fitting and tighten clamp. Route hose as shown in Figure 5.

- Refer to applicable Service Manual and install fuel tank onto vehicle.

- Refer to the applicable Service manual and reconnect the fuel pump.

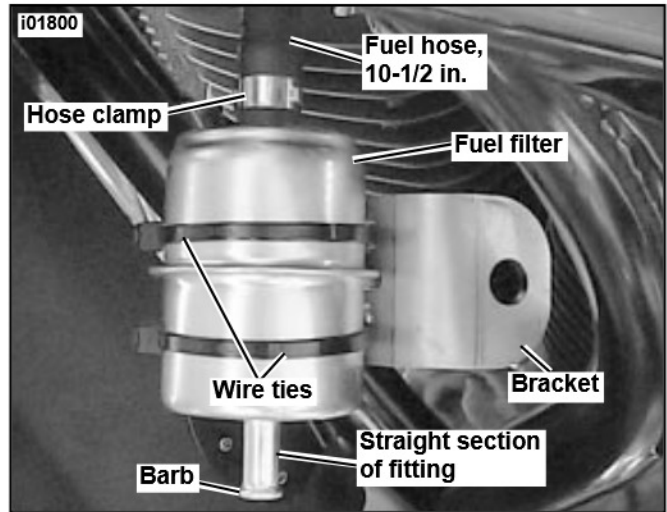


Figure 3. Filter Mounted to Bracket

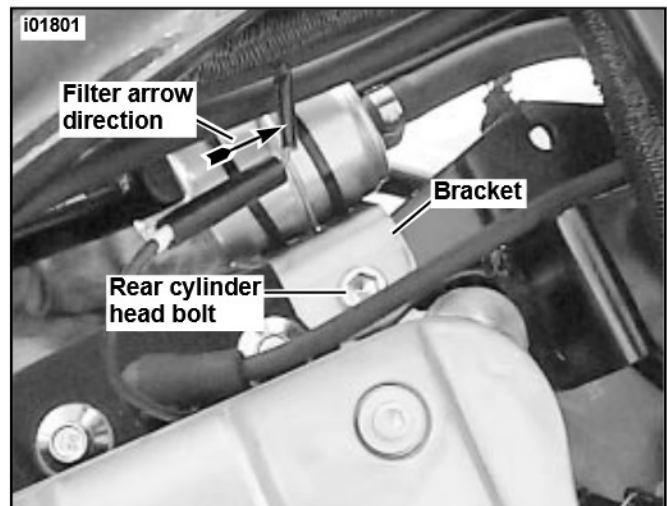


Figure 4. Clamp Mounting

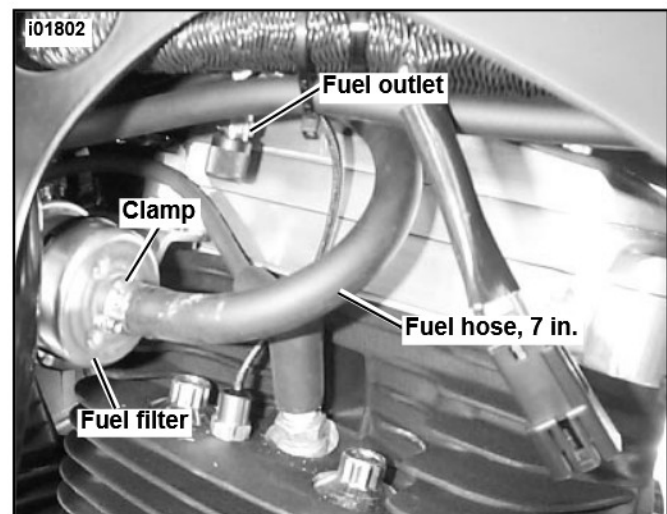


Figure 5. Fuel Tank to Filter

⚠ WARNING

After installing seat, pull upward on front of seat to be sure it is locked in position. If seat is loose, it could shift during vehicle operation resulting in loss of control of vehicle and death or serious injury.

15. Install seat and reconnect the negative battery cable.

CAUTION

Ensure that the hose is not contacting any sharp engine, frame or harness component. If it does, the hose could be damaged.

16. Check that the 7 in. hose is not contacting any sharp engine, frame or harness components.
17. Fill fuel tank. Turn ignition ON and listen for fuel pump activation.
18. Start vehicle and verify that it idles well and that there are no fuel leaks.

For 1999 Thunderbolt S3 Models.

⚠ WARNING

To prevent accidental startup of the motorcycle and possible personal injury, always disconnect the negative battery cable when working on a motorcycle. If the positive cable should contact ground with the negative cable installed, the resulting sparks may cause a battery explosion which could result in death or serious injury.

1. Disconnect negative battery cable.

⚠ WARNING

The gasoline in the fuel supply line downstream of the fuel pump is under high pressure (49 psi [338 kPa]). To avoid an uncontrolled discharge or spray of gasoline, always purge the system of high pressure gasoline before removing fuel tank. Gasoline is extremely flammable and highly explosive. Inadequate safety precautions could result in death or serious injury.

2. See the applicable Service Manual. Purge the fuel line.
3. Remove the seat.

NOTE

The original fuel tank mounting parts for the S3 models were recalled (campaign number 0814) and the new parts are shown on Figure 6. If the new parts are not on your vehicle, perform the recall together with this upgrade. Per the recall, the procedure for removing and installing the fuel tank has been modified. Refer to the procedures in this Instruction Sheet instead of those in the Service Manual.

4. See Figure 6. Remove bolt (1), top mounting plate (2) and top retention plate (3). Lift tank and remove lower retention plate (4) and lower mounting plate (5).
5. Disconnect hose from vapor vent valve.

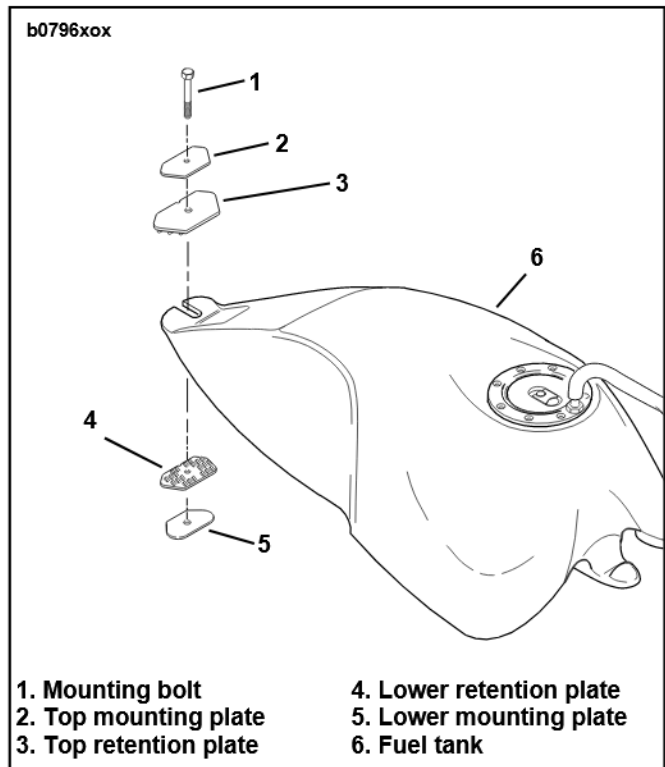


Figure 6. S3 Fuel Tank Mounting Arrangement

⚠ WARNING

A small amount of gasoline will drain from the fuel supply fitting and fuel line when removed. Thoroughly wipe up any spilled fuel immediately. Dispose of rags in a suitable manner. Gasoline is extremely flammable and highly explosive. Inadequate safety precautions could result in death or serious injury.

6. Prop fuel tank against frame to gain access to fuel supply fitting. Wrap shop towel around the fuel supply fitting and remove fuel line.

CAUTION

Use caution when removing fuel tank. If tank should contact other chassis parts, tank finish may be damaged.

7. Remove fuel tank from frame.

⚠ WARNING

A small amount of gasoline will drain from the fuel line when the filter is removed. Thoroughly wipe up any spilled fuel immediately. Dispose of rags in a suitable manner. Gasoline is extremely flammable and highly explosive. Inadequate safety precautions could result in death or serious injury.

8. See applicable Service Manual and remove the fuel filter and fuel lines. Discard filter and fuel lines but retain sheathing.

CAUTION

Do not rotate fuel fitting by rotating the fitting nut. Damage to the fuel pump connection may occur.

9. See Figure 1. Rotate the fuel outlet approximately 180° by tightening the fuel outlet into the fuel fitting nut, while securely holding the nut. The fitting should point toward the rear of the motorcycle (opposite of the way shown).

CAUTION

Be sure to push the fuel line all the way onto the fuel rail connection. Position hose clamp on straight section of fitting, clear of barb, and properly tighten the clamp.

10. See Figure 2. Cut a piece of bulk fuel line (Part No. 63521-95) to 10-1/2 in. Attach fuel line, with a hose clamp, to the fuel rail and tighten clamp. Slide the sheathing onto the hose and route hose as shown.

11. See Figure 3. Using the wire ties, attach the fuel filter to the bracket with the filter's ridge on the middle slot of the bracket. Verify that the flow arrow on the filter is pointing towards front of vehicle.

- Ensure that the hose is not contacting any sharp engine, frame or harness component. If it does the hose could be damaged.
- Be sure to push the fuel line all the way onto the fuel fitting. Position hose clamp on straight section of fitting, clear of barb, and properly tighten the clamp.

12. Slide a hose clamp on the 10-1/2 in. hose, attach the discharge fitting of the filter onto the hose and tighten the clamp. Ensure that it is not contacting any sharp engine, frame or harness components.

13. See Figure 4. Remove the rear cylinder head bolt and washer. Discard washer.

14. Install the fuel filter bracket onto the bolt. Apply LOC-TITE THREADLOCKER 262 (red) to the three bottom threads of the bolt.

15. Reinstall the bolt into the cylinder head and torque to 30-33 ft-lbs (40.7-44.7 Nm).

CAUTION

Be sure to push the fuel line all the way onto the fuel fitting. Position hose clamp on straight section of fitting, clear of barb, and properly tighten the clamp.

16. See Figure 5. Cut a piece of bulk fuel line (Part No. 63521-95) to 7 in. Attach the line to the fuel tank fuel outlet fitting with a hose clamp and tighten clamp.

17. Prop fuel tank against frame. Slide a hose clamp onto the 7 in. hose, attach the hose to the filter's inlet fitting and tighten clamp. Route hose as shown in Figure 5.

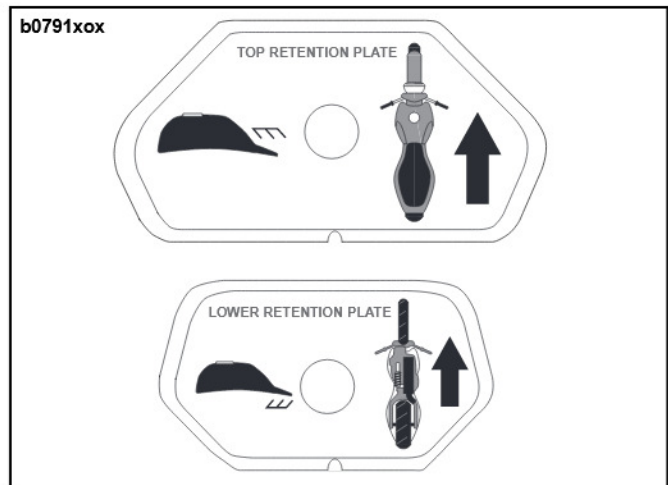


Figure 7. Retention Plate Decals

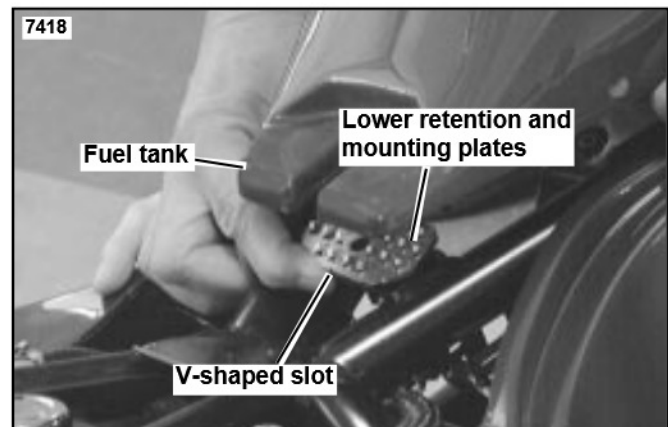


Figure 8. Bottom Plate

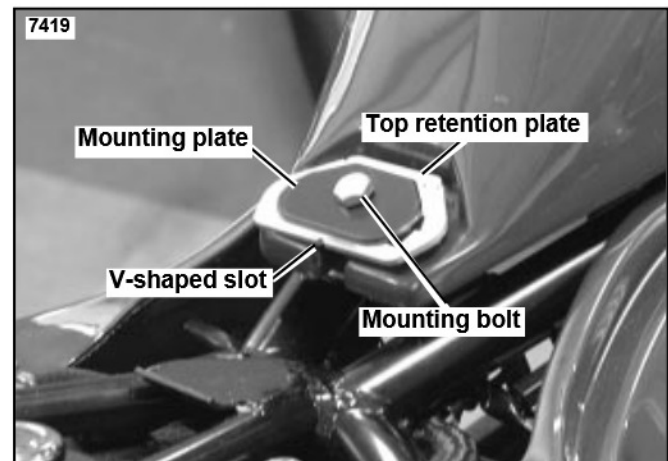


Figure 9. Final Assembly

NOTE

- The top retention plate is larger than the lower one.
- See Figure 7. The retention plates have decals on them showing the position and direction that they are to be mounted. Also, they have a V-shaped notch which is to face the rear of the vehicle.

18. See Figure 8. Carefully raise the back of the fuel tank and place mounting plate and the lower retention plate in position on the frame. It is important that the prongs on the retention plate face toward the rear of the vehicle and be in contact with the fuel tank. Also, the shorter straight side of the mounting plate must face the rear of the vehicle.

19. Carefully place the fuel tank onto the lower retention plate and mounting plate.

NOTE

For motorcycles having tank mask as an accessory, be sure to secure mask so that it is between the top retention plate and the mounting plate and not below the retention plate.

20. See Figures 6 and 9. Place the top retention plate and a mounting plate in position on top of the fuel tank rear mounting projections. **It is important that the prongs on the retention plate face toward the rear of the vehicle and be in contact with the fuel tank. Also, the shorter straight side of the mounting plate must face the front of the vehicle.**
21. See Figure 6. Install mounting bolt (1) and tighten to a torque of 18-23 ft-lbs. (24.4-31.2 Nm). Wait five minutes and retighten to a torque of 18-23 ft-lbs. (24.4-31.2 Nm).
22. Refer to the applicable Service Manual and reconnect the fuel pump.

⚠ WARNING

After installing seat, pull upward on front of seat to be sure it is locked in position. If seat is loose, it could shift during vehicle operation resulting in loss of control of vehicle and death or serious injury

22. Install seat and reconnect the negative battery cable.

CAUTION

Ensure that the hose is not contacting any sharp engine, frame or harness component. If it does the hose could be damaged.

24. Check that the 7 in. hose is not contacting any sharp engine, frame or harness components.
25. Fill fuel tank. Turn ignition ON and listen for fuel pump activation.
26. Start the vehicle and verify that it idles well and that there are no fuel leaks.