Service Tool Instructions

BOSCH

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HD-48030 FUEL INJECTOR FITTING AND CANISTER CLEANER KIT

General

See Service Tool Parts at the end of this document. The Fuel Injector Fitting and Canister Cleaner Kit (HD-48030) is used for cleaning the fuel injector system.

Procedure

WARNING!

The rider's safety depends upon the correct installation of this kit. Use the appropriate service manual procedures. If the procedure is not within your capabilities or you do not have the correct tools, have a Harley-Davidson dealer perform the installation. Improper installation of this kit could result in death or serious injury. (00333a)

WARNING!

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

WARNING!

When servicing the fuel system, do not smoke or allow open flame or sparks in the vicinity. Gasoline is extremely flammable and highly explosive, which could result in death or serious injury. (00330a)

Additional Items Required

The following items are required to perform this procedure:

- B-45522 Fuel Pressure Gauge Adapter for XB Models.
- HD-44061 Fuel Pressure Gauge Adapter for 2000 and Later Models.

This kit DOES NOT include OTC 7000A Pro Inject-R Kleen cleaner (HD-48030-10) (Cleaner kit includes 12, 16 oz. cans). Cleaner must be purchased separately.

Engine Warm-up

NOTE

- *The engine must be operated until normal operating temperature is reached. The cleaner fluid has a higher temperature flash point than gasoline and cold engine starts would be difficult.*
- *For air cooled engines, it is recommended that a fan be placed facing the engine to help cool engine during the cleaning procedure.*

Table 1. Canister Pressure Setting

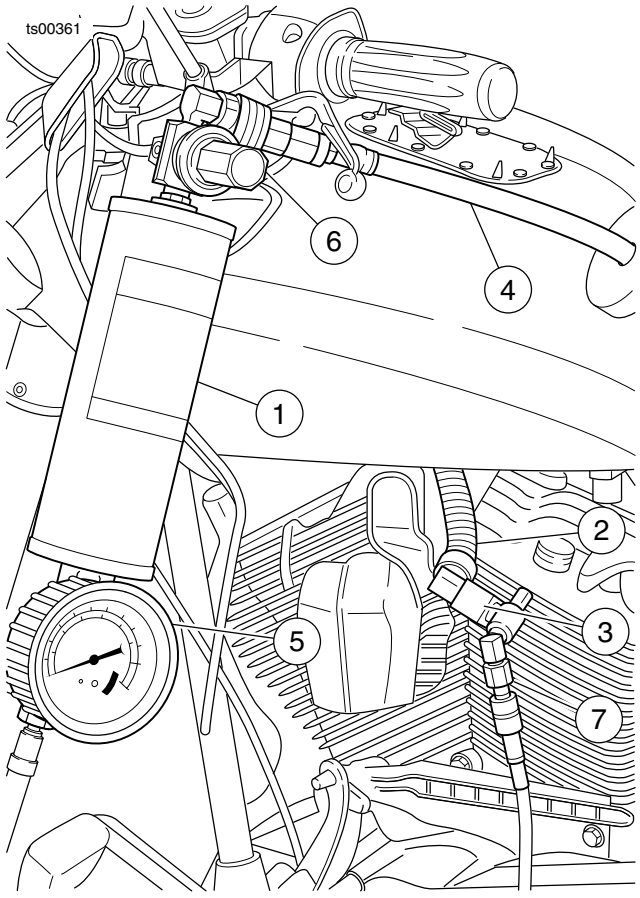
MODEL	PRESSURE SETTING
Delphi (2001-present)	55 psi (3.8 bar)
Buell (1999-2010)	46 psi (3.2 bar)
Magneti Marelli (1995-2001)	40 psi (2.8 bar)

Preparing For Connecting Injector Cleaner On All Models

NOTE

Fuel pump operation must be disabled by appropriate method during cleaning procedure. Engine will run using pressure from canister.

1. Refer to the Service Manual that covers model on which injectors are to be cleaned.



1. **Fuel injector cleaner canister**
2. **Fuel tank hose**
3. **Quick connect fitting to fuel line**
4. **Air hose**
5. **Pressure gauge**
6. **Air regulator**
7. **Quick connect to cleaner canister**

Figure 1. Fuel injector cleaner installed (typical).

2. Perform the procedure for a fuel pressure test, but stop at the point where the fuel pressure gauge would be connected.

NOTE

- *This cleaner kit is designed to be used to clean all fuel injected engines made by Harley-Davidson and Buell.*
- *The fuel pressure setting MUST be set at or below the motorcycle fuel regulator setting in order to prevent cleaning solution from entering the fuel tank on motorcycles equipped with fuel return lines. The proper setting for the regulator is specific for each motorcycle. See "Table 1. Canister Pressure Setting" on page 1 for the correct fuel pressure setting.*

Fitting Installation

Quick Disconnect Models, 2000 and Later

WARNING!

Gasoline can drain from the fuel line when disconnected from fuel tank. Gasoline is extremely flammable and highly explosive, which could result in death or serious injury. Wipe up spilled fuel immediately and dispose of rags in a suitable manner. (00260a)

WARNING!

Gasoline can drain from the fuel line and adapter when removed. Gasoline is extremely flammable and highly explosive, which could result in death or serious injury. Wipe up spilled fuel immediately and dispose of rags in a suitable manner. (00255a)

1. See Figure 1. Install Quick-Connect (HD-48030-30) to Fuel Pressure Gauge Adapter (HD-44061).
2. Install gauge adapter onto the fuel line.
3. Turn off canister valve (fully clockwise).
4. Connect Hose (567709) to cleaning canister.

NOTE

The OTC 7000A Pro Inject-R Kleen cleaner comes in a 16 ounce container. The proper operation of the injector cleaning process requires the use of 8 ounces of cleaner fluid per operation. If opening a new container of cleaning solution, pour one half (8 oz) of the cleaner solution into canister and reseal container cap tightly.

5. Remove canister top and fill fuel injector cleaner canister with 8 ounces of OTC 7000A Pro Inject-R Kleen cleaner (HD-48030-10). Install canister cover.
6. Hang fuel injector cleaner canister from handlebar (protect paint and chrome surfaces from canister).
7. Connect canister hose to quick connect fitting.
8. Turn canister pressure regulator to full closed position (counterclockwise).
9. Attach shop air hose to fitting on top of canister.
10. Open supply valve on canister.
11. Turn canister pressure regulator clockwise until pressure gauge reads 55 psi (3.8 bar).
12. Start engine and run at 1800 RPM until canister is empty and engine stalls.

13. Turn OFF ignition.
14. Turn the canister fuel valve to the closed (clockwise) position.
15. Turn canister regulator to full closed position (counterclockwise) to release pressure in container. Disconnect air supply.
16. Remove fuel pressure gauge adapter from fuel line. Close supply valve on canister. Connect motorcycle fuel line. Remove canister from handlebar.
17. Connect fuel pump fuse or fuel pump electrical connector.
18. Start engine and check for fuel leaks.
19. Remove the quick connect from fuel pressure gauge adapter.
20. Remove the fuel pressure gauge adapter from hose.
21. Remove hose from canister and clean all parts for storage.

V-Rod Models

WARNING!

Gasoline can drain from the fuel line when disconnected from fuel tank. Gasoline is extremely flammable and highly explosive, which could result in death or serious injury. Wipe up spilled fuel immediately and dispose of rags in a suitable manner. (00260a)

WARNING!

Gasoline can drain from the fuel line and adapter when removed. Gasoline is extremely flammable and highly explosive, which could result in death or serious injury. Wipe up spilled fuel immediately and dispose of rags in a suitable manner. (00255a)

1. See Figure 2. Install Quick-Connect (HD-48030-30) to attachment point on fuel rail.

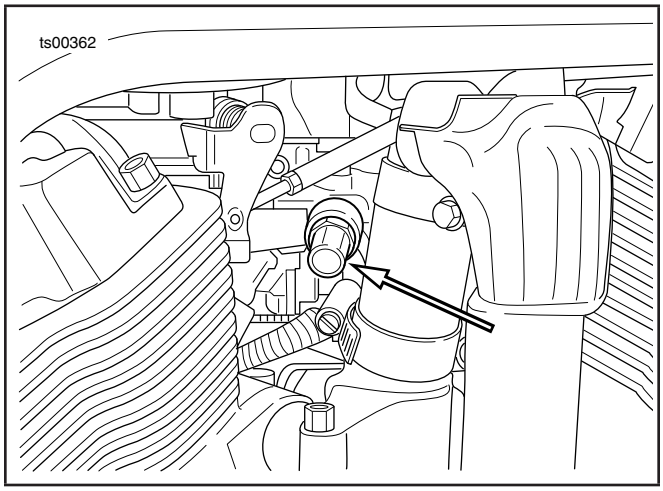


Figure 2. V-Rod attachment point.

2. Connect Hose (567709) to Fuel Injector Cleaner Canister (HD-48030-20).
3. Turn off canister fuel valve (fully clockwise).

NOTE

The OTC 7000A Pro Inject-R Kleen cleaner (HD-48030-10) comes in a 16 ounce container. The proper operation of the injector cleaning process requires the use of 8 ounces of cleaner fluid per operation. If opening a new container of cleaning solution, pour one half (8 oz) of the cleaner solution into canister and reseal container cap tightly.

4. Remove canister top and fill fuel injector cleaner canister with 8 ounces of OTC 7000A Pro Inject-R Kleen cleaner (HD-48030-10). Install canister cover.
5. Hang fuel injector cleaner canister from handlebar (protect paint and chrome surfaces from canister).
6. Connect hose to quick connect on fuel rail.
7. Turn canister pressure regulator to full closed position (counterclockwise).
8. Attach shop air hose to fitting on top of canister.
9. Turn canister pressure regulator clockwise until pressure gauge reads 55 psi (3.8 bar).
10. Turn on canister fuel valve (fully counterclockwise).
11. Start engine and run at 1800 RPM until canister is empty and engine stalls.
12. Turn OFF ignition.
13. Turn the canister fuel valve to the closed (clockwise) position.
14. Turn canister regulator to full closed position (counterclockwise) to release pressure in container. Disconnect air supply.
15. Remove any residual cleaner. Remove quick connect from fuel line.
16. Connect fuel pump fuse or fuel pump electrical connector.
17. Start engine and check for fuel leaks.
18. Remove the quick connect from hose.
19. Remove hose from canister and clean all parts for storage.

Older Buell Models

WARNING!

Gasoline can drain from the fuel line when disconnected from fuel tank. Gasoline is extremely flammable and highly explosive, which could result in death or serious injury. Wipe up spilled fuel immediately and dispose of rags in a suitable manner. (00260a).

WARNING!

Gasoline can drain from the fuel line and adapter when removed. Gasoline is extremely flammable

and highly explosive, which could result in death or serious injury. Wipe up spilled fuel immediately and dispose of rags in a suitable manner. (00255a)

1. Disconnect fuel line from gas tank and install Fuel Fitting (HD-48030-40) to fuel line. Plug line from fuel tank with suitable plugs to prevent gas spilling.
2. Connect Hose (567709) to Fuel Injector Cleaner Canister (HD-48030-20).
3. Close canister fuel valve (clockwise).

NOTE

The OTC 7000A Pro Inject-R Kleen cleaner (HD-48030-10) comes in a 16 ounce container. The proper operation of the injector cleaning process requires the use of 8 ounces of cleaner fluid per operation. If opening a new container of cleaning solution, pour one half (8 oz) of the cleaner solution into canister and reseal container cap tightly.

4. Remove canister top and fill fuel injector cleaner canister with 8 ounces of OTC 7000A Pro Inject-R Kleen cleaner (HD-48030-10). Install canister cover.
5. Hang fuel injector cleaner canister from handlebar (protect paint and chrome surfaces from canister).
6. Connect canister hose to fuel fitting.
7. Turn canister pressure regulator to full CLOSED position (counterclockwise).
8. Attach shop air hose to fitting on top of canister.
9. Turn canister pressure regulator clockwise until pressure gauge reads 46 psi (3.2 bar).

NOTE

For air cooled engines, it is recommended that a fan be placed facing the engine to help cool engine during the cleaning procedure.

10. Start engine and run at 1800 RPM until canister is empty and engine stalls.
11. Turn OFF ignition.
12. Turn the canister fuel valve to the closed (clockwise) position.
13. Turn canister regulator to full closed position (counterclockwise) to release pressure in container. Disconnect air supply.
14. Remove fuel fitting from fuel line. Connect motorcycle fuel line. Remove block on fuel tank line and connect fuel line.
15. Connect fuel pump fuse or fuel pump electrical connector.
16. Start engine and check for fuel leaks.
17. Remove the fuel fitting from hose.
18. Remove hose from canister and clean all parts for storage.

Current Buell Models

NOTE

Follow the procedure in your Service Manual for removing the air box.

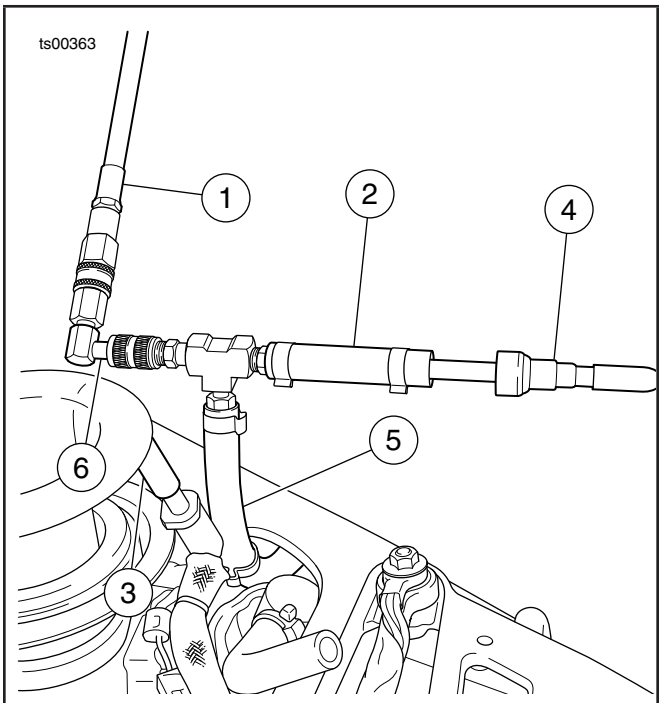
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Gasoline can drain from the fuel line when disconnected from fuel tank. Gasoline is extremely flammable and highly explosive, which could result in death or serious injury. Wipe up spilled fuel immediately and dispose of rags in a suitable manner. (00260a)

WARNING!

Gasoline can drain from the fuel line and adapter when removed. Gasoline is extremely flammable and highly explosive, which could result in death or serious injury. Wipe up spilled fuel immediately and dispose of rags in a suitable manner. (00255a)

1. Disconnect fuel line at injector inlet.



1. **Canister hose**
2. **Fuel pressure gauge adapter**
3. **Fuel return line plug**
4. **Fuel return line plug**
5. **Fuel injector inlet**
6. **Quick connect**

Figure 3. Buell fuel injection hookup.

2. See Figure 3. Plug fuel line with Fuel Return Line Plug (HD-48030-60).
3. Connect Hose (567709) to Fuel Injector Cleaner Canister (HD-48030-20).
4. Insert Fuel Pressure Gauge Adapter (B-45522) into fuel injector inlet.
5. Install Quick Connect (HD-48030-30) on threaded

fitting on fuel pressure gauge adapter.

6. Install Fuel Return Line Plug (HD-48030-50) on metal hose barb of fuel pressure gauge adapter.

NOTE

The Removal Tool (HD-48030-70) is used to remove the Fuel Return Line Plug (HD-48030-50).

7. Close the canister fuel valve.

NOTE

The OTC 7000A Pro Inject-R Kleen cleaner (HD-48030-10) comes in a 16 ounce container. The proper operation of the injector cleaning process requires the use of 8 ounces of cleaner fluid per operation. If opening a new container of cleaning solution, pour one half (8 oz) of the cleaner solution into canister and reseal container cap tightly.

8. Remove canister top and fill fuel injector cleaner canister with 8 ounces of OTC 7000A Pro Inject-R Kleen cleaner (HD-48030-10). Install canister cover.
9. Hang fuel injector cleaner canister from handlebar (protect paint and chrome surfaces from canister).
10. Connect canister hose to fuel line connector.
11. Turn canister pressure regulator to full CLOSED position (counterclockwise).
12. Attach shop air hose to fitting on top of canister.
13. Turn canister pressure regulator clockwise until pressure gauge reads 46 psi (3.2 bar).

NOTE

For air cooled engines, it is recommended that a fan be placed facing the engine to help cool engine during the cleaning procedure.

14. Start engine and run at 1800 RPM until canister is empty and engine stalls.
15. Turn OFF ignition.
16. Turn the canister fuel valve to the closed (clockwise) position.
17. Turn canister regulator to full closed position (counterclockwise) to release pressure in container. Disconnect air supply.
18. Remove the fuel return line plug from the fuel line. Remove fuel pressure gauge adapter from the fuel injector inlet. Connect motorcycle fuel line to fuel inlet.
19. Connect fuel pump fuse or fuel pump electrical connector.
20. Start engine and check for fuel leaks.
21. Remove the fuel return line plug from fuel pressure gauge adapter.
22. Remove the fuel pressure gauge adapter from the quick connect.
23. Remove the quick connect from the hose.
24. Remove hose from canister and clean all parts for storage.

1995-1999 Magnetti-Marelli Harley-Davidson EFI Models

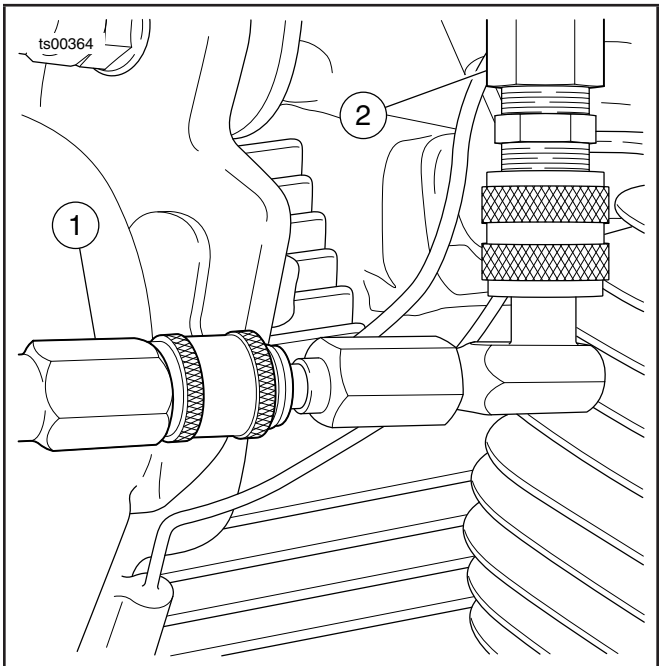
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WARNING!

Gasoline can drain from the fuel line and adapter when removed. Gasoline is extremely flammable and highly explosive, which could result in death or serious injury. Wipe up spilled fuel immediately and dispose of rags in a suitable manner. (00255a)

1. See Figure 4. Remove pipe plug from bottom of tank fitting and install the Fuel Pressure Gauge Adapter (HD-41182-1).



1. Canister hose
2. Fuel pressure gauge adapter

Figure 4. Magnetti-Marelli installation.

NOTE

Fuel return line to gas tank should be clamped off with suitable hose clamp to prevent cleaning fluid from entering fuel tank.

2. Connect Hose (567709) to Fuel Injector Cleaner Canister (HD-48030-20).
3. Close canister fuel valve (clockwise).

NOTE

The OTC 7000A Pro Inject-R Kleen cleaner (HD-48030-10) comes in a 16 ounce container. The proper operation of the injector cleaning process requires the use of 8 ounces of cleaner fluid per operation. If opening a new container of cleaning solution, pour one half (8 oz) of the cleaner solution into canister and reseal container cap tightly.

4. Remove canister top and fill fuel injector cleaner canister with 8 ounces of OTC 7000A Pro Inject-R Kleen cleaner (HD-48030-10). Install canister cover.
5. Hang fuel injector cleaner canister from handlebar (protect paint and chrome surfaces from canister).
6. Connect canister hose to fuel pressure gauge adapter.
7. Turn canister pressure regulator to full CLOSED position (counterclockwise).
8. Attach shop air hose to fitting on top of canister.
9. Turn canister pressure regulator clockwise until pressure gauge reads 40 psi (2.8 bar).

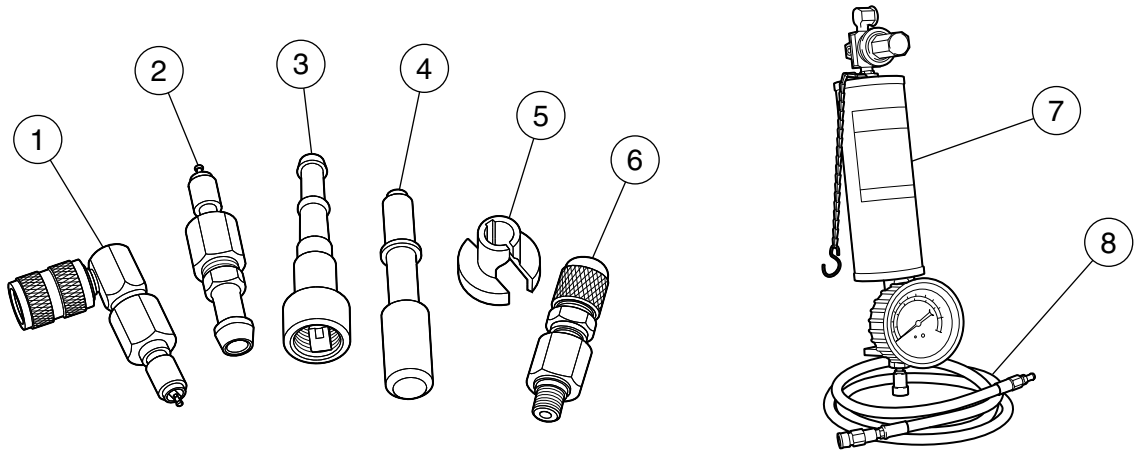
NOTE

For air cooled engines, it is recommended that a fan be placed facing the engine to help cool engine during the cleaning procedure.

10. Start engine and run at 1800 RPM until canister is empty and engine stalls.
11. Turn OFF ignition.
12. Turn the canister fuel valve to the closed (clockwise) position.
13. Turn canister regulator to full closed position (counterclockwise) to release pressure in container. Disconnect air supply.
14. Remove fuel pressure gauge adapter from fuel line. Connect motorcycle fuel line. Remove clamp on fuel return line.
15. Connect fuel pump fuse or fuel pump electrical connector.
16. Start engine and check for fuel leaks.
17. Remove the fuel pressure gauge adapter from hose.
18. Remove hose from canister and clean all parts for storage.

	Service Tool Parts	Part No. HD-48030
	Fuel Injector Fitting and Canister Cleaner Kit	Date 12/2014

ts00365



Item	Description	Qty.	Part No.
1.	Quick connect	1	HD-48030-30
2.	Fuel fitting	1	HD-48030-40
3.	Fuel return line plug (female)	1	HD-48030-50
4.	Fuel return line plug (male)	1	HD-48030-60
5.	Removal tool	1	HD-48030-70
6.	Fuel pressure gauge adapter	1	HD-41182-1
7.	Fuel injector cleaner canister	1	HD-48030-20
8.	Hose	1	567709

NOTE

This kit DOES NOT include OTC #7000 - Pro Inject-R-Kleen cleaner (HD-48030-10) (Cleaner kit includes 12, 16 oz. cans). Cleaner must be purchased separately.