

FUEL TANK SERVICE KIT

P/N 2204145 (Application: 2004-2005 Kingpin®, 2005 Hammer® Models)

P/N 2204146 (Application: 2003-2005 Vegas® Models)



This kit contains a 2009-current style fuel tank / fuel pump assembly that offers improved performance over the original tank / pump assembly.

- The fuel pump has been pre-installed in the fuel tank, so the tank is ready for installation on the motorcycle.
- Fuel pump operating pressure is similar to the original pump, so re-calibration is *not* required.
- Tank badges must be ordered separately and replaced, or old badges removed from existing tank and installed with new adhesive PN 8560068 (ordered separately). Refer to appropriate **Service Manual** for badge removal procedure.
- A new (Silver) fuel cap is required for this fuel tank, so a new ignition switch has also been included to retain a single key for all vehicle operations. Black (PN 4012376-266) or Chrome (4012376-156) caps must be ordered separately.
- **Please note that all parts from this kit must be installed with the fuel tank as directed in the instructions.**
- Some original parts will be re-used, including the vent line (California tanks) and water drain lines, and the fuel line hose clamp at the fuel rail (use the new fuel line provided in the kit with your existing clamp). Closely inspect these parts prior to installation of this kit and replace any that fail inspection.
- **IMPORTANT: 49 State models (which have a water drain line only) require installation of hose and plug (PN 5413885) on the tank vent fitting, and removal of the vent seal in the fuel cap area. See instructions for details.**

Before you begin, read the instructions and make sure all parts and tools are accounted for. Please retain these installation instructions for future reference and parts ordering information.

Approximate Installation Time: 45 Minutes

This kit includes:

Qty.	Part Description	Part Number
1	Fuel Tank & Pump Assembly, Vegas (Spine)	2521063-xxx (color)
OR		
1	Fuel Tank & Pump Assembly, Kingpin / Hammer (No Spine)	2521064-xxx (color)
1	Fuel Line, Tank to Rail, 2003-2007	5413838
1	Plug / Hose, 2003-2005 49 State	5413885
1	Ignition Switch / Fuel Cap, (Silver)	4012376-385
1	Clamp (to secure Plug / Hose to tank vent fitting on 49 state)	7081151
6	Isolator	5414144
3	Bushing	5136665
1	Instructions	9922608

You will need to supply:

8 mm Internal Hex Socket

Torque Wrench

Hand Tools

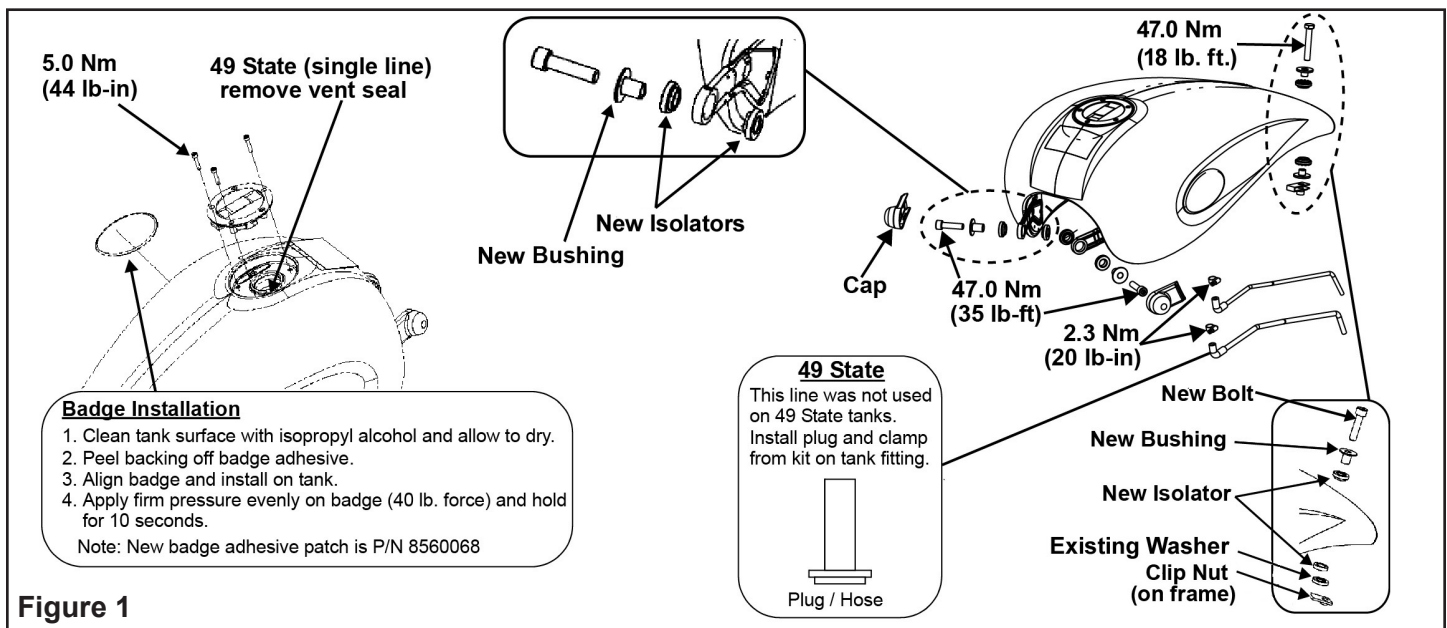


Figure 1

INSTALLATION INSTRUCTIONS

1. Refer to the appropriate *Service Manual or Owner's Manual* to de-pressurize the fuel system and remove the side covers, seat, and fuel tank.

Kit Fuel Tank Preparation / Installation

2. Open fuel cap. Remove M5x12 screw (A) and discard. Figure 2.
3. Remove three fuel cap retaining screws (B) and cap. Figure 3.
4. Install new fuel cap from kit on new tank. Install screws (removed from old fuel cap) and tighten evenly to 5.0 Nm (44 lb-in).
5. If the **tank** you are replacing is a 2003-2005 49 State tank (identified by a **single** drain line attached to a single fitting underneath the old tank), remove and discard the small vent passage seal (C). The seal is located in the right rear corner of the fuel cap area on the new tank.
Failure to remove this seal will prevent proper tank venting because you will be plugging the fitting on the bottom of the tank in a later step on 49 state models. Figure 4.
DO NOT remove the seal on California model tanks that were originally equipped with two lines.
6. Loosen clamp(s) (D) (if equipped) and remove water drain and vent line from old tank. Set line (s) aside for installation on kit tank. Inspect rubber elbow fittings on line(s) (E) and replace if cracked or damaged. Figure 5.

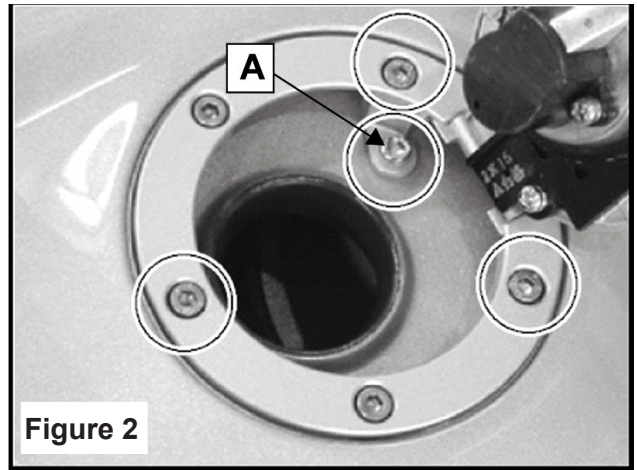


Figure 2

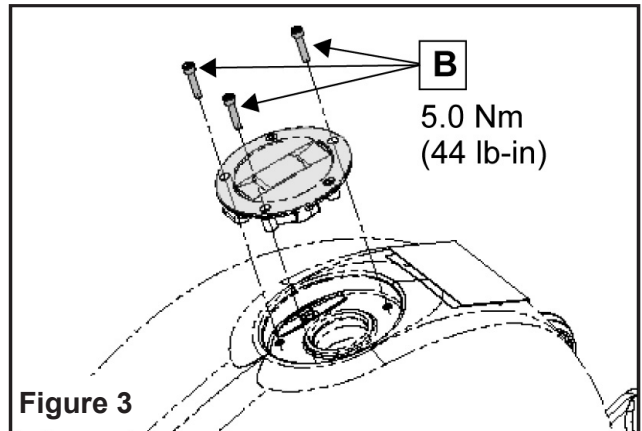


Figure 3

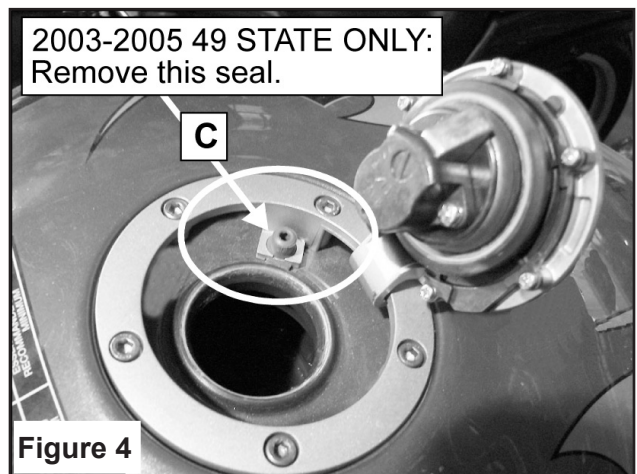


Figure 4

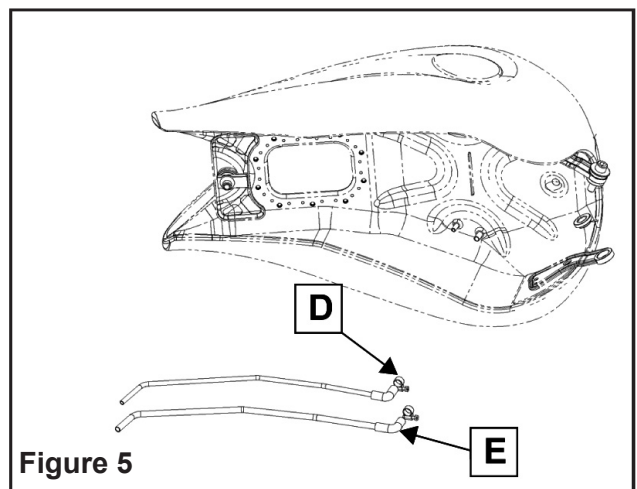


Figure 5

Line Installation On New Fuel Tank

Tanks that had two lines attached (Figure 6):

(2003-2005 California models).

- Install large diameter hose (water drain) on FRONT MOST fitting.
- Install smaller diameter hose (vent) to rear most fitting on tank.
- Orient lines and clamps to the proper angle on tank fittings, and tighten clamps to 2.3 Nm (20 lb-in).
- Use care when connecting these lines to the vehicle to ensure the vent line (from rear fitting) is connected to line that leads to the Evaporative Emissions Canister.

Tanks that had a single line attached (Figure 7):

(2003-2005 49 State models).

- Install previously removed hose on FRONT MOST fitting.
 - Slide clamp from kit over the hose end of end of Plug / Hose from kit (PN 7081151) and install onto rear fitting until bottomed against tank.
 - Torque both clamps to 2.3 Nm (20 lb-in).
7. Install new front tank mount bushings and new isolators supplied with kit to new tank. Figure 1.
 8. Install the new rear tank mount bushing and isolators supplied with kit.
 8. Route new fuel line (PN 5413838) from kit between frame rails and inside of main wire harness to fuel rail but do not connect it to the rail.
 9. Route pump wire harness connector to rear of fuel line.
 10. With front wheel pointed straight ahead, place tank on frame, carefully guiding front of tank to front frame mounts. Loosely install front tank mount bolts.
 11. Place a protective cover over the fuel tank and lift rear of tank enough to connect the fuel pump wire harness.
 12. Connect the fuel line to the fitting on the fuel pump, pressing it straight upward until you hear it click securely in place.
 13. Lower the tank, making sure the fuel line and pump connection have clearance to any obstructions that could stress the fitting.
 14. Torque all mounting bolts to 47 Nm (35 lb-ft).
 15. Place hose clamp (removed from old fuel line) onto new fuel line and push fuel line fully onto rail fitting. Position hose clamp 3-4 mm (1/8 - 5/32") from end of fuel line and tighten to 2.5 Nm (25 lb-in).
 16. **49 State:** Connect water drain line at left rear side of tank to the hose that leads to bottom of frame (atmosphere).

California: Connect vent line to the hose that leads to the Evaporative Emissions Canister, and water drain to the hose that leads to bottom of frame (atmosphere). DO NOT reverse these line connections. Figure 8.

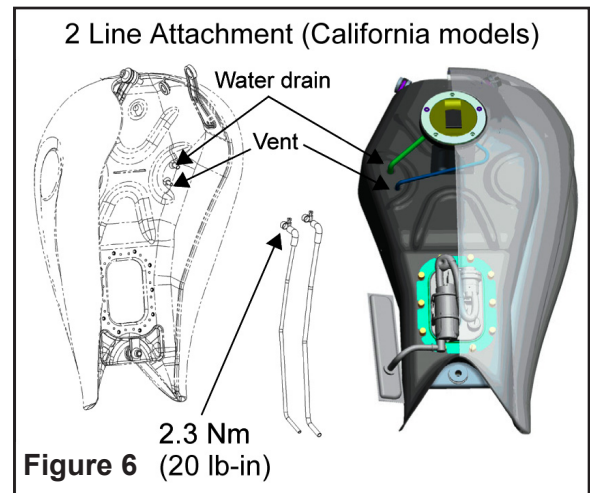


Figure 6 (20 lb-in)

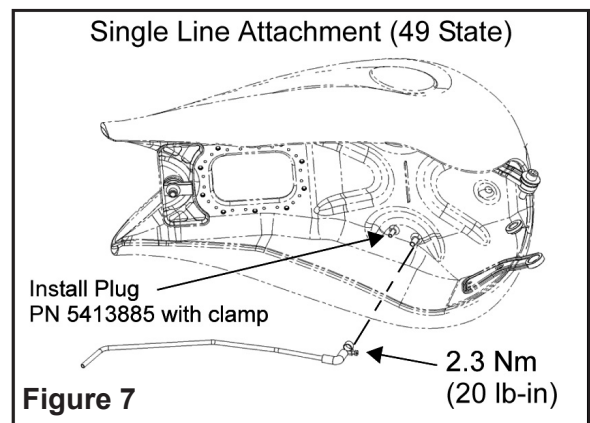


Figure 7



Fig 8 California Models: Be sure vent line is connected to canister hose.

17. Open throttle and release it to be sure it returns freely and completely to the idle position. If any interference is noted re-check routing of fuel line and fuel pump wiring harness.
18. Add at least two gallons of fuel to tank. Prime the fuel system (Refer to **Service Manual**).
19. Start the motorcycle and let it idle. Turn handlebars from full right to full left (be sure fast idle lever is in the OFF position). The idle speed should not change in any steering position. If idle speed increases when handlebars are turned refer to the appropriate **Service Manual** to inspect throttle cable free play and hose / cable routing.
20. Carefully inspect fuel line connections for any sign of fuel leakage and repair if necessary.