



Supplement Sheet

Date: March 29, 2011 (Rev. 02/03/2012)

Subject: Service Replacement for the 751-12306 (951-12306) Fuel Shut-Off Solenoid

Models Engine Model:
Affected: 4P90M0 (952Z4P90M0)

Read and understand these instructions thoroughly before proceeding.

PURPOSE: The connector of the supplied replacement fuel shut-off solenoid has been updated from the early production (old) solenoids, see Figure 1. Therefore, the stator existing on the engine (early or late production version) will dictate when to use the supplied adapter. This supplement sheet defines the two fuel shut-off solenoid replacement and existing stator scenarios with instructions for the adapter supplied with the new fuel shut-off solenoid.

NOTE: These materials are prepared for use by trained technicians who are experienced in the service and repair of equipment of the kind described in this publication, and are not intended for use by untrained or inexperienced individuals. Such individuals should seek the assistance of an authorized service technician or dealer.

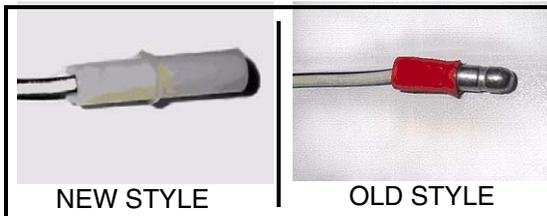
CONTENTS

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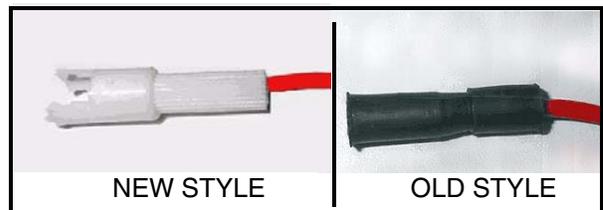
| ITEM NO. | PART NUMBER | QTY | DESCRIPTION |
|----------|-------------|-----|-------------------------------|
| 1 | 951-12306 | 1 | SOLENOID:FUEL SHUT-OFF |
| 2 | 951-12476 | 1 | ADAPTER:CARBURETOR |
| 3 | 951-12263 | 1 | GASKET:INSULATOR:CARBURETOR |
| 4 | 951-12261 | 1 | GASKET:CARBURETOR |
| 5 | 951-12258 | 1 | GASKET:MANIFOLD (AIR INTAKE) |
| 6 | 951-12772 | 1 | O-RING:SOLENOID:FUEL SHUT-OFF |
| 7 | 710-05450 | 2 | SCREW: M5 x 12 |
| 8 | 736-04629 | 2 | WASHER |
| 7 | * | 1 | THIS INSTRUCTION SHEET |

OVERVIEW: There are 2 scenarios that can exist once the new fuel shut-off solenoid is installed...

- A. Installing new fuel shut-off solenoid with early production (old style) stator
- B. Installing new fuel shut-off solenoid with late production (new style) stator



FUEL SHUT-OFF SOLENOID WIRE CONNECTOR



STATOR ASSEMBLY CONNECTOR

FIGURE 1

SCENARIO "A": Install the supplied adapter, 951-12476, between the old stator wire and the new fuel shut-off solenoid wire. See Figure 2. Ensure that both adapter connectors have firmly snapped into their mating connectors.



FIGURE 2

SCENARIO "B": The adapter, 951-12476, is not required, refer to Figure 1. Discard the adapter.

SEE PAGES 2 AND 3 FOR FUEL SHUT-OFF SOLENOID ACCESS, REMOVAL and INSTALLATION

FUEL SHUT-OFF SOLENOID ACCESS, REMOVAL and INSTALLATION

Pre-service Instructions:

1. Place the unit on a flat and level surface.
2. Turn off engine, remove ignition key and allow engine and muffler to cool to room temperature before proceeding.
3. Disconnect the negative black cable from the negative battery terminal first, then disconnect the positive red cable from the positive battery terminal.
4. Drain the fuel tank or clamp off the fuel line to the carburetor. Drain the carburetor's fuel by removing the fuel bowl drain plug and gasket, P/N 951-11349. When bowl is drained, replace the fuel bowl drain plug. **Torque the drain plug to 7 - 9 Nm (62 - 80 In-Lbs.)** See Figure 3.

FUEL SHUT-OFF SOLENOID HARNESS ACCESS: (Refer to Figure 4 for Steps 5 through 8)

5. Loosen the two plastic thumb nuts securing the air filter cover. Remove the cover and air filter element.
6. Using a 10mm socket and ratchet, remove the three nuts securing the finger guard and the one nut securing the shroud to the intake manifold. Remove the finger guard.
7. Using a 12mm socket and ratchet, loosen the two shoulder bolts above the valve cover.
8. Remove the engine shroud. Remove spark plug wire from the spark plug and ground the spark plug wire to the engine block.

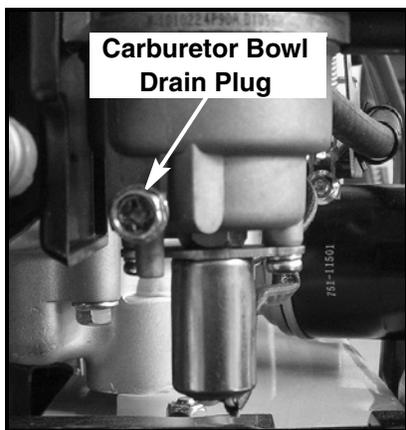


FIGURE 3

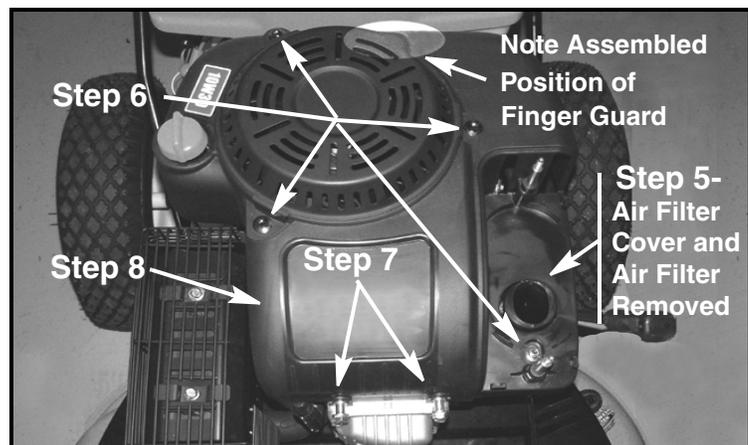


FIGURE 4

FUEL SHUT-OFF SOLENOID REMOVAL:

IMPORTANT - Before removing the old fuel shut-off solenoid from the carburetor make note, for later reassembly, how the fuel shut-off solenoid wire is routed by the shield/carburetor insulator (See Figure 5A), then up over the engine block, restrained by the wire clip (See Figure 5B) and down behind the muffler to the stator's fuel shut-off wire behind the oil dipstick tube.

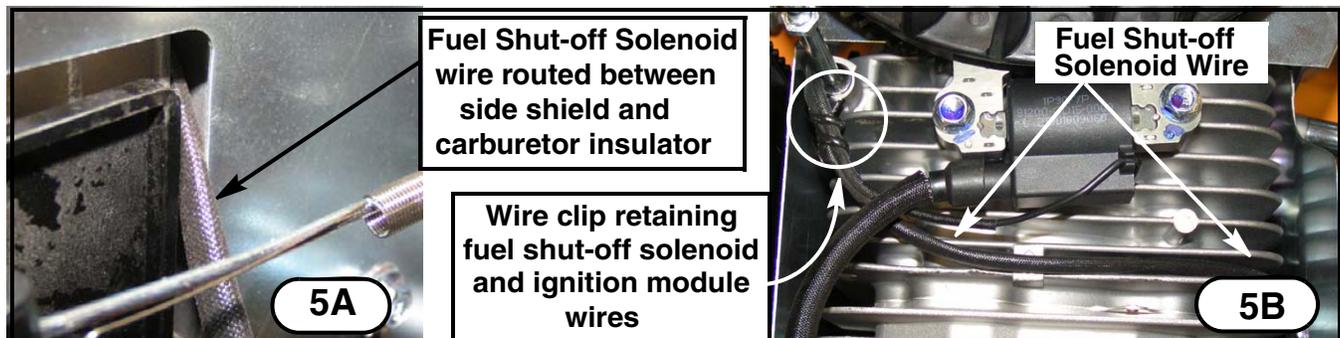


FIGURE 5

9. Open the wire clip located behind the oil dipstick tube and the wire clip located next to the shroud mounting stud near the flywheel fan, see Figures 8 and 5B.
10. Disconnect the fuel shut-off solenoid wire from the stator wire located behind the oil dipstick tube. See Figure 6.

NOTE: It is not necessary to remove the oil dipstick tube to access the wires in the wire clip. If the oil dipstick tube is removed, it will be difficult to re-insert the tube into the sump port without possibly destroying the tube's lower o-ring, P/N 951-12363.



FIGURE 6

11. Carefully remove the fuel shut-off solenoid wire back through its' routing until it is free of the engine. Disconnect the fuel shut-off solenoid's ground wire from the side shield located to the right of the carburetor.

NOTE: The amount of clearance below the fuel shut-off solenoid will determine if the carburetor needs to be removed **GO TO Page 4 for CARBURETOR REMOVAL (Step A)** in order to remove the fuel shut-off solenoid from the carburetor. The phillips head screws securing the fuel shut-off solenoid are tight and may require a small ratchet (for added torque) with a good No.2 phillips bit.

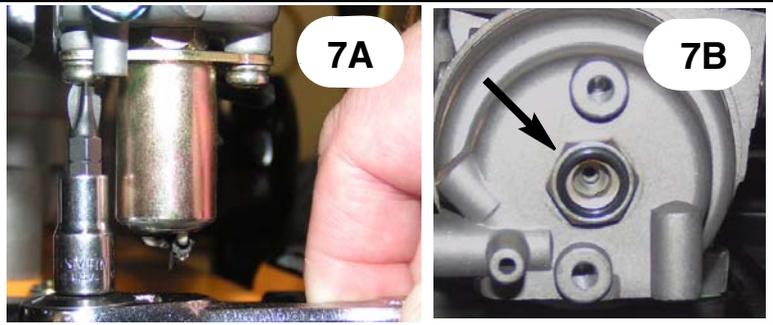


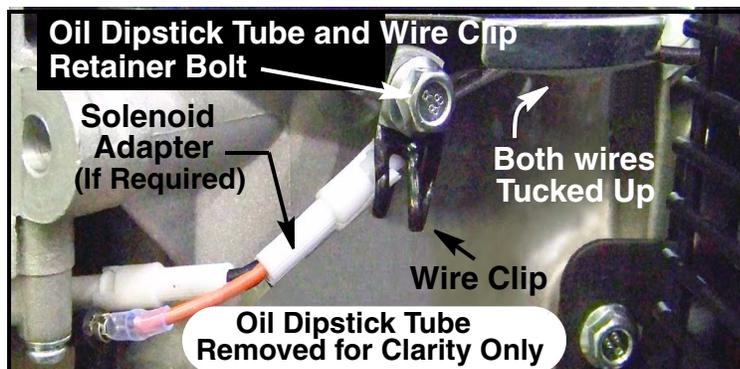
FIGURE 7

12. Remove and discard the two screws and lock washers securing the fuel shut-off solenoid to the fuel bowl (See Figure 7A). Carefully lower the old fuel shut-off solenoid so as not to damage the fuel bowl nut's o-ring seat/groove (See Figure 7B). Discard the old fuel shut-off solenoid and o-ring.

FUEL SHUT-OFF SOLENOID INSTALLATION:

13. Install the new o-ring, Item 6, into the fuel bowl nut's o-ring seat/groove. Carefully install the new Fuel Shut-off Solenoid, Item 1, onto the carburetor bowl ensuring the o-ring is not damaged and seated within the fuel bowl nut's seat/groove. Secure the fuel shut-off solenoid with the two new metric Screws, Item 7, and new washers, Item 8. **Torque each screw to 3 - 5 Nm (27 - 44 In-Lbs).** If it was necessary to remove the carburetor to replace the fuel shut-off solenoid, **GO TO Page 4, CARBURETOR INSTALLATION: (Step G)**, and reinstall the carburetor and air intake at this time.

14. Route the new solenoid wire as shown in Figures 5A, 5B and 8. Connect the solenoid wire to the stator wire. Depending on whether you have Scenario "A" or "B" (see **OVERVIEW** and **SCENARIO "A"** and **"B"** on page 1), connect the stator's fuel shut-off solenoid wire to the fuel shut-off solenoid wire. See Figure 8.



NOTE: It is not necessary to remove the oil dipstick tube to access the wires in the wire clip. If the oil dipstick tube is removed, it will be very difficult to re-insert the tube into the sump port without possibly destroying the tube's lower o-ring, P/N 951-12363.

FIGURE 8

15. Secure the fuel shut-off solenoid's ground wire to the side shield with the screw removed in Step 11. **Torque screw to 6 - 8 Nm (53 - 71 In-Lbs).**

FINAL REASSEMBLY:

16. Reconnect the spark plug wire to the spark plug.

17. Re-install the shroud and finger guard, **Torque all four shroud nuts to 7 - 9 Nm (62 - 80 In-Lbs).** Re-install the air filter element and air filter cover.

18. Ensure the fuel line clamp (if used) is removed.

19. Connect the positive red cable to the positive battery terminal first, then connect the negative black cable to the negative battery terminal. **This completes the installation of the fuel shut-off solenoid.**

CARBURETOR REMOVAL (IF REQUIRED)

A. Using a 10mm socket and ratchet, remove the two nuts securing the plastic air intake manifold and carburetor to the engine block. Slide the air intake manifold off of the mounting studs. Discard the manifold gasket, 951-12258.

B. Using a No. 2 phillips screwdriver or 8mm socket and ratchet, remove the forward most screw securing the throttle control bracket guard. This will allow the choke arm to rotate forward past the guard allowing the carburetor to be slid off the studs sufficiently to permit the choke link to be unhooked from the choke arm. See Figure 9.

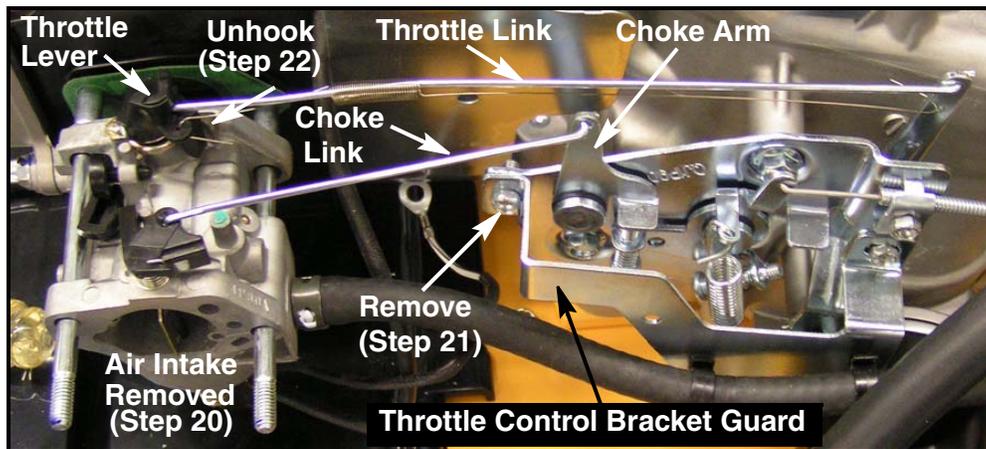


FIGURE 9

C. Unhook the throttle link tension spring from the throttle lever. See Figure 9.

D. Carefully, so as not to bend the links, slide the carburetor off of the mounting studs sufficiently to unhook the choke link from the choke arm. See Figure 10.

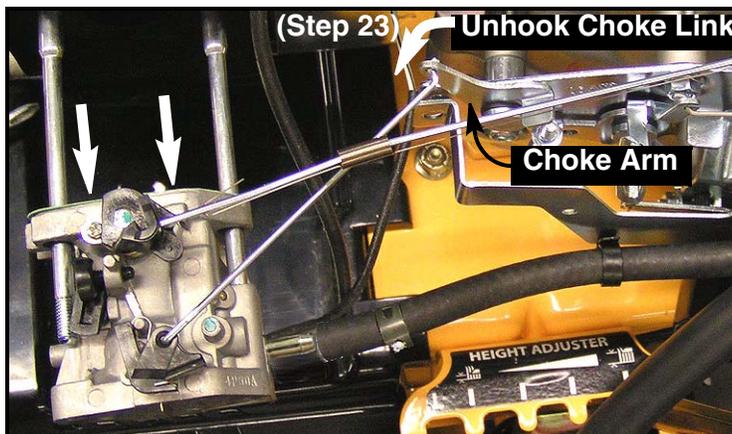


FIGURE 10

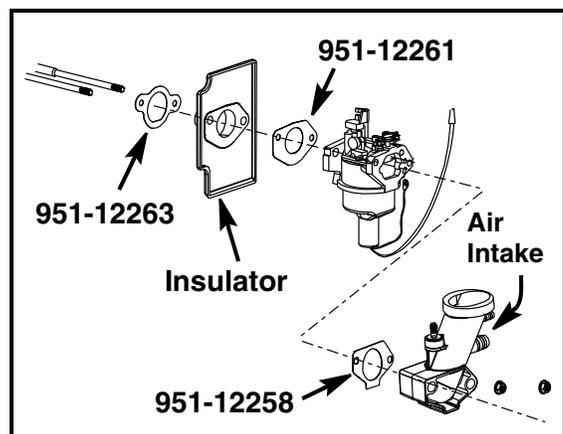


FIGURE 11

E. Remove the carburetor just off of the mounting studs and rotate the throttle lever so that the throttle link clears the slot in the throttle lever and remove the throttle link from the throttle lever. Discard the gasket that goes between the insulator and cylinder head and the gasket that goes between the carburetor and insulator. Retain the plastic insulator.

F. With the carburetor removed **GO TO Page 3, Step 12.**

CARBURETOR INSTALLATION:

G. Install a new gasket, 951-12263 (Item 3), between the insulator and cylinder head, install the plastic insulator, then a new gasket, 951-12261 (Item 4), between the carburetor and insulator. See Figure 11.

H. Install the carburetor onto the mounting studs in the reverse order of removal - Steps E, D, C, and B.

I. Install a new gasket, 951-12258 (Item 5), between the air intake manifold and the carburetor. Install the air intake manifold onto the mounting studs. See Figure 11.

J. Using a 10mm socket and ratchet, install the two nuts, removed in Step A, securing the plastic air intake assembly and carburetor to the engine block. **Torque each nut to 7-9 Nm (62-80 In-Lbs)**

K. Ensure that the fuel hose is slid all the way onto the carburetor fuel inlet fitting. Re-install the hose clamp to secure the fuel hose on the carburetor's fuel inlet fitting.

L. **GO TO Page 3, Step 14** to complete the installation of the fuel shut-off solenoid and then **FINAL ASSEMBLY:**