

Float Kit Instructions



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Kit PN 2203424; 2203447

Application: Fuel tanks for the following snowmobiles:

- 2005 All 900 RMK's and 900 Fusions
- 2006 All 900/700HO RMK's and 900/700HO Fusions

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

These instructions apply to all of the kits listed below. Only one of the two kits accompanies these instructions (see part number on carton).

The 2203424 kit includes:

Qty	Description	Part Number
1	Gasket-Fuel Pump 6 Hole	5412952
1	Float -Plastic	5437046
1	Float- Arm	7043279
1	Retainer-Float Arm	7081437
7	Screw-M5 x 0.8 x 14 HX/FL-SL-Y	7518317
1	Instruction	9921033

The 2203447 kit includes all the above in addition to:

Qty	Description	Part Number
1	Asm-Fuel Filter/Hose	2520377

Nomenclature:

- 1) PFA – Pump Flange Assembly, refers to the fuel pump assembly
- 2) Float Assembly – assembly of part numbers 7043279 and 5437046

Special Tool Requirements:

- Torque Wrench (able to deliver 23 in./lbs.)
- Mity-Vac™ or equivalent Pressure Pump (SPX P/N: 2870975)
- Schrader Valve T-fitting (SPX P/N: 2872602), Optional
- Fuel Pressure Tester (SPX P/N: PU-43506)
- Isopropyl Alcohol (rubbing alcohol)
- Dish Soap
- Squeeze Bottle or Paper Cup
- Fuel Line Disconnection Tools (2-strokes only, SPX/OTC P/N: 7361 or equivalent)
- Protective Gloves
- Clean Shop Rags/Towels
- Safety Glasses
- 5/16" Fuel Hose – 8" long
- 2 Clamps for 5/16" Fuel Hose

IMPORTANT: For your safety, and to ensure a satisfactory installation, perform all installation steps correctly in the sequence as shown on the attached instructions.

⚠WARNING

Gasoline is extremely flammable and explosive under certain conditions. Always stop the engine and refuel outdoors or in a well-ventilated area. Do not smoke or allow open flames or sparks in or near the area where refueling is performed or where gasoline is stored. If you get gasoline in your eyes or if you swallow gasoline, see your doctor immediately. Never try to siphon gasoline using mouth suction. If you spill gasoline on your skin or clothing, immediately wash it off with soap and water and change clothing. Never start the engine or let it run in an enclosed area. Gasoline powered engine exhaust fumes are poisonous and can cause loss of consciousness and death in a short time.

INSTALLATION INSTRUCTIONS

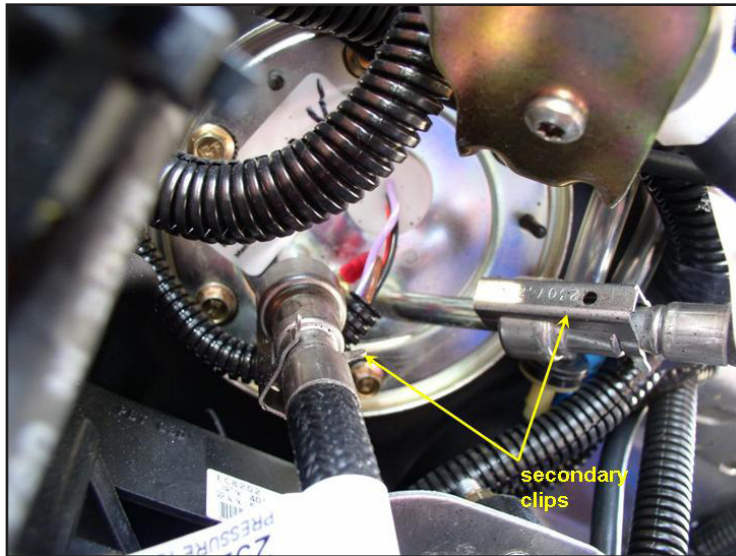
1. Remove fuel from the tank. Properly dispose of the fuel.
2. Remove the air box as shown in Figure 1. Peel back the rubber gasket on the front of the air box and pull up firmly on the front of the air box assembly. Remove the air box from the locating pins at the back of the box and remove from the machine.



Figure 1

3. Remove the console on Fusion models (See Maintenance Manual). On RMK models remove all the screws, but do not remove the rivet in the recoil recess that attaches the console to the exhaust heat shield. Lift the RMK console enough to allow easy access to the fuel tank.
4. Remove the seat (See Service Manual).
5. If electric start is installed, disconnect the negative (-) cable from the battery first, followed by the positive (+) cable. Secure the cables away from the battery so they will not make contact with the battery terminals.
6. Release the residual pressure in the fuel system by attaching the fuel pressure tester (PN PU-43506) to the fuel system Schrader valve (on return line from fuel rail). Slowly open the release valve, draining the gas into a suitable container. Remove the tool and replace the valve dust cap.
7. Unplug the fuel pump electrical connector at the fuel tank.

8. Remove the secondary clips (Figure 2) from the inlet and outlet fuel lines at the PFA. The clip has two legs that protrude into the fuel line connector. The end of the clip facing the front of the machine must be slid from around the fuel line and then the clip can be pushed toward the fuel tank to disengage it from the fuel line. Take care not to drop the clip into the engine compartment. Save the two clips as they will be reinstalled later.



**Figure 2
Secondary Clips**

9. Using the 5/16" fuel line disconnect tool (SPX/OTC PN: 7361 or equivalent), disconnect both fuel lines from the fuel tank.
10. Disconnect vent line from fitting at the top of the tank on MY05 units. The vent lines can remain attached to the tanks of MY06 snowmobiles.
11. Remove both nuts fastening rear of fuel tank to the tunnel.
12. Remove tank by lifting rear of tank off studs and sliding tank backwards.
13. Place the fuel tank in a well ventilated area where you can easily work on the fuel pump assembly.
14. Remove the six pump flange assembly screws and discard (Figure 3).



**Figure 3
PFA Pump
Flange Screws**

15. Gently pull the PFA out of the fuel tank far enough to expose the float arm (Figure 4). Remove the flange gasket by sliding it over the flange and discard.

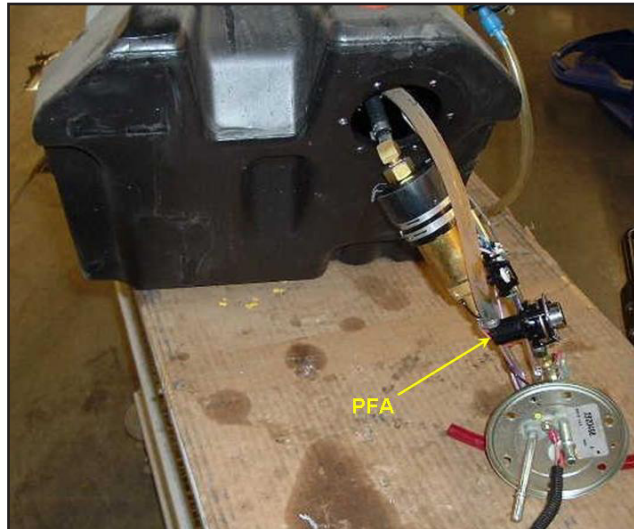


Figure 4
PFA Pulled
Out From Tank

16. Squeeze the ends of the float arm retainer together and pull the retainer away from the sender card assembly (Figure 5).

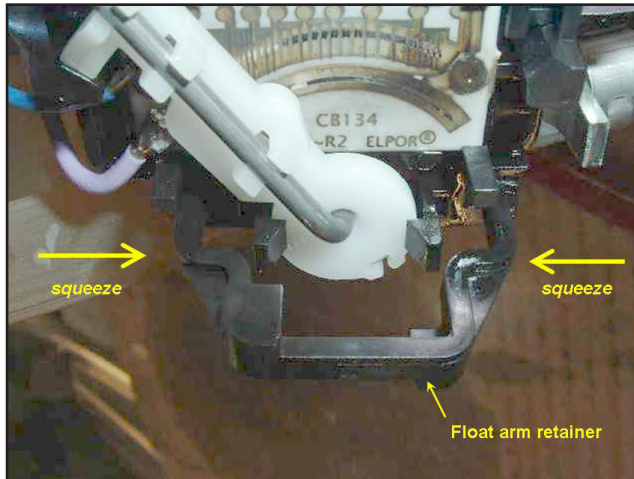


Figure 5
Removing Float
Arm Retainer

17. Gently pull the float arm away from the sender card assembly. If necessary, place a small screw driver between the white plastic pivot and the float arm in location shown in Figure 6 and pry the float arm wire away from the pivot. Discard the old float arm and float.

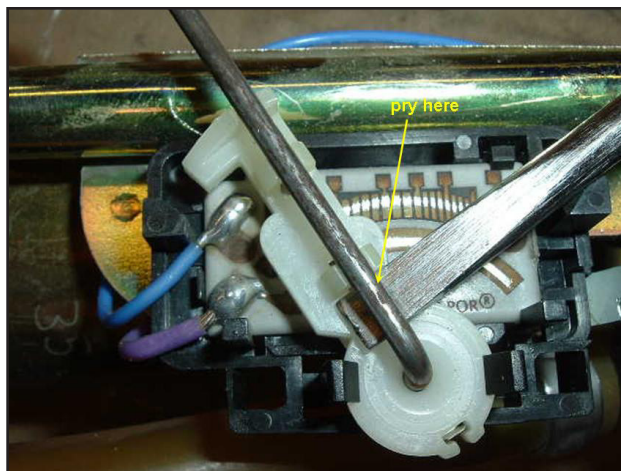


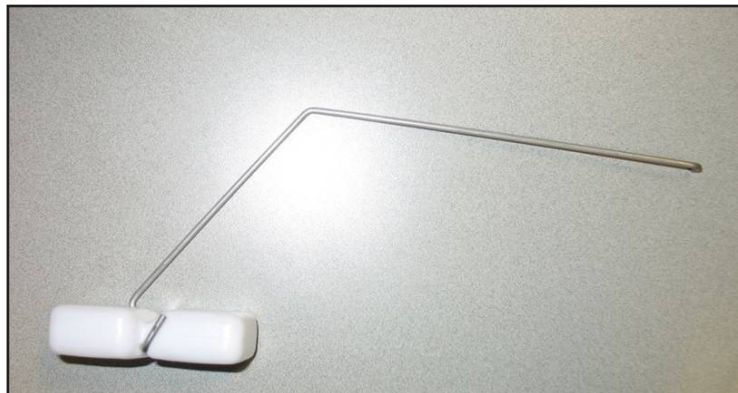
Figure 6
Pry Point for
Float Arm

18. Saturate a clean rag with isopropyl alcohol and clean the surface of the tank in the pump mounting area, the tank side of the pump flange, and around the screw holes on the top of the pump flange. Dry all surfaces with a clean rag. Allow adequate drying time for the alcohol.
19. Dampen a clean rag with alcohol and thoroughly remove all contaminants from both sides of the supplied gasket (PN 5412952).



**Figure 7
Gasket Installation**

20. Install the clean gasket supplied in the kit by carefully stretching it over the pump flange (Figure 7). Position the gasket with the barbs/locating pins facing the pump flange. The position of the gasket is indexed. The number "952" (last three digits of the p/n) on the gasket forward surface should be oriented towards the top of the tank. Push/pull the barbs/locating pins thru the holes in the pump flange.
21. Snap the new float (PN 5437046) onto the float arm (PN 7043239) as shown in Figure 8. Note the orientation of the float relative to the float arm.



**Figure 8
New Float and
Float Arm**

23. Snap the retainer clip over the sender pivot. Figure 9 shows the retainer clip correctly snapped into place. If needed, a new retainer clip is provided in this kit.

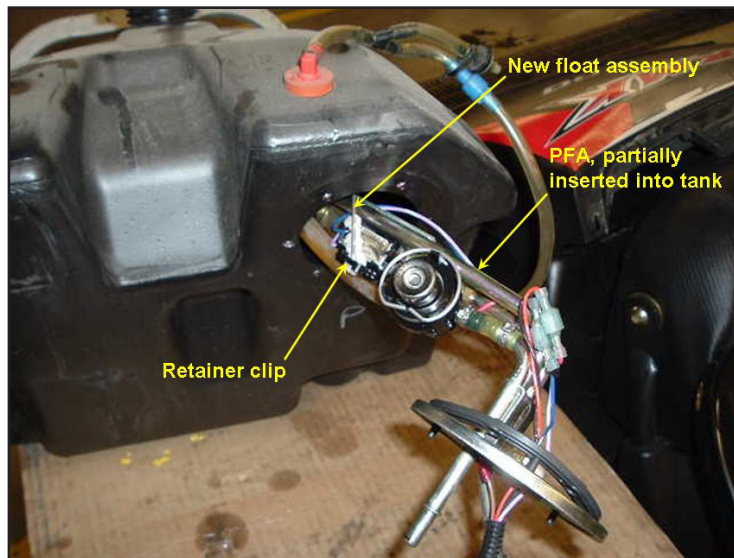


Figure 9
Installing Float
Assembly and
Retainer Clip

24. Carefully push the remainder of the PFA into the tank. Pump flange shall be oriented with the ground lug oriented towards the bottom of the fuel tank as shown in Figure 10.
25. Using the supplied screws (p/n: 7518317), thread in one of the two top most screws (a few turns is sufficient). This screw will serve as a locator. Start threading in the remaining five screws by hand.
26. With a nut driver or socket/ratchet and using the torque sequence in Figure 10. Sequentially turn each screw a few revolutions at a time until gasket is just seated between the flange and the fuel tank.

NOTE: Gasket and screws supplied in the kit must be used even if they were replaced by performing previous service bulletins.

CRITICAL:

27. Using a torque wrench and the torque sequence in Figure 10, tighten all six screws to 10 in-lbs (1.13 N-m). Tighten each screw in one continuous, quick motion.
28. Once initial torque sequence is done, re-tighten all six screws to 23 in-lbs (2.60 N-m) per the torque sequence in Figure 10. Tighten each screw in one continuous, quick motion.
29. Plug the fuel inlet and outlet fittings by clamping the ends of the 5/16" fuel hose to the fittings and firmly install the gas cap.

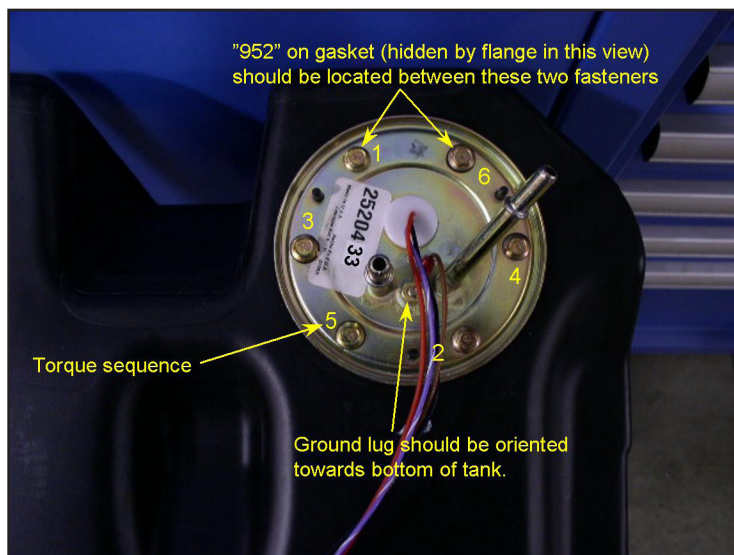
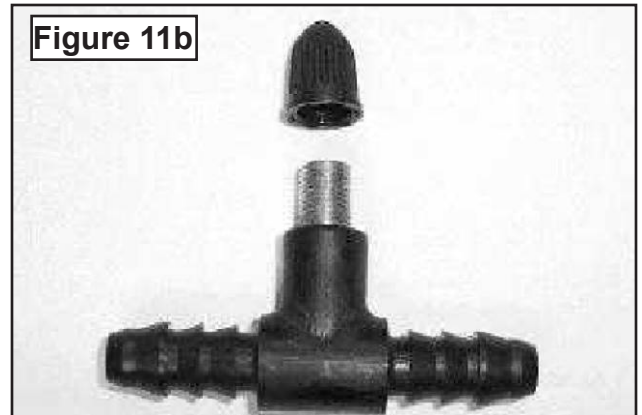
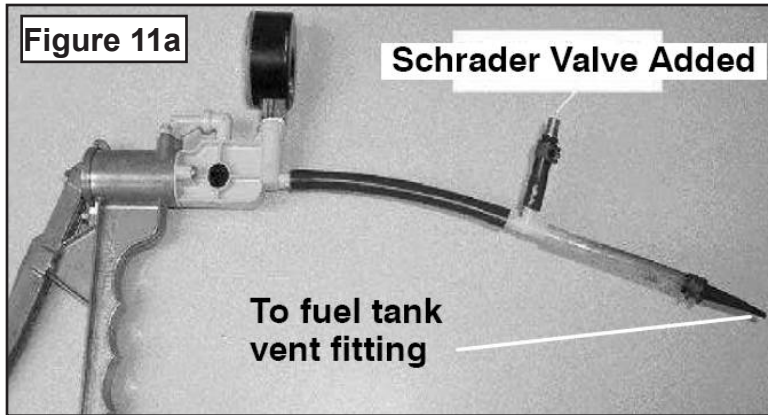


Figure 10
PFA Orientation

30. Attach the proper size hose to allow a Mity-Vac™ (or equivalent pressure pump with a low-pressure scale) to be connected to the fuel tank vent fitting (Figure 11a).



31. Pressurize the tank to 5 PSI. The tank will change shape when pressurized. This is normal.

⚠ CAUTION: Do not exceed 6 PSI!

The fuel tank has a large volume, and using a low volume hand pump to pressurize it is not recommended. The attachment of an air valve stem in-line with the pressure supply line will allow the use of a larger volume pump (i.e. bicycle tire pump). See Figure 14a. This will considerably reduce the amount of time required to reach 5 PSI. Use the optional Schrader valve listed in the tools list, if desired (Figures 14a and 14b). If you use a larger volume pump, be sure to monitor the pressure on the gauge constantly so that 6 PSI is never exceeded.

32. Mix a ratio of approximately ten parts water to one part dish soap in a squeeze bottle or paper cup. This solution will serve as your leak detector.
33. Saturate the fuel sender flange area with the soap solution.
34. Inspect for leaks at the screw heads, around the perimeter of the pump flange, and around the white plastic wire grommet. There may be bubbles present from the initial application of leak detector. These bubbles can be popped by lightly blowing on them. Watch for new bubbles forming. Bubbles formed can be very small, so look closely. Apply additional leak detection fluid during inspection if needed.
35. If there is a leak under the flange or gasket, install a new gasket (PN 5412952) and flange screws (p/n: 7518317).
36. If no leaks are detected, the tank assembly is adequately sealed and ready for installation into the snowmobile. Do not re-install yet as there are additional steps in this bulletin.
37. If using kit number 2203447, replace fuel filter (See Service Manual).
38. Set the fuel tank on the tunnel, connect the vent line if disconnected, and slide the fuel tank back into position. Fasten the nuts at the rear of the tank to 5 ft-lbs (6.78 N-m). Verify routing of vent lines and make sure they are not kinked.
39. Reconnect the fuel lines at the pump flange. Push quick connects onto fittings until they “click” into place.
40. Install the secondary clips to both fuel connections at the fuel PFA.
41. Reinstall the seat.
44. Reinstall the console.
45. If electric start was installed, reconnect the positive (+) battery cable then the negative (-) cable.
46. Reinstall the air box.