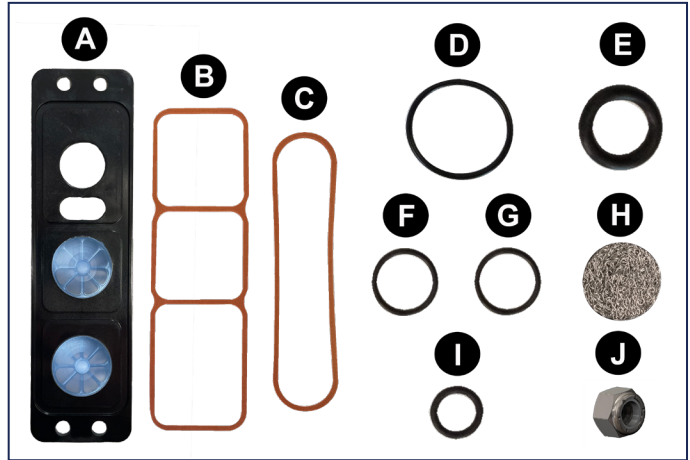


Kit contains the following items:

ID #	Quantity	Description	Part #
A	1	Check Valve Plate (Pre-Assembled)	18.002.0
B	1	Rectangular Red Seal	03.005.3
C	1	Oval Red Seal	03.005.2
D	1	O-Ring for Hale "Q" Only	26.226.1
E	1	O-Ring for Air Inlet Piston	26.207.0
F	1	O-Ring for Air Inlet Shaft	26.016.1
G	1	O-Ring for Air Inlet Port - Auto Only	26.017.0
H	1	Filter, Internal Mesh	21.002.0
I	1	O-Ring for Top of Manifold - Auto Only	26.012.0
J	1	Nut, 1/4-20 HEX SST Lock	04.010.0



Removal of Automatic AirPrimer

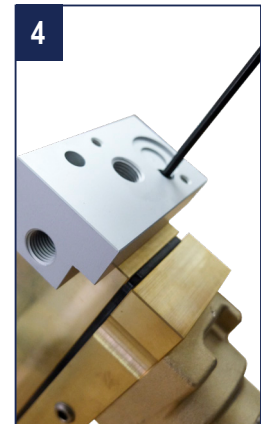
1. Ensure that the wheels are chocked. Vehicle is tagged "Out of Service."
2. Locate the primer within pump enclosure.
3. Disconnect the following:
 - a. Air Supply hose coming from chassis air supply.
 - b. Disconnect the solenoid wiring connector from the wiring harness.
 - c. If you have a multi location installation disconnect the airlines at the manifold that extend to the remote priming valves.
 - d. Piping from fire pump to the primer. Also from remote priming valves if present.
4. If you have a Hale "Q" model pump detach the primer from the fire pump.
5. For other pumps, remove the primer from the bracket that holds the primer.
6. Take primer to a clean workbench for disassembly.



Disassembly of Automatic AirPrimer

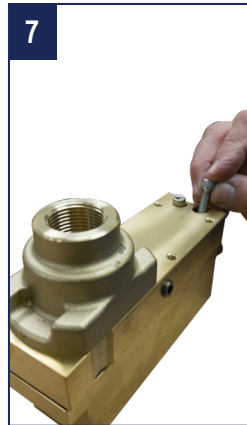
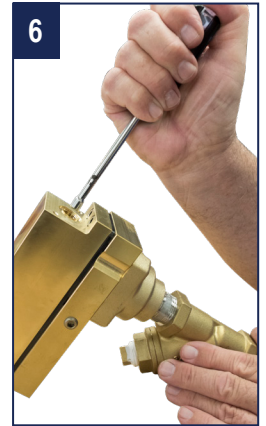
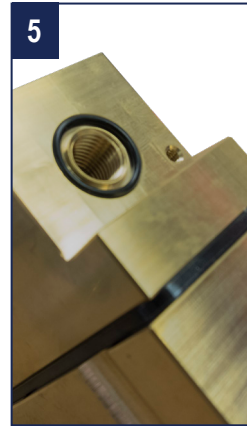
NOTE: Use proper fitting tools. Most fasteners were assembled using Loctite 243 thread locking fluid. Utilize a hair dryer or heat gun to assist with screw removal.

1. Remove the two (2) phillips head screws at the top of the solenoid. **NOTE:** It is a good idea to place match marks (AA) on the solenoid and manifold prior to disassembly as it is possible to assemble the components backwards. Remove the solenoid and place in a clean area (**see photo 1**). **NOTE:** There are two (2) O-Rings in the bottom of the solenoid that must remain in place.
2. Remove the flat washer and O-Ring from the top of manifold and place in a clean area. The flat washer will be reused, discard the O-Ring (**see photos 2 and 3**).
3. Remove the two (2) recessed socket head screws in the manifold with a 9/64" T Handle allen wrench (**see photo 4**). This will expose the air inlet port at the top of the Outboard primer body. **NOTE:** There is an O-Ring at the top of the port that will be replaced when reassembling the primer. Remove and discard existing O-Ring (**see photo 5 on next page**). This port houses the inlet air filter that will be replaced with a new one supplied in the kit.

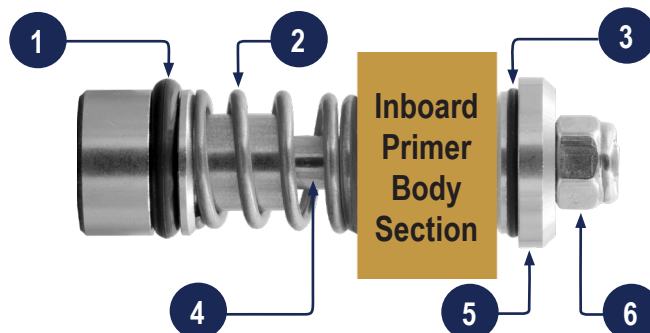


Disassembly of Automatic AirPrimer continued...

4. Reach into the port with a pick tool to remove the wire mesh filter. Replace with the new one (**item J on page 1**), and gently press into place with a small diameter nut driver, using caution to avoid damaging the thread (**see photo 6**).
5. Remove the two (2) 1/4-20 x 1" socket head screws at the bottom (Inboard) side of the primer with a 3/16" allen wrench and set aside for reuse (**see photo 7**).
6. Remove the two (2) 1/4-20 x 1" socket head screws in the notch area at the top of the (Outboard) side of the primer with a 3/16" allen wrench and set aside for reuse (**see photo 8**).
7. Separate the Inboard and Outboard primer bodies (**see photo 9**).
8. This exposes the black plastic Check Valve Plate and red rectangular seal that will be replaced (**see photo 10**). The replacement plate comes with new check valve disks pre-installed. The opposite side of the plate is where the red oval seal mates to the Inboard primer body. Discard all three (3) pieces (**see photo 11**).
9. Using a nut driver and pin spanner wrench, remove the piston from the shaft in order to replace the spring (**see photo 12**). **NOTE:** This was assembled with Loctite and may be difficult to loosen. Using heat can aid in disassembly. The pin spanner is available from McMaster Carr, Part Number: 5735A11. **Use caution as to not damage the piston.**
10. Remove O-Ring from the piston (**see photo 12**) and discard.
11. Remove the spring **and save** (**see photo 13**).
12. Remove shaft from Inboard Primer Body.
13. Remove Sealing O-Ring (**see detail at bottom of page**) and discard.
14. To remove Sealing O-Ring, remove lock nut and washer. Discard nut **and save washer**.



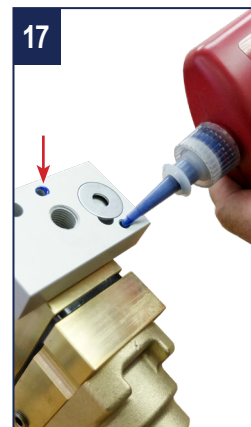
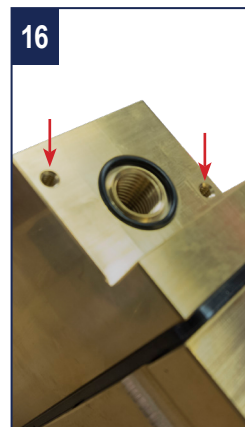
Detail of Piston and Stem parts supplied in Kit



1. Piston O-Ring
2. Replacement Spring
3. Sealing O-Ring
4. Shaft
5. Washer
6. Lock Nut

Assembly of Automatic AirPrimer

1. Supplies Needed
 - a. Parker Super O Lube or equiv. (Available from Amazon)
 - b. Loctite 243 or equiv. (Available from Amazon)
2. Install new O-Ring onto shaft.
3. Re-install washer and lock nut onto shaft.
4. Place shaft through the Inboard Primer Body in the same manner as it was removed.
5. Install saved spring onto the shaft. Place a drop of Loctite 243 on the threads and reinstall the piston onto the shaft. Tighten with the pin spanner wrench and nut driver.
6. Install the new O-Ring into the groove on the piston (**see photo 14**). Apply Parker O Lube to the circumference of the piston and O-Ring (**see photo 15**).
7. Place the red oval seal around the raised oval ridge of the black plastic Check Valve Plate.
8. Place the new black plastic Check Valve Plate over the piston and stem ensuring that the translucent silicone disks are facing you. Align the plate with the holes on the Inboard body.
9. Place the new red rectangular seal into the groove of the black plastic Check Valve Plate.
10. Carefully place the piston into the bore of the Outboard body using a back and forth twisting motion while applying pressure until fully seated.
11. Align the screw holes of the Inboard and Outboard bodies.
12. Install two (2) 1/4-20 x 1" socket head set screws in the top notched area of the Outboard Body.
13. Install two (2) 1/4-20 x 1" socket head set screws in the bottom of the Inboard Body.
14. Tighten all four (4) screws with a 3/16" allen wrench.
15. Verify that the new mesh inlet filter was installed into the port at the top of the Outboard Body (**see photo 6**).
16. At this step it is recommended to supply shop air to primer inlet and measure max vacuum using a gauge to verify the primer is working properly. (Not possible with Hale mount primer.)
17. Place the new O-Ring into the groove at the top of the Outboard Body (**see photo 16**).
18. Place a drop of Loctite 243 into each of the two (2) screw holes diagonally across from each other (**see photo 16 - red arrows**).
19. Attach the aluminum manifold to the top of the Outboard Body with the two (2) 8/32 x 1" socket head screws that were previously removed. Use a 9/64" allen wrench to tighten.
20. Place the new O-Ring into the recess at the top of aluminum manifold (**refer to photo 3 on page 1**).
21. Place the flat washer previously removed into the recess at the top of the aluminum manifold (**refer to photo 2 on page 1**).
22. Place a drop of Loctite 243 into each screw hold as show in **photo 17**.
23. Reattach the solenoid to the aluminum manifold. Ensure that the **match** marks made during disassembly align and that the two (2) O-Rings at the bottom of the solenoid are still in place (**see photo 18**). Tighten the two (2) phillips head screws (**see photo 19**) to secure the solenoid to the manifold.
24. Reinstall the primer into the pump enclosure and connect all air, electrical and plumbing connections previously removed.



Removal of Manual AirPrimer

1. Ensure that the wheels are chocked and that the vehicle is tagged "Out of Service."
2. Locate the primer within the pump enclosure.
3. Disconnect the following:
 - a. Air supply hose coming from the chassis air supply.
 - b. if you have a multi location installation, disconnect the airlines at the manifold that extend to the remote priming valves.
 - c. Piping from fire pump to the primer. Also from remote priming valves if present.
4. If you have a Hale "Q" modle pump detach the primer from the fire pump.
5. For other pumps, remove the primer from the bracket that holds the primer.
6. Take primer to clean workbench for disassembly.

NOTE: O-Rings H and I on page 1 are not used with the Manual AirPrimer.

Disassembly of Manual AirPrimer

NOTE: Use proper fitting tools. Most fasteners were assembled using Loctite 243 thread locking fluid. Utilize a hair dryer or heat gun assist with screw removal.

1. Unscrew the air inlet fitting at the top of the Outboard Primer Body.
2. Reach into the port with pick tool to remove the wire mesh filter. Replace with the new one (**item J on page 1**), and gently press into place with a small diameter nut driver using caution to avoid damaging the threads (**see photo 6**).
3. Remove the two (2) 1/4-20 x 1" socket head screws at the bottom (Inboard) side of the primer with a 3/6" allen wrench and set aside for reuse (**see photo 7**).
4. Remove the two (2) 1/4-20 x 1" socket head screws in the notch area at the top of the (Outboard) side of the primer with a 3/16" allen wrench and set aside for reuse (**see photo 8**).
5. Separate the Inboard and Outboard prier bodies (**see photo 9**).
6. This exposes the black plastic Check Valve Plate and red rectangular seal that will be replaced (**see photo 10**). The replacement of plate comes with the check valve disk. The opposite side of the plate is where the red oval seal mates to the Inboard poard primer body. Discard all three (3) pieces (**photo 11**).
7. Using a nut driver and pin spanner wrench, remove the piston from the shaft (see photo 12). **NOTE:** This was assembled with Loctite and may be difficult to lossen. Using heat from hair dryer or heat gun will assist with disassembly. The pin spanner is available from McMaster Carr, Part Number: 5735A11. **Use caution as to not damage the piston.**
8. Remove the O-Ring from the piston (**see photo 12**) and discard.
9. Remove the spring **and save** (**see photo 13**).
10. Remove the shaft from Inboard Primer Body.
11. Remove lock nut and discard, then remove and **save washer from shaft**.
12. Remove Sealing O-Ring (**see deatil at bottom of page 2**) and discard.

Assembly of Manual AirPrimer

1. Supplies Needed:
 - a) Parker Super O Lube (Available from Amazon)
 - b) Loctite 243 (Available from Amazon)
2. Install new Sealing O-Ring onto shaft.
3. Place shaft through the Inboard Primer Body in the same manner as it was removed.
4. Install new spring onto the shaft. Place a drop of Loctite 243 on the threads and reinstall the piston onto the shaft. Tighten with the pin spanner wrench and nut driver.
5. Install the new O-Ring into the groove on the piston (**see photo 14**). Apply Parker O Lube to the circumference of the piston and O-Ring (**see photo 15**).
6. Place the new red oval seal around the raised oval ridge of the black plastic Check Valve Plate.
7. Place the new black plastic Check Valve Plate over the piston and stem ensuring that the translucent silicone disks are facing you. Align the plate with the holes on the Inboard body.
8. Place the new red rectangular seal into the groove of the black plastic Check Valve Plate.
9. Carefully place the piston into the bore of the Outboard body using a back and forth twisting motion while applying pressure until fully seated.
10. Align the screw holes of the Primer bodies.
11. Install two (2) 1/4-20 x 1" socket head set screws in the notched area of Outboard Body.
12. Install two (2) 1/4-20 x 1" socket head set screws in the bottom of the Inboard Body.
13. Tighten all screws with a 3/16" allen wrench.
14. Verify that the new mesh inlet filter was installed into the port at the top of the Outboard Body (**see photo 6**).
15. Install the air fitting at top of Outboard body. Use a minimal amount of Teflon Tape or Pipe Sealant to avoid inlet filter blockage.
16. At this step it is recommended to supply shop air to primer inlet and measure max vacuum using a gauge to verify the primer is working properly.(Not possible with Hale mount primer.)
17. Reinstall the primer into the pump enclosure and connect all air and plumbing connections previously removed.
18. Start the vehicle and test the operation of the primer **before** placing the vehicle back In Service.