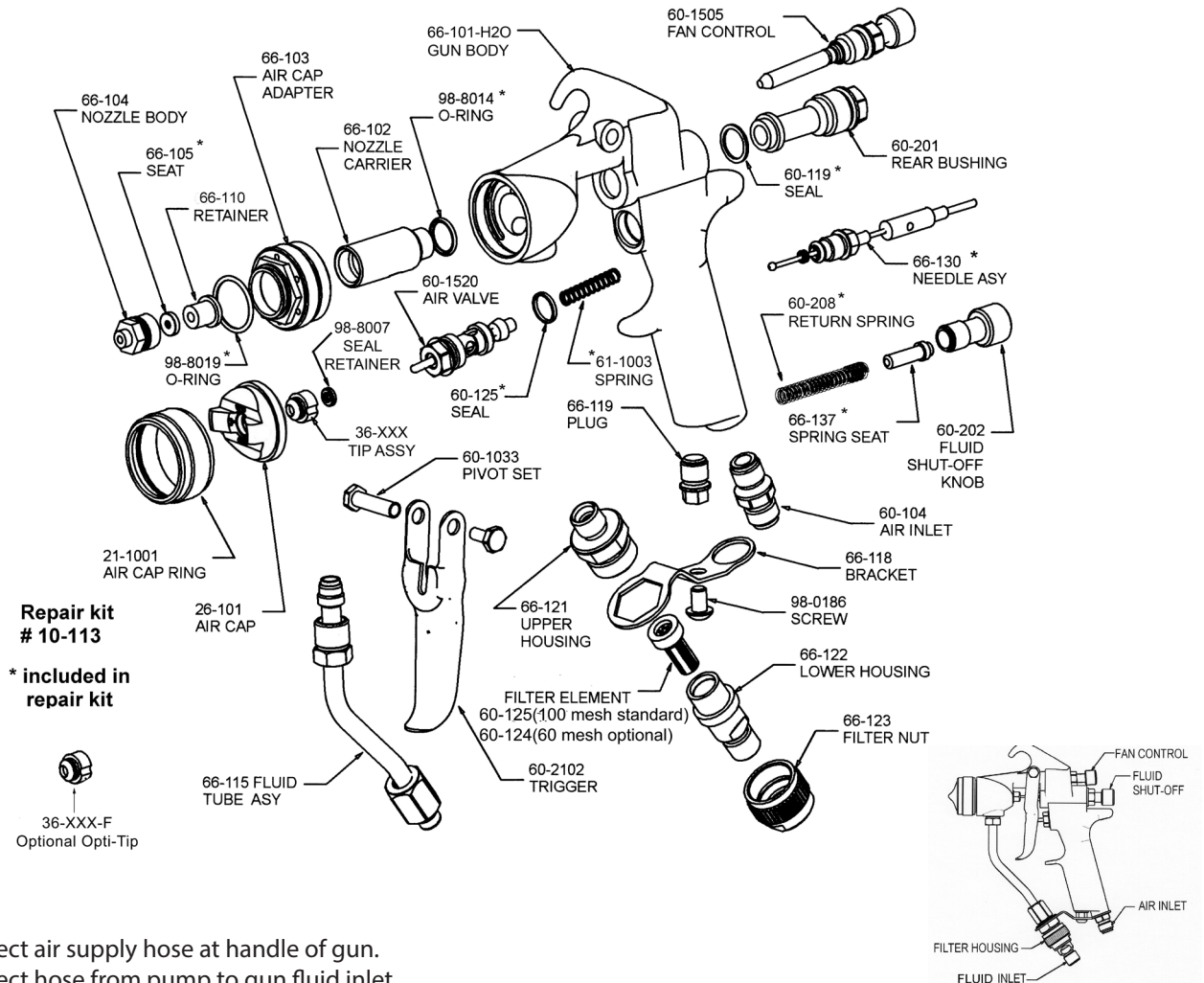


Operation and Maintenance for H2O-Cougar Spray Gun



Operation

1. Connect air supply hose at handle of gun.
2. Connect hose from pump to gun fluid inlet.
3. The fluid shut-off knob locks the trigger and prevents gun operation when turned clockwise as far as possible.
4. Maximum pattern width is determined by tip selection. Turning the fan control knob counter clockwise will narrow the fan. Pattern is maximum when fan control knob is completely closed.
5. For HVLP compliance, do not exceed 15 psi air pressure at gun handle.

Maintenance

NOTE: Complete gun disassembly is not recommended for normal cleaning and maintenance.
IMPORTANT! Relieve gun fluid pressure to 0 psi before performing any maintenance.

Replacing Needle Assembly

1. Remove trigger.
2. Remove fluid shut-off knob by turning counter clockwise. Remove return spring and spring seat.
3. Using a 9/16" open end wrench or socket, remove rear bushing. Don't lose gasket, it can be reused.
4. Using a 3/8" open end wrench remove needle seal packing nut. The needle assembly can be removed thru back of gun.
5. When replacing spring seat, the long end goes inside spring for operating pressures below 1000 psi. For operating pressures above 1000 psi short end of spring seat goes into spring.

Replacing Gun Seat

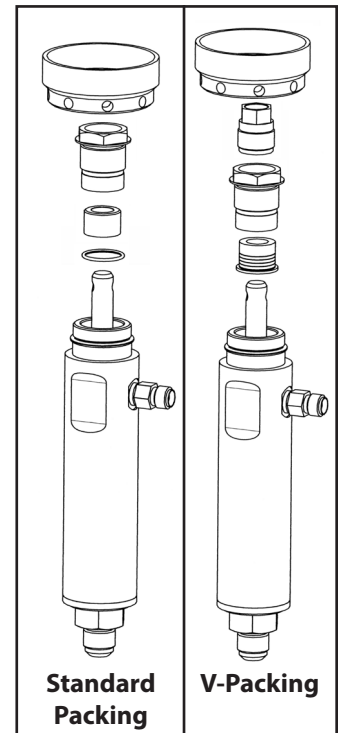
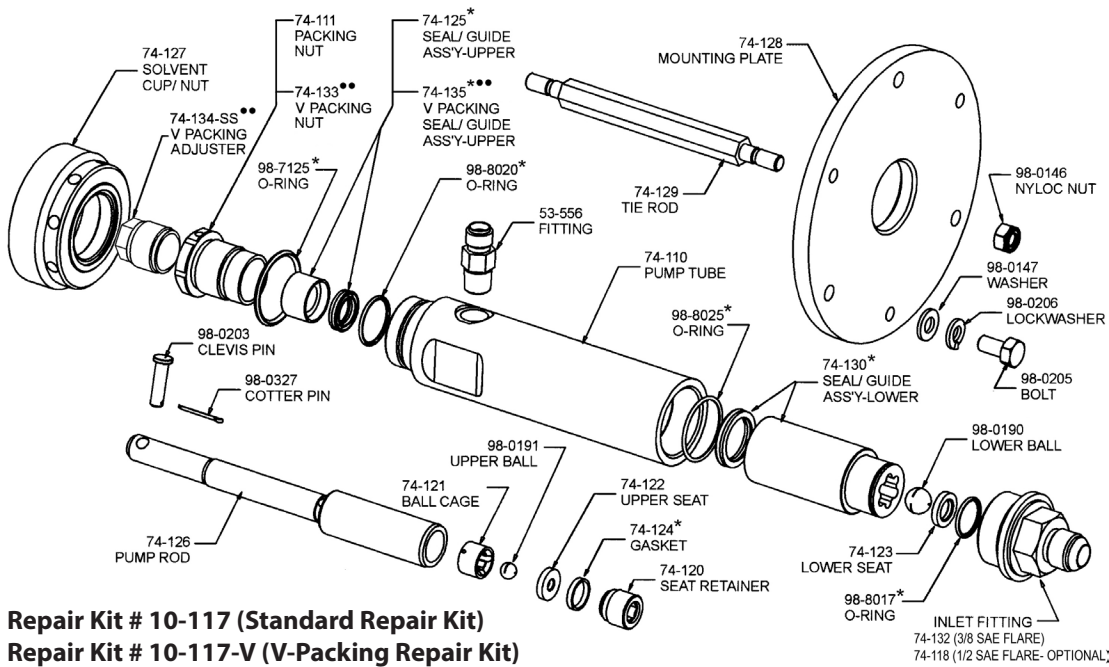
1. Remove air cap and fluid tip. Using a 1/2" socket, remove fluid nozzle body.
2. Using a 3/32" rod or the end of the needle assembly push the seat and seat retainer out of nozzle body.

Replacing Gun Filter

1. Using a 3/4" open end wrench, remove filter retainer nut and separate upper and lower filter housings exposing the filter. It is not necessary to disconnect fluid hose to change filter.

Note: Gun is equipped with a 100 mesh filter. 60 mesh filters are also available.

H2O-C14 Air Assist Airless Fluid Section - 74-101/74-101P



Repair Kit # 10-117 (Standard Repair Kit)
Repair Kit # 10-117-V (V-Packing Repair Kit)
***Included in repair kit**

Upgrade Kit # 74-136 (Converts Standard Packing models to V-Packing models)
****Included in Upgrade Kit (74-136)**

Disassembly from the Air Motor

Pump disassembly and service is easiest if first removed from air motor.

1. Disconnect the fluid hose and siphon hose from the pump.
2. Remove the cotter pin and clevis pin connecting the pump and air motor.
3. Leave mounting plate and tie rods attached to the air motor. Loosen and remove the solvent cup using the 1/4" pin wrench provided.

Pump Disassembly

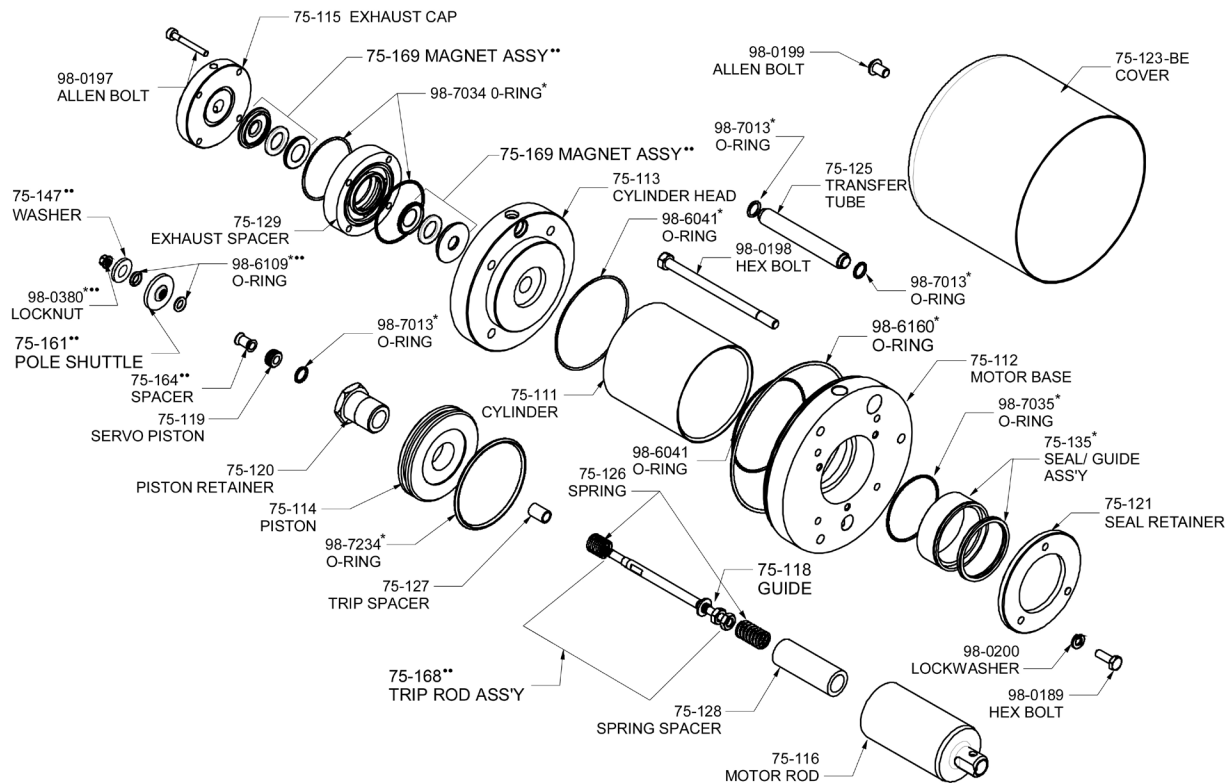
It is recommended that repair kit #10-117 or 10-117-V be on hand before starting pump repair.

1. Holding the pump tube by the flats, remove the inlet fitting using an adjustable or 1 1/8" wrench. The lower ball and seat can be removed.
2. Push down on the pump rod from top of pump. The pump rod and lower seal/guide assembly will come out thru bottom of pump.
3. Remove the upper packing nut using an adjustable or 1 1/8" wrench. The upper seal/guide will come out with the upper packing nut.
4. Place one end of the 1/4" pin wrench thru the clevis pin hole in the pump rod. Using a 3/8" hex wrench remove the upper seat retainer. The upper seat, ball, and ball cage can be removed.

Pump Reassembly

1. Inspect the pump rod in the areas where the upper and lower seals ride. If the diameter of the rod in these areas appear to be reduced or if scoring has occurred, the rod must be replaced. Replace the upper ball and seat into the rod using a clean ball and seal. Note, the seat is reversible.
2. Replace the upper seal/guide in the upper packing nut. Replace the o-ring (98-8020) on pumps with standard packings only. Place upper packing nut into pump tube and tighten.
3. Place the lower end of the pump rod into a new lower seal/guide assembly and new o-ring (98-8025). Carefully slide upper end of pump rod into pump tube and thru the upper seal/guide.
4. Place a new o-ring (98-8017) around the lower seat (Note, seat is reversible) and push into the recess in the inlet fitting. Set a clean ball on the seat and tighten inlet fitting into the pump tube.
5. Replace o-ring (98-7125) on pump tube and slide pump thru mounting plate and solvent cup. Orient the outlet fitting as desired and tighten the solvent cup to secure pump. Reattach the pump to the air motor by replacing the clevis pin and cotter pin.

H2O-C14 Air Assist Airless Air Motor - 75-100



Repair Kit #10-163

*Included in repair kit (10-163)

Upgrade Kit #10-165 (Converts any old model 14:1 pump to the new PEAK Model)

**Included in Upgrade Kit (10-165)

Replacing the Air Motor Rod Seal/Guide Assembly

The main air motor rod seal/guide assembly can be replaced without major disassembly of air motor.

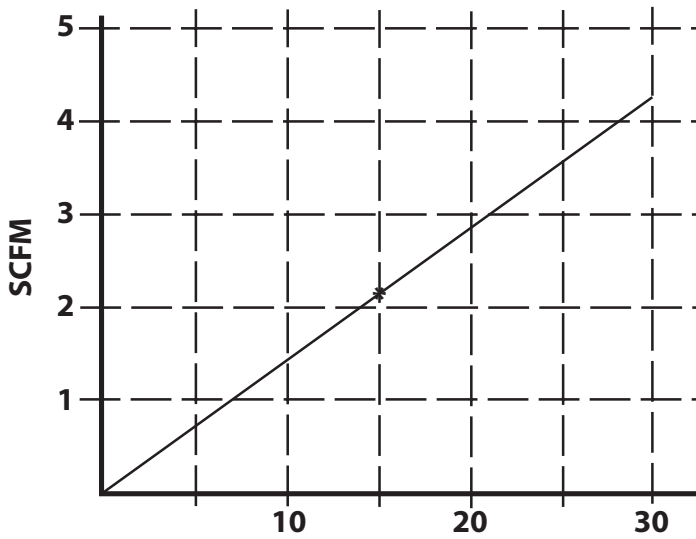
1. Push the air motor rod up as high as possible.
2. Using a 7/16" wrench, remove the three hex head bolts and remove the seal retainer plate. The exposed end of the guide has a groove. Using two screw drivers, engage the groove and pry the seal/guide assembly out.
3. Lubricate o-ring (98-7035) and the new seal/guide assembly with petroleum jelly. Insert over air motor rod and into gland cavity. Caution! Use care not to damage seal lips.
4. Replace the retainer plate and three retainer plate screws.

Complete Air Motor Disassembly

It is recommended that repair kit # 10-163 be on hand before starting pump repair.

1. Remove the air motor cover using a 1/4" hex wrench.
2. Remove the four allen head bolts (98-0197).
3. Remove the exhaust cap, valve plate, and exhaust spacer.
4. Push the air motor rod to the up position. Lift up on locknut (98-0380) until a flat on the trip rod is exposed just outside the top cylinder head. Using a 1/4" open end wrench on the trip rod and a second 5/16" wrench on the locknut, remove the locknut.
5. Continue holding the trip rod and unscrew the magnet assembly. Remove the spacer and servo piston. Note: Wrap the magnet assembly in a clean paper towel as it will attract any nearby magnetic debris.
6. Using a 1/2" wrench, remove the four hex head bolt holding retaining the cylinder head. Remove the cylinder head, cylinder and transfer tube.
7. Push the air motor rod out of the motor base. Using a 5/8" open end wrench on the air motor rod and a 1 1/4" wrench, remove the piston retainer. The trip rod and trip springs can be removed for inspection.
8. See instructions above for removal and replacement of the seal/guide assembly in the motor base.
9. Reassemble air motor in reverse order. Lubricate all o-rings using petroleum jelly during reassembly.
10. Add 1 drop of CAPlus 71TL thread locker to the trip rod assembly threads before installing magnet assembly.

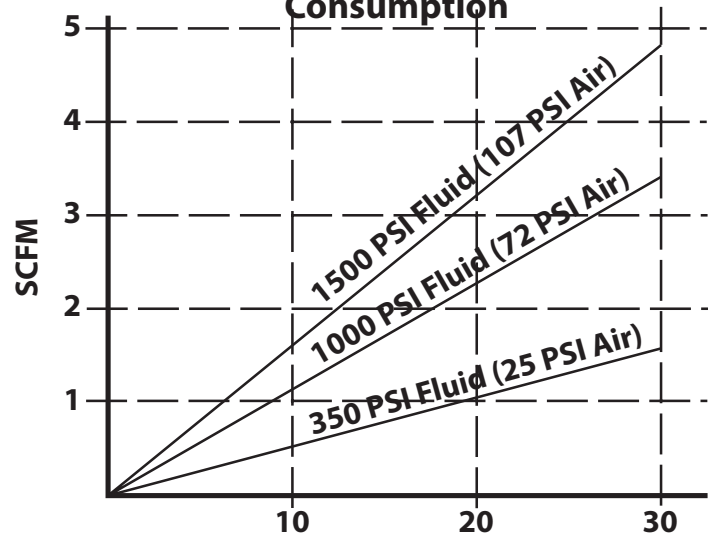
H2O-Cougar Gun Air Consumption



Gun Regulator Pressure (PSI)

*Max pressure for HVLP

H2O-C14 AAA Pump Air Consumption



Pump Speed (Cycles Per Minute)

13 26 39

Pump Speed (Ounces Per Minute)

Compressed Air Requirements

Minimum compressor size will vary with the application. Air requirements for the gun and pump must be added together for total air requirements.

Example: Gun Regulator Setting 25 psi, scfm = 3.5
 Pump fluid pressure is 1000 psi and cycle rate is 30, scfm = 1.75
 Minimum compressor requirement: 3.5+1.75 = 5.25 scfm

Fluid Tip Flow Rate Chart (Fluid oz/min.)

Tip Size	Pressure - 350 (PSIG)		Pressure - 700 (PSIG)		Pressure - 1000 (PSIG)		Pressure - 1500 (PSIG)	
	Light Materials	Heavy Materials	Light Materials	Heavy Materials	Light Materials	Heavy Materials	Light Materials	Heavy Materials
0.007	3	-	4	-	5	-	6	-
0.009	5	-	8	-	9	-	11	-
0.011	8	-	11	-	13	-	16	-
0.013	10	-	14	-	17	-	21	-
0.015	13	-	18	-	22	-	27	-
0.017	17	13	24	18	29	22	35	27
0.019	21	16	30	23	36	27	44	33
0.021	27	21	38	29	45	35	56	43

Note: Values are approximate and will vary depending on actual material viscosity



Training videos are available at:
<http://www.spraycat.com/trainingvideos.html>