



A Global Leader in Pump and Valve Solutions

Flojet

Industrial Spares for Pumps



Engineered for life



Welcome to our brand. Flojet.

The driving force throughout ITT is to provide innovative and quality products that fulfil the expressed needs of our customers. Flojet – ITT is the leader in the small pump market offering the most versatile range of industrial pumps for over 35 years.

The pumps represented in this catalogue are the result of ITT’s close collaboration with its customers to provide application-specific products.

ITT creates a unified culture centred on doing essential things in extraordinary ways, uses values as a compass, and make our customers central to everything we do. ITT provides solutions integral to performance and safety in the markets ITT serves.

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FLOJET®

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The following kits are available for all ranges:

- Diaphragm Kit
- Check Valve Kit
- Pressure Switch Kit

To find the Correct Kits: Identify the pump model number in the left column and read across to the kit number required.

Spares not referenced in this document may be subject to unavailability or long lead times.

Pump models not referenced in this document may no longer have spares available. Please contact your local ITT Flojet representative for further details.



MODEL
CHASSIS
ENGINE
C.I.M.
POWER AT
PUMP

**DIAPHRAGM
PUMPS**

Duplex II Reference

Disassemble Pump Housing

1. Disconnect power to the pump motor. Relieve system pressure. Disconnect inlet and outlet hoses.
2. Remove pressure switch cover and remove wire leads from switch assembly.
3. Remove the four recessed pump housing screws located on top of the pump housing.
4. Remove the pump housing from diaphragm/lower housing assembly.

Check Valve Assembly: Follow steps 1 through 4

5. The check valve housing and o-ring located in the upper housing or on the diaphragm cam assembly.
6. If in the upper housing, remove by placing a small flat bladed screwdriver between the upper housing and check valve and pry out.

Diaphragm / Cam Assembly

7. Remove two deep set Phillips headed screws.
8. Rotate bearing cover, so access notch is aligned with cam bearing set screw, loosen set screw with 1/8" allen wrench and slide pump lower housing assembly from motor shaft.
9. After removing the cam bearing from the outer piston set, the inner piston screws are now visible, remove both flat headed screws. The outer piston set can now be removed from the two inner pistons.

Reassemble Diaphragm / Cam Assembly

1. Place hex stem of inner pistons through the diaphragm and the openings in the lower housing and into outer piston set.
2. Center pistons in the diaphragm and install two flat headed screws.
3. Place cam bearing over outer piston set aligning locating pins into the holes of the cam bearing housing.
4. Install round headed screws and tighten securely.

Lower Housing

5. Coat motor shaft with grease prior to installing the diaphragm/cam bearing assembly to motor.
6. Attach cam bearing assembly to motor shaft by aligning shaft indentation with set screw and tighten securely (Rotate access notches down toward the base plate)
7. Install and tighten 2 phillips headed screws to motor (torque to 25 inch pounds [2.8 Nm]).

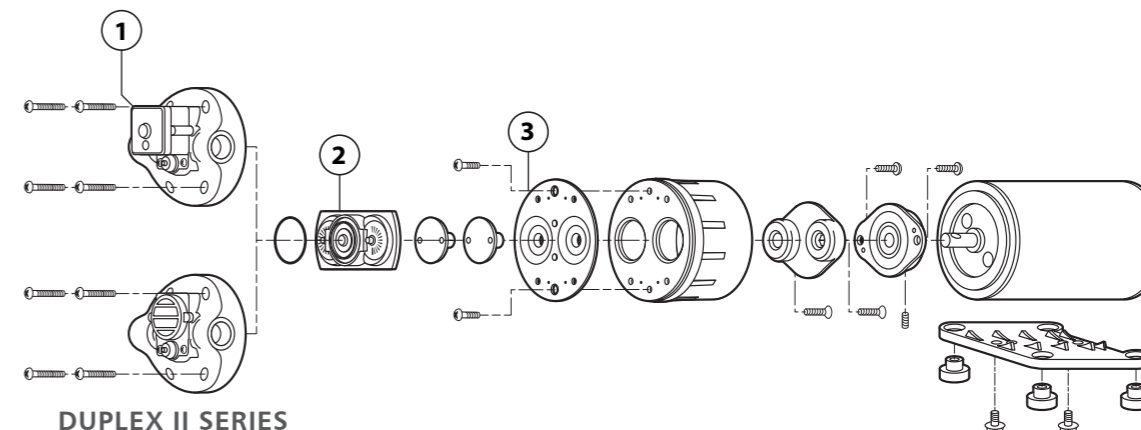
Check Valve Assembly

8. Install check valve with new o-ring over the pistons in diaphragm, discharge side up (side with center circle up).

Pump Housing

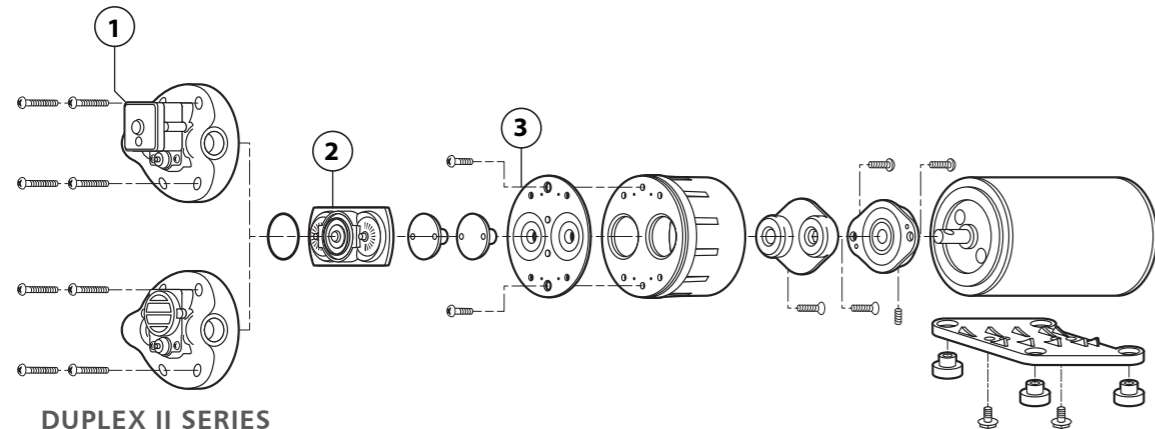
9. Place pump housing over check valve and align the four screw holes with lower housing.
10. Install the four Phillips headed screws into the bearing cover and cross tighten.

NOTE: Pressure switches listed are NPT. For direct mount please change the "5" in part number to "0"
(ie. 02095100 becomes 02095100)



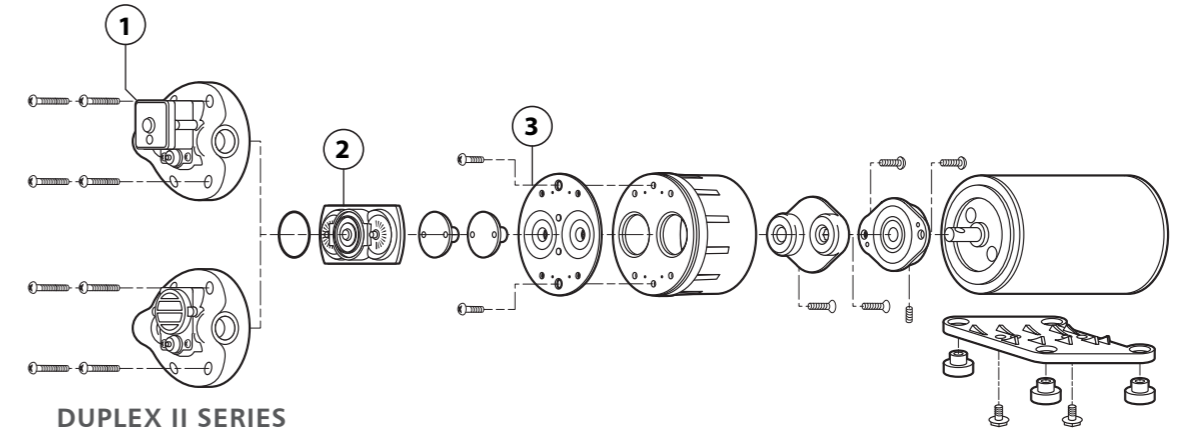
DUPLEX II SERIES

PART NO.	PRESSURE SWITCH	CHECK VALVE	DIAPHRAGM
D12X000R	NA	20914003A	21010004
D1722F5011RL	02095100	20914002A	21010004
D1725E6011RL	02090121	20914003A	21010003
D1725F1411RL	NA	20914002A	21010004
D1725H1411RL	NA	20914003A	21010004
D1725H1412RL	NA	20914003A	21010004
D1725J6011RL	02090121	20914002A	21010003
D1732F1311RL	NA	20914002A	21010004
D1732F5011RL	02095100	20914002A	21010004
D1732F5011RL	02095100	20914002A	21010004
D1732H1311RL	NA	20914003A	21010004
D1732H5011RL	02095100	20914003A	21010004
D1735E7011RL	02090120	20914003A	21010003
D1735H7011RL	02090120	20914003A	21010004
D1735J7011RL	02090120	20914002A	21010003
D17X001RL	NA	20914003A	21010004
D17X002RL	NA	20914003A	21010004
D17X002RL	NA	20914003A	21010004
D2121F5011R	02095100	20914002A	21010004
D2122F1212R	NA	20914002A	21010004
D2124F1411R	NA	20914002A	21010004
D2125F6011R	02090121	20914002A	21010004
D2131F1311R	NA	20914002A	21010004
D2132F5011R	02095100	20914002A	21010004
D2132F6011R	02090121	20914002A	21010004
D2134F1411R	NA	20914002A	21010004
D2134F6011R	02090121	20914002A	21010004
D2135J7011R	02090120	20914002A	21010003
D31211211R	NA	20914001A	21010002
D31213011R	02095109	20914001A	21010002
D3121E1211R	NA	20914003A	21010003
D3121E3011R	02095109	20914003A	21010003
D3121F1211R	NA	20914003A	21010004
D3121H1211R	NA	20914003A	21010004



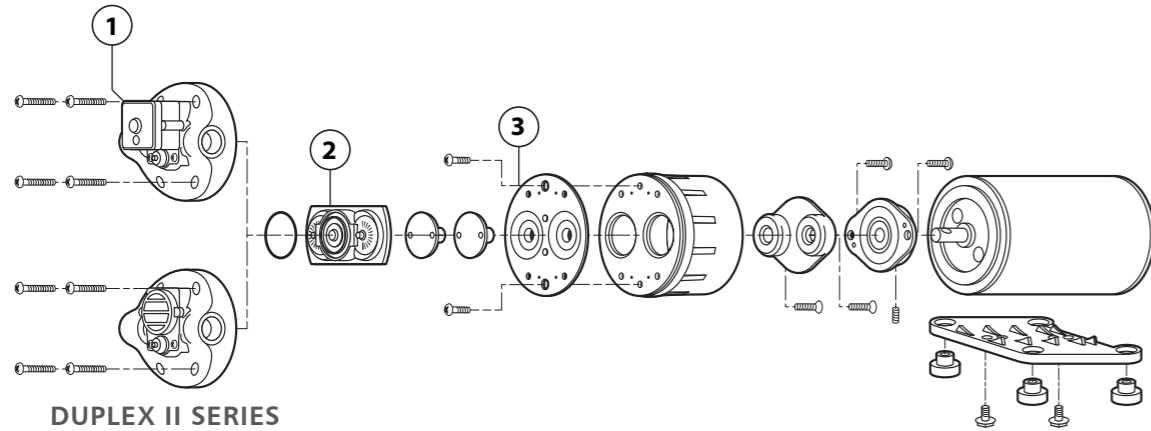
DUPLEX II SERIES

PART NO.	PRESSURE SWITCH	CHECK VALVE	DIAPHRAGM
D3121H3011R	02095109	20914003A	21010004
D3121V1211R	NA	20914002A	21010001
D3121V3011R	02095109	20914002A	21010001
D31311311R	NA	20914001A	21010002
D31311312R	NA	20914001A	21010002
D31315011R	02095100	20914001A	21010002
D3131E1311R	NA	20914003A	21010003
D3131E5011R	02095100	20914003A	21010003
D3131F1311R	NA	20914002A	21010004
D3131H1111R	NA	20914003A	21010004
D3131H1311R	NA	20914003A	21010004
D3131H5011R	02095100	20914003A	21010004
D3131H5012R	02095100	20914003A	21010004
D3131V1311R	NA	20914002A	21010001
D3131V5011R	02095100	20914002A	21010001
D3131V6011R	02095100	20914002A	21010001
D31341311R	NA	20914001A	21010002
D31345011R	02095100	20914001A	21010002
D3134H1311R	NA	20914003A	21010004
D31351311R	NA	20914001A	21010002
D31351412R	NA	20914001A	21010002
D31357011R	02090120	20914001A	21010002
D3135E1411R	NA	20914003A	21010003
D3135E7011R	02090120	20914003A	21010003
D3135F1411R	NA	20914002A	21010004
D3135H1411R	NA	20914003A	21010004
D3135H7011R	02090120	20914003A	21010004
D3135V1411R	NA	20914002A	21010001
D3145H5011R	02095100	20914003A	21010004
D31X020R	NA	20914002A	21010001
D31X023R	NA	20914001A	21010002
D31X024R	02095103	20914004A	21010003
D31X026R	NA	20914002A	21010004
D31X033R	NA	20914003A	21010003



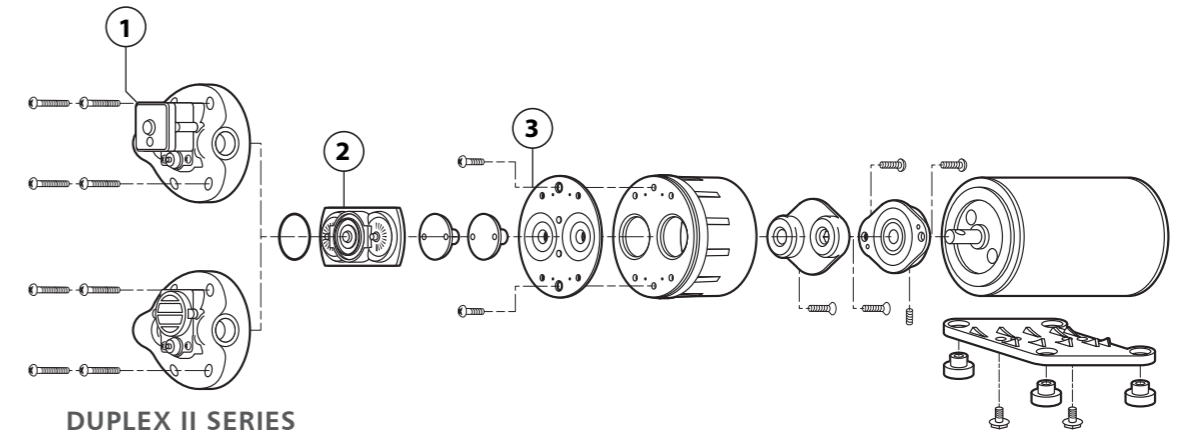
DUPLEX II SERIES

PART NO.	PRESSURE SWITCH	CHECK VALVE	DIAPHRAGM
D31X033R	NA	20914003A	21010003
D32211211R	NA	20914001A	21010002
D32213011R	02095109	20914001A	21010002
D3221E1212R	NA	20914003A	21010003
D3221E3011R	02095109	20914003A	21010003
D3221H1212R	NA	20914003A	21010004
D3221H3011R	02095109	20914003A	21010004
D3221H5011R	02095100	20914003A	21010004
D3221V1211R	NA	20914002A	21010001
D3221V3011R	02095109	20914002A	21010001
D3224H4012R	02095103	20914003A	21010004
D32311311R	NA	20914001A	21010002
D32315011R	02095100	20914001A	21010002
D3231E1211R	NA	20914003A	21010003
D3231E5011R	02095100	20914003A	21010003
D3231H1311R	NA	20914003A	21010004
D3231H5011R	02095100	20914003A	21010004
D3231V1311R	NA	20914002A	21010001
D3231V5011R	02095100	20914002A	21010001
D3234H1111R	NA	20914003A	21010004
D32357011R	02090120	20914001A	21010002
D3235E1411R	NA	20914003A	21010003
D3235E5011R	02095100	20914003A	21010003
D3235E7011R	02090120	20914003A	21010003
D3235H1411R	NA	20914003A	21010004
D3235H7011R	02090120	20914003A	21010004
D3235J7011R	02090120	20914002A	21010003
D32X002R	02095103	20914003A	21010004
D32X003R	NA	20914003A	21010004
D32X004R	02095100	20914001A	21010002
D32X005R	NA	20914003A	21010003
D36211311R	NA	20914001A	21010002
D3621H1212R	NA	20914003A	21010004
D3631H1311R	NA	20914003A	21010004



DUPLEX II SERIES

PART NO.	PRESSURE SWITCH	CHECK VALVE	DIAPHRAGM
D3631H1312R	NA	20914003A	21010004
D3631H5011R	02095100	20914003A	21010004
D3631V1311R	NA	20914002A	21010001
D37125011RL	02095100	20914001A	21010002
D3712H1311RL	NA	20914003A	21010004
D3712H1312RL	NA	20914003A	21010004
D37221211RL	NA	20914001A	21010002
D37223011RL	02095109	20914001A	21010002
D3722E1211RL	NA	20914003A	21010003
D3722E3011RL	02095109	20914003A	21010003
D3722H1211RL	NA	20914003A	21010004
D3722H1311RL	NA	20914003A	21010004
D3722H1312RL	NA	20914003A	21010004
D3722H3011RL	02095109	20914003A	21010004
D3722V1211RL	NA	20914002A	21010001
D3722V3011RL	02095109	20914002A	21010001
D3725V1411RL	NA	20914002A	21010001
D37321311RL	NA	20914001A	21010002
D37325011RL	02095100	20914001A	21010002
D3732E1311RL	NA	20914003A	21010003
D3732E4011RL	02095103	20914003A	21010003
D3732E5011RL	02095100	20914003A	21010003
D3732F1311RL	NA	20914002A	21010004
D3732H1311RL	NA	20914003A	21010004
D3732H1312R	NA	20914003A	21010004
D3732H5011RL	02095100	20914003A	21010004
D3732V1311RL	NA	20914002A	21010001
D3732V3011RL	02095109	20914002A	21010001
D3732V5011RL	02095100	20914002A	21010001
D37351411RL	NA	20914001A	21010002
D37357011RL	02090120	20914001A	21010002
D3735E1411RL	NA	20914003A	21010003
D3735E7011RL	02090120	20914003A	21010003
D3735H1411RL	NA	20914003A	21010004



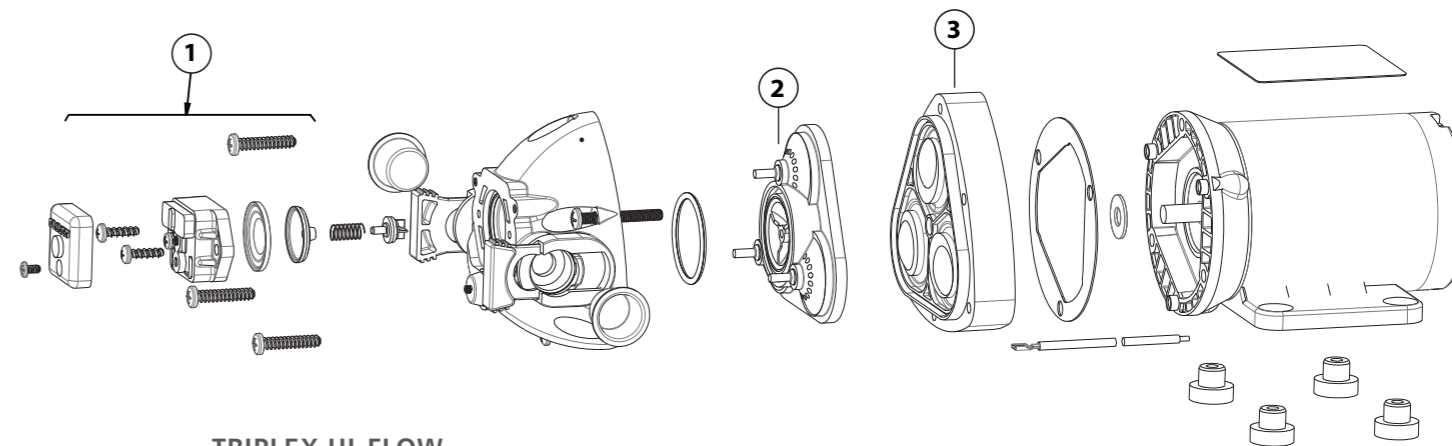
DUPLEX II SERIES

PART NO.	PRESSURE SWITCH	CHECK VALVE	DIAPHRAGM
D3735H1512RL	NA	20914003A	21010004
D3735H7011RL	02090120	20914003A	21010004
D3735V1411RL	NA	20914002A	21010001
D3742H5011RL	02095100	20914003A	21010004
D37X000R	NA	20914003A	21010003
D37X006R	02095100	20914003A	21010004
D37X008R	NA	20914003A	21010003
D37X011RL	NA	20914002A	21010004
D37X012RL	02095115	20914003A	21010003
D37X013R	02095109	20914002A	21010001
D4722H4011R	02095103	20914003A	21010004
D4922H4011R	02095103	20914003A	21010004
D4932H5011R	02095100	20914003A	21010004
D4935H5011R	02095100	20914003A	21010004
D4935H6011R	02090121	20914003A	21010004
D4935H7011R	02090120	20914003A	21010004
D7125G1411R	NA	20914001A	21010004
D7125G6011R	02090121	20914001A	21010004
D7131G1311R	NA	20914001A	21010004
D7131G5011R	02095100	20914001A	21010004
D7135I7011R	02090120	20914002A	21010002
D71X000R	NA	20914001A	21010002
D71X002R	NA	20914001A	21010002
D71X004R	NA	20914003A	21010004
D71X005R	NA	20914001A	21010002
D7225G1411R	NA	20914001A	21010004
D72315011R	02095100	20914001A	21010002
D72X001R	02090120	20914001A	21010002
D72X003R	NA	20914002A	21010001

Triplex Reference

Disassemble Pump Housing

1. Disconnect power to the pump motor. Relieve system pressure. Disconnect inlet and outlet hoses.
2. Remove the pressure switch cover and remove the two wire leads from the switch space connectors.
3. Remove the six screws from the upper housing.
4. Remove the upper housing from the check valve and diaphragm / lower housing assemblies.



Check Valve Assembly

(To replace check valve only follow steps 1 through 6)

5. The check valve chamber and o-ring are located on the diaphragm / lower housing assembly.
6. Remove the check valve chamber subassembly from the diaphragm / lower housing subassembly (pull the valve chamber from the diaphragm).

TRIPLEX HI-FLOW

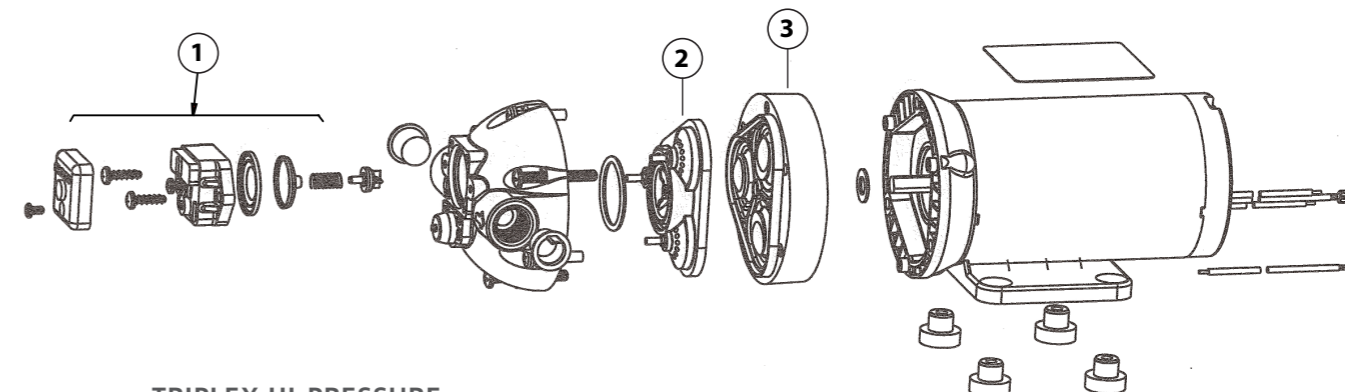
PART NO.	PRESSURE SWITCH	CHECK VALVE	DIAPHRAGM
R3521139	02091060	20407021	21040643
R3521149	02091060	20407034	21040643
R3521339	02091060	20407021	21040643
R3521349	02091060	20407034	21040643

Diaphragm / Cam / Lower Housing Assembly:

7. Remove the diaphragm / lower housing assembly from the motor from end bell adaptor.

Reassemble Pressure Switch Assembly

1. Install the switch diaphragm into upper housing NOTE: Check the old diaphragm for material mark located in the center of the new diaphragms. V is for VITON, and E is for EPDM. Select the correct material for the installation.
2. Install the switch body over the diaphragm, align the screw holes and install the two mounting screws.
3. Reinstall the two wires onto the spade connectors, then install the switch cover and screw.



Check Valve Assembly

4. Install the o-ring into the o-ring groove located on the discharge side of the check assembly.
5. Install the check valve chamber assembly into the diaphragm, thus aligning the check valve chamber with the diaphragm seal walls (push in to secure the diaphragm).

TRIPLEX HI-PRESSURE

PART NO.	PRESSURE SWITCH	CHECK VALVE	DIAPHRAGM
R3111500	NA	20407035	21040142A
R3111501	NA	20407035	21040142A
R3710242	02091100	20407035	21040142A
R3710502	02091100	20407035	21040142A
R3711132	02091100	20407033	21040142A
R3711142	02091100	20407035	21040142A
R3711232	02091100	20407033	21040142A
R3711242	02091100	20407035	21040142A
R3711332	02091100	20407033	21040142A
R3711342	02091100	20407035	21040142A
R3811132	02091150	20407033	21040142A
R3811142	02091150	20407035	21040142A
R3811232	02091150	20407033	21040142A
R3811242	02091150	20407035	21040142A
R3811332	02091150	20407033	21040142A
R3811342	02091150	20407035	21040142A
R3F14242	NA	20407035	21040142A

Upper Housing Assembly

6. With the check valve chamber subassembly installed on the diaphragm, place the upper housing assembly onto the pre-assembled lower housing subassembly.
7. Lube the motor shaft with a small amount of light grease; align the cam with the motor "D" shaft and motor list, then slide the cam onto the motor shaft.
8. Check the discharge location (see arrow on front of port) for correct port orientation (discharge right is the standard position).
9. Install the six pump head screws through the upper housing, 3 screws will engage to lower housing. The other 3 screws will go through the lower housing into the front end bell assembly aligning the 3 pins on the front bell with the 3 holes on the lower housing and tighten securely.

Quad Reference

Disassemble

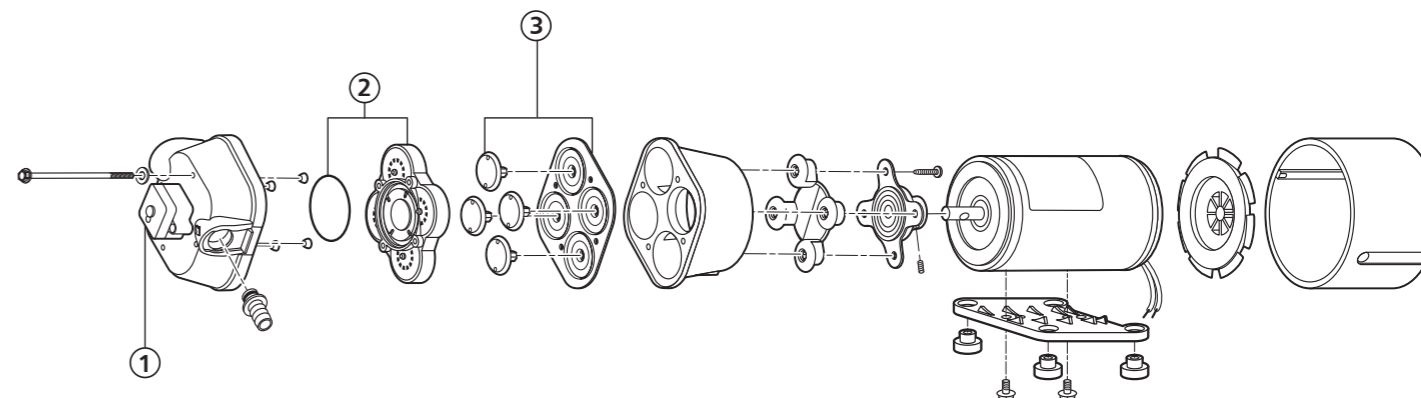
1. Remove power from the pump. Open discharge valve to relieve system pressure.
2. Push port clips back and disconnect plumbing from pump.
3. Loosen the four pump head screws, do not remove screws.
4. Rotate pump head until cam / bearing set screw is visible through drain notch.
5. Loosen cam / bearing set screw and slide pump off motor shaft.
6. Separate upper housing, lower housing and check valve assembly as required.
(Please ensure that ferrules are in place and not lost.)

Reassembly

1. Install new outer in lower housing with piston tops pointing away from motor.
2. Install new diaphragm in lower housing with the molded o-ring seals facing away from motor.
3. Insert each inner piston through the diaphragm into outer piston.
4. Turn each piston until fully seated.
5. Secure cam / bearing assembly to outer pistons using 18 inch pounds (2.0 Nm) of torque.
6. Lube the motor shaft with a small amount of light grease; slide lower housing on motor shaft. Align set screw with motor shaft indentation.
7. Set screw **MUST** be positioned over shaft indentation and secured tightly.
8. Check that ferrules are installed in upper housing and o-ring is properly seated.
9. Install check valve assembly in upper housing and fit upper and lower housings together.
10. Align pump head with motor and tighten four screws evenly using 25 inch pounds (2.8Nm) of torque.

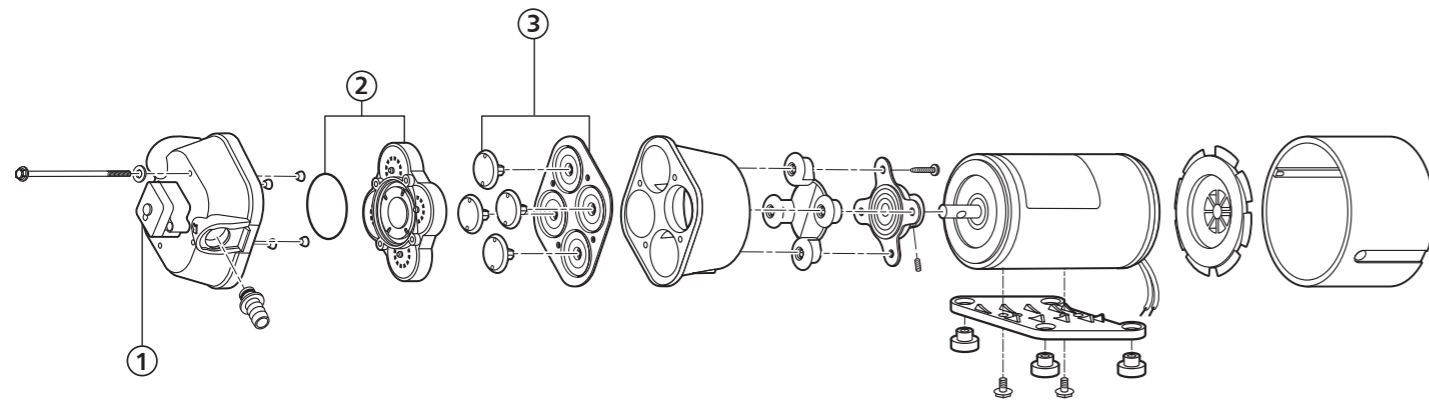
Switch Replacement

1. Remove power from pump. Relieve system pressure. Disconnect inlet and outlet hoses.
2. Remove pressure switch cover and disconnect power leads from switch.
3. Remove switch and switch diaphragm from pump by remove two switch mounting screws.
4. Replace switch diaphragm and switch **NOTE:** Check the old diaphragm for material mark located in the center of the new diaphragms. V is for VITON, and E is for EPDM. Select the correct material for the installation.
5. Do not over tighten switch mounting screws.



QUAD 4000 SERIES

PART NO.	PRESSURE SWITCH	CHECK VALVE	DIAPHRAGM
R4100143	NA	20407030	20403040
R4100343	NA	20407030	20403040
R4100500	NA	20407030	20403040
R4100502	NA	20407020	20403040
R4100507	NA	20407060	20403040
R4100522	NA	20407030	20403040
R4100523	NA	20407020	20403040
R4100524	NA	20407020	20403040
R4100525	NA	20407030	20403040
R4105524	NA	20407030	20403040
R4120242	NA	20407030	20403040
R4120243	NA	20407030	20403040
R4120252	NA	20407020	20403040
R4120253	NA	20407020	20403040
R4300142	02095103	20407030	20403040
R4300143	02095103	20407030	20403040
R4300242	02095109	20407030	20403040
R4300342	02095103	20407030	20403040
R4300343	02095103	20407030	20403040
R4300500	02095103	20407020	20403040
R4300501	02095103	20407020	20403040
R4300503	02095109	20407020	20403040
R4300504	02095103	20407020	20403040
R4300506	02095103	20407010	20403050
R4300519	02095103	20407030	20403040
R4300520	02095103	20407010	20403050
R4300521	02095104	20407030	20403040
R4300522	02095104	20407030	20403040
R4300533	02095103	20407030	20403040
R4300533	02095103	20407030	20403040
R4300534	02095103	20407020	20403040
R4300535	02095103	20407020	20403040
R4300536	02095104	20407020	20403040
R4300537	02095103	20407010	20403050



QUAD 4000 SERIES

PART NO.	PRESSURE SWITCH	CHECK VALVE	DIAPHRAGM
R4300538	02095104	20407030	20403040
R4300539	02095104	20407030	20403040
R4300540	02095104	20407060	20403040
R4320242	02095104	20407030	20403040
R4320243	02095104	20407030	20403040
R4320252	02095104	20407020	20403040
R4320253	02095104	20407020	20403040
R4320501	02095103	20407030	20403040
R4400343	02095104	20407030	20403040
R4400501	02095104	20407030	20403040
R4400503	02095105	20407020	20403040
R4400504	02095105	20407020	20403040
R4400505	02095104	20407030	20403040

Pentaflex Reference (See page 16 for exploded view)

Disassemble Pump Housing

1. Disconnect power to the pump motor. Relieve system pressure. Disconnect inlet and outlet hoses.
2. Remove the pressure switch cover and remove the two wire leads from the switch space connectors.
3. Remove the six screws from the upper housing.
4. Remove the upper housing from the check valve and diaphragm / lower housing assemblies.

Check Valve Assembly (To replace check valve only follow steps 1 through 6)

5. The check valve chamber and o-ring are located on the diaphragm / lower housing assembly.
6. Remove the check valve chamber subassembly from the diaphragm / lower housing subassembly (pull the valve chamber from the diaphragm).

Diaphragm / Cam / Lower Housing Assembly

7. Remove the diaphragm / lower housing assembly from the motor from end bell adaptor.

Reassemble Pressure Switch Assembly

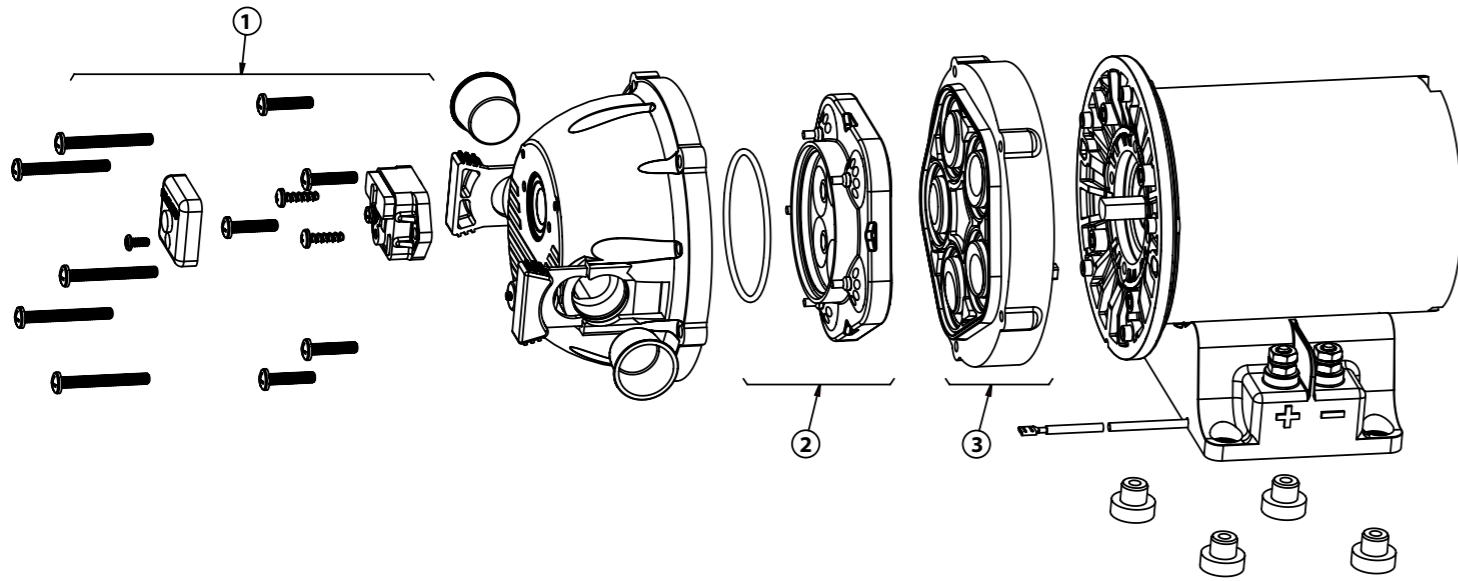
1. Install the switch diaphragm into upper housing NOTE: Check the old diaphragm for material mark located in the center of the new diaphragms. V is for VITON, and E is for EPDM. Select the correct material for the installation.
2. Install the switch body over the diaphragm, align the screw holes and install the two mounting screws.
3. Reinstall the two wires onto the spade connectors, install the switch cover and screw.

Check Valve Assembly

4. Install the o-ring into the o-ring groove located on the discharge side of the check assembly.
5. Install the check valve chamber assembly into the diaphragm, thus aligning the check valve chamber with the diaphragm seal walls (push in to secure the diaphragm).

Upper Housing Assembly

6. With the check valve chamber subassembly installed on the diaphragm, place the upper housing assembly onto the pre-assembled lower housing subassembly.
7. Lube the motor shaft with a small amount of light grease; align the cam with the motor "D" shaft and motor list, then slide the cam onto the motor shaft.
8. Check the discharge location (see arrow on front of port) for correct port orientation (discharge right is the standard position).
9. Install the six pump head screws through the upper housing, 3 screws will engage to lower housing. The other 3 screws will go through the lower housing into the front end bell assembly aligning the 3 pins on the front bell with the 3 holes on the lower housing and tighten securely.



PENTAFLEX SERIES

PART NO.	PRESSURE SWITCH	CHECK VALVE	DIAPHRAGM
R7300142	02091780	20407730	20419730
R7300342	02091780	20407730	20419730

Troubleshooting for all products:

Pulsating Flow – Pump cycles on and off:

- Restricted pump delivery.
- Check discharge lines, fittings and valves for undersizing or clogging

Failure to Prime – Motor operates but no pump discharge

- Restricted intake or discharge line
- Air leak in intake line
- Punctured pump diaphragm
- Debris under flapper valves
- Crack in pump housing

Motor fails to turn on

- Loose wiring connection
- Pump circuit has no power
- Blown fuse / thermal protector tripped
- Pressure switch failure
- Defective motor

Pump fails to turn off after all valves are closed

- Empty tank
- Punctured pump diaphragm
- Discharge line leak
- Defective pressure switch
- Insufficient voltage to pump
- Debris under flapper valves

Low flow and pressure

- Air leak at pump intake
- Accumulation of debris inside pump and plumbing
- Worn pump bearing (excessive noise)
- Punctured pump diaphragm
- Defective motor

Pumps have thermal overload protected motors. The motor will automatically shut off if temperature rises due to an overload condition. If the motor shuts off in this manner, turn electrical power off and close all nozzles or valves. After a cooling off period the pump will automatically re-start.

Product Warranty:

ITT Flojet warrants products to be free of defects in material and/or workmanship for a period of one year after purchase by the customer from Flojet. During this one year warranty period, Flojet will at its option, at no charge to the customer, repair or replace this product if found defective, with a new or reconditioned product, but not to include costs of removal or installation. No product will be accepted without a return authorization number and COSSH sheet completed. All returned goods must be shipped with transportation charges prepaid. This is only a summary of our Limited Warranty. For a copy of our complete warranty, please request form no F100-101.

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