



SERVICE BULLETIN

PN: 21368597

RELEASE DATE: January 1, 2020

REVISION DATE: February 10, 2020

MODEL: Hi Flow, Stroller, and Sprint

ISSUE: Hi Flow, Stroller, and Sprint SRV Retrofit Kit Instructions

NOTES: This instruction is to guide technicians how to remove the SRV mounting from the FCV on meter Sprints and Strollers. This was a plumbing consolidation for the Sprint and Stroller Models that have capacitance meters. This will also streamline the 30PSI Secondary Relief Valves. These kits are required for the Sprint, Stroller, or Hi Flow Strollers with meters in the event that there is a need to replace the Flow Control Valve as these will no longer have the SRV port in them.

WARNING: Do not use the new FCV that does not have the SRV port without installing the entire kit.

Table 1. Available Kit Options

Kit Part Number	FCV Included in Kit	Description
21371865	14812860T	Service Manifold Assembly 0-15 LPM
21371866	21366017	Service Manifold Assembly 0-2 LPM
21371863	11014539T	Service Manifold Assembly 0-6 LPM
21373979	11014539T	Sprint Service Manifold Assembly 0-6 LPM
21373980	21366017	Sprint Service Manifold Assembly 0-2 LPM

Tools Required:

- Phillips Head #1
- 3/8 Wrench
- 9/16 Wrench
- ½ Wrench
- 7/64 T-handle Allen Wrench
- Soldering Iron
- Heat gun
- Teflon tape
- 80-90 in/lb Torque Wrench

Table 2. Parts Included in Stroller Hi-Flow kit PN 21371865

Part Number	Description
14812860T	FCV 20PSI 0-15 LPM G4 PORT
21237266	MANIFOLD TEE, 3/16 MPI
CA404841	FITTING FEEDTHRU
B-775068-00	FERRULE,3/16" TUBE, BRASS
21360363	HARNESS ASSY STR G4 PVC
B-778827-00	BAG CLEAR POLY 9X12X.002"
21368597	SPRINT STROLLER SRV INST
CA406704	PULL WIRE TOOL
11370584	INSULATION COLLAR
13095635	Solder .032" Dia., 3% Flux Tel.001Lb.

Table 3. Parts Included in Stroller Pediatric kit PN 21371866

Part Number	Description
21366017	FCV 20PSI 0-2 LPM V2 PORT TPED
21237266	MANIFOLD TEE, 3/16 MPI
CA404841	FITTING FEEDTHRU
B-775068-00	FERRULE,3/16" TUBE, BRASS
21360363	HARNESS ASSY STR G4 PVC
B-778827-00	BAG CLEAR POLY 9X12X.002"
21368597	SPRINT STROLLER SRV INST
CA406704	PULL WIRE TOOL
11370584	INSULATION COLLAR
13095635	Solder .032" Dia., 3% Flux Tel.001Lb.

Table 4. Parts Included in Stroller Standard Flow kit PN 21371863

Part Number	Description
11014539T	FCV 20PSI 0-6 LPM G3 PORT TPED
21237266	MANIFOLD TEE, 3/16 MPI
CA404841	FITTING FEEDTHRU
B-775068-00	FERRULE,3/16" TUBE, BRASS
21360363	HARNES ASSY STR G4 PVC
B-778827-00	BAG CLEAR POLY 9X12X.002"
21368597	SPRINT STROLLER SRV INST
CA406704	PULL WIRE TOOL
11370584	INSULATION COLLAR
13095635	Solder .032" Dia., 3% Flux Tel.001Lb.

Table 5. Parts Included in Sprint kit PN 21373979

Part Number	Description
11014539T	FCV 20PSI 0-6 LPM G3 PORT TPED
21385560	STREET TEE
B-778827-00	BAG CLEAR POLY 9X12X.002"
21368597	SPRINT STROLLER SRV INST
11370584	INSULATION COLLAR

Table 6. Parts Included in Sprint kit PN 21373980

Part Number	Description
21366017	FCV 20PSI 0-2 LPM V2 PORT TPED
21385560	STREET TEE
B-778827-00	BAG CLEAR POLY 9X12X.002"
21368597	SPRINT STROLLER SRV INST
11370584	INSULATION COLLAR

1. **Procedure A:** Sprint Retrofit PN 21373979 & 21373980
Caution: The unit must be empty, warm and vented before starting procedure.
 - 1.1 Remove the condensation pad cover from the bottom of the unit.
 - 1.2 Remove (2) screws from bottom assembly as shown.

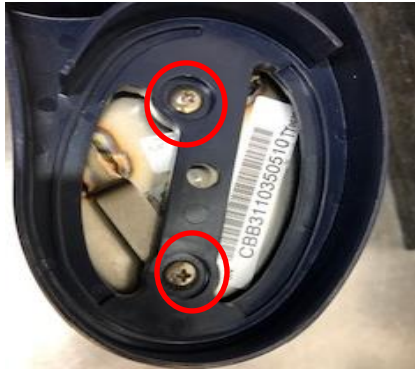


Figure 1.2

- 1.3 Remove the strap from the unit if attached. Remove the knob and decal from the Flow Control Valve (FCV). Remove the dome cover then remove the three screws as shown.



Figure 1.3

- 1.4 After screws are removed, pull the top cover off the unit and pull out the assembled bottle.
- 1.5 Use a Phillips head screw driver #1 to remove screws from the top of the FCV locking plate to release the FCV from bracket. Use a 3/8" Wrench to remove the fitting from the bottom of the FCV.

Note: Save the Secondary Relief Valve (SRV) from the old FCV for step 1.7



Figure 1.5

- 1.6 Slide the new FCV back through the bracket and reattach the fitting to the new FCV with the 3/8" wrench. Attach the locking plate back on top of FCV with the 2 screws using a Phillips head screw driver #1.

- 1.7 Remove the Secondary Relief Valve (SRV) from the FCV with a 9/16 Wrench (make sure threads are clean) and attach to the Street Tee fitting (PN 21385560), torque SRV to 80-90 in/lb when reinstalling. Remove the PRV from the plumbing with a ½ Wrench, clean off threads, apply new Teflon tape leaving the 1st thread bare, and attach to the Street Tee fitting.

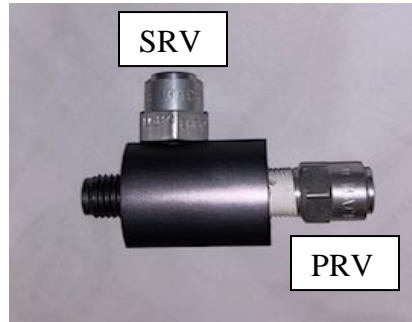


Figure 1.7

- 1.8 Attach Street Tee fitting PN 21385560 to plumbing where the PRV was removed. See Figure 1.8 A for Side Fill and Figure 1.8 B for Top Fill.



Figure 1.8 A



Figure 1.8 B

- 1.9 After assembly is complete with the new FCV and Street Tee fitting, the bottle can be put back into casing and assembled back together.
2. **Procedure B:** Hi FLOW and Stroller Retrofit PN 21371863, 21371865, and 21371866.
- Caution: The unit must be empty, warm and vented before starting procedure.**
- 2.1 Follow steps from Procedure A 1.1 through 1.5.
- Note: For HI FLOW, remove from casing and continue to step 1.5 from Procedure A.**
- Note: Save the SRV from the old FCV for step 2.2**
- 2.2 Assemble the SRV onto the Manifold Tee (PN 21237266), which will come with Fitting Feedthru (PN CA404841) and Ferrule (PN B-775068-00) already attached, tighten to 80-90 in.-LB. The wire harness assembly will be threaded through the Manifold Tee by the red wire. Manifold tee assembly will be needed in step 2.6.
- Note: Feed the red wire through. Do not pull on the wire or it could strip the insulation of the wire.**

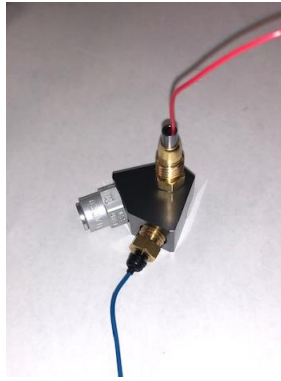


Figure 2.2

- 2.3 Disconnect the meter wire harness and remove the (2) mounting screws from the meter.
- 2.4 Remove the (3) screws on the bracket and lift the bracket from the manifold.
 - 2.4.1 For Top fill, remove fitting 1 with a $\frac{1}{2}$ Wrench and fitting 2 with a $\frac{9}{16}$ Wrench from the plumbing as seen in figure below.
 - 2.4.2 For Side fill, remove fitting 1.

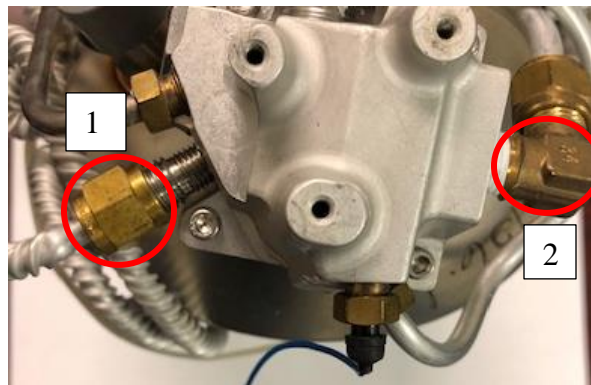


Figure 2.4

- 2.5 Remove (4) screws from the top of the manifold with a hex key wrench.
- 2.6 Remove the manifold assembly from the Dewar.
- 2.7 Remove the $\frac{1}{4}$ " wide heat shrink insulation collar and unsolder the wire from the probe.
- 2.8 Solder the Pull Wire CA406704 to the end of the Probe Wire. This wire will be used as a tool to pull the wire harness through the heat shield.

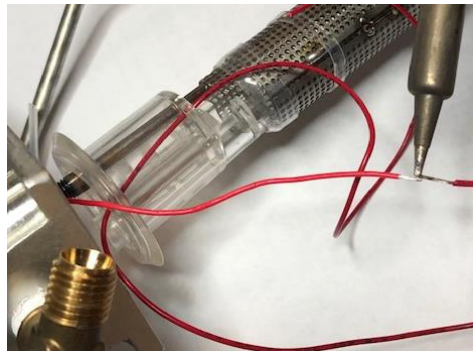


Figure 2.8

- 2.9 Remove the fitting on the manifold with the red and blue wire harness using a $\frac{3}{8}$ Wrench. As the fitting is removed from the manifold, the pull wire will also be pulled through the heat shield and manifold.

- 2.10 Unsolder the Pull Wire from the removed probe wire and re-solder it to the manifold tee assembly.
- 2.11 The manifold tee assembly will be threaded through the hole that the wire harness was removed from. Tighten it finger tight and then 1 flat more.
NOTE: Only spin the brass nut on the manifold tee when tightening, not the whole body.
- 2.12 After using the Pull Wire to pull the harness assembly through the heat shield, it can be unsoldered. The harness will now be slid through the new 1/4" wide heat shrink insulation collar, and soldered back to the probe. Heat shrink the insulation collar (PN11370584) to support the wire. Add fitting back under the manifold tee. Tighten it finger tight plus 1 flat. See below for completed manifold.

Note: Be sure to not have any solder material touch the inner probe. This will affect the capacitance.

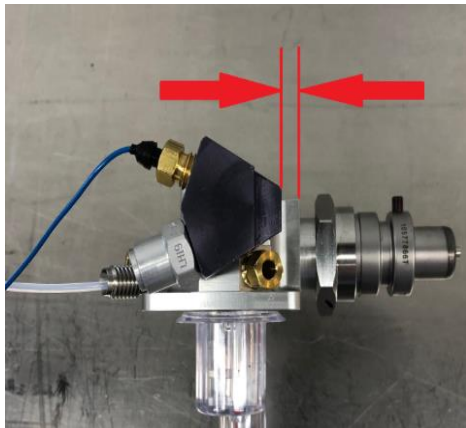


Figure 2.12.1



Figure 2.12.2

- 2.13 Insert manifold back into the bottle and secure with (4) screws using the T-handle. Reattach fittings from step 2.4. Reattach the bracket (see Figure 2.13.1) and meter (see Figure 2.13.2).

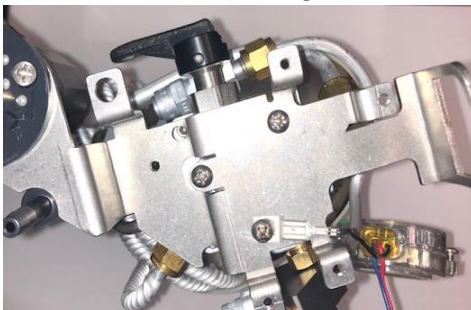


Figure 2.13.1



Figure 2.13.2

- 2.14 Insert the new FCV into the bracket; attach locking plate on the top of FCV and fitting to bottom of FCV. Tighten it finger tight plus 1 flat.



Figure 2.10

- 2.15 Reassemble casing and add flow control decal and knob to FCV.
- 2.16 Test Capacitance and leak check.
- 2.17 Recalibrate meter.

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