

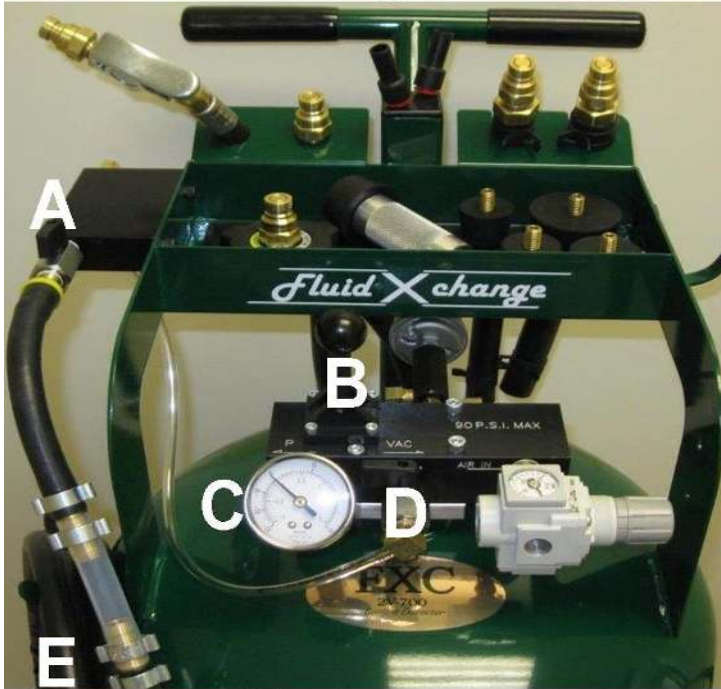
# FluidXchange Operating Instructions

## Photo Legend:

- A - In-Hose Shut-Off Valve
- B - Control Manifold (Vacuum or Pressure)
- C - Vac/Press Gauge

- D - Pressure By-Pass Shut-Off Valve
- E - End-of-Hose Q/D Coupling
- F - Air Evacuation Kit Handle
- G - End-of-Hose Hand Valve Assembly

## FluidXchange Controls



*Coolant Extractor photo shows all purchasable Accessories & Attachments (Your Tool Kit may not have everything shown)*

## Extract Coolant

- 1) Remove Vehicle Surge-Tank Cap
- 2) Connect shop air (regulated to 90 psi max) to manifold
- 3) Close in-hose ball-valve (A)
- 4) Ball-valve (D) should be closed
- 5) Place control manifold in vacuum mode (B)
- 6) Connect hose to cooling system Q/D Fitting (E)
- 7) Open in-hose ball-valve (A) to extract coolant
- 8) Amt of vacuum can be seen on gauge (C)
- 9) Close in-hose ball-valve (A) when extraction is complete
- 10) Disconnect hose from cooling system Q/D Fitting (E)



Volvo / Mack / Prevost

Cool-Drain / International / Freightliner

New Flyer Bus / Nova Bus

Retro-Fitted Vehicles

Your Coolant Service Tool Service-Hose will have one of the above style End-of-Hose Quick-Disconnect Couplings:

## Use of the Freightliner Drain-Hose Adapters:



- 1) Slip the end of the appropriate size Adapter Hose over the Drain-Nipple. Use the included Hose-Clamp if necessary to effect a complete seal
- 2) Open the Drain-Nipple as prescribed by the Vehicle's OEM
- 3) Connect the Adapter to the end of the Service Hose (E)
- 4) Use the Tool as you normally would
- 5) Reverse these procedures to end the connection to the Radiator & remove the Adapter from the Radiator's Drain-Nipple

# FluidXchange Operating Instructions

(Revised 9-2022)

## Inject Coolant

- 1) Remove Vehicle Surge-Tank Cap
- 2) Connect shop air (regulated to 90 psi max) to manifold
- 3) Close in-hose ball-valve (A)
- 4) Place control manifold in pressure mode (C) up to 25 psi
- 5) Connect hose to cooling system Q/D Fitting (E)
- 6) Open in-hose ball-valve (A) to inject coolant
- 7) Add pressure to tank as needed to continue to inject coolant
- 8) Tank will shut-off when completely empty to avoid injecting air into the cooling system
- 9) Do not over-flow cooling system surge-tank
- 10) Close in-hose ball-valve (A) when injection is complete
- 11) Disconnect hose from cooling system Q/D Fitting (E)

### **Instructional Videos:**

A complete set of Instructional Videos are available On-Line at [www.FLUIDXCHANGE.com](http://www.FLUIDXCHANGE.com).

### **Contact Information:**

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## Eliminate Trapped Air

- 1) As part of the Injection step, take these additional steps
- 2) Stop injecting coolant when a few inches of coolant reach the Surge Tank. Close in-hose ball-valve (A)
- 3) Disconnect hose from cooling system Q/D Fitting (E)
- 4) Attach Air Evacuation Stopper Handle to hose (F to E) or use the included Surge-Tank Cap with Fitting if it Fits
- 5) Clamp off any vent hoses/connections to the Vehicle Cooling System
- 6) Place control manifold in vacuum mode (C)
- 7) Seal Air Evacuation Stopper over Vehicle Surge-Tank opening
- 8) Open in-hose ball-valve (A) to apply vacuum
- 9) Amt of vacuum can be seen on gauge (C)
- 10) Watch air bubble in the Surge Tank as trapped air is removed from the cooling system
- 11) When air bubbles stop, close in-hose ball-valve (A)
- 12) Relieve vacuum on surge-tank and remove Air Evacuation stopper
- 13) Replace Air Evacuation Stopper Handle with Hand Valve (G to E)
- 14) Place control manifold in pressure mode (B) up to 25 psi
- 15) Open in-hose ball-valve (A)
- 16) Complete filling the Surge Tank using Hand Valve

## Cleaning and Maintenance of the Coolant Service Tool:

Dealing with contaminated coolant is always a concern. Identify on the front-end any contamination issues prior to coolant removal. If contaminated coolant has been removed into the Coolant Extractor, we recommend the following steps to clean the system.

- 1) Mix ½ cup low-foam detergent with 15 gallons of hot water.
- 2) Attach the hand-valve to the end of the hose connector, create a vacuum in the Tool tank, open the hose shut-off valve, and suck the soap & water solution into the Tool tank. Use the provided wand attachments as needed.
- 3) When the Tool tank is filled, continue to vacuum air thru the hand-valve into the tank to agitate the cleaning mixture inside. You can also shake the Tool to splash the soap & water to all areas inside the tank.
- 4) When finished, pressurize the Tank to remove the cleaning mixture. The fluid will contain contaminants when removed so please dispose of the mixture properly.
- 5) You can repeat this process as needed for severe contamination.
- 6) The last cycle should be a rinse with clean water.