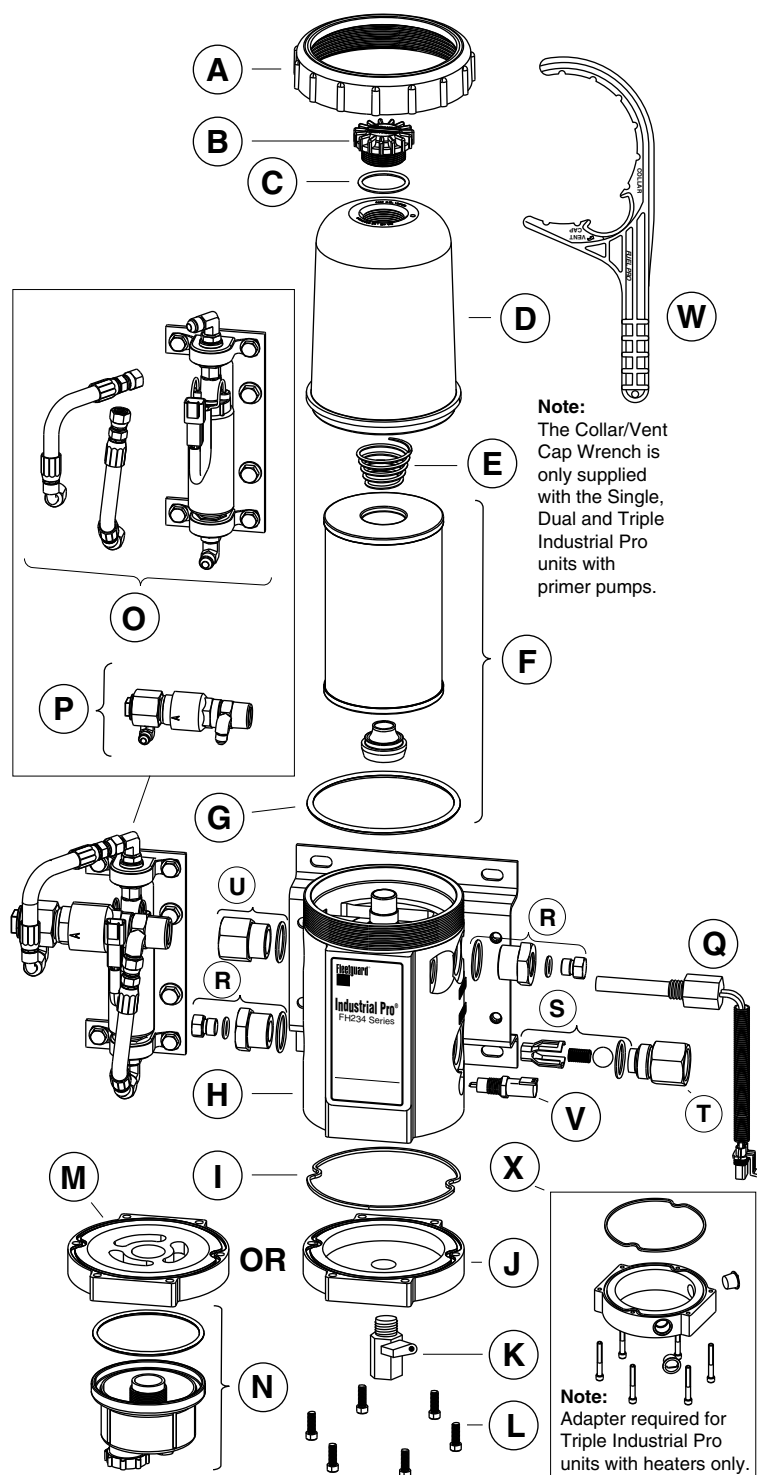


Industrial Pro® FH234 Series Filter/Separator/Warmer Installation Instructions

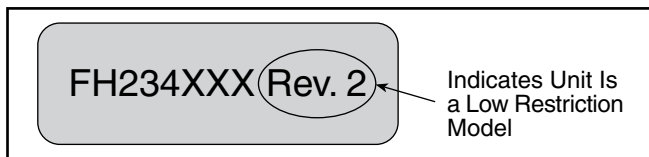


Part	Description	Part Number
A	Collar	3946706 S
B	Vent Cap	Vent Cap and Assembly
C	O-Ring	3944440 S
D	Cover	3946705 S
E	Filter Spring	3944441 S
F	Filter Element (includes Grommet and O-Rings)	See page 6
G	O-Ring Pack - included with each replacement element Biodiesel Gasket Pack - only required for >B5 Biodiesel fuel (use each filter change)	3944449 S 3950445 S
H	Industrial Pro®	See page 9
I	Bottom Seal	3945125 S
J	Bottom Plate	3956011 S
K	Drain Valve	3944453 S
L	Bottom Bolts (6)	3946704 S
M	Bottom Plate	3947502 S
N	Bowl Assembly and Bowl Assembly Seal	3960670 S
O	Primer Pump Kit (Pump, Hoses, Bracket, and Vibration Isolators): Single unit only Dual/Duplex/Triple/Triplex only	3961286 S 3961287 S
P	Primer Pump Fitting Set: Single unit only Dual/Duplex only Triple/Triplex only	3961283 S 3961284 S 3961285 S
Q	12 VDC Combo Thermo/Heater 24 VDC Combo Thermo/Heater	3959754 S 3959755 S
R	SAE 3/4" Plug with M14 Diagnostic Port and O-Ring Seal	Not Service Replaceable
S	Check Valve Service Kit (Single unit only)	3944447 S
T	Check Valve Body: Single unit only Dual/Duplex/Triple/Triplex only	3957159 S 3954139 S
U	SAE 1 1/4" Plug (3/4" Plug for Single unit only) with O-Ring Seal	3957160 S
V	Water-In-Fuel (WIF) Sensor	3957158 S
W	Collar/Vent Cap Wrench	3944451 S
X	Heater/Thermoswitch Adapter	3956562 S
Not Shown	WIF Wiring Harness	3950729 S
	WIF LED	3946670 S
	120 V AC Heater	3945121 S

Note: The WIF sensor is not included, but can be purchased separately.

CAUTION: These instructions are intended for use by professional mechanics who are trained in the proper use of power and hand tools, using appropriate safety precautions (including eye protection).

Note: Effective March 2006, Fleetguard switched to a lower restriction design for the Industrial Pro® series. These low restriction units have some dimension changes and a significant reduction in overall restriction of between 3.4 - 6.8 kPa (0.49 - 0.98 lb/in²), depending on the model. The low restriction units can be identified by the label located on the right side of the unit. The part number will contain "Rev. 2" if it is a low restriction unit. This revision number does not appear on the originally designed units. For detailed dimension information, refer to the Technical Bulletin for that model.



Service Kit Installation

This system must be installed between the fuel tank and the transfer fuel pump on the suction side of the fuel system. It **can be used as the only fuel filter in the fuel system** by removing the existing filter and heads, or remove the filters only and replace with special Diverter Caps (sold separately - see Table 1).

Note: If the Industrial Pro is used as the primary filter and a secondary filter is required, secondary filter life may be extended.

Table 1 - Diverter Caps

Diverter Cap Part Number	Required Filter Head Stud Size	Required Filter Head Seal ID	Required Filter Head Seal OD
3945182 S	1"-14	2.475"	2.895"
3945183 S	1"-14	3.225"	3.435"
3945184 S	M16 x 1.5	2.475"	2.895"
3945185 S	3/4" x 16	2.475"	2.895"
3945186 S	7/8" x 14	2.475"	2.895"
3945187 S	M18 x 1.5	2.475"	2.895"
3945188 S	13/16" x 12	3.225"	3.235"

Note: Diverter Caps for FS1216 and FS1006 not included.

WARNING: When diesel fuel is circulated through an operating engine, it can become very hot. To prevent personal injury:

Scalding hazard! Do not allow heated liquid fuel to come in contact with eyes or unprotected skin. Always allow the engine and fuel to cool to ambient temperature before replacing the fuel filter or performing service operations which could result in the spillage of fuel from the fuel system. If this is not possible, protective clothing (face shield, insulated hat, gloves, apron) must be worn.

Heated diesel fuel can form combustible vapor mixtures in the area around the fuel source. To eliminate the potential for fire, keep open flames, sparks or other potential ignition sources away from the work area, and do not smoke during filter replacement or service operations which could result in the escape of diesel fuel or fuel vapors.

Always perform engine or vessel fuel system maintenance in a well ventilated area that is kept free of bystanders.

Installation Steps

1. With the engine shut down and at ambient temperature, close the fuel shutoff valve (if equipped) and place a suitable container under the fuel filters.
2. Remove the primary fuel filter element assembly, sediment, and/or water separator. Drain the used element and dispose of it in an environmentally responsible manner, according to state and/or federal (EPA) recommendations. The fuel can be returned to the tank.
3. For a one-filter system, select the required secondary filter head diverter cap from those listed in Table 1. The required part number is determined by the size of the spin-on filter stud and the filter sealing surface diameter.

The Industrial Pro is designed to provide total engine filtration, when fitted with the appropriate filter to meet OEM engine specifications. Installation of the Industrial Pro should be on the suction side of the fuel system. Introducing the Fuel Processor to

more than 30 lb/in² (2.07 bar) at any time can cause unit failure or give false information regarding filter life.

Install the diverter cap on the secondary filter head as follows:

- a. Remove the secondary fuel filter element, drain and dispose of it in an environmentally responsible manner according to government regulations (i.e., state/province, federal, etc.). The fuel can be returned to the tank.
 - b. Lightly lubricate the seal on the top of the diverter cap with Loctite® 76747 antiseize.
 - c. Thread the adapter onto the secondary filter stud and tighten by hand plus 1/2 turn further.
 - d. Install the "Do Not Remove" sticker on the diverter cap.
4. Mount the Industrial Pro® in the desired location keeping the following points in mind:
- a. **Mounting the Industrial Pro directly on the engine is NOT RECOMMENDED.**
 - b. Mount vertically with the cover and element pointing up.
 - c. Make sure there is enough top and side clearance for the cover to be conveniently removed for filter replacement.

⚠ CAUTION: The Industrial Pro functions BEST when installed so that the Filter Element is above the "FULL" level of the fuel tank. The housing can be installed up to 6' (1.8 m) below the "FULL" level of the fuel tank. Installing below the "FULL" level causes the starting level to be higher than normal. If mounted below full tank level, a shut off valve will be required at the inlet to allow filter changes without overflow of fuel. Mounting below 6' (1.8 m) eliminates the Seeing is Believing functionality.

5. For NPTF installations, skip to Step 6. If metric connections are required, metric adapter fittings are available. For Single Industrial Pro units, use part no. 3954136 S (which includes an outlet M26 x 1.5 outlet fitting, M26 x 1.5 inlet fitting with check valve body, check valve ball, check valve retainer, and check valve spring) and install to inlet and outlet ports of housing.

For Dual, Duplex, Triple, or Triplex units, use part no. 3956561 S (which contains two M42 x 1.5 fittings) and install to inlet and outlet ports of assembly.

6. Route the fuel supply line from the fuel tank to the Industrial Pro inlet (see Figure 1). Route a fuel line from the Industrial Pro outlet to the fuel pump inlet.

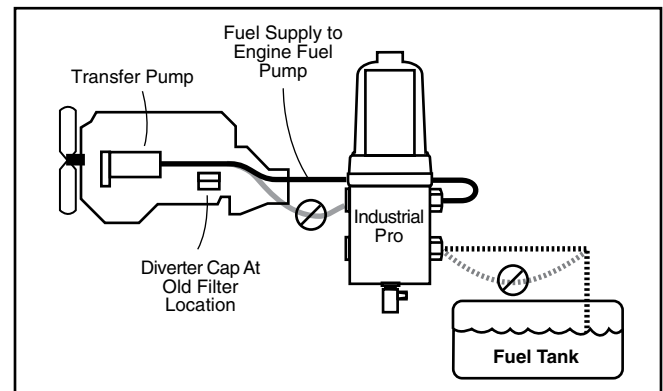


Figure 1 - Industrial Pro Connections

⚠ CAUTION: To avoid fuel line water traps that can freeze in cold conditions and restrict, or block, the flow of fuel to the engine, be certain that there are no low spots in the hoses when routing them in the engine compartment.

For Dual/Duplex and Triple/Triplex systems, if a check valve is required, part no. 3954139 S must be purchased and installed at or near the inlet of the Industrial Pro assembly (see Figure 2).

Note: When the engine is shut off, fuel levels may drop until the engine is restarted.

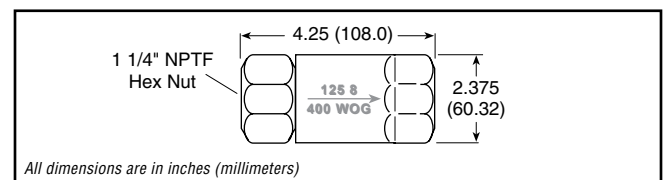


Figure 2 - Check Valve

Note: Check valve will add an additional 2" Hg (0.98 lb/in² or 0.067 bar). Make sure the system can handle the additional restriction.

7. To minimize restrictions, observe the following guidelines when plumbing the system.
 - a. Keep the fuel line routing as smooth as possible with no low hanging loops which can trap water.
 - b. Use 90° elbows only when necessary.
 - c. If the fuel hoses are made up to length on the job, be sure that the inner liner of the fuel hose is not cut by the fitting, creating potential check valve effects. Also make sure hoses are clean and free of debris before installing.

⚠ CAUTION: To avoid damaging the aluminum fuel housing, do not overtighten fuel lines or fuel line fittings.

8. Apply Teflon® pipe sealant to the inlet and outlet hose threads and connect the hoses to the unit.

Installing a WIF (Water In Fuel) Probe

1. Install the WIF Probe (3957158 S) into the side of the Industrial Pro® (see Figure 3). Torque to 20-25 in-lbs (2.3-2.8 N·m).

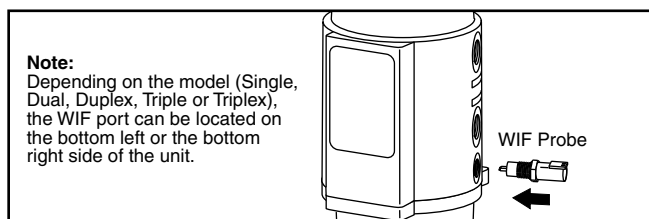


Figure 3 - WIF Probe Installation

2. Install the WIF wiring harness (3950729 S) on WIF Probe. The harness has the following connections: 12" (304.8 mm) black ground lead with a 3/8" (9.53 mm) diameter loop end and a 72" (1828.80 mm) green WIF wire.
3. Drill 1/2" (12.70 mm) hole in the control panel where the WIF LED (3946670 S) is to be located.
 - a. Installation must have 1.5" (38.10 mm) of clearance behind dash or control panel.
 - b. Use caution not to damage nearby components when drilling.
4. Install WIF LED by pressing firmly into the drilled hole.
5. Connect the 4" (101.60 mm) black ground wire on WIF LED to a ground source. Attach additional black wire as needed.
6. Connect the 12" (304.8 mm) black ground lead with a 3/8" (9.53 mm) diameter loop end on the WIF wiring harness to ground source near Fuel Processor (if applicable).

7. Connect 72" (1828.80 mm) green signal wire on WIF wiring harness to 4" (101.60 mm) green signal wire on WIF LED. Use additional green wire as needed.
8. Locate 12 VDC or 24 VDC power source. Run red wire from power source to 4" (101.60 mm) red wire on WIF LED. Add a 10 A in-line fuse (not included). (See Figure 4.)

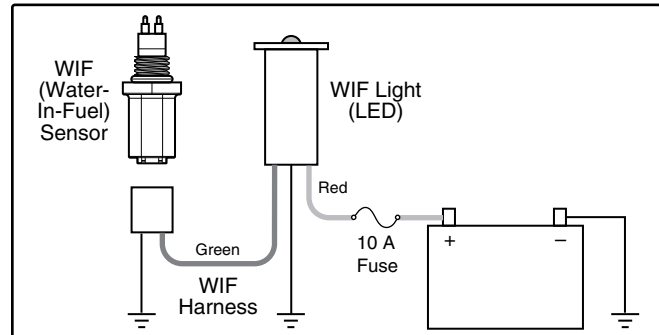


Figure 4 - WIF Wiring

Note: Use appropriate connectors to attach the wires. To test the WIF indicator, pour water into the body of the fuel processor until it covers the WIF probe. The WIF LED should illuminate. The volume of fluid necessary to turn the WIF indicator on is 34.92 oz ± 0.33 oz (1033 mL ± 10 mL).

Installing an Optional Electric Heater

All units come with pre-drilled ports to allow for Combo Thermo/Heaters. Dual/Duplex and Triple/Triplex units will require two or three heaters respectively.

Table 2 – 12 and 24 VDC Combo Thermo/Heaters

Part Number	Description
3959754 S	12 VDC Combo Thermo/Heater
3959755 S	24 VDC Combo Thermo/Heater

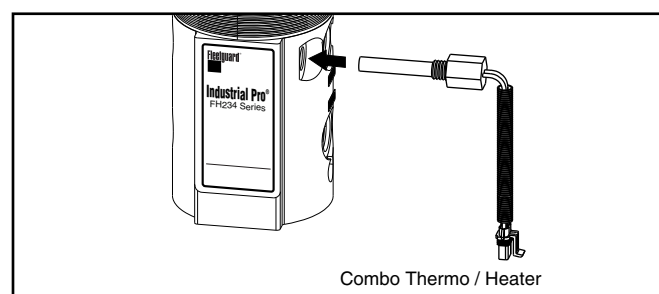


Figure 5 - Single Combo Thermo/Heater Installation

To install, follow the wiring diagram in Figure 6.

Refer to equipment owner's manual for more specific information related to wiring diagrams of the equipment to which the unit will be applied.

Note: When wiring the Electric Preheater, use a fuse NOT a circuit breaker.

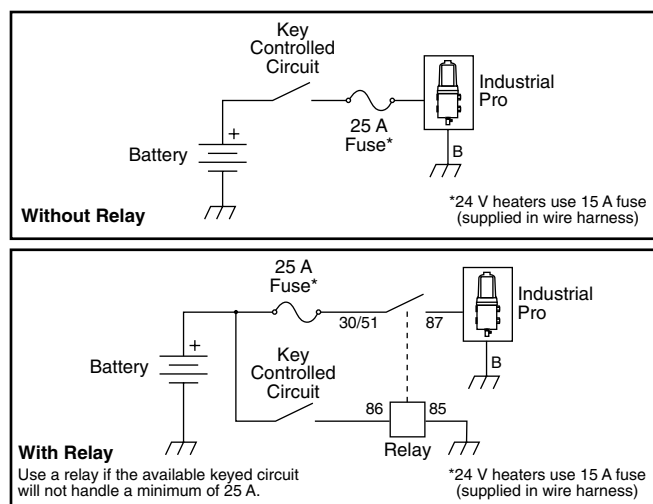


Figure 6 – Heater Wiring Options

For systems with multiple Industrial Pro® units, the preheater must be split in the Junction Box. See Figure 7 for wiring a Dual/Duplex or Triple/Triplex systems.

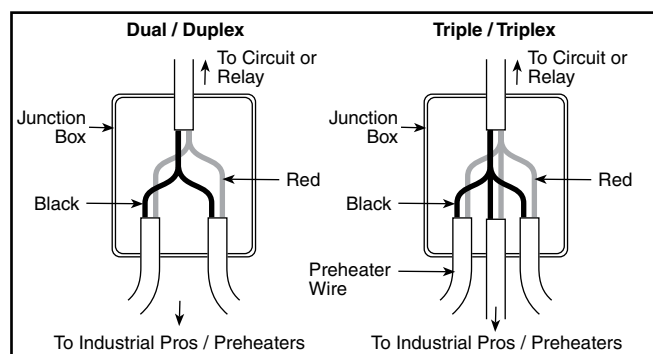


Figure 7 – Wiring Multiple Filter Systems

To Install a 120 VAC Heater:

1. Electric preheaters are optional and must be ordered separately.

Table 3 - 120 VAC Heaters

Part Number	Description
3945121 S	120 VAC/75 W Heater
3945126 S	Single Cordset
3946716 S	Y Cordset (Y cord to processor and block heater w/ locking ring)

2. If a 120 VAC Heater is not already installed, remove the 1/2" NPT plug from the side of the Industrial Pro and install the 120 VAC Heater. Torque to 15-30 ft-lbs (20.3-40.7 N-m). (See Figure 8.)

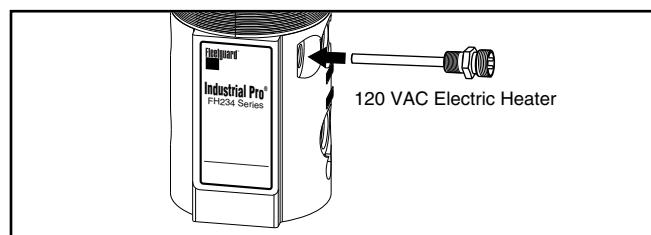


Figure 8 – 120 VAC Heater Installation

3. Two types of cordsets are available for the 120 VAC/75 W heater(s) (see Figure 9).
4. Plug the power cord into a 120 V receptacle.

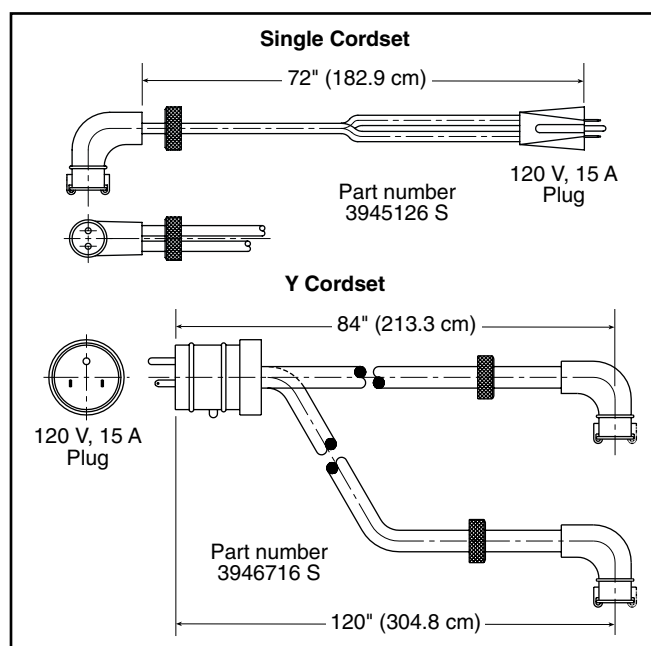


Figure 9 – Electric Heater Cordsets

Installing a Heater Spacer

A heater spacer (part no. 3956562 S) is required for the Triple/Triplex center unit only (see Figure 10). The left and right units of the Dual/Duplex or Triple/Triplex units have ports available for the heaters.

1. Turn off the engine. Drain all the fuel from the Industrial Pro®.
2. Remove the six 1/4"-20 cap screws holding the bottom plate to the unit. Discard the cap screws.
3. Clean any dirt or debris off the bottom plate and seal.
4. Install the o-ring on the heater adapter.
5. Line up the bottom plate and the heater space with the body.
6. Install six 1/4"-20 cap screws in the bottom plate and finger tighten.
7. Tighten bolts in a star pattern to 14 in-lbs.
8. Install the Combo Thermo/Heater.

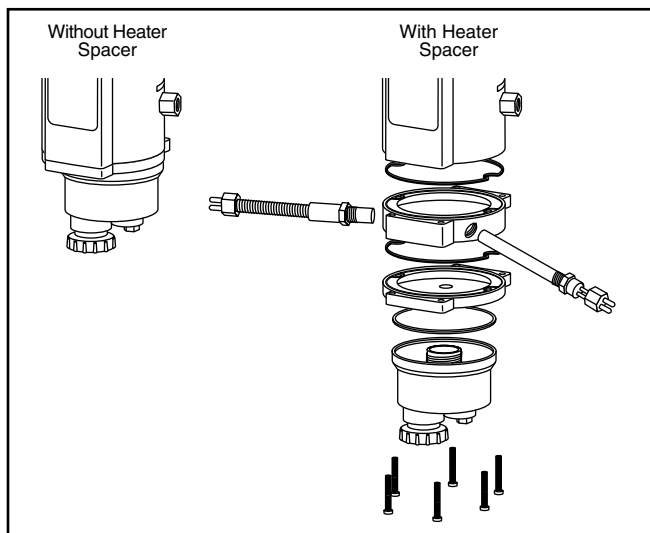


Figure 10 – Heater Spacer Installation

Filter Change Procedure

Changing the Filter in a Single Industrial Pro

1. Turn off the engine. Loosen the vent cap to break the air lock in the filter.
2. Open the drain valve and drain the fuel level below the collar, then close the drain valve. Dispose of the fuel in an environmentally responsible manner, according to state and/or federal (EPA) or national recommendations.
3. Using the Collar/Vent Cap Wrench (part number 3944451 S), remove the clear cover from the fuel

processor by removing the collar. Discard the o-ring from the base of the cover. (A new o-ring seal is supplied with the new filter.) Remove the filter element from the Industrial Pro by pulling upward and twisting slightly. Be sure the sealing grommet is removed from the center stud.

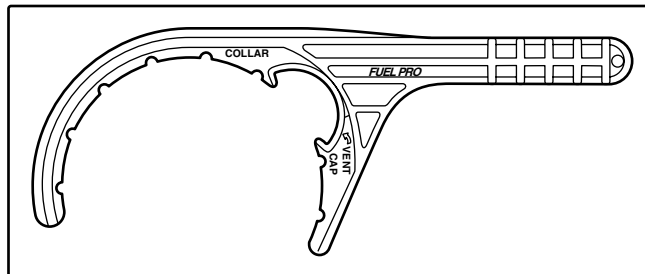


Figure 11 – Collar/Vent Cap Wrench

4. Install the new filter element (supplied with a Sealing Grommet already inserted into the element) on the processor center stud by pushing down and twisting slightly. After checking to make sure the new o-ring seal (supplied with the filter) at the base of the cover is in place, install the cover and collar. Hand tighten the collar until seated. **Do not use tools to tighten.**

Table 4 – Industrial Pro Replacement Filters

Part Number	Description
FS19766	EleMax™ Stratapore™ 2 micron (plus size)
FS19763	EleMax Stratapore 7 micron (plus size)
FS19764	EleMax Stratapore 10 micron (plus size)
FS19765	EleMax Stratapore 25 micron (plus size)
FS19729	EleMax Cellulose 50 micron

Note: The common filter sizes for the Industrial Pro FH234 Series, Fuel Pro FH230 Series and Diesel Pro FH233 Series are FS19761 (2 µm), FS197624 (7 µm), FS19727 (10 µm), FS19728 (25 µm), and FS19729 (50 µm).

5. Remove the vent cap from the top of the clear cover by turning the vent cap counterclockwise. Fill the clear cover with enough clean fuel to cover the bottom half of the filter element. Make sure the new o-ring (supplied with the filter) is installed on the vent cap. Reinstall the vent cap and **tighten by hand only.**
6. Start the engine. When the lubrication system reaches its normal operating pressure, increase engine RPM for one minute.

Note: The clear filter cover will not fill completely during engine operation. It will gradually fill over time as the filter becomes clogged. The filter element does not need to be changed until the fuel level has risen to the top of the filter element.

Changing the Right or Left Filter in a Duplex or Triplex Unit (see Figure 12)

⚠ CAUTION: If the full flow capability of all units is utilized in a prime power generation application, external filtration must be provided while the Industrial Pro® unit is being serviced. Also, in prime power generation applications, units may occasionally need to be isolated to drain the water although the filter may not need changing.

1. Leave the engine running.
Original Model: To change the right filter in an original model, rotate the valve handle until the arrow on the valve points to Left Only. To change the left filter in an original model, rotate the valve handle until the arrow on the valve points to Right Only.
Low Restriction REV2 Model: To change the right filter in a low restriction model, swing the handle to the OFF position on the right side filter. To change the left filter in a low restriction model, swing the handle to the OFF position on the left side filter.

Note: On the original model, be certain that the valve handle points directly at the arrow for the desired selection (Both in Operation, Both Off, Right Only or Left Only).

2. Place a drain pan or other appropriate container under the filter to be replaced.
3. Loosen the vent cap on the filter to be replaced to break the air lock in the filter.
4. Open the drain valve and drain the fuel level below the collar, then close the drain valve.
5. Using the Collar/Vent Cap Wrench (part number 3944451 S), remove the clear cover from the fuel processor by removing the collar. Discard the o-ring from the base of the cover. (A new o-ring

seal is supplied with the new filter.) Remove the filter element from the Industrial Pro by pulling upward and twisting slightly. Be sure the sealing grommet is removed from the center stud. Dispose of the filter in an environmentally responsible manner, according to state, federal (EPA), national, and/or global environmental recommendations.

6. Install the new filter and grommet on center stud.
7. Place the new cover o-ring, cover and collar over the filter.
8. Press down on cover, holding it in place, while hand tightening the collar until seated. **Do not use tools to tighten.**
9. Fill the clear cover with enough clean fuel to cover the bottom half of the filter element. Make sure the new o-ring (supplied with the filter) is installed on the vent cap.
10. Install the vent cap. **Tighten by hand only.**
11. **Original Unit:** Rotate the valve handle (see Figure 9) until the arrow points to Both in Operation or to the Single unit to be in operation.
Low Restriction REV2 Unit: Swing the valve handle of the serviced unit to the ON position.

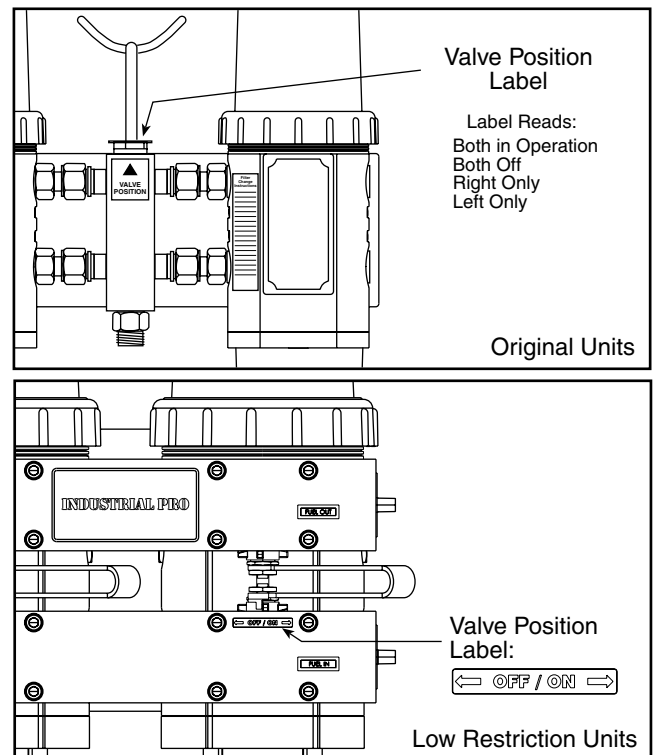


Figure 12 – Valve Position Label Location

12. Raise the RPM for one minute to purge the air from the system.

Changing the Center Filter in a Triplex Unit

1. Leave the engine running. For the original model, Rotate the valve handle on the right hand unit until the arrow on the valve points to Right Only, then rotate the valve handle on the left hand unit until the arrow on the valve points to Left Only. For Low Restriction REV2 models, swing both the right and left valve handles to the ON position and the center unit valve handle to the OFF position.
2. Follow steps 2 - 10 in the previous section.
3. **Original Unit:** Rotate either the left or the right valve to "Both in Operation."
Low Restriction REV2 Unit: Swing the center valve to the ON position.

Priming the System

Note: It is not necessary to prime the Single, Dual and Triple units equipped with a primer pump.

1. Check to make sure the drain valve at the base of the Industrial Pro® is closed. Close the fuel shutoff valve (if equipped).
2. Remove the vent cap from the top of the clear cover. Fill the Industrial Pro full of clean fuel. Reinstall the vent cap and **tighten by hand only**.
3. Open the fuel shutoff valve (if equipped). Start the engine. When the lubrication system reaches its normal operating pressure, increase engine speed to high idle for one to two minutes. After the air is purged, loosen the vent cap until the fuel level lowers to just above the collar. **Tighten the vent cap by hand only.**

- Note:** The clear filter cover will not fill completely during engine operation. It will gradually fill over time and the fuel level will rise as the filter becomes clogged.
4. Hand tighten the collar again while the engine is running. **To avoid damage, do not use tools to tighten the collar.**

⚠ CAUTION: To avoid damaging the aluminum fuel processor body, do not overtighten fuel lines or fuel line fittings.

Emergency Temporary Filter Replacement

In the event of an emergency, the Industrial Pro accepts a standard spin-on filter.

1. Depending on the unit (Single, Duplex or Triplex), follow the filter change instructions until the filter and grommet have been removed.
2. Install an engine spin-on filter (part number FF105, for example) on the threaded stud.
3. Install the cover, spring, seal and collar over the filter for later reuse and to guard against loss.
4. Start the engine. Raise the RPM for one minute to purge the air from the system.

Draining Contaminants

1. Turn off the engine and open the filter vent.
2. Place a cup under the drain valve at the base of the Industrial Pro and open the drain valve.
3. Water will flow into the cup. When fuel begins to flow out of the drain, close the drain valve. (Drain the minimum amount of fuel possible.)
4. Close the filter vent.
5. Start the engine. Raise the RPM for one minute to purge the air from the system.

Suggested Preventive Maintenance

Weekly – Drain water.

Every Filter Change – Change o-rings and grommet (included with new filter). For biodiesel applications, order gasket kit part no. 3950445 S (or part no. 3957345 S for units with a clear bowl).

Every 12 Months – Check all electrical connections for corrosion. Check all fuel fittings for leaks.

Extreme winter or salt corrosion environments may require lubrication of the top collar threads with Loctite® 76747 antiseize every 180 days.

Ordering Information

Housing Part Number	Filter Element	Filter Element Type	Micron Rating ¹	Fuel Flow gal/hr (L/hr)	Primer Pump	DP ² Gauge	WIF ³	Drain	Check Valve	Heat	Fuel In & Fuel Out	Fuel In & Fuel Out Port Size	Fuel In & Out Port Size ⁴ (metric)
Industrial Pro® Single													
FH23400	FS19763	Cartridge	7	200 (757)	No	No	Optional	Yes	Yes	N/A	Left or Right	3/4" NPT	M26 x 1.5
FH23402	FS19763	Cartridge	7	200 (757)	No	No	Optional	Yes	Yes	12 VDC	Left or Right	3/4" NPT	M26 x 1.5
FH23401	FS19763	Cartridge	7	200 (757)	No	No	Optional	Yes	Yes	24 VDC	Left or Right	3/4" NPT	M26 x 1.5
FH23453	FS19765	Cartridge	25	200 (757)	No	No	Optional	Yes	Yes	24 VDC	Left or Right	3/4" NPT	M26 x 1.5
Industrial Pro Single with Primer Pump													
FH23457	FS19763	Cartridge	7	200 (757)	Yes	No	Yes	Yes	Yes	Ports Available	In Right/Out Left	3/4" NPT	M26 x 1.5
FH23466	FS19763	Cartridge	7	200 (757)	Yes	No	Yes	Yes	Yes	Ports Available	In Right/Out Left	3/4" NPT	M26 x 1.5
Industrial Pro Dual (No shutoff valve)													
FH23435	FS19765	Cartridge	25	400 (1514)	No	No	Optional	Yes	No	Ports Available	Left or Right	1-1/4" NPT	M42 x 2
FH23439	FS19763	Cartridge	7	400 (1514)	No	No	Optional	Yes	No	Ports Available	Left or Right	1-1/4" NPT	M42 x 2
Industrial Pro Dual with Primer Pump (No shutoff valve)													
FH23458	FS19763	Cartridge	7	400 (1514)	Yes	No	Yes	Yes	Yes	Ports Available	In Right/Out Left	1-1/4" NPT	M42 x 2
Industrial Pro Duplex (Includes shutoff valve)													
FH23440	FS19763	Cartridge	7	400 (1514)	No	No	Optional	Yes	No	Ports Available	Left or Right	1-1/4" NPT	M42 x 2
Industrial Pro Duplex with Primer Pump (Includes shutoff valve)													
FH23467	FS19763	Cartridge	7	400 (1514)	No	No	Optional	Yes	No	Ports Available	Left or Right	1-1/4"-11.5 NPT	M42 x 2
Industrial Pro Triple (Includes shutoff valve)													
FH23441	FS19763	Cartridge	7	600 (2271)	No	No	Optional	Yes	No	Ports Available	Left or Right	1-1/4" NPT	M42 x 2
Industrial Pro Triple with Primer Pump (Includes shutoff valve)													
FH23459	FS19763	Cartridge	7	600 (2271)	Yes	No	Yes	Yes	Yes	Ports Available	In Right/Out Left	1-1/4" NPT	M42 x 2
Industrial Pro Triplex (Includes shutoff valve)													
FH23438	FS19763	Cartridge	7	600 (2271)	No	No	Optional	Yes	No	Ports Available	Left or Right	1-1/4" NPT	M42 x 2
Industrial Pro Triplex with Primer Pump (Includes shutoff valve)													
FH23468	FS19763	Cartridge	7	600 (2271)	Yes	No	Optional	Yes	No	Ports Available	Left or Right	1-1/4"-11.5 NPT	M42 x 2

¹ Other filter options at different micron ratings are available.

² DP = Differential Pressure

³ Water-In-Fuel sensor (WIF), part number **3957158 S**, available separately.

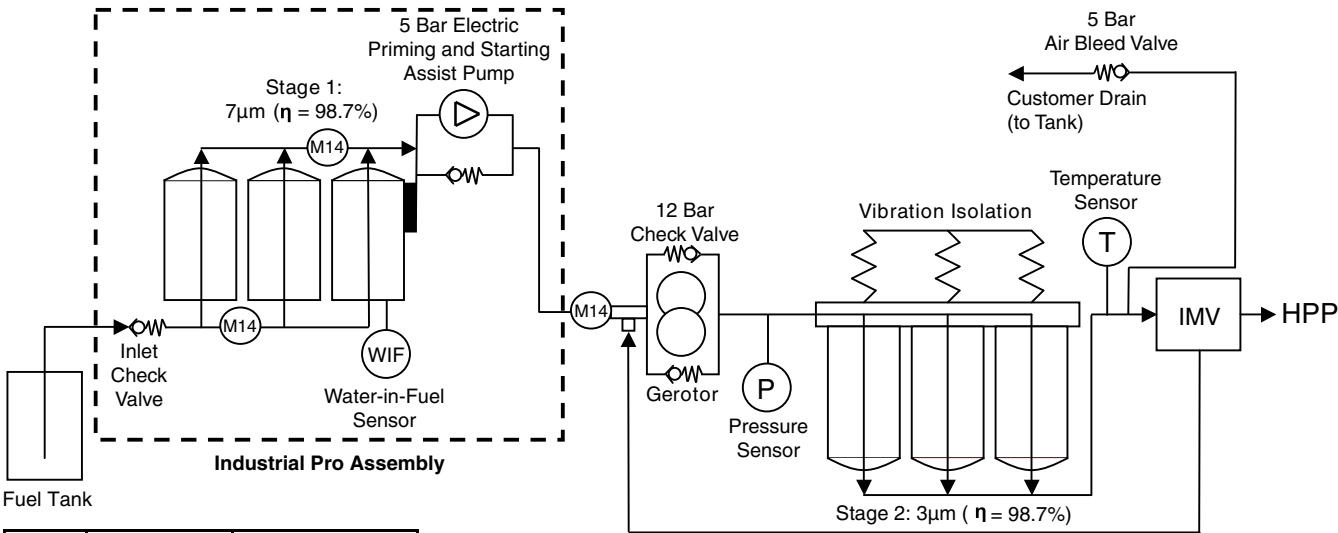
⁴ Metric connections require metric adapter fittings. For M26 x 1.5 fittings, use part no. **3954136 S** (which includes an outlet M26 x 1.5 outlet fitting, M26 x 1.5 inlet fitting with check valve body, check valve ball, check valve retainer, and check valve spring) and install to inlet and outlet ports of housing. For M42 x 2 fittings, use part no. **3956561 S** (which contains two M42 x 2 fittings) and install to inlet and outlet ports of assembly.

Specifications

Specification	Single	Dual/Duplex	Triple/Triplex
Height Overall	19.02" (483.1 mm)	18.81" (477.9 mm)	18.79" (477.2 mm)
Depth Overall	7.27" (187.2 mm)	10.47" (265.8 mm)/11.04 (280.4)	10.46" (265.8 mm)/11.04 (280.4)
Width, max	6.30" (160.0 mm)	18.75" (476.3 mm)	22.24" (564.9 mm)
Mt. Brkt. Centers (Vert.)	4.25" (108.0 mm)	6.60" (167.6 mm)	6.60" (167.6 mm)
Mt. Brkt. Centers (Horiz.)	5.20" (132.0 mm)	6.75" (171.5 mm)	6.75" (171.5 mm)
Weight (Dry)	17 lbs (7.7 kg)	51 lbs (23.1 kg)	70 lbs (31.75 kg)
Fuel Capacity (w/o filter)	0.37 gal (1.4 L)	0.74 gal (2.8 L)	1.11 gal (4.2 L)
Fuel Connections	3/4" NPT (M26 x 1.5)	1 1/4" NPT (M42 x 2)	1 1/4" NPT (M42 x 2)
Fuel Flow Rate	200 gal/hr (757 L/hr)	400 gal/hr (1515 L/hr)	600 gal/hr (2272 L/hr)
Recommended Applications	Heavy Duty Engines	Heavy Duty Engines	Heavy Duty Engines
Water Trap Capacity	20.3 fl oz (600 ml)	40.6 fl oz (1200 ml)	60.9 fl oz (1800 ml)
Filter Service Clearance	Min. 3.5" (88.9 mm)	Min. 3.5" (88.9 mm)	Min. 3.5" (88.9 mm)
Electrical Heater	One Heater Required: 12 VDC, 250 W, 21 A ± 3 A 24 VDC, 250 W, 10 A ± 2 A	Two Heaters Required: 12 VDC, 250 W, 21 A ± 3 A 24 VDC, 250 W, 10 A ± 2 A	Three Heaters Required: 12 VDC, 250 W, 21 A ± 3 A 24 VDC, 250 W, 10 A ± 2 A
Primer Pump (Single, Dual and Triple Units Only)	Supply Voltage: 24 VDC Temperature Range: -20 °F (-29 °C) - 250 °F (120 °C)		
Fuel Types	Compatible for use with Diesel #1, Diesel #2, Kerosene, Biodiesel, and JP8		

Specifications subject to change without notice.

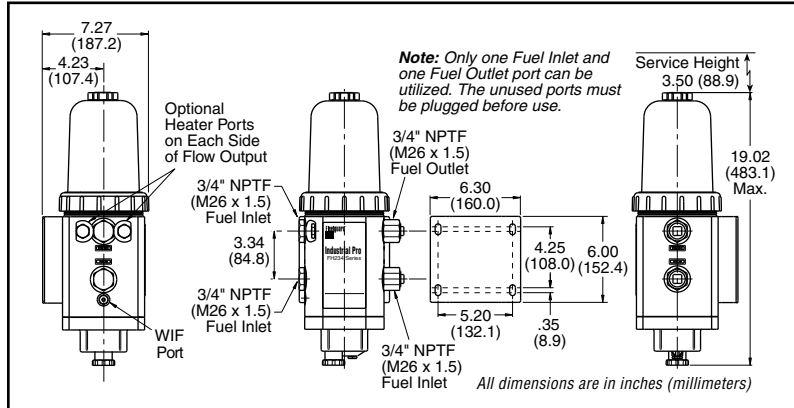
Cummins Tier 3 HHP (High Horsepower) System



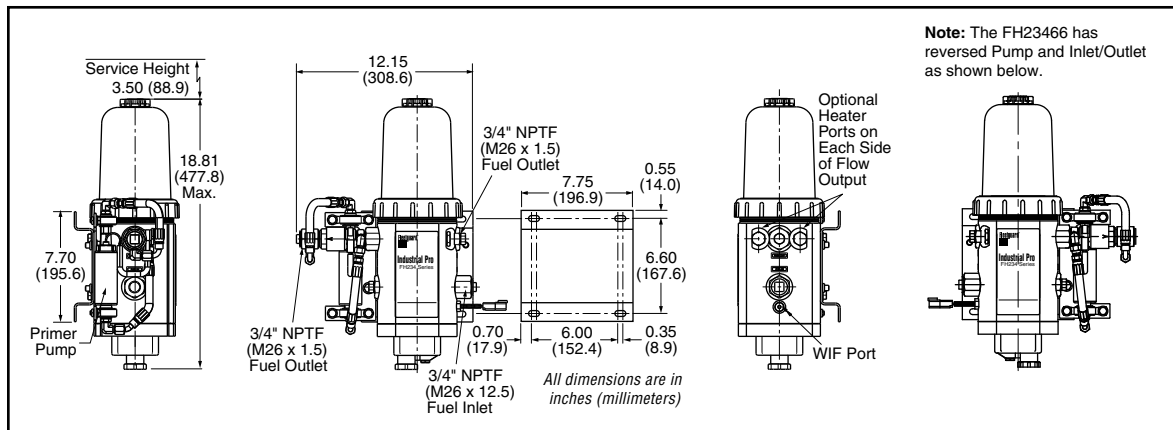
Engine	Number of Stage 1 Units	Number of Stage 2 Canisters
Q19	1 (4964097)	2 (FF5607)
Q38	2 (4964098)	3 (FF5607)
Q50	3 (4964099)	3 (FF5607)
Q60	3 (4964099)	3 (FF5607)

Dimensions

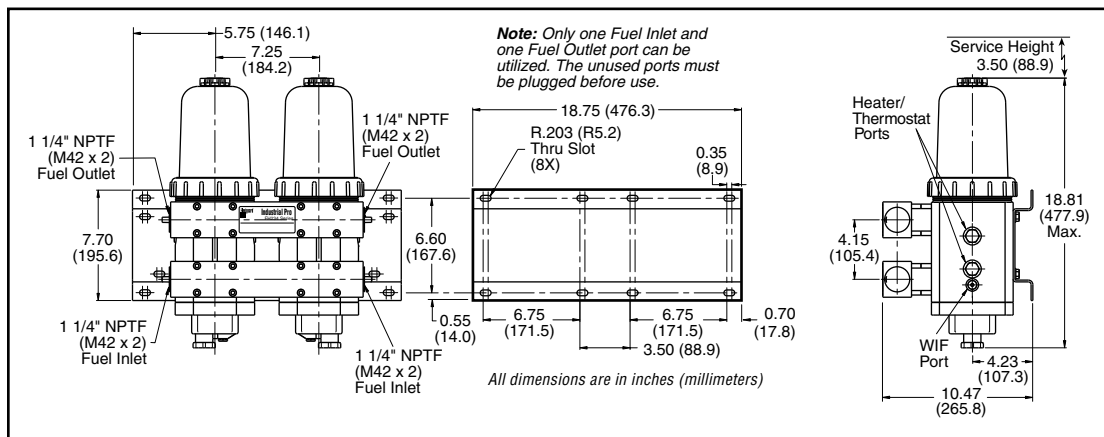
Industrial Pro® Single



Industrial Pro Single with Pump

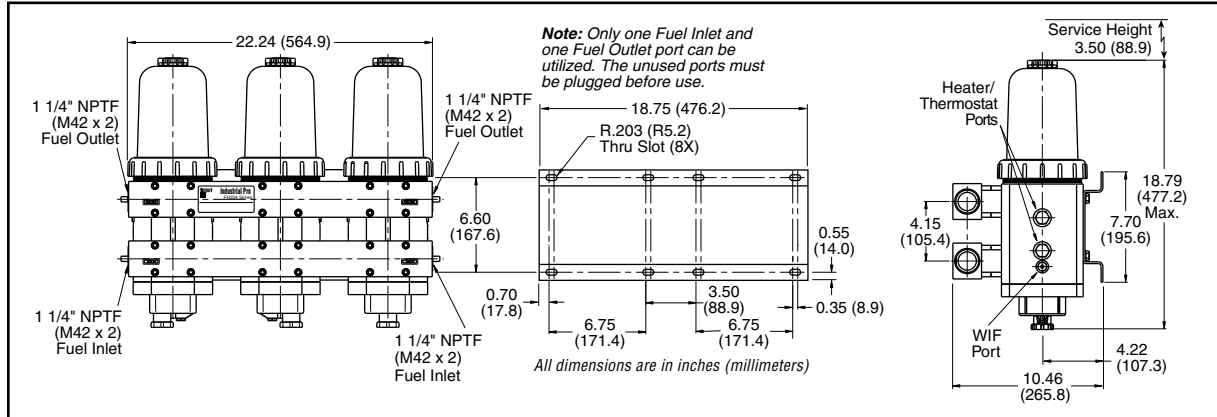


Industrial Pro Dual

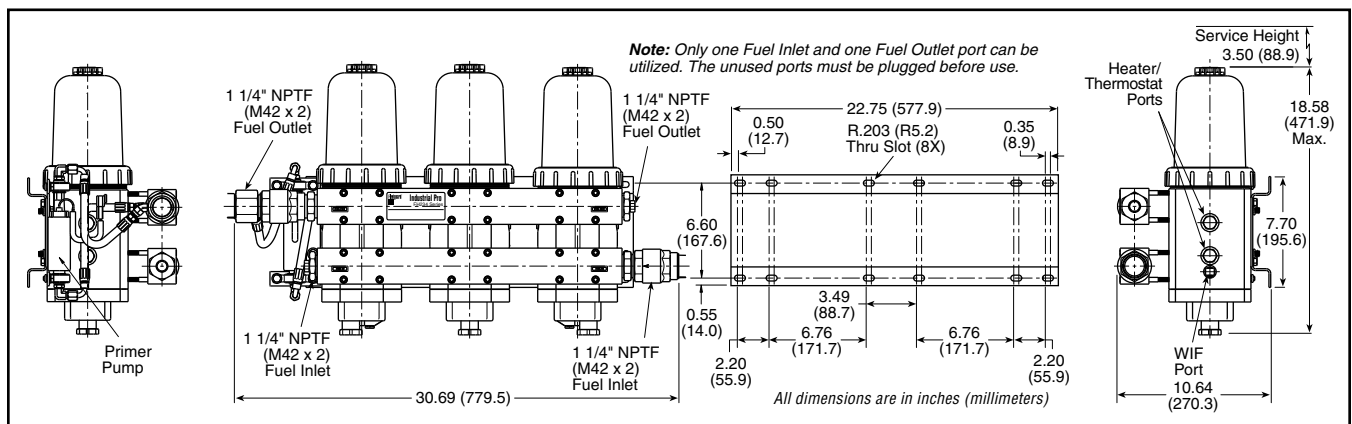


Dimensions

Industrial Pro® Triple



Industrial Pro Triple with Pump



Industrial Pro Triplex

