Product Catalog

Filtration Products and Accessories for
Fuel, Oil, Air, Water, Hydraulic and Gaseous Fluids.

Vibration Isolation Products for
Engines, Machines and Equipment.

Some FTG Customers:

FTG Product Lines

FTG, Inc. is a minority-owned small business with empowered employees who are entrepreneurs. We develop or offer innovative solutions for customers who demand quality and performance in the products used on their engines and equipment. With over 40 years of mobile, marine, industrial aviation, heavy duty parts and filtration experience, you can count on us.

Presented in this catalog is information to help you choose a product solution and any replacement parts for your needs.

This catalog highlights **FTG's** range of products in the following categories:

FTG, Inc.
3511 Finch Road
Modesto, CA 95357
www.ftginc.com

Technical Support
209-575-0500
support@ftginc.com

Fuel Filtration and Heaters

FTG, Inc.
3511 Finch Road
Modesto, CA 95357
www.ftginc.com

Technical Support
209-575-0500
support@ftginc.com

FS9 Series

For Gasoline, Kerosene, Diesel, Biofuels, Lube Oil or Hydraulic Fluid & Others

Simplify the job of filtration...

We offer a versatile housing that will accept various filter elements.

A modular system that is field customized by the end-user or factory configured.

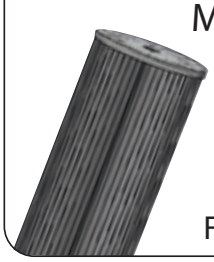
Step-filtration offers improved efficiencies, extends service intervals, and saves time and money.

Customers can install elements into the housings to mix & match for desired filtration efficiencies. Choose from cleanable, depth, or water repelling element.

Product Benefits:

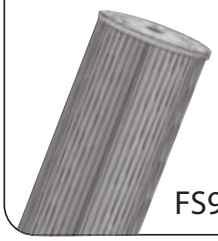
- Single, Two-stage or Three-Stage configuration
- All steel housing
- High flow rate
- Multiple fluids
- Various filter element types and efficiencies
- Series or step-filtration
- Application versatility
- Primary contaminant separation chamber
- Extended service interval
- American Bureau of Shipping Certificate of Design Assessment for housing
- Water-in-fuel detection
- Powder-painted

Cleanable Media



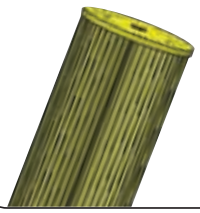
FS950

Depth Media



FS9DEP

Aquabloc® Media



2020

*Aquabloc® is a registered trademark of Parker Hannifin Corporation.

FS Series Step Filtration System

Specifications

Specifications	FS9-1	FS9-2	FS9-3
Maximum Flow Rate	300 gph / 1364 lph		
Port Size	3/4" Male NPT		
Height	17" / 43 cm		
Width	10" / 26 cm	22" / 56 cm	28" / 71 cm
Depth	14" / 36 cm		
Weight (dry)	10# / 4.6 kg	20# / 9.2 kg	30# / 13.8 kg
Maximum Working Pressure	30 psi / 2 bar		
H2O Removal Efficiency	99% (w/ 2020 elements)		
Working Temperature Range	-40˚ to +255˚F (-40˚ to +124˚C)		

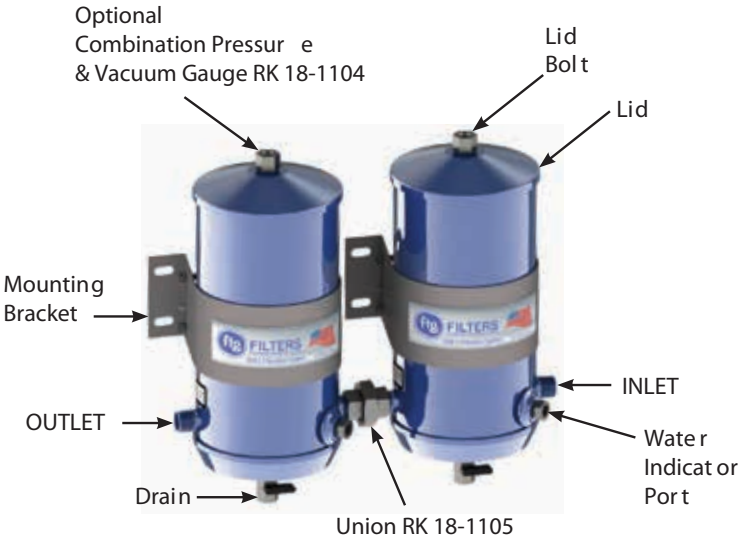
Single-Stage Configuration

Also available as FP9-2 or FP9-3 duplex and triplex versions.

Element Options	Media Type	Efficiency Rating	Initial Pressure Drop
FS950	Stainless Steel	50 micron	1 PSID
FS9DEP	Adsorbant depth	30 micron	3 PSID
2020PM-OR	Genuine Racor Aquabloc®	30 micron	2 PSID
2020TM-OR	Genuine Racor Aquabloc®	10 micron	2 PSID
2020SM-OR	Genuine Racor Aquabloc®	2 micron	2 PSID

Configurations

Customers can install elements into the housings to mix & match for desired filtration efficiencies. It is recommended to use higher micron rated elements in the upstream housing(s).



Two-Stage Configuration

Three-Stage Configuration

777R Series

Fuel Heater/Water Separator

The 777R assembly is a complete fuel filtration system that removes contaminants from fuel using the following two stage process:

Stage 1. As fuel enters the assembly, it moves through the centrifuge and spins off large solids and water droplets, which are heavier than fuel, and fall to the bottom of the collection bowl.

Stage 2. Proprietary Aquabloc® II cartridge elements repel water and remove contaminates from fuel down to 2 micron. They are waterproof and effective longer than water absorbing elements.

Specifications	
Maximum Flow Rate: (with diesel)	180 GPH (682 LPH)
Inlet/Outlet Port Size	½" NPT
Housing Material	Aluminum
Replacement Element	See Element Chart
Micron Rating	30
Minimum Service Clearance (above filter) (below filter)	6.0 in. (15.2 cm) 2.0 in. (5.1 cm)
Height	18.8 in. (47.8 cm)
Depth	6.8 in. (17.3 cm)
Width	8.1 in. (20.6 cm)
Weight (dry)	12.0 lb (5.4 kg)
Maximum Working Pressure[1]	30 PSI (2.1 bar)
Water Removal Efficiency	99%
Clean Pressure Drop	0.8 PSI (5.0 kPa)
Case Quantity	6
Ambient Temperature Range	-40° to +250°F (-40° to +121°C)
Maximum Fuel Temperature	190°F (87°C)

Notes: [1]Vacuum side installations only.

How to Order

(The example below illustrates how part numbers are constructed.)

777R30

Basic Model Number

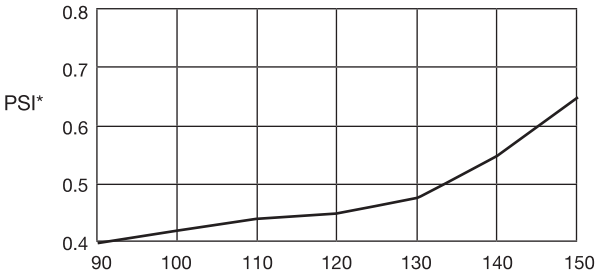
Specify:
02 for 2 micron
10 for 10 micron
30 for 30 micron

Replacement Elements		
2 micron (Final Filtration)	10 micron (Secondary Filtration)	30 micron (Primary Filtration)
6732S	**6732T**	**6732P**

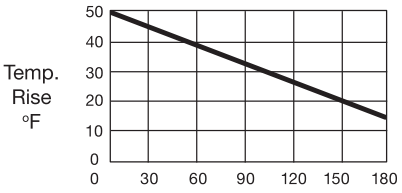
Note: Maintain 6 in. (15.2 cm) overhead clearance for servicing.

777R assemblies feature an internal thermostat to protect electric engine controls from overheating by the fuel heater and regulates fuel temperature automatically; warm fuel in the winter, cool fuel in the summer (thermostat setting: on at 40°F (4°C), off at 61°F (16°C). This filter also offers temperature controlled fuel heating with return fuel or engine coolant; thermostat valve open to 95°F (35°C). Other features include a fuel primer port on top of the assembly, a internal check valve that guards against loss of prime, a heavy duty integrated mounting bracket that is part of its one-piece billet machined body, a clear bottom bowl that allows the operator to check for water and solid contamination at a glance, and a self-venting drain. Optional accessories include a vacuum gauge and a water detection system.

Test Data



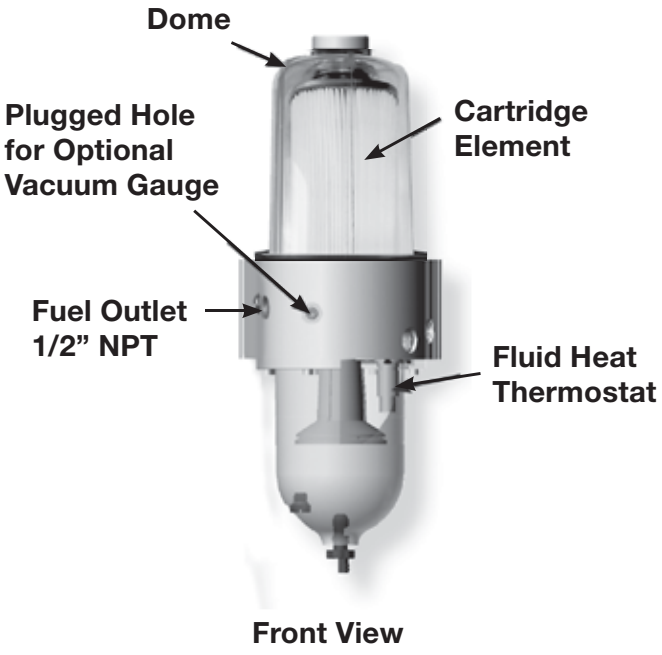
Fuel Flow Restriction



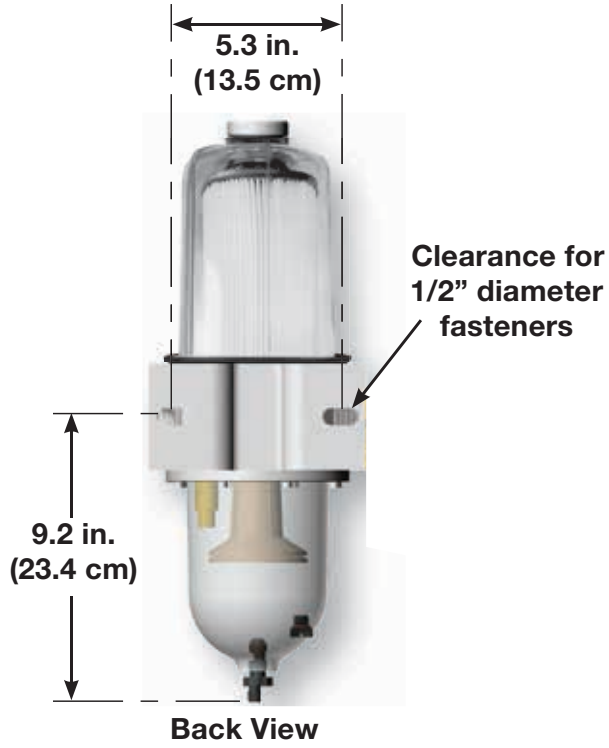
Heat Rise vs Flow
(Fuel = -10° F)
(Coolant = +185° F @ 5 gpm)

* PSI X 2.036 = inHg. / PSI X 6.895 = kPa

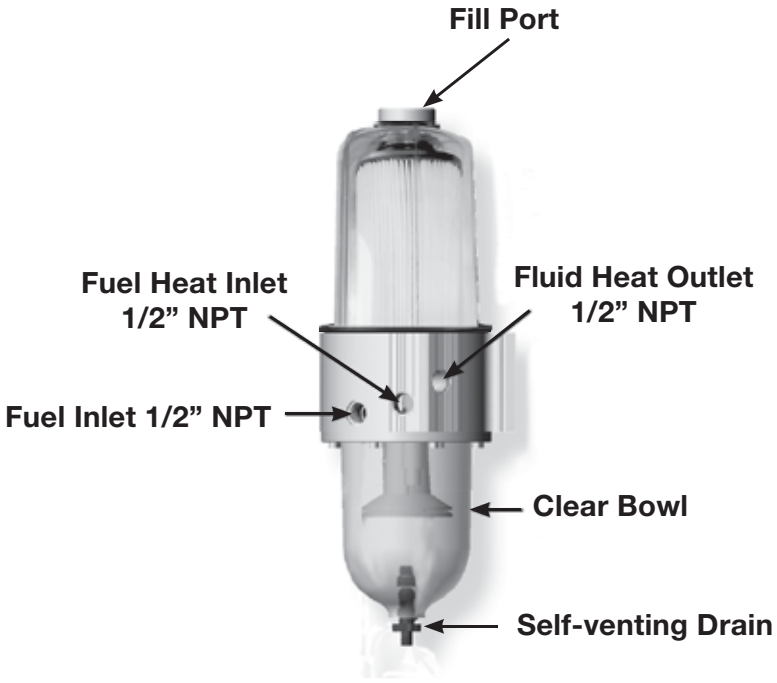
Mounting Information



Front View



Back View

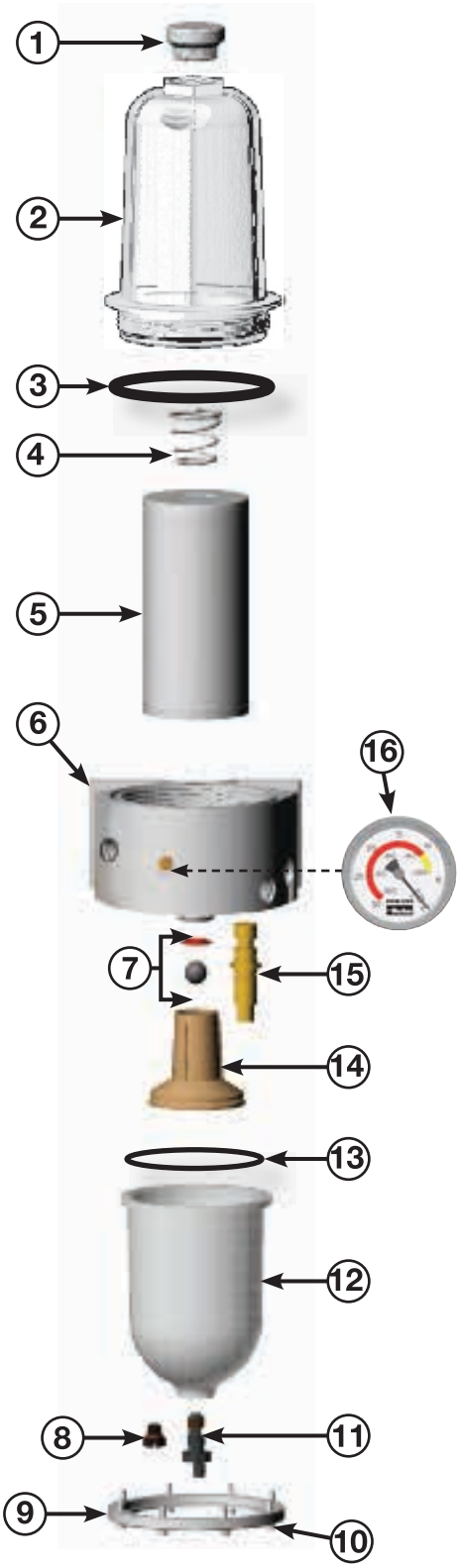


Right Side View

777R

Replacement Parts

	Part No.	Description
1.	**6707**	Priming Plug Kit (includes o-ring)
2.	**RK23008**	Clear Dome Kit (includes #'s 2-4 and plug o-ring)
3.	**6706P**	Dome Gasket (kit includes 3 gaskets)
4.	**RK6733**	Element Spring
5.	Replacement Element	
	6732S	2 Micron
	6732T	10 Micron
	6732P	30 Micron
6.	N/A	Machined Billet Body
7.	**RK23046**	Check Valve Kit (includes checkball and checkball gasket)
8.	**RK20126**	Sensor Plug Kit (½" SAE)
9.	**RK23014**	Bowl Retaining Ring Kit (includes #13)
10.	**RK23016**	Capscrew Kit (8 capscrews)
11.	**RK30476**	Self Venting Drain Kit
12.	**RK11-1938**	Bottom Bowl Kit (includes #'s 11, 14 & 16)
13.	**11007**	Bowl Seal Kit
14.	**RK11-1939**	Turbine Centrifuge Kit
15.	**RKSV700A**	Thermostat Kit
16.	**RK18-1104**	Vacuum Gauge Kit (optional)



Nautilus Series

6400/6401

Nautilus Series fuel filter/water separators use a unique, patented coalescing Spin-On element that enhances centrifugal force thereby pulling 99% of the suspended free water from fuel. The Nautilus element, S6464, is self-cleaning and does not require replacement under normal operating conditions; it is not a particulate removing filter.

The 6400/6401 models feature an internal heat exchanger, which uses hot engine coolant to heat the incoming fuel. The fittings fit 5/8" I.D. coolant hoses and attach to the pressure side, up to 35 PSI (2.4 bar), of the engine cooling system.

Additionally, the 6401 model also includes an internal coolant shut-off valve which is automatically controlled by a thermostat which opens at approximately 45°F (7.2°C) and closes at 100°F (37.7°C).

Heating the fuel dissolves paraffin wax crystals that form when diesel fuel is chilled thus enabling water separation to occur more efficiently and prevents downstream fuel filters from plugging with wax and/or ice crystals.

Nautilus assemblies are for PRIMARY filtration and separation use only. A secondary filter is required downstream. Model 6400 features a coolant heat exchanger as standard; a customer supplied shut-off valve may be required. Model 6401 features an internal automatic thermostat (shuts off coolant flow to heat exchanger to control fuel temperature).

Specifications	6400/6401
Maximum Flow Rate: (with S3226P element) (with S6464 coalescer element)	 75 GPH (284 LPH) 120 GPH (454 LPH)
Port Size: (inlet/outlet fuel) (coolant fittings)	 7/8"-14 SAE 5/8" Hose Barb
Service Filter Element	S6464 or S3226P
Service Clearance (below filter)	2.0 in. (5.1 cm)
Center Threads	1"-14
Height	16.5 in. (41.9 cm)
Width	6.0 in. (15.2 cm)
Depth	6.0 in. (15.2 cm)
Weight (dry)	11.3 lb (5.1 kg)
Clean Pressure Drop	0.5 PSI (0.03 bar)
Max. Allowable Pressure	15 PSI (1.03 bar)
Bowl Capacity (water) (to probe tips) (with Heater)	 2.8 oz. (82 ml) 2.4 oz. (70 ml)
H_2O Removal Efficiency	99%
Operating Temperature	-40° to +255°F (-40° to +124°C)

Nautilus

How to Order

(the example below illustrates how a part number is constructed)

6401	N
Specify: **6400** (no thermostat valve), or **6401** (with thermostat valve)	Specify: [1] **N** coalescer element. (omit if not desired)

[1] 30 micron S3226P element is standard unless **N** option is selected for coalescer element (see below).

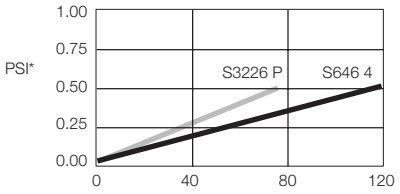
Replacement Elements

S6464	S3226P
Coalescer Element (removes water only from fuel; does not remove sediment). This filter is self-cleaning and does not require replacement under normal operating conditions.*	30 Micron Element (removes sediment and separates water)*

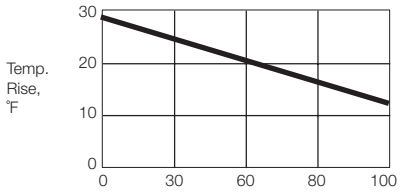
*A secondary/final filter must be in the downstream fuel system.

Test Data

Test results are from controlled laboratory testing. Field results may vary by application.



SAE J905 Fuel Flow Restriction

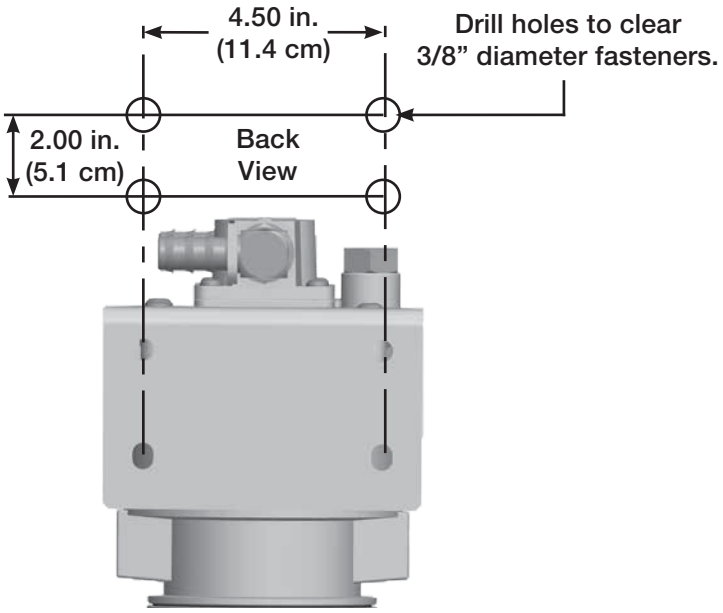


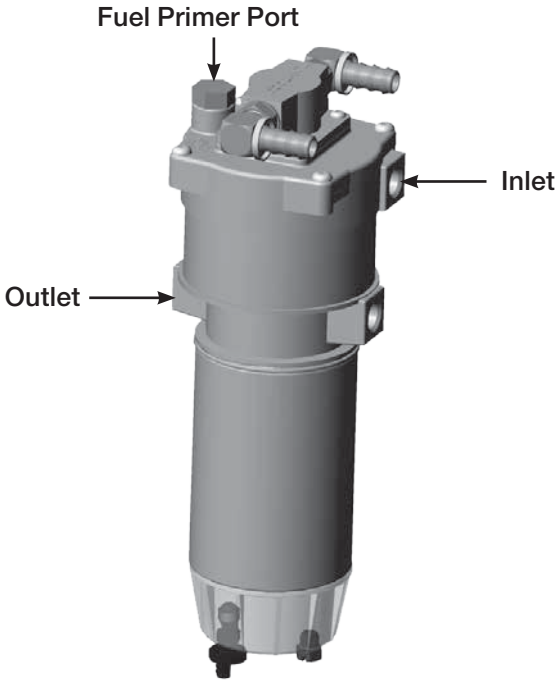
6400 Heat Rise vs Flow
Fuel = -10°F
Coolant = +185°F @ 5 gpm

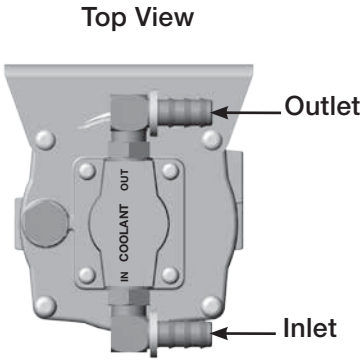
*PSI X 2.036 = inHg / PSI X 6.895 = kPa

Nautilus

Mounting Information





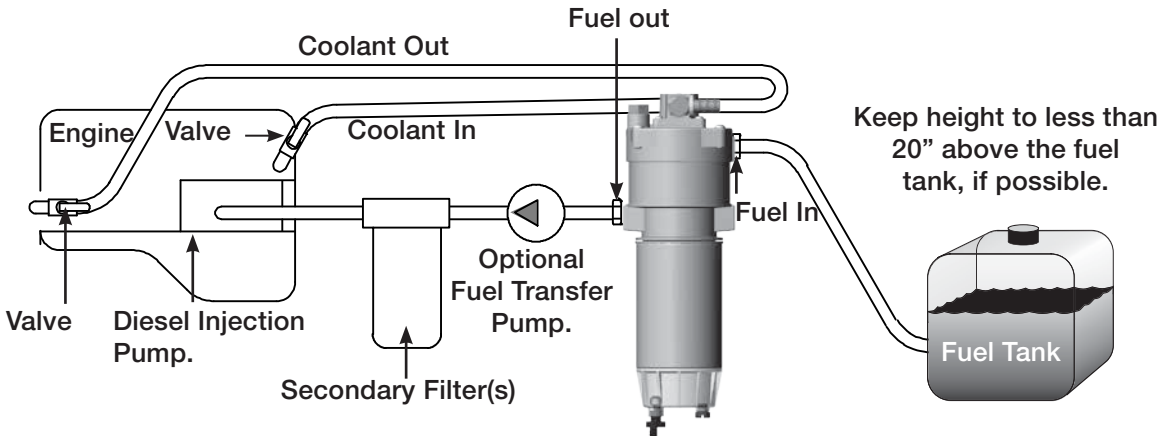


Important:

The fuel and coolant port orientation may be changed to suit any installation. Fuel ports may face opposite direction by repositioning L-bracket on opposite side along with clamp bracket. Torque 5/16” bracket fasteners to 20 ft. lbs. Coolant fittings may be repositioned within a 180° arc by loosening the locknuts. Reposition and tighten locknuts snugly. Coolant in/out manifold may be repositioned opposite as shown; torque 1/4” fasteners to 20 ft. lbs.

Nautilus

Installation Diagram



Coolant Plumbing Alternatives

Parallel System with a cab heater.

Manual shut-off valves (customer supplied) maybe used to regulate coolant to the Racor unit for summer use, if desired.

Valve Positions:

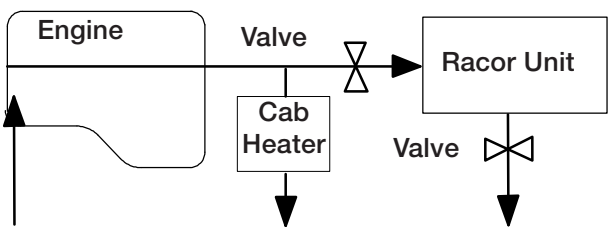
Open: About equal flow through Racor and cab heater. Closed: All coolant to the cab heater.

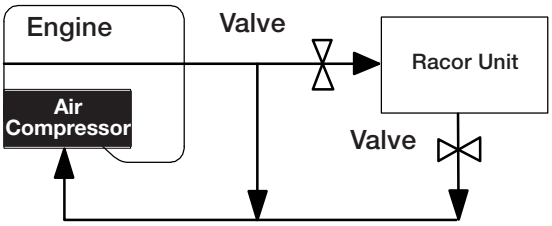
Parallel System with an air compressor.

Manual shut-off valves (customer supplied) may be use, if desired.

Valve Positions:

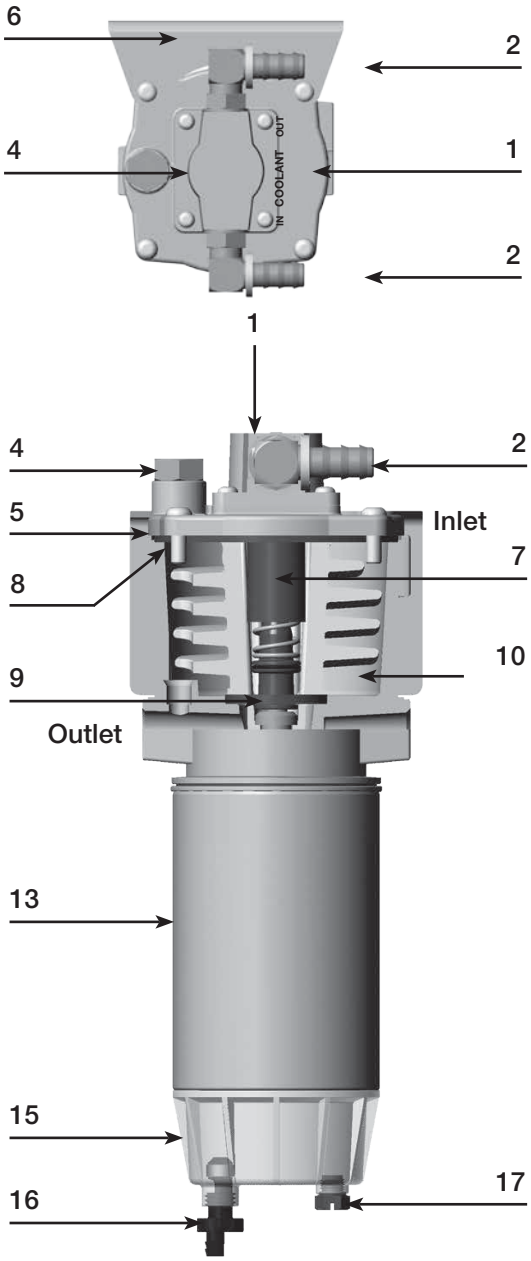
Open: About equal flow through Racor and air compressor. Closed: All coolant to the air compressor

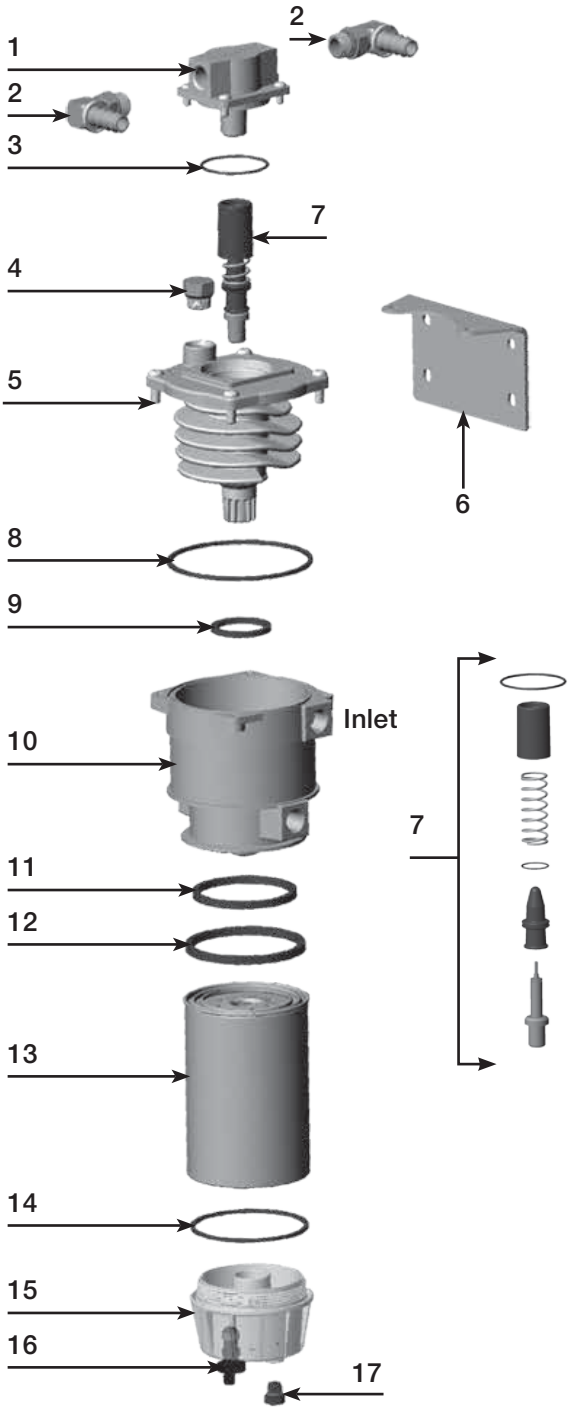




Nautilus 6400/6401

Please refer to page 132 for call out descriptions.





Nautilus

Replacement Parts

6400 / 6401

	Part Number	Description
1.	**RK 16070**	Coolant Head Kit (includes #3)
2.	**913-O10-H10**	Standard Elbow Fitting (5/8" hose barb)
	913-O10-H12	Optional Elbow Fitting (¾" hose harb)
3.	**16083**	Coolant Head O-ring
4.	**RK 11911**	Priming Port Plug Kit
5.	**RK 16007**	Heat Exchanger Kit (includes #'s 8 and 9)
6.	**RK 16073**	L-Bracket Kit
7.	**RK 16086**	Thermostat Valve Kit (includes #3)
8.	**16083**	Coolant Head O-ring
9.	**16029**	Heat Exchanger Base Seal
10.	**RK 16076**	Head Assembly Kit (includes #'s 8 and 9)
11.	**20505**	Element Gasket (for S6464 coalescing element)
12.	**40685**	Element Gasket (for S3226P30 micron element)

	Part Number	Description
13.	**S6464**	Water Coalescing Element (includes #11 and 14)
	S3226P	30 Micron Filter Element (includes #12 and 14)
14.	**30965**	Bowl Gasket
15.	Replacement Bowls (includes #'s 14 to 17)	
	RK 30063	Bowl and Drain Kit
	RK 30900[1]	Same as Above with 12 vdc Heater
	RK 30925[1]	Same as Above with 24 vdc Heater
16.	**RK 30476**	Self-venting Drain Valve Kit
17.	**RK 20126**	Water Port Plug Kit
Additional Parts (not shown)		
	RK 16040	Complete Seal Service Kit
	RK 30964[2]	Water Probe Kit
	16104	Installation Instructions

Notes:

[1] In-bowl heater may require a heater relay kit.

[2] Water probe must be used with a water detection kit - see Accessories.

WFH Series

Want proven reliability? The WFH Fuel Heater/Water Separators are for today's high performance heavy-duty and smaller midrange engines. These lightweight aluminum units use engine coolant to produce a 47° F rise in fuel temperature, eleminating the need for fuel blending.

A WFH's three-stage water seperation process is more than 99% effective in eliminating water from fuel under SAE J1839 test parameters.

Stage 1: A self-cleaning stripper screen removes water and solid contaminants from the fuel, so no primary fuel filter is required.

Stage 2: Fuel contaminants and water are drained by the driver through the unit's self-venting drain valve.

Stage 3: A floating check ball valve system guards against loss of prime during service.

WFH units require no schedule servicing, other than periodic water draining. The screen filtration system is also self-cleaning eliminating the need for additional maintenance. Seperated water is quickly and easily eliminated through an integral self-venting drain valve with no loss of prime. WFH units are available with either a 12 volt or 120 volt preheater and optional thermostat, and a ACV (Automatic Coolant Valve). Unit cover rotates 360° for ease of installation on any existing engine configuration.

WFH424

WFH500

WFH525

WFH525/ACV

WFH424

Fuel Heater/Water Separator

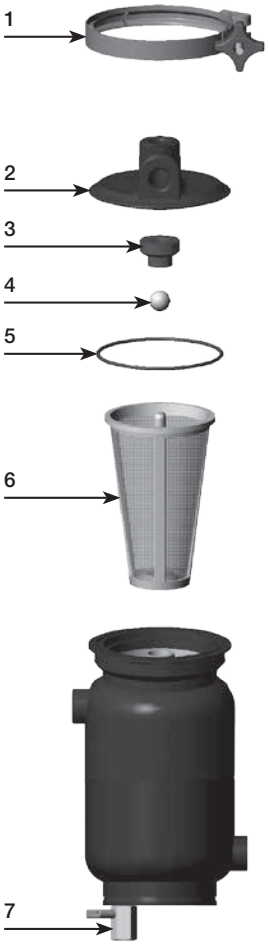
Want proven reliability? The 424 Fuel Heater/Water Separators are for today's high performance heavy-duty and smaller midrange engines. These lightweight aluminum units use engine coolant to produce a 47° F rise in fuel temperature, eliminating the need for fuel blending.

A 424's three-stage water separation process is more than 99% effective in eliminating water from fuel under SAE J1839 test parameters.

Stage 1: A self-cleaning stripper screen removes water and solid contaminants from the fuel, so no primary fuel filter is required.

Stage 2: Fuel contaminants and water are drained by the driver through the unit's self-venting drain valve.

Stage 3: A floating check ball valve system guards against loss of prime during service.



Specifications	
Maximum Flow Rate: (with diesel)	60 GPH (227 LPH)
Inlet/Outlet Port Size	1/2 NPT
Housing Material	Aluminum
Replacement Element	Screen
Micron Rating	70
Minimum Service Clearance (below filter)	4.0 in. (10.2 cm)
Height	10.0 in. (25.4 cm)
Depth	5.9 in. (15.0 cm)
Width	5.3 in. (13.5 cm)
Weight (dry)	6.3 lbs (2.9 kg)
Maximum Working Pressure[1]	N/A
Water Removal Efficiency	99%
Clean Pressure Drop	0.04 PSI (0.28 kPa)
Case Quantity	N/A
Ambient Temperature Range	-40° to +250°F (-40° to +121°C)
Maximum Fuel Temperature	190°F (88°C)

Notes: [1]Vacuum side installations only.

Replacement Parts

WFH424

	Part Number	Description
1.	**WFH5760**	Cover Clamp Kit
2.	**WFH5726B**	424 Cover Kit
3.	**WFH5731C**	Stopper Seal Kit
4.	**WFH5731K**	Check Ball Kit
5.	**WFH5730P**	O-ring Kit
6.	**WFH4732**	70 Micron Screen Kit (includes O-ring)
7.	**WFH5742**	Ball Valve Kit
8.	**WFH4736**	Mounting Bracket Kit

WFH500

Fuel Heater/Water Separator

Want proven reliability? The 500 Fuel Heater/Water Separators are for today's high performance heavy-duty and smaller midrange engines. These lightweight aluminum units use engine coolant to produce a 47°F rise in fuel temperature, eliminating the need for fuel blending.

A 500's three-stage water separation process is more than 99% effective in eliminating water from fuel under SAE J1839 test parameters.

Stage 1: A self-cleaning stripper screen removes water and solid contaminants from the fuel, so no primary fuel filter is required.

Stage 2: Fuel contaminants and water are drained by the driver through the unit's self-venting drain valve.

Stage 3: A floating check ball valve system guards against loss of prime during service.

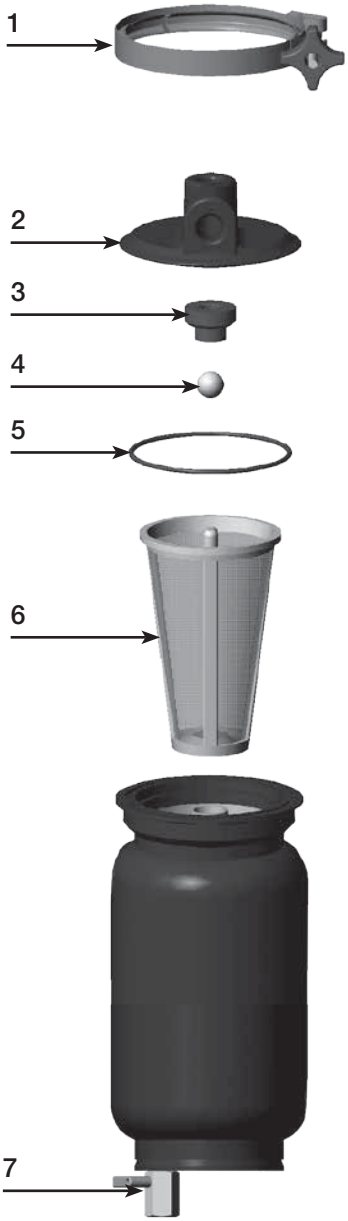
Specifications	
Maximum Flow Rate: (with diesel)	120 GPH (454 LPH)
Inlet/Outlet Port Size	1/2 NPT
Housing Material	Aluminum
Replacement Element	Screen
Micron Rating	70
Minimum Service Clearance (Below filter)	4.0 in. (10.2 cm)
Height	10.0 in. (25.4 cm)
Depth	5.9 in. (15.0 cm)
Width	5.3 in. (13.5 cm)
Weight (dry)	6.3 lbs (2.9 kg)
Maximum Working Pressure[1]	N/A
Water Removal Efficiency	99%
Clean Pressure Drop	0.04 PSI (0.28 kPa)
Case Quantity	N/A
Ambient Temperature Range	-40° to +250°F (-40° to +121°C)
Maximum Fuel Temperature	190°F (88°C)

Notes: [1]Vacuum side installations only.

Replacement Parts

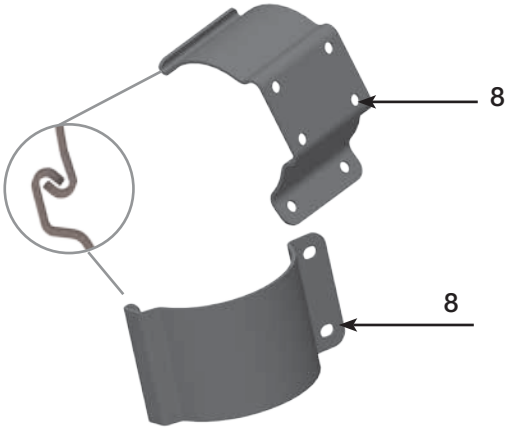
WFH500

	Part Number	Description
1.	**WFH5760**	Cover Clamp Kit
2.	**WFH5726B**	525 Cover Kit
3.	**WFH5731P**	Check Seal Packet (6 each)
4.	**WFH5731K**	Check Ball Kit (includes items 3, 4, & 5)
5.	**WFH5730P**	O-ring Kit
6.	**WFH5732/30**	30 Micron Screen Kit (includes o-ring)
7.	**WFH5742**	Ball Valve Kit
8.	**WFH5736**	Mounting Bracket Kit (includes Front & Back)



Additional Parts (not shown)

WFH5750K	Rebuild Kit 70 Micron (all 500 series #'s 3-6)
WFH5750K/30	Rebuild Kit 30 Micron (all 500 series #'s 3-6)



WFH525

Fuel Heater/Water Separator

Want proven reliability? The 525 Fuel Heater/Water Separators are for today's high performance heavy-duty and smaller midrange engines. These lightweight aluminum units use engine coolant to produce a 47°F rise in fuel temperature, eliminating the need for fuel blending.

A 525's three-stage water separation process is more than 99% effective in eliminating water from fuel under SAE J1839 test parameters.

Stage 1: A self-cleaning stripper screen removes water and solid contaminants from the fuel, so no primary fuel filter is required.

Stage 2: Fuel contaminants and water are drained by the driver through the unit's self-venting drain valve.

Stage 3: A floating check ball valve system guards against loss of prime during service.

Specifications	
Maximum Flow Rate: (with diesel)	120 GPH (454)
Inlet/Outlet Port Size	1/2 NPT
Housing Material	Aluminum
Replacement Element	Screen
Micron Rating	70
Minimum Service Clearance (below filter)	4.0 in. (10.2 cm)
Height	10.0 in. (25.4 cm)
Depth	5.9 in. (15.0 cm)
Width	5.3 in. (13.5 cm)
Weight (dry)	6.3 lbs (2.9 kg)
Maximum Working Pressure[1]	N/A
Water Removal Efficiency	99%
Clean Pressure Drop	0.04 PSI (0.28 kPa)
Case Quantity	N/A
Ambient Temperature Range	-40° to +250°F (-40° to +121°C)
Maximum Fuel Temperature	190°F (88°C)

Notes: [1]Vacuum side installations only.

Fuel Heater/Water Separators

WFH525/ACV

Fuel Heater/Water Separator

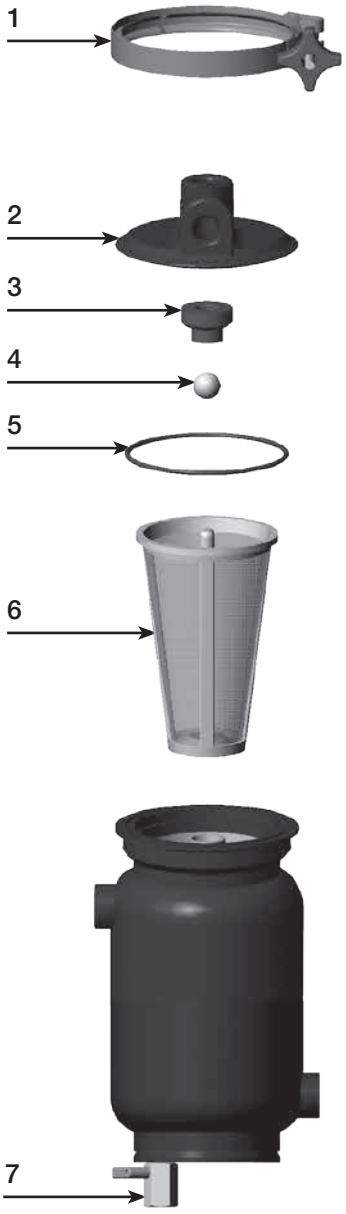
Want proven reliability? The 525 Fuel Heater/Water Separators are for today's high performance heavy-duty and smaller midrange engines. These lightweight aluminum units use engine coolant to produce a 47° F rise in fuel temperature, eliminating the need for fuel blending.

A 525's three-stage water separation process is more than 99% effective in eliminating water from fuel under SAE J1839 test parameters.

Stage 1: A self-cleaning stripper screen removes water and solid contaminants from the fuel, so no primary fuel filter is required.

Stage 2: Fuel contaminants and water are drained by the driver through the unit's self-venting drain valve.

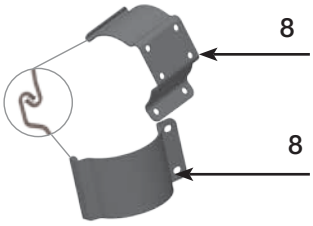
Stage 3: A floating check ball valve system guards against loss of prime during service.



Replacement Parts

WFH525, WFH525/ACV

	Part Number	Description
1.	**WFH5760**	Cover Clamp Kit
2.	**WFH5726B**	525 Cover Kit
3.	**WFH5731P**	Check Seal Packet (6 each)
4.	**WFH5731K**	Check Ball Kit (includes items 3, 4 & 5)
5.	**WFH5730P**	O-ring Kit
6.	**WFH5732/30**	30 Micron Screen Kit (includes o-ring)
7.	**WFH5742**	Ball Valve KIt
8.	**WFH5736**	Mounting Bracket Kit (includes Front & Back))

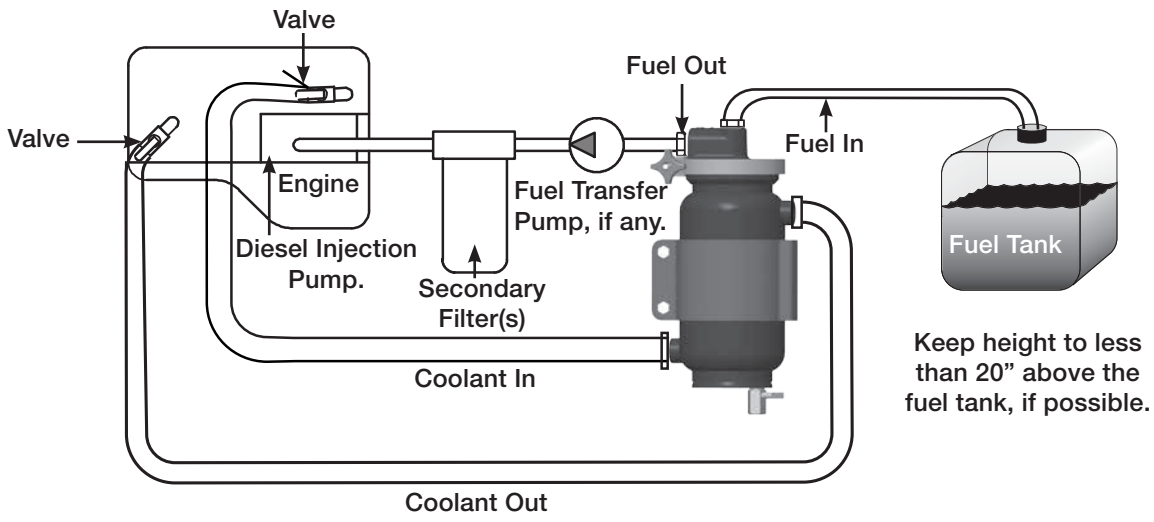


Additional Parts (not shown)

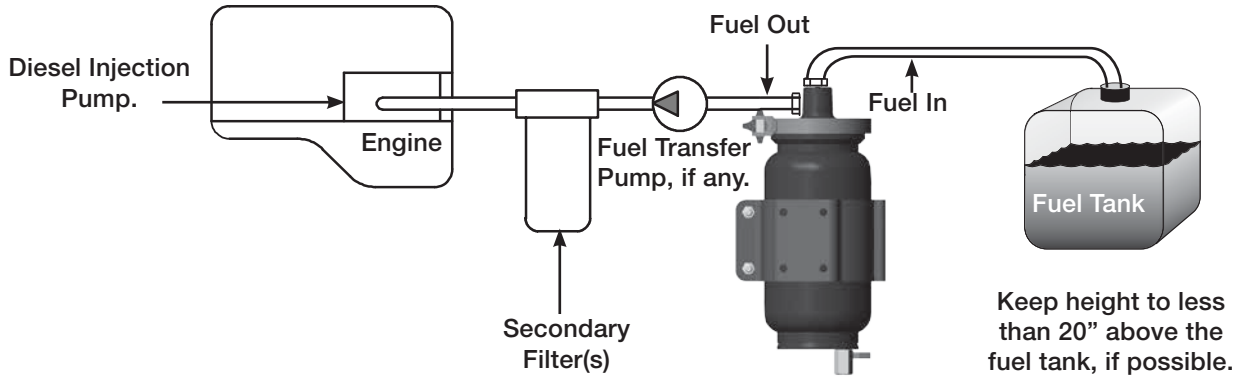
WFH5750K	Rebuild Kit 70 Micron (all 500 series #'s 3-6)
WFH5750K/30	Rebuild Kit 30 Micron (all 500 series #'s 3-6)
ACV4500	Automatic Coolant Shutoff Valve (optional ACV)

Installation Diagram

424 and 525 models

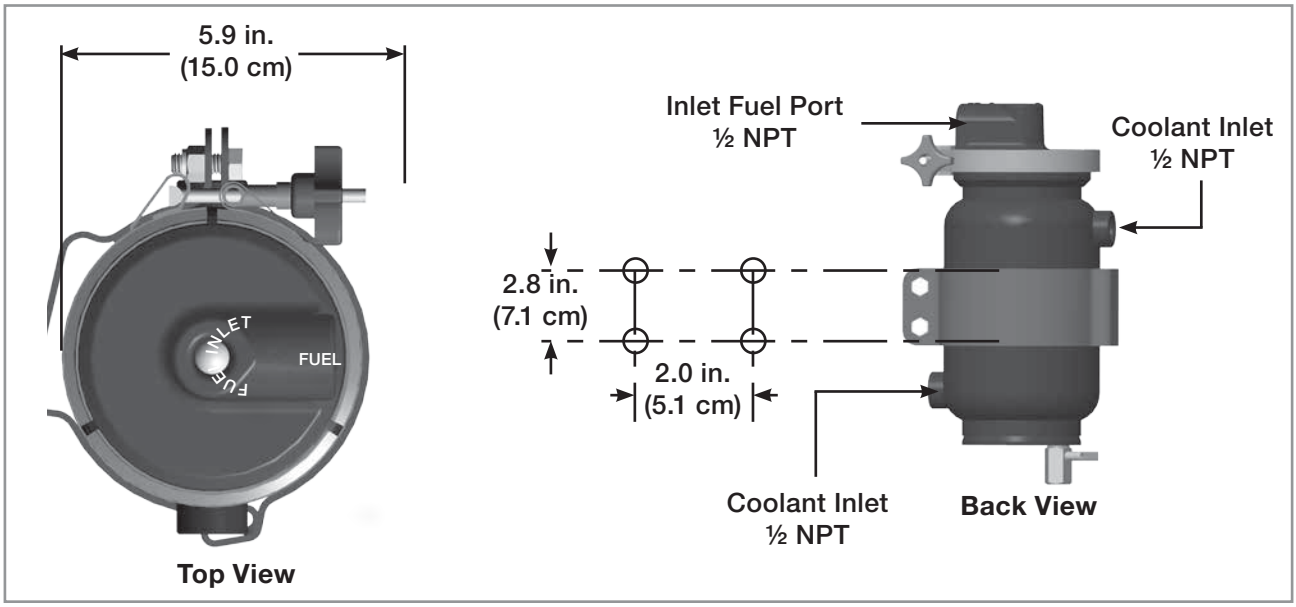


500 models

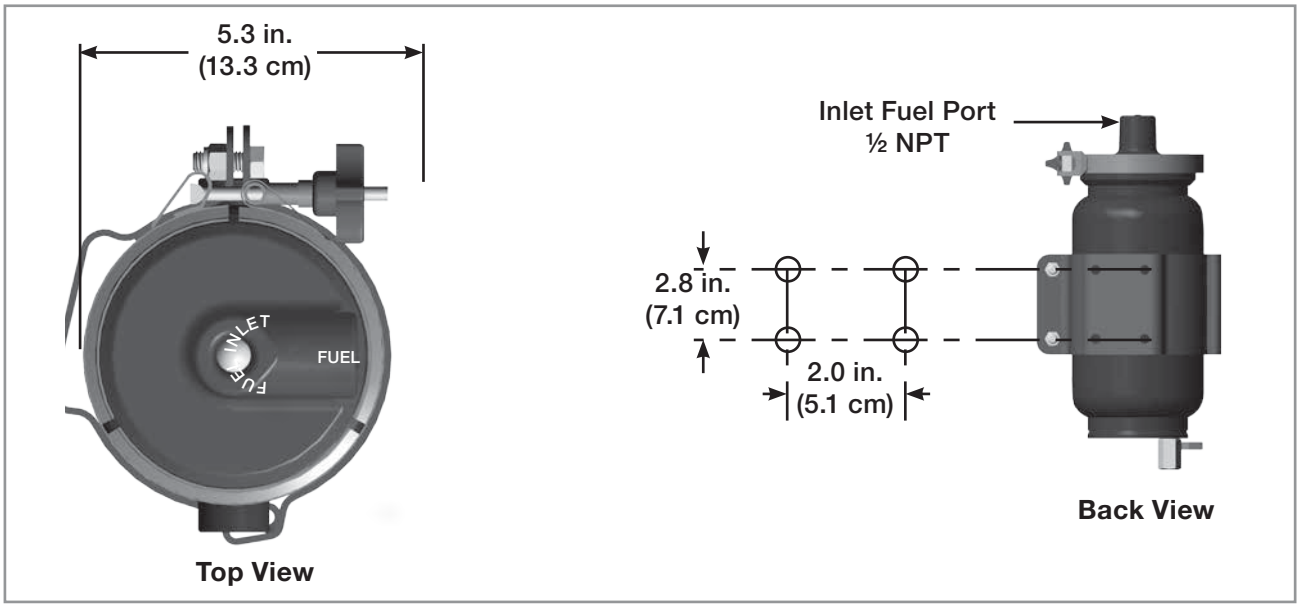


Mounting Information

424 models



500 and 525 models



How to Order

(The example below illustrates how part numbers are constructed.)

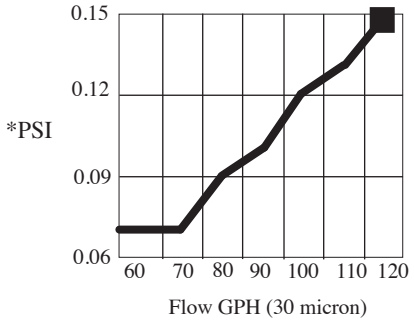
WFH525ACV/30

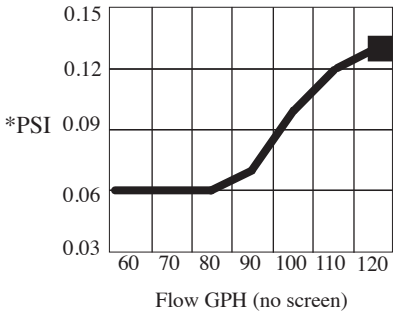
Basic Model:
Comes standard with a **70** Micron Stripper Screen and mounting brackets.

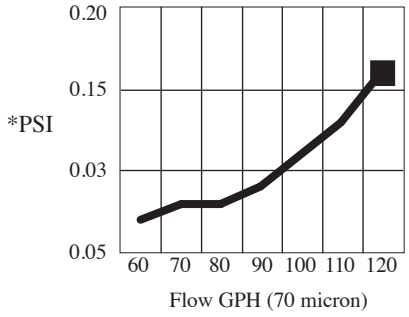
Specify:
ACV for a Automatic Coolant Valve.
(omit if not desired)

Specify:
/30 for a 30 micron Stripper Screen
(omit if not desired)

Test Data

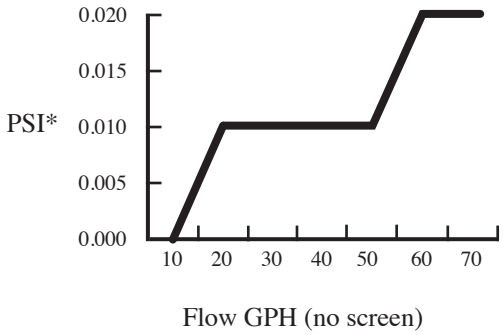


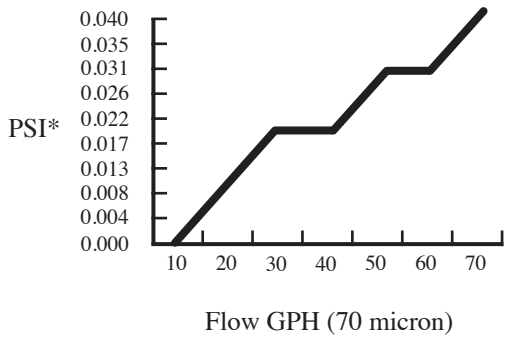




PSI X 2.036 = inHg (PSI X 6.895 = kPa)

Test results are from controlled laboratory testing. Field results may vary by application.





*PSI X 2.036 = inHg (PSI X 6.895 = kPa)

Fuel Heater/Water Separators

Features and Benefits

A. **Fuel Inlet:** Fuel flows in and is cleaned and heated before returning to engine.

B. **Fuel Outlet**: Warm fuel escapes and is consumed by engine.

C. **Cover Clamp:** Allows cover to be rotated 180° for ease and versatility of installation. Do not use tools, hand-tighten clamp only.

D. **Cover:** The self piloting no thread clamp-on design allows the top cover to be positioned in any direction for fuel routing. The cover may be removed with fuel line intact, and without tools.

E. **Internal Check Valve:** The floating check ball (check ball moves up and down through tube to ensure prime is not lost) valve system guards against loss of prime during fuel system service. Delaying the check ball for four and a half seconds allows time for any foreign matter to clear the valve seat aria, ensuring a tight seat.

1. Engine Off

2. Engine Running

F. **Coolant Outlet:** Coolant that was circulating through unit is now returning to engine.

G. **Stripper Screen:** The FH/WS has a self-flushing screen that will not allow water to pass through, and it acts as a prefilter removing contaminants to 70 micron. Eliminating the need for a primary fuel filter, the assembly also comes with a 30 micron screen.

H. **Self Venting Drain Valve:** Unique one-vale system for fast and simple water draining, it is easy for operators to drain unit.

I. **Coolant Inlet:** Coolant enters unit to warm fuel and exits through outlet.

J. **Automatic Coolant Valve (ACV):** Shuts off coolant supply at 80° F (26.6 c) to protect electronic engine controls from over heating. (Available for 525 models)

K. **Mounting Bracket:** Two piece design, mount filter vertically only. (available for 525 and 500 models)

L . **Optional:** 12 vdc 200 watt preheater cartridge (part number CH4.5 available for 500 models).

M. **Optional:** 120 vdc 63 watt electric preheater (part number CH2.75-1 available for 500 models).

The 3-Stage Process

Stage 1.

Fuel enters the FH/WS through the cover's center port. The fuel travels down the isolator tube, pushing the check ball down, then passes through fuel slots on the bottom. The fuel changes direction and travels up and around the diffuser plate. The entire time it is being warmed by the surrounding hot water jacket.

Stage 2.

Fuel then passes through the self flushing stripper screen where the contaminants and water are left behind to fall to the top of the diffuser plate. There, the contaminates settle below incoming fuel and collect at the base of the unit, were the contaminants and water are drained.

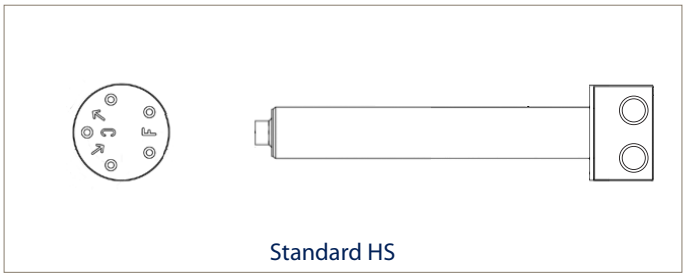
Stage 3.

Finally the clean, dry, and warm fuel exits the FH/WS unit through the cover's side port and than is ingested by the engine.

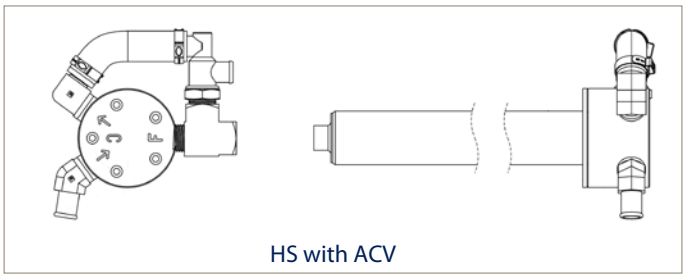
WFH Series Overview

Specifications	WFH424	WFH500	WFH525	WFH525/ACV
Flow Rate	60 GPH (227 LPH)	120 GPH (454 LPH)	120 GPH (454 LPH)	120 GPH (454 LPH)
Fuel Port Size	1/2 NPT	1/2 NPT	1/2 NPT	1/2 NPT
Coolant Port Size	1/2 NPT	N/A	1/2 NPT	1/2 NPT
Housing Material	Aluminum	Aluminum	Aluminum	Aluminum
Micron Rating	70	70	70	70
Width	5.3 in. (13.5 cm)	5.3 in. (13.5 cm)	5.3 in. (13.5 cm)	5.3 in. (13.5 cm)
Depth	5.9 in. (15.0 cm)	5.3 in. (13.5 cm)	5.3 in. (13.5 cm)	5.3 in. (13.5 cm)
Height	10.0 in. (25.4 cm)	15.8 in. (40.1 cm)	15.8 in. (40.1 cm)	15.9 in. (40.4 cm)
H_20 Removal	99%	99%	99%	99%
Coolant Ports	Yes	No	Yes	Yes
Heater Ports 12 vdc Pre-heater 120 vdc Pre-heater	 No No	 Yes No	 No No	 No No
Automatic Coolant Valve (ACV)	No	No	No	Yes
Service Element	4 in.	4 in.	4 in.	4 in.
Operating Temperature	-40° to +250° F (-40° to + 124°C)			

HOT STK® In-Tank/Standpipe Fuel Heater



Standard HS



HS with ACV

HS Series

Hot STK® Diesel Fuel Tank Heater

Diesel powered equipment operators can benefit from this in-tank fuel heater. The Hot STK® uses engine coolant to heat diesel fuel two-ways, as it passes up the standpipe and by radiating directly into the surrounding fuel in the tank.

A cold-weather running aide which can be mounted easily into existing tanks. Sized for 10” to 32” tanks to fit most applications.

An automatic coolant flow valve can be specified.

Helps operators in cold climates to keep engines running.

Product Benefits

- Heats fuel in the tank.
- Heats fuel as it flows out of the tank.
- Uses engine coolant as heat source.
- Durable 6016 T6 aluminum construction.
- Thermostat on ACV controls temperature to 96˚ F at outlet.
- Standard 6-hole mounting.
- Fits 10”-32” tanks in 1” increments.
- Anodized red head for corrosion resistance.
- 1/2” Female NPT ports and 5/8” hose.
- Mounting kit included.

Replacement Parts

Part Number	Description
WK2703K	HOT STK MOUNTING FLANGE KIT
WK2724P	HOT STK GASKET PACK ADAPTOR
WK2730P	HOT STK O-RING PACK (6 CT)
WK2750	HOT STK ADAPTOR PLATE 6” SQUARE

HOT STK® In-Tank/Standpipe Fuel Heater

Specifications	HSXX	HSXXACV
Length	11.5" to 33.5" in 1" increments	
Height x Width	3" x3"	5.6" x 5.6"
Weight	3# to 6#	4# to 7#
Port Size	1/2" FNPT	1/2" FNPT & 5/8" Hose

Part Number	Description and Tank Diameter
HS10	HOTSTICK FOR 10" DIA TANK
HS10ACV	HOTSTICK FOR 10" DIA TANK W/ AUTO COOLANT VALVE
HS11	HOTSTICK FOR 11" DIA TANK
HS11ACV	HOTSTICK FOR 11" DIA TANK W/ AUTO COOLANT VALVE
HS12	HOTSTICK FOR 12" DIA TANK
HS12ACV	HOTSTICK FOR 12" DIA TANK W/ AUTO COOLANT VALVE
HS13	HOTSTICK FOR 13" DIA TANK
HS13ACV	HOTSTICK FOR 13" DIA TANK W/ AUTO COOLANT VALVE
HS14	HOTSTICK FOR 14" DIA TANK
HS14ACV	HOTSTICK FOR 14" DIA TANK W/ AUTO COOLANT VALVE
HS15	HOTSTICK FOR 15" DIA TANK
HS15ACV	HOTSTICK FOR 15" DIA TANK W/ AUTO COOLANT VALVE
HS16	HOTSTICK FOR 16" DIA TANK
HS16ACV	HOTSTICK FOR 16" DIA TANK W/ AUTO COOLANT VALVE
HS17	HOTSTICK FOR 17" DIA TANK
HS17ACV	HOTSTICK FOR 17" DIA TANK W/ AUTO COOLANT VALVE
HS18	HOTSTICK FOR 18" DIA TANK
HS18ACV	HOTSTICK FOR 18" DIA TANK W/ AUTO COOLANT VALVE
HS19	HOTSTICK FOR 19" DIA TANK
HS19ACV	HOTSTICK FOR 19" DIA TANK W/ AUTO COOLANT VALVE
HS20	HOTSTICK FOR 20" DIA TANK
HS20ACV	HOTSTICK FOR 20" DIA TANK W/ AUTO COOLANT VALVE
HS21	HOTSTICK FOR 21" DIA TANK
HS21ACV	HOTSTICK FOR 21" DIA TANK W/ AUTO COOLANT VALVE
HS22	HOTSTICK FOR 22" DIA TANK
HS22ACV	HOTSTICK FOR 22" DIA TANK W/ AUTO COOLANT VALVE
HS23	HOTSTICK FOR 23" DIA TANK
HS23ACV	HOTSTICK FOR 23" DIA TANK W/ AUTO COOLANT VALVE
HS24	HOTSTICK FOR 24" DIA TANK
HS24ACV	HOTSTICK FOR 24" DIA TANK W/ AUTO COOLANT VALVE
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HS25ACV	HOTSTICK FOR 25" DIA TANK W/ AUTO COOLANT VALVE
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HS26ACV	HOTSTICK FOR 26" DIA TANK W/ AUTO COOLANT VALVE
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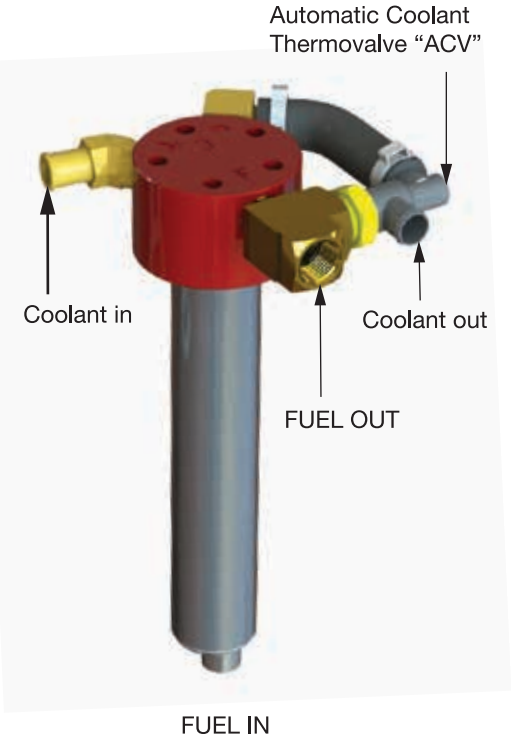
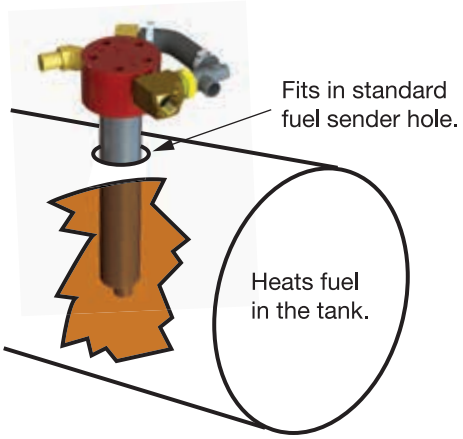
HS28ACV	HOTSTICK FOR 28" DIA TANK W/ AUTO COOLANT VALVE
HS29	HOTSTICK FOR 29" DIA TANK
HS29ACV	HOTSTICK FOR 29" DIA TANK W/ AUTO COOLANT VALVE
HS30	HOTSTICK FOR 30" DIA TANK
HS30ACV	HOTSTICK FOR 30" DIA TANK W/ AUTO COOLANT VALVE
HS31	HOTSTICK FOR 31" DIA TANK
HS31ACV	HOTSTICK FOR 31" DIA TANK W/ AUTO COOLANT VALVE
HS32	HOTSTICK FOR 32" DIA TANK
HS32ACV	HOTSTICK FOR 32" DIA TANK W/ AUTO COOLANT VALVE





Fuel Filter Vessel Series

FTG offers stationary and portable fuel filtration solutions.

Part Number	Description
EFD-1001	FUEL DEHYDRATOR, SOCK FILTER, 10", SINGLE
EFD-1002	FUEL DEHYDRATOR, SOCK FILTER, 10"- DOUBLE
EFD-2401	FUEL DEHYDRATOR, SOCK FILTER, 24", SINGLE
EFD-2402	FUEL DEHYDRATOR, SOCK FILTER, 24", DOUBLE
EFD-3601	FUEL DEHYDRATOR, SOCK FILTER, 36", SINGLE
EFD-3602	FUEL DEHYDRATOR, SOCK FILTER, 36", DOUBLE
FTG-800D-12	FUEL FILTER/WATER SEPARATOR HOUSING, 12 GPM
FTG-800D-20	FUEL FILTER/WATER SEPARATOR HOUSING, 20 GPM
FTG-800D-3REC-D	WALLMOUNT FUEL FILTER RECYLER UNIT, 3 GPM
FTG-800D-5REC-D	PORTABLE FUEL FILTER/WATER SEPARATOR CART, 5 GPM
FTG-800D-OF3D	WALLMOUNT OIL/FUEL BLENDER/RECYLER, 3 GPM
FTG-800D-OF5D	PORTABLE OIL/FUEL BLENDER/RECYLER CART, 5 GPM
FTG-850-MD	FUEL FILTER/WATER SEPARATOR HOUSING, 50 GPM

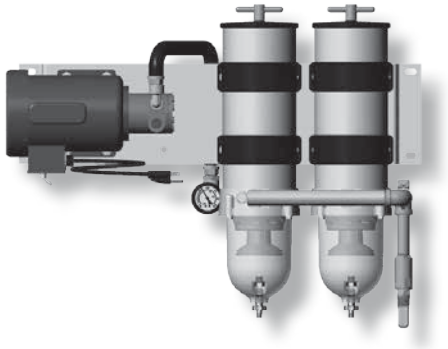
FTG-800D-20

FTG-800D-5REC-D

FTG-800D-OF3D

FTG-850-MD

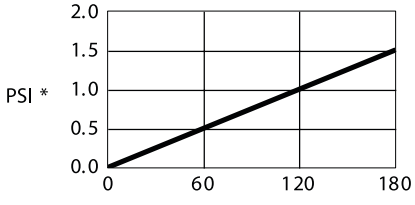
FTG 800 Series



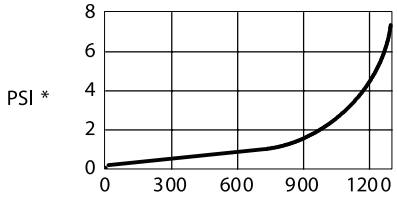
Specifications	FTG-800D-OF3	FTG-800D-5REC-D
Application	Wall Mount	Cart
Motor Voltage	AC (110 Volt 60Hz)	110 Volt 60 Hz
Max. Flow Rate	180 GPH (681 LPH)	180 GPH (681 LPH)
Replacement Element (2 Elements)	2020TM-OR	2020TM-OR
Port Size	1/2" NPT	1/2" NPT
Height	36.0 in. (88.0 cm)	46.0 in. (116.8 cm)
Width	30.0 in. (76.0 cm)	20.0 in. (50.8 cm)
Depth	18.0 in. (46.0 cm)	24 in. (61 cm)
Weight (dry)	57.0 lb. (26 kg)	82 lbs (37 kg)
Clean Pressure Drop	1.2 PSI (8.5 kPa)	1.5 PSI (10.2 kPa)
Water Capacity	20.6 oz. (610 ml)	20.6 oz. (610 ml)
H_2O Removal Efficiency	99%	99%
Operating Temperature	-10° to +180°F (-23° to +82°C	

Test Data FTG-800D-OF3 and FTG-800D-5REC-D

(Test results are from controlled laboratory testing. Field results may vary.)



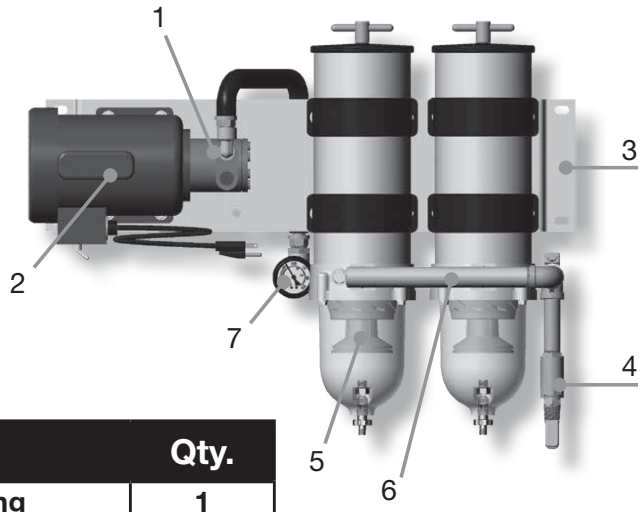
Flow (GPH)
SAE J905 Fuel Flow Restrictions



Grams
SAE J905 Solids Capacity
(using SOFTC-2A; 2020TM Element)

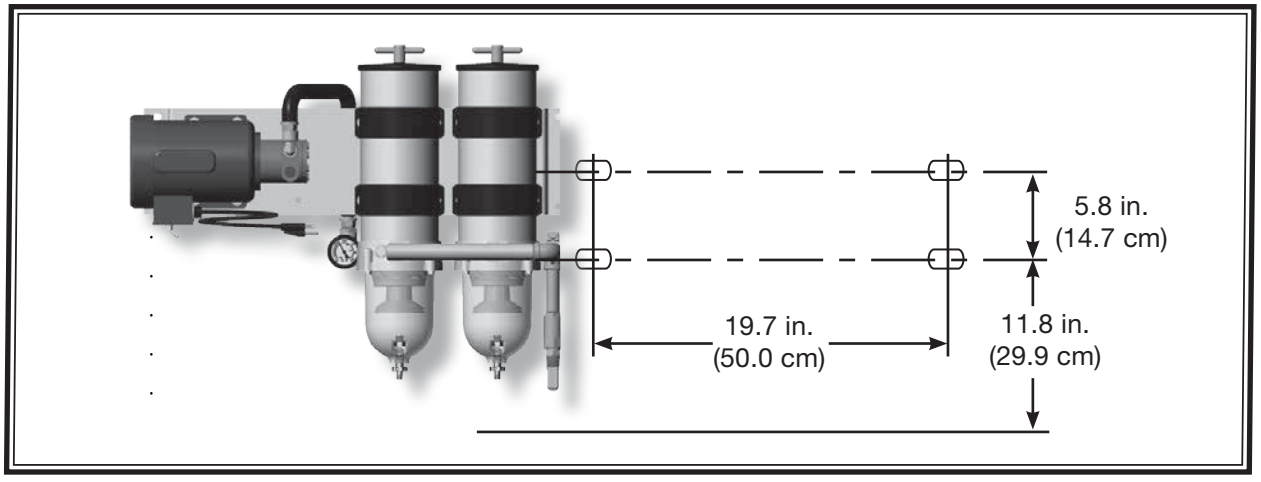
*PSI X 2.036 = inHg. / PSI X 6.895 = kPa

FTG-800D-OF3



Item/Part No.	Description	Qty.
1. RK11643	Motor / pump coupling	1
2. RK18043	110/220 60 Hz motor/3 gpm pump	1
3. RK18999	Main mounting bracket	1
4. RK18-1291	Mixer valve assembly	1
5. 1000FH10	Fuel Filter	2
6. RK11892	Double manifold	2
7. RK18-1104	Compound gauge	1

Mounting Hole Pattern for FTG-800D-OF3



Replacement Service Elements

Service elements include Lid Seals.

2020TM-OR	***10 Micron (Blue End Caps)*** ***These models use two (2) elements.***

FTG-800D-5REC-D

The **FTG-800D-5REC-D Filter/Recycling Buggy** can be used to remove water and contamination from diesel fuel, kerosene, biodiesel, and light hydrocarbons in day and standard fuel tanks. Tank recycling reduces the cost of engine fuel filters and maintenance requirements. This portable filter buggy offers intermittent or continuous operation to meet demanding schedules. Filter assemblies feature 10 micron Aquabloc®II filters and see-thru collection bowls, which allow quick visual inspection and easy-to-use manual drain valves.

The filter buggy is light-weight which permits field maintenance with minimal effort. It flows up to 3 GPM (13.6 LPM) with a clean filter and has a low pressure drop of 1.5 PSI (0.1 bar).

Specifications

	FTG-800D-5REC-D
Maximum Flow Rate	3 GPM (13.6 LPM)
Maximum Working Pressure	15 PSI (1 bar)
Replacement Filter (one per filter housing, 2 total)	2020TM-OR
Port Size	1/2" NPT
Voltage	120 VAC
Height	36 in. (91.4 cm)
Width	17 in. (43.2 cm)
Depth	18 in. (45.7 cm)
Weight (dry)	82 lbs (37.2 kg)
Clean Pressure Drop	1.5 PSI (0.1 bar)
Bowl/Sump Water Capacity	20.6 oz (610 ml)
Ambient Temperature Range	-10° to 200°F (-23° to 93°C)
Maximum Fuel Temperature	180°F (82°C)

Features and Benefits

1. **Portable Recirculating or Fuel Transfer unit.**
2. **180 GPH maximum flow rate.**
3. **Power requirements: 120 Volts AC / 60 Hertz.**
4. **Hoses are 5/8" I.D., 15 feet long.**
5. **Vacuum/pressure gauge for monitoring element condition.**
6. **Uses two (2) filter elements.**

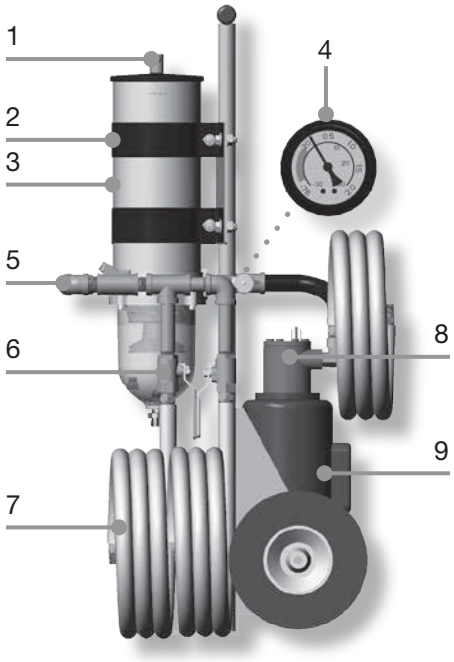
Replacement Parts

FTG-800D-5REC

	Part Number	Description
1.	**RK 11838**	Cap-Screw Carriage Kit 5/16" (18x3.2 in.)
2.	**RK 11815-103**	Clamp Bracket Kit
3.	**1000FH10**	Fuel Filter
4.	**RK 18-1104**	Compound Gauge Kit
5.	**RK 11892**	Double Manifold Pipe Kit (¾" NPT)
6.	**RK 18-1291**	Mixer Valve Kit
7.	**RS6022**	STK Hose
8.	**18-2328**	Motor/Pump Coupling Kit
9.	**RK 18043**	110/220 Volt 60 Hz Motor Kit

Additional Parts (not shown)

7244	Installation Instructions

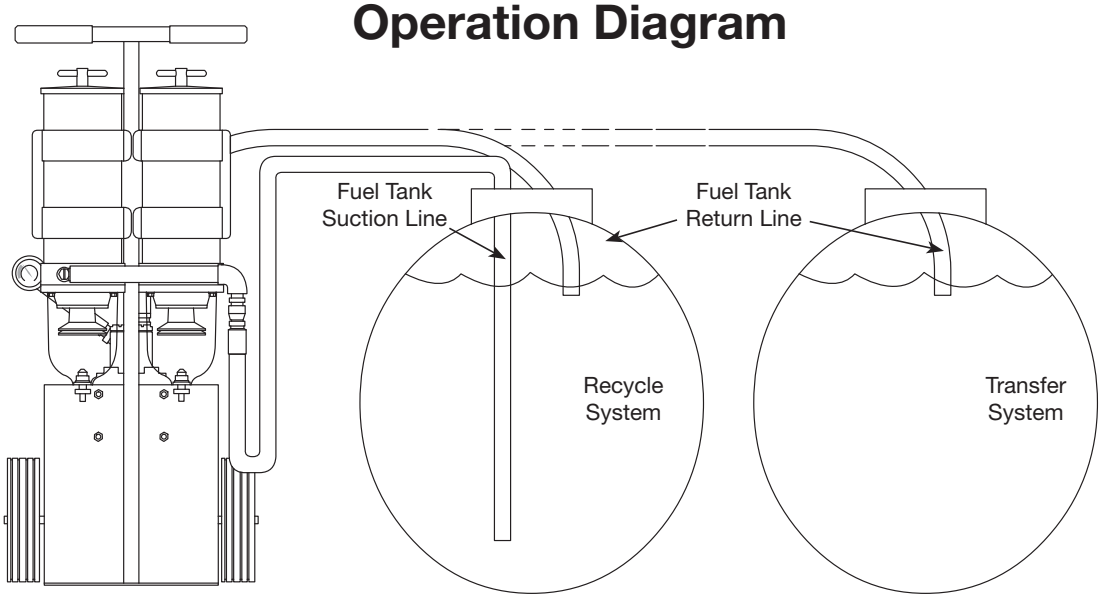


Replacement Service Element

Service element includes Lid Seal.

2020TM-OR ***10 Micron (Blue End Caps)***
The 800D-5REC uses two (2) elements.

Operation Diagram



*Aquabloc® is a registered trademark of Parker Hannifin Corp.

Section B

Fuel Tank Level Senders

FTG, Inc.
3511 Finch Road
Modesto, CA 95357
www.ftginc.com

Technical Support
209-575-0500
support@ftginc.com

Fuel Tank Level Senders

FS240, FS88 and FS5V Series

FTG's Fuel Tank Level Senders measure the fuel level in your tank. They are ruggedly reliable and 100% solid state.
These fuel senders eliminate the need to continuously replace mechanical senders and can be used in a stand alone application. They fit standard 5-bolt SAE fuel sender holes, 14" to 66" tanks, and are available for 0-88 ohm, 240-33 ohm, and 5 volt systems.

They consists of a sensor probe and an amplifier which is located in the mounting plate assembly components are encapsulated in an epoxy resin to seal out moisture other and contaminants which could affect operation of the unit.

Product Features

- Rugged and reliable, 100% solid sttate construction.
- Designed for use in 12 or 24 volt electrical system.
- Continuous readout of the fuel tank level.
- Applications: genset, truck, bus, marine.
- Use with any petroleum based product.
- Available in most lengths 14" to 66" (see opposite page).
- Available for 240-33 ohm and 0-88 ohm gauges.

Fuel Tank Level Senders

The FTG Fuel Sender is a solid state design which uses no moving parts to sense fuel/liquid levels using capacitance technology. The sender is available for diesel fuel, gasoline and light oils. This sender is available in all common ohm ranges currently in use. The two standard ranges are 240-33 OHM and 0-88 OHM.

Specifications

Power Consumption	12 volt DC Negative Ground Approx. 30mADC at Vign=15VDC
Sensing Method	Capacitance
Operating Temp. Range	-40°F - +240°F (-40°C - 116°C)
Variances	Approximately 1% reading chance for every 15˚F change from calibrated temperature.
Mounting	Standard 5 hole SAE bolt pattern for fuel senders.
Material	
Mounting Head	30% glass filled nylon 6
Probe	D3003-H14 6061-T6 Aluminum Tubing

Part Number Information

Part Number	Fuel Sender Length	Part Number	Fuel Sender Length
FS240-13	13	FS88-24	24
FS240-14	14	FS88-27	27
FS240-16	16	FS88-28	28
FS240-17	17	FS88-31	31
FS240-18	18	FS88-33	33
FS240-19	19	FS88-34	34
FS240-20	20	FS88-35	35
FS240-21	21	FS88-36	36
FS240-22	22	FS88-38	38
FS240-23	23	FS24-240-23	23
FS240-24	24	FS24-240-26	26
FS240-26	26	FS24-240-3025	30.25
FS240-27	27	FS24-240-3125	31.25
FS240-30	30	FS24-240-52	52
FS240-31	31	FS5V-12	12
FS240-32	32	FS5V-13	13
FS240-33	33	FS5V-14	14
FS240-34	34	FS5V-15	15
FS240-35	35	FS5V-16	16
FS240-36	36	FS5V-17	17
FS240-37	37	FS5V-18	18
FS240-38	38	FS5V-19	19
FS240-41	41	FS5V-20	20
FS240-47	47	FS5V-21	21
FS240-63	63	FS5V-22	22
FS88-10	10	FS5V-23	23
FS88-12	12	FS5V-24	24
FS88-14.5	14.5	FS5V-25	25
FS88-16	16	FS5V-26	26
FS88-17	17	FS5V-27	27
FS88-21	21	FS5V-30	30
FS88-23	23	FS5V-32.5	32.5
		FS5V-35	35

Section C

Air Filtration

FTG, Inc.
3511 Finch Road
Modesto, CA 95357
www.ftginc.com

Technical Support
209-575-0500
support@ftginc.com

AFS Series

The Solution

These cleanable and reusable Marine Air Filtration Systems for Marine Diesel Engines from **FTG** are designed to replace filter elements in Walker Engineering's ***AIRSEP®** housings.

Benefits

- Reduced disposal costs.
- Reduced inventory meets OEM specifications.
- Diagnostic tool.
- Quick and easy clean-up and re-oil.
- One-time investment.
- Rugged Materials.
- Full-flow.
- Cleanable and reusable.

How it Works

1. **Cross reference your current filter to an AFS part number. (Please see next Page).**
2. **Remove the old filter, then replace with the new AFS filter.**
3. **At normal service intervals (determined by your engine manufacturer) remove the AFS filter.**
4. **Clean your AFS filter element with part number FACLEAN or soapy water, rinse/dry.**
5. **Re-oil using the re-oil kit part FACLEAN and re-install.**

*AIRSEP® is a registered trademark of Walker Engineering.

How to order

Type	Dimensions Max Dia. X H x Min Dia	Reference P/N	FTG P/N
Cylinder	7.5 x 5	CD173	FA173
Cylinder	7.5 x 6	CD174	FA174
Cylinder	7.5 x 7	CD175	FA175
Cylinder	7.5 x 9	CD177	FA177
Cylinder	7.5 x 10	CD178	FA178
Cylinder	9 x 12	CD201	FA201
Cylinder	9 x 9	CD200	FA200
Cylinder	10 x 6	CD202	FA202
Cylinder	10 x 12	CD182	FA182
Cylinder	10 x 8	CD170	FA170
Cylinder	10 x 10	CD181	FA181
Cylinder	12 x 6	CD203	FA203
Cylinder	12 x 7	CD186	FA186
Cylinder	12 x 12	CD183	FA183
Cylinder	12 x 10	CD187	FA187
Cylinder	12 x 8	CD204	FA204
Cylinder	12 x 14	CD189	FA189
Cylinder	3 x 3	CD180	FA180
Conical	7.5 x 6 x 5	CD194	FA194
Conical	7.5 x 8 x 5	CD195	FA195
Conical	7.5 x 10 x 5	CD190	FA190
Conical	9 x 12 x 7	CD197	FA197
Conical	9 x 9 x 7	CD196	FA196
Conical	9 x 14 x 7	CD184	FA184
Conical	10 x 14 x 7	CD185	FA185
	Filter cleaning and re-oil kit		FACLEAN

AFS Cleanable Air Filtration System

The Challenge

Keeping your engine or equipment clean takes technology and care. With the **AFS Cleanable Air Filtration** System, you can save time, save money, and even help save the environment. The AFS is available in configurations that install directly onto existing housings.

They replace standard air filters with an engineered textile media filter. A quick wash-up and re-oil and you're back in service. A heavy-duty option designed to fit *Pamic® style housings. AFS Air filters help in marine or other severe service applications.

The Solution

Install a cleanable and reusable filtration system from **FTG.** Designed to replace filter elements in Pamic housings, the AFS Series is an easy to install solution.

How it works

1. **Cross reference your current filter to an AFS part number. (Please see next Page for help).**
2. **Remove the old filter, then replace with the new AFS filter**.
3. **At normal service intervals (determined by your engine manufacturer) remove the AFS filter**.
4. **Clean your AFS filter element with part number FACLEAN or soapy water, rinse/dry**.
5. **Re-oil using the re-oil kit part FACLEAN and re-install.**

*Pamic® is a registered trademark of Parker Hannifin Corporation.

Air Filtration Systems for Pamic Style Housings

Benefits

- Reduced disposal costs.
- Reduced inventory.
- Meets OEM specifications.
- Diagnostic tool.
- Quick and easy clean-up and re-oil.
- One-time investment.
- Rugged Materials.
- Full-flow.
- Cleanable and reusable.

How to order

Pamic Tube Rows	Pamic dimensions	Pamic Reference P/N	FTG P/N
2 x 6	15.19 x 3.19 x 8.13	P-12-26	FA12-26
4 x 4	10.56 x 10.56 x 8.13	P-16	FA16
4 x 6	15.19 x 10.56 x 8.13	P-24	FA24
4 x 8	19.82 x 10.56 x 8.13	P-32	FA32
6 x 6	15.19 x 15.19 x 8.13	P-36	FA36
6 x 8	19.82 x 15.19 x 8.13	P-48	FA48
8 x 8	19.82 x 19.82 x 8.13	P-64	FA64
	*Filter cleaning and re-oil kit		FACLEAN

* The number of cleaning kits needed varies by the filter size, please see the installation instructions for details.

Section D

Water Filtration

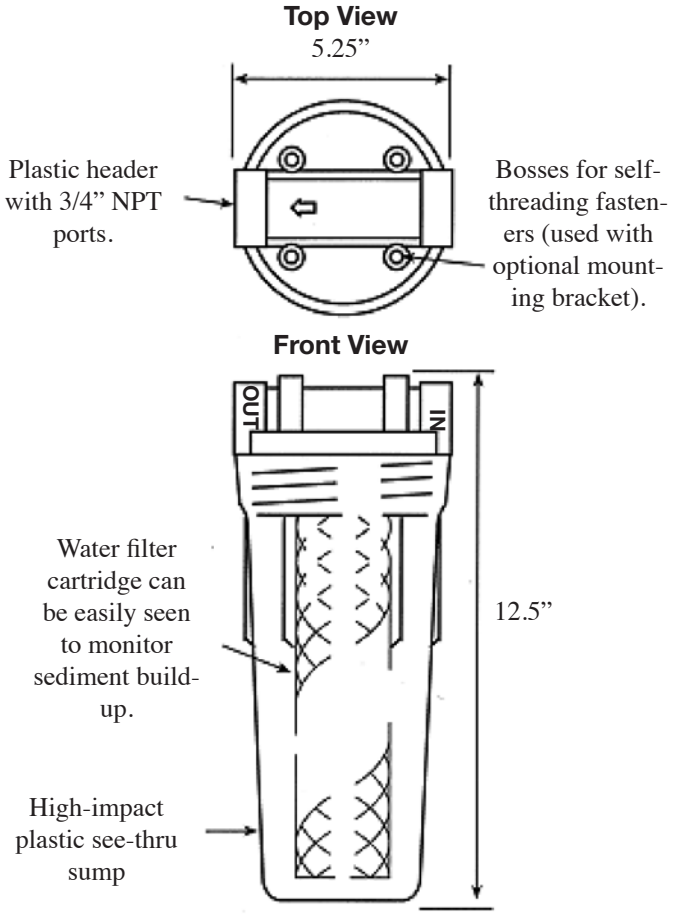
FTG, Inc.
3511 Finch Road
Modesto, CA 95357
www.ftginc.com

Technical Support
209-575-0500
support@ftginc.com

WFS Series

Overview

The **WFS Water Filtration Series** are is available in configurations that install in-line or onto bulj heads or walls to offer filtration for 3-6 gpm (12-23lpm) cold water systems. The housings are rugged and the bowls are see-through. There are four element versions to choose from 5, 30, or 60 micron sediment cartridges or a 5 micron sediment, taste, and odor cartridge. A mounting bracket and a filter service tool are available. Inlet and outlet are both 3/4" NPT and the overall dimensions are 12.5" (32 cm) height x 5.25" (13 cm) width.



Mounting Instructions

1. **Install in a vertical position only.**
2. **install on the cold water supply line only with a maximum pressure of 125 psi (8bar)**.
3. **Customer supplied connectors and pipe thread sealant**.
4. **Do not allow to freeze or overheat [100˚F (38˚C) ambient air maximum]**.
5. **Use as a separator for solids only, not designed as a purifier.**
6. **Do not use for sea (salt) water, micro-biologically contaminated water, or with any other unsafe water source**.

How to order

Choose the **FTG** part number assembly/micron rating desired. For example **WFA12-S20** is a 30 micron rating and **WFA12-T5** is a 5 micron rating. The smaller the micron rating, the smaller the oarticulate size that is trapped. Effective in removing rust, sand, algae and other foreign sediment particles from your cold water supply. The taste and odor element **(T5)** uses a two-stage syatem, the outer core traps sediments and the inner core of activated charcoal removes objectionable tastes and odors.

Specifications	WFA12-S5, S30, S60	WFA12-T5
Fluid Filtered	Drinking water, sediment only	Drinking water, sediment & taste
Maximum Flow Capacity	6 gpm (23 lpm)	3 gpm (23 lpm)
Maximum Pressure	125 psi (8.6 bar)1	25 psi (8.6 bar)
Inlet/Outlet Port Size	3/4"-14 NPTF	3/4"-14 NPTF
Height	12.5 in. (31.8 cm)1	2.5 in. (31.8 cm)
Diameter	5.25 in. (13.3 cm)	5.25 in. (13.3 cm)
Weight	3.1 lbs. (1.4 kg)3	.1 lbs. (1.4 kg)
Operating Temperature (cold water only)	33 to 100 degree F (0.6 to 38 C)	33 to 100 degree F (0.6 to 38 C)

Part Number	Description
WFC-T5B	Replacement element, 5 micron sediment, taste, and odor
WFC-S5B	Replacement element, 5 micron sediment only
WFC-S30B	Replacement element, 30 micron sediment only
WFC-S60B	Replacement element, 60 micron sediment only
WF-035	Mounting bracket. L-shaped plated steel w/ fasteners
WF-037	Rubber seal for the bowl-to-head
WF-039	Wrench to help in the removal of the clear bowl sump

Section E

Lube Oil Filtration

FTG, Inc.
3511 Finch Road
Modesto, CA 95357
www.ftginc.com

Technical Support
209-575-0500
support@ftginc.com

Lubrication Spin-on Series

Overview

The **LFS Spin-on Series** installs onto engines as a permanent, cleanable and reusable lubrication oil filtration system. Five different models are available with the size and thread to fit most applications (see table opposite page). These heavy duty housings replace standard lube oil filters. The filter elements are made from rugged stainless steel wire cloth media engineered to be cleanable and reusable for the life of the engine. A bypass valve and anti-drain back seal are included in each assembly.

Replacement element include a new filter element, all seals and the spring. See opposite page for part numbers.

Mounting Instructions

1. **Remove existing spin-on lube oil filter (please follow your engine manufacturer's instructions).**
2. **Install LFS Spin-on filter assembly, apply thin film of clean oil to seal.**
3. **Follow engine manufacturer's instructions for refilling your engine with oil.**
4. **Check for leaks.**

For help in cleaning your LFS filter, please see the cleaning instructions bulletin at www.ftgfilters.com.

How to order

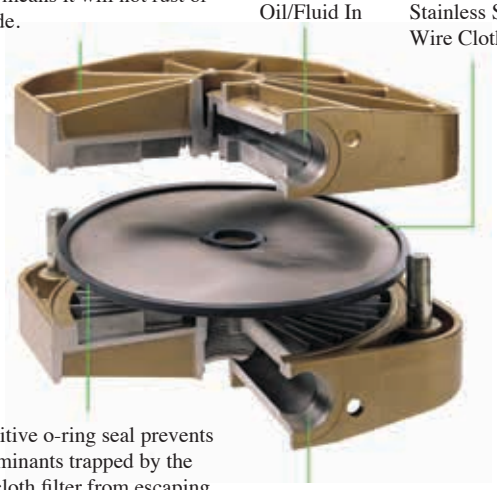
Choose model size and thread, add thread letter to number suffix.
For example: **FL1B, FL3C, FL5F, FL6H** or **FL7L** (see chart below).

Specifications						
Series Model:		**FL1__**	**FL3__**	**FL5__**	**FL6__**	**FL7__**
Housing Material		Anodized Forged Aluminum 6061				
Element Material		Stainless Steel Wire Woven into a Dutch Twill Mesh Screen				
Replacement Element Kit		**FL125**	**FL325**	**FL525**	**FL625**	**FL725**
Rated Flow*		20 GPM (76 LPM)	25 GPM (95 LPM)	36 GPM (140 LPM)	66 GPM (250 LPM)	44 GPM (170 LPM)
Housing Height		4.20" (11 cm)	5.00" (13 cm)	6.70" (17 cm)	10.60" (27 cm)	12.20" (31 cm)
Element Height		3.20" (8.1 cm)	4.00" (10 cm)	5.70" (14 cm)	8.25" (21 cm)	9.00" (23 cm)
Housing Diameter		3.25" (8.3 cm)	3.25" (8.3 cm)	3.25" (8.3 cm)	4.50" (11 cm)	4.50" (11 cm)
Element Diameter		2.50" (6.4 cm)	2.50" (6.4 cm)	3.25" (8.3 cm)	3.75" (9.5 cm)	3.75" (9.5 cm)
Weight		1.2 lbs / 0.5 kg	1.4 lbs / 0.6 kg	1.6 lbs / 0.7 kg	5.0 lbs / 2.3 kg	6.2 lbs / 2.8 kg
Micron Rating - Absolute		25µ	25µ	25µ	25µ	25µ
Micron Rating - Nominal		15µ	15µ	15µ	15µ	15µ
Thread	**Suffix**	**Part #**	**Part #**	**Part #**	**Part #**	**Part #**
M18 x 1.5	**A**	**FL1A**	**FL3A**	-	-	-
M20 x 1.5	**B**	**FL1B**	**FI3B**	-	-	-
M22 x 1.5	**C**	**FL1C**	**FL3C**	**FL5C**	-	-
3/4"-16	**D**	**FL1D**	**FL3D**	**FL5D**	-	-
13/16"-16	**E**	**FL1E**	**FL3E**	**FL5E**	-	-
1"-16	**F**	-	**FL3F**	**FL5F**	-	-
1-1/8" - 16	**G**	-	-	-	**FL6G**	**FL7G**
1-3/8" - 16	**H**	-	-	-	**FL6H**	**FL7H**
1-1/2" - 12	**I**	-	-	-	**FL6I**	**FL7I**
1-1/2" - 16	**J**	-	-	-	**FL6J**	**FL7J**
1-5/8" - 12	**K**	-	-	-	**FL6K**	**FL7K**
M36 x 1.5	**L**	-	-	-	**FL6L**	**FL7L**
2-1/4" - 12	**M**	-	-	-	**FL6M**	**FL7M**

*Flow rate shown is for clean SAE 30W lubrication oil at 100 degree F (38 degree C)

Remote-Mount LFS

The rugged die-cast aluminum construction is designed for years and years of service. A high-quality powder coated finish means it will not rust or corrode.



A positive o-ring seal prevents contaminants trapped by the wire cloth filter from escaping downstream where they can damage precision components. When the filter requires service, the service indicator light alerts the operator.

A bypass relief valve lowers the restriction when the wire cloth filte is plugged. Warning ligh is included.

	LFS35	LFS60	LFS90
Maximum Flow Rate	6 GPM (23 LPM)	20 GPM (76 LPM)	45 GPM (170 LPM)
Maximum PSI	150 PSI (10.3 bar)	150 PSI (10.3 bar)	150 PSI (10.3 bar)
Height	2.45 in. (6.22 cm)	3.50 in. (8.89 cm)	4.75 in. (12.07 cm)
Width	3.63 in. (9.22 cm)	6.00 in. (15.24 cm)	9.62 in. (24.43 cm)
Depth	3.63 in. (9.22 cm)	6.00 in. (15.24 cm)	9.50 in. (24.13 cm)
Weight	1.21 lbs (0.55 Kg)	4.31 lbs (1.95 Kg)	10.60 lbs (4.81 Kg)
Ports	3/8" NPT	1 1/16"-12 (SAE J1926)	1 5/16"-12 (SAE J1926)
Micron Availability	28, 40	28, 40, 60, 115	28, 40, 60, 115
Service Indicator Light	Yes	Yes	Yes
Hose Kit	LFS35HK	LFS60HK	LFS90HK

Overview

The **FTG Remote-Mount LFS** can be easily installed for convenient access of trucks, buses, off-highway and industrial equipment, and in marine engine rooms. Whether for lube oil, hydraulic, coolant, power steering or transmission fluids, the stainless steel wire cloth filter presents an impenetrable path that solid particles and metal shavings simply can't get through.

Benefits

- No more disposal worries.
- Eliminates filter inventory.
- Valuable diagnostic tool.
- Extends engine life.
- Quick and easy maintenance.
- One-time investment.
- Full-flow with built-in bypass.
- Indicator light signals the need for service.

Spin-On Oil Filter Adapter and Replacement O-Ring Kits

Complete Part No. Kit	Replacement Seal Kit* Part No.	Adapter to Engine Threads	Adapter In/Out Port Threads
LFS CHV-A	N/A	1/4"-20 (2) 5/16"-18 (2)	1/2"-14 NPTF
LFS 112-36A	RK46169	1"-12	1/2"-14 NPTF
LFS 11212-48A	RK46045	1 1/2"-12	1 5/16"-12 SAE
LFS 11216-41A	RK46170	1 1/2"-16	1/2"-14 NPTF
LFS 11216-48A	RK46045	1 1/2"-16	1 5/16"-12 SAE
LFS 11216-50A	N/A	1 1/2"-16	1 5/16"-12 SAE
LFS 116-36A	RK46169	1"-16	1/2"-14 NPTF
LFS 11816-36A	RK46169	1 1/8"-16	1/2"-14 NPTF
LFS 11816-48A	RK46045	1 1/8"-16	1 5/16"-12 SAE
LFS 1316-36A	RK46169	1 3/16"-16	1/2"-14 NPTF
LFS 13816-48A	RK46045	1 3/8"-16	1 5/16"-12 SAE
LFS 15812-48A	RK46045	1 5/8"-12	1 5/16"-12 SAE
LFS1815-31A	RK46169	18 mm X 1.5	1/2"-14 NPTF
LFS 2015-31A*	RK46169	20 mm X 1.5	1/2"-14 NPTF
LFS 2015-36A	RK46169	20 mm X 1.5	1/2"-14 NPTF
LFS 2015-31A	RK46169	22 MM X 1.5	1/2"-14 NPTF
LFS 3416-31A	RK46169	3/4"-16	1/2"-14 NPTF
LFS 5818-31A	RK46169	5/8"-18	1/2"-14 NPTF

*O-ring or gasket should be replaced if adapter is removed from engine, after being in service. RK46169: Gasket, 2.48" I.D. RK46045: O-ring, 3.73" I.D. RK46170: Gasket, 3.10" I.D.

LFS Cleanable Lube Oil Remote Mount Series

Replacement Parts

Part Number	Description
LFS 11212-48A	OIL FILTER ADAPTER,11/2-12MT
LFS 11216-41A	OIL FILTER ADAPTER,11/2-16MT
LFS 11216-48A	OIL FILTER ADAPTER,11/2-16MT
LFS 11216-50A	OIL FILTER ADAPTER,11/2-16MT
LFS 116-36A	OIL FILTER ADAPTER,1-16MT
LFS 11816-36A	OIL FILTER ADAPTER,1-1/8-16MT
LFS 11816-48A	OIL FILTER ADAPTER,1-1/8-16MT
LFS 1316-36A	OIL FILTER ADAPTER,13/16-16MT
LFS 15812-48A	OIL FILTER ADAPTER 1-5/8-12 MT
LFS 1815-31A	OIL FILTER ADAPTER,18MMX1.5MT
LFS 2015-31A	OIL FILTER ADAPTER,20MMX1.5MT
LFS 2015-36A	OIL FILTER ADAPTER,20MMX1.5MT
LFS 2215-31A	OIL FILTER ADAPTER, 22MMX1.5MT
LFS 2415-36A	OIL FILTER ADAPTER,24X1.5MM
LFS 3416-31A	OIL FILTER ADAPTER,3/4-16MT
LFS 3528	3.5"LFS,28MIC,W/O TT LT SENSOR
LFS 3528TT	3.5" LFS ASSEMBLY, 28 MICRON, LT. SWITCH
LFS 3528WCF	3.5" LFS WIRE CLOTH FILTER, 28 MICRON
LFS 3540 3.5"	LFS ASSEMBLY,40 MICRON
LFS 3540WCF	3.5" LFS WIRE CLOTH FILTER, 40 MICRON
LFS 46599	DETERGENT, SPRAY WASH, 5 GALLON PAIL
LFS 46600	DETERGENT, ULTRASONIC WASH, 2.5 GALLON JUG
LFS 6010WCF	10 MIC WIRE CLOTH FILTER
LFS 60115WCF	115 MIC WIRE CLOTH FILTER
LFS 6028WCF	28 MIC WIRE CLOTH FILTER
LFS 6040WCF	40 MIC WIRE CLOTH FILTER
LFS 6060WCF	60MIC WIRE CLOTH FILTER
LFS 60HK	HOSE KIT, LFS MODEL 60
LFS 6205BP	6"LFS BYPASS FILTER ASSEMBLY
LFS 6210BP	6"LFS BYPASS FILTER ASSEMBLY
LFS 62115	6"LFS ASSEMBLY. 115 MICRON, 2 PORTS
LFS 62115TT	6"LFS ASSEMBLY, 115 MICRON, 2 PORTS, LIGHT SWITCH
LFS 6228	6"LFS ASSEMBLY, 28 MICRON, 2 PORTS
LFS 6228TT	6"LFS ASSEMBLY, 28 MICRON 2 PORTS, LIGHT SWITCH
LFS 6240	6"LFS ASSEMBLY, 40 MICRON, TWO PORTS
LFS 6240TT	6"LFS ASSEMBLY, 40 MICRON, 2 PORTS, LIGHT SWITCH
LFS 6260	6"LFS ASSEMBLY, 60 MICRON, 2 PORTS
LFS 6260TT	6"LFS ASSEMBLY, 60 MICRON, 2 PORTS, LIGHT SWITCH
LFS 64115	6"LFS ASSEMBLY, 115 MICRON, 4 PORTS
LFS 64115TT	6"LFS ASSEMBLY., 115 MICRON, 4 PORTS, LIGHT SWITCH
LFS 6428	6"LFS ASSEMBLY, 28 MICRON, 4 PORTS
LFS 6428KT-01	MODEL 64 INSTALLATION KIT, 13/16" - 16 THREAD
LFS 6428KT-02	MODEL 64 INSTALLATION KIT, 1"-16 THREAD
LFS 6428KT-03	MODEL 64 INSTALLATION KIT, 1"-12 THREAD
LFS 6428KT-04	MODEL 64 INSTALLATION KIT,1 1/2"-16 THREAD
LFS 6428TT	6" LFS ASSBLY, 28 MIC, 4 PORTS,LT.SWITCH
LFS 6440	6" LFS ASSBLY, 40 MIC, 4 PORTS

Part Number	Description
LFS 6440TT	6" LFS ASSBLY, 40 MIC, 4 PORTS, LT. SWITCH
LFS 6460	6" LFS ASSBLY, 60 MIC, 4 PORTS
LFS 6460TT	6" LFS ASSBLY, 60 MIC, 4 PORTS, LT. SWITCH
LFS 7000S	LFS ELEMENT CLEANING SYSTEM, SPRAY
LFS 7000U	LFS ELEMENT CLEANING SYSTEM, ULTRASONIC
LFS 9005WCF	9" WIRE CLOTH FILTER, 5 MICRON
LFS 9010WCF	9" WIRE CLOTH FILTER, 10 MICRON
LFS 90115WCF	9" WIRE CLOTH FILTER, 115 MICRON
LFS 9028WCF	9" WIRE CLOTH FILTER, 28 MICRON
LFS 9040WCF	9" WIRE CLOTH FILTER, 40 MICRON
LFS 9060WCF	9" WIRE CLOTH FILTER, 60 MICRON
LFS 90HK	HOSE KIT, LFS MODEL 90
LFS 9210BP	9" LFS BYPASS FILTER ASSEMBLY
LFS 92115	9" LFS ASSBLY, 115 MIC, 2 PORTS
LFS 92115TT	9" LFS ASSBLY, 115 MIC, 2 PORTS, LIGHT SWITCH
LFS 9228	9" LFS ASSBLY, 28 MIC, 2 PORTS
LFS 9228TT	9" LFS ASSBLY, 28 MIC, 2 PORTS, LIGHT SWITCH
LFS 9240	9" LFS ASSBLY, 40 MIC, 2 PORTS
LFS 9240TT	9" LFS ASSBLY, 40 MIC, 2 PORTS, LIGHT SWITCH
LFS 9260	9" LFS ASSBLY, 60 MIC, 2 PORTS
LFS 9260TT	9" LFS ASSBLY, 60 MIC, 2 PORTS, LIGHT SWITCH
LFS CHV-A	OIL FILTER ADAPTER,CHEVROLET
LFS M3615-48A	OIL FILTER ADAPTER,M36 X 1.5
LFS RK356LS	TATTLETALE LIGHT SENSOR-SWITCH
LFS RK356LSK	TATTLETALE LIGHT SENSOR-COMPLT
LFS RK46008	KIT-REPL. PORT PLUG
LFS RK46045	KIT-REPL. O-RING 343 LFS
LFS RK46134	KIT-LIGHT PANEL, DELAY & LATCH
LFS RK46138	LIGHT SENSOR SWITCH KIT, 92/94
LFS RK46159	KIT-HOSE BYPASS LFS MODEL62&92
LFS RK46169	KIT-REPL. GASKET 2-230 LFS
LFS RK46170	KIT-REPL. GASKET 2-239 LFS
LFS RK46582	KIT-REPL. SEAL 801/802
LFS RK46588	COUPLING, QUICK FILL MALE, 700 SERIES
LFS RK46589	COUPLING, QUICK FILL FEMALE, 700 SERIES
LFS RK46634	FITTING KIT, COMBO FILTER
LFS RK60MFK	6" MULTI FILTER KIT
LFS RK750	OUTER REPL FLTR, 25 MIC, FOR LFS 700/700LS
LFS RK751	INNER REPL FLTR, 10 MIC, FOR LFS700/700LS
LFS RK752	WARNING LIGHT
LFS RK753	BOTTOM CAP WITH LIGHT SWITCH
LFS RK755	SEAL KIT FOR LFS 700, 703, 705, 707, 710, 712, 714
LFS RK757	KIT-ELEMENT LFS 718 SERIES
LFS RK758	KIT-REPL. SEAL LFS 718 SERIES
LFS RK759	ELEMENT KIT FOR LFS 703, 705, 707, 710, 712, 71412
LFS700BPE	REPLACEMENT ELEMENT ASSY, LFS 700 SERIES

Direct Spin-On LFS 700 Series

Overview

With **FTG Lubrication Filtration Systems**, you can save your engine, save time, save money, and even help save the environment. The revolutionary Full-Flow Cleanable Series is available in configurations that spin directly onto existing engine mounting heads or in remote-mount models. They replace lube oil and other filters with a cleanable stainless steel wire cloth filter. A quick wash-up in solvent or aqueous solution and you're back in service.

The FTG spin-on oil filter threads directly onto virtually all engine lube oil heads. Clean-up of the reusable wire cloth filter is straightforward; simply remove the oil filter drain plug in the bottom of the filter end cap to drain dirty oil. Then unsrew the filter end cap and drop the dirty filter screen out, clean and replace.

It's the fastest, most innovative and environmentally friendly oil filter change in the business.

Spins directly onto existing filter heads. LFS spin-on models are available for most engines, see chart below.

The rugged heat-treated aluminum housing is designed for years and years of service. A high-quality anodized finish means it will not rust or corrode.

Stainless steel wire cloth with specail co-pleat design for durability, efficiency, and long life.

Direct Spin-On Full-Flow Application Guide

Application	Cummins/Detroit	Detroit	Caterpillar	Isuzu	Caterpillar	International	International FORD
FTG Filter Assembly	**LFS 703 or FL7I**	**LFS 705 or FL7K**	**LFS 707 or FL7G**	**LFS 710 or FL7H**	**LFS 712 or FL7J**	**LFS 714 or FL7L**	**LFS 718 or FL7J**
	C Series, L10, Big CAM IV, 230, 240, NTC-250, 290, 300, 350, 355, 370, 400, All KT, All 53, 71, 6v92, 149 Series, and Pre-1996 Series 60	Series 50 & 60, 1993 and on	3116, 3208T, 3304, 3306, 3126 MACK TRUCK EM-6, EN ENDT, EM-7 Volvo FLT	Mitsubishi FK & FM Series Truck GMC / Isuzu FVR with 8.4 Ltr. Volvo with John Deere 744E Industrial Isuzu Engine	3176, 3406, 3408, 3412, C-10, C-12, C-15, C-16	DT-466, 1994 and on	6.9L IDI, 7.3L IDI, 7.3L DI Power Stroke T444E
Filter References Data Cross-Over							
Fleetguard	LF670 LF3363	LF3620 LF3671	LF667 LF3379	LF777	LF691A LF3566	LF3640	LF3344 LF3630
Baldwin	B95-MPG B196	B495	B7600 B75	B7019	B99	B7030	B134 B7039
Wix	51812 51970	51971	51791 51788	51728 51749	51792 51722	51799	51742 51734
Cummins	3313279						
Caterpillar			1R0739 1R0714		1R0716		
Detroit	23518524	25014504					
Isuzu				11324010521			
Mack			485-GB-3191				
International						1819452-C1	1804442C1
Thread Size	1-1/2 x 12 UN	1-5/8 x 12 UN	1-1/8 x 16 UN	1-3/8 x 16 UN	1-1/2 x 16 UN	M36 x 1.5	1-1/2 x 16

Section F

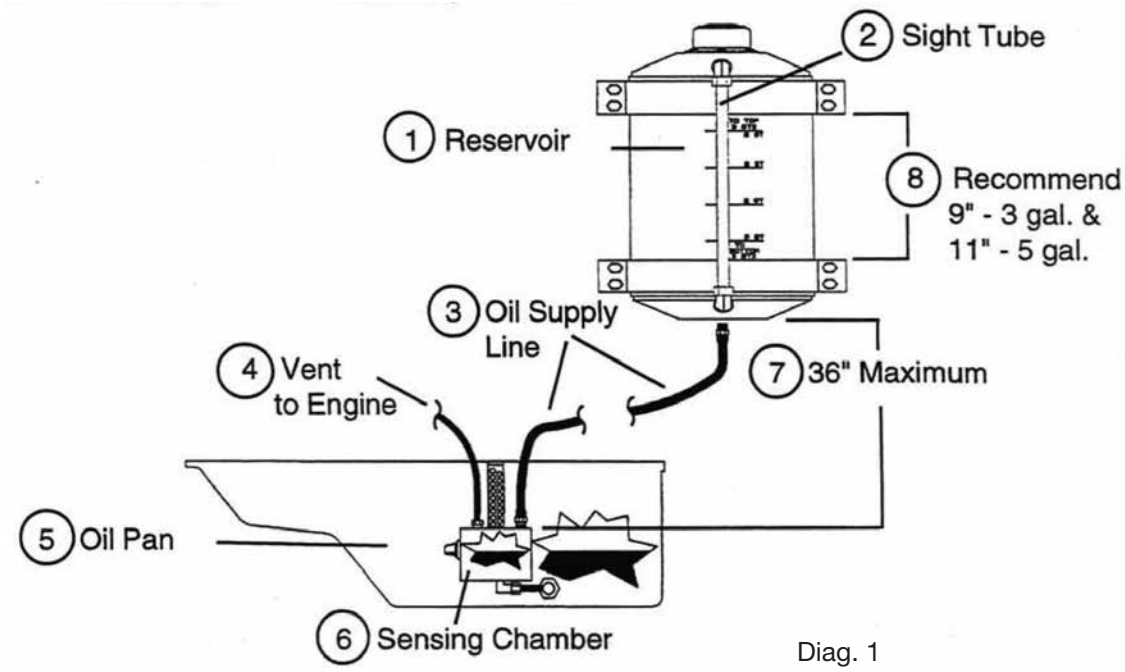
Lube Oil Never Lo Systems

FTG, Inc.
3511 Finch Road
Modesto, CA 95357
www.ftginc.com

Technical Support
209-575-0500
support@ftginc.com

GENERAL OPERATION

The AFG Never Lo system is an automatic engine oil replenishing system which utilizes a three (3) or five (5) gallon on-board oil reservoir. This system continuously monitors engine oil and automatically maintains a pre-adjusted level. The AFG Never Lo is easy to install, requires no electrical connections and is completely mechanical in operation. The oil reservoir features an easy to read level indicator sight tube, Item (2) (Diag. 1).
NOTE: This unit does not relieve operator from checking oil levels.



Diag. 1

I. MOUNTING OF COMPONENTS

A) Reservoir:

Mount reservoir in a solid location on the frame rail or exhaust stanchion that provides easy access for filling and operator visibility of the sight tube, Item (2) (Diag.1).

The brackets be 9” apart on 3 gallon round reservoir and 11” on 5 gallon round reservoir for proper support, Item (8) (Diag. 1).

Use #8 hose, keeping hose as short as possible and free from any hills or valleys, Item (3) (Diag. 1). The bottom of the reservoir must be located no higher than 36” above the oil entry point on the sensing chamber, Item (7) (Diag. 1).

NOTE: Anything over 36” could cause the system to become erratic.

CAUTION: As the vertical distance decreases betweenthe reservoir and sensing Chamber, the oil hose routing becomes morecritical for hills and Valleys. If a long distance separates the reservoir and chamber, we suggest running the oil supply hose through a conduit or rigid tubing for support. Flare conduit ends before running hose through it.

II. MOUNTING OF COMPONENTS

B) Sensing Chamber:

The point of entry into the pan may be the drain plug or an auxiliary plug on the light side of the pan below the oil level when the engine is running. Mount the universal pan bracket to the oil pan on the same side of the engine in an unobstructed area near the middle of the pan. Temporarily mount the sensing chamber in the middle set of holes on the pan bracket. The 1/4H NPT port, Item (B) (Diag. 2), on the top of the sensing chamber must be vented to the valve cover or other no pressure point on the engine using #6 hose so oil doesn't accumulate in the hose, Item (4) (Diag.1). Run a #8 hose from the bottom of the sensing chamber, ttem (E) (Diag.2), to the oil pan.

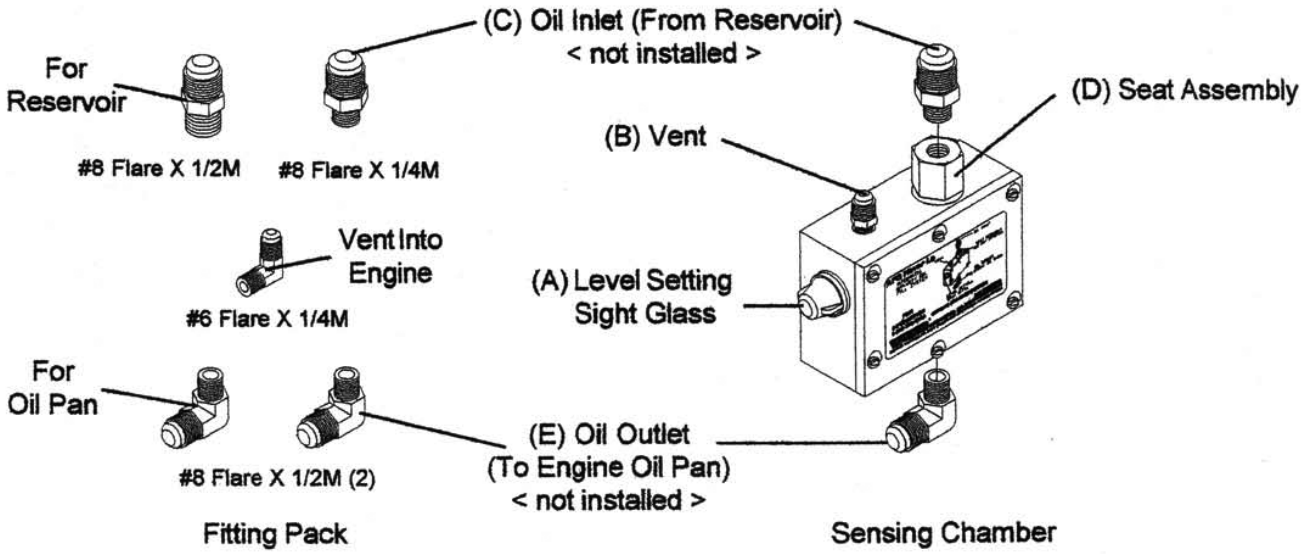
NOTE: Sensing chamber **MUST** be mounted horizontally on the right side of the engine (reference Diag.1 on opposite page).

III. MOUNTING OF COMPONENTS

B) Sensing Chamber:

The point of entry into the pan may be the drain plug or an auxiliary plug on the light side of the pan below the oil level when the engine is running. Mount the universal pan bracket to the oil pan on the same side of the engine in an unobstructed area near the middle of the pan. Temporarily mount the sensing chamber in the middle set of holes on the pan bracket. The 1/4H NPT port, Item (B) (Diag. 2), on the top of the sensing chamber must be vented to the valve cover or other no pressure point on the engine using #6 hose so oil doesn't accumulate in the hose, Item (4) (Diag.1). Run a #8 hose from the bottom of the sensing chamber, ttem (E) (Diag.2), to the oil pan,

NOTE: Sensing chamber **MUST** be mounted horizontally on the right side of the engine (reference Diag.1 on opposite page).

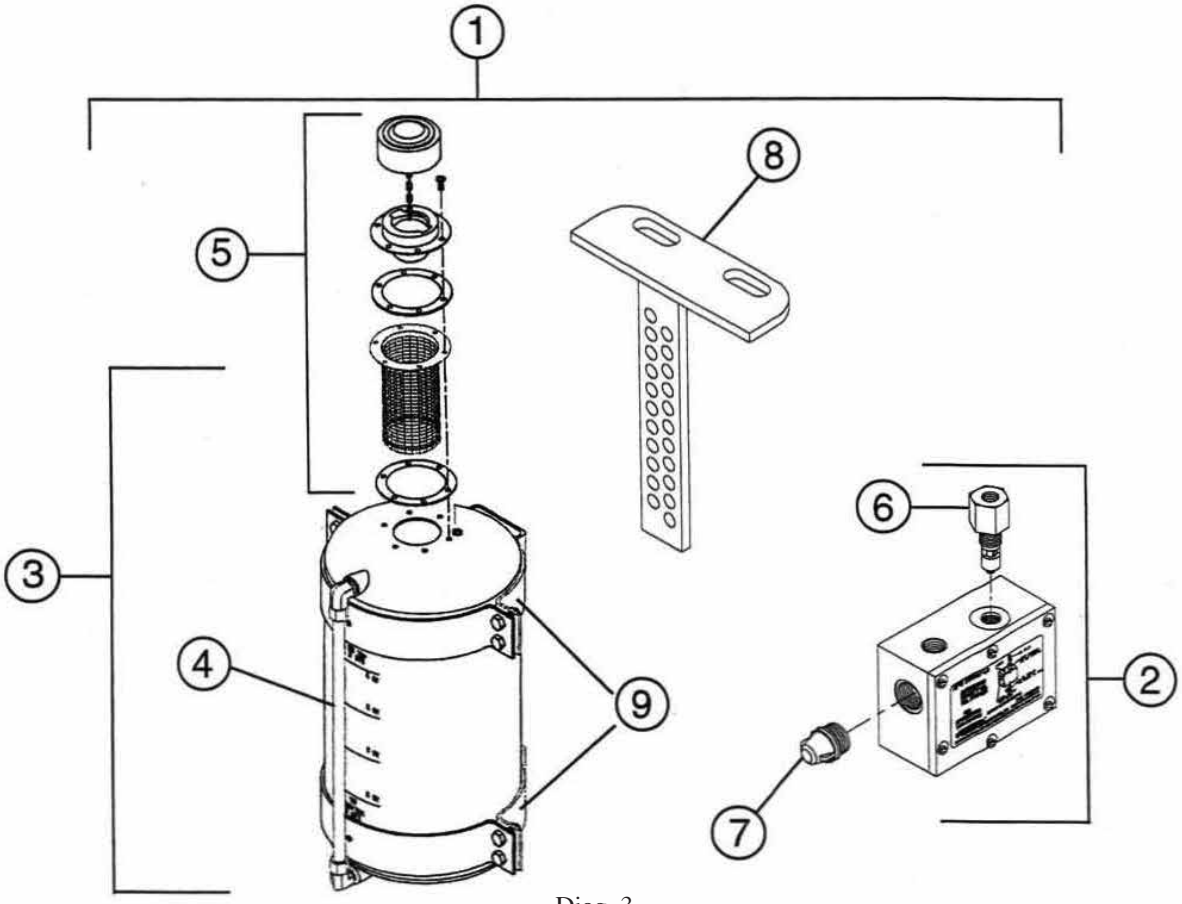


Diag.2

AFG30R & AFG50R

PARTS LIST

1	AFG30R	3 Gallon System
	AFG50R	5 Gallon System *(not shown)*
2	AFG10	Sensing Chamber w/out Mounting Bracket
3	AFG34	3 Gallon Reservoir (*includes* 4, 5 & 9 - 2 set)
	AFG54	5 Gallon Reservoir (*includes* 4, 5 & 9 - 2 set)
4	AFG34ST	Sight Tube kit - 3 Gallon
	AFG54ST	Sight Tube kit - 5 Gallon
5	3GV14	Fill Cap assembly
6	AFG25	Needle & Seat assembly
7	AFG45	Sight Glass
8	AFG64	Universal Mounting Bracket
9	3NL52	Mounting Bracket· 1 set (2 sets required)

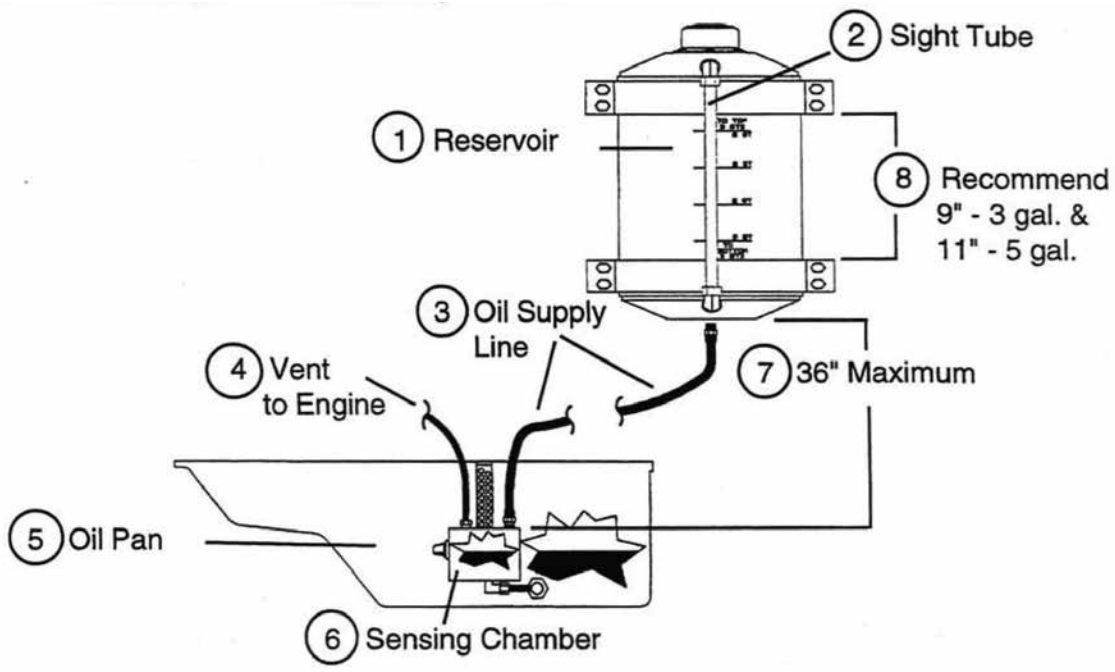


Diag. 3

GENERAL OPERATION

The AFG Never Lo system is an automatic engine oil replenishing system which utilizes a three (3) or five (5) gallon on-board oil reservoir. This system continuously monitors engine oil and automatically maintains a pre-adjusted level. The AFG Never Lo is easy to install, requires no electrical connections and is completely mechanical in operation. The oil reservoir features an easy to read level indicator sight tube, Item (2) (Diag. 1).

NOTE: This unit does not relieve operator from checking oil levels.



Diag. 1

I. MOUNTING OF COMPONENTS

A) Reservoir:

Mount reservoir in a solid location on the frame rail or exhaust stanchion that provides easy access for filling and operator visibility of the sight tube, Item (2) (Diag.1). The brackets should be 9” apart on the 3 gallon round reservoir and 11” on the 5 gallon round reservoir for proper support, Item (8) (Diag.1).

Use #8 hose, keeping hose as short as possible and free from any hills or valleys, Item (3) (Diag.1). The bottom of the reservoir must be located no higher than 36” above the oil entry point on the sensing chamber, Item (7) (Diag.1).

NOTE: Anything over 36” could cause the system to be come erratic.

CAUTION: As the vertical distance decreases between the reservoir and sensing chamber, the oil hose routing becomes more critical for hills and valleys. If a long distance separates the reservoir and chamber, we suggest running the oil supply hose through a conduit or rigid tubing for support. Flare conduit ends before running hose through it.

II. MOUNTING OF COMPONENTS

B) Sensing Chamber:

The point of entry into the pan may be the drain plug or an auxiliary plug on the light side of the pan below the oil level when the engine is running. The 1/4" NPT port, Item (B) (Diag. 2), on the top of the sensing chamber must be vented to the valve cover or other no pressure point on the engine using #6 hose so oil doesn't accumulate in the hose, Item (4) (Diag.1).

NOTE: The installed straight fitting **MUST** be used. The use of the 90° fitting in the sensing chamber will cause it to be erratic.

Make sure this hose has no hills or valleys. Run a #8 hose from the bottom of the sensing chamber, Item (E) (Diag.2), to the oil pan.

NOTE: Sensing chamber **MUST** be mounted horizontally on the right side of the engine (reference Diag.1 on previous page).

III. CHAMBER SETTING

The mounting bracket has been designed to fit a standard Series 60 engine.

A) Install mounting bracket on right side of engine in matching holes on block. The vertical portion of the mounting bracket should be close to the rear of the sump (Diag.4). The bolt hole for the top of bracket is to the right of the site where the dipstick enters the block. The hole for the lower bolt is below the water pump.

NOTE: The lower bolt hole may also have a hose hanger bracket attached already.

B) For 11 liter - mount chamber on 8th hole down on the left side of the bracket.
For 12 liter - mount chamber on 3rd hole down on the left side of the bracket.
NOTE: Moving the sensing chamber diagonally will affect the oil level 1/4" and vertical movement 1/2".

C) Make sure the vehicle is on level ground and that the engine oil is at the desired level before starting engine. (ie. Some companies run right at the full mark, while others run at one or two quarts down).

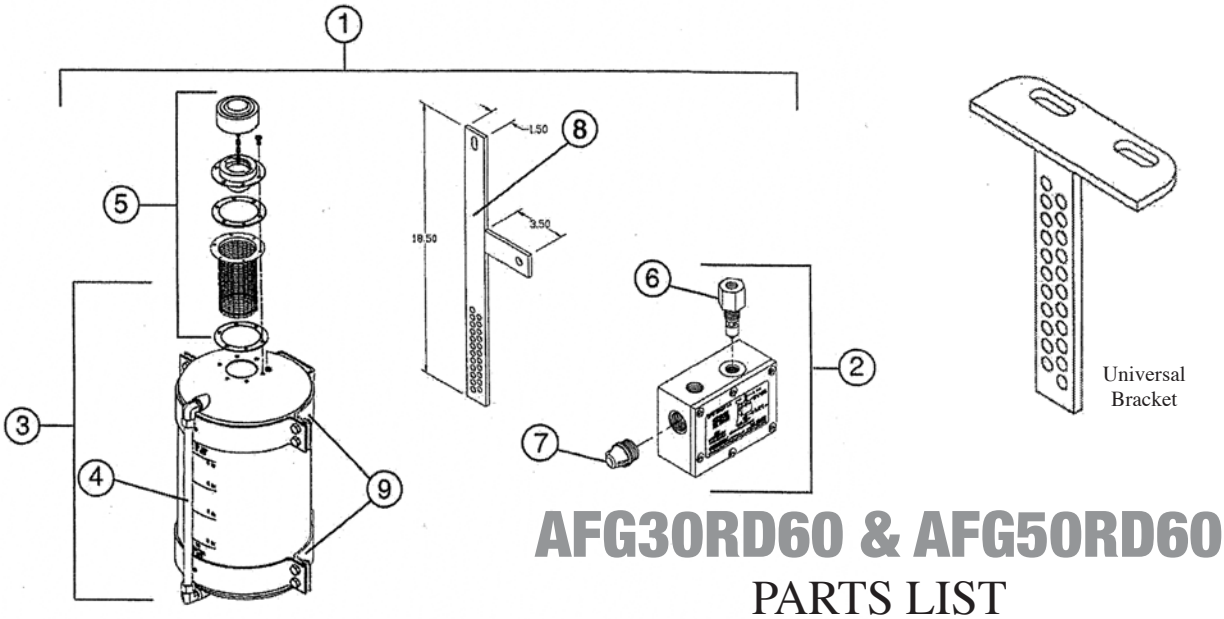
D) Start engine and achieve operating temperature before continuing.

E) With engine running at full governed RPM, move the sensing chamber up or down, one hole at a time diagonally on the bracket until oil level setting sight glass, Item (A), (Diag. 2).

F) Tighten sensing chamber securely to the mounting bracket.

G) Shorten up hoses if necessary so there are not any hills or valleys, as this could cause the system to be erratic.

CAUTION: When making hoses, make sure they are free of any inside debris. Debris will hang up seat assembly, causing the AFG to work improperly. If the unit does not function properly (not filling or overfilling), remove seat assembly and clean. (See #6 on page 4).

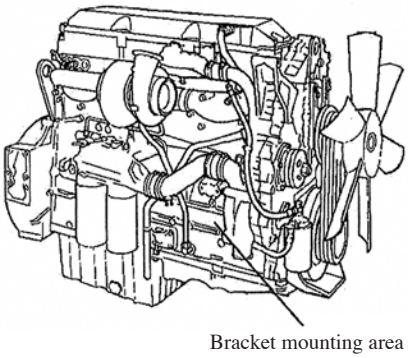


Diag. 3

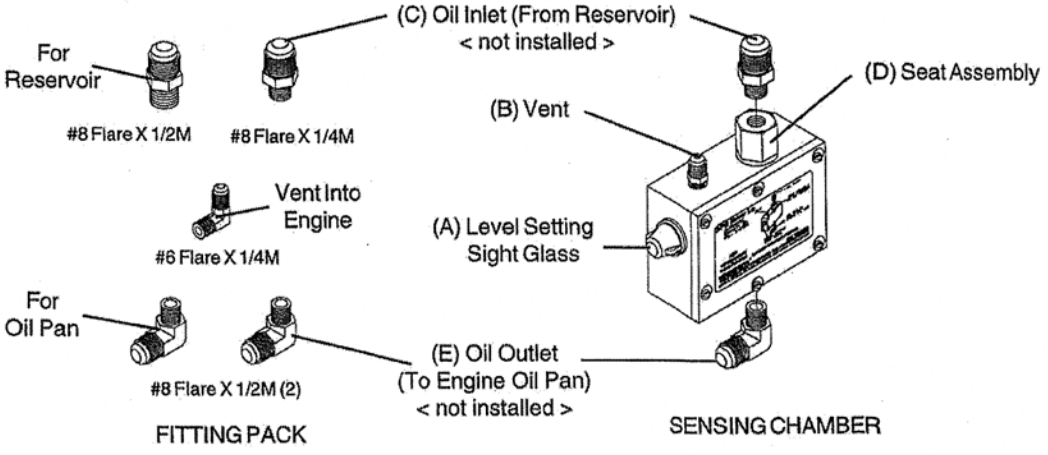
AFG30RD60 & AFG50RD60

PARTS LIST

1	AFG30RD60	3 Gallon System
	AFG50RD60	5 Gallon System *(not shown)*
2	AFG10	Sensing Chamber w/out Mounting Bracket
3	AFG34	3 Gallon Reservoir (*includes* 4, 5 & 9 - 2 set)
	AFG54	5 Gallon Reservoir (*includes* 4, 5 & 9 - 2 set)
4	AFG34ST	Sight Tube kit - 3 Gallon
	AFG54ST	Sight Tube kit - 5 Gallon *(not shown)*
5	3GV14	Fill Cap assembly
6	AFG25	Needle & Seat assembly
7	AFG45	Sight Glass
8	AFGD60	Mounting Bracket for DDC Series 60
	AFG64	Optional Universal Mounting Bracket
9	3NL52	Mounting Bracket· 1 set (2 sets required)



Diag. 4



Diag. 2

Section G

Fittings and Valves

FTG, Inc.
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Modesto, CA 95357
www.ftginc.com

Technical Support
209-575-0500
support@ftginc.com

Fluid Connectors

FTG fittings are available in various materials, styles and sizes to fit most filters made and most installation requirements. The following page is a helpful guide which outlines how part numbers are structured.

Materials: FTG fittings are made of either brass (CA360 or CA345), or plated steel (C12L14 with zinc di-chomate). When the part number is listed using the part numbering system, the second digit indicates the material, such as 91X = steel, 93X = stainless steel, and 95X = brass.

Styles: FTG products feature several porting styles to external plumbing however the most common are SAE J1926 Straight Thread O-ring & SAE J476 National Pipe Thread (see next two pages for more info).

SAE J1926 & SAE J2244 Straight Thread O-ring

These designs utilize straight threads for holding power and an O-ring for superior sealing capability. Straight thread ports permit exact positioning of elbow fittings, provide a leak free joint, eliminate distortion and cracking of boss due to over tightening and are easier to maintain. The standard Parker O-ring material is compound No. N552-90, 90 durometer Buna-Nitrile (NBR). Apply a light coating of clean fuel or Parker Super O-lube (RK31605) to the O-ring prior to installation.

SAE J476 National Pipe Thread

Many Racor fuel ports feature the National Pipe Tapered for Fuels (NPTF - also known as DrySeal Piping Thread) design for best sealing efficiency in smaller filters. The crests of the threads flatten upon tightening and allow the flanks to make contact thus sealing the joint. Use of a thread sealant, such as Parker's Unipar, is recommended to ensure a leak-proof seal. **To avoid system contamination, do not apply sealant onto the first few threads.**

Fluid Connectors

FTG Fitting Numbering System

This new system was developed to standardize **FTG** aftermarket fitting part numbers and to more closely meet accepted industry practices. This table is provided to assist our field customer service professionals in identifying and or specifying a particular fitting. **While the system can identify numerous fitting combinations, it should be noted that many combinations are not available from FTG.**

911– O10– J10

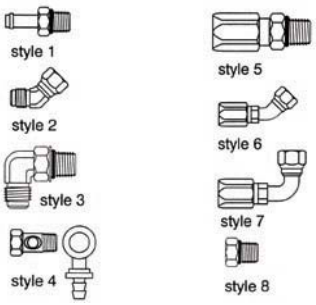
T1 thread | T2 thread

FAMILY:
9 = Fittings

MATERIAL:
1 = Steel
3 = Stainless Steel
5 = Brass
7 = Aluminum
9 = Polymer

STYLE:
(Suction/Low Pressure use)
1 = Straight
2 = 45 degree
3 = 90 degree
4 = Banjo Bolt/Union

(Low/Medium Pressure use)
5 = Hose Straight
6 = Hose 45 degree
7 = Hose 90 degree
8 = Plug



T1 THREAD:
This is always the thread that attaches to the Racor product port fitting:
B = BSPT (British Standard Pipe Thread)
N = NPT, or NPTF (tapered pipe)
M = Metric (straight)
O = SAE O-ring (straight)
W = Swivel with JIC 37° female threads (exception for T1).

Size	O,W	B,N*	M
3	3/8-24	N/A	N/A
4	7/16-20	1/4-18	N/A
5	1/2-20	N/A	N/A
6	9/16-18	3/8-18	N/A
8	3/4-16	1/2-14	N/A
10	7/8-14	N/A	M10x1.5
12	1 1/16-12	3/4-14	N/A
14	N/A	N/A	M14x1.5
16	1 5/16-12	1-11 1/2	N/A

T2 FEATURE:
This end adapts to a fitting, hose or tube:
D = Drilled/Tapped NPT
H = Hose barb, male (hose I.D.)
F = NPT, female (tapered pipe thread)
N = NPT, male (tapered pipe thread)
J = J.I.C. 37° male straight thread
S = SAE 45° male straight thread
T = Tube, CPI female (Tube O.D.)

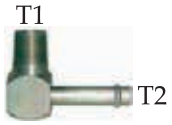
Size	J,S	D,F,N	T,H(R4)	H(R5)
4	7/16-20	1/4-18	1/4	3/16
5	1/2-20	N/A	5/16	1/4
6	9/16-18	3/8-18	3/8	5/16
8	3/4-16	1/2-14	1/2	13/32
10	7/8-14	N/A	5/8	1/2
12	1 1/16-12	3/4-14	3/4	5/8
16	1 5/16-12	1-11 1/2	1	7/8

NOTES:
* NPT/BSPT Threads for simplicity, these similar threads are shown in the same column, but differ in the angle of the thread from (i.e. NPT= 60° BSP= 55°) and are not interchangeable

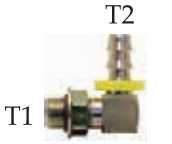
N/A = Not currently available.

Fluid Connectors

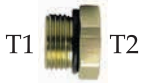
Filters with 1/4”-18 NPT fuel ports, use the following fittings: Hose bead fitting requires hose clamp.

Part Number	Material	T1	T2	Image
951-N4-H4	Brass	1/4″-18 (male)	1/4″ (hose barb)	
951-N4-H5	Brass	1/4″-18 (male)	5/16″ (hose barb)	
911-N4-H6	Plated Steel	1/4″-18 (male)	3/8″ (hose barb)	
953-N4-H5	Brass	1/4″-18 (male)	5/16″	
953-N4-H6	Brass	1/4″-18 (male)	3/8″	
913-N4-H6	Plated Steel	1/4″-18 (male)	3/8″	

Filters with 3/8”-18 fuel ports, use the following fittings:

Part Number	Material	T1	T2	Image
951-N6-J6	Brass	3/8″-18 (male)	9/16″-18 UNF	
951-N6-J8	Brass	3/8″-18 (male)	3/4″-16 UNF	
911-N6-H6	Plated Steel	3/8″-18 (male)	3/8″ (hose barb)	
911-N6-H8	Plated Steel	3/8″-18 (male)	1/2″ (hose barb)	
951-N6-H4	Brass	3/8″-18 (male)	1/4″ (hose barb)	
951-N6-H5	Brass	3/8″-18 (male)	5/16″ (hose barb)	
913-N6-H6	Plated Steel	3/8″-18 (male)	3/8″ (hose barb)	

Filters with 7/16”-20 SAE fuel ports, use the following fittings:

Part Number	Material	T1	T2	Image
911-O4-F4	Plated Steel	7/16″-20 (male)	1/4″-18 (female)	

Filters with 9/16”-18 NPT x SAE fuel ports, use the following fittings:

Part Number	Material	T1	T2	Image
9040-6-4	Brass	9/16″-18 (male)	1/4″-18 (female)	
9040-6-6	Brass	9/16″-18 (male)	3/8″-18 (female)	

Plated steel fittings are recommended for applications exposed to salt spray.

Fluid Connectors

Filters with 9/16”-18 SAE fuel ports, use the following fittings:

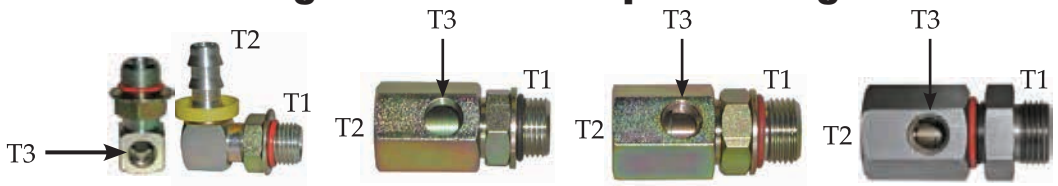
Part Number	Material	T1	T2	Image
911-O6-H5/6	Plated Steel	9/16″-18 (male)	5/16-3/8″ (hose barb)	
9020-6-4	Brass	9/16″-18 (male)	7/16″-20 (male)	
9020-6-6	Brass	9/16″-18 (male)	9/16″-18 (male)	
9010-6-4	Plated Steel	9/16″-18 (male)	7/16″-20 (male)	
9010-6-6	Plated Steel	9/16″-18 (male)	9/16″-18 (male)	
913-O6-H5	Plated Steel	9/16″-18 (male)	5/16″ (hose barb)	
913-O6-H6	Plated Steel	9/16″-18 (male)	3/8″ (hose barb)	

Filters with 3/4”-16 SAE fuel ports, use the following fittings: Hose bead fitting requires hose clamp.

Part Number	Material	T1	T2	Image
911-O8-H6	Plated Steel	3/4″-16 (male)	3/8″ (hose barb)	
911-O8-H8	Plated Steel	3/4″-16 (male)	1/2″ (hose barb)	
911-O8-J6	Plated Steel	3/4″-16 (male)	9/16″-18 (male)	
911-O8-J8	Plated Steel	3/4″-16 (male)	3/4″-16 (male)	
911-O8-J10	Plated Steel	3/4″-16 (male)	7/8″-14 (male)	
913-O8-H5	Plated Steel	3/4″-16 (male)	5/16″ (hose barb)	
913-O8-H6	Plated Steel	3/4″-16 (male)	3/8″ (hose barb)	
913-O8-H8	Plated Steel	3/4″-16 (male)	1/2″ (hose barb)	
913-O8-H10	Plated Steel	3/4″-16 (male)	5/8″ (hose barb)	
913-O8-J6	Plated Steel	3/4″-16 (male)	9/16″-18 (male)	
913-O8-J8	Plated Steel	3/4″-16 (male)	3/4″-16 (male)	
913-O8-J10	Plated Steel	3/4″-16 (male)	7/8″-14 (male)	

Fluid Connectors

Vacuum Gauge or Switch Adapter Fittings

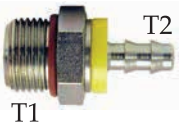
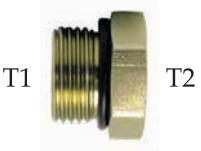


Specifications	913-O6-D6	911-O8-D8	911-O10-D10	9040-10-8DT
T1 Thread	9/16″-18	¾″-14	⅞″-14	⅞″-14
T2 Thread	⅜″ hose	¾″-16 SAE	⅞″-14 SAE	½″-14 NPTF
T3 Thread	¼″NPTF	⅛″NPTF	⅛″NPTF	⅛″NPTF

Filters with 3/4”-16 SAE fuel ports, use the following fittings:

Part Number	Material	T1	T2	Image
911-O8-F4	Plated Steel	3/4″-16 (male)	1/4″-18 (female)	
911-O8-F6	Plated Steel	3/4″-16 (male)	3/8″-18 (female)	
911-O8-F8	Plated Steel	3/4″-16 (male)	1/2″-14 (female)	

Filters with 7/8”-14 SAE fuel ports, use the following fittings:

Part Number	Material	T1	T2	Image
911-O10-H5	Plated Steel	7/8″-14 (male)	5/16″ (hose barb)	
911-O10-H6	Plated Steel	7/8″-14 (male)	3/8″ (hose barb)	
911-O10-H8	Plated Steel	7/8″-14 (male)	1/2″ (hose barb)	
911-O10-H10	Plated Steel	7/8″-14 (male)	5/8″ (hose barb)	
911-O10-H12	Plated Steel	7/8″-14 (male)	3/4″ (hose barb)	
9020-10-6	Plated Steel	7/8″-14 (male)	9/16″-18 (male)	
9020-10-8	Plated Steel	7/8″-14 (male)	3/4″-16 (male)	
9020-10-10	Plated Steel	7/8″-14 (male)	7/8″-14 (male)	
911-O10-F4	Plated Steel	7/8″-14 (male)	1/4″-18 (female)	
911-O10-F6	Plated Steel	7/8″-14 (male)	3/8″-18 (female)	
911-O10-F8	Plated Steel	7/8″-14 (male)	1/2″-14 (female)	
911-O10-F12	Plated Steel	7/8″-14 (male)	3/4″ (female)	
9010-10-8	Plated Steel	7/8″-14 (male)	3/4″-16 (male)	
9010-10-10	Plated Steel	7/8″-14 (male)	7/8″-14 (male)	

Parker 800 Series (SAE R4) Push-Lok low pressure hose recommended. Source from Parker Hannifin Corporation, Hose Products Division. For your local distributor call (216) 943-5700, E.S.T.

Fluid Connectors

Filters with M16-1.5 ORB fuel ports, use the following fittings:

Part Number	Material	T1	T2	Image
911-M16-F6	Plated Steel	M16-1.5	3/8″-18 (female)	 T1 T2
911-M16-F8	Plated Steel	M16-1.5	1/2″-14 (female)	

Filters with 9/16”-18 UNF fuel ports, use the following fittings:

Part Number	Material	T1	T2	Image
955-W6-H6	Brass	9/16″-18 (female)	3/8″ (hose barb)	T1  T2

Filters with 3/4”-16 UNF fuel ports, use the following fittings:

Part Number	Material	T1	T2	Image
955-W8-H8	Brass	3/4″-16 (female)	1/2″ (hose barb)	T1  T2

Filters with 7/8”- 16 UNF fuel ports, use the following fittings:

Part Number	Material	T1 Thread	T2 Thread	Image
911-W10-N6	Plated Steel	7/8″-14 (female)	3/8″-18 (male)	T1  T2
911-W10-N8	Plated Steel	7/8″-14 (female)	1/2″-14 (male)	
911-W10-N12	Plated Steel	7/8″-14 (female)	3/4″-14 (male)	
911-W10-B8	Plated Steel	7/8″-14 (female)	1/2″-14 (female)	T1  T2
911-W10-F8	Plated Steel	7/8″-14 (female)	1/2″-14 (female)	
911-W10-F12	Plated Steel	7/8″-14 (female)	3/4″-14 (female)	
913-W10-F8	Plated Steel	7/8″-14 (female)	1/2″-14 (female)	T1  T2
913-W10-N8	Plated Steel	7/8″-14 (female)	1/2″-14 (male)	
915-W10-R8	Plated Steel	7/8″-14 (female)	13/32″ (female)	T1  T2
915-W10-R10	Plated Steel	7/8″-14 (female)	1/2″ (female)	
915-W10-R12	Plated Steel	7/8″-14 (female)	5/8″ (female)	
917-W10-R8	Plated Steel	7/8″-14 (female)	13/32″ (female)	 T2 T1
917-W10-R10	Plated Steel	7/8″-14 (female)	1/2″ (female)	
917-W10-R12	Plated Steel	7/8″-14 (female)	5/8″ (female)	
917-W10-H10	Plated Steel	7/8″-14 (female)	5/8″ (hose barb)	
955-W10-H8	Brass	7/8″-14 (female)	1/2″ (hose barb)	T1  T2
955-W10-H10	Brass	7/8″-14 (female)	5/8″ (hose barb)	

Section H

Heavy Duty Parts

FTG, Inc.
3511 Finch Road
Modesto, CA 95357
www.ftginc.com

Technical Support
209-575-0500
support@ftginc.com

Accessories

REF600LE

Solid State Electronic Flasher

Overview

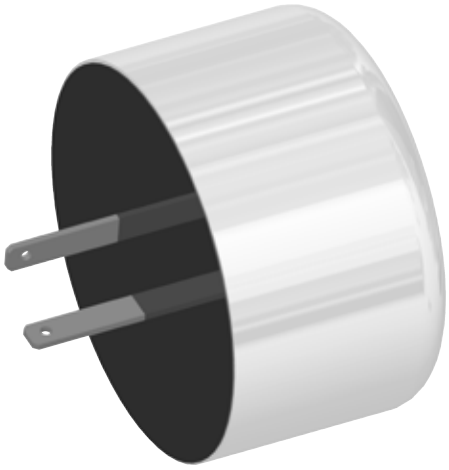
The **REF600LE** is suitable for today's longer rigs requiring more lamps, as well as many special need vehicles. These 12 volt power houses generate over 100 million flashes per flasher for optimum value. Proven reliable in years of field testing, each flasher features overload and short protection, 14-bulb capacity, no ground wire, and can be reset.

Product Features

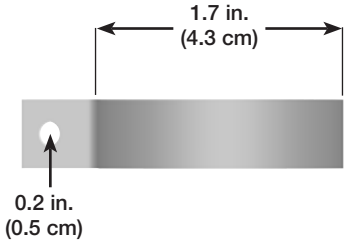
- **Overload and Short Protection**
- **Fallout History of Less Than One Tenth of One Percent**
- **14-Bulb Capacity**
- **Handles 30 Amps**
- **No Ground Wire**
- **Resettable**

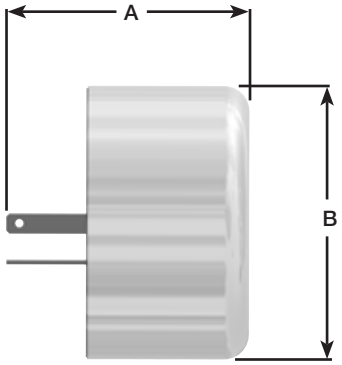
Specifications

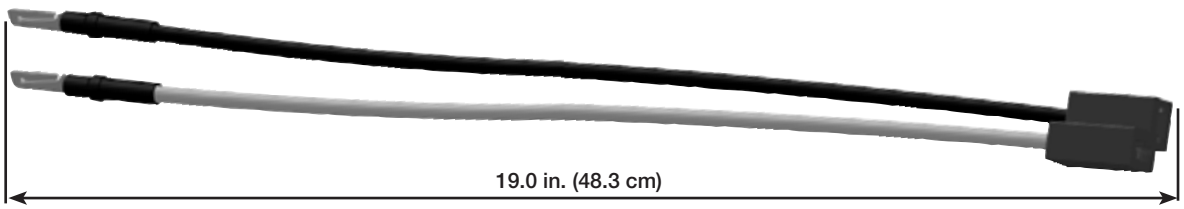
	REF600LE
Power Supply	12 Volt
Power Handling	30 Amps
Maximum Bulb Capacity	14
Flash Count	>100,000,000
Depth (A)	1.5 in. (3.8 cm)
Diameter (B)	1.7 in. (4.3 cm)
Weight	0.3 lb (0.14 kg)



Dimensions







Section J

VIP Mounts

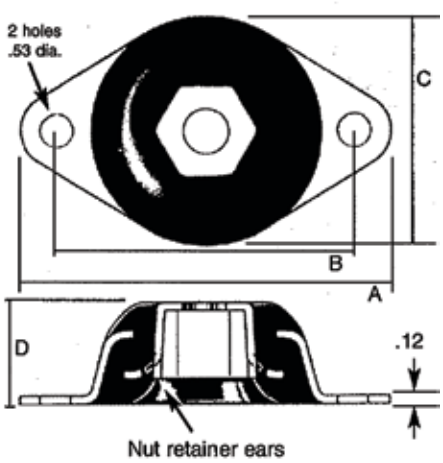
FTG, Inc.
3511 Finch Road
Modesto, CA 95357
www.ftginc.com

Technical Support
209-575-0500
support@ftginc.com

CA-1290 and CA-1595

The **CA-1290** is one of our most popular mounts as it can be used in a wide variety of conditions. They may be used individually or in tandem to isolate vibration in compression and shear conditions. Please see examples of mounting options on facing page.

The **CA-1595** is a slightly smaller version of the CA-1290, to be used where the load ranges may not be as high or severe. As with the CA-1290 these mounts are captive to ensure that even in complete disintegration of the rubber (by fire etc.)the mounting will not release the item from it's base.



Part Numbers and Dimensions

Part #	A	B	C	D	Durometers Available
CS-1290	6.25	5.00	3.88	1.66	40, 50, 60 and 70
CA-1595	5.38	4.12	3.25	1.66	40,50, 60 and 70

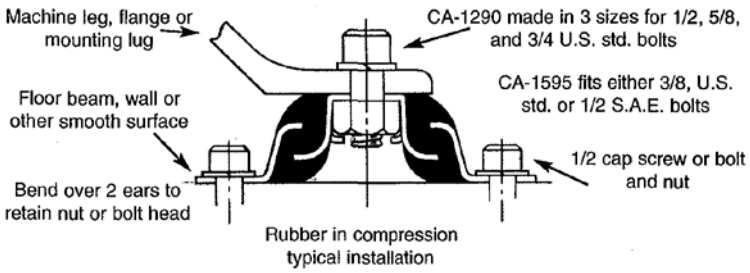
CA-1290 mounts are available with a 1/2", 5/8", or 3/4" bore.
CA-1595 has a 1/2' bore only.

Application of CA-1290 and CA-1595

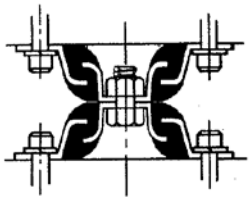
The chief features of this mounting are:

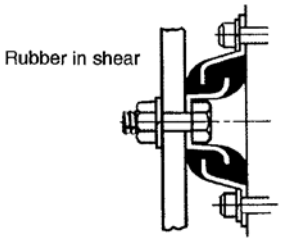
1. Ease of installation - the underside of the center insert is a socket, adapted to receive a standard hexagon nut, and is provided with two ears which can be bent over with a cold chisel to retain the nut in place, thereby allowing the machine to be placed on the mounting and a bolt or cap screw inserted from the top.

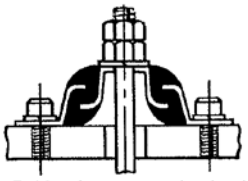
2. Factor of safety - the telescopic inserts provide considerable stability in all directions in a horizontal plane. Also, because of the erratically interlocking flanges, a factor of safety is provided such that unforeseen dynamic forces or complete disintegration of the rubber by fire, etc., will not permit the machine to topple from its foundation.



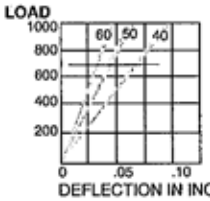
Rubber in compression typical installation


Rubber in compression mountings in tandem deflection doubled

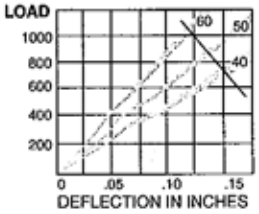



Rubber in compression load suspended from mounting

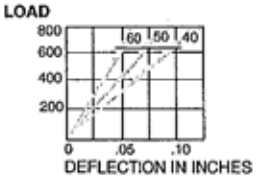
Tension

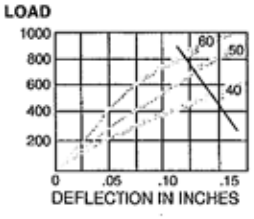


Compression



CA-1290





CA-1595

Commercial Applications Products

Part #
Description

Cushion Connector
For compression loads up to 13.3 lbs. Shear loads up to 6.4 lbs. Custom solutions available. Call for additional sizes.

E-109
Used for a wide variety of applications, where a large degree of dampening is needed.

CA-1595
Engine mounting, air conditioning. Machinery mounting 200 lbs-800 lbs. Capacity nut retainer, ear holes .53" dia. 1/2" dia. center hole shown.

CA-1290
Engine mounting, air conditioning, machinery mounting can be used in tandem to isolate vibration in compression and shear conditions. Available with 1/3", 5/8", or 3/4" bore only.

CA-244 no.5, no.7
Light compressive loads in the range of 100 to 400 lbs. Machinery mounting. Engine mounts used where applicable. No.5 has 1/2"-20 S.A.E. thread. No.7 has 3/8-16 S.A.E. thread.

11M15, 25, 50
Used for military applications. Durable and light. Compressive loads, HVAC, compressors. Call for specs and other application usage.

VIP8692656
Plate mount used for lightweight applications. Loads up to 25 lbs when used in conjunction. Up to 50 lbs. Call for specs.

NBD320, 321
Vibration dampener, machinery mount. Engine mount NBD 320 is normally used with rebound NDD-455. Loads up to 1600 lbs. 321 up to 800 lbs. .781" center hole diameter. 40,50,60,70 shore available.

NDD455,456
Engine mount. Compressors can be used in conjunction with the NBD320, 321, or by itself as a primary mount. Loads up to 400 lbs. NDD455 has a .62" center hole diameter. NDD456 has a .90" center hole diameter. 40,50,60,70 shore available.

VIP100-24SQ
Lightweight mounts. HVAC compressors light loads up to 5 lbs. In conjunction up to 40 lbs. .20" center hole diameter.

CA368 no.6 thru 8
Motor isolators used for machinery mounting. Radiators, air compressors up to 200 lbs. Isolates nearby systems from motor vibration. .62" center hole diameter. 40,50,60,70 shore available. Use of DA993 metal cup is recommended.

S7400-3
Machinery mount. Heavy duty application, call for specs.

CA368 no.1 thru 5
Motor isolators used for machinery mounting. Radiators, air compressors up to 200 lbs. Isolates nearby systems from motor vibration. .62" center hole diameter. 40,50,60,70 shore available. Use of DA993 metal cup is recommended.

1163302-04
Ideal for mounting heavy loads that need severe vibration isolation. Engine suspension, machine mounts. Can be used as a bumper as well. 1163302-04 has 3/8"x24 threaded studs.

CM1000, CM2000
Cup mounts have good shock & vibration isolation characteristics at freq. above 40Hz. Can be mounted in any direction for protection of electrical & mechanical equipment. CMJ1000 1/4"x20 center hole 140 lbs max load. CM2000 3/8"x16 center hole 250 lbs max load.

Vibration Isolation Products

A CA244-7-60; B VIP117-645-0
Lightweight mounts 2-5 lbs. Computers, refrigeration, compressors, electrical motors, bushing, lightweight applications. Call for more info.available.

K93501-15
This shear mount can be used for engines, transmissions, machinery… Threaded studs are 3.625" apart. Through holes are 7/16" dia.

10870335
Resilient mount. Can be used for a wide range of applications. Loads either vertically or horizontally. Nominal axial load of 1,240 lbs. Custom rubber formulations will allow for endless possibilities. 1.125" center hole diameter.

DA993
Metal cup was designed for use with CA-368 mount. Employed to help separate the mounts and rebounds.

SEW22181
Rubber coated bushing for head pulley. Call for more information on application.

NBD6310
Firestone insulation, engine mount, machinery mount, radiators. Vehicle cabs both on and off road. Up to 700 lb. Load deflection is adjustable with rubber hardness to meet your requirements. Call for info.

Cushion Bumpers
VIP offers a wide variety of bumpers (as shown).The 4 pictured are our most popular design, loads up to 250 lbs. Flat nose, snub nose, and standard bumper style.

VIP50074-11
Center bolt mount. Lightweight, 60 lbs load for a variety of applications. Call for more information.

VIP-118-645-0
Pipe grommet, used for protection of metal tubing. Different sizes available, call for more info

VIP80-0150; 80-130; 80-131; VIP 40-0150; 20-0130
VIP manufactures a few sizes of pipe/pressure vessel saddles to aid in cushioning your piping from surrounding vibration. For sizes in stock, please call.

M2318-07; M2319-07
Fluted sleeve used for panel applications.

VIP117-341-2
Oval mounts are used for panel applications. Call for information regarding rubber hardness options.

1CRE622 thru 6CRE622
Rubber grommet for tube cable pressure seal use and panel through hole applications as well.

FAA/PMA Approved Applications

VIP 50804-10 I/W J-3804-10

MFG.	MODEL	POPULAR NAME	ENGINE	NEEDED PER
AERO COM.	520	COMMANDER	LYC. GO-435	8 EA.
BEECH	B50	TWIN BONANZA	LYC. GO-435-C2	8 EA.
	C50,D50,D50E	TWIN BONANZA	LYC. GO-480-G2F6	8 EA.
GRUMMAN	G44,G44A,Scan 30	WIDGEON	LYC. GO-435-C2	8 EA.

VIP 50804-20 I/W J-3804-20 & 94110-01

MFG.	MODEL	POPULAR NAME	ENGINE	NEEDED PER
PIPER	PA23-235	APACHE	LYC. IO-540-B1A5	8 EA.
	PA23-250	AZTEC	LYC. O-540-A1B5	8 EA.
	PA23-250	AZTEC B	LYC. 540-C1B5,A1D5	8 EA.
	PA24-260	COMANCHE 260	LYC. IO-540-E4A5,D4A5	8 EA.
	PA25-235	PAWNEE-235	LYC. O-540-B2B5	4EA.

VIP 50525-1 I/W J-7525-1 & 94110-40

MFG.	MODEL	POPULAR NAME	ENGINE	NEEDED PER
BEECH	E50, F50, G50	TWIN BONANZA	LYC. GSO-480-B1,B6	4 EA.
	H50, J50	TWIN BONANZA	LYC. GSO-480-B1,B6	4 EA.
	G50, H50, J50	TWIN BONANZA	LYC. GSO-480-A1B6	4 EA.
	65, A65	QUEEN AIR	LYC. IGSO-480-A1B6	4 EA.
	80, A80, B80	QUEEN AIR	LYC. IGSO-540-A1D	4 EA.
	88	QUEEN AIR	LYC. IGSO-540-A1D	4 EA.

VIP 101-78 I/W MB-100878

MFG.	MODEL	POPULAR NAME	ENGINE	NEEDED PER
DeHAVILLAND	DHC-2	BEAVER	R-985	12 EA.

FAA/PMA Approved Applications

VIP 50545-1 I/W J-6545-1 & 94110-40

MFG.	MODEL	POPULAR NAME	ENGINE	NEEDED PER
AERO COM.	Meyers 200B		CONT. 0-470-B	8 EA.
	500A	COMMANDER	CONT. 10470- M	8 EA.
	560	COMMANDER	LYC. GO-480 C	8 EA.
	560 A, E, F	COMMANDER	LYC. GO-480-B	8 EA.
	680, 680 E	COMMANDER	LYC. GO-480-C	8 EA.
	680 F	COMMANDER	LYC. IGSO-540-BIC	8 EA.
	680 FL	Grand COMMANDER	LYC. IBSO-540-BIA	8 EA.
BEECH				
	E50, F50, G50, H50	TWIN BONANZA	LYC. GSO-480-B1B6	4 EA.
	G50,H50,J50	TWIN BONANZA	LYC. IGSO-480-A1B6	4 EA.
	65	QUEEN AIR	LYC. IGSO-480-A1E6	4 EA.
	80, A80, B80	QUEEN AIR	LYC. IGSO-540-A1D	4 EA.
	88	QUEEN AIR	LYC. IGSO-540-A1D	4 EA.
	88	QUEEN AIR	LYC. IGSO-540-A1K	4 EA.
CESSNA				
	P172	SKYHAWK	CONT. GO-300-E	4 EA.
	175, A, B, C	SKYHAWK	CONT. GO-300-AE-E	4 EA.
	180D, E, H, I	SKYHAWK	CONT. O-470 B,J,Z	4 EA.
	182, 182 A-F	SKYLANE	CONT. O-470-RU	4 EA.
	185, 185 A-B	SKYWAGON	CONT. IO-470-F	4 EA.
	210-5 (205), 210 A-D	SKYWAGON	CONT. IO-470-E,S	4 EA.
	310 A-I	SKYWAGON	CONT. O-470-M	8 EA.
	185E	SKYWAGON	CONT. IO-520-I	4 EA.
	A185F	AG CARRYALL	CONT. IO-520-I	4 EA.
	188	AG WAGON 230	CONT. O-470-R	4 EA.
HELIO				
	H-395	SUPER COURIER	LYC. GO-480-G1D6	4 EA.
LOCKHEAD				
	60		CONT. IO-470-B	4 EA.
PIAGGIO				
Treckler	P1236-L-1	GULL	LYC. GO-480 B	8 EA.
	P1236- L-2	SUPER GULL	LYC. GO-480 B2C6	8 EA.

VIP 101-79 I/W MB-100879

MFG.	MODEL	POPULAR NAME	ENGINE	NEEDED PER
DeHAVILLAND	DHC-3	OTTER	R-1340	12 EA.

International Applications

MFG.	MODEL	NAME	ENGINES	HP or THR	Part # Used	# Per AC	Interchange With
Argentina							
AERO BOERO	A-1829	CESSNA	1/CON 0-470-R	230	VIP 50545-1	4	J-6545-1
Australia							
TRANSAVIA	PL-12	AIRTRUK	1/RRC-IO-520-D	300	VIP 50545-1	4	J-6545-1
TRANSAVIA	PL-12U	AIRTRUK	1/RRCT-320	300	VIP 50545-1	4	J-6545-1
TRANSAVIA	PL-12-T320	AIRTRUK	1/CON-T-320	320	VIP 50545-1	4	J-6545-1
TRANSAVIA	PL-12-T300	AIRTRUK	1LYC. IO-540-K15	300	VIP 50545-1	4	J-6545-1
Canada							
CANADAIR	CL-215	WTR.BMBR	PWA/R2800-51MA	2050	VIP-106-18		MR-36M
France							
WASSMER	WA-4/21-235		1/LYC.IO-540	235	VIP 50804-20	4	J-3804-20
WASSMER	WA-4/21-250	Super 4/21	1/LYC.IO-540-C4E5	250	VIP 50804-20	4	J-3804-20
Germany							
AERMACCHI	AL-60B2		CON.TSIO-470-B	260	VIP 50545-1	4	J-6545-1
Italy							
PIAGGIO	P-136		2/LYC. GO-480	270	VIP 50804-10	4	J-3804-10
PIAGGIO	P-136LI		2/LYC. GO-480	340	VIP 50804-10	4	J-3804-10
PIAGGIO	P-149		1/LYC. GO-480	270	VIP 50804-10	4	J-3804-10
PIAGGIO	P-166		2/LYC. GO-480	340	VIP 50804-10	4	J-3804-10
PIAGGIO	P-166M,S		2/LYC. GO-480-B1C6	340	VIP 50545-1	8	J-6545
SIA MARCHETTI	S-208		1/LYC. O-540-E4A5	260	VIP 50804-20	4	J-3804-20
SIA MARCHETTI	SF-260		1/LYC. O-540-E4A5	260	VIP 50804-20	4	J-3804-20
Switzerland							
PILATUS	PC-6	PORTE	1/LYC. IGSO-540-A1A	380	VIP 50545-1	4	J-6545-1
U.K							
BEAGLE	B-206		2/RRC-GIO-470-A	310	VIP 50545-1	8	J-6545-1
Yugoslavia							
UTVA	UTVA-60		1/LYC. GO-480-B1A6	270	VIP 50804-10	4	J-3804-10
UTVA	UTVA-60		1/LYC. GO-480-G1S6	295	VIP 50804-10	4	J-3804-10
UTVA	UTVA-60		1/LYC. GO-480-B1S6	340	VIP 50804-10	4	J-3804-10
UTVA	UTVA-65	PRIVREDNIK	1/LYC. GO-480-B1A6	270	VIP 50804-10	4	J-3804-10
UTVA	UTVA-65	PRIVREDNIK	1/LYC. GO-480-G1S6	295	VIP 50804-10	4	J-3804-10

Aircraft Eligibility for Current Supplemental Type Certificate (STC's: SA1686WE, SA1845WE, SA19004WE)

P/N: VIP 50545-1
(Identical to Lord J-6545-1 and Barry 94110-40)

Cessna

P172D	**205**	
180	**205A**	
180A through 180K	206	
182	208	
182A through 182R	210	
185	210-5	
185A through 185E	**210-5A**	
188	210A through 210	D
	310A through 210	I

Beech

E50	F50	G50
H50	J50	65
65-80	65-A80	65-B80
65-88	**A65**	**70**

Aero Commander
200B

Helio
H-395

Lockheed
60

Piaggio
P 1236-L1
P 1236-L2

P/N: VIP 50525-1
(Identical to Lord J-7525-1 and Barry 94110-40)

Beech

E50	F50	G50
H50	J50	65
65-80	65-A80	65-B80
65-88	**A65**	**70**

P/N: VIP 50804-10
(Identical to Lord J-3804-10)

Beech

B50	C50	50
D50A	**D50B**	**D50C**
D50E		

Aero Commander
520

Grumman

G44	G44A	Scan Type 30

P/N: VIP 50804-20
(Identical to Lord J-3804-20 and Barry 94110-01)

Piper

PA-23-235	PA-23-250
PA-24-250	PA-24-260
PA-25-235	PA-25-260

Helio
H-395A

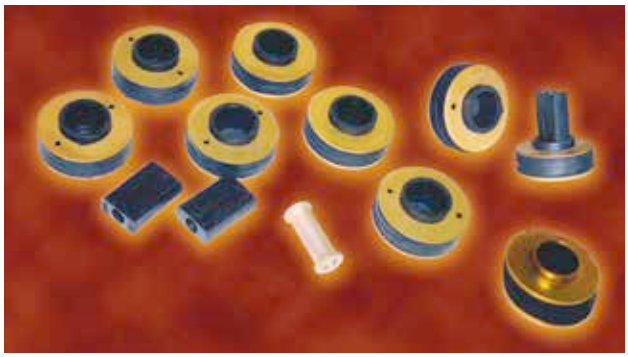
Vibration Isolation Products, Inc., d.b.a. Pacific Molded Technologies is proud to announce a recent expansion of our current **Supplemental Type Certificate** for many Passenger Aircraft.
The table on left lists all aircraft supported, with our newly approved aircraft highlighted in bold text. Along with newly expanded eligibility, large quantity purchases are available at discounted prices that beat other national competitors.

Aircraft Eligibility under STC's: SA4-180, SA4-181, SA4-182 and SA4-183

VIP 101-78
DeHavilland
DHC-2, Beaver
Sikorsky
S-51

VIP 101-79
DeHavilland
DHC-3, Otter
Sikorsky
S-55

Additional Aircraft Engine Mounts - Experimental Use /Kit Aircraft Only



VIP 50402-5
(Similar to Lord J-7402-16 and Barry 94150-01)

VIP 50401-300
The acrobatic variant to the above mount

VIP 50011-20
(Similar to Lord J-9613-49 and Barry 94011-20)

VIP 50016-08
The acrobatic variant to the above mount
(Similar to Barry 94016-08)

We are here to help.

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support@ftginc.com

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