



## Section: H Lubrication Filtration

aerospace  
climate control  
electromechanical  
filtration  
fluid & gas handling  
hydraulics  
pneumatics  
process control  
sealing & shielding



ENGINEERING YOUR SUCCESS.

# Table of Contents

<b>RK46267 Top Load Oil Filter</b> .....	H1
<b>LFS 300 Series Spin On Retrofit Oil Filter Kit</b> .....	H4
<b>LFS 800 Series Bypass Oil Filter</b> .....	H7
<b>Bypass Kits</b> .....	H19
<b>DOC System Automatic Oil Change</b> .....	H23
<b>Never Lo Overview Automatic Gravity Oil Refill System</b> .....	H25
<b>AFG30R Kit Automatic Gravity Oil Kit</b> .....	H26
<b>AFG50R Kit Automatic Gravity Oil Kit</b> .....	H28
<b>RKAFGV12 Kit</b> .....	H30
<b>2MP30R Pressurized Kit</b> .....	H32
<b>ABS Series Bypass Oil Cleaners</b> .....	H34
<b>Testing and Analysis</b> .....	H42
<b>LFS Accessories</b> .....	H44
<b>Part Number Index</b> .....	H46

# RK46267



## The New Generation of Top-Load Filters

A permanent assembly houses Racor top-load oil filter. The top-load filters meet the requirements of today's oil-controlled, high pressure fuel injection systems. Racor media meets the variable geometry and variable nozzle turbocharger requirements. An uncompromising, high level of fluid cleanliness is needed to achieve operating efficiency and reach service life. The environmentally-friendly cartridge oil filters are crushable, incinerable and cost-effective to

replace. Filter service is from the top of the module and skin contact is minimal due to the unique screw top cap and oil element attachment. The permanent assembly is customized with a patented automatic drain that allows oil to drain back into the sump when the engine is turned off and the screw top cap is removed for service. This Racor-engineered feature eliminates the waste oil that is left in a standard spin-on filter and thrown away during a filter change. The top-load oil conditioning module is a prime example of value-added system.

A Racor engineering that tailors a filtration system to a specific engine working in a broad range of environments. Development includes detailed analysis of the engine's filtration requirements, change intervals, available mounting space and a cost analysis of the entire program. Racor's investment in rapid prototype equipment provides fit-up assemblies to facilitate the development process.

# RK46267



<b>Specifications</b>	<b>RK46267</b>
<b>Flow Rate</b>	40 GPM (151 LPM)
<b>Application</b>	Engine Oil and Hydraulic Oil
<b>Maximum Pressure</b>	150 PSI (10.3 bar)
<b>Height</b>	11.2 in. (28.4 cm)
<b>Diameter</b>	5.8 in. (14.8 cm)
<b>Weight</b>	6.7 lbs (3.03 kg)

## Environmental Responsibility

Designing products that help protect the environment is a top priority at Racor Division. Thousands of engineering hours are invested to meet OEM specifications with

environmentally-friendly products. Racor top-load oil filters are metal free and crushable, taking less disposal space and incinerable, leaving only a trace amount of ash.

# Features

Top-loading filter replacement is user-friendly – cleaner, easier, quicker than servicing under-engine mounted filters.

High performance, high efficiency engineered filter media. Environmentally-friendly, incinerable element.

Optional oil pressure regulator is can be integral into the system.

Oil supply from engine.

Auto drain port.

Clean oil to engine.

The filter element and screw top cap are a patented, combination design that minimizes skin contact during service. System patents ensure that equipment owners receive genuine OEM replacement filters.

Patented center tube filter design includes a bypass for engine protection. Because oil is supplied to the engine from the top of the chamber, contaminants collecting at the bottom do not enter the engine.

Rugged, die cast aluminum housing.

Die cast aluminum mounting base.



## LFS 300 Series

# LFS 300 Series

The Racor LFS 300 Series Retrofit Kits allow the conversion from a standard metal spin-on disposable canister to a premium cartridge oil filter. These revolutionary systems feature a crushable, burnable replacement cartridge element that offers increased capacity and efficiency.

The Racor 300 Series Lubrication Filtration Systems are unique in their configuration. They feature a spin-on die-cast aluminum canister that mounts directly to the engine in place of the existing spin-on filter.

The engineered design of the Racor cellulose filter element provides for an environmentally clean and efficient oil filter.

### Applications:

The models available will fit most Dodge, Ford, General Motors gasoline engines from 2.5L to 7.5L in trucks and the Dodge /Cummins "B" series 5.9L diesel engine.

### Products:

The retrofit kits come complete with the aluminum canister with the correct mounting thread on the end cap, a filter element in the canister, and a spare element for the next oil change.

### Features:

The LFS 300 Series Retrofit Kits are a three-piece design. They include an aluminum housing which screws directly onto the engine in place of the disposable filter element, a patented premium cellulose filter cartridge and the cartridge mounting end cap.

Simply remove the existing disposable oil filter and screw on the aluminum housing and tighten. This housing will stay on the engine and will not have to be removed to service the filter.

All retrofit kits include bottom and side drain plugs, and by-pass valves.

**Available Threads:** 3/4"-16, M18 x 1.5, 1"-16 UNF



LFS 331



LFS 333



LFS 335



LFS 339

LFS 300 Series

LFS 300 Series Overview



Specifications	LFS 331	LFS 333	LFS 335	LFS 339
<b>Flow Rate</b>	9 GPM (34 LPM)	9 GPM (34 LPM)	16 GPM (61 LPM)	16 GPM (61 LPM)
<b>Inlet Port Size</b>	3/4"-16 UNF	18 mm X 1.5	3/4"-16 UNF	1"-16 UNF
<b>Mounting Nut Size</b>	1-1/16 in. (2.7 cm)	1-1/16 in. (2.7 cm)	1-1/16 in. (2.7 cm)	1-1/16 in. (2.7 cm)
<b>Engine Application</b>	Dodge Gasoline Truck Model Years 1991-1999	General Motors Gasoline Truck Model Years 1981-1998	Ford Gasoline Truck Model Years 1977-1999	Dodge Truck Diesel Model Years 1986-2000
<b>Replacement Element</b>	LFS 331-3RE	LFS 331-3RE	LFS 335-7RE	LFS 339-41RE
<b>Maximum Pressure</b>	150 PSI (10.03 bar)	150 PSI (10.03 bar)	150 PSI (10.03 bar)	150 PSI (10.03 bar)
<b>Bypass Setting</b>	11.0 PSI (.75 bar)	20.0 PSI (1.4 bar)	11.0 PSI (.75 bar)	20.0 PSI (1.4 bar)
<b>Service Clearance</b>	7.0 in. (17.8 cm)	7.0 in. (17.8 cm)	8.0 in. (20.3 cm)	9.0 in. (22.9 cm)
<b>Height</b>	5.6 in. (14.2 cm)	5.6 in. (14.2 cm)	5.9 in. (15.0 cm)	7.1 in. (18.0 cm)
<b>Diameter</b>	3.4 in. (8.6 cm)	3.4 in. (8.6 cm)	4.2 in. (10.7 cm)	4.2 in. (10.7 cm)
<b>Weight (dry)</b>	1.1 lb (0.5 kg)	1.1 lb (0.5 kg)	1.6 lb (0.7 kg)	1.9 lb (0.9 kg)
<b>Operating Temperature</b>	-40° to +255°F (-40° to +121°C)			

H

# LFS 300 Series

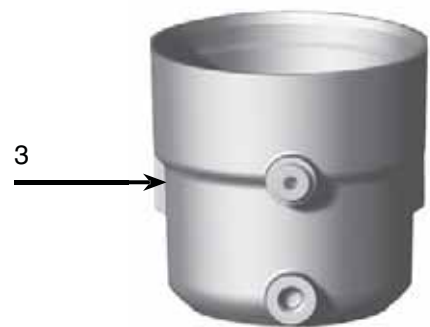
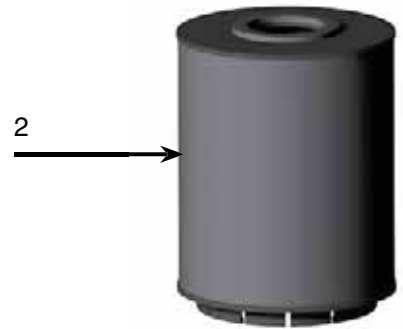
## Replacement Parts

### LFS 331, LFS 333, LFS 335 and LFS 339

	<u>Part Number</u>	<u>Description</u>
1.	N/A	Lid
2.	Replacement Elements	
	<b>LFS 331-3RE</b>	LFS 331
	<b>LFS 331-3RE</b>	LFS 333
	<b>LFS 335-7RE</b>	LFS 335
	<b>LFS 339-41RE</b>	LFS 339
3.	N/A	Housing
4.	<b>46313</b>	Seal Kit (LFS 331 & LFS 335)
	<b>46314</b>	Seal kit (LFS 335 & LFS 339)

### Additional Parts (not shown)

<b>46311</b>	Installation Instructions
--------------	---------------------------





# LFS 800 Series

The Racor Bypass Oil Series removes dirt, varnish, ash, tar, soot and other moisture that full-flow filters cannot remove from your engine's oil.

The system also removes condensed water, which forms component-damaging acids if left in the oil.

The Racor Bypass Oil Series removes contaminants down to one micron, which minimizes wear and extends engine component life. The polishing effect of the Racor Bypass Oil Series and the use of the Racor Oil Analysis system will allow the engine oil service intervals to be extended. By reducing the disposal of waste oil, the system also contributes to preserving the environment.

## Superior Oil Filtration

The winding pattern of the element creates many identical spiral passageways, tapered in cross section so as to trap the larger particles near

the outer portion of the element and the smaller particles as the oil flows inward through the element. Solids are filtered by entrapment in the filter media throughout the entire depth of the element and reduces damaging particle count by 99%.

## Bypass Oil Series Benefits

- Extends the miles/hours between oil changes.
- Saves maintenance costs and downtime.
- Keeps oil cleaner longer, reducing oil consumption and disposal.
- Extends engine life and "rebuild" intervals.
- Keeps engines better lubricated which means reduced wear.
- Removes damaging moisture.



LFS 800A



LFS 801



LFS 802



LFS 820



LFS 825



# LFS 800 Series

## LFS 800 Series Overview



<b>Specifications</b>	<b>LFS 800A</b>	<b>LFS 801</b>	<b>LFS 802</b>
<b>Engine HP (up to)</b>	150	250	400
<b>Sump Capacity</b>	2.5 Gal (9.5 L)	5.0 Gal (18.9 L)	15.0 Gal (57.0 L)
<b>Oil Flow Rate</b>	0.3 GPM (0.5 LPM)	0.4 GPM (1.4 LPM)	0.5 GPM (1.9 LPM)
<b>Inlet Port Size</b>	1/8 in. NPT	1/4 in. NPT	1/4 in. NPT
<b>Replacement Element</b>	LFS 800ABPE	LFS 801BPE	LFS 802BPE
<b>Seal Kit</b>	LFS RK46581	LFS RK46582	LFS RK46582
<b>Canister Cap</b>	0.13 Gal (0.5 L)	0.3 Gal (0.9 L)	0.5 Gal (1.9 L)
<b>Orifice Size</b>	0.04 in. (0.1 cm)	0.04 in. (0.1 cm)	0.4 in. (1.1 cm)
<b>Max Working Pressure</b>	150 PSI (1034 kPa)	150 PSI (1034 kPa)	150 PSI (1034 kPa)
<b>Height</b>	5.5 in. (1.4 cm)	7.5 in. (19.1 cm)	11.0 in. (27.9 cm)
<b>With</b>	4.0 in. (10.2 cm)	5.3 in. (13.3 cm)	5.3 in. (13.3 cm)
<b>Depth</b>	4.5 in. (11.4 cm)	5.7 in. (14.5 cm)	5.7 in. (14.5 cm)
<b>Weight (dry)</b>	3.2 lbs (1.5 kg)	5.3 lbs (2.4 kg)	8.0 lbs (3.6 kg)
<b>Operating Temperature</b>	-40° to +255°F (-40° to +121°C)		

- For accurate engine flow rates, consult your engine or equipment manual, manufacturer's agent or a Racor distributor.
- The only accredited way to extend your oil change interval is through a formal lube analysis program.

LFS 800 Series

LFS 800 Series Overview



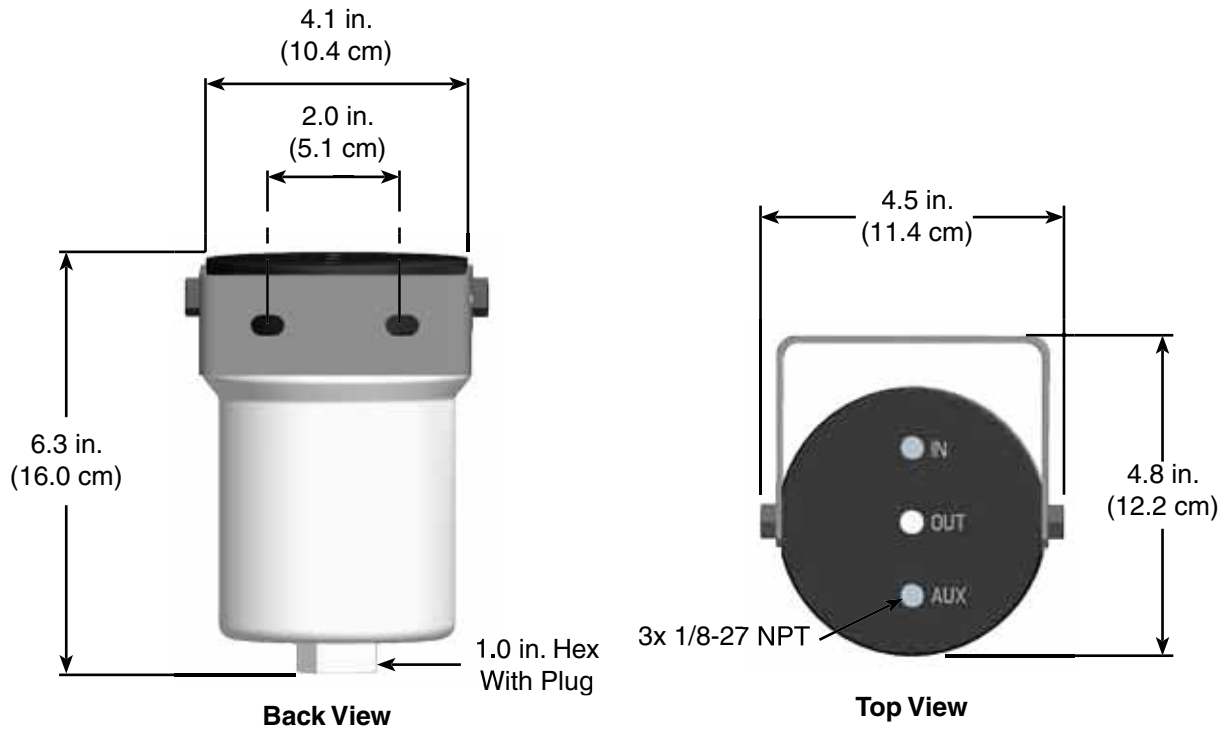
Specifications	LFS 802-S*	LFS 820	LFS 825
Engine HP (up to)	400	500	800
Sump Capacity	15.0 Gal (57.0 L)	30.0 Gal (114.0 L)	45.0 Gal (170.0 L)
Oil Flow Rate	0.5 GPM (1.9 LPM)	1.0 GPM (3.8 LPM)	1.5 GPM (5.7 LPM)
Inlet Port Size	Spin-on	1/2 in. NPT	1/2 in. NPT
Replacement Element	LFS RK46582	LFS 820BPE	LFS 825BPE
Seal Kit	LFS RK755	LFS RK46583	LFS RK46583
Canister Cap	0.5 Gal (1.9 L)	2.5 Gal (9.5 L)	3.5 Gal (13.3 L)
Orifice Size	0.4 in. (1.1 cm)	0.1 in. (0.3 cm)	0.1 in. (0.3 cm)
Max Working Pressure	150 PSI (1034 kPa)	150 PSI (1034 kPa)	150 PSI (1034 kPa)
Height	11.0 in. (27.9 cm)	14.5 in. (36.8 cm)	20.0 in. (50.8 cm)
With	5.3 in. (13.3 cm)	9.0 in. (22.9 cm)	9.0 in. (22.9 cm)
Depth	5.7 in. (14.5 cm)	9.2 in. (23.3 cm)	9.2 in. (23.3 cm)
Weight (dry)	8.0 lbs (3.6 kg)	13.7 lbs (6.3 kg)	18.9 lbs (8.6 kg)
Operating Temperature	-40° to + 255°F (-40° to + 121°C)		

Notes: \*The LFS802-S is a replacement spin-on filter for CAT: C10, C12, and C15, 3176 with 1 3/8"-16 NPT threads.

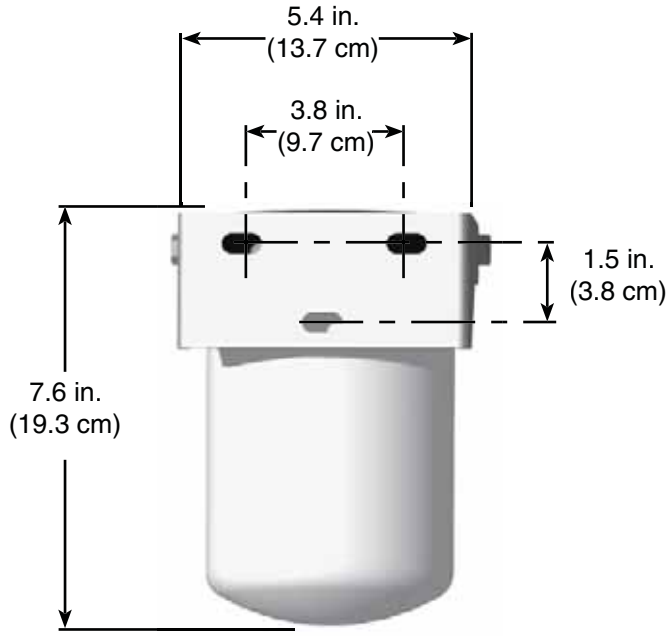


# LFS 800A

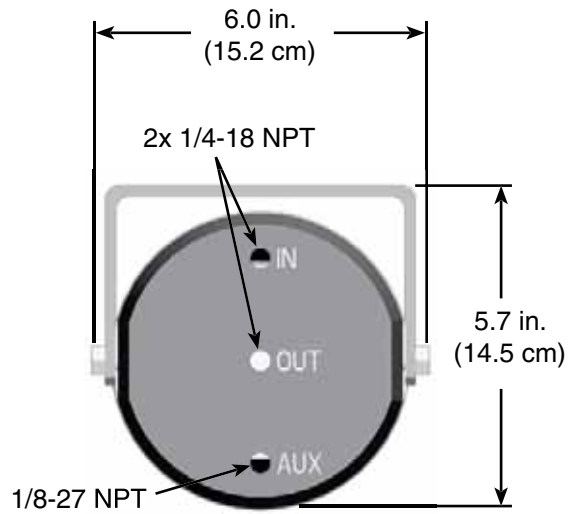
## Mounting Information



# Mounting Information



Back View

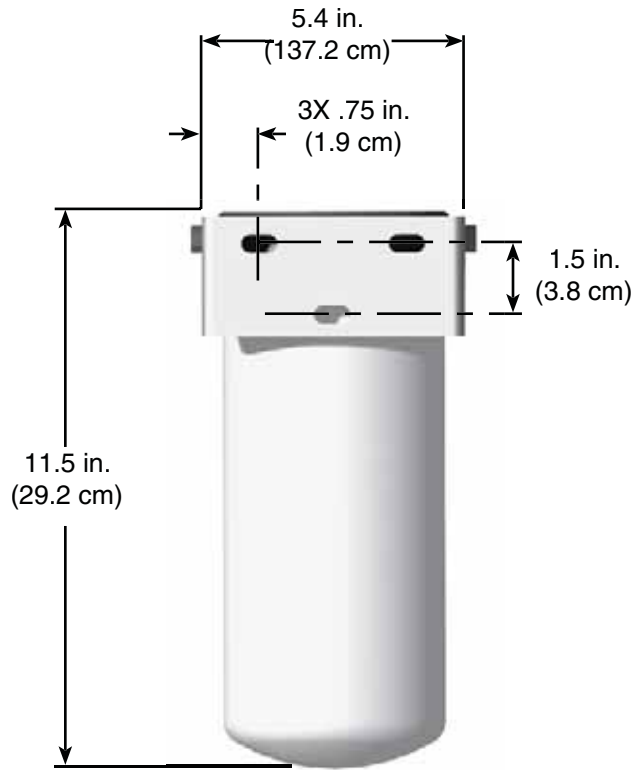


Top View

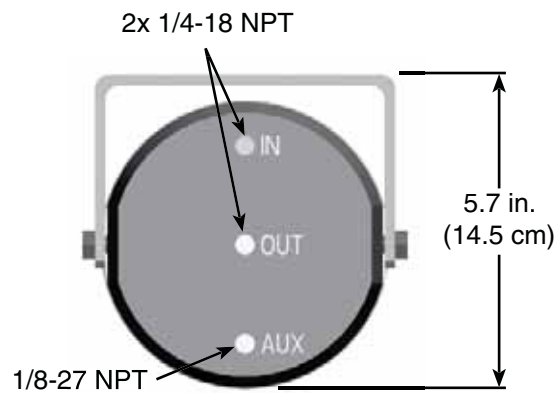


LFS 802

## Mounting Information



Back View



Top View

# Spin-on Filter

## Mounting Information

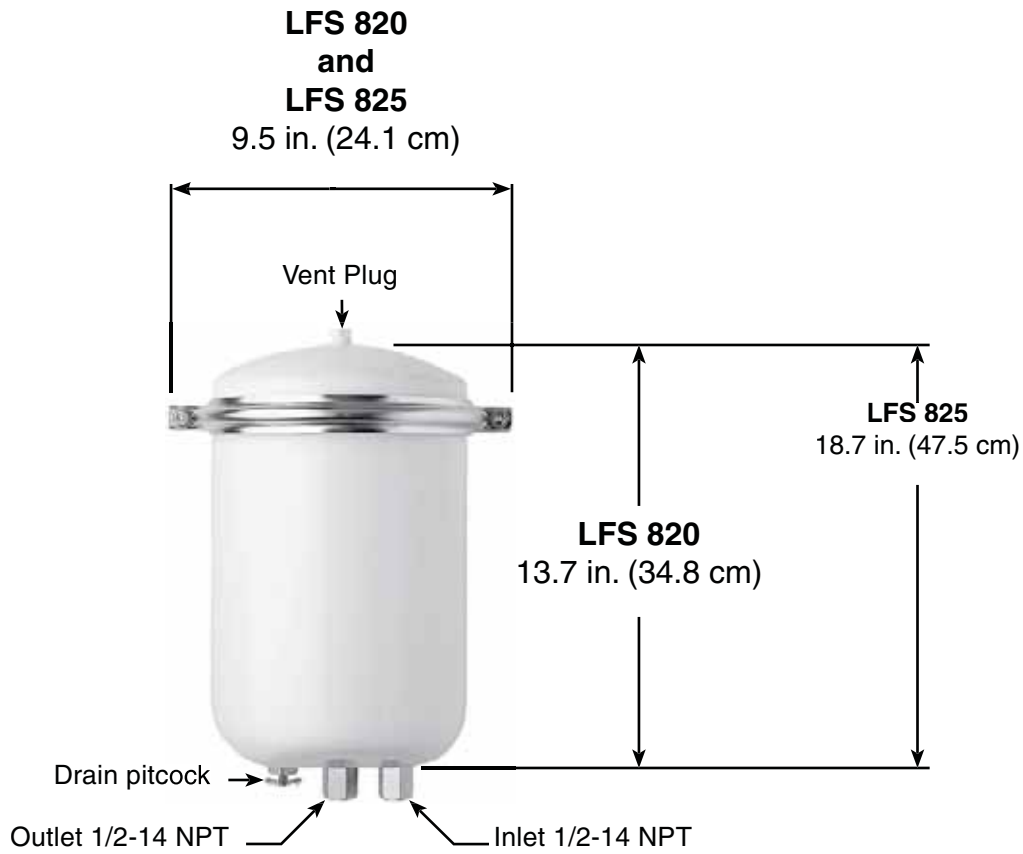


H

LFS 820

# LFS 820 & LFS 825

## Mounting Information

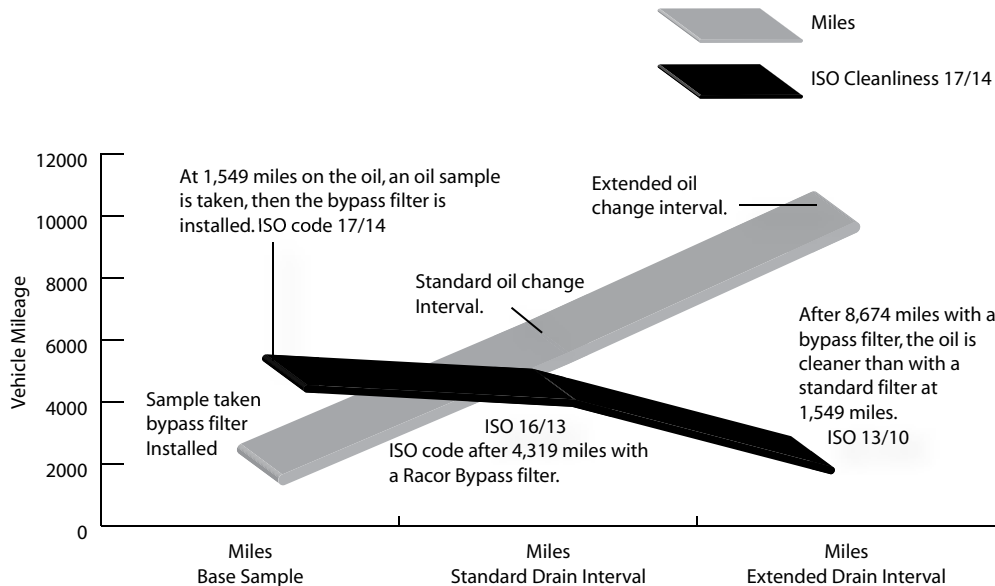
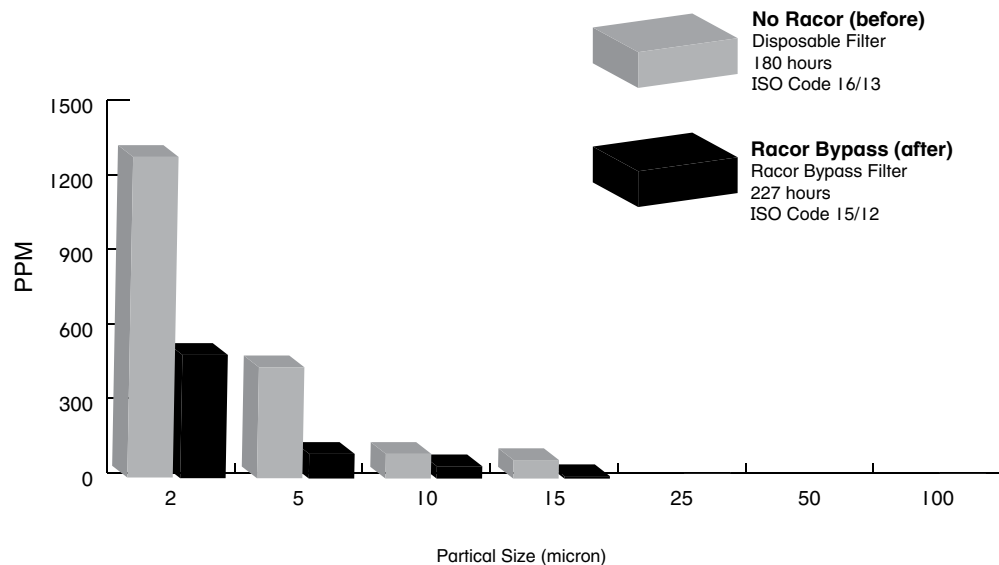


**LFS 820 Shown**



# Bypass Filter

## Test Data



Questions? Contact Technical Support:  
800 344 3286 or 209 521 7860 ext. 7555  
e-mail: racortech@parker.com

## LFS 800A CID

### Customer Interface Drawing

**REVISOR**

DATE	DESCRIPTION	E. N.	DATE	CHK	CHK
18272	ISSUED DRAWING	060706	DO	RR	

IN  
OUT  
AUX

STAMP DATE CODE  
MONTH/YEAR

**NOTES: UNLESS OTHERWISE SPECIFIED-**

- 1. MATERIAL:
  - HEAD: BLACK ANODIZED ALUMINUM
  - CANISTER: WHITE POWDER COATED ALUMINUM
  - BRAKETS: PLATED STEEL
  - FASTENERS: PLATED STEEL
  - SEPL. ELEMENT: LFS 800A BPE
  - O-RINGS: NBR ELASTOMER

**CUSTOMER INTERFACE DRAWING**

QUANTITY	REQD.	PART NUMBER	DESCRIPTION	ITEM NO.

REVISE ONLY ON *Pro/E* SYSTEM  
THIS PRINT SUPERSEDES ANY EARLIER DATE; DESTROY SAME  
THIS PRINT USE ALL INFORMATION HEREIN:  
DO NOT SCALE DRAWING  
NEXT REVISION: FIRST USED ON: APPLICATION:

DESIGN: D. OLSON 060706  
CHECK: R. HAMILTON 060706

PLEASE CONSULT THE FOLLOWING TOLERANCES:  
DECIMAL .015  
FRACTIONAL 1/32  
ANGULAR .5  
HOLE POSITION .010

SCALE: 1.000 RELEASE DATE: 060706 (Sheet 1 of 1)

**RACOR** ACQUA MOBILITÄT CORPORATION  
2700 40th AVE. N.E.  
MINNETONKA, MN 55345

TITLE: **FILTER ASSEMBLY, BYPASS, 2 GPM**

SIZE: D  
CODE: 55752  
LFS800A

1" HEX WITH PLUG

MAIN LABEL

2X (.31 X .50) SLOT

3X 1/8-27 NPT

16.300

14.500

14.750

14.131

1.751

1.000

1.000

1.331

1.331

# Customer Interface Drawing

2X 1/4-18 NPT  
1/8-27 NPT  
STAMP DATE CODE MONTH/YEAR

**NOTES: UNLESS OTHERWISE SPECIFIED:**

1. MATERIAL:  
 HEAD: BLACK ANODIZED ALUMINUM.  
 CANISTER: WHITE POWDER COATED STEEL.  
 BRACKET: PLATED STEEL.  
 FASTENERS: PLATED STEEL.  
 REPL ELEMENT: LFS 801 BPE  
 O-RING: NBR ELASTOMER.

**CUSTOMER INTERFACE DRAWING**

QUANTITY REQD		PART NUMBER	DESCRIPTION	ITEM NO.
PARTS LIST				
DRAWN		N. GALL	111203	
CHECK		G. GARCIA	111203	
DESIGN				
TITLE		<b>FILTER ASSEMBLY, BYPASS</b>		
MATERIAL:		UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES DECIMAL .xx ± .04 ANGULAR ± 5° FRACTIONAL .xxx ± .005 ±		
FINISH:		SIZE C CODE IDENT NO. 55752 DRG. NO. LFS 801 CID		
NEXT ASSY FIRST USED ON		SCALE 0.500 RELEASE DATE 111203 SHEET 1 of 1		
APPLICATION		DO NOT SCALE DRAWING		

Rev B Ver 1 dlet WIP

# LFS 802 CID

## Customer Interface Drawing

REVISIONS					
LTR	DESCRIPTION	E. N.	DATE	DRW	CHK
-	DRAWING RELEASE	9650	111996	DG	DG

NOTES: UNLESS OTHERWISE SPECIFIED-

1. MATERIAL:  
 HEAD: BLACK ANODIZED ALUMINUM.  
 CANISTER: WHITE POWDER COATED STEEL.  
 BRACKET: PLATED STEEL.  
 FASTENERS: PLATED STEEL.  
 ELEMENT: UTILIZE 46595 CARTRIDGE WITH END CAPS.  
 O-RING: NBR ELASTOMER

CUSTOMER INTERFACE DRAWING

QUANTITY REQD		PART NUMBER	DESCRIPTION	ITEM NO.
PARTS LIST				
DRAWN		D. GIVA	111996	
CHECK		D. GIVA	111996	
DESIGN				
TITLE		PARKER HANNIFIN CORPORATION RACOR DIVISION P.O. BOX 3208 MODESTO, CA 95353		
MATERIAL:		UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES		
FINISH:		TOLERANCES DECIMAL - ± ANGULAR - ± FRACTIONAL - ±		
SIZE	CODE	IDENT NO.	DRG. NO.	REV
C		55752	LFS 802 CID	B
DO NOT SCALE DRAWING		SCALE	0.333	RELEASE DATE
			111996	SHEET 1 of 1

REV B Ver 0 Lev 1

# Bypass Kits

The Racor Bypass Oil Series removes dirt, varnish, ash, tar, soot and other contaminants that full-flow filters cannot remove from your engine's oil and hydraulic systems. The system also removes moisture, which forms component-damaging acids if left in the oil. The Racor Bypass Oil Series removes 99.0% of damaging contaminants to minimize wear and extends engine component life. The polishing effect of the Racor Bypass Oil Series and the use of the Racor Oil Analysis system will allow the engine oil or hydraulic fluid service intervals to be extended. By reducing the disposal of waste oil, the system also contributes to preserving the environment.

## Bypass Oil Series Benefits

- Extends the miles between oil changes
- Saves maintenance costs and downtime
- Keeps oil cleaner longer, reducing oil consumption and disposal
- Extends engine life and "re-build" intervals
- Keeps engines better lubricated which means reduced wear
- Removes damaging water



LFS RK873F Shown

# LFS Kits

(GM Duramax 6.6L)  
**LFS RK866G**

(Ford 7.3L)  
**LFS RK873F**

(Dodge/Cummins 5.9L)  
**LFS RK859CL**

(Dodge/Cummins 5.9L)  
**LFS RK859CEB**

(Ford/International 6.0L)  
**LFS RK860F**

(Ford Econoline Van)  
**LFS RK860FE**

(Dodge/Cummins 5.9L)  
**LFS RK859CEA**



# Bypass Kits

## Bypass Kits Overview

Part Number	Application	Year Model
<i>LFS RK859CEA</i>	Dodge/Cummins 5.9L	1993-2002 Drain Plug Return
<i>LFS RK859CEB</i>	Dodge/Cummins 5.9L	1994-2001 Drain Plug Return
<i>LFS RK859CL</i>	Dodge/Cummins 5.9L	1998 ½-Current Filter Cap Return
<i>LFS RK866G</i>	GM Duramax 6.6L	All Models
<i>LFS RK860F</i>	Ford 6.0L	2003-Current
<i>LFS RK860FE</i>	Ford 6 cylinder	Econoline Van
<i>LFS RK873F</i>	Ford 7.3L DI & IDI Engine	1987-2003

## Hose and Fitting Kits

Remote bypass oil filter kits come complete with hose, adapters and all required fittings for a simple installation. The filter is mounted at any angle, using the supplied heavy duty bracket. The oil supply is taken from the engine by means of the unique machined and anodized components. The oil is returned to the crankcase by the filter cap or drain plug adapter.



### LFS RK801BHK

Hose and fittings kit for:

- LFS RK859CL
- LFS RK860F
- LFS RK866G

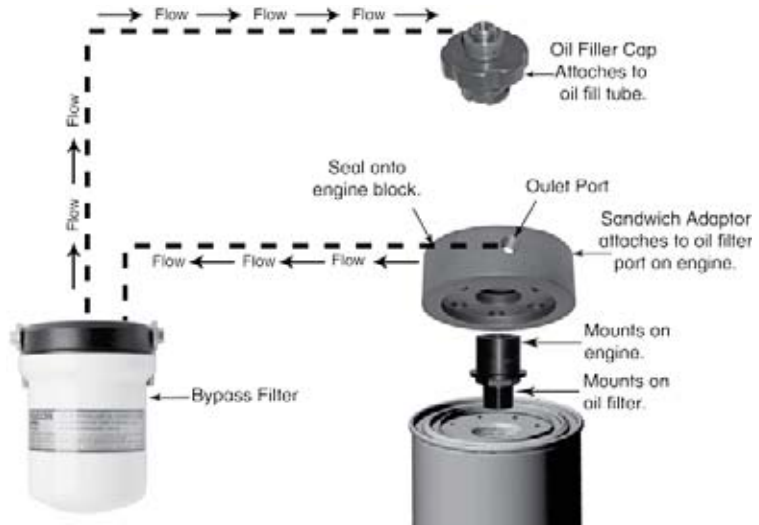
### LFS RK800BHK

Hose and fittings kit for:

- LFS RK859CEA
- LFS RK859CEB
- LFS RK873F

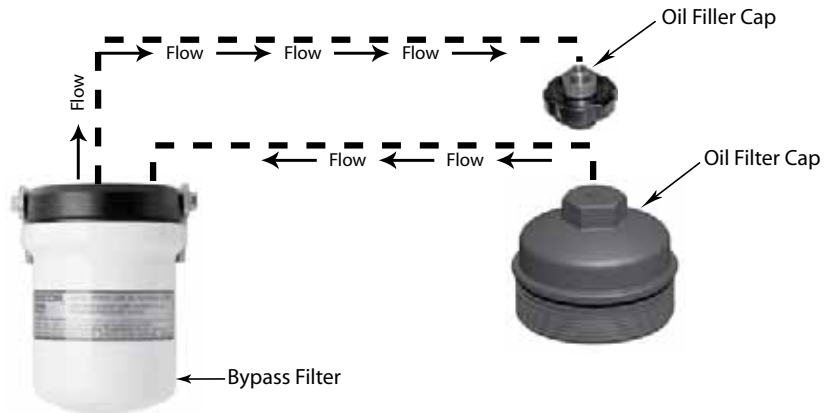
# Installation

**LFS RK866G**  
GM Duramax 6.6L



**LFS RK860F**  
Ford/International 6.0L

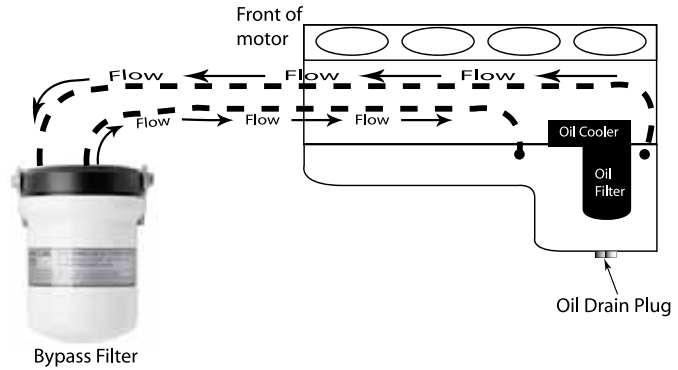
**LFS RK860FE**  
Ford Econoline Van



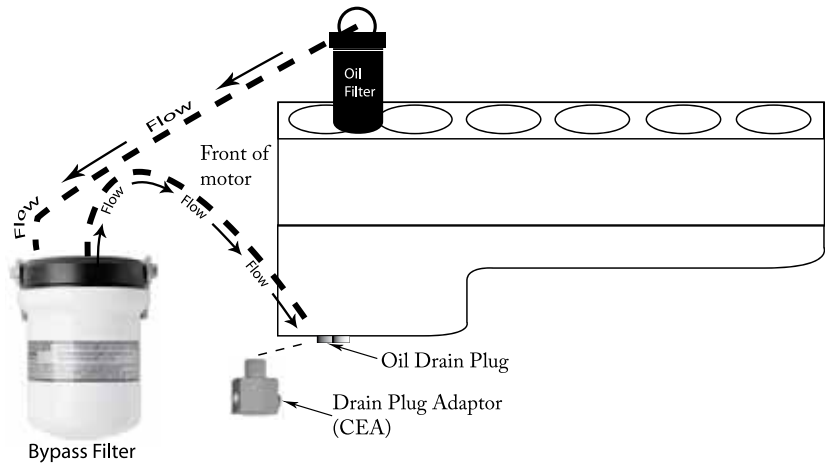
# Bypass Kits

## Installation

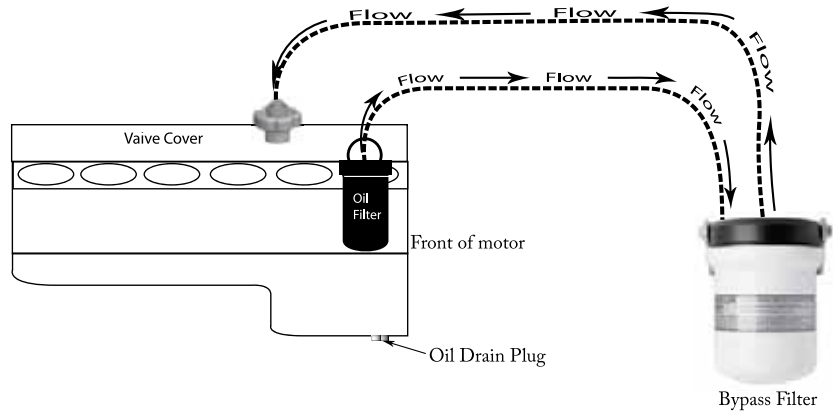
**LFS RK873F**  
Ford 7.3L DI and IDI Engine



**LFS RK859CEA & CEB**  
Dodge/Cummins 5.9L



**LFS RK859CL**  
Dodge/Cummins 5.9L





## DOC System (*Discontinued*)

# DOC19P

DOC19P is a patented maintenance systems that automatically changes the oil as the engine is running. DOC19P systematically removes small amounts of oil from the engine, blends it into the return fuel line and burns it as fuel - in a simple, efficient closed loop system to keep your vehicle out of maintenance shop and on the job. Saves time and fuel costs.

The DOC19P incorporates Racor's proven gravity based Never Lo oil replenishing system to continuously replace the oil withdrawn from the engine and burned by the action of the DOC19P for the ultimate in hands off maintenance. The DOC19P pays for itself in less than a year of average use.



H

# DOC System (*Discontinued*)

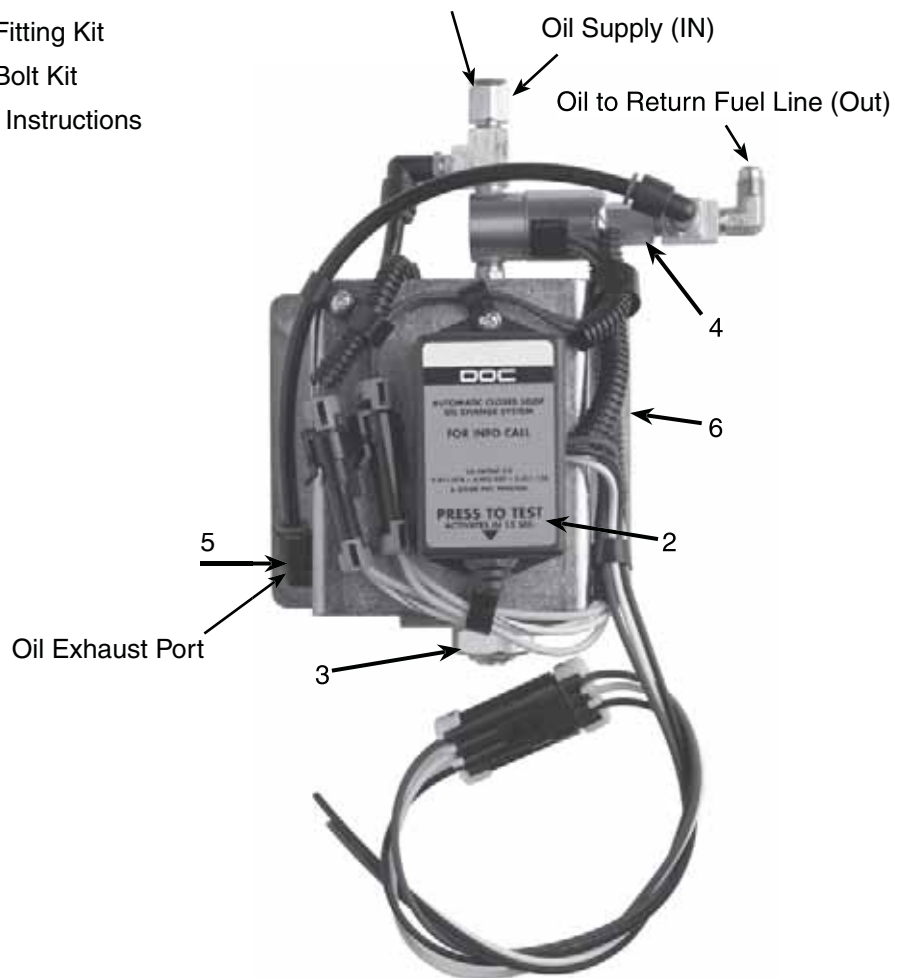
## Replacement Parts

<u>Part Number</u>	<u>Description</u>
1 <b>DOC19P</b>	Automatic Oil Change
2 <b>DOC20PORX</b>	Control Module
3 <b>DOC25CPOX</b>	Cylinder Assembly
4 <b>DOC22PO</b>	Top Solenoid Assembly
5 <b>DOC22PC</b>	Bottom Solenoid Assembly
6 <b>DOC28CTAOX</b>	Mounting Bracket

Additional Parts (not shown)

<b>DOC45K</b>	Assembly Fitting Kit
<b>BK14150</b>	Assembly Bolt Kit
<b>1000152</b>	Installation Instructions

**CAUTION:** This fitting contains a filter screen and removing the fitting will void the warranty.



## Never Lo Replenishing System Overview

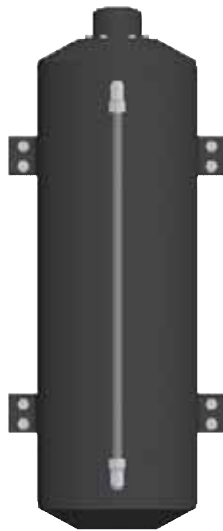
## Replenishing System

The Never Lo Oil Replenishing System, automatic or manual, provides a constant supply of fresh clean oil to the engine.

- **The AFG Automatic Gravity System** continuously monitors engine oil and automatically maintains engine oil at a pre-adjusted level. The system requires no electrical connections and is simple to install.
- **The Push-Button Manual Pressurized Remote Fill Oil Replenishing System** allows an operator to add oil to the engine by simply depressing a valve button until the desired amount of oil has been added.
- **The amount of oil needed is determined by routine dipstick checking. The tank site gauge is calibrated at 2 quart intervals for easy make up.**
- **When used in conjunction with the DOC19P, the Never Lo Oil Replenishing System provides a automatic supply of fresh oil to the engine.**



AFG30R Kit



AFG50R Kit



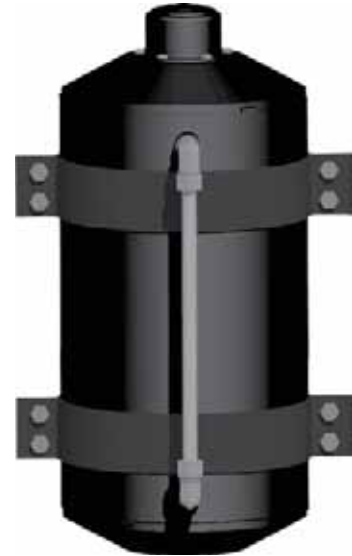
2MP30R Kit

# AFG30R Kit

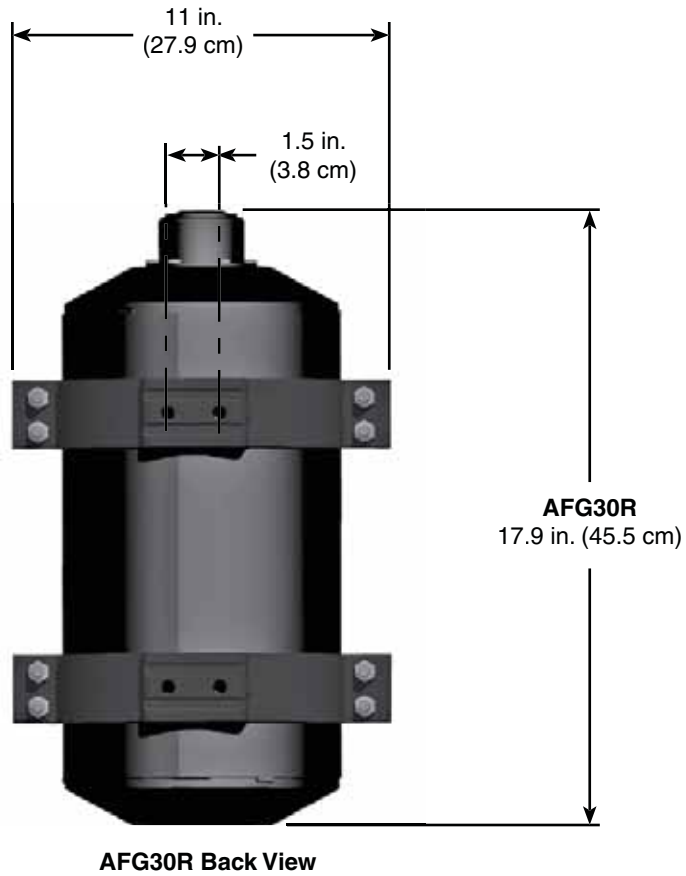
## Kit Includes

<u>Part Number</u>	<u>Description</u>	<u>Quantity</u>
<b>3GV14X</b>	Fill Cap Assembly	(1)
<b>3NL52RX</b>	Round Mounting Bracket	(2)
<b>3NL52SX</b>	Square Mounting Bracket	(2)
<b>63PT-8-62</b>	1/2" Hose Insert	(2)
<b>N11-8ANG</b>	1/2" Nylon Tubing	A/R
<b>23005</b>	Elbow, #8 Tube X 3/8"	(2)
<b>11078</b>	Hex Head Capscrews 3/8" -16 X 1"	(8)
<b>11901</b>	Hex Nut 3/8" -16 Self Locking	(8)
<b>AFG10FK</b>	Fitting Kit	(1)
<b>AFG10FK</b>	Universal Bracket	(1)
<b>RKAFGSV12</b>	Optional Solenoid Valve (12 vdc, normally closed, 1/4" NPT ports, 1/4" orifice) Mounting diagram shown in this section.	
<b>REL1230LT</b>	Relay	
<b>AFG30R</b>	Round Reservoir (3 gallon)	
<b>AFG30RSV</b>	3 Gallon With Solenoid Valve	
<b>AFG34ST</b>	Sight Glass (for 3 gallon unit)	
<b>2104-4-6</b>	90° Elbow Fitting (1/4" NPT by 3/8" male)	(2)
<b>0104-4-6</b>	Straight Fitting (1/4" NPT by 3/8" male)	(2)
<b>3NL4469A</b>	Sensing Chamber	
<b>0104-6-6</b>	Straight fitting (3/8" NPT by 3/8" male)	(1)
<b>145F-6-6</b>	Tee Fitting (3/8" NPT by 3/8" male)	(1)
<b>3NL70LT</b>	Oil Sensor Assembly	

**Note: Not all part numbers are available individually.**



# Mounting Information



H

# AFG50R Kit

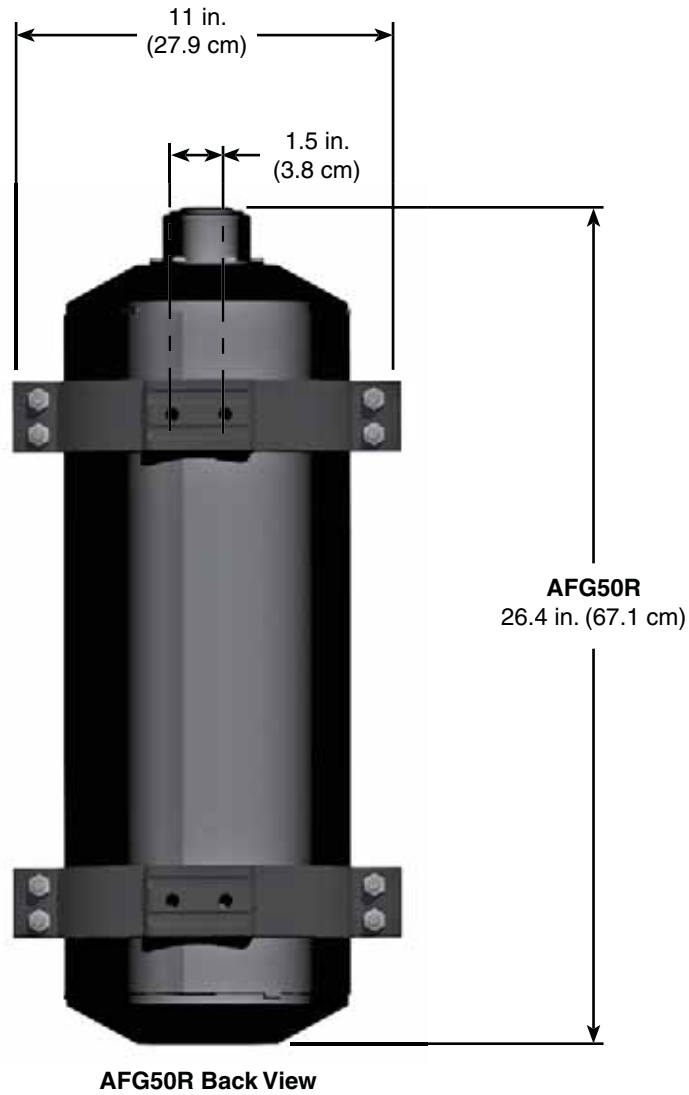
## Kit Includes

<u>Part Number</u>	<u>Description</u>	<u>Quantity</u>
<b>3GV14X</b>	Fill Cap Assembly	(1)
<b>3NL52RX</b>	Round Mounting Bracket	(2)
<b>3NL52SX</b>	Square Mounting Bracket	(2)
<b>63PT-8-62</b>	1/2" Hose Insert	(2)
<b>N11-8ANG</b>	1/2" Nylon Tubing	A/R
<b>23005</b>	Elbow, #8 Tube X 3/8"	(2)
<b>11078</b>	Hex Head Capscrews 3/8" -16 X 1"	(8)
<b>11901</b>	Hex Nut 3/8" -16 Self Locking	(8)
<b>AFG10FK</b>	Fitting Kit	(1)
<b>AFG10FK</b>	Universal Bracket	(1)
<b>RKAFGSV12</b>	Optional Solenoid Valve (12 vdc, normally closed, 1/4" NPT ports, 1/4" orifice) Mounting diagram shown in this section.	
<b>REL1230LT</b>	Relay	
<b>AFG50R</b>	Round Reservoir (5 gallon)	
<b>AFG50RSV</b>	5 Gallon With Solenoid Valve	
<b>2104-4-6</b>	90° Elbow Fitting (1/4" NPT by 3/8" male)	(2)
<b>0104-4-6</b>	Straight Fitting (1/4" NPT by 3/8" male)	(2)
<b>3NL4469A</b>	Sensing Chamber	
<b>0104-6-6</b>	Straight fitting (3/8" NPT by 3/8" male)	(1)
<b>145F-6-6</b>	Tee Fitting (3/8" NPT by 3/8" male)	(1)
<b>3NL70LT</b>	Oil Sensor Assembly	

**Note: Not all part numbers are available individually.**



# Mounting Information



H

# RKAFGV12 Kit

## Kit Includes

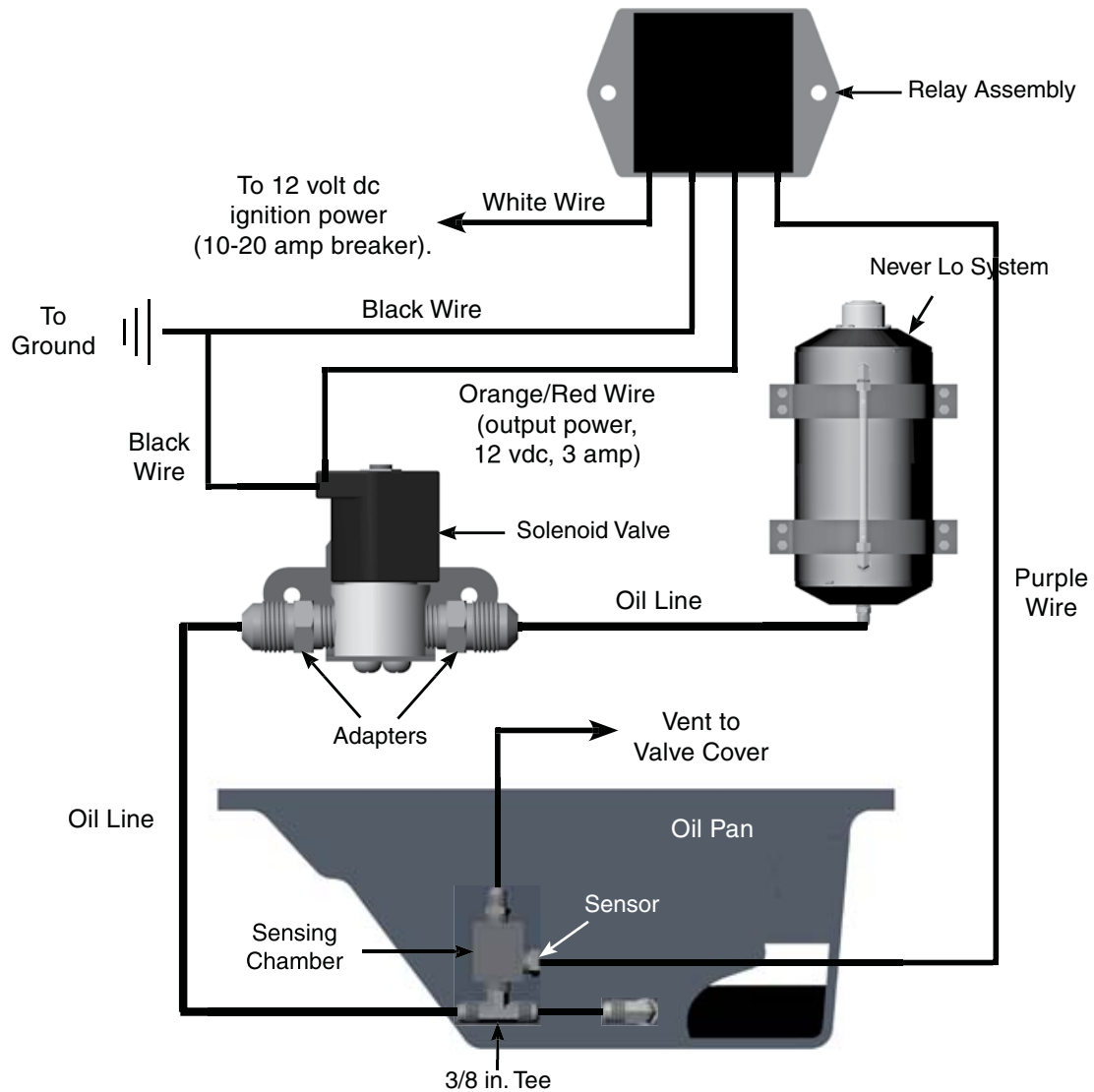
<u>Part Number</u>	<u>Description</u>	<u>Quantity</u>
0104-4-8	1/4" Adapter Pipe to #8 Hose	(2)
0104-6-6	3/8" Adapter Pipe to #6 Hose	(1)
23063	3/8" Tee Pipe to #8 Hose	(1)
REL1230LT	Relay Assembly	(1)
23060	12 vdc Solenoid Valve Assembly	(1)
23059	Mounting Bracket	(1)
3NL4469A	Sensing Chamber	(1)
3NL70LT	Oil Sensor Assembly	(1)
23061	REL1230LT Mating Harness	(1)
23024	10-32 x 1/2" Capscrew	(2)
11841	5/16"-18 Selflocking Hex Nut	(2)

**Note: Not all part numbers are available individually.**





# Electronic AFG30R and AFG50R Units



H

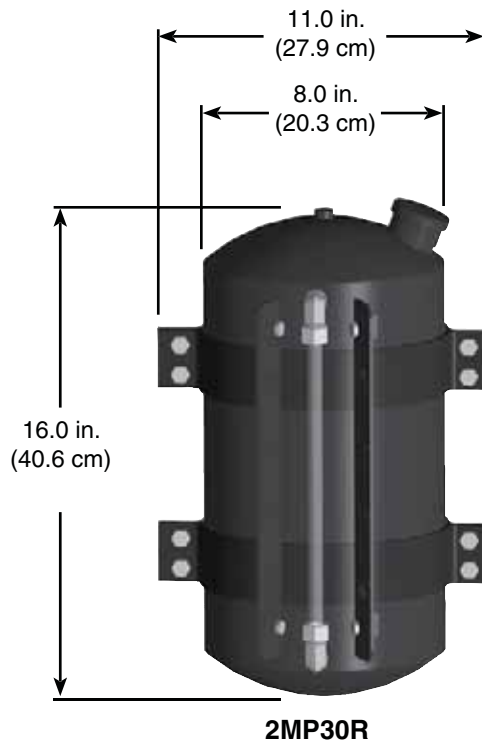
# 2MP30R Pressurized Kit

## Kit Includes

<u>Part Number</u>	<u>Description</u>	<u>Quantity</u>
2MP51UX	3 Gallon Pressurized Tank	(1)
3NL56UX	Tank Cap	
23006	Filler Cap O-ring	
2MP988LX	Left Side Sight Guard	
2MP988RX	Right Side Sight Gaurd	(1)
3NL52RX	Round Mounting Bracket	(1)
3NL52SX	Square Mounting Bracket	(1)
23005	Elbow, #8 Tube x 3/8" NPT male	(2)
11901	Hex Nut 3/8"-16 Self Locking	(8)
11078	Capscrew 3/8"-16 x 1" Long	(8)
23021	Capscrew 1/4"-20 x 3/8"	(4)
N11-8ANG	1/2" Nylon Tubing	
3MP9400X	Double Valve Push Button	(1)

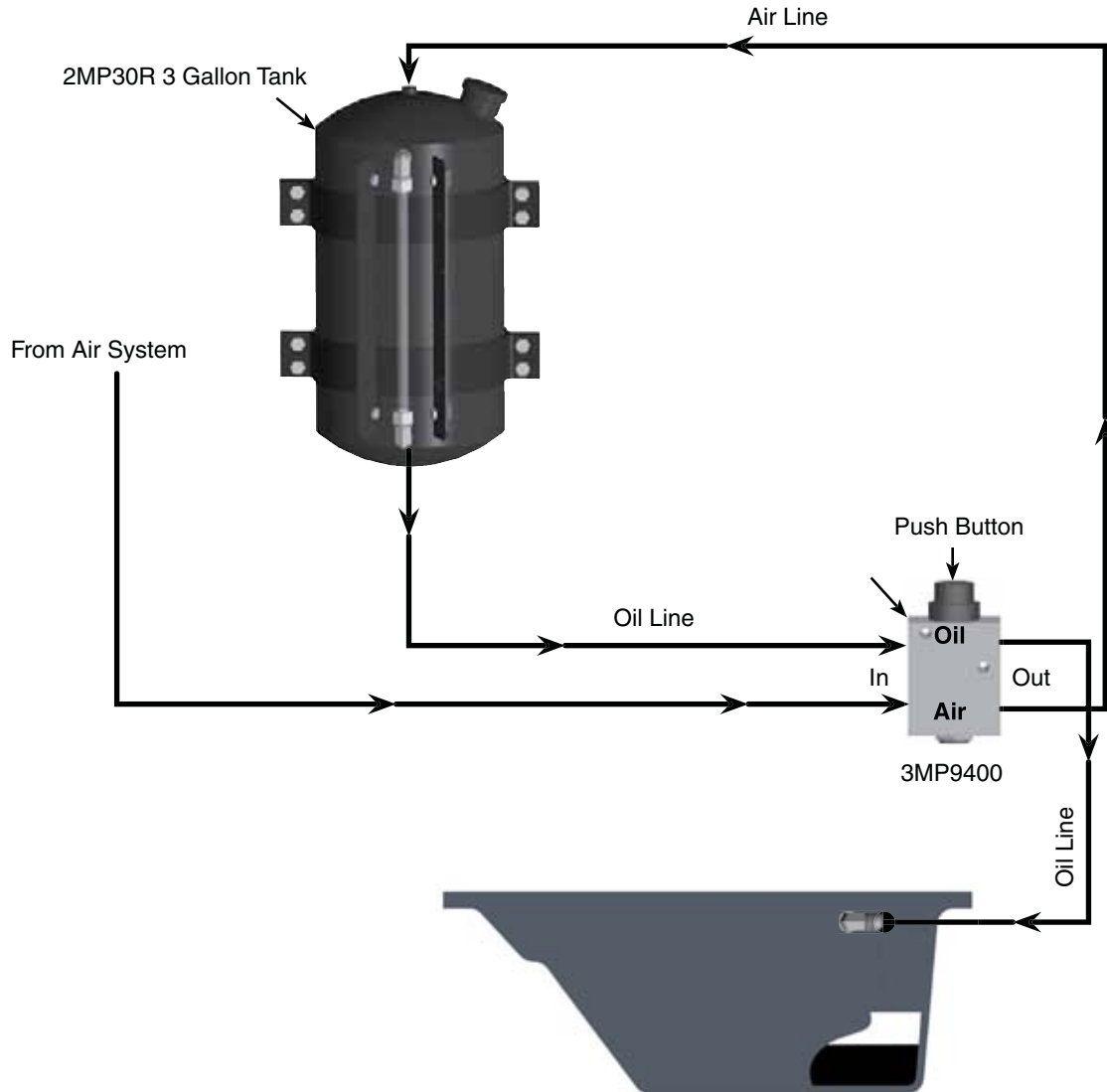
Note: Not all part numbers shown are available individually.

## Mounting Information



# 2MP30R Pressurized Kit

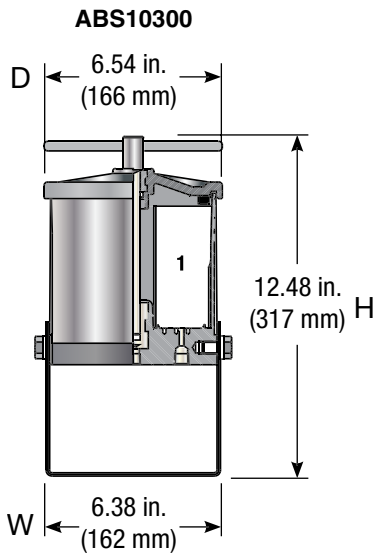
## Pressure AFG System



H

# ABS Series Bypass Oil Cleaners

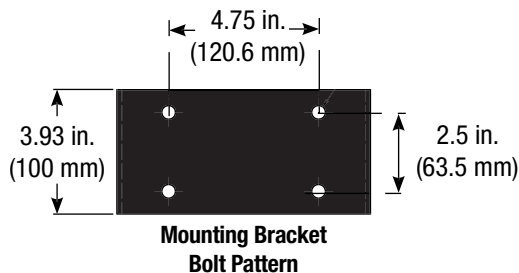
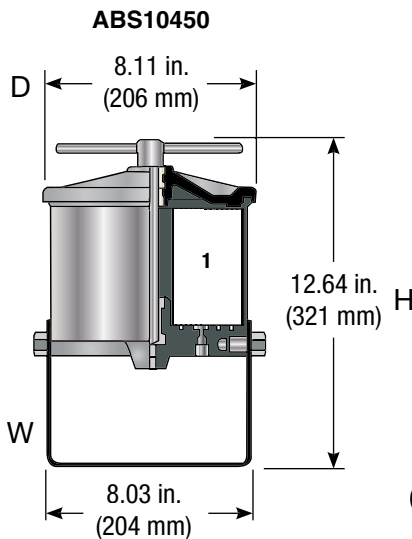
## Racor Absolute Oil Cleaner Plays an Active Part in Every Engine Application



Specifications	ABS10300	ABS10450
<b>Maximum Pressure</b>	180 PSI (12.4 bar)	180 PSI (12.4 bar)
<b>Capacity</b>	30 qts (28 L)	50 qts (47 L)
<b>Port Size (inlet/outlet)</b>	1/4" NPTF	1/4" NPTF
<b>Dimensions</b>	W6.38 x D6.54 x H12.48 in. (W162 x D166 x H317 mm)	W8.03 x D8.11 x H12.64 in. (W204 x D206 x H321 mm)
<b>Weight</b>	10 lbs (4.5 kg)	15 lbs (6.8 kg)

### Replacement Parts List

<b>ABS44030</b>	Seal Service Kit (for ABS10300)
<b>ABS44045</b>	Seal Service Kit (for ABS10450)
<b>ABS45165</b>	Bracket (for ABS10300)
<b>ABS45155</b>	Bracket (for ABS10450)
<b>ABS45336</b>	T-handle (for ABS10300)
<b>ABS45346</b>	T-handle (for ABS10450)



### Replacement Filters

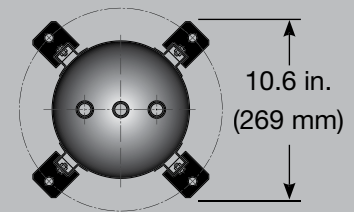
<b>ABS10300</b>	3 micron filter (Green)
<b>ABS20330</b>	5 micron filter (Blue)
<b>ABS20370</b>	10 micron filter (Orange)
<b>ABS25350</b>	
<b>ABS10450</b>	3 micron filter (Green)
<b>ABS20430</b>	5 micron filter (Blue)
<b>ABS20470</b>	10 micron filter (Orange)
<b>ABS25450</b>	

# ABS Series Bypass Oil Cleaners

## SU Series



ø 0.5 in. (12.7 mm) 4 holes



Bottom View

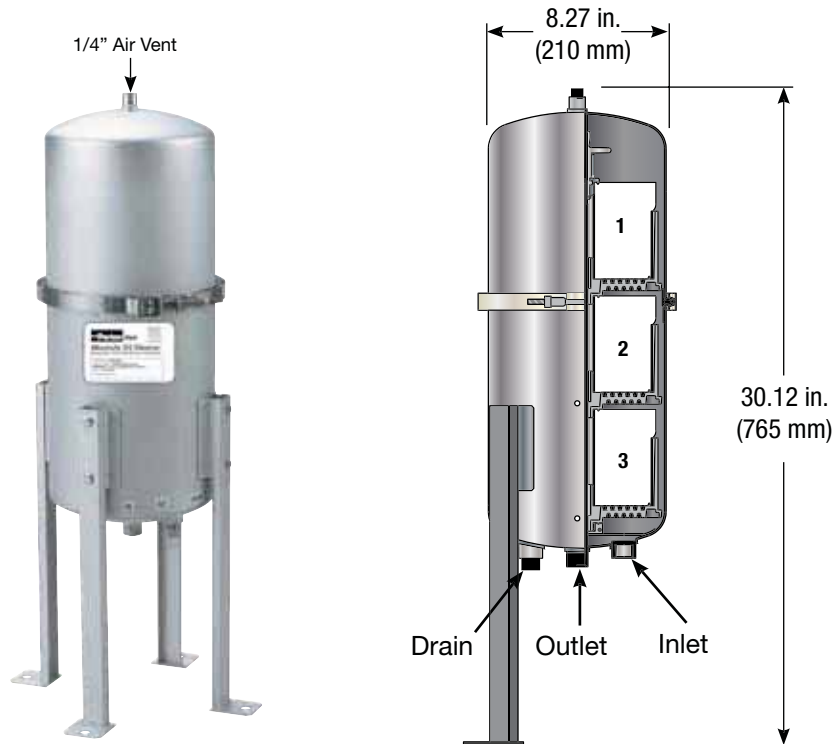
Specifications	ABS11200
<b>Housing Material</b>	Stainless Steel
<b>Capacity</b>	100 qt (94.6 L)
<b>Port Size (inlet/outlet/drain)</b>	1/2" NPT
<b>Working Pressure</b>	<120 PSI (8.3 bar)
<b>Dimensions</b>	W9.3 x D10.6 x H16.1 in. (W210 x D269 x H620 mm)
<b>Replacement Filters</b>	(use two) ABS20430 (3 micron), ABS20470 (5 micron) ABS25450 (10 micron)
<b>Weight</b>	22 lbs (10.0 kg)

## Replacement Parts

<b>ABS44090</b>	Seal Service Kit
<b>ABS50030</b>	V-band Kit
<b>ABS50068</b>	Nut and Bolt Kit
<b>ABS50070</b>	Packing
<b>ABS50057</b>	O-ring

# ABS Series Bypass Oil Cleaners

## SU Series



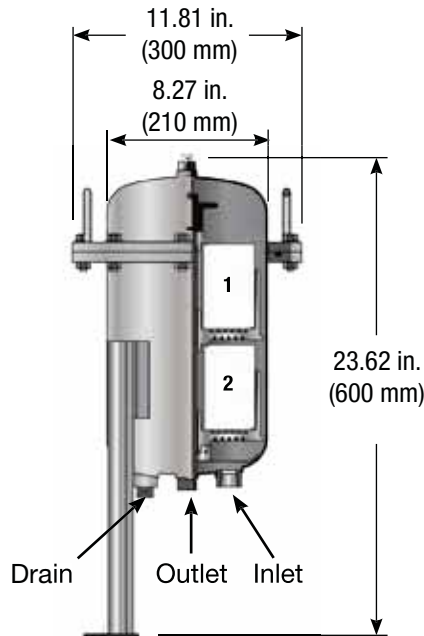
Specifications	ABS11300
<b>Housing Material</b>	Stainless Steel
<b>Capacity</b>	150 qt (142.0 L)
<b>Port Size (inlet/outlet/drain)</b>	1/2" NPT
<b>Working Pressure</b>	<120 PSI (8.3 bar)
<b>Dimensions</b>	W9.3 x D10.6 x H30.0 in. (W236 x D269 x H762 mm)
<b>Replacement Filters</b>	(use three) ABS20430 (3 micron), ABS20470 (5 micron), ABS25450 (10 micron)
<b>Weight</b>	28.7 lbs (13.0 kg)

## Replacement Parts

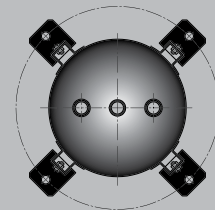
ABS44090	Seal Service Kit
ABS50030	V-band Kit
ABS50070	Packing
ABS50057	O-ring

# ABS Series Bypass Oil Cleaners

## SS Series



ø 0.5 in. (12.7 mm) 4 holes



Bottom View

H

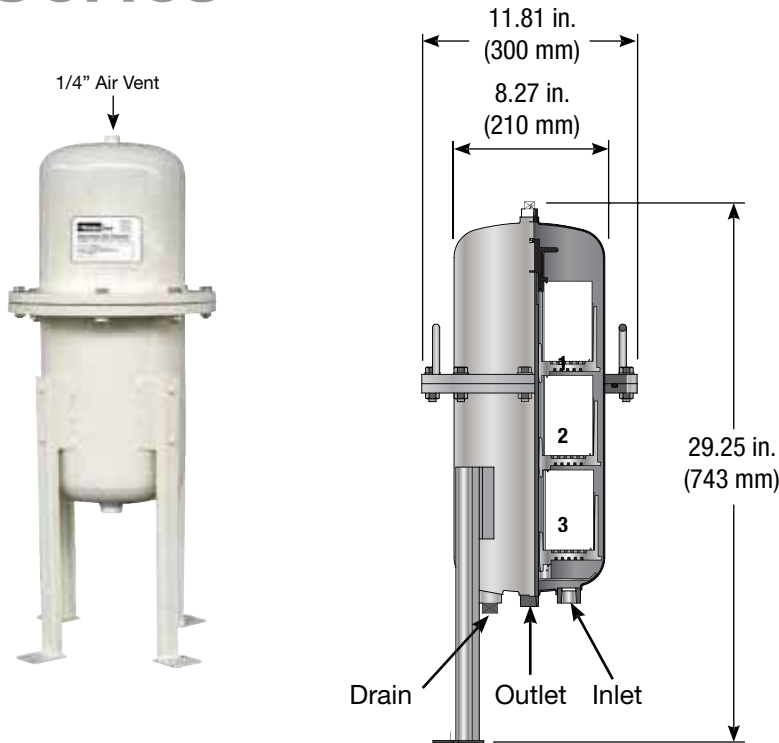
Specifications	ABS11400
<b>Housing Material</b>	Carbon Steel
<b>Capacity</b>	100 qt (94.6 L)
<b>Port Size (inlet/outlet/drain)</b>	1/2" NPTF
<b>Working Pressure</b>	<72.5 PSI (5.0 bar)
<b>Dimensions</b>	W11.81 x H23.62 in. (W300 x H600 mm)
<b>Replacement Filters</b>	(use two) ABS20430 (3 micron), ABS20480 (5 micron) ABS25450 (10 micron)
<b>Weight</b>	40 lbs (18.1 kg)

## Replacement Parts

<b>ABS44080</b>	Seal Service Kit
<b>ABS50082</b>	O-ring Kit
<b>ABS50072</b>	Packing Spacer
<b>ABS50065</b>	Suppression Nut

# ABS Series Bypass Oil Cleaners

## SS Series



Specifications	ABS11410
<b>Housing Material</b>	Carbon Steel
<b>Capacity</b>	150 qt (142.0 L)
<b>Port Size (inlet/outlet/drain)</b>	1/2" NPTF
<b>Working Pressure</b>	<72.5 PSI (5.0 bar)
<b>Dimensions</b>	W11.81 x H29.25 in. (W300 x H743 mm)
<b>Replacement Filters</b>	(use three) ABS24030 (3 micron) ABS20490 (5 micron), ABS25450 (10 micron)
<b>Weight</b>	48.5 lbs (22 kg)

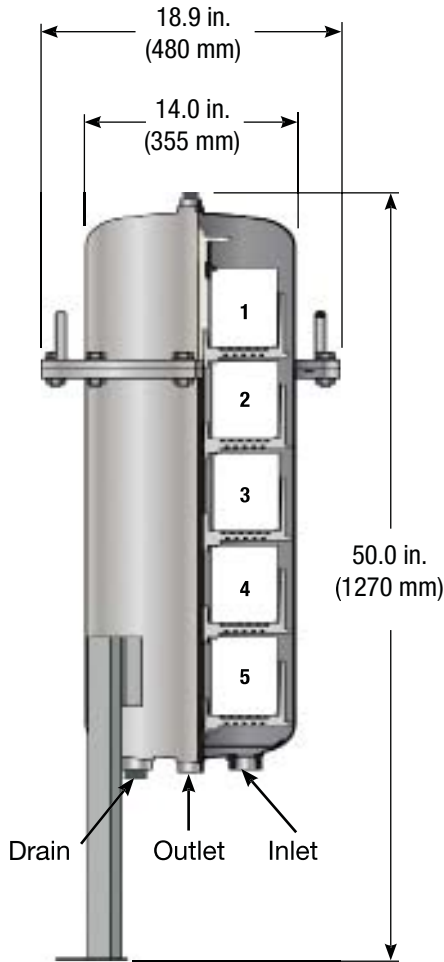
## Replacement Parts

ABS44080	Seal Service Kit
ABS50082	O-ring Kit
ABS50072	Packing Kit
ABS50068	Bolt and Nut Kit



# ABS Series Bypass Oil Cleaners

## SS Series



H

Specifications	ABS10515
<b>Housing Material</b>	Carbon Steel
<b>Capacity</b>	250 qt (236.6 L)
<b>Port Size (inlet/outlet/drain)</b>	1/2" NPTF
<b>Working Pressure</b>	<72.5 PSI (5.0 bar)
<b>Dimensions</b>	W18.9 x H50.0 in. (W480 x H1270 mm)
<b>Replacement Filters</b>	(use five) ABS20515 (3 micron)
<b>Weight</b>	191 lbs (86.6 kg)

## Replacement Parts

ABS44080	Seal Service Kit
ABS50058	O-ring Kit

# ABS Series Bypass Oil Cleaners

## Replacement Filters

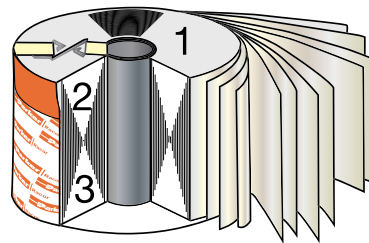
### Absolute Micron

Racor ABS filters are based on the axial flow principle and combines micro and depth filtration. This setup forces the oil to pass 8.5 oz (250 ml) of cellulose material, and to pass through 3 stages of different density, offering the best filter purification possible.

1. Big particles are retained on top of the filter, smaller particles (100 to 10 micron) in the 1st stage and the smallest particles in the lower compressed part of the filter (<10 micron).
2. The cellulose filter material allows water absorption up to 8.6 oz (255 ml) by filter.
3. The combination of a special cellulose material with a long flow distance 4.5 in. (114 mm) through the filter results in the ABS unique ability to remove sludge and oxidation products. Our filter products are perfect for any industrial or manufacturing use. Our filter purification process has helped earn our reputation in the industry.

**Important:** note that all our filter have passed the official Multipass test to ISO 4572. It is the only world-wide accepted test to define filter purification, efficiency and to publish absolute micron ratings and BETA-ratio's!

### 3-Step Micro Filtration



Axial filtration combined with special cellulose industrial filter materials.

1. Solid particle filtration.
2. Water absorption.
3. Sludge, resin and oxidation products absorption.

### Axial Micro Filter

The Racor ABS oil cleaner micro filters are based on operating principles that differ from those for conventional oil filters.

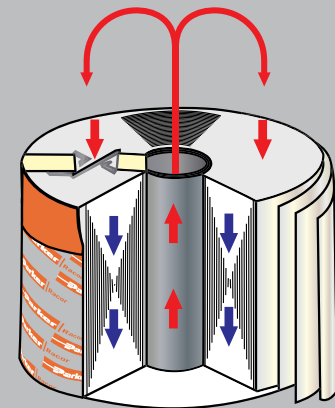
The design of these filters is based on the axial flow principle whereby a filter mass of 114 mm is applied. This is an enormous difference in comparison with the 1 to 2 mm thickness of conventional circulation filters. These 114 mm thick filters are always installed in a bypass position and this ensures that pressure and flow pulses are avoided.

### Cellulose Filter Media

In addition, Racor ABS filters use a specially designed cellulose filter medium that makes it possible to absorb water from oil and to completely remove oxidation products.

### The Perfect Filter

Extra thick filter mass, specifically designed cellulose media, and bypass installation are key criteria for high dirt retention capacity. Use Racor Absolute Series oil cleaners for maximum dirt and water removing efficiency.



- Mining
- Off Highway
- Marine
- Locomotives
- Construction
- Mobile

## Product Selection Guide

Engine Sump Capacity	Model
Up to 30 qt (28.4 L)	ABS10300
Up to 50 qt (47.3 Liters)	ABS10450
Up to 100 qt (94.6 L)**	ABS11200 / ABS11400
Up to 150 qt (142.0 L)	ABS11410 / ABS11300
Up to 250 qt (236.6 L)	ABS10515

\*\*Note: Long life filters last 40% longer and are available upon request.

Disclaimer: Product selection guide is for reference only — filter selection may vary depending on application.



# ABS Series Bypass Oil Cleaners

## Filter Condition

### Check Engine Condition By Viewing Filter

Filter change cycle depends on equipment use and environmental conditions. To maintain oil cleanliness level to within manufactures recommendations,

change filter whenever hours or distance driven is within oil drain interval. X series filters will last up to 40% longer so intervals should be adjusted to reflect longer filter life.



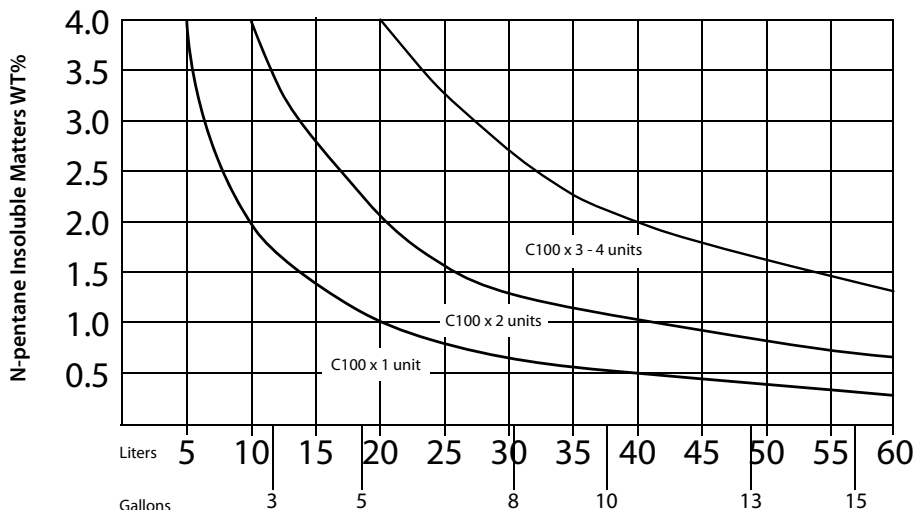
**NOTE:** Always use engine oil analysis to monitor the condition of the engine and lube oil when extending oil drain intervals.

1. When filter functions normally: There is a slight amount of carbon, based on this visual inspection, the filter is being changed appropriately and there is no engine trouble.
2. When metallic particles are found on the surface it is an indication of engine wear occurring due to metal to metal contact. Further monitoring or inspection is necessary.
3. A filter with visual cracks in the media are an indication of coolant or excessive moisture in the engine. Further inspection or monitoring is necessary to prevent severe engine damage.
4. Large amounts of soot or carbon build up are an indication of long idle times, poor engine combustion, over heating, moisture causing high viscosity or over extension of the oil change interval.



## Selection Guide of Units Required

Based on Pentane Solubles.



**LFS RK760**  
Lube Oil Analysis Kit  
Spectrochemical Analysis of  
up to 22 Trace Elements



**Time Frame:** 3 to 11 days, web page reporting is available.

Questions? Contact Technical Support: Oil Pan Capacity  
800 344 3286 or 209 521 7860 ext. 7555  
e-mail: racortech@parker.com

## Testing and Analysis

# Sootcheck™

### LFS RK763

SootChek™ is a hand held, battery operated diagnostic tool that tests soot concentration levels in diesel engine lubricating oil up to 10%, without sample preparation or solvents. It has been specifically designed for fleet operators, transit authorities, service stations, construction sites, preventative maintenance personnel, or anyone that needs easy, on-site soot measurements to enable them to know exactly when to change the lubricating oil based on soot analysis.



# Oilcheck™

### LFS RK761

OilChek™ Portable oil monitor measures the effect of all the contaminants and chemicals that occur in synthetic and petroleum based oils. This is achieved by detecting and measuring the oil's dielectric constant.

By comparing the measurements obtained from used and unused oils of the same make and grade, the oil monitor is able to determine the degree of change in the oil's dielectric constant. Dielectric change is directly related to the contamination level and degradation of the oil and may allow the user to achieve longer intervals between oil changes and immediately detect increased mechanical wear and coolant dilution, resulting in the loss of the oil's lubricating properties.

### Fluid Types:

- Engine Oil
- Transmission Fluid
- Hydraulic Fluid



# Analysis Kit

## LFS RK760

Lube oil sampling allows the prediction of oil quality, which can be used to determine optimum maintenance schedules, as well as for early warning signs of internal engine problems.

The Racor LFS RK760 engine lube oil analysis kits comes complete with sample bottle, prepaid mailer, and documents for logging necessary information for the lab to properly analyze and report their findings to the customer.

### Fluid Types:

- Engine Oil
- Transmission Fluid
- Hydraulic Fluid

### Uses:

- Stop ongoing wear
- Oil condition monitoring
- Failure Diagnosis
- Extended oil drain interval



H

## LFS Accessories

# Hose and Seal Kits

Remote bypass oil filter kits come complete with hose, adapters and all required fittings for a simple installation. The filter is mounted at any angle, using the supplied heavy duty bracket. The oil supply is taken from the engine by means of the unique machined and anodized components. The oil is returned to the crankcase by the filter cap or drain plug adapter.

### Benefits of installing one of these kits include:

- Extended oil change intervals.
- Reduced maintenance cost.
- Reduced engine wear.
- Superior 1 micron filtration.
- Rugged design.
- Will not void engine warranty.
- Oil sampling valve included.



### LFS RK801BHK

Hose and Fittings Kit for

- LFS RK859CL
- LFS RK860F
- LFS RK866G

### Bypass Kits

### LFS RK800BHK

Hose and Fittings Kit for

- LFS RK859CEA
- LFS RK859CEB
- LFS RK873F

### Bypass Kits

# PF L2016

Specifications	PF L2016
<b>Application</b>	Parfit Oil Filter Replacement Element Ford Power Stroke® Model Year 2007 Engine. (1840752C91)
<b>Maximum Flow Rate</b>	20 GPM (75.7 LPM)
<b>Maximum Working Pressure</b>	60 PSI (
<b>Micron Rating</b>	20 Micron
<b>Height</b>	6.5 in. (
<b>Diameter</b>	3.3 in. (
<b>Center Threads</b>	N/A
<b>Solids Capacity</b>	N/A
<b>Weight (dry)</b>	3.4 oz (
<b>H<sub>2</sub>O Removal Efficiency</b>	95%
<b>Operating Temperature</b>	-50° to +225°F (-45° to +107°C)



## Cross Reference

Motorcraft	Ford	International
FL2016	3C3Z6731AA	1840752C91

# Part Number Index

## 0

PRODUCT	PAGE#
0104-4-6	H26, H28
0104-4-8	H29
0104-6-6	H29
01-4-6-6	H26, H28

## 1

PRODUCT	PAGE
11078	H26, H28
11901	H26, H28
1000152	H24
11078	H32
11841	H29
11901	H32
145F-6-6	H26, H28

## 2

PRODUCT	PAGE
23005	H26, H28
2104-4-6	H26, H28
23005	H32
23006	H32
23021	H32
23024	H29
23059	H29
23060	H29
23061	H29
23063	H29
2MP30R	H25
2MP51UX	H32
2MP988LX	H32
2MP988RX	H32

## 3

PRODUCT	PAGE
3GV14X	H26, H28
3MP9400X	H32
3NL4469A	H26, H28, H29
3NL52RX	H26, H28, H32
3NL52SX	H26, H28, H32
3NL56UX	H32
3NL70LT	H26, H28, H29

## 4

PRODUCT	PAGE
46311	H6
46313	H6
46314	H6

## 6

PRODUCT	PAGE
63PT-8-62	H26, H28

## A

PRODUCT	PAGE
ABS10300	H34, H40
ABS10450	H34, H40
ABS10515	H39, H40
ABS11200	H35, H40
ABS11300	H36, H40
ABS11400	H37, H40
ABS11410	H38, H40
ABS20330	H34
ABS20370	H34
ABS20430	H34
ABS20470	H34
ABS25350	H34
ABS25450	H34
ABS44030	H34



ABS44045	H34
ABS44080	H37, H38, H39
ABS44090	H35, H36
ABS45155	H34
ABS45165	H34
ABS45336	H34
ABS45346	H34
ABS50030	H35, H36
ABS50057	H35, H36
ABS50065	H37
ABS50068	H35, H38, H39
ABS50070	H35, H36
ABS50072	H37, H38
ABS50082	H37, H38
AFG10FK	H26, H28
AFG30R	H25, H26, H27
AFG30RSV	H26
AFG34ST	H26
AFG50R	H25, H28
AFG50RSV	H28

## B

PRODUCT	PAGE
BK14150	H24

## D

PRODUCT	PAGE
DOC19P	H23, H24
DOC20PORX	H24
DOC22PC	H24
DOC22PO	H24
DOC25CPOX	H24
DOC28CTAOX	H24
DOC45K	H24

## L

PRODUCT	PAGE
LFS 331	H5
LFS 331-3RE	H6
LFS 333	H5
LFS 335	H5

LFS 335-7RE	H6
LFS 339	H5
LFS 339-41RE	H6
LFS 801	H7, H8
LFS 802	H7, H8
LFS 802S	H9
LFS 820	H7, H9
LFS 825	H7, H9
LFS 880A	H7, H8
LFS RK760	H43
LFS RK761	H42
LFS RK763	H42
LFS RK800BHK	H44
LFS RK801BHK	H44
LFS RK859CEA	H19, H20
LFS RK859CEB	H19, H20
LFS RK859CL	H19, H20
LFS RK860F	H19, H20
LFS RK860FE	H19, H20
LFS RK866G	H19, H20
LFS RK873F	H19, H20

## N

PRODUCT	PAGE
N11-8ANG	H26, H28, H32

## P

PRODUCT	PAGE
PF L2016	H45

## R

PRODUCT	PAGE
REL 1230LT	H26, H28, H29
RK46267	H1, H2
RKAFGSV12	H26, H28, H29

H

