



A **Clarience Technologies** Company

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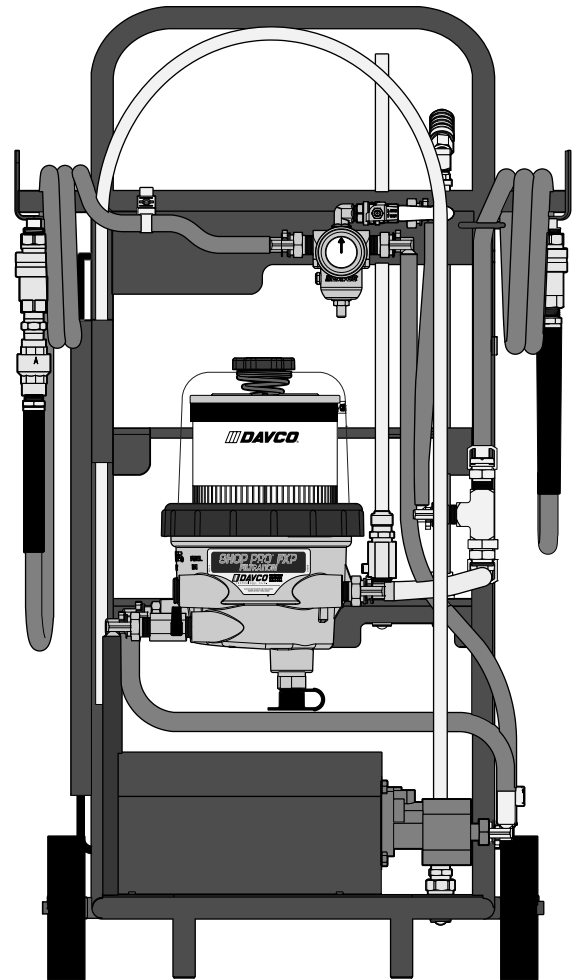
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 **CAUTION 95 PSI - DESIGNED TO BE USED ONLY WITH DETROIT DD 5, 8, 13, 15 AND 16 ENGINES TO OPEN THE TWO-STAGE VALVE FOR COMPLETE FUEL SYSTEM PRIMING**

FOR UPDATED INFORMATION VISIT [WWW.DAVCO.COM](http://WWW.DAVCO.COM)

# SHOP PRO® FXP 95

## TECHNICAL MANUAL

## APPLICATIONS AND FEATURES



**Product Warning: The Shop Pro is only approved for use with diesel fuel. It is not approved for use with gasoline or any other flammable liquids.**

### Applications

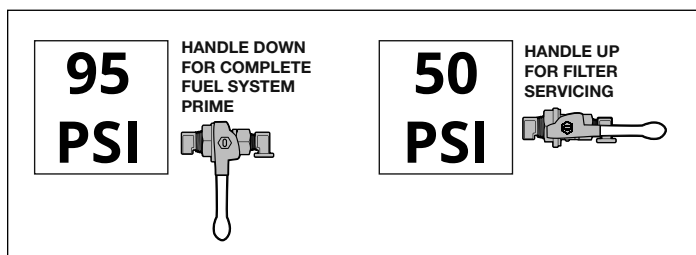
- **Removing Fuel**
- **Priming after Filter Service**
  - Eliminates the use of hand priming pumps after performing maintenance
  - Uses on-board fuel to prime engines and filters, avoids the hassle of keeping reserve fuel on hand
  - Eliminates cross contamination of fuel
- **Fuel Transfer**
  - Filters and transfers fuel in one operation
  - Transfers fuel when repairing tanks or crossover lines
  - Transfers fuel for trucks being sold or taken out of service
- **Tank Cleaning**
  - Removes contaminated fuel, sediment and water from fuel tanks of diesel powered equipment or from diesel storage tanks
  - Cleans fuel tanks during service — can be a value added service or a new revenue stream
  - Eliminates downtime due to fuel contamination

### 95/50 Regulator Settings



**Use 95 PSI setting (range of 90 PSI to 95 PSI) for priming after complete fuel system service on DD 5, 8, 13, 15 and 16 engines only.**

- Use 50 PSI setting (range of 45 PSI to 50 PSI) for all other uses and engine applications.



### Specifications

Height:	40.89"
Width:	23.3"
Depth:	17.0"
Weight:	74 lbs
Electric Motor:	120VAC, 3450 RPM
Flow Rate:	150 GPH

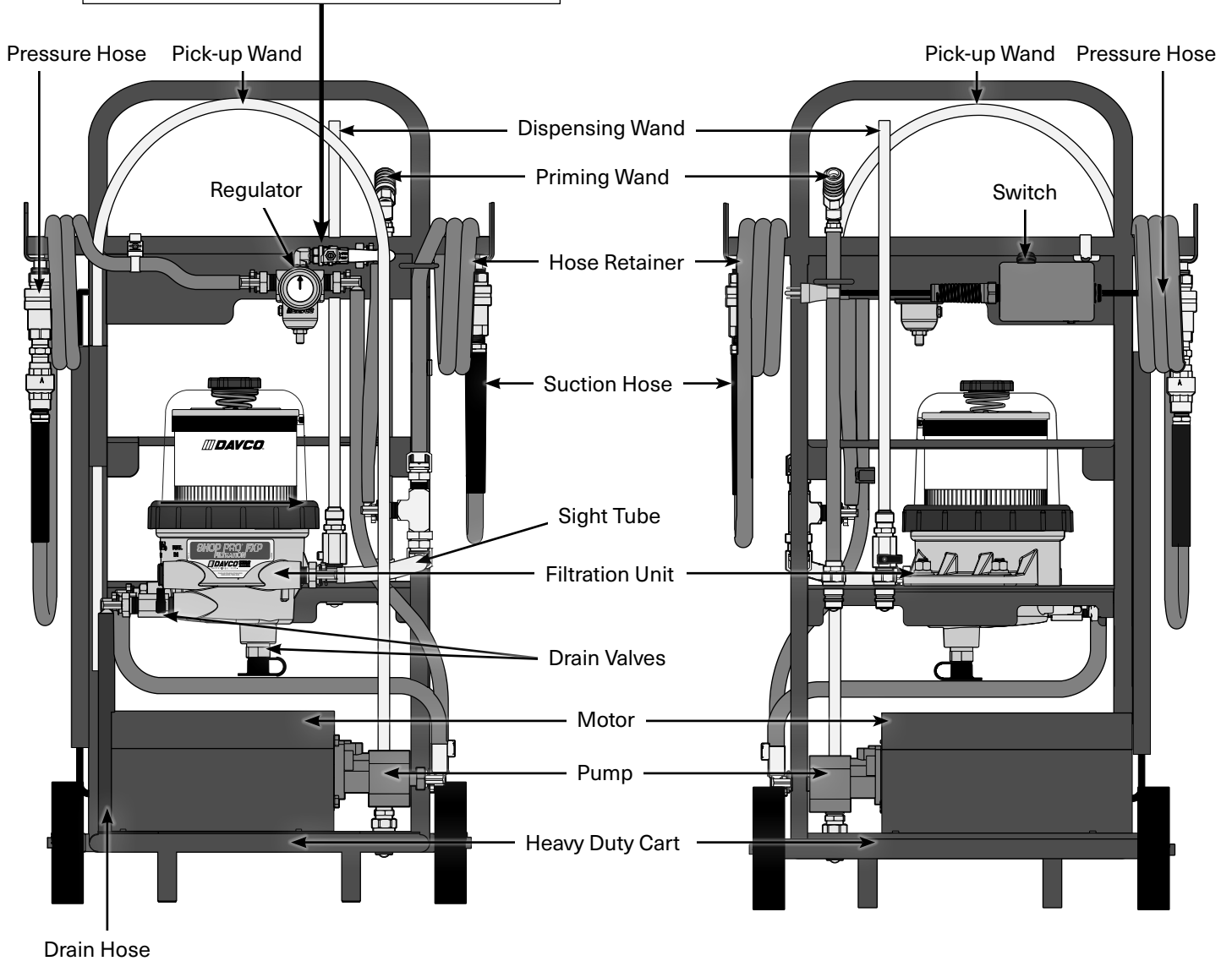
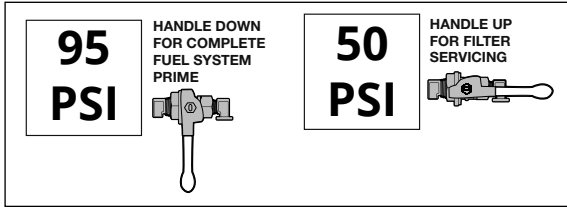
### Shop Pro Filtration

- All-in-one fuel filter and water separator for diesel fuel
- Superior fuel/water separation
- Easy to access drain
- Lightweight aluminum construction

### Features

- **DETROIT® Fuel System Priming**
  - Opens the two stage valve for complete fuel system priming
  - Eliminates the use of hand priming pumps after performing maintenance
- **Cart**
  - Heavy-duty steel construction
  - Portable and self-contained
- **Electrical**
  - Circuit Breaker Protection
  - UL® Listed, rear-facing receptacle
  - Waterproof ON/OFF switch
  - 120VAC connection
- **Pump and Motor**
  - Electric motor/pump combination rated for continuous operation, UL® Listed and CSA approved
- **Adapters and hoses**
  - No-drip fittings
  - Color-coded for function

**SHOP PRO® FXP 95 COMPONENTS**



## SAFETY PROCEDURES

### General Safety Precautions



**The Shop Pro is only approved for use with diesel fuel. It is not approved for use with gasoline or any other flammable liquids.**

- Read all instructions before use to avoid injury.
  - To avoid serious injury or death, follow the safety information in this document.
  - Keep this manual. If you need to replace the manual, call customer service at 800-328-2611 or visit [www.davco.com](http://www.davco.com) for a replacement.
  - Read all product safety labels.
  - Refer to appropriate regulations for environmental and workplace safety rules.
- ⚠ WARNING: To prevent personal injury**
- **Recommended Personal Protection Equipment:** Eye Protection and chemical resistant gloves are recommended.
  - **Avoid Fuel Spillage:** When disconnecting attachments equipped with Quick connect fittings, wrap a shop rag around the fitting to catch any residual fuel.
  - Do not leave the Shop Pro running unattended. Follow engine manufacturer guidelines for proper priming procedures. Always disconnect the power supply when

the Shop Pro is not in use.

- **Scalding hazard:** When diesel fuel is circulated through an operating engine, it can become very hot. Do not allow fuel to come in contact with eyes or unprotected skin. Allow the engine and fuel to cool to ambient temperature before replacing the fuel filter or performing service operations which could result in spillage of fuel from the fuel system.
- **Fire Prevention:** Heated fuel can form combustible vapor mixtures in the area around the fuel source. To eliminate the potential for fire, keep open flames, sparks or other potential ignition sources away from the work area. Do not smoke during filter replacement or service operations.
- **Inhalation Precaution:** Always perform engine or vehicle fuel system maintenance in a well ventilated area that is kept free of bystanders.
- **Government Regulations:** Engine fluids (oil, fuel, and coolant) may be a hazard to human health and the environment. Handle all fluids and other contaminated materials (such as filters and rags) in accordance with applicable regulations. Recycle or dispose of engine fluids, filters, and other contaminated materials according to applicable regulations.

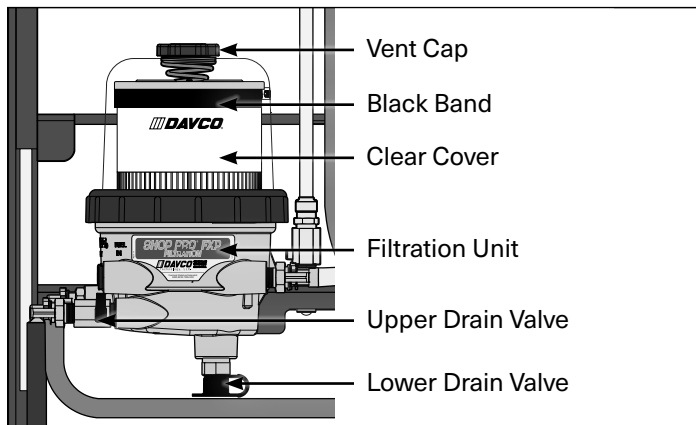
## SET-UP AND MAINTENANCE

### Set-up and First Use

1. Unpack the Shop Pro and remove the cable ties from hoses.
2. Remove the vent cap from the filtration unit. Pour diesel fuel into the clear cover until it reaches the black band on the filter element (approximately 1 gallon). (This fuel will be on the "dirty" side of the filter, meaning that the fuel will be filtered before flowing through the Shop Pro FXP to the engine or tank.)
3. Reinstall the vent cap and tighten by hand until it clicks.
4. Connect the Shop Pro to a power source. Install the pick-up wand on the green and dispensing wand on the red pressure hose. Put the wands in a five gallon (minimum) fuel container or truck fuel tank. Open the valve on the dispensing wand. Turn the Shop Pro power on and circulate fuel until there are no bubbles in the sight tube. Turn off the Shop Pro. Close the ball valve on the dispensing wand. Remove the wands from the hoses and return them to their storage area. Connect the hoses to the hose retainers.

### Filtration Unit Maintenance

The Shop Pro filter should be changed at one-year intervals unless a drop of flow is noticed, then it needs to be performed sooner.

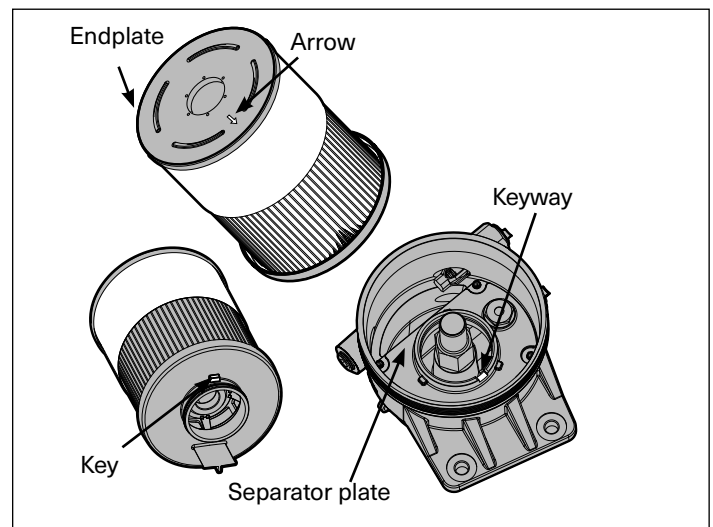


#### Filters (from OEM dealers)

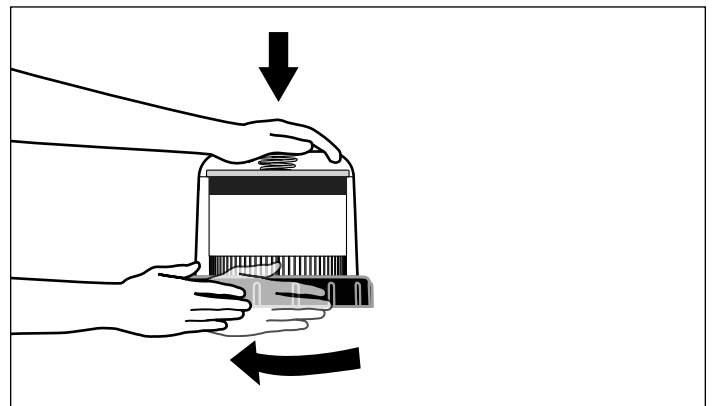
DDC	A0000905051
Fleetguard	FS20083

1. Open the vent cap to break the vacuum. Place a container under the drain hose and the drain valve on the filtration unit. Open both drain valves and drain the filtration unit completely.
2. Remove the vent cap and dispose of the o-ring. Clean the threads of the vent cap and on the top of the cover. Set the vent cap aside.

3. Using the collar wrench, loosen the collar.
4. Remove the clear cover and collar from the Fuel Pro. Discard the cover o-ring and install a new o-ring (supplied with the filter) on the cover. Clean the threads on the collar and the body. Install the new o-ring on vent cap (supplied with the filter).
5. Remove the filter element by pulling upward.
6. Record the date of the filter change on the filter wrap. Install the new filter element. Position the filter element so the key is lined up with the keyway on the separator plate of the housing. Use the arrow on the top of the endplate to align the filter. Ensure the filter element is fully seated by firmly pushing on the endplate. The filter should not rotate freely.



7. After checking to make sure the new o-ring seal is seated correctly on the base of the cover, install the cover and collar.
8. Apply downward pressure on the top of the cover and rotate the collar until contact.

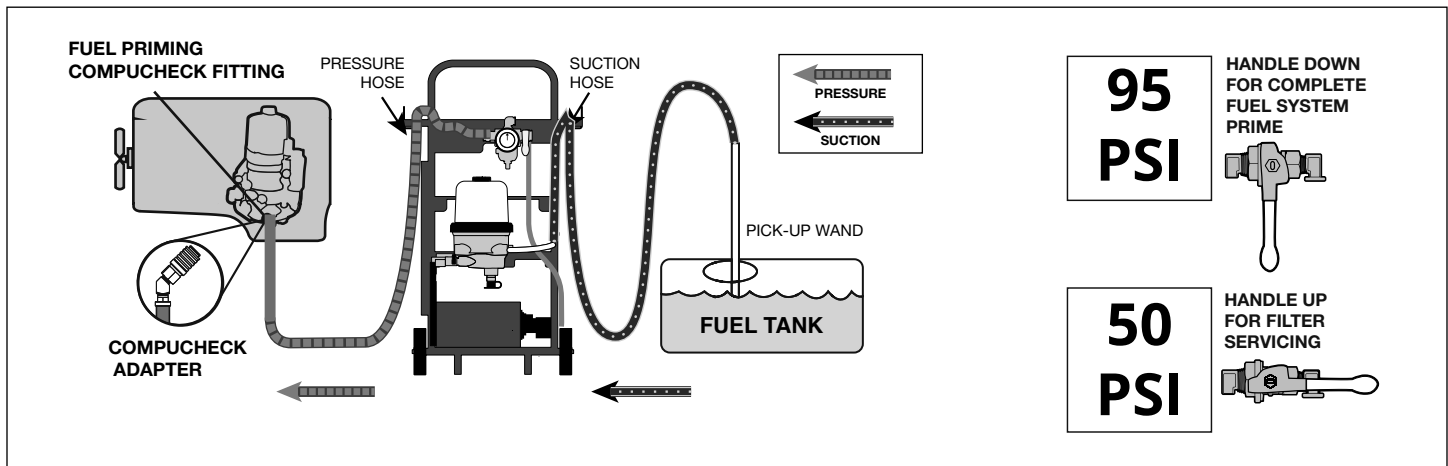


9. **Close the drain valves.** Pour approximately a gallon of fuel into the vent cap opening. Reinstall the vent cap (turn it until it clicks).

## PRIMING THE FUEL MODULE WITH THE COMPUCHECK ADAPTER

### Regulator Settings: 95/50 Regulator Settings

- Use 95 PSI setting (range of 90 PSI to 95 PSI) for priming **after complete fuel system service** on DD 5, 8, 13, 15 and 16 engines **only**.
- Use 50 PSI setting (range of 45 PSI to 50 PSI) for all other priming uses and engine applications.



1. Attach the pick-up (60") wand to the suction hose (green) and insert it into the fuel tank.
2. Attach the Compuccheck Adapter (blue hose) to the pressure hose (red) on the Shop Pro.

3. Connect the Compuccheck fitting to the priming port on the fuel module.



3. Connect the Compuccheck fitting to the priming port on the fuel module.



4. Turn the Shop Pro FXP ON. Prime the fuel system for four minutes.



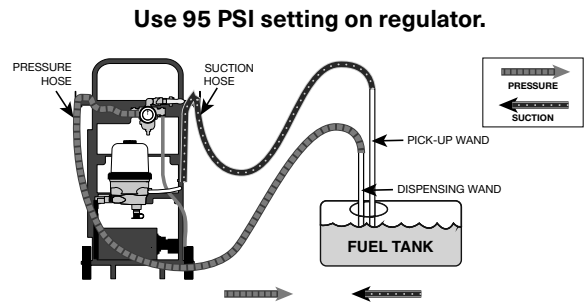
**If you are priming a DD 5 or DD 8 engines, turn the Shop Pro OFF before starting the engine.**

5. If you are priming an engine other than a DD 5 or DD8 engine, start the engine while the Shop Pro is running. Allow the engine to idle until the engine reaches full oil pressure. Run the engine at high idle for one minute. Return the engine to idle and turn off the Shop Pro.
6. Turn off the engine.
7. Remove the Compuccheck adapter from the fuel module.
8. With the pickup wand still in the tank, disconnect the suction hose. Raise the tube as high as possible. Press the pickup wand anti-drip ball valve and allow the fuel to drain completely.
9. Remove the pick-up wand from the fuel tank.
10. Return the adapters to the cart. Return the hoses to the hose retainers.
11. Restart the truck and check for leaks.

## FUEL TANK SWEEPING/TRANSFER WITH FILTRATION

### Fuel Tank Sweeping Overview:

The suction hose (green) is connected to the pick-up wand (60" white wand). The pressure hose (red) is connected to the dispensing wand (20" white wand). The fuel is filtered as it is drawn from the tank and returned to the same tank (or auxiliary tank). By moving the wand along the sides and bottom of the tank, water and contaminants that have settled in the tank are removed. The sight tube aids in determining the length of time needed to clean the tank.



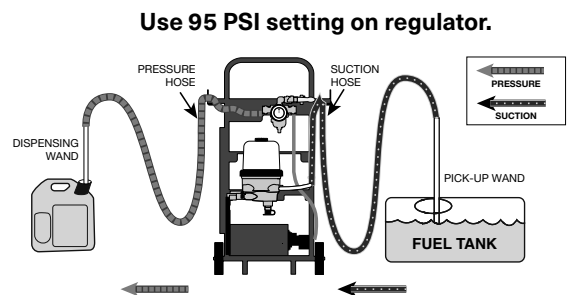
**Pro Tip:** Remove the anti-siphon fill cap from the fuel tank before sweeping.

**Pro Tip:** Elevate the end of the truck to allow water and contaminants to collect closest to the fuel fill point.

1. Connect the Shop Pro to a power source. Attach the 60" pick-up wand to the suction hose (green) and insert it into the fuel tank. Attach the 20" dispensing wand to the pressure hose (red). Insert the dispensing wand into the fuel tank and open the valve.
2. Turn the Shop Pro ON.
3. With the pick up wand, slowly sweep the bottom and sides of the fuel tank with a side-to-side motion. Refer to the appearance of the fuel in the sight tube to determine when sweeping is complete. If the tank being cleaned has excessive water (visible in the clear cover) turn the Shop Pro off and drain the filtration unit.
4. When sweeping is complete, run for one additional minute to flush residual water from the Shop Pro to prevent gear corrosion. Turn the Shop Pro OFF.
5. With the pickup wand still in the tank, disconnect the pressure hose and raise the wand as high as possible. Press the pickup wand anti-drip valve ball and allow the fuel to drain completely. Close the valve on the dispensing wand.
6. Remove the wands from the fuel tank and return them to the cart. Return the hoses to the hose retainers.

### Fuel Transfer with Filtration Overview:

The suction hose (green) is connected to the pick-up wand (60" white wand). The pressure hose (red) is connected to the dispensing wand (20" white wand). The fuel is filtered as it is drawn from the **Tank A** or storage container and transferred to **Tank B**. Water and contaminants that have settled in the tank are removed as the fuel is transferred between the tanks.



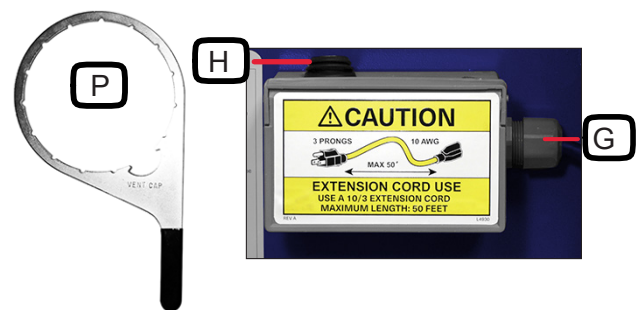
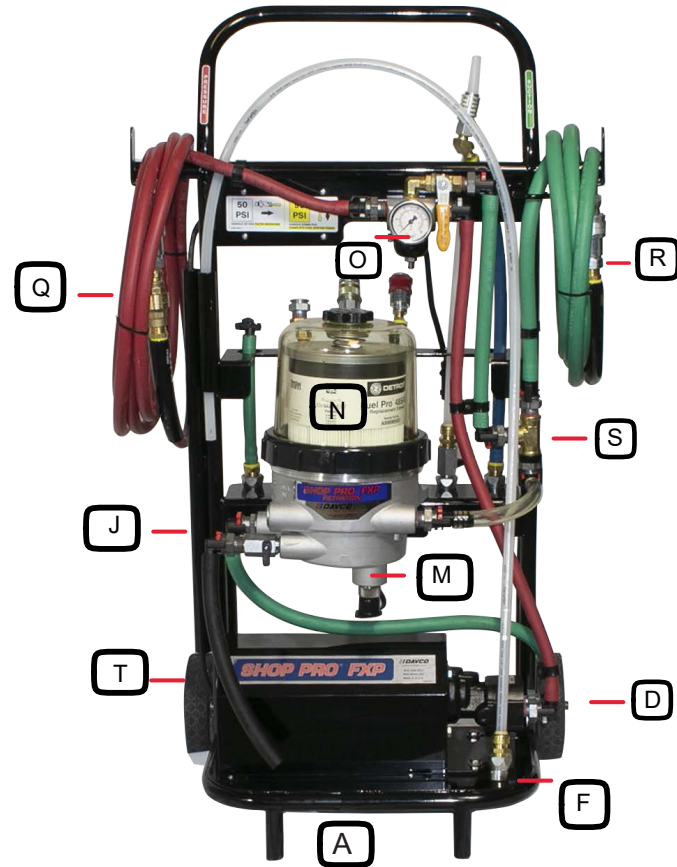
1. Connect the Shop Pro to a power source. Turn the regulator handle to the 95 PSI setting.
2. Attach the 60" pick-up wand to the suction hose (green) and insert it into the fuel tank.
3. Attach the 20" dispensing wand to the pressure hose (red). Insert the dispensing wand into the fuel tank or container that the fuel is to be transferred to. Open the ball valve on the dispensing wand.
4. Turn the Shop Pro ON. If the tank the fuel is being transferred from has excessive water (visible in the clear cover) turn the Shop Pro off and drain the filtration unit.
5. When the fuel transfer is complete, run for one additional minute to flush residual water from the Shop Pro to potential pump corrosion. Turn the Shop Pro OFF.
6. With the pickup wand still in the tank, disconnect the pressure hose. Raise the wand as high as possible. Press the pickup wand anti-drip valve and allow the fuel to drain completely.
7. Close the valve on the dispensing wand. Return wands to the cart and the hoses to the hose retainers.

CART		
A	Motor Cover and (4) Screws	788038S-BLK
B	Motor Fasteners (Not Shown)	782225S
C	Pump Bracket, Washers & Screws (Not Shown)	782230-BLK
D	Wheels (2), Pins & Washers	788031S

ELECTRICAL / PUMP		
E	Coupler Asm	782229S
F	Pump	782227S
G	Electrical Box with Switch	788032S
H	Electrical Switch	782215S
I	Motor (Not Shown)	782251S

FUEL FILTRATION		
J	Cover, Collar, Vent Cap, Spring, Vent cap O-ring	782157S
K	Drain Valve	485022DAV
L	Drain Valve Service Kit (Not Shown)	485021DAV
M	Filtration Unit	488950FXP-10
N	Fuel Filter - Fleetguard Brand	FS20083
N	Fuel Filter - DTNA Branded	A0000903651
O	Regulator Asm	788003-1S
P	Wrench	482017DAV

HOSES		
Q	Pressure Hose Assembly (red) 17 ft.	788007S
R	Suction Hose Assembly (green) 12 ft.	788009S
S	Hose Kit ( Sight Glass-Filter, Pump-Filter)	788018S
T	Drain Hose	788035S






Purchase service parts directly from the DAVCO online store. Scan this code with your cell phone to go directly to the [Shop Pro FXP Service Parts page](#).









**ADAPTERS**

Description		
Compucheck Adapter (Blue)	782294S	
Pick-Up Wand (60" tube)	782289S	
Dispensing Wand (20" tube)	788037S	

**NAVISTAR HOSE KITS**

Description		
Voss Fitting Adapter (Red)	782293S	
Angled Voss Adapter (Green)	782292S	
Includes Voss Fitting Adapter (Red) and Angled Voss Adapter (Green) for Navistar Engines	782319S	 

**HOSE KITS TO SERVICE FUEL PRO UNITS WITH PENSKE ESOC FITTINGS**

ESOC Adapter - Yellow Hose*	782290S	
ESOC Adapter - Black Hose**	782291S	

**CAUTION: THE CORRECT ESOC ADAPTER MUST BE USED TO PREVENT FUEL LEAKAGE.**

\*Use Yellow Hose ESOC Adapter for (old) silver ESOC fitting.

\*\*Use Black Hose ESOC Adapter for black or (new) silver ESOC fitting.



**FITTINGS**

Description		
Quick Connect Fitting for Pressure/Suction hoses	782284S	
Compucheck Fitting for 782236S/782294S	782012S	

**MX HOSE KITS**

Kit, MX13 EPA  
2010/2013 and MX 11  
EPA13 Engines (Both  
accessories with handle)

782306PAC



A	782301PAC
B	782300PAC

**REPLACEMENT HOSES**

Pressure Hose (Red)  
without check valve  
and handle

788007S



Suction Hose (Green)  
without check valve  
and handle

788009S



## WARRANTY AND RETURNS POLICY

### Warranty

Please review DAVCO's Product Warranty terms and conditions carefully before installing and/or using a DAVCO product.

**Diesel Pro® 243, 245, Fuel Pro® 382, 385, 482, 483, 485, 487, 488, Industrial Pro®, Pro-Chek®, Sea Pro®**

DAVCO Technology, LLC warrants these products to be free of defects in material and workmanship for five years, 500,000 miles or 10,000 hours (whichever comes first) and electrical parts for two-years, 200,000 miles or 4,000 hours (whichever comes first) from the purchase date\*.

#### Shop Pro®

DAVCO Technology, LLC warrants the Shop Pro (except for the motor) to be free of defects in material and workmanship for two years from the date of purchase. The Shop Pro motor is warranted for one year from date of purchase.

#### REN Products, EyeMax®, and Fuel Pro® 384

DAVCO Technology, LLC warrants these products to be free of defects in material and workmanship for two-years or 200,000 miles (whichever comes first) from the purchase date.

By installing and/or using the product, you agree to be bound by the following:

#### This Warranty does not apply to:

- Failure or inadequate performance due to improper installation, misuse, misapplication, faulty installation, alteration/modification, poor maintenance, neglect, accident, or conditions resulting from actions outside DAVCO's control, including but not limited to the use of contaminated, corrosive, and unapproved fluids.
- Downtime, loss of use, loss of profits or income, loss of capital, cost of substitute equipment, living expenses, claims by purchaser's customers or other third parties, or other incidental, special or consequential damages.
- Attachments, accessory items, and parts not manufactured or distributed by DAVCO.
- Any aftermarket or OEM component not approved specifically to work with a DAVCO manufactured product
- Product that has been installed with aftermarket parts or altered or modified in any way.
- Normal wear and tear, abuse, vandalism, acts of God, improper storage or handling, disasters such as flood, fire, or war, failure to operate, maintain or repair in accordance with instructions, or failure to repair the vehicle into which the product is installed in accordance with the vehicle manufacturer's instructions or common maintenance practices.

This warranty is the sole warranty made by DAVCO. DAVCO makes no other warranties, expressed or implied, of merchantability or fitness for a particular purpose.

In the unlikely event of a defective product, DAVCO will either rework the defective product or replace it at DAVCO's discretion. If you feel you have a warrantable issue, contact DAVCO at 800-328-2611 for a Return Goods Authorization (RGA) number \*\*. An RGA number is required prior to the return of any product.

\* Purchase Date: The date of the first retail purchase of a new vehicle or piece of equipment from the OEM dealer or factory. For "Over the Counter" purchase: The date of sale to the first retail customer.

\*\*Products submitted for Warranty consideration will be inspected by DAVCO personnel. Re-work or replacement will be based on DAVCO's Warranty procedure and/or the results of their evaluation. DAVCO's Warranty Program does not in any way constitute a product guarantee.

### Parts Return:

**A Return Goods Authorization (RGA) must be obtained from DAVCO prior to returning any products. Returns may be accepted under the following circumstances:**

- Order Shipping Error: A credit against the original invoice, including freight charges for both ways will be issued for returns in which DAVCO inadvertently shipped incorrect quantity or product.
- Overstock: Returns for ordering more product(s) than required, or incorrect part(s), will be accepted within 60 days from the date of purchase. Proof of purchase will be required, i.e.: original invoice/delivery receipt. These types of return(s) are subject to a minimum restock fee of 40% or \$40.00, whichever is higher. Additional restock fees may apply. Product(s) will be inspected for "like new" condition and additional costs will be the responsibility of the customer. No obsolete parts may be returned.
- Freight charges for return(s) will be the responsibility of the customer.

