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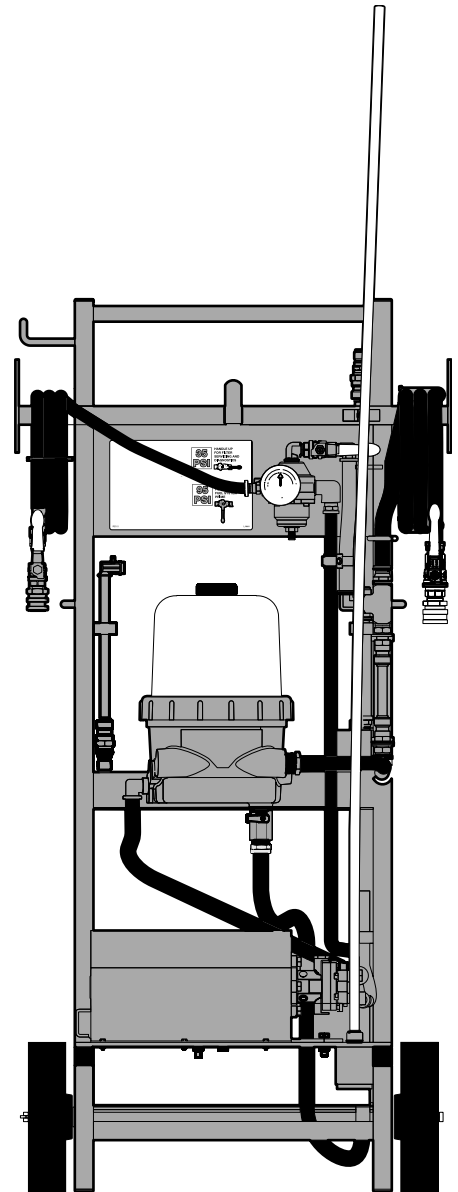
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CAUTION 95 PSI – DESIGNED TO BE USED ONLY WITH DETROIT DD13, 15 AND 16 ENGINES TO OPEN THE TWO-STAGE VALVE FOR COMPLETE FUEL SYSTEM PRIMING



SHOP PRO® FXP 95
WITH 50/95 PSI REGULATOR
TECHNICAL MANUAL

FOR ADDITIONAL INFORMATION, VISIT www.davco.com

F1306 REV B
Updated 09/06/16

APPLICATIONS AND FEATURES

Applications

- △ **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.**
- **Removing Fuel**
- **Priming after filter service**
 - Eliminates the use of hand priming pumps after performing maintenance
 - Uses onboard 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 13, 15 and 16 Engines only.**
- Use 50 PSI Setting (range of 45 psi to 50 psi) for all other uses and engine applications.



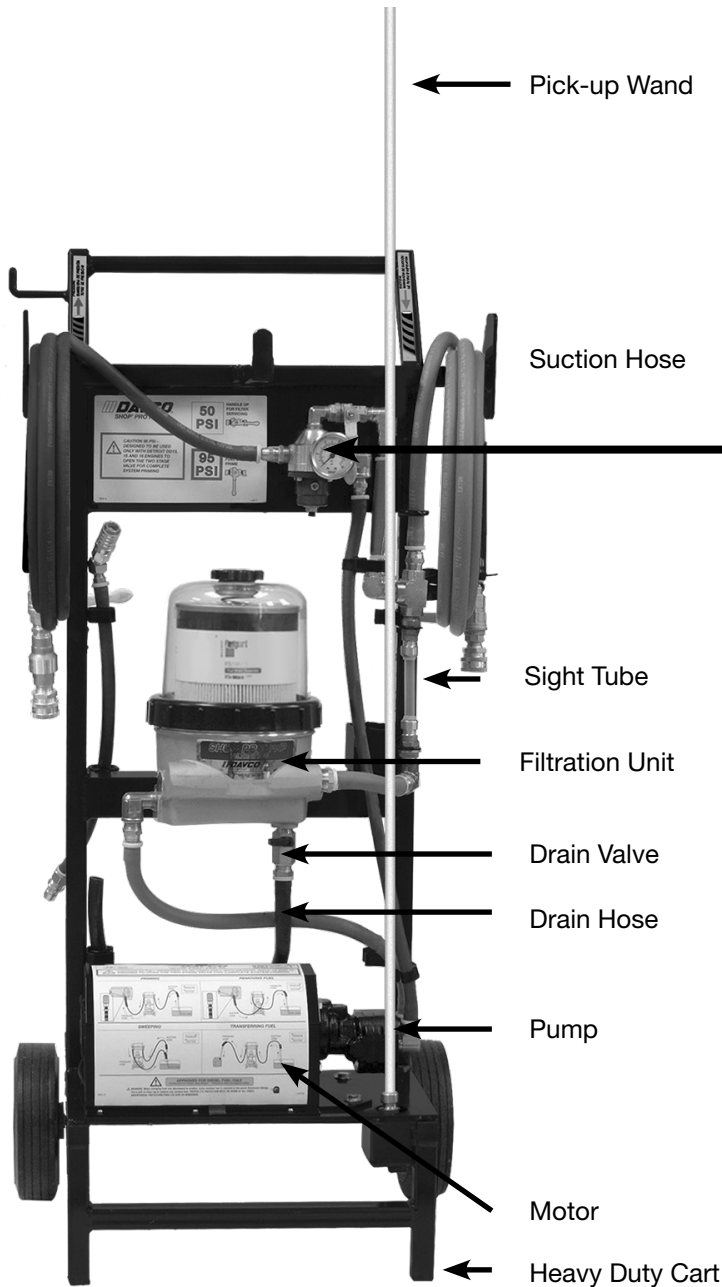
Shop Pro Filtration

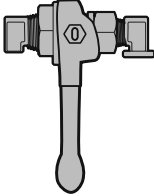
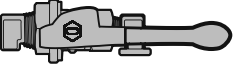
- All-in-one fuel filter and water separator for diesel fuel
- “SEEING IS BELIEVING”® Clear cover provides instant visual indication of filter life
- Superior fuel/water separation
- Dry filter changes — drain fuel below collar and replace filter
- Easy to access drain
- Aluminum construction — lightweight and corrosion resistant
- All Shop Pro Functions filter the fuel to 7 microns

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**
 - Custom heavy duty construction design
 - Portable and self-contained
 - Integrated drip reservoirs with drains
- **Electrical**
 - 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
- **Regulators**
 - **95 psi setting** (handle down, range of 90 psi to 95 psi). Designed to be used only with Detroit DD13, 15 and 16 engines to open the two-stage valve for complete fuel system priming.
 - **50 psi setting** (handle up, range of 45 psi to 50 psi) for use on other applications

SHOP PRO® FXP 95 COMPONENTS



95 PSI	<p>HANDLE DOWN FOR COMPLETE FUEL SYSTEM PRIME</p> 
Regulator	
50 PSI	<p>HANDLE UP FOR FILTER SERVICING</p> 

120VAC RECEPTACLE



120VAC SWITCH



⚠ IMPORTANT SAFETY PRECAUTIONS

General Safety Precautions

- 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/documents for a replacement.
- Read all product safety labels.
- Refer to appropriate regulations for environmental and workplace safety rules.

WARNING: To prevent personal injury

- **Eye Protection:** Proper eye protection must be worn when operating the Shop Pro.
- **Avoid fuel spillage:** When disconnecting attachments equipped with quick disconnect fittings, wrap a shop rag around the fitting to catch any residual fuel. Allow fuel to drain back into hoses before closing ball valves to avoid spillage when returning hoses to the cart.
- 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.
- The ignition key must be in the **off** position, unless otherwise directed. To avoid unintentional engine startup, use a lockout key and/or signage to alert personnel that work is being performed.
- The Shop Pro is to be used with only diesel fuel. Do not use the Shop Pro with gasoline or any other combustible fluid.

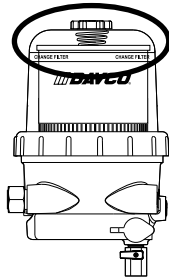
Government Regulations

- 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

1. Unwrap the Shop Pro FXP and remove cable ties from hoses.
2. Assemble the suction hose to the pick-up wand.
3. Remove the vent cap from the filtration unit.



4. 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.)
5. Reinstall the vent cap and tighten by hand until it clicks. The Shop Pro FXP is now ready for use.

Filtration Unit Maintenance

Drain Water

Water that has been separated from fuel will collect in the bottom of the body of the filtration unit. Drain the water periodically. This will depend on how often the Shop Pro is used and the quality of the fuel it has filtered.

1. Open the vent cap slightly to break the vacuum. Place the end of the drain hose in a suitable container and open the drain valve.



2. When only fuel is coming out of the hose, shut the valve. Hand tighten the vent cap until it clicks.

Filter Replacement

Replace the filter in the filtration unit when the fuel remains at the top of the filter element. The filter change will also include replacement of the seals on the vent cap and on the collar.

1. Remove the vent cap and open the drain valve to drain the fuel below the collar level.
2. Remove the collar (use the DAVCO wrench) then remove the clear cover. Remove the filter. Remove the seals from the cover and the vent cap. Dispose of the filter and the seals properly.
3. Using a clean shop rag, clean the cover, vent cap, collar and threads on the filtration unit body. Do not use any acetone based cleaners on clear cover.
4. Install the new filter and the seals (included with the replacement filter).
5. Place the collar over the cover. Simultaneously apply pressure to the top of the clear cover and turn the collar until it is seated on the body of the filtration unit. Tighten the collar until it no longer spins freely. Using the collar wrench, tighten the collar two additional ribs.
6. Pour clean fuel into the filtration unit. Hand tighten the vent cap until it clicks.

Replacement filter part numbers:

Fleetguard: FS19915

Detroit Diesel: A0000903651

Cart Maintenance

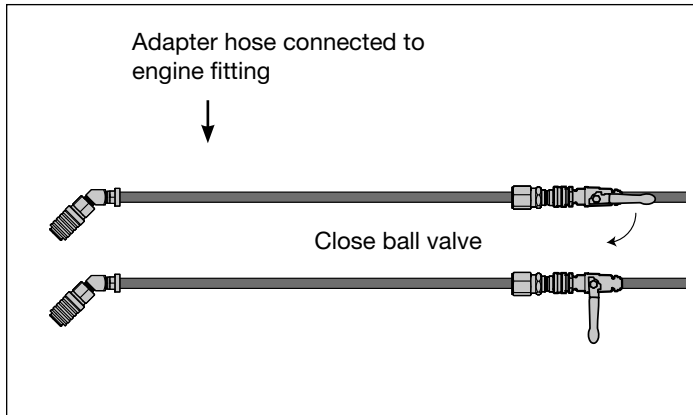
1. Open the small drain valves on the bottom of the reservoirs on the cart. Dispose of waste fluid properly.
2. Wipe the surfaces with shop rags.

Service Parts

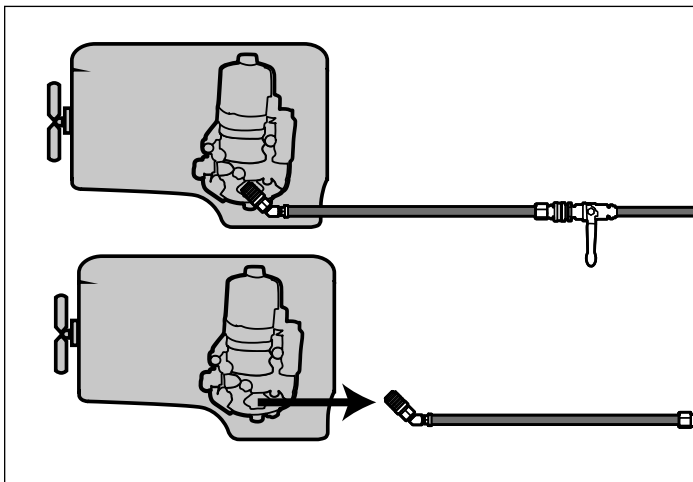
Service parts are listed on page 13. Call DAVCO customer service at 800- 328-2611 to order.

PREVENT FUEL SPILLAGE

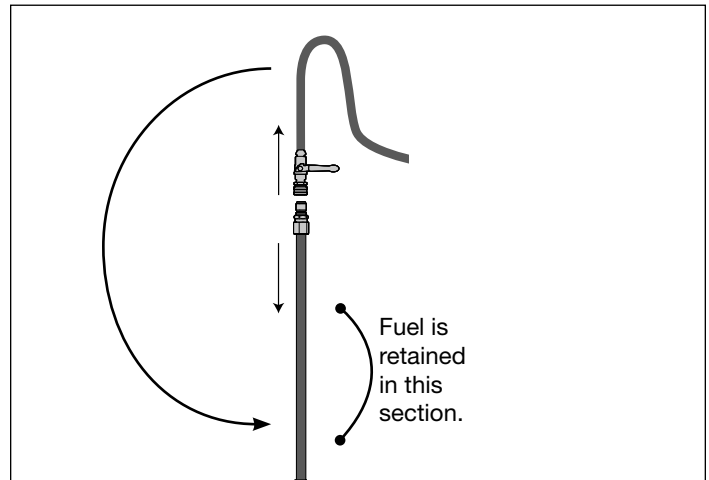
1. Close the ball valve.



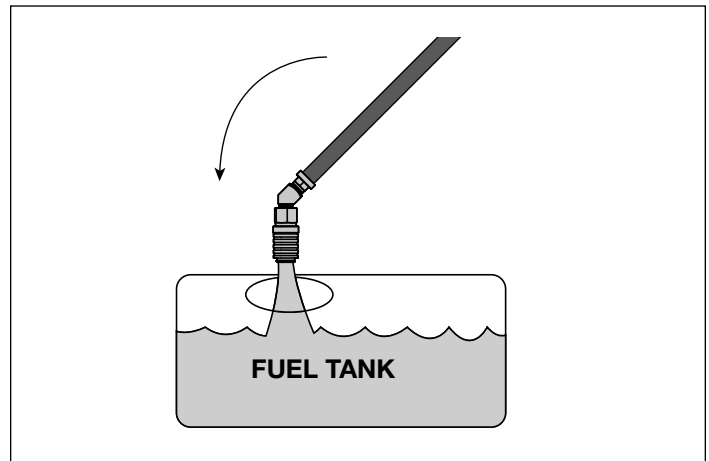
2. Disconnect the adapter hose from the engine fitting.



3. Turn 90° (before disconnecting the adapter hose from the pressure hose). With the adapter hose pointing downward and the pressure hose held up, disconnect the adapter hose.

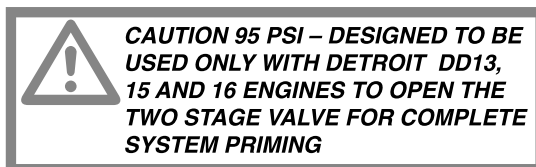


4. Hold the hose vertically. Pour the retained fuel into a fuel tank or other suitable container.








95/50 Regulator Settings

- Use 95 PSI Setting for Priming after complete fuel system service on DD 13, 15 and 16 Engines only.

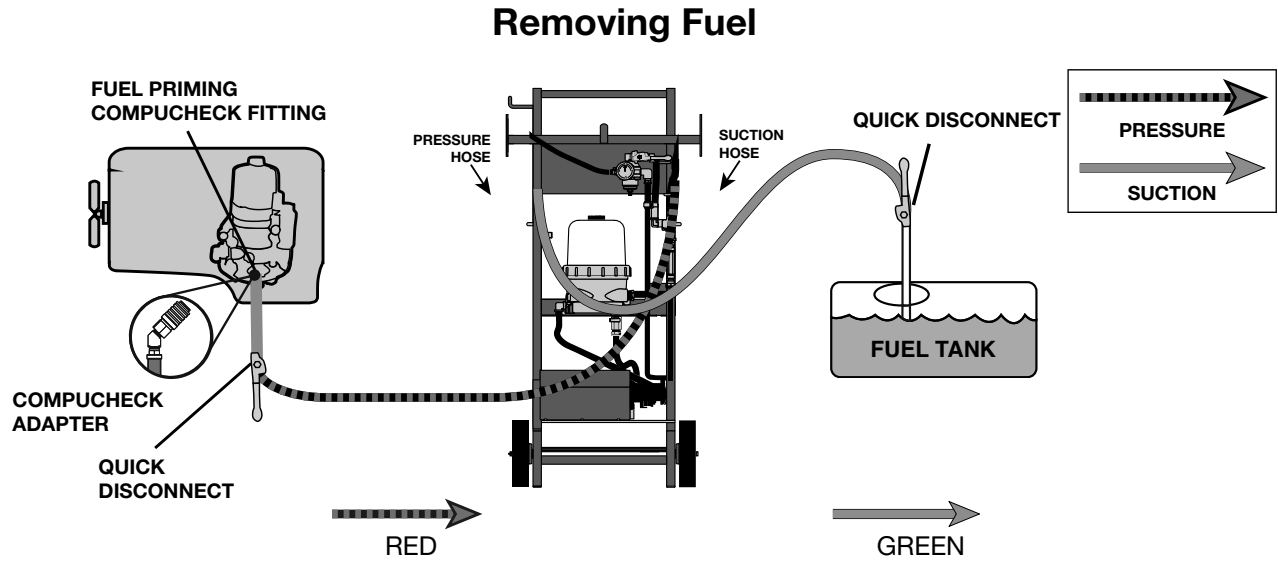


- Use 50 PSI Setting for all other uses and other engine applications.


HOSES AND ADAPTERS

HOSES				
HOSE COLOR	CONNECTION	USAGE	ADAPTER	PHOTO
Red	Quick Disconnect	Pressure side hose from Shop Pro	Dispensing wand Priming Voss adapter with red hose	
Green	Quick Disconnect	Suction Side hose from Shop Pro	Pick-up wand sweeping or fuel transfer, removing fuel Voss adapter with green hose	
ADAPTERS				
HOSE COLOR	CONNECTION	USAGE	HOSE	PHOTO
Blue	Compucheck	Engine fuel module compucheck fitting for priming engine fuel module.	Pressure hose (red)	
White tube	Quick Disconnect	Pick-up wand: Put in fuel tank or container	Suction hose (green)	
White tube	Quick Disconnect	Dispensing Wand: Tank sweeping or fuel transfer	Pressure hose (red)	

HOSE CONNECTIONS - REMOVING FUEL

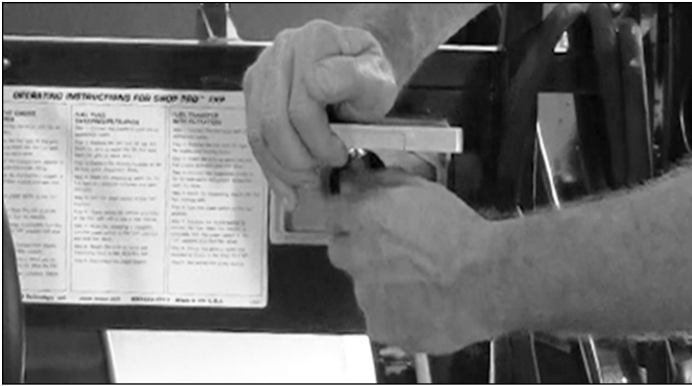


The filtered fuel flow through the Shop Pro is identified on the frame and at the end of each Shop Pro hose (RED) for pressure and GREEN for suction.

HOSE COLOR	USAGE	CONNECT TO	LOOKS LIKE
Blue	Engine fuel module compucHECK fitting	Pressure hose (red) for priming, suction hose (green) for removing fuel.	

REMOVING FUEL FROM THE FUEL MODULE

1. Connect the Shop Pro to a power source.



2. Attach the pick-up wand to the pressure hose (red) and insert it into the fuel tank. Open the ball valve. Attach the Compucheck adapter hose (blue) to the Shop Pro suction hose (green).
3. Connect to the Compucheck adapter to the Fuel Priming Compucheck fitting. Open the Shop Pro pressure hose ball valve.



4. Turn the Shop Pro ON and remove the fuel.

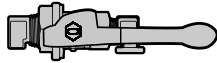


5. When fuel removal is complete, turn the Shop Pro OFF. Close the ball valve on the suction hose.
 6. Remove the Compucheck adapter from the engine fuel filter module.
- ⚠ **CAUTION – To Prevent Fuel Spillage:**
There will be residual fuel in the adapter hose when disconnecting from the Shop Pro hose. Hold the adapter hose downward before disconnecting from the Shop Pro hose.
7. Follow the instructions for filter changes in the Fuel Pro technical manual. Instructions for priming the engine fuel system on following pages.

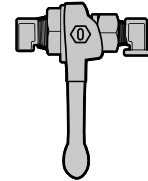
PRIMING THE FUEL MODULE WITH THE COMPUCHECK FITTING

Priming with Compucheck Adaptor

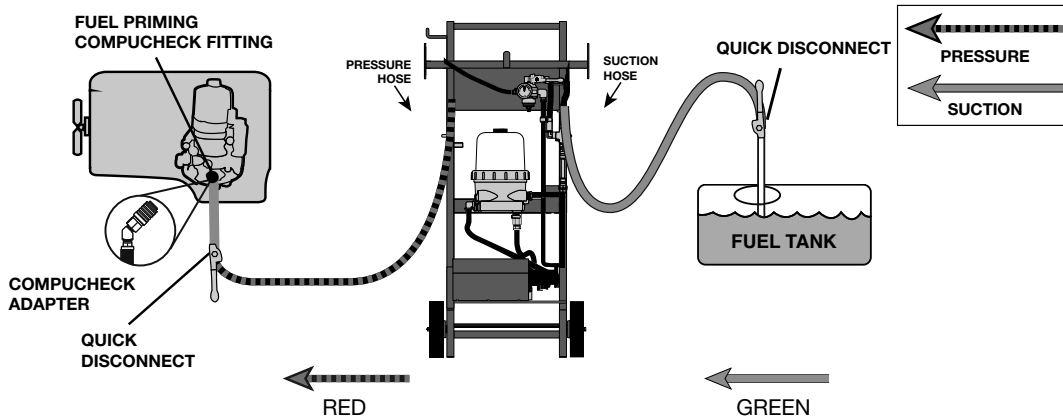
Use 50 PSI for filtering and diagnostics



Use 95 PSI for complete fuel system priming



CAUTION 95 PSI – DESIGNED TO BE USED ONLY WITH DETROIT DD13, 15 AND 16 ENGINES TO OPEN THE TWO-STAGE VALVE FOR COMPLETE FUEL SYSTEM PRIMING



The filtered fuel flow through the Shop Pro is identified by the color of the hoses. Shop Pro hoses with RED are pressure and GREEN are suction.

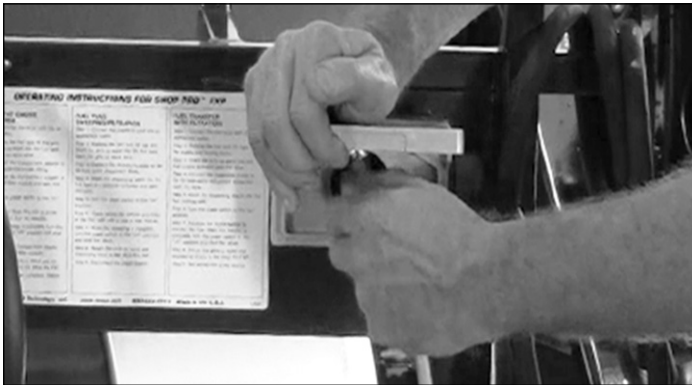
HOSE COLOR	USAGE	CONNECT TO	LOOKS LIKE
Blue	Engine fuel module compucheck fitting	Pressure hose (red) for priming, suction hose (green) for removing fuel.	

PRIMING THE FUEL MODULE WITH THE COMPUCHECK FITTING

Regulator Settings (SEE PREVIOUS PAGE)

- Use 95 PSI Setting for Priming after complete fuel system service on DD 13, 15 and 16 Engines only.
- Use 50 PSI Setting for all other uses and engine applications.

1. Connect the Shop Pro FXP to a power source.



2. Remove the fuel tank fill cap and insert the pick-up wand into the fuel tank. Open the pick-up wand ball valve.



3. Connect the priming hose to the pressure hose quick disconnect fitting.
4. Connect the Compucheck fitting to the priming port on the engine fuel module. Open the ball valve.
5. Turn the Shop Pro FXP ON.
6. Prime the fuel system for four (4) minutes.

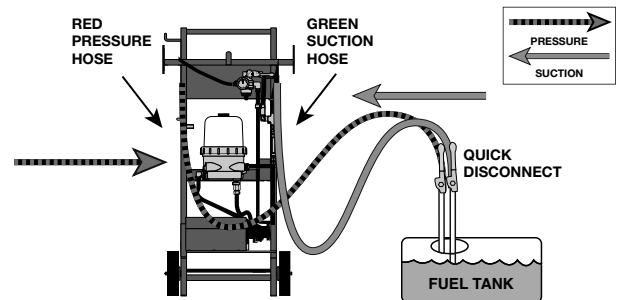


7. When priming is complete, turn the Shop Pro FXP OFF. Close the ball valve on the pressure hose.
 8. Remove the Compucheck adapter from the engine fuel filter module. Disconnect the priming hose.
- ⚠ CAUTION: TO PREVENT FUEL SPILLAGE**
There will be residual fuel in the priming hose when disconnecting from the Shop Pro hose. Hold the priming hose downward before disconnecting from the Shop Pro hose. Return the priming hose to the cart.
9. Return the priming hose to the cart.
 10. Remove the pick-up wand from the fuel tank. Allow the fuel to drain back into the tank before closing the ball valves. Return the wand to the cart.

TANK SWEEPING WITH FILTRATION

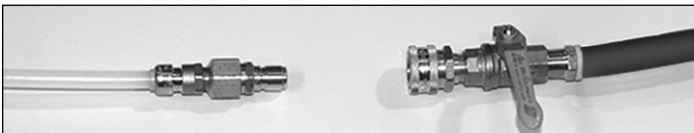
Overview:

The suction hose (green) is connected to the pick-up wand (longer white wand). The pressure hose (red) is connected to the dispensing wand (shorter white wand). The fuel is filtered as it is pumped from the tank and returned to the same tank. By moving the wand along the sides and bottom of the tank, particles, debris, 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.



⚠ CAUTION: If excessive water in fuel is being pumped through the Shop Pro, run it with fuel only for up to one minute before shutting off the Shop Pro to prevent gear corrosion.

1. Connect the Shop Pro FXP to a power source.
2. Attach the pick-up wand to the suction hose (green) and insert into the fuel tank. Open the pick-up wand ball valve.



3. Remove the fuel tank fill cap and insert the pick-up wand into the fuel tank. Open the pick-up wand ball valve.



4. Connect the dispensing wand to the pressure hose. Insert the dispensing wand into the fuel tank and open the ball valve.

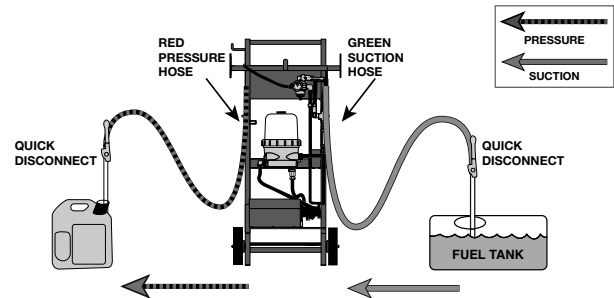


5. Turn the Shop Pro ON.
6. Slowly sweep the bottom and sides of the fuel tank with a side-to-side motion. Refer to the appearance of the fuel in the sight tube to determine when sweeping is complete. When sweeping is complete, turn OFF the Shop Pro.
7. Remove the wands from the fuel tank. Allow the fuel to drain back into the tank before closing the ball valves.
8. Return the wands to the cart.

FUEL TRANSFER WITH FILTRATION

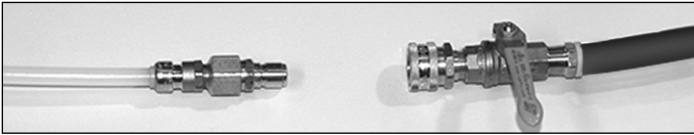
Overview:

The suction hose (green) is connected to the pick-up wand (longer white wand). The pressure hose (red) is connected to the dispensing wand. The fuel is filtered as it is pumped from the tank (or storage container) and into another tank (or storage container). Any debris, particles, or contaminants that have settled in the tank will be removed as the fuel is transferred between tanks.



⚠ CAUTION: If excessive water in fuel is being pumped through the Shop Pro, run it with fuel only for up to one minute before shutting off the Shop Pro to prevent gear corrosion.

1. Connect the Shop Pro to a power source.
2. Attach the pick-up wand to the suction hose (green) and insert into the fuel tank. Open the pick-up wand ball valve.






3. Attach the 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.

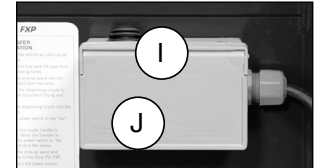
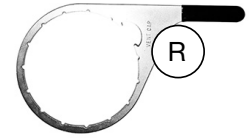


4. Turn the Shop Pro ON.
5. When the fuel transfer is complete, turn the Shop Pro OFF. Close the ball valve on the dispensing wand and return it to the cart.
6. Remove the pick-up wand from the fuel tank. Allow the fuel to drain back into the tank before closing the ball valves. Return the wand to the cart.
7. Return the wand to the cart.

SERVICE PARTS

ADAPTERS

A	CompuCheck Adapter (Blue)	782236S	
B	Pick-Up Wand (60" tube)	782114S	
C	Dispensing Wand (23" tube)	782133S	



CART

D	Plugs (10) 1" x 1" Sq	782196S
E	Gripper Clips & Screws	782213S
F	Motor Cover and (5) Screws	782126S-BLK
	Motor Fasteners (Not Shown)	782225S
	Petcocks (2) (Not Shown)	782197S
	Pump Bkt, Washers & Screws (Not Shown)	782230-BLK
G	Wheels (2), Pins & Washers	782194S

ELECTRICAL

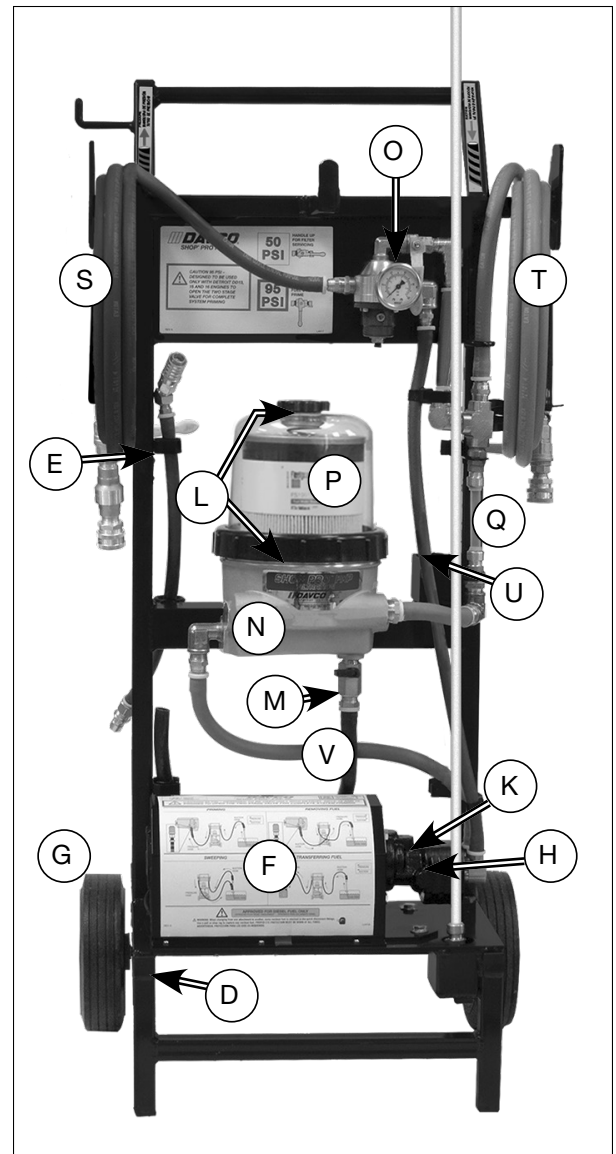
H	Coupler Asm	782058S
I	Electrical Box w/Switch	782061S
J	Electrical Switch	782215S
	Motor (Not Shown)	782251S
K	Pump	782227S

FUEL FILTRATION

L	Cover, Collar, Vent Cap and O-rings	782157S
M	Drain Valve	102008
N	Filtration Unit	782141S
O	Regulator Asm	782246-1S
P	Fuel Filter-Fleetguard	FS19915
Q	Sight Glass Kit	782149S
R	Wrench	482017

HOSES

S	Pressure Hose (red) 17 ft.	782134S
T	Suction Hose (green) 12 ft.	782117S
U	Hose Kit (Sight Glass, Sight Glass-Filter, Pump-Filter)	782212S,
V	Drain Hose	782144S



WARRANTY POLICY

Product Warranty

Diesel Pro® 243, Diesel Pro® 245, Fuel Pro® 382, Fuel Pro® 482, Fuel Pro® 483, Fuel Pro® 485, Fuel Pro® 486, Fuel Pro® 487, Industrial Pro®, Shop Pro®, Pro-Chek®, Sea Pro®

Please review DAVCO's Product Warranty terms and conditions carefully before installing and/or using a DAVCO product. By installing and/or using the product, you agree to be bound by the following:

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*. The Shop Pro motor has a one-year warranty from the purchase date.

REN Products, EyeMax®, Electronic Gauges, Electronic Dipsticks 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.

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 contaminated 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. 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.

PARTS RETURN POLICY

Parts Return General Policy

Note: 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.

