



# DFCC

Portable Diesel Fuel Conditioning Cart



ENGINEERING YOUR SUCCESS.

# DFCC

## Portable Diesel Fuel Conditioning Cart

Practical and economical maintenance tool.

Parker's comprehensive asset health management approach extends well beyond traditional methods and brings focus to long term fuel system performance and reliability. Pre-filtration of diesel and biodiesel fuels is critical in maintaining today's fuel injection systems and extending system component life.

Tight tolerances and higher system pressures require significant improvement in fuel cleanliness and quality. The Parker Diesel Fuel Conditioning Cart delivers on the promise of high efficiency removal of harmful contaminants that impact injector life and compromise engine performance. Like most fuels, diesel requires filtration prior to use and after long periods of storage.

The use of the Parker Diesel Fuel Conditioning Cart is a practical and economical maintenance tool that contributes to optimum engine performance, regardless of application.



**Designed for Diesel and Biodiesel blended fuels only. Do not use with Gasoline.**

Features	Advantages	Benefits
10 & 25 micron elements available	Meets cleanliness standards	Extends component life and improves system performance
Heavy duty frame	Rugged and durable	Built to last
Lightweight and portable	Easy to move from place-to-place	One operator
Eleven-foot hose and wand assemblies included	Additional hardware not necessary	Ready to use as received
Parker's E-Z FORM™ MP Series 7219 kink-resistant nitrile hose	Low pressure suction/return hose and vehicle fuel fill connector line	Specifically made for diesel
FBO-14 fuel filter	Does not require any tools for filter change outs	Polishes fuel
Parker H series gear pump	Fixed displacement loaded gear pump which has a high tolerance to system contamination	Long life
Narrow design	Better maneuverability	Exceptional movement through tight spaces, narrow aisles, and smaller overall footprint
Ergonomic frame design	Improved handle height and center of gravity for most average users	Decreased force needed for tipping into moving position, improved handle height for comfort and decreased strain on neck, back, and shoulders
10 inch wheels	Larger 10 inch wheels	Increased mobility and handling in various terrains
Removable drip tray	Drip tray now removable	Ability to easily dispose of any excess oil in drip pan by disconnecting it from the frame

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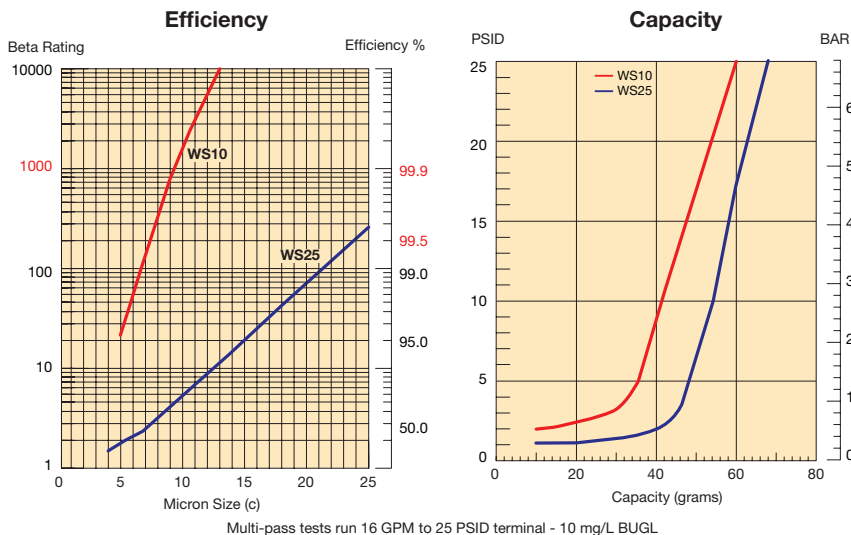
## Specifications

<b>Maximum Recommended Fluid Viscosity</b>	Diesel – 200 SUS (44 cSt); 0.85 specific gravity
<b>Flow Rate</b>	16 gpm (60.5 lpm)
<b>Visual Indicator</b>	15 psid (1.03 bar) visual differential
<b>Operating Temperature</b>	17.5°F to +150°F (-8.1°C to +66°C)
<b>Electrical Service Required</b>	110/220 volts, 60 Hz, single phase, 8.0/4.2 amp
<b>Electrical Motor</b>	¾ hp @ 3500 rpm, TEFC
<b>Recommended Fluids</b>	Diesel fuels
<b>Construction</b>	Cart frame – Steel Filter head – Die Cast Filter bowl – Steel Hoses – Nitrile Wands - PVC
<b>Weight</b>	115 lbs. (52.2 kg)
<b>Dimensions</b>	Height: 43 in (1092 mm) Width: 21 in (533 mm) Depth: 21 in (533 mm)

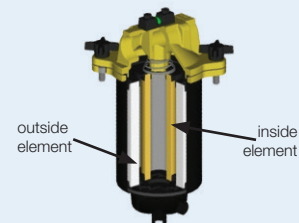
## Element Performance

New Tier 4 Diesel Engines require finer filtration and better performance

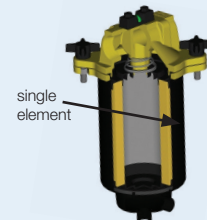
Typical engine fuel contamination levels, established in 1998 by Worldwide Fuel Charter Committee, required cleanliness of 18/16/13 per ISO 4406. Due to technology advances in High Pressure Common Rail injection systems, the new engines manufactured today require cleanliness levels as low as [12/9/6 or better](#). Injector pressures are exceeding 30,000 psi (2,068 bar) and smaller nozzle openings are driving the requirements.



## Element Choices



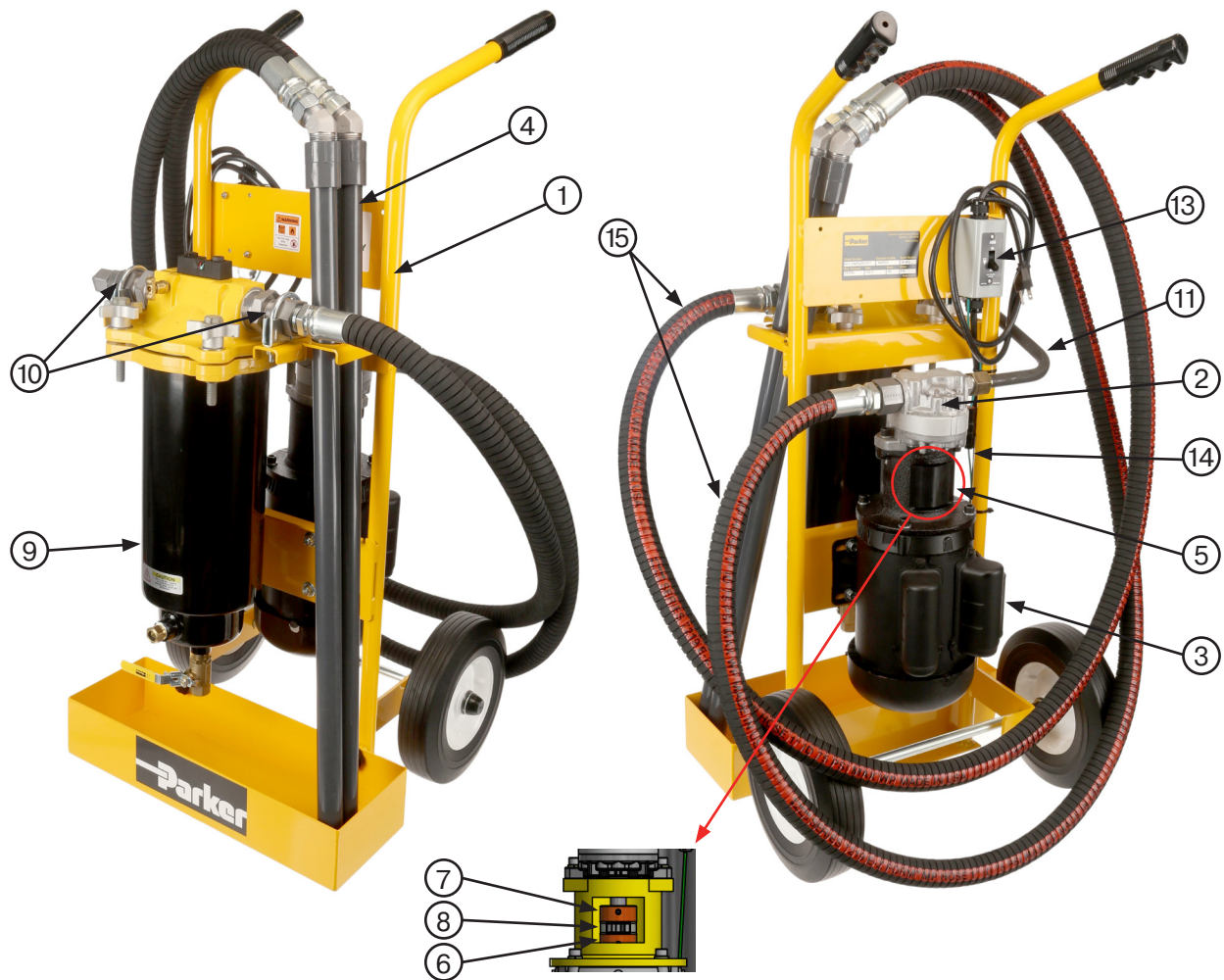
**WS** - Water separator elements are critical when there is a need to remove both particulate and water contamination from fuels. Testing has shown the WS 25 micron element is capable of achieving >99.5% single pass particulate removal efficiency.



**ST** - Silicone treated elements are ideal for removing particulate contaminants like dust, dirt, rust, sand, scale etc. from fuels.

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## Replacement Parts



### Parts List

#	Part Number	Description	Qty.	#	Part Number	Description	Qty.
1	947742	Frame assembly	1	9	945513	Filter housing FBO-14	1
2	943389	H49 gear pump H49AAIAV	1	10	947744	U Bolt 5/16-18 thread	2
3	947822	3/4 HP motor	1	11	947657	Tube assembly	1
4	928784	PVC wand assembly	2	12	947823	Heater element (not shown)	1
5	947561	Pump adapter	1	13	947319	Manual motor starter	1
6	943087	Coupling Lovejoy L075.625	1	14	CF	Deutsch connector assembly ground wire	1
7	943088	Coupling Lovejoy L075.750	1	15	945582	Hose assembly E-Z Form series 7219	2
8	943133	Spider nitrile L075	1				

CF - Consult Factory

# Diesel Fuel Conditioning Cart

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Do not use with Gasoline.

## Assembly & Operation

### Assembly

1. Install hoses to filter by threading the hose end with the straight thread o-ring seal fitting into the pump inlet and filter outlet ports.
2. Connect the PVC tube wands to the swivel fitting on the hose end. When servicing the PVC tube wand, do not over-torque the metal fittings going into the PVC coupling. Over-torque will result in cracking the coupling. Generally, 1/4 turn beyond hand-tight is sufficient.

### Operating Instructions

1. Insert the inlet wand assembly into the supply fluid receptacle (drum/reservoir).
2. Insert the outlet wand assembly into the clean fluid receptacle (drum/reservoir).
3. Verify that the ON/OFF switch is OFF and plug the cord into the proper grounded power source (3 wire).
4. Turn switch to ON position and check outlet wand for fuel flow. Allow 30 to 60 seconds for filter to fill with fuel. If repeated attempts to obtain fuel flow fail, check pump inlet fittings for tightness, remove bowl and verify the cover sealing o-ring is in place. It may be necessary to pour 1 or 2 quarts of fluid in to prime pump initially.

5. The condition of the filter element should be monitored by observing the cleanliness indicator on the top of filter. When the indicator is in the CHANGE position filter element **MUST** be replaced.

**Warning:** Do not restrict the outlet hose with a shut-off valve, causing excessive pressure, which may be harmful to personnel or to the filter cart.

6. The 15 psid cleanliness indicator responds to differential pressure changes and will indicate the condition of the element.

**NOTE:** The filter cart must be in operation for the indicator to read properly.

### Maintenance Instructions

1. Turn switch to OFF position and unplug cord from electrical outlet.
2. Disconnect Deutsch ground wire from bowl. (See #14 on Parts List)
3. Remove tube wands from fuel to prevent siphoning.
4. Open the vent valve on the head to allow the unit to thoroughly vent before loosening the four (4) head knobs.
5. Open the drain valve on the bottom of the housing to allow all fluid to drain from the unit.
6. Loosen the four (4) knobs attached to the head.

7. Remove the head gasket and discard.
8. Remove and discard the expended element.
9. Flush the interior of the housing with clean, processed, filtered fuel or solvent; Note: A non metallic bristle brush may help remove caked-on debris. Rinse the housing and head with a soft, lint-free cloth.
10. Lightly lubricate the new O-ring with Vaseline or petroleum jelly and position it on the head. If Vaseline is not available, lubricate gasket with clean fuel or clean oil.
11. Insert a new element into the housing. Position housing (with element) underneath filter head. Push/Twist element on to head spigot. The head conical spring will seat/seal the element into the housing.
12. Rotate housing onto the bolts. Hand tighten knobs until head is snug to the housing.
13. Reconnect Deutsch ground wire to bowl. (See #14 on Parts List)
14. Examine all connections and seals for leaks, shut down immediately if leaks are present. **NOTE:** Do not tighten head bolts if unit is pressurized, crack open vent valve to relieve pressure then address leaks.
15. Close the vent valve when a small amount of fluid starts to come out.

**CAUTION:** Refer to the SDSs of the filtered fluids for proper care and handling of the expended filter element and/or all internal parts that have been in contact with the filtered product.

## Troubleshooting

Problem	Cause	Solution
Does not start	ON/OFF switch	Turn switch ON, replace switch if defective
	No electrical power	Plug in cart
	Motor overload	Replace heater element
	Defective motor	Replace
No fuel flow or erratic pump noise	Filter housing not filled with fuel	Allow pump to run 30 to 60 seconds
	Suction leak	Check tightness of inlet fittings Check for kink or restriction in inlet hose Add 1 or 2 quarts of fuel to inlet hose
	Defective pump	Replace pump
Indicator reads BYPASS	Element dirty	Replace element
Indicator does not seem to change	No element	Install element
		Check cart model number to verify correct element.



**WARNING:** This product can expose you to chemicals including, Formaldehyde, which is known to the State of California to cause cancer. For more information, go to: [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

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## Portable Diesel Fuel Conditioning Cart

### How to Order

Select the desired symbol (in the correct position) to construct a model code. Example:

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8
DFCC	14	WS	10	V	V	X	1

BOX 1: Filter Series	
Symbol	Description
DFCC	Standard Cart

BOX 2: Model Length	
Symbol	Description
14	Double

BOX 3: Media Code	
Symbol	Description
WS	Water Separator
ST <sup>1</sup>	Silicone Treated Particulate

BOX 4: Degree of Filtration	
Symbol	Description
10	10 micron
25	25 micron

BOX 5: Seals	
Symbol	Description
V*	Fluorocarbon (FKM)

\* E-Z Form™ MP 7219 Nitrile Hose

BOX 6: Indicator	
Symbol	Description
V	Differential Visual

BOX 7: Bypass	
Symbol	Description
X	No Bypass

BOX 8: Options	
Symbol	Description
1	None

Notes:

- When "ST" is selected, only "10" is available in Box 4

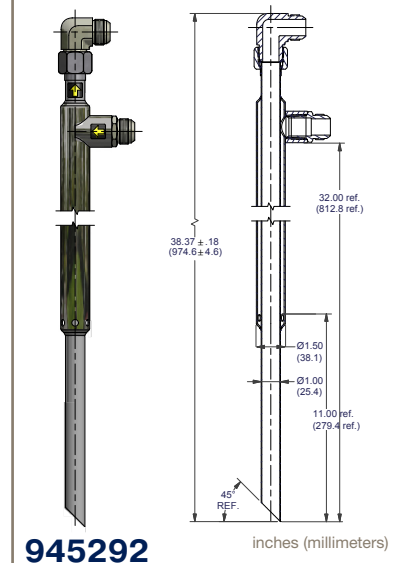
### Replacement Elements

Element	Micron Rating	Coalescer/ Separator	Silicone Treated/ Particulate
FBO-14	10	945517	945521
	25	945518	N/A

### Accessories

Part Number	Description
945292	Concentric Wand

### Single Point Suction & Return



**945292**

- 1" diameter suction tube
- Fits in openings 1.5 inches and larger
- 32" suction depth
- In-tank filtering
- One port access to the tank
- All steel construction

