



CUMMINS N-14 Pump Mount to Frame Filter Conversion

INSTALLATION MANUAL

For Trucks Equipped with
Cummins N-14 Engines



PLEASE READ
THESE INSTRUCTIONS
THOROUGHLY
BEFORE BEGINNING
INSTALLATION

Revised 08/23/18

Part No. PMFC-CUN14



Proudly Made in the USA

www.airdogdiesel.com

1-573-635-0555 or

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Providing "Test Cell Performance" in "Real World Conditions" Since 1993.

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The installation of your AirDog® can be made relatively easy by following the steps outlined in this manual, and:

1. Inventory the package components. Notify PureFlow® Technologies immediately if any parts are missing or damaged.
2. Read the installation manual completely. Understand the installation recommendations before beginning.
3. The installation recommendations and guidelines contained herein are suggestions only. Individual installations may vary.

SAFETY GUIDELINES

CAUTION: Chock the vehicle’s tire to prevent from rolling.

CAUTION: Wear safety glasses when operating power tools such as drills and grinders or when using a punch or chisel.

CAUTION: Route the fuel lines keeping them away from hot exhaust components and/or moving parts. Properly secure the fuel lines to prevent chaffing.








**If you are uncertain of any installation procedure, contact:
 PureFlow® Technologies, Inc. for technical assistance.**

Field Serviceable Hose End Assembly Instructions:

1. Lubricate insert threads and I.D. of hose.
2. Screw hose into socket (left-hand thread) until hose bottoms.
 Back out 1/4 turn.
3. Screw insert into socket until insert touches socket.



Section 2: Conversion Kit Parts List

1	Installation Manual	206-1-0504K	
1	#10 - M JIC x 1/2" M ORB - Modified	4A-1-02-10-08-S-.5M	
2	#10 - 90° F Swivel x Fuel Line End	4A-2-13-10-10-S	
2	#10 - F Swivel x Straight Fuel Line End	4A-1-13-10-10-S	
2	Socket Head Cap Screws 1/4 -20x3" 1/4" Lock Washer PN: 908-02-0200-HDWR	1L-A48C 1R-9-AC	
1	9 ft Section #10 Steel Braid Reinforced Fuel Line	4C-1-10-10-9FT	
1	Pulse Dampener with O-ring Kit PN: 908-002-4G-0008	002-4G-0008 4G-2-00001	

Section 2: AirDog® Pump Mount Fuel Filter Conversion

Primary Fuel Filters: It is most important that there are no fuel filters between the AirDog® and the engine's transfer pump that could plug and cause restriction.



Figure 1

FROM THIS

TO

THIS

Section 3: Conversion Procedure
Pump Mount Primary Fuel Filter Conversion, cont'd

Before connecting the AirDog® to your Cummins N-14 transfer pump, the primary fuel filter assembly mounted on the transfer pump should be removed.

3-1. Remove the 4 socket head cap screws securing the filter head to the transfer pump. Remove the primary fuel filter head from the transfer pump. (Figure 2)

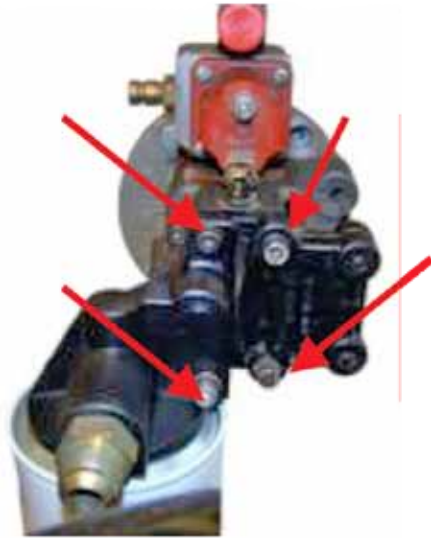


Figure 2



Figure 3

3-2. Install the two (2) 1/4-20x3" socket head cap screws and lock washers supplied in the kit. (Fig 3)

3-3. Install the Pulse Dampener using the longer 1/4-20 socket head cap screws and washers previously removed in step 3-1. Be careful to properly install the O-ring in the pulse dampener. (Fig 4)

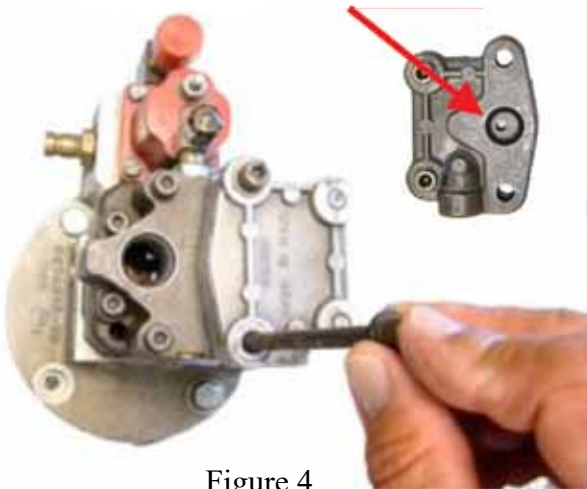


Figure 4

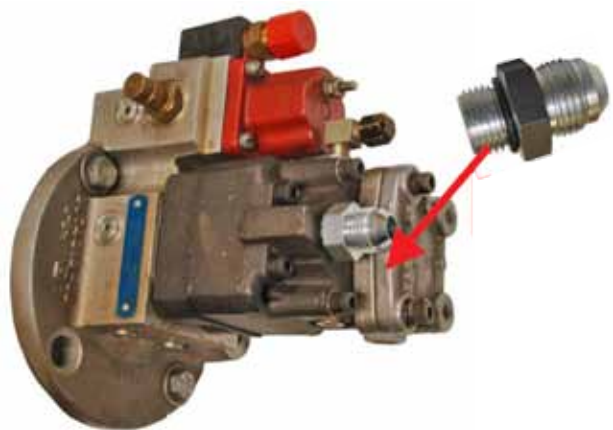


Figure 5

3-4. Install the #10 M JIC x 1/2" M ORB fuel fitting in the fuel inlet port on the transfer pump. Properly tighten the socket head cap screws and fuel inlet fitting.

Section 3: Conversion Procedure
Pump Mount Primary Fuel Filter Conversion, cont'd

3-5. Measure and cut a length of fuel line necessary to reach from the AirDog® out to “ENGINE” port to the fuel inlet fitting on the transfer pump.



Figure 6

NOTE: This assembled fuel line is for illustration only, use the proper end fittings that apply to you application.

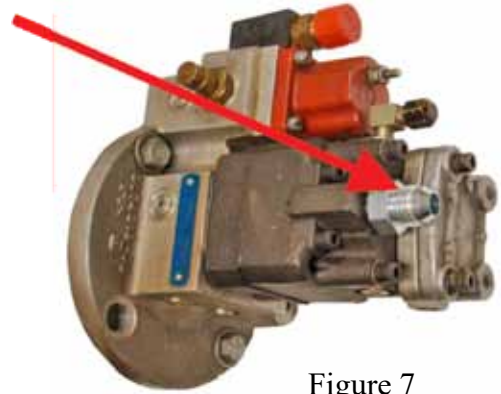


Figure 7

3-6. Assemble the fuel line with the proper end fittings.



Figure 8

3-7. Route and connect the fuel line to the proper fittings on the AirDog® and the engine transfer pump. Properly tighten the fittings. Secure the fuel line as necessary to prevent abrasion and chaffing.

NOTE: Use a 90° swivel fitting as necessary.



Figure 9

Connecting the AirDog® Fuel Supply Line to the ECM Cooler Plate.

3-8. Measure and cut a length of fuel line necessary to reach from the AirDog® “FUEL IN” port to the fuel outlet fitting on the ECM Cooler Plate.



Figure 10



Figure 11

3-9. Assemble the fuel line with the proper end fittings.

Pump Mount Primary Fuel Filter Conversion, cont'd

3-10. Route and connect the fuel line to the proper fittings on the AirDog® and the ECM Cooler Plate. Use a 90° swivel fitting as necessary.



3-11 Properly tighten the fittings. Secure the fuel line as necessary to prevent abrasion and chaffing.

VERY IMPORTANT: The N-14 ECM Cooler Plate has directional flow. There is a designated inlet and outlet port. Should the fuel lines be connected in reverse when installing the AirDog®, a flow issue may develop that will cause the Indicator Light to come on when backing off the throttle.

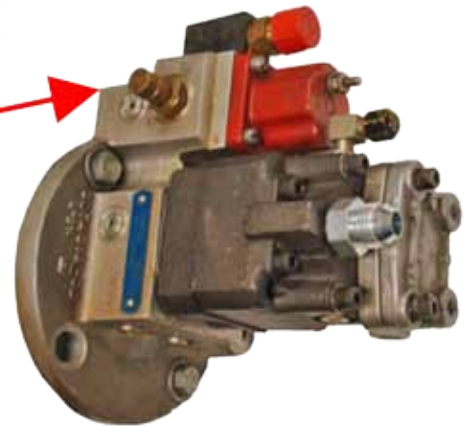
Should this happen, simply connect the fuel lines going in and out of the ECM Cooler to the correct port.

RECHECK ALL FUEL FITTINGS FOR LEAKAGE AND PROPERLY TORQUE. BE SURE ALL LINES ARE PROPERLY ROUTED TO PROTECT FROM EXCESSIVE HEAT AND SECURED TO PROTECT FROM CHAFFING AND ABRASION.

Check the fuel rail pressure! To ensure peak engine efficiency for maximum fuel economy, the fuel rail pressure must be within Cummins published specifications for the N-14 engine. For best performance, it is recommended to have the pressure closest to the maximum limit.

RPM	GPH	Fuel Rail Pressure
1,200	74.25	130-160
2,100	92.8	150-180

Connect pressure gauge here





www.airdogdiesel.com
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