



INDUSTRIAL Fuel Air Separation System

INSTALLATION MANUAL UNIVERSAL DIESEL ENGINE APPLICATIONS AIRDOG® FPII-150 AND FPII-200



**PLEASE READ
THESE INSTRUCTIONS
THOROUGHLY
BEFORE BEGINNING
INSTALLATION**



NOW WITH DEMAND FLOW

Revised 10/14/2022



Proudly Made in the USA

www.airdogdiesel.com
1-573-635-0555 or
1-877-463-4373

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

PATENT

www.AirDogDiesel.com/patents

AirDog[®] INDUSTRIAL Fuel Air Separation System

THE RIGHT CHOICE FOR YOUR DIESEL ENGINE

4G-HD Fuel Pump

Pump shaft, stabilized with bearings on each end, holds the gerotor in virtually perfect alignment for quiet running and extended longevity!

Bearings



Low Fuel Pressure Switch and LED Indicator

Lets you know when to service the fuel filter and water separator before suffering power loss.
NO MORE GUESSING!



Positive Air Separation with primary air discharge port.



Demand Flow System

Easy installation, only one small line connected to the engine return line to return air/vapor to the tank.



Protective Wire Screen

In water separator nipple.



LoveJoy Coupler System

The LoveJoy Coupler System is self-aligning and eliminates virtually all vibrations.



Dual Port Pump

Balances the gerotor for quiet operation and higher flows.



Adjustable Regulator

For just the right fuel pressure.

**6 Micron Particulate Filters
Long-Lasting MicroGlass Media**

**Water Separator/Prefilter Long
Long-Lasting Wire Mesh Media**

CARB Executive Orders D-595-5 & D-595U-6 permit the advertisement, sales and installation of PureFlow Technologies AirDog[®] Diesel Fuel Systems in California on 2020 and older model year on-road diesel vehicles and off-road diesel vehicles/equipment.

SYSTEM OVERVIEW

Welcome to the **AirDog® Heavy Duty Industrial**
Fuel Air Separation System for universal diesel engine applications

The AirDog®, with ADVANCED FUEL AIR SEPARATION, DEMAND FLOW, ADJUSTABLE REGULATOR, LOW PRESSURE SENSOR with LED INDICATOR and the 4G-HD FUEL PUMP, is a premium fuel filtration and delivery system for diesel engine applications.

Specifically, if the fuel pressure/flow to the injector, even with entrained air and vapor removed, is insufficient to totally fill the injector barrel on the up stroke of the plunger, a void or low pressure will form that allows vapor to re-form within the injector. The result, “injector lag”, is just another name for “delayed injection timing”. No matter what term is used, it leaves the engine with increased fuel consumption, lost power, and increased exhaust emissions.

All AirDog® products are manufactured with a personal touch, unsurpassed attention to detail and the most stringent quality assurance.

TYPICAL INSTALLATION LAYOUT



The AirDog® requires only one small return line connected to the engine return line, for quick and easy installations.

TABLE OF CONTENTS

| | |
|----------------|------------------------------------|
| Section 1..... | Table of Contents |
| Section 2..... | Installation and Safety Guidelines |
| Section 3..... | Parts List |

INSTALLATION PROCEDURES

| | |
|----------------|--------------------------------------|
| Section 4..... | Selecting the Best Mounting Location |
| Section 5..... | AirDog® & Mounting Brackets |

Fuel Lines, Fittings & Fuel Pressure Sensor

| | |
|-----------------|----------------------------------|
| Section 6A..... | Fittings & Pressure Sensor |
| Section 6B..... | Fuel Line from AirDog® to Engine |
| Section 6C..... | AirDog® Fuel Return to Tank |
| Section 6D..... | From Tank to AirDog® |

Wire Harness

| | |
|----------------|--------------|
| Section 7..... | Wire Harness |
|----------------|--------------|

| | |
|----------------|------------------|
| Section 8..... | Initial Start Up |
|----------------|------------------|

Maintenance

| | |
|----------------|----------------|
| Section 9..... | Filter Service |
|----------------|----------------|

PureFlow® Technologies, Inc.

AirDog® FPII-150 & FPII-200

UNIVERSAL DIESEL APPLICATIONS

Section 2

Installation & Safety Guidelines

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

1. Inventory the package components. Immediately notify PureFlow® Technologies, Inc., of any missing or damaged parts.
2. Read the installation manual completely. Understand how the system operates and the installation recommendations before beginning.
3. Proper location of the AirDog® on the vehicle is essential. Consider hazards presented to the equipment by road debris and the elements.
4. The installation recommendations and guidelines contained herein are suggestions only. Individual installations may vary.
5. Use diesel compatible thread sealer when installing fittings with NPT threads. (Loctite® 545 Thread Sealer is diesel compatible.)

DO NOT REMOVE FACTORY INSTALLED SECONDARY FUEL FILTERS. REMOVAL OF A FACTORY INSTALLED SECONDARY FUEL FILTER MAY VOID YOUR ENGINE WARRANTY.

SAFETY GUIDELINES

CAUTION: Chock the vehicle's tires to prevent rolling.

CAUTION: Disconnect the battery cables before proceeding with the AirDog® installation.

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

CAUTION: Do Not drill into or weld the top of the frame rail or within 1-½" of the frame rail flange on the side of the frame rail.

CAUTION: Route the fuel lines and electrical harnesses keeping them away from hot exhaust components and/or moving parts. Properly secure the fuel lines and electrical harnesses to prevent chafing using zip ties included in installation kit.

CAUTION: Do not subject the AirDog® system directly to high-pressure wash systems. Doing so may damage seals and electrical components, and such damage is NOT covered under warranty.

If you are uncertain of any installation procedure, please call PureFlow® Technologies, Inc. at 573-635-0555 for technical assistance.

NOTE: The pictures used in this manual are for example only and may not depict the exact components as found on your vehicle.

PLEASE NOTE: Due to the many variables in components and arrangement of those components in the different truck models, this kit contains only the mounting brackets, mounting hardware, wire harness and basic fuel fittings needed to install the AirDog® using existing fuel lines.

PureFlow® Technologies, Inc.





AirDog® FPII-150 & FPII-200

UNIVERSAL DIESEL APPLICATIONS



Section 3

Installation Parts List



Parts List

| QTY | Description | Part Number | Image |
|-----|---|------------------------------|---|
| 1 | Installation Manual | 206-1-0400 |  |
| 1 | AirDog® - with Serial Number Plate Fuel Filter FF200-MG-6 Water Separator WS200-WS | FPII-150 or 200 |  |
| 1 | Wire Harness w/ Indicator Light & Dash Plate Includes: 1 ea Indicator Light (5G-1-1-47674) 1 ea Dash Plate (201-3-0004-S-M716) | 5E-2-010 908-5G-1-1-47674 |  |
| 1 | 3/8" Low Pressure Hose (Air/Vapor Return Line) - 7 ft Section | 4C-1-02-05-010-7FT |  |







ADFK-400 Installation Kit

| | | | |
|----|-----------------------------|---|---|
| 1 | Fuel Pressure Sensor | 908-5C-9-007 <i>or</i> 908-5C-9-0010 |  |
| 15 | 12" Zip Ties | 5H-2-1-12 |  |







908-00-0304 Frame Mount Bracket Kit

| | | | |
|---|--|---|---|
| 1 | Left Mounting Bracket | 002-3C-0003 |  |
| 1 | Right Mounting Bracket | 002-3C-0004 | |
| 1 | 901-08-0100 Frame Mount Bracket Bolt Kit Includes: 4 ea 3/8-16 x 1-1/4 HHCS 4 ea 1/4-20 x 2 SHCS 908-08-0100-N Nut Packet 4 ea 3/8-16 Hex Nut & 4 ea 1/4-20 Hex Nut 908-08-0100-W Washer Packet 4 ea 3/8 Split Lock Washer & 4 ea 1/4 Split Lock Washer | 1J-1-C20SZ 1L-A32C <i>1S-1-CSZ & 1S-1-AC</i> <i>1R-6-CSZ & 1R-6-AC</i> |  |

908-08-0800-UNIV AirDog® FPII Basic Fitting Kit - Universal Applications

| | | | |
|---|--|-----------------|---|
| 2 | #10M JIC x 1/2 M NPTF Straight Connector | 4A-1-01-10-08-S |  |
| 2 | #10M JIC x #10F JICX 90° Swivel Nut Elbow | 4A-2-04-10-10-S |  |
| 2 | #8M JIC x 1/2 M NPTF Straight Connector | 4A-1-01-08-08-S |  |
| 2 | #8M JIC x #8F JICX 90° Swivel Nut Elbow | 4A-2-04-08-08-S |  |
| 1 | #6M JIC x 1/4 M NPTF Straight Connector | 4A-1-01-A-C-SZ |  |
| 1 | 3/8 ID, 7/8 OD Rubber Grommet | 5J-1-1-04-2758 |  |

908-01-0400-RLFK Return Line Fitting Kit

| | | | |
|---|--|------------------|---|
| 1 | #6M JIC x 1/4 M NPTF Straight Connector | 4A-1-01-A-C-SZ |  |
| 1 | #8M JIC x #8F JICX x 1/4 NPTF Port GagePort | 4A-1-11-08-08-4P |  |
| 2 | #6F JICX x 3/8 Push-lock Hose Barb | 4A-1-09-06-06-B |  |
| 1 | #6M JIC x #6F JICX 90° Street Elbow | 4A-2-04-06-06-S |  |
| 1 | 3/8-18 M NPTF x 3/8-18 F NPTF x 3/8-18 F NPTF Tee | 4A-4-01-06-S |  |
| 1 | #6M JIC x 3/8 M NPTF Straight Connector | 4A-1-02-06-06-S |  |

SBK-1000 Sandwich Bracket Kit

| | | | | |
|-----------------|---|---|--|---|
| OPTIONAL | 1 | Sandwich Mounting Bracket Kit for AirDog® & Champ Includes: 1 Front Bracket (002-3C-0010-SBF), 1 Back Bracket (002-3C-0011-SBB), & 1 Universal Bracket (002-3C-0006PCB) | 908-00-8888 |  |
| | 1 | 901-08-0100-SB Hardware Kit Includes: 4 ea 3/8-16 x 1 FHSCS 3 ea 3/8-16 x 3-1/2 HHCS 3 each 3/8-16 x 4-1/2 HHCS 7 ea 3/8-16 Hex Nut 7 ea 3/8 Split Lock Washer | 1M-C16SZ 1J-1-C56SZ 1J-1-C72SZ 1S-1-CSZ 1R-6-CSZ |  |

Selecting the Best Location to Mount the AirDog®

Installing the AirDog® at the proper location on the vehicle is most important. When deciding where to locate the AirDog®, the following points should be considered:

- Best relationship to the transfer pump and the original primary fuel filter location
- Protection from the elements and road debris
- Accessibility for service

CAUTION: Do NOT mount the AirDog® directly on the engine. Mounting the AirDog® directly on the engine will immediately VOID your AirDog® Warranty.

Pictures below show examples of different AirDog® installations. There are many variations in the arrangements of the components on the various trucks. With a little ingenuity, the AirDog® can be successfully installed on any universal diesel engine application.



This installation shows the AirDog® mounted under the steering column ahead of the shock absorber. Plenty of room here.

NOTE: Check for clearance with the tire turned both toward and away from the AirDog®.

Selecting the Best Mounting Location, cont'd



This picture finds space to mount the AirDog® on a bracket in the location of the original primary fuel filter.



This installation on a short nose "Day Cab" is on the driver's side, behind the battery box.



This picture shows how to find space to mount the AirDog® to the rear of the shock absorber.

OPTIONAL KIT AVAILABLE (PN: SBK-1000)

NO DRILL Universal Sandwich Mounting Bracket

Determine which holes in bracket 1 that you are going to need by holding it up to the frame of your vehicle.

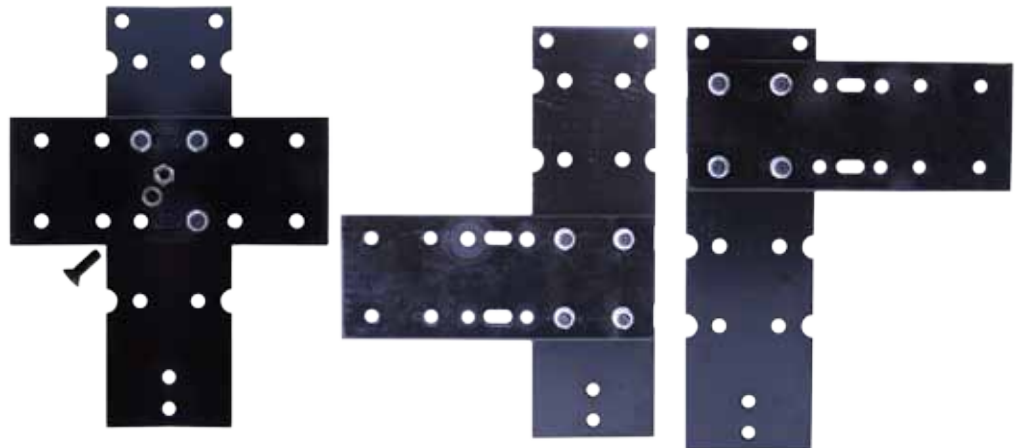
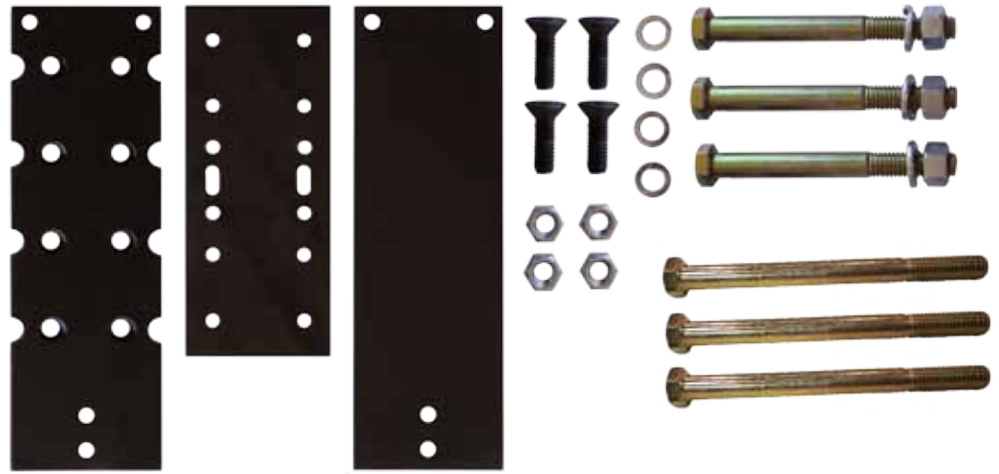
Use mounting hardware to mount bracket 1 to bracket 2. The position of bracket 2 can be adjusted vertically and horizontally to suit your particular needs.

Using product mounting hardware, mount product to brackets.

Install 2 of the frame bracket bolts in top of bracket 1 & bracket 3. Slide over frame and install bottom bolt.

Note: 3.5" and 4.5" bolts are included. Use the length best suited to your vehicle's frame width.

Tighten bolts as needed.
Install filter or filter and water separator as applicable.



Section 5

Mounting the AirDog®

Mounting the AirDog® on the Frame or Preferred Application

5-1. Disconnect the fuel lines and remove the primary fuel filter, if equipped.



5-2. Mount the AirDog® as close to the location of the primary fuel filter, if equipped, as possible. This will allow you, in most cases, to use the original fuel supply line from the fuel tank and also the fuel line to the engine.

5-3. Loosely assemble the mounting brackets and filters to the AirDog®.

5-4. Hold the AirDog®, with the brackets and filters attached, next to the frame at the selected mounting location. Check for clearance.



NOTE: If mounted between the frame and steer tire, turn the steering wheel fully to the left and right to check for tire clearance.

Intalling the AirDog® on the Frame, cont'd

5-5. Hold the AirDog® at the selected mounting location on the frame. Mark and center punch each hole location.



5-6. Drill a 3/8" hole at each of the 4 previously marked locations.

WARNING: DO NOT DRILL INTO OR DAMAGE ANY Wire, AIR LINES OR OTHER COMPONENTS LOCATED BEHIND THE FRAME RAIL.

5-7. Loosely assemble the mounting brackets to the frame.

5-8. Mount and loosely assemble the AirDog® on the brackets.



5-9. After mounting the AirDog® on the brackets, snug the fasteners to achieve a good relaxed fit.

5-10. Properly tighten all of the fasteners.

NOTE: These steps are necessary to prevent stress cracks from forming in the mounting brackets due to vibration.



Fuel Line Overview

The AirDog® has been engineered to eliminate fuel related problems. It is important that the fuel lines are assembled and installed properly so as not to cause fuel flow restriction.

When possible, use the fuel lines that are on the vehicle. This will reduce your installation costs and make the installation go much more quickly.

NOTE: On various class 8 trucks, the manufacturer may use “plastic” or other than traditional steel braid fuel lines. These lines require special fittings. The fittings used with the original primary fuel filter are specific to the fuel lines used on the truck. When possible, mount the AirDog® in the location that will allow the use of the original fuel lines and fittings.

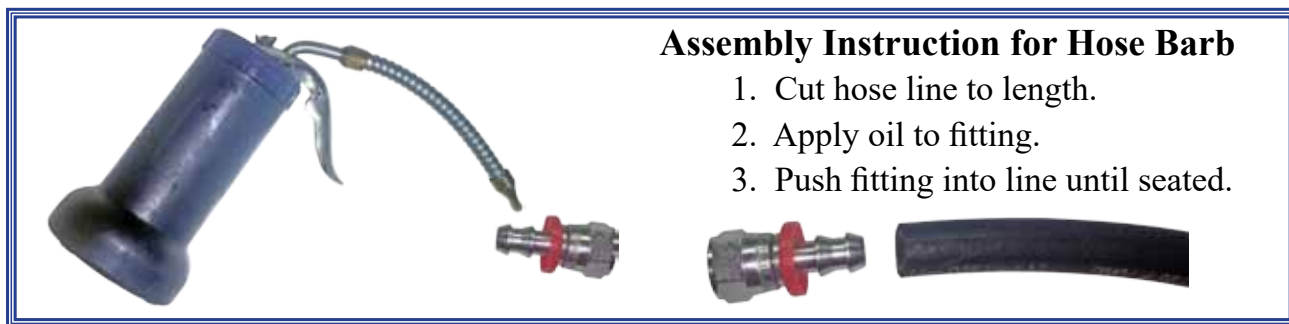
Inspect the original fuel lines for size, length, and condition. If the fuel lines are in good condition and the correct size and length to adequately reach the AirDog®, you may want to go ahead and use them. If any of the fuel lines need to be replaced, it is recommended that the fuel lines selected meet or exceed SAE 100R5 requirements.

Fuel Supply Line: The fuel supply lines from the tank to the AirDog® and to the engine should be size 10, or at the absolute minimum, size 8.

Air/Vapor Return Line: The AirDog® return line should be connected to the engine’s return line, low pressure side. A size 6 line for the Air/Vapor return line is adequate.

Primary Fuel Filters: It is most important that there are no fuel filters between the fuel tank and the AirDog® or between the AirDog® and the engine’s transfer pump to plug and cause fuel flow issues. These filters must be removed from the system as part of the AirDog® installation.

Secondary Fuel Filters: DO NOT REMOVE SECONDARY FUEL FILTERS. This is the filter between the transfer pump and the engine head.



Assembly Instruction for Hose Barb

1. Cut hose line to length.
2. Apply oil to fitting.
3. Push fitting into line until seated.

Installing the Fuel Fittings and Pressure Sensor

IMPORTANT: Use diesel compatible thread sealer when installing NPT fittings.

NOTE: Pictures below illustrate the installation of straight fittings - #8 JIC and #10 JIC fittings have been included - you will use one or the other based on your fuel line size. In some instances, 90° fittings may be required to connect the fuel lines to the AirDog®. Therefore, 90° fittings have also been included in the kit.



6A-1. Install the straight #10 (or #8) JIC x 1/2" NPT fuel fitting in the AirDog® fuel port marked "ENGINE".

6A-2. Install a straight #10 (or #8) JIC x 1/2" NPT fuel fitting into the fuel inlet port next to the regulator.



6A-3. Install the 1/4" NPT x #6 JIC Male Air/Vapor return fitting into the Air/Vapor return port marked "TANK".

6A-4. Remove the 1/8" NPT plug in the 45° elbow. Install the pressure sensor into the elbow.

Section 6B: Connecting the AirDog® Pressure Line to the Transfer Pump on the Engine

6B-1. Connect the original fuel line from the primary fuel filter outlet to the transfer pump (Step 5-1) to the AirDog® out to "Engine" port. If the fuel line is not in good condition or the proper length to make the connection, replace it with a new fuel line.



Note: This engine does not have a secondary fuel filter.



Connecting the AirDog® Fuel Line to the Transfer Pump on the Engine, cont'd

6B-2. When replacing the fuel line connecting the AirDog® to the engine transfer pump, measure and cut the length of fuel line required, when properly routed, to make the connection. Assemble the fuel line per standard procedures.

6B-3. Connect one end of the fuel line to the AirDog® port marked “ENGINE”.



**Install a 90° fitting
as needed**



**Detroit Diesel Series 60®
fuel transfer pump fuel inlet**

6B-4. Route the new fuel line from the AirDog® to the transfer pump. Connect the fuel line to the transfer pump fuel inlet fitting. Properly tighten the fittings. Secure the fuel line with zip ties as necessary to prevent abrasion and chaffing.

Section 6C: Installing the AirDog® Return Line

The AirDog® returns entrained air & vapor to the fuel tank. It is best to connect the AirDog® Air/Vapor return line directly to the engine fuel return line. Be sure to connect it after the pressure regulator.

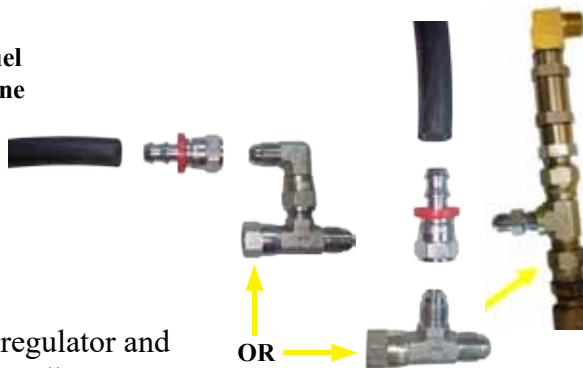
NOTE: It is recommended to use a #6 size line for the Air/Vapor return.

Connecting the AirDog® Air/Vapor Return to the Engine Fuel Return Line

6C-1. Disconnect the fuel return line connected to the Rail Pressure Regulator at the back of the head, if equipped.



**Engine Fuel
Return Line**



6C-2. Insert a “T” between the engine rail pressure regulator and the return line to connect the AirDog® Air/Vapor return line.

NOTE: Some class 8 trucks may have a cab with a short hood. This style of truck will have the engine recessed into the firewall making the return fuel fitting on the back of the head difficult to reach. If the truck you are installing the AirDog® on has this style cab, it may be easiest to connect the AirDog® Air/Vapor return line directly before the splitter “Tee” if equipped.

NOTE: For the return to tank connections, a 3/8" NPT Tee (PN 4A-4-01-06-S) and #6 M JIC x 3/8" M NPT Adapter (PN 4A-1-02-06-06-S) have been included in this kit, and are adaptable to most applications. As an example, the picture below shows the 3/8" NPT Tee used to Tee the AirDog return with the engine fuel return connected to a port on top of the fuel tank. Additional or replacement fittings may be required to adapt to your specific application.



Installing the AirDog® Return Line, cont'd

For trucks with only one fuel tank, it may be easiest to connect the AirDog® return line directly to the fuel tank. The fuel return line supplied in the installation kit is only long enough to connect the AirDog® return to the engine return at the back of the head. Longer fuel lines, if needed, can be purchased from your local parts supplier.

6C-3. If the fuel tank has an extra port, remove the plug.



6C-4. Install a 1/4" NPT x #6 JIC fitting into the port. Use bushing if necessary (not included).



6C-5. To install the Air/Vapor return line in a tank with no extra port, simply install a "Tee" fitting in the engine return line at the fuel tank.

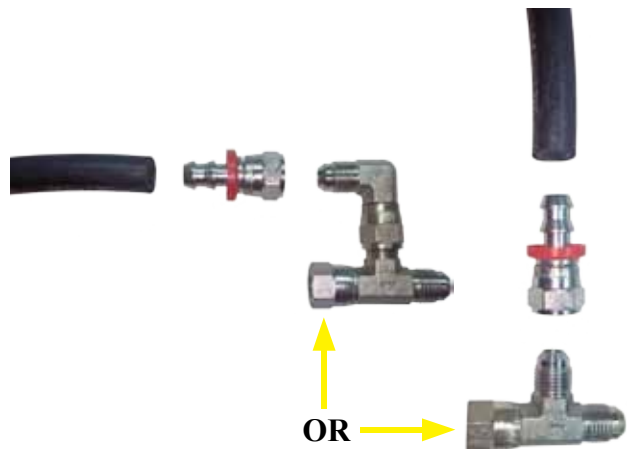


6C-6. The filter assembly has return fuel from the engine running through it to heat the incoming fuel. When removing this filter, re-connect the return line, from the engine to the return line to the tank with a "Tee". Connect the AirDog® return line to the "Tee".

6C-7. Measure and cut the length of fuel line required, when properly routed, to connect the AirDog® "Return Line" to the new fitting in the fuel tank or the "Tee".



AirDog®
Air/Vapor Return Port



6C-8. Assemble the fuel line per standard procedures for push lock fittings.

6C-9. Connect one end to the AirDog® return fitting and the other end to the fitting in the fuel tank or the "Tee" as appropriate.

Connecting the AirDog® Fuel Supply Line to the Fuel Tank

6D-1. Inspect the fuel supply lines that connect the fuel tank(s) to the primary fuel filter for size, length, and condition. If a fuel line has deteriorated or if it is too short to connect to the AirDog®, replace it or make an extension as necessary.

6D-2. If it is necessary to replace the fuel line, measure and cut the length of fuel line required when properly routed and secured, to make the connection. Assemble the fuel line per standard procedures.

6D-3. Route the fuel supply line from the fuel tank to the fitting on the AirDog® fuel inlet port marked “FUEL IN”.



6D-4. Connect the fuel supply line from the fuel tank to the fitting. Secure the line with zip ties to prevent chafing and abrasion.

WIRE HARNESS

***VERY IMPORTANT: The AirDog® wire harness requires a 15 amp fuse.**

The AirDog® wire harness has a low pressure sensor and an amber LED indicator light as standard equipment. The indicator light will illuminate at start-up, remain on for a few seconds, then go off and should remain off unless pressure flow to the engine drops below minimum requirements.

THE AIRDOG® WIRE HARNESS



Securing the AirDog® Wire Harness Relay to the Vehicle

8-1. Secure the AirDog® wire harness relay to the vehicle. This picture shows the relay mounted on the firewall.



8-2. Route the AirDog® wire harness pump motor lead and the fuel pressure sensor lead to the AirDog® unit. Connect the wire harness pump motor lead (labeled “Attach to Motor”) to the AirDog® unit pump motor lead.



8-3. Connect the AirDog® wire harness fuel pressure sensor lead to the AirDog® unit fuel pressure sensor.

Relay Trigger Lead and Indicator Light Lead

The indicator light lead must be routed through the firewall and to the dash board. The relay trigger lead must be connected to a contact point that is electrically “HOT” when the key is in the “RUN” position. This could be either in a spare fuse holder in the fuse panel or on the ignition switch itself.

NOTE: DO NOT connect the relay trigger lead to a point that is “HOT” when the key is in the **ACCESSORY** position.

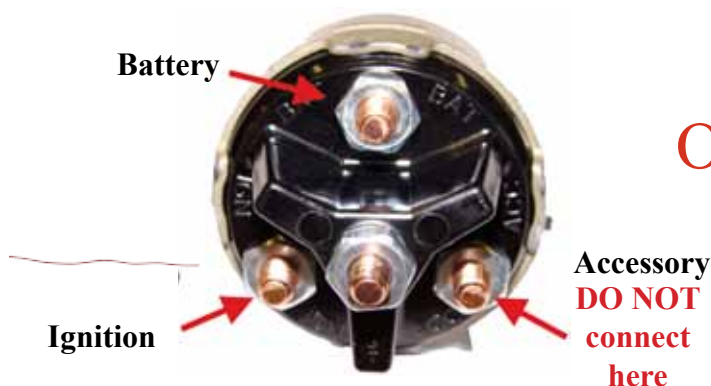
Routing the Indicator Light and Relay Trigger lead through the firewall:



7-4. If an access hole is available, remove the plug and route the lead through the hole. If no access hole is available, select the best location and drill a 5/8” hole in the firewall to allow entry of the relay trigger lead and indicator light into the cab.

7-5. Route the relay trigger lead (red) and indicator light lead through the firewall. Be sure to seal the opening or install a grommet around the wire loom to prevent water leakage and protect it from chafing.

7-6. Connect the red relay trigger lead to a terminal on the ignition switch that is “Hot” when the ignition key is in the “RUN” position **OR** connect the red relay trigger lead to a fuse holder in the fuse panel that is “HOT” when the ignition key is in the “RUN” position.



OR



Section 7

Wire Harness

7-7. Select a location on the dashboard that is easily visible to the driver.



7-8. Remove the dash components as necessary to access the area behind the selected location.

7-9. Drill a 7/16" hole in the dash at the selected location. Be very careful when drilling. Do not damage components located behind the dash. Remove the nut from the indicator light.



7-10. Install the dash plate and indicator light in the dash. Reinstall nut and tighten until snug. *Note-to adhere plate to dash, you may peel off the paper backing from the backside of the plate to expose adhesive. Connect the positive (orange wire) lead on the wire harness to the positive (marked orange) quick connect terminal on the indicator light (see image above). Then connect the negative (blue wire) lead on the wire harness to the negative (unmarked) quick connect terminal on the indicator light.

7-11. Re-install the removed dash components to their original position.

Connecting the Power Supply Leads

The power supply leads can be easily connected to the appropriate contacts on the alternator. However, any high amperage terminal that is always "HOT" is OK for the Positive + (RED) lead. Be sure the NEGATIVE — (GREEN) lead is connected to a reliable chassis ground.

7-12. Route the red and green power supply leads to the alternator. Connect the Green (-) ground lead to the alternator **Ground** connection.



7-13. Connect the Red (+) positive lead to the alternator **Hot Lead** going to the battery.

NOTE: Secure wire harness with zip ties included in installation kit.

SECTION 8: INITIAL START UP PROCEDURE

The AirDog® is a self priming system. However, to prevent damage to a dry seal and reduce the life expectancy of the system, it is suggested to pre-fill the water separator/pre-filter with diesel fuel to the bottom of the “NUT PLATE”.

- ☐ 8-1. Rub CLEAN diesel fuel or oil on filter seals before installing to ensure a proper seal.
- ☐ 8-2. Pre-fill the water separator/pre-filter with diesel fuel up to the bottom of the nut plate.
- ☐ 8-3. Turn the starter key to the on/run position.
- ☐ 8-4. The AirDog® should now be running and pumping fuel, bleed the fuel line to the engine by loosening the fuel line connection at the engine fitting. As soon as the line is purged of air and pure fuel is observed, properly tighten the fuel fitting.

NOTE: Put a rag or shop towel over and around the fitting to prevent fuel splatter or spray. Catch all spilled fuel and dispose of properly. Wear safety glasses.

- ☐ 8-5. Start the engine.

RECHECK ALL FUEL FITTINGS FOR LEAKAGE AND PROPER TORQUE. BE SURE ALL FUEL LINES ARE PROPERLY ROUTED TO PROTECT FROM EXCESSIVE HEAT AND SECURED TO PROTECT FROM CHAFING AND ABRASION. RECHECK ALL ELECTRICAL LINES, SECURE AS NECESSARY.

Servicing the AirDog® Fuel Filter and Water Separator/Pre-Filter

The AirDog® low pressure sensor monitors the fuel filter and water separator.

FUEL FILTER: When the fuel filter becomes plugged, the AirDog® Indicator Light will illuminate, indicating it is time for a fuel filter replacement. The AirDog® fuel filters have a typical lifespan of 25,000+ miles, and up to 40,000 miles, as they are made with a high-quality and high-capacity Micro-glass media, as opposed to a paper element, and filter life is affected by many variables. In any case, we do not recommend exceeding 40,000 miles of service with a fuel filter. It is recommended that you keep a replacement AirDog® fuel filter on-hand, ready for replacement when the AirDog® Indicator Light illuminates. When replacing the fuel filter, be sure to clean the under side of the AirDog® base. Rub clean diesel fuel or oil on filter seals before installing to ensure a proper seal. It is not necessary to pre-fill the fuel filter with fuel, the AirDog® will fill the filter and prime the system automatically. Follow the instructions on the filter for proper tightening procedures.



The Water Separator/Pre-Filter

WATER SEPARATOR: Should the water separator/pre-filter or the wire screen in the nipple become plugged, preventing sufficient operating pressure flow to the engine, the Indicator Light will immediately illuminate.

Check the water separator/pre-filter for plugging. Clean or replace as necessary. If the light continues to be on, check the screen in the water separator/pre-filter nipple for debris and plugging. Clean as necessary.

Replace the water separator if it becomes damaged or permanently plugged. Servicing of the water separator simply requires draining at regular intervals. It is suggested to check/drain the water separator weekly or as needed should you experience excessive 'water in fuel' conditions. Before re-installing the water separator after cleaning, be sure to clean the under side of the AirDog® base. Rub clean diesel fuel or oil on filter seals before installing to ensure a proper seal. Follow the instructions printed on the water separator/pre-filter for proper tightening procedures.

When tightening filters with a filter wrench, DO NOT overtighten as doing so may damage the filter.

Caution: Be careful to prevent any contaminants from entering the water separator when removing for cleaning or replacement. Although the water separator pre-filter nipple has a protective wire screen, any debris passing through the system could cause the gerotor to lock up, which can then cause the in-line fuse to blow. Such a pump lock-up is not covered under warranty.

Dispose of waste fuel and used filters properly to protect our environment.

[illegible]



www.airdogdiesel.com
1-877-463-4373 or
1-573-635-0555

Copyright© 2017
CD Patents, LLC

All Rights Reserved

Bulletin No. 206-1-0400
Revised Oct 14, 2022