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PN(s): 701-901-3368
701-900-3368
701-801-3368
701-800-3368

TWIN FUELER FUEL SYSTEM

Installation Manual v1.1

ATS Twin Fueler Fuel System
2011-2015 Ford 6.7L Power Stroke



ATS Diesel Performance, Inc
(800) 949-6002



PLEASE READ ALL INSTRUCTIONS BEFORE INSTALLING!

2011-2015 Ford 6.7L Twin Fueler Install Instructions

1. Disconnect negative battery terminals.
2. If dual alternator truck, drain coolant out of secondary cooling system (petcock on passenger side facing forward behind bumper. See fig 2.1 (If single alternator proceed to step 4)



Fig. 2.1

3. Disconnect 2nd alternator. Remove cable from truck.



Fig. 2.2

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4. Remove serpentine belt, rotate the belt tensioner clockwise.

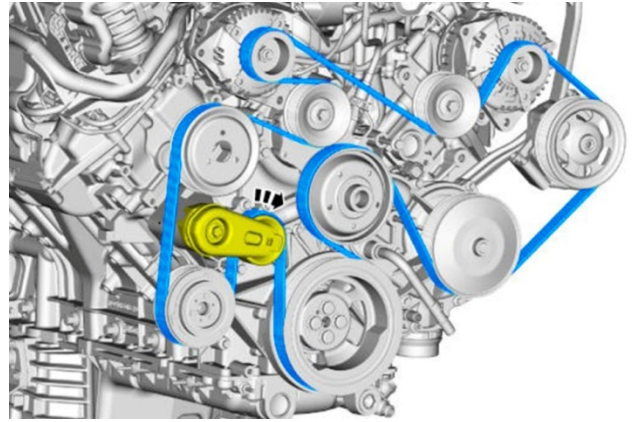


Fig 3.1

5. Remove 2nd alternator. (Single alternator skip to step 8.)



Fig. 3.2

6. Disconnect clips from upper and lower coolant hoses, remove fan shroud support. Remove nuts off of the top 2 shroud supports so shroud can flex to be able to remove the support bolt from the water pump. Once support is off remove the 4 bolts holding the water pump to the engine. Remove water pump



Fig. 3.2

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7. Install new supplied water pump. Torque to 18 lb.ft. Re-install factory coolant hoses, and shroud supports.

8. Remove the 2 ribbed factory idler pulleys

9. Remove harness retainer for cp3 injection pump to fit properly. Retainer is held on by 1 bolt and 3 zip ties

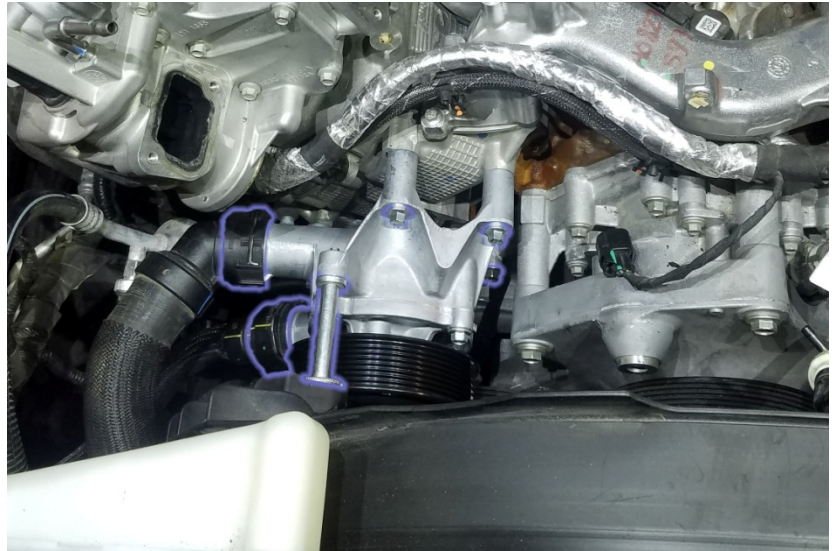


Fig. 4.1

10. Remove factory fuel rail plug with 10mm triple square. Some residual fuel will leak use paper towel to catch fuel



Fig 4.2

11. Install new supplied ATS fuel rail fitting. Torque to 54ft lbs

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12. On bench attach cp3 pump to bracket with 3 M8x1.75mm socket head cap screws with washers and flange nuts.. Leave loose



Fig. 5.1



Fig. 5.2

13. Remove 1 water pump bolt and 2 fan pulley bracket bolts and install cp3 pump and bracket into those 3 holes and tighten.



Fig 5.3

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14. Install High pressure fuel line. Tighten both sides.



Fig 6.1

15. Now tighten bolts to mount pump to bracket.
16. Install both ATS ribbed idler pulleys, one onto new cp3 pump bracket and other onto factory boss. (see fig. 6.2)



Fig 6.2

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17. Remove Factory fuel filter
 - a. Disconnect filter supply, cp4 supply and injector return. All have a different type of quick connect fitting, fig 7.1. Push clip through and squeeze tabs in inside
 - b. Twist filter counter clockwise about 90 degrees to remove, fig. 7.2.

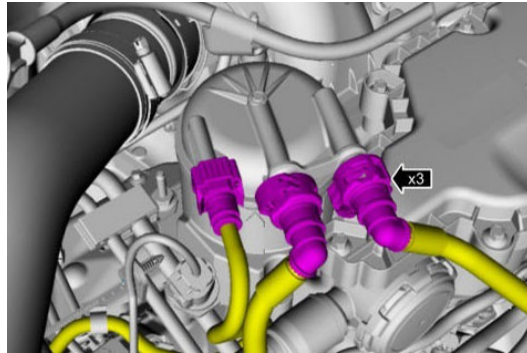


Fig. 7.1

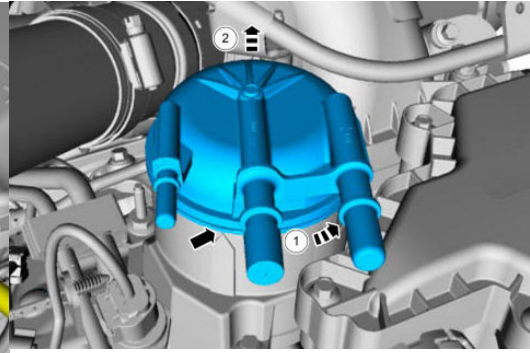


Fig. 7.2

18. On bench install all the quick connect fittings, jic-8 fittings, and npt plug(s) into ATS fuel filter block. Lubricate filter o-ring with diesel or oil to help seal, then spin on filter. (See fig. 7.4 for 2017 fitting orientation)
 - a. Install fuel filter assembly into factory fuel filter housing using supplied insulator.

2017 Fitting Orientation



Fig. 7.3



Fig. 7.4

NOTE: On 2011-2017 models, the injector return is connected to the fuel filter supply. Keep the same as factory, use the extra 3/8" npt plug and plug the center outlet on ATS fuel filter block.

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19. Disconnect factory fuel rail return line. Install ATS fuel rail return quick connect on factory fuel line and re-install factory fuel rail return line. Install 12mm to jic-6 into side of ATS fuel rail return quick connect fitting.



Fig. 8.1



Fig 8.2

20. Run supply and return lines to cp3 pump
 - a. From ATS fuel filter block use supplied Jic-8 90° fittings to 1/2" push-lock and run to -8 fitting in cp3 pump
 - b. From ATS fuel rail return line quick connect fitting use supplied Jic -6 90° fittings to 3/8" push-lock and run line to Jic-6 fitting in cp3 pump
21. Run lines along each other and secure with supplied zip ties



Fig. 8.3



Fig 8.4

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22. To install ATS Control Box,
 - a. Disconnect CP4 in valley of motor
 - b. Using supplied splitter harness and plug one end into CP4 pump and other into factory CP4 connector. Run next to CP3 and bring connector next to FCA on CP3.
 - c. Route along factory harness for clean look.
 - d. Mount ATS Control Box on fuse box or firewall using supplied velcro.



Fig 9.1

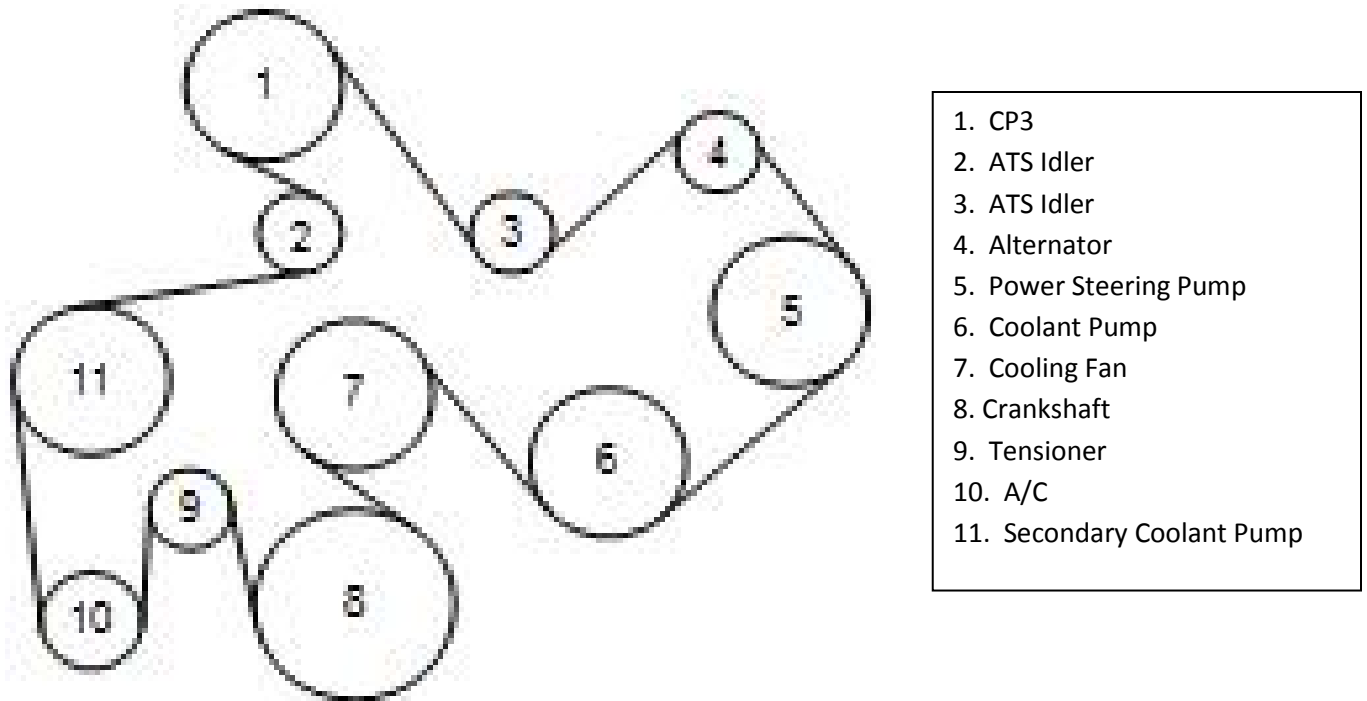
23. Install ATS twin fueler billet aluminum pulley.
 - a. Secure with nut
 - b. Torque to 52 lb.ft



Fig 9.2

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24. Install supplied serpentine belt and follow new belt routing diagram.+



25. If it is a dual alternator truck make sure petcock is closed and fill secondary system back with coolant to manufacture specifications
26. Re-install intake tube and Air box lid
27. Start vehicle and check for leaks.

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Have Any Questions?

Thank you for purchasing the ATS CP3 Twin Fueler Kit. Please check our website at <http://www.atsdiesel.com> for technical support and other performance products such as the 5-Star™ torque converter, ATS High Performance Valve Body and ATS High Performance Transmission along with our full line of power enhancers. Please call or e-mail our Technical Service Department, 8:00am to 5:30pm Mountain Standard Time, Monday through Friday.

Contact Information

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We strive to make our instructions as clear and complete as possible. To achieve this, our instructions are under constant construction. We encourage you to visit our website to check for the most up-to-date manuals and diagrams as well as other information. If you have any suggestions as to how we can improve this installation manual, let us know at <mailto:Suggestions@ATSDiesel.com>.

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Limited Warranty Statement

ATS Diesel Performance warrants the original purchaser that any parts purchased shall be free from defects in material and workmanship. ATS Diesel Performance is the warrantor of this product, in the event this product is purchased from a distributor or retailer other than ATS Diesel Performance the customer must contact ATS Diesel Performance for any warranty concerns, not the purchasing dealer. A defect is defined as a condition that would render the product inoperable. This warranty does not cover deteriorating of plating, paint or any other coating. ATS liability is limited to the repair or replacement, at ATS's option, of any warrantable product returned prepaid with a complete service history and proof of purchase to the factory. A valid proof of purchase is a dated bill of sale. Repaired or replaced, product will be returned to the customer, freight collect on a like-for-like part number basis. Accepted warranty units, which have been replaced, become the sole property of ATS.

A Return Product Authorization number obtained in advance from an ATS customer service representative must accompany products returned for warranty determination. ATS will be the final authority on all warranty decisions.

This warranty shall not apply to any unit which has been improperly stored or installed, subjected to misapplication, improper operating conditions, accidents, or neglect; or which has been improperly repaired, altered or otherwise mistreated by the owner or his agent.

This warranty shall terminate at the end of 12 months in service with the original user. Labor cost incurred by the removal and replacement of an ATS product, while performing warranty work, will be the responsibility of the vehicle owner; in no case does the obligation of ATS Diesel Performance exceed the original purchase price of the product as indicated on the original bill of sale.

Except as set forth in this warranty, ATS disclaims any implied warranty, including implied warranties of merchantability and fitness for a particular purpose. ATS also disclaims any liability for incidental or consequential damages including, but not limited to, repair labor, rental vehicles, hotel costs or any other inconvenience costs. This warranty is in lieu of all warranties or guarantees, either expressed or implied, and shall not extend to any customer or to any person other than the original purchaser residing within the boundaries of the continental US or Canada.

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2011-2015 Ford 6.7L Twin Fueler Install Instructions

Bill of Materials

1. LBZ 2CP# Pump (977800161)
 - a) 12mm to JIC-6 in return port (Parker p#7400-60-12)
 - b) Long 12mm to JIC-8 in supply port (ATS)
 - c) Remove gears off back of pump, replace with billet aluminum plate.
 - i) M6 x 1.0 x 18mm low profile socket head cap screws x4
 - ii) Socket head screw x2
 - iii) Billet aluminum plate black anodized with laser engraving.
2. Ford 6.7L Pump Mount Bracket [(Midwest),ATS]
3. High Pressure Fuel Line (20" USUI)
4. ATS Fuel Filter Block
5. Fuel Filter (Napa p#3386)
6. 3/8" NPT to 5/16" quick Connect Fitting (2017+) only (ATS)
7. 3/8" NPT to 12mm Quick Connect Fitting (ATS)
8. 3/8" NPT to 1/2" Quick Connect Fitting (ATS)
9. 3/8" NPT to Straight JIC -8 Fitting (Phenix p# B838-3)
10. 3/8" NPT Plugs x2 (McMaster p# 50785k214) (Phenix p# A3704-4)
11. 90° JIC-6 Push-lock Fitting x2 (Parker p# 33982-6-6) (Phenix p# J3690-3)
12. 90° JIC-8 Push-lock Fitting x2 (Phenix p# J3890-3)
13. High Pressure Rail Fitting (ATS 701-005-1000)
14. JIC-6 to 12mm Straight Fitting (Parker p#7400-6-12)
15. Rail Return Quick Connect Fitting (ATS)
16. 1/2" Fuel Line 30" (Parker 821FR-8)
17. 3/8" Fuel Line 38" (Parker 821-6)
18. 3.25" Silicone Boot (Silicone Intakes p# SIL000618)
19. Electronic Control Box [(ATS) (Tom Brown)]
20. Ribbed/Smooth Idler Pulleys (Year Dependant) x2 [(pulley ATS)(bearing McMaster P#)]
21. Idler Pulley Spacer (ATS)
22. Pump Pulley (ATS p# 701-029-3368)
23. Pulley Nut (ATS)
24. Double sided Dual Ribbed Serpentine Belt (Ford p# BC3Z-8620-B)
25. Secondary Water Pump (Dual Alternator Trucks Only) (Ford p# BC3Z-8501-C)

Hardware Kit

1. M8 x 1.25mm x 150mm hex head bolt (McMaster p# 91280A574)
2. M8 x 1.25mm x 140mm hex head bolt (McMaster p# 91280A571)
3. M8 x 1.25mm x 145mm socket head cap screw (McMaster P391290A478)(Trimmed to 145mm)
4. M8 x 1.25mm x 55mm socket head cap screw x3 (Fastenal p#1139594)
5. M8 x 1.25mm flange nuts x3 (Fastenal p#0162317)
6. M8 flat washers x5 (Fastenal p#40222)
7. M10 x 1.5mm x 20mm flange head bolts x2 (Fastenal p#
8. 8" zip ties x10