



***advanced FLOW engineering***

**Instruction Manual P/N: 46-20331**

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Make: GM Model: 2500/3500 Year: 2017-2018 Engine: V-8 6.6L (td)



- Please read the entire instruction manual before proceeding.
- Ensure all components listed are present.
- If you are missing any of the components, call customer support at 951-493-7100.
- Ensure you have all necessary tools before proceeding.
- Do not attempt to work on your vehicle when the engine is hot.
- Disconnect the negative battery terminal before proceeding.
- Retain factory parts for future use.

Label	Qty.	Description	Part Number
A	1	S/A Intercooler	A5-60814
B	1	Nut, Clip-On: M8 x 1.25	05-60104
C	6	Plug, Hex Hd Socket: 1/8" NPT	03-50029
D	2	Spacer, AL: 3/4" OD x 15/32" ID x 1/4"L	05-46058

**Tools Needed:** 7mm, 8mm, 10mm, 11mm, 13mm, 15mm, 18mm sockets, 10mm & 14mm wrench, T15 Torx socket, 3/16" allen wrench, 3/8" drive ratchet, 18" extension, 6" extension, panel popper, flat head screwdriver, thread sealant.

**Note:** Legal in California for use on race vehicles only. The use of this device on vehicles used on public streets or highways is strictly prohibited in California and others states that have adopted California emission regulations.





1. Park the vehicle on level ground and engage the parking brake.
2. Disconnect the negative battery cable on both batteries.
3. Remove plastic cover, using a panel popper or flat head screwdriver.
4. This is a good time to place masking tape across the bumper, lower grille, and headlights to protect the parts from being scratched.



5. Remove the four (4) mounting screws on the top of the grille, using a 10mm socket.
6. Remove grille by using pliers on the back side to squeeze retaining clips and pulling on the grille in that area to release the clips.
7. Once the grille is detached from its mounts, set the grille aside.



8. Remove both front fender flares from the vehicle using a T15 Torx and a 13mm socket.
9. Remove both front inner wheel wells using a T15 Torx and a 7mm socket.



10. Disconnect the wire harness for the bumper from underneath the vehicle directly behind the license plate.
11. Remove one (1) bolt on each side connecting the bumper support bar to the bumper (located directly in front of each of the front wheels) using a 15mm socket.



12. Remove the four (4) bolts across the front of the bumper located near the tow hooks, using a 18mm socket.
13. Remove front bumper.





14. Remove the plastic cover in the wheel well to expose the bolts securing the air deflectors onto the vehicle, using a panel popper or flat head screwdriver.
15. Remove the screws securing the plastic air deflectors located below both headlights using 7mm and 10mm sockets.



16. Unclip the air deflectors from underneath the headlights and remove them from the vehicle.



17. Remove the hood seal along the passenger side of the fender by pulling straight up to release the tape securing it to the fender.
18. Remove the four (4) bolts securing both headlights to vehicle using a 10mm socket.
19. Disconnect the connector on the back side of the headlights and remove them from the vehicle.



20. Loosen the clamps for the hot side intercooler tube at the turbo outlet and intercooler inlet on the driver side of the vehicle using a 11mm socket.
21. Remove the hot side intercooler tube from the bottom of the vehicle.



22. Disconnect the Mass Air Flow sensor from the intake tube.
23. Remove the intake air box and tube from the vehicle using an 8mm socket.
24. Remove the upper air box mounting bracket from the vehicle using a 10mm socket.



25. Remove the lower air box mounting bracket from the vehicle using a 10mm socket and a flat head screwdriver to release the transmission lines from their mount.
26. Disconnect the connector for the temperature sensor for the cold side intercooler tube from the engine harness.
27. Remove the bolt securing the intercooler tube to the mounting bracket, using a 13mm socket.

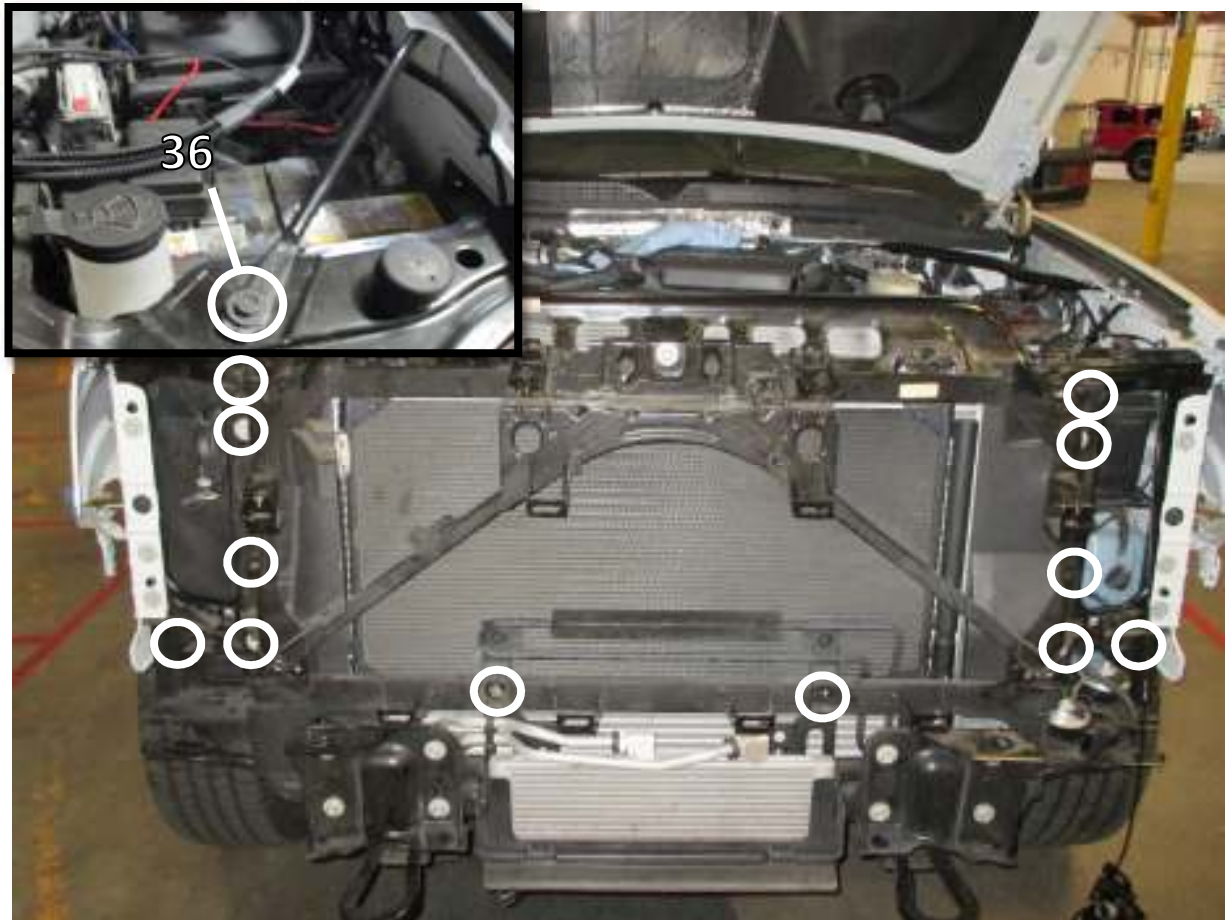


28. To disconnect the intercooler tube from the engine you will need to rotate the grey ring at the top of the tube to the left slightly and pull it downwards to release it from the engine.
29. To disconnect the intercooler tube from the intercooler you will need to lift both sides of the retaining clip that secures the intercooler tube to the intercooler using two flat head screwdrivers and pull the intercooler tube off the intercooler at the same time.
30. Remove the intercooler tube from the vehicle.
31. Remove the bolt for the radiator fan shroud brace that is directly behind the intercooler tube bracket from step 27, using a 13mm socket.
32. Remove the two bolts securing the intercooler tube mounting bracket to the vehicle, using a 10mm wrench.
33. Install the fan shroud bolt back into the vehicle and tighten.



34. Disconnect the temperature sensor and hood latch from the wiring harness.
35. Unclip the wire harness from the core support and set aside.





36. Remove the bolt securing the brace (on the drivers side) to the upper core support using a 10mm socket and push the brace out of the way.
37. Mark the location of the hood latch using a marker.
38. Remove the bolts securing the hood latch to the vehicle using a 13mm socket and set aside.
39. Remove the grille mount from the vehicle using 10mm and 13mm sockets.



40. Remove both headlight mounting clips from the fenders, by squeezing the ends underneath the fender together and pulling it out of the top.



41. Remove the two (2) bolts securing the radiator to the core support from the back, using a 13mm socket.
42. Remove the six (6) bolts securing the upper core support to the vehicle using a 10mm socket. There will be three (3) bolts on each side on the bottom side of the upper core support.



43. Remove the four (4) bolts securing the radiator to the intercooler using a 13mm socket.
44. Remove the rubber mounting grommet from the driver side lower radiator mount and set to the side, it will be re-installed later.



45. Remove the two (2) bolts securing the power steering cooler to the vehicle using a 10mm socket.

**Note: You will need help removing the intercooler from the vehicle.**

46. Lift the radiator off the mounts and push back to make room for the intercooler to come out.

**NOTE: When moving the A/C condenser be sure not to damage A/C lines or the power steering cooler fins.**

47. Lift the A/C Condenser out of its lower mounts and set it in front of the power steering cooler to make room to get the intercooler out of the vehicle.

**NOTE: When removing the Intercooler lift the drivers side out and over the A/C Condenser mount then the passenger side can come out, be sure not to damage the intercooler on the A/C mounts.**

48. Lift the intercooler out of the vehicle slowly. You will need to maneuver around a few A/C lines and the radiator so take your time.



49. Once the factory intercooler is out of the vehicle, transfer the two (2) rubber grommets on the bottom pins over from the factory intercooler to the supplied aFe intercooler.

50. Install the supplied clip onto the passenger side top mount of the aFe intercooler.

**Note: If you are going to be using auxiliary sensors they will be installed after the intercooler is in the vehicle.**

**Note: Be sure to use thread sealant on the plugs or sensors to prevent any leaking**

51. If you will not be using any auxiliary sensors, install the six (6) supplied 1/8" NPT plugs into the fittings.



52. With some help, install the aFe intercooler into the vehicle very carefully. You will need to maneuver the intercooler around the radiator and some A/C lines.
53. Reinstall the driver side mounting grommet onto the radiator from step 44.
54. Place the A/C condenser back into the lower mounts.



55. Place the radiator on the mounts on the back side of the aFe intercooler.
56. Reinstall the upper core support into the vehicle and start the six (6) mounting bolts into the bottom of the core support.
57. Reinstall the two (2) upper radiator mounting bolts with the supplied spacers into the top radiator mounts, do not tighten yet.
58. Reinstall the four (4) radiator mounting bolts and tighten the radiator to the intercooler using a 13mm socket.
59. Tighten the six (6) upper core support bolts from step 56 using a 10mm socket.
60. Tighten the two (2) upper radiator mounting bolts from step 57 using a 13mm socket.





61. Reinstall the bolt securing the passenger side brace to the upper core support and tighten using a 10mm socket.
62. Reinstall the headlight mounting clips into the fenders.
63. Reinstall the grille mount into vehicle and tighten using 10mm and 13mm sockets.
64. Reinstall the hood latch into the vehicle, using a 13mm socket (make sure to align).
65. Reconnect the temperature sensor and hood latch to the wiring harness.
66. Clip the wire harness back into the core support.



67. Reinstall the factory cold side intercooler tube into the vehicle by first connecting the intercooler tube to the engine inlet, then connecting the intercooler tube to the intercooler connection.
68. Be sure the retaining clips on the top and bottom snap into place all the way around the fittings.
69. Reconnect the temperature sensor to the engine harness.



70. Reinstall the lower air box mount into the vehicle and tighten all the bolts using a 10mm socket.

71. Reinstall the upper air box mount into the vehicle and tighten all the bolts using a 10mm socket.



72. Reinstall the factory hot side intercooler tube into the vehicle from the bottom.
73. Ensure the tube is not touching anything then tighten all the clamps using an 11mm socket.



74. Reconnect the headlights and install back into the vehicle and tighten bolts.
75. Reinstall the plastic air deflector below headlights.
76. Reinstall the plastic cover in wheel well.
77. Reinstall the hood seal along the passenger side of the fender.



78. Reinstall the front bumper onto the vehicle.
79. Reinstall the four (4) bolts across the front of the bumper and the two (2) bumper support bar bolts on the side.
80. Align the front bumper and tighten all bolts.
81. Reconnect the bumper wiring harness underneath the vehicle.



82. Reinstall the wheel wells and fender flares onto vehicle and tighten all bolts.
83. Reinstall the grille onto the vehicle.
84. Remove the tape from the vehicle.
85. Reinstall the air box, intake tube, and reconnect the Mass Air Flow sensor.
86. Reinstall the plastic radiator cover.
87. Reconnect the negative battery cables.
88. Install is now complete!

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# Warranty

## General Terms:

- aFe warrants their products to be free from manufacturer's defects due to workmanship and material.
- This warranty applies only to the original purchaser of the product and is nontransferable.
- Proof of purchase of the aFe product is required for all warranty claims.
- Warranty is valid provided aFe instructions for installation and/or cleaning were properly followed.
- Proper maintenance with regular inspections of product is required to insure warranty coverage.
- Damage due to improper installation, abuse, unauthorized repair or alteration is not warranted.
- Incidental or consequential damages or cost, including installation and removal of part, incurred due to failure of aFe product is not covered under this warranty.
- All warranty is limited to the repair and/or replacement of the aFe part. To request Return Goods Authorization ("RGA"), email [RGA@afepower.com](mailto:RGA@afepower.com) or call (951)493-7100. Upon receipt of the RGA, you must return the product to the address provided in the RGA, freight prepaid and accompanied with a dated proof of purchase and the RGA. Upon receipt of the defective product and upon verification of proof of purchase, aFe will either repair or replace the defective product within a reasonable time, not to exceed thirty days.

Product Category	P/N Prefix	Warranty duration
Direct OE Replacement Filters	10, 11, 30, 31, 71, 73	Life of the vehicle
Racing Filters	18	1 year
Universal	21, 24, 72	2 years
Air Intake Systems	50, 51, 54, 55, 75	2 years
Exhaust Systems	49	2 years
Intercoolers & Intercooler Tubes	46-2	2 years
Intake Manifolds	46-1	2 years
Differential Cover	46-7	Life of the vehicle
Exhaust Manifolds	46	2 years
Throttle Body Spacers	46-3	2 years
Fluid Filters	44	90 days
Pre-Filters	28	2 years
Heavy Duty OE Replacement	70	2 years
PowerSports OE Replacement	81, 87	2 years
PowerSports Intake Systems	85	2 years

No other warranty expressed or implied applies nor is any person or advanced FLOW engineering authorized to assume any other warranty. Some States do not allow the exclusion or limitation of incidental or consequential damages or do not allow limitations on how long an implied warranty lasts, so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from State to State.



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