



advanced FLOW engineering

Instruction Manual P/N: 46-50012-B

Make: **Jeep** Model: **Wrangler JK** Year: **2012-2018** Engine: **V-6 3.6L**



- 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	Radiator, Fabricated	05-60774
B	1	Radiator Hose, Upper	05-60777B
C	1	Radiator Hose, Lower	05-60778B
D	4	Clamp, T-Bolt	03-50578
E	1	Shroud, Radiator w/ Badge	05-60878
F	1	Valve, Drainage	03-50579
G	4	Screw, Hex Hd: M6x1x12	03-50032
H	12	Screw, Hex Hd: M6x1x16	03-50052
I	16	Washer, M6	03-50070
J	1	Tubing, PCV Clear	03-50583
K	2	Trim, Rubber Edge: 1/16"	05-00149
L	6	Washer, Insulating	03-50600

Tools Needed: Screwdrivers, long extension, ratchet, 8mm socket, 10mm socket, 11mm socket, 13mm socket, 15mm socket, 10mm wrench, 14mm wrench, thread sealant, pliers, panel popper.





1. Park vehicle on level ground and engage the parking brake.
2. Open the hood.
3. Locate the petcock on your radiator.
4. Open the petcock and begin draining coolant into a drain pan.
5. Remove radiator cap and drain remainder of coolant from system.

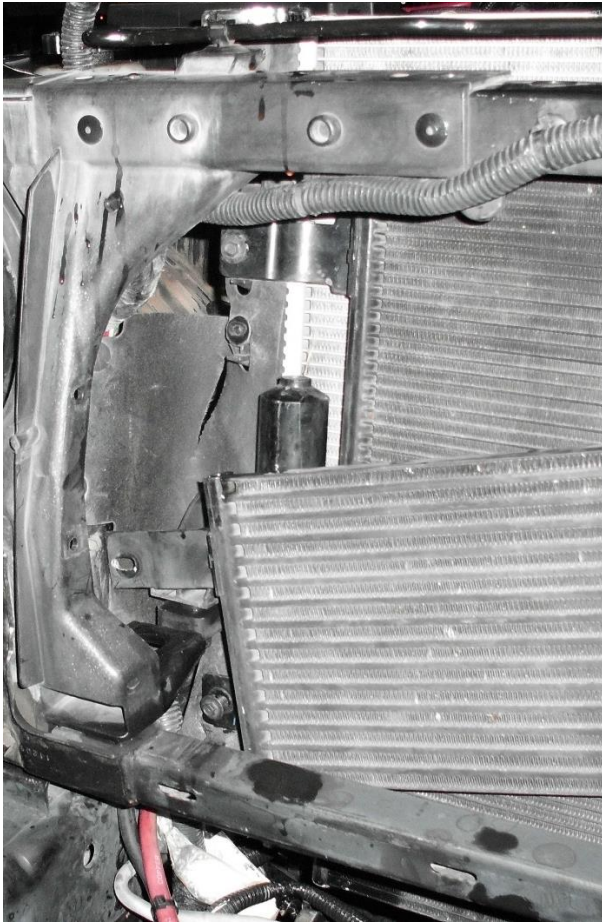


Note: If there is an aftermarket winch on the vehicle, the front bumper and winch may need to be removed in order to remove the grille.

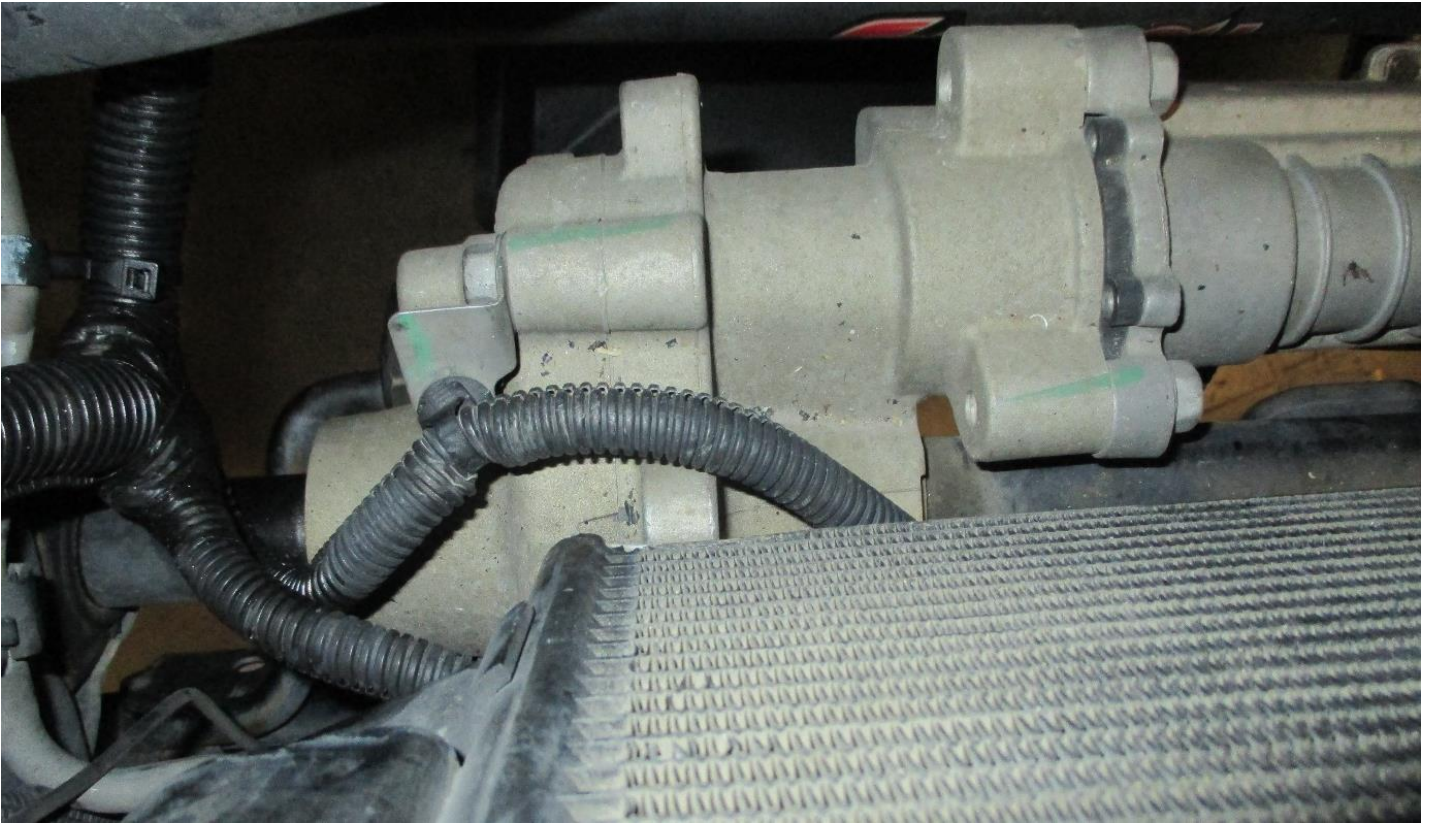
6. Remove the six (6) clips securing the grille to the vehicle.
7. Disconnect the front turn signals from the grille then, remove the grille.
8. Remove the engine cover.
9. Remove the four (4) clips securing the plastic radiator cover to the vehicle.
10. Disconnect the air temperature sensor and the breather hose from the intake tube.
11. Remove the two (2) bolts securing the intake tube to the radiator fan assembly using a 10mm socket.
12. Remove the intake tube and air box lid from the vehicle using an 8mm socket.



13. Using pliers to squeeze the hose clamps, slide the radiator hose clamps back down the hose.
14. Remove both radiator hoses from the vehicle.
15. Disconnect the overflow hose from the radiator and remove the overflow bottle from the vehicle.
16. Disconnect the large radiator fan connector from the engine harness.



17. Remove the two (2) bolts that secure the radiator to the vehicle using a 10mm socket.
18. Remove the bolt securing the A/C lines to the side of the radiator behind the driver side headlight using an 8mm socket.
19. Remove the two (2) clips securing the rubber air deflectors to the core support on both sides using a panel popper.
20. Remove the five (5) bolts securing the A/C condenser and transmission cooler to the front of the radiator using an 8mm socket.
21. Carefully lift the radiator from the vehicle.



22. If your vehicle is not equipped with the factory electronic sway bar disconnect skip to Step 25.
23. Loosen the bolt securing the wire loom bracket onto the electronic sway bar disconnect using a 15mm socket.
24. Rotate the bracket down to create clearance for the wire loom below the radiator. Tighten the bolt while holding the bracket in place.



Note: Be sure to use thread sealant on the threads of the petcock before instillation.

25. Install the supplied petcock into the bottom fitting of the aFe radiator. Tighten using a 14mm wrench.
26. Remove the two (2) mounting grommets from the factory radiator and install onto the lower mounting pins of the aFe radiator.



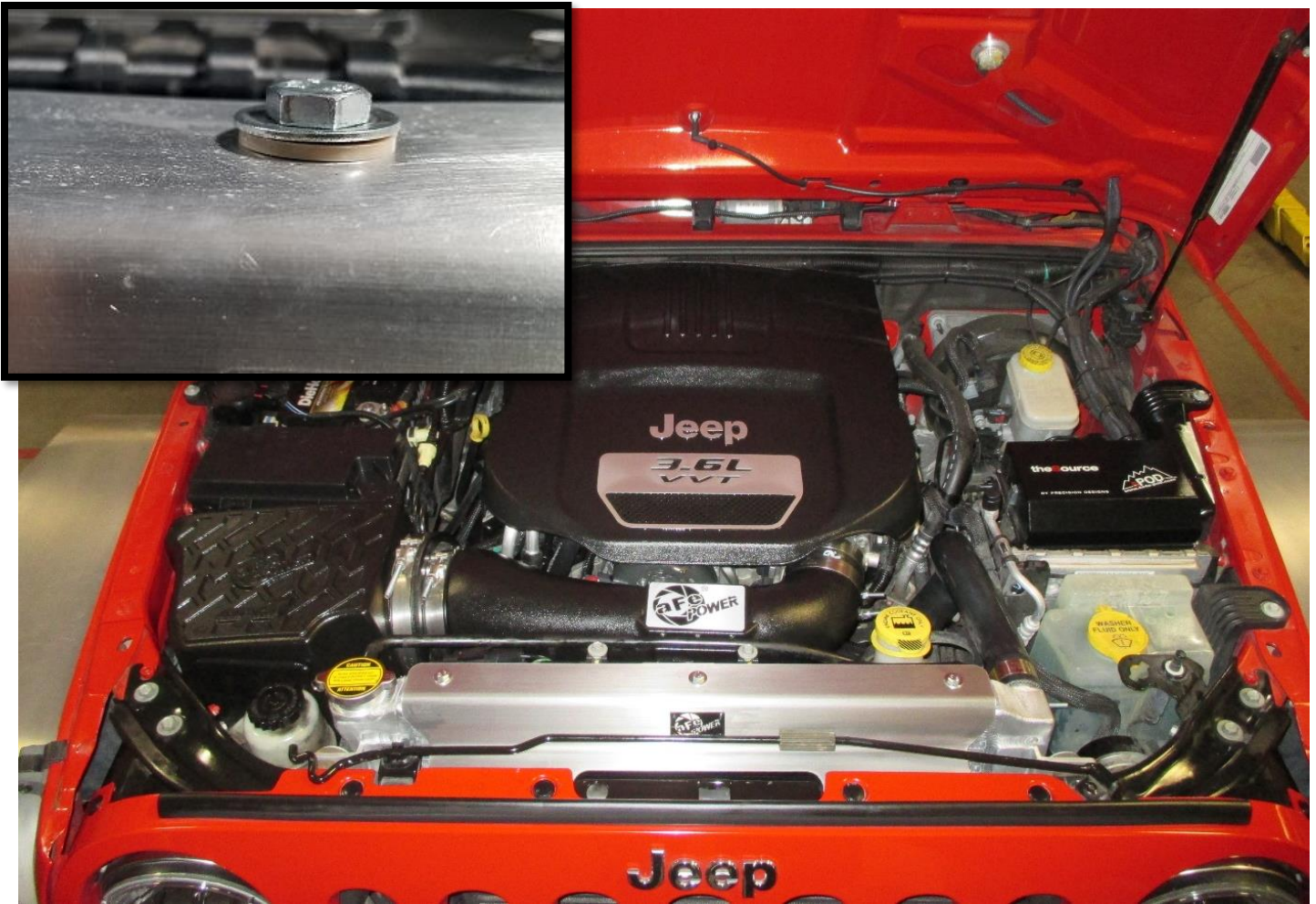
27. Remove the two (2) bolts securing the fan assembly to the radiator, using an 8mm socket. Separate the fan assembly from the radiator.
28. Mark fan assembly to trim the top and bottom of it to be flush with the sides of the fan assembly (approximately $\frac{1}{4}$ "), see photos above.
29. Trim the fan assembly.
30. Test fit the fan assembly onto the aFe radiator to make sure enough plastic was trimmed off.
31. Install the supplied rubber trim onto the top and bottom of the fan assembly and trim excess if needed.
32. Transfer the factory rubber air deflectors from the factory radiator to the aFe radiator.



33. Install the aFe radiator into the vehicle. Do not position it into the mounting location yet.
34. Mount the A/C condenser and transmission cooler onto the front of the radiator with five (5) of the supplied M6 x 1.0 x 16mm bolts and M6 washers. Tighten using a 10mm socket.
35. Remove the top mount grommets from the factory radiator.
36. Slide the factory mounting bolts and grommets into the top mounting brackets on the aFe radiator and tighten the radiator to the core support using a 10mm socket.
37. Use one (1) of the supplied M6 x 1.0 x 12mm bolts with an M6 washer to mount the A/C lines to side of the aFe radiator behind the driver side headlight. Tighten using a 10mm socket.
38. Install the fan assembly into the vehicle and tighten using two (2) of the supplied M6 x 1.0 x 16mm bolts and M6 washers with a 10mm socket.
39. Reconnect the electric fan connector to the engine harness.



40. Install the supplied hose clamps onto the new aFe radiator hoses.
41. Install the upper and lower aFe radiator hoses into the vehicle with the aFe logo to where they can be read from the front of the vehicle.
42. Rotate the new hose clamps to where they will not be rubbing on anything. Tighten them using an 11mm socket.
43. Install the overflow bottle back into the vehicle and connect the overflow hose to the aFe radiator.



44. Install the intake system back into the vehicle.
45. Reconnect the temperature sensor and breather hose.
46. Be sure the petcock is closed by turning the t-handle clock-wise. Install the supplied clear hose onto the end of the petcock and tuck out of the way.
47. Use the proper Chrysler coolant refill procedure to be sure that all the air gets out of the system when refilling the coolant.
48. Top off coolant in the radiator and fill overflow bottle to the max line and install the supplied radiator cap.
49. Install the aFe radiator shroud onto the radiator using three (3) of the supplied M6 x 1.0 x 12mm bolts, three (3) M6 washers, and six (6) plastic insulating washers (do not tighten them yet).
Install the plastic washers on both sides of the shroud to help minimize heat transfer.
50. Install the grille onto the vehicle and reconnect the front turn signals.
51. Secure the grille with the factory clips then, tighten the aFe radiator shroud using a 10mm socket.

Install winch and front bumper if they were removed.

52. Install engine cover.
53. Test drive vehicle.
54. Let vehicle cool down then check coolant levels, top off if needed.
Install is now complete!

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