



advanced FLOW engineering

**Instruction Manual** P/N: 46-52101

BladeRunner – Street Series Radiator

Make: **Jeep** Model: **Wrangler** Year: **1997-2006** Engine: **I6 - 4.0L**



- Please read the entire instruction manual before proceeding.
- Ensure all components listed are present.
- Ensure you have all necessary tools before proceeding.
- Ensure that your vehicle is cooled off before proceeding.
- Retain factory parts for future use.

Label	Qty.	Description
A	1	Radiator
B	1	Fitting, Coolant Over-Flow Barb
C	1	Valve, Drain
D	2	Fitting, Transmission Cooler
E	11	Screws, M6 x 1.0m x 20mm
F	11	Washer, Lock M6
G	11	Washers, Fender M6
H	2	Plug, 5/8"-18
I	1	Clip nut, M6
J	1	Cap, Radiator





1. Park vehicle on level ground and engage the parking brake.
2. Disconnect the negative battery cable.
3. Open the petcock and begin draining coolant.
4. Remove radiator cap and drain remainder of coolant from the system.



5. Disconnect the over-flow hose from the filler neck on the radiator.
6. Remove the coolant reservoir from the fan shroud.





**Note: aFe recommends the inspection of the upper and lower radiator hoses at this time.**

7. Disconnect the upper radiator hose.
8. Disconnect the lower radiator hose.

**Note: If installing on a manual transmission, please skip to Step 10.**

**Note: Transmission oil will run out of the transmission cooler lines attached to the radiator when they are disconnected. Make sure to have a way to catch the oil prior to disconnecting.**

**Automatic Transmission only:**

9. Disconnect the transmission oil lines from the bottom of the radiator.



10. Remove the fan clutch from the water pump. Leave it in the fan shroud.
11. Loosen the fan shroud and remove the hardware.
12. Remove the fan shroud and the fan clutch assembly at the same time.



13. Remove the front differential breather hose.





14. Remove the radiator.



**Note: Make sure to apply teflon tape to the supplied drain valve.**

15. Install the drain valve.

**Note: If installing the radiator in a manual transmission vehicle, skip to Step 17.**

**Automatic Transmission only:**

16. Install the two (2) supplied transmission cooler fittings.

**Note: Please skip to Step 18 if installing into an automatic transmission vehicle.**

**Manual Transmissions only:**

17. Install the two (2) supplied 5/8"-18 plugs.



18. Install the supplied aFe Bladerunner radiator using six (6) supplied M6 x 1.0m x 20mm screws, six (6) supplied M6 lock washers, and six (6) supplied M6 fender washers. Tighten to factory specifications.



19. Locate the second hole down (from the top of the radiator) on the driver's side. Install the supplied M6 clip nut onto the radiator at this location.
20. Attach the front differential breather hose using one M6 x 1.0m x 20mm screw, one M6 lock washer, and one M6 fender washer. Tighten to factory specifications.





21. Install the fan clutch assembly and the fan shroud at the same time and leave both loose.
22. Tighten the fan clutch assembly to the water pump to factory specifications.



23. Tighten the fan shroud to the radiator using four (4) M6 x 1.0m x 20mm screws, four (4) M6 lock washers, and four (4) M6 fender washers. Tighten to factory specifications.



24. Install the upper radiator hose and tighten to factory specifications.
25. Install the lower radiator hose and tighten to factory specifications.

**Note: If you are installing in a manual transmission vehicle please skip to Step 27.**

**Automatic Transmissions only:**

26. Install the lines for the transmission cooler and tighten to factory specifications.



27. Install the coolant reservoir onto the fan shroud.

**Note: Please make sure to use teflon tape on the coolant over-flow barb fitting prior to installation.**

28. Install the supplied coolant over-flow barb fitting to the radiator and snug up (do not over tighten).

29. Install the over-flow hose onto the coolant over-flow barb fitting.

30. Use the proper coolant refill procedure to be sure that all the air gets out of the system when refilling the coolant.





31. Top off coolant in the radiator, fill the over-flow bottle to the max line, and install the supplied radiator cap.
32. Test drive the vehicle.
33. Let the vehicle cool down then check coolant levels. Top off coolant if needed.
34. Install is now complete!

**Note: Be sure to check all connections after 50-100 miles.**