

NEUSPEED®

FRONT MOUNT INTERCOOLER

GOLF / JETTA IV 1.8T – MANUAL TRANSMISSION ONLY

PART # 48.10.91 & 48.10.91P

INSTALLATION INSTRUCTIONS

PART LIST:	1 – INTERCOOLER CORE	1 – U-BENT TUBE
	1 – L-SHAPED TUBE	1 – INTERCOOLER INLET TUBE
	3 – M6 NYLOC NUT	3 – M6 x 20mm HEX BOLTS
	2 – M6 HEX NUTS	2 – M6 x 20mm SOCKET HEAD BOLTS
	2 – M6 WASHERS	3 – M6 LARGE OD WASHERS
	5 – SMALL HOSE CLAMPS	1 – RUBBER ISOLATOR MOUNT
	2 – ¾" x 2" FOAM TAPE	1 – SENSOR FITTING ADAPTER
	2 – LARGE HOSE CLAMPS	2 – STRAIGHT SILICONE HOSE
	1 – 90° SILICONE HOSE	1 – SILICONE REDUCER HOSE
	2 – SPACERS	

TOOLS REQ:	1 – FLAT SCREW DRIVER	1 – PHILLIPS SCREW DRIVER
	1 – DRILL MOTOR	1 – ¼" DRILL BIT
	1 – 2½" HOLE SAW	1 – FILE
	1 – T25 TORX DRIVER	1 – T30 TORX DRIVER
	1 – RATCHET HANDLE	1 – 10MM SOCKET
	1 – 10mm WRENCH	1 – EXTENSION
	1 – FLOOR JACK	1 – JACK STANDS
	1 – MARKING PEN	1 – HACKSAW
	1 – 5MM HEX KEY WRENCH	



1. Remove factory grill by prying up metal retaining clip of hood release lever. Using a screw driver spread the plastic release lever open to disconnect from hood latch. Release grill attachment clip located in square hole on top of grill by pushing down plastic catch with screw driver. Disconnect upper corners of grill by pulling forward. Tip grill forward and pull up to release grill.



2a. Remove bumper cover: On top remove the (5) Torx T30 screws.



2b. Up front, remove both outer grill inserts by pushing down release tabs at top corners. Remove (1) Torx T30 screw from each side.



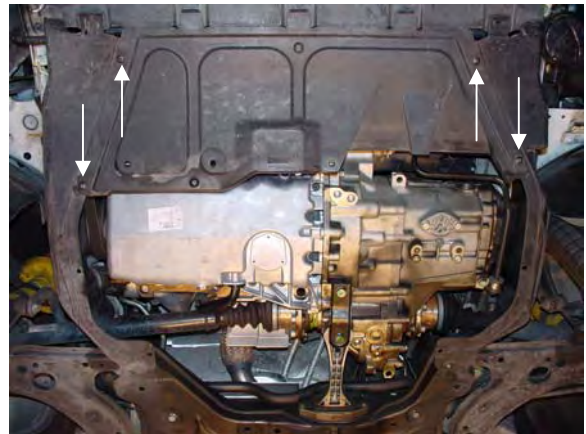
2c. In each fender well, remove (4) Torx T25 screws. Pull bumper cover forward at each corner and disconnect side marker lamp harness from each side. Remove bumper cover.



3. Remove factory intercooler: Unclip and remove air ducting from intercooler. Disconnect boost sensor wire harness from sensor at top intercooler end-tank. Remove (2) 10mm hex bolts at top of intercooler and (1) 10mm hex bolt at bottom of intercooler. Disconnect inlet hose at bottom of intercooler and upper hose at throttle body. Unclip wire loom from rubber intake hose. Carefully, remove factory intercooler and attached intake hose.



4. Remove OE pancake pipe by removing (1) 10mm hex nut and loosening hose clamp.



5. Remove center under tray by removing (4) Torx T25 screws.



6. Remove two lower side engine covers by removing (1) Torx T25 screw and unscrewing (2) metal retaining clips on each cover. ⚙️**Hint:** Use flat head screw driver to rotate metal retaining clip counter-clockwise. Passenger-side shown.



8. Position intercooler core with brackets inside of cut grooves and with upper channels pushed up against bottom lip of metal bumper structure. With marking pen, mark position of holes through mounting brackets.



7. Trimming of radiator core for intercooler fitment: Position both channels on top of intercooler to bottom lip of metal bumper structure. Center intercooler core in front of radiator. Use marking pen to mark position of lower mounting brackets and around inlet and outlet of intercooler core. ⚙️**Hint:** Instead of using a marking pen, try white out to mark position for better contrast. Use keyhole saw, hacksaw, or die grinder to cut away and remove marked sections. Use file to clean up cut sections as necessary.



9. Using 1/4" drill bit, drill marked holes. **NOTE:** Mind drilling depth to be careful not to puncture radiator.



10. Attach foam tape (supplied) around lip of steel bumper structure where intercooler channel will be inserted.



11. Use (2) M6x20mm bolts, (2) washers, and (2) nyloc nuts to fasten intercooler to lower radiator core.



12. On driver's side side engine cover, mark center of hole per diagram. Cut hole using a 2½" hole saw. Use file to clean-up hole if necessary. Re-install driver's side side engine cover using original hardware.



13. Push up on horn to bend mounting bracket for clearance of u-bent intercooler tube. **Hint:** Instead of bending bracket, you may remove lower horn from bracket and re-mount to upper horn bracket. Remove protective cap from outlet side of intercooler end-tank. With straight silicone hose connector and (2) hose clamps, connect intercooler outlet to short end of U-bent pipe. Screw drive of clamps should be on top side as shown. If necessary, use a file to elongate side engine cover hole for proper pipe fitment. Do not tighten hose clamps at this time.



14. Remove (2) Phillips screws from factory boost sensor. Remove boost sensor from factory intercooler. Install aluminum boost sensor adapter onto fitting on L-shaped tube. Then install boost sensor onto fitting as shown. Fasten with (2) M6x20mm socket head bolts (supplied). **NOTE: Use caution when tightening – do not over tighten.** Install L-shaped tube from bottom side of vehicle.

15. Use stepped silicone connector hose to connect U-bent tube with L-shaped pipe. Do not tighten hose clamps at this time.



16. Connect upper end of L-shaped tube to throttle body with 90° silicone elbow with (1) supplied hose clamp to intercooler tube. Re-use OE throttle body hose clamp at throttle body. Do not tighten hose clamps at this time.



17. Center L-shaped tube between A/C receiver drier and power steering pulley for best clearance and mark hole for bracket mounting. **NOTE: If you plan on using our Power Pulley kit in the future, you will need to space L-Shaped pipe closer toward A/C receiver drier.** Use 1/4" drill bit and drill hole. **NOTE: Mind drilling depth to be careful not to puncture radiator.** Mount L-shaped tube with rubber isolator mount, washer, and M6 hex nuts.



18. Use 1/4" drill bit and drill hole for U-bent tube mounting bracket. **NOTE: Mind drilling depth to be careful not to puncture radiator.** Mount U-bent tube with M6 x 20mm hex bolt, washer, and nyloc nut. Tighten all hose clamps at this time. Double-check clearances. Re-connect boost sensor wire harness – position wires loom away from fan and drive pulleys.



19. Install intercooler inlet pipe to factory turbo hose and to intercooler inlet end-tank. On end-tank side, remove protective cap from inlet side of intercooler end-tank and use a straight silicone hose and two hose clamps. Screw drive of clamps should be on top side as shown. Use original intercooler mounting bolt to fasten intercooler inlet pipe to original bracket. Tighten hose clamps at this time.



20. Re-install passenger's side engine cover.



21. Re-install center under tray. Trim leading edge of under tray for proper clearance of intercooler and intercooler tube mounting brackets.



22a. Re-install bumper cover **Golf**: Trim backside of bumper cover as indicated by arrows. Start at corners of grill openings and feather trimming outwards. Double-check clearance and proceed to step 23.

22b. Re-install bumper cover **Jetta**: On backside of bumper cover, trim locking tabs that attach lower valance to bumper cover where interference occurs with intercooler. Double-check clearance and proceed to step 23.



23. Use spacers (supplied) behind bumper cover lower mounting tabs. Re-install bumper cover in reverse of disassembly.