
INSTALLATION **GUIDE**

**VW AMAROK
INTERCOOLER KIT**



P/N PWI63123 – INTERCOOLER | P/N PWA64398 – PIPE KIT



Contents

CONDITIONAL MANUFACTURERS WARRANTY	2
Warranty voids.....	2
Warranty does not cover.....	2
LIMIT OF LIABILITY STATEMENT	2
SAFETY PRECAUTIONS	3
IMPORTANT INFORMATION FOR FITTING	4
RADIATORS:	4
INTERCOOLERS:.....	4
OIL COOLERS:.....	4
LIQUID TO AIR BARREL INTERCOOLER KITS:	4
APPLICATION	5
PACKING LIST	5
DISASSEMBLY	7
ASSEMBLY	12
Assembly Section 1 – Intercooler	12
Assembly Section 2 – Pipe Kit.....	16

CONDITIONAL MANUFACTURERS WARRANTY

PWR Custom Aluminium Radiators, Intercoolers and Oil Coolers along with cores only for these units are warranted to the original purchaser to be free of fault for materials and workmanship for a period of 1 year from the date of purchase and only when used under normal operating conditions. Claims for internal damage to engine or other related components of user's vehicle are not covered by this warranty. The PWR product user is responsible for the monitoring of engine temperature operations and for having the appropriate detection devices in place to warn the user of overheating and other engine related malfunctions. At time of installation an approved coolant must be added to the cooling system. (See important information – Radiator point 3) Responsibility for any damage, injury or loss attributed to any fault in material or workmanship in the above listed products shall be limited by replacing the unit on return of the defective product.

Warranty voids

If the product is repaired or welded by another party other than PWR Performance Products. * If any defect is attributable to an accident, abuse or negligence. * Where the product is used for an application for other than it was intended. * If any parts or accessories are fitted which adversely affect the product

Warranty does not cover

Charge relating to removal and replacement to vehicle. *Internal or external corrosion. * Any consequential damage. * Freight cost incurred to send the item back to PWR

LIMIT OF LIABILITY STATEMENT

The information contained in this publication was accurate and in effect at the time the publication was approved for printing and is subject to change without notice or liability. PWR Performance Products reserves the right to revise the information presented herein or to discontinue the production of parts described at any time.

SAFETY PRECAUTIONS

STOP

CAREFULLY READ THE IMPORTANT SAFETY PRECAUTIONS and WARNINGS BEFORE PROCEEDING WITH THE INSTALLATION!

Appropriate disassembly, assembly methods and procedures are essential to ensure the personal safety of the individual performing the kit installation. Improper installation due to the failure to correctly follow these instructions could cause personal injury or death. Read each step of the installation manual carefully before starting the installation.

- Always wear safety glasses for eye protection.
- Place the ignition switch in the OFF position.
- Always apply the parking brake when working on the vehicle.
- Block the front and rear tyre surfaces to prevent unexpected vehicle movement.
- Operate the engine only in well-ventilated areas to avoid exposure to carbon monoxide.
- Do not smoke or use flammable items near or around the fuel system.
- Use chemicals and cleaners only in well ventilated areas.
- Batteries can produce explosive hydrogen gas which can cause personal injury. Do not allow flames, sparks or flammable sources to come near the battery.
- Keep hands and any other objects away from the radiator fan blades.
- Keep yourself and your clothing away from moving parts when the engine is running.
- Do not wear loose clothing or jewellery that can be caught in rotating or moving parts.

IMPORTANT INFORMATION FOR FITTING

Please read the following before fitting our PWR Performance Product.

WARNING

WARNING: Failure to follow this procedure will void your warranty.

- Do not use this product in any other motor vehicle for which it is not designed.
- Do not use any other mounting location / method other than described in this instruction.
- It is advisable to seek assistance of another person when installing this product.
- Do not repair or modify this product and / or its mounting bracket in any way - repair or modification may affect proper operation of the vehicle or cause destruction of property.
- Ensure all torque settings are followed.
- Be sure to clean and remove any loose debris before removing pipe work as debris entering the engine could be detrimental to the engine and or components

Radiators:

- Before removing the old radiator check the existing coolant for stray current. This is done by connecting a voltmeter between the coolant and the battery ground. The meter should have a range of at least 12 volts (assuming the vehicle have a 12 volt charging system) and a sensitivity of at least one-tenth of a volt. By connecting one test lead to battery ground and placing the other lead into the coolant (DO NOT TOUCH THE METAL CORE OR FILLER NECK) any voltage indicates current passing through the coolant-ELECTROLYSIS.
- If no current found flush cooling system with distilled water to remove the existing coolant/inhibitors. When the entire system has been flushed including the over flow bottles, you can fit the new radiator. DO NOT MIX COOLANTS
- Select a coolant that is recommended by the manufacturer or by PWR. Product must meet the current AS2108 or manufacturer's engine coolant/inhibitor standard and refill system. Bring engine up to temperature and let cool. Re-Check the coolant level and top up if necessary. USE ONLY DISTILLED WATER.
- IMPORTANT- again recheck step 1 for any stray current.
- PLEASE be careful when fitting and make sure all mounting points are tight (to manufacturer's specifications) and there is sufficient clearance so no rubbing occurs.
- PLEASE ensure that all hose clamps are done up.
- Correct cap must be used for each individual system.

Intercoolers:

- PLEASE be careful when fitting and make sure all mounting points are tight (to manufacturer's specifications) and there is sufficient clearance so no rubbing occurs.
- PLEASE ensure that all hose clamps are done up.

Oil Coolers:

- PLEASE be careful when fitting and make sure all mounting points are tight (to manufacturer's specifications) and there is sufficient clearance so no rubbing occurs.
- PLEASE ensure that all hose clamps are done up.
- Do not run over 80 psi rating.

Liquid to Air Barrel Intercooler kits:

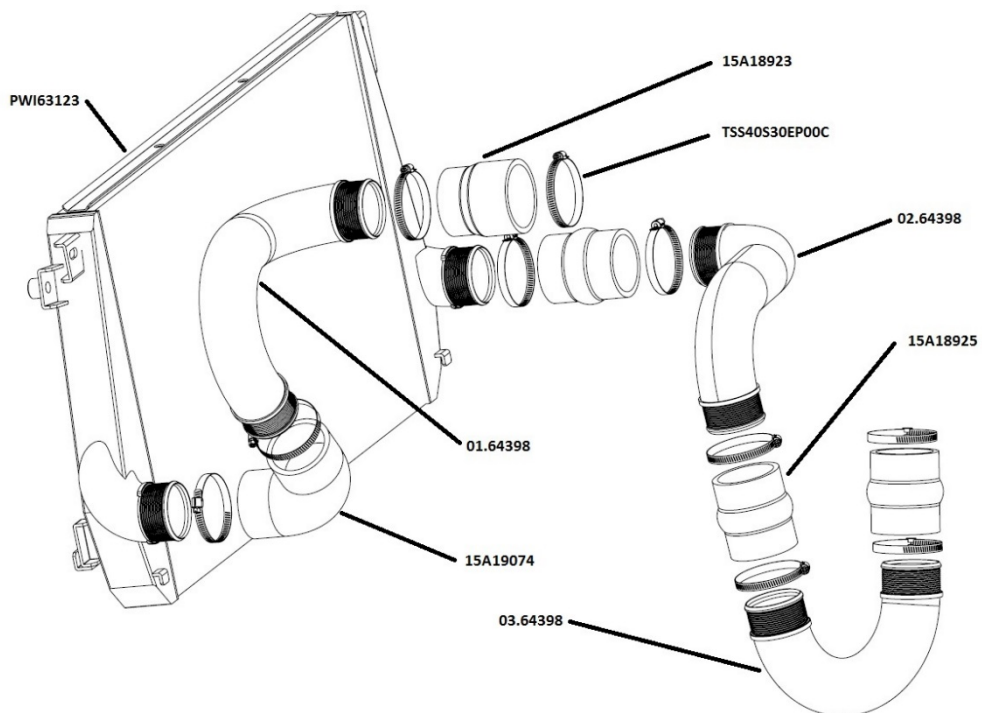
- Select a coolant that is recommended by the manufacturer or by PWR. Product must meet the current AS2108 engine coolant/inhibitor standard and refill system. Cycle the fluids through the system to remove air locks. Re-Check the coolant level and top up if necessary. USE ONLY DISTILLED WATER
- PLEASE be careful when fitting and make sure all mounting points are tight (to manufacturer's specifications) and that there is sufficient clearance so no rubbing occurs.
- PLEASE ensure that all hose clamps are done up.
- Pump must be fitted in accordance to fitting instructions supplied and by a qualified auto electrician.

APPLICATION

Before commencing the procedures outlined please read the guide and verify all parts are present and not damaged. If anything is missing or damaged, please notify PWR Performance Products on 07 5547 1600.

PACKING LIST

Description	Part Number	Quantity
Air Induction		
42mm Amarak Intercooler	PWI63123	1
M6 x 16mm Bolt	MSBNM616Z	2
M6 x 50mm Bolt	MSBNM650Z	1
M8 x 40mm Bolt	MSBNM840Z	2
M8 Washer	MSFWM8Z	2
Billet Spacer Bush (22 Long x 22 OD x 8 ID)	99A19837	3
Washers Aluminium		3
Cold Intercooler Outlet Pipe	01.64398	1
Hot Intercooler Intake Pipe Top	02.64398	1
Hot Intercooler Intake Pipe Bottom	03.64398	1
Silicone Hump Hose	15A18925	3
Silicon Hose 2.5" - 2.25 Reducer	15A18923	1
Silicon Hose Elbow 90 Degree	15A19074	1
Murray Hose Clamps	TSS40S30EP00C	10
Decals/Labels		
Warranty Card		1



EQUIPMENT AND SUPPLIES REQUIRED FOR FITMENT

- Fender Cover (2)
- 1/4" and 3/8" Drive Ratchets with Extensions
- 3/8" Drive Torque Wrench (7-35 ft-lb range)
- Metric Socket Sets (short and deep recommended)
- Metric Wrench Sets
- Metric Allen Key Set
- T-25, T-27 AND T-30 Torx Bit Screwdrivers or Sockets
- Short Phillips-head Screwdriver
- Small flat screw driver
- Trim Pad Tool (for pushpin removal)
- Assembly Lubricant (White Lithium Grease or Petroleum Jelly)
- Sharp Knife or Razor Blade
- Medium Strength Thread Locker – Loctite® 242 (blue) or equivalent
- Writing equipment (pen or marker)
- Zip lock / reseal able bags (to store and label removed nuts / bolts clips etc.)

DISASSEMBLY

The following section will guide you through the disassembly of the OEM parts on your vehicle. Special care should be taken to label parts and avoid damaging items as removed since many items will be reused.

1. Open bonnet.
2. Cover guards with fender covers to protect vehicle finish.
3. Disconnect Battery.



4. Remove LH and RH fog lamp trims by prying with a small flat screw driver and then pulling them forward out of detent.



5. Remove the fog lamp retaining screws with a T25 Torx screwdriver. There are three screws on each side. Pull the fog lamps forward out of bumper and separate the electrical connectors. Retain for reinstallation.



6. Remove the four (4) plastic scrivets at the top of the grille. Pry the center section of the scrivets upwards while rotating with Allen key and retain for reinstallation.



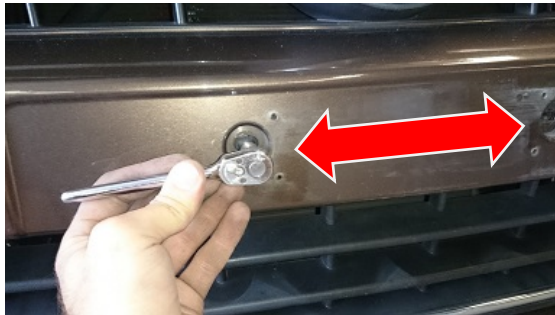
7. Remove the screws from under the wheel well using a T-25 Torx screwdriver (2 each side) and retain for reinstallation.



8. Remove the number plate and remove the two (2) bumper screws using a screw driver. Retain for reinstallation.



9. Remove the 2 bolts from behind the number plate.



10. Remove the long bolts from fog light recess in the bumper using a 13mm Socket (1 each side). Retain for reinstallation.



11. Remove the screws that retain the front edge of the wheel well liners to the underside of the bumper using a T-25 Torx screw driver.



12. With the help of a second person release the bumper from beneath the headlights and remove the bumper by pulling off forwards and parallel.



13. Undo and remove the radiator core support cross braces (2 places each) using a 13mm socket take care not to drop the spacer plate. Retain for reinstallation.



14. Unplug latch sensor.



15. Remove bonnet release cable restraint by pushing down firmly on the 2 pins from radiator



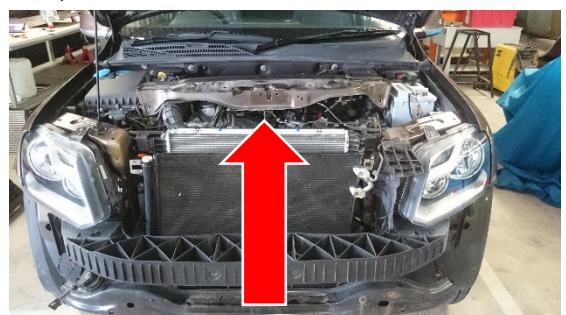
16. Undo the screw holding in the air intake spout on the driver's side of the car next to the head lamp.



17. Carefully release the clips in the intake and remove forward from the vehicle and retain for reinstallation. Unbolt the radiator core support panel using a T-30 Torx screw driver (4 places on the front edge and 2 places on the top edge)



18. **NOTE** – Leave bonnet release cable connected to radiator core support and rest core support across the top of the engine being careful not to touch the battery or surfaces that may be easily scratched.



20. Remove the top intercooler hose by undoing the clamps and force hose off. (If installing the PWR pipe kit it is suggested cut the hose along the length of the outlets using a knife to speed up the hose removal and Discard the OEM hoses).



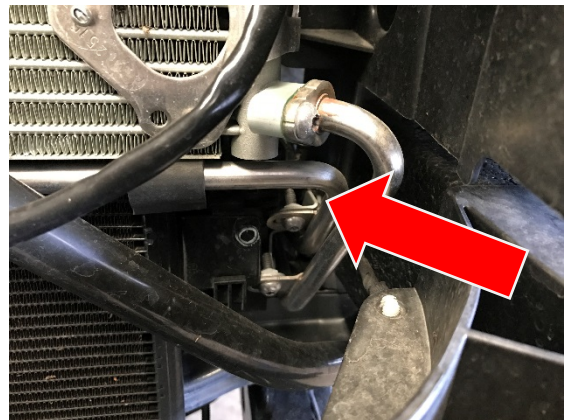
21. Undo and remove the bottom intercooler inlet hose by undoing hose clamps and either forcing the hose off (or if installing the PWR pipe kit cutting the hose away for ease of removal).



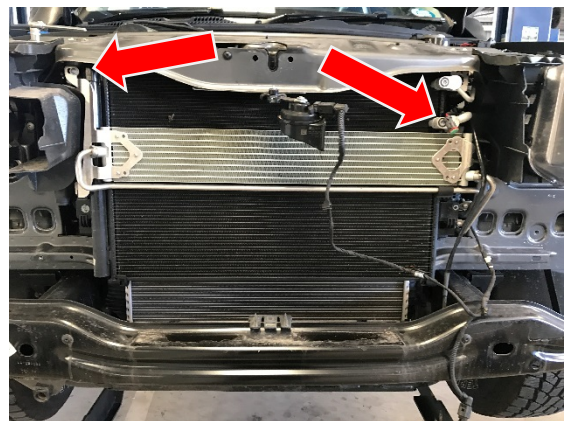
22. Unclip plug and remove horns using a 13mm socket on each side of chassis rail. This step is required to give you extra access room for the next steps.



23. If your Amarok has the Automatic transmission cooler installed as shown below, undo the 2 mount screws holding the lines in place. If no transmission cooler is fitted proceed to step 25.



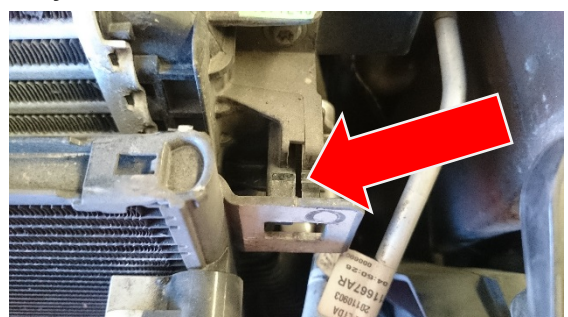
24. Undo mounting screw and release from lower clips and the clip behind as indicated below.

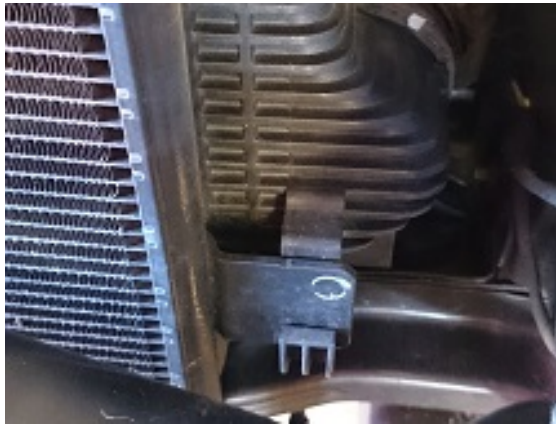


- 25.



Take extra care during the next stage to avoid having to degas and re-gas the air-conditioning system. Separate the Air-conditioning condenser away from the radiator and intercooler assembly by pushing in the tabs on the top brackets and pulling up and forward out of the lower cradle. Do not remove but take up slack in A/C lines and pull forward. **Alternatively, have a qualified automotive air conditioning expert degas the A/C for removal.**



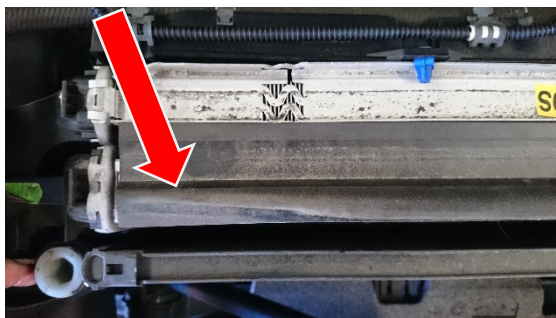


26. Once the A/C condenser is loosened undo the T-30 Torx screws on the Intercooler.



27. To remove lift up and forward. May require some manipulation of Radiator and A/C condenser and hoses to remove. It is suggested to have the help of a second person to spread the cores and hoses apart during removal to avoid damaging the radiator and A/C condenser cores by pulling in the direction of the red arrow as below.

N.B. You may also want to remove the bracket as shown in step 29 at this time to avoid damage to cores.



28. Remove plastic strip from the top of the OE intercooler and set aside to reinstall on the PWR intercooler.



29. Also if fitted, remove the transmission cooler bracket as shown. Retain for reinstallation.



ASSEMBLY

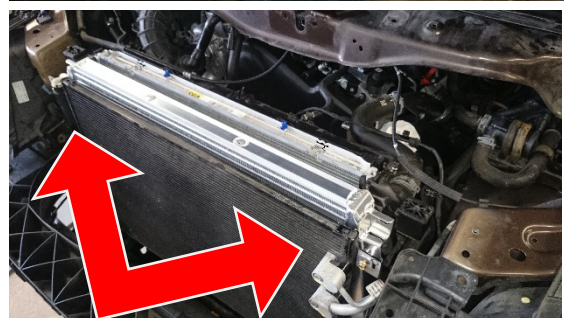
The following section will guide you through the assembly of the PWR Performance Products upgraded intercooler and pipe kit installation in your vehicle. If you have not purchased the PWR Radiator upgrade and are only installing the intercooler and pipe kit, please proceed to step **Assembly Section 2 – Pipe Kit**.

Assembly Section 1 – Intercooler

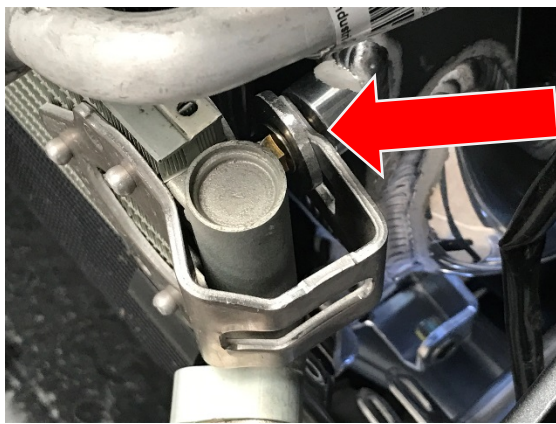
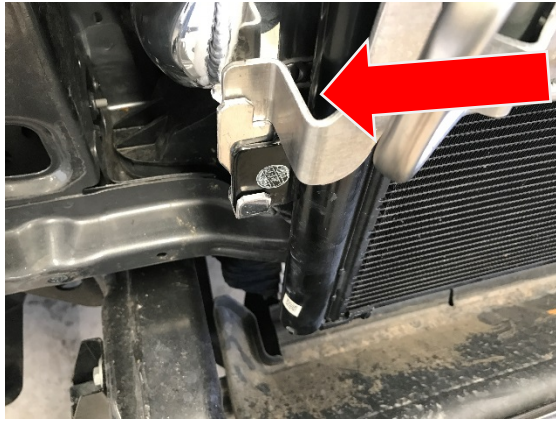
1. Taking care and with the help of another person pull the A/C lines and condenser out of the way and install the new intercooler. Be sure it locates in the bottom clips and use the original screws to fix it to the radiator.



2. Reinstall the A/C condenser back in place being sure the lower tabs have connected properly and use the new M6 screws and washers to hold in place at the top. (only install 1 on passenger side at this time if your car has a the OEM transmission cooler)



3. At this point reinstall the transmission cooler using the new screw supplied. This bolt is hidden as shown below. Ensure bottom mount is clipped in to the bracket.



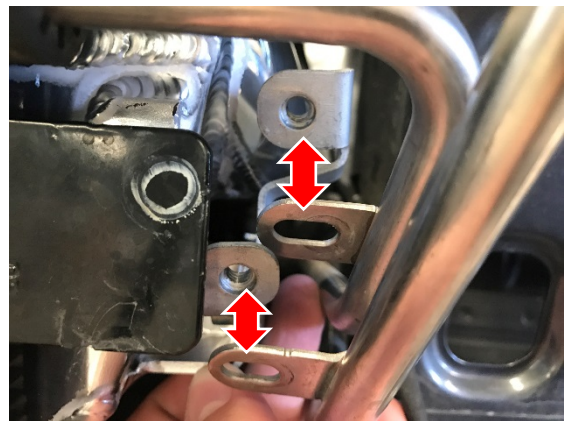
4. Install the M6x50 bolt and billet spacer 99A19837 on the driver's side to secure the AC condenser and the transmission cooler.



5. Reinstall the metal bracket to the PWR intercooler that hold the Transmission oil cooler pipes as shown.



6. Secure the transmission cooler pipes to the bracket.



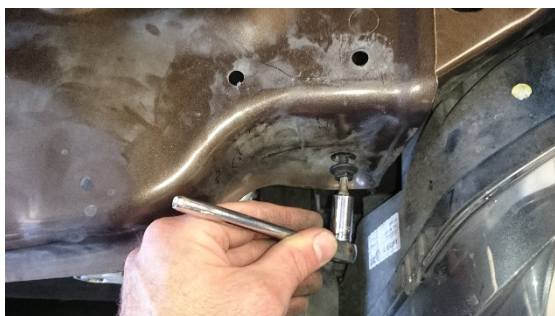
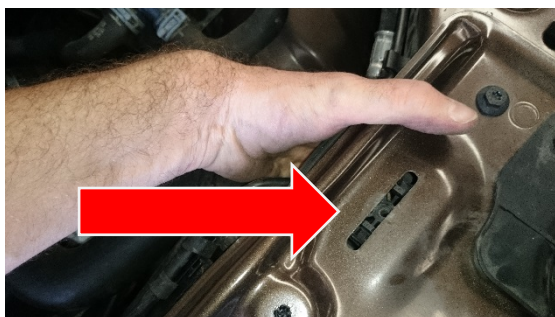
7. Reinstall the plastic strip on top of the new PWR intercooler.



9. Reinstall air ducting by clipping into place and fasten using original bolt next to head light.



8. Reinstall the radiator core support panel and fasten using original bolts. Make sure the radiator lines up and slips in to the slot as indicated below.



10. If you have the transmission cooler you may be required to install the supplied M8 x 40 bolts with the washers and 20mm spacers so the radiator core support braces do not touch the transmission cooler. In not fitted/required proceed to step 11.



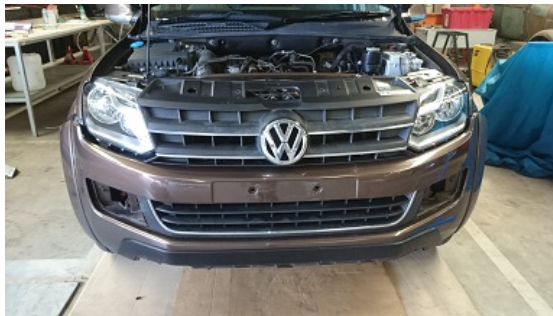
11. Reinstall radiator core support braces and the bonnet latch.



12. Clip Sensor back into place and reinstall horn.



13. Reinstall the front bar and grille.



14. Install the screws behind the fog lights, number plate as well as under the bumper and wheel arches.



15. Reinstall the sensor back into the bar as indicated.



16. Re install the plastic cowling over the radiator and Intercooler.



Assembly Section 2 – Pipe Kit

⚠ WARNING

Ensure torque settings are correct for Murray clamps to avoid under or over tension of clamps which may lead to failure. Rated Ultimate Torque: 75in.lbs. min. (8.5Nm) Recommended Installation Torque: 50in.lbs. (5.6Nm)

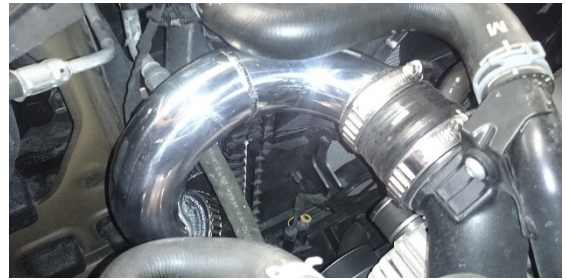
17. Start with the cold pipe by connecting the silicone elbow (15A18924) to the intercooler. Slip on clamps but don't tighten at this point.



18. Next slide the silicone reducer (15A18923) on to the throttle body. Slide on clamps but do not tighten at this point.



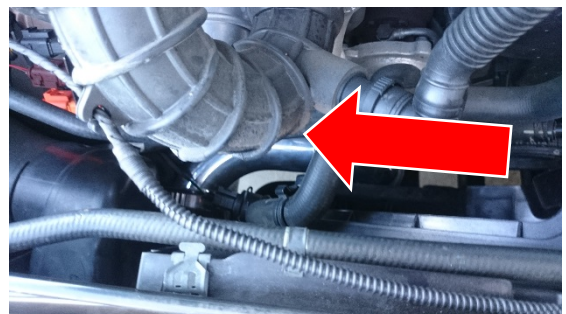
19. Next slip in tube 01.64398 and rotate into place to ensure silicone and hard pipes do not rub or touch anywhere. Then do up clamps to tension and confirm they are tight.



20. Move to the hot side next. The assembled hot pipe will look similar to the lay out below.



21. At this stage slip on all silicone and hose clamps but do not tighten up at this point.
22. Slide the pipe up from under the car and connect the top of the pipe work to the intercooler as shown below.



23. Next connect the silicone to the bottom of the turbo outlet as shown in the image below.



24. Ensure that the pipes do not rub anywhere and tighten up all clamps to tension.
N.B. The OE plumbing may vary from auto to manual so please pay particular attention to ensure that there is no rubbing on other hoses. If you find hoses are touching insulate

contact areas and zip tie to secure to ensure there is no rub through.

25. Reconnect the battery and confirm that all nut bolts, washers, clips and clamps are done up.
26. Ensure there are no tools or obstructions left under the bonnet and your PWR intercooler and pipe kit is now installed. Enjoy and thank you from the team at PWR.

