

---

# INSTALLATION GUIDE

TOYOTA HILUX  
INTERCOOLER KIT



P/N PWI66777K



# Contents

<b>CONDITIONAL MANUFACTURERS WARRANTY</b> .....	2
Warranty voids.....	2
Warranty does not cover.....	2
<b>LIMIT OF LIABILITY STATEMENT</b> .....	2
<b>SAFETY PRECAUTIONS</b> .....	3
<b>IMPORTANT INFORMATION FOR FITTING</b> .....	4
RADIATORS: .....	4
INTERCOOLERS:.....	4
OIL COOLERS:.....	4
LIQUID TO AIR BARREL INTERCOOLER KITS: .....	4
<b>APPLICATION</b> .....	5
<b>PACKING LIST</b> .....	5
<b>EQUIPMENT AND SUPPLIES REQUIRED FOR FITMENT</b> .....	6
<b>DISASSEMBLY</b> .....	7
<b>ASSEMBLY</b> .....	13
Assembly Intercooler and Pipe Kit .....	13

## 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 your 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 re-check 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:***

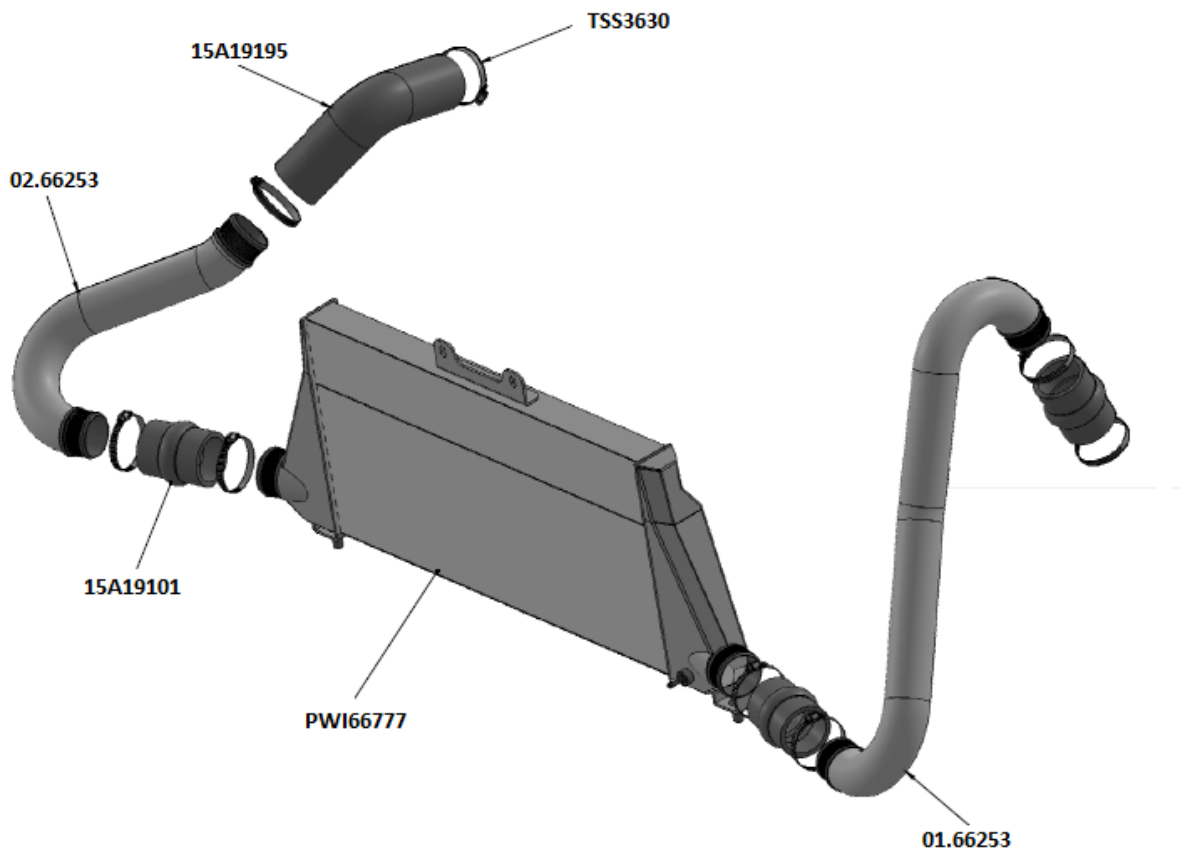
- Select a coolant that is recommended by the manufacturer or by PWR. Product must meet the current AS2108 engine coolant/inhibitor standard and refill system. Cycle the fluids through the system to remove air locks. Re-check the coolant level and top up if necessary. USE ONLY DISTILLED WATER.
- PLEASE 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
<b>Air Induction</b>		
55mm/42mm Hilux Stepped Intercooler	PWI66777	1
1/8" NPT to 3/16" Barb	AF841-03-04	1
Cold Intercooler Intake Pipe	01.66253	1
Hot Intercooler Outlet Pipe	02.66253	1
Silicone Hump Hose 51mm x 80mm Long	15A19101	3
Silicone Hose 51mm x 67 Degree Bend	15A19195	1
Zip Ties 200 x 4.8	CT2004.8B	5
Murray Hose Clamps 50-73mm	TSS36S30EP00C	8
Bolt M6 x 16 Socket Head Cap Screw	SHCSM616ZP	2
M6 Flat Washers	MSFWM6Z	2
<b>Decals/Labels</b>		
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
- 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
- Hacksaw or Snips (to cut plastic)
- Medium Strength Thread Locker – Loctite® 242 (blue) or equivalent
- Writing equipment (pen or marker)
- Zip lock / resealable 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 grille starting with the top edge of the grille using small flat blade screw driver.



5. Next remove the screws from behind the grille holding the brackets to the grille.



6. Once the brackets are removed pop out the grille.





7. Once the grille is removed it is recommended to begin removal of the screws and clips under the wheel arches.



8. Remove the bolts and clips under the bumper bar.



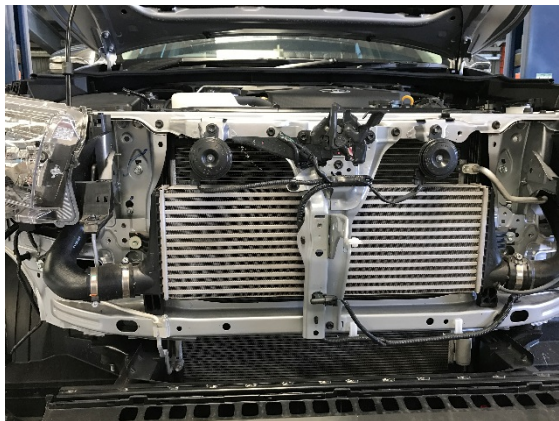
9. Undo the last of the bolts holding in the top of the bar.



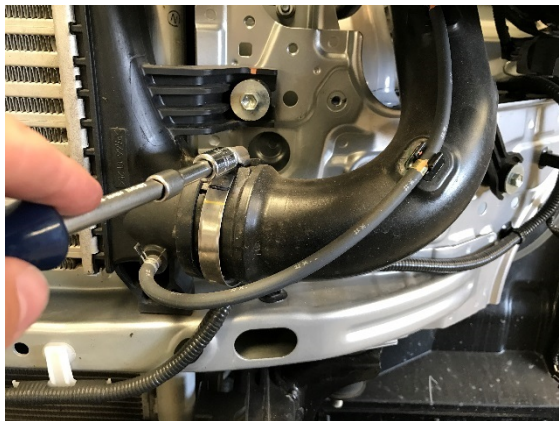
10. Unplug fog lights if fitted and with the help of a second person pull the bar away from the car.

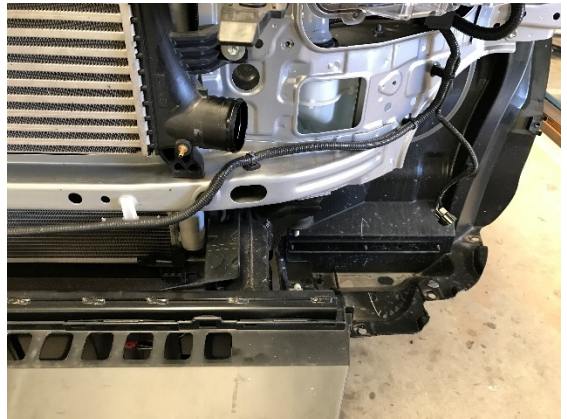
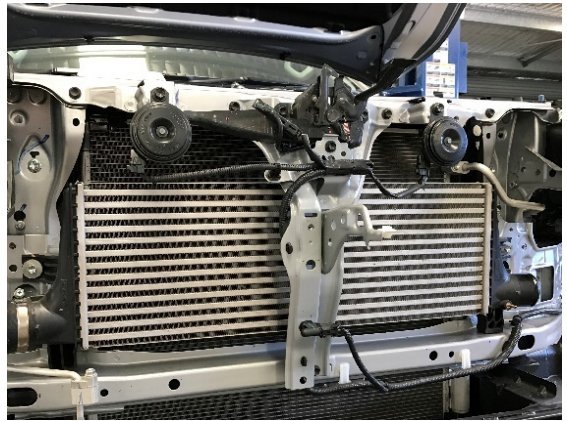


11. Next step is to remove the middle reinforcement bar and the brackets holding it in place.

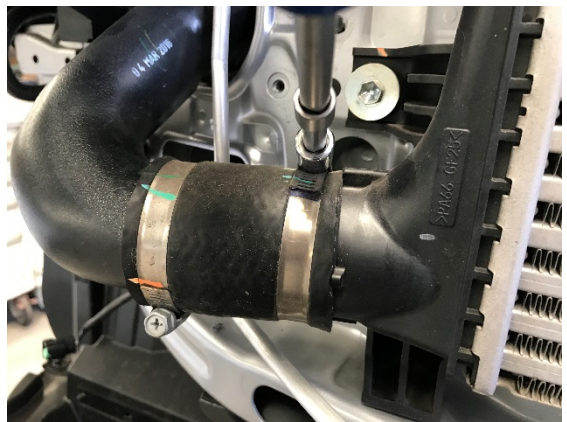


12. Undo the boost sensor hose and begin to remove all the factory cold side piping.

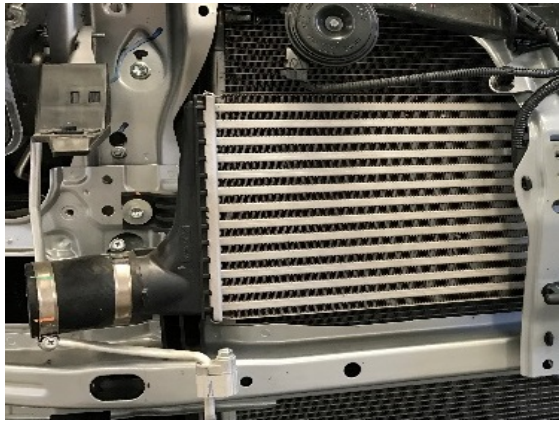
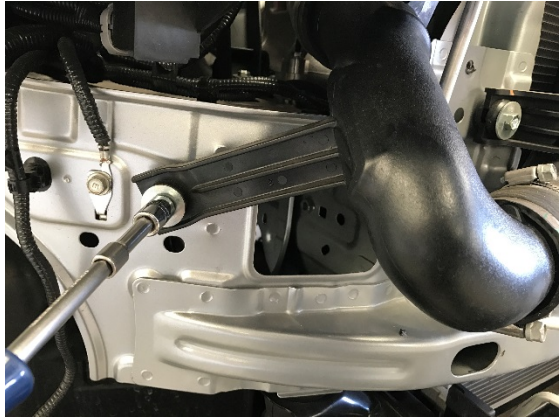




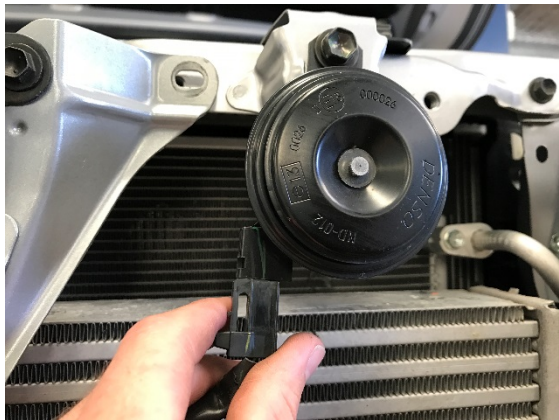
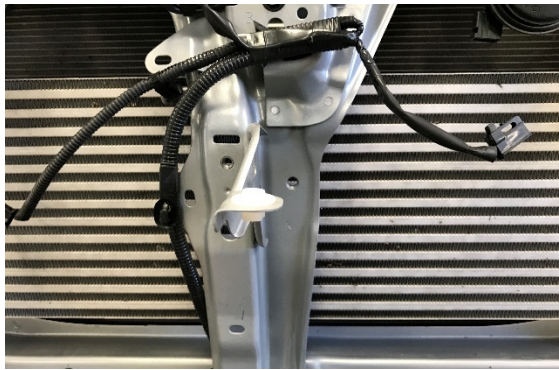
13. Next step is to undo the hose clamps on the hot side OEM intercooler pipes.



14. Undo support bracket bolts to remove the OEM hot side pipe.



15. Unplug the horns and wiring harness clips.



16. Remove Sensor.



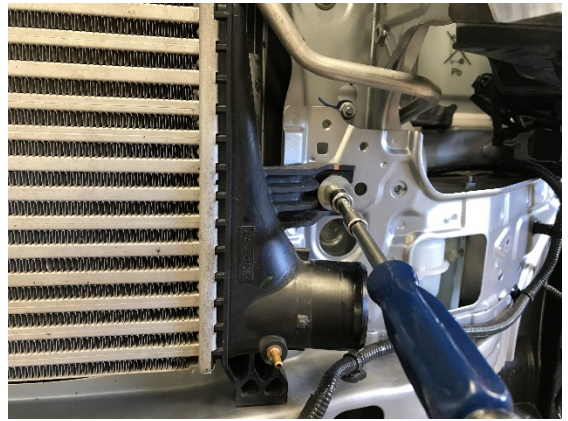
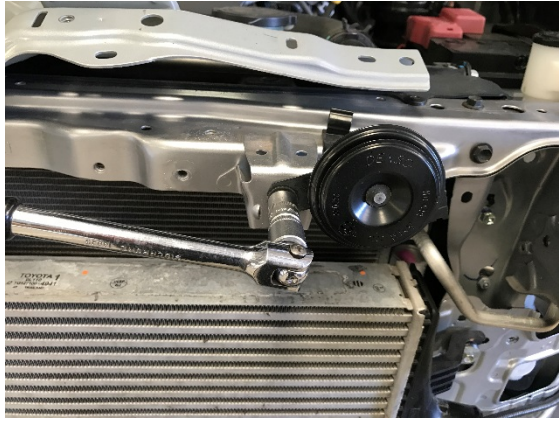
17. Undo bonnet latch.



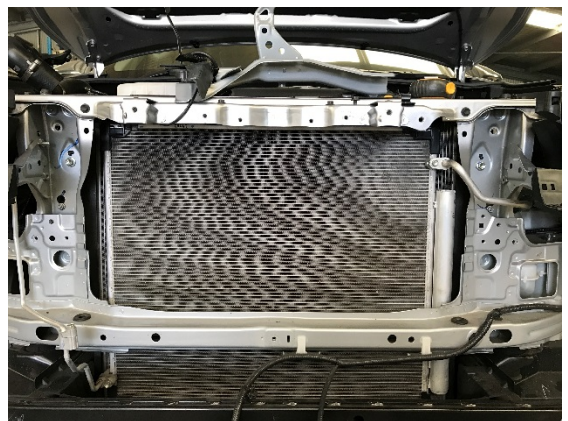
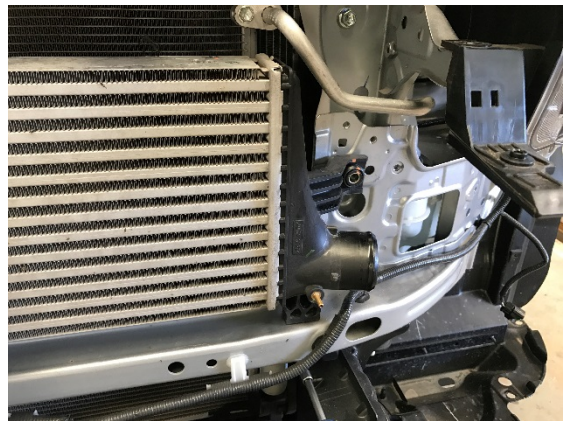
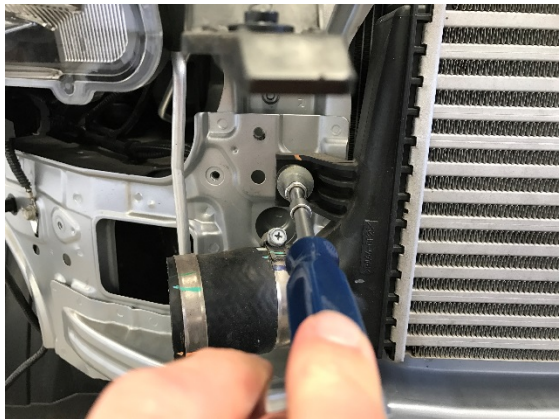
18. Unscrew and remove center support after the latch is removed.



19. Undo and remove the horns.



20. Undo the bolts and remove the OEM intercooler.



# ASSEMBLY

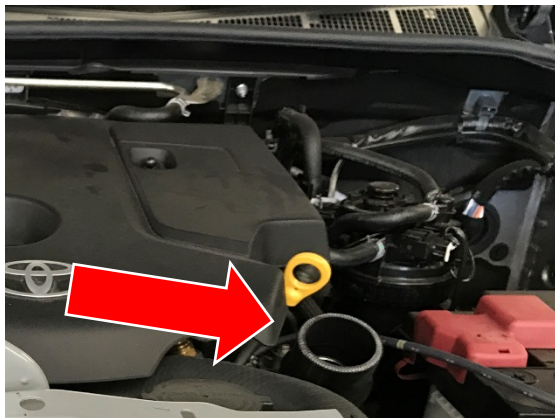
The following section will guide you through the assembly of the PWR Performance Products upgraded intercooler and pipe kit installation in your vehicle.

## ***Assembly of Intercooler and Pipe Kit***

21. Next step is to install the new PWR supplied pipes.



22. Slide the silicone hose 15A19101 onto the throttle body. Putting hose clamps on loose at this stage.



23. Next slide the cold pipe in through the hole in the support panel and slip into the silicone.



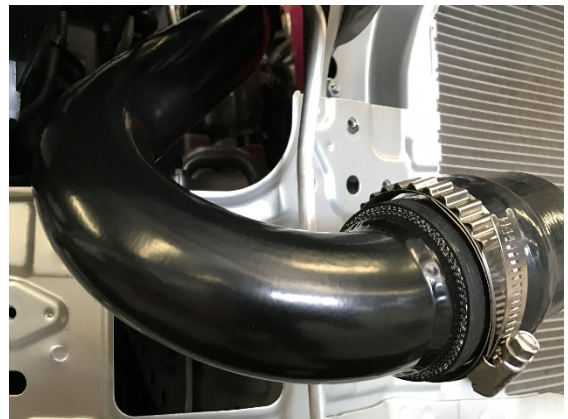
24. Next slip the silicone hose 15A19195 onto the turbo outlet, again put clamps on loose at this stage.



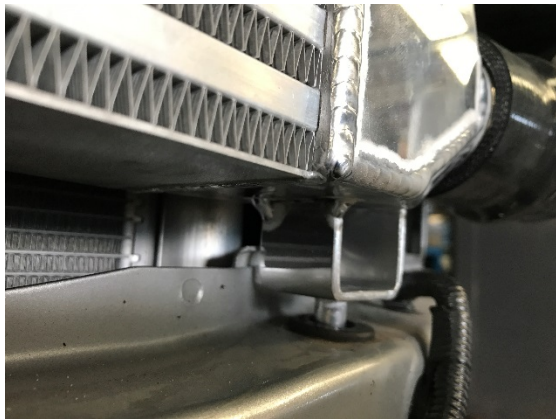
25. Proceed to feed the hot pipe through the hole in the radiator core support panel as shown.



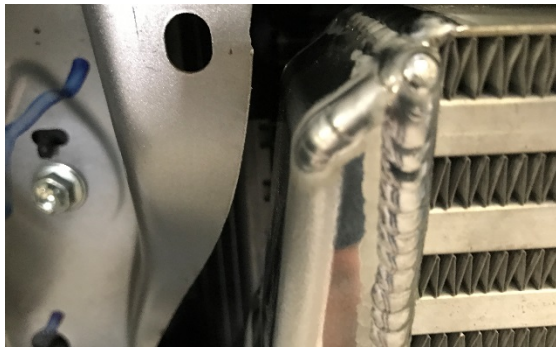
26. Slide the last two pieces of silicone 15A19101 onto the intercooler ends of the pipework.



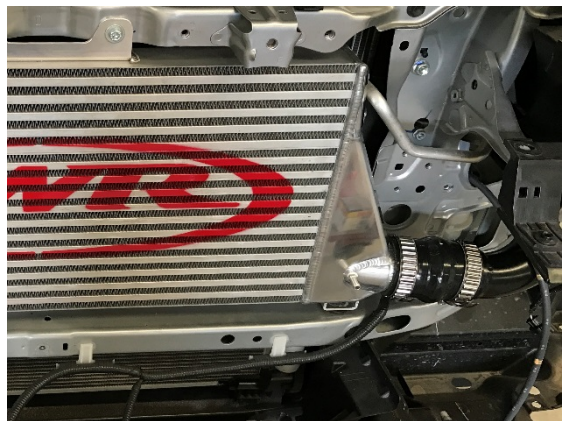
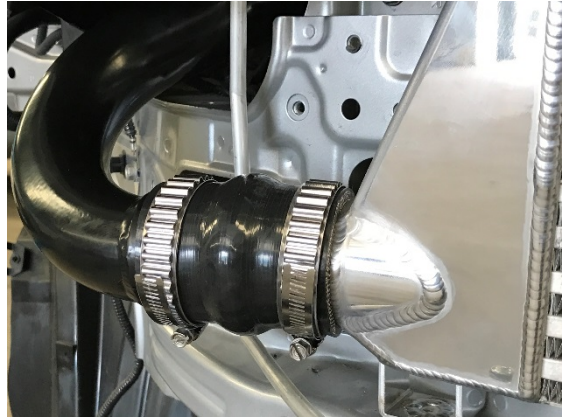
27. Next ensure the rubber grommets are still in the lower mounts and begin to install the new PWR intercooler.



28. Ensure the Intercooler does not rub on the body or air conditioning lines anywhere. It is very close but there should be approximately 3mm clearance.



29. Slide the intercooler pipes onto the intercooler inlets and outlets.

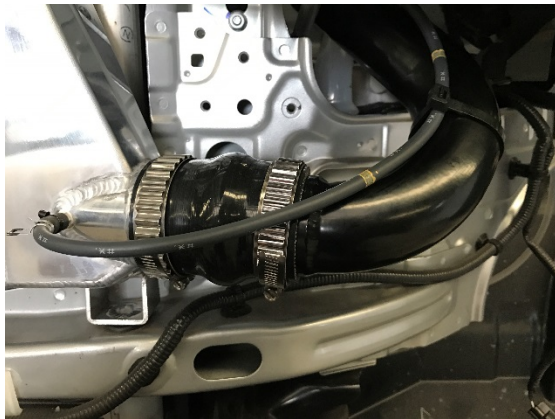


30. Use the 2 x M6 socket caps screws and washers provided to fix into place.



31. Double check all the pipe work and intercooler are clear of obstruction and tighten up hose clamps and fasteners. Ensure the Murray clamps are tightened to manufacturer's specifications.

32. Ensure the hose barb AF841-03-04 is screwed into the intercooler and sealed then route the boost pressure sensor line from the intercooler along the cold pipe and secure with cable ties (supplied) and/or heat proof tape as shown.



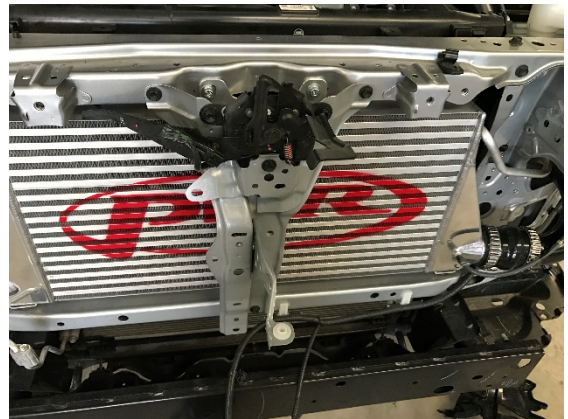
33. Be careful that the hose is not squashed with the cable tie.



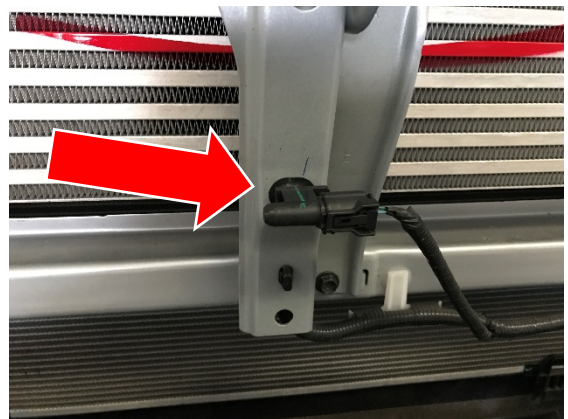
34. Before you reinstall the bonnet latch and support brace you will need to trim off and debur the edge of the cable guide/cover to avoid it hitting your new PWR intercooler as shown in the images below.



35. Install and secure bonnet latch and brace and check it does not touch the core anywhere.

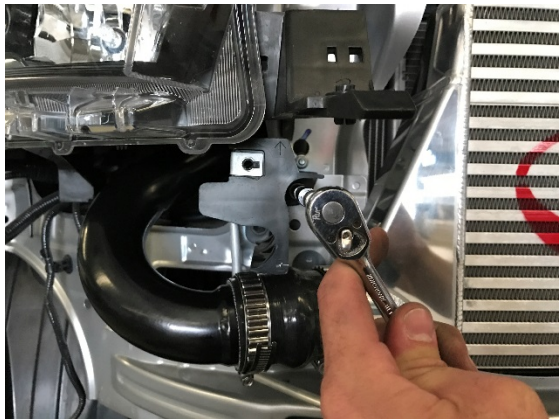
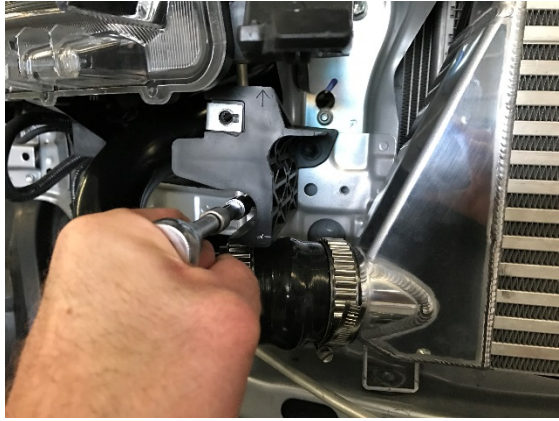


36. Reinstall sensors.

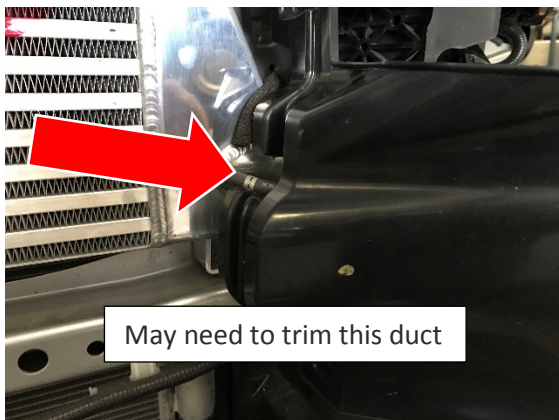
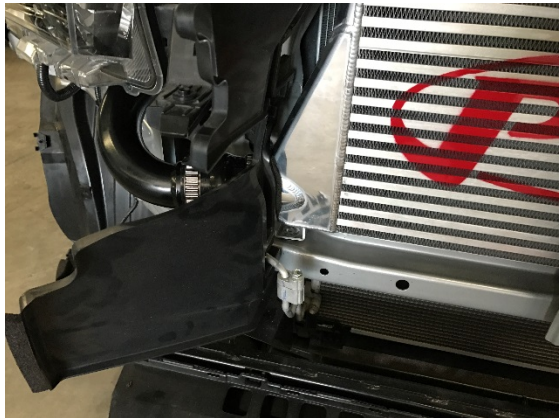




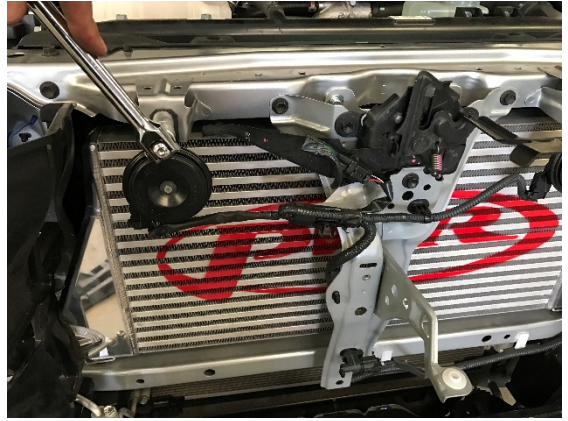
37. Install the bumper reinforcement brackets.



38. Install the ducting. NB: the passenger side duct may need to be trimmed to avoid hitting the boost sensor hose.



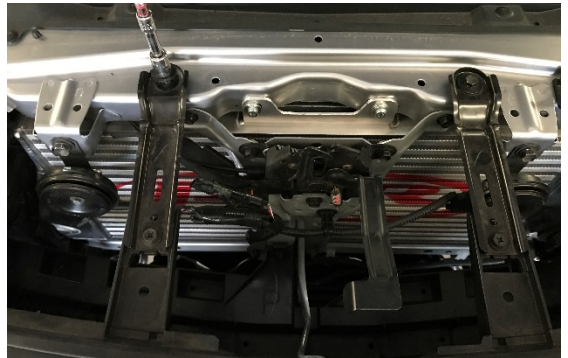
39. Reinstall the horns.



40. Reinstall the bumper reinforcement bar.



41. Reinstall the bumper bar. Ensure all brackets and bolts are secure.





42. Reinstall the front grille and lock panel cover.



43. Reconnect the battery and confirm that all nuts, bolts, washers, clips and clamps are done up.
44. Ensure there are no tools or obstructions left under the bonnet and your PWR intercooler and pipe kit is now installed ready to enjoy.

