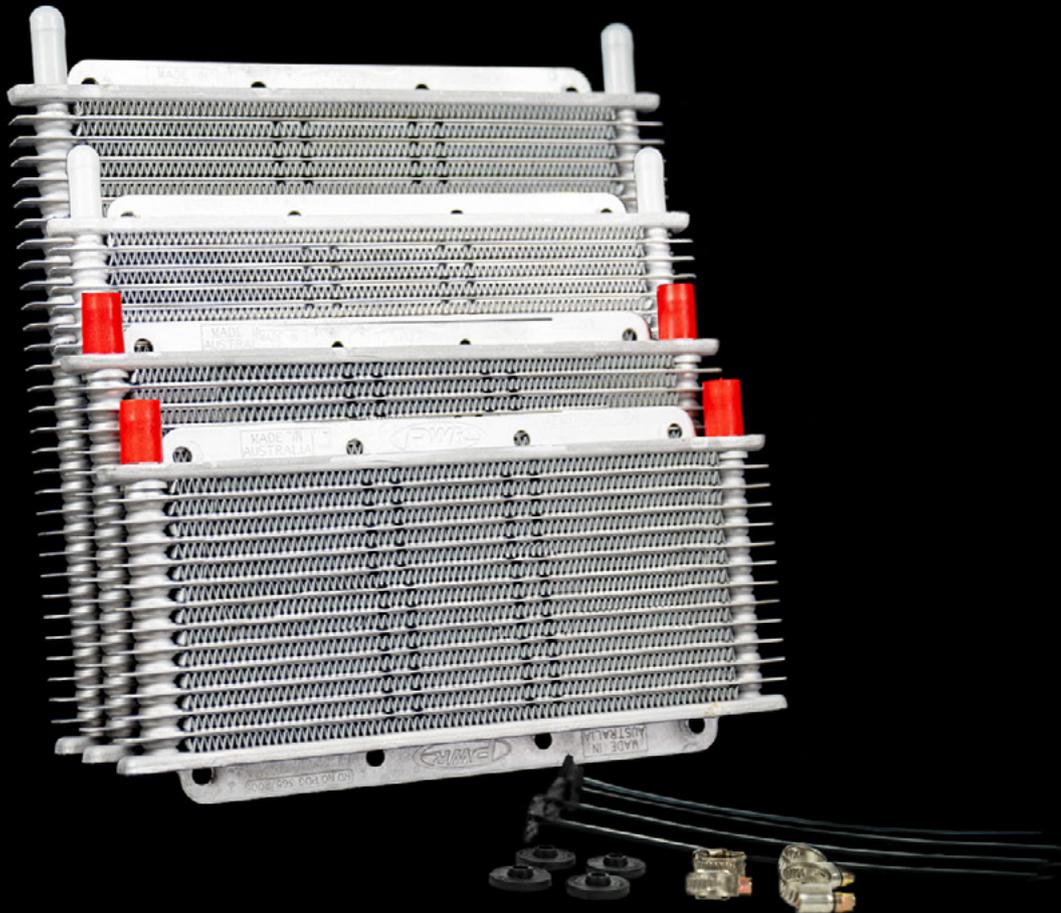


# INSTALLATION GUIDE

## TRANSMISSION COOLER INSTRUCTIONS



### Universal Kits

Part#	Description	Outlet Size
PWO5628	Transmission Oil Cooler Kit, 280 x 110 x 19mm	5/16'
PWO5629	Transmission Oil Cooler Kit, 280 x 150 x 19mm	5/16'
PWO5630	Transmission Oil Cooler Kit, 280 x 200 x 19mm	5/16'
PWO5631	Transmission Oil Cooler Kit, 280 x 255 x 19mm	5/16'
PWO5386	Transmission Oil Cooler Kit, 280 x 110 x 19mm	3/8'
PWO5387	Transmission Oil Cooler Kit, 280 x 150 x 19mm	3/8'
PWO5388	Transmission Oil Cooler Kit, 280 x 200 x 19mm	3/8'
PWO5389	Transmission Oil Cooler Kit, 280 x 255 x 19mm	3/8'

### Specific Vehicle Kits

Part#	Description	Outlet Size
PWO52048	Transmission Oil Cooler Kit, Ford Falcon BF / FG / Territory 280 x 255 x 19mm	3/8'
PWO6115	Transmission Oil Cooler Kit, Ford Falcon BA 280 x 255 x 19mm	3/8'
PWO6680	Transmission Oil Cooler Kit, Holden Commodore VY V6 & V8 280 x 255 x 19mm	3/8'
PWO6687	Transmission Oil Cooler Kit, Holden Commodore VT S2 - VY V6 & V8 280 x 255 x 19mm	3/8'
PWO6690	Transmission Oil Cooler Kit, Holden Commodore VZ V6 & V8 280 x 255 x 19mm	3/8'
PWO7267	Transmission Oil Cooler Kit, Holden Commodore VE V6 & V8 ('06 - Aug '11)	3/8'



ENGINEERING THE UNFAIR ADVANTAGE

# CONDITIONAL MANUFACTURERS WARRANTY

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PWR Custom Aluminum 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

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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

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***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 jewelry 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.

The auxiliary transmission cooler is an economical way to help protect the transmission from excessive heat generated from: Towing – Boats, Caravans, Trailers Carrying loads, Climbing steep grades, Stop and go traffic, Hot driving conditions and Driving in snow or sand.

## APPLICATION

Average installation time is 30 mins.

This kit is suitable for most common makes and models. However, some transmission lines are not compatible with the quick fit kit. In these instances you should seek specialist cooling advice.

## PACKING LIST

4 X Nylon rods and locking discs  
4 X Neoprene spacer pads  
4 X Hose clamps, in-tank outlet adapter and hose.

## TOOLS REQUIRED

Screw driver  
Spanner  
Knife

## IMPORTANT NOTES:

When fitted, hoses should be free from moving objects, hot areas, sharp edges, kinks and should have a minimum bend radius of 75mm.

Transmission cooler should be mounted at least 25mm from fans and 150mm from exhaust manifolds.

Do not over tighten hose clamps as over tightening may cause premature failure.

All connections and fittings should be tightened after “settling” and should be checked periodically for leakage.

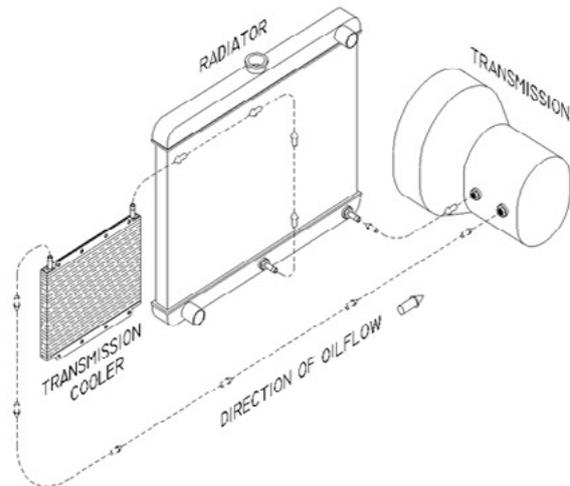
## COOLER CONNECTION

To obtain maximum efficiency from the auxiliary transmission cooler, the cooler should be placed in series with the existing cooling system (FIG 1).

To use the PWR auxiliary transmission cooler in series it is important to ensure that the cooler is connected so that the transmission fluid passes from the cooler in the radiator to the PWR auxiliary cooler and then onto the transmission.

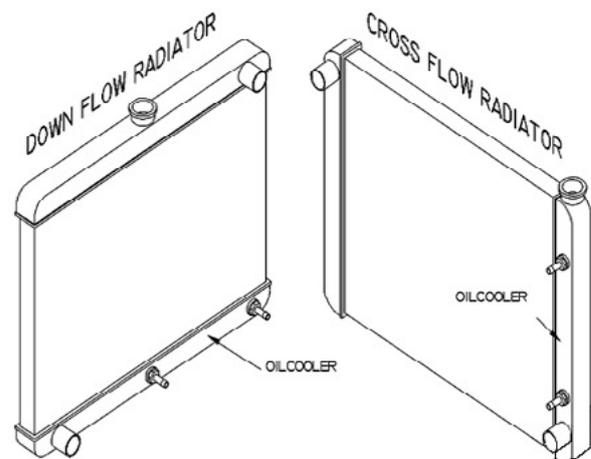
This will allow for the coolest fluid to pass to the transmission. Refer to FIG 2 to show the location of the in-tank cooler in conventional radiators

FIG 1: In series cooler connection



Indicates Intended Path For Hose Connection.

FIG 2: Conventional down flow and cross flow



Typical In-Tank Oil Cooler Positioning in Conventional Down Flow and Cross Flow Radiators.

## PROCEDURE TO DETERMINE IN-TANK OUTLET LINE:

- Start engine while cold
- Operate engine at fast idle for 10 seconds. Keep the vehicle stationary.
- Stop engine
- Feel both lines; the coolest line is the fluid outlet line.

## COOLER POSITION:

Your PWR transmission cooler can be fitted with plate's vertical or horizontal. The cooler should also be placed in front of the radiator (FIG 3), or in front of the condenser if one is fitted (FIG 4).

FIG 3: Auxiliary cooler in front of radiator

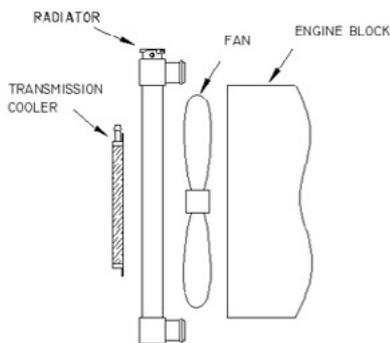
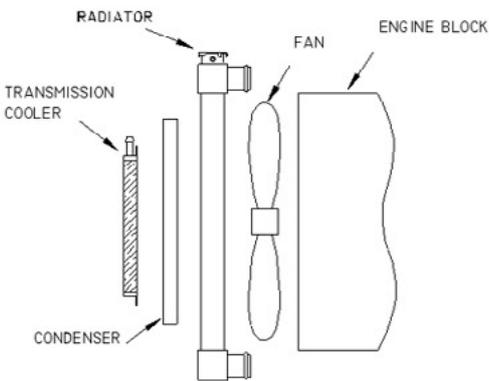


FIG 4: Auxiliary cooler in front of condenser

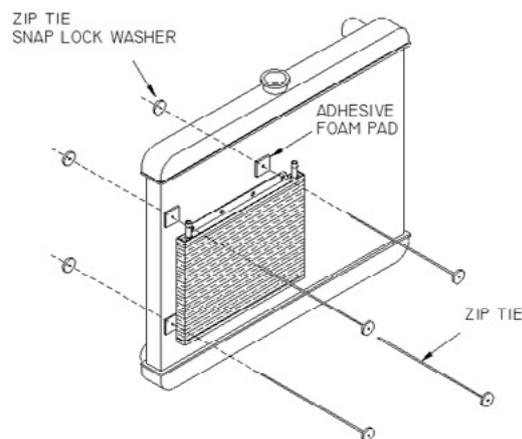


**COOLER INSTALLATION:** - Vehicle with rubber hose connections to transmission

1. Place hose clamps on ends of hose and push hose onto oil cooler fittings. Leave hose in a loop. **DO NOT CUT HOSE.**
2. Position hose clamps 6mm from end of hose and tighten hose clamps – Refer "important notes".
3. Position the 4 neoprene spacer pads behind the locating holes with the adhesive side of the neoprene sticking to the cooler.
4. Position the cooler as per fig. 3 or fig. 4 with the neoprene spacers between the cooler and the radiator or condenser.

5. Insert the 4 nylon rods through the locating holes on the cooler (and neoprene spacers) and through (a) the radiator, fig 3; or (b) the condenser and radiator, fig 4. Install locking disks onto the nylon rods. Push each disc up the nylon rods to tighten and cut off excess rod. Refer fig 5.
6. Install in-tank outlet adapter onto oil cooler outlet fitting on radiator tank.
7. Cut hose to reach in-tank cooler outlet fitting or adapter. Fit hose clamp over the end of the cooler hose and place the hose up approx. 25mm on the in-tank cooler outlet fitting or adapter.
8. Position hose clamps 6mm from end of hose and tighten hose clamps – Refer "important notes".
9. Now position the PWR transmission cooler outlet hose to the disconnected transmission line. Cut away excess hose. Fit hose clamp over the cooler hose and place the hose up approx. 25mm on the disconnected lines flared end.
10. Position hose clamps 6mm from end of hose and tighten hose clamps – Refer "Important Notes".
11. **CHECK THAT WHEN FITTED, THE HOSES ARE FREE FROM MOVING OBJECTS, HOT AREAS, SHARP EDGES, KINKS AND HAVE A MINIMUM BEND RADIUS OF 75mm – Refer "Important Notes".**

FIG 5: Position of the PWR transmission cooler neoprene spacer, radiator and tie rods.



## CHECK INSTALLATION:

1. Operate engine at fast idle for 2 minutes. Check hose and fittings for leakage. If leakage found stop engine and tighten hose clamps.
2. Both lines to the PWR cooler should be warm. If not warm, transmission fluid is not flowing through the cooler. Check for kinks in hoses or blockages.
3. Check transmission fluid as per owner's manual.
4. All connections and fittings should be tightened after "settling" and should be checked periodically for leakage – refer "Important Notes".