



**Ford Ranger/Mazda Bt50 complete
Automatic transmission cooling kit
Version 4 updates 2022**



Simple easy to fit kit



Genuine high quality OIL cooler



High quality braided hoses with – AN8 fittings



HDi Original adaptors with Normex Orings









New Mounting Brackets

Please read before continue

Please read through all the instruction and practice all precaution in all aspect of safety and every step priorand during the installation. This installation menu is purely for **HYBRID DEVELOPMENT INTERNATIONALRACING PRODUCTS** and is used as guide only. As different vehicles in different countries may have different specifications and component layout. Therefore, it is important to make sure the connection is properly done by authorized personals or dealers.

Warning

- Check and clean all open area for foreign object inside.
- Installation should only be carried out by authorized dealer or agent only.
- Avoiding water, liquid or fluid during and post installation.
- Do not install the unit in a place that will interface the driver.
- This product is off road only not for public road.
- Never adjust the fitment when the car is moving or on public road ,doing so is dangerous to yourselves and others
- Make sure there is adequate ventilation if you are installing or setting it in door.

Product name: HDi Ford Ranger/MazdaBt50 complete Automatic transmission cooling kit

Product code: HDI-ATF-KIT-RAN/MAZ-PX1-2VER4

As our goal to continuous improvement we have new update for the transmission fluid cooling kit the VERSION 2 makes the installation simpler and easier to install.

HDi Ford Ranger/Mazda Bt50 complete Automatic transmission cooling kit is designed for better temperature maintenance of the ATF oil, especially under heavy towing or under a heavy load. Tests have shown 10-15 Degrees C lower in peak temperatures well as more solid in-gear torque transfer.

The better maintaining in transmission oil temperature is known as an effective way for extension of the transmission's life.

The HDi Ford Ranger/Mazda Bt50 complete Automatic transmission cooling kit is to replacing the regular standard water to oil factory unit via a Design registered adaptor make it easy to fit.

This is another HDi innovation product from HDI to produce effective high quality product.

Performance guaranteed!

After hundreds of hours in design and testing, tests have shown 10-15 Degrees C lower in recorded peak temperature as well as more solid in-gear torque transfer.

Ford Ranger/Mazda Bt50 complete Automatic transmission cooling kit benefit as below:

- Reduce heavy load peak temperature
- Solid transmission torque transfer
- Reduce torque slip due to overheating
- Easy to install
- Extend transmission operation life
- Improve fuel efficiency by reducing transmission losses
- Best value for money

The HDi Ford Ranger/Mazda Bt50 complete Automatic transmission cooling kit comes with all needed components for completing installation. Including HDi high quality oil cooler Braded hose and professional fittings in order to take care of toughest condition. The Full stainless steel screws and brackets the best durability against water and salt corrosion. The special design allowing enough area for aftermarket4wd winch to be installed It also allows good air flow to the radiator! Perfect for installing with HDi GT2 intercooler kit (www.hdiranger.com) The reduced inlet restriction and inlet temperature provides higher density of oxygen for better combustion with the same amount of fuel. Hence, increase mileage!

Product parts list



{All pictures in this manual is for reference only actual products may be different.}

Part #	Description	quantity	note
ADPT-ran-atf 3-2-rev5	Adaptor for Ranger/BT50	2	
bk75-RNGR-ATF-top-Rrev2	HDi Oil cooler holding bracket	1	
M6 x 12	M6 x 12 mm bolt	15	
M6 nut	M6 x 12 Nut	15	
- 8 hose	HDi ATF hose kit - AN8 165/185	2	
atf cooler	HDi -AN8 transmission cooler	1	
O-Ring	Normex O-rings	4	
P-CLM-19	Rubber P Clamps	4	

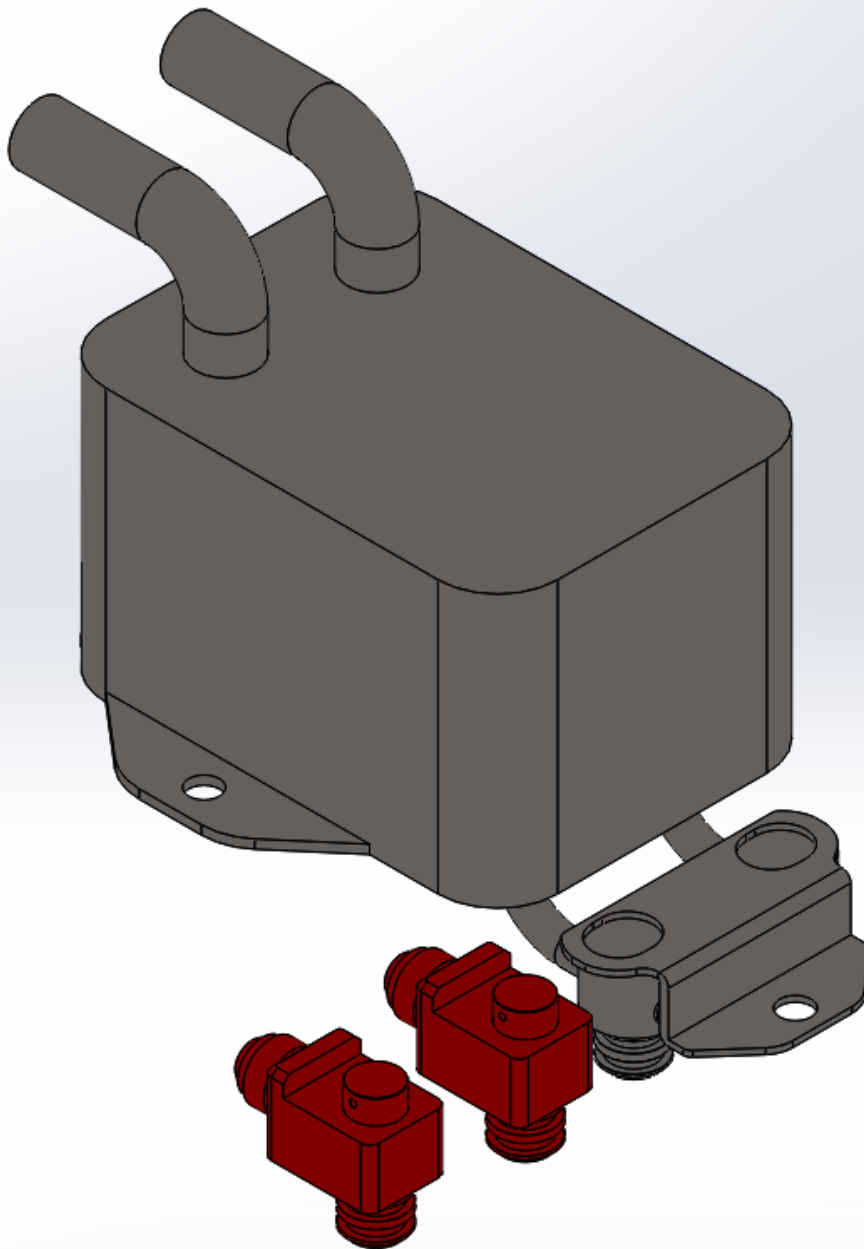
Installation:

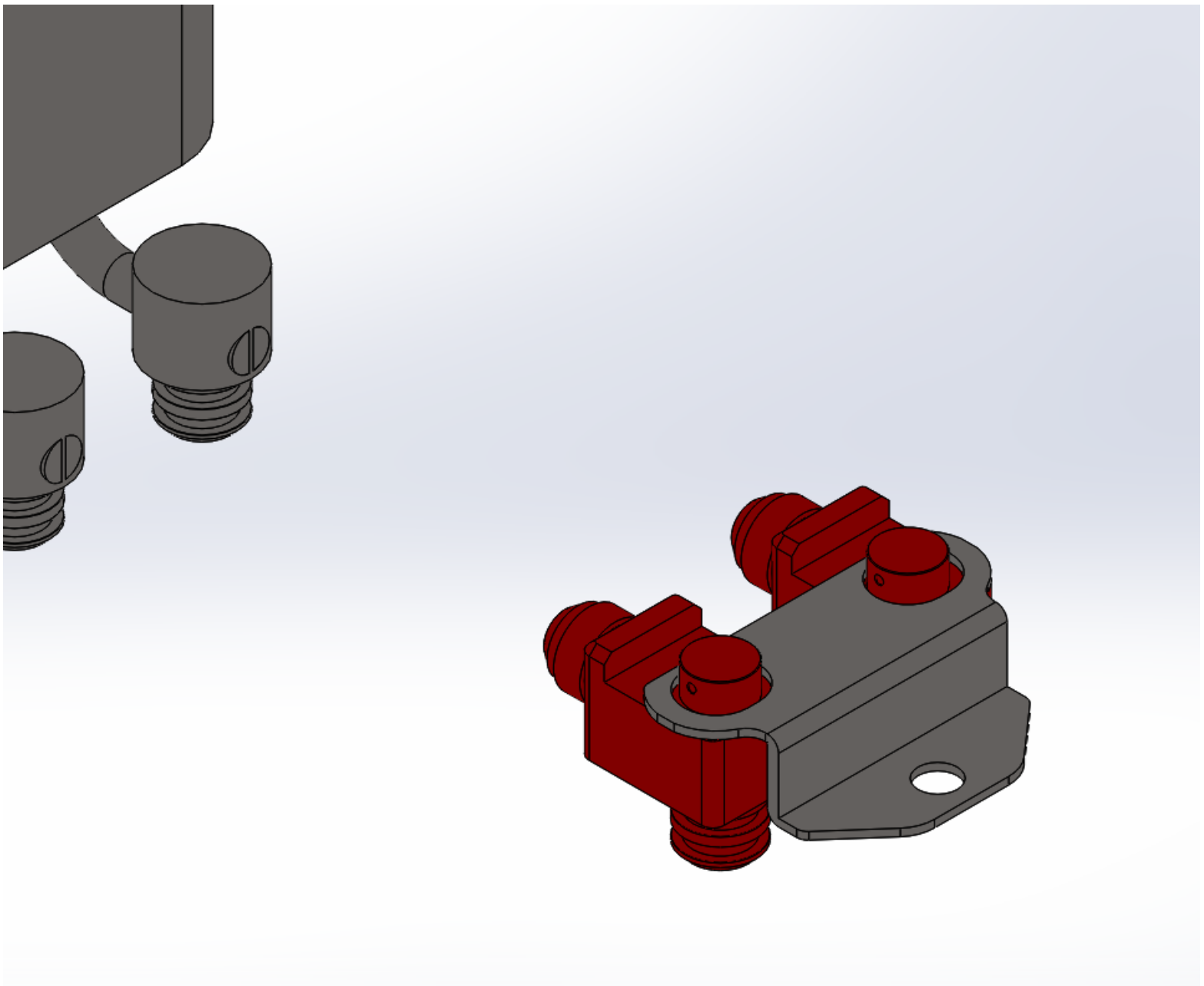
Installation of HDi Ford Ranger/Mazda Bt50 complete Automatic transmission cooling kit is simple. It is easily installed with basic workshop tools, installation is a quick and easy process normally it takes less than 1-2 hours.

All OEM cooler remains no cutting hoses needed.

The below installation are mixed photos from with Ford Ranger PX1, PX2 , and Mazda BT50 because they are very similar in installation process.

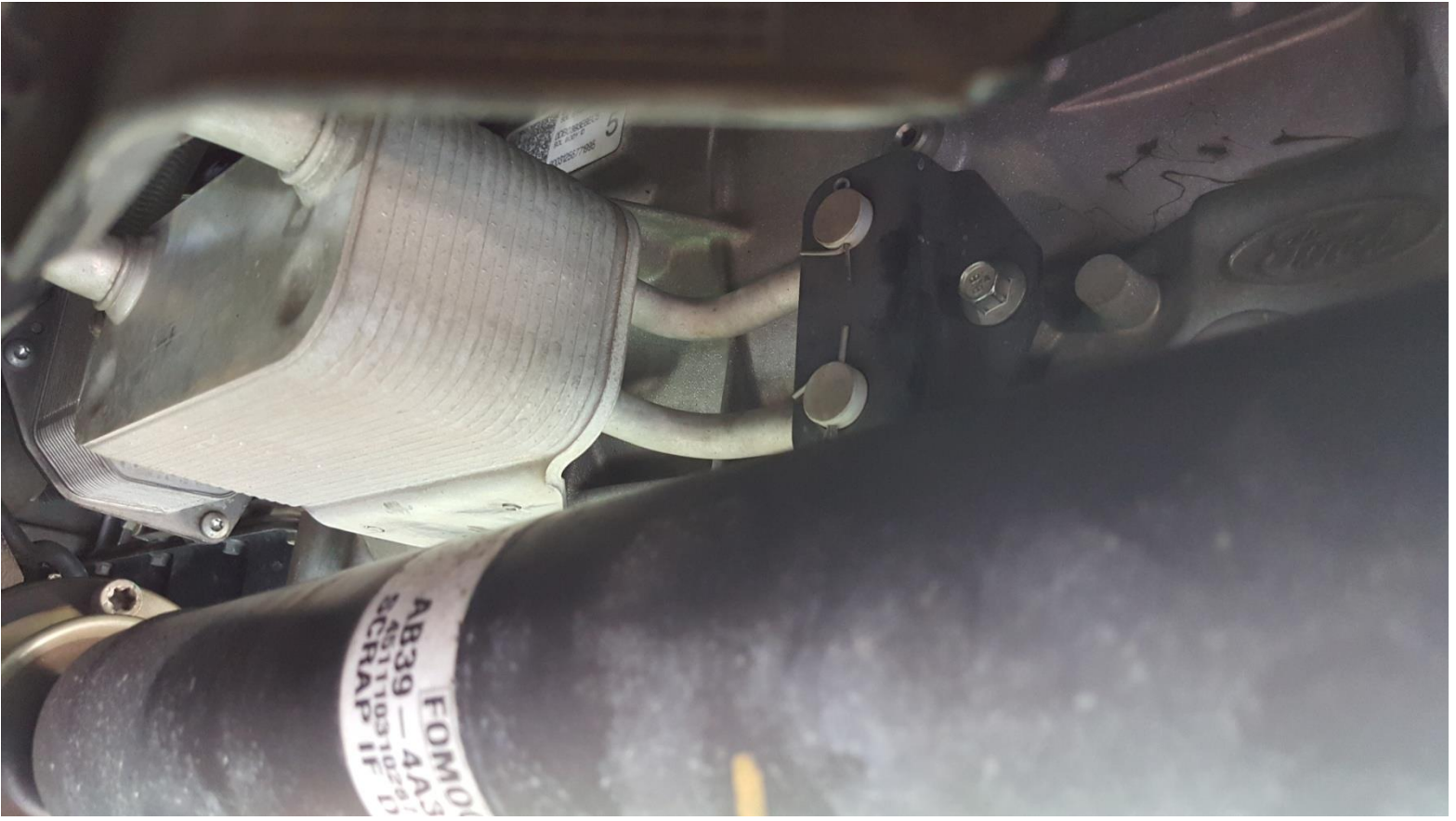
HDi Oil cooler adaptor and support brackets assembly as below:

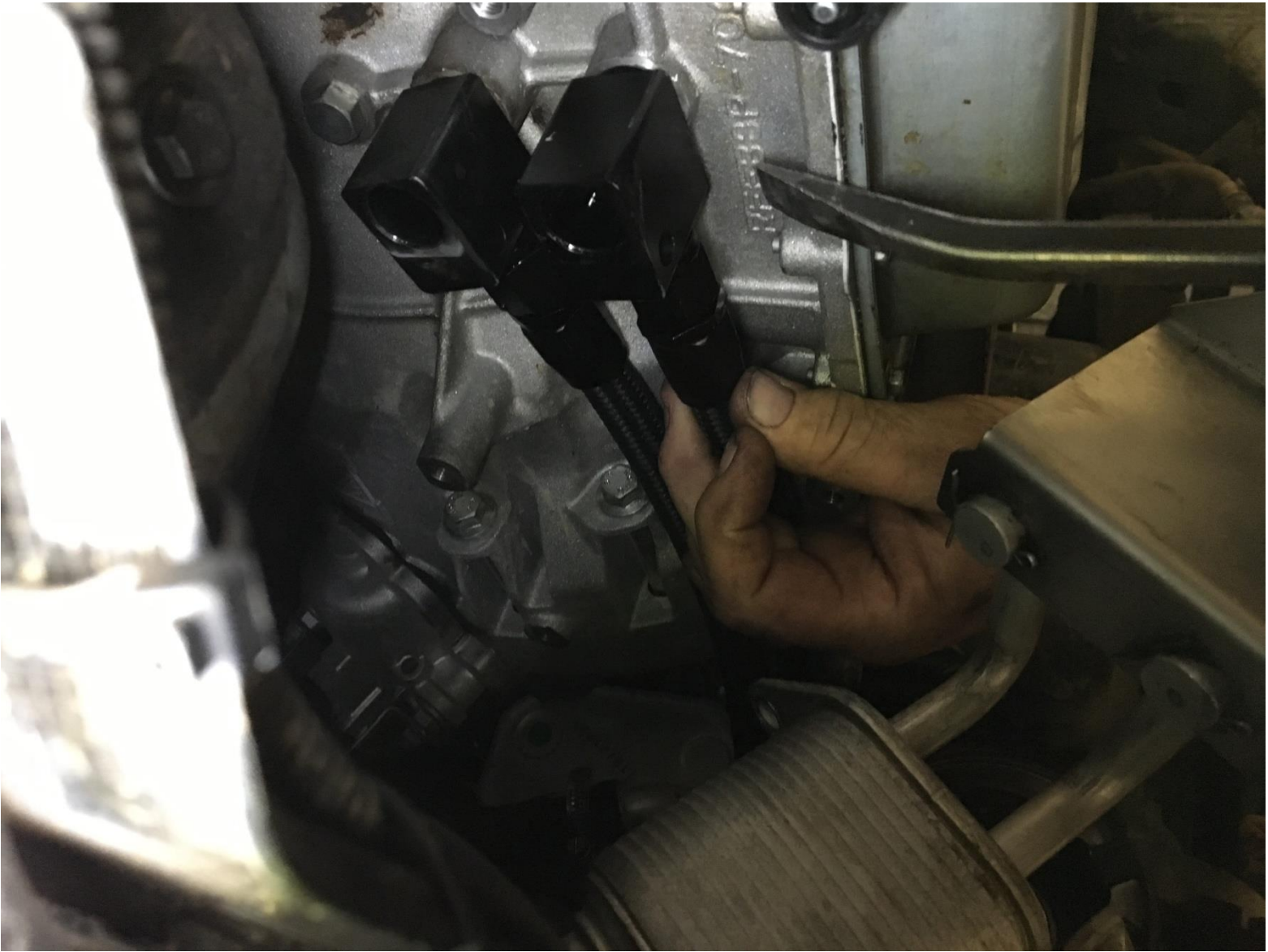




Make sure the split pins is reinstalled







Please note: by using the HDi ATF cooler adaptor the standard water to oil cooler is by passed removed , after installed the HDi ATF cooler kit please top up ATF to compensate the extra volume that the HDi AFT kit carry as well as the oil lost during the installation. Please contact the manufacturer for the oil type that is recommended.

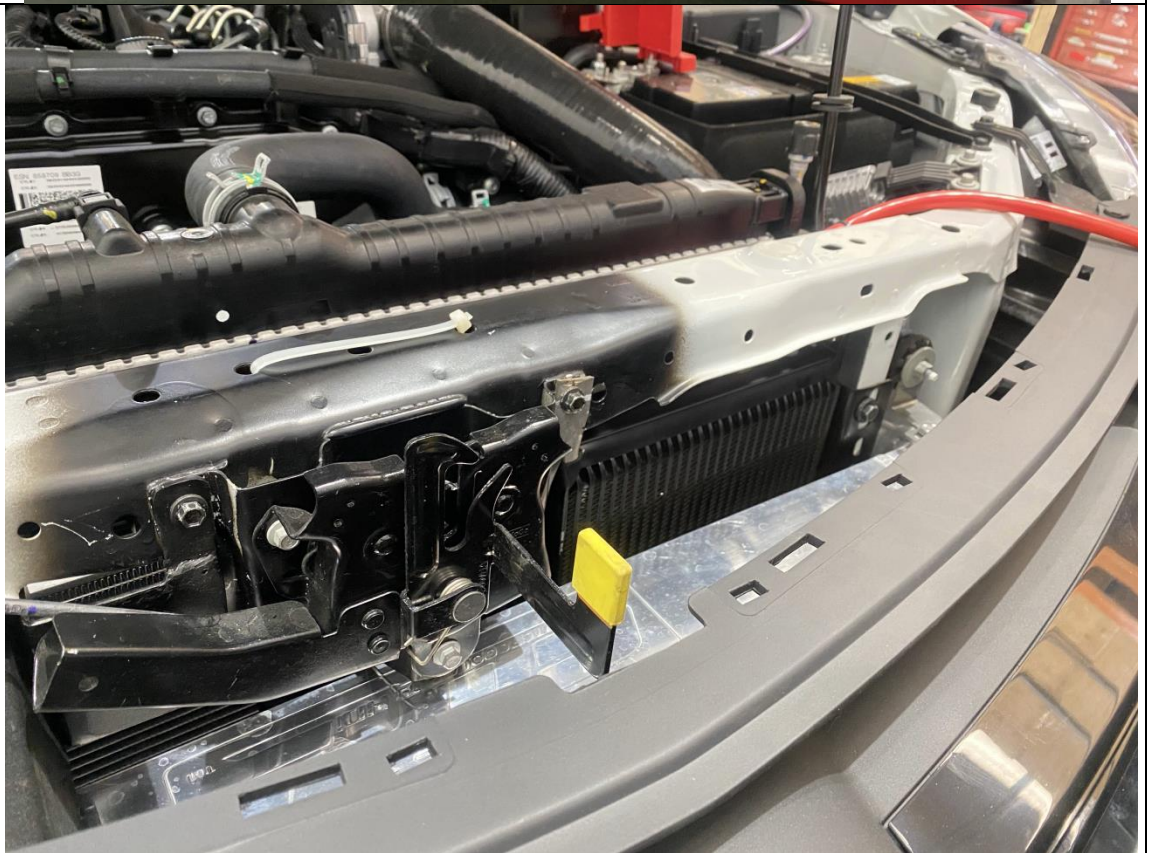
Installation procedure:

Remove the front grille



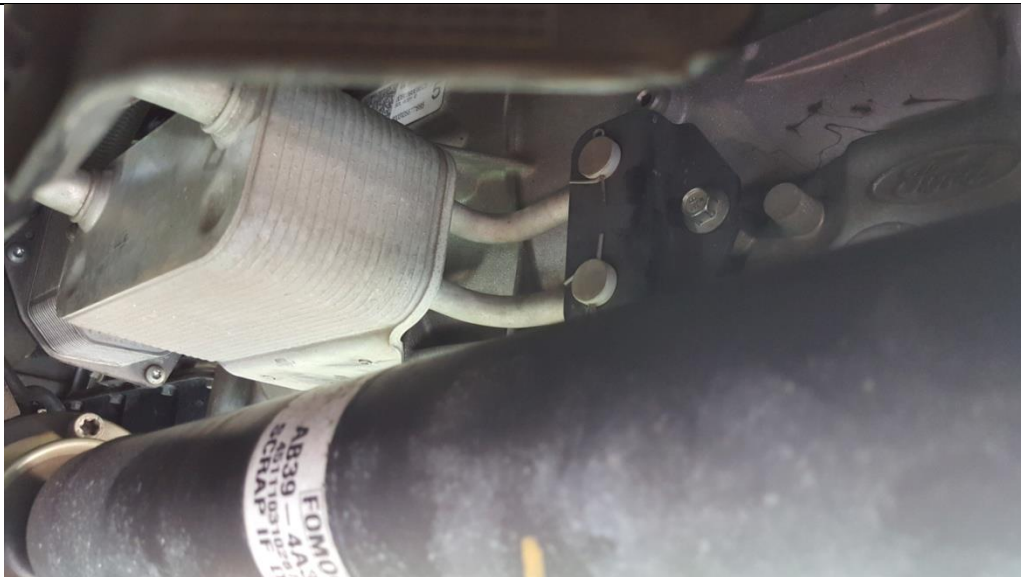
Install HDi ATF cooler kit with the supplied bracket.

You may need to drill 1 hole on top and 2 holes on the bottom





Locate the Standard AFT cooler next to the Gear box above the Drive Shaft



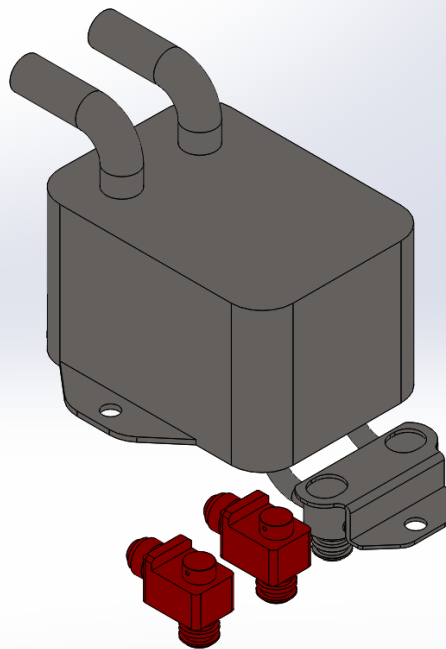
Remove the Drive shaft for better clearance and easier installation.



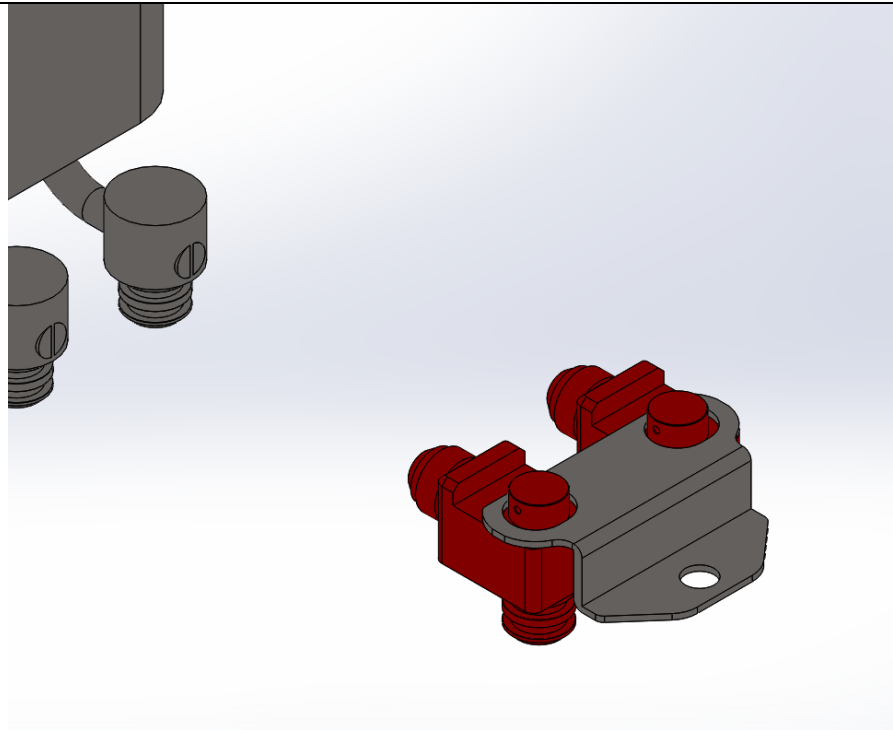
Install supplied ATF cooler brackets and HDI Adaptors. Make sure torque up to **22.5 - 29 ft/lbs!**



Carefully remove the standard ATF cooler brackets, (DO NOT Disconnect the Standard ATF cooler's Top water hoses! Yet)



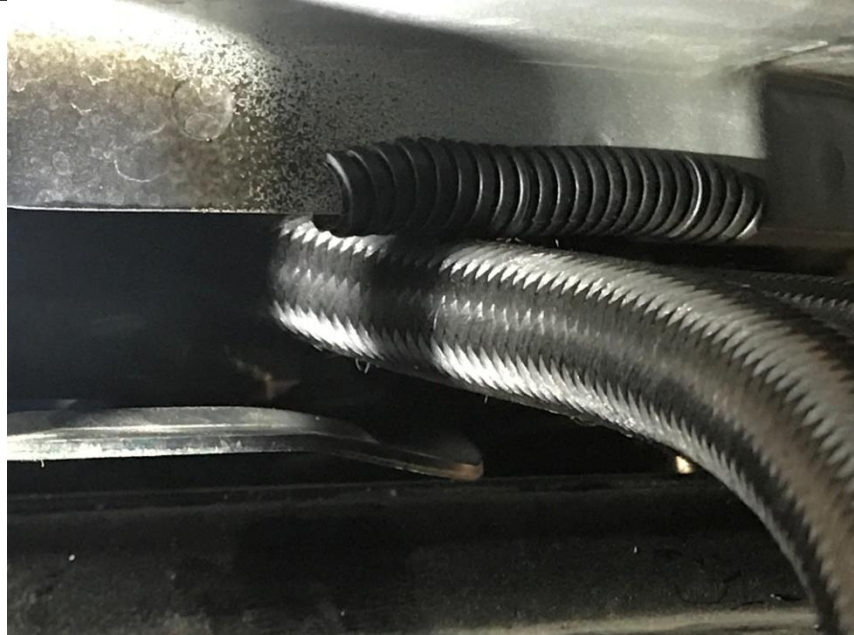
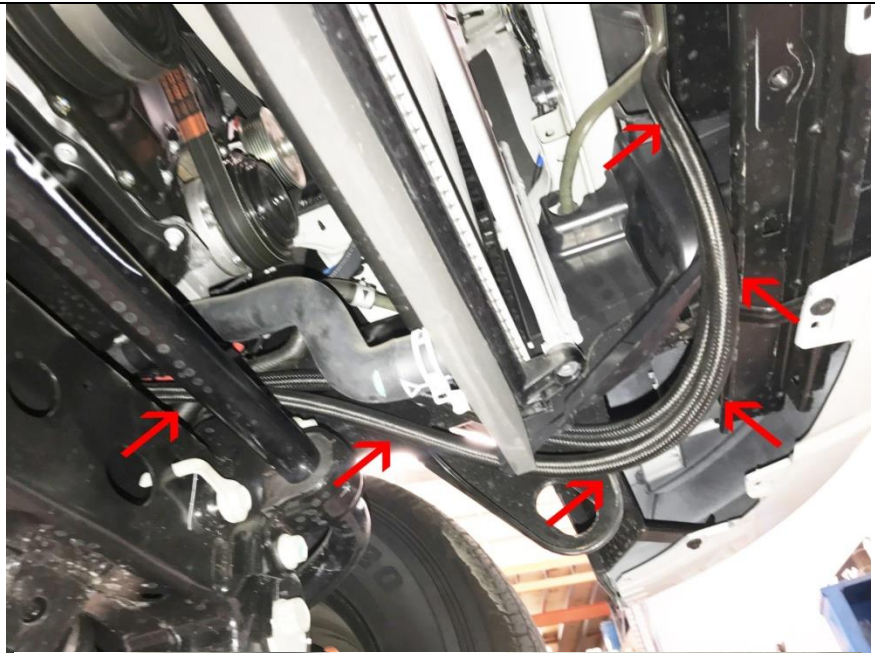
Connect the standard bracket with the new adaptor
Picture shown how it is installed , make sure the split pin is installed back on



Run the supplied HDi Braded Race ATF hoses to the front ATF cooler (Make sure away from any rotating components and sharp edges)



Avoid Sharp edges rubbing against the hoses
Edges protection may needed.



Push the Steering cooler pipe back to make clearance if necessary.



Re check the hoses and the ATF cooler's inlets and outlets to make sure no foreign object fall in inside then connect the lower HDi AFT cooler hose

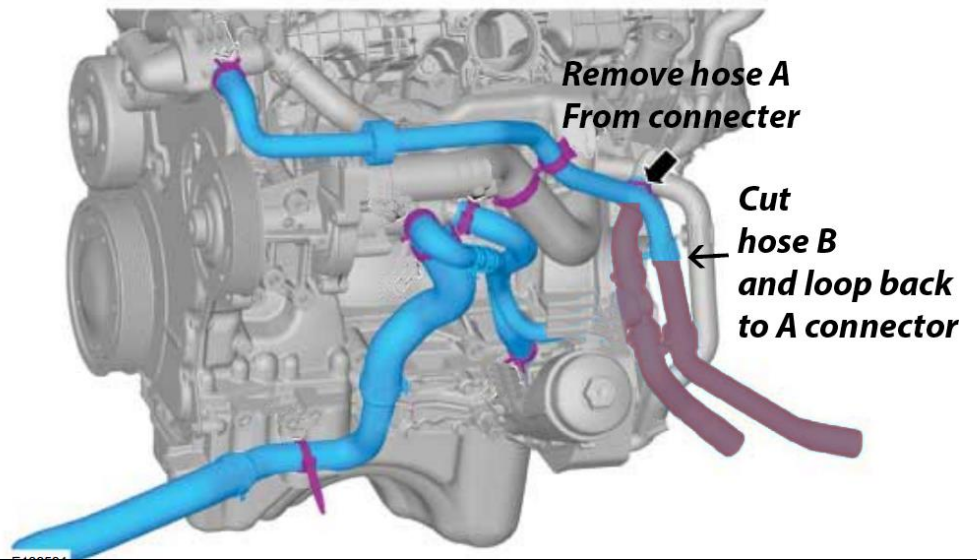


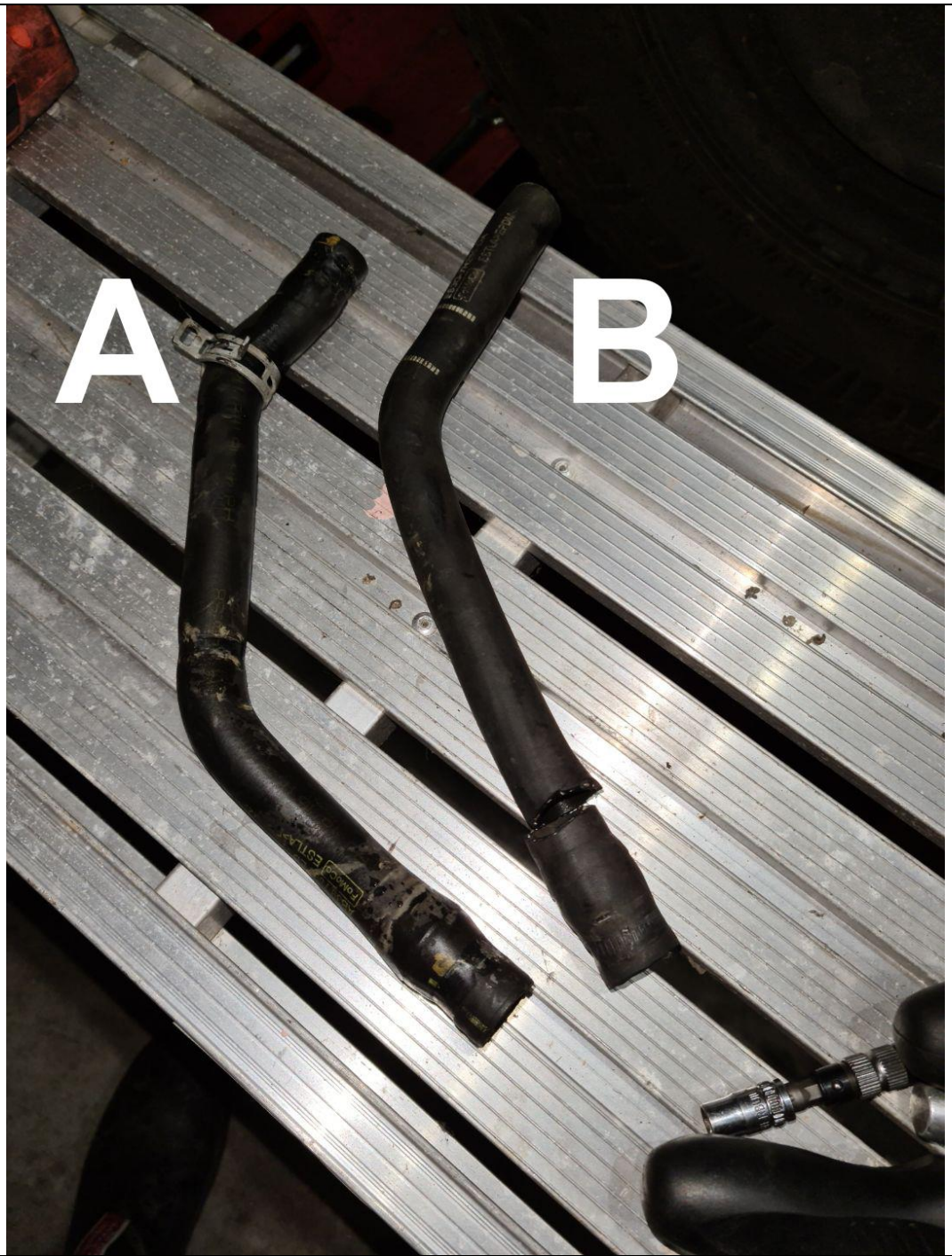
After all hoses are installed, install a cushioned P-clamp so the ATF hoses is secured to the gear box.



By pass the OEM heater hose can be done in 2 ways as shown

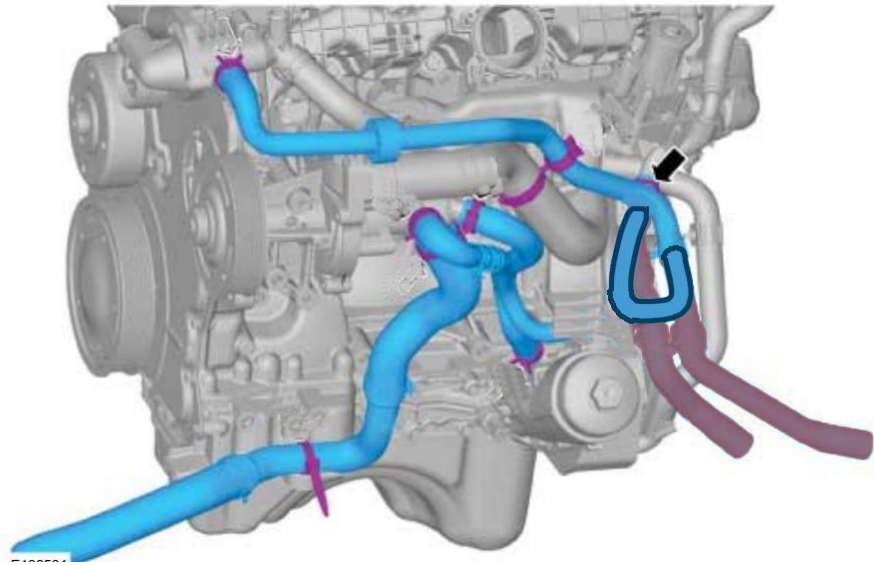
Method 1,
Cut the original Hose B as shown and loop back to the hose A outlet.





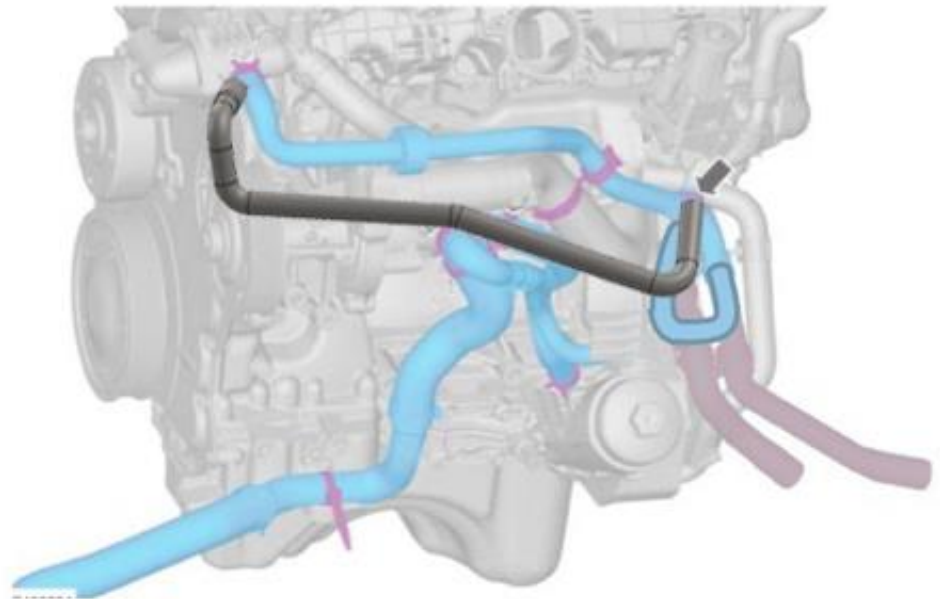
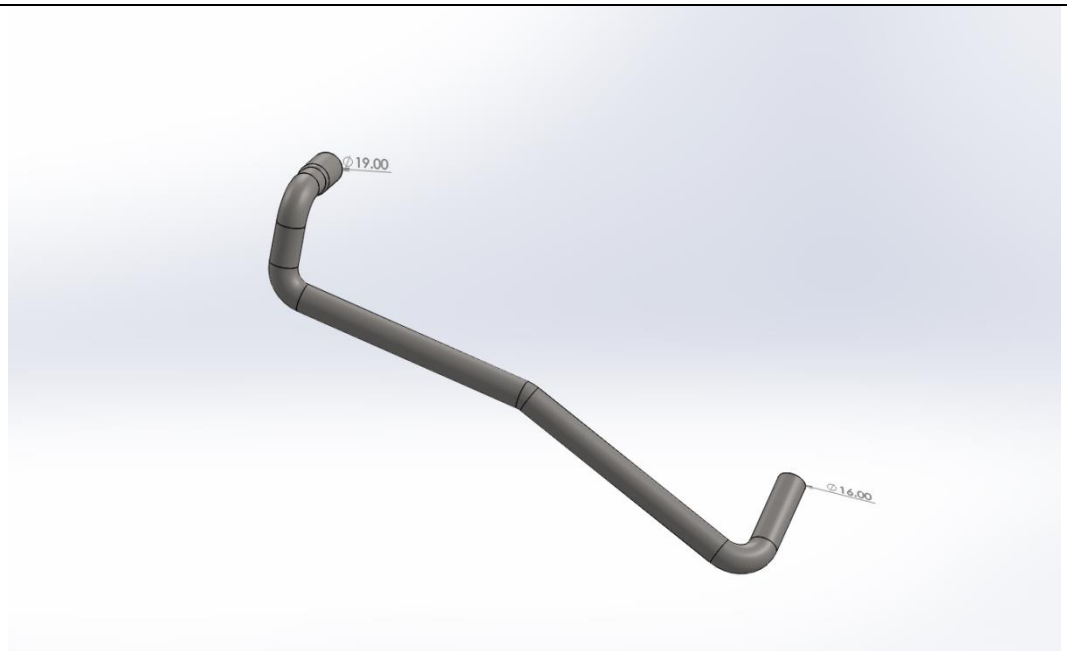


There is a Mark show where to cut !!



Then loob it backas shown

Method 2,
you can purchase an
optional water bypass
hose SP-
For extra \$59
Once it the hose is
looped back you can
completely remove the
OEM ATF heat
exchanger!



Picture shown the loop back hose
Please make sure it does not leak any coolant.



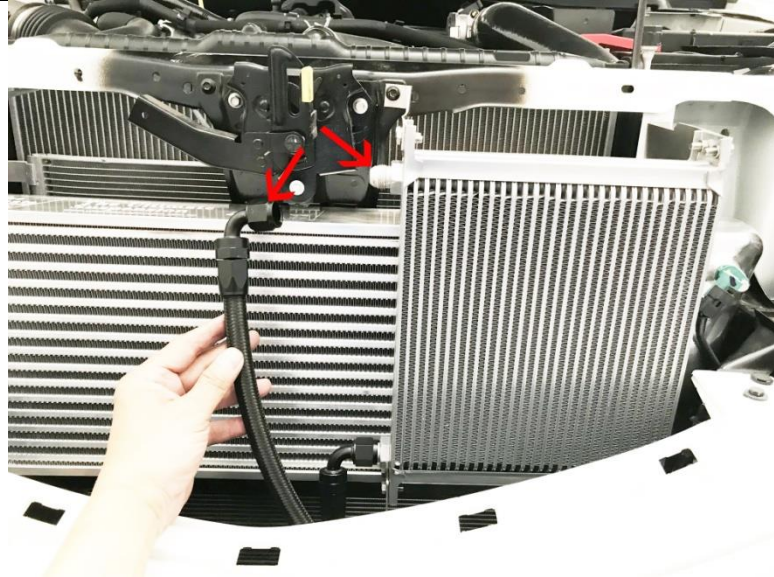
Top Up Approximately 1.2 L from the top HDi ATF cooler and cooler hose

Note : bottom connect to the transmission lower out let

And the top connect it to the top transmission upper inlet.

Connect the top HDi ATF cooler hose, tighten and recheck all connections, bolts and nuts, clean all area. Start the engine check if there are any oil leaks.

Recheck transmission oil level
Reinstall the front grill.
Installation finished



For more information please email Sales@hybrid-power.com

LIMITED WARRANTY

HDi will warranty for the period of 1 year from original purchase against all defects in workmanship and materials. HDi is not responsible for expenses incurred for labor, personal injury or inconvenience. HDi sole responsibility is to offer a replacement product or to repair the damaged product. HDi cannot warranty products damaged by improper installation. All other products sold by HDi are warranted by the original manufactures and is not the responsibility of HDi.

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