

**HYBRID DEVELOPMENT INTERNATIONAL
RACING INTERCOOLER KIT
INSTALLATION MENU**



Subaru Forester SF5 Intercooler Kit



X1 SPECIAL EDITION

Please read before continue

Please read through all the instruction and practice all precaution in all aspect of safety and every step prior and during the installation. This installation menu is purely for **HYBRID DEVELOPMENT INTERNATIONAL**

RACING INTERCOOLER KIT

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.

LIMITED WARRANTY

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

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For more information please visit www.hybrid-power.com or contact tech@hybrid-power.com

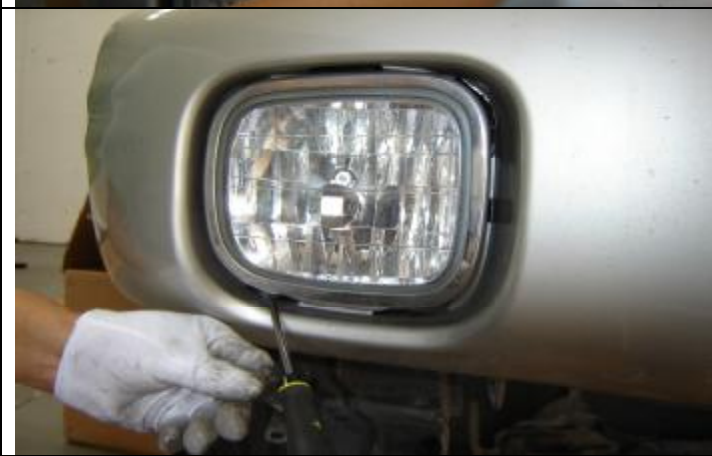
Using a Heavy duty Car Jack, lift the car and place it on Jack Stands or place the vehicle on a workshop hoist.



Remove the plastic splash guard from under the car front bumper bar.



Remove the front grille and plastic moldings from under the headlights on Both sides.



Remove the factory Fog lights from the bumper bar by unscrewing fittings.



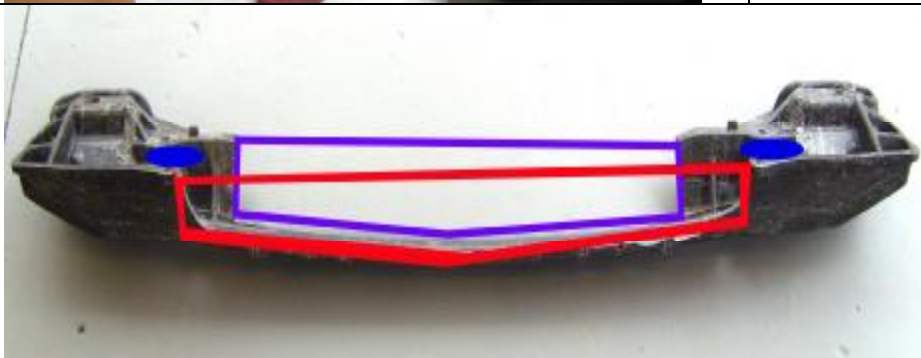
Now remove the front bumper bar by releasing the mounting clips in a sideways motion on both sides.



Remove the white plastic/foam impact bar from the support bar



Remove the 2 metal mounts from under the support bar (permanently remove)



Some internal trimming for pipe clearance is required where marked with oval shape

Remove the hard plastic support structure bar

Trim back the hard plastic bumper support bar on top and bottom as per the shaded area – TOP – 95mm x 90 mm long, BOTTOM – 105mm x 74mm long (This is a reference only, it will depend on the alignment of your vehicle. Some further trimming may be required)



Cut the metal reinforcement bracket (on both sides) in a 'U' shape 75mm high and 20 mm deep. This is for Intercooler pipe clearance.

Left Side



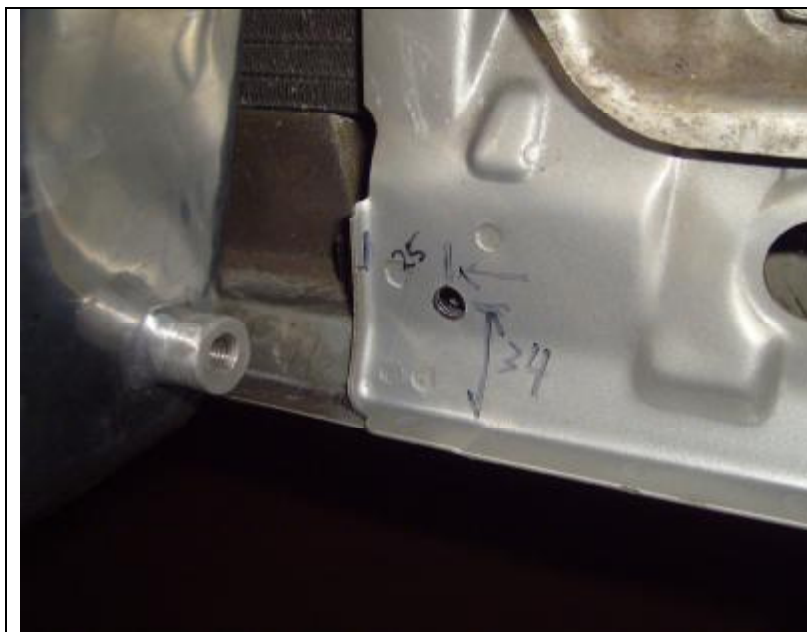
Right Side



Drill two 8 mm holes, measuring 180mm from the centre of the support bar, on either side. This is to mount the intercooler.

MOUNTING INTERCOOLER

At the metal support bar, using the supplied 15 mm HDi spacers, mount them in between the intercooler and support bar and fasten with the 2 x 25 mm M8 screws from the top.



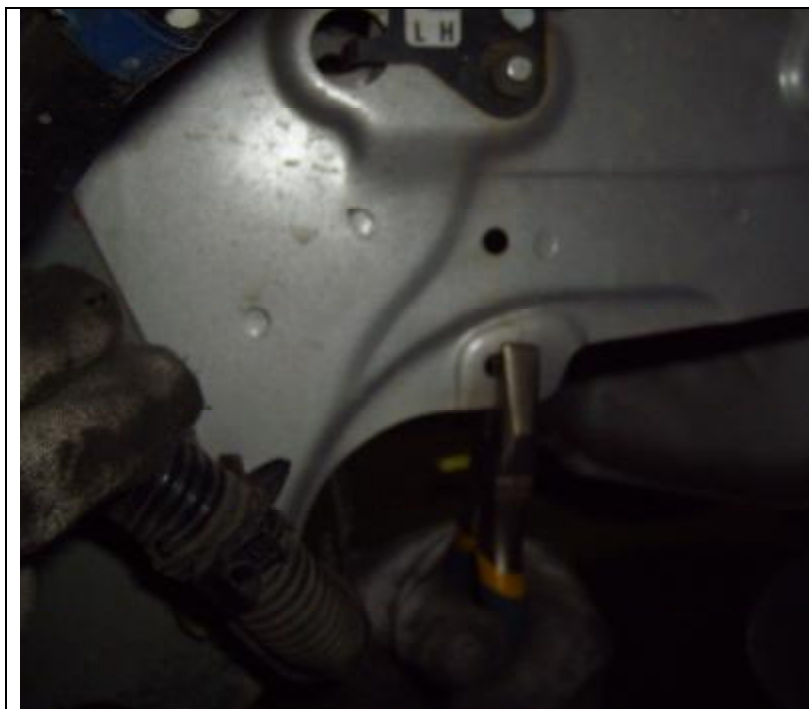
Use the supplied brackets to confirm the measurement based on the alignment of your Forester BEFORE drilling

On the bottom of the chassis rail (on both sides), measure 34mm high and 25mm inward. Then drill one 8 mm hole on both sides.

LOWER MOUNTING – Install the lower 'L' shaped supplied bracket and M8 bolt and Fasten



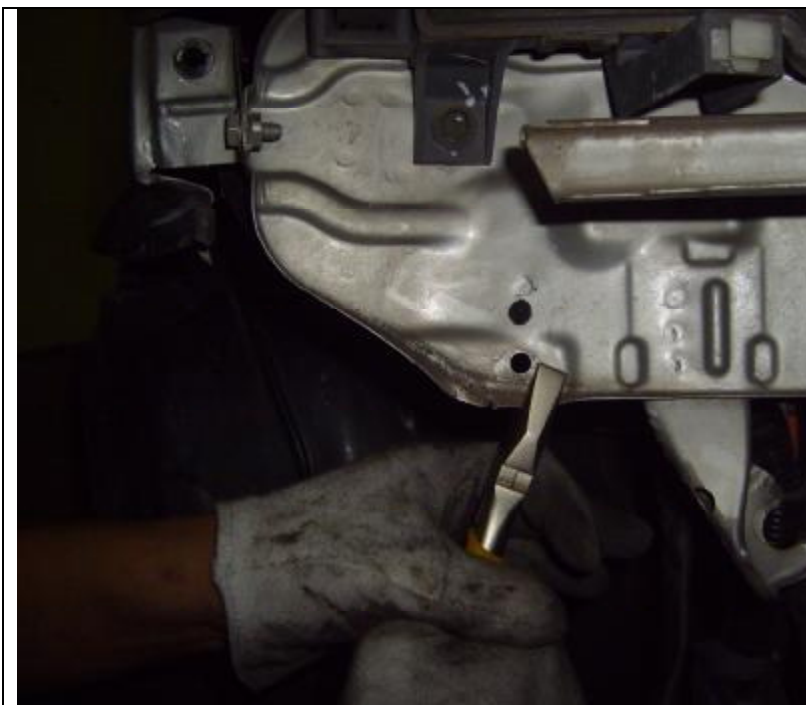
On the passenger side chassis rail, remove the wiring harness clip. Leave detached to clear the HDi Intercooler piping.



In the position of where the wiring harness hole is located, gently bend the lip towards the chassis rail for pipe clearance.



On the Driver's side, remove the wiring harness clip from under the headlight. Drill a 75mm hole 20mm higher than the existing hole and reconnect the wiring harness clip.



Now gently bend the Air resonance bracket and front bracing back to clear the HDi Intercooler piping



BEWARE OF FOREIGN OBJECTS FALLING INTO THE PIPING DURING INSTALLATION

Remove the plastic air duct from air box and airflow meter

Remove the Resonance Box from inside the bumper area



Remove standard intercooler and BOV



Block off the standard BOV. Remove the return hose and block the port with supplied Cap and clamp.



Now, carefully by hand – push the heater hose (located under the factory intercooler) down by about 10mm for the hot pipe clearance.



Install a 2.0" HDi silicon hose to the Turbo and fasten with the supplied standard clamps. **Fasten tightly.**

Install the HDi Intercooler hot pipe to the 2.0" HDi silicon hose and fasten with a HDi clamp



Install 2 x HDi Super Clamp to a 2.5" HDi silicon hose then install the lower passenger side under engine intercooler pipe.

Do NOT fasten tightly to make adjustments



Install 2 x HDi Super Clamp to a 2.5" HDi silicon hose then install the lower passenger side intercooler pipe.

Do not fasten tightly to make adjustments



Install the supplied intercooler piping support kit. Secure to the sway bar bracket

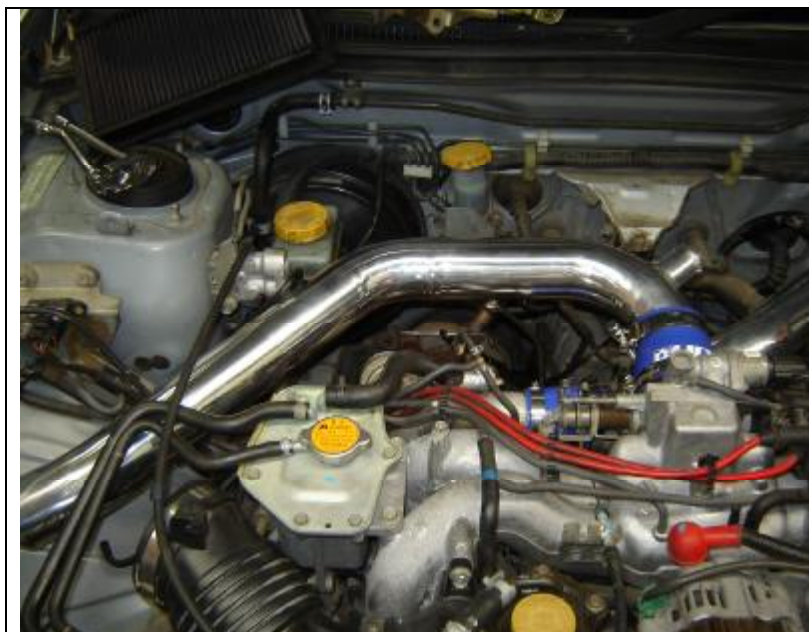
Assembly:

- 3.5" Standard Clamp
- 'L' shape bracket
- Clamp fitting
- 1 x M8 short bolt



Using 2 x HDi Super Clamps and a HDi silicon hose secure the lower passenger side intercooler pipe to the HDi X1 intercooler.

Check all piping for clearance and fasten HDi Super Clamps



Install top driver's side intercooler pipe using the supplied 2.75" reducer HDi silicon hose and HDi Super Clamps. Fasten tightly



Install the inner fender intercooler pipe with HDi silicon hose and HDi Super Clamps. The pipe goes through the hole closest to the suspension tower.

Do not fasten tightly to make adjustments

Check piping clearance to inner guard



Join the lower driver's side intercooler pipe with supplied HDi silicon hose and HDi Super Clamps to the HDi X1 intercooler

Check all piping for clearance and fasten HDi Super Clamps



IMPORTANT:
Check all pipes and fasteners for proper clearance, then tighten all HDi Super Clamps and mounting brackets



Install your universal after market BOV to the supplied port on the intercooler cold pipe



Re install the hard plastic support structure bar and plastic/foam impact bar. Check for clearance.

Trim the bumper bar to suit, clearing the intercooler.

Re install the bumper bar and Fog lights

Re install the splash guard under the bumper bar (some trimming maybe required, varies depending on model)

Finally, re insert the front grille and radiator plastic shroud.

Ready for test drive...feel the power

Note:
Due to the high flow and low pressure drop characteristic of the HDi intercoolers – the turbo efficiency may increase and the factory boost limiter maybe reached. If this is experienced, please consult an HDi Technical Dealer.