

INSTALLATION GUIDE

MUSTANG S550 GT ENGINE OIL COOLER KIT



For 60 years Harrop Engineering has been at the forefront of designing, developing and manufacturing precision performance components. Today our innovative and logical approach is applied to low volume automotive OEMs and the performance aftermarket through a dedicated team of 65 staff. Core performance products include Superchargers, Engine Components, Brakes, Differentials and we are also the exclusive Australian Distributor for Forgeline Motorsport Wheels & Lingenfelter Performance Parts.

Harrop are also the preferred supplier of Eaton Supercharger and Traction Control technology including dual branded product designed and manufactured in-house. There are currently over 4000 components in our portfolio and this is growing daily as we continually develop more Harrop Performance Products.

Our high profile car manufacturing customers include Holden, HSV, FPV, Roush and Lotus.

We also supply to race teams from categories including F1, NASCAR and V8 Supercars and an extensive range of drag, circuit and off-road competitors. Just as importantly, a large portion of our customers are performance enthusiasts and weekend warriors who are highly passionate about their ride.

Please take a moment to review the following pages and learn why Harrop is the first choice in performance products.

Thank you for choosing Harrop and enjoy your Harrop enhanced ride.

- Team HARROP



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ATTENTION: READ BEFORE PROCEEDING



IMPORTANT INFORMATION

Installing this product indicates your acceptance of the responsibility and liability associated with the fitment and use of this product. Please ensure the owner and drivers of the vehicle are aware of their responsibilities and liabilities as indicated below.

Thank you for purchasing this Harrop Engine Oil Cooler Kit which has been designed and made with pride in Australia. The owner and drivers of the enhanced vehicle must be aware that fitment of this product may affect:

- The vehicle's factory warranty.
- Insurance cover and associated liabilities.

Please follow the instructions accordingly and ensure the safe operation of all tools and equipment are adhered to in accordance with the vehicle and equipment manufacturer's recommendations.



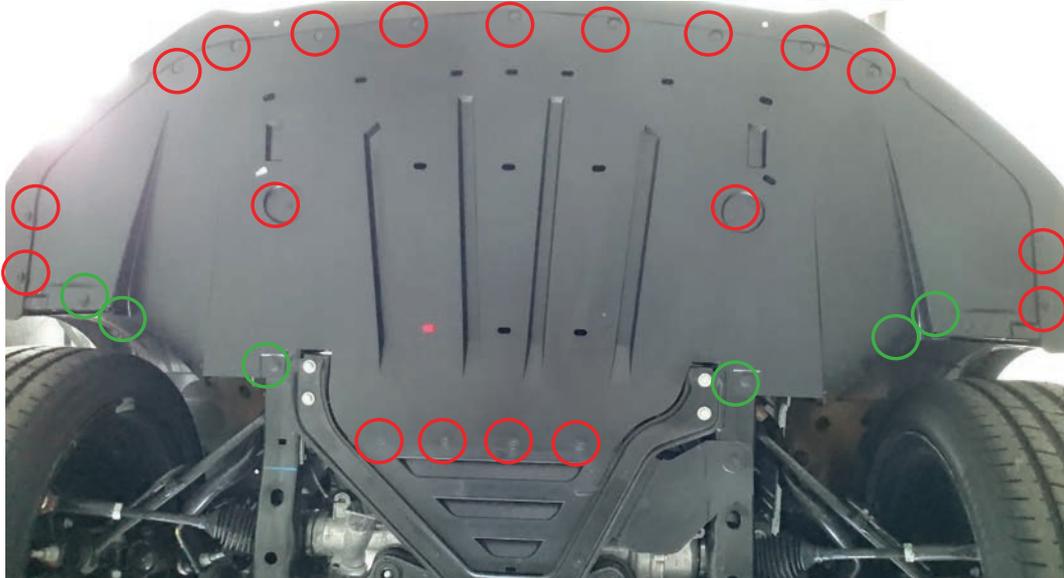
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1. Place the car on a hoist or on some ramps.
2. Remove the front under tray and place aside.



3. Drain the coolant from the radiator, drain cock is located on the RH side of the radiator.
4. Disconnect the two hoses from the standard factory cooler. Using the U tube and the two worm drive clamps supplied, install the tube as per image below to loop the coolant.

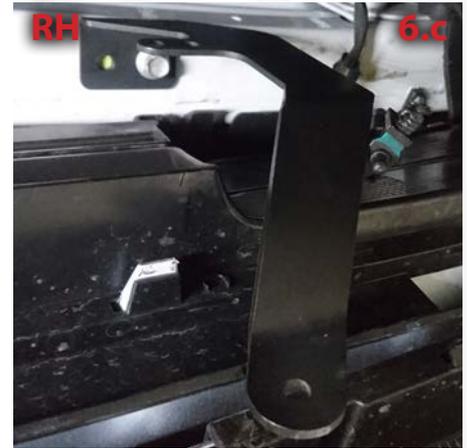


5. Remove the ambient air temp sensor and bracket located behind the lower air intake on the RH side. Separate the sensor from the bracket.
6. Fit the front RH bracket using the far right hole where the ambient air sensor was mounted and the extreme right hole of the bracket using one self-drilling screw supplied (Note you can open hole up with drill bit supplied, when screwing screw in add some anti seize as lubricant). Fit the U nut into the slot on the left hand side and using 1 M6 cap screw mount the left hand bracket. (Image 6.b)

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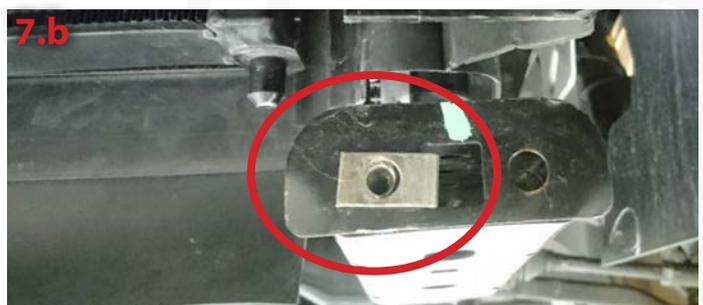
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Note - MY18 cars and onwards mount the LH bracket on top of the radar mount.



7. Insert the 2 U nuts into the lower front rails as per images 7.a and 7.b below. Mount the rear oil cooler mounting brackets as per image below but leave them loose. Note 'S' bend is to point forward - see image 8.a.



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8. Temporarily install the oil cooler as per image below. Confirm acceptance of fitment and mark the inner holes in the front brackets so that they can be drilled (with drill bit supplied) and screwed (use anti seize as lubricant on screws). Once the brackets are fully secured mount the ambient air sensor to RH bracket - Image 8.c. Reinstall/mount the oil cooler.



9. Remove the factory oil cooler. Using the existing square O rings and new screws supplied install the Harrop oil cooler adaptor block and torque the screws to 14 Nm. Install the 2 AN10 fittings into the adaptor block ensuring you lubricate the O rings on the fittings. Trick to tightening the AN fittings is via use of socket, universal drive and extension bar through the side for the upper fitting and through the front for the lower fitting after the extension bar is fed from the rear to the front.



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10. Feed the 2 hoses through from the front of the car to the adaptor block (straight connectors towards the adaptor block). Screw the upper hose first to the adaptor block followed by the lower one, it does not matter which hose connects to the upper or lower fitting.

11. Install the 2 raw aluminium AN10 fittings into the oil cooler ensuring the O rings are in place and lubricated prior to tightening. Ensure you hold the hex fitting on the cooler so that it will not twist off the cooler tank with a correct sized spanner.



12. Using a 7.0mm drill bit drill 4 holes in the channel in the bottom of the radiator, 2 holes on the front edge and 2 holes on the back edge opposite each other to enable a cable tie to be threaded through. These holes should be about 180-200mm centred.

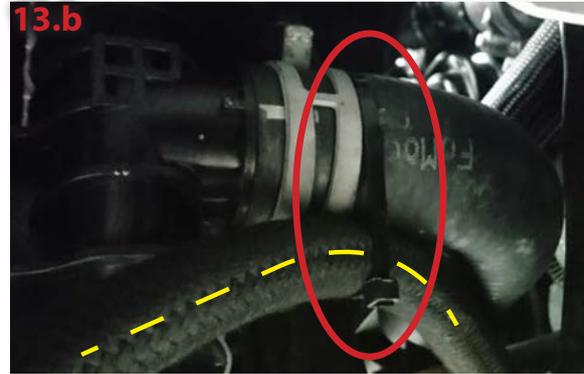
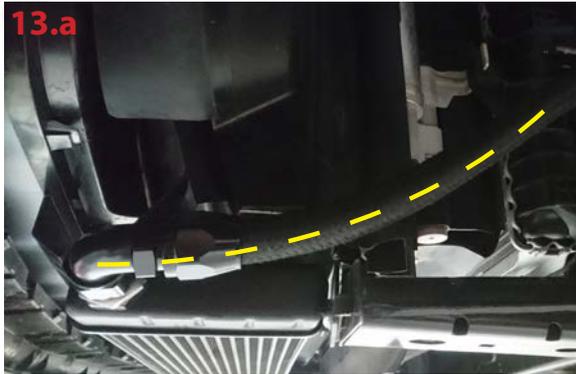


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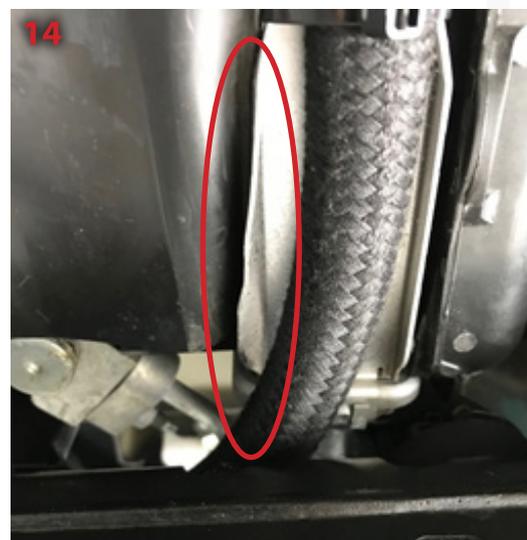
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13. Route and connect the hoses onto the just installed fittings as per image below, and cable tie off the hoses to the radiator, radiator hose and just rearward of the oil filter cable tie the the hoses to the engine harness that can be accessed just behind the steering rack. Cable tie the hose to the bottom of the radiator channel in 4 places, 2 where the holes were drilled and 2 in the original radiator notches in the channel.



14. The radiator channel will also need to be folded away from the hose at both the left and right side to provide clearance away from sharp edges as per image below. (RHS shown)



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15. Top up/fill the radiator with the manufacturers specified coolant. The installation of this oil cooler system will add about 800mm of oil to total system volume, check and top up with manufacturers specified oil approximately this amount and any additional that may have been lost when removing the old oil cooler.

16. Run the engine and thoroughly check for oil and coolant leaks and let the engine warm up to temperature. Check hose routings to ensure they have been tethered securely so that they will not vibrate or chafe through on any sharp edges. Once satisfied that there are no leaks reinstall the front undertray..



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