



Installation Guide

TVS 2300

JLR AJ133-V8 Supercharger upgrade



JUL 2023 - Rev 0

ENGINEERING PERFORMANCE SINCE 1955

Important Information

Installing the supercharger 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 supercharged vehicle are aware of their responsibilities and liabilities as indicated below.

Thank you for purchasing this supercharger which has been designed and made with pride. The owner and drivers of the enhanced vehicle must be aware that fitment of a supercharger may affect:

- The vehicle's factory warranty.
- Insurance cover and associated liabilities.
- Compatibility with emission and roadworthy certification.
- The validity of a driver's license for a supercharged vehicle.
- The handling & braking capability of the vehicle due to increased engine power & torque characteristics.
- The longevity of the engine.
- The vehicle will need to use premium unleaded fuel only (98 RON).

It is the owner's/driver's responsibility to accept any consequences and liabilities of using the supercharger and any subsequent effect it may have. Harrop Engineering shall not be liable and shall be 'Held Harmless' for any direct and/or indirect/consequential losses, costs, damages, expenses, injuries or liabilities whatsoever incurred by the owner/driver of the vehicle or other parties arising from this supercharger, its installation and/or its operation. It is recommended that vehicles have completed 1,500 km and have been driven, serviced and maintained in accordance with the vehicle manufacturer's handbook before fitting a supercharger. An engine should be deemed reliable and have delivered all reasonable expectations in line with the vehicle manufacturer's specifications prior to fitting a supercharger.

Warranty.

This supercharger is covered by a limited warranty on components and workmanship for a period of 36 months from the date of purchase, subject to the following:

- Installation must be completed by a qualified motor mechanic or technician who has undertaken appropriate training in fitting Harrop superchargers.
- The supercharger has not been modified or "overdriven" by fitting alternative drive pulleys.
- The supercharged vehicle has been tuned by an appropriately qualified and experienced technician.
- The supercharged vehicle has been driven in accordance with the conditions specified by the vehicle manufacturer's normal use of operation, driving care and vehicle service program.
- The supercharged vehicle has not been used for competitive racing.

No warranty shall apply where Harrop have determined improper fitment or handling, misuse in operation, neglect, or accident damage. Engine modifications made prior to or in conjunction with the supercharger fitment may invalidate the Harrop limited warranty. Any warranty claims must be made immediately & directly in writing to Harrop Engineering so that a determination can be made promptly. Involvement of a third party or an attempt to repair a perceived/actual fault may invalidate the warranty. To the extent of the law, the determination on any warranty claim & associated costs will be at the sole discretion of Harrop Engineering.

By installing the supercharger you acknowledge that all conditions pertaining to this supercharger and its operation have been read, understood and accepted

For 65 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.

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 4,000 components in our portfolio and this is growing daily as we continually develop more Harrop Performance Products.

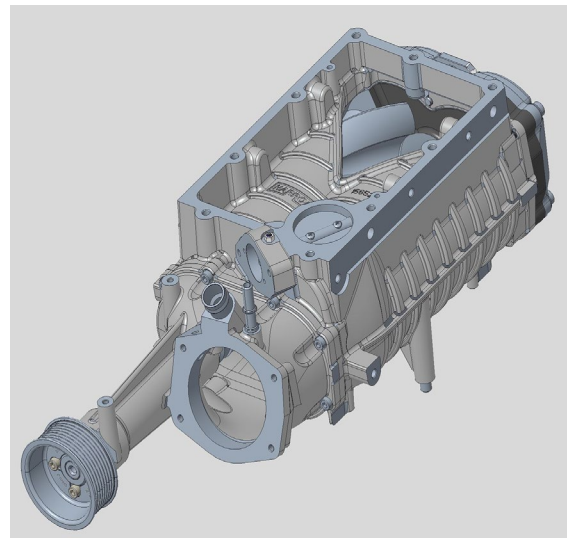
Our high profile car manufacturing customers have included Holden, HSV, FPV, Ford, Roush, Toyota, TRD and Lotus.

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 Superchargers.

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

- Team **HARROP**



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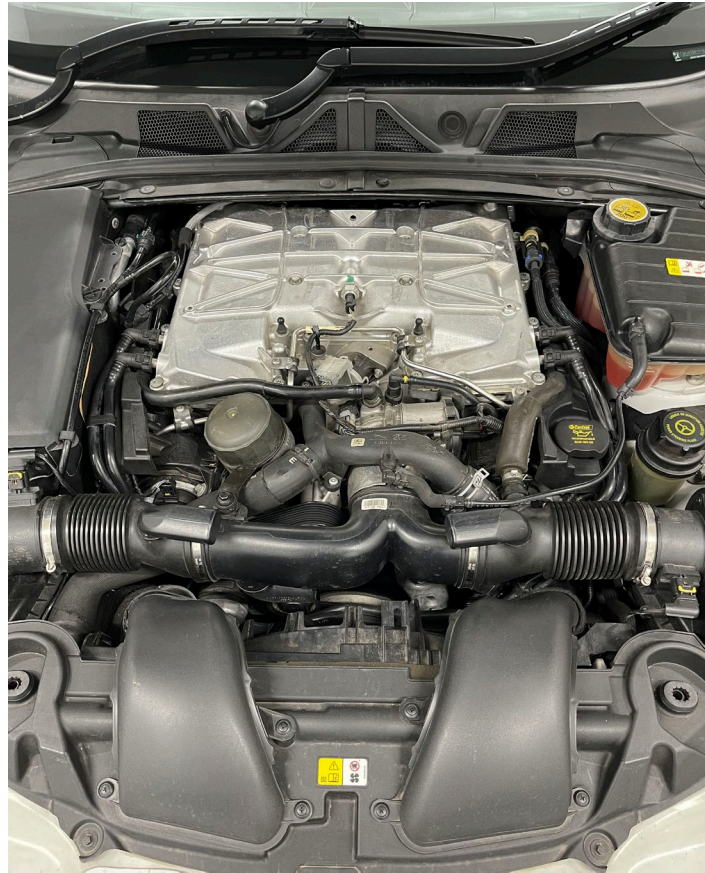
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References to left and right in the instructions are made to the vehicles side and NOT the installer

REMOVAL OF OEM SUPERCHARGER

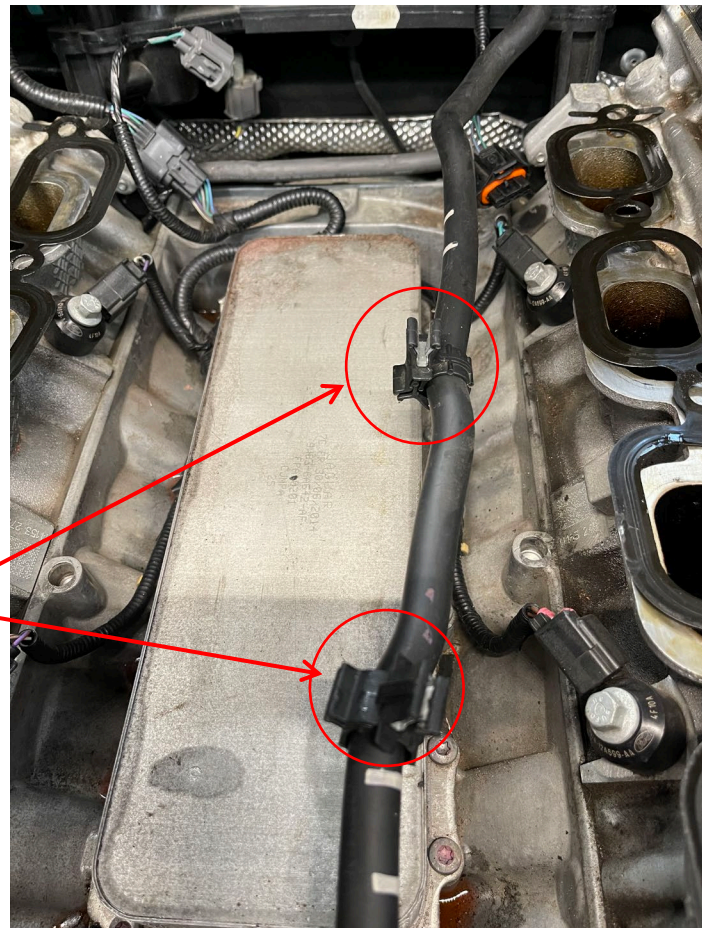
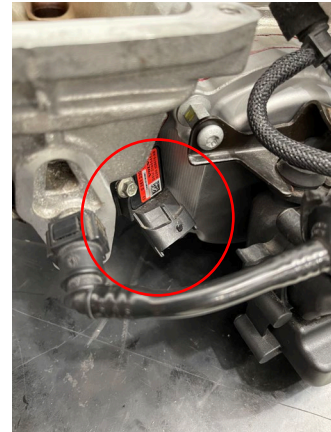
NOTE: This Harrop FDFI TVS2300 Supercharger kit is designed for the 5.0 Supercharged AJV8 fitted to JAGUAR and RANGE ROVER with electronic bypass actuator sensor, as a factory replacement.

Refer manufacturers procedure for removal of the OEM Supercharger from the vehicle.



REMOVAL OF OEM SUPERCHARGER

Prior to removing the supercharger assembly from the engine, position the supercharger assembly to gain sufficient clearance to disconnect the rear MAP sensor connector, and the Noise Feedback System connector.



At this point, reach under the supercharger and disengage the 2 push on clips retaining the throttle body heater hose to the underside of the supercharger.

Remove the OEM supercharger assembly via the manufacturers procedure, and place securely on a work bench.

Cover the intake ports with tape.

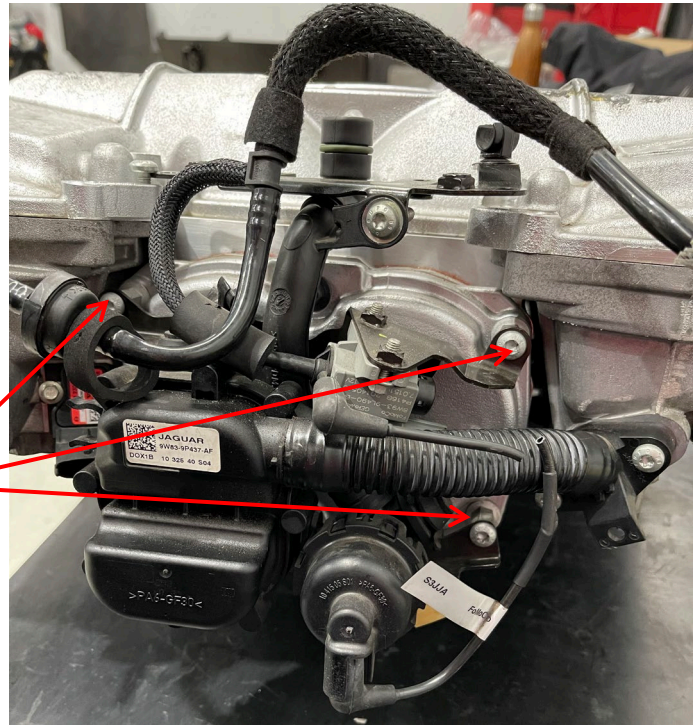
PREPARATION OF NEW SUPERCHARGER

Position the Harrop Supercharger next to the OEM Supercharger on the work bench.

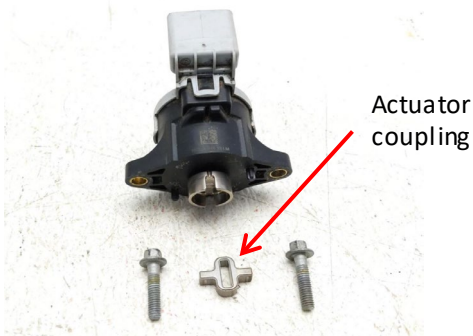
Swap the following parts from the OEM Supercharger to the Harrop Supercharger, and torque fasteners to manufacturers specifications:-

Left and Right Inlet manifolds - 6 torq, and 2 hex head fasteners

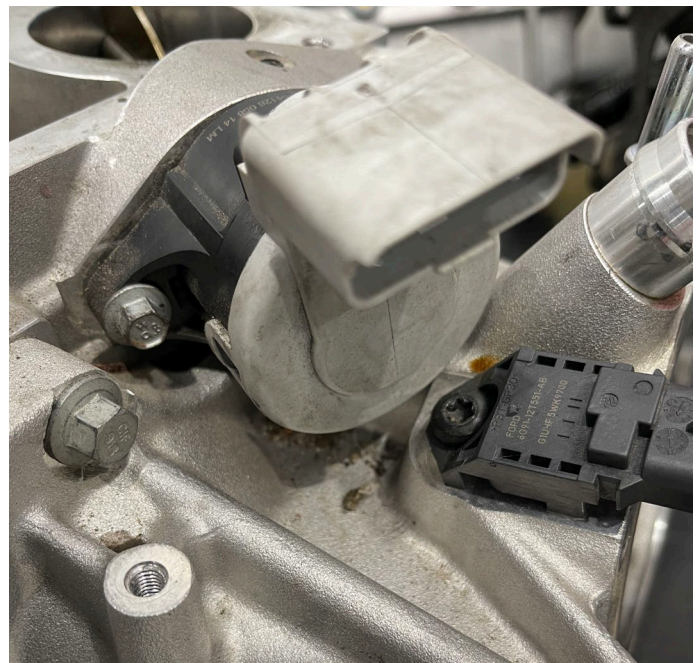
Noise feedback system – 3 screws retaining the bracket and 2 screws retaining the Symposer inlet pipe



Electronic Bypass Actuator Sensor assembly, paying special attention to the actuator coupling and bypass butterfly position.



Electronic Bypass Actuator Sensor Assembly



MAP sensor on front cover. (Apply a light coat of oil to o-ring before installing)

INSTALLATION OF NEW SUPERCHARGER, WRAP UP

Remove tape from intake ports.

Install new inlet manifold gaskets.

Install Harrop Supercharger as per manufacturers OEM Supercharger installation procedure and specifications.

Prior to installing the Charge Air Cooler tank top, apply a bead of silicone gasket around the perimeter (as shown).

Install a new OEM supercharger upper manifold gasket.

Apply a bead of silicone gasket around the same perimeter (top face) of OEM gasket.

Continue to install Harrop Supercharger as per manufacturers OEM Supercharger Installation procedure and specifications.

Install the supercharger drive belt, the belt route is as per factory installation (refer image)

Reconnect battery

Ensure all hoses and harnesses have a adequate clearance to pulleys and supercharger belt.

Fill and bleed the engine cooling system as per factory specifications with JAGUAR LAND ROVER approved specification of engine coolant

The vehicle should start with the standard engine calibration file, run the engine to confirm no leaks from the fuel line and cooling system.

Run the vehicle on dyno to complete the tuning.

