HARROP TVS2300 SUPERCHARGER KIT

This TVS2300 Supercharger upgrade for the AJ133 V8 is a direct replacement for the OEM TVS1900 supercharger system. The Harrop TVS2300 also features an upgraded solid coupler eliminating the factory OEM spring coupler which is prone to fatigue and failure. Several key ancillary items and areas were identified, which required upgrading to produce significant power gains and to do so reliably and effectively. **This FAQ is not meant to provide step-by-step instructions but rather provide some technical details and installation support on the most commonly asked questions.**

KEY FEATURES:

- Eaton 2300 TVS Supercharger Technology
- 20% larger positive displacement supercharger compared to OEM TVS1900
- A direct bolt in replacement for the OEM Eaton TVS1900 Supercharger
- Integrated OEM Electronic Supercharger bypass system which relieves boost under light load conditions, reducing drive loss and improving fuel economy
- 747BHP (increase of 36% from stock 550BHP), 700ft/lbs (increase of 35% from stock 517ft/lbs)

Cooling & Induction (Air Intake, Water Methanol, Coolant Pump Upgrade):

On supercharged applications, effective management of intake air temperatures is critical. Our team found that it was not possible to effectively manage intake air temperatures without supplemental cooling. Our full Carbon Fiber intake system not only dramatically increases cross sectional volume but also includes provisions for water-methanol injection ports to reduce charged air temperatures. Our intake is supplemented with a full water methanol injection system, with all the necessary fittings, tank, pump & check valves. This system proved its worth during testing, generating repeatable numbers back-to-back to back. We also require an upgraded charge-cooler, coolant pump.

- **Water Methanol Kit:**
  - The **12GPH** is the nozzle of choice to use.
  - The system **only needs 1 mechanical check valve closest to the nozzle**, and the electric solenoid shut off as close to the nozzle is best too. The system will bleed the system pressure into the intake, so the check valve is only good at holding anything under 10psi, which means the 200psi the pump creates will bleed all the way down to 10psi in that line before the check valve, this is why it's important to install the electrical shut off valve close to the nozzle as well to prevent a long delay of pressure reaching the nozzle. We install the check valve right off the nozzle holder, and the solenoid we fit to the right side of the radiator at top. The solenoid doesn't need to be smacked to the nozzle, but the closer the better.
  - The **VC30 pressure setting**, this can be left alone, you can alter them as you need dependent on weather, meaning if it's hotter outside you might want to lower the psi set, and same goes if you are at a track, you

might want to set them into a zone that does not affect corner exiting speed or it might bog the engine if set too low.
    - For the **fluid mix ratio**, we're only using this to cool the intake temp sensor in the top of the blower lid, if that sensor gets too hot, it will crack and fail the sensor.
    - If your system is bled, you can use the 50:50 mix, whether it be 50:50 by weight or by volume really doesn't matter for this setup.
- **Carbon Fiber Intake FAQ:** CLICK HERE - F-Type Carbon Fiber Intake
- **Charge Cooler Coolant Pump FAQ:** CLICK HERE - Pierburg CWA150
    - You should have received a wiring harness with that to make it plug and play, you will need to fashion some sort of bracket to install this into place, see video example: **CWA Coolant Pump YouTube Video**
- **SNO Performance WMI Kit FAQ:** CLICK HERE - SNO FAQ
    - The blue cap, with the check valve threaded into the center, will avoid any fumes/smells from the fluid in the tank from entering the cabin.
    - There may be extra parts not required for installation of this kit, they can be disposed of once confirmation the kit is working as expected.

Supercharger Drive, Vacuum Pump Delete

The OEM tensioner layout leaves a lot to be desired. Even completely unmodified vehicles can see belt slippage, premature belt wear, and belts contacting the tensioner body. Increasing the supercharger drive rate or size exacerbates this problem and is critical to achieving the performance targets for the TVS 2300. Our kit includes an upgraded belt stage 1 tensioner and the option to move up to our stage 2 tensioner as we've continued to add even more power with tuning and other upgrades such as our billet camshafts. **Mechanical vacuum pump delete kit is optional for our stage 1 and required for our stage 2 tensioner products.**

- **Stage 1 Belt Tensioner**: Stage 1 Tensioner Video
- **Stage 2 Belt Tensioner:** Stage 2 Tensioner Video
- **Mechanical Vacuum Pump Delete Kit:** Vacuum Pump Delete Video

Other Accessory FAQ:

- **Symposer delete**: Symposer Video Overview
- **Datalogging:** Data Logging Install Instructions
    - We need a pull from low rpm to redline in same gear and then run from stop till 1/4 at WOT. If this is being done on a dyno, then just record the runs in that same gear on the dyno rollers with load
    - Cannot be an inertia dyno or we cannot tune the water meth injection.
- **VMP Fuel Pump Booster FAQ:** CLICK HERE - VMP Fuel Pump Booster

Misc. FAQ:

- **Tamper Proof Bolts:** If you received an extra set of tamper proof bolts that Harrop includes, they are designed to snap off the head once torque value is met, so that the pulley can't be changed easily, however they do not fit inside the pulley, so we include our own bolts. You can just discard the other bolts you may have received.
- **European Vehicles with pedestrian hood lift airbag systems**, will need to identify a different mounting location for the mechanical vacuum pump delete kit, as the airbag itself is housed in the space this kit was designed for.

- Yes, you can use an **interchiller kit** in place of the water methanol system, however we have not designed or tested this setup and will require additional data logging and testing for us to properly tune for your setup. This may result in lower than expected performance gains.
- If you already have another **3rd party lower crank pulley** installed, you will need to consult with our technical department to determine if our stage 1 or 2 tensioner products would be compatible as well as what belt size would be needed for your specific application.
- If you already have another **3rd party intake setup** installed, we can use that as part of the kit, however you may not be able to achieve maximum power output provided by the 2300 kit as restricted airflow will reduce the amount of cooling required. You will also need to have a way to connect the WMI system, by drilling or tapping into the existing intake setup.

Thank you for your purchase. Tag us in any of your photos or videos once installed.