Cooling Upgrade Installations

Installation instructions for cooling upgrades on your Audi S6 / S7.

- Coolant AN Line Upgrade Install

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Part Available: TGK Motorsports AN Coolant Line Upgrade Kit

1. **Remove Headlight Plastic Covers**
   For the S7, remove any plastic covers around the headlights to access the radiator area. This step does not apply to the S6.

2. **Remove Radiator Cover**
   Detach the radiator cover by removing the two plastic pins at the top. Set the cover aside.

3. **Remove Underneath Plastic Cover**
   With the radiator cover removed, locate and unscrew the three T30 bolts beneath it to detach the additional plastic cover.

4. **Remove Intake**
   Remove the intake to access the coolant lines and components.

5. **Remove Intake Air Guide**
   If using a factory intake, remove the two T30 bolts securing the air guide. For aftermarket intakes, use the appropriate Allen wrench.

6. **Remove Splash Shields**
   Pull back or remove the splash shields beneath the vehicle to access the lower cooling system components.

7. **Drain Coolant**

    - Place a suitable coolant catch pan underneath the car and ensure the engine is cool to avoid burns.
    - Carefully open the coolant reservoir cap with a cloth to relieve any pressure, preventing hot coolant from spraying.
    - Using a Phillips-head screwdriver, open the coolant drain plug to let the system drain completely.

    > **WARNING***:* The cooling system will require additional tools for full draining and filling; follow Audi's coolant filling and bleeding procedures to prevent air pockets and overheating.

8. **Disconnect OEM Coolant Lines**

    Lift up on the release tabs of the OEM coolant lines, then pull them straight out to disconnect. Expect some residual coolant to drain out, so keep a rag or container ready.

    Remove OEM Fittings

9. **Install AN Adapters**

    Install the AN adapters by double-wrenching each securely. Ensure that each adapter is seated properly to prevent leaks.

10. **Route and Install AN Lines**

    - Route the front coolant line, using both 45-degree and 90-degree connectors.
    - Avoid the factory path; route the lines around the front of the engine and through the center of the core support to the radiator for optimal clearance and fit.

    Routing AN Lines

11. **Connect to Coolant Crossover Line**

    Use the supplied barb fitting to attach the AN line to the coolant crossover line on the passenger side. **Tip:** Temporarily removing the rubber crossover hose can make it easier to attach the barb fitting before re-securing.

    Connecting to Crossover Line

12. **Refill Coolant**

    - Refill the coolant system with Audi-approved coolant mixed with distilled water according to Audi's recommended ratios (e.g., 50% coolant and 50% water for most

regions - using distilled water prevents mineral deposits and corrosion)
- Fill the system up to the recommended level, as marked on the coolant reservoir.

> **Note**: Use the **VAS6096** or **similar coolant filling tool** if available to eliminate air pockets during the refill process.

13. **Bleed Air from the System**

- **Remove the upper cowl cover** and open the bleed port.
- **Allow coolant to flow** from the bleed port until no air bubbles are visible.
- **Close the bleed port** and reinstall the cowl cover.
- **Jack up the passenger side of the car** to help move any trapped air toward the bleed port.
- **Set the heater to high (HI) with the fan on low** to open the heater core.
- **Reopen the bleed port briefly** to release any remaining air from the heater core area.
- **Turn off the A/C** (ensure the LED in the A/C button is off).
- **Run the engine at 3500 RPM for about 4 minutes** to push coolant through the system.
- **Allow the engine to idle** until the temperature gauge reaches 90°C (194°F) and both heater hoses are warm.
- **Run the engine at 2000 RPM for 2 more minutes** to ensure full circulation.

> **Important**: Once the system is bled, run the engine as specified in Audi's service guide, typically at idle and then at 2000 RPM, to circulate coolant fully and confirm no air pockets remain.

Following these detailed steps should ensure a secure, leak-free installation of the TGK AN coolant lines.

Refer to **TGK Motorsports** and Audi's maintenance manuals for additional insights and troubleshooting support.