PERFORMANCE STEERING COMPONENTS

High-Performance Electric Power Steering Pump Kit

Jeep Wrangler JL | Gladiator JT
3.0L EcoDiesel (2020–2023)

Part #: PK30JP1

Installation Guide

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What This Kit Does

This kit converts the factory JL electric power steering pump to PSC's high performance electric pump setup. It's built to handle more load and keep your steering smooth, especially when you've added bigger tires or other upgrades.

Every Jeep is a little different, so your installation might not match this guide step-for-step—but this will get you where you need to go.

What's in the Kit

1. **(1) ESP5200 – EHPS Pump – ESP5200 – Wrangler JL/JT 3.0L Diesel & 392**
2. **(1) CK221 - Heat Sink Cooler Kit – Jeep JL/JT 3.0L Diesel (2020–2024) – ESP5200 Pump – Single Pass:**
    - (1) 16.302P - Mounting Bracket, Fluid Cooler Jeep JL/JT
    - (1) C212S-ANO - PSC 12" High Flow Heat Sink Fluid Cooler-Single Pass - Black Anodized
    - (1) CMK212S-6TN - Cooler Master Kit for C212S/C214S Single Pass -6 AN Fittings
    - (1) HA-L130 - Hose Assembly, Cooler to Steering Gear EHPS Equipped
    - (1) HA-L153- Hose Assembly, Cooler to PSC EHPS Pump (24 Inches)
    - (1) HWK-CK220 - Hardware Kit for CK220 Cooler Kit:
        - (2) FSHHD-1/4-20-.75
        - (2) FSHST-1/4-14-1.0
        - (2) FSNL-1/4-20 - Lock Nut
        - (2) FSW-1/4 SAE- Washers
3. **(3) FL-PSC8061 – PSC TRU BLUE® Power Steering Fluid – 1 Quart**

Tools Needed

Hand Tools

- Metric socket set
- Ratchet with short and long extensions
- Torx bit set (for grille, fender, and inner fender hardware)
- Flathead screwdriver or panel trim tool (for push rivets and clips)
- Pliers (for spring clamps on hoses)
- Utility knife or hose cutter (to remove OEM low pressure line)

Fluid & Catching Gear

- Drain pan for catching old power steering fluid
- Funnel for filling system
- Shop towels or rags

Body & Fitment Tools

- Panel clip pliers (makes fender removal faster - optional but helpful)
- Small grinder, Dremel, or file (to trim 1/8 - off the grille retaining clips)

Safety

- Safety glasses
- Light gloves (optional, but good for working around sharp body panels)

1. Open the hood all the way back against the windshield.

Put something soft between them so you don't scratch paint or glass.

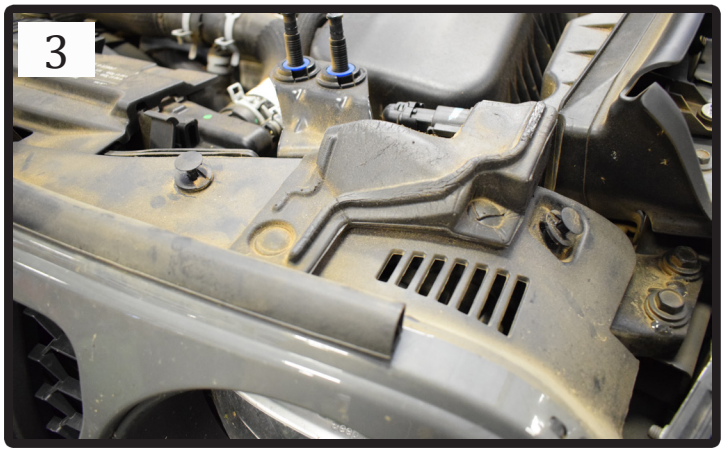
2. If you have an aftermarket bumper or winch, you may need to loosen or remove it.

Sometimes you can just tilt the winch forward so you can pull the grille.

3. Remove the grille.

Remove the push rivets along the top of the grille, then pull the lower corners outward to release the retaining clips.

NOTE: Vehicles equipped with a front camera will have a washer hose and electrical connector attached to the grille. Disconnect both before removing the grille.

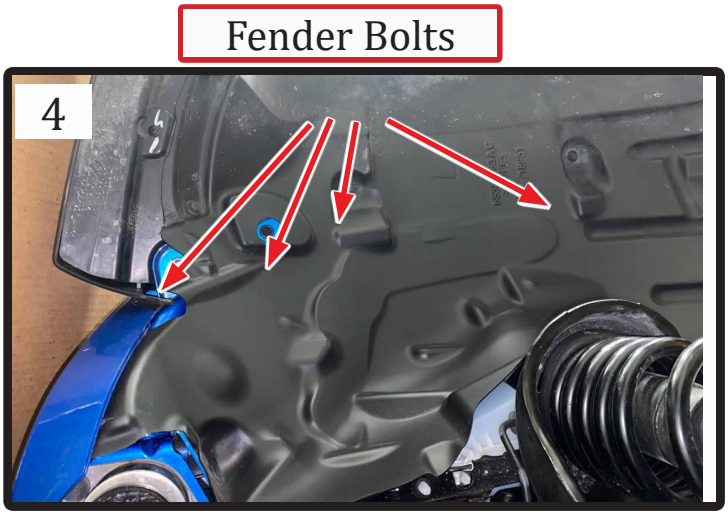


4. Pull off the passenger-side fender and inner fender as one piece.

There are (4) bolts through the inner fender and (1) push pin up front.

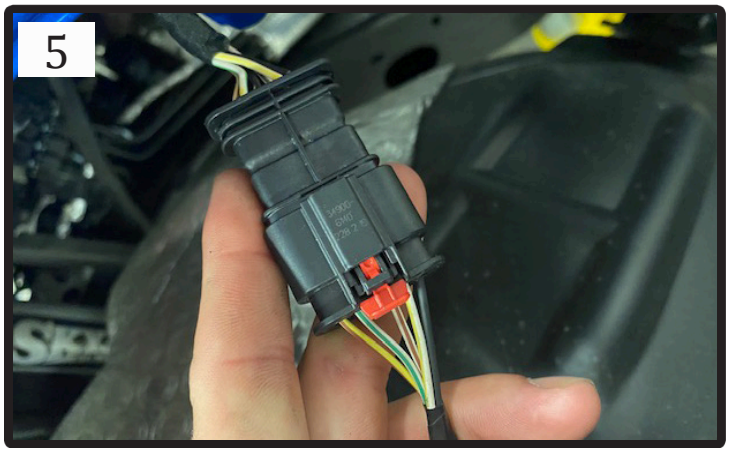
Start at the back of the fender—lift up and out.

A few clips may break, but replacements are easy to find (Mopar 6852-6185-AA-008).



5. Before the fender comes off completely, unplug the wiring connector for the lights.

Slide the red lock tab out, then press the black tab while pulling the connector apart.

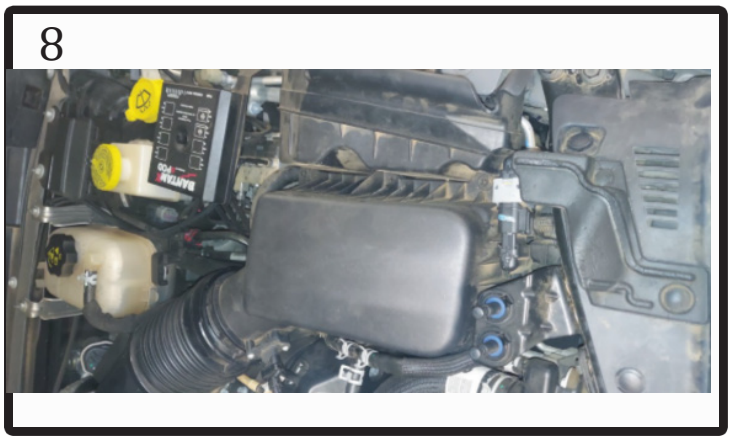


6. Drain and discard the factory power steering fluid.

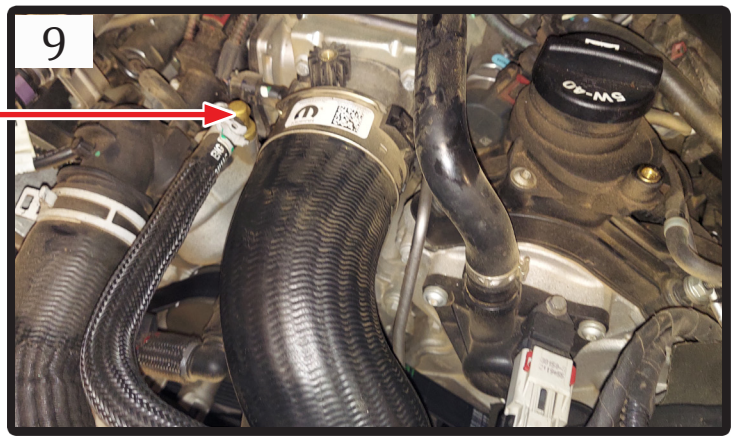
You can disconnect the low pressure hose at the front of the OEM pump.

7. Remove and retain the engine dust cover.

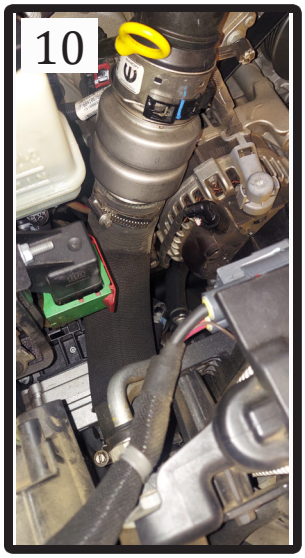
8. Remove and retain the air filter housing and worm clamps.



9. Remove and retain turbo inlet tube and clamps.



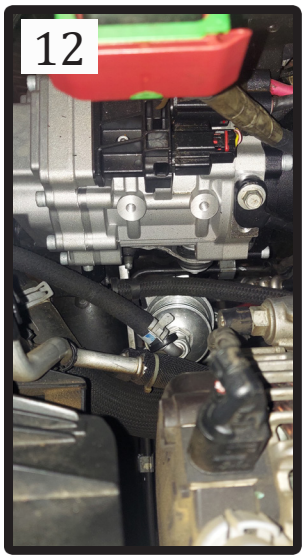
10. Remove and retain the turbo outlet tube clamps.



11. Remove and retain the bolt holding the OEM fill reservoir.

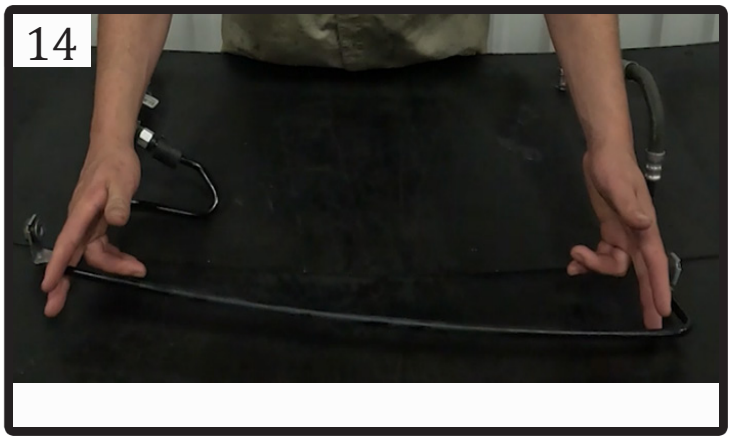
12. Remove the OEM pump.

Remove the OEM pump. Retain the mounting bolts for reuse. The OEM pump will not be re-used.



13. Remove and retain the OEM fill reservoir and the hose connected to it.

14. Remove and discard the low pressure line at the front of the OEM pump—the one closest to the firewall on the steering gear.

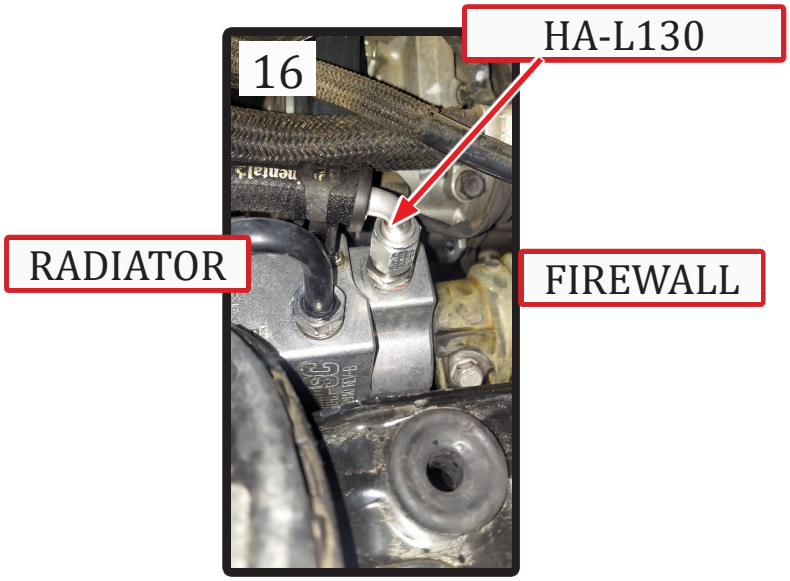


15. Install the SF02M fitting (included with the HA-L130 hose) onto the steering gear.

16. Install the HA-L130 hose.

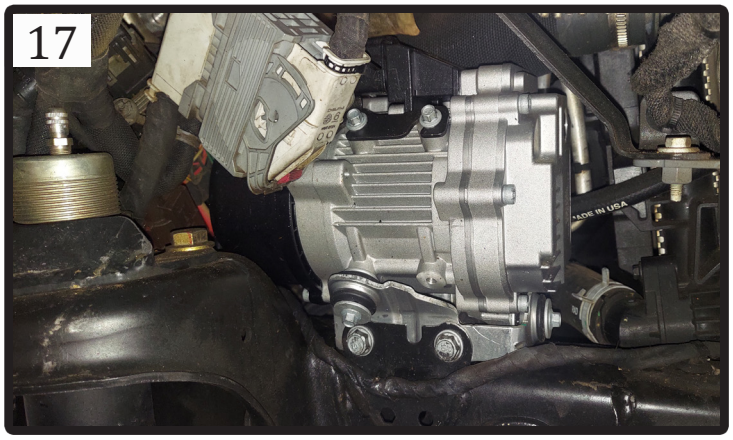
Use the 90° end at the steering gear, then route the hose under the ram air box and over to the front of the condenser.

Torque: 27 ft-lb



17. Install the ESP5200 pump using the OEM bolts in the factory pump location.

Torque Specifications:
Pump to bracket frame: 21 ft-lb
Pump to bracket: 6 ft-lb



18. Install the 90° end of the HA-L131 hose to the ESP5200 pump.

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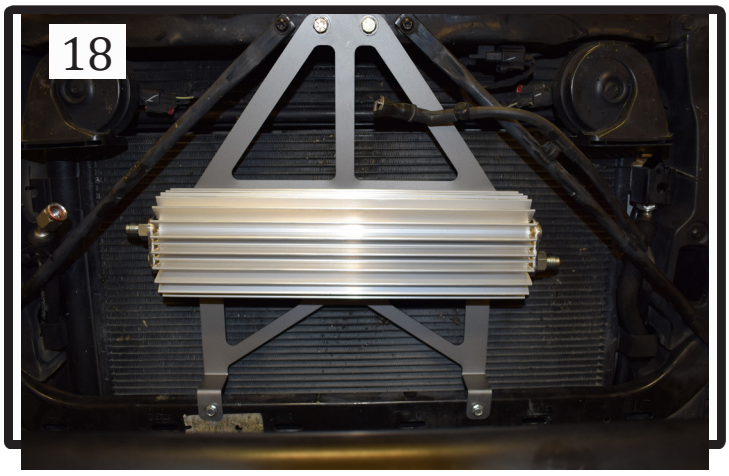
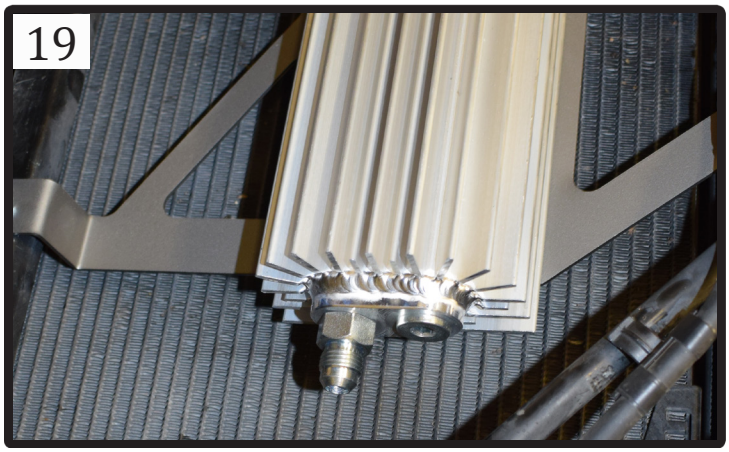


19. On the bench, install the fittings and plugs onto the C212S cooler.

The AN fitting goes on the bottom right side of the cooler.

NOTE: All O-ring sides of the fittings go into the cooler.

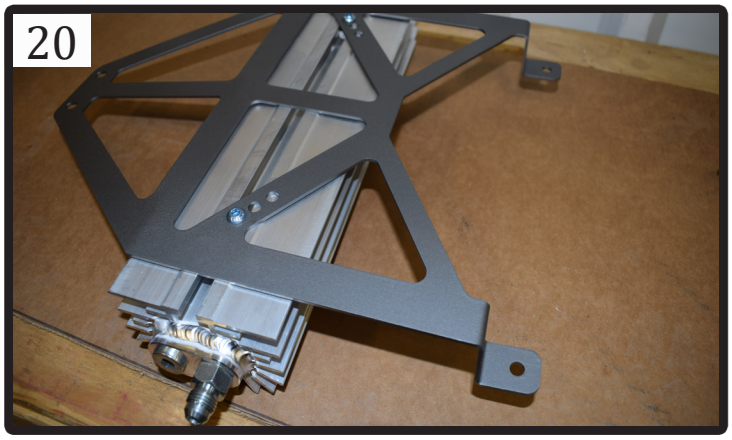


20. Mount the cooler onto the 16.302 bracket.

Use (2) M6-1.0 T slot nuts and (2) M6- 1.0 x 12 BHCS bolts.

The cooler should sit in the lower holes of the bracket and be centered as best as possible.

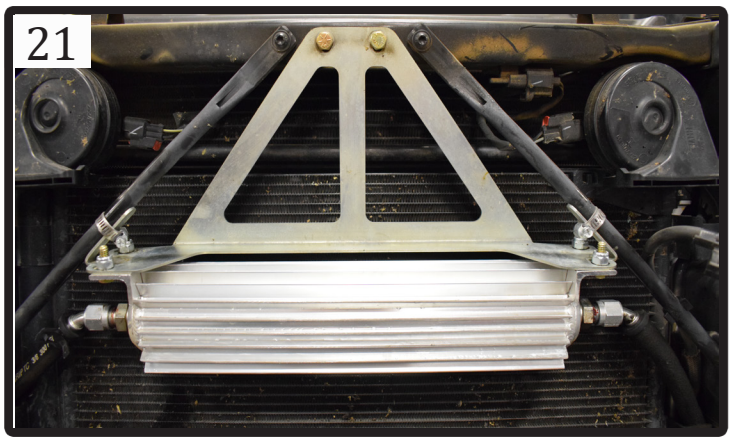
Torque: 20 ft-lb



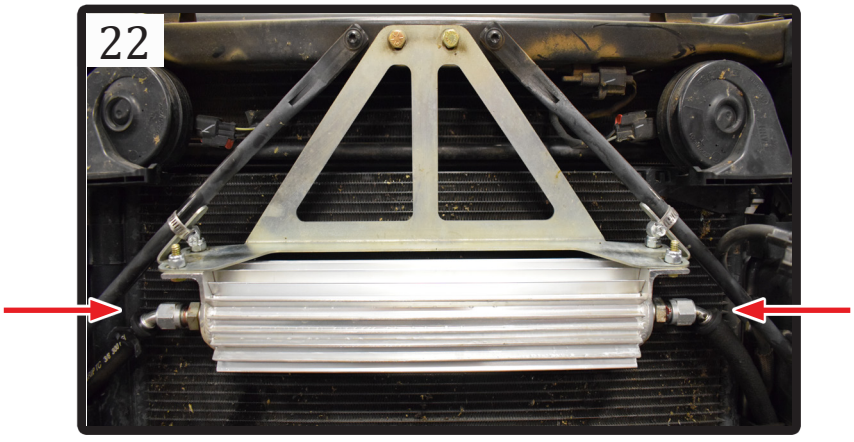
21. Install the cooler + bracket assembly.

Use:

- (2) 1/4-20 x 3/4 bolts
- (2) 1/4” flat washers
- (2) 1/4-20 lock nuts (top holes)
- (2) FSHST-1/4-14-1.0 self tapping screws (bottom holes)

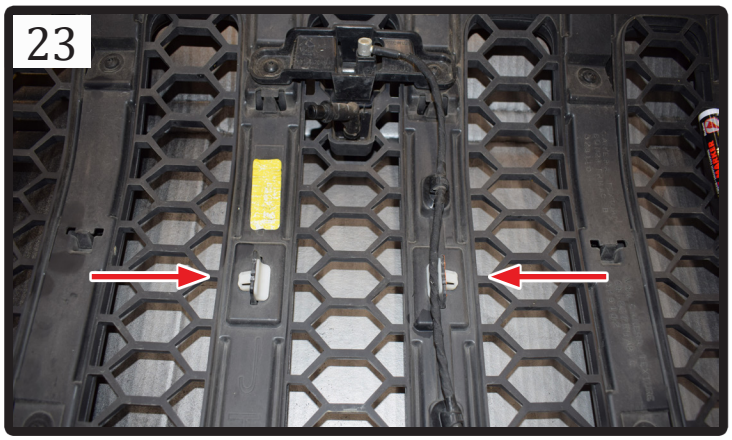


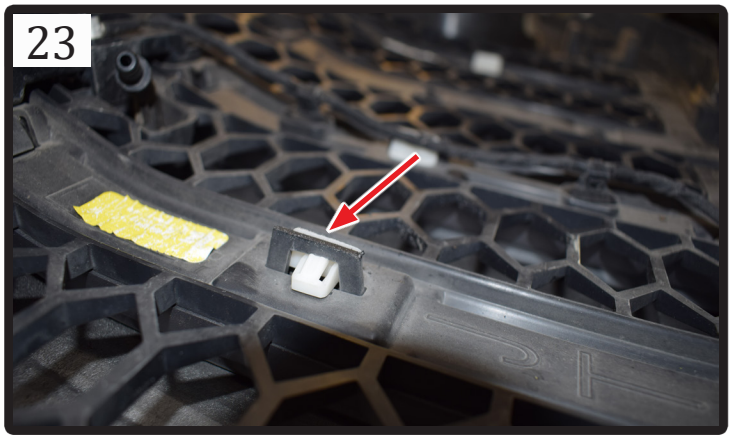
22. Connect both hoses (HA-L130 and HA-L131) to the cooler.



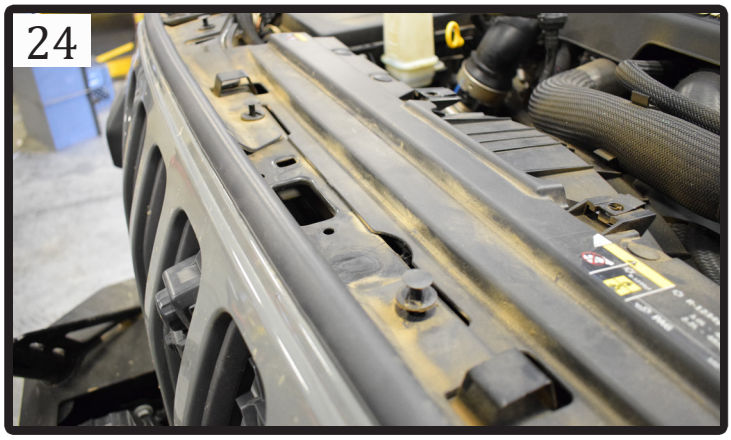
23. Before reinstalling the grille, trim the two retaining clips under the camera by 1/8".

A quick cut or grind fixes it.

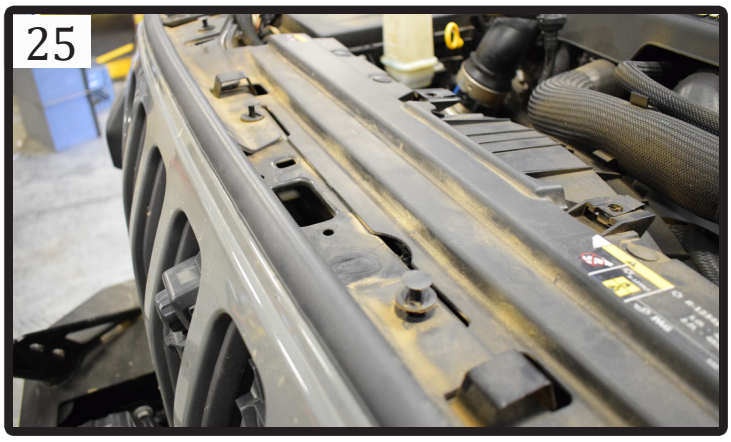




24. Reinstall the grille. Ensure all trim clips are fully seated.

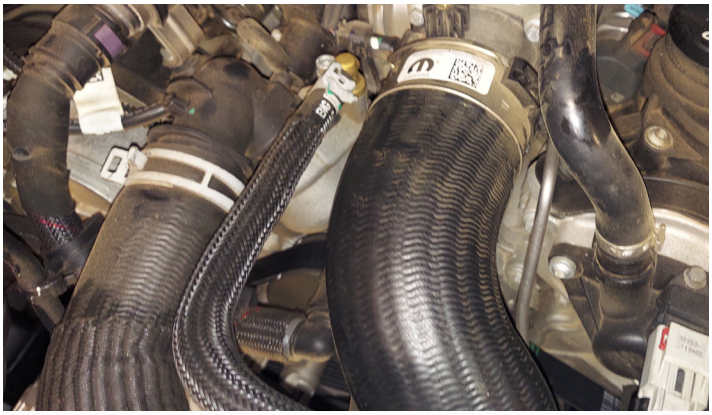


25. Reinstall the passenger-side inner fender.



26. Reinstall the turbo inlet tube and tighten clamps.

27. Reinstall the air filter box and tighten clamps.



28. Reinstall the turbo outlet tube.

29. Reinstall the power steering fill reservoir using the OEM bolt.

30. Reinstall the engine dust cover.

31. Proceed to Bleeding Procedure on next page.

Bleeding Procedure

Once the pump conversion is installed, the system must be properly filled and bled to remove all air. **PSC strongly recommends using PSC 715 power steering fluid with this system.** Four quarts of PSC fluid are included in the kit.

Be aware: this system **can take some time to fully purge**. Patience here is critical to pump life and performance.

Prep

1. Safely jack up the **front of the vehicle** and place jack stands under the **front axle**.

   This removes load from the steering and makes it much easier to turn the wheels lock to lock during bleeding.

2. Make sure all fittings, hoses, and clamps are tight before adding fluid.

Initial Fill & Prime

1. Remove the reservoir cap and **fill the tank only about halfway**.

   Do not fill it completely during the bleeding process.

2. Once the fluid level stops dropping, install the reservoir cap.

3. Start the engine for **2–3 seconds**, then shut it off.

   The fluid in the reservoir will drop quickly — this is normal.

4. Remove the cap and add more fluid to bring it back to about halfway full.

5. Repeat this start and shut off process **a few times**, allowing a couple of minutes between starts.

   During this stage the fluid will become **very aerated**. Letting the system sit gives the air and rise out of the fluid.

Bleeding Procedure Cont

Steering Bleed

1. After a few prime cycles, start the engine and slowly turn the steering wheel **full right, then full left**.
2. Repeat lock to lock steering **3–4 times**, then shut the engine off.
3. Let the system sit for a few minutes, check the fluid level, and top off as needed.
4. Continue this process until the fluid level **stabilizes and no longer drops**.

Loaded Bleed (Final Air Removal)

1. Remove the jack stands and lower the vehicle to the ground.
2. Start the engine and drive the vehicle to bring **some heat into the fluid**.

   Heat helps release any remaining trapped air.
3. If you hear the pump **whining**, the fluid is still aerated. Do not continue driving — shut the engine off and allow the fluid to clear before proceeding.
4. Recheck fluid level and top off as needed.

   Taking the time to properly bleed the system ensures quiet operation, maximum performance, and long pump life.

Bleeding Procedure Cont

Final Checks

- Final fluid level should be approximately 1”–1½” of fluid in the bottom of the reservoir.
- Make sure the vent hose is properly installed on the remote relief valve before driving.
- Recheck fluid level after the first drive.

Important Notes

- Pump whine indicates aerated fluid — this is not good for the pump.
- Running the vehicle for extended periods while whining is present must be corrected immediately.
- In many cases, the final bit of air simply requires letting the vehicle sit so the fluid can fully de aerate.

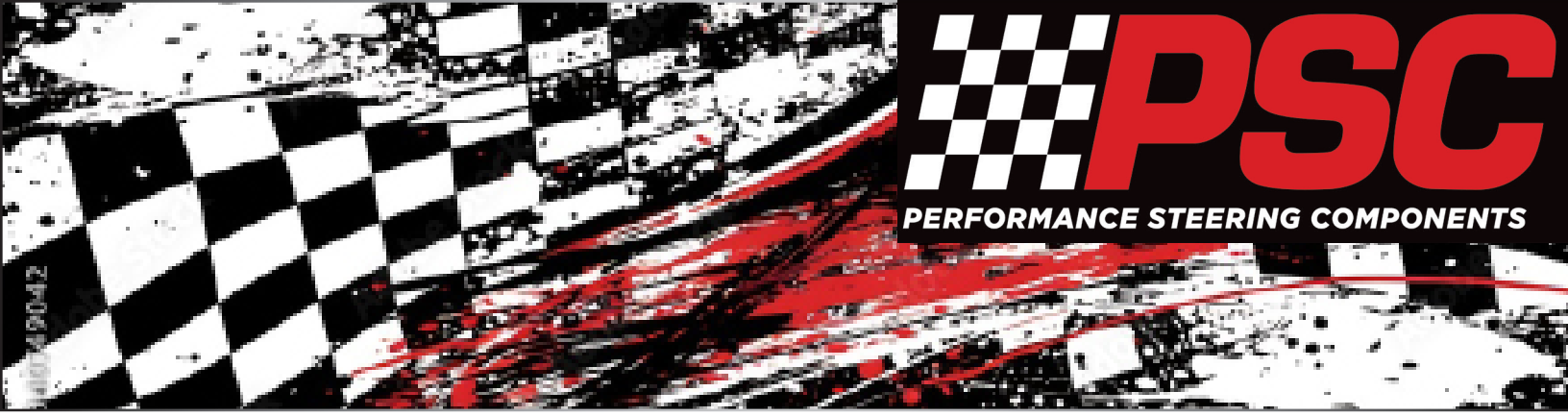
Taking the time to properly bleed the system ensures quiet operation, maximum performance, and long pump life.

Scan to Order PSC 715, Tru Blue® or PSC 729 flushing fluid

PSC 715

PSC Tru Blue

PSC 729



CONTACT US

Questions about an install or need help finding the right part?

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