



BIG BORE XD® Cylinder Assist® Kit
RAM 2500 / 3500 (2014-2024)
– Bolt-On Installation

Part #: SK858



Installation Guide



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Before You Start

Before you dive in, take a minute to set yourself up right. This job's straightforward if you've got the basics covered:

- **Park it solid.** Level ground, parking brake on, wheels chocked. You don't want that truck moving while you're under it.
- **Lift smart.** If you're using a jack, support the front axle with stands. Never trust just the jack.
- **Eye and hand protection.** Power steering fluid isn't something you want in your eyes—or all over your hands.
- **Clean work area.** Dirt and grit in the system will wreck a pump fast. Wipe down mounting surfaces before installing the new gear.
- **Have a drain pan ready.** You'll lose some fluid when you pull the old lines. Keep it contained.
- **Torque matters.** Factory bolts and PSC hardware have specific torque specs. Use a torque wrench, not "good and tight."
- **Double-check steering wheel position.** Center it and lock it before you pull the old steering gear. That keeps your alignment true.
- **Plan for bleeding time.** This isn't a rush job—bleeding the system right is critical. Give yourself extra time and patience.



What's in the Kit

Box 1 —

- SG856R— Cylinder Assist Steering Gear

Box 2 — **CAK858** — Cylinder Assist Axle Kit:

- (1) SC2200 – Cylinder Assist® – Single-Ended – 1.5" x 8.0"
- (1) MB34K – Mounting Bracket – Cylinder Assist® – Ram 2500/3500 (2019–2021)
- (1) HK2062 – Hose Kit – Ram 2500/3500 Cylinder Assist® (2014+)
- (1) REXFR10 – Rod End – Female Shank – RH Thread – 5/8-18 FR x 5/8" Ball
- (1) REXMR10-SS – Rod End – Male – 5/8-18 x 5/8" – Shortened .750"
- (2) FSNJ-5/8-18RH – 5/8-18 RH Jam Nut
- (1) FL-SWE715-4PAK – PSC 715 Power Steering Fluid – 4-Quart Pack



Tools Needed

- Pitman arm puller
- 5/8" drill bit
- Torque wrench (up to 180 ft-lbs)
- Standard hand tools

1. Center & Lock the Steering Wheel

Center and lock the steering wheel so the new steering gear lines up exactly like the old one.

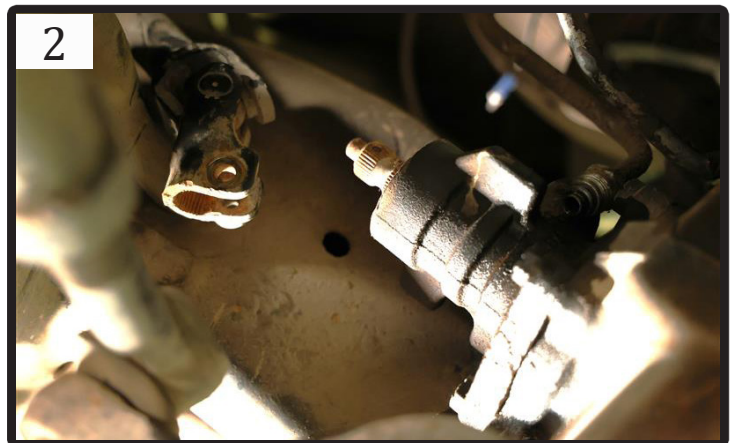
(Photo shown is from a previous build, but the process is the same.)



2. Disconnect Steering Shaft

Remove the bolt from the lower steering shaft at the gear.

Slide the shaft off and move it out of the way.



3. Remove Factory Lines

Loosen and remove both factory steering lines.

Drain fluid into a pan and set lines aside.

4. Pull the Pitman Arm

Remove the nut and washer, then use a pitman arm puller to remove the arm completely.

Tip: Before you pull the old steering gear, take note of the angle the pitman arm is pointing. That way, when you drop the new steering gear in, everything lines up exactly like the original.



5. Remove Steering Gear

Take out the (3) bolts that go through the frame and hold the steering gear in place.

It helps to have someone underneath supporting the gear while you back the bolts out.

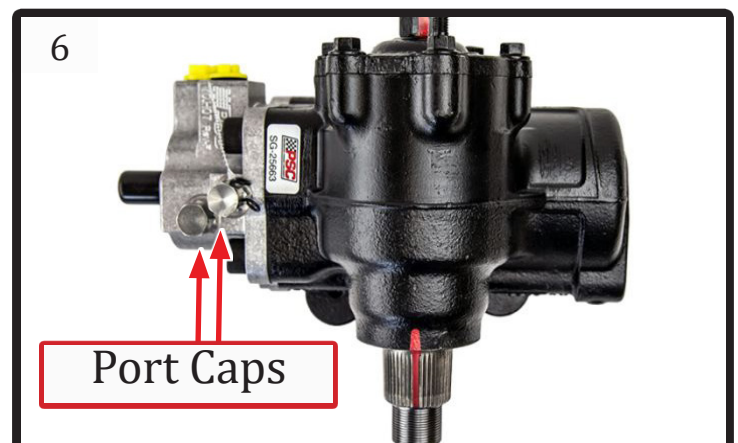
Once it's free, **pull the gear out through the bottom.**

6. Prep for Install

Remove the (2) cylinder assist port caps from the steering gear.

Clean and inspect all mounting and sealing surfaces before installation.

Install the new O-rings supplied with the steering gear onto the factory power steering line fittings.



7. Install New Gear

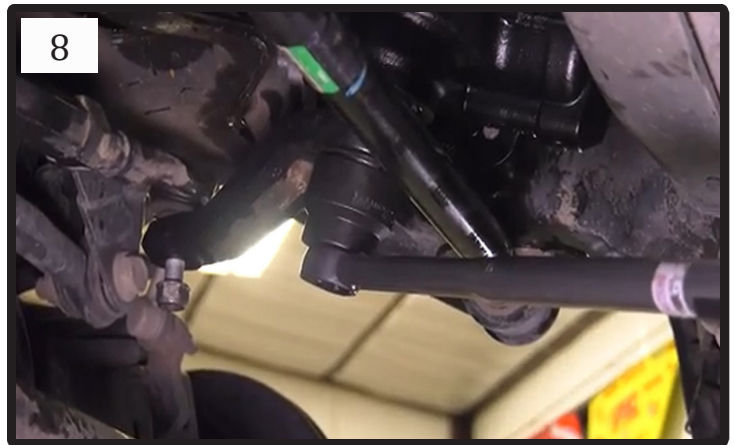
Use the (3) factory bolts. **Torque to 115 ft-lbs.**

8. Install Pitman Arm

Factory arm goes back on with lock-nut and washer. **Torque to 180 ft-lbs.**

9. Reconnect Factory Lines

Install in the same ports and tighten.



10. Reattach Steering Shaft

Slide the coupler fully onto the gear and secure with the factory bolt.

11. Drill Stabilizer Mount

Use a 5/8" bit to enlarge the factory hole for the supplied hardware.



12. Assemble Cylinder Kit

- Thread heim joints and lock nuts.
- Stationary side mounts to axle with spacers.



13. Install Tie-Rod Bracket

Using the two factory bolts, install the tie-rod mount bracket as shown above. Install the bolts from the bottom up and secure them with the factory nuts.

The shaft side of the Cylinder Assist will mount to this bracket using the supplied hardware.

Torque specs:

- Tie-rod link bolts: 50 ft-lbs
- Cylinder mount bolt: 70 ft-lbs



14. Connect High-Pressure Lines

Use the HA-H2062-P hose, the longer hose in this kit, on the top port of the gear.

Angle lines forward for clearance.

15. Connect Cylinder Lines

Longer hose to passenger side, shorter to driver side.

Angle fittings inward.



16. Secure Hoses

Drill (2) ¼" holes in cross member for "P" clamps. Zip-tie lines together toward cylinder.



17. Check Movement

With vehicle lifted, cycle steering lock-to-lock. Confirm smooth travel and no binding.

18. Bleed the System

The final step is bleeding your steering system. Follow the bleeding procedure on the next two pages.

IMPORTANT:

Don't rush this step. Bleeding the system is one of the most important parts of the installation. Take your time and follow the procedure as closely as possible to remove all air from the system and ensure proper steering performance.



Bleeding Procedure

With the kit installed, the last step is adding PSC 715 or PSC TRU BLUE® power steering fluid and bleeding the system of all air. This part takes patience and diligence to do it properly—but it's critical to purge all the air out of the system to prevent damage to the pump.

Step 1: With the engine off, jack up the front of the vehicle and put jack stands under the front axle. This makes the bleeding process easier.

Step 2: Add PSC fluid to the reservoir until it's about 1" to 1-1/2" from the top or with an OEM reservoir keep the level between min and max. **NOTE:** With a PSC reservoir make sure the filter submerged in fluid at all times.

Step 3: Turn the steering wheel lock-to-lock (all the way right and all the way left) to pull more fluid through the system. Keep adding fluid a little at a time, checking the level after each round — whether that's with a dipstick, sight glass, or fill plug — until it's consistently sitting where it should be. You're looking for steady, not bouncing around.

Step 4: Put the cap on the reservoir and start the engine for about 30 seconds—but **do not turn the steering wheel yet.**

NOTE: The fluid level in the reservoir will drop and get aerated. Letting a few minutes pass between startups will allow air bubbles to work their way out of the system. Refill the reservoir and repeat this process a couple of times.

Step 5: Start the engine and turn the steering wheel completely right and then left 10-15 times. Shut the engine off and let the vehicle sit for 10 minutes. Check and add fluid as necessary. Repeat this process 3-4 times.

At this point the fluid level should move about one inch up or down when cycling the steering, and no bubbles should be visible in the reservoir



Bleeding Procedure Cont

Step 6: Lower the vehicle to the ground and repeat the process above one more time. Check the fluid level again.

Step 7: Take the vehicle for a test drive. Listen for pump noise—that's a sign of fluid aeration. If you hear it, shut the vehicle off to let the bubbles dissipate.

If noise keeps coming back, double check the low-pressure lines and make sure all fittings are tight. Top off the fluid and drive the vehicle again. Let the system cool down once you believe it's properly bled.

Step 8: Remove the reservoir cap and have someone start the vehicle while you watch the fluid level.

If the level drops on startup, there's still air in the system.

If it stays steady, you'll be good.

NOTE: Getting all the air out of the system can take some time. If the pump is whining, you are aerating the fluid which is not good for the pump. If you're running your vehicle for an extended time and your pump has not stopped whining, it needs to be addressed as soon as possible. Sometimes this can be as simple as letting the vehicle sit to get the last of the air out. Always make sure the fluid level is good and there are no leaks.

Scan to Order PSC715, Tru Blue® or PSC729 flushing fluid



PSC 715



PSC Tru Blue



PSC 729



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