



BIG BORE XD® Steering Gear

Ford Super Duty 6.0L Power Stroke Diesel (2003–2004)

Ford Excursion 7.3L Power Stroke Diesel (2000–2003)

Ford Excursion 6.0L Power Stroke Diesel (2003–2005)

Part #: SG752R



Installation Guide



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Before You Start

This PSC steering gear replaces your factory gear for improved durability and performance. You can install this in a home garage if you're comfortable with basic tools. If you're unsure, have a pro do the job.

Important: The gear weighs about 50 lbs—grab a friend to help with lifting and positioning.

Torque Note: You'll need to torque the pitman arm nut to 200 ft-lbs. If you don't have a torque wrench that goes that high or a way to secure the gear while torquing, plan to take it to a shop for that step.



What's in the Box

- (2) H0304-C-06 — Cap Nut, -6
- (1) FSWL-7/8 — 7/8" Lock Washer
- (1) HE80241 — High-Pressure Hose Assembly (1999–2004 Ford Super Duty / Excursion)
- (2) H6802-6-6 — 6MB to 6MJX 45° Fitting (Steering Gear / Cylinder Assist Port)
- (1) FSNJ-7/8-14RH — 7/8"-14 RH Jam Nut
- (1) CAAS-M103 — Cylinder Assist Adapter (Ford F250/F350 1999–2004)
- (2) AMSOR011BN70 — O-Ring, Line Seal (0.301" ID x 0.4375" OD)

Tip: Use medium-grade thread locker on bolts without lock washers or lock nuts. Use Permabond thread sealant on all hydraulic fittings and hose couplings.

Tools Needed

- 1-5/16" socket & torque wrench (torque pitman arm nut to 200 ft-lbs)
- Standard hand tools (ratchets, sockets, wrenches)
- Ratchet strap or bungee cord (to secure steering wheel)
- Drip pan (for fluid)
- Thread locker & thread sealant



General Information

This PSC steering gear can be installed in a home garage, but if you're unsure at any point, we recommend having a professional handle the install.

The steering gear weighs about 50 lbs, so having a second person there to help is strongly recommended. It can be difficult to position the gear and start the mounting bolts on your own.

You'll need a 1-5/16" socket and a torque wrench capable of reaching 200 ft-lbs to properly torque the pitman arm nut. If you don't have a way to safely secure the gear to a workbench or can't reach that torque spec, plan to take it to a shop or parts store that can handle it for you.

Other than that, standard hand tools are all that's required.

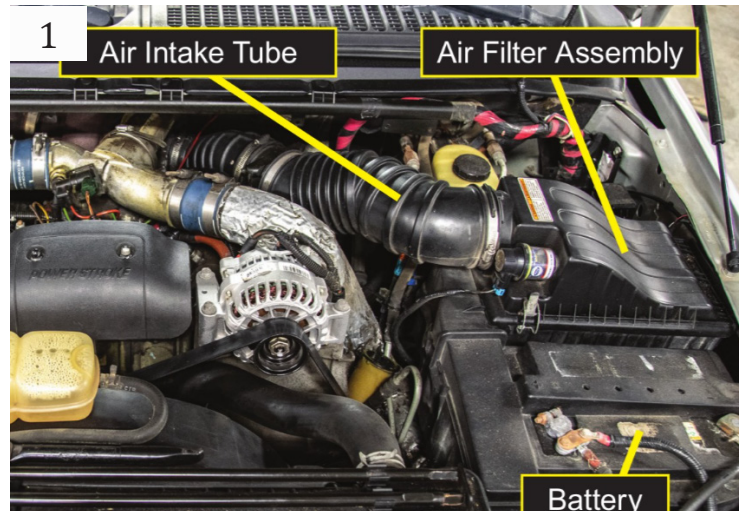
Note: This guide is intended to walk you through the general install process. Every vehicle is a little different, so no two installs will be exactly the same. The photos shown are from a 7.3L PowerStroke installation, so they may differ slightly from a 6.0L. The components and overall install process remain the same.

Step 1: Open Hood & Disconnect Battery

Lift the hood and make sure it's fully supported.

Disconnect the driver-side battery and remove the air filter assembly.

Note: If you have a stock air intake tube, it can stay in place. If you're running an aftermarket intake tube, you may need to remove it as well.



Step 2: Remove Battery & Battery/Air Filter Tray

Remove the driver-side battery completely.

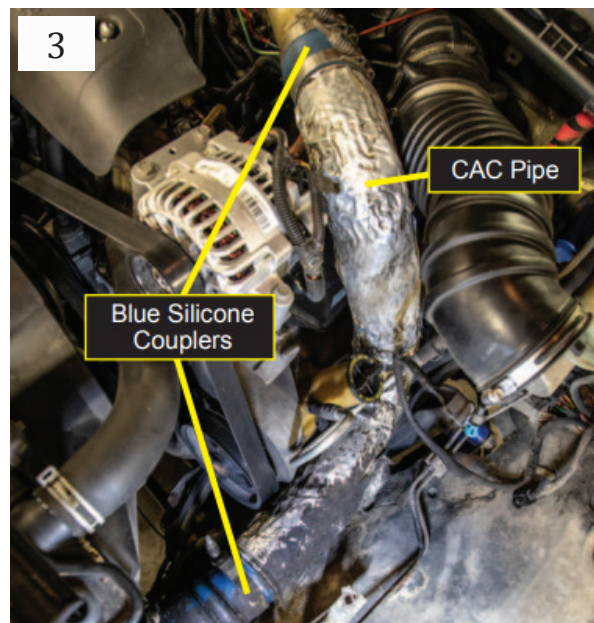
With the battery removed, take out the bolts securing the battery/air filter tray and remove the tray from the engine bay.



Step 3: Remove Charge Air Cooler (CAC) Pipe

With the battery/air filter tray removed, you'll now have access to the Charge Air Cooler (CAC) pipe (silver pipe).

Remove the CAC pipe from the blue silicone couplers.

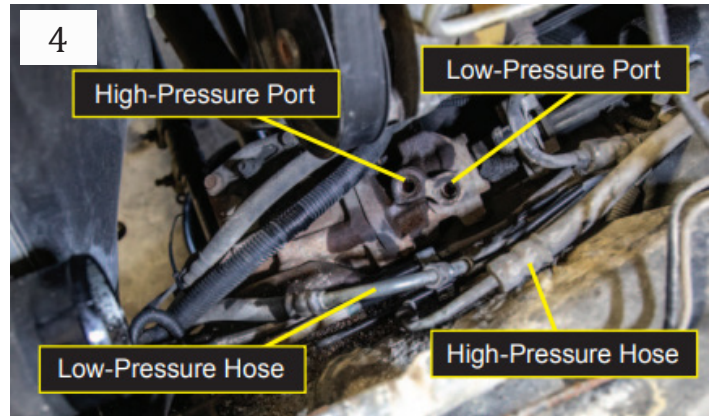


Step 4: Disconnect Steering Gear Hoses

You should now have a clear view to the top of the steering gear through the engine bay

- Remove both hoses from the steering gear.
- Completely remove the high-pressure hose running from the hydro-boost to the steering gear. You will be replacing this hose with PSC hose **HE80241**.

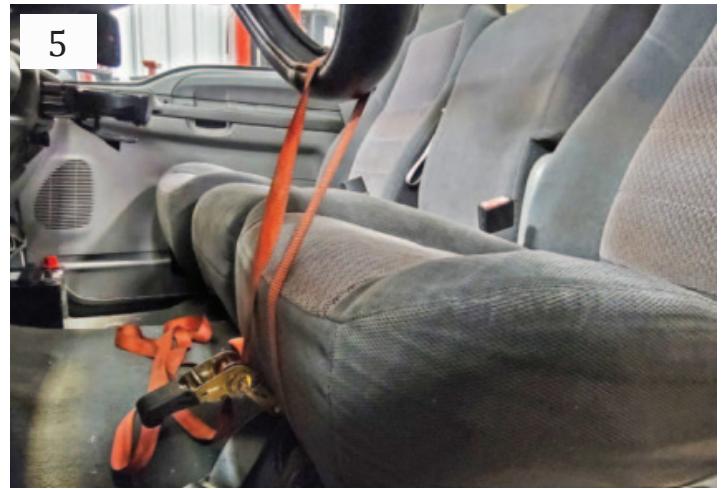
Note: Place a drip pan underneath to catch any fluid.



Step 5: Secure Steering Wheel

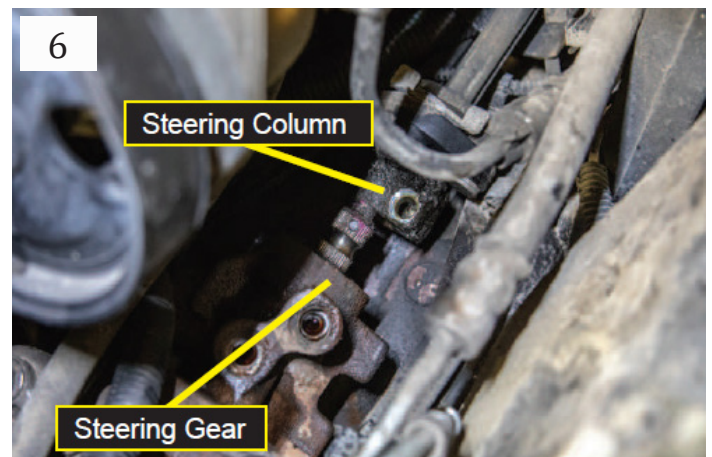
Secure the steering wheel so it cannot rotate.

We recommend using a ratchet strap or bungee cord.



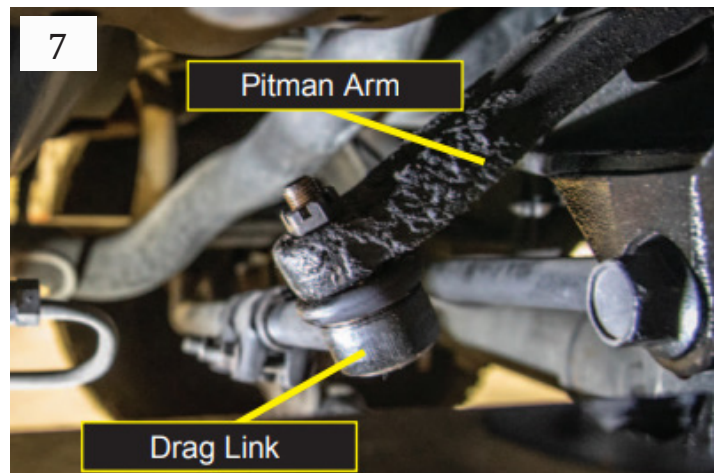
Step 6: Disconnect Steering Column

Separate the steering column from the steering gear.



Step 7: Remove Drag Link

Separate and remove the drag link from the pitman arm.

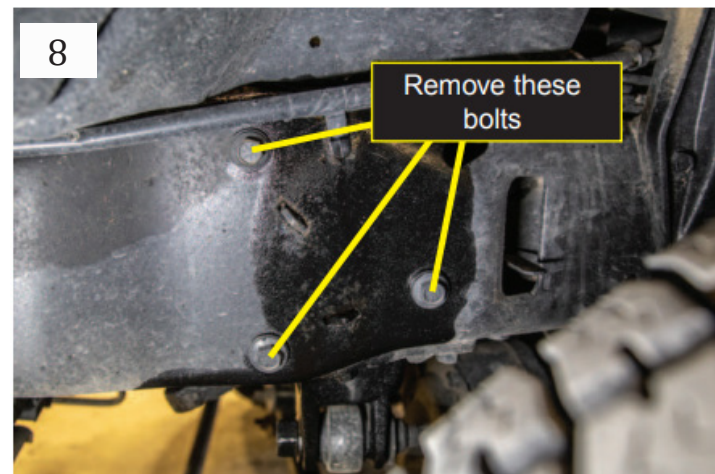


Step 8: Remove Factory Steering Gear

From the driver-side wheel well, remove the three (3) bolts securing the steering gear to the frame.

- Keep these bolts—you'll reuse them to install the PSC gear.
- The factory steering gear will drop out through the bottom of the vehicle.

Note: This gear is heavy. Having a friend help with this step is strongly recommended.



Step 9: Swap Pitman Arm

Remove the pitman arm from the factory steering gear and install it onto the new PSC steering gear.

Torque the pitman arm nut to 200 ft-lbs while the gear is outside the vehicle.

Note: If you don't have a way to securely hold and torque the gear to 200 ft-lbs, take it to a local auto parts store or repair shop (O'Reilly's, AutoZone, etc.) and have them torque it for you.

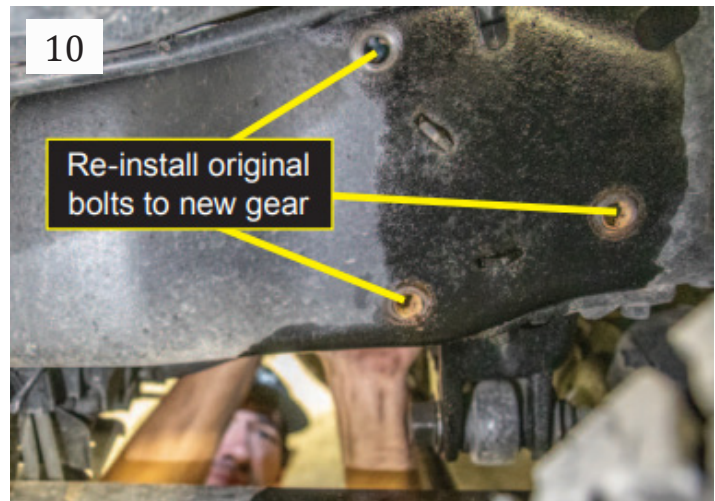


Step 10: Install PSC Steering Gear

With a friend holding the PSC steering gear in position, install it onto the frame using the same three factory bolts removed earlier.

Note: The gear is heavy and difficult to hold in place alone—having a second set of hands makes this much easier.

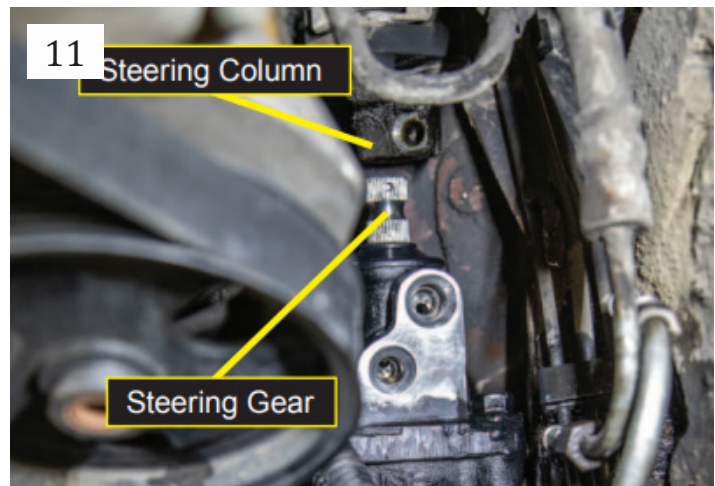
Torque: 111 ft-lb



Step 11: Reconnect Steering Column

Reinstall the steering column onto the PSC steering gear.

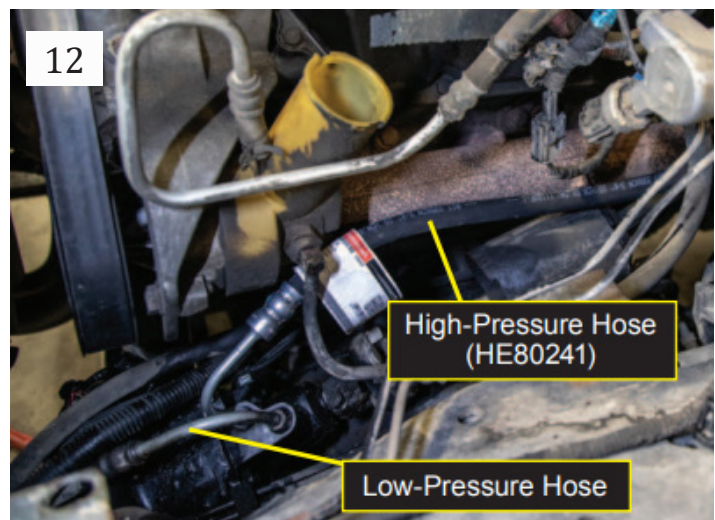
Torque: 15 ft-lb



Step 12: Install New High-Pressure Hose

Install the PSC-supplied high-pressure hose (HE80241) from the steering gear to the hydro-boost.

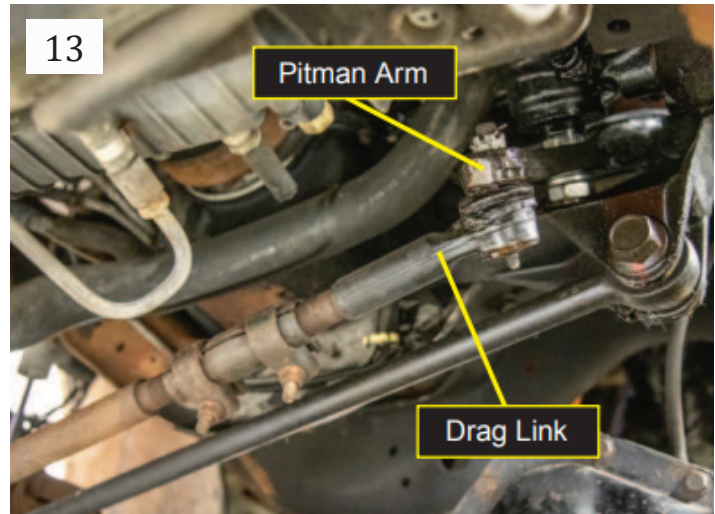
Reinstall the factory low-pressure return line into the low-pressure port on the steering gear.



Step 13: Reattach Drag Link

Reinstall the drag link onto the pitman arm.

Torque: 129 ft-lb



Step 14: Reinstall Removed Components

Reinstall components in the following order:

1. CAC pipe into the blue silicone couplers
2. Battery/air filter tray
3. Battery
4. Air filter assembly

Reconnect the battery.

Note: If you removed an aftermarket intake tube earlier, reinstall it after the air filter assembly and before reconnecting the battery.



Step 15: Fill & Bleed System

Fill the system with PSC power steering fluid.

Follow the bleeding procedure on the next pages carefully.

Tip: Take your time and be patient—proper bleeding is critical for correct steering performance.



Bleeding Procedure

With the kit installed, the final—and most important—step is filling the system with PSC power steering fluid and bleeding all air from the system. PSC fluids are specifically formulated for high-performance steering systems.

This process takes patience, but it's critical. Any air left in the system can cause pump noise, poor performance, or pump damage.

Step 1: Raise the Front Axle

Jack up the front of the vehicle and support it securely with jack stands under the front axle. Raising the tires off the ground removes steering load and makes bleeding much easier.

Step 2: Fill Reservoir

Add PSC power steering fluid to the reservoir until the level is about 1 inch from the top of the reservoir.

With the engine off, turn the steering wheel fully from lock to lock (all the way right, then all the way left). This pulls fluid into the system and begins pushing air out.

Continue cycling the steering and adding fluid as needed until the fluid level remains consistent and no longer drops.

Step 3: Initial Engine Run (No Steering Input)

Start the engine and let it idle without turning the steering wheel.

- The fluid level will drop and become aerated—this is normal.
- Maintain the fluid level while the engine idles.
- Watch for air bubbles working their way out of the system.

Once the fluid level stabilizes and bubbles slow down, shut the engine off and let the vehicle sit for several minutes. Recheck and top off fluid if needed.

Step 4: Steering Cycle with Engine Running

Start the engine again and slowly turn the steering wheel from lock to lock at idle while monitoring the fluid level.

Shut the engine off and allow the system to rest for a few minutes. Recheck the fluid level and add as needed.



Bleeding Procedure Cont

Step 5: Hydro Boost Bleed (If Equipped)

With the engine running, press and release the brake pedal while slowly turning the steering wheel fully right and left 5–10 times. Expect the pump to be noisy during this step—this is normal at this stage.

Next, cycle the steering wheel lock to lock 5–10 more times without pressing the brakes.

Repeat this process as needed.

Step 6: Final Air Purge Cycles

Start the engine and turn the steering wheel fully left and right 10–15 times.

Shut the engine off and let the vehicle sit for about 10 minutes.

Check the fluid level and add as necessary.

Repeat this cycle 3–4 times.

As air is purged, the fluid level will stop dropping and bubbles will no longer be visible in the reservoir.

Step 7: Lower Vehicle & Test Drive

Remove the jack stands and lower the vehicle to the ground.

Take the vehicle for a short test drive to build some heat in the system—this helps remove any remaining air.

- If the pump begins to whine, stop driving.
- Shut the engine off and allow the fluid to settle.
- Top off the fluid as needed.

Step 8: Final Air Check

With the engine cold, remove the reservoir cap and have someone start the vehicle while you watch the fluid level.

- If the fluid level drops on startup, air is still present.
- If the level remains steady, the system is properly bled.



CONTACT US

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

Phone: (817) 270-0102

Mon-Fri | 9 AM-5 PM CT

Email: support@pscmotorsports.com

Web: www.pscsteering.com

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PSC 715



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