

Detroit Speed  
12.7:1 Ratio Steering Gear  
1967-1992 Camaro/Firebird, 1964-1981 Chevelle,  
1968-1979 Nova, 1982-2003 S10 Pickup & 1978-88 G-Body  
P/N: 090204DS & 090215DS

Thank you for your purchase of the Detroit Speed 12.7:1 power steering gear. You can now achieve rack and pinion steering performance with a bolt-in steering gear. This steering gear is used to replace the common GM 800 series power steering gear used from 1964 to 1992.



The DSE Steering Gear includes the following features:

- All new steering gear unit, not rebuilt
- Fits 1982-92 Camaro/Firebird with no modification to the steering box or the frame
- Improved steering feel due to low friction gear design
- Precision rack and pinion valve technology
- Late model performance car feel
- Quick ratio 12.7:1
- Lighter than stock steering box
- Original power pitman arm may be used
- A new 3/4 x 30 spline rag joint is available through Detroit Speed
- New O-ring power steering hoses are needed
- DSE Steering Gear Outlet Fittings not included

**NOTE:** For the 1978-88 G-Body and the 1982-92 Camaro/Firebird application, a steering shaft kit will be needed. Detroit Speed does offer a steering shaft kit (P/N: 092519DS).

To install the DSE Steering Gear, follow the following steps.

1. Support the vehicle on jack stands.
2. Depending on application, it may be necessary to remove the exhaust manifold or header from the driver side to gain better access to the steering gear.
3. Remove the pitman arm from both the drag link and the steering gear. A pitman arm removal tool should be used to remove the pitman arm from the steering gear. If the car has original power steering, inspect the arm for wear and save for later reinstallation. If the car has manual steering, you will need a replacement power steering pitman arm (available from Detroit Speed, P/N: 092301DS for 1967-69 Camaro & 1968-72 Nova).
4. To disconnect the steering column from the gear, loosen the nuts at the rag joint that go through the flange on the steering column or the steering shaft.
5. Remove the power steering hoses from the steering gear if the car is originally power steering equipped.
6. With the original steering gear properly supported, remove the three bolts that attach the gear to the frame rail. These bolts will be reused for installation. Remove the original gear from the vehicle.
7. Place the DSE steering gear against the frame and thread the three bolts into the new steering gear. Be sure to use the correct mounting points on the steering as the fourth mounting boss is not used (Figure 1). Torque the mounting bolts to 70 ft/lbs. **NOTE:** If the fourth mounting point does need to be used you will need to add a 1/2" thick spacer between the steering gear and the frame. You will also need to use a 1/2" long bolt.

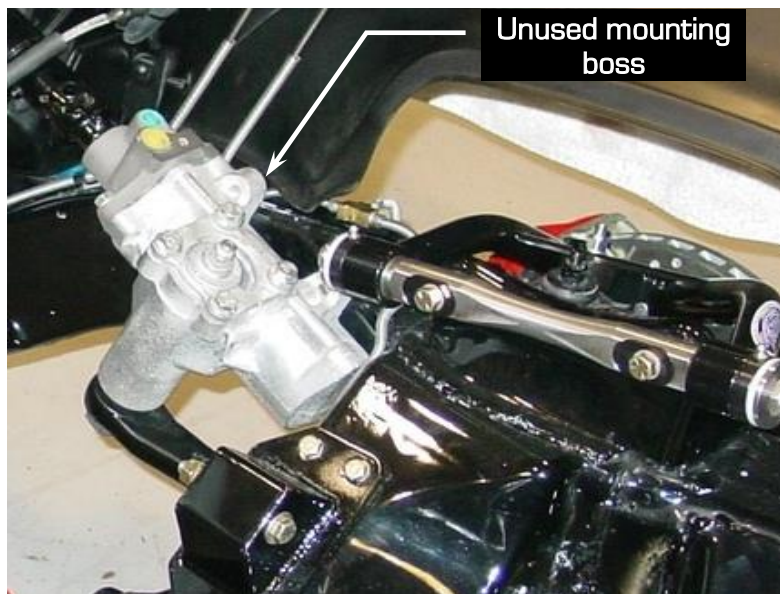


Figure 1 - Unused Mounting Boss

8. Attach the pitman arm to the steering gear and the drag link. Torque the pitman arm nut to 120 ft/lbs. Do not forget to install a new cotter pin.
9. Attach the power steering hoses to the steering gear. Make sure the pressure and return hoses are installed into the correct ports. Both ports are O-ring type. The pressure port fitting size is M18 x 1.5mm and the return port fitting size is M16 x 1.5mm (Figure 2 on the next page). Detroit Speed has a full line of hoses and fittings to complete your power steering system.

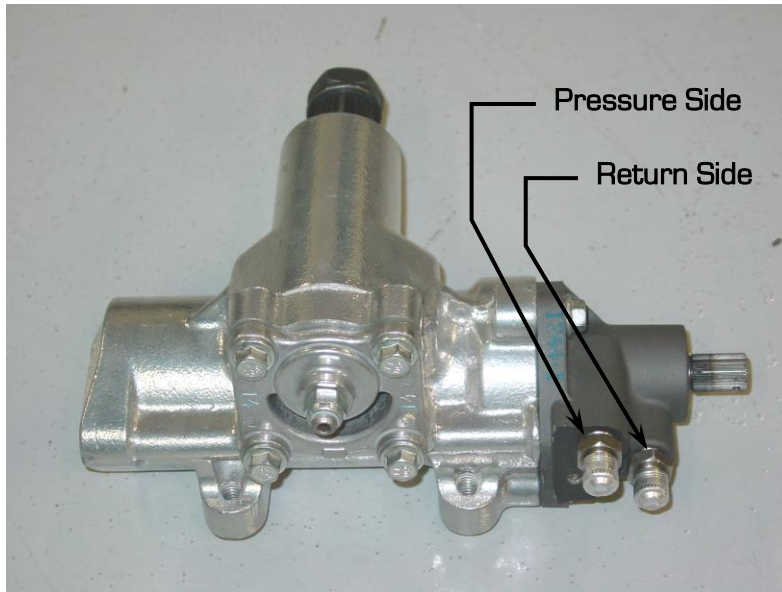


Figure 2 – Pressure & Return Ports

10. Attach the DSE steering gear to the steering column. A new rag joint is required and is available from Detroit Speed (P/N: 090205DS). If using a different method to attach the steering column to the steering gear, the input shaft is 3/4" – 30 splined shafts.
11. Add power steering fluid to the system. Detroit Speed does offer Valvoline power steering fluid for your power steering system (P/N: 140112). All air must be bled from the system. Follow the steps below to bleed air from the system.
  - a) After filling the system with power steering fluid, raise and support the front of the car.
  - b) Verify that the engine is turned off.
  - c) Slowly turn the steering wheel from full left lock to full right lock. **NOTE:** Avoid hard steering input into full lock positions.
  - d) Check the fluid level and maintain it at the "full" mark or 1/2" to 3/4" above the reservoir inlet fitting.
  - e) Repeat Steps 11.c through 11.d three to four times.
  - f) Start the engine and repeat Steps 11.c through 11.e.
  - g) Turn the engine off and recheck the fluid levels.
12. The installation of the DSE Steering Gear is now complete.
13. Because the pitman arm has been removed and reinstalled, an alignment by a professional alignment shop is recommended.

If you have any questions before or during the installation of this product, please contact Detroit Speed at [tech@detroitsspeed.com](mailto:tech@detroitsspeed.com) or 704.662.3272

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