

Detroit Speed
Detroit Tuned Steering Rack
Various Applications
P/N: 090220DS & 090221DS

Detroit Speed's new rack and pinions have been optimized to provide an exceptional modern performance feel on the street and on the track and are available in both standard and narrow widths. The standard width is 24.5" and the narrow width is 21.5" (inner tie rod ball to ball width). This is one of the only racks with a 21.5" width in the aftermarket industry!



The Detroit Tuned Steering Rack features:

- 'Detroit Tuned' valving specifically designed to provide the increased effort and performance feel found in late model performance vehicles.
- All new components.
- Every rack undergoes a rigorous quality check and is performance tested prior to being packaged.
- Included polyurethane mounting bushings.
- An internal inner tie rod boot balance tube.

Detroit Speed Steering Rack Specifications		
	Standard (PN 090221DS)	Narrow (PN 090220DS)
Inner Tie Rod Ball to Ball Width	24.5"	21.5"
Overall Width	45"	42"
Linear Rack Travel	4.5"	4.5"
Number of Turns Lock to Lock	2.5*	2.5
Mounting Bolt Span	15.5"	13.5"
Centerline of Rack Housing to Centerline of Driver's Side Mount	8.77"	7.77"
Mounting Bolt Size	9/16"	
Outer Tie Rod Thread Length	6"	
Outer Tie Rod Thread Size	9/16"-18	
Input Shaft	3/4"-36	
Recommended Pump Flow Rate	3 gal/min	
Maximum Peak System Pressure	1800 psi	
High Pressure Fitting Thread	9/16"-18	
Low Pressure Fitting Thread	5/8"-18	

*For the standard rack, you can remove the spacers inside the boots of the rack on both sides in order to have 5.5" of linear travel and 3 turns lock to lock.

Fastener Torque Specifications – Detroit Tuned Steering Rack	
Application	Torque (lb.-ft)
Rack and Pinion Mounting Bolts	95

NOTE: Before the rack and pinion is installed, you can center the rack on the bench before it is installed. Mark a line along the length of the input shaft. Turn the rack all the way to one side and mark the housing where the line on the input shaft lines up. Turn the rack all the way in the other direction and count the turns in the opposite direction. Mark the housing where the line on the input shaft lines up. Turn the rack back in the opposite direction 1/2 the amount of turns so that the line on the input shaft lands in between your 2 marks on the housing (Figure 1).



Figure 1 – Center the Rack & Pinion

NOTE: The mounts on the rack and pinion are offset to one side in relation to the centerline of the rack housing. For the standard rack, the distance from the centerline of the rack housing to the center of of the driver's side mount hole is 8.77" for the standard rack and 7.77" for the narrow rack.

Rack Assembly:

1. Thread the outer tie rod ends onto the rack and pinion.
2. When installing the tie rod ends, make sure they are equal distance on each side to center the steering. To verify, measure from the end of the threads to the edge of the jam nut. This measurement should be approximately 3/4" per side.
3. Install the grease fittings into the tie rod ends.
4. After the rack is installed into the vehicle, attach the power steering hoses to the steering gear. Follow Figure 1 on the next page for the location of the pressure and return ports.

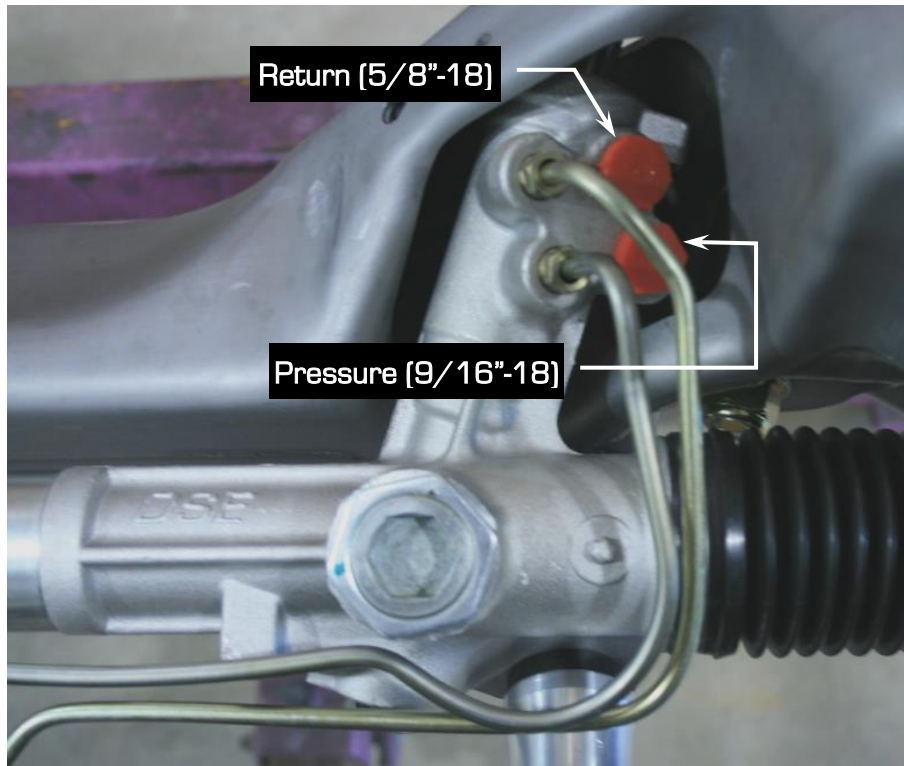


Figure 1 – Pressure and Return Port Locations

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

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