1955-57 DELPHI POWER STEERING BOX INSTALLATION

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Randy has been involved in the Chevy parts business for over 25 years. He is a wizard at creating, making and modifying custom parts for Chevys.

This Chevy Delphi steering kit is an excellent way to upgrade your classic to modern steering if you wish to stay with a steering box. Its internal rack spool and 16:1 ratio gives quick, precise, steering and road feel. It is the next best thing to a rack and pinion steering system. This box can be used with the original steering column or an ididit tilt column. When using the original steering column, it must be shortened using P/N 53-400 or 53-401 conversion kit in order to make room for the proper flex coupler. All of the original standard steering linkage is maintained while the stock steering box is removed and no longer used. Any type of header or cast iron manifold exhaust system will fit with the Delphi kit. This article covers a small block short water pump installation. Big block short water pump installations are similar. If you want a classic that truly drives like a brand new car, install our Chevy Delphi steering kit!

53-224

53-227

53-231

Tech Tips

When installing the 605, 670, Delphi or rack and pinion steering conversions, *a different set of alignment specs must be used to avoid wandering and over-sensitive steering feel:*

	1955	1956	1957
Caster Degrees:	+2-1/2 to 3-1/2	+2-1/2 to 3-1/2	+2-1/2 to 3-1/2
Camber Degrees: Pass-	-1/4	-1/4	-1/4
Driver-	0	0	0
Steering Axis Inclination Degrees:	3-1/2 +/- 1/2	3-1/2 to 4 1/2	3 to 4
Toe-In Inches:	1/8 to 3/16	1/8 to 3/16	1/8 to 1/4

Parts Needed:

53-231	Small Block Delphi Power Steering Kit
53-232	Big Block Delphi Power Steering Kit
53-228	Delphi Box To ididit Floor Shift Column Flex Coupler
53-229	Delphi Box To ididit Column Shift Column Flex Coupler
53-230	Delphi Box To Original Column Flex Coupler
53-224	Delphi Power Steering Box
53-400	Column Shift Steering Column Conversion Kit
53-401	Floor Shift Steering Column Conversion Kit
53-27	Small Block Power Steering Pump Bracket
53-28	Power Steering Pump
53-29	Power Steering Pump Adjusting Bracket
53-50	O-Ring Return Hose (Small & Big Block)
53-51	Small Block O-Ring Pressure Hose
18-35	Small Block Harmonic Balancer
53-227	Manual Steering Pitman Arm

To order parts call 1-800-456-1957 or visit ClassicChevy.com

Tools Needed:

Floor Jack
Engine Hoist
Screwdriver
9/16 Wrench
1/2 Wrench
5/8 Wrench
3/4 Wrench

Time Frame:

8-Hours

Photo #1a & 1b: The original steering box is bolted to the frame with three 3/8" carriage bolts and nuts. The stock mast jacket (steering column) protrudes through the firewall about 3-1/2". The steering shaft that connects the steering box to the steering wheel is part of the steering box and not removable.
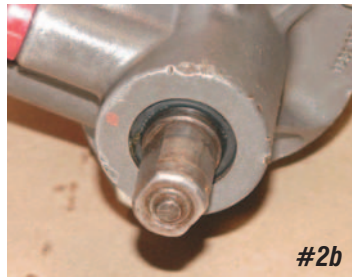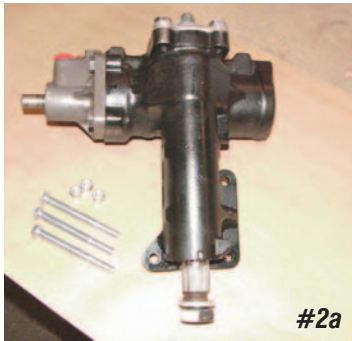
Photo #2a & 2b: The new Delphi power steering box has a one piece case and is bolted to the frame using the original three holes in the frame. The input shaft on the Delphi box is a male 17 millimeter double-D.

Photo #3a & 3b: The Delphi box includes new bolts to attach the box to the frame. With the box bolted to the frame, the clearance between the box and the exhaust is the same on the Delphi box and the original one. The Delphi box is taller than the original box at the firewall. If the stock mast jacket is going to be used, **P/N 53-400** mast jacket conversion for column shift or **53-401** for floor shift (refer to CCI web site for a copy of the tech article) will need to be used.

Photo #4: A flex coupler (rag joint) is used to connect the steering box to the steering column to improve road feel by reducing the transfer of bumps and vibration to the steering wheel. Three different couplers are available so the stock column or any aftermarket column can be used with the Delphi box. The bottom of each of the couplers is 17 millimeter female to connect to the steering box. The top of each coupler is where the difference is. Follow the chart below to determine the correct coupler to be used for your particular application.

53-228   17mm Delphi box to columns with 3/4"-DD shaft
53-229   17mm Delphi box to columns with 1"-DD shaft
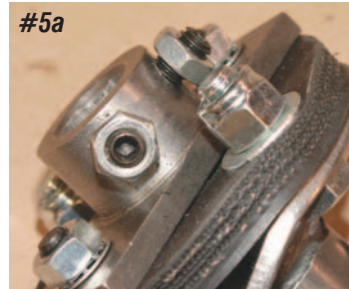53-230   17mm Delphi box to columns with 3/4"- spline shaft

Photo #5a & 5b: The coupler is held to the steering box shaft and steering column shaft with set screws and lock nuts.

Photo #6a & 6b & 6c: The original front motor mounts attach to the front of the engine on each side of the harmonic balancer. The driver's side mount will be replaced with a combination left front motor mount and power steering pump mounting bracket. This bracket can also be used as the power steering pump bracket only if the engine is side mounted. Using an engine hoist or floor jack under the oil pan, slightly raise the engine to take the load off the front engine mounts.
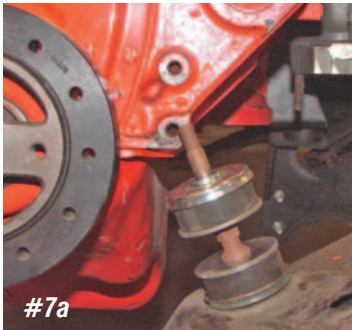
Photo #7a & 7b: Remove the stock left front motor mount and replace it with bracket **P/N 53-27**. The new bracket is held to the engine block with the supplied grade-5 bolts and lock washers.

Photo #8: With the pump bracket in place, lower the engine down and install the new upper rubber cushion, washer and nut.
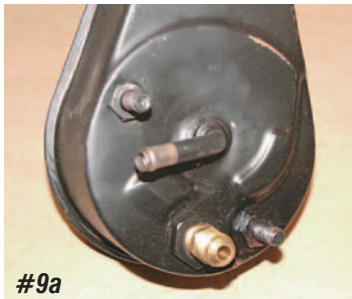
Photo #9a & 9b: There are two studs on the back of the power steering pump **P/N 53-28**. The lower stud keys into the rear slot on the power steering pump bracket. On the front of the pump there are four 3/8" holes. The lower hole is used to attach the pump to the power steering pump bracket.

Photo #10a & 10b: Place the pump into the power steering pump bracket. The rear stud is secured to the bracket with a supplied flat washer, lock washer and nut. The front of the pump is held to the bracket with a supplied 3/4" long bolt and lock washer.
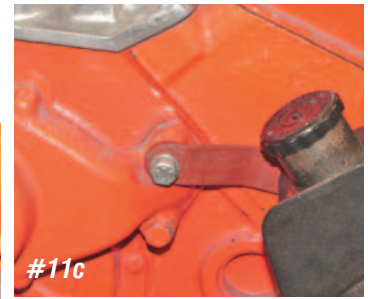
Photo #11a & 11b & 11c: The pump adjusting arm **P/N 53-29** connects to the upper stud on the back of the pump and to the upper water pump bolt on the driver's side of the engine. At the stud on the rear of the pump, a supplied flat washer, lock washer and nut is used. At the water pump the stock water pump bolt can be used.

Photo #12: The bolt-on crankshaft pulley **P/N 53-34** will drive the power steering pump. If the engine has the stock harmonic balancer with the riveted-on pulley, it will need to be updated with a pulley that accepts bolt-on pulleys. **P/N 18-35** is a 6-1/8" diameter harmonic balancer that will accept bolt-on pulleys.

Photo #13a & 13b & 13c & 13d & 13e: The crankshaft pulley for the power steering pump **P/N 53-34** is the third groove pulley for the crankshaft. This pulley is made to fit inside a single or double groove pulley. The double groove pulley **P/N 51-03** has two collars that will key into the single groove pulley **P/N 53-34**. With the pulleys keyed together, they can be bolted to the harmonic balancer.
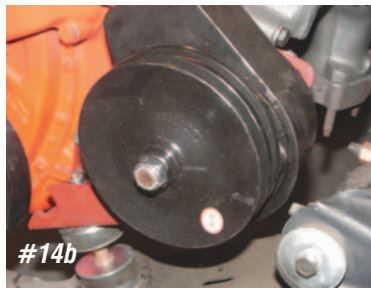
Photo #14a & 14b: The power steering pump pulley is held to the pump with a locking nut. There is a key on the shaft that locks the pulley to the pump shaft. Install the power steering pump pulley **P/N 53-30** onto the pump shaft and torque the nut to 45 ft-lbs.

Photo #15a & 15b: Next, install the power steering belt **P/N 41-10.** The pump will lean inward leaving enough clearance between the pump reservoir and the upper control arm stud.
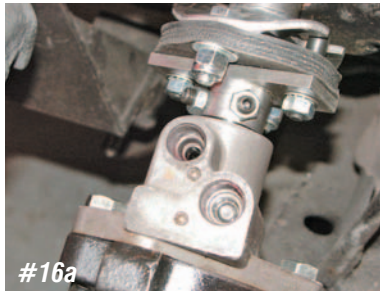
Photo #16a & 16b: The Delphi box uses O-ring fittings. This type of fitting does not require any sealer on the threads. Just a small amount of oil is needed when attaching the hoses to the steering box.
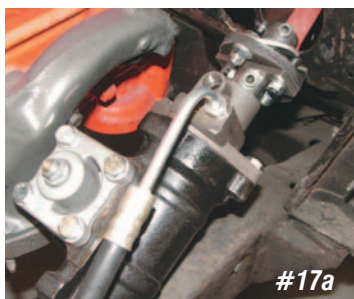
Photo #17a & 17b: The pressure hose **P/N 53-51** has an 18 millimeter male O-ring fitting on one end and a 3/8" flare nut on the other end. The male end of the hose connects to the larger fitting on the steering box. The flare nut connects to the male fitting on the back of the power steering pump.
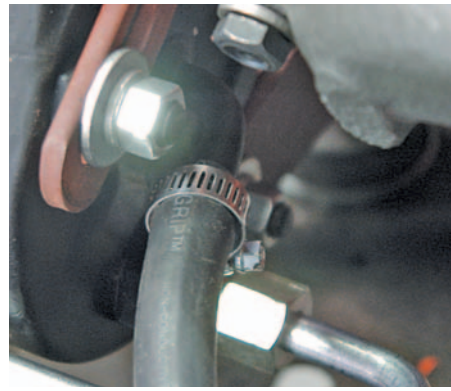

Photo #18: The return hose **P/N 53-50** has a 16 millimeter male O-ring fitting on one end and is straight cut hose at the other end. The male end of the hose connects to the smaller fitting on the steering box. The hose end connects to the barbed nipple on the back of the pump using a small hose clamp. Enjoy your new power steering box! Good luck.