How-To

How to Rebuild a Mopar Steering Column

Mopar columns are relatively simple to work on - here's how to do it.

By Steve Dulcich
Photography: Steve Dulcich

There's a fine line that separates the look of a fully rebuilt Mopar from a car that is just fixed up. Be it a purist's authentic resto or a tastefully and functionally modified car, you can always spot the machine that received the whole nine yards. Everywhere you look, it's quality, clean, and like new or better. To perform the total rebuild, you must go into each component and work the details before moving to the next. You'll find yourself working on components of the car that most guys take for granted. How many late-model Camaro or 5.0 Mustang guys will blueprint the pedals, rework the window mechanism, or, as we do this month, fully rebuild a steering column? Not many, we guess.

The details truly make the difference. Take the oft-neglected steering column. Slip behind the wheel of a nice looking Mopar, and the little things can detract and annoy. These cars are 30-plus years old and show it: The steering wheel begins to growl when turned, the signals won't self-cancel or work at all, and the ignition key has to be wiggled to get the engine to fire. Suddenly, that pretty Mopar acts like a tired old car. By the same token, if the wheel turns as smooth as silk, the controls snap positively like they were made yesterday, and the finish quality looks better than it did leaving Hamtramck, the sense of quality prevails. We had all types of woes brewing in the column of our '71 Challenger R/T: faulty electronics, a junkyard-quality finish, and dried, dirt-encrusted bearings made it anything but a smooth operator. A full cosmetic and functional rebuild set us back a couple of days, but it put us way ahead of the game when it came to a quality resto effort.

Not the usual item to start a restoration on, our '71 Challenger R/T yielded this battle-weary steering column. Getting it in shape made for a relaxing weekend project. Mopar columns are relatively simple to work on as compared to the complex units of today, and the floor-shift examples found in most factory musclecars are the simplest.

The first item to come off was the steering wheel. Most columns have steering wheels which spline directly to the shaft; however, in E-Body examples such as this--Tuff Wheel and Rim-Blo cars included--the wheel bolts to an adapter. Remove the wheel's outer trim, typically retained with screws from the backside, and then separate the horn mechanism.

You'll need a steering-wheel puller to separate the adapter hub (or steering wheel) from the splined shaft. Underneath is the upper bearing casting, which houses the signal switch and shaft bearing.

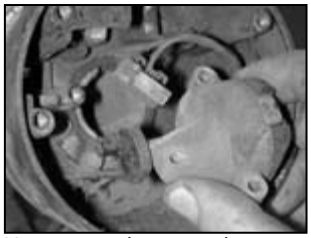
With the wheel and adapter hub removed, you can now get to the turn-signal mechanism. Next, remove the column mounting bracket and wiring trough. Inspect the signal mechanism for broken

To make working on the column easier, we made this simple bracket, which bolts in place of the factory mount and allows the column to be bolted into a vice.

plastic canceling tabs. Electrical checks should be made to ensure the switch is working (see sidebar). Unbolt the turn-signal arm first and then the three small retaining screws from the plastic mechanism. The switch wiring probably won't come out of the column at this point, but there will be enough slack to pull the switch up and swing it out of the way.

Three screws hold the upper bearing housing to the lock housing. Remove the screws and separate the two housings to reveal the shaft-lock mechanism and ignition-switch gear. A pin through the steering shaft (covered by a thin sheetmetal sleeve) retaining the lock plate must be removed. Chrysler recommends a special pressing tool to remove the pin. With the column out of the car, a drift is fine as long as the shaft is well supported from behind, as shown.

With the lock plate off, the steering shaft can be pulled out from the bottom of the column. Two screws and a guideplate retain the lock lever mechanism. Remove the guideplate. Next, remove the ignition lock. With the ignition in the lock position and the key out, depress the spring-loaded lock retainer with a stiff wire or small screwdriver through the access hole, as shown, and pull the lock out.



Unscrew and remove the ignition switch and key-buzzer switch to finish emptying the column.

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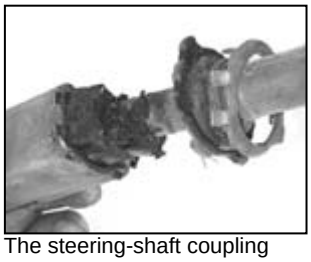
With everything stripped out of the column, remove the lock housing and rear movable (shifter arm) housing from the column tube by unbolting them. A small spring connects the rear housing to the tube in locking floor-shift columns.

At the bottom end of the column housing, the lower bushing is held in with a wire bail, and pulls straight out. The lower mount consists of two plates with a rubber seal in between; it releases when the two are separated.



The steering-shaft coupling should be disassembled for clean up and/or rebuilding. The grease in ours looked like asphalt.

After cleaning and degreasing, we stripped all of the column components by blasting with extra-fine silica sand.

The column parts are painted with a semi-flat-black mix of urethane to match the factory color. The upper and floor mounting brackets are painted a glossier shade, as per factory original, while the shaft and coupling get a custom-mixed shade of "bare steel."

With everything cleaned and painted, the reassembly is the reverse of the teardown, substituting fresh parts as required; some small parts and switches can still be found from the dealer. Year One also carries ignition and signal switches, locks, bearings, and other column parts, or they can be sourced at swap meets or the boneyard. Our ignition switch was loose and showed burnt contacts, so we substituted a good used replacement from an extra column-shift unit we had; ditto for the signal switch. Chrysler used the same style of columns for years with only minor changes, so parts are easily interchangeable.

The column-to-steering-box-coupler components can be lubed with wheel bearing grease. Year One also offers a rebuild kit if your parts are shot.

We cleaned up the steering wheel and center piece, and our column was ready for another 30 years of trouble-free service. The detailed column looks fantastic--a nice payoff for a couple days' work.

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Testing 1-2-3

A few tests can quickly identify a bad signal switch, saving the potential frustration of putting together the column and tearing it down again to replace the switch. Here's how to test it:

Horn: The switch provides the ground for the horn relay. This is the black wire. Bridge a test light from the black output wire to a hot source. The light should fire when the horn is depressed, and if it doesn't, suspect a fault in the switch or horn contact plates. Substitute a multimeter for the test light by checking for continuity between the same wires.

Brake lights: The brake lights on Mopars share a common bulb with the turn signal and feed the brake lights through the signal switch. A failure in the turn-signal switch is a common cause of frustration when brake lights refuse to function (the signals may even work fine). To check for a problem in the column, center the turn-signal switch and run a hot jumper wire to the white brake-light feed wire at the switch connector. The test light should come on when contacted to the brown (right rear) and green (left rear) wires, which feed the rear brake/turn light elements. With the switch to the right, only the green should be live, and only the brown should be live when the switch is in the left turn position. If this isn't the case, a problem is in the switch.

Turn signals: The turn signals feed through the red wire, which draws its juice through the signal-flasher unit. To check the signal switch, connect a jumper wire to the white feed wire at the switch connector. There are four output wires for the turn-signal system, one for each corner of the car. Turn the switch to the right. The brown (right rear) and tan (right front) wires should fire a test lamp, and the green (left rear) and light green (left front) wires should be live when you turn the switch to the left. Failing this test, the switch is faulty.

SOURCES

Year One
800/932-7663
yearone.com