



PRIME STEER

A 10-minute trick for adding precision to Mopar steering systems

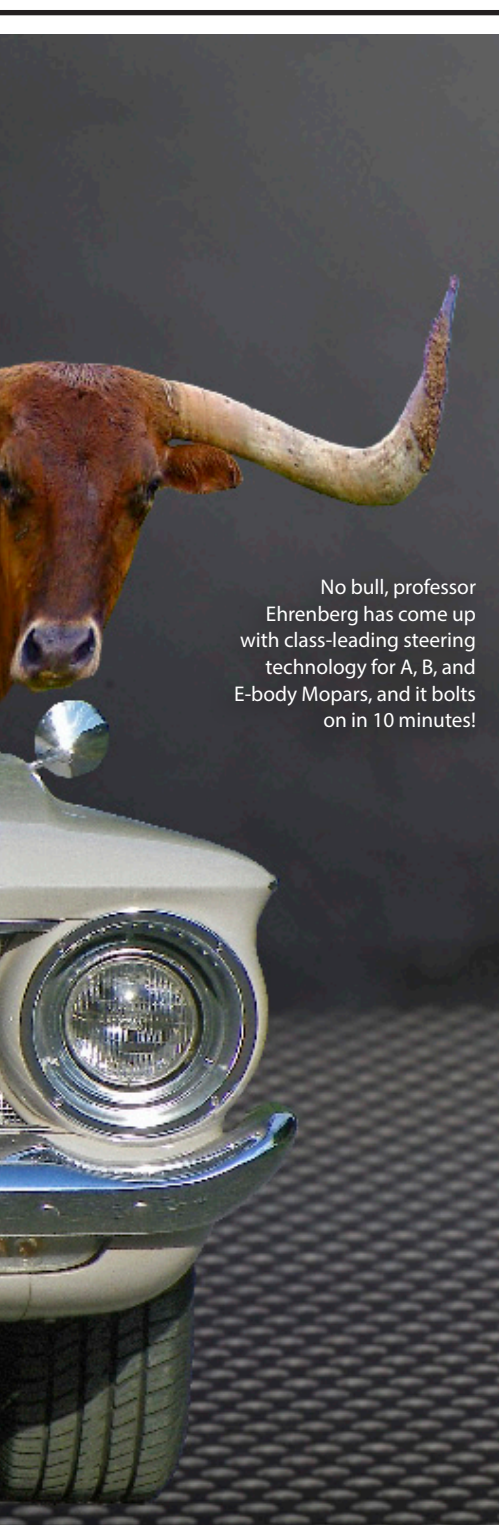


Story and photos
by Richard Ehrenberg S.A.E.

It seems like yesterday, but it was the fall of 1968. A friend of mine, Shelly (now pushing up daisies) had just taken delivery of a new 1969 Coronet 4-door sedan, 383. Nice car. But it had one annoyance—a clunking noise in the front end. It had been back to the dealer a few times, but they, apparently, couldn't fix it. I, in fact, drove him to the dealer to pick it up after attempt number three. I drove it around the block, which, in NYC, is

more like an off-road excursion. Clunk! Clunk! Not fixed. We pulled back into the dealer's lot, and I asked Shelly to twist the steering wheel left and right while I peered, prodded, and listened, underhood. I was amazed to see the power steering pressure hose moving around like a pissed-off rattlesnake! At first I figured that it was just a hydraulic reaction flexing the hose. My second supposition, just as incorrect, would have accounted for the noise: Loose chuck mounting bolts. But it was neither. It was simply the K-member flexing—the hose and chuck were moving!!

Within a few more moments, I had tracked down the source of the clunk: One of the LCA stud nuts had insufficient torque. Fixed in 30 seconds with a breaker bar and $\frac{1}{2}$ " socket. But the sight of the flexi K-member stayed imbedded in my grey matter forever. When we were building up our Green Brick '69 Valiant "real street" auto-X and road racer in the 1990s, I was determined to minimize the flex, which I calculated, correctly, would improve steering precision measurably. We added K-member gussets galore. We also added a few more upgrades, such as $\frac{1}{4}$ " tie rods from a '74-up



No bull, professor Ehrenberg has come up with class-leading steering technology for A, B, and E-body Mopars, and it bolts on in 10 minutes!

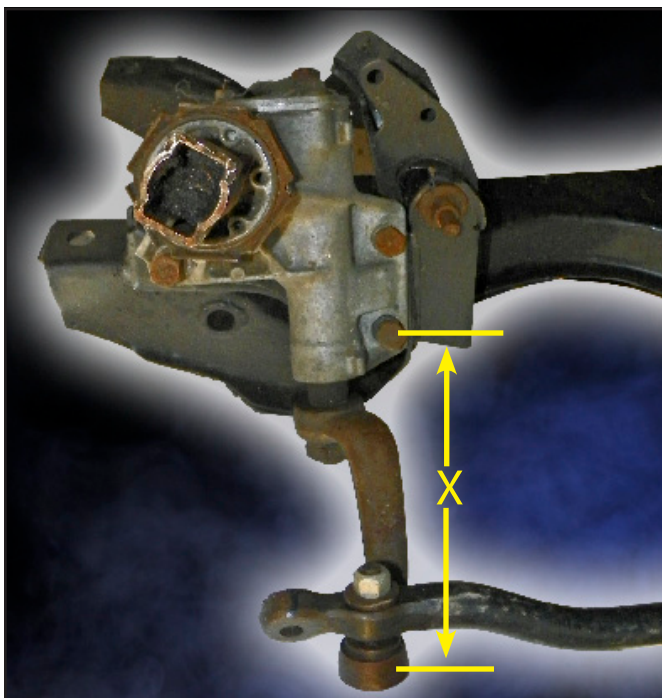
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C-body, 16:1 manual steering, "off label" UCA offset bushing installation, etc., all of which have become commonplace these days, thank me very much.

OK, fast-forward just a few years, fall of 1970. I spec'd out a new '71 Duster for my in-laws: 318, 3.23:1 Sure-Grip, HD suspension, and PS, manual discs. This car steered so well, so precisely, that I was sure Ma Mopar had drastically revised the steering system. Upon investigation, however, I learned that the primary reasons (besides being brandy-new) were a luck-of-the-draw winner of a steering



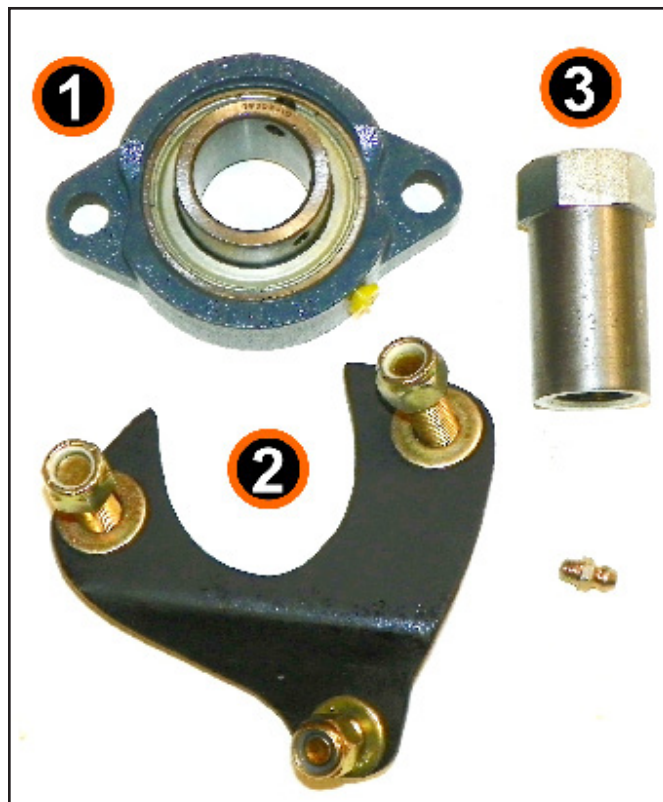
The basic problem: From the steering box mounting pads on the K-member to the pitman arm and center link is a long span (this pix is of our '62 B-body, project Savvy Savoy). This cantilever effect induces the K-member to flex.



A-bodies (shown, with a manual chuck), and later B- and all E-bodies have the same curse. It is just too far from the pitman arm/center link pivot to the chuck mount (dimension "X")—approx. triple the bolt spacing! This is where a lot of the precision gets lost (excessive leverage).



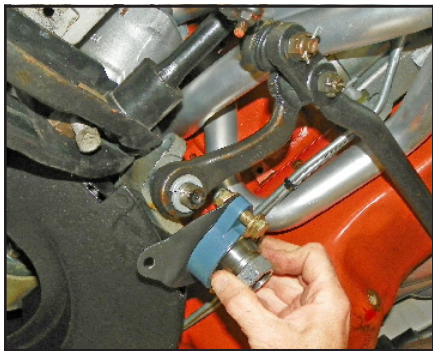
Sold Steel Industries came up with this kit for Dodge pickups. It adds a third bearing below the pitman arm. Crazy-big bracket though.



Luckily, classic Mopars have a beefy pinch-weld lip around the K-member, which a simple bracket (2), (this is the '62-'65 B-body version) can rigidly mount a lower support bearing (1). The long sleeve nut (3) replaces—in seconds—the stock pitman arm nut, and centers the pitman shaft in the new bearing. This is a prototype, Firmfeel.com will offer a variant of this kit for all muscle-era Mopars.



Begin by removing the pitman nut (1 1/4" hex) and lockwasher.



No need to pull the pitman. Simply slide the new sleeve nut through the bearing, and thread it onto the shaft (with the lock-washer), and bolt the FFI bracket onto the bearing housing.



Torque the new nut to 175 ft./lbs.



Hold the bracket, with the bearing as centered as possible (not critical), against the K's pinch-weld flange, and mark the location of the mounting hole. Production brackets will have two holes.

chuck and pump pressure on the low end of specs.

A few years later (mid-'70s), Mother would carry this one step beyond, by introducing "Firm Feel" PS chucks, primarily for police cars. The difference between these and the mundane loosey-goosey boxes in your Mopar? Select-fit assembly and stiffer reaction springs. Nothing else.

OK, you get the point. Now it is 2011, and Muscle-era Mopars need help to bring their steering systems into the contemporary era.

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Drill a clearance hole for a $\frac{3}{8}$ " bolt—roughly $\frac{1}{2}$ ", or 11mm if you're into that furrin' system.



Snug up the Allen (hex recess) setscrews locking the bearing's built-in collar to the sleeve nut.



Install the supplied $\frac{3}{8}$ " SAE bolt, washer, and locknut, tighten. As we said, production kits will use 2 bolts for added rigidity.



Pump it full of Mopar Multi-Mileage lube and hit the road, Jack. Yer done! No wheel alignment needed.



We were worried that ground clearance might be affected...it isn't.

Some, as we mentioned, are now well known (and some of which we'll delve into soon with an update). But wait, there's more.

There are two fresh-'n'-easy bolt-on upgrades that you're gonna love. For this article, we'll cover the first, you're gonna have to wait for number two. A little background as an appetizer: 1994-up Dodge pickups also had steering that was less than ideal, also due to a crossmember and steering-box-mount flex problem. In researching this for a friend, we stumbled upon a really slick fix. In a nutshell. This bolt-on goodie adds a third steering chuck bearing located below the pitman arm. At the heart of this kit are a bolt-on stub which replaces the pitman-retention nut, a floating (self-aligning) bearing, and a (rather large) bracket kit. The moment we saw this, a lightbulb turned on in our grey matter. This would solve the

K-member flex cleanly, as a bolt-on. We contacted the manufacturer (Solid Steel Industries, www.solidsteel.biz, of Weyburn, Sask. Canada) to see if they were interested in coming up with something similar for classic Mopars, but never heard back. So we passed the idea along to the crazies at Firm Feel, Inc. (www.firmfeel.com, Vancouver, Wash., [800] FIRM-426) who immediately saw the potential. As you'll see in the accompanying photographs, FFI turned this from concept to product in a few short months, and the difference is significant.

If you've been reading M.A. for more than a week or two, you've got the drill down pat: The pix and captions will walk you through the horrors of the installation. Let the half-inch-wrench-twisting begin!