

# LYING DOWN ON THE JOB



## Get the Upper Hand on Your Mustang's Rear Axle With TCP's Pushrod Coilover Suspension System

**T**he original leaf-spring rear suspension on classic Mustangs was economical to produce and perfectly adequate for average duty as a grocery getter or boulevard cruiser. However, the stock suspension certainly has its limitations when it comes to ride quality and adjustability. These limitations became more apparent as horsepower and handling demands on the Mustang were increased.



When performance-oriented people install larger wheels and tires out back, it becomes clear that the leaf springs are a limiting factor when it comes to selecting a tire and offset for any kind of high-performance application, be it road racing, drag racing, or just spirited driving. The original leaf-spring suspension also allows serious axle windup, and it does a poor job of locating the axle precisely in relation to the chassis during turns.

## The kit locates the rear axle precisely for greatly improved handling

In search of a high-tech solution to the stock rear-suspension limitations, we visited Mustang Depot in Las Vegas, Nevada, where the crew was installing a Total Control Products rear pushrod coilover suspension kit on their company project Mustang. The kit, which fits any '65-'70 Mustang or '67-'70 Cougar, utilizes adjustable coilovers in a lay-down configuration along with a torque arm and Watt's link, for complete control over the rear axle's movement, handling, and ride height. The installation of Total Control Products subframe connectors is strongly recommended for the best performance results. The kit locates

◀ Here's the Total Control Products rear pushrod coilover suspension setup. The complete rear axle is carried in a subframe assembly, which is welded to the rear framerails of the car. The system has an advanced design where the leaf springs are discarded and two trailing arms locate the rear axle. Lateral movement restraint is accomplished by a full Watt's linkage with arms that extend to either side rather than to one side only. Axle wind-up is prevented by the use of a sturdy torque arm which attaches to a small crossmember (not shown). The shocks are laid over on their sides and are connected to a rocker arm or bell crank, which in turn restrains the up and down movement of the axle.

the rear axle precisely for greatly improved handling, with trailing arms and the aforementioned Watt's linkage. Axle wind-up is eliminated

using the torque arm. On the whole, the package offers improved handling, maximum adjustability, and enhanced strength.



During the course of the conversion, we'll also install these rear disc brakes from Stainless Steel Brakes Corp. Included along with the calipers are slotted rotors, parking-brake assemblies, and braided steel brake lines.



The TCP kit replaces the entire rear suspension, so it's necessary to remove all of the old hardware prior to installation. Remove any portions of the exhaust system that may interfere, although mufflers can remain in place if in the stock location. Definitely unbolt or cut any exhaust tubing that's routed over the rear axlehousing.

Position the subframe assembly carefully in the car, according to the instructions.

Be sure to locate the subframe securely with clamps as shown in the photo so that it doesn't shift during the welding process. Tack-weld the mounting brackets in place both front and rear; then remove the subframe. Continue the welds until complete.

Reinstall the subframe with the supplied bolts and torque them to 65 ft-lb. ▶



The VariShock coilover is in place. As previously noted, the outer body of the shock is threaded, and the dark collar at the bottom of the spring can be turned to raise or lower the spring as well as adjust the ride height accordingly.

Install the shock-absorber rocker arms. Here, we view the job from outside the wheel-house looking in. The top of the rocker arm attaches to the shock-absorber end, and the spherical joint connects with the axlehousing. All of the fasteners will be tightened to 50 ft-lb. ▶



This photo shows the shock-absorber connection on the outside end. For this project, a new Chris Alston FAB9 housing will be used, but the axlehousing of your choice can be easily equipped with the required mounting bracketry using the included brackets, instructions, and your MIG welder.



Here's a close-up of the coilover shocks. Besides allowing the ride height to be dialed in exactly via the threaded adjustment collars, they're also externally adjustable for both bump and rebound in a range covered by 16 increments.



The trailing arm attaches to the car at the old leaf-spring forward mounting point. Ensure your Mustang or Cougar's frame and torque box are in sound shape, otherwise they'll become the weak point in the suspension. Spacers keep the arm centered exactly. Install the trailing arms with a preadjustment of 22 inches for the Mustang and 25 inches for a Cougar. There are three positions on the rear mount that go from the best traction setting at the bottom to the least roll steer at the top.



This factory photo shows how the other end of the trailing arm attaches to the axle bracket using spherical joints, which offer zero deflection. The length of the trailing arm is adjustable at this juncture, and the adjustment is locked into place with the large jamb nut.



The pivot arm for the Watt's linkage is mounted to a threaded boss welded onto the bottom of the FAB9 housing or to your supplied housing.



As you can see, the arms of the Watt's linkage have been installed going from the pivot arm out to the bracket on the end of the axlehousing. Here we see the Currie 9+ third member going into place.



This look at the Watt's linkage mechanism shows the axle torque arm being attached at the axle end.



At the forward end of the installation, a bracket that is part of the subframe connector crossmember receives the torque arm.



The Total Control Products suspension is in place. All that remains is to set some final adjustments, making sure the rearend is centered and squared. Then it's time to go road racing. Mustang Depot opted for an Eleanor-type side-exhaust kit for its project. Other exhaust solutions include simple turndowns at the mufflers or short tailpipes that dump into the rear wheelwells.