

You don't have to climb walls to understand torque laws, torque wrenches or how to figure the amount of torque to use.

However, a classic torque job calls for basic metal-to-metal know-how and tender loving care of wrenches.

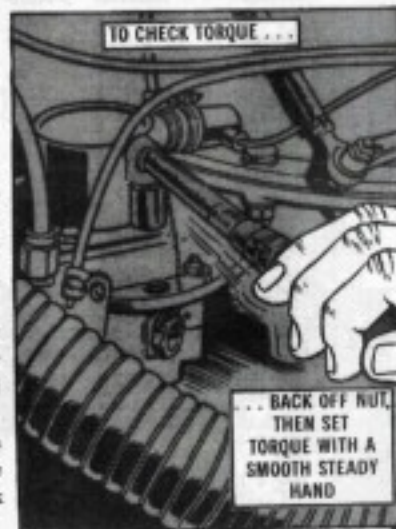
### TORQUE TIPS

To get correct torque, you gotta have 3 things going for you—clean threads, undamaged threads, and clean mating surfaces.

One point to remember, Podner. After x number of hours, metals "set" when mated — drawn together — under torque pressure. It takes up to 10 per cent more power—torque—to break this set and get the fastener moving than it took to get the original torque.

When you have to "check" torque, or retorque, back off on the nut, bolt or screw—then bring it back to the original torque.

A fastener has to be turning with a steady, smooth force to get accurate torque. Any herky-jerky, yankityank force ruins a torque reading every time.



Another kind of "set" bug the Pro squashes right here is seizure.

It happens like so. About the time you reach correct torque reading, during the last few turns, you may get a popping effect . . . the wrench stops turning.

If this "set" happens, back off the nut or bolt and do your torque thing again.

Slow 'n' steady does it until you get the correct torque reading.

Hold one! Never, like n-e-v-e-r, use a torque wrench to back off a fastener or for tapping or hammering. It ruins calibration, for a fact.



Unless the TM says otherwise, always use the torque wrench on the nut end, and stop turning when the torque is reached.

Once in awhile, because of a tight space deal, you'll have to tighten a bolt at the head end. It takes torque or pressure to get the bolt moving in the hole, or to align parts, so torque to the high side of the torque range.

You'll get a more accurate torque reading with new fasteners if you run 'em up to the correct torque—back 'em off a half turn—then retorque. This cleans and smooths the threads slicker'n a whistle.

Replace bolts with damaged threads, or rechase and clean the threads.

If you have to use a damaged bolt, add extra run-up resistance to the torque. Measure run-up on the last rotation because rust or a burr may have become polished off at this point.

When you reach torque while tightening castellated nuts, the safety wire or