

Power Steering Adjustment

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This How To applies to the Saginaw Power Steering Box. I believe this box was installed on all Full-Size Jeeps that came with power steering. The recirculating ball mechanism in the Saginaw power steering box wears naturally with use. Centered between the 4 bolts that fasten the top plate to the steering box is an adjustment. If I remember right, it is an Allen screw with a lock nut around the screw.

The adjustment is sometimes covered by the bottom of the radiator. If it is, you will have to strategically cut-off the short end of a 90 degree bend type Allen wrench in order to turn the screw. I don't remember what size Allen wrench it takes.

To adjust the thing, loosen the lock nut and turn the screw in clock wise. Just a 1/8 turn at a time until you get close to 1" of play between going left and going right. One inch of on center play means you can move the steering wheel, at the rim, back and forth 1" before it goes left or right.

To judge whether or not you are close to 1" of play, start the engine and then stand outside and turn the steering wheel back and forth through the window opening while watching the front tire for movement. When you can move your hand one inch back and forth before you see the tire move, you are in the ball park. Once you get close to 1", then turn the adjuster only 1/16 of a turn until you are at or just under 1" of free play.

ALWAYS err on the conservative side if you are in doubt. You can damage the steering box if you get it too tight. Road test the Jeep after every adjustment. Find a nice smooth road with very little crown (crown = high spot in the center sloped toward the shoulders for water run-off) where you can drive at a steady 45-50 MPH plus so you can judge how much on center play you have.

The Jeep Service Manual warns against adjusting the box unless you remove it and go through a big long procedure involving setting bearing pre-load and over center torque.

When you turn the adjusting screw, you are moving the pitman shaft up in relation to the case. The shaft has a beveled gear on it and you are moving his gear closer to complete mesh with the worm shaft. Complete mesh is what you don't want to happen. There needs to be some play between the two.

Keeping your steering box in adjustment will decrease wear. The more play you have, the more wear will occur between the pitman shaft gear and the worm shaft. At some point you will no longer be able to adjust out the play and the box will have to be rebuilt.

I've been doing this about once every 18 mos.-2 years on my Chero. I have yet to reach the end of the adjuster. I don't think it'll be anytime in the next 100,000 miles either.

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