Two Tooth Steering Basics

Simple once known

by Paul Modlin and Mishawaka High School students:
Tim Glasco, Bradley Howe, and Christian Mestach

The Ford Model A two tooth steering system is designed to be adjustable to compensate for wear. There are three adjustments to the two tooth steering system that can be made with the steering column in the car. They are: **1. End play in the two tooth sector**, **2. end play in the steering shaft**, and **3. proper mesh of the two tooth sector in the worm gear**. The Model A Ford Service Manual recommends "When it is necessary to make any one of these adjustments, the other two adjustments should also be checked." Make all adjustments in the order listed above.

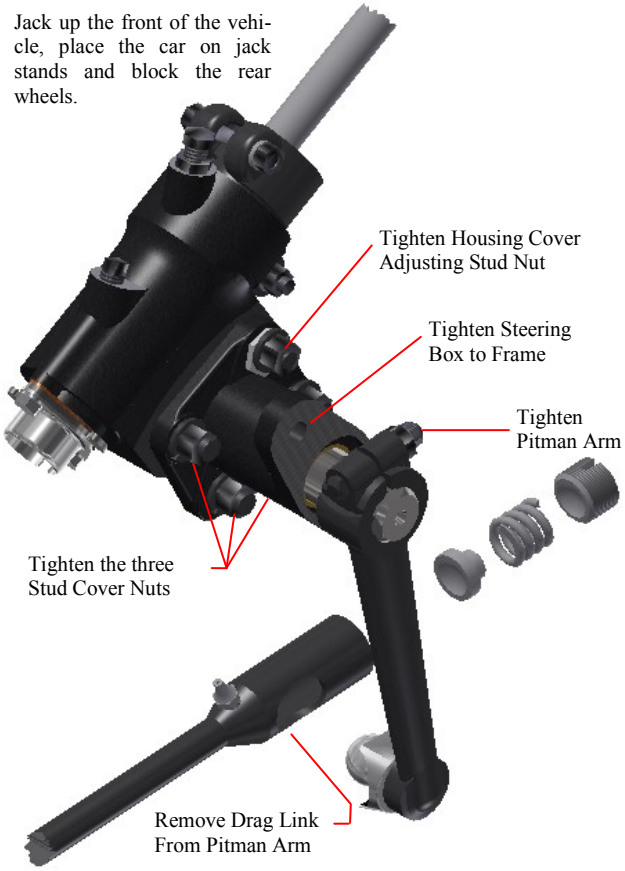
Tools:

- Standard Screw Driver
- Offset Screw Driver
- Needle Nose Pliers
- 5/8 Wrench
- 7/8 Wrench


Offset Screw Driver

Prior to Making Adjustment

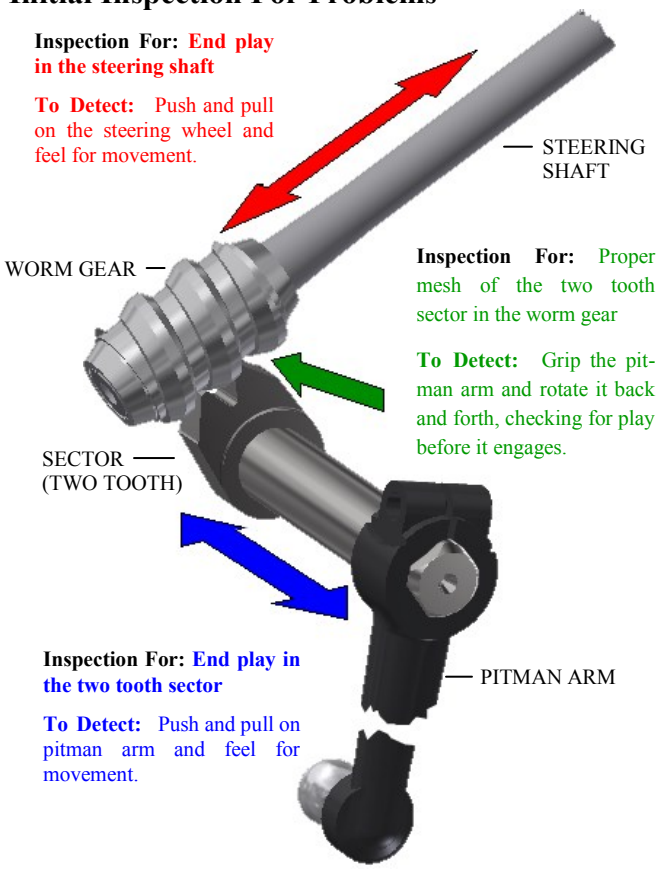
Jack up the front of the vehicle, place the car on jack stands and block the rear wheels.



Initial Inspection For Problems

Inspection For: End play in the steering shaft

To Detect: Push and pull on the steering wheel and feel for movement.



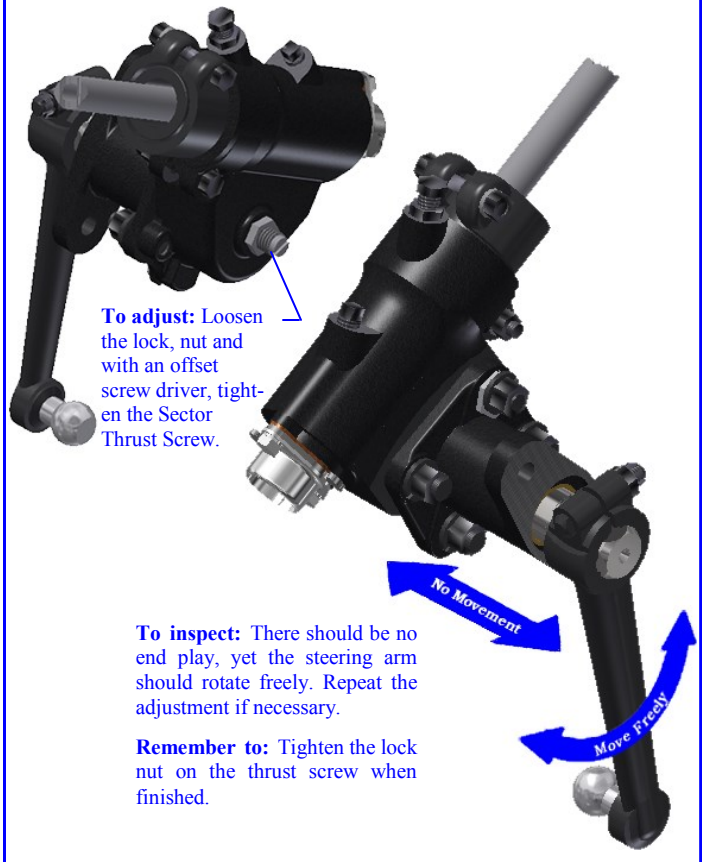
Inspection For: Proper mesh of the two tooth sector in the worm gear

To Detect: Grip the pitman arm and rotate it back and forth, checking for play before it engages.

Inspection For: End play in the two tooth sector

To Detect: Push and pull on pitman arm and feel for movement.

1. End Play in Two Tooth Sector



To adjust: Loosen the lock, nut and with an offset screw driver, tighten the Sector Thrust Screw.

To inspect: There should be no end play, yet the steering arm should rotate freely. Repeat the adjustment if necessary.

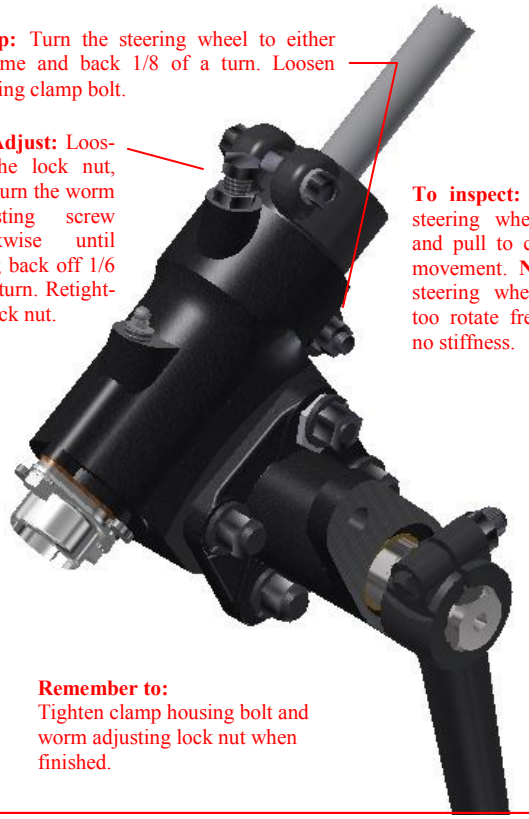
Remember to: Tighten the lock nut on the thrust screw when finished.

2. End Play in Steering Shaft

Setup: Turn the steering wheel to either extreme and back 1/8 of a turn. Loosen housing clamp bolt.

To Adjust: Loosen the lock nut, and turn the worm adjusting screw clockwise until tight; back off 1/6 of a turn. Retighten lock nut.

To inspect: Grip the steering wheel; push and pull to check for movement. **Note:** the steering wheel needs too rotate freely with no stiffness.



Remember to:
Tighten clamp housing bolt and worm adjusting lock nut when finished.

3. Proper Mesh of the Two Tooth Sector in Worm Gear

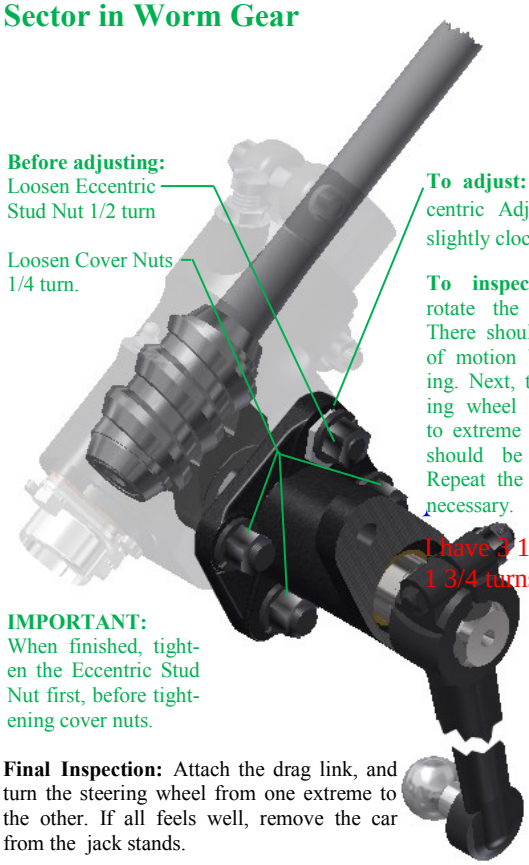
Before adjusting:
Loosen Eccentric Stud Nut 1/2 turn

Loosen Cover Nuts 1/4 turn.

To adjust: Turn the Eccentric Adjusting Sleeve slightly clockwise.

To inspect: Grip and rotate the pitman arm. There should be no lose of motion before engaging. Next, turn the steering wheel from extreme to extreme position there should be no binding. Repeat the adjustment if necessary.

I have 3 1/2 stop to stop
1 3/4 turns to center



IMPORTANT:
When finished, tighten the Eccentric Stud Nut first, before tightening cover nuts.

Final Inspection: Attach the drag link, and turn the steering wheel from one extreme to the other. If all feels well, remove the car from the jack stands.

Two Tooth Assembly

