



THE MODEL T FORD

ITS REPAIR,
SERVICE, AND
RESTORATION

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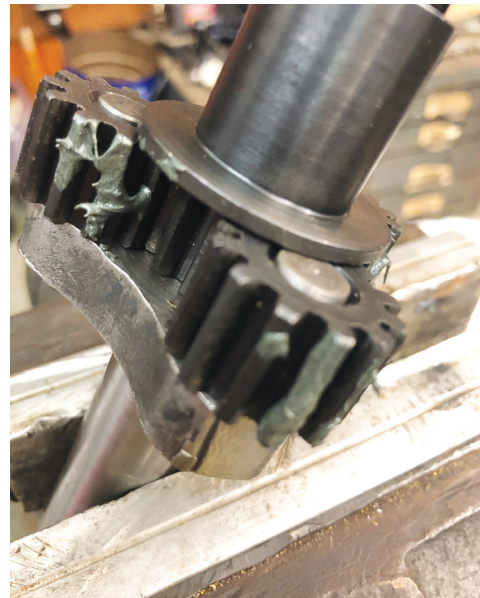
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Lapping New Steering Gears

Fitting a new set of reproduction planetary steering gears can greatly improve the steering control of the Model T, as old gears can become worn and result in a large amount of play at the wheel.

Installing new gears normally requires them to be 'lapped', to slightly polish each gear tooth so there is smooth rotation without catching or binding. To lap the gears, use a fine grit valve grinding compound to remove high spots on the gears and create a smooth mesh (photo 1).

Hold the steering post with a bench vise that has smooth jaws and apply a small amount of compound to the gears. The lapping is accomplished by rotating the center drive pinion gear. The drive pinion is the center drive post that holds the steering wheel (photo 2). Screw a used or spare steering wheel nut to the post and place a hex socket and wrench over it to turn the pinion post and rotate the three planetary gears (photo 3).



2) A dab of grinding compound on gears



1) Valve grinding compound is useful for lapping the steel gears



3) Steering wheel nut on pinion post for using a socket wrench

Rotate the pinion post to twist the gears for lapping, twisting in both directions many times until the gears seem to mesh well together without binding (photo 4). Periodically remove each gear from the steering post pins and place on another pin so that all gears can be fitted to each other. Take care to keep the lapping compound grit away from the inside of the gears and the outside of the pins, to minimize any loosening of the gears on their pins.

After suitable lapping and you feel there is good mesh (photo 5), use lacquer thinner to remove any remains of the lapping compound from each gear and the drive pinion. The gears are now ready to be installed in the steering case (photo 6).



4) Socket wrench used to turn gears



5) Smooth gear mesh obtained by lapping



6) Lapped and cleaned gears with drive pinion, showing the burnished teeth. Ready to install.



7) The longer pin fits into the groove of the steering case



8) Greased gears and drive pinion installed



9) An oil filter strap wrench helps tighten the steering case cover

When reinstalling the steering post and gear assembly, be sure to align the longest pin with the groove in the top quadrant of the steering case. That longer pin in the groove helps prevent over-steer conditions (photos 7 and 8). Ford made this change with gear cases in late 1921, so only the late '21-'27 gear cases have a groove for the long pin.

Complete the assembly by filling the steering case with red bearing grease, then screw the steering case cover in place. A rubber-lined oil filter strap wrench is a useful tool to tighten the cover (photo 9). Be sure to install the small #6, 32 tpi, 1/4" long retaining screw to lock the cover in place (photo 10).



10) Align the holes in the steering case and cover for the important retaining screw

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