

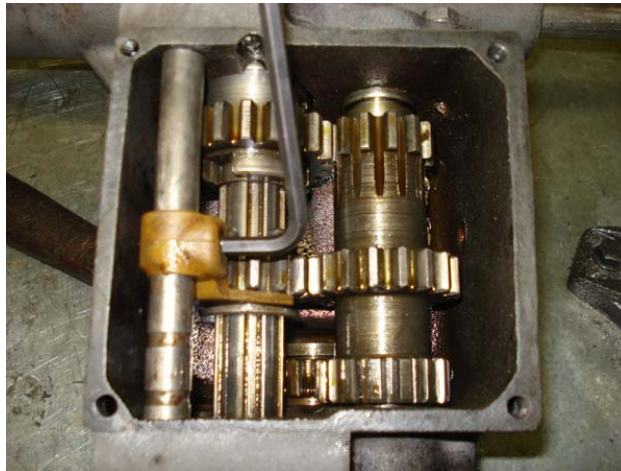
Bantam Tractor 3000 and 5000 Transmission and Differential Part Numbers

Amount	Part Name	Part #	Manufacture	Bantam Part #
2 ea	Cluster Gear Bearing Front and Rear	B-1212	Torrington USA	8382
1 ea	Spline Shaft Bearing Front	88504	ND USA	8232
1 ea	Worm Shaft Bearing Front	88504	ND USA	8232
2 ea	Rear Axle Main Bearing	3206	New Departure USA	5357
2 ea	Rear Axle Sleeve Bearing	21 GP	Johnson	5354

Bantam Tractor 3000 and 5000 Transmission and Differential Rebuild Disassembly



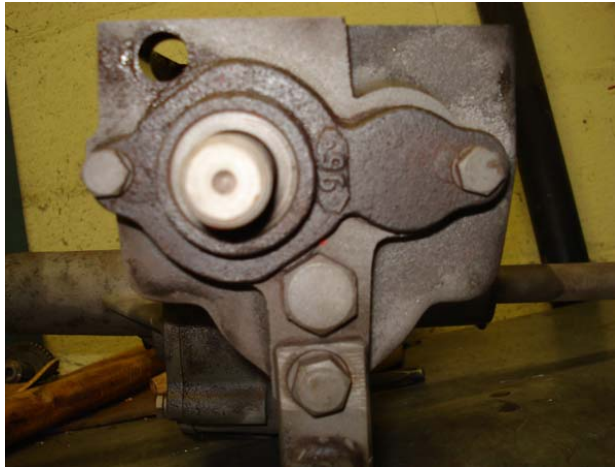
Use a 3/16" Allen wrench, count turns as you back-out Plunger Pin Retaining Screw. Should be about 10 turns.



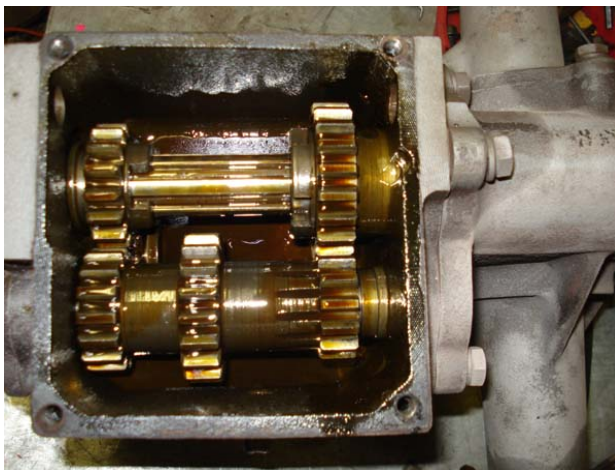
Use a 3/16" Allen wrench and loosen Shift Yoke Retaining Screw.



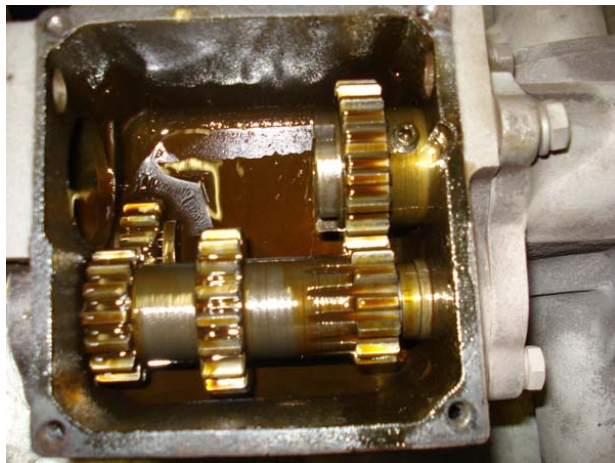
Slid Shifter Shaft out of the Shift Yoke and Transmission housing. Remove Plunger Pin and Spring from Transmission housing.



Remove Transmission Front Bearing Cap and Gasket.



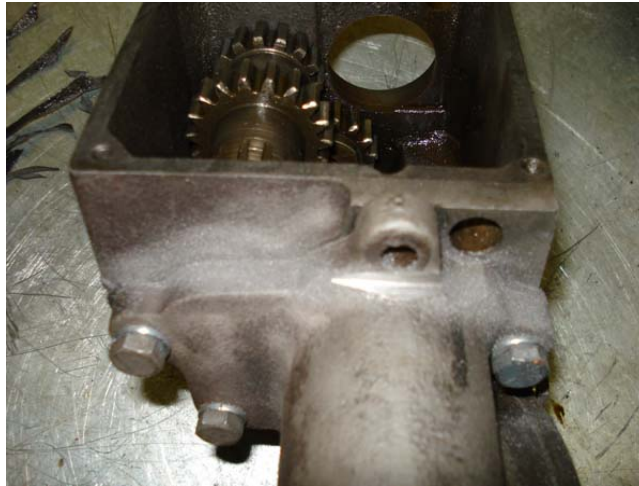
Remove Splined Drive Shaft and Slider Gear.



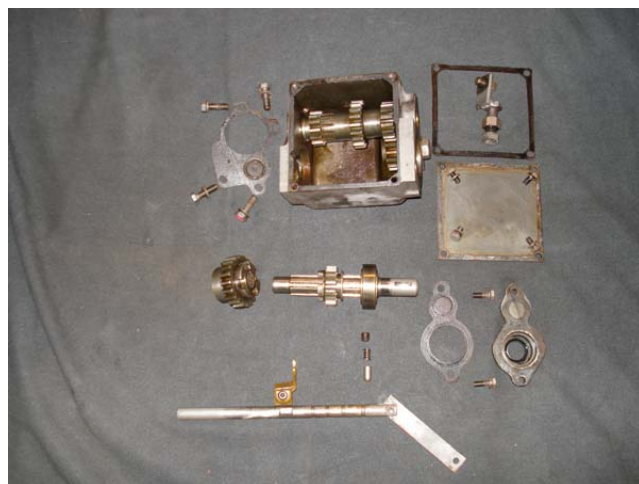
Using a 5/32" Allen wrench, Loosen the two (2) Retaining Screws in the Main Drive Gear and slide off the Main Drive Gear noting not to loose the Main Drive Gear Key.



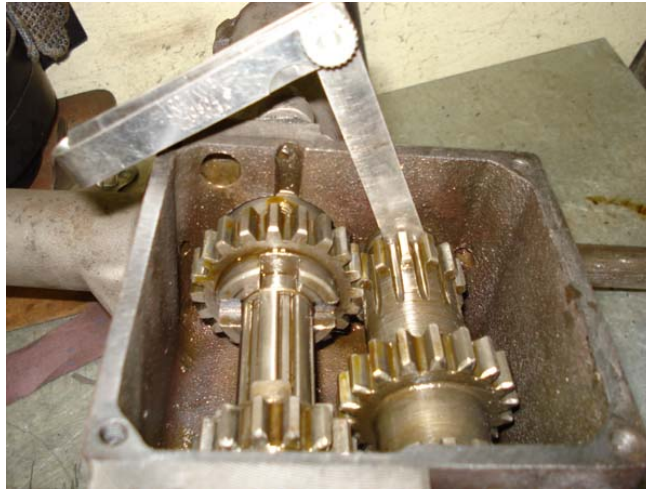
Inspect the Shifter Yoke for wear or damage. It is common to find the Shifter Yoke has been repaired.
Inspect the Main Drive Gear Bearing for wear or damage.



Remove the four (4) bolts that hold the Transmission to the Differential.



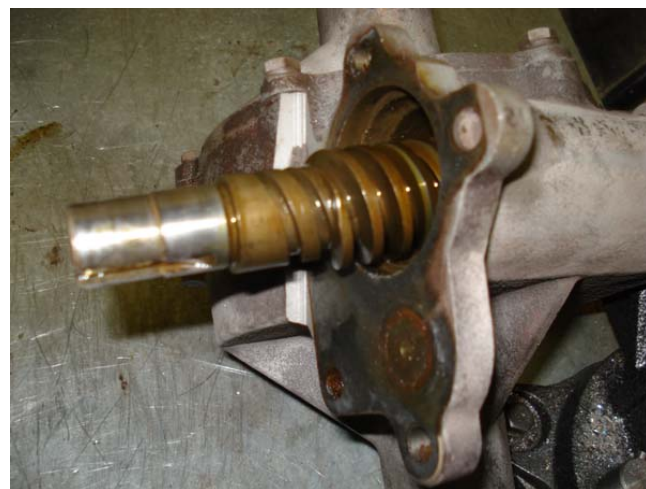
Remove the Transmission from the Differential. Inspect the top bolt hole on the Transmission. It is very thin and the Transmission housing has been known to be cracked.



Use a feeler gauge and check the gap between the Cluster Gear and the Rear Cluster Gear Spacer. It should be approximately .053". Inspect the Cluster Gear Bearings for wear or damage.



Remove the Front Worm Shaft Bearing and Spacer Shim if it has one. I have seen the Spacer Shim used in about 50% of the Differentials.



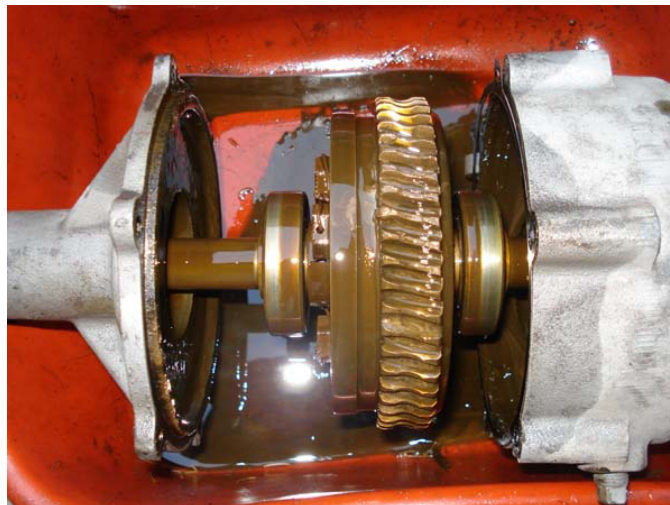
Remove the Worm Drive Shaft by turning it as you pull on it. If it doesn't want to come out, then remove the Worm Shaft Bearing Cap on the other side and push on it as you turn it.



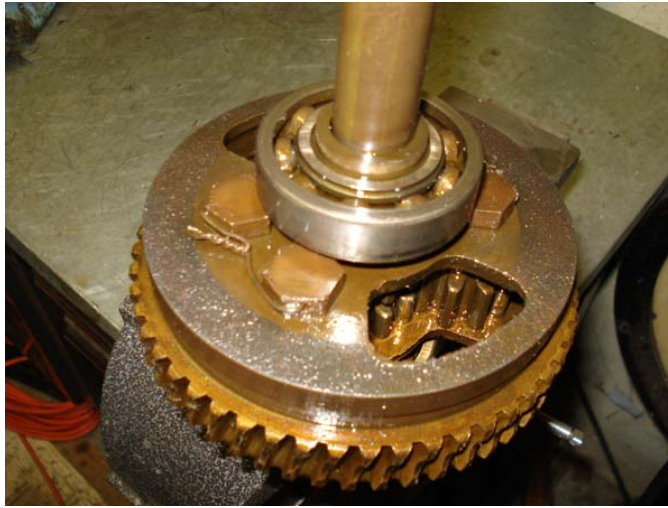
NOTE: It is very important that you remove all rust, dirt or any other debris from both Rear Axles. The Differential Housing and Side Cover must be able to slide off of the Rear Axle Shafts.



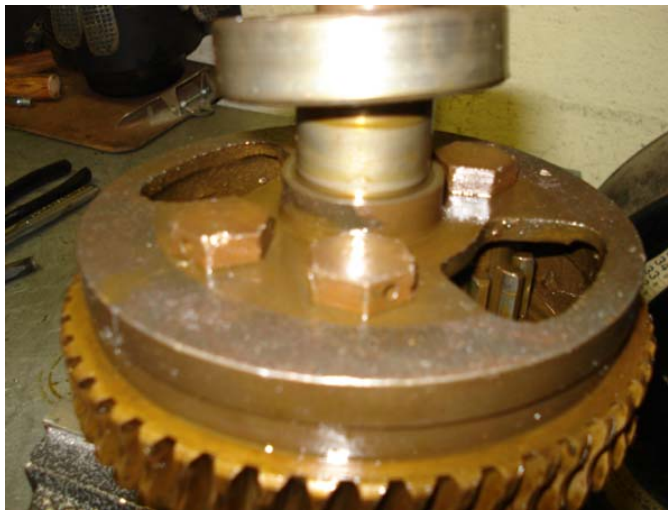
Remove the six (6) differential Side Cover bolts.



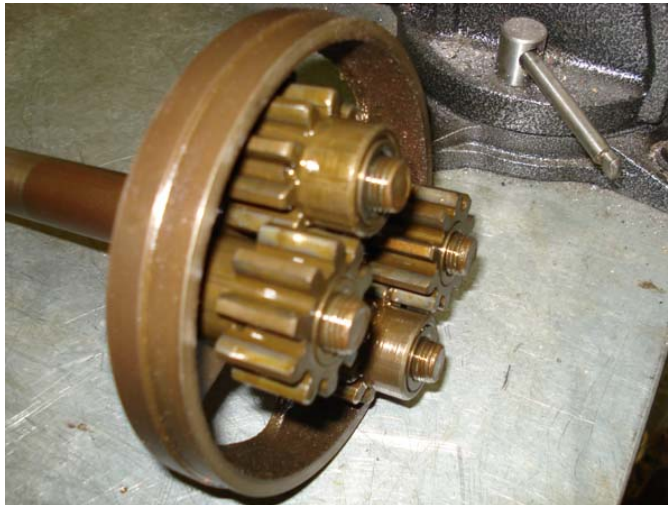
Separate the Differential Side Cover from the Differential Housing.



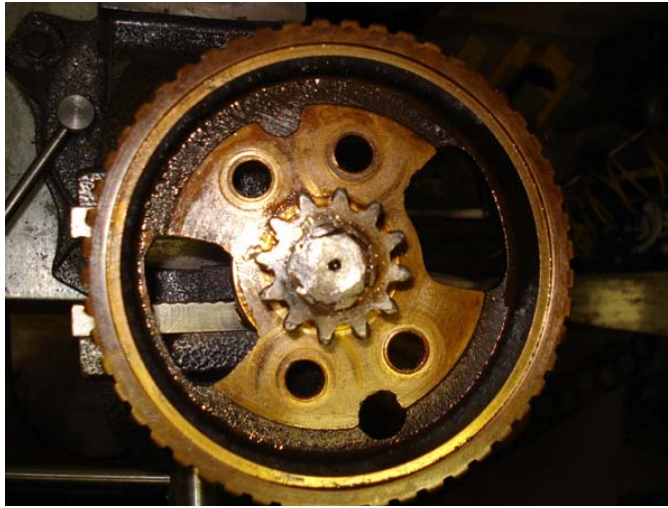
Remove the Rear Axle Main Bearing from the Differential Drive Gear Cover.



Remove the mechanics safety wire from the four (4) Spider Gear Bolts.



Loosen the four (4) Spider Gear Bolts and remove the Differential Drive Gear Cover, Right Hand Axle and Spider Gears with Spider Gear Bushings all as one assembly.
NOTE the four (4) Spider Gears position.



Inspect both Rear Axle Shafts that the Axle Shaft Inner Gears are swedged properly. If you do not do this then you could have the Axle Shaft and Wheel assemblies slide out the side of your tractor. OUCH !

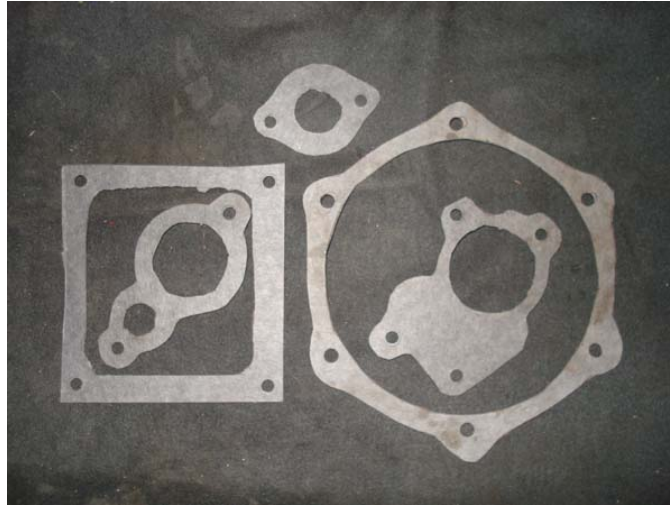


Use a punch and drive out the old Rear Axle Sleeve Bearings and Seals.



Clean and inspect all parts for wear or damage.

Assembly



Make your self a new set of gaskets using the gasket paper of your choice.



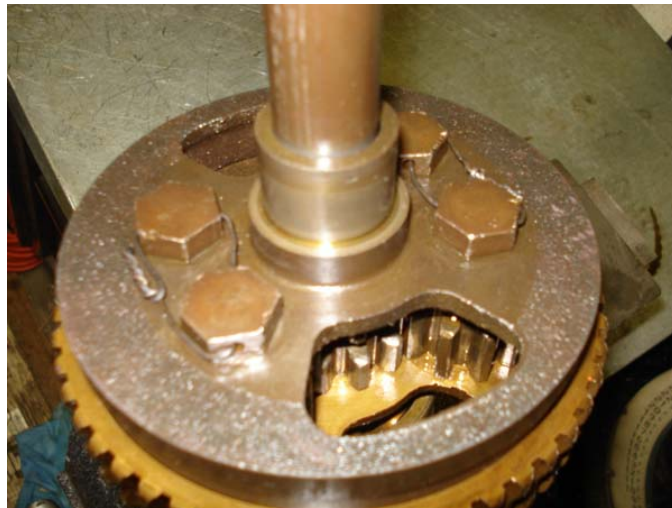
Drive in new Rear Axle Sleeve Bearings using the correct size socket.



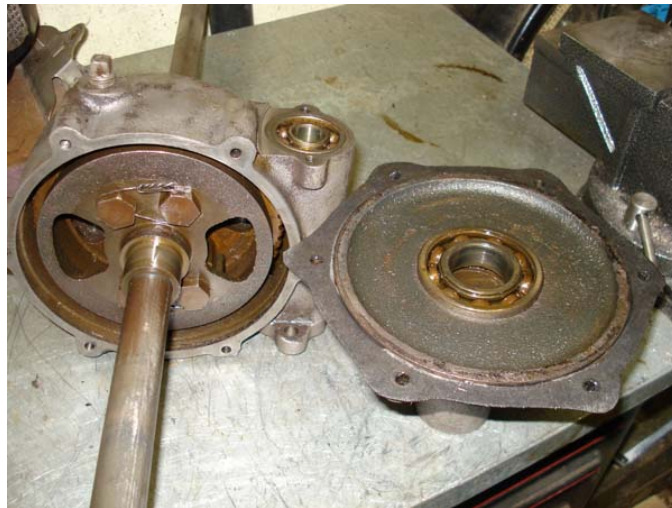
Drive Rear Axle Sleeve Bearings in until it is flush with the inner resets. This allows room for the Rear Axle Oil Seals.



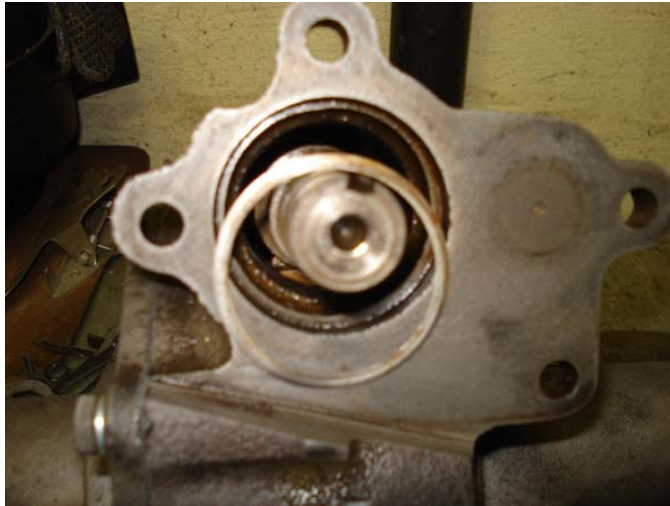
Drive in new Rear Axle Oil Seals.



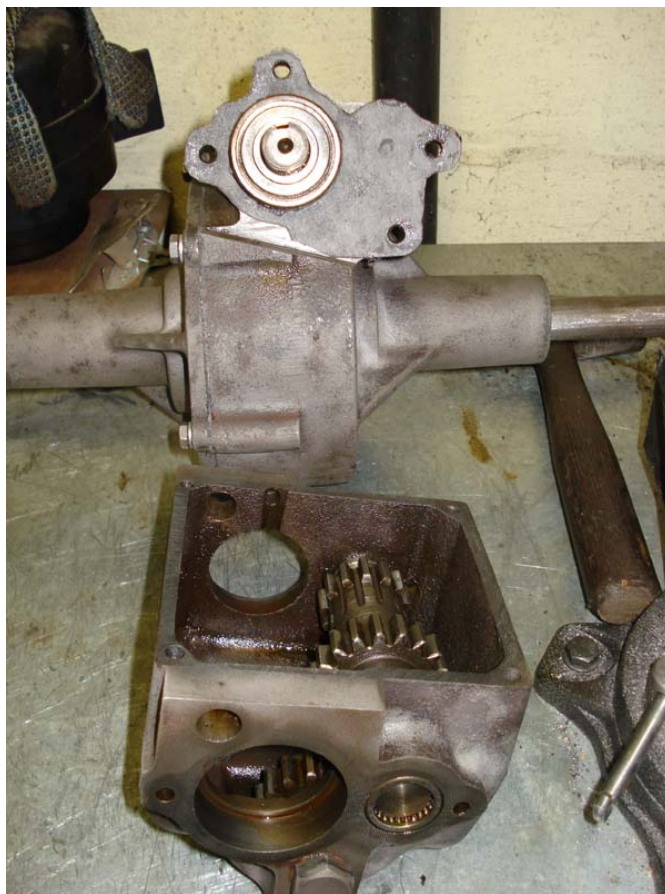
Assemble the four (4) Spider Gear Bolts, Differential Drive Gear Cover, Right Hand Axle and Spider Gears with Spider Gear Bushings all as one assembly. NOTE that the four (4) Spider Gears are positioned properly. Install new mechanics safety wires in Spider Gear Bolts.



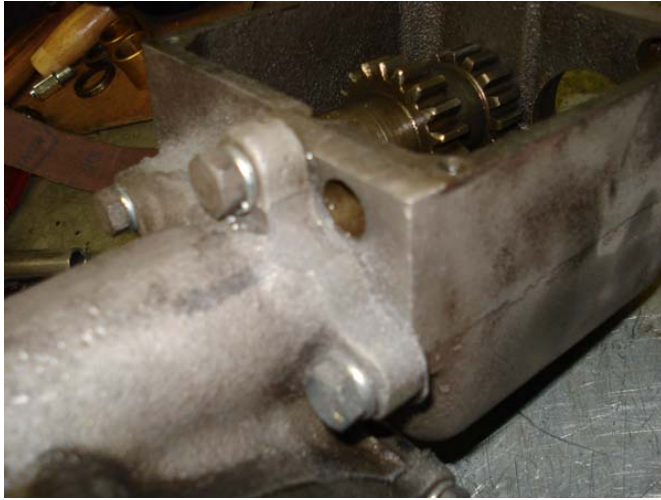
Install the Differential Housing and Differential Housing Side Cover and Bearing with new gasket. Tighten the six (6) Differential Housing Side Cover bolts.



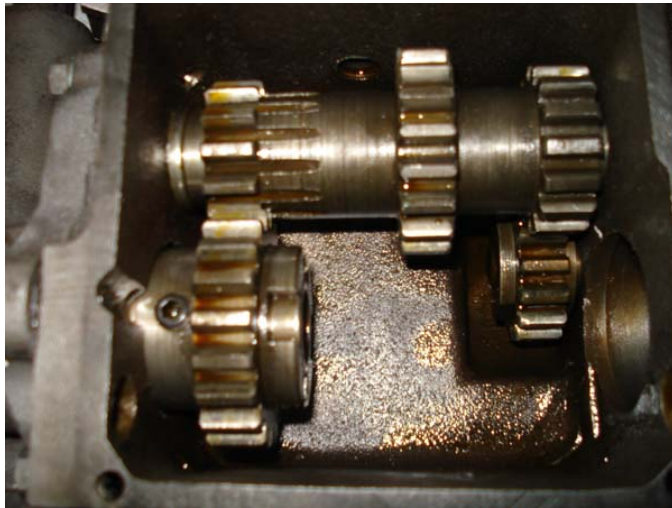
Install the Worm Drive Shaft, Spacer Shim and Front Worm Shaft Bearing.



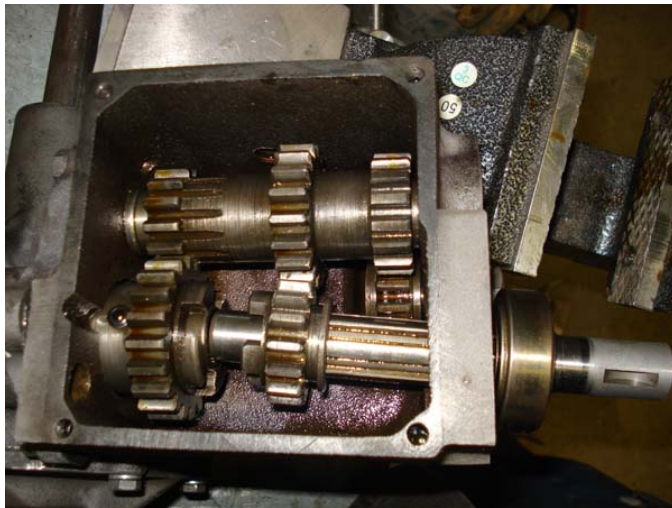
Install the new Transmission to Differential Gasket.



Install the Transmission to the Differential and evenly tighten the four (4) mounting bolts.



Install the Main Drive Gear onto the Worm Drive Shaft. NOTE: Insure that the Main Drive Gear Key is installed properly. Do not tighten the two (2) Main Drive Gear Retaining Screws at this time.



Install the Splined Drive Shaft and Slider Gear.



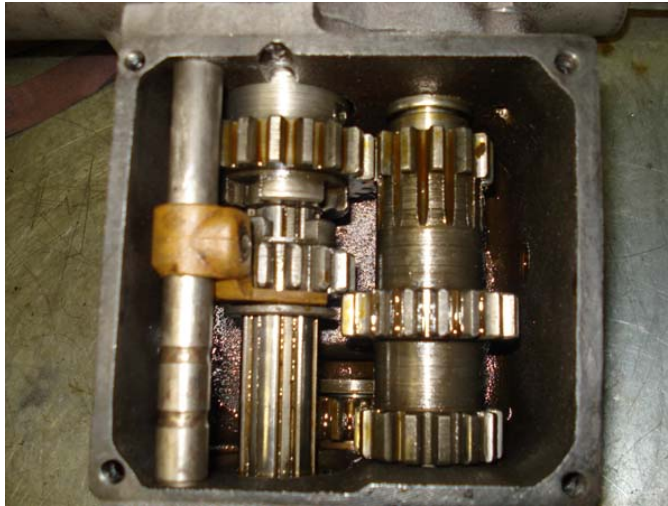
Drive out and install a new Splined Drive Shaft Front Oil Seal.



Install the Transmission front Bearing Cap with new gasket and tighten.



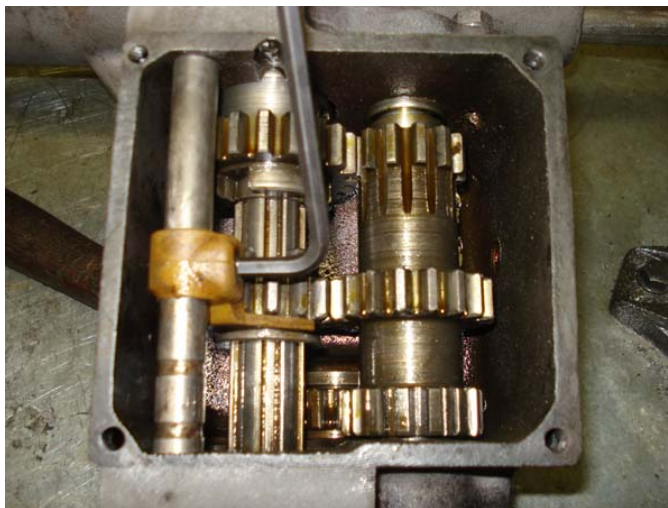
Using a feeler gauge, set a gap of .005" to .007" between the Main Drive Gear and Splined Drive Shaft. Tighten the two (2) Main Drive Gear Retaining Screws.



Install the Shifter Shaft and the Shift Yoke in Transmission housing.



Install the Plunger Pin, Spring and Retaining Screw into the transmission housing. Turn the Retaining Screw IN the same amount of turns as when you removed it. Should be about ten (10) turns.



Line up the Sliding Gear on the center Cluster gear as pictured. Push the Shifter Shaft IN or OUT until the Shift Shaft is in the proper detent for LOW GEAR range. Tighten the Shift Yoke Retaining Screw.



Install the Transmission Housing Cover with a new gasket.