

00791059 Gearbox Servicing

Safety Precautions :

Be certain to clamp or securely support the gearbox and sub-assemblies to prevent injuries to hands and feet due to inadvertent dropping or falling over.

Always wear safety glasses and gloves to prevent eye and hand injury when chiseling or hammering on metal components. Hardened metal will chip unexpectedly.

An assembled gearbox is quite heavy. Use a hoist or get help to handle them safely. Lift carefully and properly using legs to lift-not your back.

Tools needed :

Set of Snap Ring pliers

Needle nose pliers

Scraper

Seal removal tool or flat head screwdriver

Ratchet or Air Ratchet with extension

5/8 socket and a 1 3/4 socket

Punch

Hammer

Seal Installation Tool

1/4 Allen wrench

Assembly Notes:

Output shaft bearing pre-load is 6-8 inch pounds without seal (rolling Torque).

The gearbox backlash is to be set at 6-8 thousandths .

Replace any damaged components.

When assembling the bearings ,pay attention to not make any pressure on the rollers or cages in order to avoid damage.

When assembling oil seals, avoid contact with cutting parts in order to prevent any damage to the inner lip.

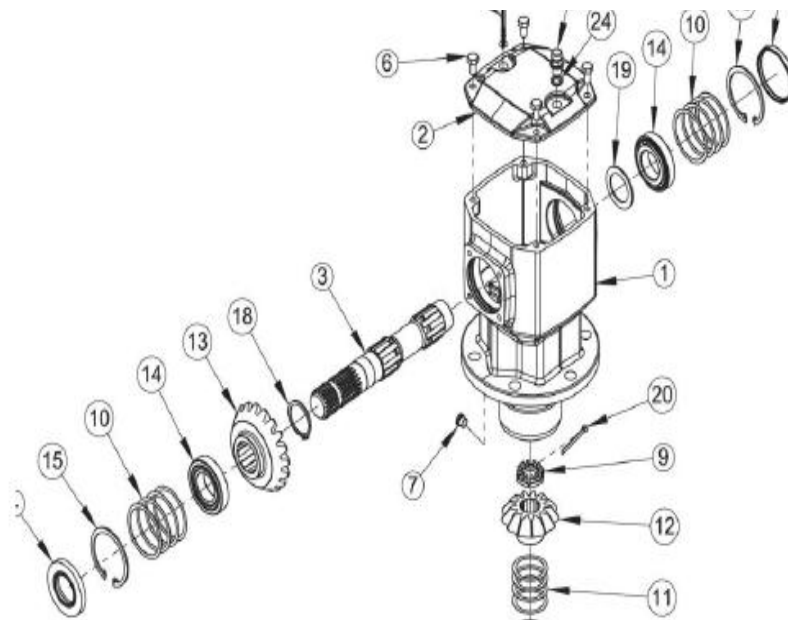
To add oil add by removing the dipstick item # 26 add to fill line on dipstick use EP80W-90

To drain oil remove item #7 plug with a 1/4 Allen head wrench .

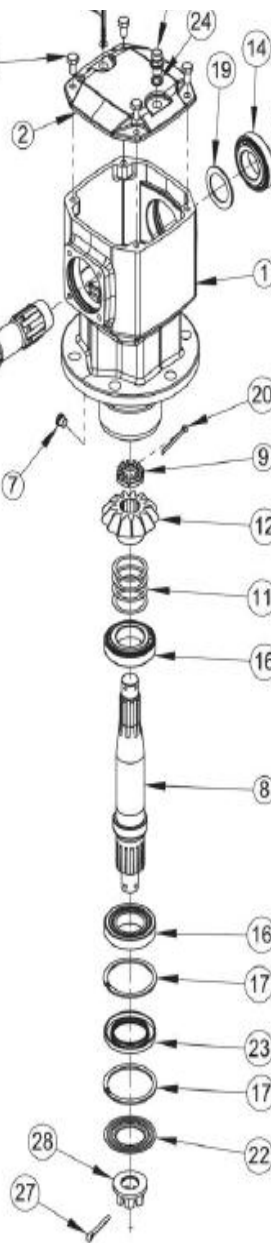
GEARBOX ASSEMBLY

540 RPM





REF. NO.	PART NO.	DESCRIPTION	QTY.
	00791059	Gearbox Assembly	1
1	00791062	Housing	1
2	00791063	Cap, Top	1
3	00791064	Shaft, Input	1
4	50068116	Seal, Oil M45 x 85 x 10	1
5	70725	Cap, Oil M85 x 10	1
6	44390BH	Capscrew M10-1.5 x 20 Gr8.8	4
7	00791032	Plug, Socket Head	1
8	00791065	Shaft, Output	1
9	00755621	Nut, Castle M30-1.5	1
10	00791066	Kit, Shim for Input Shaft	1
11	00791067	Kit, Shim for Output Shaft	1
12	00791080	Kit, Gear (19 and 13 Tooth Gears)	1
13	00791080	Kit, Gear (19 and 13 Tooth Gears)	1
14	70796	Bearing, Roller M45 x 85 x 20.75	2
15	00755618	Ring, Snap M85 x 88.5 x 3	2
16	70800	Bearing, Roller M50 x 90 x 21.75	2
17	00791083	Ring, Snap M90 x 93.5 x 3	2
18	2516460	Ring, Snap M50 x 47 x 3	1
19	00755632	Shim M45.3 x 65.3 x 2.5	1
20	70499	Pin Cotter M5 x 63	1
21	N/A	Tag	1
22	00791085	Shield, Protective	1
23	00791084	Seal, Oil Dbl. Lip M60 x 90 x 10	1
24	00790983	Sealing Washer	1
25	00790985	Plug, Vent M16 -1.5	1
26	4038611	Dipstick, Oil	1
27	2716423	Pin, Cotter M6 x 60	1
28	00791093	Nut, Castle M30-2	1



Disassembly of Gearbox

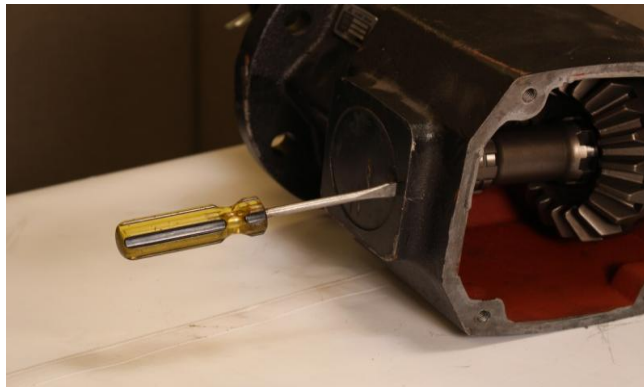
Note : Empty gearbox of any oil before disassembling by removing bottom plug Item #7 with 1/4 Allen wrench.

1) Remove four bolts item #6 with 5/8 socket or wrench to remove top plate item # 2.



2) Remove input seal item #4 with seal removal tool or flathead screwdriver.

3) Remove gripping cap item # 5 with seal removal tool or flathead screwdriver.

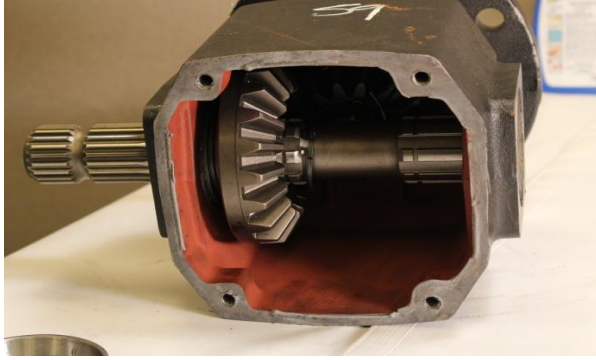


4) Remove input snap ring item #15 front side of input shaft and remove shims item #10 , keep shims and snap ring together label them so you will put them in the same location you took them out. Note picture below how we put snap ring and shims together and labeled them GS for gear side.

5) Remove snap ring item # 15 rear of input shaft housing remove shims item # 10 label snap ring and shims and snap ring keeping them together so you can put the in the location you removed them from .Note see picture below we labeled this set as OS for opposite side of gear gearbox.



6) Remove input shaft item #3 driving it away from gear side item #13 remove item # 13.



7) Remove cotter pin Item #20 remove castle nut item # 9 using 1 3/4 socket and use a pipe wrench to hold opposite side of shaft to keep from turning as you loosen nut.



8) Remove bottom protective shield item #22 with flat head screw driver.



9) Remove bottom snap ring item # 17.



10) Remove bottom seal item # 23.



11) Remove snap ring on backside of seal item #17.



12) Remove output shaft item #8 by tapping out remove gear at same time item # 12.



13) Remove bearing item #16 off shaft item #8 with punch and hammer lightly.



Assembling Gearbox

Note : Seals should be installed last.

1) Install bottom race&bearing set item # 16 in bottom of housing then install out put shaft item #8 through bottom install item #17 snap ring .



2) Install item #16 race&bearing set install item #12 gear Install item #9 castle nut torque to eight inch pounds rolling torque before seals installed install item #20 cotter pin.



3) Install race out of item #14 race&bearing set (gear side first Input shaft) top housing Install Item #10 shims gear side first Install Item #15 snap ring.

4) Install Item #14 bearing (gear side first) in top housing (Input) place in race install Item #13 gear in place then Install Item #3 Input shaft through front side of housing tap in place.

5) Install Item #19 shims backside top housing (Input shaft) Install Item # 14 bearing
Then Install Item # 14 race then install Item # 10 shims then Install Item # 15 snap ring.



6) Install Item # 23 seal then Install Item #17 snap ring Install Item #22 protective shield
bottom housing.



7) Install Item #5 solid oil seal backside top housing then Install Item #4 Input seal front side
of top housing.

8) Clean old permatx off top gearbox housing and item #2 top plate then Install fresh layer
of permatx install Item #2 top plate to housing #1 using (4) bolts Item # 6.

9) Fill with oil to fill level on dipstick ,gearbox oil capacity is three quarts recommended oil
is EP80W-90 gear oil.