

Hurtback

From: Hurtback [hurtback@covad.net]
Sent: Monday, May 16, 2005 11:41 AM
To: hurtback@covad.net
Subject: 198am1overhaulweb



Above is a NP-208 out of my ramcharger but it is slightly different than the 198am1 but parts on the inside may interchange.

Here is the 198 am1 I got out of the tug





Remove the drive yokes from the front and rear. Then take out all the bolts from the tail housing and remove the speedo drive lift off the housing and this is what you see. Remove the plastic oil pump plate.



Next take out all the case cover bolts and using the two pry slots on each end lift off the case.





Make sure you note all the shims and the Torrington locations. You can see one bearing in the lower left pix on the right sprocket and a shim on the left shaft. This has a good chain.

Note the shift fork for the 2 wheel - 4 wheel drive. The next pix shows the missing hi-low range fork. It fits on the shaft and lifts the plastic ring you see in the pix.



Lift off the chain and gears as a unit, all the bearings will fall all over, DO NOT LOSE ANY!!! Note the Torrington bearings and all the roller bearings that fell. Also notice how shiny all the bearing surfaces are, no pitting, blue marks, or metal transfer, it all looks mirror smooth. This case is in excellent shape and shows no abuse from 23000 miles in low range. I think it will go 100,000+ as it is and running in low doesn't hurt anything like some say since the planetary gear set is just like a auto trans and they go for ever if lubed.



Note the bearings and this thin shim must go back in same place. note hi-range shift ring



Next pull out the shaft and note more bearings they are all shinny and mirror like as is the shaft. None need replaced but I will replace all the seals. You can now see the gear that locks the outer part of planet gear so you can get hi range. You will also have to cut the snap ring off the shaft just above the plastic shift ring. It is the smaller one on the main shaft and NOT the one that holds the plastic ring and planet gears!!!



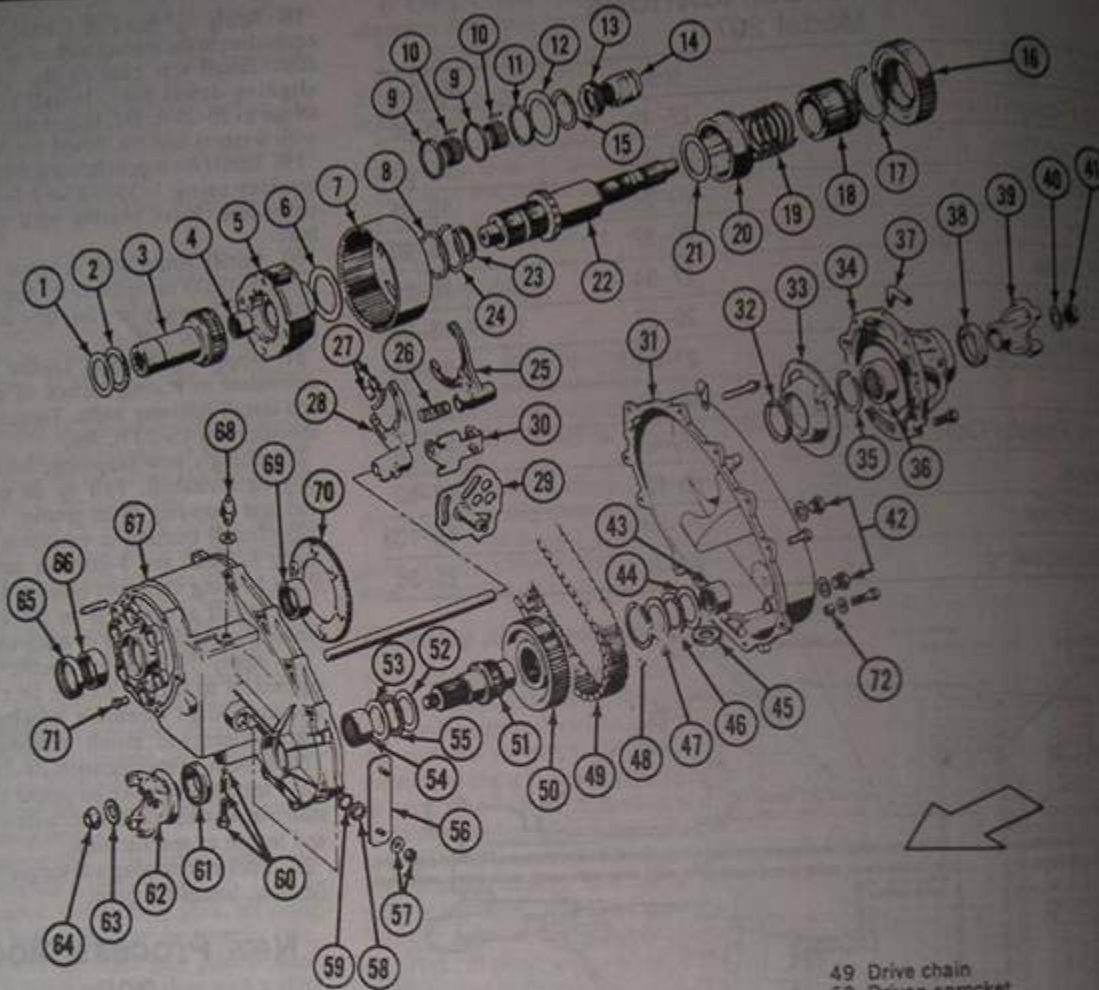
The last two pictures are showing the detent (Left) and lock bolt (right) that hold the shifter plate in position. You will need to grind the bolt shorter so the plate can move or add the stock ball switch if you want a "4x4 engaged" Light.



Reassembly next week!

#65 Input shaft t-case seal 16149 national
 #38 Rear output shaft seal F490 TTO
 #61 Front output shaft seal 16149 PSO
 #32 Plastic plate oil pump seal 13759 CR
 Shift shaft has o-ring and speedo has o-ring.

TRANSFER CASES



- 1 Input gear thrust washer
- 2 Input gear thrust bearing
- 3 Input gear
- 4 Mainshaft pilot bearing
- 5 Planetary assembly
- 6 Planetary thrust washer
- 7 Annulus gear
- 8 Annulus gear thrust washer
- 9 Needle bearing spacers
- 10 Mainshaft needle bearings (120)
- 11 Needle bearing spacer
- 12 Thrust washer
- 13 Oil pump
- 14 Speedometer gear
- 15 Drive sprocket retaining ring
- 16 Drive sprocket
- 17 Sprocket carrier stop ring
- 18 Sprocket carrier
- 19 Clutch spring
- 20 Sliding clutch
- 21 Thrust washer
- 22 Mainshaft
- 23 Mainshaft thrust bearing
- 24 Annulus gear retaining ring
- 25 Mode fork

- 26 Mode fork spring
- 27 Range fork insert
- 28 Range fork
- 29 Range sector
- 30 Mode fork bracket
- 31 Rear case
- 32 Seal
- 33 Pump housing
- 34 Rear retainer
- 35 Rear output bearing
- 36 Bearing snap ring
- 37 Vent tube
- 38 Rear seal
- 39 Rear yoke
- 40 Yoke seal washer
- 41 Yoke nut
- 42 Drain and fill plugs
- 43 Front output shaft rear bearing
- 44 Front output shaft rear thrust bearing race (thick)
- 45 Case magnet
- 46 Front output shaft rear thrust bearing
- 47 Front output shaft rear thrust bearing race (thin)
- 48 Driven sprocket retaining ring

- 49 Drive chain
- 50 Driven sprocket
- 51 Front output shaft
- 52 Front output shaft front thrust bearing race (thin)
- 53 Front output shaft front thrust bearing race (thick)
- 54 Front output shaft front bearing
- 55 Front output shaft front thrust bearing
- 56 Operating lever
- 57 Washer and locknut
- 58 Range sector shaft seal retainer
- 59 Range sector shaft seal
- 60 Detent ball, spring and retainer bolt
- 61 Front seal
- 62 Front yoke
- 63 Yoke seal washer
- 64 Yoke nut
- 65 Input gear oil seal
- 66 Input gear front bearing
- 67 Front case
- 68 Lock mode indicator switch and washer
- 69 Input gear rear bearing
- 70 Lockplate
- 71 Lockplate bolts
- 72 Case alignment dowels

Exploded view of 208

the front input shaft inward and by angling the gear slightly to obtain adequate clear-

10. Remove the screw, poppet spring and check ball from the front case half.

13. Place a shop towel on the shift rail. Clamp the rail with a vise grip pliers so the

