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Rough Country 50-7907 Installation Instructions

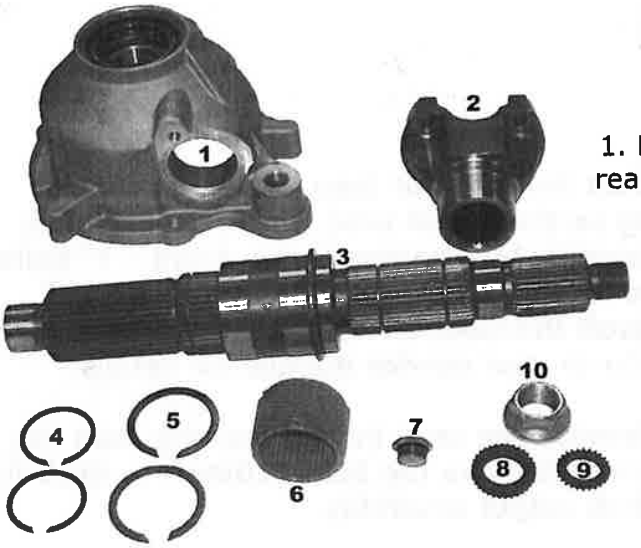
Slip Yoke Eliminator Kit for NP231 Jeep Cherokee & Wrangler

Part number: 50-7907

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Scan for fitment, price and install help

Slip Yoke Eliminator Kit
for New Process 231
Transfer Case Assemblies



Kit Components:

1. Rear Housing Assembly (Includes rear housing, rear output seal, rear output bearing and rear output snap ring, pre-assembled.)
2. Rear Output Yoke
3. Mainshaft
4. Speedometer Snap Ring
5. Mode Gear Snap Ring
6. Speedometer Drive Gear
7. Plug, Housing
8. Rear Output Spline Seal
9. Front Output Spline Seal
10. Rear Output Yoke Nut

Set Up

We recommend that you read through this entire set of instructions prior to removing your 231 Transfer case from the Jeep®. Then we recommend that after you remove the Assembly from the Jeep®, you disassemble the entire case assembly and inspect all of your existing components. If any require replacement, order your replacement parts and then complete the assembly along with your new kit.

We suggest that you take care to keep track of all of your hardware. Label the containers that you use to hold the hardware, in order to find the correct piece when it is time to reassemble. We recommend that a Silicone RTV, (Part # 05010884AA) be available to you at that time. Use of a good service manual will help you to identify each component. It will also specify each specific torque value, etc. Labeling of each component will also help you greatly when it is time to assemble this transfer case.

Read through your service manual in advance to make sure you have all the tools necessary.

You will also need to organize your lubricants and thread-locker. Preparation will help ensure that you do a good job, and avoid having to open your case assembly again later for corrections.

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INSTRUCTIONS

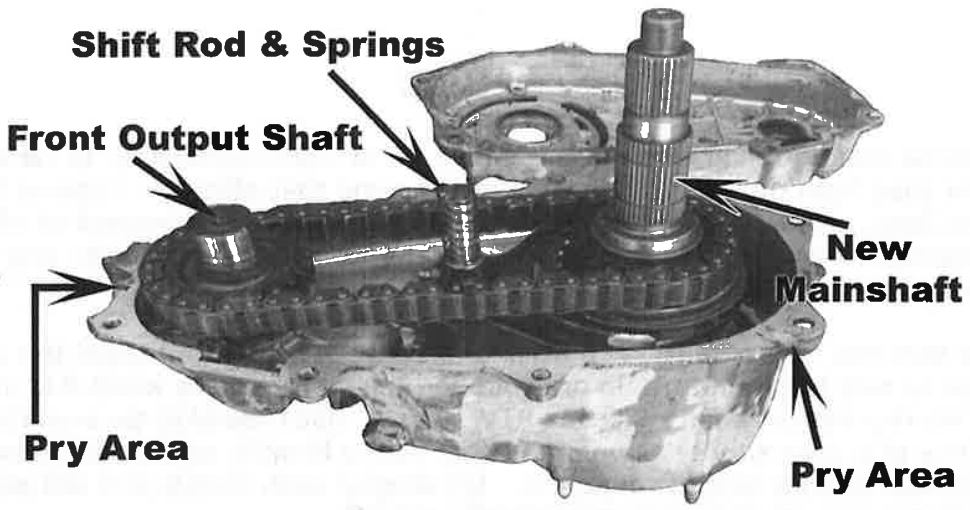
1: Place the Transfer Case in 4L prior to removal. Remove the driveshafts, linkage and speedometer unit. Be careful to note the position of each component prior to removal. Separate the Transfer Case from the Transmission, and then remove the transfer case from the Jeep®.

2: Remove the front Yoke.

3: Remove the Selector Lever.

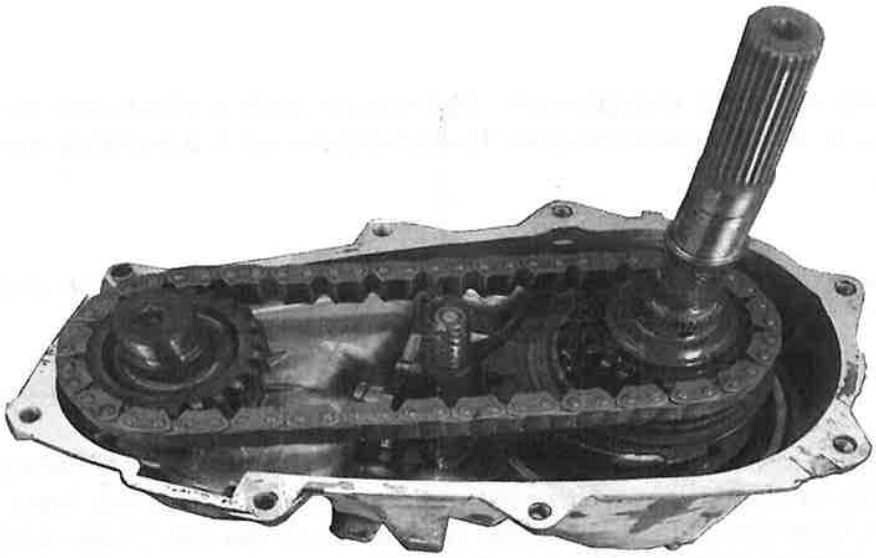
4: Remove the output shaft Boot and Dust Shield. Your Jeep® may or may not have a harmonic balancer, depending on the model year. Newer Jeeps® have a harmonic balancer. Remove this balancer by inserting three 6mm – 1" bolts through the holes (Which are tapped for this purpose). When fully inserted these bolts will act as a press, and push the balancer off the shaft. There may be other slight model variations. Refer to your service manual for details.

5: Remove the spacer and snap ring. Remove the seal, inner snap ring from the shaft. Remove the bearing retainer ring. Remove the bolts (10mm) to the output housing and then remove the stock output assembly.



6: Mark the locations of the rear case half Bolts (10mm 12 pt.) before removing them. Separate the case by carefully using the intended pry bar location slots only. Prying anywhere else on the case halves may damage the surface, causing the case to not seal properly later. Carefully begin to pry the case halves apart. As the case halves are being separated you should be able to disconnect the pickup tube and pump assembly with the rear case. DO NOT

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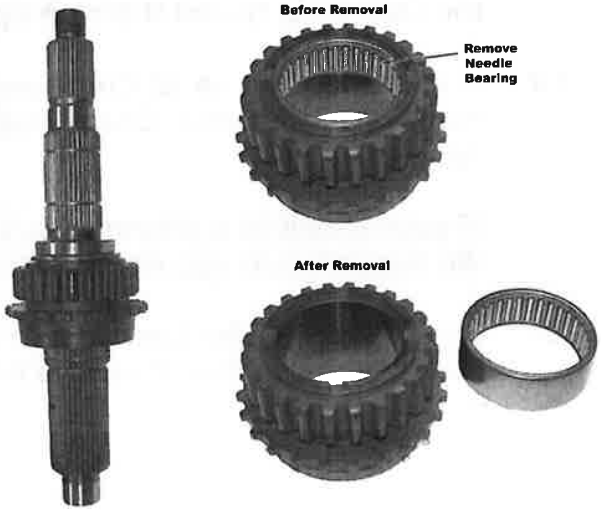
The front half with the rear case and oil pump assembly removed.

disassemble the pump itself. Inspect the O-rings, and replace them if they are nicked or worn. Make sure to clean the inner case. Inspect for wear or damage.

7: Remove the Front Output Shaft from the bearing, then remove the Chain from the Mainshaft. Clean and inspect the Chain and Shafts. If the Chain shows signs of stretching or fatigue, make sure that you replace it (Part # 4338935).

8: Remove the Mainshaft from the front case. Note, or photo the locations of the snap rings, Mode Hub and Sprocket. You will need to reassemble these parts onto the new shaft.

9: Prior to 1997, the 231 used "Caged Roller Bearings" on this output shaft. After 1997 there were no bearings in this position. If you have an earlier model, these bearings must be removed from the sprocket with a press or bearing puller.



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10: Inspect all of the components. Make sure each is clean and in good condition. Pre-lube all components prior to installation with a suitable assembly lubricant.

11: Replace the stock Mainshaft with the new one contained in the kit. Slide the Drive Sprocket into position on the new Mainshaft.

12: Slide the Mode Hub into position, and install the Retaining Ring.

13: Pre-lubricate the Mainshaft assembly and Chain with ATF, along with the shaft bearing surfaces. Insert the Mainshaft Assembly into the front case half Planetary Assembly. Place the front Output Shaft on the Chain and place them into position with the Mainshaft and Case.

14: Secure the Mode Spring on the Shift Rail.

15: Make one final inspection prior to installing the Rear Case Half back onto the assembly. If all components are properly positioned and clean, prepare case halves with the RTV Sealant (5010884AA)

16: CAREFULLY slide the Oil Pump and Rear Case half on and into position. Do not force the case halves together! The Mode Fork Shift Rail extends through the Rear Case. Re-install all the Bolts into their original locations and torque to 20-25 ft/lbs.

17: Reinstall the Selector Lever.

18: Install the Speedometer Gear Snap Ring in the groove on the shaft next to the Oil Pump. Install the blue Speedometer Gear. Secure with the Snap Ring.

19: If your Jeep® is an XJ Cherokee, you should have a Vacuum Actuator on the rear Output Housing. Check your old housing for this Vacuum Actuator. If so, reinstall.

If your Jeep® is a Wrangler®, a plug with a seal has been included in this kit. We suggest that you also use the RTV sealant here.

20: Some 231 Transfer Case Assemblies have a shift rod that extends 1-1/2" out from the Case. If your vehicle has this longer shift rod, it must be shortened

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to protrude only 1" beyond the case. To determine this, shift the assembly into 4WD. The Shift Rod should be fully extended in this position. In order to make sure that there is no interference because of the length of this shaft, fit the Housing to the Rear Case Half. Align the Pump outer tabs with the Housing. Cut the extra length with a grinding wheel or saw. Make sure that you smooth out the cut with a file.

21: At this point, pre lube the remaining Bearing and Seal. Install them into the rear Output Housing. And secure with the Snap Ring.

22: Again, apply RTV sealant to the mating surfaces of the Case and the Output Housing.

23: Support the Mainshaft assembly and slide your new rear assembly into position. Carefully index the pump outer tabs, then align and install the rear Output Assembly.

24: Carefully pull the Output Shaft to seat it against the rear bearing.

25: Install the remaining 5 bolts (10mm) into the Output Housing. Torque to 15-20 ft/lbs.

26: Place the Front Yoke seal into position. Prelube the Seal and Yoke with ATF. Slide the Yoke into position. Tighten to 140 / 150 torque lbs. Repeat for Rear yoke.

27: Install the Speedometer Housing into the new Output Housing. You will need to determine the proper position for your unit by determining which Speedometer Gear tooth count your vehicle has. There are 4 possible types. You will find your tooth count on the Speedometer Housing. Align the correct number on your housing, and secure with the retaining clip.

28: Seal the O-ring with some RTV.

29: Install the Transfer Case Assembly into your vehicle.

30: Fill your Transfer Case Assembly to the proper level with ATF.

31: Reassemble the Front Drive Shaft, Linkages, Speedometer Cable and any remaining mating components.

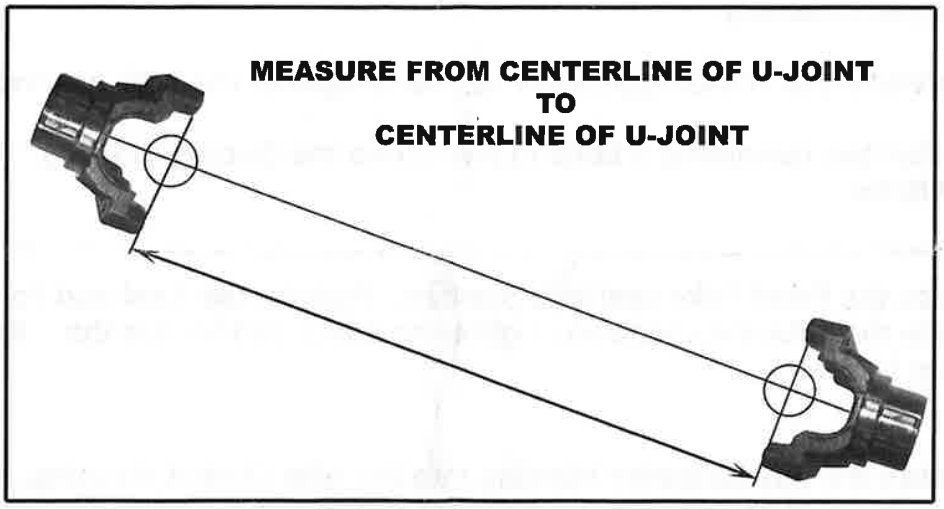
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32: Carefully measure the EXACT distance from the Transfer Case Rear Yoke, to the rear Differential Yoke. The rear Differential Yoke must be pointed at the Transfer Case yoke in order to get a correct measurement. This should be done with at vehicle's normal load, on the ground. Measure from the centers of the U-Joints.

Locate your local qualified Driveshaft Repair shop. You will need to MODIFY or REPLACE your drive shaft, based on your measurement.

Use a CV Joint and Long Slip Spline style Shaft Assembly.

33: No Front Driveshaft modification is necessary.





While every attempt is made to ensure that the information contained in this column is correct, no liability can be accepted by the authors for loss, damage or injury caused by any errors in, or omissions from the information given. All service should be performed by qualified mechanics. Neither the manufacturer nor the seller can be held responsible for any mechanical work performed. Standard and accepted safety precautions and equipment should be used in every procedure.

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