

## GEO TRACKER / SIDEKICK / VITARI 4.24:1 TRANSFER CASE GEAR SET

Advance Adapters 4.24:1 Sumo Gears fit Suzuki Sidekicks and Chevy/Geo Trackers from 1991 to 1998, Suzuki Vitara's, Grand Vitara's and Chevy Trackers from 1999 to 2001.

- These gears provide 134% low range reduction from stock.
- Clearancing inside your case is required for installation.

The installation of this gear set requires almost complete disassembly of the transfer case. We have provided illustrative disassembly and assembly instructions. If your transfer case is in need of a rebuild, now would be a good time to do it.

Here are a couple of points to keep in mind that will make the installation much easier if you've never disassembled a transfer case like this.

1. Keep all bolts separated into groups as you remove them and label their container.
2. Keep all small parts in separate containers and label them and their container.
3. Make sure you have a clean and spacious area to perform the installation.
4. These instructions are to be used as a guide. The official shop manual is strongly recommended for your application.

### ***KIT CONSISTS OF:***

<b><i>No.</i></b>	<b><i>Qty.</i></b>	<b><i>Description</i></b>
1.	1	Input gear
2.	1	Idler gear
3.	1	Low gear

### **TOOLS REQUIRED**

- Flat blade screwdriver
- Phillips screwdriver
- End wrenches
- Metric sockets
- Dead blow hammer
- Gasket scraper
- Angle grinder
- Arbor Press
- Snap ring pliers
- Punch set
- Gear puller
- Magnetic pick up tool



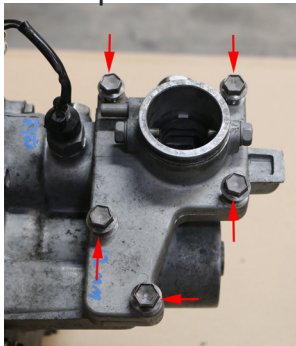
**SPECIAL NOTE:** The components packaged in this kit have been assembled and machined for specific type of conversions. Modifications to any of the components will void any possible warranty or return privileges. If you do not fully understand modifications or changes that will be required to complete your conversion, we strongly recommend that you contact our sales department for more information. This instruction sheet is only to be used for the assembly of Advance Adapter components. We recommend that a service manual pertaining to your vehicle be obtained for specific torque values, wiring diagrams and other related equipment. These manuals are normally available at automotive dealerships and parts stores.

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### DISSASSEMBLY

#### Step 1

- Remove 5 bolts holding shift tower on with 12mm 6 point socket



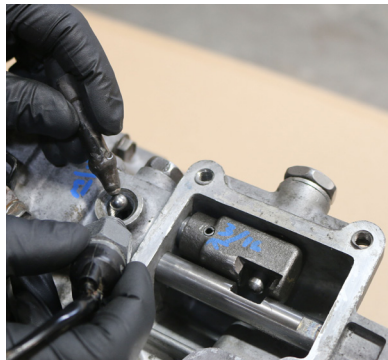
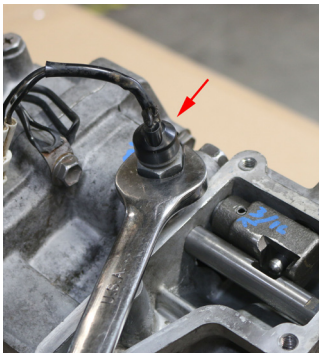
#### Step 2

- Pry under shift tower using flat blade screwdriver



#### Step 3

- Remove electrical switches
- Using 24mm 6 point socket remove shift plug, spring, ball and locating pin
- Using 14mm 6 point remove 2 plugs, springs and balls



#### Step 4

- Using 14mm 6 point socket remove shift plug, spring, ball and locating pin (x2)

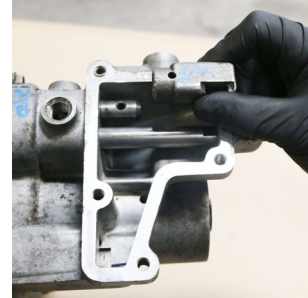
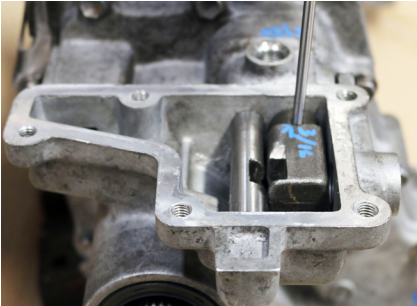


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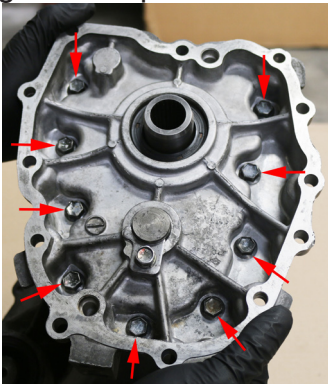
### Step 5

- Using a 3/16" punch remove roll pin that holds shift yoke into place



### Step 6

- Remove 9 intermediate case bolts using 12mm 6 point socket



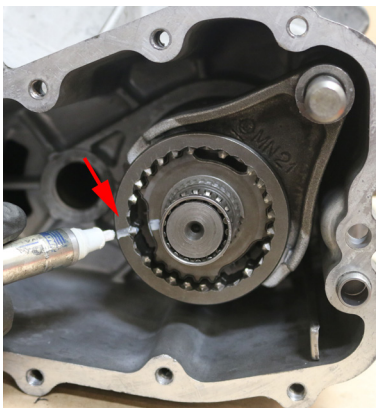
### Step 7

- Using a dead blow hammer tap the intermediate housing to separate case halves



### Step 8

- Mark engagement collar & hub to insure correct re-assembly



### Step 9

- Remove shift fork shaft & shift slider out as an assembly

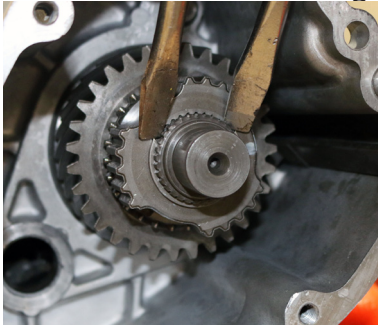


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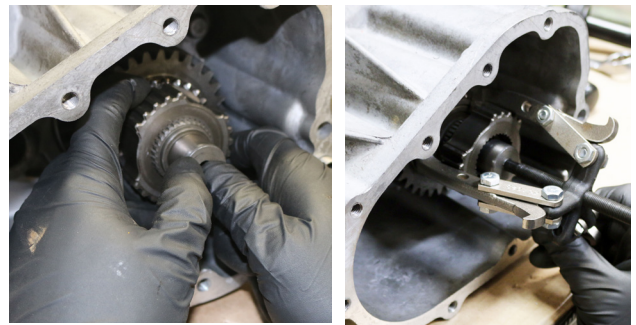
### Step 10

- Using 2 large equal length flat blade screwdrivers remove retaining clip



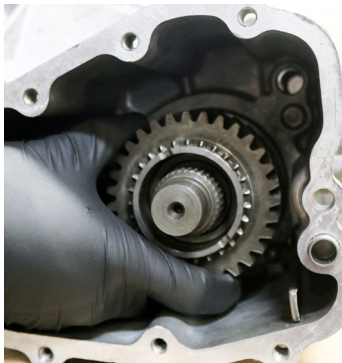
### Step 11

- Remove clutch hub. You may or may not need to use a puller.



### Step 12

- Remove low output gear & needle bearing from mainshaft



### Step 13

- Remove thrust washer & 2 locating steel balls from counter shaft



### Step 14

- Remove idler gear including caged needle bearings



### Step 15

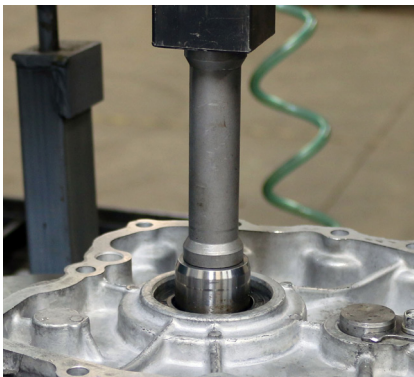
- Unseat snap ring from input shaft but don't remove yet



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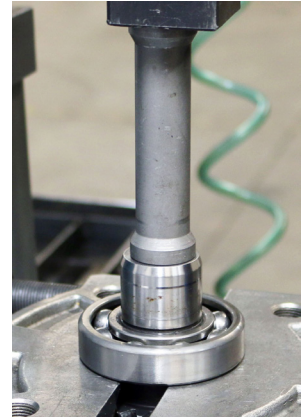
### Step 16

- Using a press or dead blow hammer remove input shaft from case. Be careful not to damage seal and snap ring



### Step 17

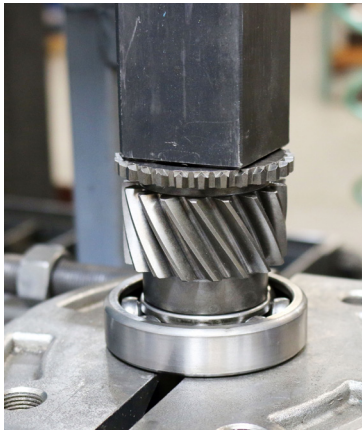
- Remove circlip & press bearing off input shaft.



## ASSEMBLY

### Step 18

- Re-install bearing and snap ring on new input gear



### Step 19

- Lubricate caged needle bearings & install on counter shaft with spacer in between the two caged needle bearings



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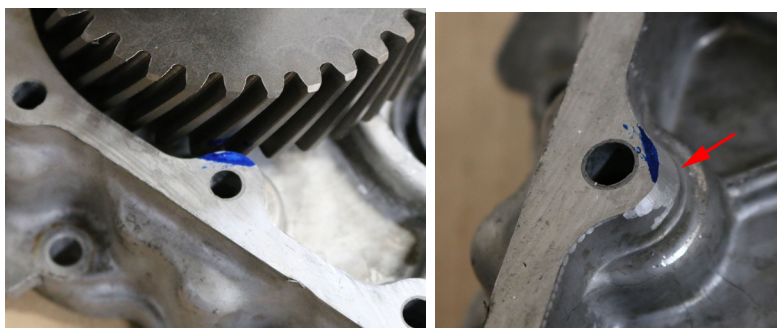
### Step 20

- Test fit & install thrust washer, Idler gear & input shaft together & set onto counter shaft.
- Tap input gear into place with deadblow hammer



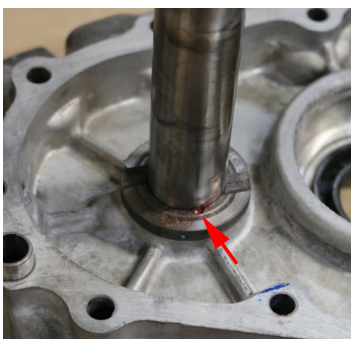
### Step 21

- Mark area on case housing that needs to be cleared for idler gear
- The gear may fit but it is extremely tight, we feel it is best to clearance slightly



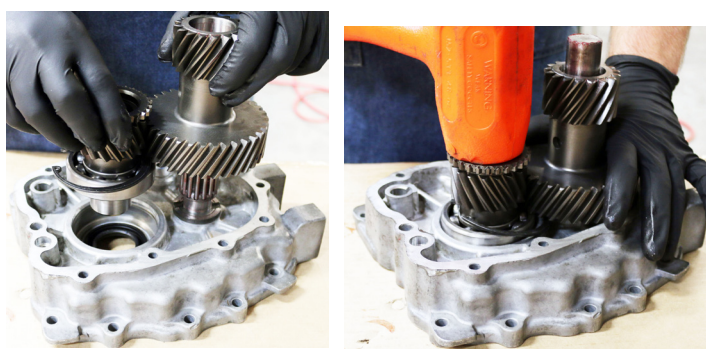
### Step 22

- Grease idler pin, install steel ball & thrust washer



### Step 23

- Re-install idler gear & input shaft
- Tap gear into place with dead blow hammer or press into place with Arbor press



### Step 24

- Install input gear snap ring



### Step 25

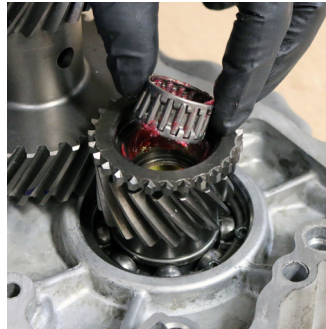
- Install steel ball & thrust washer



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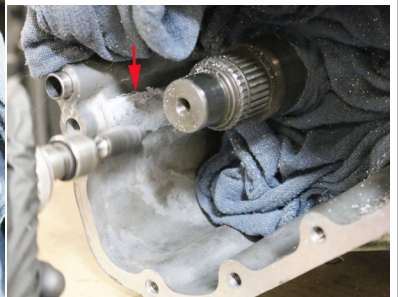
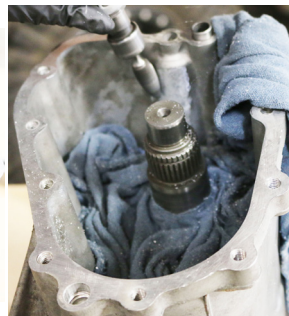
### Step 26

- Lubricate caged needle bearings, inside of input gear & install bearing



### Step 27

- Mark case area where material will need be removed. Using a die grinder or file remove a small amount of material at a time and test fit in between until the low output gear clears case. Make sure to cover bearings and oil cavities with rags prior to grinding and properly remove all metal shavings before going to the next step



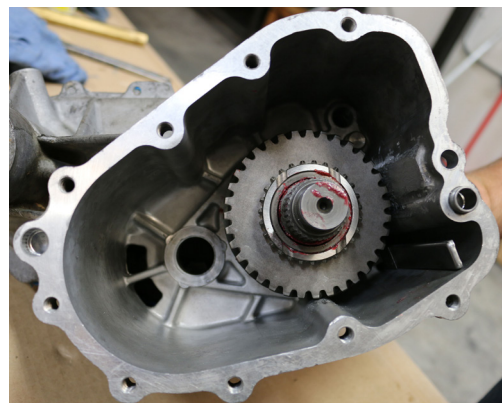
### Step 28

- Lubricate caged needle bearings, inside of input gear & install bearing



### Step 29

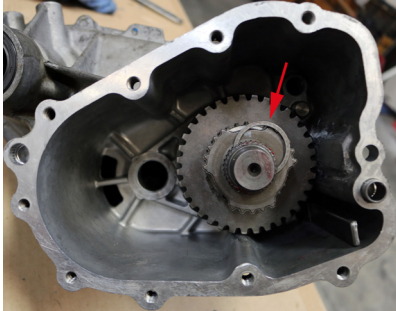
- Install low gear onto mainshaft



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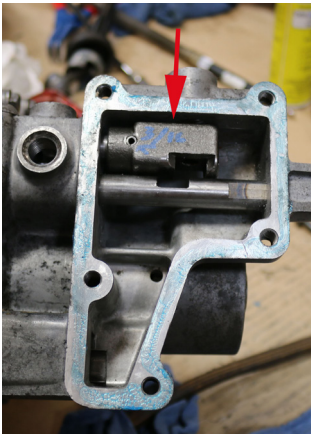
### Step 30

- Install reduction clutch hub & clip



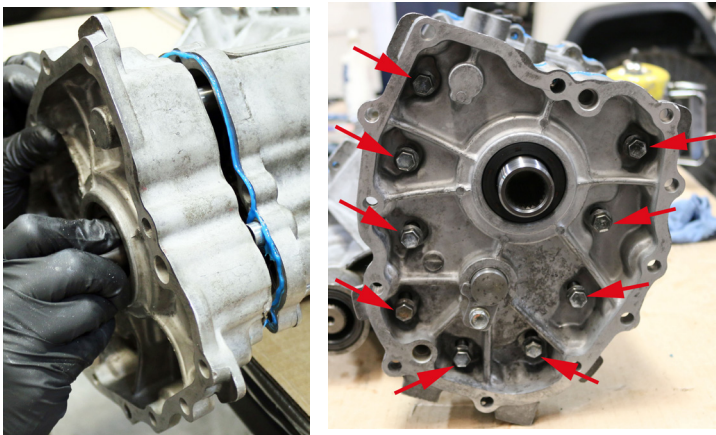
### Step 32

- Re-install shift yoke & roll pin



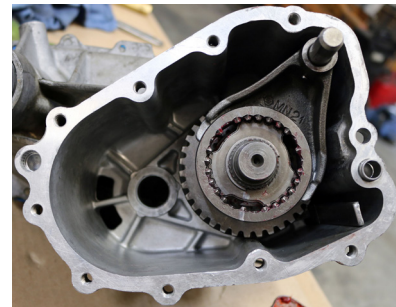
### Step 34

- Re-install front housing using nine 8mm bolts & torque between 13.0 - 20.0 ft lbs



### Step 31

- Install shift shaft, fork & slider assembly lining up the marks previously made in Step 8



### Step 33

- Make sure case is surface is clean
- Apply a small even bead of gasket sealer to case & re-assemble



### Step 35

- Re-install shifter return spring, ball & other electrical switches





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### Step 36

- Apply a small even bead of gasket sealer to the shifter base & install the shifter base & shifter
- Spin inputs & outputs by hand to check for smooth operation

