



**By Mike Weinberg  
Contributing Editor**

Nissan, formerly Datsun, has a good-sized share of the car market. The Maxima front-wheel-drive model uses a very smooth-running V-6 motor and a good-shifting five-speed manual transaxle. Although we tend to call this unit a "Maxima five-speed," its real designation is the RS5F50A. Introduced in 1985, this unit is found in all standard-shift Maximas through 1992. A variation of this transmission,

# Maximum Maxima

designated the RS5F50V, was introduced in 1990 and is found in the Axxess, Pulsar and Stanza models through 1992.

This gear box has a two-piece aluminum case with five synchronized forward speeds and reverse. Bearings are of the tapered roller-bearing type and preload is set by shims under the bearing races. There are four plastic oil channels inside the unit. Please don't forget to put them in their proper places during a rebuild, as failure to do so will result in catastrophic damage due to lack of lubrication. On the bottom of the case, we find a black plastic position switch that sends juice to the reverse lights. It is sealed with an O-ring and has a tendency to leak. The position switch is retained with a bolt

through an oblong tab cast into the plastic. If you have to remove one in the car, DO NOT pry on the tab, as it will break off. Use a 200 governor cover removal tool and some patience and it will come off. Located behind it is a small set of electrical contacts that sit on the shift selector. These contacts are not secured by bolts or clips and have an affinity for the dark places in your shop when they react to the forces of gravity.

1st gear - 3.285 to 1	4th gear - .911 to 1
2nd gear - 1.850 to 1	5th gear - .740 to 1
3rd gear - 1.206 to 1	Final drive ratio - 3.429 to 1

Take notice that fourth gear is slightly overdriven.

*continues next page*

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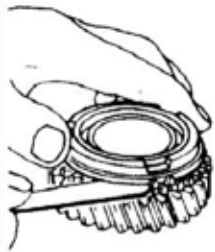
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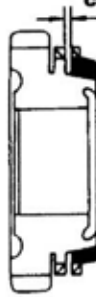
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**Wear limit**



**Baulk ring-to-gear clearance:**



**#1**

Synchro-ring clearance to the gear cone should be .039 to .053, and this unit uses brass rings (See Figure 1). The bearing preload and gear side clearances are pretty tight in this unit. Refer to the factory manual for the correct specs.

This is a relatively easy unit to repair, but there are a few areas to pay close attention to. The detent balls and springs are located under

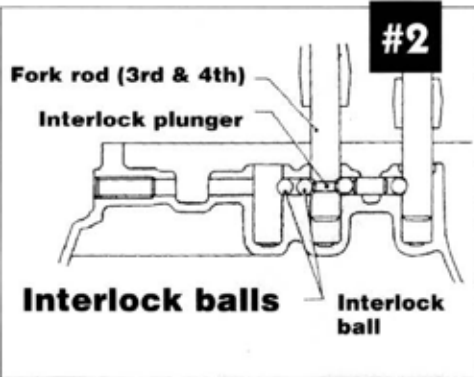
side of the clutch housing is a plug under which is a long spring and the 5th-gear interlock ball. Between the 5th rail and the 3-4 rail are two interlock balls. In the 3-4 rail is a small, thin interlock pin, which is lost easily. Between the 3-4 rail and the 1-2 rail is an interlock ball, a large interlock pin and another ball. Any mix-up in this arrangement or a lost small 3-4 pin will bring your customer back on the end of a hook with the unit stuck in gear.

The reverse-lever assembly actuates the reverse-idler gear when reverse is selected. There are two holes in the reverse arm. The hole to the left is where the reverse-arm shaft is anchored (See Figure 3). The hole to the right houses the reverse checkball, which

usually falls out on tear down. Before assembly of the case halves, remember to line up the reverse-idler shaft so that the reverse-idler shaft-retaining bolt will line up with the cases together (See Figure 4). The unit is sealed with RTV and there are no gaskets.

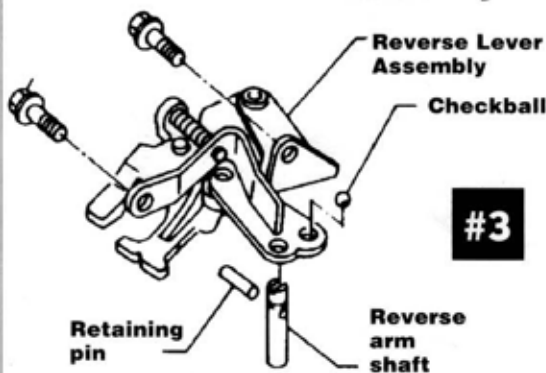
A common failure on this unit is caused by the throwout bearing. The input collar that the clutch-release bearing rides on is part of the casting of the clutch housing. If it is worn or cracked, you will have to replace the case or find a really good machinist, both options being expensive. We have had three such failures related to new Nissan release bearings. The OEM throwout bearing has a plastic internal collar, which rides on the input collar. This plastic has a tendency to break out of the bearing support causing case damage. We now use a Chicago Rawhide clutch-release bearing (part number N4029) which is made of steel and we have had no other failures of this type. Be sure to check the clutch fork and all related parts, as this unit will not tolerate any wear in this area.

These are nice units to work on and will make you good profits. Pay attention to the details and the big things will take care of themselves. I wish all of you a healthy, prosperous New Year. ■



**#2**

**Reverse Lever Assembly**



**#3**

**#4**

**Align the directions of the holes**

