

2006 Pontiac GTO V8-6.0L VIN U

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Transmission Jumps Out of Gear

Transmission Jumps Out of [Gear](#)

Diagnostic Aids

If the transmission jumps out of [gear](#) during deceleration, inspect the components that may allow for the gears or shafts to tip. If the gears or shafts tip, the synchronizer sleeve can disengage from the selector teeth on the speed gear. If the transmission jumps out of gear during acceleration, inspect the components that may not allow full engagement of the synchronizer sleeve to the selector teeth on the speed gear. Insufficient engagement of the selector teeth under torque may cause the transmission to jump out of gear.

Test Description

The numbers below refer to the step numbers on the diagnostic table.

2. A static shift test is performed by shifting into all [gear](#) positions with the engine not operating. While performing the test, slowly move the shift lever. Feel for proper movement of the shift lever and transmission internal shift components.
4. A dynamic shift test is performed by shifting into all [gear](#) positions with the engine operating. Test for the correct mesh of the synchronizers sleeve and the speed gear selector teeth. Move the shift lever, and feel for the synchronizer sleeve to release from the gear, then let up on the clutch pedal. Depress the clutch pedal and move the shift lever to engage the gear again, to ensure full travel of the shift components.
5. This step inspects for worn or damaged transmission or engine mounts. Loose mounts may cause a shock on the transmission allowing for [gear](#) disengagement.
6. This step inspects for the misalignment of the torque tube to transmission. Misalignment may put a bind on the [input shaft](#), allowing for the input shaft or the [mainshaft](#) to tip.
8. This step inspects the [pilot bearing](#) and the pilot bearing journal on the [input shaft](#). A worn pilot bearing or input shaft may allow the input shaft to tip, causing [gear](#) disengagement.

Step 1 - Step 10

Step	Action	Yes	No
DEFINITION: Gear disengagement occurs during acceleration or deceleration.			
1	Did you review the Symptoms - Manual Transmission operations and perform the necessary inspections?	Go to Step 2	Go to Symptoms - Manual Transmission
2	<ol style="list-style-type: none"> 1. Perform a static shift test. 2. Test for the following conditions: <ul style="list-style-type: none"> o Blockage preventing full shift lever movement o Excessive movement in the shift lever o Detent plungers engaging in the shift rails o Synchronizer pressure pieces on the synchronizer sleeves Did the transmission shift completely into all gears?	Go to Step 5	Go to Step 3
3	<ol style="list-style-type: none"> 1. Remove the shift control shift closeout boot. 2. Inspect for the following: <ul style="list-style-type: none"> o Loose mounting o Foreign debris Did you find and repair the condition?	Go to Step 10	Go to Step 4
4	<ol style="list-style-type: none"> 1. Perform a dynamic shift test on the transmission. 2. Test for the following conditions: <ul style="list-style-type: none"> o Synchronizer sleeve engagement to the speed gear selector teeth o Detent plungers engaging in the shift rails Did the transmission shift completely into all gears?	Go to Step 5	Go to Step 8
5	Inspect the engine and/or transmission mounts. Did you find and repair the condition?	Go to Step 10	Go to Step 6
6	Inspect the clutch housing for loose bolts or misalignment. Are there any loose bolts or misalignment?	Go to Step 9	Go to Step 8
7	Tighten any loose housing bolts and/or align the housing . Refer to Clutch Assembly Replacement. Did you find and repair the condition?	Go to Step 10	Go to Step 8
8	<ol style="list-style-type: none"> 1. Remove the transmission. 2. Remove the clutch assembly. 3. Inspect the pilot bearing for being faulty. 4. Inspect the input shaft for excessive wear at the pilot bearing. Did you find and repair the condition?	Go to Step 10	Go to Step 9
9	<ol style="list-style-type: none"> 1. Disassemble the transmission. Refer to Transmission Disassemble 2. Inspect the following components for wear or damage: <ul style="list-style-type: none"> o The shift rails o The detent plungers and springs o The shift forks o The synchronizer sleeve and speed gear selector teeth o The mainshaft to input shaft bearing and journals o The speed gear bearings and journals o The speed gear axial clearance o The mainshaft center and rear bearings Did you find and repair the condition?	Go to Step 10	Go to Diagnostic Aids
10	Operate the system in order to verify the repair. Did you correct the condition?	System OK	Go to Step 1

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