

FORD:

2007-2009 Mustang

This article supersedes TSB **09-19-11** to remove the production fix date, update the Service Procedure and Part List.

ISSUE

Some 2007-2009 Mustang Shelby GT500 vehicles may exhibit the following clutch/transmission symptoms: hard to disengage or engage 1st and reverse, hard to shift all gears, vehicle creeps with transmission in gear and clutch pedal fully depressed without brake pedal application. These symptoms may be caused by the clutch not disengaging fully when the clutch pedal is fully depressed. This may be due to flywheel distortion caused by excessive heat build-up during unique traffic conditions (example: severe stop/go urban driving, excessive clutch slipping). The clutch system is designed for performance driving conditions.

ACTION

Follow the Service Procedure steps to correct the condition.

SERVICE PROCEDURE

Located at the end of the procedure are Figures 1, 2 and 3 which show the typical appearance of a flywheel and clutch that has been damaged due to overheating of the clutch. Figures 4, 5 and 6 show the typical appearance of a good flywheel and clutch.

This procedure does not apply to or correct the normal characteristics of the twin-disc cera-metallic clutch used in the Shelby GT500 vehicle or normal wear. The twin disc cera-metallic clutch incorporates racing technology to combine a low inertia assembly with a very durable friction material with high torque capability. Depending on your driving technique, the smoothness of how the clutch reacts to clutch engagements may be different from other vehicles that use a single disc clutch system. Also refer to pages 8 and 9 of the GT500 Owner Guide Supplement for additional information.

Normal Operating Characteristics Of The Twin Disc Cera-metallic Clutch

- Clutch chatter/shudder when engaging the clutch.
- Narrow or abrupt engagement point.
- Hiss upon clutch engagement or disengagement.
- Transmission gear rollover noise at idle.
- Gear rattle noise at very low speeds when in 1st or 2nd gear.
- Normal wear.

Diagnosis And Service Procedure Update

Based on engineering analysis of all of the returned transmission components replaced when performing the prior TSBs, it has been determined that the synchronizer assemblies and transmission input shafts do not exhibit any abnormal wear that would require transmission component replacements.

A diagnostic procedure has been developed to confirm that the transmission synchronizers are operating properly and prevent any unnecessary transmission repairs.

Transmission Synchronizer Diagnosis Procedure

The following procedure is to be used to determine if the synchronizer assemblies in the transmission may have been damaged by attempting to operate the vehicle with a dragging clutch.

1. Set parking brake.
2. Transmission in neutral.
3. Start engine and allow it to idle.
4. Clutch engaged - pedal fully released.
5. Attempt to shift transmission into first gear by firmly pushing shift lever approximately 5-10 lb-ft (22-45 N•m) force for 2-3 seconds.

NOTE: The information in Technical Service Bulletins is intended for use by trained, professional technicians with the knowledge, tools, and equipment to do the job properly and safely. It informs these technicians of conditions that may occur on some vehicles, or provides information that could assist in proper vehicle service. The procedures should not be performed by "do-it-yourselfers". Do not assume that a condition described affects your car or truck. Contact a Ford, Lincoln, or Mercury dealership to determine whether the Bulletin applies to your vehicle. Warranty Policy and Extended Service Plan documentation determine Warranty and/or Extended Service Plan coverage unless stated otherwise in the TSB article. The information in this Technical Service Bulletin (TSB) was current at the time of printing. Ford Motor Company reserves the right to supersede this information with updates. The most recent information is available through Ford Motor Company's on-line technical resources.

TSB 10-3-8 (Continued)

6. If the synchronizers are okay, the transmission will not make any clash or grinding noise. You will not be able to move the gearshift lever into the selected gear (the synchronizer will block out gear engagement) and the engine RPM will decrease slightly.
7. Repeat the synchronizer test (Step 5 and 6) on all of the other forward gears.
 - a. If the transmission passes the synchronizer test, the transmission will not require additional service; proceed with clutch/flywheel replacement only. Refer to Clutch Replacement procedure.
 - b. If clash/grinding noise is found when performing the synchronizer diagnostic, the transmission will need to be repaired along with the replacement of the clutch. Refer to Transmission Repair procedure.

Clutch Replacement

1. Remove the transmission per 2010 Workshop Manual (WSM), Section 308-03C.
2. Remove and replace flywheel per 2010 WSM, Section 303-01C. Discard old bolts and use new bolts.
3. Install new pilot bearing per 2010 WSM, Section 308-01.
4. Install new clutch disc and plate assembly per 2010 WSM, Section 308-01. Using new bolts.
5. Apply a small amount of Motorcraft® PTFE Lubricant to the clutch hub splines per 2010 WSM, Section 308-01.
6. Install new clutch slave cylinder and hydraulic line per 2010 WSM, Section 308-02.
7. Install the transmission per 2010 WSM, Section 308-03C.
8. Refer to Powertrain Control Module (PCM) Reprogramming.

Transmission Repair

1. Remove, drain, disassemble and clean the transmission per 2010 WSM, Section 308-03C.

2. Remove and replace input shaft and all synchronizer assemblies per 2010 WSM, Section 308-03C.
3. Assemble the transmission per 2010 WSM, Section 308-03C.
4. Install the transmission per 2010 WSM, Section 308-03C.
5. Refer to PCM Reprogramming.

PCM Reprogramming

The PCM must be reprogrammed after the clutch is replaced. Reprogram the PCM to the latest calibration using IDS release 65.07 and higher. This new calibration is not included in the VCM 2010.1 DVD. Calibration files may also be obtained at www.motorcraft.com.

PART NUMBER	PART NAME
AR3Z-6375-A	Flywheel
AR3Z-7B546-A	Clutch
7R3Z-7C391-B	Transmission Kit
XG-8	Motorcraft® PTFE Lubricant
XT-5-QM	Motorcraft® MERCON® V Automatic Transmission Fluid
PM-1-C	Motorcraft® High Performance DOT 3 Motor Vehicle Brake Fluid
XG-1-C	Motorcraft® Premium Long-Life Grease
TA-30	Motorcraft® Silicone Gasket and Sealant
TA-25	Motorcraft® Threadlock and Sealer
F6ZZ-7600-A	Pilot Bearing
1R3Z-7052-AA	Transmission Input Shaft Oil Seal
AR3Z-7A508-A	Clutch Slave Cylinder
AR3Z-7A512-A	Clutch Slave Tube
N808969-S100	Clutch Bolt (6 required)
F6ZZ-6379-AA	Flywheel Bolt (8 required)

WARRANTY STATUS: Eligible Under Provisions Of New Vehicle Limited Warranty Coverage
IMPORTANT: Warranty coverage limits/policies are not altered by a TSB. Warranty coverage limits are determined by the identified causal part.

TSB 10-3-8 (Continued)

OPERATION	DESCRIPTION	TIME
100308A	2007-2009 Mustang GT500: Replace The Clutch Disc And Plate Assembly; Pilot Bearing, Slave Cylinder And Flywheel. Includes Time To Remove And Install Transmission, Perform The Synchronizer Diagnosis, And Reprogram The PCM (Do Not Use With Any Other Labor Operations)	4.2 Hrs.
100308B	2007-2009 Mustang GT500: Replace The Input Shaft; Synchronizer Assemblies, Clutch Disc And Plate Assembly; Pilot Bearing, Slave Cylinder And Flywheel. Includes Time To Remove And Install Transmission, Perform The Synchronizer Diagnosis, And Reprogram The PCM (Do Not Use With Any Other Labor Operations)	7.7 Hrs.

DEALER CODING

BASIC PART NO.
6375

CONDITION
CODE
69



Figure 2 - Article 10-3-8



Figure 3 - Article 10-3-8



Figure 1 - Article 10-3-8

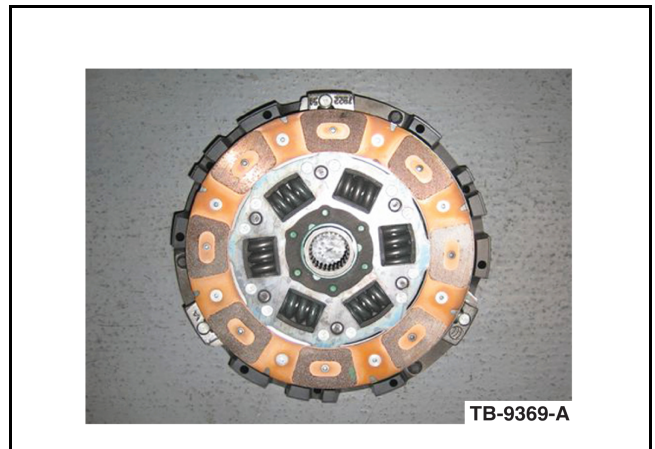


Figure 4 - Article 10-3-8

TSB 10-3-8 (Continued)



Figure 5 - Article 10-3-8



Figure 6 - Article 10-3-8