

SPECIFICATIONS**Material**

Item	Specification	Fill Capacity
Gasket Maker TA-16	WSK-M2G348-A5	—
High Performance DOT 3 Motor Vehicle Brake Fluid PM-1-C (US); CPM-1-C (Canada)	WSS-M6C62-A or WSS-M6C65-A1	—
Motorcraft® Full Synthetic Manual Transmission Fluid XT-M5-QS	WSD-M2C200-C	2.6L (2.7 qt)
Premium Long-Life Grease XG-1-C or XG-1-K (US); CXG-1-C (Canada)	ESA-M1C75-B	—

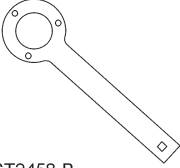
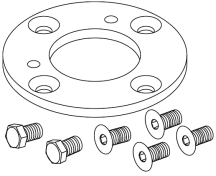
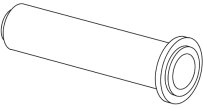
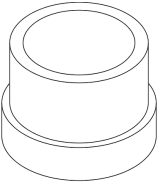
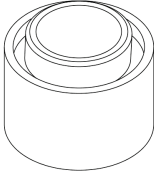
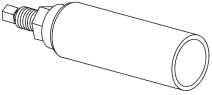
General Specifications

Item	Specification
Rotational Torque maximum	
Input shaft	1.2 Nm (10.6 lb-in)
Transmission	
Physical weight (dry)	56 kg (123.5 lb)

Torque Specifications

Description	Nm	lb-ft	lb-in
Catalytic converter-to-exhaust manifold nuts ^a	—	—	—
Clutch slave cylinder bolts	11	—	97
Crossmember brace bolts	48	35	—
Crossmember brace nuts	48	35	—
Dash boot bearing nuts	9	—	80
Drain plug	35	26	—
Engine spacer plate-to-transmission bolts (5.0L [4V] engines)	35	26	—
Engine-to-transmission bolts (3.7L engines)	48	35	—
Exhaust (H-pipe) clamps	48	35	—
Fill plug	35	26	—
Gearshift lever nuts	11	—	97
Gearshift lever-to-transmission bolt	40	30	—
Gearshift lever bolt	15	—	133
Output shaft flange nut ^a	—	—	—
Output Shaft Speed (OSS) sensor bolt	10	—	89
Reverse idler gear mount bolt	27	20	—
Reverse lamp switch	20	15	—
Shift fork pivot bolts	37	27	—
Skip shift solenoid bolts (5.0L [4V] engines)	10	—	89
Steering column shaft pinch bolt	48	35	—
Strut tower cross brace nuts	35	26	—
Subframe bolts	115	85	—
Subframe cross brace nuts	48	35	—
Subframe nuts	115	85	—
Transmission case bolts	24	18	—

Transmission**Special Tool(s)**

 <p>ST2458-B</p>	<p>Holding Tool, Drive Pinion Flange 205-478</p>
 <p>ST3236-A</p>	<p>Holding Tool, Rear Flange 308-807</p>
 <p>ST3235-A</p>	<p>Installer, Front Seal 308-806</p>
 <p>ST3237-A</p>	<p>Installer, Rear Flange 308-808</p>
 <p>ST3240-A</p>	<p>Installer, Rear Seal 308-811</p>
 <p>ST3238-A</p>	<p>Installer, Syncro Gear Pack 308-809</p>

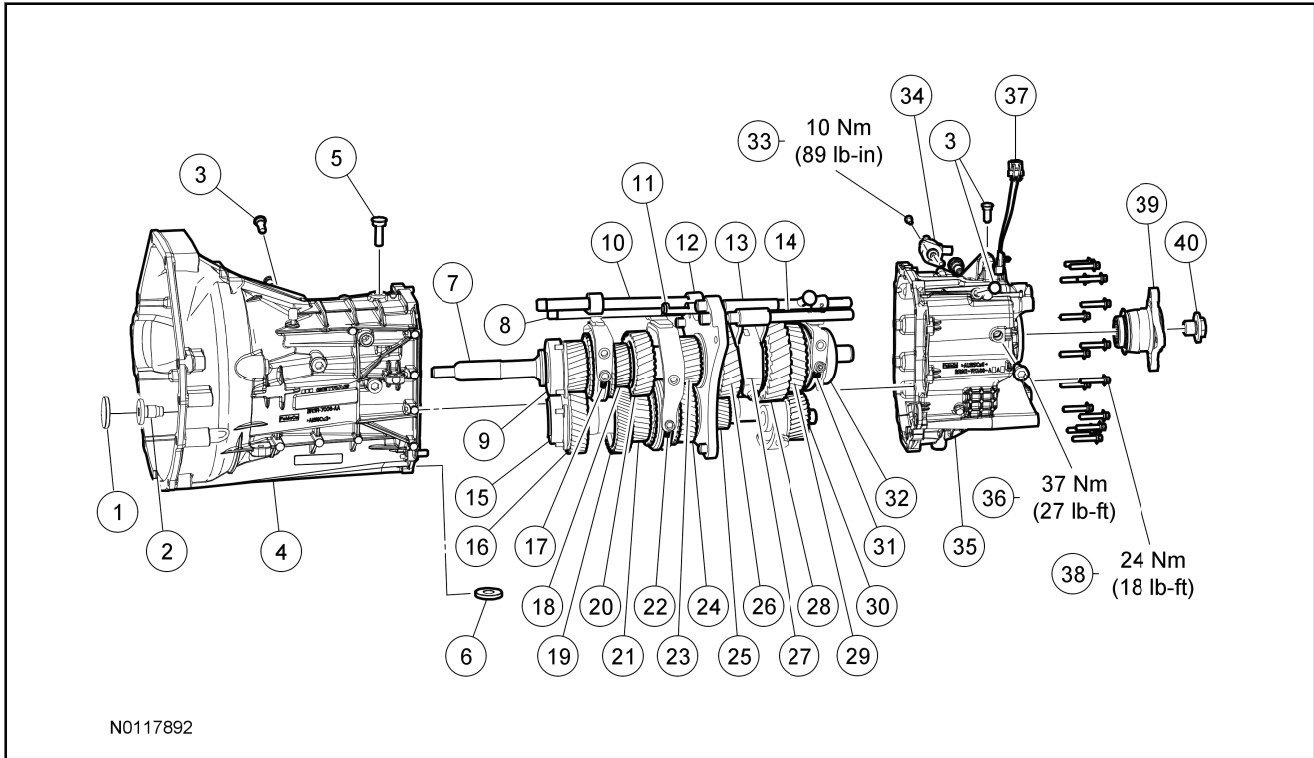
Material

Item	Specification
Gasket Maker TA-16	WSK-M2G348-A5
Motorcraft® Full Synthetic Manual Transmission Fluid	WSD-M2C200-C

(Continued)

Material (Continued)

Item	Specification
XT-M5-QS	



N0117892

Item	Part Number	Description
1	00933	Countershaft bolt cover
2	7L013	Counter shaft bolt
3	—	Shift rod detent (4 required)
4	7005	Front transmission case
5	7C031	Main shift rod stop pin
6	7L027	Magnet
7	7017	Input shaft
8	7H418	3rd/4th gear shift rod
9	7025	Input shaft bearing
10	7230	5th/6th gear shift rod
11	7210	Main shift rod assembly
12	7J086	Center support
13	7H418	Reverse gear shift rod
14	7240	1st/2nd gear shift rod
15	7121	Counter shaft bearing
16	7144	Counter shaft 5th gear
17	7124 / 7230	5th/6th gear synchronizer / fork assembly
18	7J101	6th driven gear
19	7113	6th gear
20	7101	3rd driven gear
21	7101	3rd gear
22	7124 / 7230	3rd/4th gear synchronizer / fork assembly

DESCRIPTION AND OPERATION

Manual Transmission

The MT82 6-speed transmission features:

- six forward speeds and one reverse speed.
- helical toothed gear wheels and gears that are constantly engaged.
- triple synchronisation on 1st and 2nd gears.
- double synchronisation on 3rd and 4th gears.
- a shift interlock system to prevent the engagement of more than one gear.
- a skip shift system to bypass 2nd and 3rd gears for vehicles equipped with 5.0L (4V) engines.
- aluminum front and rear main cases.
- an input shaft, output shaft and countershaft.
- ball bearings on input shaft, output shaft and countershaft.
- a reverse idler gear to produce a reverse rotation of the output shaft.

The transmission function is to move the vehicle from a rest position to motion. This is done by transferring the engine torque to the vehicle rear wheels. The transmission uses gears to adapt the torque to the demands of load and road conditions. It matches engine power to vehicle needs.

This power is delivered from the engine flywheel, to the transmission. The power is transmitted through a driver-operated clutch, which allows for engagement and disengagement of the engine to the transmission.

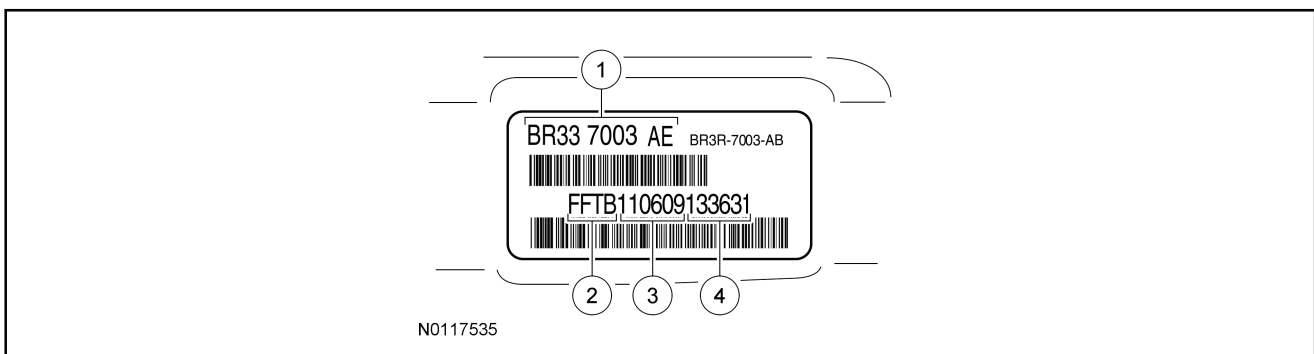
The transmission input shaft receives the power when the clutch is engaged. It is transferred through the input shaft to the drive gear. Torque is transferred to the countershaft drive gear and is delivered along the countershaft to all the countershaft gears. Torque is then transferred to the engaged mainshaft gear. The transmission then uses a system of mainshaft gears to change the speed and torque relationship between the engine crankshaft and the transmission output shaft.

Transmission Identification

The transmission identification tag is located on the RH side of the transmission, near the driveshaft flange.

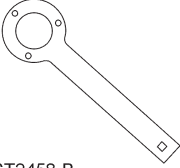
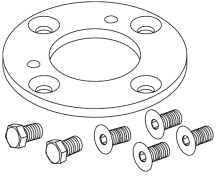
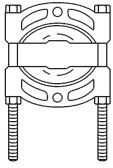
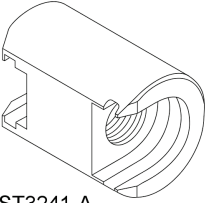
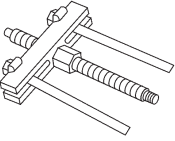
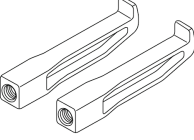
The MT82 transmission is available in the Mustang with 3.7L or 5.0L (4V) engines.

Transmission Identification Tag



Item	Part Number	Description
1	—	Replacement part number
2	—	Place of manufacture
3	—	Vehicle build date
4	—	Build time

Transmission**Special Tool(s)**

 <p>ST2458-B</p>	<p>Holding Tool, Drive Pinion Flange 205-478</p>
 <p>ST3236-A</p>	<p>Holding Tool, Rear Flange 308-807</p>
 <p>ST1368-A</p>	<p>Puller, Bearing 205-D064 (D84L-1123-A) or equivalent</p>
 <p>ST3241-A</p>	<p>Remover, Detent 308-812</p>
 <p>ST1516-A</p>	<p>Remover/Installer, Front Wheel Hub 204-069 (T81P-1104-C)</p>
 <p>ST3239-A</p>	<p>Remover, Syncro Gear Pack 308-810</p>

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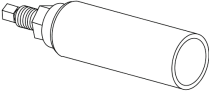
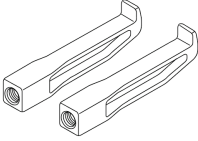
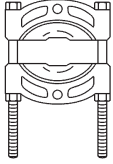
Item	Part Number	Description
19	7113	6th gear
20	7101	3rd driven gear
21	7101	3rd gear
22	7124 / 7230	3rd/4th gear synchronizer / fork assembly
23	7112	4th driven gear
24	7113	4th gear
25	7102	2nd gear
26	7102	2nd driven gear
27	7230	1st/2nd gear synchronizer and fork assembly
28	7100	1st driven gear
29	7C238	Reverse driven gear
30	7142	Reverse idler gear
31	7124 / 7230	Reverse gear synchronizer / fork assembly
32	7065	Output shaft bearing
33	W714875	Skip shift solenoid bolts
34	7G136	Skip shift solenoid
35	7K400	Rear transmission case
36	7K179	Shift fork pivot bolts (6 required)
37	15520	Reverse light switch
38	—	Transmission case bolts
39	7K177	Output shaft flange
40	7L013	Output shaft flange bolt

1. Refer to exploded view(s) and any Warnings, Notices, Notes, Materials, Specifications and Special Tools. Items in the exploded views may not be listed in order of removal.

In order to ensure the most accurate information, some procedural and pinpoint test steps may be under development and not immediately available at vehicle introduction. We continuously monitor feedback for improvement. If you would like to give specific feedback, please use the "Is this procedure helpful?" or "SPECS" (Service Publication Error Correction System) buttons above.

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Countershaft**Special Tool(s)**

 <p>ST3238-A</p>	<p>Installer, Syncro Gear Pack 308-809</p>
 <p>ST3239-A</p>	<p>Remover, Syncro Gear Pack 308-810</p>
 <p>ST1368-A</p>	<p>Puller, Bearing 205-D064 (D84L-1123-A) or equivalent</p>

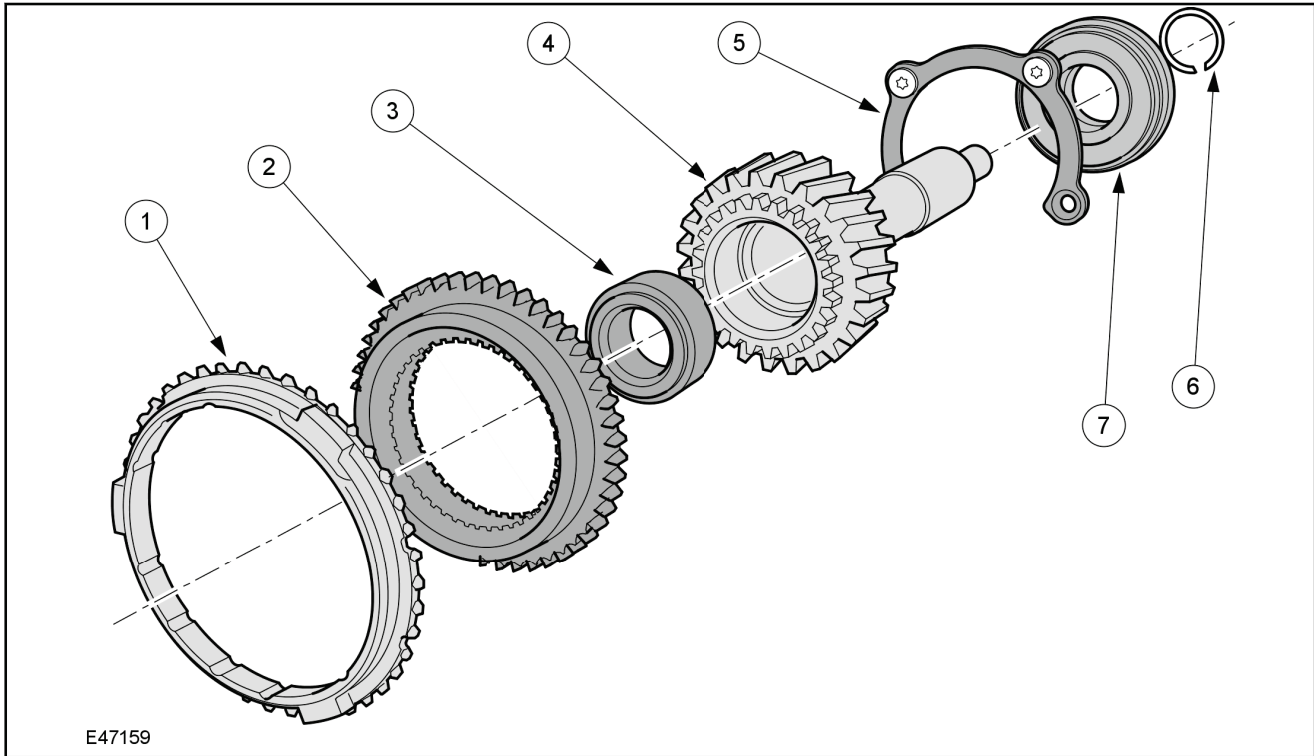
Material

Item	Specification
Motorcraft® Full Synthetic Manual Transmission Fluid XT-M5-QS	WSD-M2C200-C

Input Shaft

Material

Item	Specification
Motorcraft® Full Synthetic Manual Transmission Fluid XT-M5-QS	WSD-M2C200-C



E47159

Item	Part Number	Description
1	—	5th gear synchronizer ring
2	—	5th gear splined synchronizer
3	—	Output shaft pilot bearing
4	7017	Input shaft
5	—	Input shaft bearing retainer (model dependent)
6	7025	Input shaft bearing
7	—	Input shaft snap ring

1. Refer to exploded view(s) and any Warnings, Notices, Notes, Materials, Specifications and Special Tools. Items in the exploded views may not be listed in order of removal.

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Item	Part Number	Description
26	—	1st gear outer synchronizer ring
27	—	1st/2nd gear synchronizer assembly

1. Refer to exploded view(s) and any Warnings, Notices, Notes, Materials, Specifications and Special Tools. Items in the exploded views may not be listed in order of removal.

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SECTION 308-03A Manual Transaxle/Transmission — MT82 Getrag 6-Speed

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Synchronizers	308-03A-2
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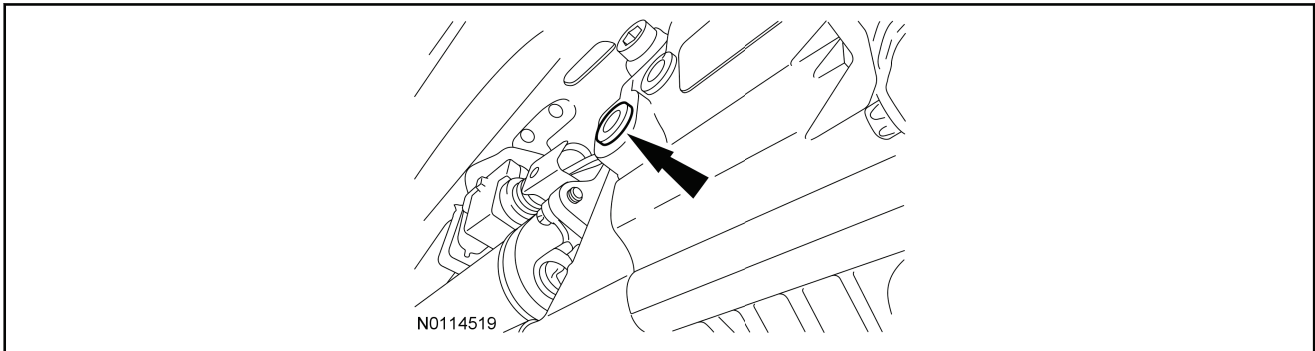
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GENERAL PROCEDURES (Continued)

Remove the fill plug.



5. **NOTICE:**
The use of any other transmission fluid than specified can result in the transmission failing to operate in a normal manner or transmission failure.

NOTE:

Do not overfill the transmission. This will cause transmission fluid to be forced out of the case.

Using a suitable oil suction gun, fill the transmission with the recommended fluid.

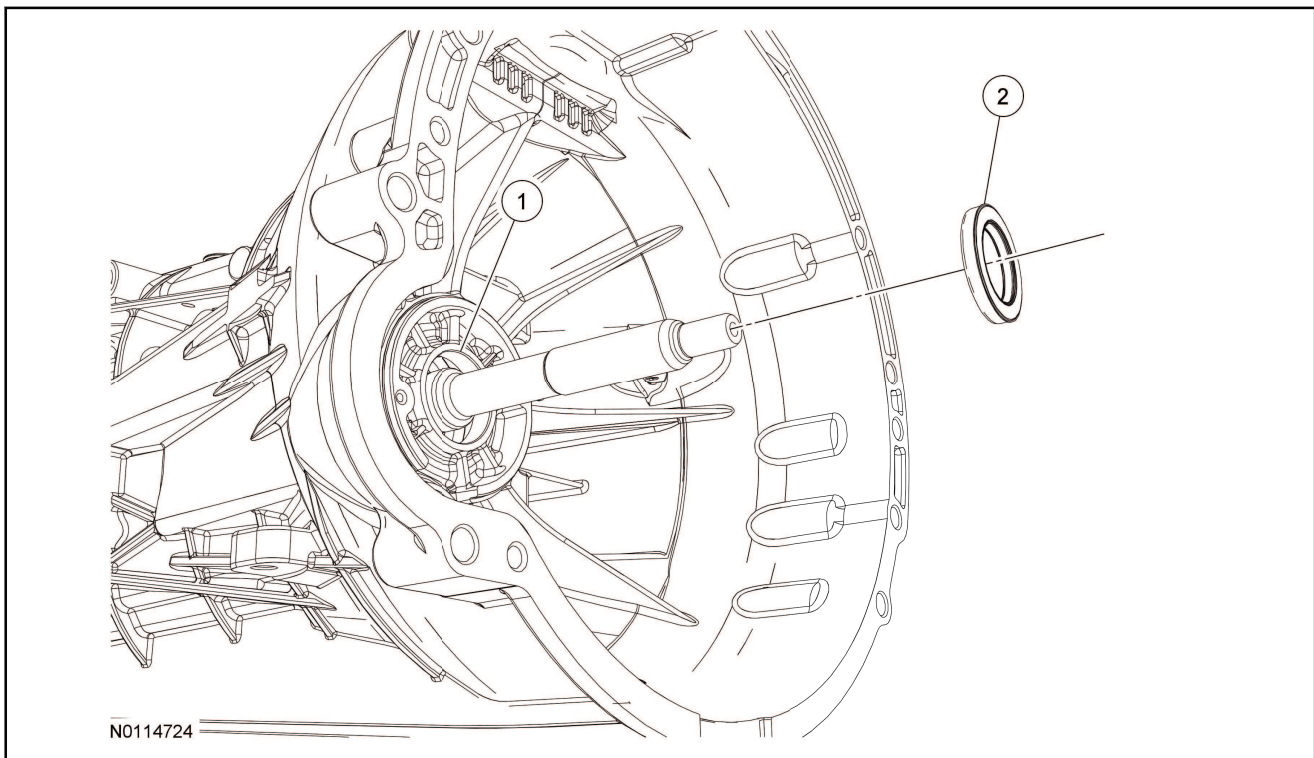
- Transmission capacity is 2.6L (2.7 qt).

6. Install the fill plug.
- Tighten to 35 Nm (26 lb-ft).

IN-VEHICLE REPAIR

Input Shaft Seal

Special Tool(s)



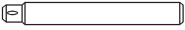
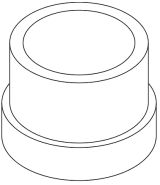
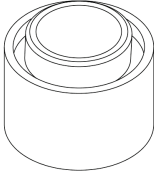
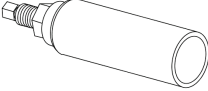
Item	Part Number	Description
1	7006	Transmission case
2	7048	Input shaft seal

1. Refer to exploded view(s) and any Warnings, Notices, Notes, Materials, Specifications and Special Tools. Items in the exploded views may not be listed in order of removal.

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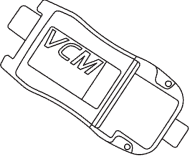
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IN-VEHICLE REPAIR**Output Shaft Seal****Special Tool(s)**

 ST1255-A	Handle 205-153 (T80T-4000-W)
 ST3237-A	Installer, Rear Flange 308-808
 ST3240-A	Installer, Rear Seal 308-812
 ST3238-A	Installer, Syncro Gear Pack 308-809

Transmission

Special Tool(s)

 <p>ST2834-A</p>	<p>Vehicle Communication Module (VCM) and Integrated Diagnostic System (IDS) software with appropriate hardware, or equivalent scan tool</p>
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Material

Item	Specification
High Performance DOT 3 Motor Vehicle Brake Fluid PM-1-C (US); CPM-1-C (Canada)	WSS-M6C62-A or WSS-M6C65-A1
Motorcraft® Full Synthetic Manual Transmission Fluid XT-M5-QS	WSD-M2C200-C
Premium Long-Life Grease XG-1-C or XG-1-K (US); CXG-1-C (Canada)	ESA-M1C75-B



WARNING:

Do not breathe dust or use compressed air to blow dust from storage containers or friction components. Remove dust using government-approved techniques. Friction component dust may be a cancer and lung disease hazard. Exposure to potentially hazardous components may occur if dusts are created during repair of friction components, such as brake pads and clutch discs. Exposure may also cause irritation to skin, eyes and respiratory tract, and may cause allergic reactions and/or may lead to other chronic health effects. If irritation persists, seek medical attention or advice. Failure to follow these instructions may result in serious personal injury.

All vehicles

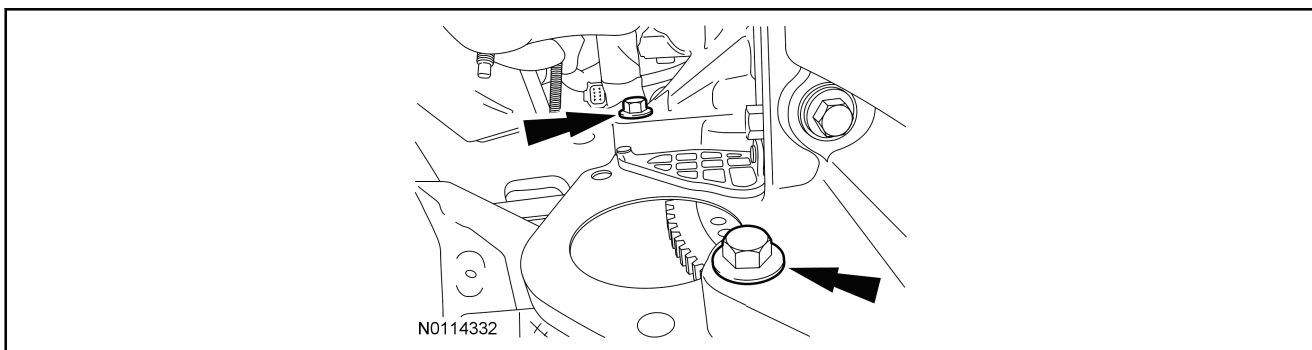
1. **NOTE:**
Before installing the transmission, clean and lubricate the input shaft with a small amount of grease.

Position the transmission to the engine.

2. Install the 4 transmission-to-engine bolts and 3 transmission-to-engine stud bolts.
 - Tighten to 48 Nm (35 lb-ft).

Vehicles equipped with 3.7L

3. Install the 2 engine-to-transmission bolts.
 - Tighten to 48 Nm (35 lb-ft).



All vehicles

4. Connect the clutch slave cylinder tube to the clutch slave cylinder connector.
 - Attach the clutch hydraulic tube clip.