

1 03 06-16



## Service Information Bulletin

SUBJECT	DATE
TCM SPN 520970/FMI 7	March 2016

### Additions, Revisions, or Updates

Publication Number / Title	Platform	Section Title	Change
DDC-SVC-MAN-0140	DT12	SPN 520970/FMI 7	Update to Step 6
DDC-SVC-MAN-0084	DT12	SPN 520970/FMI 7	
DDC-SVC-MAN-S084	DT12	SPN 520970/FMI 7	

DiagnosticLink users: Please update the troubleshooting guides in DiagnosticLink with this newest version. To update the tool troubleshooting guide, open DiagnosticLink and from the Help - Troubleshooting Guides menu, select the appropriate troubleshooting manual, then click Update.



13400 Outer Drive, West, Detroit, Michigan 48239-4001  
 Telephone: 313-592-5000  
[www.demanddetroit.com](http://www.demanddetroit.com)

## 2 SPN 520970/FMI 7

Clutch - Unable to Open Fully

Check as follows:

1. Connect DiagnosticLink<sup>®</sup> 8.01 or higher; SPN 520999/FMI 7 (AMT Clutch Control - Mechanical Error) may also be present when this fault occurs.



### **WARNING: PERSONAL INJURY**

To avoid injury before starting and running the engine, ensure the vehicle is parked on a level surface, parking brake is set, and the wheels are blocked.



### **WARNING: ENGINE EXHAUST**

To avoid injury from inhaling engine exhaust, always operate the engine in a well-ventilated area. Engine exhaust is toxic.

2. Start the engine and idle for two minutes.
3. Is the transmission air supply pressure greater than 689 kPa (100 psi)?
  - a. Yes; Go to step 6.
  - b. No; Go to step 4.
4. Shut the engine OFF.
5. Inspect transmission air supply lines and fittings for leaks; repair as necessary. Repeat all steps in this procedure.
6. Under the Actions menu, select transmission heading and then choose Clutch Apply Leak Test; execute routine. Does the result indicate a successful completion, test pass? Note that test may have to be performed three times in order to get a "pass" result.
  - a. Yes; Go to step 7.
  - b. No; Go to step 8.
7. Under Instrumentation tab, select Transmission Learned Values. Is Instrument Learned Value Clutch Minimum greater than 33 mm or Clutch Limit Stop Maximum Value greater than 51mm?

DiagnosticLink - Engineering - Offline ((BAKJGLDR1GSGV7215) 7-8-2015 1522:22)

File Edit View Log Parameters Actions Tools Help Full Screen

Instrumentation Engine: DDEC13-DD15 Transmission: DT12-DT12 DA

All Instruments	Chart	Cruise Control	Data Stream	EGR	Engine Brake	FIS Fuel Quantity	Mechanical	Switches	TCM Global Status
Transmission		Transmission Learned Values		User		Variable Speed Water Pump			
Splitter group sensor learned minimum value			mm		Actual position value clutch			mm	
			17.060					34.900	
Splitter group sensor learned maximum value			mm		Learned value clutch minimum			mm	
			22.980					35.170	
Range group sensor learned minimum value			mm		Clutch limit stop maximum value			mm	
			16.560					51.670	
Range group sensor learned maximum value			mm		Status clutch calibration				
			44.640					learned values available	
Gear actuator sensor learned minimum value at selector position with minimum se...			mm		Actual position value splitter			mm	
			17.410					17	
Gear actuator sensor learned maximum value at selector lower middle position			mm		Actual position value rail			mm	
			49.170					23	
Gear actuator sensor learned neutral position value			mm		Actual position value range			mm	
			33.860					16	
Selector sensor learned minimum value			mm		Transmission learn status				
			14.680					learned values available	
Selector sensor learned maximum value			mm						
			33.160						

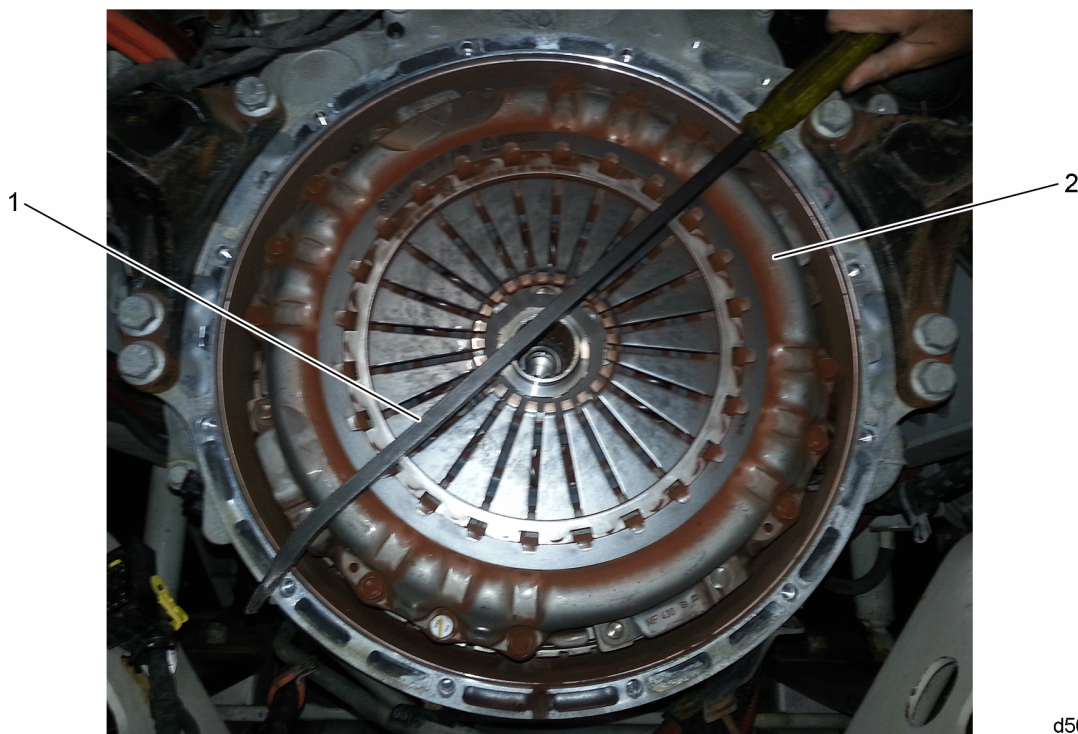
Logged Connections (pause)

- Common Powertrai... CPC04T: Online
- Motor Control Mod... MCM21T: Online
- Transmission Contr... TCM01T: Online
- Aftertreatment Con... ACM21T: Online

Log time: 7/8/2015 3:27:49 PM

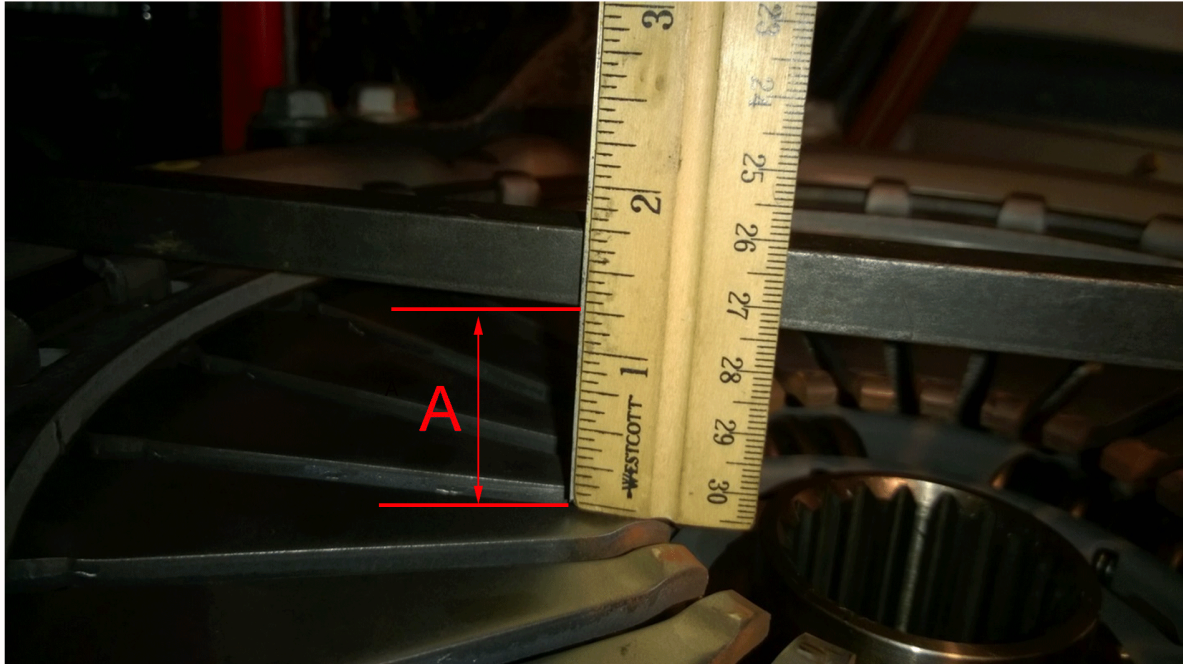
d500248

- a. Yes; Go to step 8.
  - b. No; obtain a driving log file and contact Detroit™ Transmission Support at 855-253-0428 for further assistance.
8. Remove transmission. Refer to section "Removal of the Transmission".
  9. Keep the pressure plate and clutch disk installed on the engine.
    - a. Lay a straightedge (1) on the raised portions on the pressure plate (2).



- b. Use a ruler to measure the distance (A) from the straightedge to the contact apex of each release finger.

d500250



d500249

10. Is the measurement greater than 2.54 cm (1 in.) or pressure plate fingers warped?
  - a. Yes; replace pressure plate, pressure plate mounting bolts and clutch disc. Refer to section "Installation of the Clutch".
  - b. No; replace the Concentric Pneumatic Clutch Actuator (CPCA). Refer to section "Removal of the Clutch Actuator Assembly".