



Technical Journal

TITLE:

Rough shifts, 5-4, Neutral Control, N-D TF80SC/SD

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ISSUING DEPARTMENT:
Technical Service

CAR MARKET:
United States and Canada

PARTNER:
3 US 7510 Volvo Car USA

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2017-02-06

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2017-02-13

FUNC GROUP:
4370

FUNC DESC:
**Automatic, transmission
(hydromechanical)**

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“Right first time in Time”

Attachment

Vehicle Type

Type	Eng	Eng Desc	Sales	Body	Gear	Steer	Model Year	Plant	Chassis range	Struc Week Range
1XX					0		2011-9999		0009029-9999999	201046-999952
1XX					6		2011-9999		0009029-9999999	201046-999952
275	95	B6324S5			0		2013-9999		0650101-0999999	201220-999952
275	95	B6324S5			6		2013-9999		0650101-0999999	201220-999952

CSC Customer Symptom Codes

Code	Description
MA	Automatic transmission/Shifts rough or jerky/Unsure when/at all times
ND	Automatic transmission/Shifts rough or jerky/When downshifting
NF	Automatic transmission/Shifts rough or jerky/When engaging gear at standstill

VST Operation Number

VST Operation Number	Description
36004-2	
36060-3	
98530-2	



DTC Diagnostic Trouble Codes

Control Module	Code	Fault Type
TCM	P089500	Intermittent

Rows beginning with * are modified

Note! If using a printed copy of this Technical Journal, first check for the latest online version.

Text

TCM=Transmission Control Module

SW=Software

VIDA= Vehicle Information and Diagnostic Aftersales

***NOTE! THIS DOCUMENT SUPERSEDES THE PREVIOUS TECHNICAL JOURNAL 26840 DATED 19-Aug-2014. PLEASE UPDATE YOUR FILES.**

***TJ29078 replaces closed TJ 26840**

***TJ updated to include labor op in VST format**

DESCRIPTION:

Due to internal tolerance deviation in automatic gearbox (TF80SC/SD), the customer may experience rough shift from 5:th to 4:th gear, or/and shift shock after standing still at brake release, or/and harsh engagement N-D shift.

DTC TCM-P089500 might not be stored even with above stated symptoms.

PRODUCT MODIFICATION:

A modified TCM software with better adaptation functionality for internal tolerance deviation in automatic gearbox.

Adaptation temperatures areas is 1=40-65, 2=66-73, 3=74-81, 4=82-89 5=90-110.

With this SW the adaptation is active from 40°C, for N-D, 5-4 coast down and Neutral control.

MATERIAL RETURN:

Material for analysis can be requested in Vehicle Report.

VEHICLE REPORT:

Follow the guideline found in TIE under Instructions – Manuals, chapter 3.5.3.

Yes, please submit a Vehicle Report if the service solution described in this TJ has no effect.

Use concern area “Vehicle Report” and sub concern area “Support Needed”, use function group 4370.

In report please include detailed customer complaint as well as driving condition when it happens.

Which gear, throttle, gearbox oil temperature, driving pattern just before the issue occurred, etc.

Perform a readout with VIDA (if possible, just after issue occurrence) to automatically record adaptation parameters for further troubleshooting purposes. And add VIDA logs in to VR.



SERVICE:

In case of customer complaints matching above symptoms, update to the latest TCM SW from VIDA.

After TCM S/W update, an adaptation process should be performed.

Use VIDA TCM advanced menu to activate the “adaptation mode” (this will allow you to see which gear you are in and also when gearbox has been adjusted).

Adaptation has to be performed in specific temperature areas reached by following a specific

HEAT-UP PROCEDURE:

To avoid internal damage to the transmission, it is NOT allowed to heat up gearbox by using brake and acceleration pedal in D.

To heat up the transmission, start in manual mode with third gear and accelerate with high acceleration pedal.

Do this until you reach few degrees below target temperature area. Stand still in D mode and wait for temp to increase to the lower limit of the target temperature area.

Note: For most efficiency for all new functions it is important to reach temp above 85° C.

HEAT-UP transmission until 72°C (refer to above procedure)

STEP 1 - Temperature area 3 (74-81°C):

1. With brake active, put shifter in Neutral, wait 5-10 seconds
2. Move shifter to Drive, brake still active, wait 45-60 seconds
3. Release brake, do not push accelerator pedal
4. Brake the car to complete stop, wait 10 seconds with brake still active
5. Repeat step 1-4 one more time

HEAT-UP transmission until 80°C (refer to above procedure)

STEP 2 – Temperature area 4 (82-90°C):

1. With brake active, put shifter in Neutral, wait 5-10 seconds.
2. Move shifter to Drive, brake still active, wait 45-60 seconds.
3. Release brake, do not push accelerator pedal.
4. Brake the car to complete stop, wait 10 seconds with brake still active.
5. Repeat step 1-4 at least 10 times.
6. If possible, make a test drive to verify the general shift quality, especially for 5-4 coast down shifts.

Note: Inform to the customer when the car is returned, that some hard shifts might occur sporadically in specific conditions (even several weeks after dealer adaptation – depending on customer driving pattern). The adaptation will continue to improve the shift quality.

Note: If the adaptation is done in other temperature areas than in above procedure, the shift quality for N-D, 5-4 coast down and Neutral Control may be more improved.



***VSTG OPERATION NUMBER:**

36004-2

36060-3

98530-2