


VOLVO CARS SERVICE AND PARTS BUSINESS			
<h1>Technical Journal</h1>			
TITLE: Rough shifts, 5-4 downshift, Neutral Control, N-D and/or DTC P089500, TF80SC			
REF NO: TJ 26840	ISSUING DEPARTMENT: Technical Service	CAR MARKET: United States and Canada	
PARTNER: 3 US 7510 Volvo Cars North America		ISSUE DATE:	
FUNC GROUP: 4370	FUNC DESC: automatic, transmission (hydromechanical)	YEAR 2014	MONTH 03
		DAY 19	
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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		2011-2013		0009029-9999999	201046-201319
1XX					6		2011-2013		0009029-9999999	201046-201319
275	95	B6324S5			0		2013-2013		0628377-0663187	201146-201247
275	95	B6324S5			6		2013-2013		0628377-0663187	201220-201247

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

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

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NOTE! THIS DOCUMENT SUPERSEDES THE PREVIOUS TECHNICAL JOURNAL 28640 DATED 2014-01-27. Main operation 36004 has been removed and 36002 has been added. PLEASE UPDATE YOUR FILES.

DESCRIPTION:

Due to an internal tolerance deviation in the automatic transmission, (TF80SC) the customer may experience rough shift from 5th to 4th gear, and/or shift shock after standing still at brake pedal release, and/or harsh engagement during the neutral to drive (N-D) shift, and/or set Transmission Control Module (TCM) DTC P089500. The symptoms may also occur without TCM P089500.

PRODUCT MODIFICATION:

There is a modified software that regulates for the internal tolerance deviation for different temperature areas in automatic transmission (T/M).

MATERIAL RETURN:

Material for analysis can be requested in Vehicle Report.

VEHICLE REPORT:

Only if this TJ does not help to fix the symptom, submit a request form through prior approval, following TJ 23342 for the prior approval process.

In the form, please include customer complaint as well as driving condition then it happens.

Which gear, temperature, etc.

***SERVICE:**

In case of customer complaints, update the TCM software (SW) with latest software in VIDA.

After the TCM SW has been updated, an adaptation process should be performed. Since the new modified TCM SW implements a temperature split for the adaptation for the 5-4 coast down shifts, N-D shifts, and for Neutral Control), schedule enough time to perform this adaptation.

Use VIDA (TCM advanced menu) to:

1. Activate the "adaptation mode."
2. Monitor the T/M oil temperature to indicate in which transmission oil temperature area you are. The objective of the adaptation process is to adjust transmission control parameters in 5 T/M oil temperature areas: 40-65°C, 66-73°C, 74-81°C, 82-89°C, 90-110°C.

IMPORTANT INFORMATION: T/M oil temperature should be below 40°C to start the adaptation process. Check T/M oil temperature before start of adaptation process. If T/M oil temperature is too high, let the vehicle cool-down until the temperature comes down to 40°C (or below).



ADAPTATION PROCESS (PHASE 1):

- *1. Start with 5-4 Coast down from 40 degree C. Do as many as possible until 65 degree C is reached.
2. With foot on brake pedal. Put shifter in N, wait 3 sec, move shifter to D, wait 3 sec, move back to N. Repeat this at least 5 times and then continue until you get “transmission adjusted” message on the dashboard. If this message does not appear but shift quality is judged OK after 10 additional shifts, you can proceed to the next step.
3. Have shifter in D, brake active for 1 min, release brake, activate brake and keep it active for 1 min. Repeat this at least 5 times and then continue until you get “transmission adjusted” message on the dashboard. If this message does not appear but shift quality is judged OK after 10 additional shifts, you can proceed to the next step.
4. Accelerate to reach 5th gear. With light brake, perform 5-4 CD shift (in D-range). Repeat this at least 5 times and then continue until you get “transmission adjusted” message on the dashboard. If this message does not appear but shift quality is judged OK after 10 additional shifts, you can proceed to the next step.

If T/M oil temperature did not yet reach the upper limit of the temperature area under adaptation, stop the vehicle and increase the T/M temperature gently by performing take-offs in 3rd gear (Geartronic mode) until the lower limit of the next temperature area is reached (max. 3 take-offs).

Repeat steps 2-4 in each temp area (66-73°C, 74-81°C, 82-89°C, 90-110°C) until 95 degree is reached. T/M oil temperature increase should be controlled carefully. If temperature is increasing too fast, it might be necessary to let the vehicle cool-down a few minutes to remain in the same temperature area until steps 2-4 are completed.

ADAPTATION PROCESS (PHASE 2):

1. Let the gearbox cool down to approx. 66 degree C.
2. Do the basic adaptation according to VIDA instruction.
3. Turn of the car and let TCM go to sleep.
4. After 1 minute do a new read out of the car with VIDA (connected to the Internet)

Adaptation should now be completed. If gearbox shifts as it should release the car to customer. If shift quality still not is good, contact prior approval as stated above.

In case of symptom reoccurrence, avoid to reset adaptation values (or to download TCM SW) but perform additional adaptation (in the temperature area where the symptom still occurs).

***VOLVO STANDARD TIMES GUIDE (VSTG) INFO:**

36002-3: Software control module downloading

43713-2: Automatic gearbox test drive/adaptation

98513-2: Adaption extended acc. to TJ26840 - 2.1 hrs

Labor times are valid at the time of release and are subject to change.