

LTB00782V4

TECHNICAL BULLETIN

28 OCT 2015



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INFORMATION

This bulletin supersedes TSB LTB00782v3/2015 dated 01 OCT 2015, which should either be destroyed or clearly marked to show it is no longer valid (e.g. with a line across the page). Only refer to the electronic version of this Technical Bulletin in TOPIx.

Changes are highlighted in blue

SECTION:

307-00

SUBJECT/CONCERN:

Automatic Transmission Shift Concerns

AFFECTED VEHICLE RANGE:

MODEL:	MODEL YEAR:	VIN:	ASSEMBLY PLANT:	APPLICABILITY:
Range Rover Evoque (LV)	2012-2013	600000-856580	Halewood	Vehicles With: AWF21 6-Speed Automatic Transmission
Freelander 2/LR2 (LF)	2011-2015	216517-439912		Vehicles With: AWF21 6-Speed Automatic Transmission
Freelander 2/LR2 (LF)	2011-2015	900000-911855	Halewood	Vehicles With: AWF21 6-Speed Automatic Transmission

MARKETS:

All except Russia

CONDITION SUMMARY:
SITUATION:

A customer may express a concern about the quality of the automatic gear change.

Examples of this concern are:

- A rough gear change or jerk from stationary when selecting DRIVE (D) from NEUTRAL (N).
- A rough gear change or jerk when releasing the foot brake from a stationary position, whilst vehicle is in DRIVE (D) (handbrake not applied), for example in a traffic jam or pulling away from traffic lights.
- A rough gear change or jerk whilst driving vehicle on coast down from 6th gear (off accelerator), but only when down shifting from 5th to 4th gear.

This version has been created to change the Causal part number.

CAUSE:

Transmission Control Module (TCM) software programming.

Suggested Customer Concern Code MN1.

ACTION:

Should a customer express this concern, follow the Diagnostic Procedure below.

TOOLS:



**DVD143.03 AND
CALIBRATION FILE 219
LOADED OR LATER**

JLR approved diagnostic
tool



JLR
approved
battery
support unit

WARRANTY:

NOTES:

- Repair procedures are under constant review, and therefore times are subject to change; those quoted here must be taken as guidance only. Always refer to TOPIx to obtain the latest repair time.
- DDW requires the use of causal part numbers. Labor only claims must show the causal part number with a quantity of zero.

DESCRIPTION	SRO	TIME (HOURS)	CONDITION CODE	CAUSAL PART
Automatic transmission - tune download	44.90.10	0.2	42	LR023463
Automatic transmission - adaptation procedure	44.90.16	0.8	42	LR023463

NOTE:

Normal Warranty procedures apply.

DIAGNOSTIC PROCEDURE:

1

CAUTION:

This procedure requires DVD143.03 and Calibration File 219 loaded or later.

Connect the JLR approved battery support unit.

2

Connect the JLR approved diagnostic tool to the vehicle and begin a new diagnostic session, by reading the vehicle identification number (VIN) for the current vehicle and initiating the data collect sequence.

3

Follow the prompts.

4

If the hyperlink is not available, the application can be found as follows:

- Select the Diagnosis Session Type.
- Select any of the following symptoms:
 - Powertrain - Automatic transmission and transaxle - Automatic transmission and transaxle symptoms - Bump from transmission on shutdown
 - Powertrain - Automatic transmission and transaxle - Automatic transmission and transaxle symptoms - Harsh gear change
 - Powertrain - Automatic transmission and transaxle - Automatic transmission and transaxle symptoms - Harsh gear engagement from park or neutral

- From 'Recommendations', run: Configure existing module - transmission control module

5 Disconnect the JLR approved battery support unit.

AWF21 6-Speed Automatic Transmission Adaptation Procedure

NOTE:

Before carrying out the following adaptation procedure make sure there is sufficient space for the vehicle to be moved forwards.

6

CAUTION:

Do not apply the brake and accelerator pedal, in DRIVE (D) to heat up the automatic transmission. This will lead to internal damage of the automatic transmission.

To complete the AWF21 6-Speed automatic transmission adaptation, it is necessary to follow the **HEAT-UP PROCEDURE** below:

- To heat up the transmission, start the vehicle and select NEUTRAL. Check that the NEUTRAL LED illuminates with foot brake applied and raise the engine speed up to 2000 rpm.
- Using the manufacturer approved diagnostic system, check the datalogger signal - **Oil Temp Sensor (TCM)**..

Follow the HEAT-UP procedure until the transmission oil temperature has reached 74°C

7 Transmission oil temperature (74-81°C)

- 1 With the foot brake applied select NEUTRAL. Check that the NEUTRAL LED illuminates and then wait ten seconds.
- 2 Keeping the foot brake applied select DRIVE and wait 90 seconds.

- 3 Do not press the accelerator pedal. Release the foot brake and allow the vehicle to move forward for two metres.
- 4 Bring the car to a complete stop wait for 10 seconds with the foot brake applied.
- 5 Repeat the Steps 1-4 **(Repeat one more time)**.

If required follow the HEAT-UP procedure until the transmission oil temperature has reached 82°C

8 Transmission oil temperature (82-90°C)

- 1 With the foot brake applied select NEUTRAL. Check that the NEUTRAL LED illuminates and then wait ten seconds.
- 2 Keeping the foot brake applied select DRIVE and wait 90 seconds.
- 3 Do not press the accelerator pedal. Release the foot brake and allow the vehicle to move forward for two metres.
- 4 Bring the car to a complete stop wait for 10 seconds with the foot brake applied.
- 5 Repeat the Steps 1-4 **(Repeat four more times)**.

If required follow the HEAT-UP procedure until the transmission oil temperature has reached 90°C

9 Transmission oil temperature (90-100°C)

- 1 With the foot brake applied select NEUTRAL. Check that the NEUTRAL LED illuminates and then wait ten seconds.
 - 2 Keeping the foot brake applied select DRIVE and wait 90 seconds.
 - 3 Do not press the accelerator pedal. Release the foot brake and allow the vehicle to move forward for two metres.
 - 4 Bring the car to a complete stop wait for 10 seconds with the foot brake applied.
 - 5 Repeat the Steps 1-4 **(Repeat four more times)**.
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- 10 When all tasks are complete, return the vehicle to the workshop, exit the current session by selecting the Session tab and then selecting the Close Session option.
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- 11 Disconnect the JLR approved diagnostic tool.

When the vehicle is returned you must inform the customer that some harsh gearshifts may occur until the transmission control module (TCM) has adapted itself. The adaptation can take several weeks depending on the customer's driving. The TCM self-learning will continue to improve the shift quality in the additional temperature ranges until optimum values are achieved. The shift quality for NEUTRAL (N) to DRIVE (D), 5th to 4th gear down shift and neutral idle exit control will be improved.

Neutral Idle exit is a mode entered when the car is in DRIVE (D) and held with the brake applied for a period of time greater than a threshold (approximately 6 Seconds). The Transmission then releases clutch pressure to effect a neutral condition; 'Idle Neutral'. When the Brakes are released again, the transmission will re-engage drive; 'Idle Neutral Exit'.