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Model Year Start: 2016	Model: LX570	Prod Date Range: [09/2015 -]
Title: AE80F AUTOMATIC TRANSMISSION / TRANSAXLE: AUTOMATIC TRANSMISSION SYSTEM: ROAD TEST; 2016 - 2018 MY LX570 [09/2015 -]		

ROAD TEST

1. PROBLEM SYMPTOM CONFIRMATION

- (a) Based on the result of the customer problem analysis, try to reproduce the symptoms. If the problem is that the transmission does not shift up or shift down, or that the shift point is too high or too low, conduct the following road test referring to the automatic shift schedule and attempt to duplicate the problem symptoms.

2. ROAD TEST

- (a) Perform a road test.

CAUTION:

Check for safety before performing any tests.

NOTICE:

- Be sure to inspect and adjust the engine before performing these tests.
- Perform the road test with the engine coolant temperature is 60°C (140°F) or higher and the ATF temperature between 40 and 110°C (104 and 230°F).
- Perform these tests with the air conditioning and cruise control off.

INSPECTION	PROCEDURE
Transmission Control Switch Test	With the vehicle stationary and the shift lever in D, move the shift lever to S and return it to D. Check that the meter display changes from D to the appropriate S range and then back again.
S Position Test	With the vehicle stationary and the shift lever in S, move the shift lever to "+" and "-". Check that the meter display changes between S ranges properly.
D Position Shift Test	While driving the vehicle normally, check that the transmission shifts up and down through each gear properly.
Lock-up Function	While driving on a level surface at a constant speed in the lock-up range with the shift lever in D, lightly depress the accelerator pedal and check that the engine speed does not change abruptly.
P Position Test	Stop the vehicle on an incline (approximately 5° or more). Then move the shift lever to P and release the parking brake. Check that the parking lock pawl holds the vehicle in place.
Abnormal Noise and Vibration	Check for abnormal noise and vibration while driving the vehicle forward and backward, and during shift operations.
Fluid Leakage	After performing all other road test inspections, check for fluid leakage.

HINT:

When checking for DTCs after a repair, drive the vehicle according to the monitor drive pattern (See page [INFO](#)).

- (b) Shift schedule confirmation

- Connect the Techstream to the DLC3.
- Turn the engine switch on (IG).
- Turn the Techstream on.
- Enter the following menus: Powertrain / Engine / Data List / Vehicle Speed, Accelerator Position and Shift Position Sig from ECT.
- Check that the "Shift Position Sig from ECT" changes in accordance with the "Vehicle Speed" as shown in the following table.

Shift Schedule Chart

ACCELERATOR POSITION	10 +/-1%						
SHIFT POSITION SIG FROM ECT (SHIFT LEVER IN D)	1ST TO 2ND	2ND TO 3RD	3RD TO 4TH	4TH TO 5TH	5TH TO 6TH	6TH TO 7TH	7TH TO 8TH
Vehicle Speed	5 to 15 km/h (3 to 9 mph)	10 to 25 km/h (6 to 16 mph)	15 to 35 km/h (9 to 22 mph)	25 to 40 km/h (16 to 25 mph)	35 to 50 km/h (22 to 31 mph)	45 to 60 km/h (28 to 37 mph)	65 to 75 km/h (40 to 47 mph)

NOTICE:

- All vehicle speeds indicated in the above table are actual values. Therefore, if checking a shift point with a chassis dynamometer, keep in mind that there is a margin of error in the chassis dynamometer indication.
- If checking a shift point against the vehicle speed indicated on the speedometer, remember to consider the speedometer correction rate and margin of error in the Techstream indication.

- (c) Lock-up confirmation

- Connect the Techstream to the DLC3.
- Turn the engine switch on (IG).
- Turn the Techstream on.
- Enter the following menus: Powertrain / Engine / Data List / Vehicle Speed, Engine Speed, Accelerator Position, Shift Position Sig from ECT, A/T Oil Temp from ECT, SPD (NT) and ECT Lock Up.

(5) When the following conditions are met, check that the difference between "Engine Speed" and "SPD (NT)" is 50 rpm or less.

Lock-up Schedule

Accelerator Position	10 +/-1%
Vehicle Speed	80 km/h (50 mph) or more
Shift Position Sig from ECT	8th gear
ECT Lock Up	ON

HINT:

Lock-up prohibition conditions:

- Shift range between "1" (S1 range) and "4" (S4 range)
- Accelerator pedal is fully released
- Stop light switch signal is on
- Transfer in L4
- ATF temperature is below 40°C (104°F)

(d) Manual down-shift permission speed

(1) Manual down-shift is permitted for each shift status when the vehicle speed is below the corresponding range shown in the following table.

Manual Down-shift Permission Speed Chart

SHIFT STATUS (SHIFT LEVER IN S)	S8 TO S7	S7 TO S6	S6 TO S5	S5 TO S4	S4 TO S3	S3 TO S2	S2 TO S1
Vehicle Speed	280 to 305 km/h (174 to 190 mph)	235 to 260 km/h (146 to 162 mph)	195 to 215 km/h (121 to 134 mph)	165 to 185 km/h (103 to 115 mph)	125 to 145 km/h (78 to 90 mph)	80 to 90 km/h (50 to 56 mph)	30 to 40 km/h (19 to 25 mph)

(e) Shift schedule when accelerator pedal is fully depressed

Shift Schedule Chart

ACCELERATOR PEDAL	FULLY DEPRESSED						
SHIFT STATUS (SHIFT LEVER IN D)	1ST TO 2ND	2ND TO 3RD	3RD TO 4TH	4TH TO 5TH	5TH TO 6TH	6TH TO 7TH	7TH TO 8TH
Vehicle Speed	50 to 65 km/h (31 to 40 mph)	85 to 100 km/h (53 to 62 mph)	125 to 150 km/h (78 to 93 mph)	165 to 185 km/h (103 to 115 mph)	195 to 215 km/h (121 to 134 mph)	235 to 260 km/h (146 to 162 mph)	280 to 305 km/h (174 to 190 mph)