



Test Monitoring Center

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APPROVED BY ASTM D02.B	12 / 8 / 99
	(DATE)

HIGH TEMPERATURE CYCLIC DURABILITY INFORMATION LETTER 99-2

June 25, 1999

ASTM consensus has not been obtained on this information letter. An appropriate ASTM ballot will be issued in order to achieve such consensus.

TO: High Temperature Cyclic Durability Surveillance Panel

SUBJECT: Approved Test Hardware Configurations

At the June 9, 1999 High Temperature Cyclic Durability Surveillance Panel meeting, the panel rescinded the use of the new hardware configuration (described in HTCT Information Letter 98-2 as "POST-IL-98-2") and approved the use of a "Hybrid" configuration. The only two hardware configurations now acceptable for reference and non-reference oil testing are the "PRE-IL-98-2" now known as Configuration 1, and the "Hybrid", now known as Configuration 2. In addition, non-reference oil tests must be run on the same hardware configuration as was used to calibrate the stand. Sections 9.2.1, 9.2.2, 9.2.2.1, Table 4, and Annex A2 of Test Method D5579 have been revised to list the part numbers for these configurations, and to note that only these two configurations are acceptable for tests started after June 9, 1999. Section 9.2.3 has also been revised to include the requirement to install a 1/16 inch shim between the shift valve and the transmission case, when using Configuration 2.

The attached pages reflect the addition of these items to Test Method D 5579. These changes are effective for all tests starting after June 9, 1999.

Steve Marty
Chairman
High Temperature Cyclic Durability
Surveillance Panel

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Attachment

(Revises Test Method D5579-98a)

9.2.1 *General*--Assemble all parts as instructed in the MACK Transmission Service Manual T2130/2180, except where the service manual applies to parts that are modified for this test method. Use the part numbers identified in Table 4 for the appropriate hardware configuration. Use test oil for lubricating parts during assembly. For all tests (reference and non-reference oil) starting after June 9, 1999, use only hardware listed under Configurations 1 or 2 in Table 4.

TABLE 4 Part Numbers for Approved Configurations

Part Description	TEST HARDWARE CONFIGURATION	
	Configuration 1	Configuration 2
Synchronizer Clutch Assembly	320KB450C	320KB459
Synchronizer Pin (3 each)	301KC240B	301KC33
Synchronizer Pin (3 each)	301KC241B	301KC34
Synchronizer Pin (3 each)	48AX17	301KC35
Synchronizer Pre-load Spring (3 each)	107KD244	107KD247
High Range Mainshaft Gear	751KB489	751KB4123
Low Range Mainshaft Hub	84KC42	84KC47
Compound Mainshaft, Rear	601KC429	601KC429
Bearing, Compound Mainshaft	None required	46AX538
Thrust Washers, Mainshaft (2 each)	223KD316A	None Required
Snap Ring (2 each)	97AX151	97AX151
Snap Ring (2 each)	97AX267	97AX267
Shift Rail	591KC3154A	591KC3154A
O-ring, Low Range Shift Piston	56AX560	56AX560
Piston, High Low Range Shift	336KC318	336KC318
Cylinder Housing, Hi-Lo Shift Piston	55KC46A	55KC46A
O-ring, Compound Shift Piston	None Required	None Required
O-ring, Range High Low Shift Piston	56AX588	56AX588
Countershaft Gear, Front	757KB3322	757KB3322
	757KB4108	757KB4108
Countershaft Gear, Rear	757KB4106	757KB4106
	757KB440A	
Range Shift Valve	216KD123	216KD42

9.2.2 *New Parts*—Obtain the following parts from an authorized Mack truck dealer. Install the following new parts each test:

	Number Required	Mack Part No.
Kit (Parts in this kit are listed in Annex A2)	1	377SH21
Range Fork	1	575KB457
Low Range Mainshaft Hub	1	84KC47 (Configuration 2 only)

9.2.2.1 Inspect the following parts after each test and replace if worn or damaged:

	Number Required	Mack Part No.
Thrust Washer	3	233KD249
Thrust Washer	2	233KD316A
Clutch Housing	2	53KC486D
High Range Mainshaft Gear	1	751KB4123 (Configuration 2 only)

9.2.3 *Inspection of Air Valves*—Inspect the pistons of the range shift valve and the fork air cylinder and replace if damaged or visibly worn. Replace the O-rings in these valves when nicked, cut, softened, or hardened. However, replace these O-rings at least every six months. Install a 1/16 in. thick shim between the shift cylinder and the transmission case for Configuration 2 tests.

11.1.1.1 If the test oil is a non-reference oil, first ensure that acceptable results on the passing and failing reference oils have been obtained, and then conduct the non-reference oil test on the same hardware configuration used for the reference oil tests.

Annex A2 TEST KIT PARTS

TABLE A2.1 Test Kit Parts

Mack Truck Kit No. 377SH21

Name	Quantity	Configuration 1	Configuration 2
		Part Number	Part Number
Sliding Clutch	1	320KB450C	320KB459
Pin	3	301KC240B	301KC33
Pin	3	301KC241B	301KC34
Spacer Tube	3	301KC243C	301KC243C
Ball/Pin	6	48AX17	301KC35
Spring	6	107KD244	107KD247
Friction Disk	8	495KB361	495KB361
Reaction Disk	8	495KB367	495KB367