

VEHICLE CYCLING TEST

Application

This cycling procedure is established to provide a uniform method of accelerated transmission endurance testing for evaluation of candidate automatic transmission fluids using a 3speed Ford-built automatic transmission.

The particular model and series transmission will be specified by Ford Motor Company, Transmission & Chassis Division, Product Engineering.

Apparatus Required

1. A new production transmission and converter assembly is required for each test.
2. The test vehicle used must represent the maximum engine torque and vehicle model combination for which the transmission specified is released.
3. The test vehicle must include instrumentation sufficient to provide for continuously monitoring transmission front pump oil temperature, transmission control oil pressure and ambient temperature.

Conditioning and Test Conditions

All test values indicated herein are based on material conditioned in a controlled atmosphere of 23 +/- 2 °C and 50 +/- 5 % relative humidity for not less than 24 h prior to testing and tested under the same conditions unless otherwise specified.

Cycling Procedure

1. Transmission oil temperature must be at least 150 °F at the start of the test cycle.
2. With the selector lever in D (or equivalent) position and the vehicle speed at 15 mph or less, depress the accelerator pedal to the floor to initiate the cycle. The transmission must be in low gear at the start of the cycle. Hold the accelerator pedal on the floor until both 1-2 and 2-3 upshifts are completed.

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2001 07 24	Revised	Editorial – no technical change A. Cockman
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3. After the 2-3 upshift is completed, return the accelerator pedal to engine idle throttle position. Move the selector lever to Lo position; the transmission must shift to second gear. Decelerate in second until an automatic 2-1 zero-throttle downshift occurs.
4. Move the selector lever to D₁ position and repeat 2 and 3. The sequence 2, 3, 4 constitutes a cycle.
5. Succeeding cycles must not occur more frequently than every .85 miles, as indicated by the test vehicle odometer.
6. Once every ten miles (approximately) stop the vehicle, move the selector lever to reverse position and back up 75 ft in not more than 5 s, stop, then continue forward cycling.
7. Transmission front pump oil temperature must not exceed 250 °F at any time during the test operation.
8. Transmission oil must not be added during the test. If sufficient oil is lost, due to any cause during the test that prevents normal operation of the transmission, the test data obtained is not acceptable. Do not add oil.

Band Adjustment Procedure

1. Cruise-O-Matic front band: Adjust only at completion of 4000 cycles. Use band adjustment procedure specified in the appropriate vehicle service manual except if adjustment required is less than one full turn, reset to maintain the factory setting. If adjustment required is more than one turn, set to one turn.

Cruise-O-Matic rear band: Adjust to one and one-half turns or to factory setting, whichever is smaller.

2. C-4 COM forward band: Adjust only at completion of 4,000 cycles, using procedure specified in service manual, adjust to one and one-half turns or to setting, whichever is smaller.

C-4 COM low-reverse band: Adjust to three turns or to factory setting, whichever is smaller.

Chemicals, materials, parts, and equipment referenced in this document must be used and handled properly. Each party is responsible for determining proper use and handling in its facilities.