

# Life Performance and Accelerated Leakage Tendencies

## Life Performance of Automotive Wheel Bearing Grease Leakage Tendencies of Automotive Wheel Bearing Grease Under Accelerated Conditions

### test method

Evaluates the high temperature stability of automotive wheel bearing greases in a modified automotive front wheel hub-spindle-bearings assembly. The ASTM D3527 Life Performance test employs severe conditions—25 lbf (111N) thrust load, 1000rpm, 160°C spindle temperature – to induce grease deterioration and failure. The test continues in a 20/4 hour on/off cycle until grease breakdown causes measured drive motor torque to increase past an established end point. The number of hours to failure is the test result. The ASTM D4290 Accelerated Leakage Tendencies procedure employs similar test conditions for a 20 hour period, after which leakage of grease and oil is measured and the bearings are washed and examined for deposits of gum and varnish.

### high temperature wheel bearing grease tester

- Conforms to ASTM D3527, D4290 and D4950 specifications
- Fully automatic operation
- Digital monitoring of all test functions

Performs life performance and accelerated leakage tendencies tests on lubricating greases in accordance with ASTM test specifications. Consists of a modified front wheel hub-spindle-bearings assembly housed in a constant temperature oven and coupled to a 1/4hp variable-speed drive motor. Controls test functions automatically and provides continuous digital display of motor torque, rpm, chamber temperature, spindle temperature, time cycle and elapsed time. Test parameters outside of ASTM specifications can be selected by the operator for in-house testing. Automatically terminates test and displays elapsed on-cycle hours when grease deterioration causes drive motor torque to increase to the calibrated end point. A built-in thirty second time delay circuit prevents erroneous test terminations due to momentary surges in motor torque at the beginning of the on-cycle. Insulated constant temperature oven is equipped with a 1200W heater and balanced 1/20 hp circulation fan for efficient heat distribution. Sliding access doors and a movable platform that swings the drive motor out of the way provide easy access to the spindle assembly. Modified steel spindle and hub assembly conforms to all critical 1971 Chevy II dimensions and is fitted with thermocouple, bearing thrust loading device and anodized aluminum grease collector. All controls and monitors are housed in a separate cabinet.

### ordering information

catalog no.	description	qty
	<b>Wheel Bearing Grease Tester</b>	<b>1</b>
K18500	High Temperature Wheel Bearing Grease Tester 115V 60Hz	
K18595	High Temperature Wheel Bearing Grease Tester 220-240V 50Hz	
K18590	High Temperature Wheel Bearing Grease Tester 220-240V 60Hz	



K18500 High Temperature Wheel Bearing Grease Tester

### specifications

Conforms to the specifications of:  
 ASTM D3527, D4290, D4950  
 Digital controls and displays:  
 Timer: on/off cycle and real time  
 Chamber Temperature: °C  
 Spindle Temperature: °C  
 Motor rpm: 0-1725rpm  
 Motor Torque: current draw  
 Elapsed Time: 9999.9 hr.  
 Maximum Temperature: 177°C (350°F)

#### Electrical Requirements:

115V 60Hz, Single Phase, 13A  
 220-240V 50Hz, Single Phase, 7A  
 220-240V 60Hz, Single Phase, 7A

#### Included Accessories

Thermocouples (2)  
 Thermometer holder  
 Bearings (1set)  
 Grease Packer Assembly  
 Bearing Installation/Removal Tools:  
 bearing installer, small and large  
 bearing cup removers, bearing cup installer,  
 bearing puller and spindle wrenches (pins)  
 Dimensions lwxh,in.(cm)  
 Test Unit: 16x20x153/4 (41x51x40)  
 Control Unit: 16x14x16 (41x36x41)  
 Net Weight: 145 lbs (65.8kg)

#### Shipping Information

Shipping Weight: 230 lbs (104.3kg)  
 Dimensions: 14.8 Cu. ft.

### accessories

catalog no.	description	qty
250-000-42C	ASTM 42C Thermometer Range: 95 to 255°C	1
289-004-001	Inboard Bearing Set Includes LM67048 Cone and LM67010 Cup	
289-004-002	Outboard Bearing Set Includes LM11949 Cone and LM11910 Cup	



85 Corporate Drive, Holtsville, New York 11742  
 1-800-878-9070 (in u.s. only) TEL: +1 631 589 3800 FAX: +1 631 589 3815  
 Email: sales@koehlerinstrument.com www.koehlerinstrument.com