TEST SPECIFICATION (Part No. 89-817-1)

General Description

Speed Sensor, electromagnetic pickup for operation with phonic wheel

Mechanical

Material:	Case: Stainless steel - Stainless 416 Magnet: Cast Alnico/Alcomax 111 Epoxy: Ciba Geigy Spec. 2003
Dimensions:	See drawing A 3625
Weight:	70 Gm.

Electrical

Resistance:	550 +/- 30 Ohms @ 20 deg. C.
Inductance:	290 mH +/- 10%
Breakdown Volts:	Min. 500 V.D.C.
Insulation:	> 20 M Ohms
Output:	Min. 1.5V R.M.S. at 1000Hz into 5K Ohm load with 0.5mm airgap using 1.25 module cast steel gearwheel, nom. rel. permeability 500.

Environmental

Per MIL-STD-810D

FUCTIONAL TEST PROCEDURE (Part No. 89-817-1)

The test is to be carried out on assemblies after assembly stage 5.

TEST SET UP:

A Digital Multimeter is required and the calibration accuracy of the instrument must be better that +/- 1%, and traceable to National Standards.

The test must be carried out under ambient conditions at a temperature of 20 Deg. C. with a tolerance of +/- 5 Deg. C.

The total terminal resistance measured under these conditions must be 550 Ohms with a tolerance of +/- 30 Ohms. This must be noted against serial numbers on batch test sheet.

SCOPE: This procedure defines the required performance test method for Micromovements Speed Sensor Type A3625.

The test is based on the use of a standard gear wheel set at a controlled speed of rotation with a fixed air gap set between the sensor head and gear wheel. The purpose of the test is to determine the correct level of signal voltage under simulated operating conditions.

STANDARD GEAR WHEEL:

Teeth:	60
PCD:	78.5
Module:	1.25 (20 DP)
Material:	Grey Cast Iron

TEST SET UP: Standard Gear Serial No: MMG-02 is mounted in on a shaft.

The Speed Sensor is fixed at right angles to the gear and the air gap is set to 0.5mm. Tolerance +/- 0.02mm. This is incorporated into the MML 3625 Test Fixture.

The sensor is connected to a 5KOhm resistor (tolerance 2%) and the output voltage developed across the resistor is measured using the digital multimeter. Set the output frequency to 1000 Hz +/- 10 Hz. Set the digital multimeter to measure A.C. volts. The signal output voltage must comply with the following specification:

1. The frequency must be between 990 Hz and 1010 Hz.
2. The output must be greater than 1.5 V rms. The actual value to be recorded on test sheet.