



SAE-J1455 Testing for the *Reverse-A-Matic*™ System

April 21, 2003

Test Performed	Result	J1455 Section	Comments
Temperature Cycle, 120 Hours	Pass	4.1.3.1 Figure 2b	8 Hours X 15 = 120 hours at -40°C to +85°C
Thermal Shock 20 Hours	Pass	4.1.3.2 Figure 2c	4 Hours X 5 = 20 hours at -40°C to +85°C
Humidity	Pass	4.2.3 Figure 4a	8 Hours, 95% Humidity, 95°C
Salt Spray	Pass	4.3.3	24 Hours
Immersion/Splash	Pass	4.4.3 4.4.1	Oil, Gas, Diesel, Salt Water, grease, alcohol, kerosene, transmission fluid, etc.
Steam Cleaning/ Pressure Wash	Pass	4.5.3	High Pressure Spray
Fungus	N/A		Not Performed
Dust	Pass	4.7.3	24 Hours
Sand	Pass	4.7.3	1 Hour
Gravel	Pass	4.7.3	24 Minutes
Altitude	Pass	4.8.3	24 Hours at 40,000 Feet
Random Vibration	Pass	4.9.4.2	2 Hours per Axis, Random
Mechanical Shock	Pass	4.10.3.3 4.10.3.4	Harness Drop Test Operational Shock Test
Electrical Characteristics	Pass	4.11.1.1.3	9 - 16 Volts Input, Reverse Polarity, 18 Volts
Load Dump Transient	Pass	4.11.2.2.1	ISO 7637-2 pulse 5a
Inductive Load Switching	Pass	4.11.2.2.2	ISO 7637-2 Pulse 1
Mutual Coupling	Pass	4.11.2.2.3	ISO 7637-3 pulses a + b
Electro-Static Discharge	Pass	4.11.2.2.5.1	15KV, J1211
EMI	Pass	4.11.3.3.1	SAE J1113/41 Radiated and Conducted Emissions
EMI	Pass	4.11.3.3.2	SAE J1113/21, Susceptibility

Notes:

- All units fully operational, without failure, under all test conditions described.
- Testing performed on lots of 5 units each.
- Testing performed by Independent A2LA Accredited Laboratory.