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**General Requirements for Electrical Ignition
Systems for Internal Combustion Engines in
Class I, Division 2 or Zone 2, Hazardous
(Classified) Locations**

Approved 4 May 2009

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General Requirements for Electrical Ignition Systems for Internal Combustion Engines in Class I,
Division 2 or Zone 2, Hazardous (Classified) Locations

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ISA
67 Alexander Drive
P.O. Box 12277
Research Triangle Park, North Carolina 27709

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T. Smith	Altronic Inc.
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R. Strube	Intertek Testing Services
K. Young	Northern Natural Gas

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NAME	COMPANY
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Contents

1	Purpose.....	9
2	Scope.....	9
3	References.....	9
4	Definitions	9
5	General requirements	12
6	Construction and testing requirements.....	13
	6.1 General	13
	6.2 Power sources	14
	6.3 Ignition control unit.....	14
	6.4 Primary wires	14
	6.5 Ignition coils	14
	6.6 Secondary leads	15
	6.7 Spark plugs	15
7	Spark containment.....	16
	7.1 General	16
	7.2 Secondary leads	16
	7.3 Spark plugs.....	16
	7.4 Terminations	17
8	Spark prevention.....	17
	8.1 General	17
	8.2 Terminations	17
9	Spark detection/prevention	17
10	Documentation and marking	17
11	Test procedures	21
	11.1 Abrasion test for secondary leads or wiring.....	22
	11.2 Elevated temperature exposure test.....	26
	11.3 Chemical compatibility	26
	11.4 Vibration test	28
	11.5 Shielded secondary system tests	28
	11.6 Spark plug pressure and temperature tests.....	28
	11.7 Secondary lead assembly flashover tests	29
	11.8 Secondary lead UV degradation tests	30
	11.9 Secondary lead bending and dielectric voltage withstand tests.....	30
	11.10 Spark prevention test.....	30
	11.11 Primary and secondary terminations pull test.....	31
	11.12 Spark plug dielectric test.....	31
	11.13 Secondary lead or wiring insulation cut test	32
	11.14 Surface temperature test	33
	11.15 Impact test.....	33
	11.16 Secondary lead pull test.....	35

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1 Purpose

This standard is intended to enhance the safety of personnel by providing minimum requirements for electrical ignition systems for spark-ignited reciprocating internal combustion engines, parts of which are installed or operated in Class I, Division 2 or Zone 2 hazardous (classified) locations.

2 Scope

This standard provides minimum construction and test requirements in addition to manufacturer installation and maintenance recommendations for the safe operation of ignition systems and components for spark-ignited reciprocating internal combustion engines in Class I, Division 2, Group C or D or Class I, Zone 2, Group IIB or IIA, hazardous (classified) locations. These requirements apply to systems rated for normal operation with secondary voltages less than or equal to 35 kV.

This standard is intended to cover only ignition systems of reciprocating internal combustion engines that are stationary when in operation. This does not include any application where the engine would be in motion (vehicles) while operating. Applications addressed by the scope of this document include but are not limited to gas compressors, electric power generators, and pumps.

This standard applies to ignition systems suitable for use in an ambient temperature range of -40°C to +70°C (-40°F to +158°F).

3 References

ANSI NFPA 70, National Electrical Code®

ANSI/ISA-12.12.01, Nonincendive Electrical Equipment for Use in Class I and II, Division 2 and Class III, Divisions 1 and 2 Hazardous (Classified) Locations

ANSI/ISA-60079-0, Electrical Apparatus for Use in Class I, Zones 0, 1 & 2 Hazardous (Classified) Locations: General Requirements

ANSI/ISA-60079-1, Electrical Apparatus for Use in Hazardous (Classified) Locations: Type of Protection - Flameproof "d"

ANSI/ISA-60079-15, Electrical Apparatus for Use in Hazardous (Classified) Locations: Type of Protection "n"

ANSI/UL 1203, UL Standard for Safety Explosion-Proof and Dust-Ignition-Proof Electrical Equipment for Use in Hazardous (Classified) Locations

ANSI/UL2556, Wire and Cable Test Methods

SAE J2031, High Tension Ignition Cable

4 Definitions

4.1 alarm:

an audible, visual, or physical presentation designed to alert the user that a specific parameter has been reached or exceeded.

4.2 ambient temperature:

the temperature of the air in the immediate vicinity of the device, equipment or component.