



AEROSPACE INFORMATION REPORT

AIR5373™

REV. A

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Superseding AIR5373

(R) Fuels in Ground Support Equipment (Other Than Gasoline or Diesel)

RATIONALE

AIR5373A has been reaffirmed to comply with the SAE five-year review policy.

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1. SCOPE

This SAE Aerospace Information Report (AIR) is intended as a source of comparative information and is subject to change to keep pace with experience and technical advances. This document describes currently used fuels and fuels which may be used in the future. Conventional gasoline and diesel fuels are intentionally omitted from this document.

1.1 Purpose

The purpose of this document is to provide basic information regarding fuels which can be used in aircraft ground support equipment. This document is recommended for use by those engaged in the design, selection, or maintenance of ground support equipment, and their fuel systems.

1.2 Field of Application

This document is applicable to spark ignition or compression ignition engines, and battery powered electric motors.

CAUTION: Always follow the specific recommendations and guidelines of the engine manufacturer, regarding suitable fuel types for a particular engine. The use of unauthorized fuels may void the warranty and result in damage or injury.

2. APPLICABLE DOCUMENTS

There are no referenced publications specified herein.

3. TERMINOLOGY

3.1 SPARK IGNITION ENGINE

An internal combustion engine utilizing a positive ignition system to ignite the air/fuel charge. All gasoline fueled engines are of the spark ignited type.

3.2 COMPRESSION IGNITION ENGINE

An internal combustion engine utilizing high compression to ignite the air/fuel charge. All diesel fueled engines are of the compression ignition type.

3.3 STOICHIOMETRIC AIR/FUEL RATIO

The ideal air/fuel ratio, resulting in complete combustion of all fuel and air. This ratio is dependent on fuel type.

3.4 LEAN AIR/FUEL RATIO

More air and less fuel than the stoichiometric air/fuel ratio.

3.5 RICH AIR/FUEL RATIO

More fuel and less air than the stoichiometric air/fuel ratio.

3.6 CARBON MONOXIDE (CO)

Carbon monoxide is produced when combustion takes place with insufficient oxygen. Carbon monoxide emissions can be a concern in spark ignited engines as they are typically operated near stoichiometric at part load and rich at full load. Carbon monoxide emissions are lower for diesel engines as they generally operate in a lean condition.