



GUIDE
FOR THE INVESTIGATION
OF
DIESEL ENGINES
FOR
DRIVING CENTRIFUGAL FIRE PUMPS

UNDERWRITERS' LABORATORIES OF CANADA

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First Edition December, 1970
SECOND EDITION December, 1979

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ULC Subject C448A-1979

GUIDE FOR THE INVESTIGATION OF DIESEL ENGINES FOR DRIVING CENTRIFUGAL FIRE PUMPS

FOREWORD

This Guide is based upon sound engineering principles, research, records of tests and field experience, and an appreciation of the problems of manufacture, installation, and use derived from consultation with and information obtained from manufacturers, users, inspection authorities, and others having specialized experience.

This Guide is subject to revision as further experience and investigation may show is necessary or desirable.

A product which complies with these requirements will not necessarily be acceptable, if, when examined and tested, it is found to have features not covered by the Guide which may impair the result contemplated by these requirements.

A product employing materials or having forms of construction differing from those detailed in these requirements may be examined and tested according to the intent of the requirements, and if found to be substantially equivalent, may be given recognition.

1. SCOPE

1.1 These requirements cover the design, construction and performance of diesel engines intended for driving centrifugal fire pumps.

2. ENGINE REQUIREMENTS

2.1 GENERAL

2.1.1 The manufacturer shall supply documents showing construction details and engine specifications.

2.2 INSTRUMENTATION AND CONTROLS

2.2.1 The following minimum instrumentation shall be installed in a panel and mounted on the engine by the manufacturer:

- A A tachometer shall be provided to indicate engine speed. If the tachometer is not of the totalizing type, an hour meter shall be provided to indicate total time of operation;
- B An oil pressure gauge shall be provided to indicate engine lubricant pressure;
- C A temperature gauge shall be provided. Engines shall be equipped with a temperature gauge to monitor the primary coolant loop temperature;
- D An ammeter shall be provided to indicate the charging system current's magnitude and direction. If pneumatic-starting is used, the ammeter may be omitted;
- E An air pressure gauge shall be provided when pneumatic-starting is used. This gauge shall monitor air reservoir pressure;
- F Unless locally mounted elsewhere on the engine, all required control devices, switches, and indicator lamps shall also be mounted in the engine panel. Any locally mounted devices must be securely fastened to the engine, readily accessible and wired to the junction box.

2.2.2 Engines shall be provided with a speed sensitive switch to signal engine operation and crank termination. Power for this signal shall be taken from a source other than the engine generator or alternator.