



SURFACE VEHICLE RECOMMENDED PRACTICE

J1375™

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Starter Motor Application Considerations

RATIONALE

This SAE Recommended Practice is being stabilized because it covers mature technology, expertise no longer resides in the owning committee, and the technical committee cannot find users for this document. This document has not been updated or downloaded in many years.

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This document has been declared "STABILIZED" by SAE Vehicle EE System Diagnostics Steering Committee and will no longer be subjected to periodic reviews for currency. Users are responsible for verifying references and continued suitability of technical requirements. Newer technology may exist.

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1. Scope—This SAE Recommended Practice identifies some basic and general conditions that should be considered when making electrical starter motor applications.

2. References

2.1 Applicable Publications—The following publications form a part of this specification to the extent specified herein. Unless otherwise indicated, the latest issue of SAE publications shall apply.

2.1.1 SAE PUBLICATIONS—Available from SAE, 400 Commonwealth Drive, Warrendale, PA 15096-0001.

SAE J541—Voltage Drop for Starting Motor Circuits

SAE J543—Starting Motor Pinions and Ring Gears

SAE J1253—Low Temperature Cranking Load Requirements of an Engine

2.2 Related Publications—The following publications are provided for information purposes only and are not a required part of this document.

2.2.1 ISO PUBLICATIONS—Available from SAE, 400 Commonwealth Drive, Warrendale, PA 15096-0001.

ISO 8123—Road vehicles—Diametral pitch starter motor pinions

ISO 8856—Electrical performance of starter motors

ISO 9457-1—Road vehicles—Starter motor pinion

ISO 9457-2—Road vehicles—Metric starter motor pinions—Part 2: Pinions with 20 pressure angle

3. Application Conditions for Consideration

3.1 Components for starter motor system shall be selected according to the current edition of SAE J1253. A vehicle "owner's manual" recommended cranking cycle should be limited to 15 s "on" followed by 2 min "off" for automotive gasoline engines.

On diesel applications, allow a maximum of 30 s cranking time followed by 2 min rest time.

3.2 Pinion and ring gear data and center distances shall be compatible with the current edition of SAE J543.

3.3 Maximum voltage drop in the battery cable, including ground return, shall not exceed limits shown in the current edition of SAE J541.