SAE The Engineering Society For Advancing Mobility Land Sea Air and Space®
INTERNATIONAL
400 Commonwealth Drive, Warrendale, PA 15096-0001

SURFACE VEHICLE RECOMMENDED PRACTICE

SAE J1079

REAF. MAR95

Issued 1974-08
Reaffirmed 1995-03

Superseding J1079 SEP88

Submitted for recognition as an American National Standard

OVERCENTER CLUTCH SPIN TEST PROCEDURE

***Foreword*—**This reaffirmed document has been changed only to reflect the new SAE Technical Boards Format.

1. ***Scope*—**This SAE Recommended Practice applies to driving ring type overcenter clutches such as are used in industrial power takeoffs.

1.1 **Purpose—**This document is intended to provide a uniform test procedure for overcenter clutches to determine either the rotative speed at which they will burst or a specified speed they will withstand without burst.

2. ***References***

2.1 **Applicable Publication—**The following publication forms a part of the specification to the extent specified herein. Unless otherwise indicated the latest revision of SAE publications shall apply.

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

SAE J1240—Flywheel Spin Test Procedure

3. ***Test Equipment*—**Refer to SAE J1240 for a description of test equipment requirements.

4. ***Test Procedure***

4.1 Prior to spin testing, the item to be tested is to be identified, checked for material and dimensional defects, and balanced to print specification. Hardness readings should be recorded on all critical areas.

4.2 Test should be performed in a minimum ambient temperature of 15 °C (60 °F). Record ambient temperature.

4.3 **Mountings—**For items 4.3.2 through 4.3.5, use enough clamping force to hold the test piece in place on the fixture but not enough to counteract centrifugal force.

4.3.1 CLUTCH ASSEMBLIES—Mount the clutch assembly on the test shaft in new clutch engaged or new clutch released position. Suitable spacers may be used to simulate a drive disc. The release bearing and bearing carrier may be removed.

4.3.2 PRESSURE PLATE OR MULTIPLE-PLATE CLUTCH INTERMEDIATE PLATE—Mount the specimen on a test fixture piloting either by the same methods used in the clutch or by the ID.

TO PLACE A DOCUMENT ORDER; (724) 776-4970 FAX: (724) 776-0790
SAE WEB ADDRESS http://www.sae.org

4.3.3 DRIVE RING—Mount the drive ring on the test fixture piloting by the ID.

4.3.4 DRIVE DISC (ONE PIECE)—Subject the drive disc to 260 °C ± 3 °C (500 °F ± 5 °F) for 15 min. Mount the drive disc on the test fixture piloting by the ID. The maximum elapsed time between removal from the heat chamber and initial acceleration shall be 25 s. See 4.4.

4.3.5 DRIVE RING AND SEGMENTED DRIVE DISC—Mount the drive ring on the test fixture piloting by the ID. Position the segmented drive disc or discs in the drive ring in the new clutch released position. Segments must be positioned without clamping by the test fixtures so they remain in a plane perpendicular to the axis of rotation during the test.

4.4 Check and record part concentricity and runout as assembled on the spin test adapter. For drive discs to be tested hot (4.3.4), measurements may be made before heating.

4.5 After attaining 75% of predetermined minimal peripheral speed, accelerate at a peripheral rate not to exceed 1.4 m/s^2 (4.6 ft/s^2) to a predetermined speed limit or until burst occurs.

PREPARED BY THE SAE CLUTCH, FLYWHEEL, AND HOUSING STANDARDS COMMITTEE