

INTERNATIONAL TRUCK AND ENGINE CORPORATION		
TMS (TRUCK MATERIAL SPECIFICATION)		NUMBER: TMS-9535
TITLE: Quality Requirements For Clutch Assemblies		REVISION: B-1
WRITTEN/EDITED BY: Materials Engineering	APPROVED BY: Materials Engineering	DATE ISSUED: August 2001
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<i>This specification may involve hazardous materials, equipment, and procedures. This specification does not purport to address all of the safety issues associated with its use. The user is responsible to consult appropriate safety and health practices and to determine the applicability of regulatory limits prior to use.</i>		
Change Notice: Reformatted and Editorial Changes		
Reference:	Keywords: Clutch Assemblies	

1.0 APPLICATION

This specification covers the quality control requirements for purchased clutch assemblies provided as completed units to International plants.

2.0 SCOPE

This specification covers the quality plan, KCC quality control, source approval, and identification requirements.

3.0 REFERENCE DOCUMENTS

Unless otherwise specified, the latest issue of all referenced standards shall apply. The following standards, specifications and regulations are referenced in this specification.

Quality System Standard QS-9000 (ISO 9001)
INTERNATIONAL IQR Quality Standard
INTERNATIONAL Manufacturing Standard D-13
CFR Title 29, Part 1910

4.0 GENERAL REQUIREMENTS

Product supplied shall be suitable for its intended application.

5.0 QUALITY

All clutches supplied shall be delivered in a clean and dry condition. All clutch assembly/test fluids/greases which may remain or leave a residue in the clutch must be compatible with International factory fill fluids/greases. Cover Assemblies shall be free of rust and cracks. Driven Discs, and Intermediate Plates shall be free of rust, cracks, pits, gouges, nicks, and scratches and all friction surfaces shall be free from paint, dirt, oil, or damage which could affect the torque carrying capabilities of the clutch.

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5.1 Control Plan

A Quality Control Plan for this product will be established by mutual agreement between International and the supplier. The following items, where applicable,* will be included in the control plan as dimensional features for management by statistical process control.**



Stamped Clutches Only

1. Clutch Mounting Holes Location
2. Clutch Mounting Holes Diameter



Cast Clutches Only

1. Pilot Diameter
2. Intermediate Plate Lug Width/Slot Width
3. Drive Pin Flat Thickness
4. Drive Pin Shank Diameter
5. Drive Pin Concentricity Between Shank and Flat

* Additional characteristics for inclusion in the control plan may be specified on the engineering drawing and/or purchase order.

** See International Engineering Design Standard A-16.

6.0 SOURCE APPROVAL AND QUALITY CONTROL

6.1 Supplier Requirements

Suppliers must conform to the requirements of the International IQR Quality Standard which includes conformance to the QS-9000 (ISO 9001) Quality System Standard. A mutually acceptable Quality Control Plan as described therein is required for source approval to the requirements of this specification.

6.2 Approval

Parts supplied against contracts or purchase orders citing this specification shall be equivalent in all respects to those samples which were approved by the purchaser. No changes in formulation or processing practices are permitted without approval. In the event that changes in material, properties, processing practices, construction, color, or labeling of the product are required, the supplier shall notify Materials Engineering at TDTC and Purchasing and Supplier Development of the proposed change(s). Test data indicating conformance to all requirements of this specification, test samples, and new or amended or updated Material Safety Data Sheet(s) (MSDS), in accordance with CFR Title 29, Part 1910 shall be submitted with the request for change.

6.3 Process Control

The supplier shall either perform and report results of tests on specific lots of parts produced or provide statistical evidence of the lot having been produced in a state of statistical control and with a process capable of providing all required properties. The part supplier and the plant metallurgist and/or the quality control manager of the using International plant may determine testing and reporting requirements on specific products.

7.0 SHIPPING, PACKING AND IDENTIFICATION

Loading, packing, and identification shall be in accordance with Manufacturing Std.D-13.

8.0 DESIGNATION ON DRAWINGS

The drawing will utilize the KCC symbol with a note that: Completed assemblies will comply with Requirements of TMS-9535.

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