

**FLUID, AUTOMATIC TRANSMISSION, MANUAL
GEARBOX, SERVICE USE****WSS-M2C203-A1****1. SCOPE**

The material defined by this specification is a service fill fluid for manual transmissions composed of base oils and performance additives.

2. APPLICATION

This specification was originally released for service material used as a hydraulic control fluid and general lubricant in manual transmissions.

3. REQUIREMENTS**3.0 STANDARD REQUIREMENTS FOR PRODUCTION MATERIALS**

Material suppliers and part producers must conform to the Company's Standard Requirements For Production Materials (WSS-M99P1111-A).

3.3 COLOR Dyed red
(ASTM D 1500)

3.4 VISCOSITY

3.4.1 KINEMATIC at 100 °C, new fluid, min 7.00 mm²/s
(ISO 3104/ASTM D 445)

3.4.2 KINEMATIC at 40 °C, new fluid, min 43.6 mm²/s
(ISO 3104/ASTM D 445)

3.4.3 BROOKFIELD VISCOSITY at -40 °C, min 50 Pa.s
(ASTM D 2983)

3.5 ANTI-FOAMING PROPERTIES
(ASTM D 892)

	Foam tendency at end of 5 minute blowing period	Foam stability at end of 5 minute blowing period
Stage 1, max	20 mL	0 mL
Stage 2, max	40 mL	0 mL
Stage 3, max	20 mL	0 mL

3.6 NON-CORROSION AND NON-RUSTING PROPERTIES No visible rust
(ASTM D 665, Procedure A, 24 h)

Date	Action	Revisions
2004 05 20	Revised	Para 3.0 inserted; para 3.1, 3.2, 3.11 & 4 deleted
2000 07 31		Editorial – no technical change
1999 03 02	Activated	



3.7 TOXICITY

Shall be non-toxic and shall not cause skin rash or irritation (dermatitis) to exposed handlers in normal production and servicing operations.

3.8 STORAGE

Shall not settle or separate to the extent that would require remixing before use and must be capable of storage without any detrimental effect for a min of two years. Supplier shall furnish all necessary information on types of material required for packaging and on the storage life of the material in each of the product packages supplied. For any particular size package or container for the product, the supplier shall furnish information on safe storage practice and recommendations as to max and min ambient temperatures and direct sun load conditions at which the product may be stored without any adverse effect. If the package is considered unsafe for storage in an automotive vehicle, the package shall be labeled accordingly and the safe storage conditions specified.

3.9 SYSTEM COMPATIBILITY

All materials approved for use against this specification must be endorsed by the affected transmission supplier.

3.10 ADDITIONAL REQUIREMENTS

Specific requirements for material and/or manufactured parts shall be specified on the Engineering drawing, Engineering parts specification and/or performance specification. All critical areas with respect to these properties shall be clearly designated on the engineering drawing.