

**FLUID, POWER ASSISTED STEERING, EXTENDED
TEMPERATURE RANGE****WSS-M2C204-A2****1. SCOPE**

The material defined by this specification is a power assisted steering (PAS) fluid composed of high viscosity index PAO and hydrocracked base fluids and additives.

2. APPLICATION

This specification was released originally for fluid used in PAS hydraulic systems. The viscosity characteristics of this fluid reduces system power consumption compared to standard mineral oil based products, particularly at low temperatures. CAUTION: The flash point of this material (approximately 150 °C) is significantly lower than previous PAS fluids (approximately 190 - 200 °C).

3. REQUIREMENTS**3.1 STANDARD REQUIREMENTS FOR PRODUCTION MATERIALS**

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

3.2 COLOR

Dyed Green

Use the weight percent necessary of a stable green dye to produce a distinct green hue when one drop of fluid is placed on a white blotter or filter paper. The color shall not significantly deteriorate during any test herein.

3.3 VISCOSITY

3.3.1 Kinematic at 100 °C, min (ISO 3104) 6.0 +/- 0.5 mm²/s

3.3.2 Dynamic at - 40 °C, max (ISO 3104/ASTM D 2983) 1 350 +/- 400 mPa.s

3.3.3 Taper Roller Bearing Shear Stability (DIN 51350-6 - KRL/C, max viscosity loss) 25.0%

3.3.4 Viscosity Index, min (ISO 2909) 300

**3.4 POUR POINT, max
(ISO 3016)**

- 50 °C

Date	Action	Revisions
2003 08 14	Activated	

**Documents**

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**3.5 FLASH POINT**
(ISO 2592/2719)

Report °C

3.6 MISCIBILITY TEST

The fluid shall be compatible with previously used WSA-M2C195-A material when equal volumes of each are heated to 150 +/- 2 °C for one hour and then cooled to - 40 +/- 2 °C for one hour. No visible deposits or separation shall occur (visual check only).

3.7 COPPER CORROSION
(ISO 2160)

3 h at room temperature, max
3 h at 150 +/- 2 °C, max

1a
1b

3.8 ANTI FOAMING PROPERTIES
(ASTM D 892/D 6082)

Foam Tendency
at end of 5 min
blowing period

Foam Stability
at end of 1 min
settling period

Sequence 1, max	25 mL	0 mL
Sequence 2, max	50 mL	0 mL
Sequence 3, max	25 mL	0 mL
Sequence 4(initial approval only), max	125 mL	0 mL

(For Sequence 4 use ASTM D 6082)

3.9 MOISTURE, max
(Any agreed method)

0.1%

3.10 FZG TEST METHOD A/8, 3/90, min
(ISO 14635-1)

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3.11 EFFECT ON CEC L-39-T-96 REFERENCE ELASTOMER COMPOUNDS
(ISO 1817, 7 days +/- 2 h, 150 +/- 2 °C)

Change in volume, %

Report

Change in hardness, IRHD
(ISO 48)

Report

3.11.1 RE1 (fluoroelastomer)

3.11.2 RE2 (acrylic)

3.11.3 RE3 (silicone)

3.11.4 RE4 (nitrile)