



LUBRICANT, SAE 75W-140, HYPOID GEAR, DURABILITY

WSS-M2C192-B

1. SCOPE

The material defined by this specification contains poly-alpha-olefin (PAO) synthetic hydrocarbon base lubricant. The sulfur/phosphorus/nitrogen/boron additive system has superior thermal and oxidation stability. This material is similar to WSL-M2C192-A fluid with an additional thermally stable anti-wear package

2. APPLICATION

This specification was released originally for material used to lubricate conventional and limited slip differential hypoid gear rear axles. for applications used in GCC markets and Police fleets

3. STANDARD REQUIREMENTS FOR PRODUCTION MATERIALS

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

3.1 ACCEPTANCE REQUIREMENTS

These tests must be conducted on each blend of material and the method of sampling must conform to ASTM D 4057.

3.1.1	Sulfur (ASTM D4951 / D4927 / D1552)	1.8 - 2.6 %
3.1.2	Phosphorus (ASTM D4951 / 4927)	0.11 - 0.16 %
3.1.3	Moisture (ASTM D95 / D4928 / D7546)	0.3 % max
3.1.4	Viscosity at 100 °C, (ASTM D445)	23.8 – 26.2 cSt
3.1.5	Viscosity Index (ASTM D2270)	162 min
3.1.6	Pour Point (ASTM D97)	-42 °C max
3.1.7	Flash Point (ASTM D92)	165 °C min
3.1.8	Color (ASTM D1500)	Amber brown

Date	Action	Revisions
2011 08 10	Activated	



Documents

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3.2 QUALIFICATION TEST

In addition to initial acceptance tests, these are to be conducted by all new suppliers prior to source approval.

- 3.2.1 Seal testing (150 °C for 200 hrs)
V56, V72, V74 and V77 materials from approved supplier

Temperature	150	150	150
Hours	50 hrs	72 hrs	200 hrs
Volume Change, %	+ / - 25	+ / - 25	+ / - 25
Hardness (Durometer) Change, pts	+ / - 25	+ / - 25	+ / - 25
Tensile Change, %	+ / - 25	+ / - 25	+ / - 25
Elongation Change, %	+ / - 55	+ / - 55	+ / - 55

- 3.2.2 DKA Oxidation Tests (CEC L-48-A-95, 155 °C for 40 hrs)

- Phosphorus, % 0.1 % min

4. APPROVED ADDITIVE CHEMISTRY / FINISHED FLUID

Finished fluid must use either of the below approved additive package / finished fluid for compliance to this specification.

Anglamol 6055L 100 % by volume
(Lubrizol Corporation)

Report finished fluid data on Supplement A & B and submit a copy to TDE Engineering for approval to this specification.

5. QUALITY CONTROL/SUPPLIER TESTING

Testing required on every batch are: 3.1.1,3.1.2,3.1.3,3.1.4,3.1.5,3.1.6,3.1.7 and 3.1.8

Testing required on annual basis are: 3.1.1,3.1.2,3.1.3,3.1.4,3.1.5,3.1.6,3.1.7 and 3.1.8

Annual validation is to be completed by the end of first quarter (approximately 3 months prior to Job 1).

Supplier in-house test results are acceptable after concurrence with the Product engineering design & release / materials section.