



FLUID, AUTOMATIC TRANSMISSION OPTIMIZED FOR ANTI SQUAWK PERFORMANCE

WSS-M2C938-A2

1. SCOPE

The material defined by this specification is for factory fill automatic transmission fluid (ATF) composed of base oil and additives for optimized anti squawk performance of shifting clutches.

2. APPLICATION

This specification is released for factory fill application of various automatic transmissions. This material consists of approved WSS-M2C938-A ATF and anti squawk top treat (friction modifier).

3. REQUIREMENTS

Material specification requirements are to be used for initial qualification of materials.

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).

This material is made of approved (and qualified per WSS-M2C938-A specification) ATF and addition of friction modifier to improve anti squawk performance of fluid.

3.2 COLOR Red
(ISO 2092)

3.3 VISCOSITY

3.3.1 At 100 °C 6.2 mm²/sec max
(ISO 3104, ASTM D 445)

3.3.2 At -40 °C 12000 mPa.s max
(DIN 51398, ASTM D 2983)

3.3.3 Shear Stability
(CEC L-45-T93)

After 20 hrs KRL, KV at 100 °C 5.5 mm²/s, min
After 40 hrs KRL, KV at 100 °C 5.0 mm²/s, min

3.3.4 After NOACK Test,
(ASTM D 5800, 150 °C, 2 hr, Modified NOACK Test)

3.3.4.1 Viscosity at -40 °C max change
2000 mPa.s

3.3.4.2 Evaporation loss 10% max

Date	Action	Revisions
2010 08 09	Activated	





3.4	FLASH POINT (ASTM D 92)	180 °C min
3.5	DENSITY (ISO 12185 at 15 °C)	Report Value
3.6	ANTI FOAMING PROPERTIES (ASTM D 892)	
	Sequence I	50 / 0 ml max
	Sequence II	50 / 0 ml max
	Sequence III	50 / 0 ml max
	Sequence IV (ASTM D 6082-01)	100 / 0 ml max
3.7	MOLYBDENUM IDENTIFICATION (XRF-Mo, ASTM D4927)	15 to 25 ppm
3.8	MOISTURE (ASTM D6304)	0.05% max
3.9	OXIDATION TESTS (Modified FLTM BJ 110-04, 155 °C +/- 1)	
	Lead Coupon Weight Loss, 100 hrs,	0.5% max
	Pentane Insolubles, 300 hrs	0.35% max
	Differential Infrared Carbonyl Absorbance 300 hrs	15/cm max
	Total Acid Number Change, 300 hrs,	1.5 max
	% Viscosity Change at 40 °C, 300 hrs,	10% max
	Copper Strip Rating, 300 hrs,	3B max
	Aluminum Strip Rating, 300 hrs, max.	No Varnish
	Sludge, 300 hrs, max.	No Sludge