

OIL LUBRICATING - DRIVELINE, WET BRAKES AND HYDRAULIC FLUID "134-D" FLUID

1. SCOPE

1.1 The material defined by this specification is a multi-functional tractor driveline lubricant composed of refined petroleum base oil and additives as necessary to meet the requirements of this specification.

1.2 This specification may involve hazardous materials, procedures and apparatus. This specification does not address the health and safety problems associated with its application or use. It is the specification user's responsibility to follow appropriate health or safety practices and determine the application or regulatory limitation before use.

1.3 This specification replaces the FORD specification

ESN-M2C134-D

2. APPLICATION

This specification was released originally for a tractor lubricant which satisfies the requirements of transmission, rear axle, hydraulics, and oil-immersed brakes/clutches. The normal operating temperature range is -20° to 93°C (-5° to 200°F).

3. DESIGNATION

The Engineering drawing shall contain the notation for specification of subject material as described in specification 86511126 (FNHA-3-B-100). The notation information shall be taken from TABLE 3 and entered on the engineering drawing.

4. RELATED STANDARDS

ASTM D92 - Test Method for Flash and Fire Point by Cleveland Open Cup.

ASTM D97 - Test Methods for Flash Point by Pensky-Martens Closed Tester.

ASTM D130 - Method for Detection of Copper Corrosion From Petroleum Products By the Copper Strip Tarnish Test.

ASTM D445 - Test Method for Kinematic Viscosity of Transparent and Opaque Liquids.(and the Calculation of Dynamic Viscosity)

ASTM D665 - Test Method for Rust-Preventing Characteristics of Inhibited Mineral Oil in the Presence of Water.

ASTM D892 - Test Method for Foaming Characteristic of Lubricating Oils.

ASTM D2266 - Test Method for Wear Preventive Characteristics of Lubricating Grease. (four Ball Method)

ASTM D2983 - Test Method for Low-Temperature Viscosity of automotive Fluid lubricants Measured by Brookfield Viscometer.

ASTM D3945 Test Method for Shear Stability of Polymer-Containing Fluids Using a Diesel Injector Nozzle

86509436 STD 660 H Jenkins

86509437 STD Tandem Pump

86509438 STD 400 Cycle Stall

86509439 STD 450 Cycle High E

86509440 STD Field Test.2000

86509441 STD Brake Test

86509442 STD PTO Clutch Test

86509443 STD Static Friction

86509443 STD Dynamic Friction

86509444 STD Shift Quality

86511126 STD Ref Stds on Dwgs (FNHA-3-B-100)

					NAME	STD TRANS/HYD OIL	
					 NEW HOLLAND	ENGINEERING SPECIFICATION	
ALL	D	BJF	111108	12/97		FRAME 1	OF 5
ALL	C	RLF	110229	8/97		PART NUMBER	
ALL	B	RE	106079	2/95			
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MATERIALS / FUELS & LUB'S

FNHA-2-C-201.00

TABLE 1

DESCRIPTION	REQUIREMENTS	UNITS	METHODS
Viscosity			
At 100° C, min.	9.0	mm 2/s	ASTM D 445
At 40° C, typical	55	mm 2/s	ASTM D 445
At -18° C, max.	4,000	mPa.s	ASTM D 2983
Viscosity Index , typical	145		
Viscosity Stability, Change at 100°C			
· After 30 passes in Method A min.	-16	%	ASTM D3945
· After 100 hours at 150°C (Heat 200 g of candidate oil in a 400 ml glass beaker in an oven with gravity convection) (NO SLUDGE)	+10	%	
Physical Requirements			
Pour Point, max.	- 37°	C	ASTM D 97
Flash Point min.	190°	C	ASTM D 92
Foaming Tendency / Stability			
Sequence 1 max.	20/0	ml	ASTM D 892
Sequence 2 max.	50/0	ml	ASTM D 892
Sequence 3 max.	20/0	ml	ASTM D 892
Copper corrosion			
3 Hr. at 150°C	2b		ASTM D 130
48 Hrs. at 120°C Weigh sample before and after test. Record weight loss, max	1.0	mg	
Rust Protection	No Rust		ASTM D 665 Method A
Wear Teat Scar Dia. 60 min,1500 rpm,85°C,40 kg max.	0.40	mm	ASTM D 2266
Seal Compatibility (See Section 5.2)	pass		
Water Sensitivity (See Section 5.1)	pass		
PERFORMANCE REQUIREMENTS			
660 Hour Jenkins cycle Test	pass		86509436
Tandem Pump Durability Test	pass		86509437
16 X 16 Inching / Shifting Quality	pass		86509444
16 X 16 Transmission - 400 Cycle Stall Test	pass		86509438
16 X 16 Transmission - 450 Cycle High Energy Test	pass		86509439
2000 Hrs. Field Test	pass		86509440
Brake Test	pass		86509441
Pto Clutch Test	pass		86509442
Dynamic Coefficient of friction	0.095 - 0.135		86509443
Static Coefficient of friction	0.085 - 0.110		86509443



NAME

STD TRANS/HYD OIL

ENGINEERING SPECIFICATION

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