



# TECHNICAL DATA BULLETIN

## 4932-4934 All-Purpose Hydraulic Oil

### DESCRIPTION:

Anti-wear hydraulic oil designed with additives that offer excellent rust protection, strong anti-wear properties, and superior thermal stability. Contains select paraffinic base stocks which provide high oxidation resistance.

### PHYSICAL CHARACTERISTICS - TYPICAL

	<u>4932</u>	<u>4933</u>	<u>4934</u>
ISO Grade	32	46	68
Gravity, °API	32.2	31.4	30.7
Viscosity			
SUS @ 100°F	164.5	236.8	351.8
SUS @ 210°F	43.85	48.56	55.30
cSt @ 40°C	31.98	46.05	68.12
cSt @ 100°C	5.34	6.76	8.74
Viscosity Index, min	95	95	95
Color	Amber	Amber	Amber
Pour Point, °F (°C)	-27 (-33)	-22 (-30)	-17 (-27)
Flash Point, °F (°C)	430 (222)	445 (230)	470 (244)

### TEST RESULTS:

	1a	1a	1a
Copper Corrosion, ASTM D-130	Pass	Pass	Pass
Rust Test, 48 hrs., ASTM D-665B			
Four Ball Wear, ASTM D-4172 (20 kg, 54°C, 1800 rpm, 1 hr.)	.62 mm	.32 mm	.30 mm
Total Acid Number (TAN), ASTM D-664	0.14	0.14	0.14
Foam Test, ASTM D-892 Tendency/Stability			
Sequence I	0/0	0/0	0/0
Sequence II	0/0	0/0	0/0
Sequence III	0/0	0/0	0/0
Oxidation Test, hrs, ASTM D-943	2000	2000	2000
Water Separation, ASTM D-1401 ml oil-ml water-ml emulsion (mins.)	40-40-0-(15)	40-39-1(15)	40-40-0-(20)

### MEETS PERFORMANCE REQUIREMENTS OF:

Denison HF-0	CETOP RP91H
Vickers I-286-S (Industrial) and M-2950-S (Mobile)	AFNOR NF E 48-603 (HM)
Cincinnati Machine P-68 (4932), P-69 (4934), and P-70 (4933)	DIN 51524 Part II
USDA H2	

### APPLICATION:

Applications include both mobile and stationary hydraulic systems that call for a superior anti-wear hydraulic fluid, that will outperform conventional anti-wear hydraulic oils.

## LUBRICATION ENGINEERS, Inc.

## **BENEFICIAL QUALITIES:**

Contains 100% paraffinic base oils which provide high oxidation resistance.

Special anti-wear additive package greatly reduces wear to assure longer life for bearings and rubbing surfaces.

Excellent rust protection.

Nonfoaming in service.

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