

**Laboratory**                      **Quality Control laboratory - Indian Oil Corporation Ltd., Lube Oil Blending Plant - Asaoti, Village & P.O. Asaoti, District: Palwal, Haryana**

**Accreditation Standard**    **ISO/IEC 17025: 2005**

**Certificate Number**        **TC-6488**

**Page 1 of 2**

**Validity**                         **03.11.2017 to 02.11.2019**

**Last Amended on --**

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
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**CHEMICAL TESTING**

<b>I. LUBRICANTS</b>				
<b>1.</b>	<b>Automotive, Industrial &amp; Speciality Oil</b>	ASTM Colour	ASTM D1500-12,IS 1448 P12-13	0 to 8.0
		Flash point (COC)	ASTM D92-16B (2012b),IS 1448 P69-13	80°C to 400°C
		Pour Point	ASTM D97 -17,IS 1448 P10- 13	45°C to -48°C
		Kinematic Viscosity KV @100°C KV @ 40°C	ASTM D445-17A,IS 1448 P10-13	1.3 Cst to 2000 Cst. 2 Cst to 5000 Cst.
		Viscosity Index	ASTM D2270-10 (2016),	80 to 200
		Sulphated ash	ASTM D874-13A	0.005% wt to 5.0% wt
		Total Base Number (TBNE)	ASTM D2896-15 IS 1448 P86-1977 (RA 2006)	0.5 mg KoH/g to 200 mg KoH/g
		Total Base Number (TBNE)	LBP/QC/WI/15 (Issue No. 01,Date 02.01.2017)	0.5 mg KoH/g to 200 mg KoH/g
		Total Acid Number	ASTM D974-14 E2	0.01 mg KoH/g to 250 mg KoH/g
		Apparent Viscosity by Cold Cranking Simulator.	ASTM D5293-15	1000 Cp to 25000 Cp
		Low Temperature Viscosity by Rotational Viscometer	ASTM D 2983-17	500 Cp to 900000 Cp
		Noack Volatility	ASTM D5800-15A	1% to 25%
		High Shear Viscosity (HTHS)	ASTM D 4683-17	1.5 cSt to 7.5 cSt
		Emulsion Test	ASTM D1401-12e1-2012,IS 1448 P91	5 min to 60 min

**Anuja Anand**  
Convenor

**N. Venkateswaran**  
Program Director

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		Density	ASTM D 4052	0.7000 g/ml to 1.2 g/ml
		Density	ASTM D 1298-12B, IS 1448 P-16	0.7000 g/ml to 1.2 g/ml
		Moisture (Crackle)	IS 4543:1977 App B	Qualitative (Pass / Fail)

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Program Director