



IDO UNIVERSAL

IDO UNIVERSAL oils are blended from select high viscosity index (VI) base stocks and low-ash additives with sufficient detergent to ensure excellent engine cleanliness, minimize ring-sticking and liner-scuffing, prevent sludge formation and stuck valve lifters, reduce bearing corrosion and engine rusting. The low-ash feature (1.0% by weight) reduces combustion chamber deposits, and the high VI base stocks together with oxidation inhibitors provide protection against extreme operating temperature oil breakdown as well as lacquer and varnish deposits. Anti-wear additives reduce wear, and antifoam inhibitors provide enough protection for use even in transmissions and hydraulic systems.

IDO UNIVERSAL was developed to meet the needs of mixed fleet operators in order to solve the problem of selection and application as well as to reduce inventory. **IDO UNIVERSAL** exceeds all the automotive gasoline and diesel engine manufacturers' requirements in the appropriate grades. These oils can be used in all high and medium speed diesel engines in automotive and construction applications and certain diesels in marine service. In appropriate grades, this oil is also suitable for use in transmissions and hydraulic systems. **IDO Universal 10W** and **30** grades have Allison C-4 approval for use in their heavy-duty automatic transmissions.

The **5W40** grade is a synthetic blend that provides extra protection for severe duty and has the added benefit of excellent cold start performance while still providing the same protection at high-temperatures as SAE* **30** and **40** grade oils.

IDO UNIVERSAL meets or exceeds the following performance requirements:

Features

- High viscosity/low ash formulations
- Promotes engine cleanliness
- Excellent resistance to high temperature

Benefits

- Multipurpose – reduces inventory
- Excellent hydraulic oil (SAE 10W, 20W and 30)
- Suitable for truck manual transmissions (SAE 50)
- Approved for Allison transmissions (SAE 10W and 30)
- Suitable for other power-shift and industrial automatic transmissions
- Proven performance over breakdown millions of miles

	10W	20W	30	40	50	10W30	15W40	5W40	0W30
CI-4+							X		
CI-4							X		
CH-4						X	X	M	M
CF-2			X	X	X				
CF	X	X	X	X	X	X	X	M	M
SL							X	M	M
SJ			X	X	X	X	X	M	M
ACEA E3, E5							M		
Caterpillar ECF-1A						X			
JASO DH-1							M		
MB 228.3							M		
Volvo VDS							X		
Volvo VDS-2							X		
Cummins CES 20078							M		
Cummins CES 20076						M	X		
Mack EO-M+							X		
Allison C-4	M		M			M	M		
Cat. TO-2 - Performance	M	M	M	M	M	M	M	M	M
DDC 7SE 270			M	M	M	M	M		
TSI-06-12-25 International Navistar							X		
Detroit Diesel Power Guard 93K215 –Apr.							X		
Global DHD-1							M		

*SAE : Society Of Automotive Engineers



Typical Performance Results

SAE GRADE	10W	20W	30	40	50	15W40	10W30	5W40	0W30
VISCOSITY (D-445)									
cSt @ 40°C	32.7	53.3	96.8	137.9	209.1	124	71.0	99.6	57.8
cSt @ 100°C	5.7	7.7	11.3	14.3	18.8	15.2	10.3	14.4	10.0
VISCOSITY INDEX (D-2270)	117	108	103	102	100	127	130	149	160
SPECIFIC GRAVITY (D-4052)	0.875	0.881	0.885	0.888	0.893	0.884	0.882	0.859	0.863
DENSITY (KG/L) @ 15°C	0.875	0.872	0.885	0.888	0.893	0.883	0.882	0.859	0.862
API GRAVITY @ 15.6°C	30.2	30.6	28.4	27.8	26.6	28.6	28.9	31.9	34.4
FLASH PT. (°C) (D-92)	224	236	268	284	298	232	222	232	192
COLD-CRANK SIMULATOR (D-2602)									
cP @ -15°C (max. 9500)	—	2539	—	—	—	—	—	—	—
cP @ -20°C (max. 7000)	—	—	—	—	—	6326	—	—	—
cP @ -25°C (max. 7000)	3686	—	—	—	—	—	5730	—	—
cP @ -30°C (max. 6600)	—	—	—	—	—	—	—	5532	—
cP @ -35°C (max. 6200)	—	—	—	—	—	—	—	—	6024
LOW TEMPERATURE PUMPABILITY (D-3829)									
cP @ -20°C (max. 60000)	—	2539	—	—	—	—	—	—	—
cP @ -25°C (max. 60000)	—	—	—	—	—	34405	—	—	—
cP @ -30°C (max. 60000)	8959	—	—	—	—	—	26588	—	—
cP @ -35°C (max. 60000)	—	—	—	—	—	—	—	42636	—
cP @ -40°C (max. 60000)	—	—	—	—	—	—	—	—	54460
TOTAL BASE NUMBER (D-2896)	7.6	7.6	7.6	8.0	8.0	11.3	11.3	11.3	11.0
ZINC CONTENT (% wt)	0.09	0.09	0.09	0.09	0.09	0.13	0.13	0.13	0.13
SULPHATED ASH (% wt) (D-874)	1.0	1.0	1.0	1.0	1.0	1.4	1.4	1.4	1.4

Available Package Sizes

	946ml. (1 US qt)	3.78L (1 US Gal)	20L (5.28 US Gal)	60L (15.85 US Gal)	205L (54.2 US Gal)	210L (55.5 US Gal)	500L (12 US Gal)	1000L (264 US Gal)	1200L (317 US Gal)	Bulk
IDO UNIV 10W	X	X	X		X	X	X	X		X
IDO UNIV 20W	X		X		X	X	X	X		X
IDO UNIV 30	X	X	X		X	X	X	X	X	X
IDO UNIV 40	X		X		X	X	X	X		X
IDO UNIV 50			X							
IDO UNIV 5W40		X	X			X	X	X	X	X
IDO UNIV 10W30	X	X	X		X	X	X	X		X
IDO UNIV 15W40	X	X	X		X	X	X	X	X	X

Check with sales representative or website for the latest product approvals.

