

OIL and Grease Technical Specification

Tender 2024

Table of Contents

1. GENERAL CONDITIONS:	3
2. GENERAL REQUIREMENTS:	3
3. SUPPLIER AND PRODUCT EVALUATION:	3
TABLE 1 OILS AND GREASE SPECIFICATION	4
TABLE 2 DELIVERY SCHEDULE	9
TABLE 3 DATASHEET	10

1. GENERAL CONDITIONS:

- 1.1. The supplier has to follow all the below mentioned specifications of the offered Oil and Lubricants as described in **[Table 1]** and also all requirements and terms and conditions.
- 1.2. The supplier has to supply the required quantities in monthly bases as per our monthly needed. **[Table 2]**
- 1.3. The purchaser (AICT) has all rights to ask the supplier for testing laboratory samples of the delivered Oil and Lubricants if needed at the expenses of the supplier to check the specification and quality assurance of the products.

2. GENERAL REQUIREMENTS:

The following requirements are mandatory:

- 2.1. The supplier has to provide products in suitable barrels, cans and bottles well sealed.
- 2.2. All provided products must be manufactured in 2024 and all packages must provide the production and expiry date.
- 2.3. The supplier has to supply the required quantities in **monthly** bases to two terminals (Alexandria & Dekhela) as per AICT monthly Consumption.
- 2.4. The required quantities are estimated and actual quantities will be received according to actual consumption and maybe less than estimated quantities.

3. SUPPLIER AND PRODUCT EVALUATION:

- 3.1. All the suppliers have to submit the following submittals in the tender documents for evaluation, and AICT has all rights to reject the offers that haven't included the following:
 - i. Complete the products datasheet of **[Table 3]**.
 - ii. Approvals and certificates of all offered items of oils and lubricants.
 - iii. Product Datasheet (PDS) and typical properties of all offered items of oils and lubricants.
 - iv. Material Safety Datasheet (MSDS) of all offered items of oils and lubricants.
 - v. Recommended Oil drain Intervals of all offered items of oils.
 - vi. Certification of Oil analysis Lab.
 - vii. Reference List of products and customers especially in Egypt ports. And provide supported documents of extended ODI of the offered products if any.

TABLE 1 OILS AND GREASE SPECIFICATION

No	Item Code	Description	Specification	Application
1	1016881	Lube Oil 85W140	<ul style="list-style-type: none"> • <u>Description:</u> Heavy Duty Automotive gear lubricant to provide protection in automotive axles and final drives over a wide temperature range and extreme drain operation. And to have thermal stability and resistance to oxidation, rust, and corrosion. Provide protection against wear. • <u>Specification:</u> <ul style="list-style-type: none"> -SAE Grade : 85W140 -Performance Approval: API GL-5 -Oil Drain Interval : 1000 running hours at least -Viscosity Index ASTM D2270: not less than 95 -Viscosity Grade: not less than 300 cSt @ 40°C And not less than 25 cSt @ 100°C -Flash point ASTM D92: not less than 220 °C 	<ul style="list-style-type: none"> • Automotive axles and final drives • Components Manufacture: Kessler and Sisu
2	1016885	Hydraulic Oil ISO VG 46	<ul style="list-style-type: none"> • <u>Description:</u> Heavy Duty and high quality Hydraulic containing anti-oxidant, anti-rust, anti-wear, and anti-foam additives to meet the heavy duty requirements of hydraulic systems using high pressure and systems requiring high load-carrying capability. Excellent thermal and hydrolytic stability and excellent air release and water separation. Keep clean properties to reduce system deposits and sludge. Also extend Components lifetime and ODI. • <u>Specification:</u> <ul style="list-style-type: none"> -ISO VG: 46 -Meets or exceeds DIN 51524-2: 2006-09 -Oil Drain Interval : 3000 running hours at least -Viscosity Index ASTM D2270: not less than 95 -Viscosity Grade: not less than 45 cSt @ 40°C And not less than 6.6 cSt @ 100°C -Flash point ASTM D92: not less than 220 °C 	<ul style="list-style-type: none"> • Industrial Hydraulic Circuits of STS, RTG, Forklift, Reach Stacker, Trucks, and Manlift • Components Manufacture: Parker, Rexroth, Hydac, Vickers, Genie, Linde, CAT, and CVS

No	Item Code	Description	Specification	Application
3	1016886	Engine Oil 15W40	<ul style="list-style-type: none"> <u>Description:</u> Heavy Duty Diesel Engine Oil. provide high performance against soot build-up and high temperature and high resistance to oxidation, corrosion, and high temperature deposits. And has high performance on high Sulphur fuel and has high detergency characteristics. <u>Specification:</u> <ul style="list-style-type: none"> -SAE Grade: 15W40 -Mineral Oil with additives -Meets API CI-4 -Oil Drain Interval will be 500 engine hours at least -Viscosity Index ASTM D2270: not less than 140 -Viscosity Grade: not less than 105 cSt -TBN ASTM D2896: not less than 10 -Flash point ASTM D92: 200 °C -Sulphated Ash (wt%) ASTM D874: below 1.3 	<ul style="list-style-type: none"> Off-Highway Container handling Equipment: RTG-Reach Stacker-Trucks-Pickups-Forklifts Engine Manufacture: CAT_ C 18 Cummins QSX15, QSM11, QSB6.7 Perkins-Mitsubishi-Detroit Turbocharged, Electronic fuel Injection and standard fuel injection Engines.
4	1016900	Multipurpose Grease NLGI 2	<ul style="list-style-type: none"> <u>Description:</u> General purpose grease for heavy duty applications has to provide Shock load protection, Load-carrying protection, corrosion and rust protection, Water resistant, and Maximum service lubrication excellent protection against rust. <u>Specification:</u> <ul style="list-style-type: none"> -NLGI Grade: 2 -Thickener Type: Lithium -Worked Penetration ASTM D217:280 -Dropping Point D2265: not less than 190 	<ul style="list-style-type: none"> greasing of STS, RTG, Reach Stacker, Trucks, and Manlift couplings, rollers, bearings, pushing, wheels, and sheaves.
5	1016895	Coolant	<ul style="list-style-type: none"> <u>Description:</u> High performance coolant for engine radiators of off-highway and heavy-duty engines to provide protection against corrosion of radiators, cylinder blocks and, water pumps. the coolant has is to be fully formulated with organic acid technology (OAT) <u>Specification:</u> <ul style="list-style-type: none"> -Recommended for off-road heavy duty and industrial equipment -Non-Nitrated, phosphate-free, silicate-free, and brotate-free -Antifreeze mix 50% 	<ul style="list-style-type: none"> Engine cooling Circuits

No	Item Code	Description	Specification	Application
			<ul style="list-style-type: none"> - Meets ASTM D6210, Cummins CES 14603 - Drain Interval not less than: 12,000 Hrs. - Boiling Point: not less than 125 C - Freezing Point ASTM D1177: not less than -37 C - Flash Point not less than 130 C 	
6	1016887	Automatic Transmission Fluid	<ul style="list-style-type: none"> • <u>Description:</u> Heavy Duty automatic transmission fluid. ATF Dexron III product. has to provide smooth transmission operation and protection against wear and leakage and to has high thermal stability and excellent oxidation resistance. Also ensuring cold start high performance at low temperature. • <u>Specification:</u> <ul style="list-style-type: none"> - Oil type: ATF Dexron III - Meets or exceeds ZF TE-ML 14A,04D - Oil Drain Interval will be 1000 engine hours at least - Viscosity Index ASTM D2270: not less than 160 - Viscosity @ 100 °C: not less than 8 cSt - Flash point ASTM D92: not less than 195 °C 	<ul style="list-style-type: none"> • Off-Highway Container handling Equipment: Reach Stacker- Trucks- Forklifts • Automatic Transmission Manufacture: Dana-Allison – Mitsubishi
7	1016890	Gear Reducer Oil ISO VG 320	<ul style="list-style-type: none"> • <u>Description:</u> Heavy Duty gears oil having capability of working under extreme high pressure and load carrying properties. And enhance gear wear protection from micro pitting, minimize deposits, high thermal stability. And high resistance to oil oxidation , rut, corrosion , foaming ,and sludge formation • <u>Specification:</u> <ul style="list-style-type: none"> - ISO Viscosity Grade: 320 - Meets or exceeds DIN 51517-3 - AGMA Grade: 6 EP - Oil Drain Interval will be 5000 hours at least - Viscosity Index ASTM D2270: not less than 95 - Viscosity Grade: not less than 320 cSt @ 40°C And not less than 24 cSt @ 100°C - Flash point ASTM D92: not less than 240 °C 	<ul style="list-style-type: none"> • Gear Reducers of STS, RTG. • Gear Reducers Manufacture: Flender, and ZPMC
8	1016888	Gear Reducer Oil ISO VG 220	<ul style="list-style-type: none"> • <u>Description:</u> Heavy Duty gears oil having capability of working under extreme high pressure and load carrying properties. And enhance gear wear protection from micro pitting , minimize deposits, high thermal 	<ul style="list-style-type: none"> • Gear Reducers of STS, RTG. • Gear Reducers Manufacture: Flender, and ZPMC

No	Item Code	Description	Specification	Application
			<p>stability. And high resistance to oil oxidation , rut, corrosion , foaming ,and sludge formation</p> <ul style="list-style-type: none"> • <u>Specification:</u> <ul style="list-style-type: none"> -ISO Viscosity Grade: 220 -Meets or exceeds DIN 51517-3 -AGMA Grade: 5 EP -Oil Drain Interval will be 5000 hours at least -Viscosity Index ASTM D2270: not less than 95 -Viscosity Grade: not less than 220 cSt @ 40°C And not less than 18.5 cSt @ 100°C -Flash point ASTM D92: not less than 240 °C 	
9	1016891	Lubricant Fluid API GL-4	<ul style="list-style-type: none"> • <u>Description:</u> Heavy Duty tractor lubricant meets and exceed transmission and hydraulic fluid requirements. Has to reduce ODI and has to provide optimum frictional properties and to have high thermal stability and excellent corrosion resistance. Also ensuring high thermal stability. • <u>Specification:</u> <ul style="list-style-type: none"> -SAE Grade: 10W30 -Performance Level: API GL-4 -Oil Drain Interval will be 3000 engine hours at least -Viscosity Index ASTM D2270: not less than 130 -Viscosity @ 100 °C: not less than 8 cSt -Flash point ASTM D92: not less than 195 °C 	<ul style="list-style-type: none"> • Brakes of Off-Highway Container handling Equipment: Reach Stacker- Brakes
10	1016893	Mobil lube 80W90	<ul style="list-style-type: none"> • <u>Description:</u> Heavy Duty Automotive gear lubricant to provide protection in automotive axles and final drives over a wide temperature range and extreme drain operation. And to have thermal stability and resistance to oxidation, rust, and corrosion. Provide protection against wear. • <u>Specification:</u> <ul style="list-style-type: none"> -SAE Grade : 80W90 -Performance Approval: API GL-5 -Oil Drain Interval : 1000 running hours at least -Viscosity Index ASTM D2270: not less than 100 -Viscosity Grade: not less than 130 cSt @ 40°C And not less than 14 cSt @ 100°C -Flash point ASTM D92: not less than 200 °C 	<ul style="list-style-type: none"> • Automotive axles and final drives of Forklifts and slewing reducer. • Components Manufacture: Mitsubishi and Elme

No	Item Code	Description	Specification	Application
11	1015778	Automatic Synthetic Transmission Oil ATF (Alison TES295)	<ul style="list-style-type: none"> • <u>Description:</u> Heavy Duty automatic transmission synthetic fluid. ATF Dexron III product. has to extend oil drain interval and provide smooth transmission operation and protection against wear and leakage and to has high thermal stability and excellent oxidation resistance. Also ensuring cold start high performance at low temperature. • <u>Specification:</u> <ul style="list-style-type: none"> -Oil type: Synthetic ATF -Meets or exceeds Allison TES 295 -Oil Drain Interval will be 6000 engine hours at least -Viscosity Index ASTM D2270: not less than 168 -Viscosity Grade: not less than 39 cSt @ 40°C And not less than 7 cSt @ 100°C -Flash point ASTM D92: not less than 230 °C 	<ul style="list-style-type: none"> • Off-Highway Container handling Equipment: Trucks • Automatic Transmission Manufacture: Allison-3000 Series
12	1016897	Wire ropes grease	<ul style="list-style-type: none"> • <u>Description:</u> Wire Ropes grease for standard and plastic filled wire ropes. has to provide optimum adhesive characteristics and ultra-protection against rust and corrosion. Also provide protection against extreme temperatures and mild acids. And reduce wear and maintain lifetime of wire ropes. • <u>Specification:</u> <ul style="list-style-type: none"> -Viscosity @ 100 °C: not less than 22 cSt -Flash point ASTM D92: not less than 230 °C -Dropping Point D2265: not less than 60 	<ul style="list-style-type: none"> • greasing of STS and RTG wire ropes • Standard and plastic filled wire ropes

TABLE 2 DELIVERY SCHEDULE

No	Item Code	Description	Quantity	Unit	Delivery
1	1016881	Lube Oil 85W140	14	Brl	Delivery will be in monthly patches that will be decided based on AICT actual consumption with (two) weeks prior notice to the supplier
2	1016885	Hydraulic Oil ISO VG 46	46	Brl	
3	1016886	Engine Oil 15W40	155	Brl	
4	1016900	Multipurpose Grease NLGI 2	15	Brl	
5	1016895	Coolant	17	Brl	
6	1016887	Automatic Transmission Fluid	23	Brl	
7	1016890	Gear Reducer Oil ISO VG 320	34	Brl	
8	1016888	Gear Reducer Oil ISO VG 220	11	Brl	
9	1016891	Lubricant Fluid API GL-4	12	Brl	
10	1016893	Mobil lube 80W90	2	Brl	
11	1015778	Automatic Synthetic Transmission Oil ATF (Alison TES295)	160	Liter	
12	1016897	Wire ropes grease	18	Pack	

TABLE 3 DATASHEET

No.	Item Code	Description	Physical/ Chemical Properties	Standard	Limit/Value <i>"To be filled by Supplier"</i>
1	1016881	Lube Oil 85W140	SAE Grade	SAE	
			Standards	API	
			Recommended ODI (<i>Hours</i>)		
			Viscosity Index	ASTM D2270	
			cSt @ 40°C	ASTM D445	
			cSt @ 100°C	ASTM D445	
			Flash point	ASTM D92	
			Pour Point	ASTM D97	
2	1016885	Hydraulic Oil	ISO VG		
			Standards	DIN	
			Recommended ODI (<i>Running Hours</i>)		
			cSt @ 40°C	ASTM D445	
			cSt @ 100°C	ASTM D445	
			Viscosity Index	ASTM D2270	
			Flash point	ASTM D92	
			Pour Point	ASTM D97	
			Oxidation Stability	ASTM D943	
Foam Tendency Stability Sequence I,II,III	ASTM D892				
3	1016886	Engine Oil 15W40	SAE Grade	SAE	
			Oil Type (<i>Mineral /Synthetic</i>)		
			Standards	API	
			Recommended ODI (<i>Engine Hours</i>)		
			Viscosity Index	ASTM D2270	
			Viscosity Grade (<i>cSt</i>)	ASTM D445	
			cSt @ 100°C	ASTM D445	
			TBN	ASTM D2896	
			Flash point	ASTM D92	
			Pour Point	ASTM D97	
Sulphated Ash (wt%)	ASTM D874				
4	1016900	Multipurpose Grease	NLGI Grade		
			Thickener Type		
			Worked Penetration at 25°C	ASTM D217	
			cSt @ 40°C	ASTM D445	
			Timken Ok Value	D2509	
			4 Ball Weld Value	ASTM D2596	
Rust Protection	ASTM D6138				

No.	Item Code	Description	Physical/ Chemical Properties	Standard	Limit/Value <i>"To be filled by Supplier"</i>
5	1016895	Coolant	Drain Interval Period (Engine Hours)		
			Standard Compliance [Yes/No]	ASTM D6210 CUMMINS CES 14603	
			Non-Nitrated, phosphate-free, silicate-free, and brotate-free [Yes/ No]		
			Off-Road Application [Yes/ No]		
			Boiling Point		
			Freezing Point		
			Flash Point		
			Antifreeze mix %		
6	1016887	Automatic Transmission Oil	OIL Type		
			Approvals	ZF Approval	
			Recommended ODI (<i>Running Hours</i>)		
			Viscosity Index	ASTM D2270	
			Flash point	ASTM D92	
			Pour Point	ASTM D97	
			Brookfield Viscosity @ -40°C	D2983	
7	1016890	Gear Reducer Oil ISO VG 320	ISO Viscosity Grade	ISO	
			Standards	AGMA	
			Standards	DIN 51517-3	
			Recommended ODI (<i>Hours</i>)		
			Viscosity Index	ASTM D2270	
			cSt @ 40 °C	ASTM D445	
			cSt @ 100 °C	ASTM D445	
			Flash point	ASTM D92	
			Pour Point	ASTM D97	
			Rust Protection	ASTM D665	
8	1016888	Gear Reducer Oil ISO VG 220	ISO Viscosity Grade	ISO	
			Standards	AGMA	
			Standards	DIN 51517-3	
			Recommended ODI (<i>Hours</i>)		
			Viscosity Index	ASTM D2270	
			cSt @ 40 °C	ASTM D445	
			cSt @ 100 °C	ASTM D445	
			Flash point	ASTM D92	
			Pour Point	ASTM D97	
			Rust Protection	ASTM D665	
9	1016891	Fluid Oil	SAE Grade	SAE	
			Standards	API	
			Recommended ODI (<i>Engine Hours</i>)		

No.	Item Code	Description	Physical/ Chemical Properties	Standard	Limit/Value <i>"To be filled by Supplier"</i>
			Viscosity Index	ASTM D2270	
			Viscosity Grade @40°C (cSt)	ASTM D445	
			cSt @ 100°C	ASTM D445	
			Flash point	ASTM D92	
			Pour Point	ASTM D97	
			Zinc	ASTM D4951	
			Foam Tendency Stability Sequence I,II,III	ASTM D892	
10	1016893	Lube Oil 80W90	SAE Grade	SAE	
			Standards	API	
			Recommended ODI (Hours)		
			Viscosity Index	ASTM D2270	
			cSt @ 40°C	ASTM D445	
			cSt @ 100°C	ASTM D445	
			Flash point	ASTM D92	
Pour Point	ASTM D97				
11	1015778	Automatic Synthetic Transmission Oil ATF (Alison TES295)	OIL Type		
			Approvals	Allison TES295	
			Recommended ODI (Running Hours)		
			Viscosity Index	ASTM D2270	
			Flash point	ASTM D92	
			Pour Point	ASTM D97	
12	10168897	Wire ropes grease	Brookfield Viscosity @ -40°C	D2983	
			cSt @ 100°C	ASTM D445	
			Dropping Point	ASTM D2265	
			Flash point	ASTM D92	