



LUBRICATION CHART

VESSEL

TWILIGHT STELLAR

SHIPOWNER

TWILIGHT NAVIGATION



CEPSA

TWILIGHT STELLAR

	EQUIPMENT	APPLICATION	RECOMMENDED LUBRICANT
MAIN ENGINE PROPULSION			
1	MAIN ENGINE <i>MAK 6M32</i>	CRANKCASE & CILINDERS	CEPSA PETREL 1540
2	MAIN ENGINE GOVERNOR <i>WOODWARD UG 40</i>	HYDRAULIC SYSTEM	CEPSA COMPRESORES AR 68
3	MAIN ENGINE REDUCTION GEARS <i>RENK TACKE HUWL 630 D</i>	ENCLOSED GEARS	CEPSA PETREL 1530
4	STERN TUBE <i>LAGERSMIT</i>	BEARINGS & SEALS	CEPSA STERNA BIO
5	CPP UNIT <i>BERG</i>	HYDRAULIC SYSTEM	CEPSA MISTRAL HX 68
6		PROPELLER HUB	CEPSA STERNA BIO
STEERING GEAR			
7	STEERING GEAR <i>ULSTEIN 9M</i>	HYDRAULIC SYSTEM	CEPSA MISTRAL HX 68
PROPELLER UNITS / THRUSTERS			
8	BOW THRUSTER <i>BERG SPF-5</i>	ENCLOSED GEARS	CEPSA RADA XMP 68
9		SEALING SYSTEM	CEPSA MISTRAL HX 68
POWER GENERATION			
10	AUXILIARY ENGINE DIESEL <i>CATERPILLAR 3508 DITA</i>	CRANKCASE & CILINDERS	CEPSA ULTRAMAR SHPD 15W40
EMERGENCY MACHINERY			
11	EMERGENCY ALTERNATOR <i>CATERPILLAR 3306</i>	CRANKCASE & CILINDERS	CEPSA ULTRAMAR SHPD 15W40
12	EMERGENCY FIRE PUMP <i>ALLWEILER</i>	OIL POINTS	CEPSA PETREL 1530
13		GREASE POINTS	CEPSA ARGA COMPLEX LITIO EP (*)

TWILIGHT STELLAR

EQUIPMENT	APPLICATION	RECOMMENDED LUBRICANT
ENGINE ROOM ANCILLARY MACHINERY		
14 MAIN AIR COMPRESSOR <i>HAMWORTHY V150 & V200</i>	CRANKCASE SYSTEM	CEPSA COMPRESORES ES 100 (**)
15 FUEL OIL PURIFIER <i>ALFA LAVAL MMPX 3003</i>	BEARINGS	CEPSA RADA XMP 150
16 LUBRICATING OIL PURIFIER <i>ALFA LAVAL MOPX 205</i>	ENCLOSED GEARS	CEPSA RADA XMP 220
17 THERMAL OIL SYSTEM <i>WANSON 3000B THERMOPACK</i>	SYSTEM	CEPSA DIATERMO 32
18 REMOTE CONTROL VALVES <i>NAKAKITA</i>	HYDRAULIC SYSTEM	CEPSA HIDRÁULICO HM 15
19 SLUDGE PUMP & BILGE PUMPS <i>COMET 1570</i>	BEARINGS & SEALS	CEPSA ARGA COMPLEX LITIO EP (*)
20 WATERLIGHT DOORS <i>QUIXIN</i>	HYDRAULIC SYSTEM	CEPSA HIDRÁULICO HM 15
21	OIL LUBRICATION	CEPSA PETREL 1530
22 ENGINE ROOM PUMPS <i>ALWEILLER</i>	BULK HEAD SEALING OIL	CEPSA HIDRÁULICO HM 15
23	GREASE POINTS	CEPSA ARGA COMPLEX LITIO EP (*)
HOTEL SERVICES		
24 REFRIGERATION COMPRESSOR <i>HEINEN & HOPMAN SELF-CONTAINED</i>	SYSTEM	CEPSA NORTHER AB 100 (**)
25 AIR CONDITION COMPRESSOR <i>HEINEN & HOPMAN CARRIER 5F40 (R404A)</i>	SYSTEM	CEPSA NORTHER HFC 68 (**)
DECK MACHINERY		
26	ENCLOSED GEARS	CEPSA RADA XMP 220
27 WINDLASS & MOORING WINCH <i>ULSTEIN BRATTVAAG</i>	REMOTE CONTROL UNIT	CEPSA HIDRÁULICO HM 15
28	HYDRAULIC SYSTEM	CEPSA MISTRAL HX 100
29	HYDRAULIC SYSTEM	CEPSA MISTRAL HX 32
30 PROVISION CRANE <i>STH CHINA MAR MCY 880-1,5T-6M</i>	OPEN GEARS	CEPSA ARGA BIOGREASE EP 2
31	GREASE POINTS	CEPSA ARGA COMPLEX LITIO EP (*)

TWILIGHT STELLAR

EQUIPMENT	APPLICATION	RECOMMENDED LUBRICANT
DECK MACHINERY		
32 HOSE HANDLING CRANE <i>HYDRALIFT 1085-3-12</i>	HYDRAULIC SYSTEM	CEPSA MISTRAL HX 32
33	GEARBOX	CEPSA AURIGA TE 55
34 HOSE HANDLING CRANE <i>HYDRALIFT 1085-3-12</i>	OPEN GEARS	CEPSA ARGÁ BIOGREASE EP 2
35	GREASE POINTS	CEPSA ARGÁ COMPLEX LITIO EP (*)
CARGO MACHINERY		
36 CARGO PUMP <i>SVANEHOJ DW 150/150 & 200/200</i>	BULK HEAD SEALING OIL	CEPSA HIDRÁULICO HM 15
37	BEARINGS	CEPSA ARGÁ COMPLEX LITIO EP (*)
MISCELLANEOUS		
38 ELECTRIC MOTOR, PUMPS & FANS	GREASE POINTS	CEPSA ARGÁ COMPLEX LITIO EP (*)
LIFEBOAT MACHINERY		
39 LIFEBOAT DAVIT <i>SCHAT DAVIT 95005</i>	ENCLOSED GEARS	CEPSA RADA XMP 150
40	HYDRAULIC SYSTEM	CEPSA MISTRAL HX 32
41 LIFEBOAT ENGINE <i>LISTER-PETTER</i>	CRANKCASE SYSTEM	CEPSA ULTRAMAR SHPD 15W40
42	GEARBOX	
43 RESCUE BOAT ENGINE <i>RUGGERINI DIESEL F25 OUTBOARD</i>	CRANKCASE & CYLINDERS	CEPSA FUERABORDA 2T
GENERAL LUBRICATION		
GENERAL OILING	OIL LUBRICATION	CEPSA PETREL 1530
GENERAL GREASING	GREASE POINTS	CEPSA ARGÁ COMPLEX LITIO EP (*)
OPEN GEARS	BRUSH APPLIED	CEPSA ARGÁ FORCE
WIRE ROPES	BRUSH APPLIED	CEPSA ARGÁ FORCE



OBSERVATIONS

The grease marked with (*) may have not the same nature as the previous one. It is important to clean properly the equipment before its use. Products marked with (**) are synthetic lubricants. They must not be mixed with other lubricants.

To obtain an optimum drain period as well as to check the general status of wear in the installed equipment in the vessel we recommend to send periodic oil samples with the established sampling program.

We recommend to take an oil sample of each equipment before refill to confirm the recommended products.



RECOMMENDED CEPSA LUBRICATION

	CEPSA LUBRICANT
1	CEPSA PETREL 1540
2	CEPSA COMPRESORES AR 68
3, 12	CEPSA PETREL 1530
4, 6	CEPSA STERNA BIO
5, 7, 9	CEPSA MISTRAL HX 68
8	CEPSA RADA XMP 68
10, 11	CEPSA ULTRAMAR SHPD 15W40
13	CEPSA ARGÁ COMPLEX LITIO EP (*)
14	CEPSA COMPRESORES ES 100 (**)
15, 39	CEPSA RADA XMP 150
16, 26	CEPSA RADA XMP 220
17	CEPSA DIATERMO 32
18, 20, 22, 27, 36	CEPSA HIDRÁULICO HM 15
24	CEPSA NORTHER AB 100 (**)
25	CEPSA NORTHER HFC 68 (**)
28	CEPSA MISTRAL HX 100
30, 34	CEPSA ARGÁ BIOGREASE EP 2
29, 32, 40	CEPSA MISTRAL HX 32
33	CEPSA AURIGA TE 55
43	CEPSA FUERABORDA 2T