

LUBRICATION SCHEDULE

Ship Name: MV HMCC SEARCHER

IMO No. 9234800

Hull No: 29

Builder: Damen Shipyards, Netherlands

Year Built: 2001

Ship Type: Customs Patrol Vessel

DWT: 0

Owner/Customer: HM Revenue & Customs

Associate: Castrol UK

Issued By: Sullivan, Barry

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Lubricants Summary

Lubricating Oils

MHP 153 [C]	Shaft Bearings & Seals	Seals
	General Oiling	Oil Lubrication
	Propeller Shaft Bearings	Bearings
	M.E. Gearbox	Enclosed Gears
Vecton 15W-40 [C]	A.E. Diesel	Crankcase & Cylinders
	Main Engine	Crankcase & Cylinders
	Boarding RIB Engine	Engine Crankcase
	Salvage Pump Engine	Crankcase & Cylinders
	Emergency Fire Pump Engine	Crankcase & Cylinders
Alpha SP 150 [C]	MOB Boat Davit	Enclosed Gears
	Capstans	Enclosed Gears
	Bow Thruster	Enclosed Gears
Alpha SP 220 [C]	Anchor Winch	Enclosed Gears
Transmax Dex III Multivehicle [F]	Boarding RIB Engine	ZF Gearbox
	Boarding RIB Engine	Hydraulic Bucket System
Hyspin AWH-M 15 [C]	Boarding RIB Engine	Hydraulic Steering System
Hyspin AWH-M 46 [C]	MOB Boat Davit	Reduction Gears
	Deck Hydraulic Power Pack	Hydraulic System
	Stabilisers	Hydraulic System
	Steering Gear	Hydraulic System
Hyspin AWH-M 68 [C]	CPP Unit	Hydraulic System
Hyspin AWH-M 100 [C]	F.O. Separator	Enclosed Gears
Aircol SW 68 [M]	Air Conditioning Compressor	Crankcase & Cylinders
Safecoat DW 33	Spare Parts	Brush Applied

Greases

Biotac MP [M]	General Greasing (Deck Machinery)	Grease Points
	Open Gears & Wire Ropes	Brush Applied
Spheerol SX2 [C]	MOB Boat Davit	Grease Points
	Rudder Carrier	Bearings
	General Greasing (Below Decks)	Grease Points
	Steering Gear	Hydraulic Cylinder Bearings
	Electric Motors, Pumps & Fans	Grease Points



Emergency Fire Pump

Grease Points



General Information

The specified Castrol multigrade for smaller 4-stroke engines will generally be supplied as Tecton Global 15W40, although other comparable Castrol branded multigrades of a similar performance maybe supplied. Please note that all these SAE 15W40 multigrades are fully miscible and compatible

Liability Disclaimer

This Lubrication Schedule has been prepared on the following basis (which the Owner / Customer acknowledges and accepts by making use of it):

- (i) The preparation of this Lubrication Schedule is governed by our standard Terms & Conditions of Sale (a copy of which can be found at the back of your Marine Lubricants Agreement and/or is available on request).
- (ii) In recommending which of our lubricants is most suited to a given piece of machinery, we have relied on information about that machinery which you or a third party have provided to us orally or in writing. Accordingly, we do not accept any liability for any inaccuracy in that information. If you become aware of any such inaccuracy, you should inform us immediately.
- (iii) This Lubrication Schedule replaces all previously dated lubrication recommendation schedules & surveys, which should be removed from use and destroyed.



Lubricant Availability

- [C] Core Product available in all ports offering a CORE product range.
- [M] Main Product available in all ports offering a MAIN product range.
- [F] Full Product available in all ports offering a FULL product range.

All orders shall be subject to the limits set out in the Castrol Directory of Marine Services (for example the restrictions set out in the Castrol Directory of Marine Services in respect of maximum or minimum delivery quantities or lead time required by us). Deliveries of any marine lubricant will be subject to availability at the port in question and we shall not be liable to you if any grade or method of delivery set out in the Castrol Directory of Marine Services as being normally available is not available.



TANK CAPACITIES

<u>TANK</u>	<u>LOCATION</u>	<u>CAPACITY</u>
No Tank Details Recorded		0

MACHINERY LUBRICANTS

Main Propulsion

Main Engine

Caterpillar

Type: 3516 B TA HP

Crankcase & Cylinders

Vecton 15W-40 [C]

M.E. Gearbox

Reintjes

Type: WLS930

Enclosed Gears

MHP 153 [C]

CPP Unit

Kamewa

Type: CPP

Hydraulic System

Hyspin AWH-M 68 [C]

Propeller Shaft Bearings

Railko

Type: CY 160 LS

Bearings

MHP 153 [C]

Shaft Bearings & Seals

JCM

Type: MK2-M

Seals

MHP 153 [C]

Steering Gear

Steering Gear

Sperry

Hydraulic System

Hyspin AWH-M 46 [C]

Hydraulic Cylinder

Spheerol SX2 [C]

Bearings

Rudder Carrier

SKF

Bearings

Spheerol SX2 [C]

Propeller Units/Thrusters

Bow Thruster

Promac

Type: FP 70/580

Enclosed Gears

Alpha SP 150 [C]

Power Generation

A.E. Diesel

Caterpillar

Type: 3304B Di-T

Crankcase & Cylinders

Vecton 15W-40 [C]



Emergency Machinery

Emergency Fire Pump

Azcue

Type: CA-50/7A

Grease Points

Spheerol SX2 [C]

Emergency Fire Pump Engine

Lombardini

Type: 15LD

Crankcase & Cylinders

Vecton 15W-40 [C]

Engine Room Ancillary Machinery

Stabilisers

Vosper Thornycroft

Type: 200

Hydraulic System

Hyspin AWH-M 46 [C]

F.O. Separator

WESTFALIA SEPERATOR AG.

Type: OTC 2-02-137

Enclosed Gears

Hyspin AWH-M 100 [C]

Hotel Services

Air Conditioning Compressor

Crankcase & Cylinders

Aircol SW 68 [M]

Deck Machinery

Anchor Winch

Kraaijeveld

Enclosed Gears

Alpha SP 220 [C]

Capstans

Ima Trans

Type: C303, EKS 1150

Enclosed Gears

Alpha SP 150 [C]

Deck Hydraulic Power Pack

Koppen & Lethem

Hydraulic System

Hyspin AWH-M 46 [C]

Salvage Pump Engine

Yanmar

Type: L48

Crankcase & Cylinders

Vecton 15W-40 [C]

Miscellaneous

Electric Motors, Pumps & Fans

Grease Points

Spheerol SX2 [C]

Lifeboat Machinery

Boarding RIB Engine

Yanmar

Type: 6LP

Engine Crankcase

Vecton 15W-40 [C]

ZF Gearbox

Transmax Dex III
Multivehicle [F]

Hydraulic Bucket System

Transmax Dex III
Multivehicle [F]

Hydraulic Steering
System

Hyspin AWH-M 15 [C]

MOB Boat Davit

SEC Davits BV

Enclosed Gears

Alpha SP 150 [C]

Reduction Gears

Hyspin AWH-M 46 [C]

Grease Points

Spheerol SX2 [C]

General Lubrication

General Oiling

Oil Lubrication

MHP 153 [C]

General Greasing (Below Decks)

Grease Points

Spheerol SX2 [C]

General Greasing (Deck Machinery)

Grease Points

Biotac MP [M] *
(Plain Bearings only)

VGP Approved

Open Gears & Wire Ropes

Brush Applied

Biotac MP [M]

VGP Approved

Spare Parts

Brush Applied

Safecoat DW 33

Health, Safety and Environment Information

The following Health and Safety and Lubricant Management advice are extracts from the full health, safety and environmental information which is provided for all products in the relevant Material Safety Data Sheets, (MSDS), which should be held on board the vessel. The MSDS's give full details of potential hazards, precautions and first aid measures, together with advice on environmental effects and disposal of used products. Refer to www.castrol.com/marine and the Directory of Marine Services for more information.

SPILLS

- Contain and recover spilled material using sand or other suitable inert absorbent material.
- Product contaminated rags, paper or material used to absorb spillages, represent a fire hazard, and should be disposed of safely immediately after use.
- Spilled material may make surfaces slippery.

HANDLING

- Avoid contact with eyes.
- If splashing is likely to occur wear a full face visor or chemical goggles as appropriate.
- Avoid frequent or prolonged skin contact with fresh or used product.
- If injection through skin of high pressure lubricant has occurred, seek urgent medical attention.
- Avoid inhalation of lubricant mists, vapours and fumes.
- Take particular care to avoid contact with all used oils and combustion deposits.
- Good working practices, high standards of personal hygiene and plant cleanliness must be maintained at all times.
- Wash hands thoroughly with soap or cleanser and water after contact.
- Use disposable cloths and discard when soiled.
- Do not put soiled cloths into pockets.

STORAGE

- Drums should be stored under cover away from heat and sources of ignition.
- Store drums thoroughly lashed, under cover and tightly sealed, preventing water accumulating on drum ends. It is possible that water ingress may occur if drums are stored vertically, and a solution is to store horizontally but well secured.
- Where outdoor storage is unavoidable, drums should be covered.
- Ensure drums are tightly sealed after use.

DISPOSAL CONSIDERATIONS

- Dispose of via an authorised person/ licensed waste disposal contractor in accordance with local regulations.
- Incineration may be carried out under controlled conditions provided that local regulations for emissions are met.
- At sea, used or unwanted product should be stored for eventual discharge into port approved waste oil disposal facilities.

FIRE-FIGHTING MEASURES

- Use foam, dry powder or water fog. Do not use water jets.
- Fires in confined spaces should be dealt with by trained personnel wearing approved breathing apparatus.
- Water may be used to cool nearby heat exposed areas/objects/packages.
- Avoid spraying directly into storage containers because of the danger of boil-over.
- Toxic fumes, smoke, carbon dioxide and hazardous gases, including carbon monoxide may be evolved on burning or exposure to heat.

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MACHINERY LUBRICANTS **(CONDENSED)**

Main Engine	Crankcase & Cylinders	Vecton 15W-40 [C]
M.E. Gearbox	Enclosed Gears	MHP 153 [C]
CPP Unit	Hydraulic System	Hyspin AWH-M 68 [C]
Propeller Shaft Bearings	Bearings	MHP 153 [C]
Shaft Bearings & Seals	Seals	MHP 153 [C]
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Steering Gear	Hydraulic System	Hyspin AWH-M 46 [C]
	Hydraulic Cylinder	Spheerol SX2 [C]
	Bearings	
Rudder Carrier	Bearings	Spheerol SX2 [C]
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Bow Thruster	Enclosed Gears	Alpha SP 150 [C]
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A.E. Diesel	Crankcase & Cylinders	Vecton 15W-40 [C]
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Emergency Fire Pump	Grease Points	Spheerol SX2 [C]
Emergency Fire Pump Engine	Crankcase & Cylinders	Vecton 15W-40 [C]
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Stabilisers	Hydraulic System	Hyspin AWH-M 46 [C]
F.O. Separator	Enclosed Gears	Hyspin AWH-M 100 [C]
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Air Conditioning Compressor	Crankcase & Cylinders	Aircol SW 68 [M]
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Anchor Winch	Enclosed Gears	Alpha SP 220 [C]
Capstans	Enclosed Gears	Alpha SP 150 [C]
Deck Hydraulic Power Pack	Hydraulic System	Hyspin AWH-M 46 [C]
Salvage Pump Engine	Crankcase & Cylinders	Vecton 15W-40 [C]
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Electric Motors, Pumps & Fans	Grease Points	Spheerol SX2 [C]
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Boarding RIB Engine	Engine Crankcase	Vecton 15W-40 [C]	
	ZF Gearbox	Transmax Dex III Multivehicle [F]	
	Hydraulic Bucket System	Transmax Dex III Multivehicle [F]	
	Hydraulic Steering System	Hyspin AWH-M 15 [C]	
MOB Boat Davit	Enclosed Gears	Alpha SP 150 [C]	
	Reduction Gears	Hyspin AWH-M 46 [C]	
	Grease Points	Spheerol SX2 [C]	
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General Oiling	Oil Lubrication	MHP 153 [C]	
General Greasing (Below Decks)	Grease Points	Spheerol SX2 [C]	
General Greasing (Deck Machinery)	Grease Points	Biotac MP [M] * (Plain Bearings only)	VGP Approved
Open Gears & Wire Ropes	Brush Applied	Biotac MP [M]	VGP Approved
Spare Parts	Brush Applied	Safecoat DW 33	
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