

your global specialist



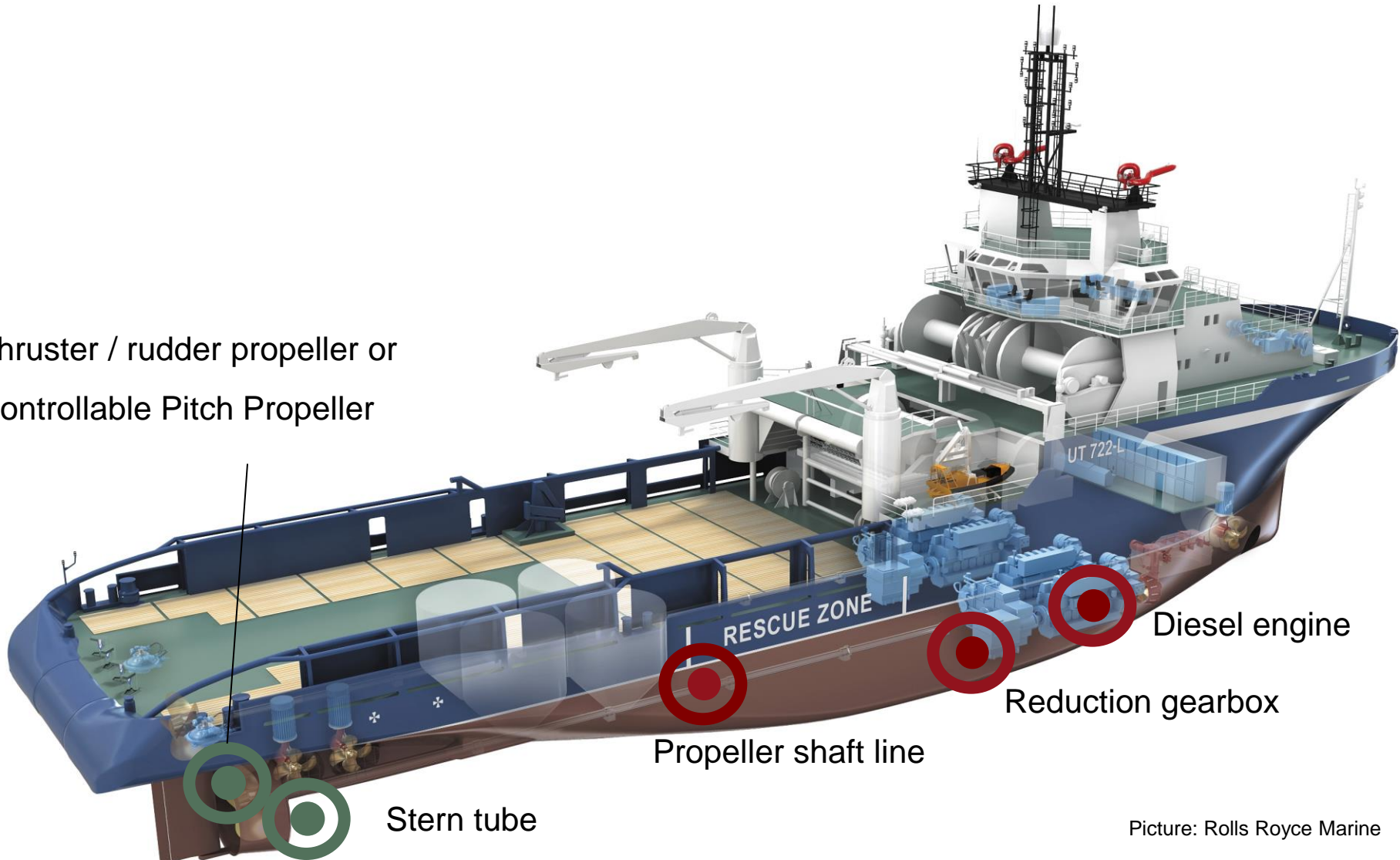
Lubricating points at ships.

Overview.

Lubricating points on an AHTS vessel Main propulsion.

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Thruster / rudder propeller or
Controllable Pitch Propeller

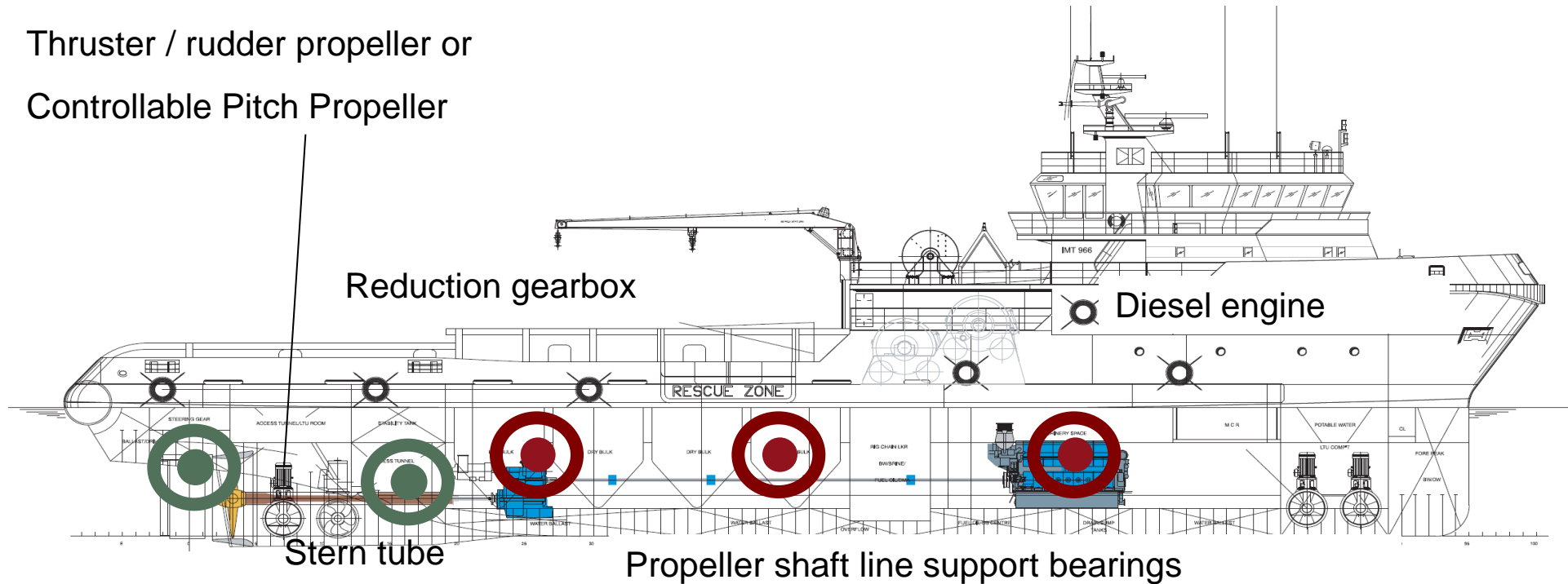


Picture: Rolls Royce Marine

Lubricating points on an AHTS vessel Main propulsion.

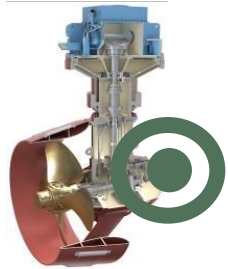
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Thruster / rudder propeller or
Controllable Pitch Propeller

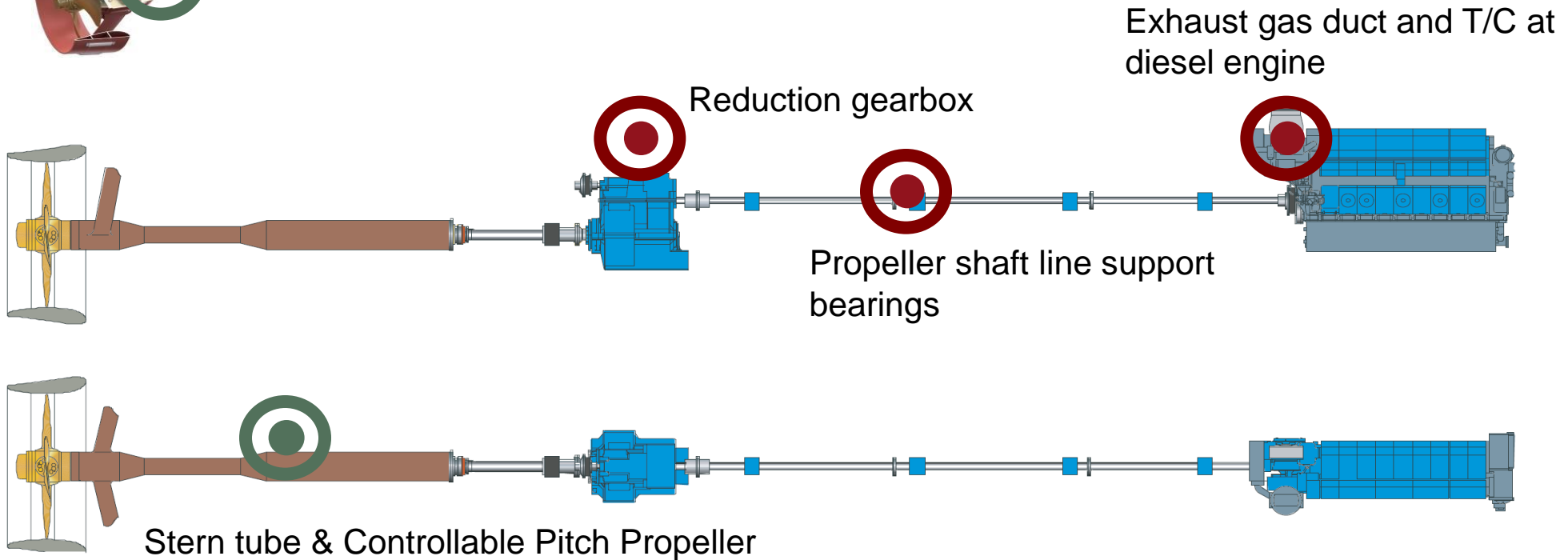


Picture: MAN Diesel SE
General arrangement of the IMT-designed AHTS for Swire Pacific

Lubricating points on an AHTS vessel Main propulsion.



Thruster / rudder propeller



Picture: MAN Diesel SE
Side and top view of the port-side propulsion system arrangement

Lubricating points – Main propulsion.



Application	Product
Diesel engine - Screws on turbocharger	Klüberpaste HEL 46-450
Marine reduction gearbox	Klüberoil GEM 1-100 N Klübersynth GEM 4-100 N
Stern tube for Controllable and Fixed Pitch Propeller	Klüberbio RM 2-150 Klüberbio RM 2-100
Controllable Pitch Propeller servo oil	Klüberbio EG 2-100 (under development) Klüberbio EG 2-68 (under development)
Propeller shaft line support bearings	Klüberplex BEM 41-132
Thruster / rudder propeller	Klüberbio EG 2-150 Klüberbio EG 2-100 (under development) Klüberbio EG 2-68 (under development)

Lubricating points – Main propulsion Two-stroke Diesel engine.

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Open gear drive between turning gear pinion and flywheel is used during maintenance work in order to bring the crankshaft and the running gear in any required position.

Crankshaft may rotate for another hour after switching off the hot diesel engine to ensure constant heat dissipation.

Surface pressures on the tooth flanks have become very high.



Lubricating points – Main propulsion Two-stroke Diesel engine.

The logo for Klüber Lubrication, featuring the word "KLÜBER" in a large, bold, yellow font with a double vertical line above it, and the word "LUBRICATION" in a smaller, white, italicized font below it, all set against a black background.

Application

Two-stroke Diesel engine – Flywheel and pinion
(open gear)

MAN Diesel 2-stroke engines, crank pin bearing,
during assembly

Product

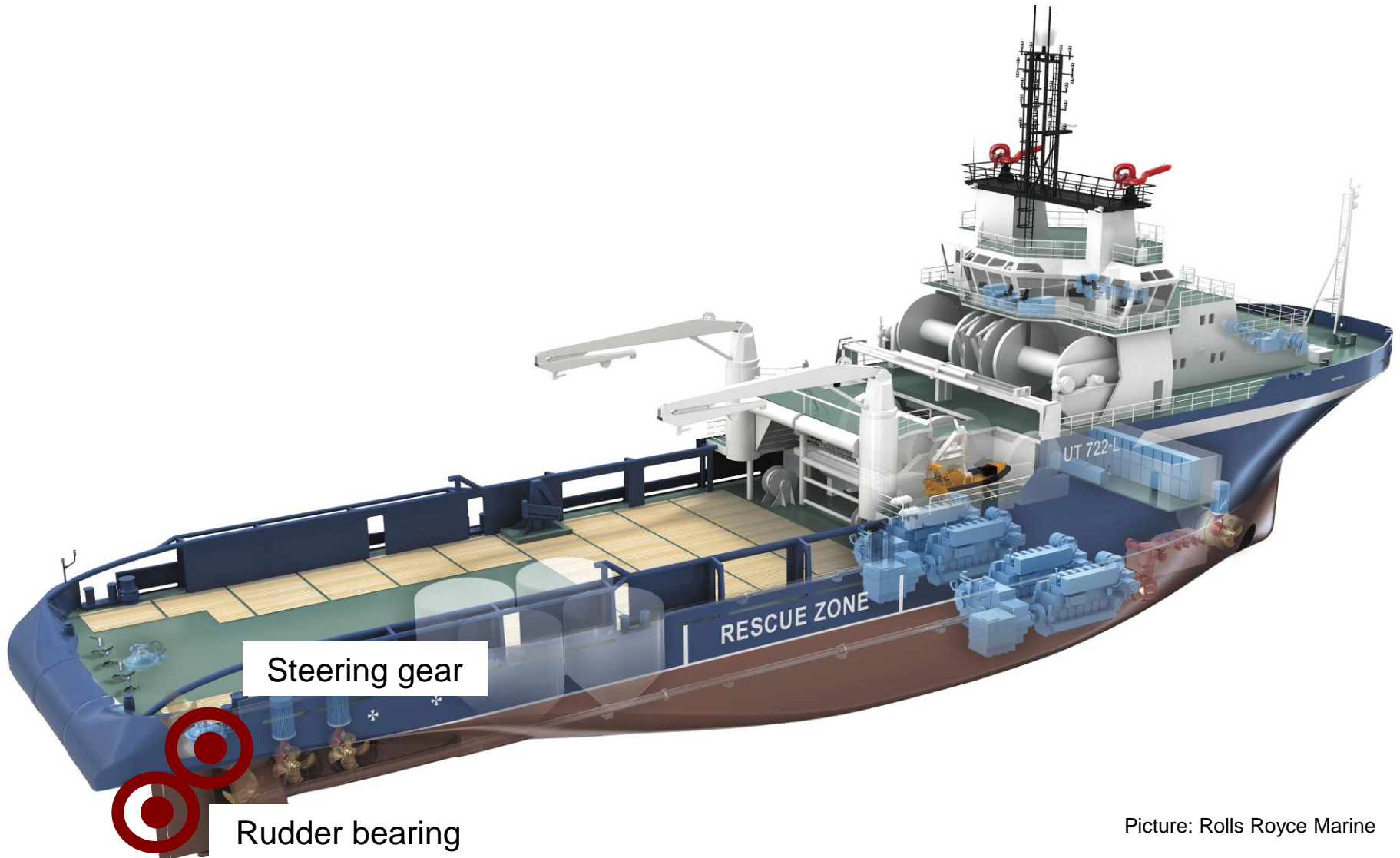
Klüberfluid C-F 3 ULTRA (for Wartsila two-stroke
engines)

Klüberplex AG 11-462

Klüberpaste MR 46-401

Lubricating points on an AHTS vessel Steering gear.

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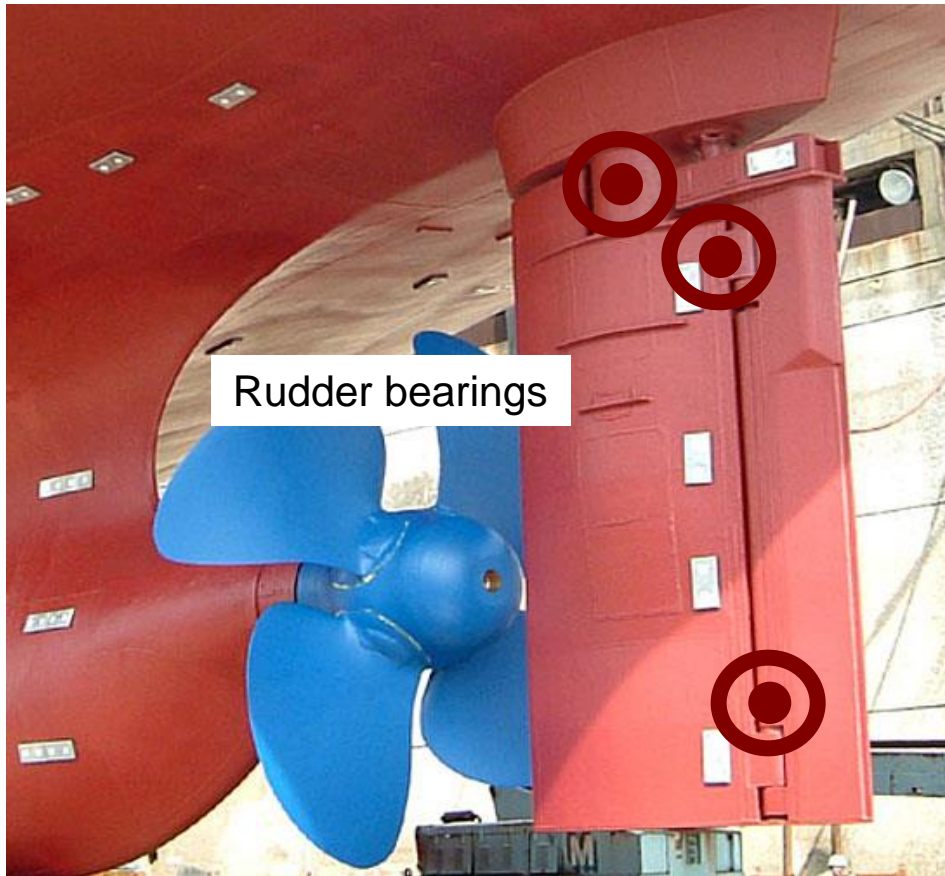


Picture: Rolls Royce Marine

Flap rudder and steering gear.



Flap rudder



Steering gear



Picture: Internet

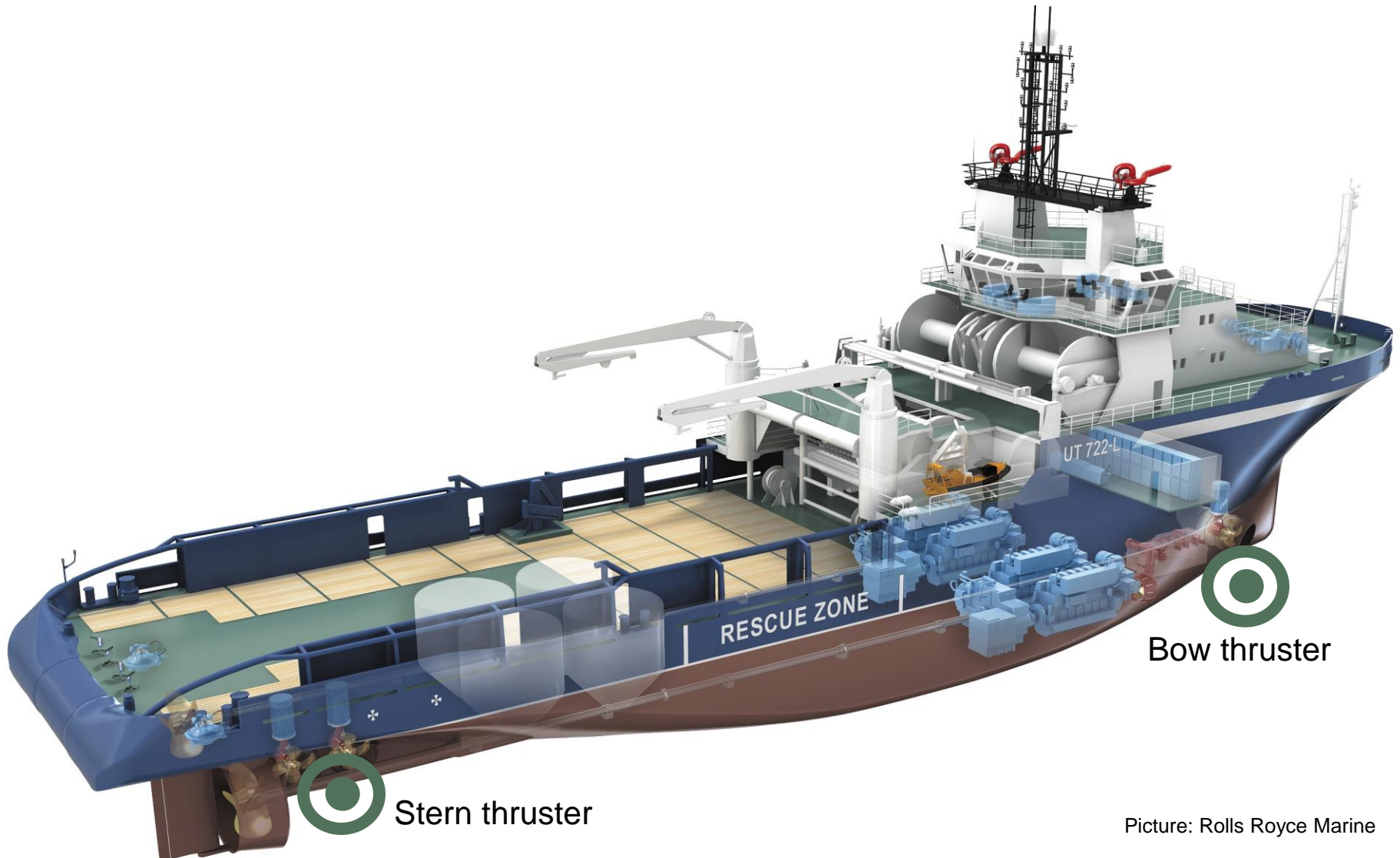
Lubricating points – Steering gear



Application	Product
Steering gear – hydraulic system	Biodegradable hydraulic oil under development
Steering gear – bearings	Klüberplex BEM 41-132 STABURAGS NBU 12 K
Rudder carrying bearing	Klüberplex BEM 41-132 STABURAGS NBU 12 K

Lubricating points on an AHTS vessel Thrusters.

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Picture: Rolls Royce Marine

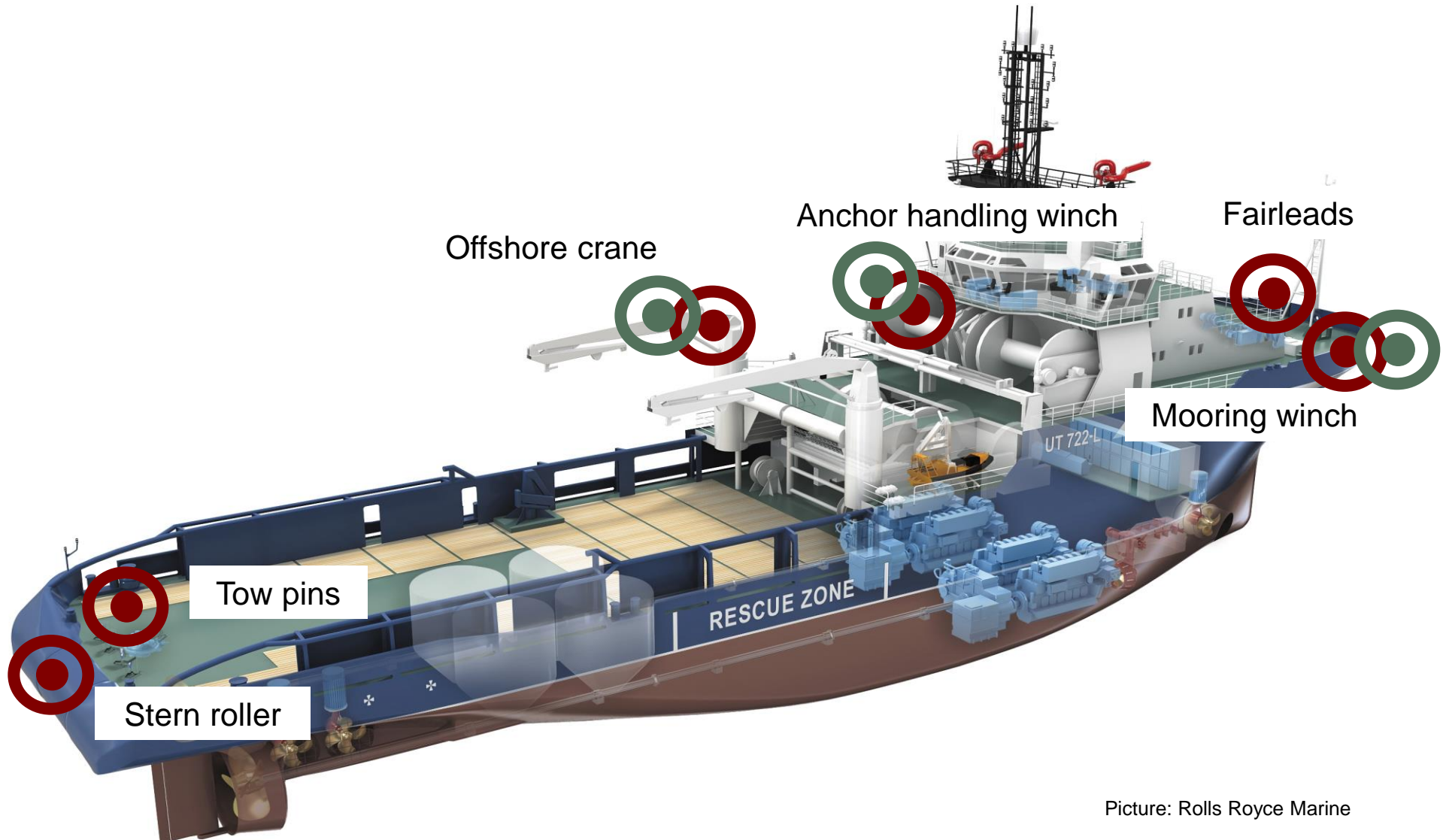
Lubricating points – Thrusters



Application	Product
Bow thruster	Klüberbio EG 2-150 Klüberbio EG 2-100 (under development) Klüberbio EG 2-68 (under development)
Stern thruster	Klüberbio EG 2-150 Klüberbio EG 2-100 (under development) Klüberbio EG 2-68 (under development)

Lubricating points on an AHTS vessel Deck machinery.

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Lubricating points – Deck machinery



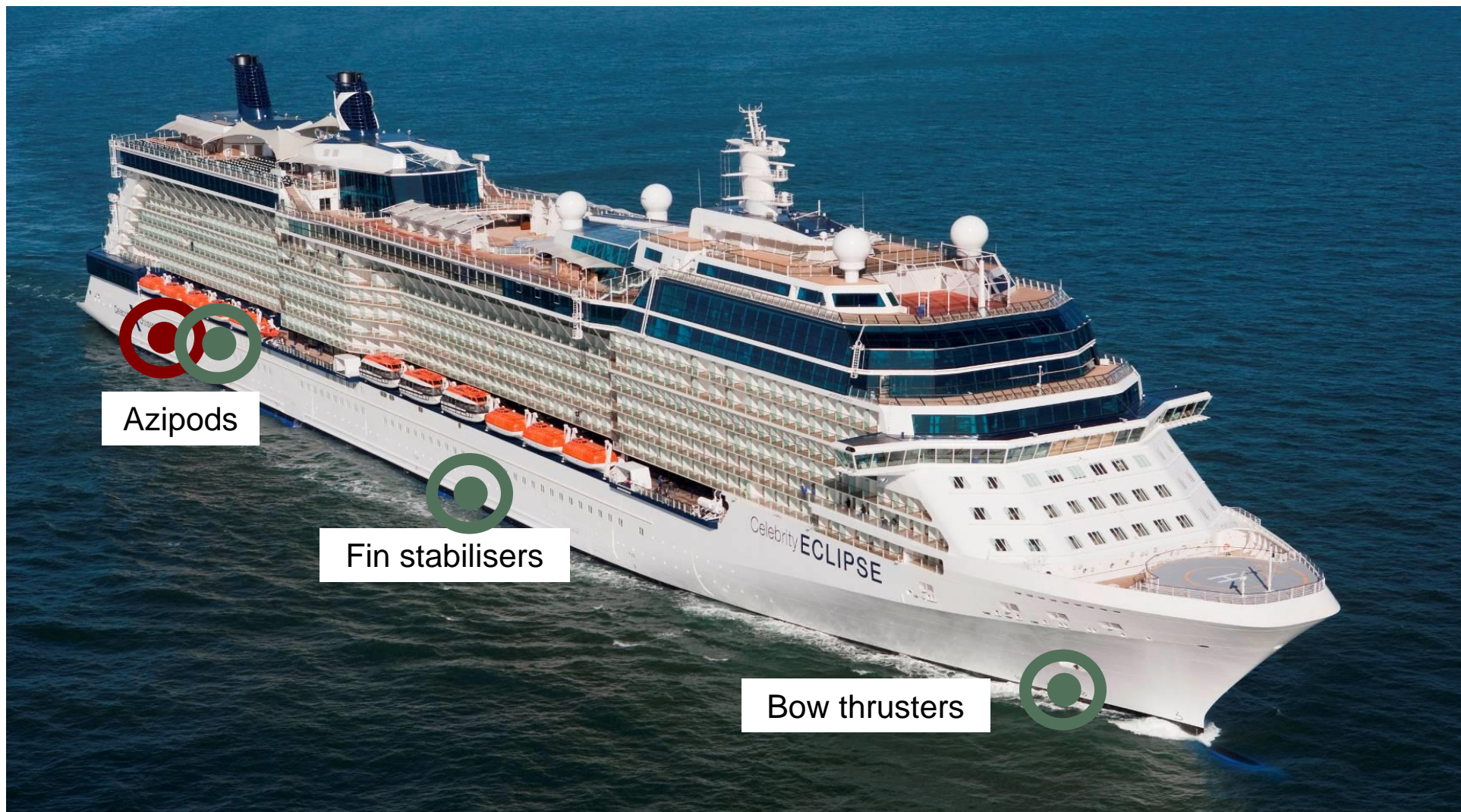
Application		Product
Mooring winch	Hydraulic system Bearings Enclosed gear Open gear	Biodegradable hydraulic oil under development Klüberplex AG 11-462 Klübersynth GEM 4-220 N Klüberplex AG 11-462
Anchor winch	Hydraulic system Bearings Open gear Spooling device	Biodegradable hydraulic oil under development Klüberplex AG 11-462 Klüberplex AG 11-462 Klüberfluid C-F 3 ULTRA Klüberplex AG 11-462
Fairlead		Klüberplex AG 11-462

Lubricating points – Deck machinery

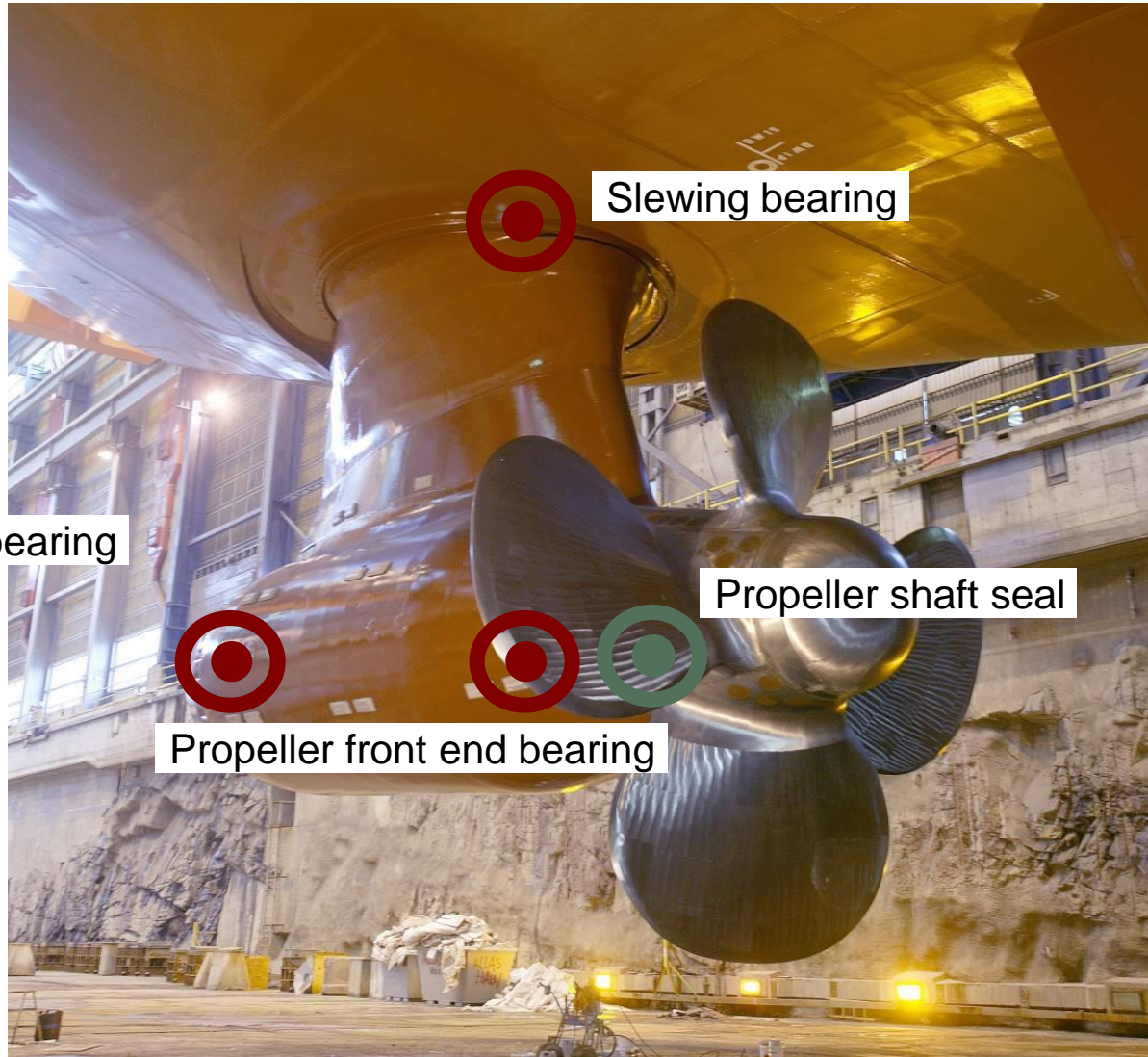


Application		Product
Offshore crane	Hydraulic system Bearings Open gear	Biodegradable hydraulic oil under development Klüberplex AG 11-462 Klüberplex AG 11-462
Stern roller bearing		Klüberplex AG 11-462
Steel wire rope		Klüberplex AG 11-462
Tow pins		Klüberplex AG 11-462

Below the water line – Cruise ships



Azipod.



Slewing bearing

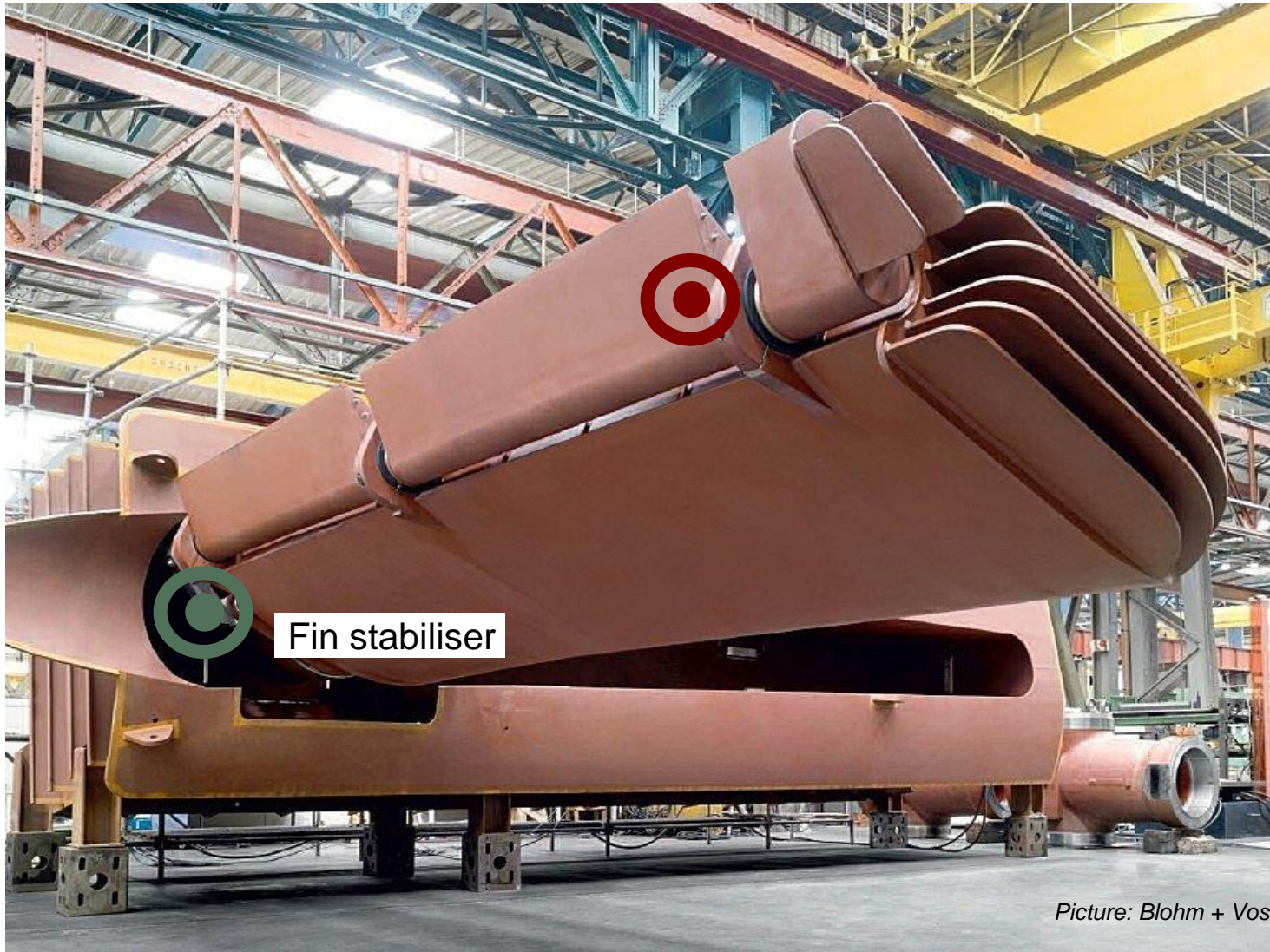
Thrust bearing

Propeller shaft seal

Propeller front end bearing

Fin stabiliser

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Picture: Blohm + Voss Industries

Below the water line – Cruise ships



Application	Product
Azipod Slewing bearing Thrust bearing Propeller bearing Propeller seal	Klüberfludi C-F 3 ULTRA Klübersynth GEM 4-320 N Klübersynth GEM 4-320 N Klüberbio RM 2-150 / RM 2-100
Fin stabiliser	Biodegradable hydraulic oil under development Klüberbio EG 2-150 STABURAGS NBU 30 K

Hotel service – Refrigerating and air conditioning compressors.

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Hotel service – Refrigerating and air conditioning compressors.



Application	Product
Cooling screw compressor Cooling piston compressor	Klüber Summit R 100 / 200 / 300
Compressed air screw compressor	Klüber Summit SH 32 / 46 / 68
Compressed air piston compressor	Klüber Summit DSL 68 / 100 / 125