

# YACHT.

## REPORT ON OIL ENGINE MACHINERY.

No. 6812

24 JUL 1929

pt. 4b.

19-7-1929 When handed in at Local Office 23-7-1929 Port of MANCHESTER  
Date, First Survey 14-5-29 Last Survey 16-7-1929  
Number of Visits 7

Single on the ~~Twin~~ ~~Triple~~ ~~Quadruple~~ Screw vessel "MAID MARION."  
Tons Gross Net

built at Manchester By whom built L. Gardner & Sons Ltd. Yard No. When built  
Engines made at Manchester By whom made L. Gardner & Sons Ltd. Engine No. 28170 When made 1929  
Donkey Boilers made at By whom made Boiler No. When made  
Horse Power 54 Owners Port belonging to  
Horse Power as per Rule 15 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted  
made for which vessel is intended Yachting

ENGINES, &c. Type of Engines Vertical, Reversing, Air Starting, 2 or 4 stroke cycle 2 Single or double acting Single  
Maximum pressure in cylinders 580 lbs/sq. in. Diameter of cylinders 8" Length of stroke 9 3/4" No. of cylinders 3 No. of cranks 3  
An of bearings, adjacent to the Crank, measured from inner edge to inner edge 14" Is there a bearing between each crank Yes.  
Revolutions per minute 400 Flywheel dia. 31 1/2" Weight 1159 lbs Means of ignition Heat of compression of fuel used Heavy Oil  
Crank Shaft, dia. of journals 4 3/4" as per Rule 4 3/4" Crank pin dia. 4 3/4" Crank Webs Mid. length breadth 6 1/2" Mid. length thickness 2 3/8" Thickness parallel to axis Solid  
Flywheel Shaft, diameter as per Rule 4 3/4" as fitted Intermediate Shafts, diameter as per Rule 4 3/4" as fitted Thrust Shaft, diameter at collars as per Rule 3" as fitted Specially considered

Tube Shaft, diameter as per Rule 4 3/4" as fitted Screw Shaft, diameter as per Rule 4 3/4" as fitted Is the tube shaft fitted with a continuous liner  
Bronze Liners, thickness in way of bushes as per Rule 1/4" as fitted Thickness between bushes as per rule Is the after end of the liner made watertight in the  
Propeller boss If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner

the liner does not fit tightly at the part between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive  
two liners are fitted, is the shaft lapped or protected between the liners Is an approved Oil Gland or other appliance fitted at the after end of the tube  
aft If so, state type Length of Bearing in Stern Bush next to and supporting propeller

Propeller, dia. Pitch No. of blades Material whether Moveable Total Developed Surface sq. feet  
Method of reversing Engines Camshaft driven Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes. Means of lubrication  
TO MAIN BEARINGS. Are the cylinders fitted with safety valves Yes. Are the exhaust pipes and silencers water cooled or lagged with

Insulating material WATER COOLED the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine  
Cooling Water Pumps, No. One on engine Is the sea suction provided with an efficient strainer which can be cleared within the vessel  
Bilge Pumps worked from the Main Engines, No. one Diameter 1 3/4" Stroke 2 1/2" Can one be overhauled while the other is at work

Pumps connected to the Main Bilge Line No. and Size How driven  
Ballast Pumps, No. and size Lubricating Oil Pumps, including Spare Pump, No. and size One 1 3/4" dia. & 7 1/2" effective stroke  
Are two independent means arranged for circulating water through the Oil Cooler Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge

Pumps, No. and size:—In Machinery Spaces  
In Holds, &c. Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size  
Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes Are the Bilge Suctions in the Machinery Spaces

ed from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges  
Are all Sea Connections fitted direct on the skin of the ship Are they fitted with Valves or Cocks  
Are they fixed sufficiently high on the ship's side to be seen without lifting the platform plates Are the Overboard Discharges above or below the deep water line

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel Are the Blow Off Cocks fitted with a spigot and brass covering plate  
What pipes pass through the bunkers How are they protected  
What pipes pass through the deep tanks Have they been tested as per Rule

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times  
Is the arrangement of valves and their connections such as to prevent the possibility of water passing from the sea or from water tanks into the cargo or machinery spaces, or from one  
compartment to another Is the Shaft Tunnel watertight Is it fitted with a watertight door worked from

If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork  
Main Air Compressors, No. One on engine No. of stages 2 Diameters 1 3/8" & 4 1/2" Stroke 2 1/2" Driven by crank shaft extension  
Auxiliary Air Compressors, No. 1 Gardner No. of stages one Diameters 1 3/8" Stroke 3 3/8" Driven by Gardner Engine  
Small Auxiliary Air Compressors, No. No. of stages Diameters Stroke Driven by

Scavenging Air Pumps, No. crankcase compression Diameter Stroke Driven by  
Auxiliary Engines crank shafts, diameter as per Rule 1 3/8" as fitted 1 3/8" Running test only  
AIR RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule Safety valves fitted on compressor Plug in end. (3' high)

Can the internal surfaces of the receivers be examined Yes What means are provided for cleaning their inner surfaces  
Is there a drain arrangement fitted at the lowest part of each receiver Yes  
High Pressure Air Receivers, No. Not fitted Cubic capacity of each Internal diameter thickness  
Seamless, lap welded or riveted longitudinal joint Material Range of tensile strength Working pressure by Rules

Starting Air Receivers, No. 2. 183617 Total cubic capacity 8 CUB. FT. Internal diameter 10" thickness 1/4" sides, 1" centre of base  
Seamless, lap welded or riveted longitudinal joint SEAMLESS Material Mild Steel Range of tensile strength 28/32 Tons Working pressure by Rules 460 lbs/sq. in.  
CHESTERFIELD TYPE

W315-0085(112)



IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

PLANS. Are approved plans forwarded herewith for Shafting *yes*  
(If not, state date of approval)

Receivers *yes*

Separate Tanks *✓*

Donkey Boilers

General Pumping Arrangements

Oil Fuel Burning Arrangements

SPARE GEAR

The foregoing is a correct description,

L GARDNER & SONS, LIMITED.

William Gardner. Manufacturer.

Dates of Survey while building  
During progress of work in shops - - 1929. May 5<sup>th</sup>, June 7<sup>th</sup>, 19<sup>th</sup>, 26<sup>th</sup>, 28<sup>th</sup>, July 2<sup>nd</sup>, 16<sup>th</sup>.  
During erection on board vessel - -  
Total No. of visits

Dates of Examination of principal parts—Cylinders 26-6-29 Covers 26-6-29 Pistons 19-6-29 Rods *✓* Connecting rods 16-7-29  
Crank shaft 14-5-29 Flywheel shaft *✓* Thrust shaft 12-6-29 Intermediate shafts Tube shaft  
Screw shaft Propeller Stern tube Engine seatings Engines holding down bolts

Completion of fitting sea connections Completion of pumping arrangements Engines tried under working conditions in shop 16-7-29  
Crank shaft, Material Mild Steel Identification Mark 79 *CF* Flywheel shaft, Material *✓* Identification Mark *✓*  
Thrust shaft, Material Mild Steel Identification Mark 82 *CF* Intermediate shafts, Material Identification Marks  
Tube shaft, Material Identification Mark Screw shaft, Material Identification Mark

Is the flash point of the oil to be used over 150° F.

Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with

Is the vessel (not being an oil tanker) fitted for carrying oil as cargo

If so, have the requirements of the Rules been complied with

Is this machinery duplicate of a previous case *yes*

If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c.) The above 3 cylinders. Messrs. Thompsons N° 1087. Mch. Report 6699. The above main engines of Gardner's Type 3J5 and one Gardner petrol O.V.C. Type single cylinder vertical engine N° 28125 at 770 R.P.M. with its single stage air compressor have been built under Special Survey, and the materials tested in accordance with the rules of this Society. The materials so far as can be seen are sound and the workmanship is good. The engines proved satisfactory under shop tests on full load. The above engines are in my opinion eligible for the notation of *L.M.C.* with date when fitted on board the vessel in accordance with the rule requirements.

Amt. charged to Messrs L. Gardner & Sons  $\frac{4}{5}$  (£9-0-0) = £7-4-0

The amount of Entry Fee ... £ : *✓* When applied for, 23-7-1929  
Special (See note above) ... £ 7 : 0 : 0  
Donkey Boiler Fee ... £ : *✓*  
Travelling Expenses (if any) £ : *✓* When received, 30-8-29

Committee's Minute

FRI. 30 AUG 1929

Assigned see Minute on

San Rpt 13658

J. J. Campbell  
Engineer Surveyor to Lloyd's Register of Shipping.

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Lloyd's Register  
Foundation



L. Gardner & Sons, Ltd.

Yacht "MAID MARION".

Plans herewith:-

3J5 Engine.

General Arrgt.

Flywheel.

Crankshaft.

Thrust Shaft.

Connecting Rod.

Air Compressing Cylinder.

Clutch.

Arrgt. of Water & Bilge Pumps.

Air Bottles.

Propeller Shaft.

Air Compressor Connecting Rod.

OVC Engine.

General Arrgt.

Thrust Shaft.

Crankshaft.

Cylinder.

Connecting Rod.

Air Compressing Cylinder.

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7-29

6-7-29

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