

GLASGOW REPORT No. 53853

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T.S. ENGINES NO. E.W. 105.

SPARE GEAR LISTS.

COMPLETE LIST.

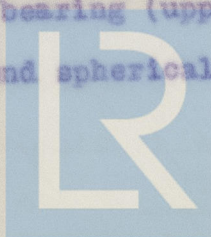
LIST OF SPARE GEAR FOR MAIN ENGINE, LLOYD'S REQUIREMENTS:

- 1 main piston complete with two skirts (one upper and one lower), rings, studs and nuts.
- 5 main piston rings.
- 2 centre connecting rod top end bolts and nuts.
- 2 centre connecting rod bottom end bolts and nuts.
- 2 side crosshead bolts and nuts.
- 2 side connecting rod bottom end bolts and nuts.
- 2 side rod bolts and nuts (transverse end).
- 2 main bearing studs and nuts.
- 1 set coupling bolts and nuts for crankshaft.
- 1 bevel wheel for camshaft drive.
- 1 spur wheel for camshaft drive.
- 2 back fuel valves complete with pilot casing and spring.
- 2 front fuel valves complete with pilot casing and spring.
- 16 spray plates.
- 1 non-return starting valve complete for main cylinder.
- 1 relief valve complete for main cylinder.
- 1 scavenge pump delivery valve complete with guard, disc, and springs.
- 1 fuel pump body complete.
- 1 scavenge pump suction valve complete with guard, disc and springs.

SPARE GEAR OVER LLOYD'S REQUIREMENTS:

- 1 bevel wheel for camshaft drive.
- 1 spur wheel for camshaft drive.
- 2 back fuel valves complete with pilot casings and springs.
- 2 front fuel valves complete with pilot casings and springs.
- 1 spare main engine piston head with rings complete.
- 2 cylinder liners each complete with cast steel jacket and steel rings shrunk on and upper piston lubricating fittings.
- 5 main piston rings.
- 1 centre connecting rod top end bearing (upper and lower halves) complete with liners.
- 1 centre connecting rod bottom end spherical bearing (upper and lower halves) with liners.

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T.S. ENGINES NO. E.W.105 - SPARE GEAR LISTS.  
COMPLETE LIST (Contd.)

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- 2 side connecting rod bottom end spherical bearings (upper and lower halves) with liners.
- 1 set of scavenge pump suction and delivery valve discs and springs for 1 pump.
- 2 priming pump rams and guides.
- 2 H.P. fuel pump oil bottles.
- 6 standard 1/4 in. bore H.P. valve spindles.
- 36 cup leather washers for H.P. distribution box.
- 4 H.P. fuel oil filter tubes.
- 6 - 1/4 in. bore H.P. cone union connections.
- 2 - 1/8 in. bore H.P. cone union connections.
- 3 dummy tails for 1/4 in. bore H.P. cone unions.
- 1 gross assorted copper and whitemetal washers.
- 2 main lower piston water service elbow castings.
- 1 spare length of tube for cooling water elbow pipes.
- 2 spare cast iron relief valves, for main cylinder.
- 1 (12ft. 0 in.) length of 1/4 in. bore H.P. fuel oil steel pipe, complete with union nut and tail.
- 12 ft. of .04 in. thick brass strip, 6 in. wide, for bearing liners.
- 12 ft. of .08 in. thick brass strip, 6 in. wide for bearing liners.
- 4 main upper piston water service rubber hoses.

SPARE SPRINGS:

- 4 cylinder relief valves.
- 1 starting valve.
- 1 non-return starting valve.
- 24 scavenge pump suction and delivery valves.
- 12 fuel valve lever return springs.
- 12 fuel valve pilot ram springs.
- 8 fuel pump suction valves.
- 4 fuel pump relief valves.

NOTE:- Above springs are additional to springs already fitted to spare parts.

SUPPLEMENTARY LIST OF SPARE GEAR:

- 1 top and 1 bottom piston rod.
- 20 main piston rings, 10 m/m wide.
- 8 main piston scraper rings.
- 8 scavenge pump suction valve springs.
- 3 scavenge pump piston rod scraper rings.
- 1 scavenge pump top end bearing.
- 1 scavenge pump connecting rod bottom end bearing.
- 6 scavenge pump delivery valve half discs.
- 16 scavenge pump delivery valve springs.
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S. ENGINES NO. E.W.105 - SPARE GEAR LISTS.  
 COMPLETE LISTS (Contd.)

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- 1 main bearing (upper and lower halves with liners).
- 1 side crosshead complete with bolts, nuts, shoes, etc.
- 1 centre connecting rod top end bearing.
- 2 starting valves spindles.
- 1 N.R. starting valve spindle.
- 6 thrust pads complete.
- 1 fuel valve lever complete with roller.
- 4 fuel cam peaks.
- 6 piston water service glands.
- 1 upper piston water service swinging link and rubber hose.
- 1 lower piston water service swinging arm.
- 4 fuel pump relief valves.
- 4 each fuel pump suction, delivery and check valves.
- 2 indicator cocks.
- 6 centre guide holding-up plates.
- 1 six-feed Kirkham lubricator.
- 2 jacket water thermometers.
- 20 ft. 1/8 in. bore by 1/4 in. o.d. copper pipe.
- 12 ft. 6 m/m by 12 m/m steel pipe.
- 1 hose and connection for draining guides.
- 6 piston water service gland springs.
- 4 fuel pump governor sleeve springs.
- 16 rubber rings for piston head.
- 28 rubber rings for cylinder liners.
- 8 rubber rings for top guides.
- 24 rubber rings for cylinder lubricators.

~~SPARE ARMATURE FOR TACHOMETER~~

SPANNERS AND SPECIAL TOOLS:

- Single ended open jaw spanners for general purposes,  
 3/8" to 1 1/2" inclusive, advancing by 1/8"..... 7 set
- Ring spanner for fuel pump ram guide nuts ..... 1
- Open jaw striking spanner for coupling bolt nuts..... 1 each.
- Open jaw spanner for intermediate crosshead nuts in  
 fuel pump..... 1
- Spanners for piston water service. .... 1 each.
- Spanner for fuel valve nuts..... 2
- Star spanners for general purposes, say 2", 2 3/4" and  
 3 1/2" or equivalent, as suitable..... 1 set
- Spanner for relief and starting valve gland screws..... 1
- Skeleton spanners for general purposes, say 2", 2 3/4"  
 and 3 1/2" or equivalent, as suitable..... 1 set
- Spanner for nuts on transverse..... 1
- Ring spanner for fuel valve spray plugs..... 1
- Ring spanner for H.P. fuel oil filter..... 1
- Spanner for upper piston rod bearing studs in way of  
 transverse..... 1
- Spanner /

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ENGINES NO. E.W.105 - SPARE GEAR LISTS.  
COMPLETE LISTS (CONTD.)

Spanner for lower piston water service gland nut.....	1
Hexagon box spanners for general purposes, say 5/8", 3/4", 7/8" and 1" or equivalent, as suitable.....	1 set
Box spanner for tap bolts in centre crosshead guide shoes.....	1
Clawfoot spanners for general purposes, say 5/8" and 3/4" or equivalent, as suitable.....	1 set
Clawfoot spanner for bearings and gears in camshaft gear boxes and bracket.....	1
Clawfoot spanner for lower piston water service connections.....	1
Handle for turning valve spindle on H.P. oil fuel filter.....	3
Key for screws securing cam peaks.....	1
Tool for withdrawing filter tubes from H.P. fuel oil filter.....	1
Eye bolts, for general purposes.....	1 set
Pin spanners for air starting valves.....	1
Rod for withdrawing fuel pump valves.....	2
Packing former for fuel valve.....	1
Covers for cylinder liners and pistons.....	1 each
Holder for cleaning filter on H.P. distribution box....	1
Cutter for spherical ends of H.P. balancer pipes an fuel valve.....	1
Eye bolt for withdrawing pilot rams .....	1
Packing drawer for water service glands.....	1
Hook eyebolt for bottom end bolts.....	4
Lever for closing fuel valve needles.....	2
Wear down gauge for crankshaft bearing.....	1
Plates for holding centre guide shoe.....	2
Packing former for relief and non-return starting valve.....	1
Spanners for crankshaft oil connections.....	1 each
Supporting bar for side crosshead.....	(2 bars 4 studs.)
Spanner for scavenge pump crosshead.....	1
Lifting eyebolts for pistons.....	1 each
Eyebolt for lifting top half of main spherical together with main bearing keep.....	3
Lifting eyebolt for piston and transverse.....	1
Gauge for transverse.....	1
Locating plug (top).....	16
Locating plug (bott.).....	16
Gauge for centre crosshead guide.....	1
Gauge for thrust shaft collar position.....	1
Reseating tool for fuel pump delivery chamber.....	1
Tool for withdrawing fuel valve spindle.....	1
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ENGINES NO. E.W.105 - SPARE GEAR LISTS.  
COMPLETE LISTS (Contd.)

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Wear down gauge for thrust shaft.....	1
Standard scraping tool for grooves in fuel valve nozzles.	1
Seating tool for fuel valve pilot valve.....	1
Seating tool for H.P. oil fuel filter valves.....	1
Star spanner for bottom piston rod stud nut.....	1
Extended stud driver for tapping holes in bottom piston..	1
1/4" B.S.P. left hand die, stock & tap.....	1
Wear down gauge for pistons.....	1
Piston ring guide for the main engines.....	1
1 3/4" lathe carrier for fuel pump rams.....	1
1 Brass Gun.	

NOTE:- Items which appear twice, only to be supplied once.

REMARKS:

The following to be supplied by the Engine Builders:-

8 gauges for the H.P. fuel pumps.				
2	"	"	"	starting air.
2	"	"	"	scavenging pumps.
2	"	"	"	forced lubrication.
2	"	"	"	jacket water system.
2	"	"	"	piston water system.



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