



No. 40 Autumu 2021 www.gardnerengineforum.co.uk



Engine Foram

Membership

Application

Title	Mr / Mrs / Miss / Dr / 0	Mr / Mrs / Miss / Dr / Other				
Forename(s)						
Surname						
Address						
			Post	Code		
Telephone No			Ex-D	rectory	Yes/No	
Mobile Telephone Number						
Email Address *						
Engine Model						
Engine Serial No						
Engine Date						
Engine Application	Stationary	Road	М		larine .	
Name of vehicle / vessel						
Any other information						
Signed			Dated			
	pership list and circulate to memb and therefore receive a copy pleas No Thank You		membersh	p number, na	me and address	
membership where possible. If s Membership detail	ls,are maintained on a computer i	t be passed on to any third po ating the the Forum. database accessible to author	arty and wil	I only be used	for communicating	
Payable by cheque, standing Cheque's to be made out to	annum (UK) renewable on the order mandate or electronic fi Gardner Engine Forum. omplete the form below.downl	und transfer.	n the webs	iite		
For electronic funds transfer Send the completed form to Mrs J M Gray - Treasurer.Gar Email:- gardnerengineforum/	rdner Engine Forum 29 Venty	will contact you with the b				

Gardner Engine Forum Philosophy

The aims of the Forum are to promote and foster interest in all Gardner engines"

Forum Officers

Chairman: John Naylor. Thatched Folly. Lindow End, Mobberley. Knutsford. WA16 7BA Tele 01565 872222

Secretary. Linda Kemp See below for contact details

Treasurer.& Membership Secretary Judith Gray 29 Verity Walk Wordsley Stourbridge West Midlands DY8 4XS Tele 01384 827745

Editor-Webmaster-Vice Chairman. Steven Gray 29 Verity Walk, Wordsley, Stourbridge, West Midlands. DY8 4XS Tele 01384 827745

Andrew & Linda Kemp. Korna Cottage, Works Lane, Barnstone, Notts. NG13 9JJ Tele 01949 860867

Contact email address gardnerengineforum@blueyonder.co,uk

Note 1: Please note that all information in this publication is given in good faith and is not necessarily checked for accuracy and hence the Gardner Engine Forum cannot accept responsibility for any errors.

Note 2: All material contained in this newsletter is the copyright of the Gardner Engine Forum or as detailed and must not be reproduced without permission of the author

Note 3: The Gardner Engine Forum does not specifically endorse advertisements placed in this publication and it does not accept responsibility for the products advertised.

Contents	Page		
Chairman's Notes	2		
ovc	3		
OVC Rebuild	5		
1994 2LW Article	8		
Barton Hall Works Photo	10		
Works Photographs 1951	11		
The Part Played by Oil Eng Buses in Empire Developm			
2022 Rally Wanted Advert	18		

Advertising Rates: Free for Members Personnel Ads Trade ½ page £25 per 2 editions

20

Electronic Magazine

Cover Photo No 1 Gas Engine Under Restoration In Australia



Chairmans Notes

Welcome to my autumn notes, time passes and it doesn't seem to be five years since my first ones in 2016. As the saying goes "a lot of water has gone under the bridge".

I hope that I find you all well and hope to see some of you at the proposed rally next year. (see page 18) ed. When I last put pen to paper it was before the Duke of Edinburgh had died, his passing reminded me of his interest in engineering, indeed he founded the Royal Academy of Engineering the headquarters being at Prince Phillip House, Central London. I was privileged to meet him once when I was on the L.G. & S stand at the London Boat show. I was impressed with his knowledge of the company and its engines. If my memory serves me correctly, I think that he had been to the works.

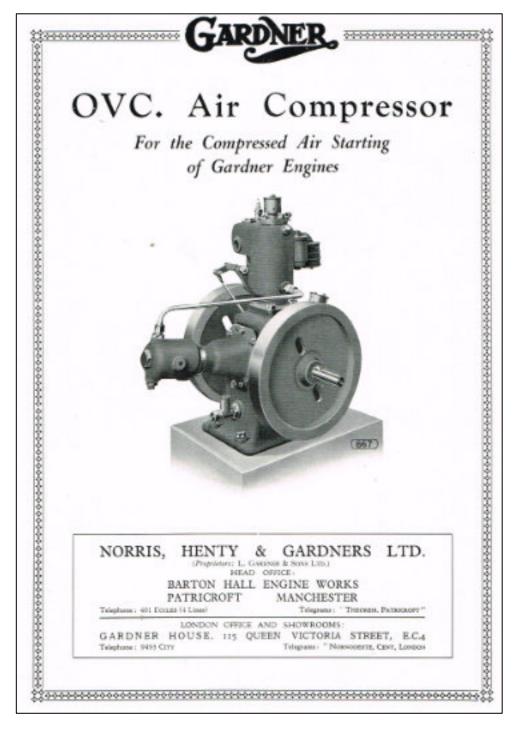
Much has been talked about recently "too many teenagers going to university and more emphasis on degree apprenticeships" while you earn whilst you learn and come out with skills the market place wants. This takes me back to the next Department I was taken to, Mr. Robinson the Personnel Manager was responsible for moving us around (I could take you to his office now), Miss Flint who my friend Eddie will remember, looked after all our Technical College efforts, Miss Flint was in charge of the Laboratory (see the works plan). Mr. Rawlinsons office was near the no. 6 Milling Department. I was posted to the Crank Shaft Machine Shops nos. 15 and 16. The two things that stand out I remember well was the copious amount of cutting oil for the lubrication of the tools in the lathes and crank pin machines. Most of the operatives wore cloggs (myself included) due mainly to the large amounts of turnings.

The crank pin turning machines were designed by Mr. Joseph Gardner built at the works, 31 were sold to other engine manufacturers including some in Russia. Do we know if any exist? Photographs can be seen in Graham Edges book.

The crank shafts came as forgings from Shardlows (I think) Sheffield and I still have my notes for machining the last operation on the pins, polished by friction, would be interested in seeing one working again.

It is always good to hear from members and I look forward to seeing some of you at next years rally. I hope we have a good turnout of boats, vehicles and engines. The LW engine missed out this year for it's 90th birthday. A big thank you to Steven and Judith Gray, Linda and Andrew Kemp and Pat and Simon Roberts for keeping things going through these difficult times. If anyone would like to join the committee please let us know. A Warm welcome to new members Simon Davis, Lawrence Macduff, Andrew Parsons, Martyn Ryder and Paul France.

John Kaylor



The Gardner OVC. Air Compressor

THE primary object of this combined engine and compressor is the Initial Charging of the air receivers of Gardner Heavy Oil Engines after installation of the main engine, or in cases where the pressure in the receiver has been lost through inadvertence or other reason.

The compressor consists of an OV Gardner Engine of 14 BHP at 770 r.p.m., into which is built a small single-stage air compressor, which is directly operated by the engine grankshaft. The OV Engine is fully described in our V Type Engine Catalogue.

The engine and compressor cylinders are water-jacketted and coupled with a copper circulation pipe, forming one circulation system.

The compressor has only one valve, the delivery valve, which is removable for examination without having to break any pipe joints. The air inlet is effected by ports in the cylinder wall, which are controlled by the moving piston.

The compressor is good for pressures up to 300 lbs. per square inch. The best idea of the capacity can be exhibited by saying that the compressor will charge a receiver of 4 cubic feet, from 0 lbs. to 250 lbs. per square inch, in 22 minutes.

Fuel for Engine. Having regard to the fact that the compressor engine must be started on petrol, and that the whole operation of the initial charging of the receivers is so short, it is not deemed necessary to change over from petrol to paraffin; consequently the engines are supplied only for petrol.

Restoration of an OVC

L Gardner and Sons Ltd designed and produced a vertical single cylinder petrol engine with an integral horizontal compressor for charging air receivers used for starting large Oil Engines, H,HF,V,VT types. It is a comparatively small engine of 1½ bhp @770 rpm. However, it is capable of pumping up to 350 pounds per square inch, now that's quite some pressure which justifies an insurance engineer surveyor to witness the necessary certifications tests prior to it's use. The engine works on the four strike principle, it's speed is governed by a single hit or miss mechanism which cleverly allows the inlet valve to open and close only when fuel is required to maintain constant speed.

The Anson Engine Museum have two of these engines, one of which came to grief before reaching the Museum's possession. Tragically serious damage had occurred resulting from non engineering labour, this created more problems than existed before rectification first was contemplated. As a volunteer OAP at the Museum I was asked to investigate and report





Compressor Connecting Rod Arrangement

back my findings to return the engine to working order as a Museum exhibit capable of doing its original designed job. To cut a long story short the cylinder water jacket outer side was blown out by Jack Frost. Repairs had been attempted but had sadly failed due to a total lack of cast iron welding technical skills! That doesn't help at all, just visualise the extent of work to rectify such destructive damage. However, there are ways to overcome these matters with modern engineering materials so after fettling of the original repair a new repair was made using a metal filled epoxy.

The water cooling pump had somehow been broken



from the base of the crankcase, enormous pressure must have been required to fracture its 3/8" bronze body. However, this had been satisfactorily brazed and was considered serviceable for further use. The push rods for the valves and hit and miss governor mechanism, well one was broken and the second badly bent, whilst this was repairable the valve timing was lost, consequently these critical settings had to be carefully worked out on a trial and error basis to determine good engine running

performance. Further horrifying malicious damage came to light when the valve gear side flywheel was taken off adding to the problems. Can you believe it, the gib head key had obviously been very tightly seized and some cowboy had hack sawed through the key and another 3/16" into the crankshaft. I'll say no more.





The engine was built to run on petrol only, the simplest type of carburetor and magneto ignition was used. No problems were expected with the carburetor but quite unexpectedly it turned out to be a major trouble spot, because the float was punctured down the central hole together with it being badly distorted. The needle jet was also distorted rendering it all useless. No time was wasted searching for a replacement the damaged parts were either repaired or replaced by making new. This work was time consuming, however, it paid off once the float was made for the

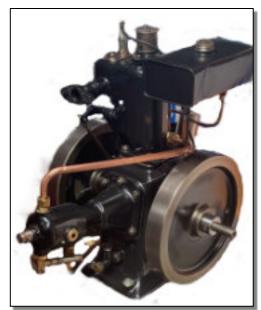
correct level.

The final component (the compressor) presented no troubles, just routine cleaning of the single valve (simplicity at its best).

The age of this engine was not known at the time of writing. However, Gardner produced them until1937, so that puts its age at over 85 years old. It is now back in the safe custody of the Museum ready to exhibit.









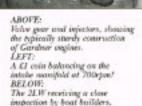
This article was originally published in the June 1994 edition of Canal and Riverboat

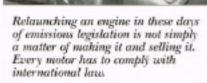
In a forgotten shed in the Gardner works lie the patterns for virtually every Gardner engine ever made and as hick would have it the patterns from the original engine turned up...

LEFT: The 2LW engine under lest at Gardners factory in Patricroft, Manchester

Gardner and the 2LW Engine

NICK BILLINGHAM looks at the background to a famous engine manufacturer and the fact they are facing the Nineties with confidence in the launch of their new specially designed engine for inland waterways use.







Gardner is one of the long established British engine manufacturers. During the 1920s and 30s sturdy diesel engines from this Manchester based engineering firm powered many commercial narrow boats. Allthough the company started off with dentists' chairs and coffee grinders back in the nineteenth century, throughout this century engines have been their forte.

Like many another engine manufacturer, they started with hot bulb and two stroke engines and then the modern four stroke diesel machine. In the 1930s they introduced the LW series which incorporated all the finest technology of the time. The 2 cylinder version became a firm favourite with narrow boat operators because of it rugged reliability.

Gardners produced this engine up until the 1970s. It went into, pumps, generator sets and probably most importantly into the small locomotive used in the South African goldmines. The engine remained virtually unchanged through this forty year production run; however the imposition sanctions against the apartheid regime killed the main market for the motors and the unit went out of production.

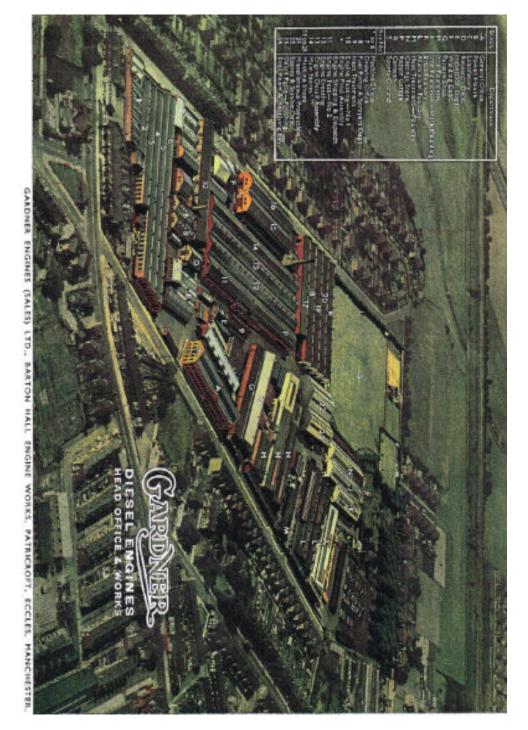
In Britain the motors chugging away in narrow boats didn't need spares very often and the market was awash with imported engines, so the loss wasn't felt very acutely except by those who believed that only a Gardner would do for their boat. It looked as though the end of an era had come for this seriously traditional boat engine.

Luckily, politics had come around full circle and the sanctions against South Africa had been lifted. Most people would think that 20 years later not a Gardner 2LW would be left in the mines, but the engine is a persistent beast and the mine owners are frantic for parts. They have tried all sorts of other engines but the 2LW seems to be the only one that can cope with the arduous work underground. For years they have been cannibalising their existing motors and now the sanctions are over, not only do they want spares, but also new engines. In a forgotten shed in the Gardner works lie the patterns for virtually every

In a forgotten shed in the Gardner works lie the patterns for virtually every Gardner engine ever made and as luck would have it, the patterns from the original engine turned up just as the parts- starved gold miners were pleading for new engines. The rebirth of the engine was assured.

Narrow boaters haven't been forgotten either. Gardners held a seminar in December to ask the views of many leading boat builders about what the new version should be like. The general view was that it should be as much like the old one as possible, although a hydraulic gearbox is likely to be the main alteration.

The first engine they have made up was on its test bed being monitored and checked. It is an impressive piece, putting out 28 horsepower at 1300rpm. It





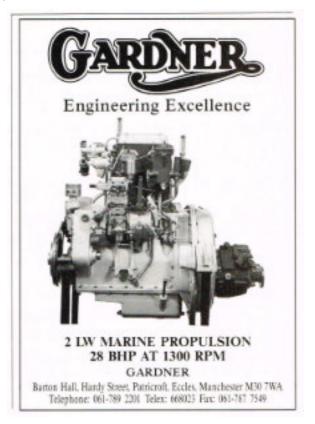


ticks over at a mere 400 and is very quiet and smooth. It is possible to balance a £1 coin on its edge on the intake manifold whilst it is doing 700prm.

Relaunching an engine in these days of emissions legislation is not simply a matter of making it and selling it. Every motor comply has to with international law. The original 2LW of 1935 meets virtually all the requirements and only small adjustments are going to be needed to make it comply. If that isn't a tribute to British engineering of the 1930s I really don't know what is! In fact everything about the 2LW suggests that this country has an awful lot to be proud about. It may be a massively overengineered engine but if it can last for 60 years then it must be good. The new engine has already been on show and should be in production in June. Gardners are going to launch a Service Training programme as well so that new owners can learn the servicing techniques and get the very best out of what promises to be a very good engine.



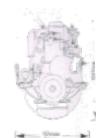
ABOVE: The famous 6-cylinder bus engine being built.











MARINE PROPULSION ENGINES

PERFORMANCE DATA

HEAVY DUTY 2 LW

GENERAL SPECIFICATION

Bore = 107.95 mm. (4.25 in)

Stroke - 152.4 mm (6 in)

Configuration - 2 cylinders in-

Cycle - 4 stroke

Aspiration - Naturally Aspirated

Compression Ratio - 14:1

Capacity - 2.8 litres (170 cu in)

Max. Power 28 bhp (20.96w) at 1300 epm

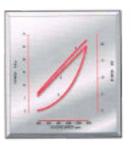
Rotation - Anti-clockwise viewed

Nett dry weight (incl gearbox)

Typical weight 473 kg (1040 lbs).

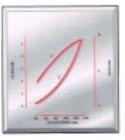
Sales brochure from 1995 for the reintroduction of the 2LW





2 LW HEAVY DUTY PERFORMANCE CURVE

- 1. Maximum power available florecoging
- 2. Shaft power
- 3. Power required by typical propeller



2 LW HEAVY DUTY FUEL CONSUMPTION CURVE

- 1. First consumption max, power absorbed
- 2. Fuel consumption peop. gover

MARINE

The Gentner marine power range covers engines with mengs from 28 kBp. up to 265 blug. All force premium specification, top performance and easy of maintenance, giving maximum productivity with the lowest patrible permitting (p.15)

In addition, Gurdour has an exercive UK distribution expubility, supported by a long conhibbed oversen-

STANDARD EOUIPMENT

- · Keel cooling
- Marine oursenission 793/150 Ratio 1.96:1.
- . SAE 2 (bywheel housing
- · English respectives:

Pront - A beam maranted across the from of the major incorporating the managing five.

Rear - Support first integral with thywheel becoing

- Marine cranishabit
- * 12 volt same
- . 12 volt, 55 area alternator.
- · Air insake elbow
- · 3 grove pulsy for additional shermore drive and applicates.
- · Fall flow lab. & fact filter.
- . Lab. oil camp emproing pump.
- · Oil cooler.
- . Engine ther with jacking acress.
- . Fuel 1th pump
- · Eduar obey
- Engine mounted instrume was far water, oil temperature.
- · Genthew all cooler
- Operation and maintenance recent all bases basels.
- . Pull 2 year warflets as stendard.

OPTIONAL EQUIPMENT

- Heat exchanger version
- · Alexandre marine resemblicat (see price (se for details).
- · Oil presents gamps.
- · Four-weight panel & instruments.
- · Stainless sorel bellows.
- · Protoction switch
- Dry obsest simorr
- · Storngoat.
- · Fieible meanings
- * First alternator also smallable at 12 vols, 76 arep.
- . Second abernator 12 vols. 55-arms or 12 role, 70 sept.
- . Optional 3rd year warranty available

TYPICAL APPLICATIONS

Ideally raised to a range of marine applications, including propolities for inland waterway have and inchery fishing vessels. Engine can also be specified for gen net mage to operate pumps, on board lighting and other autiliary functions

BENEFITS

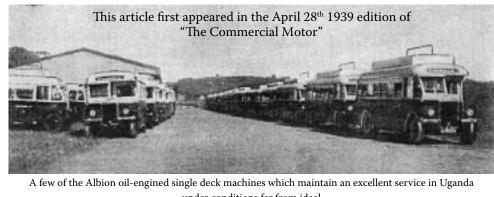
- An envisible represents for Beliability earned from muce years of hard working reperience around the werld
- proven dorability to a wide range of rearing applications - long life assured with low output per lime capacity.
- meet the most exacting sea
- . BylisMe, double and conversely facil efficient to operate. Final springs
- · Worldwide service rerosoris, long osciblished offering fell service
- · Full range of geneint replacement.

- Bobust aluminions construction -
- · Products designed and need to conditions.
- ensure fourest operational cost.
- pero, compensorsly priced expelled through UK and everseas distributor nenworks.
- Efficient, highly qualified. Application Engineering facility worldwide support a supert advice or product insulation and
- . Training courses available for bear operators, run by skilled interactors.



All information given in the halfer is redominedly remove as the time of printing but may be alonged refrequently by the Computer, branching purely are should disordere charle for exercise does or the rime of produce. O Copyright reserved by Godger 1994. Publication No. 74 QFR, 740 SEE.

Patricroft, Eccles, Manchester M30 7WA, England, Tel: 061-789 2201 Telex: 668023 Fax: 061-787 7549



under conditions far from ideal

The Part Played by Oil Engined Buses In Empire Development

Let me tell you of a big piece of recent Empire development..It had its beginnings long ago, directly after the Great War, when a young naval officer and a few, friends, with a little money, four old Army lorries that had seen service in France, and one or two demobilised ex Service men, started a bus, service in the west of England. This bus service gradually expanded and eventually made a name for itself all over the district for good service and, what as almost better, good fellowship among its personnel.

Time went by and the 'promoters of the. scheme took British buses, Overseas. Green and White buses and with them the same spirit of good service, hard work and good fellowship, With the changing years conditions altered somewhat. More bus companies sprang up at home and more organisations for ex-Service men came into being. The slump came and England wanted more overseas trade. The naval officer, Commander F T Hare, set about laying plans to take British buses farther afield. Africa, Cairo at first then farther south in less developed parts, Kenya. Nairobi had no public transport of any kind and the need was great. Green and White buses now run regular services all over the municipal area Mombasa, too now has her bus services.

This year has seen the launching of a new, and much bigger, undertaking. The story sounds easy in the telling and takes only a few' moments to read, but it took years of careful planning and negotiation before a start could be made, and would perhaps have, taken much longer but for the keenness and enterprise of Uganda's go-ahead governor who, from the start, has given the undertaking his blessing and who had gone into details and given helpful encouragement all the way through. Only those on the spot and those who have travelled in the lovely Protectorate where the natives and the whites live so harmoniously side by side, and each takes his part in the government of the country, can know what progress has been made during the present governorship, Kampala the capitol has developed enormously in the past year or two. Such important things as a water supply, electric light, drainage, better streets and better houses have come into being under the energetic and progressive rule of Sir Philip Mitchell. He realised as all good governors must, the need for efficient and reliable transport, and where the railway cannot serve the country, buses can provide that the roads are good enough. What better for the purpose than first class British oil

engined buses?. Sir Phillip got to know how experienced Commander F. T. Hare is at bus organisation, how long he has been interested in buses, and something of his record. Consequently he gave him wholehearted backing when he wanted to bring buses to Uganda and thereby go one step further in the development of the Protectorate

Manufacturers General Support.

It was decided that the best class vehicle, built and designed specifically for these roads was essential. Manufacturers who had dealt with Commander Hare over a long term of years were ready to back him generously, and, but for their support Commander Hare would have had an almost impossible task, for it was made a condition of his being given an inclusive licence over certain roads around Kampala into the outlying districts, that the required number of buses should reach Kampala towards the end of 1938 and that all services should start on January 1st 1939.

Just imagine what it meant to get a big fleet of buses built during the latter part of 1938, of raising the capital to pay for them, of getting them shipped actually during and after the European crisis of last September, of engaging and training

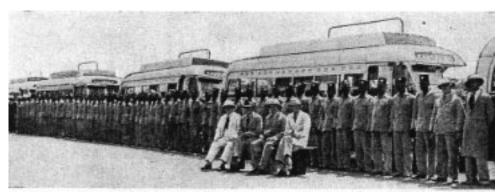
suitable personnel.

Well the promise had been given and must be fulfilled!. Albion Motors Ltd, faced up to the problem and the chassis were built; Norris, Henty and Gardner's Lt, gave of their best and the engines were ready; Duple Bodies and Motors ltd put in some splendid work and turned out first rate bodies.

The Bell Punch concern not only provided but invented an efficient ticket and punch system. A little forethought got reasonable insurance rates, and, in spite of terribly anxious times, the buses arrived in Kampala to be followed by Commander Hare himself, who found a few partially trained men, got together by members of the white staff who had gone ahead, but no garage and no offices.

Accommodation: the Open Air

The uncertainty of the European situation has perhaps been responsible, and this added to the usual difficulties and delays of building, had so hindered things that a few scaffold poles and some heaps of bricks and bags of cement took the place of a well founded garage and repair shop and big airy offices. Still the buses are due to January 1 and start they did.



The native staff, and officials responsible for Uganda's transport. From left to right (sested) are Mr. G. Browning engineer; Major K. A. Brown, director; Commander F. T. Hare, R.N., chairman; Mr. C. E. Lane, general manager

Sir Phillip Mitchell, who helped so much all through, was to have opened the services, but owing to an accident was unable to do so , Lady Mitchell therefore most kindly and efficiently deputised for him.

A Goan contractor came to the rescue with the loan of two rooms in his office and in addition put up a corrugated iron shed on the road side for the use of the company and his helpers. Then began the almost superhuman task of running full services, for literally thousands of passengers and their luggage., consisting often of the oddest assortment of parcels, including THE OIL ENGINES
IN THE UGANDA
BUSES MENTIONED
IN THIS ARTICLE
ARE THE
GARDNER 4LK TYPE

chickens wrapped in banana leaves, geese and goats. As there was no accommodation buses had to be serviced in the streets, the conductors school was held in an adjoining wood and the office staff was taught to issue tickets in the tin shed. It was well that Commander Hare and his able assistants Mr Lane and Mr Hall had a good sense of humour or the long hours and the heat and the dust and the difficult conditions under which they were forced to work would have been too hard to endure.

But the situation had its lighter side as when smartly dressed native with European suit, gorgeous tie and large watch chain, came in to buy "A first class ticket for myself, sir, please, and one second class ticket for my wife".

Two princes of royal blood joined the staff and native ladies who bought their tickets from them went on their knees to pay. Gradually the garage got its floor then roof. The walls of the ticket office grew and soon there was a waiting room, with a roof, too. No windows or doors yet, but these deficiencies were made up for, temporarily, by the use of expanded wire. All the time the buses continued to run regularly and circumspectly on their appointed routes; and the Buganda continued to travel until success became assured.

The Governors interest

All this time good fellowship and keenness in the company grew. Then came the day when Sir Philip and Lady Mitchell came to inspect the undertaking that sir Philip had done so much to introduce into Uganda. His Excellency took the greatest interest in every department of the Bus Company and approved the work. So had begun a new phase of Empire development. An enterprise born of courage to surmount all difficulties, imagination, and the pluck to undertake a new adventure, and faith in the future of the British Flag and all that it had always stood for.

Nairobi



HORRIS, HENTY AND GARDHERS LTD., Fairfords, PANCHESTER, Programmic, Street and Sec., 2023. April 1980; 111 Quant Program Sec. 54.4.



THE LEADING JOURNAL DEALING WITH ROAD TRANSPORT

Largest Circulation

Tangle Press Ink., 5.2, Readony Science, E.C.1

2022 Rally

Initial preparations are underway to hold a rally in 2022. We are planning to return to Bugsworth Basin over the weekend of $18^{th}/19^{th}$ June. Hopefully any threat from Covid will have gone away.

Agreement has still to be sorted with Bugsworth Basin Heritage Trust and the Canal and River Trust. More information in the next newsletter. The website will be updated as soon as possible once all permissions have been agreed.



Classic Maritime Diesels (engineers).

Marine engine erectors & repairers. Diesel powertrain engineers.

Gardner vintage oil engine specialists.

 $Machinists\ of\ custom\ \&\ obsolete\ engine/gearbox\ components.$

Tel: 07712 052 635 Charles. 07789 755 375 Kevin.

E-mail: classicdiesel@hotmail.com

Wanted

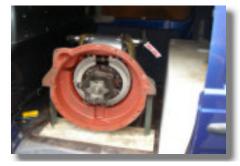
Pre 1964 type, 3LW crankshaft (for gunmetal backed, white metal lined bearings). Standard or marine. Must be suitable for grinding.

<u>OF</u>

Post 1964, 3LW crankshaft (for pre-finished thin wall bearings). Standard or marine. Must be suitable for grinding, along with post 1964 3LW crankcase to accept pre-finished thin wall bearings.

Will accept cranks up to .040" undersize on mains & pins. Give us a call: Charles or Kevin.

For Sale





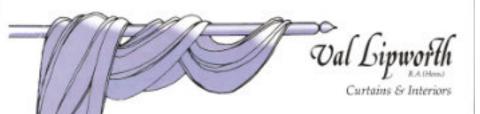
1957 2UC Reduction Gearbox
Full nut and bolt rebuild with new reduction gears.
More photographs available on request.
Contact Mike on 07719034583 or mike@mandhcarvaleting.co.uk



Electronic Newsletter

Copies of each newsletter can be emailed to members who wish to receive it by this method, either with or without a paper copy as well. Any email address used for this purpose will not be made available to any third party. If you would like to receive your newsletter this way please email the editor at gardnerengineforum@blueyonder.co.uk with your request and preferred email address.

The file will be in PDF format (usually around 2 Mb) so is universally readable



Curtains - Blinds All soft furnishings.

Specialist in Upholstery & Curtains for Boats.

Hand finishing by Qualified Designer Bespoke Curtain Tracks and Poles Fitting Service available.

Your fabric or ours.

For free quotes and advice contact us on Telephone 01260 276872. Mobile 07817 208977 E mail val4design@btinternet.com 107 Mill Green, Congleton, Cheshire, CW12 1GD



Classic Maritime Diesels Specialist Marine Diesel Engineers

- · Powertrain fault diagnosis, repair and overhaul.
- . All diesel & semi-diesel engines 1900 to present catered for,
- Gearbox problem? We rebuild: Hurth, P.R.M., Z.F., Borg-Warner, T.M.P.,
 Technodrive, and Lister hydraulic and mechanical units. Diagnostic and pressure test service available 'in vessel'. We will remove and install if required.
- Diesel Injection systems serviced; Lucas-C.A.V, Bosch, Denso, and Stanadyne. Filter and water trap units supplied.
- Machine shop facilities, Milling, turning, drilling, shaping, boring.
 Custom parts made to order.
- The finest traditional control systems designed, manufactured, and installed as featured in 'Waterways World'.
- Obsolete components e.g. engine valves, vil pump parts etc. machined to order.
 Vintage pistons machined to accept modern rings.
 White metal bearings 'blued and scraped'.

Oil engine Service & spares



Gardner engines Hand-built to order

Over 58 years of joint experience in diesel engineering, and a specialist interest in Gardner marine diesel engines.

Charles A. Mills AIRTE MIdiag E &

Classic Maritime Diesels actively supports the Anson Engine Museum, Higher Poynton.

Charles Mills 07712 052 635

Kevin Simmer 07789 755 375

Classicdiesel@hotmail.com



The museum is also open each Friday & Sunday between Easter and the end of October but on these occasions the number of engines running may vary depending which volunteers are available. If no engines are running a reduced entry fee will apply.

The Museum holds many records of Gardner and other makes of engine and also offers a dating service. Go to http://www.enginemuseum.org/news.html to find the downloadable enquiry form

Special events occur throughout the year normally at Bank Holidays See the Museum Website www.enginemuseum.org for up to date information

Anson Road, Poynton, Cheshire, SK12 1TD Tel: 01625 874 426 Email: enquiry@enginemuseum.org



Centurion Court Centurion Way Leyland Lancashire PR25 3UQ

Tele 01772 642460 Fax 01772 621333

WALSH'S ENGINEERING LTD

COMMERCIAL DIESEL ENGINE SPECIALISTS
Barton Moss Road



Eccles Manchester MR30 7RL

Parts & Services

Tele:- 0161 787 7017 Fax:- 0161 787 7038

E Mail:- walshs@gardnerdiesel.co.uk www.gardnerdiesel.co.uk

Disclaimer please see note 3 on page 1