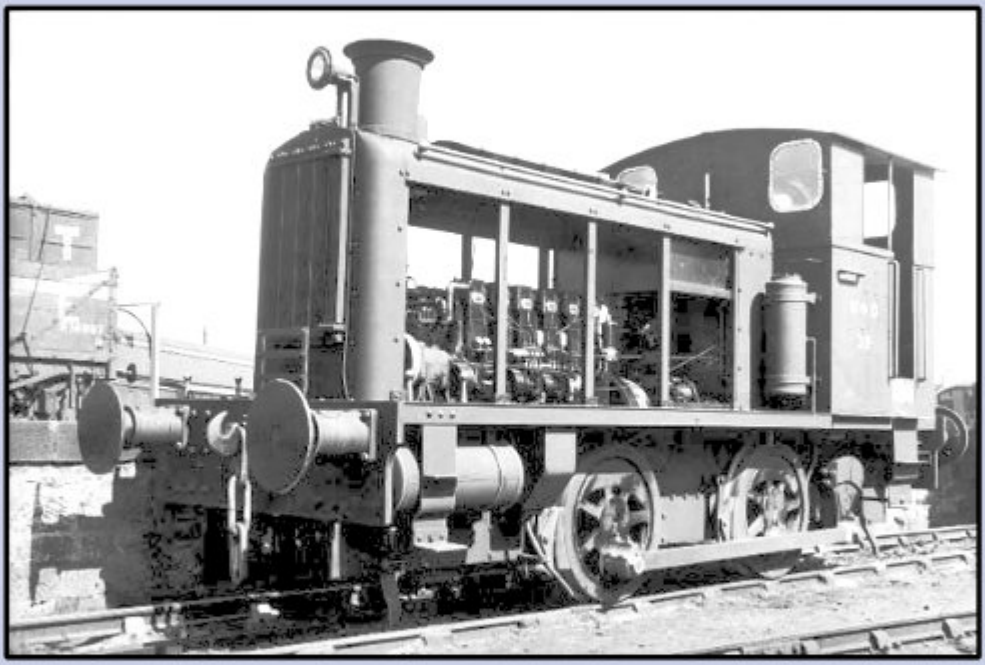
GARDNER

Engine Forum



Autumn 2024

No. 46 www.gardnerengineforum.co.uk

GARDNER Engine Forum Membership Application

Title	Mr / Mrs / Miss / Dr / Other		
Forename(s)			
Surname			
Address			
		Post Code	
Telephone No		Ex-Directory	Yes/No
Mobile Telephone Number			
Email Address *			
Engine Model			
Engine Serial No			
Engine Date			
Engine Application	Stationary	Road	Marine
Name of vehicle / vessel			
Any other information			
Signed		Dated	

Periodically we produce a membership list and circulate to members. The list comprises of the membership number, name and address only. To be included in the list and therefore receive a copy please indicate your preference.

Yes please include me ☐ No Thank You ☐

* To keep the cost of running the forum as low as possible we use email communication for the notification of renewal and confirmation of membership where possible. If supplied the email address will not be passed on to any third party and will only be used for communicating matters relating the the Forum.

Membership details are maintained on a computer database accessible to authorised committee members only.

Membership fee £10.00 per annum (UK) renewable on the anniversary of joining.
Payable by cheque, standing order mandate or electronic fund transfer.
Cheque's to be made out to Gardner Engine Forum.
For standing orders please complete the form below.download the complte form from the website

For electronic funds transfer please tick the box, ☐ we will contact you with the banking details

Send the completed form to
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Gardner Engine Forum Philosophy

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

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Cover Photo
WD 39 somewhere in 1942
(picture (C) NJvWJ)
from the WD33 site

Chairmans Notes

Welcome to the Autumn newsletter, firstly I would like to apologise for it being a bit late. Secondly it was nice to see a good turn out for the A.G.M at the Anson Engine Museum in May. Discussions went on for over an hour which is good for an A.G.M. Many thanks to you all. One thing that was mentioned was the possibility of setting up an index of available spares held by members who may be happy to help out others, especially with some of the less common items like water pump drive gears for anti clockwise engines. If you have some unusual parts that you could make available, then please let a committee member know. I read recently that it will be obvious to most of us that for economic & political reasons manufacturing is a key part of our economy. The private sector must now step up and make crucial decisions concerning Britain's re-industrialisation! being a service power isn't enough, time will tell.

I hope the following will be of interest to all. Geoff Challinor provided a copy of a few pages copied from History of the Oil Engine by Mr Arthur F Evans which I found entertaining.

I ask you to accompany me, in your imagination, being inside the cylinder of a Diesel engine. Let us imagine ourselves seated comfortably on the top of the piston, at or about the end of the compression stroke. We are in complete darkness, the atmosphere is a trifle oppressive, for the shade temperature is well over 500°C.almost a dull red heat and the density of the air is such that the contents of an average sitting room would weigh about a ton; also it is very draughty, in fact, the draught is such that in reality we should be blown off our perch and hurled about like autumn leaves in a gale. Suddenly, above our heads a valve is opened and a rainstorm of fuel begins to descend. I have called it a rain storm, but the velocity of droplets approaches much more nearly that of rifle bullets than of raindrops. For a while nothing startling happens, the rain continues to fall, the darkness remains intense. Then suddenly, away to our right perhaps, a brilliant gleam of light appears moving swiftly and purposefully; in an instant this is followed by a myriad of others all around us, some large and some small, until on all sides of us the space is filled with a merry, blaze of moving lights; from time to time the smaller lights wink and go out, while the larger ones develop fiery tails like comets; occasionally these strike the walls, but, being surrounded with an envelope of burning vapour they merely bounce off like drops of water spilt on a red hot plate. Right overhead all is darkness still, the rainstorm

continues, and the heat is becoming intense; and now we shall notice that a change is taking place. Many of the smaller lights around us have gone out, but new ones are beginning to appear, more overhead, and to form themselves into definite streams shooting rapidly downwards or outwards from. the direction of the injector nozzles. Looking round again we see that the lights around are growing yellower; they no longer move in definite directions, but appear to be drifting listlessly hither and thither; here and there they are crowding together in dense nebula, and these are burning now with a sickly smoky flame, half suffocated for want of oxygen Now we are attracted by a dazzle overhead, and, looking up, we see that what at first was cold rain falling through utter darkness, has given place to a cascade of fire, as from a rocket For a little while this continues, then ceases abruptly as the fuel valve closes Above and all around us are still some lingering fireballs, now trailing long tails of sparks and smoke and wandering aimlessly in search of the last dregs of oxygen which will consume them finally and set their souls at rest. If so, well and good, if not, some unromantic engineer outside will merely grumble that the exhaust is dirty and will set the fuel valve to close a trifle earlier. So ends the scene, or rather my conception of the scene, and I will ask you to realise that what has taken me nearly five minutes to describe may all be enacted in one five-hundredth of a second or even less. I have broadly indicated the path of invention and experiment which has produced the highly effective modern heavy-oil engine in which oil spray is diffused through hot compressed air and ignited by the heat of compression. In this manner igniting mechanisms have been abolished and spray is injected into the dense and heated air so as to produce an engine cycle of constant volume or constant pressure type as required.

The story of this advance is most interesting, and it is told in a very instructive and complete way by Mr. Arthur F. Evans in this book. The book contains a History of the Oil Engine, but that history is in fact a very careful and complete analysis of the many mechanical and other facts which have appeared from time to time. I have read Mr. Evans's very able work with much interest, and I recommend it to all oil-engine inventors. It is so interesting that I feel almost impelled to become a designer and inventor once more, but alas! fifty-six years of scientific work cannot be repeated and I must leave the subject to young men.

The 2025 Gardner Engine Rally

Is being organised to take place at
Etruria Industrial Museum
with Shirleys Bone & Flint Mill
Etruria
Stoke on Trent
Saturday 13th & Sunday 14th September
This coincides with the National Heritage weekend.
There will be a Stationary Engine Display on the Saturday and a Classic Car display on the Sunday
Entry Forms will be circulated with the next newsletter

The Future of the Forum

Whilst contemplating what to write, I was looking back at past issues of the newsletter and came across an article from the summer 2006 edition of the newsletter, (reproduced at the end) which I had long since forgotten about. I had joined the committee after the previous A.G.M to look after the website. Following the resignation of Lucy Short as editor, I found myself looking after the newsletter production which has now run to the last 32 editions. Judith took on the role of treasurer in the same year. After the rally at Wrenbury in 2013, we set up a stock of Gardner branded merchandise administered by Judith and Linda. My first foray into Rally organisation was for the 2007 event at Dudley, Since this one I have been responsible for the paperwork submissions to Canal and River Trust for permission to hold most of the events and the onsite organisation in most cases. For each event we now take the merchandise stock and Gazebo's with us, plus organising a food provider for the Saturday evening. Having given it much contemplation we have decided that this will be the last rally that we will do the organisation for. Leaving us to concentrate on the roles of editor, website, treasurer, membership secretary, and running the shop with the assistance of Linda and Andrew.
Going forward we need someone to find a suitable site and take over the organisation of a rally. This need not be a committee position.(it would be better if it is). Please give it some thought. We are available to discuss what it entails should you be interested in taking on this role. **If there are no volunteers then this will be the last Rally**. There have been 14 rallies in total so far, these have taken place at Astley Green, Gloucester, Nottinghham(2), Castlefields, Walsall, Dudley (2), Bugsworth (2), Wrenbury, Huddlesford, Etruria and Tamworth.

How did this happen? By Judith Gray (2006)

Despite having discussed the pros and cons of future commitments, deciding "no" stay as we are! How is it that after meeting up with friends again, sitting down to a nice lunch, chatting away putting the world to rights, even

confirming to each other during the short journey from the hostelry to the Anson Engine Museum, did I find myself changing my mind and realising that "no I did not want the forum to be put to bed, when Steve and myself could take up the opportunity to step into Mike and Lucy's shoes (big ones to step into and follow) and keep things going. We all feel that we are too busy, been there before done that, but the bottom line is that with a small group such as our own unless people are prepared to say "yes" and help then this next year may be the last for the forum, do you really want this to happen? If anyone is thinking "what can I do" then maybe an hour every six months to jot down some thoughts, stories or anecdotes and send them to us for the magazine, or contact Colin and offer some much need assistance. Lets hope that a "no" that turned into a "yes" will encourage others amongst you to think "yes I can". As the saying goes use it or lose it !!!!!. It would be a shame to lose what we have.

Could this be you in 2024?

Gardner on the Narrow Gauge

The preserved railway scene continues to flourish with new lines opening and existing lines being extended, and the attraction of being transported though beautiful countryside behind a preserved steam locomotive whilst reminiscing of a simpler, happier time is compelling!

However, to make this possible there are numerous diesel locomotives employed in engineering and maintenance roles and many of these have Gardner prime movers.

Focusing on the UK preserved narrow gauge, it is apparent that these railways are extremely fortunate that the UK had, until fairly recently, extensive systems using diesels operated by, for example, the military and the National Coal Board. Over 50 Gardner engined locos have been identified as being located on the preserved lines (not necessarily in use) and a selection is shown below:-

Name/Number	Manufacturer	Date	Engine	Transmission	Original Customer
Festiniog/Welsh Highland Railway - 2' Gauge					
Upnor Castle	Hibberd	1954	6LXB	Mechanical	Admiralty
Conway Castle	Baldwin	1918	4LK	Meadows Mechanical	French Army
Moel-y-Gest	Hunslet	1965	4LW	Hydraulic	Royal Navy
No 9	Baguley Drewry	1953	8LW	Mechanical	South Johnstone Sugar Mill Australia
South Tynedale Railway – 2' Gauge					
Naworth	Hudswell Clarke	1952	6LXB	Fluid /Self Changing	NCB
No 9	Hunslet	1952	6LXB	4 Speed Mechanical	NCB
Cumbria	Hunslet	1967	4LW	Torque Convertor	MOD
No 18	Hudswell Clarke	1961	6LX	Fluid 'Powerflow	NCB

Welshpool and Llanfair Light Railway - 2' 6" Gauge					
Chattenden	Baguley Drewry	1949	6LX	Mechanical	Admiralty
Ferret	Hunslet	1940	4LW	Mechanical	Admiralty
Threlkeld Quarry Museum – 2' Gauge					
	Hunslet	1945	4L2	Mechanical	NCB
Leadhills and Wanlockhead Railway – 2' Gauge					
	Hudswell Clarke	1956	4LW	Fluid/Self Changing	NCB
Lynton and Barnstaple Railway – 2' Gauge					
Heddon Hal	Hunslet	1965	4LW	Torque Convertor	Royal Navy
D 6652	Hunslet	1965	4LW	Torque Convertor	Royal Navy
Tal-y-llyn Railway – 2' 3" Gauge					
Alf	Hunslet	1950	4LW	Mechanical 2 speed	NCB
Tanfield Railway – 2' Gauge					
Tyneside George	Hudswell Clarke	1958	6LW	Mechanical	NCB
No 5	Hudswell Clarke	1960	6LW	Mechanical	NCB
Apedale Railway - 2' Gauge					
85	Hunslet	1966	4LW	Mechanical	NCB
Amberley Museum - 2' Gauge					
DM 868	Hudswell Clarke	1948	4LW	Mechanical	NCB
Isle of Man Railway - 3' Gauge					
19/20 Railcars	Walker Bros	1950	6LW	Mechanical	County Donegal Ry

None of these was bought new for the lines on which they now are located but many of them have interesting stories, a couple of which are summarised below. Both examples are now on the Festiniog and Welsh Highland Railways.

'Moelwyn'

This locomotive was built in 1918 to the design of the Baldwin Locomotive Works, Philadelphia. The customer was the French Army and it worked on the narrow gauge lines supplying personnel and materiel to support the 'front line' of the fighting in the first world war.

As constructed it was an 0-4-0 petrol-mechanical (PM) with the engine supplied by the Pittsburgh Model Engine Co.

After the war, a number of these locomotives was put up for sale in the UK and this one was bought by Col. Holman Fred Stephens for use as a shunter on the Festiniog and Welsh Highland Railways which were, at that time, a part of his extensive empire of minor lines.

It was referred to as 'the tractor' and it remained in use until 1940. With revival of the railway in the 1950s, the tractor was put back into use for track clearing work and similar duties but the petrol engine was found to be life expired, resulting in limited use.

t was named 'Moelwyn' after a local mountain, but also as a pun on its origins as 'moel' means 'bald' in Welsh!

In 1956 a decision was made to re-engine it with a 3LW and a Meadows gearbox, and in that form it provided several years of reliable operation. Whilst the 3LW gave it a high tractive effort, the combination of a short wheelbase with long overhangs and low overall gearing made it unsuitable for working passenger trains at line speed. It received a significant improvement with the addition of a pony truck at the front to improve stability at speed and in 1966 the substitution of a 4LK for the 3LW, it thus acquiring a 2-4-0 diesel mechanical (DM) classification.

Over subsequent years, many improvements were introduced to improve crew comfort such as an enclosed cab with a heater, and until recently it was in regular use on passenger and goods trains.

Latterly it has been restored cosmetically to an appearance reminiscent of how it would have appeared in its original role, but the 4LK remains the prime mover.

It is now classed as a 'heritage' locomotive within the fleet.

'Upnor Castle'

A 'Planet' 0-4-0 design built for the Admiralty by Hibberd in 1954, it was fitted with a Foden FD6 uniflow two-stroke cycle engine at the customer's request as similar engines were used in naval craft at the time. This necessitated the use of an epicyclic gearbox to reduce the engine operating speed of 2000 rpm to the standard transmission input speed of 1200 rpm .

It was based at the Chattenden and Upnor Railway (C+U) in Kent, transporting munitions and personnel, having replaced steam locomotives in those roles. The railway was closed in 1961.

In 1963, the Welshpool and Llanfair Railway (W+L) was reopening as a preserved line, but its passenger stock had been scrapped in the 1930s and it had only ever had two steam locos on the books. Fortuitously it shared the somewhat rare 2' 6" gauge with the former C+U operation and so the 'Planet' and a several 'toastrack' bogie carriages were acquired.

The loco was named 'Upnor Castle' and it became the mainstay of the maintenance and goods operations. It was able to pull passenger trains when required, but the Foden engine was not ideal for the role and uneconomical outside a relatively narrow power band.

When the W+L had the opportunity to acquire a much more suitable ex C+U locomotive ('Chattenden' - an 0-6-0 powered by a 6LX), 'Upnor Castle' was sold to the Festiniog Railway and re-gauged for 2' operation.

In 1971, the wheelbase was lengthened - a relatively simple operation as the final drive was by chains - and weights were added to the chassis to improve stability. The FD6 engine was replaced with a 6LW and subsequently in 1979, a 6LX.

Upnor Castle

In 1997, as a part of a major overhaul of the locomotive, a 'factory reconditioned' 6LXB engine was fitted and that is retained today.

In this form, the locomotive must have been considered a success because a second Planet loco was acquired and modified to the same mechanical specification although a more modern, styled, body was fitted. This was named 'Conway Castle' and both locomotives are shown in service below.

Article by Howard Evans

No 85 Hunslet. 6619 of 1966

No.85 is a mines-type diesel loco fitted with a Gardner 4LW engine. It arrived at Apedale on 15 August 2021 from its previous residence on the Leighton Buzzard narrow gauge railway. Like most such locos, it spent much of its career hidden underground, out of the prying eyes of enthusiasts. The loco was new on 30th June 1966 to the Knockshinnoch Castle Colliery, located in New Cumnock, Ayrshire. Sources vary about whether the loco was 2'0" gauge or 2'1 ½" gauge at this point. If it was re-gauged at some point, it is unclear when this was done – but certainly before its spell at Whittle (see below). Knockshinnoch Castle Colliery closed in February 1968. By 1970, the loco had been transferred to the NCB's North East area, and was at Whittle Colliery in Northumberland. This was a drift mine which used locos both on the surface and underground. In December 1976, HE6619 went to the Central Workshops at Ashington; this workshops was attached to the colliery best known for using ex-BR Class 14 diesel hydraulics on its internal railway. Doubtless suitably overhauled, HE6619 then went to the North East area training centre at Seaham. With the exception of a return visit to Ashington in July 1982, the loco remained at Seaham until it was sold into preservation at the nascent South Tynedale Railway at Alston, Cumbria in June 1986. The STR was in its infancy back then, having opened just three years earlier in 1983. Finally, the loco moved to Leighton Buzzard on 15 October 1989.

https://avlr.org.uk/moseley-railway-trust/fleet-list/diesel-locomotives/85-hunslet-6619-of-1966-2

2LW powered Hunslet Mine Locomotives

@

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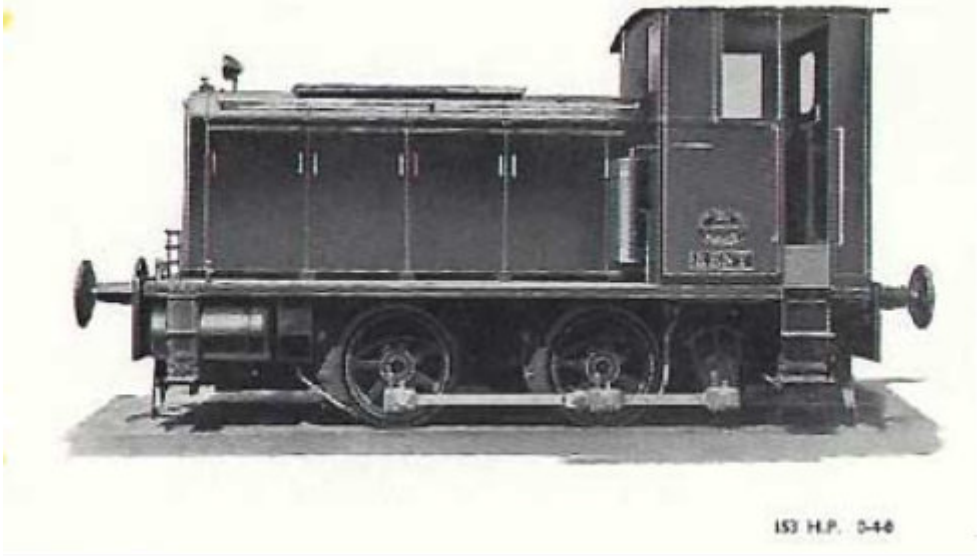
Photographs by S Gray

War Department 0-4-0
Diesel Mechanical Locomotives 1941 onward's

General history of the smaller Army diesels

The standard army 0-4-0 diesel mechanical locomotive design traces its development back to the very beginning of the diesel era in Great Britain, broadly similar machines being produced by various manufacturers as early as 1934 (the earliest Army machine originally being built for the LMS). Early versions of these machines differed considerably in detail but the basic design adopted by both Andrew Barclay and Vulcan Foundry remained unchanged from the mid 1930s until the general end of mechanical transmission locomotive production in the 1960s. Note that all the Vulcan machines were ordered through the Drewry Car Company who did not actually build locomotives and the Army tended to call all of them Standards or Barclay/Drewrys. The basic design consisted of a 6 or 8 cylinder Gardener engine (other makes were tried early on) driving a 4 speed (earlier 3, later 5) epicyclic gearbox through a fluid coupling avoiding the need for a clutch. Earlier Vulcan locomotives used English Electric - Dick Kerr frames and did not carry Vulcan works numbers - see the excellent Vulcan foundry history site for copies of the original works lists etc.

One of the early locomotives (Barclay 331 of 1938) from a 1952 Barclay catalogue



153 H.P. 0-4-0

and later machines were built in two distinct phases, one in 1940-42 and the remainder in 1945. However very similar locomotives were also built for royal ordinance factories and, at least on Barclay works lists, were ordered before the 1940-42 batch but some were delivered later. It is assumed that at least part of the reason for the 1941 batch was to replace requisitioned locomotives (mainly LMS 0-6-0 diesel electrics) lost in the fall of France. The 1945 batch were obviously constructed with the invasion and later rehabilitation of the damaged railways of the rest of the world in mind but were delivered too late to be of use (three of those ordered from Drewry were cancelled). Many of the first series were used abroad with some remaining to be adopted into the stock of various national railways. Apart from detail differences between manufacturers and in the type of final drives fitted which apply to both early and late types the batches also differed from each other in that the early types had semi-open cabs following steam practice and solid bonnet doors, while later types had full cabs, louvered doors and detailed differences in handrails etc. Pre and post-war locomotives had conventional combined coupling and connecting rods with split bushes driving the rear wheels but both production series used long connecting rods from the jack shaft driving on the front wheels with separate

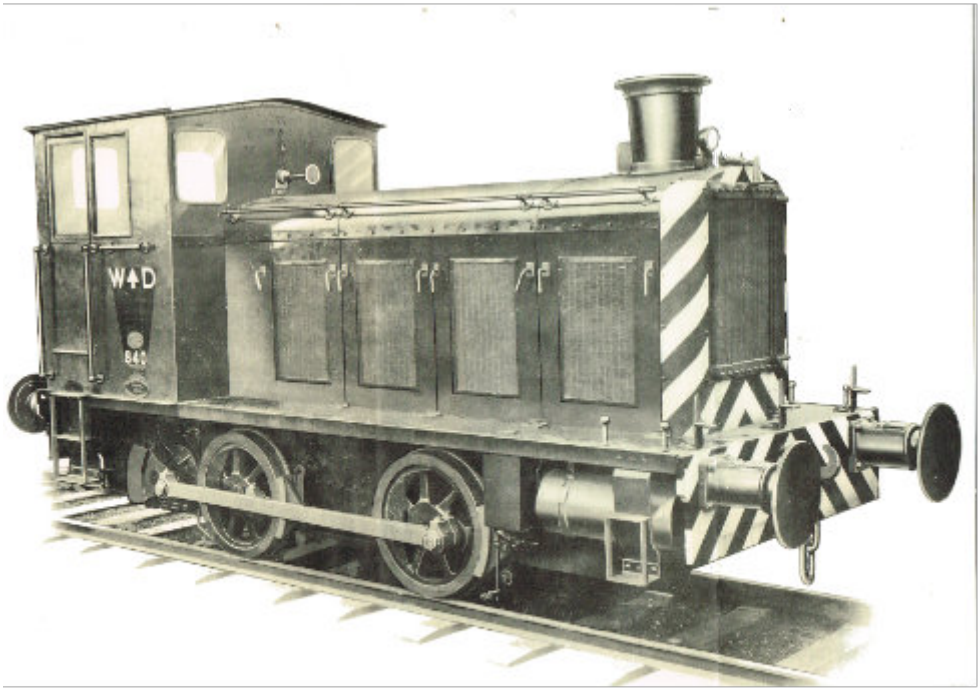


Image from Illustrated Spare Parts list issued by the War Office June 1960

connecting rods, presumably to reduce the skill required in manufacture. As yet the author has not been able to determine which design the later Barclay ROF locomotives had. All the production machines had (air start) 154Hp Gardener 6L3 engines, 4-speed Self Changing Gears transmission, air brakes and electric lighting, combining with the flameproof exhausts to allow use within ordinance factories and ammunition dumps. No further machines of this type were built for the Army but the basic design was sold to industry by both Barclay and Vulcan/Drewry and formed the basis of BR class 01 and (with 8-cylinder engine) class 06 while an 0-6-0 version became BR classes 03 and 04

In later years the early series machines had the cabs fully enclosed and most of the long term survivors were fitted with extra lights, warning beacons and electric start. Some locomotives were rebuilt with later final drives, while others were derated to 100Hp probably to prevent transmission damage. A number of the machines (most of the later batch in fact) received more comprehensive rebuilds in the late 60s /early 70s when more modern Gardener engines of type 6L3B rated at 196Hp were fitted. It is fair to say that the rebuilds were not particularly successful as the original transmission struggled to transmit the extra power while the 0-4-0 wheel arrangement and 10-ton axle loading could not easily impart it to the train! For more details and photographs of the earlier locomotives see the excellent web pages of the group who are restoring. W 33

HISTORY OF WAR DEPARTMENT DIESELS 825 AND 830 FROM NEW TO PURCHASE FOR PRESERVATION

825 at Bicester in 1964 (photo Peter Excell) - note no chimney is fitted

Although nominally the same the machines now at Isfield are of two different makes and were built in different series to somewhat different designs. Both have been rebuilt with later engines and conical chimneys but 825 has a much more complex history.The earlier machine has a very complex history to the extent that there is some doubt about its identity. The most likely explanation is that it is Barclay no 354 built in 1941, heavily rebuilt by the Army at Bicester in either 1955 or 1957 after a serious

accident. If this is the case it was WD39 (new to Longtown 7-7-41 and the first of the Barclay batch), renumbered WD70039 in 1944, later WD 825 and finally Army 221. It was one of a group of 11 that were shipped to France via Southampton Cherbourg for use by the Invasion Forces. It is not known if this loco worked outside France. For a detailed allocation history see the site of the Dutch group restoring WD33 - one of the same series that did not return to the UK after VE day as well as my summary tables.Evidence discovered during restoration shows that it has been WD 825 since the cab was rebuilt but no fully reliable trace of an earlier identity was found. The Industrial Railway Society's book on the Army locos notes that the records do not agree and actually contradicts itself between the text and the photo captions. A photo in 'The Bicester Military Railway (E. R. Lawton & Major M. W. Sackett)' p122 has a stripped frame in the background that is clearly one of the early series as it has raised rivets while the others were flush, it seems highly likely that this is the present 825 before rebuilding - the photo is not dated but is likely to have been after 1955 as the sleepers are concrete and these were not used until then. As rebuilt no 825 did not appear to carry a builders plate (none is visible in the 1964 photo below) and although there are bolt holes in the cab sides that may have held one they are too small and too close together for an original Barclay plate (the 1942 picture above suggests one was never fitted). No certain evidence of identity was found when the frames were stripped for painting, the buffers are marked 'LMS 1941', the axle boxes 354 and the only clear numbers on the body (on the front lamp bracket) suggest it was made from components intended for several of the 1941 Barclay batch. Since the engine, gearbox and final drive have all been replaced only these numbers (may) relate to the original construction although they are, of course, on removable components. It is now realised (after further stripping for restoration) that the rebuild of 825 was even more comprehensive than previously thought. Very little above the frames appears to have survived (the bonnet doors are not original, the radiator frame and bonnet top probably are as there is a cut-out for the early type chimney). The mechanics have been much mutilated comparison with other surviving early locomotives shows that the gearbox mounting is home made as is all the brake gear and most of the body including the cab, the final drive is from one of the later series (or may have been replaced with new when the 50s rebuild was done) and the gearbox presently fitted came from 830. WD825 is certainly from the early series (it has round head frame rivets and the modifications to the chassis to

accommodate the later final drive in an early frame are obvious). There are four locomotives unaccounted for - WD35/6/8/9, WD34-38 all returned from use by middle east forces (MEF) in 1947 but WD35/6/8 are unaccounted for later - all the ex-MEF ones were put up for sale in poor condition on their return and only WD34 and WD37 have a known buyer. WD39 is supposed to have been sold to Sentinals but there is no evidence of this and no reason why Sentinal (still building steam at the time) would have wanted it. All the other candidates are EE/VF/DC products and examination of survivors suggests that the EE frames have a slightly different rivet layout to the Barclay ones while the present 825 has the Barclay type. It seems most likely that the locomotive was built as WD39 in 1941, renumbered to WD70039 in 1944, damaged in an accident (or possibly used for spares) before the next renumbering in 1952 when it would have become WD823 but in fact was ignored so presumably was not considered to exist. It is later (c1955/6) decided to rebuild the frame as a 'new' loco that is completed by 1957 and incorrectly numbered 825 (assuming those rebuilding it knew it was originally from WD33-WD39 it should have been 823). Someone eventually (c1960) notices that there are now two 825s and has the wrong one (ex WD44) renumbered to 823 which of course meant there were now two 823s. In 1961 this is noticed and the original 823 (which was probably thought to be WD39) is renumbered 859 being tagged on the end of the ex-ROF locos being taken into army stock at the time. Obviously WD39 should have become 859 or whatever the

825 in use at Quesnsbrough on an empty steel train in 1993

830 out of use at Queenborough in 1993 - note the remains of the gearbox from 825 on the running

next spare number was in 1957 but clearly this was too simple (or someone may have been hiding that an extra loco has been created). In approximately 1972 WD825 was rebuilt again with a later engine (Gardner 8L3B instead of 8L3) - this engine was 196hp instead of 150 and it seems 825 and 859 were the only early series locos to be rebuilt as they had been fitted with the later design of final drive and were better able to absorb the power. Unfortunately 825 retained the early gear box and this seems to have struggled with the powerThe later history of 825 is similar to 830, its final Army allocation being Long Marston, Warwickshire from 1972 before sale to Queenborough Rolling Mills, where it became no 15, in 1985. This machine lasted much longer in Queenborough service than 830 largely due to the efforts of John Tucker (the senior locomotive driver and maintenance man) who adopted it as works locomotive thus avoiding much of the heavy work on the steel trains. Despite this motive power shortages led to it being used on this traffic and much wear occurred, leading to a rebuild of the gearbox using parts from both locos in the casing from 830 and very serious tyre and bearing wear. Our two machines also collided at some point leading to damage to 825's cab. The locomotive remained in use until 1995 when it was replaced by more modern ex-Army machines, it having become the only working loco at one point. At the time of withdrawal this was the oldest standard

gauge locomotive still in regular industrial use in Great Britain (Army 859 at Tarmac took this dubious honor later but this is also now out of use

830 is a Drewry Car Company / Vulcan Foundry built machine (builders numbers DC 2176 / VF 5257) of 1945 and is the second Drewry example from the later batch. It originally carried number WD72221, later (1951) WD830 and lastly (1968) ARMY223. It worked at a number of depots including Wem (local to where its original co-owner and myself went to school), finishing its Army career in 1985 at Ashchurch, Gloucestershire where it had been for some 15 years. It was then purchased by Shipbreakers (Queenborough) Ltd., who among other things were both scrap merchants and locomotive dealers with an extensive internal railway system which also served other local industry. This company later became Queenborough Rolling Mills producing reinforcing bar often from scrap rail imported by sea using their own rail served wharf. This involved hauling very heavy trains over rough track with a very severe curve leading to serious and unbalanced tyre wear and eventual collapse of a rear wheel bearing. This led to the locomotive, numbered 16 in the Queenborough series, going out of use in about 1989/90 and later being cannibalised to keep no 15 running.
The locomotives were deemed no longer required at Queenborough in 1995 and were purchased by myself and Nick Kelly after the Lavender line had expressed a need for a smaller shunter than the class 12 then being used.

War Department 0-4-0 article can be found at
www.thedingleypages.x10host.com/rolling_stock/series_history.htm

History of War Department Diesels 825 and 830 can be found at
www.thedingleypages.x10host.com/rolling_stock/825_830_history.htm

A video of the 6L3 from W33 being stripped cleaned and reinstalled in the locomotive can be found at
https://www.youtube.com/watch?v=dvWD_dszDgs

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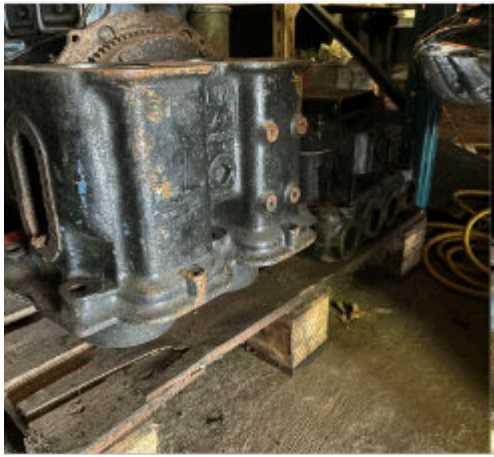

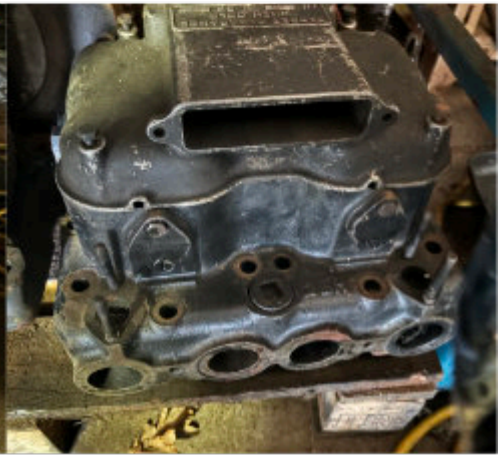

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