



• 76077 •

TODDINGTON STANDARD LOCOMOTIVE LTD

COMPONENT SPONSORSHIP SCHEME

FOR PARTS AVAILABLE TO SPONSOR, PLEASE SEE LOT NUMBERS :

0012, 0014, 0015, 0016, 0019, 0020 and 0033

FROM THE FOLLOWING LISTING


[3rd January 2021]





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COMPONENT SPONSORSHIP SCHEME

Lot No: 0001	SPONSORED BY JOHN HARRIS	LHS Locomotive Builders Plates	Lot No: 0002	SPONSORED BY BRIAN MASON	RHS Locomotive Builders Plates
<p>Details: These cast iron plates were fitted to the front of the locomotive just above the front footsteps on either side of the locomotive. All standard engines had an identical plate fitted with only the build place and date changed for each locomotive. 76077 was actually completed in December 1956 so will carry this date not 1957 as shown.</p> <p style="text-align: right;">(photo from sister locomotive 76084)</p>					


Lot No: 0003	SPONSORED BY RICHARD WINSTANLEY	LHS automatic steam chest drain valve	Lot No: 0004	SPONSORED BY RODERICK CHAPMAN	RHS automatic steam chest drain valve
 		<p>Details: The automatic steam chest drain valve is mounted on the bottom of the cylinder between the front and rear steam operated drain cocks. Its purpose is to drain off any condensation which forms in the valve chest when the regulator is closed. As soon as the regulator is opened a ball lifts onto a seat and forms a seal to prevent steam leaking from the valve chest. Unfortunately, as with most of the original fittings these were removed when the locomotive arrived at Barry scrap yard.</p>			




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Lot No: 0005	SPONSORED BY MIKE COOKE	LHS Locomotive buffer	Lot No: 0006	SPONSORED BY LIN MERRICK	RHS Locomotive buffer
<p>Details: The locomotive buffers provide an exciting opportunity to sponsor a very noticeable part of the locomotive. The buffers work in partnership with the hook and shackle to maintain a flexible connection between the loco and the rolling stock being pulled or pushed. They contain a very strong spring which softens any contact with the other vehicles in the train. Unfortunately, when the locomotive was at Barry scrap yard the buffers were removed presumably ending up on another restored locomotive. Luckily, the buffers were also used on Class 08 diesel locomotives and we have been able to purchase replacements from scrap diesels. The buffers are being refurbished for use on our locomotive.</p>					

Lot No: 0007	SPONSORED BY KEN GARRINGTON	LHS new build tender buffer			
Lot No: 0008	SPONSORED BY KEN GARRINGTON	RHS new build tender buffer			
<p>Details: When 76077 was rescued from Barry scrap yard the tender was missing so TSLL will eventually be building a new one to run behind the locomotive. To ensure we have all the parts required for this project we have purchased replacements from scrap Class 08 diesels. The buffers are being refurbished for use on our tender. This is an excellent opportunity to sponsor a prominent component for our new build tender, more tender components will be available to sponsor as and when it is beneficial to the project, we plan to take advantage of bulk purchases with other loco groups to keep the costs as low as possible. The purpose of the buffers is to work in partnership with the hook and shackle to maintain a flexible connection between the loco and the rolling stock being pulled or pushed. They contain a very strong spring which softens any contact with the other vehicles in the train.</p>					



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Lot No:
0009

SPONSORED BY
ROB MERRICK

New build tender draw hook forging



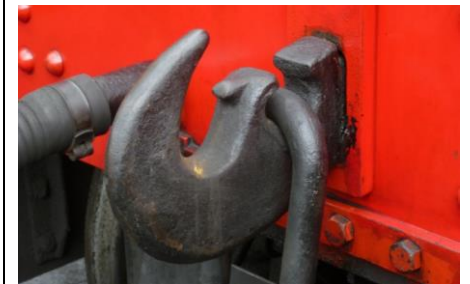
Details: When 76077 was rescued from Barry scrap yard the tender was missing so TSLL will eventually be building a new one to run behind the locomotive. To ensure we have all the parts required for this project we have purchased a draw hook forging in collaboration with the Mid Hants Railway who needed to replace the one fitted to the tender of 76017 (our original tender). The purpose of the draw hook is to take the full weight of the train securely tying the tender to the train formation. A shackle attaches to the back of the hook and forms the coupling. We have obtained several spare shackles for use on the loco and tender. Behind the draw hook there is a rubber metal sandwich arrangement and a large nut which secures the hook to the tender. The rubber metal sandwich arrangement provides an element of cushioning when the locomotive starts away as a considerable amount of shock loading can be passed through the component.

Lot No:
0010

SPONSORED BY ANDREW BRYNE

New build tender draw hook machining

Details: When 76077 was rescued from Barry scrap yard the tender was missing so TSLL will eventually be building a new one to run behind the locomotive. To ensure we have all the parts required for this project we have purchased a draw hook forging in collaboration with the Mid Hants Railway who needed to replace the one fitted to the tender of 76017 (our original tender) The forging needs to be machined so it's ready to fit onto the tender. TSLL were able to assist the MHR with the loan of a component to keep 76017 running and as a thank you they have offered to machine the forging (at an advantageous price) at the same time as their own. The machining is very important as the screw thread takes all the weight of the train.






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Lot No: 0011	SPONSORED BY RODERICK CHAPMAN, DAVID MEADOWS & ROGER EXTON	LHS front opening cab window	Lot No: 0012	Total Cost: £1500	No of Units: 3	Unit Cost: £500	RHS front opening cab window
		<p>Details: Like all the non ferrous parts and fittings our locomotive lost its original windows when it was at Barry scrap yard. We have been fortunate to obtain a set of castings which will need to be machined and safety glass fitted before the windows can be fitted to the cab. The windows are fitted into the front spectacle plate of the cab and hinge inwards to enable them to be cleaned and also provide a bit of fresh air to the crew when operating in warm weather. When the BR standard locomotives were first constructed the windows were fixed and as such many enginemen complained that they were hot in warm weather and the glass difficult to keep clean. British railways modified the design and most locomotives including 76077 were fitted with the opening design from new.</p>					



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Lot No: 0013	SPONSORED BY RICHARD DALEY			LH cylinder front relief valve	Lot No: 0014	Total Cost: £1000	No of Units: 1	Unit Cost: £1000	LHS cylinder rear relief valve
Lot No: 0015	Total Cost: £1000	No of Units: 1	Unit Cost: £1000	RHS cylinder front relief valve	Lot No: 0016	Total Cost: £1000	No of Units: 1	Unit Cost: £1000	RHS cylinder rear relief valve
				<p>Details: Like all the fittings our locomotive lost its original cylinder relief valves when it was at Barry scrap yard. We have been fortunate to obtain some original parts but they will need refurbishing and new components making before they can be fitted to the locomotive. The cylinder relief valve is designed to stop the over-pressuring of the cylinder which is usually caused by water being drawn into the cylinders (called priming). The pressure is set approx 15 PSI higher than the maximum boiler pressure so under normal circumstances they remain closed. If the pressure exceeds this then they open releasing the build up of pressure and preventing any damage to the cylinders and motion. Hence they are a very important fitting that can save the locomotive from tens of thousands of pounds of damage.</p>					




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Lot No: 0017	SPONSORED BY ROB SOUTHWELL	LH fire hole door	Lot No: 0018	SPONSORED BY DAWN SOUTHWELL	RH fire hole door
Details: Located in the cab of the locomotive and in constant use by the fireman they are a very prominent part of the cab controls. These items don't need much explanation but you may be surprised to know that they are actually hollow and as such are designed to let some (secondary) air into the firebox to aid good combustion.			Fortunately the patterns to cast replacement doors still exist and we have been able to order new castings from the Severn Valley Railway. We also need to construct a replacement set of runners, the handles, and linkages. These have been drawn up on CAD software by a long distance volunteer and are awaiting CNC cutting and eventual assembly by our local team of volunteers.		

Lot No: 0019	Total Cost: £650	No of Units: 1	Unit Cost: £650	Ejector Duplex control valve casting
				Details: The Ejector duplex control valve is fitted just forward of the LHS of the cab. This item controls the steam supply to the small and large ejector of the vacuum brake system on the locomotive. We have been fortunate to obtain a casting from an existing pattern which has saved us the cost of having a new pattern made. This sponsorship item covers the cost of the purchase of the casting but it will then require machining before it is able to be used on the locomotive (see Lot No 20)



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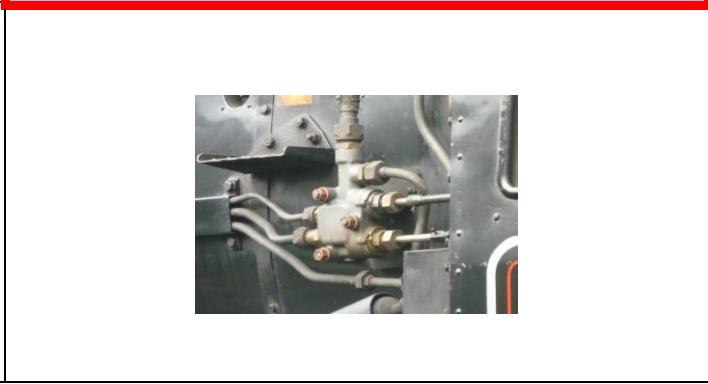
TODDINGTON STANDARD LOCOMOTIVE LTD

COMPONENT SPONSORSHIP SCHEME

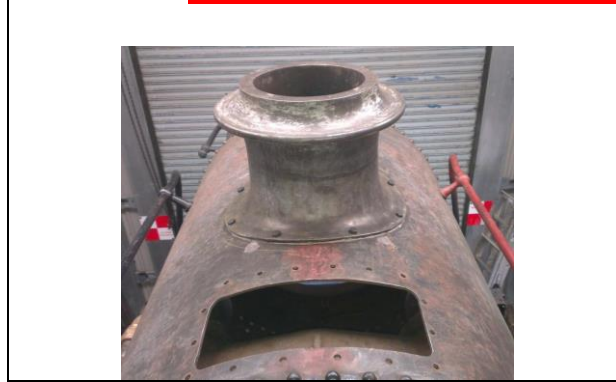
Lot No: 0020	Total Cost: £1000	No of Units: 2	Unit Cost: £500	Ejector Duplex control valve machining	ONE PART SPONSORED BY BARRY WOOLMER
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Details: The Ejector duplex control valve is fitted just forward of the LHS of the cab. This item controls the steam supply to the small and large ejector of the vacuum brake system on the locomotive.

We already have the basic casting, this sponsorship covers the cost of having the casting machined together with making all the internal and external fittings required before the valve can be used. In addition to the machining of the main casting two valve stems need to be made which will attach to the new handles in the cab. Gland nut assemblies and the pipe unions will also need to be made.



Lot No: 0021	SPONSORED BY ROBERT MACKINTOSH	Chimney (new casting)
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Details: The opportunity to sponsor the chimney casting gives the sponsor the chance of investing in a very prominent part of the locomotive. Sadly when the loco was at Barry scrap yard the chimney was removed presumably by a souvenir collector for display. It may to this very day be in someone's garden with flowers growing out of it, this being a common occurrence for such items. We know of the whereabouts of one original chimney from classmate 76084 but due to corrosion etc it is unrealistic to spend money repairing the item even if we could persuade the owner to part with it. We are fortunate that a pattern exists that has already been used to replace 76079's and 76084's chimney, so that is the preferred direction for the company.





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Lot No: 0022	SPONSORED BY CHRIS BLAKE	Smoke box door	
<p>Details: The smoke box door is arranged to hinge open enabling the access to the front of the boiler for examination and repairs. Most locomotives require this opening every day to shovel out the char that accumulates when the hot coals are sucked along the boiler tubes. 76077 is fitted with a set of screens which act as a spark arrester but also have the advantage of ejecting most of the char up the chimney when the loco is running. Along with many other serviceable parts 76077 lost its smoke box door at Barry scrap yard in the early 1980's. Fortunately, there are still companies in the UK that can press these items. Our new door is 4ft in diameter and as well as the door itself there is a sacrificial plate on the inside to reduce corrosion and prevent the door overheating when the locomotive is working hard. Also attached is the hand rail and top lamp bracket.</p>			


Lot No: 0023	SPONSORED BY STEPHEN EVERETT	Smoke box door dart	
	<p>Details: The smoke box dart gets its name from the arrow-like shape at the end of the part. Its purpose is to hold the smoke box door closed. It works by passing through a slot in the dart bar which is mounted inside the smoke box. When the dart is turned 90 deg either way using the inner smoke box door handle the flats on the front of the dart locate with the dart bar. Using the outer smoke box handle the door can then be pulled up onto its seat via the threaded section of the component. The smoke box dart locates in the housing (RHS picture) which is called a distance piece. This is riveted to the front centre of the smoke box door. By sponsoring this component you will be helping to construct our brand new smoke box, which is akin to the face of the locomotive.</p>		





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Lot No: 0024	SPONSORED BY JULIE DREW-CLIFTON	Smoke box door handles	
<p>Details: The two handles fitted in the centre of the smoke box allow the door to be opened for cleaning and maintenance. The inside handle locates the dart into the dart bar and turns only 90 deg. The outside handle has a thread in its boss that is used to pull the door up tight maintaining a good seal of the door to the ring. This is essential to ensure the locomotive steams properly. Like many parts the originals were lost at Barry scrap yard to souvenir hunters or other loco groups looking for spares. Your sponsorship will help to complete our totally new smoke box.</p> <p style="text-align: right;">(photo from sister loco 76084)</p>			

Lot No: 0025	SPONSORED BY STEPHEN EVERETT	Top smoke box door hinge	
Lot No: 0026	SPONSORED BY STEPHEN EVERETT	Bottom smoke box door hinge	
	<p>Details: When 76077 was at Barry scrap yard the smoke box door was removed, probably by another locomotive group, for their locomotive. Unfortunately the hinges and pivots were also removed so we are manufacturing new parts. The smoke box door hinges are surprisingly complicated items to manufacture being curved to fit the door. There is also a pivot block which attaches to the front of the smoke box ring and these allow the door to swing open. They are machined from profile cut steel and hand formed to fit the door. Your sponsorship of the Top or Bottom smoke box door hinge will help complete our brand new smoke box for the locomotive.</p>		



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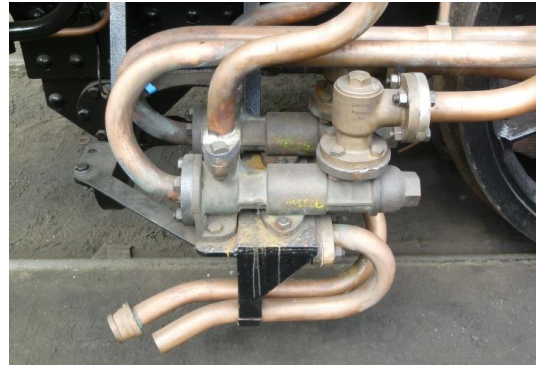
COMPONENT SPONSORSHIP SCHEME

Lot No:
0027

SPONSORED BY
CHRIS HINTON

8mm Live Steam Injector

Details: Like all of the non ferrous fittings on the locomotive, both injectors were removed when it first arrived at Barry scrap yard. These items are very important as they supply the boiler with water when the locomotive is in steam. They are a very clever component appearing to do an impossible job.



Using some clever physics they are able to force water into the boiler above the steam pressure of the boiler lifting the clack valve, using nothing more than the steam pressure in the boiler. TSLL already have one 10mm live steam injector which is currently on loan to 76084, and due to be replaced with a new one currently on order. We would like to place an order with the supplier for the 8mm one at the same time if a sponsor can be found.

Lot No:
0028

SPONSORED BY
GREG BLUNDELL

Boiler pressure gauge

Details.
Like all of the non ferrous fittings on the locomotive the gauges in the locomotive cab were removed when the locomotive was towed to Barry scrap yard.

The 7" diameter brass bodied gauge allows the crew to monitor the pressure in the boiler when operating the locomotive. We have an original gauge which will need to be refurbished and calibrated before it can be used on our locomotive.



The sponsorship for this item will cover the cost of overhauling and calibrating the gauge together with the manufacturing the pipe unions to connect it to the boiler ready for the day when we put the first fire in the locomotive.



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COMPONENT SPONSORSHIP SCHEME

Lot No:
0029

SPONSORED BY
NEIL BYRNE

Steam chest pressure gauge

Details: Like all of the non ferrous fittings on the locomotive the gauges in the locomotive cab were removed when the locomotive was towed to Barry scrap yard. This 7" diameter brass bodied gauge allows the driver to see how much pressure is in the valves and pistons when driving the locomotive.



We have an original gauge which will need to be refurbished and calibrated before it can be used on our locomotive. The sponsorship for this item will cover the cost of overhauling and calibrating the gauge together with manufacturing the pipe unions to connect it to the cylinder block ready for the day when we steam the locomotive for the first time.



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COMPONENT SPONSORSHIP SCHEME

Lot No:
0030

SPONSORED BY
PETER GUTTERIDGE

Vacuum gauge

Details: Like all of the non ferrous fittings on the locomotive the gauges in the locomotive cab were removed when the locomotive was towed to Barry scrap yard. This 6" diameter brass bodied duplex (twin needle) gauge allows the driver to see how much vacuum is created in the train pipe and the reservoir of the braking system when driving the locomotive.

Whilst a good driver does not need to look at the gauge when stopping a train it provides a visual display of the state of the system which is useful for proving the brake system.

We have an original gauge which will need to be refurbished and calibrated before it can be used on our locomotive.

The sponsorship for this item will cover the cost of overhauling and calibrating the gauge, together with manufacture of the pipe unions to connect it to the braking system, ready for the day when we operate the locomotive for the first time.





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COMPONENT SPONSORSHIP SCHEME

Lot No:
0031

SPONSORED BY
ANDREW MEREDITH

Smiths Speedometer Generator

Details:

Manufactured by J S Stone these units were fitted to a return crank on the LH trailing wheel of BR standard locomotives. From the early 1950's Speedometers were being fitted to locomotives to assist drivers to gauge the speed of the locomotive.



The generator produces a voltage and through a resistor network a current is created. This current is then displayed on the cab instrument fitted high up to the RHS of the driver's seat.

The cab instrument is a moving coil electrical ammeter that is graduated in MPH.

Lot No:
0032

SPONSORED BY
ANDREW MEREDITH

Speedometer Cab Instrument



Details:

Manufactured by Smith's instruments for J S Stone these units were fitted in the cab of locomotives from the early 1950's. It is a moving coil ammeter graduated in MPH and displays the current generated by the speedometer generator fitted on a return crank on the LH trailing wheel crank pin. The Cab instrument is fitted high up to the RHS of the drivers seat and is fitted to a board which also has the Vacuum gauge and Steam Chest pressure gauge attached.



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COMPONENT SPONSORSHIP SCHEME

Lot No: 0033	Total Cost: £10,500	No of Units: 75	Unit Cost: £140
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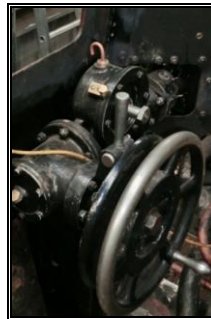
Details: When it comes to replacing components on the locomotive this item is the most complex of the main parts missing. Unfortunately, whilst at Barry scrap yard there were instances during the early 1980's of lots of components being stolen off locomotives. 76077 was one of the unlucky locomotives that suffered as a result of the thefts. Rumour has it that, although the person was caught, the parts were just thrown into the scrap pile never to be seen again. Having tried to find out if a spare reverser exists in someone's collection, the only obvious solution open to us is to construct a brand new one.

For those of you who don't know, the reverser controls the valves of the locomotive and through these regulates the amount of steam that enters the cylinder based on the percentage of the piston's stroke.

When starting a locomotive, the reverser is set to 75% meaning that steam is admitted to the cylinders for 75% of the stroke. When a loco is running fast the reverser could be set as low as 15% where just a short burst of steam keeps the loco moving along nicely.

Reversing gearbox

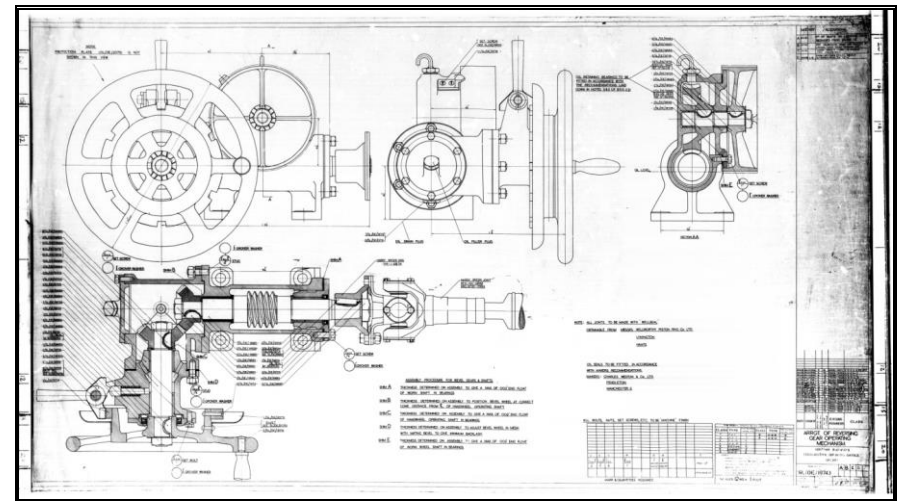
The other main task, as its name suggests, is to control the direction of the locomotive.



To build a new reverser will be challenging, there are several gears that need to be cut and complicated thread to be machined.

32/75 PARTS NOW SPONSORED BY : CHRISTINE MURRAY(1) IAN CROWDER(4) HILARY CROWDER(4) KEN GARRINGTON(2) STEPHEN EVERETT(3) VIC SMITH(1) ALAN PYE(2) DAVID MEADOWS(1), ROBERT THOMAS(1), NEIL BYRNE(1), MARTIN RIGBY(1), MARTYN SMITH(1), MALCOLM DICKSON(4), DAVID SCRUTON(2), DAVID PATERSON(1), ANDY SMITH(3)

We are fortunate that patterns exist for the body, handle and indicator drum. The CLAN group building a new Standard locomotive have already had items cast for their reverser we hope to be able to work with them to mutual benefit



As this is a high value item, we have split the total cost into 75 segments, one for each % of the piston stroke controlled by the reverser. You can purchase as many segments as suits. Completing this item will be a major step forward in 76077's restoration.