

THAMES VALLEY & GREAT WESTERN

Omnibus Trust

	Great Western Railway Road Motors
	National Omnibus & Transport Company
	Western and Southern National
	Royal Blue Express Services
	Reading Corporation
	Thames Valley Traction Company

NATIONAL OMNIBUS & TRANSPORT COMPANY 1927 LEYLAND PLSC3 LION

The Leyland PLSC Lion was launched in 1926 and was one of Leyland's L series chassis specially developed as passenger chassis with a dropped frame similar to the GWR Guy. The first model, the PLSC1, had a wheel base of 14'6" suitable for an overall length of 24'. The Leyland PLSC3 was very similar to the PLSC1 except with a longer wheelbase of 16'5" so able to accommodate an extra row of seats typically carrying 32 passengers within an overall length of 26'. Both were powered by Leyland's 5.1 litre 4 cylinder 28.9 h.p. overhead valve petrol engine and drove through a single plate clutch and 4-speed sliding mesh gearbox to a double-reduction spiral bevel rear axle.

This vehicle was delivered to the National Omnibus & Transport Company (NOTC) for operation in the West Country and was allocated to North Devon. When the railway companies obtained powers to invest in bus companies in 1929 and NOTC's West Country bus operations were combined with those of the GWR and Southern Railway to form, respectively, the Western and Southern National Omnibus Companies, this vehicle joined the Southern National fleet. Of the Lions delivered new to NOTC for West Country operation, most had Strachan & Brown or, later, Strachan bodies, apart from two by London Lorries and eight by Beadle. A further four joined the Western National fleet from GWR in 1929 and, later, three came from Dunns in Taunton.



PLSC3 No. 2816 with its original Strachans body. To the eye 80 years later, these bodies with the sloping windscreen and lower side panels had a more aesthetically pleasing and perhaps modern appearance than their Leyland contemporaries and even their Mumford replacements.



PLSC3 No. 2840 as rebodied by Mumfords in the National livery of the time with lining out and underlined fleetname.



A later picture of Mumford rebodied PLSC3 No. 2602 with a single half drop window on either side

At least 50 out of the 64 PLSC Lions operated by the Western and Southern National Companies are recorded as having been rebodied by Mumfords of Plymouth between 1935 and 1937. Mumfords rebodied many hundreds of vehicles for the National companies. Vehicle body design had advanced rapidly between the late 1920s and the mid-'30s by which time lower panelling had been extended down to cover the chassis, fuel tank, exhaust system, battery box and other items attached to the chassis. Many vehicles rebodied during this period were also fitted with more modern deeper radiators in keeping with the lines of the new bodies. However the chassis frames of the Lions did not lend themselves to this approach so the original small high mounted radiators were retained with the result that the overall appearance was rather heavy. The Mumford bodies incorporated the standard W&SNOC double aperture front destination arrangement with terminal destination above the via blind which accommodated up to four intermediate destination points in tapering lettering.

After rebodding, which was completed in February 1936, this vehicle returned to service in the North Devon & North Cornwall Area and before it was impressed by the military authorities on 8 July 1940 it had been based at Newquay. On being impressed, civilian registration and fleet numbers were removed and it was given military bonnet number D204. It was returned to Southern National at Newquay on 11 January 1943 where it is thought to have remained until sold to a dealer, Henry Bowers of Chard. Bowers had purchased 19 vehicles from W&SNOC for export to South Africa but the deal fell through and so he disposed of the vehicles to farmers, showmen and for scrap. This particular vehicle was sold to a farmer near Crewkerne, parked in an orchard and converted to a living van for fruit pickers. It is understood that it was used for this purpose until well into the 1980s. In the late 1980s it was recovered by Colin Shears and others to the West of England Transport Collection at Winkleigh. It was purchased by the present owners Colin and Helen Billington in August 2007 and was moved on a transporter to its present home near Maidenhead in October 2007 where it joined a collection of other buses and coaches of West Country origin.



On the farm near Crewkerne – the appearance completely hides the existence of the bus under the rustic boarding. By this time the cab door had parted company but the original half drop window was still in place.



Spring 1987. Now pulled out onto the farm drive with original tyres inflated, all wheels turning, steering operational having been stationary for nearly 40 years. The pitched roof and boarding had provided protection to the original body although rain had penetrated and run down the body to rust away the skirts – nevertheless a remarkable survivor.

RESTORATION

Restoration started in January 2008. It was decided to restore the body first as the chassis provided a stable platform for its reconstruction. The story of this is told in the accompanying photos. Over the following years the body frame has been reconstructed, repanelled, mouldings fixed, body wiring installed, internal bulkheads and lining panels fixed and roof mounted luggage rack built.

Having got this far by early 2012, the body was separated from the chassis so that work could proceed on the chassis and mechanical units in parallel with the body. This was achieved by the following method:

1. Removing the wheels and supporting the vehicle under its axles
2. Lifting the complete vehicle by about 9"
3. Supporting the body on longitudinal box section members resting on axle stands
4. Lowering the chassis back onto the floor - now resting on the brake drums
5. Progressively removing each pair of axle stands in front of the rear axle, pulling the vehicle forward and replacing the axle stands behind the rear axle, enabling the chassis to be extracted from under the body

The chassis is remarkably complete with all parts in place. The major units (engine, gearbox, prop shaft, axles, fuel tank) were removed. At this stage it became obvious that the bus had been involved in a major accident which has resulted in damage to the main chassis frame, in particular the longitudinal main chassis rails. At the front both members were bent downwards from the saloon bulkhead to the dumb irons, the offside by 1.375" and the nearside by 0.375" which explained why the radiator had been leaning towards the offside. At the rear, the longitudinal members were bent sideways by about 1/2" from the front spring hangers on the rear axle to the back of the chassis and the rear cross member was heavily bent and mangled. It appears likely that the vehicle left the road and a frontal impact bent the front of the chassis downwards and then the vehicle was recovered by cutting a hole in the back of the body, wrapping a hawser or chain around the chassis rear cross member and pulling the vehicle back onto the road, bending the rear of the chassis sideways in the process. This is conjecture and we shall probably never know the details of what happened but it is thought that this would have been at some stage during the war when circumstances dictated a 'make do and mend' approach. The rear of the body had been repaired but the chassis damage remained.

Our intention is to restore the vehicle to 1935 as-rebodied, roadworthy condition so it was necessary to repair the damage before continuing. This was done by a company called Chassis Alignment at Wisbech in Cambridgeshire to whom we took the complete chassis in January 2012. They have a strong floor with a grid of heavy steel members cast into it so they can apply upwards, downwards and sideways loads to different parts of the chassis. The skill is being able to know how much to push and pull to overcome the elastic (recoverable) deformations and bring about the correct amount of plastic deformation to permanently set the steel members to where they should be. Chassis Alignment did the job quickly and accurately, and are thoroughly recommended.

The chassis was away for about a month but on its return it was dismantled into component parts so that it could be grit blasted, primed and painted while the units were being stripped and rebuilt. This was done on site at Maidenhead in the late summer 2012. We supplied the paint which consisted of zinc phosphate primer and chassis black oil resistant gloss.

Since painting we have been re-assembling the chassis which is now back on its axles with gear box in place. We are currently waiting for replacement prop-shaft flexible joints which we are having made to the original pattern and prop-shaft centre bearing seal plates which are being re-cast. Once these components are installed the chassis will be put back under the body which will enable construction of the cab.

Other progress off the vehicle has included dismantling of the engine which is now well advanced. We have constructed a prototype seat carcass and had it trimmed to prove the robustness of the structure and the method of trimming. On this basis we have then constructed all the seat carcasses and the trimmer is well on the way.

Further photographs and descriptions will be added to this website as the work proceeds.



September 2007. Brought to the doors at Winkleigh after more than 20 years storage in the hangar. The original tyres still hold pressure



October 2007. On the low loader for its journey to Maidenhead for restoration.



January 2008. In the body building shop.



September 2008. Nearside framing well underway with pieces scarfed into the roof sticks where they meet the cant rail and new pillars in place.



September 2008. The cant rail is in two parts as Mumfords jig built the sides and roof as separate pieces and bolted the roof to the top of the sides. The pillars at the front of the rearmost side windows and the joining roof stick were also split along their lengths as the rear was also built as a separate structure and bolted onto the main part of the body structure.



September 2008. Fitch plates connect the pillars to the original steel channel section floor bearers



September 2008. A significant proportion of the timberwork in the rear needed replacing due to rot and woodworm



February 2009. With the original rear end removed the offside waist rail could be installed. We built the rear onto the side frames



November 2009. The rear framing is now rebuilt and main panels attached. The upper panels (corner and centre rear domes) are original in aluminium whereas the lower panels which were originally steel were damaged and corroded so were replaced with new, again formed in steel.



November 2009. Inside after reconstruction of the rear end. The original blind box has been re-installed together with internal lining panels to the domes. Markings on the floor show where the seat supports, plinths around the wheel arches and wearing slats for passengers feet were originally located so these features can be correctly reproduced.



January 2010. Main lower side panels are cut from zintec (zinc coated sheet steel) to provide stiffness and strength in the lower body. Some of the window cappings are installed



January 2010. Dave can be seen installing the final nearside lower panel.



January 2010.



April 2010. The body wiring was installed before the lining panels. Here, working from the rear the internal ceiling lining panels and external cove panels are being installed.



December 2010. Eric and Dave carrying the roof rack duck boarding past the fully panelled body with horizontal and vertical mouldings covering panel edges and defining the waist band



The body is supported on longitudinal box sections one of which can be seen just to the right of the front offside corner pillar. The box sections are supported on axle stands and, at this stage, the chassis was still in position. (Nov 2011)





The view along the prop-shaft towards the rear axle. (Nov 2011)



The chassis has now been lowered to rest on its brake drums on the floor. (Nov 2011)



The chassis begins to emerge by progressively removing and replacing axle stands on either side of the rear axle as the chassis is towed forward. (Nov 2011)



The chassis is now about half way out with the centre prop-shaft bearing below the saloon front bulkhead. (Nov 2011)



Centre bearing now under dashboard. (Nov 2011)



Rear axle under front bulkhead. (Nov 2011)



Rear axle under front bulkhead. (Nov 2011)



Chassis now completely out. (Nov 2011)



Damage to the rear cross member previously hidden behind the body lower rear panelling – we have an explanation. (Nov 2011)



Flexible rubberised fabric prop-shaft coupling inside the transmission brake drum. New couplings are now (February 2013) being produced to the original design by a company in Birmingham.



Another flexible 'rag' coupling between the clutch (left) and the gear box. (Nov 2011)



Interior lining panels in position awaiting trimming. (Jan 2012)



The offside rail was bent downwards from the front saloon bulkhead to the dumb iron as demonstrated by the gap below the black painted straight edge to the top of the chassis rail. (Jan 2012)



The complete Lion chassis before dismantling started. (Jan2012)



The damaged rear cross member. (Jan2012)



Fractured casting on the rear engine support cross member. (Feb 2012)



Cracking in the front cross member. (Feb 2012)



Cracking in the centre bearing cruciform cross member. (Feb 2012)



The straightened, repaired and painted chassis starts to take shape. (May 2012)



Head lining and rubbing strips behind the luggage racks are fixed in place and the support brackets for the luggage racks are being fixed in position. (Dec 2012)