The only railmotor service I heard of running from Wolverhampton was the service to Stourbridge via Wombourne. It was for this service that the Wolverhampton Low Level station 'New Bay' was built. One of the old Wolverhampton drivers – Walter Cottam – had the dubious privilege of being in the railmotor link firing to a driver who'd been reduced from main line work said to have been for some deviation from 'sound railway practice' not serious to confine him to shed. I gathered from Walter's remarks that this did not make for a happy driver/fireman relationship.

Concerning the operation of these odd machines Walter described coaling one from a wheelbarrow and likened the storage capacity of the bunker to be about as much use as a shelf! This was on a par with the water capacity – or lack of same – where the tank had to be filled at each end of the route as well as at Wombourne in each direction.

Out on the road, contrary to all the Company exhortations about good firing practice, especially the one about only firing when the regulator was open to avoid unnecessary smoke, in the case of the railmotors it was absolutely fatal to steam production to open the firehole door whilst the regulator was open. Having seen official drawings of these boilers I can appreciate the reason for this. The deep circular firebox had a firehole positioned immediately below the tube plate. Opening the door would send cold secondary air straight across the tube plate and up the vertical tubes, hence every station stop brought frantic activity on the part of the fireman to recharge the firebox and recover lost ground in the steam and water stakes before they lurched off on the next stage of the trip. Long runs between stations must have been a nail-biting experience for the fireman!

Walter described an unusual failure he had one day. As they set off, vestibule leading, and crashed through pointwork, he heard a momentary hiss of steam somewhere up top of the boiler. Completely mystified he heard this several times as the bogie hit rough patches. All was eventually made clear when suddenly there was a great blast of steam that filled the cab roof. The whistle pillar had snapped clean off! This of course did absolutely nothing to enhance the steaming properties of the boiler. Quite the reverse in fact! However in these sort of situations, as on the auto engines, the fireman has the ultimate sanction i.e. pulling the pin out of the regulator linkage! Watching gleefully as his mate frantically thrashes the free end of the linkage around, all to no avail followed by a furious ringing of the bell system.

Some firemen apparently had pet theories as to the best means to handle the fires on these boilers. One old driver, Bert Attew, told me how a cockney fireman had claimed the secret was to build the fire up into a cone shape crowned with a lump of coal on the top – wobbling!

If I can digress here for a moment, one of Bert's first firing turns at Wolverhampton after transferring from old Oak Common as a very junior fireman was on one of the shed pilots in the Foxes lane yard. They had No. 92 a tiny 0-4-0 saddle tank that had a gangway on only one side. Firing, when sing a shovel at all, as with a cut down blade and a handle consisting of little more than the 'T' piece jammed into the shank. Starting work Bert had the shunter on his side of the loco and getting a stop signal, turned to his mate and said 'whoa'. His mate looked back at him and said 'Well go on then'. The full horror of his situation then dawned on him. The loco only had a handbrake on the fireman's side naturally – a wheel like a

mangle! Bert spent the rest of the shift seemingly continuously winding the thing on and off. By the end of the day entertaining serious doubts about his career choice.

To get back to the subject! One morning many years ago my regular mate and I were waiting for a return working in the relief cabin at Tyseley South (a location known far and wide as 'pneumonia'! Apparently dating back to the time the shelter consisted of one of the tin huts). By this time though a grounded clerestory coach body in the final stages of decrepitude was in use. It did contain a brake-van stove. Probably explained where much of the panelling and furniture had gone! Incidentally this hovel was subsequently replaced for a period by trailer No. 188 still on its own wheels on a short length of track – and no heating system! Talk about history repeating itself. Anyway this old coach body gave us a worms-eye view of the suburban passenger services pounding into the down relief platform at Tyseley as the morning rush built up to its peak.

Watching a succession of big tankies thump past the door evidently put my mate in reflective mood. He suddenly turned to me and posed one of his M.I.C. style questions. To imagine I was in the factory and had been told to get the crane to position a big tankie or 43xx driving wheelset ready for re-wheeling a loco. How would I know which was the right way round? Knowing my mate this had to be a catch question but I could not see where. With the big ends at 90° to each other a right handed set will always have the right side in direction of travel lead to the left and with inside Stephenson valve gear each side has its own pair of eccentric sheaves for separate forward and back motion. The answer – simply that the right side balance weight has a groove on the outer edge in order to give clearance to the square end-cap on the vacuum pump. Elementary!

What's this got to do with railmotors, you're probably asking by now? Just that this gives a good lead up to an episode in the career of Jack Lloyd who retired from Oxley as our mechanical foreman. Jack served his apprenticeship at Stafford Road factory and one day their gang had been given the task of re-assembling one of the railmotors that had undergone a major overhaul. This involved re-wheeling, assembling the valve gear dropping the boiler into the frames and with the body in place and all plumbing etc, coupled up, came the great day when the unit was steamed. With all the final adjustments made, the Top Yard engineman was sent for to take it out of the shop. This worthy duly appeared and after checking all was clear, blew the whistle, dropped the lever in the direction of travel and opened the regulator. To everyone's consternation the unit lurched backwards and smashed into the wall at the end of the shop! A painful scene then ensued, culminating in the arrival of no less than the top man himself, J A Robinson, who made a tour of the scene before turning to the apprentices cowering in the corner and demanded to know the reasons for the mishap. By now of course they had had the error of their ways pointed out in no uncertain fashion, so they quaveringly explained that they had installed the driving wheelset the wrong way round. There was a painful silence while Robinson digested this, then suddenly said 'All right! We'll put the hole in the wall down to mice! But clear the rubble off that buffer plank before anyone else sees it!'

The simple fact behind all this is that the railmotors were fitted with Walschaerts valve gear. The valve events here are basically derived from a single return crank which if the fore gear is taken from the bottom of the suspension link, has to lead the big end in the forward

direction of travel on an outside admission (slide valve) engine. This is in direct valve gear (as opposed to indirect drive when the fore gear is taken from the top of the expansion link and the return crank must follow the crank pin in the forward direction of travel). Inside admissions (piston valves) have the return crank positions opposite to the above examples. The rebuilt Bulleid pacifics use an anomaly (What's new?) where the outside admission piston valves had to be retained in the rebuild scheme.

By now I trust it can be seen that by turning the wheelset round the relative positions of the return crank and crank pin are reversed. In our railmotor example the return crank now follows the crank pin in the intended forward direction of travel and if the rest of the gear is connected up in the intended way the interesting situation described above is the result.

Incidentally there are also different relative positions of the valve rod and radius rod connections to the combination lever between inside and outside admission valves. The crosshead driven combination lever gives the necessary lap and lead positions to the valve, that cannot be derived from the single return crank - unlike the Stephenson gear with its separate fore and back gear sheaves, the off-setting of which can give the required lap and lead positions in its appropriate directions.

Incidentally mention of J A Robinson brings to mind a number of office memos I came across that had been signed by him. From the look of his regular signature it appeared to have been done with the wrong end of a badly bitten school pen!