# QUEENSLAND RAILWAYS STEAM LOCOMOTIVE DEPOTS

John Newell and Arthur Robinson

This essay provides general information about Queensland Railways steam locomotive depots. It complements the oral and visual presentation by the authors at the Convention.

If there is any historical context, that of the period 1950 to 1964 would apply as this was an era during which Queensland steam locomotives reached maximum development, were most numerous and maximised the functional aspects of the locomotive depots.

The steam locomotive was the mainstay of railway operations in Queensland from 1865 until the introduction of diesel-electric locomotives in 1952. It took nearly ten years for the diesel-electrics to make serious inroads into railway operations. Although the diesel-electrics were by the mid 1950's assigned to most long distance passenger and freight workings, steam locomotives remained an important asset to the railway's operations up to the start of their demise in approximately 1962, followed by their phasing out of revenue traffic in 1969.

Steam locomotives required coal and water replenishment and maintenance at relatively frequent intervals. On the major trunk routes, this necessitated locomotive changes and the construction of storage and servicing facilities at change points. On branch lines, a small engine shed was often located at the branch terminus. In Queensland, distances between change points varied according to a range of factors, including topographical, geographical, political and the optimum distance a locomotive could travel before servicing was needed.

Thus there were some short sections between depots and change points - eg. Maryborough to Bundaberg - and some long sections - eg. Toowoomba to Roma.

## SIGNIFICANCE OF A STEAM LOCOMOTIVE DEPOT TO A RAILWAY'S OPERATIONS

Depots:

Engines were attached to depots, also known as running sheds, where they were serviced and maintained. In some cases, there was a workshops at the same place as a depot. However, the workshops and depot were separate entities, under separate control – eg. Ipswich, Rockhampton, Townsville. Mayne and Maryborough integrated the two operations.

Apart from locomotive crew, staff at a typical larger depot included:

- fitters and boilermakers;
- various semi-skilled men such as washoutmen;
- shedmen, employed to prepare and put away engines, each with a fireman;
- labourers, employed in sanding, fitting and coaling jobs, and
- cleaners, who lit and tended fires, cleaned parts and paintwork, and served as call-boys, going to crew's homes to call them to newly arranged jobs.

Depots contained various machines except but not wheel lathes..

Sub-depots:

Engines were temporarily attached to sub-depots between boiler washouts or where they were staged between runs. They returned to their home depot for boiler washouts.

At sub-depots, engines were simply lit up, put away, coaled and fitted. There were no tradesmen, and the staff was basic - cleaners and locomotive labourers. If defects developed, they were attended to by a driver, a fitter or boilermaker was called from a depot, or the engine was towed to a depot.

There were three exceptions:

- Gladstone which had a Locomotive Foreman and fitters, but did no washouts;
- Mareeba which had a Locomotive Foreman and tradesmen, and did washouts, and
- Charleville, where there was a Fitter-in-Charge.

Although a sub-depot, Mareeba's functions were essentially those of a depot, except that it could not handle heavy running repairs.

Termini:

Engines were put away between forward and return trips, usually one at a time, although at Beenleigh three engines were usually on shed overnight, even in the 1960s.

If the crew came from elsewhere, the fire could be banked, and the crew look after it overnight. If the period between trips was longer, the fireman would relight the engine for the return. If coal was needed, a local fettler would coal the engine from an open wagon.

If the crew shifts were long, and there were at least two or three such events per week, an SMEUS (Shedman Moving Engines Under Steam) would be employed to light up, kit and coal the engines, moving them in the loco area if necessary, also to operate the pump for locomotive water.

Cleaners would be sent from a nearby depot to light up engines – eg. from Wooloongabba to light up engines at South Brisbane where there were up to three shedded after-the signal cabins en route to Wooloongabba had closed, and from Ipswich to light up at Bundamba where there were usually two engines.

Engine crews were attached to the depots and sub-depots. However, to reduce shift lengths, especially on shunting trains, they were also based in various other locations, leading to a number of smaller towns throughout the state assuming the title "railway town".

Typical of these towns were:

- Mitchell, Mungalalla, Thallon, Helidon, Laidley, Yandina, Baralaba, Bluff, Barcaldine, Biggenden, Gayndah, St Lawrence,- Torrens Creek, Richmond, Duchess, Ingham, Tully, Kilkivan, Kingaroy, and Toogoolawah;
- branch line termini of Cunnamulla, Injune, Millmerran, Allora, Tweed Heads, Southport, Beaudesert, Dugandan, Yarraman and Cordalba;
- Proserpine, Sarina, Marian and Gargett in the sugar season.

There were also some other places where rail motor drivers were based, such as branch termini in the South Western Division.

Power for goods and passenger trains was supplied generally by the depot nearer to Brisbane or the coast for sections to the north or west. - eg Toowoomba supplied power for Toowoomba to Roma, Roma for all lines west and the Injune branch

However, in the sections Toowoomba – Brisbane, Brisbane – Maryborough, Maryborough -Rockhampton, and Bowen - Townsville, the depots at each end supplied the power.

Crews worked to much the same pattern, although in the slack season, some shifts were worked in the opposite direction to even out the time. The western depots tended to have sufficient engines only for the year round traffic, and the seasonal peak requirement was supplied from Toowoomba, Rockhampton and Townsville attached temporarily to the western depots.

In some instances, locomotives on some trains - usually passenger trains ran past depots to another further on.

Locomotives on the Wallangarra Mail ran through from Toowoomba to Wallangarra, although there was a significant depot at Warwick. The major purpose of Warwick depot was to provide locomotives for shunting the yard, passenger and goods services on the Dirranbandi and Texas lines, and goods services to Wallangarra, Amiens, Maryvale and Killarney.

Passenger trains on the North Coast Line from Brisbane changed locomotives at Maryborough, running past Gympie depot. Gympie depot serviced the Kingaroy and Brooloo branches, as well as Gympie-Maryborough trains. Usually, all through goods trains changed locomotives at Gympie, and again at Maryborough.

## HOME DEPOTS

From about 1928, locomotives were marked with their depot and Division, generally both on the rear of the tender, and the depot only on the right hand front buffer beam. From about the late 1940s these markings were dropped in the South Eastern Division, while in the Central Division, the depot was not shown on the rear of the tender. For a time the home depots of locomotives were painted on the right hand front buffer beam of locos and in the central and northern divisions on the tender headstock:

A - Alpha, B - Brisbane, Bowen, C - Cairns, CT - Charters Towers, CY - Cloncurry, H - Hughenden, I - Ipswich, Innisfail, M - Maryborough, MK - Mackay, R - Rockhampton, T - Toowoomba, Townsville, W - Warwick

In addition the division was painted on the back of the tender: - SED - South Eastern Division, SWD South Western Division, CD - Central Division, ND - Northern Division.

The markings were not always applied to all locos. In fact very few Ipswich locos were so marked but Toowoomba locos were nearly always marked.

Depots often kept their best engines for mail trains, so that after an overhaul, a certain engine could have been seen mostly on mail trains, although seldom on only one mail train. Engines close to their next overhaul would not be used on mail trains at all if it could be avoided.

Most steam locomotives spent most of their lives in one Division.

Locomotive depots and crews were managed by Locomotive Foremen, who were promoted fitters. A few Assistant Foremen were promoted from drivers, but the authority lay with the Foremen.

QR firemen generally received no assistance en route - they cleaned their own fires, and shovelled coal forward. The exception was that where passenger trains passed a depot or sub-depot, a cleaner, coalman or loco labourer was sent from the shed to shovel coal forward and help with the fire cleaning, as at Warwick, Chinchilla, Dalby, Gympie, Bundaberg and Gladstone. Most drivers helped with the labour, by doing some of the firing, or taking over the fire cleaning or shovelling forward. At loco stops, they usually took water as well as oiling around.

On long shifts engines were prepared and put away at the depots by men rostered for such work, but they were not available at the small sheds and outdepots.

At the bigger sheds, if the shift was to be long, engines were prepared by shedmen (former drivers, each with a fireman), and at some outdepots by a SMBUS (Shedman to Move Engines Under Steam).

The principal steam locomotive workshops on the QR were at Ipswich. Partial and general overhauls were carried out, new locomotives built, and material, parts and boilers were made and repaired there for fitting to locomotives at other workshops. Rolling stock was built and overhauled. It was a large establishment. Even during the War, on 30 June 1944, it had a staff of 3015, or 13% of the staff of the QR. There were two other main workshops which performed general overhauls, Rockhampton and Townsville, perhaps one too many for a railway of the size of the QR. There were then smaller workshops, where heavy running repairs and partial overhauls were performed: Toowoomba, Mayne, Maryborough and Cairns. The work done at these included boiler examinations, occasional boiler exchanges, stay and tube replacements, frame welding, wheel turning and valves and pistons. Maryborough was not well equipped. Cairns performed (slow, often very slow) general overhauls on B15 types and C16s. Partial overhauls were also performed at Mackay and Bowen until the isolated railways there were joined to the main system, and at Normanton and Cooktown until steam operation on the isolated lines there ceased in the twenties. From 1945 until 1963, four private companies also performed overhauls

## COALING LOCOMOTIVES

The QR was long strong on the mechanical handling of coal. The earliest form was air operated hoists. Scoops took coal from a wagon, bin or heap, raised it, and dumped it in the tenders. The air came from the locomotive braking system. There were such hoists at Rockhampton, Townsville and Emerald

From the 1920s, well over 90% of coal was gravity fed from elevated stages, on to which coal hoppers were pushed by locomotives up ramps of 1 in 20, or hauled by cable up a ramp of 1 in 5 by a locomotive running on the level - at Bundaberg, Gladstone, Mackay and Emerald). At Wooloongabba, Chinchilla, Cloncurry and Charters Towers, the coal fell from the stage into slips, which were pushed manually by coalmen to a point above the tender and tipped. At the other stages, engine crews operated tile levers to bring about the cascade of coal direct from the bins.

In some instances, coal was dropped into tenders directly from the bins at coal mines.

At small places, there was an elevated track so that the floors of open wagons were just above the tops of tenders - eg Longreach, Winton, Dalby, Gayndah,

Murgon, Dirranbandi, and Almaden. At Charleville, this track was higher and longer, so the wagons were well above tenders.

At places where coal was needed but trains few - Cunnamulla, Quilpie, Glenmorgan, Texas, Mt Surprise - and where coal could sometimes be low (Bluff, Morven, Mitchell, St Lawrence) fettlers, shedmen and firemen had to shovel coal from open wagons to tenders as best they could. In emergencies, coal was transferred from one engine to another after their tenders were brought as close as possible at loop points.

## ASH DISPOSAL

At big depots (Mayne, Ipswich, Toowoomba) ash disposal was mechanised: air operated hoists raised hoppers from pits between the rails into wagons on adjacent lines.

Elsewhere, ash was manhandled, from pits to ground by labourers in depots and fettlers at watering stations, and later by fettlers from ground to wagon. Ash was used for ballast and fill.

## TYPICAL OPERATIONS

### SOUTH-WESTERN DIVISION

Toowoomba provided power for the Main, Southern and Western Lines and local branches.

In 1953 it was 3 R15Con, 13 PB15, 16 C15, 3 AC16, 6 E17, 14 C17, 15 B18¼, 7 BB18¼, and 12 (C)Cl9. It later had four more BB18¼ when the Walkers engines were delivered, and up to eight AC16 (except when these were allocated to Roma or Warwick). It closed as a steam depot on 30 June 1969.

The 1928 depot (at Willowburn) was a 52 road roundhouse, of which 34 were covered, and had a floodlit yard and turntable, a 450 tons capacity coal stage with chutes each side, air operated ash hoists, and a hot water washout plant. The water came from wells. That for locomotives was softened in a "Baby" plant and stored in a 60,000 gallons tank. A 30,000 gallons tank of untreated water was used for washouts and general purposes.

On the Western Line, locomotives on passenger trains worked from Toowoomba to Roma, 217 miles.

Engines on goods trains were staged at Chinchilla, and thus worked 102 and 115 miles. Toowoomba engines were attached to the sub-depots at Oakey, Dalby and Chinchilla for up to two weeks for the branch lines and shunting. Branch trains to Crows Nest, Haden and Cooyar were worked from Toowoomba, but Acland coal trains on the Cooyar branch and the Cecil Plains branch were worked from Oakey. The Barakula Tramway and the Wandoan branch were worked from Chinchilla. Many down goods trains were banked

from Gowrie Junction to Toowoomba, and some goods trains between Chinchilla and Roma were double headed. In the last years of steam, some wheat trains, then made up of wheat wagons with stronger drawgear, were double headed Tara to Dalby (Glenmorgan branch), Evanslea to Oakey (Cecil Plains branch) and from Oakey or Gowrie Junction to Toowoomba.

Roma was a depot and Charleville a sub-depot.

## SOUTH-EASTERN DIVISION

Ipswich depot supplied engines for some north side of Brisbane passenger and goods workings, for local coal lines, local coal goods and passenger trains on the Main Line to the west (including to Toowoomba), and for the Brisbane Valley, Marburg, Fassifern, Mt Edwards and Laidley Valley branches, as well as, until 1956, banking engines for the Little Liverpool Range (one at Grandchester and two more overnight). Engines were shedded overnight at Dugandan, Bundamba, Toogoolawah, Yarraman and latterly Redbank and Rosewood as well, but only Grandchester was a sub-depot.

In 1952 it was allocated one B13\, 22 PB15, 9 C16, 5 AC16, 4 B17, 18 C17, 6 B18¼ and 2 BB18¼. By 1963 there were 12 B18¼, and by 1965 4 BB18¼. It closed as a depot on 30 November 1969.

On the Main Line. Engines worked from Brisbane to Toowoomba (101 miles) on both goods and passenger trains. Through up goods trains were regularly banked from Grandchester to Yarongmulu by the Grandchester banking engine (B15 type) and from Murphys Creek to Tooowoomba by Toowoomba engines which came down light or attached to a down train. (In the 1920s there was at least one crew at Murphys Creek for banking; presumably a banking engine was shedded there then.) Down through goods trains were banked from Laidley to Yarongmulu. Heavier passenger trains were double headed on the sections where goods trains were banked. There was some double heading of goods trains on the Brisbane Valley Branch and from Harrisville to Ipswich on the Fassifern branch, in each case B15s assisting C16s or C17s, and of coal trains from the Ipswich area to Brisbane.

Postwar the PB15 at Grandchester worked two shifts each day with local crews banking on the Little Liverpool Range. During the day, it banked on both sides, and in some years worked the mixed on the Laidley Valley branch as well. At night it worked solely on the Grandchester side, banking a procession of up goods trains, banking one, then returning just in time to bank the next. Sometimes the return would be made attached tender first to a down goods. A second PB15 came from Ipswich on a passenger train each evening, banked on the Laidley side through the night, and returned to Ipswich light engine in the mornings. In addition, the PB15 off 26A up Gatton passenger did some banking on the Laidley side during the day. Still there was not 24 hour cover, and some down goods reduced at Laidley. If 8S up Western Mail (usually a single engine load outside holiday periods) required assistance, an Ipswich

crew were sent up earlier to man the banker, which was not normally in use when it was due. The up Sydney Mail - 26 up - was regularly assisted. Down passenger trains seldom required assistance. When they did, the assisting engine had to continue to Grandchester because the train engine was unable to start the train from Yarongmulu. This was not a problem with goods trains, which were assisted in the rear; by the time the banking engine dropped off a goods train the train was on the easier gradients at the summit tunnel.

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