

MODELLING THE QR CONVENTION 2002

MISCELLANEOUS NOTES ON QR COLOUR SCHEMES

Dennis Campbell

It is important to note that the names of colours may not necessary be the official names or conform to a specific set of standards, but have been an interpretation according to the source of information. The following notes are not in any particular order.

Original scheme for Sunlander cars: externally painted in Soft Dove Grey with a 12" deep band in Glacier Blue above the windows which carries a narrow Bronze Yellow border. A 2½" wide Bronze Yellow band is repeated under the windows. The roof is a deep Blue-Grey.

1800 Class Diesel Rail Motor trains were painted in Aluminum with Royal Blue below windows and Bronze Yellow QR emblem on the front.

1900 and 2000 class finished in natural Stainless Steel except for original set of 2000 class, which was finished in Aluminum. Later, Royal Blue bands were added to ends of 1900 class.

Older type Rail Motors and trailers were finished in the standard carriage red covered with varnish (originally) with yellow band along side under windows, curving down at front. Later types such as RM93 & 94 (built 1951) had a chocolate colour up to the bottom window level and cream above.

Sunshine Cars were originally (1930s) painted a Dulux Maroon (a darker red than other passenger stock), but were later in the standard carriage red.

The 'standard' red used on carriages, brake vans, baggage cars, and other cars used on passenger trains, was a flat ferric oxide red finished with varnish until modern enamel paints came into use.

The red used for wooden goods wagons was an oil-based flat ferric oxide red.

Wagons constructed of steel (e.g. FJS, HJS, etc.) were originally painted black. Any members of these classes after 1969 were gradually repainted standard goods wagon grey, which was described by some QR sources as a mid or medium grey. In the 1960s, this grey was described as being Dulux Light Admiralty Grey

Insulated wagons constructed of wood (e.g. CM, CMI, CMC, CMB, etc.) were at one time painted white but most had light gray sides/ends with a weathered black roof.

Aluminum wagons were in most cases left unpainted.

CLC type bogie vans (of steel construction) were originally in the same red as passenger car as they were designed to be baggage/parcels/fast freight service attached to passenger trains. Some were later painted into a special livery of gray and yellow with red lining, specially lettered-up for the Toowoomba Coordinated Service. After this service ceased, some were used in an all-over chrome yellow (mainly for service in the Northern Division) and in later years the remaining members of this class were in the standard goods wagon gray.

Later type steel wagons (ALY, BLC, Q LX and CO types) entered traffic in a mid-grey which faded fairly quickly to a pale grey.

Traditional red colour on goods wagons was gradually replaced by mid-grey from 1969/70.

Wagons used for departmental purposes, e.g. ballast or work trains were usually painted black, whether wood or steel construction, and these were also painted standard grey after 1970.

Red buffer beams were standard for QR steam locomotives and tenders up to the end of steam.

The B18¼ class was originally turned out with planished steel boiler cladding sheets, which were polished. Later painted in black and then painted Light Brunswick Green with red lining from 1949

The BB18¼ class built by Vulcan was in Hawthorn Green (slightly darker than Brunswick Green) with carmine lining, while those built by Walkers were in a slightly brighter Brunswick Green with vermilion lining initially. The few that received overhauls/repaints after 1967 were painted black.

The first DD17s were originally in deep royal blue, later "mid" blue i.e. midway between Royal Blue and Sky Blue and was made by mixing royal blue with white 4:1.

The later type C17 class, which were fitted with roller bearings and sedan cabs, first appeared in 1938, were in a Medium Brown with Willow Green lining and were generally known as "Brown Bombers".

Beyer-Garretts were in "Midland" red, i.e. the maroon/crimson lake colour used by the Midland Railway Co. and later by the LMS Railway in the UK. These had chrome yellow lining and monograms.

It was common practice for locos receiving overhauls/repainting at Rocky W'Shops to have their air pumps/compressors painted green.

After the 1950s, wheel rims were painted white on steam locos that went through the workshops, especially those used for passenger work.

Other steam loco classes were generally painted black with red footboards and buffer beams.

QR Diesel-Electric Locos were always painted QR Blue, QR Gray and QR White!, ie. colours specified by the QR. These colours changed slightly according to the manufacturer interpretation so that variations were noticed over time with different suppliers, different batches, and changes to the paint's components and also how the railway workshops mixed the paint. One notable event was the change from mineral based paints to synthetic based paints from 1983 which produced a variation in the QR diesel blue - the earlier mineral based blue was a slightly darker shade but faded more rapidly. Some of these colours have also been known as "moon white" and "dove or horizon grey".

QR logo was adopted in 1970 and believed added to locos and rollingstock from about 1973.

The DH class was in Dulux "Verdant" or QR Diesel Green, the red was Dulux "Wildfire Red", black enamel, Horizon Gray, and the lining was in Taubmans "Sunburst" (courtesy of John Webster).

Other points to consider:

Red oxide paints change to a red-brown in time because of the iron oxide pigments. Red on carriages deepened in colour because of aging effect of varnish. With the change to modern enamel paints, this behaved the same way as with goods wagon with a gradual change to a red-brown. Most other colours, e.g. blue and grays, fade to lighter colours because of the breakdown of the pigments by ultra-violet rays (sunlight).

Roller bearing axle boxes on rail motors, some steam locomotives and passenger cars were painted green at one time.

References:

Various QR documents, reports, etc.
 Triumph of the Narrow Gauge, J Kerr.
 Locomotives in the Tropics Vol 1, 1985, Vol 2, 1994, J Armstrong.
 Queensland Railway Steam Locomotives 1900-1969: Design & Operation, J W Knowles 2002.
 Crimson Giants, A M West 1995.
 ARHS Bulletins.
 ARHS Qld Div Sunshine Express.

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SELECTED NOTES on COLOURS & WEATHERING for the QR

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These brief notes are intended to be only a guide on QR colours/weathering based on limited observations and research. More details could be obtained by consulting the QR's Archives.

To select the appropriate colours for painting QR rollingstock, it is a matter of deciding on what era is being modelled and in what condition the rollingstock will be presented. The answers to these questions will determine to some extent what colours are finally chosen.

With regard to selecting the era to be modelled, this is not as serious an issue for goods or passenger rollingstock as it is for locomotives because, fortunately for the modeller, the QR has been remarkably consistent in its colour schemes. All that needs to be considered, generally, is the use of black or red for pre-1970s or grey for the more modern era. As for the earliest period of the QR, it is anybody's guess or just conjecture as to the colour schemes because of the lack of accurate historical records and the difficulty of interpreting colour from old black & white photographs. It can be shown on period photos that locomotives were certainly in different and in some cases, unidentifiable colour schemes and that some early goods rollingstock were in lighter colours as well.

There are some indications that the earliest passenger and possibly goods rollingstock was put into traffic originally in natural timber finish with possibly a varnish finish.

It's advisable to refer to historical texts for this information or visit preserved items of rollingstock where possible.

As for the condition of the rollingstock, this is a highly subjective matter best left to the individual modeller to decide, but it will certainly influence which colours are needed. You may wish to have your rollingstock in 'as new' condition, slightly weathered, well used, or positively derelict! Perhaps a combination of all of these would also be realistic. There are a number of approaches to this. Initially, the rollingstock can be painted 'as new' and either left as is, if that is the choice, or to have weathering added over this new paint. Alternatively, the wagons could be painted with a colour that represents the weathered condition required. It's a matter of personal taste. I prefer the former as it allows me to vary the style and colour of the weathering over the whole carriage/wagon. Weathering is rarely "even" over the whole surface of any piece of rollingstock.

The following is a list of weathering and other factors that could effect the appearance of rollingstock:

- . iron based metals rusting
- . brass/copper metals corroding or tarnishing
- . rusting on metal wagons around bolts, panel edges, and anywhere that water can collect.
- . timber warping, twisting and splitting
- . soot/grime from steam locomotive exhausts
- . grime from diesel exhausts
- . residue from overflowing water and leaking steam (mineral/chemical content of water)
- . grease, oil and other lubricants leaking
- . spillage/leaking from fuel tanks
- . new rollingstock or recently re-painted following overhaul
- . change in colour scheme on part of locomotive or rollingstock
- . paint fading (oxidising), bleaching, peeling or physically worn away
- . repainting in part only (patches from repairs and replacements)
- . repainting in different colour with exposure of original underlying colours with wear and tear
- . dust and dirt swept-up from track by moving rollingstock
- . "dust" from brakeshoes
- . spillage from loads
- . wear and tear from loading/unloading, including scratches and scapes from opening/closing doors on wagons

- . accident damage
- . weathering characteristics of paint - the chemical composition, mineral or synthetic base of paint, ie. does it fade, darken or change tone with age, and for the modern era,
- . graffiti.

So far, the AR Company and TLB are the only ones that I know who produce a number of colours that are specifically for the QR. These are quite accurate, but they are for a particular era of diesel locomotives only. For passenger and goods wagons it is a matter of selecting colours that provide the best fit from the great range of commercially available paints on the market.

The following are only suggestions based on my experiences, from reading various model railway magazines, and talking to others with the same interest.

It should be noted that most of the painting I do is with artists brushes. This is because most of my rollingstock is of the older type that used wood construction, and I believe that the brush strokes enhance the appearance of timber (louvre, matchwood or plank) construction. A range of good quality artist's brushes (either natural material such as sable or synthetics) is essential even though these can be quite expensive, but the difference is very noticeable in the way paint flow can be controlled. I find that for steel wagons such as the CMIS, its better to use a spray can or airbrush to apply the overall colour because of the relatively smooth flat surfaces, where brush marks could otherwise show.

For new goods wagons, almost any "red oxide" colour is quite correct, mainly because that is what the QR actually used on wooden wagons. This is otherwise referred to as rust proofing red. This is quite different to Tuscan or Tuscan Red, which have a greater degree of brown pigment and eventually weathers to a definite brown. However the Tuscan Red could be used as the base where a very weathered wagon is wanted, but it still requires the addition of some bright red to be more accurate.

I have used the Floquil brand red oxide successfully as it tends to stick quite well to polyurethane, which is what most QR rollingstock kits are made from at this time. There are other brands available that work just as well and can even be bought from the local hardware, eg. 'Kilrust'.

It's also a matter of personal choice as to whether you use enamel or acrylic paints. This is best decided by reading the various articles in the model railway press and by experimentation. Mixing them is not a good idea as they tend to react and you will find 'crazing', ie. putting an enamel varnish over an acrylic colour, unless you let the base coat dry for about a week or two!

It has been my practice to add weathering on top of a base colour because of the variety of weathering possibilities. It is possible to include the bleaching effects of the sun, exhaust from locos, spillage from loads, rusting of metal parts and the usual dirt and grime from the track as well as the damage from careless loading/unloading! It's advisable to apply weathering lightly at first (ie. thinned down or diluted) and built up to the desired level. It's far more difficult to remove weathering if too much is used and probably a full repaint may be necessary if the weathering is overdone. For an overall weathering effect, eg a dirty roof, an airbrushing has a distinct advantage. For more specific weathering such as water or rust streaks, a fine artist's brush is most effective.

I use any combination from either the Precision or Humbrol range (for enamels) - railway colours if you can get them. However, I mainly use readily available Floquil colours as Rust, Grime, Earth, Dust as well as Weathered or Grimy Black, suitably thinned down so that the weathering colour flows freely where I want it to go. Additionally, I have had success with artists watercolour paints or better still, water colour pencils, the advantage of these two is that it has no effect on the underlying paintwork and is easy to alter or remove.

For base colours, I tend to use Floquil Grimy Black or Humbrol Engine Black for steel wagons, Weathered Black for timber wagons, especially for underframes. For underfloor equipment (being metal) on both passenger and goods, I use the Grimy Black. For 'as new' metal equipment, the Humbrol Engine Black has the right depth of colour and semi-matt finish required. This also applies when painting tankers, where a dull metal (semi-matt) finish is required.

For insulated vans such as CM/CMI/CMB, AB/ABG types, a pale/light grey is used, but I find the Humbrol LMS Pre-1937 Freight Stock Grey useful for the sides and any sort of matt dark grey or weathered black for the roof where it is made from Melthoid (a bitumen type sheeting). For reasonably new galvanised iron, I find the best is Humbrol Aluminium - I have always found silver to be too bright for small models unless a lot of grey is mixed in, as these surfaces became very dull within a short time from soot, grime, oxidation and rust.

For CMIS/CMR steel insulated/refrigerator vans, any off-white paint (but not ivory) such as Humbrol or Floquil Antique White is suitable. These wagons tended to rust fairly quickly in the Qld climate, initially along the top & bottom of the sides, and then along the bolts and edges of each panel. "Ordinary" white is alright for very new, but the addition of a few drops of orange or dark yellow will help to tone the white down. Generally, I found the Humbrol matt colours to have a good density of colour and brush on easily.

Passenger cars can be painted with the oxide red if you prefer, but because of varnish and different surface preparations, the red on QR passenger cars always appeared different to that on goods wagons. To achieve this difference, the Floquil Oxide Red can be altered by the addition of a little bright red. However the best fit found so far is a colour called Venetian Red - I use house paint from White Knight suitably thinned down but TLB now have a reasonably close version. For the passenger car roof, I use either a flat or weathered black or I make up the 'ochre' colour using Floquil Rust and Depot Buff mixed 1:1. For a clean or new carriage, I complete the painting with a coat of semi-matt varnish rather than a completely flat finish.

Generally, I use Dullcote (either spray or brush) depending on the type of wagon, however the later water-based matt varnishes are just as effective and safer.

It's worth while exploring the colours available in the military modelling scene. Some of the techniques used are also worthy of note, especially their 'dry brushing' process which is very useful for weathering - it involves using an almost dry brush. Some of the military greys will be suitable for the more modern rollingstock, eg. Sea Grey for very newly painted vans of the BLC, QLX, CO, etc type. The Tamiya Medium Grey is quite close for the standard freight stock grey as it was normally seen in every-day traffic. The actual grey used by the QR was a "Freight Car Light Grey" made especially for QR by Wattyl and earlier by Dulux.

I'm sure there are many other alternatives paints, however, the above is what I have found to be suitable for what I model.