Addenda to Modelling the Railways of Queensland #4, 2000

UNDERNEATH DETAILING OF Q.R. WAGONS.

PART 2:- THE COACHING STOCK DETAILS

The brake gear on most of QR's coaching stock is in place and operates exactly the same and has the same purpose as most freight vehicles. All of the 'Lander' cars, the stainless steel 'SX' cars and some timber coaches are the slight exception to the rule. These are of course fitted with commonwealth bogies which have the brake cylinder mounted on the bogie side frame. These carriages therefore have 4 brake cylinders per coach and have a slightly different braking system than most carriages and vans.

Unfortunately when QR disposed of most of their excess carriage fleets back in 1986 they took away a lot of modeller's opportunities to get actual first hand information and measurements on a lot of carriages and vans. However a few survived the 'slaughter' to be still around today. Most of the gear under the coaching stock is fairly standard, give or take a few millimetres but placement and particular types of gear have changed with carriage rebuilds and conversions so that today especially among the timber carriages, there are small differences between members of the same class. Different types of brake cylinders and different placement of battery boxes, dynamos and water tanks seem to be the largest changes under the floor. With photos and some modeller's licence you can still recreate what was and still is under most of QR's carriages and vans.

So let's look at what is under QR's carriage fleet. Firstly there is the brake gear.

Brake cylinders, auxiliary reservoirs and triple valves are similar to their freight cousins in every way and can be measured from my diagrams provided. The right brake cylinders and triple valves for your particular carriage will have to be determined by you!

Battery boxes are a fairly standard shape and size and appear on all carriages and vans equipped with electric lighting. The exception is again the 'Lander' cars which are coupled to a power car and thus do not need battery power. The battery boxes fall into three groups, which I call 'SX' boxes, battery boxes and double battery boxes. The 'SX' boxes refer to the stainless steel cars, which have a design of their own. The others can be found on everything else. The double battery boxes are boxes built to take two rows of batteries instead of the standard single row. Again placement of the battery boxes after alteration was not standard so photos will be needed.

Wired up to the battery boxes is the battery charger or **dynamo**. There are two types of dynamos, both are exactly the same size but have a slightly different physical appearance to each other.

Water tanks are the other common feature to QR's rolling stock. Photos are again needed here especially when modelling QR's timber carriages as a lot of coaches and vans had roof tanks instead of tanks slung from the chassis. The suburban coaches and 'Lander' brake vans were never given water tanks while some early TGV class vans had roof mounted tanks. The TGV's were standardised later though so they conformed with the other steel brake vans.

Coaches were usually not equipped with **hand brakes** as they were deemed to be coupled to a brake van. Some coaches were given end mounted screw brakes or side mounted hand lever brakes, but these were rare indeed. After 1986 when guard's vans began to disappear from the rear of freight and passenger trains QR began fitting hand brakes to most of their remaining long distance carriages. The timber coaches missed out but the 'Lander' cars were targeted, so that today almost every car is equipped with wheel ratchet hand brakes. The stainless steel 'SX' cars also had a modification job. One of the two vans was moved to the middle of the train consist in some sets. When this was done it necessitated a hand brake to be fitted to the new rear coach. Vans had a pedestal mounted handbrake wheel or just a 'T' shaped bar, which came up from the floor. **All of the vans had screw brakes** and were operated from inside the guard's compartment.

Toilet outlets are also needed when modelling coaches and vans equipped with toilets. These are rubber or tin pipes, which are 100 mm in diameter and hang down from under the floor below the toilets. Their length stretches from floor level to about halfway down the bogie side frame. Their job is to stop any human waste from splashing up and around the running gear of the coaches. You just have to look at the cattle wagons to realise why these outlets are placed there.

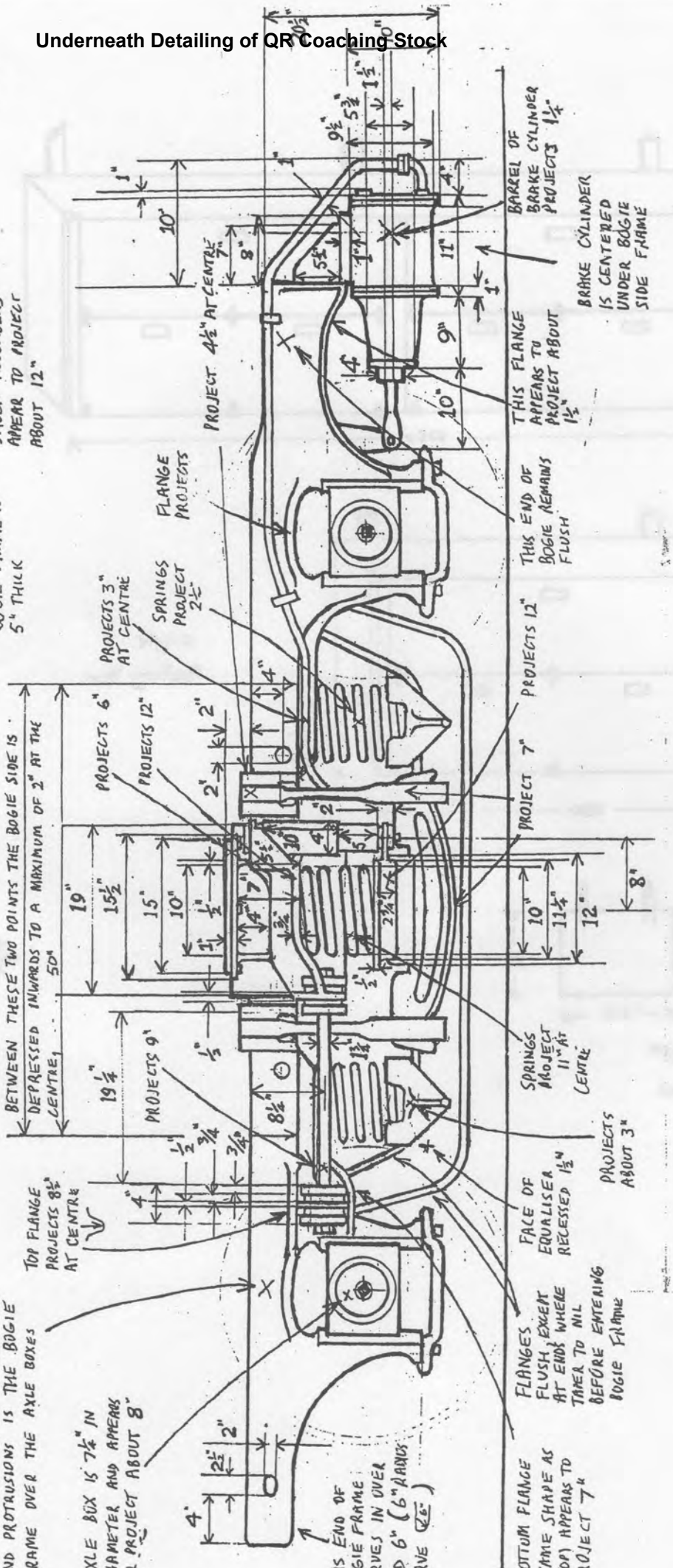
Truss rods were common on most timber carriages and vans. The steel carriages and vans were never given truss rods, as were some classes of timber vans. When truss rods are in place, you will always find four per wagon. One will be attached to each side of the outside frame of the chassis, while the other two are attached to the centre sills.

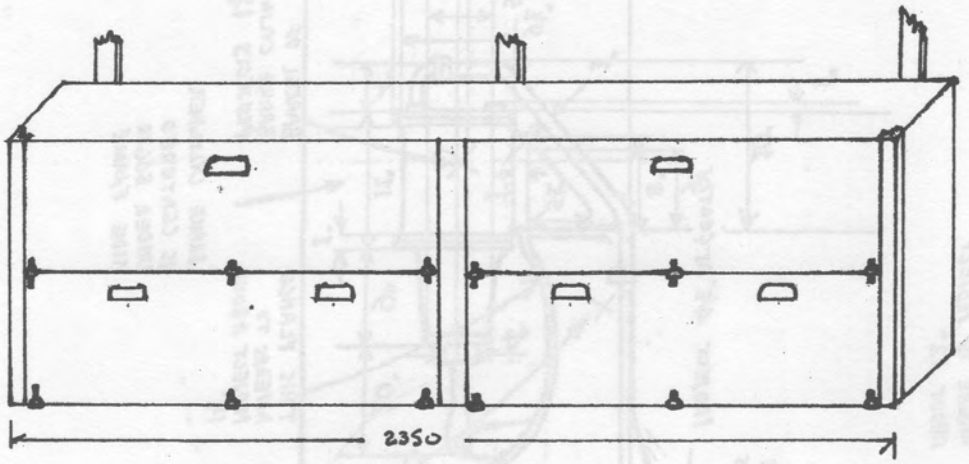
When the 'Lander' cars were introduced in the 1950's they introduced some new equipment that was placed underneath the carriages. **Air conditioning fans, condensers** and **compressors** all had to be placed under these new carriages. Up until the Great South Pacific Express was built the 'Lander' cars were the only carriages to be equipped with air conditioning.

Fortunately these carriages have a standard chassis and have not been changed or altered much. An inspection of the Sunlander showed all the cars to have the same chassis except the baggage and power cars. In earlier times the brake van would differ also of course. The Sunshine express cars were also fairly standard. The first, second and composite sitters all had the same chassis, while the sleeping cars varied somewhat between the classes. The stainless steel SX coaches also have a standard chassis, as do the BU class timber suburbans. There were four different major BU subclasses and every chassis in each subclass varies from each other. The main difference is battery boxes and dynamos being placed in different positions. The TGV class vans and all of its derivatives including the TDV class vans are all on a standard chassis. The TLV class vans and all its derivatives except the camp wagons and LTC class cars are also standard. The similarities finish there. Much of the timber coaching stock while starting their life in a standard design were altered and changed so much that by the end of their working lives they resembled nothing like their original underneath detail. Brake cylinder types, battery box and dynamo positioning are the major differences here though.

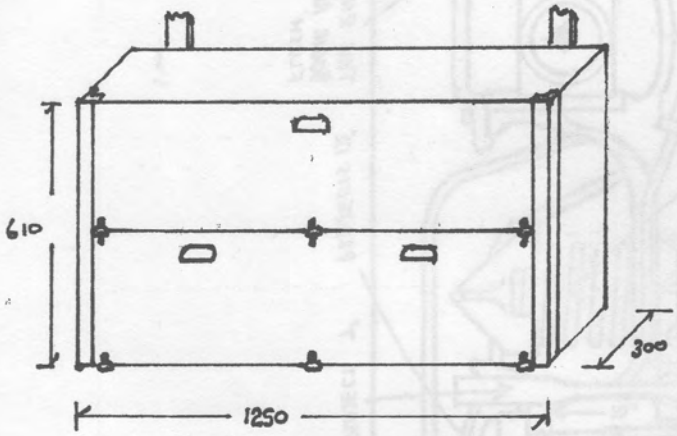
As I said at the start, with photos and a little bit of modeller's licence you can recreate a model coach or van to almost exactly what it was or is. After all, if the carriage no longer exists no one can really dispute you can they.

Commonwealth Bogie.

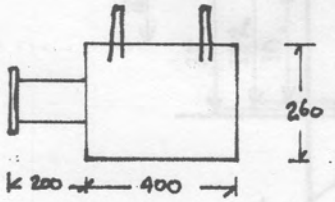




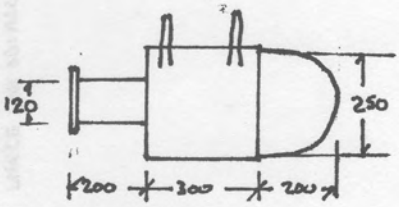
Double Battery Box



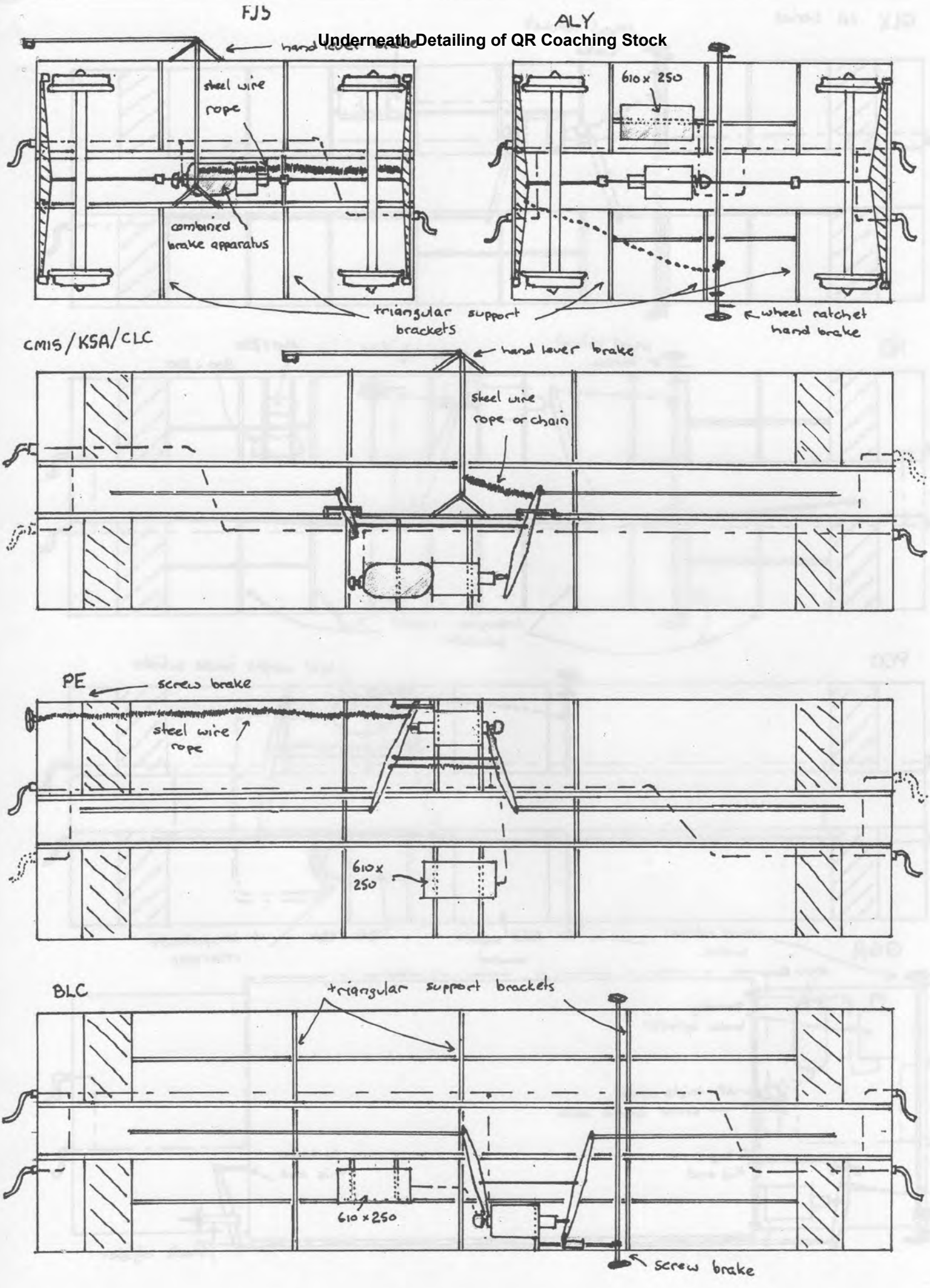
single Battery Box



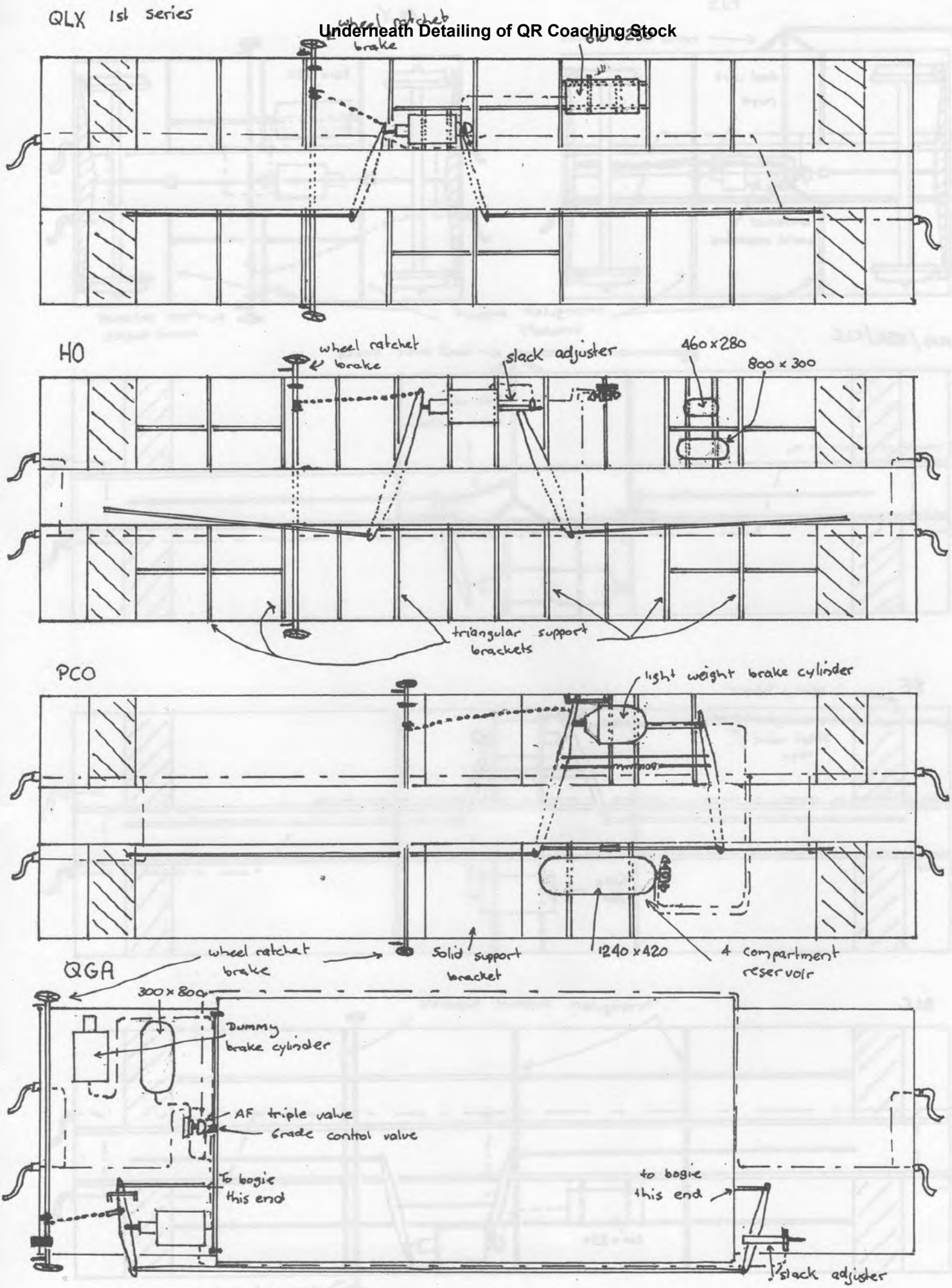
1st type Dynamo



2nd type Dynamo



** not to scale **
observed from above



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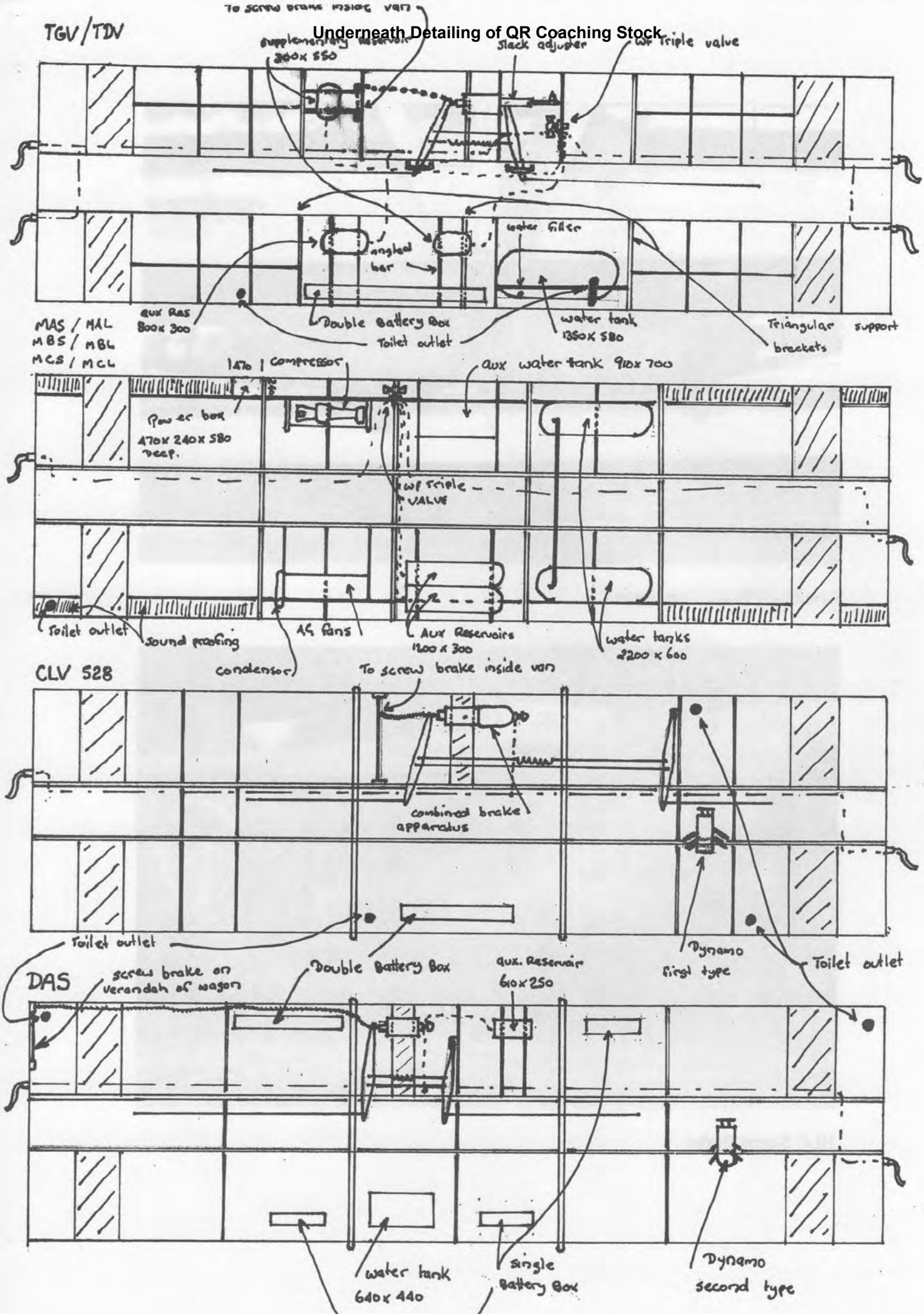
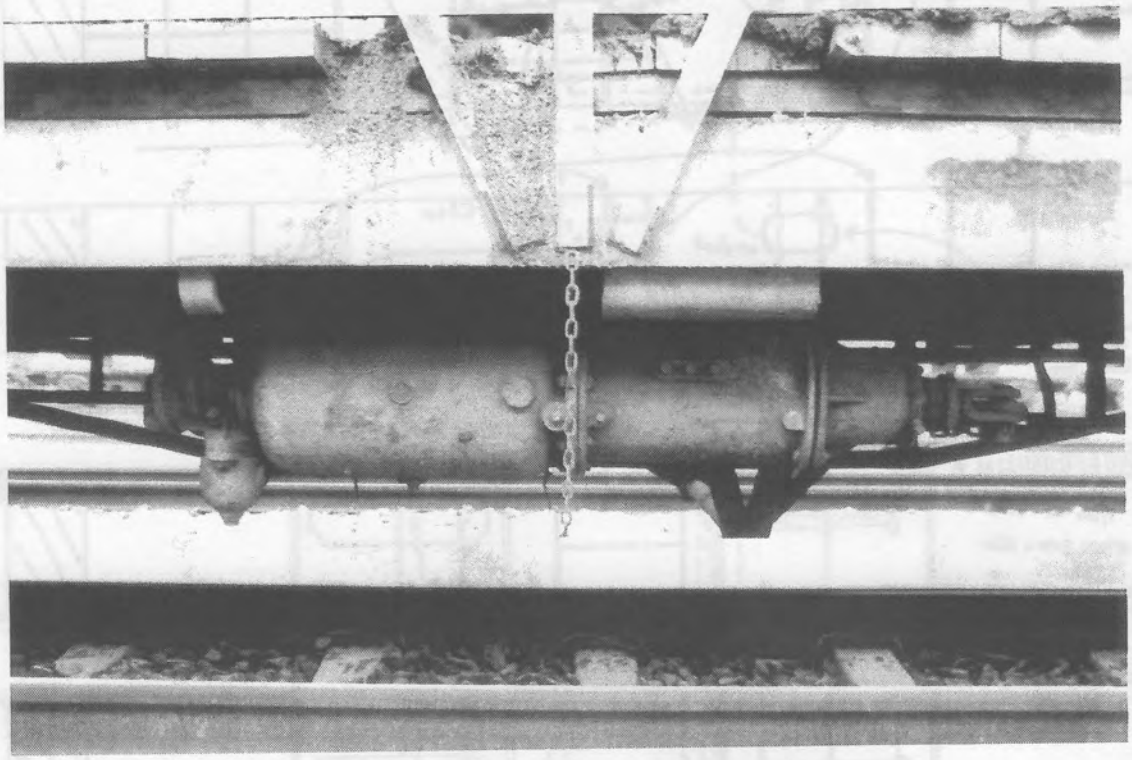
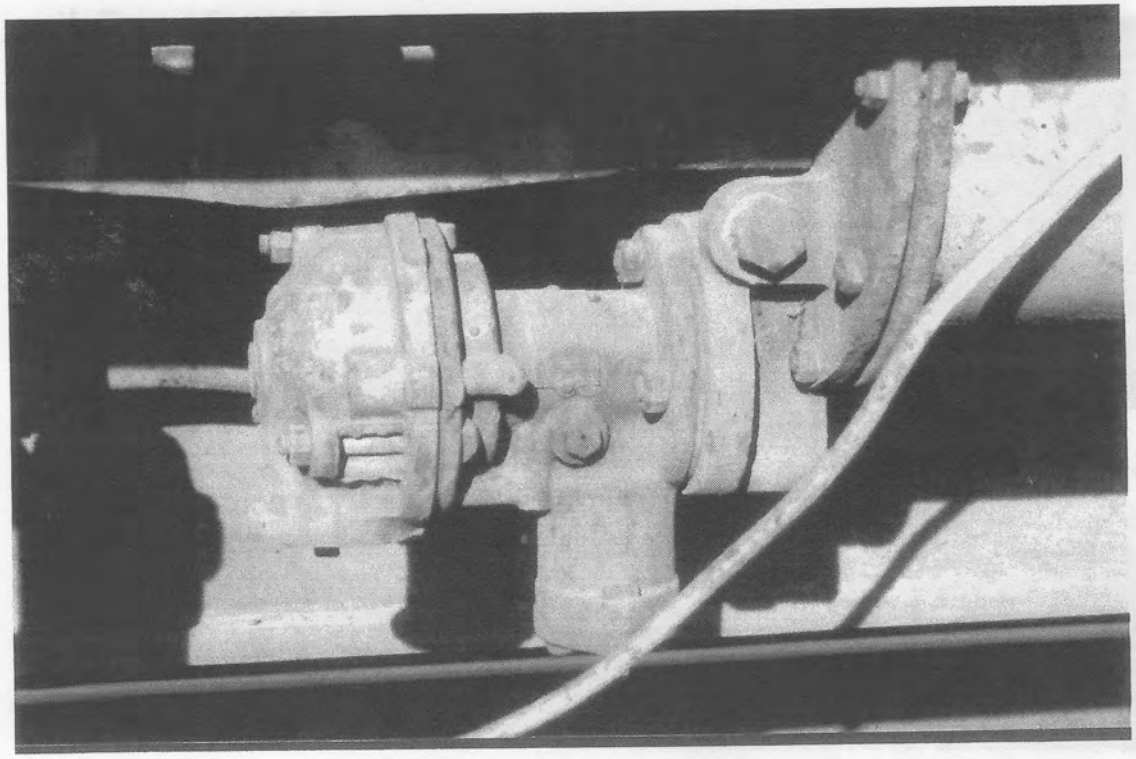

TGV / TDV
To screw brake inside van
Supplementary Reservoir 300x550
Slack adjuster
WF Triple valve
angled bar
water filter
aux Res 800x300
Double Battery Box
Toilet outlet
water tank 1350x580
Triangular support brackets
MAS / MAL
MBS / MBL
MCS / MCL
1470 | Compressor
aux water tank 910x700
Power box 470x240x580 deep.
WF Triple VALVE
Toilet outlet
Sound proofing
AC fans
AUX Reservoirs 1200 x 300
water tanks 2200 x 600
CLV 528
condensor
To screw brake inside van
combined brake apparatus
Toilet outlet
Double Battery Box
aux. Reservoir 610x250
Dynamo First type
Toilet outlet
DAS
screw brake on verandah of wagon
water tank 640x440
single Battery Box
Dynamo second type

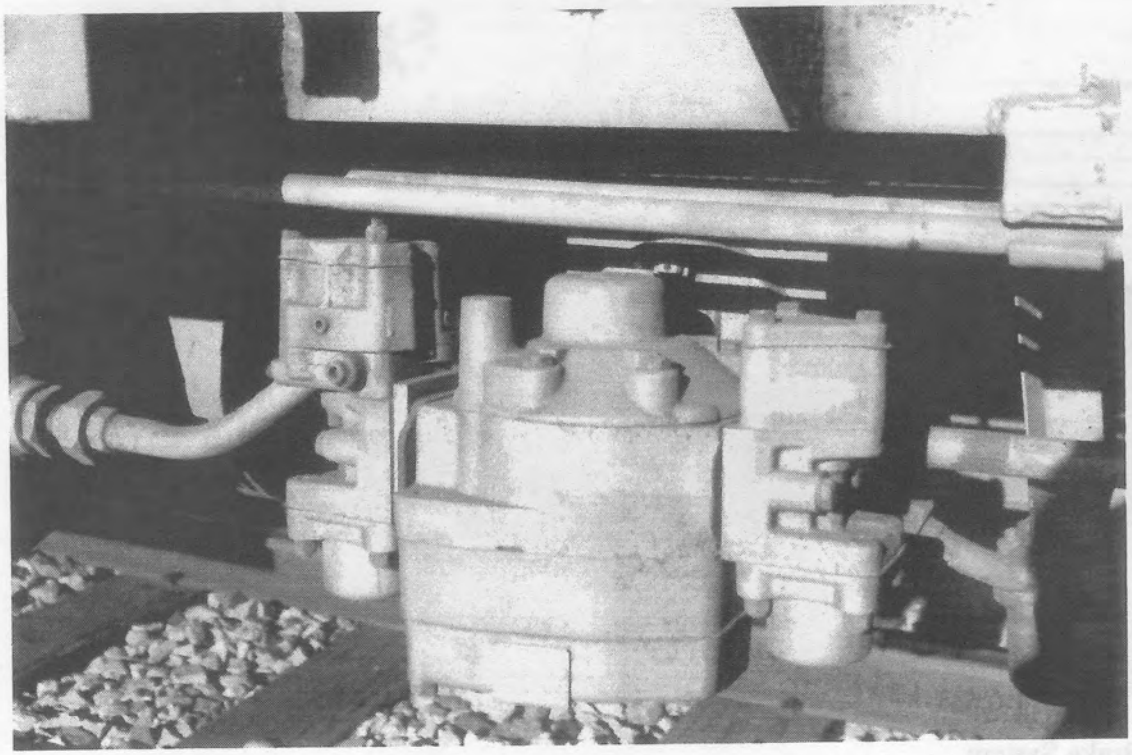


Combined Brake Apparatus

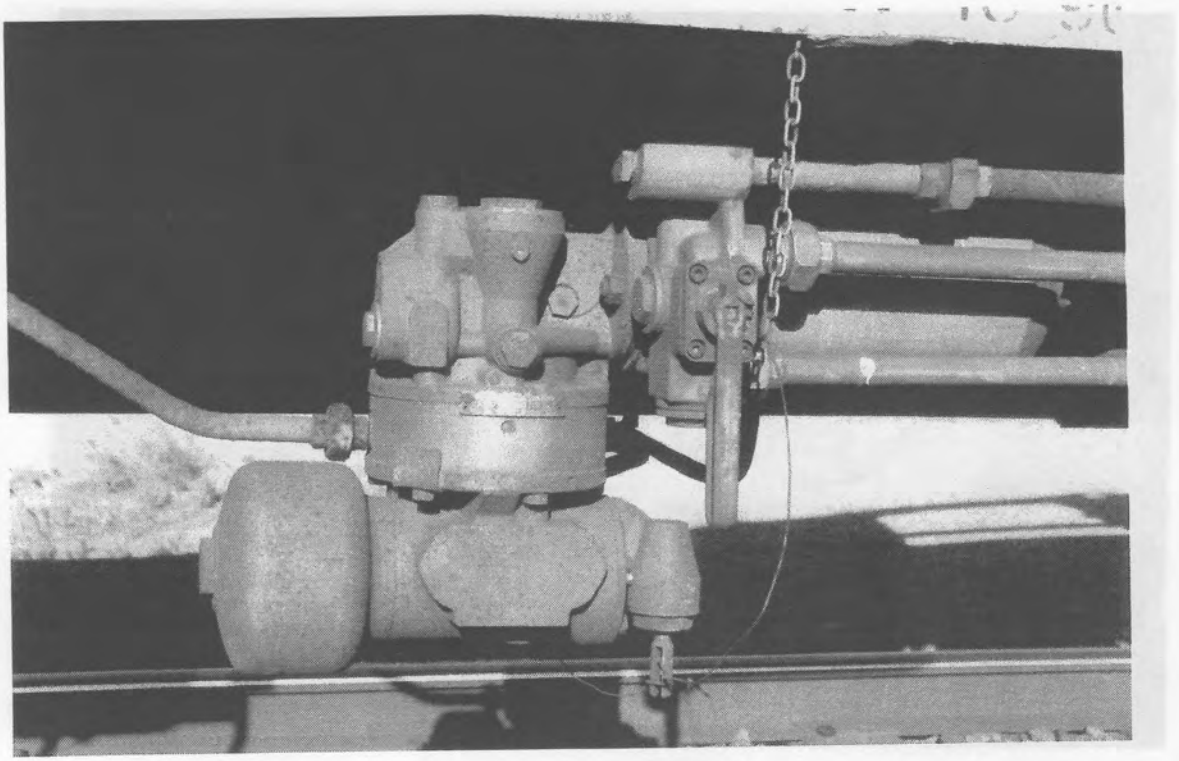
BLC Screw Brake



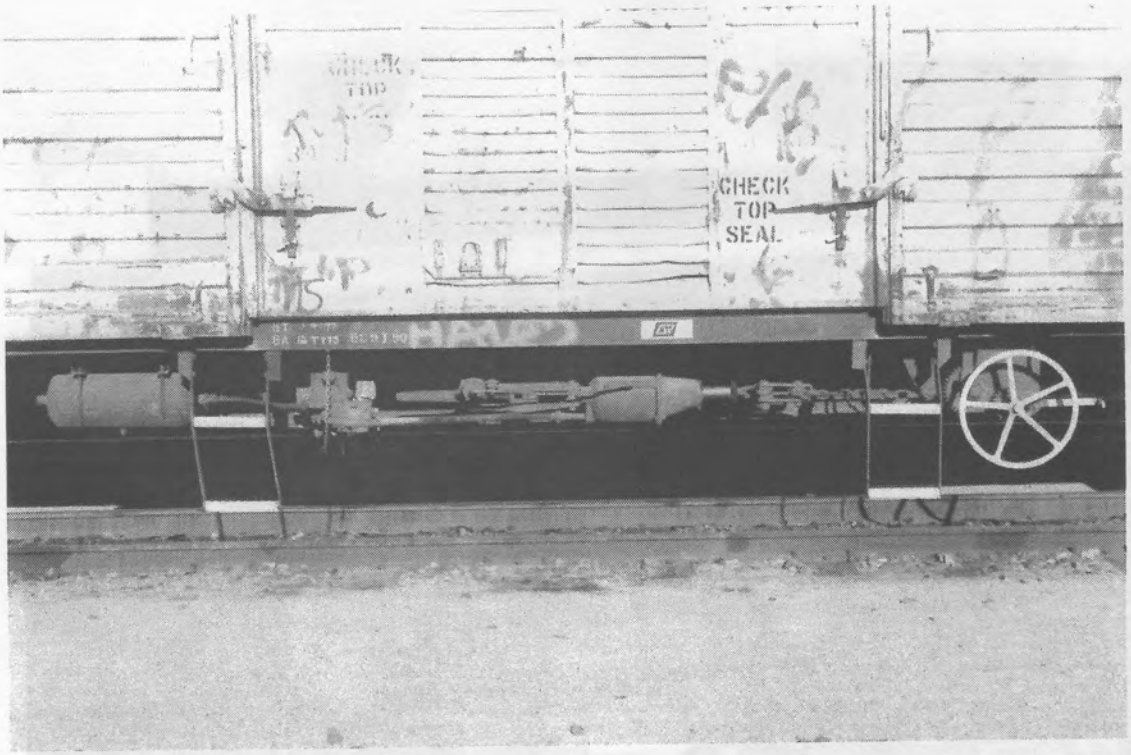
AF Triple Valve



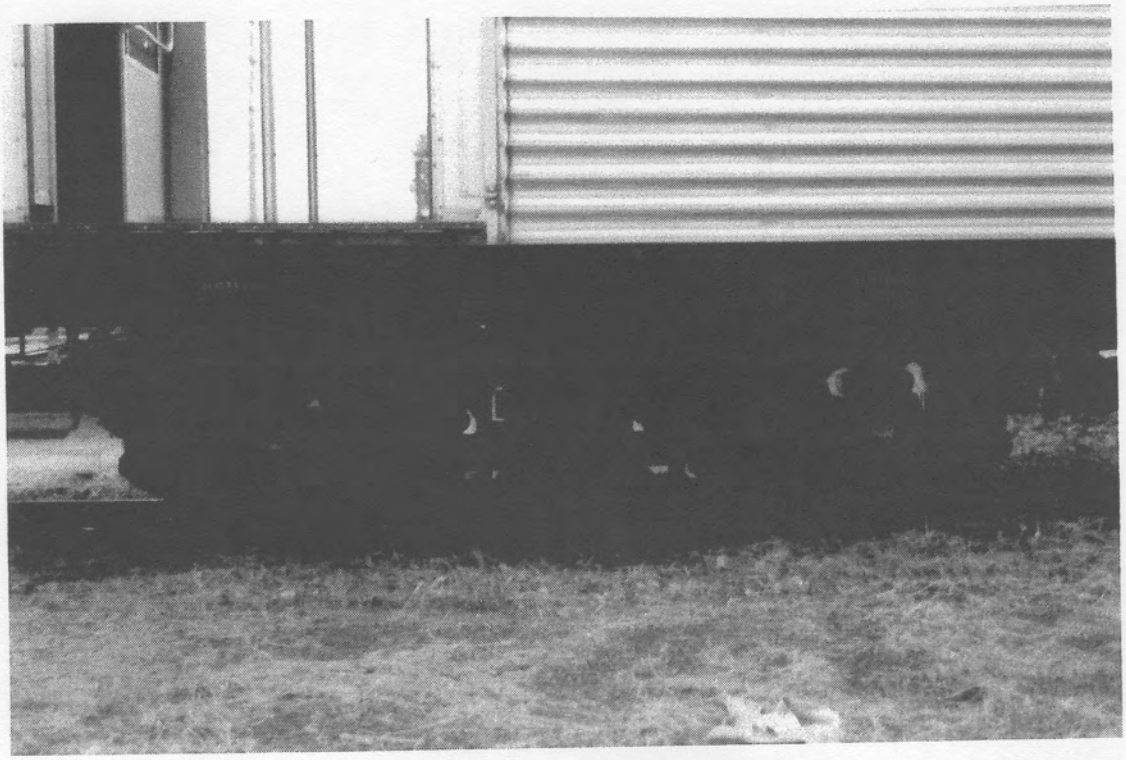
WF Triple Valve



Davies and Metcalf Triple Valve



Brake System



Commonwealth Bogie