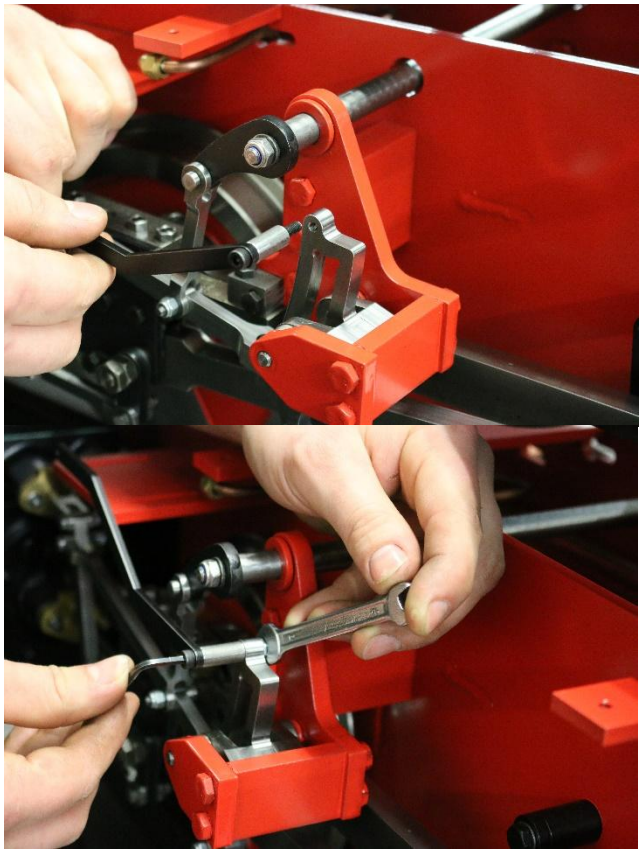
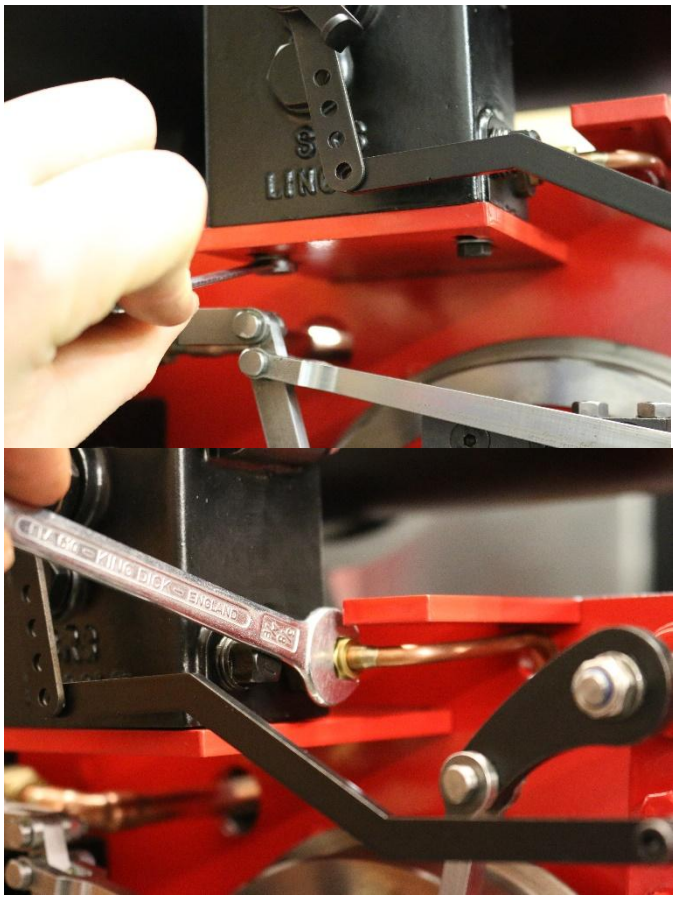
Stafford Kit Build assembly instructions
Feldbahn supplement

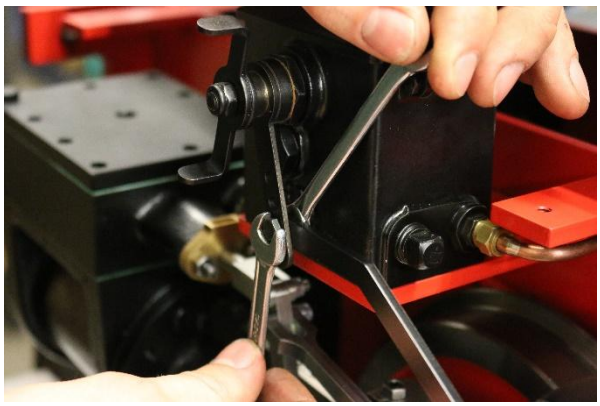
This supplement is to be referred to in conjunction with the standard Stafford assembly manual and details main points of difference between Stafford and Feldbahn.



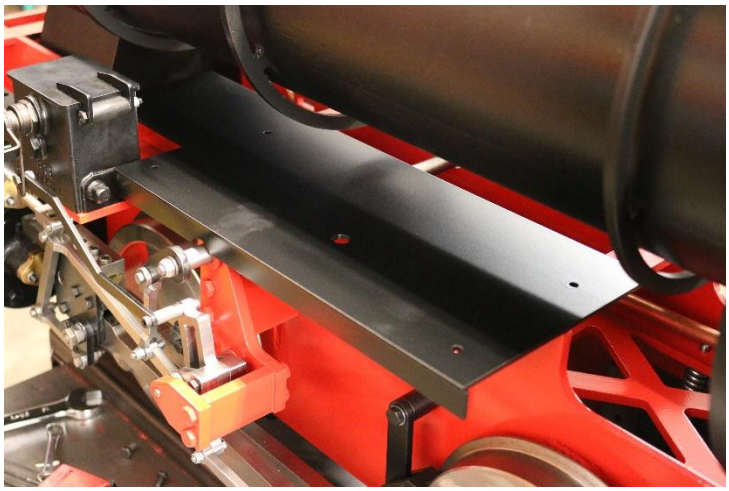
Fit lubricator link arm using using a M4 x 35 Cap head with a 17mm spacer and bolt to the top threaded hole on the expansion link (10101), Finally secure using an M4 nyloc nut on the back side of the expansion Link.



Fit Lubricator to the mounting Bracket Using M4 x 10 Hex head bolts. Fit lubricator pipe to the union and tighten.

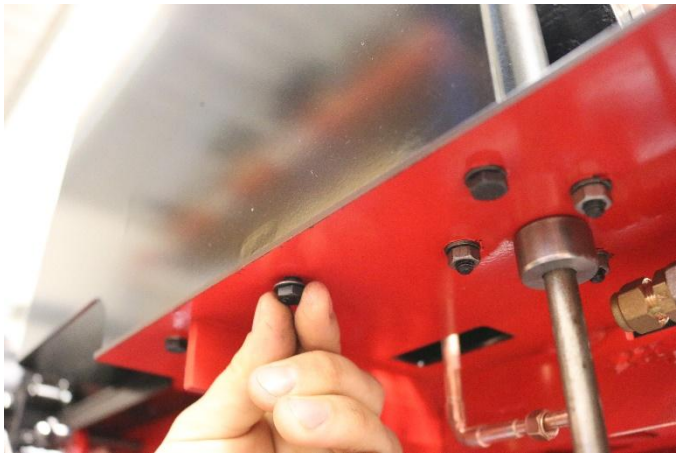


Fasten the other end of the Lubricator link arm to the lubricator using a M4 x 10 Hex head bolt and Nyloc nut, tighten till it nips up then back off half a turn.



Fit the Left and the Right side rear decks to the chassis and bolt into place using M5 x 10 Hex head bolts.

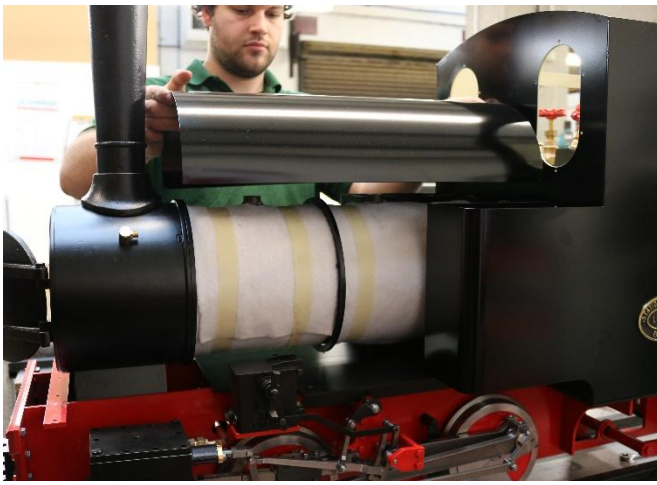
Wrap boiler lagging around the boiler and secure in place with masking tape.

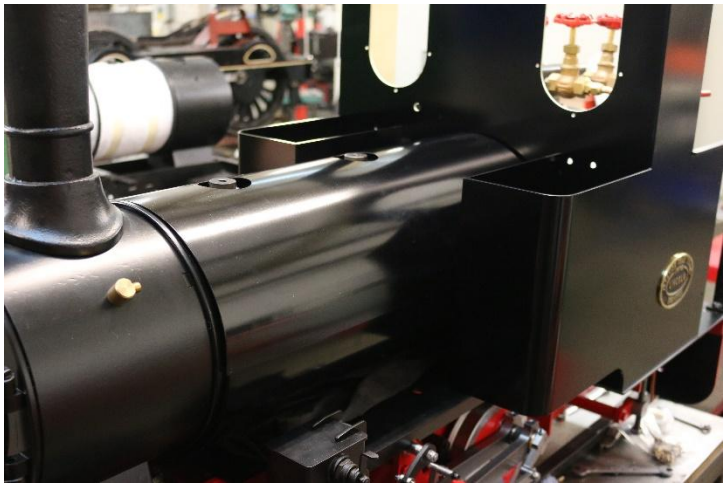


With the help of a friend lift the cab into place and bolt down using M6 x 10 Hex head bolts and washers.

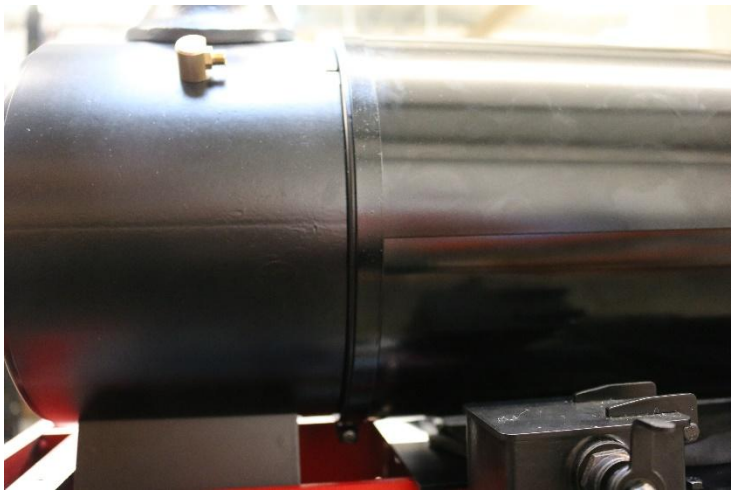
Fit works nameplates to the sides of the cab (holes pre-drilled). These are fixed into place using M3 x 12 Button head screws and nyloc nuts.

Assemble the rear cab support using M4 x 10 Hex Head bolt and nuts. Assemble onto the engine and bolt into place using M4 x 10 Hex Head bolts and nut at the top and M6 x 10 with washer on the bottom, this is fixed from the underside of the footplate and screws into the support base plate.

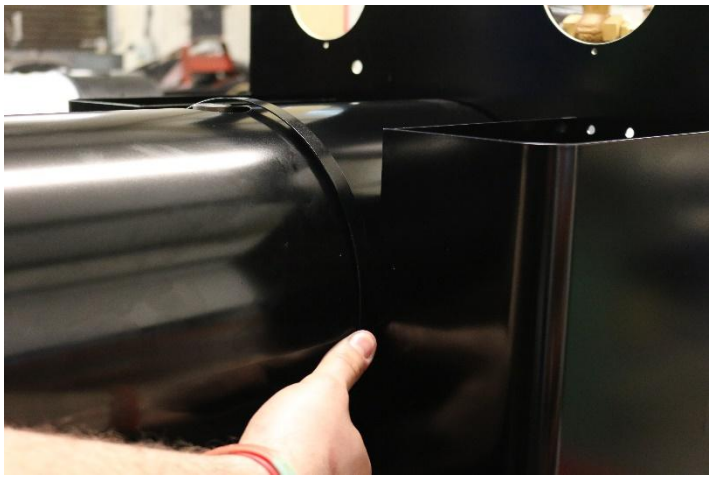


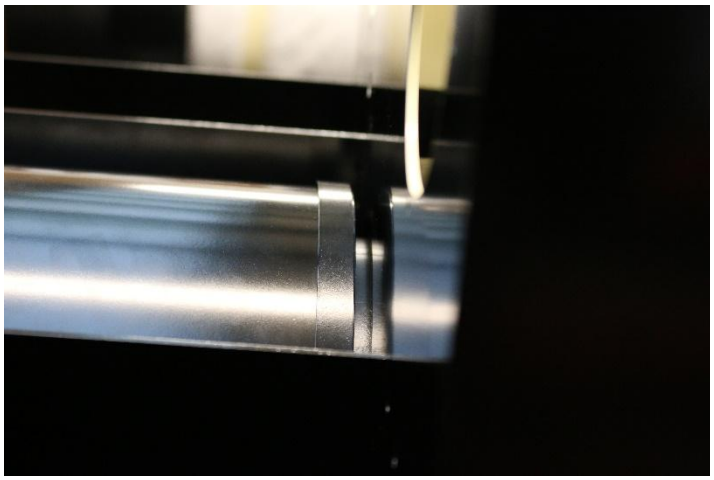


Place on the Boiler cladding starting with the bottom sheet first. This is place on from the top and rolled around the boiler to sit at the bottom. The top sheet then goes on and overlaps the bottom sheet ensuring that the holes line up with the boiler bushes.

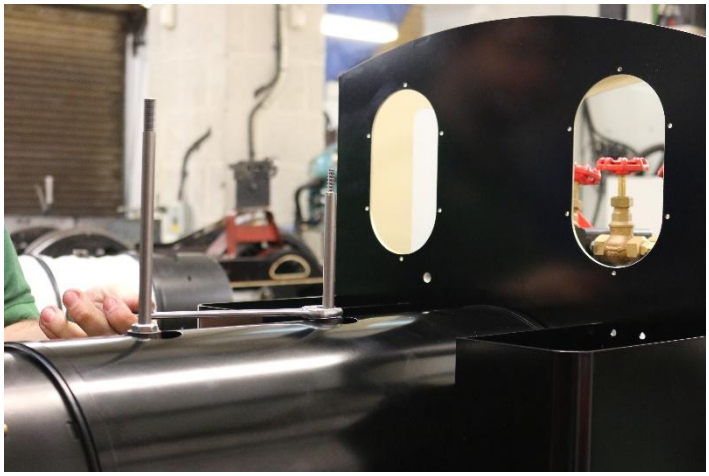


The boiler cladding is then held into place with the boiler band and these are secured by using M4 x 30 Cap Head screws and a nyloc nut. Ensure that the tabs are face under the boiler barrel to hide out of view.

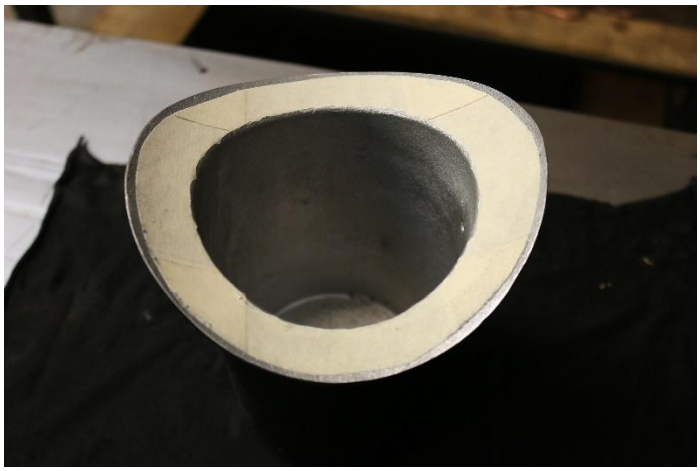




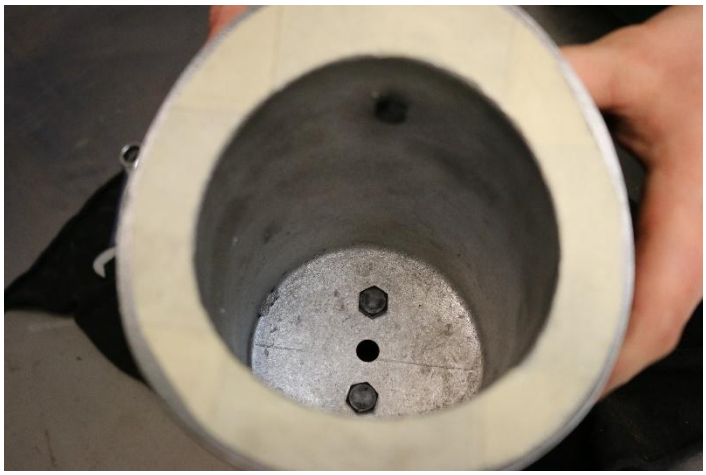
The rear boiler band is the next to be fitted, this is fitted over the boiler and slide back towards the cab till it is flush with the boiler cladding. Access to the tabs is from the underside of the water tanks. This can be tricky and help of an extra per of hands my by useful. Please note that the middle boiler band doesn't go on at this point, it is best to fit this after fitting the dummy sand and steam dome to ensure that it is seated mid-way between the two.



Both the Sand and steam dome studs are fitted at this point, the longer one of the two is for the steam dome and is fitted nearest the front of the engine. They are supplied with an M10 lock nut and they simply screw into the bushes and lock the nut off to ensure a secure fixing.

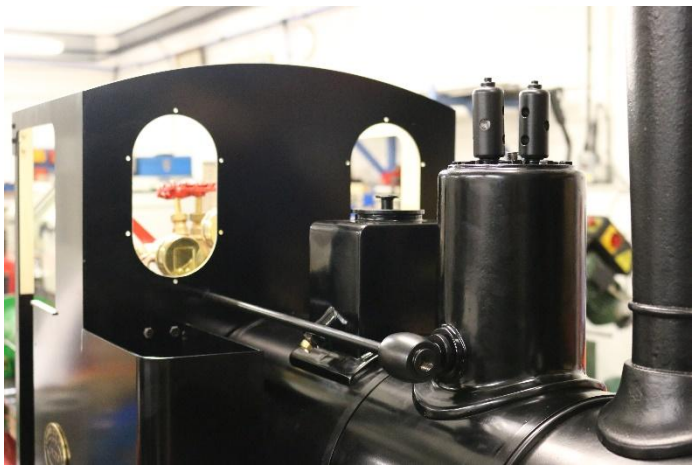


We recommend putting a layer of masking tape on the bottom of both the sand and steam domes as this will prevent scratching to the paint work.



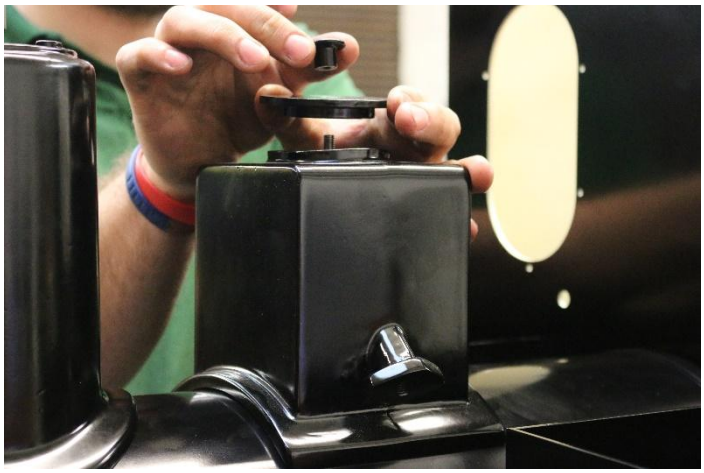
Before fitting the steam dome you will need to fit the dummy regulator and dummy Safety valves, all of which are bolted up from the inside of the dome. For the dummy safety valves use M8 x 20 hex head bolts and for the dummy regulator use a M6 x 20 hex head bolt.

Screw the dummy regulator rod in to the regulator and lock off the nut.

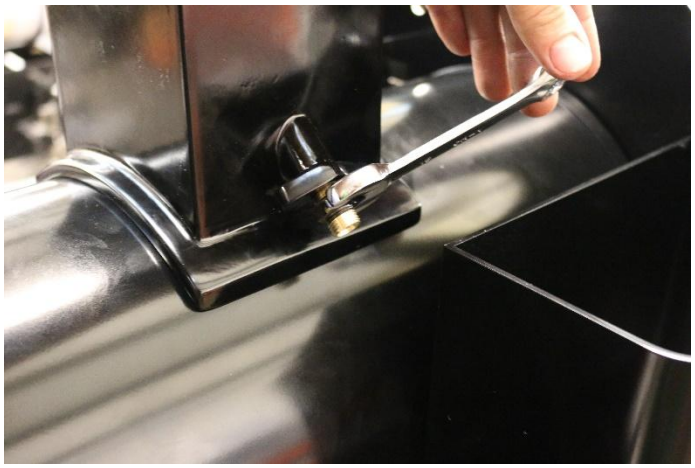


To fit the dummy steam dome you we need to seat it over the mounting stud threading the dummy regulator rod through the hole in the cab first before finally seating it onto the boiler barrel.

Finally secure down with a M10 lock nut.

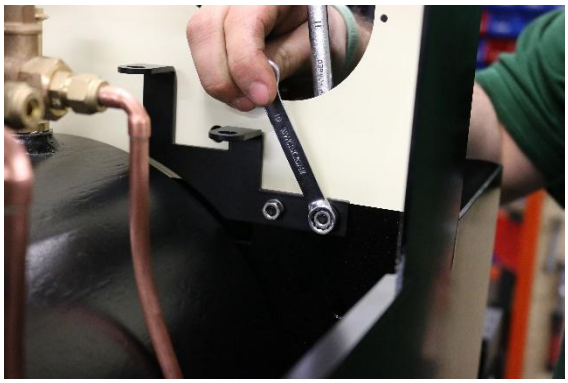


The dummy sand dome is then fitted on to the engine, this is secured by using the lid and the knob to fasten the dome down. Once the lid is in place apply some 243 loctite to the threads on the knob and secure into place.



8mm compression fitting are then fitted in to the sand dome ready for taking the pipe work.

The last of the three boiler bands can now be fitted. Ensure that the band if sat mid-way between the sand and steam dome before the final tighten.

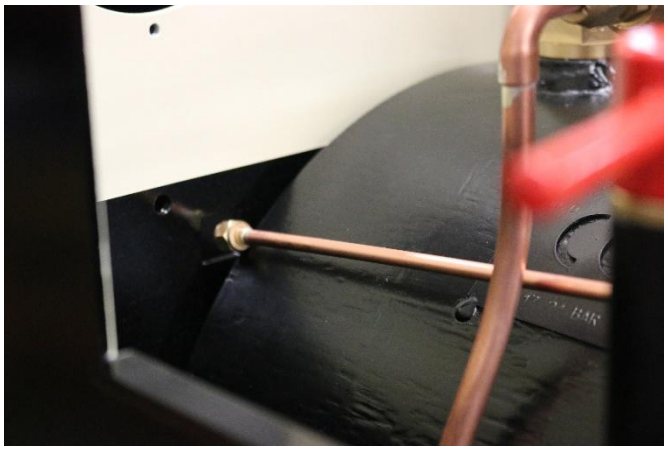


Fit the pressure gauge bracket using M6 x 12 hex head bolts with turned down head (3mm thick). Ensure that the head of the bolt is threaded throw the cab from the outside of the cab, this ensure clearance on the water tank when we come to fit them.

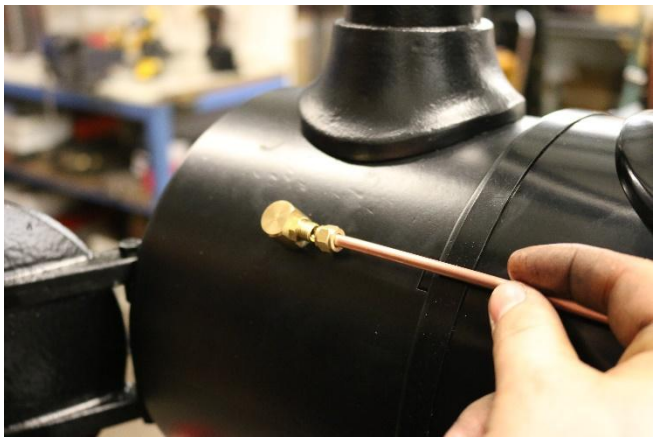
Fit the pressure gauge to the bracket, the union nut acts as the locking bolt to secure it in to place, the pressure gauge must have PTFE tape on it before fitting to ensure a good sealed join.

Fit the pressure gauge syphon to the fountain and the pressure gauge.

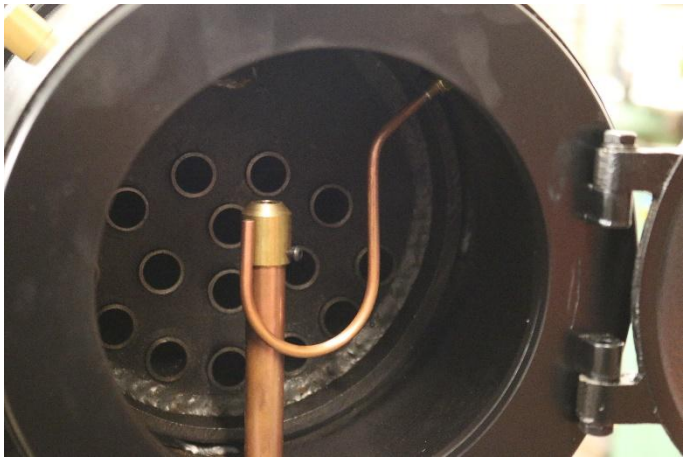
Fit smokebox steam blower fitting through the smoke and lock into place with the nut.



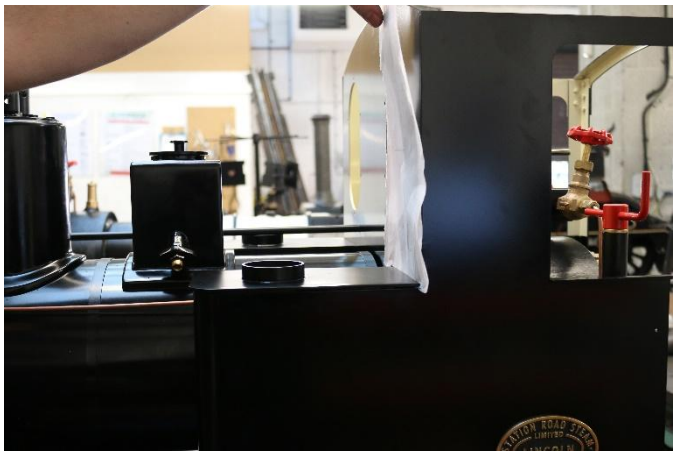
Thread the steam blower pipe through the square hole in the spectacle plate and fit to the steam valve on the fountain.



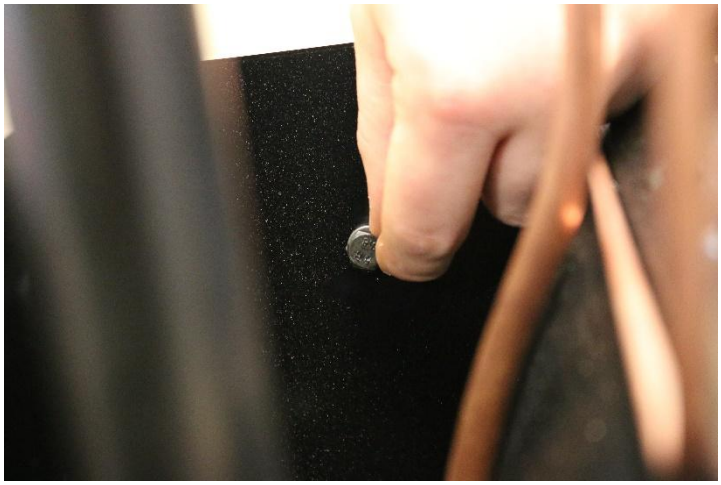
Fit the other end of the steam blower pipe to the smokebox fitting.



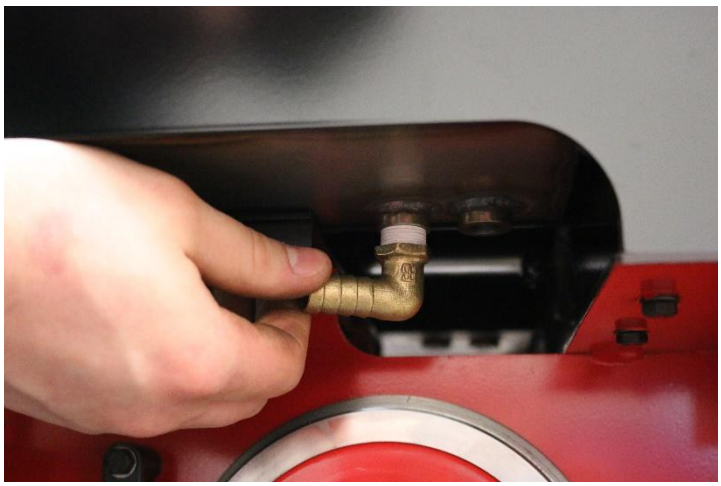
Finally fit the blower pipe to the tail of the smokebox fitting inside the smokebox.



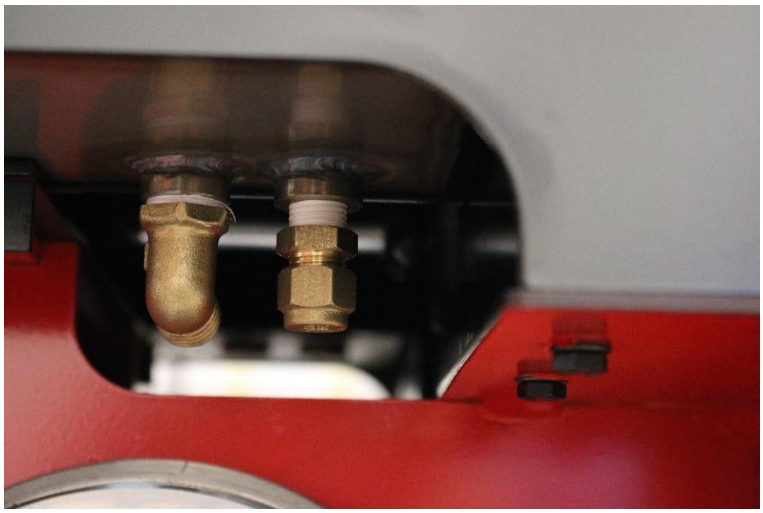
Fit Tanks into there outer pockets. Use a peace of paper at the back of it when fitting as this will prevent scratching the paint work.



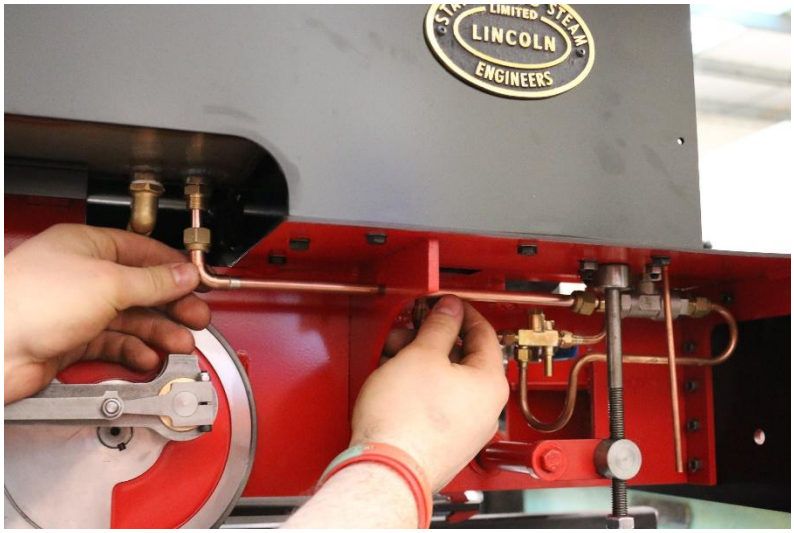
Bolt the tanks in to place from the inside of the cab using two M6 x 12 hex head bolts and washers.



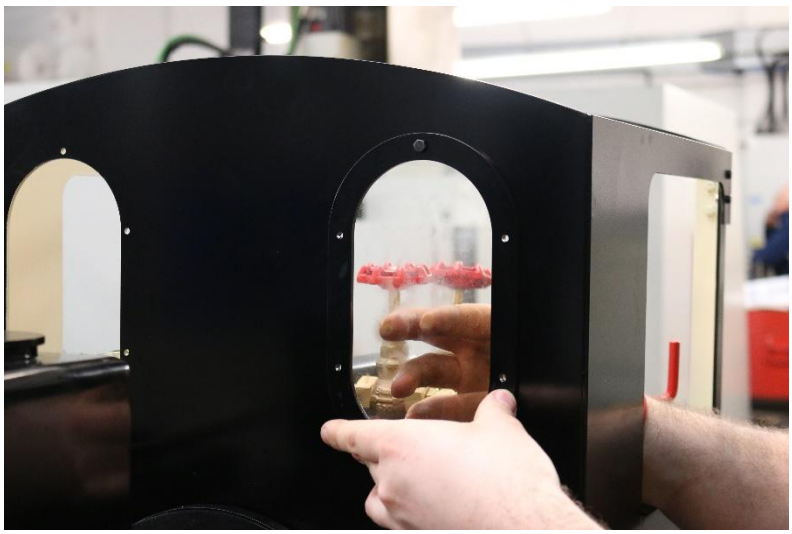
Fit the 3/8” BSP brass hose tails to the underside of the tanks use PTFE tape to seal. The hose tail should be facing in towards the frame when fitted.

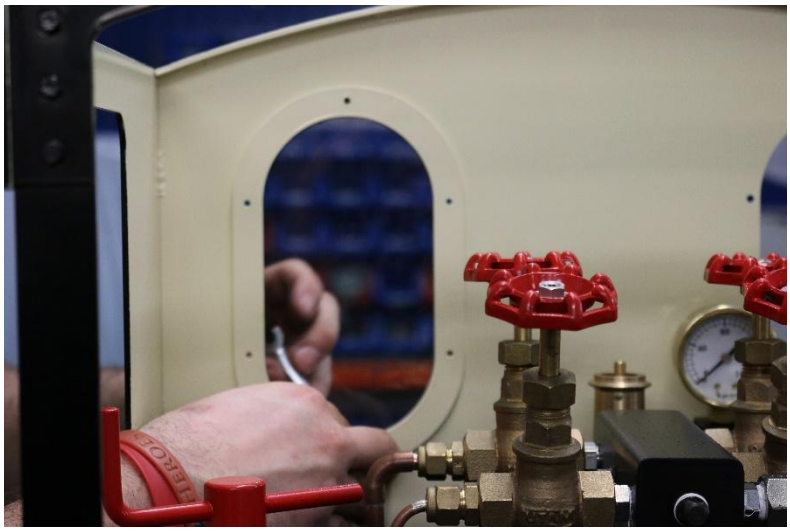


Fit the 8mm compression fitting it to the tank, again us PTFE to seal.



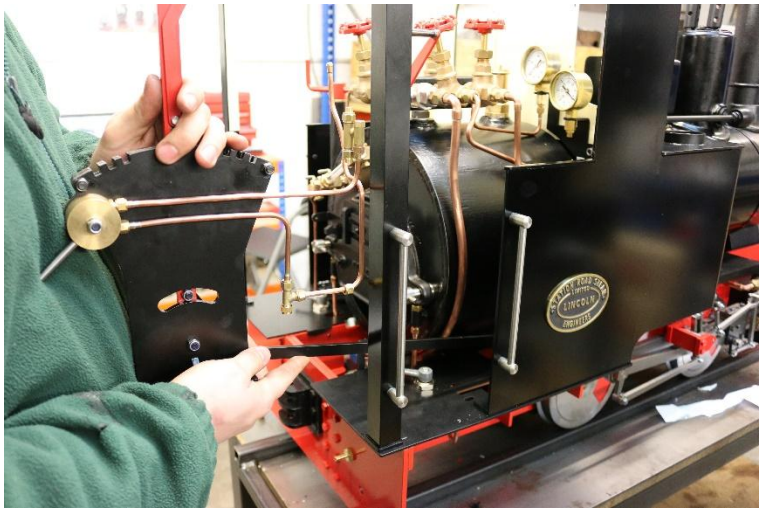
Fit the water tank to water valve pipe work and tighten up the compression fitting.



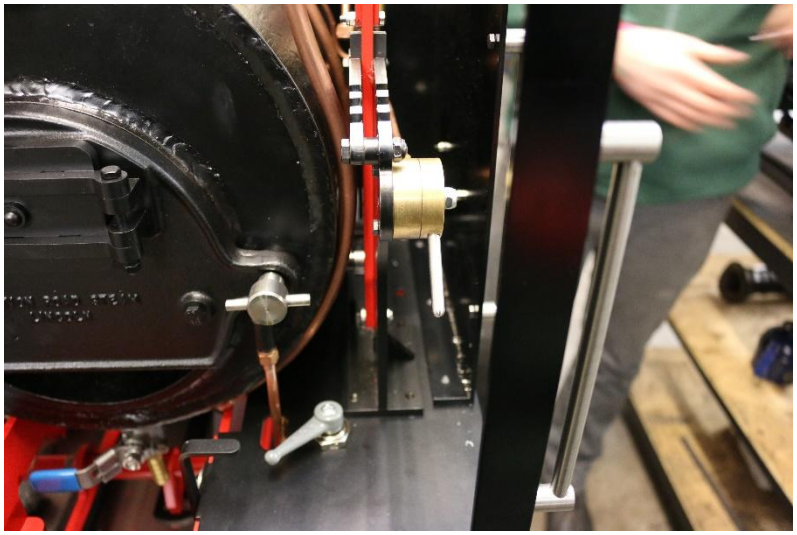


Fit the spectacles starting with the outer one first with two M4 x 10 hex heads ready in place top and bottom. Then place in the glass follow by the inner spectacle (an extra per of hands maybe helpful at this point). Fit the remaining bolts, don't over tighten the bolts as this could course the glass to crack.

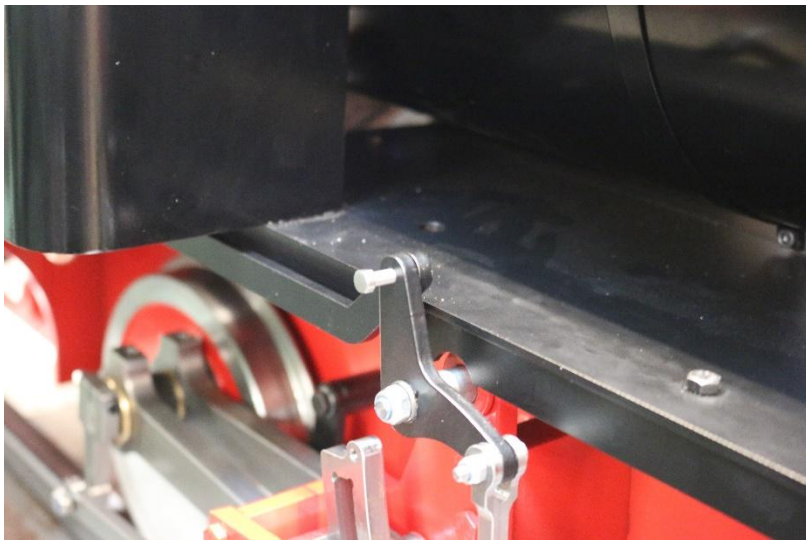
Fit the hand rails in place using M4 x 10 hex head bolts. Fit the bottom boss first lose then fit the handle and the top boss and final bolt in to place. Repeat this on all four hand rails.



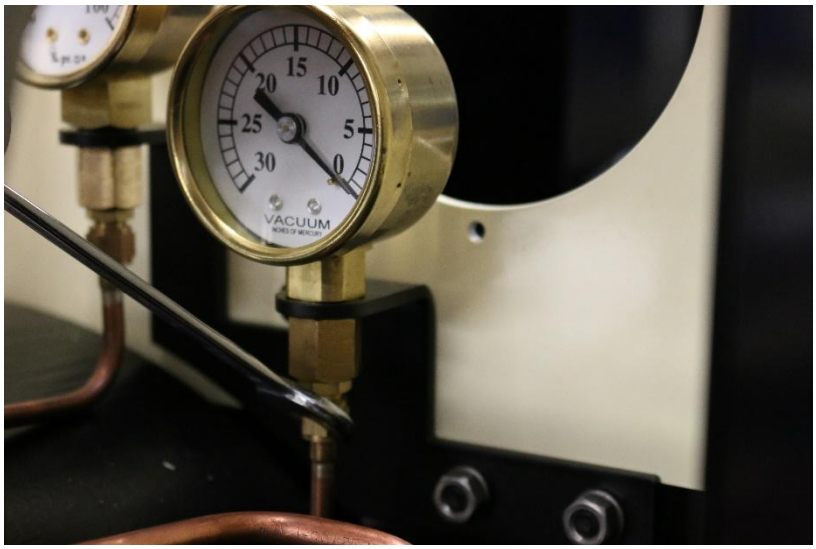
Fit on the reverser level assembly. This is easier to fit up in one peace (including the Vac Brake valve pipework) as it save's a lot of the fiddly fitting after.



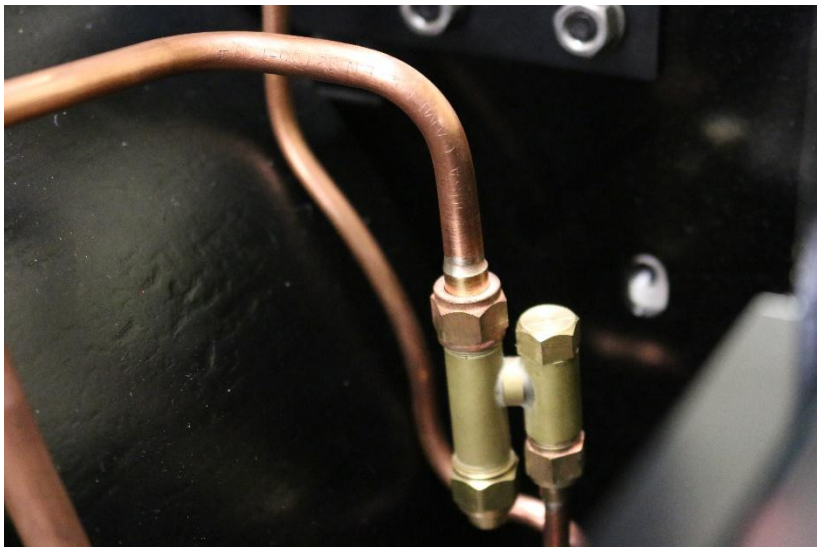
Bolt it in to place with M6 x 10 Hex head bolts with washers.



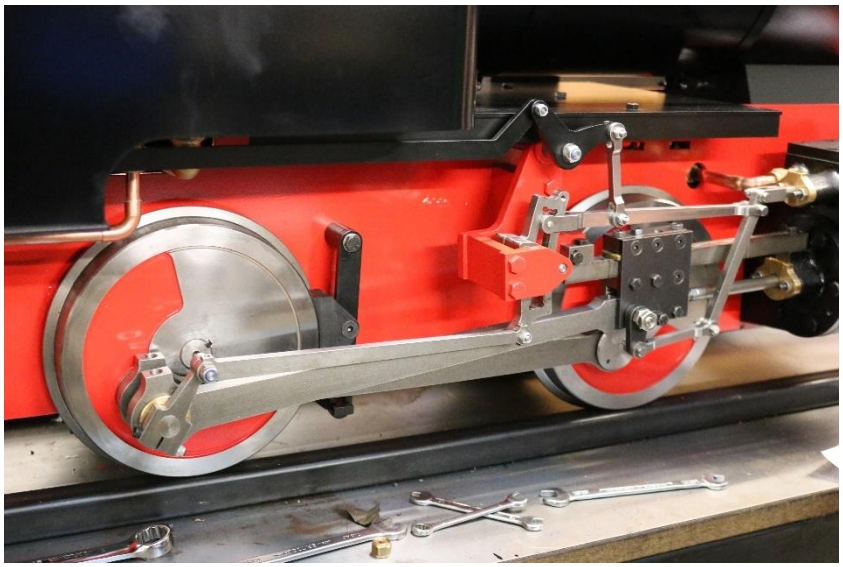
Bolt the reach rod to the reach rod lifting arm using a 20mm motion pin.

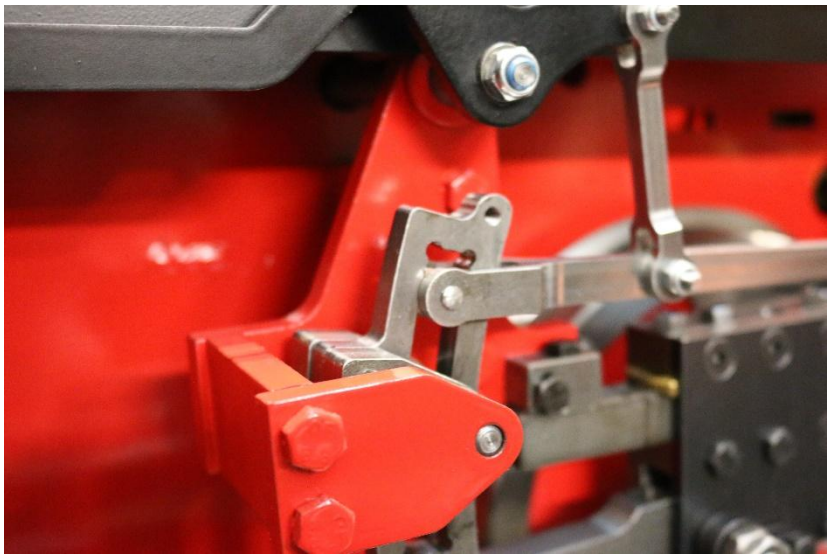


Connect the Vaccum gauge pipe work to the Vaccum Gauge.

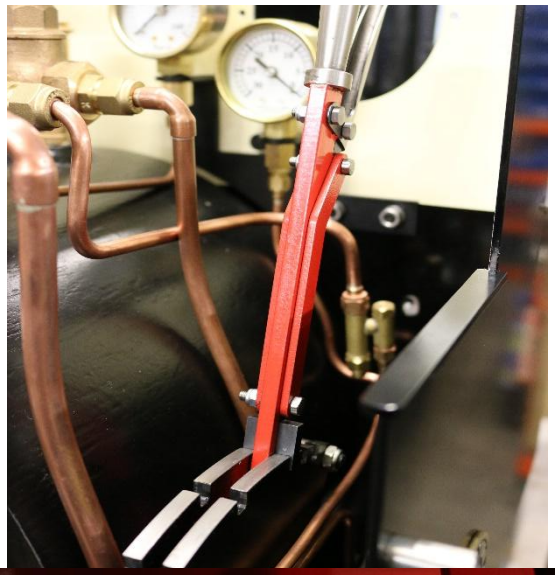


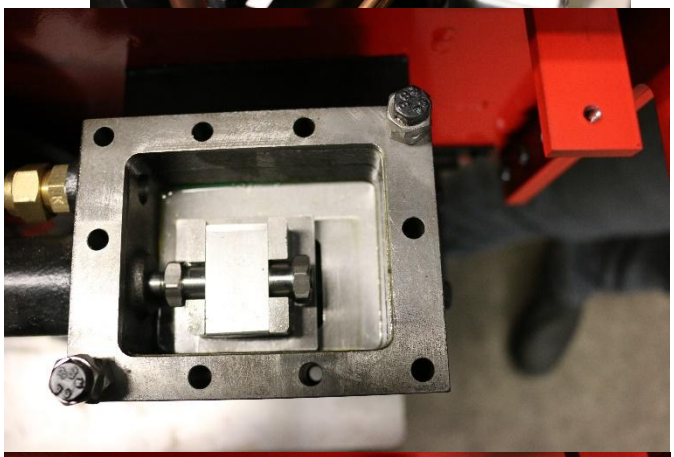
Connect the the steam pipe to the ejector.

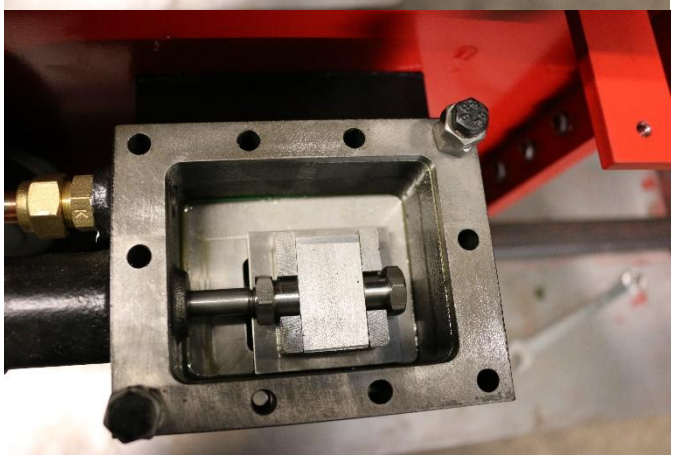




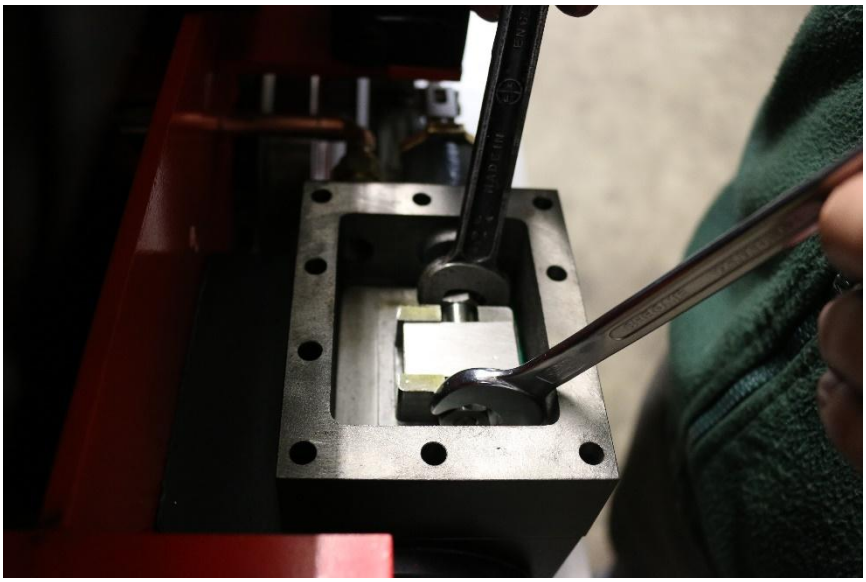
To determine where the reverser sits the return crank needs to be set at approximately 45 degrees (as shown in the above picture). Adjust the position of the reversing stand until the gap at the top and bottom of the expansion link to die block is equal. Once this is equal top and bottom bolt the reversing lever stand in its final place.







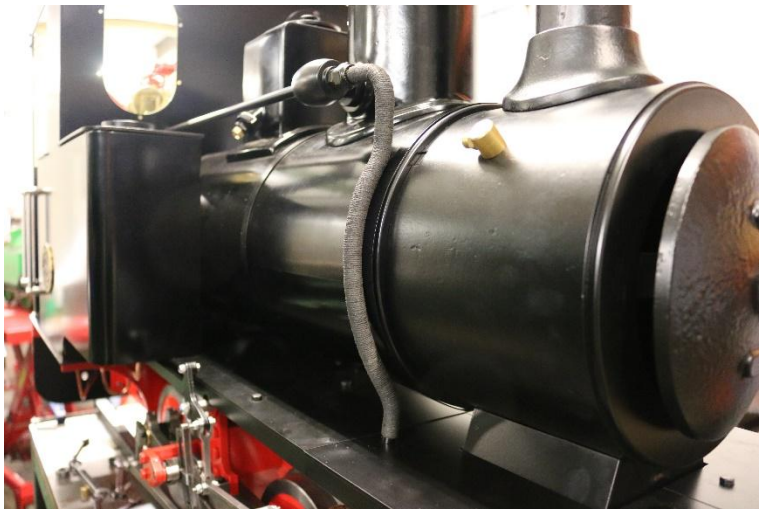
To set the valve gear take off the valve chest cover plates and set the reverser to the first notch forward. Roll the engine forwards and backwards adjusting the slide valve locking nuts until there is an equal valve opening on both sides.



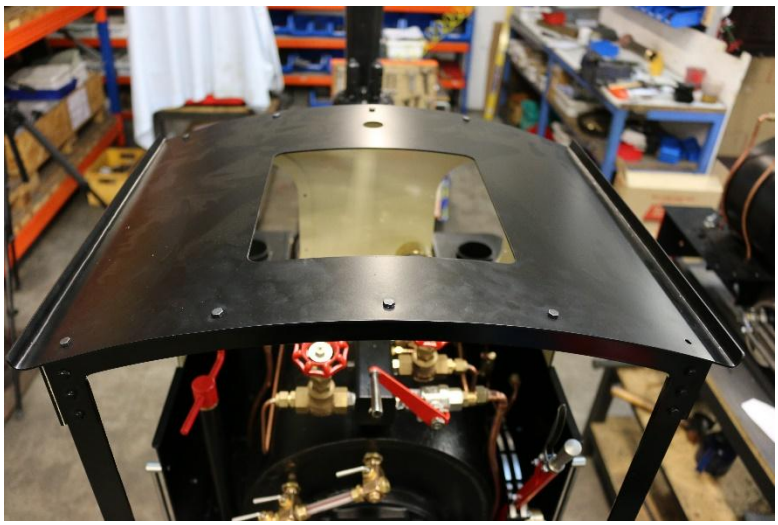
Once the valve gear is set lock of using two 9/16” AF spanners.

Put the valve chest cover back on and bolt down. All bolts should be torqued down to 13 NM.

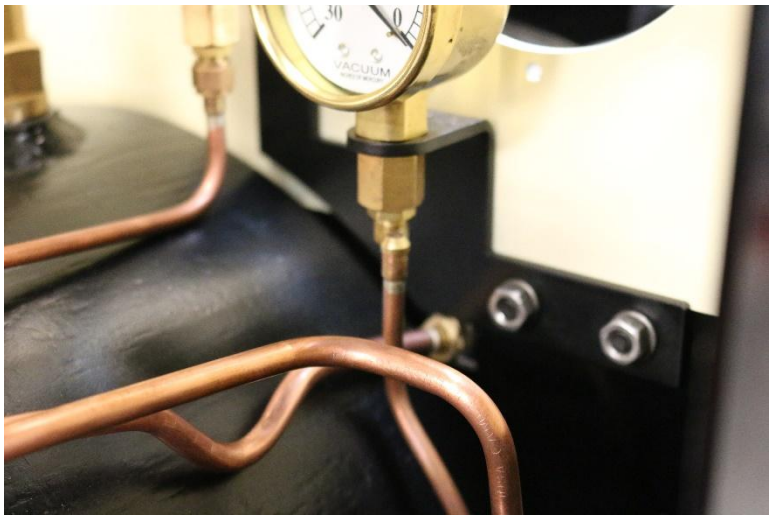
Fit the front decks, these just slot Into place and bolt on at the front using two M4 x 10 hex heads.



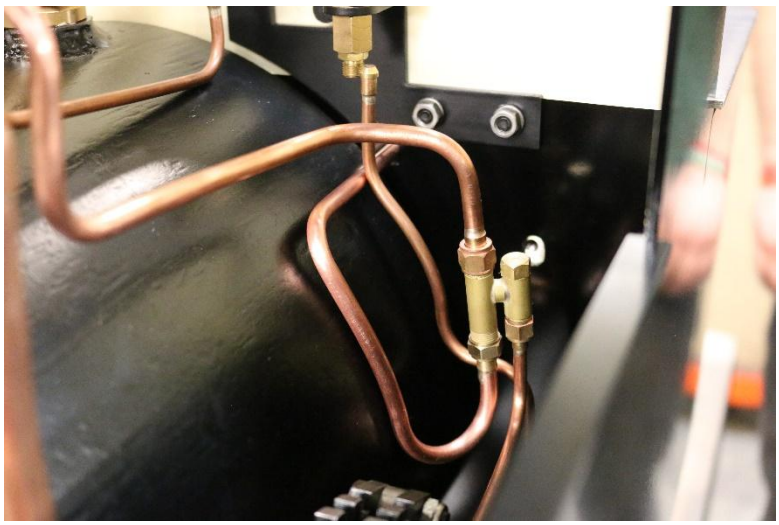
Fitting the dummy steam pipe simply fit through the hole on the deck and is tighten in to the 10mm compression on the dummy regulator.

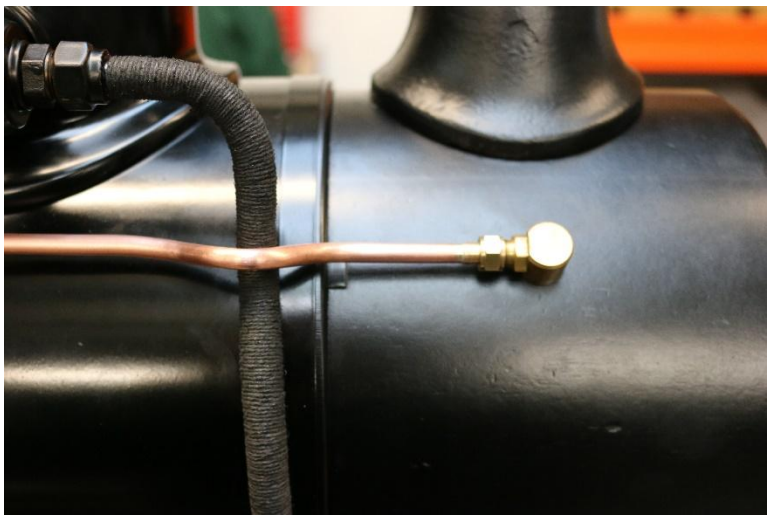


Cab roof can then be fitted at this point. This is secured in place using eight M4 x 10 hex head bolts.

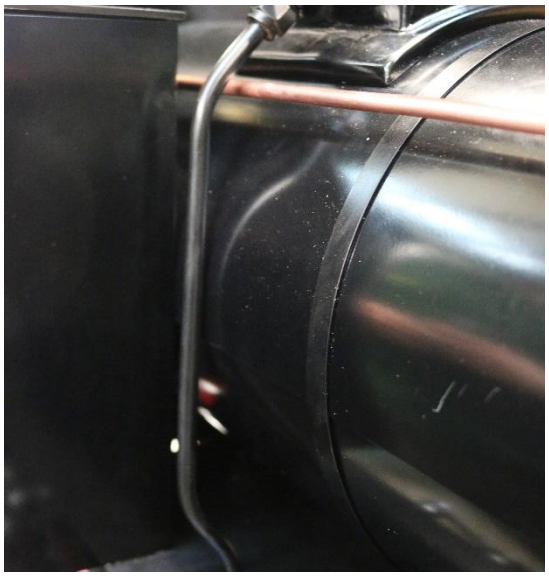


The ejector exhaust is threaded throw the square hole just under the pressure gauge bracket. This is a fiddly job as you have to weave it throw the per-fitted pipe work.

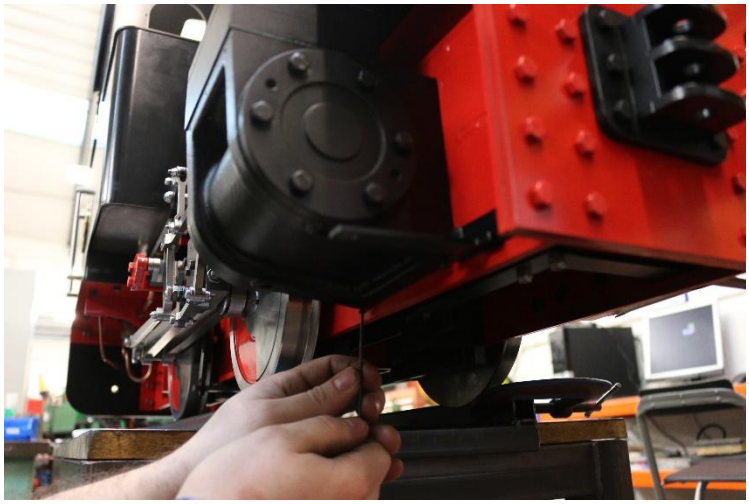




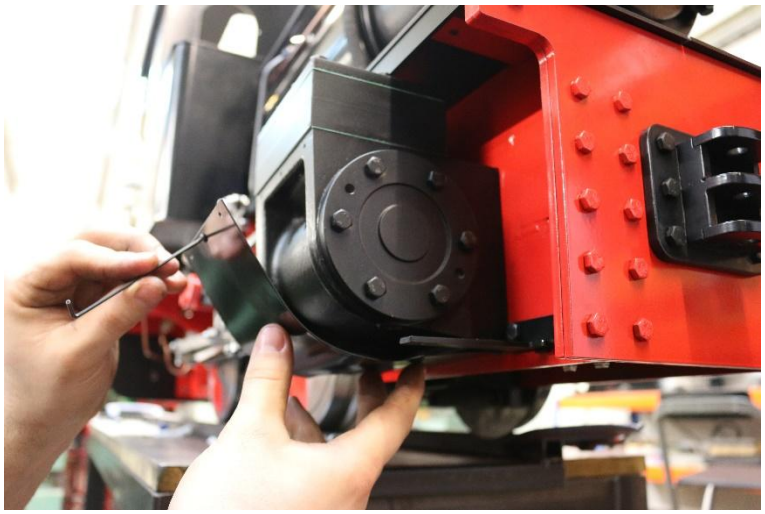
Once threaded throw secure at both ends



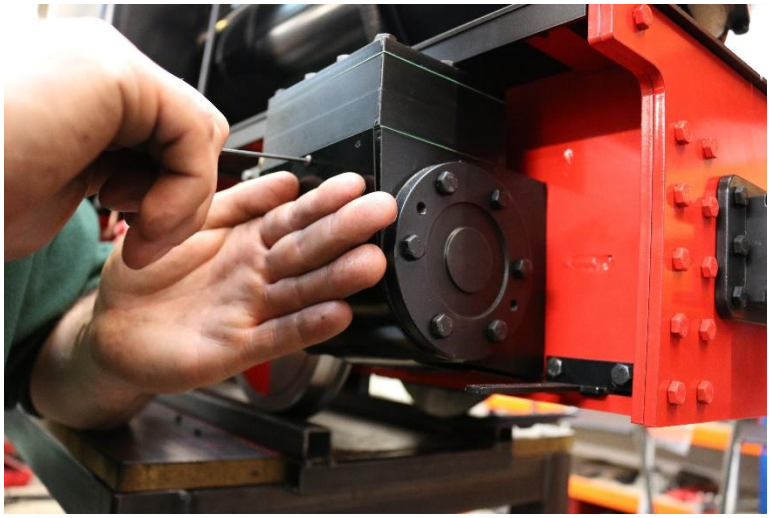
The dummy sand dome pipes fit through the hole in the decks and then fix's to the 8mm compression fitting on the dummy sand dome.



Put the two M3 x 5 button head screws in the underside of the cylinder for the cylinder cladding, leaving them loose to slide the cladding sheet in.

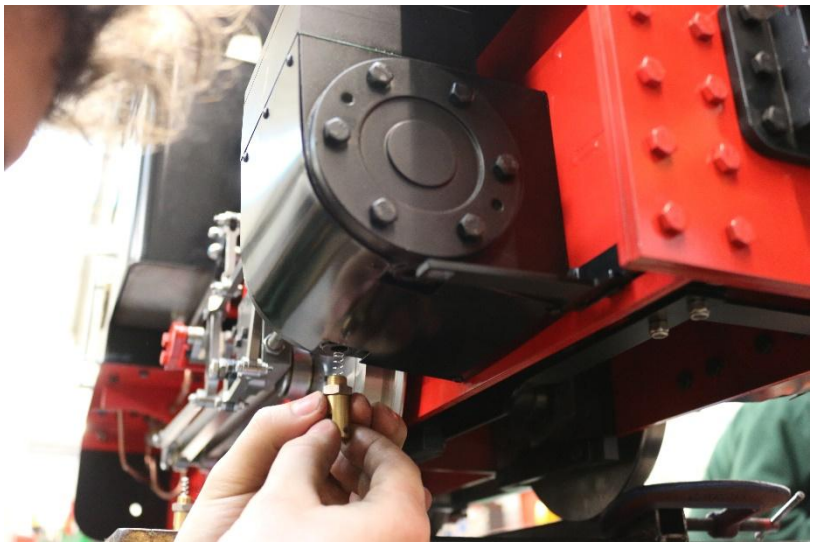


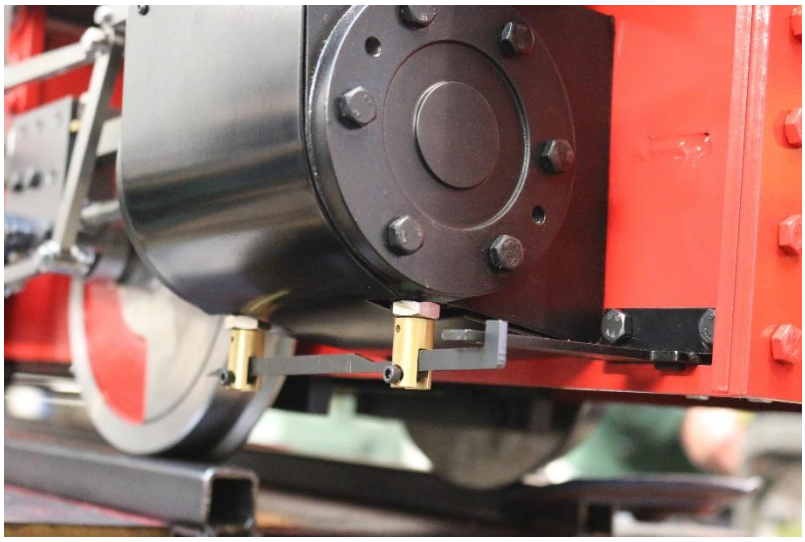
Slide the cladding on to the bottom two screws. Then fit the centre top screw in and screw on to the cylinder.



Fit the remaining screws and tighten all up.

The assembly of the drain cocks is as shown in the above picture. Pre-assemble all the drain cocks.





Fit the drain cocks to the cylinder lining the two up so as they run in line with one another. Loosely fit the operating rod to ensure that they are in line.

Endo the securing screw ensure that you keep the operating rod in place (if this drops out of place the small dowel will drop out). Fit the operating rod in to its locating hole and retighten the securing screw.

Fit the safety valve chimney, this simple fits through the cab roof and seats back down on to the top of the safety valve.