RAF 25kVA Ground Power Unit

These were the units seen alongside Lightnings, Phantoms, Harriers, Buccaneers, Jaguars, Sea Kings etc. in almost every flightline photograph. They were painted overall dark green in their final period of service, but have been finished in RAF blue/grey, and in yellow with other painting details as shown in the accompanying reference photographs.

Suggested Assembly Sequence -
Check all etched parts prior to forming or fitting to see if any etched rivet head detail needs pushing through from the rear of the part. This is best done by use of a scriber or fine centre punch against a firm base - the smooth side of a sheet of hardboard is ideal.

The castings for this kit are packed as being interchangeable with another of our GPU kits. The result of this is that are some parts included which you will not use.

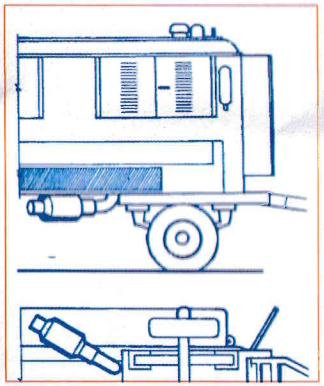
Laminate x2 of lifting eyes [23] and fit one of these assemblies [4 in total] into holes drilled out in each corner of the chequer plated area on the roof of the resin body. Note that these were removed from some units in later years [as in our photos] and if so for your model, then you should add a hexagonal plate from part 24 instead - fitting as an option, as noted on the assembly drawing. Obviously in this case there is no need to drill any location holes.

Fit the hinge strips [parts 21] centrally to the top of the each cable bin area - with the inner [plain] edge of part 21 hard up against the body side. Add part 20 over the location holes for the spot lamp unit and fit the spotlight casting through the location holes in part 20 and to the resin body side. If fitting a fire extinguisher to the body, this should be fitted to the corner of the body diagonally opposite the spotlight, using part 19, the casting supplied and a short length of .5mm wire, as per the assembly drawing.

On some units there is another roof fitting located towards the RH side of the chequer plate area at the radiator end of the unit. A casting is provided for this in case you wish to fit it - obviously a location hole will have to be drilled out for this.

Form and fit part 18 over and to the bottom & sides of the tank unit on the underside of the resin body and 3.5mm in from the outer end of the tank. Sand off the moulding feed from the bottom of the resin body moulding, ensuring a smooth surface.

Fit the exhaust pipe casting into the location hole in the bottom of the resin body, with the bottom of the support bracket on the casting contacting to the bottom of the cable bin area - note angle at which this unit is fitted - see illustration to the left.



Form part 4 and without folding the inner door areas in relation to the rest of the part, form out the sides and the lower area and test fit into the control panel end on the resin body unit. Sand the resin if required to obtain a sliding fit of part 4 into the body [do not try to force fit part 4]. Any sanding required will be minimal or not required at all, if you have formed the sides of part 4 out correctly - by 90 degrees. Remove part 4. If you are modelling the unit in 'running mode' with the doors open you should now form and fit part 10 into the main rectangular cut-out of part 4. Note that the four edge panels of part 10 fold out at an angle and that when they are all equally formed, the half-etched recesses on the REAR faces of these sections of part 10 act as locations into which the edges of the rectangular cut-out in part 4 will fit. Now fix part 4 permanently into the resin body.

If the unit is be modelled with the doors closed - then simply fold the inner door areas across the unit [through 90 degrees] to meet in the middle of part 4 and add the outer door panels from parts 5 & 6, as shown in the assembly drawing. Add a part 22 into the slot provided in parts 5 & 6. A door handle [part 25] should be added to part 6 - this being fitted via a short length of .5mm wire in exactly the same way as for the door handles on each side of the body and these can now also be fitted, again using parts 25 [x2] and .5mm wire - drill out holes for wire in body sides. Note that both these handles face outwards towards the ends of the body.

If you are modelling the unit in running mode [connected to an aircraft] then the doors are assembled in the same way - but BEFORE doing so you should fold the inner door areas on part 4 outwards by around 40-50 degrees from their straight-out position when you fitted part 4 into the resin body earlier.

You should paint the main flat face of part 10 white and also the sloping face on part 4 [below part 10]. Paint the rear [matt surface] of both the control panel films in the appropriate colours to highlight the instrument details [see reference photo], after carefully cutting these out. The relevant films are fitted over the two white areas on parts 4 & 10 after all paint is thoroughly dry.

Paint and add the control panels [parts 7 & 11] as for the body colour of your unit and when dry, fit these - part 7 fitting over the film on the sloping area of part 4 and part 11 fitting over the film and within part 10. Paint and add part 8 to part 7 and parts 12, 13 and 14 x2 to part 11, as indicated. Drill out all holes marked 'x' on the assembly drawing in parts 7 & 11 [it might defy logic but this is much more easily now that everything is fixed into place], drilling through the film behind these parts. Now you can add short spigots of wire into these holes to stand proud from the control panels by approx. .75mm. The two holes in the centre top of part 11 are for a grab handle and wire should be shaped and fitted into these as shown. See reference photographs to confirm appearance and colouring for all these details. Finally, form, paint and add part 9 over the lever/switch that was added to the hole in part 7 above the LH gauge.

Form up the towing eye unit from part 15 and fit into the recess in part 4, adding a retaining bar shaped from the .8mm wire, as shown. Fit part 16 to the area indicated on part 4 and add part 17 where indicated, to part 16. Fit the cast filler cap at the angle shown in the photographs. This obviously locates into the matching elongated holes in parts 17, part 4 and the resin body unit.

Form part 1 and without folding the inner door areas in relation to the rest of the part, form out the sides and test fit into the radiator end on the resin body unit. Sand the resin if required to obtain a sliding fit of part 1 into the body [do not try to force fit part 1]. Any sanding required will be minimal or not required at all, if you have formed the sides of part 1 out correctly - by 90 degrees. Remove part 1.

If the unit is be modelled with the doors closed

- then simply fold the inner door areas across the unit [through 90 degrees] to meet in the middle of part 1 and add the outer door panels from parts 2 & 3, as shown in the assembly drawing. Shape and add a handrail from brass wire and fit into the holes provided in parts 2 & 3.

If you are modelling the unit in running mode [connected to an aircraft] then the doors are assembled in the same way - but BEFORE doing so you should remove the small square plates on the outer edges of parts 2 & 3 and fold the inner door areas on part 1 outwards by around 40-50 degrees from their straight-out position when you fitted part 1 into the resin body earlier.

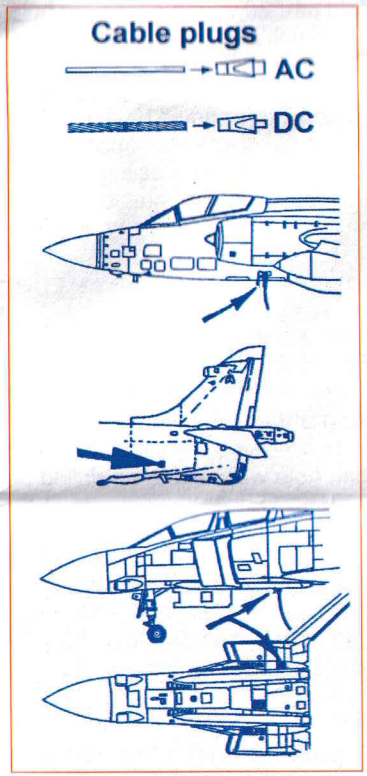
Fit the front leaf spring castings centrally to the bottom of the cast turntable unit, as noted on the assembly drawing - with the outer faces of the springs flush with the sides of the turntable. Note that the deeper bracket on each spring is fitted towards the rear of the turntable. Fit one of the axle units centrally to the bottom of the leaf springs on the turntable assembly - ensuring that the axle is mounted squarely in both its horizontal and vertical planes. Add a wheel casting to each axle end. Fit the cast leaf spring brackets for the rear axle - these locate onto the mounting blocks on the floor of the resin body - noting that the deeper bracket on each spring is fitted towards the centre of the body. Fit an axle casting centrally to the bottom of each leaf spring casting - ensuring that the axle is mounted squarely in both its horizontal and vertical planes. Add a wheel casting to each end of the axle.

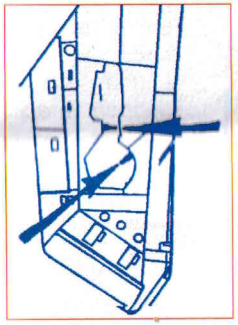
Form and fit part 30 centrally to the front edge of the turntable casting. Fit out the tow bar casting by firstly forming and adding part 26 to the under-side of the casting where indicated. Form and fit part 27 to the top of the tow bar, where shown and then form part 28 and feed it down through the slot in part 26 and attach it to part 27 by means of a short length of .5mm wire, as shown on the assembly drawing. Add a further length of .5mm wire approx. 2mm in length centrally through the hole in the end of the rearwards facing bracket on part 28, as shown, to represent the handle. Study the photographs and the assembly drawing and form up part 29. The front flap on this part fixes to the lower front section of the tow bar casting, as indicated and to the undersides of the tow bar.

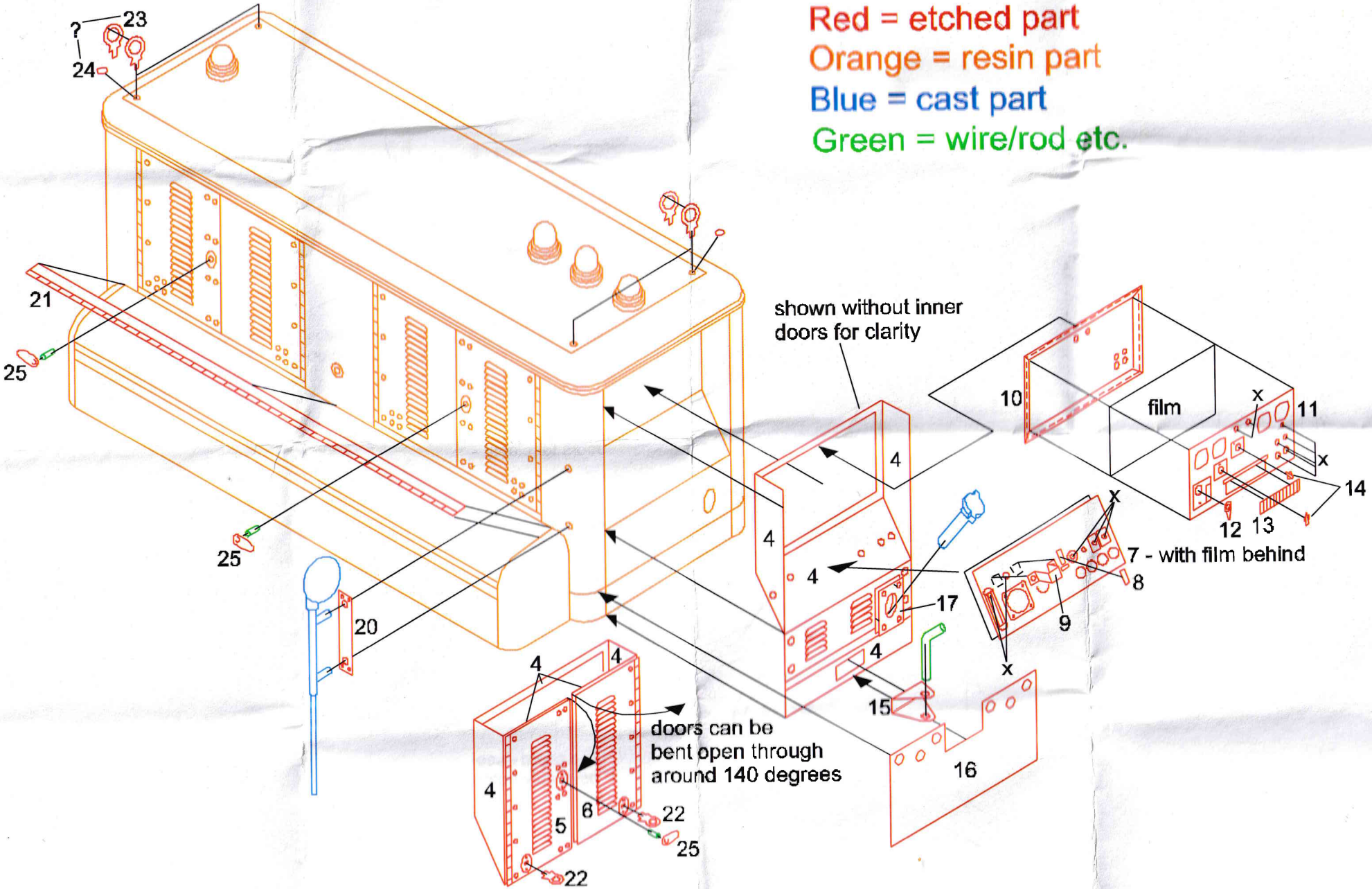
Now the tow bar unit assembly should be fitted to the attachment prongs on the front of the cast turntable by drilling out holes in the prongs and in the rear sides of the tow bar and attaching by means of short lengths of .5mm wire. By this method, the tow bar can be made to move up and down, so that the unit can be displayed with the tow bar resting on the ground or with it lifted and attached to the tow hook of a Land Rover etc. Finally a length of the pvc cord provided should be cut and fitted into the hole in the lower front of part 30, to run forwards under the tow bar, through the hole in part 26 and into the location hole in the folded-round bracket at the very bottom of part 28, as shown on the assembly drawings - referring also to the photographs included.

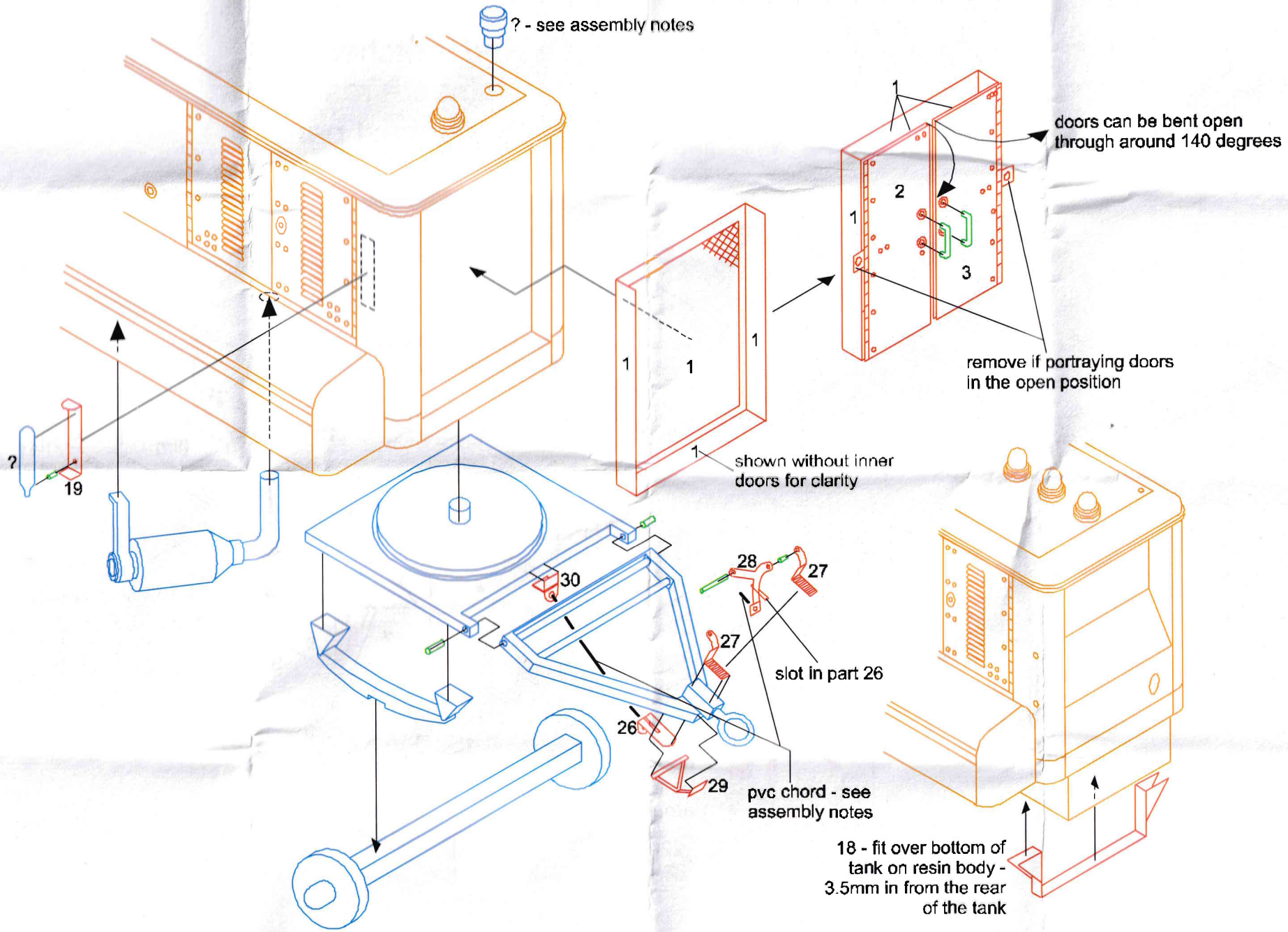
The completed turntable/tow bar assembly fits into the hole in the centre/front of the floor of the resin body unit and before fixing you should ensure that the whole unit sits square and true. For added realism, the turntable assembly can be fitted in a slightly rotated position, as shown in the photographs.

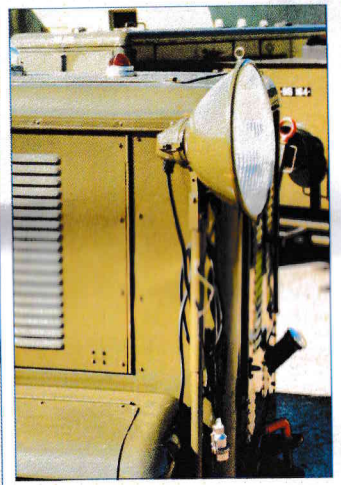
If modelling the unit in running mode [connected to an aircraft] - you should add the AC & DC cables - running from inside the bins to the supply sockets on your aircraft model. For the AC cable you should use the grey/black sleeving supplied, with one of the cast plugs inserted at the 'aircraft' end. For the DC cable it is recommended that several lengths of fine wire be twisted together with straps around the cable at 38mm intervals. These can be made using black insulating tape. The DC cable is orange in colour, and has the remaining cast plug [with the spigot removed] fitted to the 'aircraft' end. Note that the AC cable emerges from the LH bin when viewed from the control panel end of the unit, whilst the DC cable is housed within the opposite bin. The diagrams below show socket locations in various aircraft types.

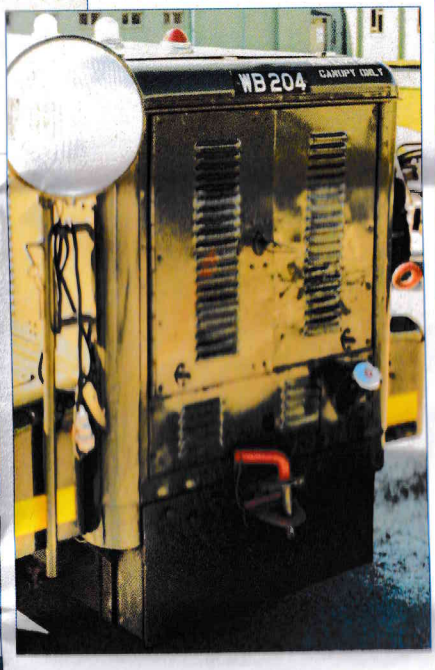





Red = etched part
Orange = resin part
Blue = cast part
Green = wire/rod etc.
?
23
24
21
25
25
20
shown without inner
doors for clarity
4
4
4
4
4
4
10
film
11
12
13
14
7 - with film behind
8
9
17
15
16
doors can be
bent open through
around 140 degrees
5
6
22
25
22


? - see assembly notes
doors can be bent open through around 140 degrees
remove if portraying doors in the open position
shown without inner doors for clarity
slot in part 26
pvc chord - see assembly notes
18 - fit over bottom of tank on resin body - 3.5mm in from the rear of the tank
?
19
30
28
27
27
26
29
1
1
1
1
1
2
3





Thanks to Staff at RAF Brawdy
for information
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