

# ASSEMBLY

---

The MGB was assembled in Australia from 1963 to 1972. In total, approximately 9,100 vehicles were built over this period. All locally assembled MGB models, as with the preceding MGA, were roadsters. (The Austin Healey Sprite and later the MG Midget were also assembled locally, alongside first the MGA and then later the MGB.) The Australian content was ultimately 45% of the car's value.

## The Assembly Process

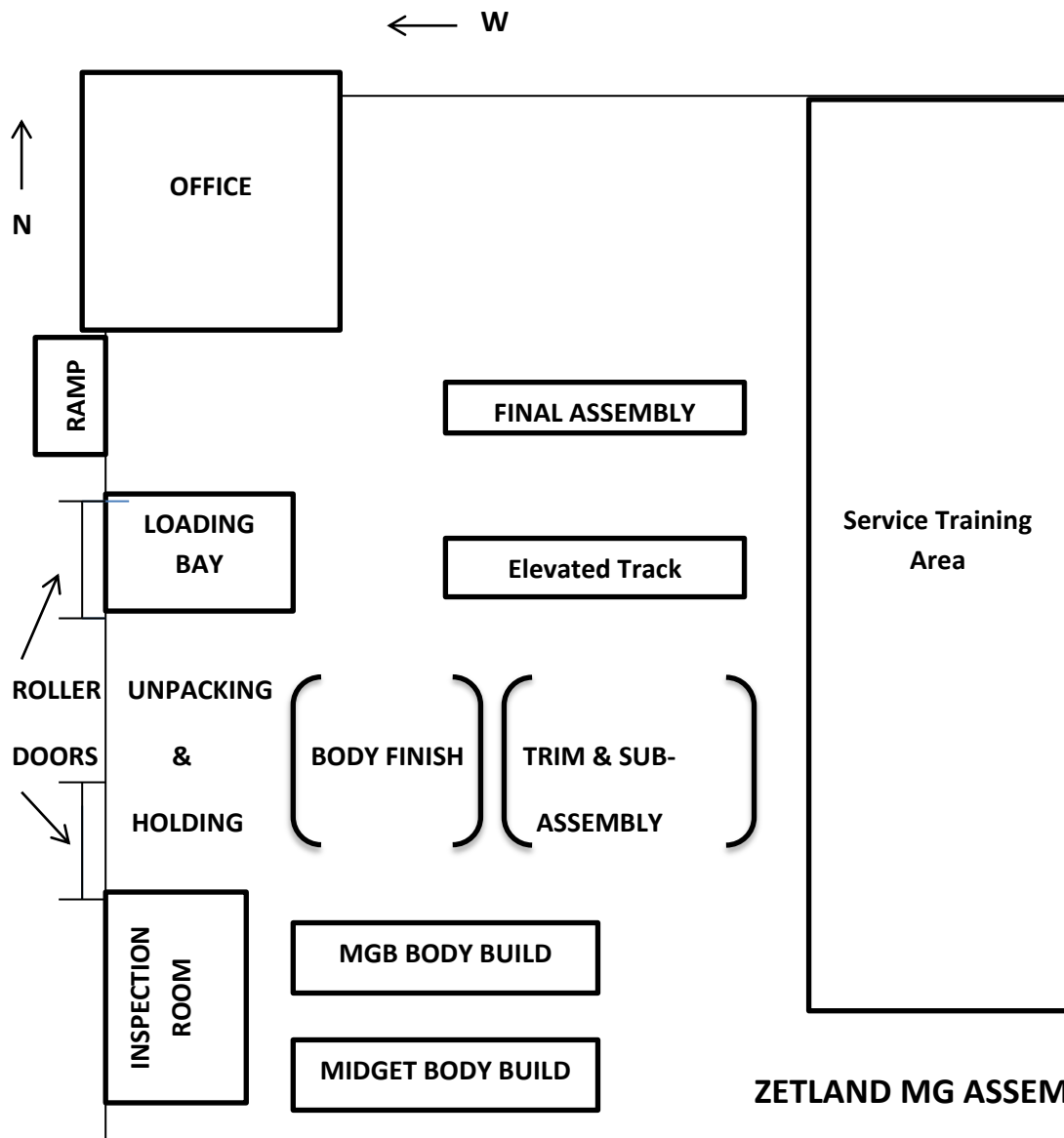


Figure 1 Plant aerial view (photo: J Lindsay)



Figure 2 CAB3 - previously Parts Store (photo: JBA)

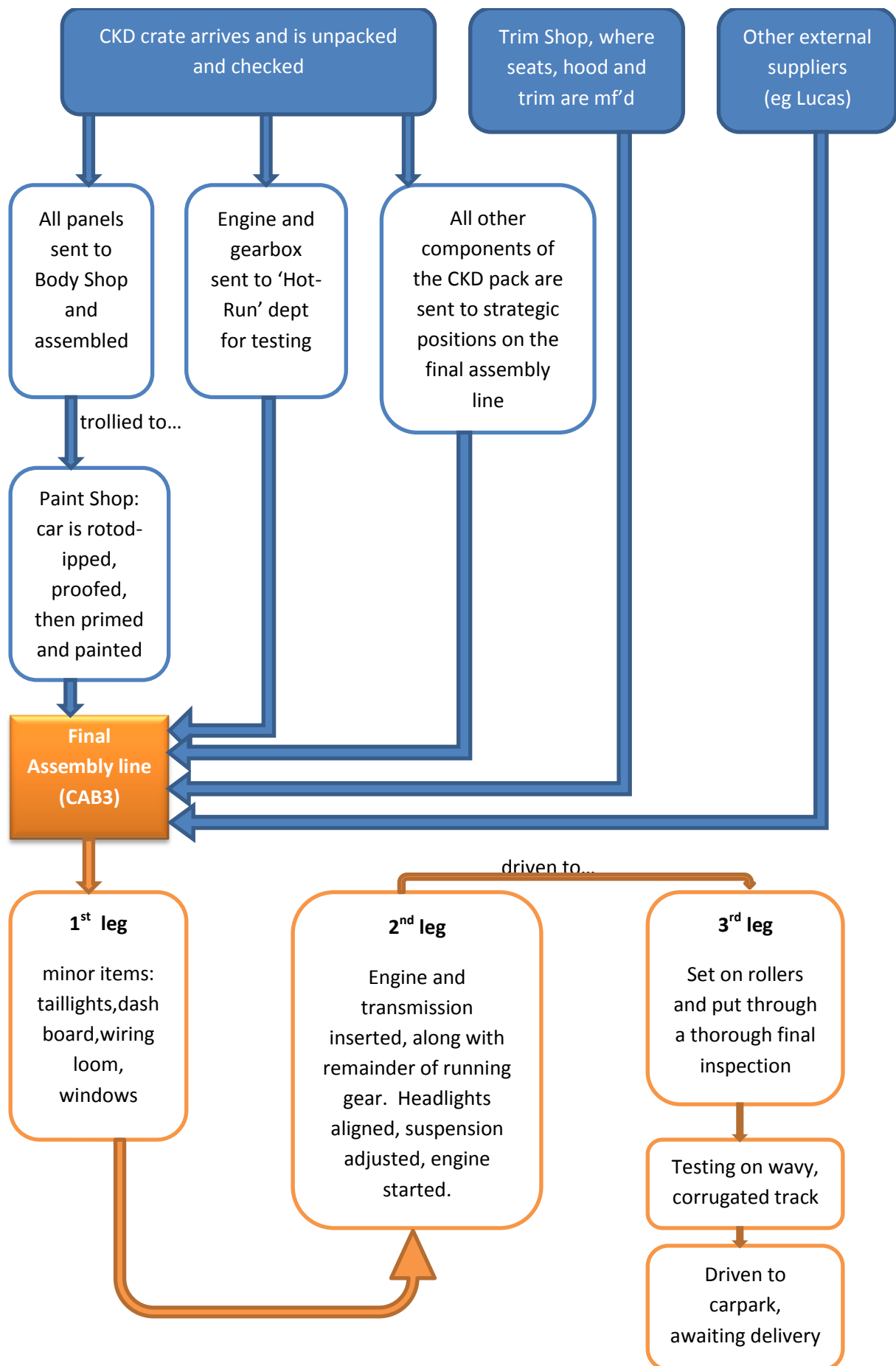




## ZETLAND MG ASSEMBLY

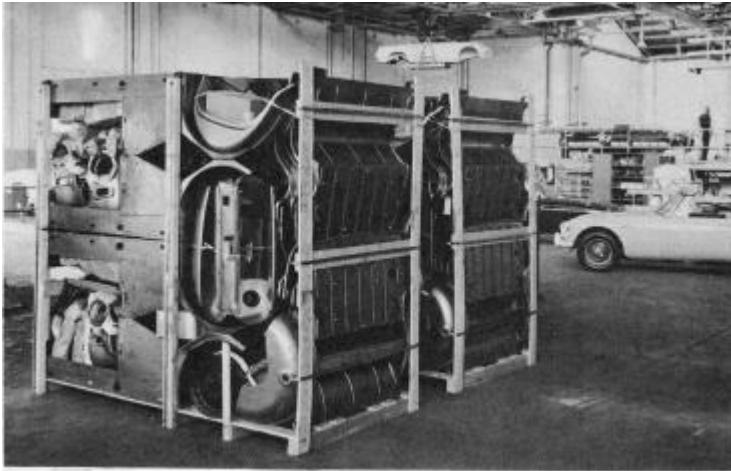
(mudmap by J. Lindsay)





**Order was placed with the UK .**

CKD crates arrive in Australia. CKD components were shipped in what was called a 'pack',



**Figure 3 Crates (midget) (photo: K. Robbins)**

usually the components for six vehicles. Components were in three separate crates; one with engines, one with mechanical parts, and one with the body and sheet metal components. Engine, gearbox and overdrive were pre-assembled; some parts (outer skin to door frame, underframe rear end assembly, main floor panel and gearbox cover assembly) were already welded.

There was a special area of the plant known as the 'CKD unboxing area' where the boxes were received and opened and checked for shipping damage and shortages.



**Figure 4 Unboxing (photo: K.Robbins)**





The links below show a complete set of original images of the parts involved and secondly, a complete set of images showing assembly techniques:

[PARTS](#)

[ASSEMBLY TECHNIQUES](#)

Parts were then taken to different sections of the factory. Engines and gearboxes were sent to the 'Unit Factory' for fitment of 'local supply' items such as distributors and alternators.

Next, engines were sent to the 'Hot-Run department', where they were placed on test beds and run for approx. ½ hour, whilst 29 separate tests were carried out, before transfer to 'CAB3' (Car Assembly Building 3).



Figure 5 Hot Run Area (photo: BMCLHG)

*NB: Due to economic reasons, the hot-run testing on the Mk II was discontinued from YGHN5/1015, reverting back to dealer organizations providing pre-delivery checks that were in existence previously*

Panels were assembled on jigs (spot-welded) to form the chassis in the body shop in 'CAB3'. Rear guards, rocker panels, cowl and upper back panel, together with front and rear aprons were welded in place. Front guards were then bolted on, then the doors were hung.



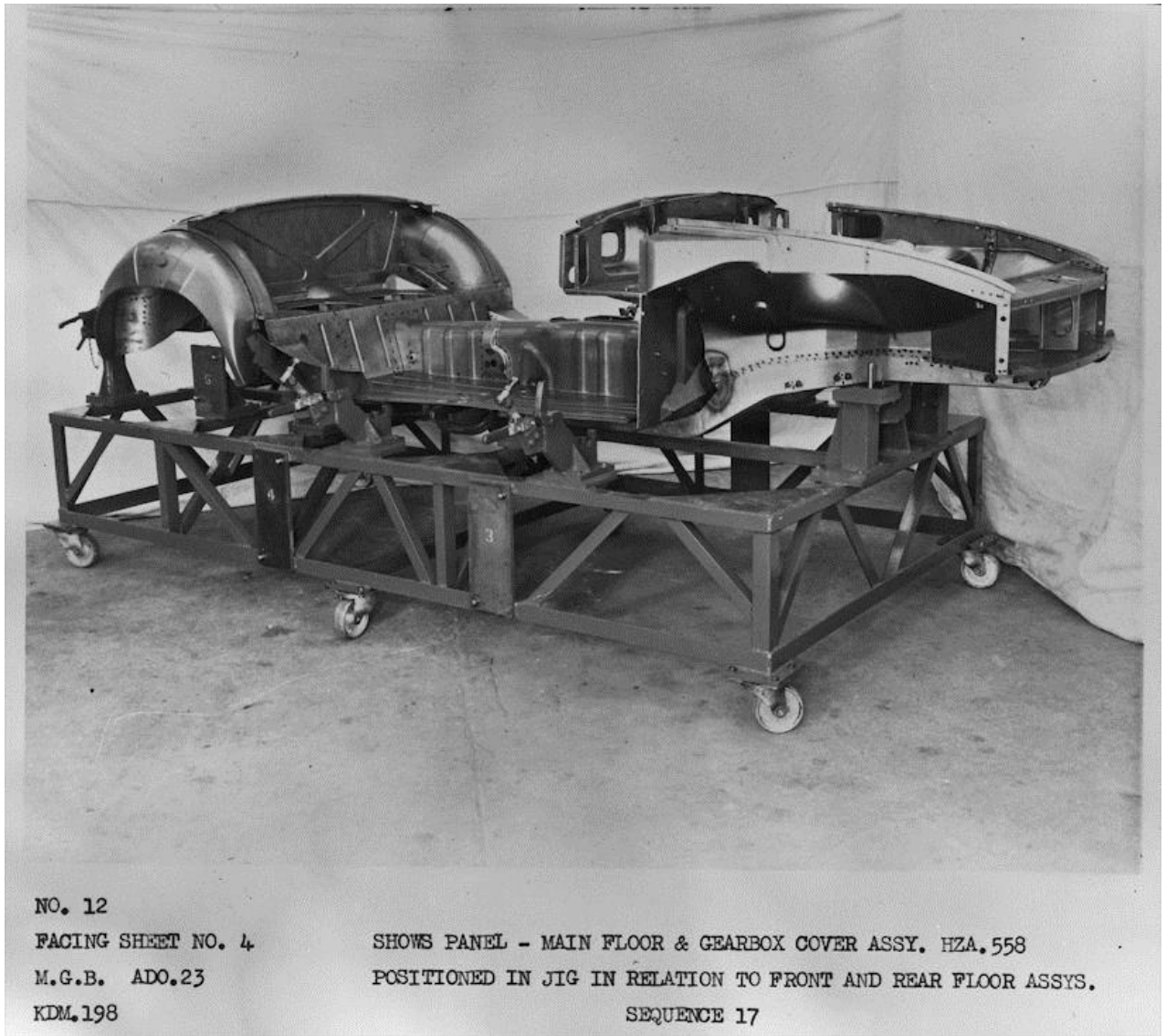


Figure 6 Body jig (photo: J Lindsay)



In the 'metal finishing bay', any imperfections to the outer body were rectified. Lead-loading of some seams was carried out then final metal finishing.

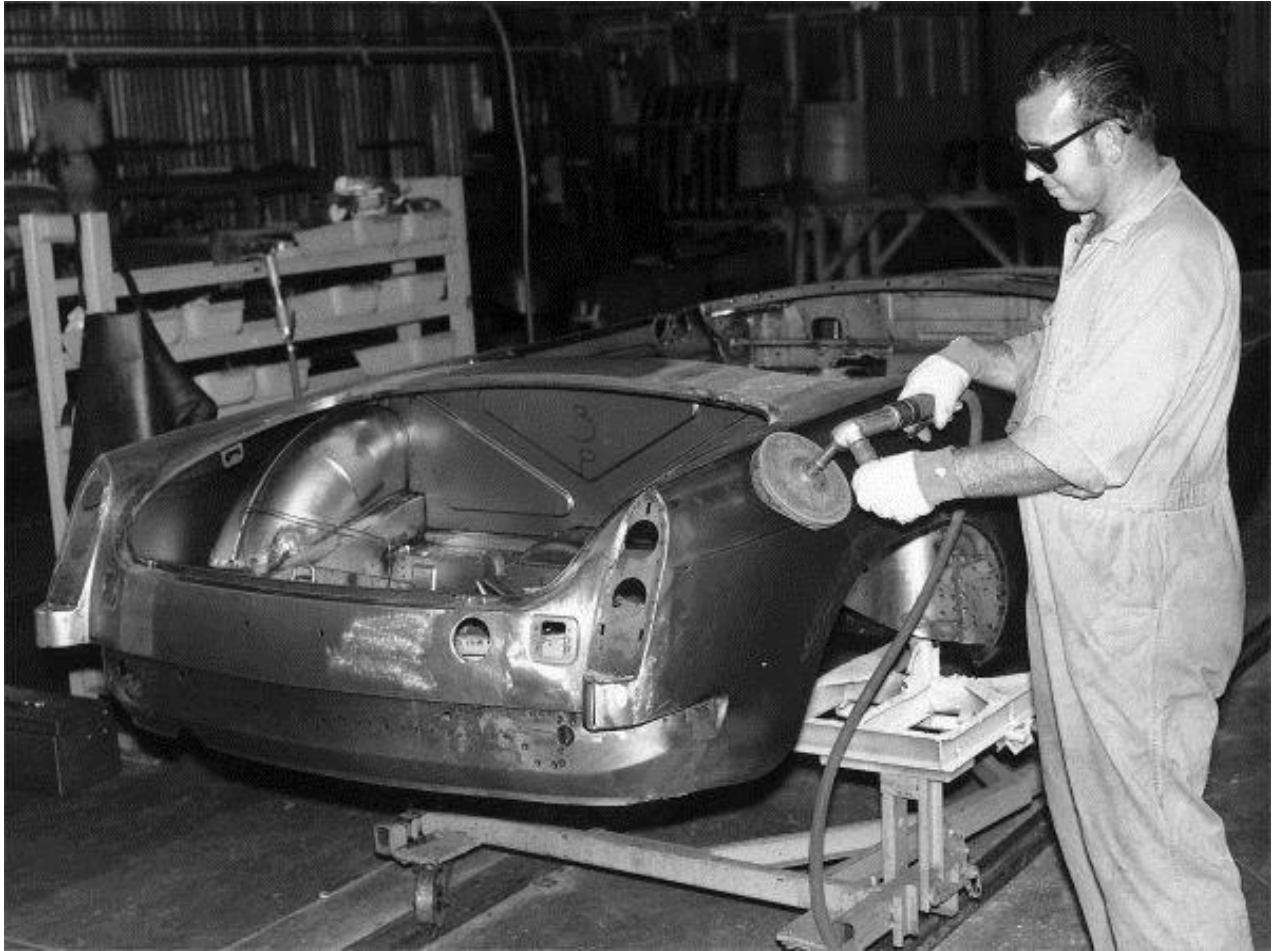


Figure 7 Body Preparation (photo: BMCLHG)







Figure 8 Body preparation (photo: BMCLHG)





From the 'body shop', it was then trollyed (on special wheeled frames ['Skuks']), being towed by a small industrial tractor called a 'Towmotor') over to the 'Paint shop', where it would pass through the 'Rotodip' system (to be thoroughly and entirely coated with rust-resistant paint).



Figure 9 Rotodip (photo: BMLHG)





**Figure 10 Proof-coating (photo: J. Lindsay)**

After emerging from the rust-proofing process, the chocolate brown body was under-proofed with sound-deadening paint, giving further corrosion protection. The body would now go to the main part of the paint shop, where it was primed and coloured.





Figure 11 Paint booth (photo: BMCLHG)

NB: Apart from the paint and the 'Hot Run' department, the MGB would not mix with any other cars being assembled.

Other parts, where necessary, were being assembled (eg steering and suspension) then placed at strategic points along the assembly line.

MEANWHILE...

The interior trim was being manufactured in 'CAB1'.







Figure 12 Trim Shop (photo: BMCLHG)





Figure 13 Trim Shop (photo: BMCLHG)



Road wheels were sent to the Small Parts Paint Shop in 'CAB1' to be painted,



Figure 14 Small Parts Paint Shop-CAB1 (photo: BMCLHG)

then sent to the tyre fitting area in 'CAB1' where tyres and tubes were fitted. As previously mentioned, power units were being put through a 30 minute, hot-run test (29 different checks) in 'CAB1'. Once these tasks were completed, they were sent to 'CAB3', where they would be introduced to the 'Final assembly line'.

It should be noted that the 'Final assembly line' at 'CAB3' was different to the rest of the vehicles being assembled at Zetland, where sedan and commercial vehicles moved along a line. The MGBs were pushed from station to station, with the workers (fewer than a normal assembly line) performing a much greater number of tasks

The vehicle (now on the 'Final assembly line') goes through some 14 separate stations to completion. These were part of a 3 leg journey (S-shaped):

1<sup>st</sup> Leg: most of the minor items were fitted (head and tail lights, dash panel and wiring loom, hydraulics and windows. On the first leg, as well as the parts strategically positioned along the leg, the vehicle is accompanied by a 3 tier, multi-binned arrangement, containing additional required components.





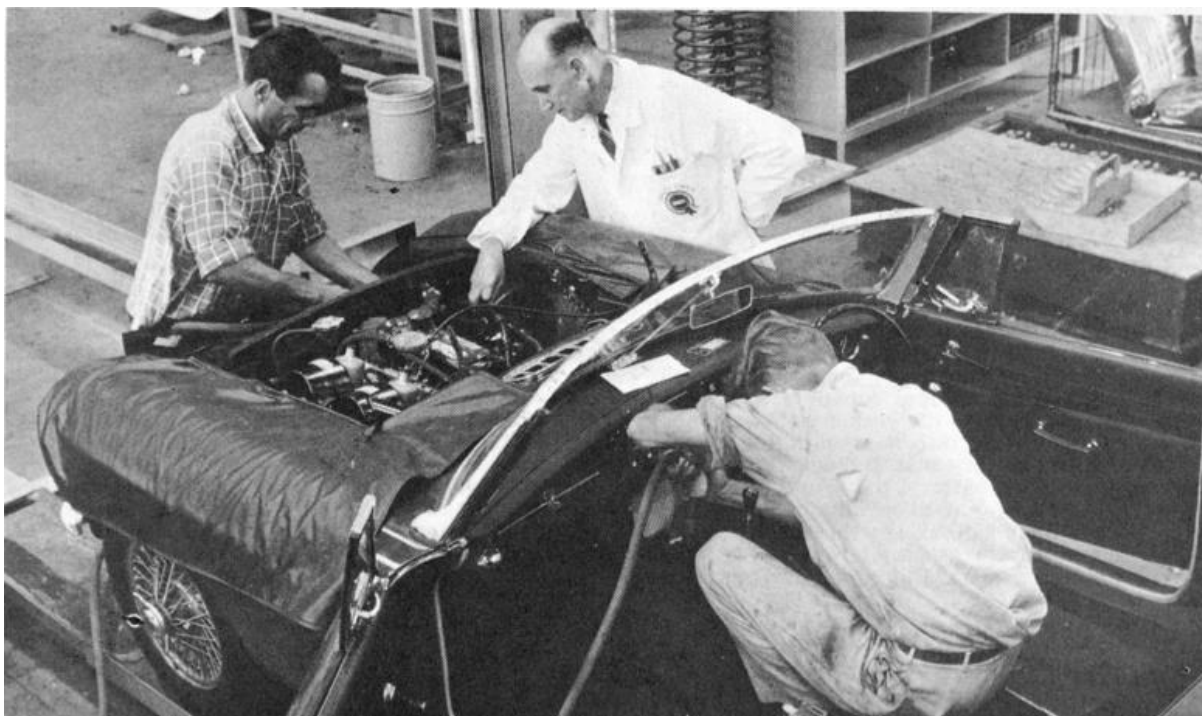


Figure 15 "Just checkin'" (photo: J Lindsay)

2<sup>nd</sup> Leg: shell receives its engine and transmission, along with the rest of the running gear. By the end of this leg, headlights have been aligned, suspension geometry adjusted, seats and bonnet added, and the engine started. It is now driven to the 3<sup>rd</sup> leg.





Figure 16 Assembly nearly complete (photo: J. Lindsay)

3<sup>rd</sup> Leg: vehicle driven onto a set of rollers, to enable a thorough check of the drive train and the steering to be aligned.

The car is now ready to leave the assembly line for testing. This was carried out on a wavy and corrugated strip, designed to reveal any rattles or looseness. Once this was carried out, the car was driven out to the car park, awaiting delivery.

### The Build Sheet

“I am only referring to the compliance plate. This only carries the VIN (chassis number). There were no other details on it.

The only information I can offer is, if the details were embossed (raised characters) it would be done off-line. If stamped, probably done next to the line. The plate would normally be in a plastic sleeve along with the build sheet. This would be riveted on in the final finish process when the car was “signed-off”.

The car would be “signed-off” at every stage of build. You see this recorded as “buy-off”.

Body shop.

Paint shop.



Trim shop – seats and associated parts only.Final assembly.Sales office.

The build sheet would normally have all details on it for the quality control guys to validate.

The dealer order number would only be married up when the car was moved to sales. The production people would advise the sales office of the VIN, along with vehicle details.”

J. Lindsay



Figure 17 Car awaiting sale at Modern Motors, Perth (photo: I forget)





