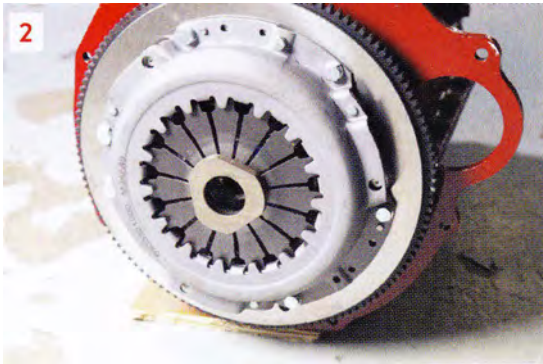
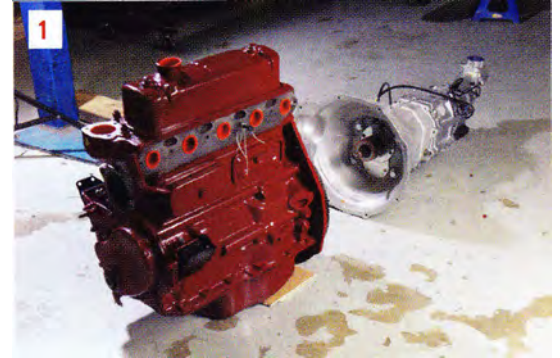


Project MGA - Gearbox Conversion

Step-by-Step Instructions

1. The MX5 gearbox supplied ready to fit, assembled into its custom casing and bell housing, with concentric slave cylinder ready fitted. It's even already filled with the correct gearbox oil.



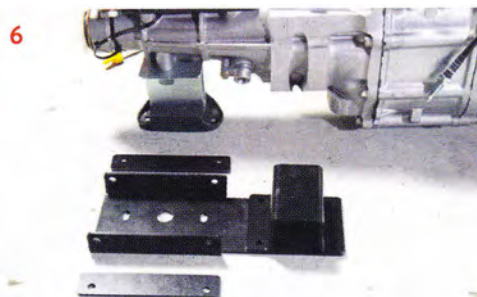
2. The clutch assembly is a hybrid using the clutch cover appropriate to the engine with a Mazda driven plate. In our case, the cover is fitted using stainless spacers to accommodate the thicker driven plate and aligned with a Mazda tool, which is supplied with the kit.

3. A new spigot bearing to suit the Mazda box is fitted into the end of the MGB engine's crank. It's lightly greased to aid smooth fitting of the gearbox.



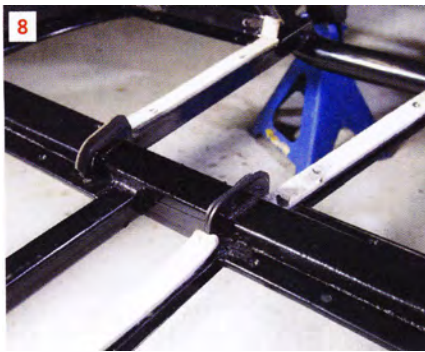
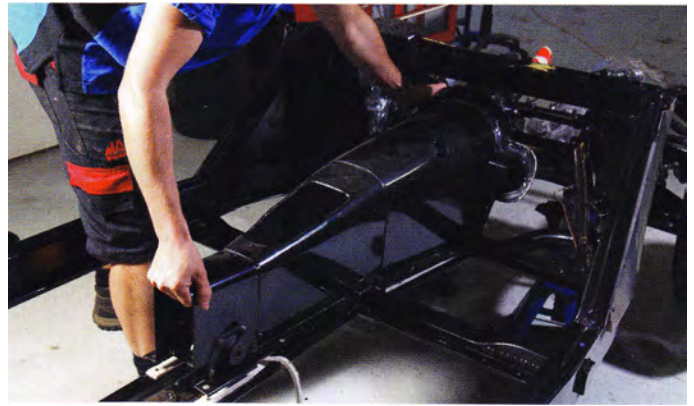
4. As we're fitting the gearbox into an effectively bare chassis, we can pre-assemble the engine and box as a unit and fit from the front. If you're going to fit just the gearbox, it's necessary to go in through the car, meaning all interior trim, the floorboards and the transmission tunnel will need to be removed.

5. The concentric slave-cylinder comes pre-fitted with all necessary paperwork – a banjo ended pipe, which goes to the master cylinder, and a bleed pipe. These exit through the top of the bell housing and need to be handled with respect during the fitting process.



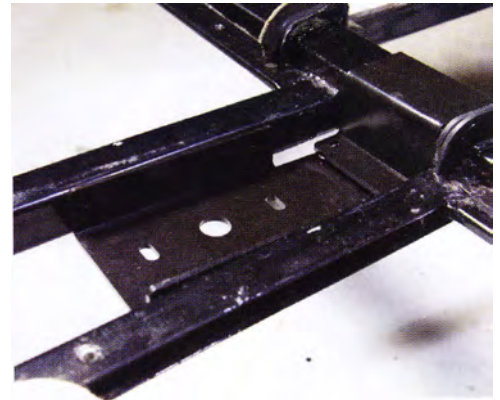
6. The new gearbox mount is cleverly designed to wrap around the cross member and has inbuilt adjustment for both fore and aft and side-to-side.

7. If you're working on a complete MGA, you will need to remove the propshaft before removing the transmission tunnel.



8. The standard gearbox mount is welded to the cross member. This needs to be cut away with an angle grinder, all traces ground flat and then the area needs to be painted to prevent future corrosion.

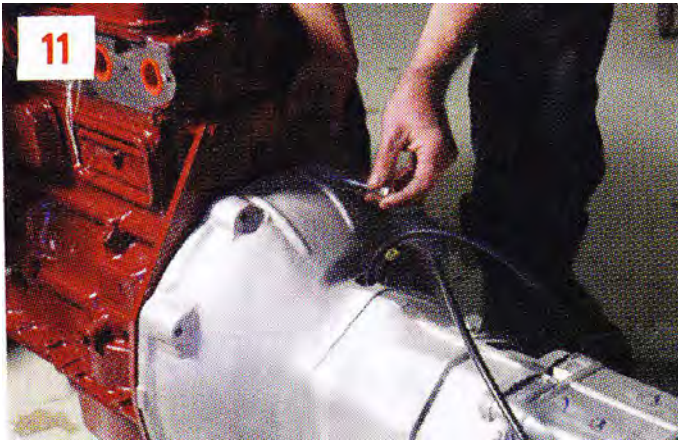
9. The new gearbox mount is secured by four nuts and bolts. It fits snugly between the longitudinal rails, which require two holes drilling on each side.



10. The engine back plate should be cleaned carefully before the box is mated up. There are no dowels to aid location so an extra pair of hands will be very useful at this stage.

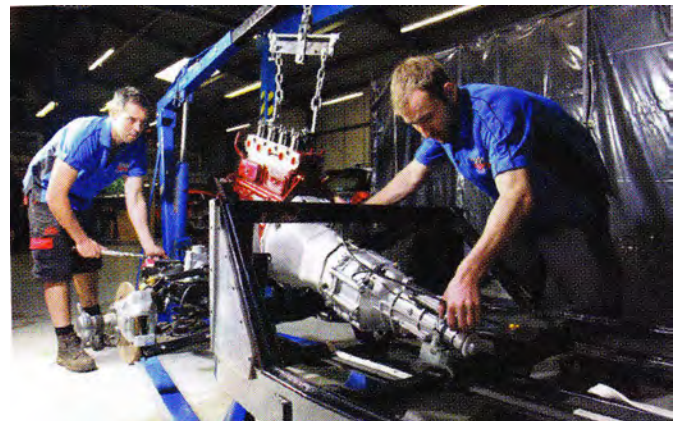
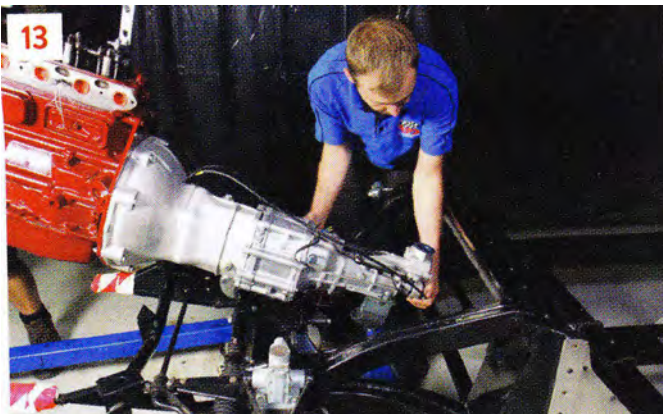


11. Once the gearbox slides home, fit the top two nuts and bolts to secure in place. Note that the length on the bolts vary around the bell housing.

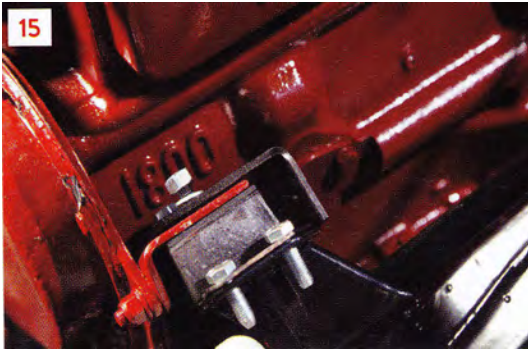


12. Ben fits lifting eyes and a load leveler in preparation for hoisting the engine and box into the chassis. The leveler allows the unit to be tilted safely to guide it into place without catching on the cross members.

13. The engine/gearbox assembly is gently guided into place. If you're going to employ this method, it is a two-man job to prevent any damage to either the unit or the car.



14. With the gearbox supported on a trolley jack, the engine mounts are aligned and the fixing bolts slotted into place.



15. On the left-hand mount, the engine restrictor bracket is fitted. This prevents the engine moving forward should the mounts fail for any reason.

16. The propshaft yoke is lubricated with some gearbox oil, and then slid into the gearbox....



17. ... and the propshaft near flange is bolted up to the differential.

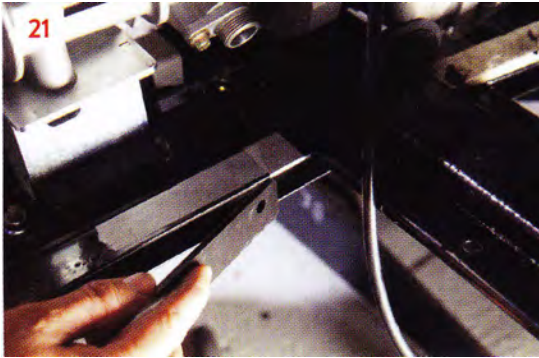
18. The front of the gearbox mount is secured to the cross member using four M8 nuts and bolts. The bottom of the mount should align with the longitudinal members of the chassis.



19. The rear rubber mount is fixed loosely to the bracket. They need to be no more than finger tight at this point as the final position will be determined once the transmission tunnel has been fixed back in place.

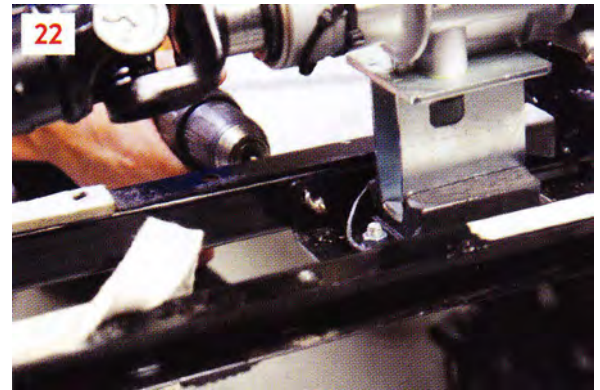


20. The bracket has side support plates, which fit inside the c-section of the longitudinal members of the chassis. These have to line up exactly with the end of the bracket if the pre-drilled holes are to match. Ben uses some masking tape to mark the ends of the bracket.



21. The support brackets are then slotted into the c-section and carefully lined up with the edge of the masking tape.

22. With the support brackets held securely in place, the holes are marked & then drilled with a 9mm drill bit.

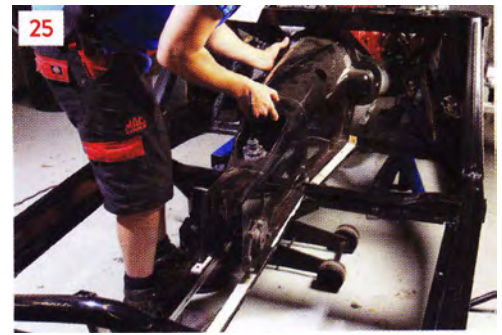


23. The gearbox mount is then secured with four M8 nuts and bolts.

24. The gearstick is slotted into place and secured with three M6 dome head cap screws. Ben checks that all gears can be selected easily.

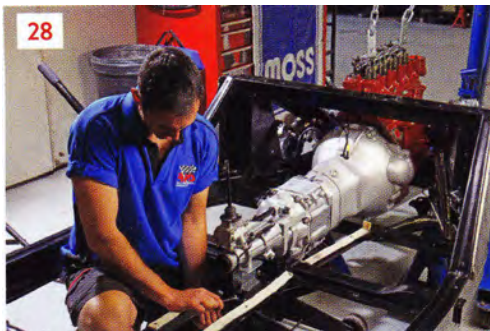


25. The gearbox tunnel now has to be refitted to check the alignment of the gearbox. The propshaft has to be removed to facilitate this, and will need to be refitted once the tunnel is secured.



26. Moss have engineered in some float on the rear mountings to allow for variations in the gearbox tunnel. There needs to be 5-8mm on the right hand side, and around the same between the propshaft yoke and the left hand side.

27. Ben gets a colleague to hold the gearbox in the right position while he tightens the two nuts and bolts securing the rear rubber mount to the bracket.



28. A hold needs to be cut in the right-hand side of the transmission tunnel to allow the speedo cable to pass through. A template is provided in the comprehensive fitting instructions.

29. The completed job. Once the trim is in place, there will be no sign of the modifications.

