

TOYOTA TSO TRANSMISSION BEHIND 'A' SERIES BMC ENGINE.

This is our most popular conversion, with sales to many Morris Ninor, Sprite/Midget and other 'A'series engined cars. Originally the conversion was aimed at Norris Minor owners but has been used by Sprite/Midget enthusiasts wishing to update their drive line. The T50 transmission has synchromesh on all 5 forward gears with fifth being overdriven by 0.861 to 1. Several Minor and Midget conversions have been completed, the first Midget conversion being executed by Simon Kidd in Movember 1986 making an excellent conversion and resulting in a magazine article, [Enjoying MG, May 1987]. One of the first Morris Minor conversions' was the, 'ask for morris' rally car, where it regular competes in rally's to this day, showing that the combination of conversion kit and Toyota transmission is more than ample for everyday use. As of January 1989 over hits have been sold and installed. Our care P.R.I. 130000 1989 HOT RED 1885 CME

We offer two basic versions of this conversion, one for Morris Minors which consists of a special cast aluminium bellhousing with a internal clutch fork bracket, spigot bush, clutch plate, clutch linkage support bracket, crossmember, speedo cable, cable thread adapter, nuts and bolts. The Midget conversion is as above, but minus the linkage support bracket and crossmember. We offer four sizes of clutch plate.

6.25.... Early M/Minor,[special]. 6.50.... Midget/Sprite,[special].

7.25....M/Minor, 8.00....Marina,

Any kit can be orderd with any size clutch plate. Only m/minor instructions available at present.

Morris Minor kit, (mechanical clutch). £
Sprite/Midget kit, (hydraulic clutch). £
S/H Transmissions from £
S/H Prop Yokes £

We do not recondition any boxes, and suggest that you have this done by your local box specialist for guarantee purposes.

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Morris Minor 5 speed Conversion Instructions.

Please read the instructions thoroughly before starting your installation. Become thoroughly familiar with all components and phases of installation. Determine what additional tools or materials you may need to complete the conversion.

At any time the vehicle is raised off the ground, it should be supported by jack stands or ramps of adequate capacity for the vehicle's weight. NEVER PERFORM ANY YORK UNDER A VEHICLE SUPPORTED BY IT'S BUMPER OR SERVICE JACK.

- Disconect the battery, exhaust clamp at the manifold and the engine stabilizer. Remove the front seats, carpet, gearbox/floor cover and brake master cylinder.
- Remove the starter, old gearbox/crossmember, clutch plate and spigot bush, (you may need to use a slide-hammer with a book end).
- Fit the new spigot bush, (tapping lightly until it is fully home), fit the new clutch plate supplied making sure the flywheel side faces the flywheel.
- Drain any old oil from the Toyota gearbox, remove old bellhousing taking care not to lose the three thrust and flat washers, (later type gearboxes only have two washers).
- 5. Fit a new oil seal (not supplied) to the input shaft recess on the gearbox side of the conversion bellhousing, place the layshaft flat/ convex washers in the lower recess and the large convex washer in the upper recess, making sure the convex washers have the dish facing rearwards, (a dab grease will hold them in place). Bolt the new bellhousing to the gearbox using a new gasket if possible.
- 6. Fit the clutch fork/thrust pad to the pivot bracket inside the bellhousing, (pivot bracket has a arrow shaped base, arrow should point to the centre of bellhousing, loctite the two bracket bolt). Remove the second and third bolts that hold the gearbox together on the underside (counting from the front of the gearbox). Place the spring and flat washers on the long bolts supplied, before screwing in halfway, so only 1" protrudes through the gearbox on the driver's side.
- Now offer up the bellhousing/gearbox and bolt onto the engine, (a bit
 of huffin' and puffin' involved here).
- 8. Bolt the new crossmember to the Toyota rubber mount and jack the Gearbox up into position making sure that the crossmember is centralised under the chassis. Now drill through the holes at each end of the crossmember, (nuts can be welded inside the chassis). Refit the starter motor.

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- of the relay shaft on the pivot ball side, clean up with a file and lightly chamfer end. Remove the pivot ball retainer plate, bolts(2) and pivot ball from the side of the old gearbox and clean. Lightly grease the pivot ball placing it in the recess of the new linkage support bracket, bolt the retainer plate over the top using the original bolts. Make sure the shoulder on the pivot ball faces out, (this is the Spring seat area). Now put the original bronze/ rubber bush, large retainer/space plates on the relay shaft, (chassis side), and the spring and new bracket assembly on the other end. Lying under the car compress and push the relay assembly up inbetween the chassis and gearbox, locating the bracket on the two cast lugs on the underside of the gearbox, (inline with the first bolt and behind the third bolt). Align the retainer/spacer plates, (chassis side) and pass the bolts through the holes and tighten. Screw home the two long bolts on the underside of the gearbox making sure they pass through the holes in the bracket, (torque to 251bs). Place the spring washer and nuts on these bolt and tighten.
- 10. Refit master cylinder and bleed the system. Refit the floor/gearbox cover to check stick position and where you will need to dent for gearbox clearance, (Later gearboxes have the stick further back and higher up, so much more cutting work is involved).
- Propshaft must have the Toyota yokes welded to the Morris propshaft, any good propshaft/engineering shop can handle this, (make sure shaft is rebalanced).
- 12. Fit the new speedo cable and thread converter, (Locktite thread converter on to speedo). The speedo will need to be recallibrated
- 13. Fit the propshaft, fill the gearbox with cil, reconnect the battery, exhaust clamp, engine stabilizer, carpet and front seats.
- 14. Double check all nut and bolts, test clutch with engine running. If it does not select properly, readjust clutch linkage.

Happy Motoring.

Check List.

Kit Parts.
Bellhousing.
Spigot bush.
Clutch Plate.
Relay Linkage Bracket.
Crossmember.
Speedo Cable.
Nuts and Bolts.

Extra Parts. Oil Seal. Gasket.

Tools Needed..
Metric and AF sockets, spanners.
Hammer, Screwdrivers, W" Drill bit
240v Drill.

No 'O' levels are needed to install this conversion, only common sense!



