HYDRAULIC CLUTCH LIFT KIT for Minor/MG gearbox

This kit is easy to fit and retains the original Minor clutch pedal. Please read and understand these instructions **before starting work.**

First remove the gearbox mounting cross member, all the mechanical linkage and the cross over shaft from the car, following the instructions in any Minor manual . It would make life easier for you if the gearbox tunnel cover is removed to give better access, although the job can be done from beneath the car if it can be raised safely enough. Support the gearbox with a jack throughout the whole operation.

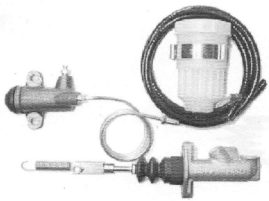
Fig 1) (refer to drawings) Using the instruction template supplied, enlarge the two half round cut-outs in the cross member end, on the drivers side; only the rear cut-away needs the two 'ears' filed out. Also file a notch in the cross member top lip , adjacent to the forward outlet hole in the new master. This will give clearance for the slave cylinder pipe to pass forward.

Fig 2) Attach the new master to the cross member as shown, ***inside*** the cross member on the ***rear*** face. Warm one end of the plastic pipe in some hot water and push it fully onto the spigot or pipe coming from the master cylinder. Secure this with one of the plastic ties supplied whilst it is still warm and pliable. Unroll about 20" of the metal pipe and screw one end into the forward hole in the master. Bend the pipe over the cross member, pulling it slightly towards the centre of the car at the same time in order to clear the floor pan. The plastic pipe can follow the same route. Now refit the cross member assembly to the car, running the the pipes forward along the chassis leg, clearing the clutch pivot etc. Push the clutch pedal up as far as possible; adjust the clevis on the threaded rod until the holes in the pedal and the clevis line up. Screw the clevis up.the shaft until half a hole is visible and then insert the clevis bolt. This will ensure a little slack in the system . The long 1/4" bolt supplied (with lock nut) is screwed into the forward hole in the chassis leg; one of the two that used to secure the clutch cross over shaft pivot. Hook the return spring between this bolt and the clevis bolt. Tighten the clevis bolt only sufficient to engage the nyloc locking fully, do not tighten fully.

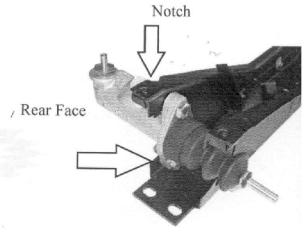
Fig 3) Shorten the original Minor pull rod to 4" as shown and radius the end with a file. Screw on the locknut and original 'ball' nut, but the opposite way round to normal. Now bolt on the slave cylinder to the bell housing (two 3/8" coarse bolts), there are already two threaded holes in the bell housing for this purpose. Ensure that the bleed nipple is at the **top**, re-position in the slave if required. Insert the shortened pull rod into the slave (radius end first) and into the eye of the clutch lifting fork, ensure the ball is screwed well down the shaft first. Push the adjusting rod fully into the slave cylinder, against the internal spring pressure, and hold it there whilst unscrewing the ball nut until there is about 1/4" of free play between the nut and the arm. Lock up the ball nut

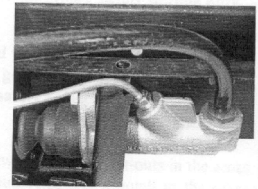
Connect the master to the slave with the metal pipe, leaving as much as possible loosely coiled up adjacent to the slave, this will help absorb vibrations and movement between the engine and chassis. Secure this pipe to the chassis with the clips provided, clear of any obstructions . Fix the remote reservoir pipe along the chassis leg, secured with the plastic 'P' clips and self tapping screws. Site the remote reservoir under the bonnet well away from any source of heat, fill and bleed the system. Check all adjustments at regular intervals as clutch wear will reduce clearance gradually, measure at the lever fork and not at the clutch pedal as normal.

Notes:- if using our ball race thrust as well then do not fit the usual lever arm return spring. The hydraulic pressure will hold the bearing lightly in contact with the clutch face without doing any harm. If however you still retain the original carbon thrust unit the fit the spring and keep an eye on clearance adjustment as these carbon units must **not** run in contact with the clutch face.

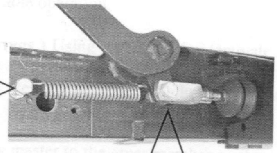


Cut **both** front and rear faces of crossmember to template supplied.
The two fixing holes are only needed in the **rear** face.
The reason for reshaping the front is clearance only.
Fit the master to the inside of the rear face.
Note the notch in top lip of crossmember to aid pipe clearance





Long bolt goes to forward hole



The clevis bolt should only be tightened enough to grip the nyloc insert.

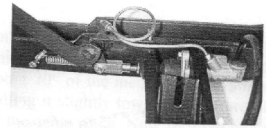
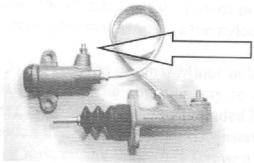
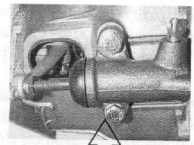


Fig 2 General assembly



The bleed screw must be at the **top** of the slave cylinder.

Copper pipe goes to the slave.



The threaded holes are already in the gearbox bell housing

Fig 1:1