

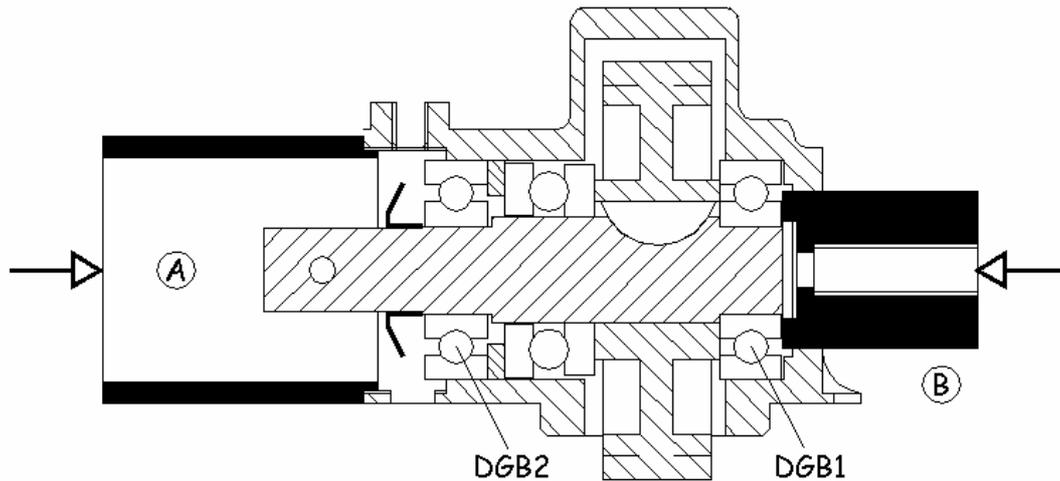
MEADOWS 4ED MAGNETO DRIVE - DISMANTLING & ASSEMBLY

This has been written as though you have borrowed the mandrels and spacers but, obviously, you can make/fudge up your own.

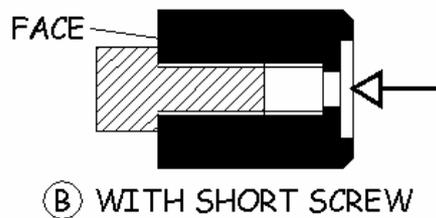
Dismantling

Mark the gear so that it can be replaced the same way around. Also mark the Simms and the end of the shaft as the cross-hole is unlikely to be exactly true.

Remove the endcap, Simms coupling, collar locking screw and collar.



Using (A) & (B), press until the left side of the gear is up against the inside of the casing – that should only need modest force as the ODs of the DGBs are only a push fit in the housing.

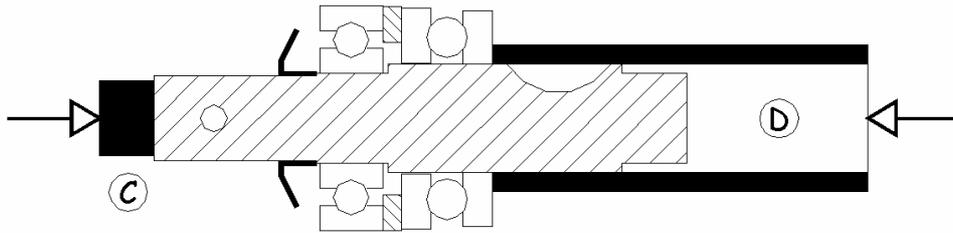


Screw the short screw into (B) and press with (B) in the reverse direction to previously. i.e. the head of the screw presses on the end of the shaft. Press until the face of (B) abuts DGB1 – this will require a lot of force as the shaft is being pressed out of the bore of DGB1, which is a press fit.

Replace the short screw with the long one, screwing it in so that, when the head touches the end of the shaft, a little bit of the body of (B) is guided by the housing.

Carry on alternately pressing and extending the projection of the screw (about 1/4" steps). The pressing force should reduce after the shaft is clear of DGB1 as it is only a heavy push fit in the gear.

Take care when the shaft is nearly out of the gear as, at that point, all force is lost and the gear or shaft could drop out. Slide out the shaft etc., tap the gear a little towards the right end to release it if is stiff. Push out DGB1.



Remove the key. Push the thrower, DGB2 etc off the shaft with (C) and (D): that will almost certainly have made the bearings unfit for further use.

Assembly – in modified form

Obtain two new RLS5 RS bearings.

Make a new spacer that is a clearance fit on the shaft. The length of the spacer should be such that, when added to the width of the hub of the gear, the total is slightly greater (say 10 thou.) than the distance between the shoulders of the major diameter of the shaft.

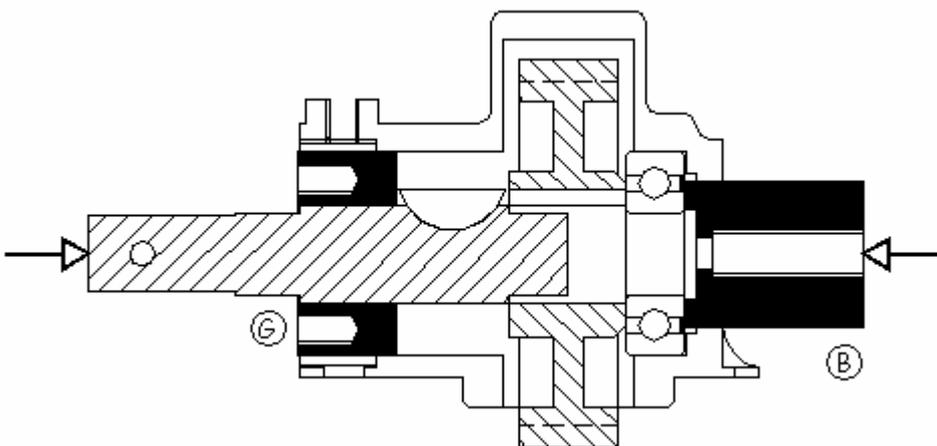
If the diameter of the hub of the gear is such that hub may touch the outer ring of DGB1 then chamfer the hub slightly.

If you are going to fit extra lubrication then drill and tap the top of the housing $\frac{1}{8}$ or $\frac{1}{4}$ " BSP.

Remove any burrs and clean all parts thoroughly. The thread of the collar can be de-mangled using a 26 TPI thread restorer. Check that it can be screwed into the body without undue force so that, at the very least, the face is flush with the end of the housing. On mine the thread in the housing has a small taper.

If the shaft is worn so that the bearings are less than a press fit on it, then use Loctite 601 or 603 (not the common Loctite used on screw threads). Oil all mating surfaces unless Loctited.

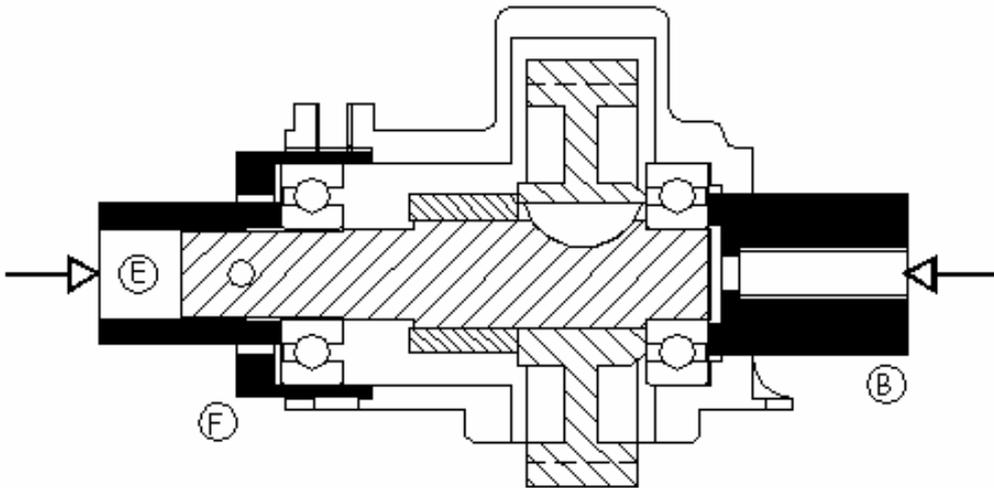
Fit the key to the shaft and check that they will just enter the gear.



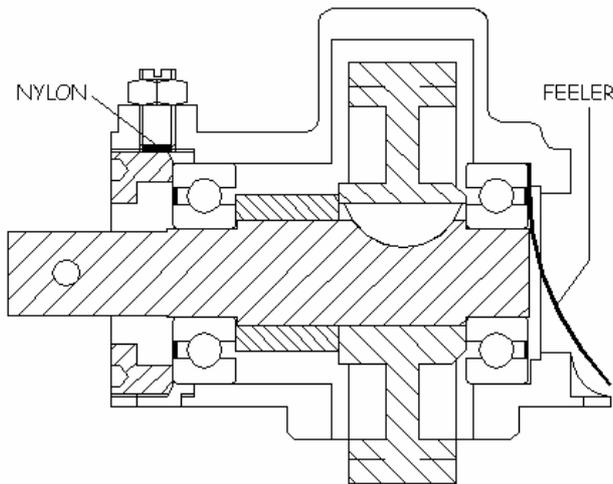
Press DBG1 into its housing – seal side first. Insert the gear and shaft and lightly tap the shaft a small way into the gear to ensure that the key has entered. Insert the guide, (G), and press the shaft into the gear and bearing supporting the bearing with (B). It doesn't matter if DBG1 isn't fully into its housing. Quite a lot of force should be required.

Remove guide (G) – the two tapped holes in it are in case it's a bit tight.

Check that the shaft revolves smoothly – it won't run freely because the seals are brand new.



Place the new spacer over the major diameter of the shaft. Position DGB2 (seal side out) and guide (F) as shown. Press DBG1 fully up to the spacer using (B) and (E) – note that one end of (E) has a short length of slightly enlarged bore which must be to the right.



Check that you can get a 5 thou. feeler gauge between the edge of the outer ring of DGB1 and the shoulder of its housing as shown: if not then use (B) and (A) to move the shaft assembly back a little.

Insert the collar and tighten it until the feeler gauge is just nipped.

Check that the shaft revolves smoothly.

Fit the collar lock with a nylon pad (as shown), the end cap and the Simms.