GEARBOX FITTING INFORMATION

Our gearboxes are reconditioned to the highest standard and guaranteed against manufacturing faults. However, to ensure correct performance and to prevent malfunctions there are procedures that must be observed when fitting. This information sheet includes general installation procedures that must be followed for the successful fitting of the gearbox. Detailed information can be obtained from the relevant workshop manual or alternatively our technical department will be happy to assist with any further enquiry.

Pre-Fitting Instructions

1. Where a cooler is fitted the radiator and cooler pipes must be flushed with quick drying solvent until perfectly clean then dried with compressed air. Water contamination from the radiator into the transmission oil cooler is a major factor on most modern cars. If the oil is pink or rusty coloured, then the main radiator with the integral transmission cooler must have its oil replaced.

2. All drive plates must be removed and inspected for cracks, enlarged bolt holes, starter ring gear wear and distortion.

3. Crankshaft end float must be checked to ensure it is within manufacturer's tolerance. Figures are available in the workshop manual.

4. Crankshaft pilot must be inspected for wear.

5. Crankshaft spigot must be lightly greased.

Fitting

Gearboxes are supplied with a Torque Converter fitted. However, if you need to remove the Torque Converter, the following points must be observed:

The Torque Converter pump drive surface must be lubricated with clean transmission fluid or petroleum jelly to help prevent any damage to the pump seal or supporting bush.

Rotate the Torque Converter gently to assist the engagement of the splines. Ensure that the tangs/flats/slots on the Torque Converter pump drive are engaged fully with the front pump drive gear.

Failure to ensure this will result in serious damage.

Offer the **COMPLETE ASSEMBLY** to the engine back plate ensuring that the face of the Torque Converter and engine back plate are parallel and flush before tightening bolts **(Never use bolts to pull the transmission into line**).

Always ensure that any dowels are correctly fitted. Check the condition of vacuum pipes where fitted paying particular attention to the rubber tubes that fit at the transmission end and also at the manifold (**There should be 18 inches of vacuum on tick over, zero inches on full throttle**).

Malfunction of the transmission will occur if incorrect.

Filling with Fluid

ALL TRANSMISSIONS & TORQUE CONVERTERS ARE SUPPLIED DRY & WILL NEED TO BE FILLED WITH FLUID: The fluid must be of the type specified by the vehicle manufacturer & any containers or equipment used must be scrupulously clean. ***PLEASE DO NOT PUT OLD OR RECENTLY REPLACED OIL BACK IN THE TRANSMISSION***.

Before cranking the engine, add 5 litres of approved fluid to the transmission (refer to the workshop manual), apply handbrake, start engine, and allow to idle. After further topping up (usually a further 5 litres of fluid) or with amount specified by manufacturer (refer to the workshop manual) move the gear selector through all gear positions a few times; then engage NEUTRAL position - vehicle must be on a level surface.

With the engine still running remove the dipstick, clean with lint-free cloth and check the level via the hot and cold marks on the dipstick, check both sides of dipstick, if different take the lowest reading & fill to cold level.

For Level plug type fitted on sump/case- fluid will trickle out when there is sufficient fluid, refit plug.

Road-test until hot and all gears are working correctly.

Dipstick type: engine still running, hand brake on & in neutral-fluid level should & must be on hot level.

Fill level plug type sump/or case: engine running, handbrake on & in neutral - remove fill level plug, if oil gushes out, drain until steady flow, refit plug. If no oil comes out, top up until steady flow, refit plug.

DO NOT OVERFILL - The importance of correct setting of fluid level cannot be overstressed.

Pressure Control: Cables/Linkage/ECU/Calibration

It is vitally important that the correct setting of pressure control cables, linkages, ECU's & selector cables/rods are carried out in accordance with instructions contained in the workshop manual.

At no time must the transmission be operated with cables or linkages broken or disconnected. The importance of carrying out this procedure correctly cannot be over emphasised.

Failure to do so <u>will</u> result in serious damage to the transmission unit.

ECU reprogramming procedure for Electronic Controlled Transmissions

After fitment of transmission and filling with the correct amount of fluid, **<u>ALL</u>** electronic controlled units must have codes cleared from all ECU management systems.

Some vehicles will need to be calibrated to wake up newly installed electronic components. These units may need to be calibrated at Main Dealerships online to a new specification or update to make the transmission work correctly.

After the adaptions have been carried out successfully, the vehicle can then be road-tested, starting off on light throttle, checking for gear shifting quality, then same procedure on medium throttle, then check for reverse and Park holds.

Following a successful road test, return the vehicle to the workshop, recheck the fluid level & top up if required, recheck to make sure ECU codes have cleared successfully, if any return including Engine or ABS codes make a note and **rectify,** most codes stored can affect the performance of the transmission to default.

Low Battery voltage is the most common default issue - if in doubt fit a good quality battery.

Finally check transmission and oil cooler including pipes for any signs of leaks-usually better to re-check next day when the vehicle has stood overnight.

These instructions are given in good faith and if adhered to should ensure many miles of trouble-free service. However, neither Flying Spares or their suppliers can accept any responsibility for faults arising from incorrect fitting of our units.