



G.M.V. OIL COOLERS

Following recent work on the G.M.V. oil cooler, the method described below should provide useful hints on its removal, stripdown, parts replacement and re-build.

1. Switch off the 3 phase supply to the lift and oil cooler.
2. Remove the covers from both the oil cooler and the hydraulic pump unit.
3. Remove the pick up pipe only from inside the hydraulic tank. (This will prevent the oil cooler charging its system).
4. Switch on the oil cooler and start up the unit. To discharge the hydraulic fluid within the system, run the cooler pump until air is being pumped into the main lift tank. At this point, switch off the cooler, isolate the supply by either locking off the main switch or removing the fuses.
5. Undo the flexible hose clamps from the pump and inlet fitting.
6. Remove the 4 no. flex head (10mm AF) self tapping screws holding down the motor/pump unit to the bottom of the cooler box. (Fig 1)
7. Remove fan guard from end of cooler unit.
8. Disconnect motor wiring (plug and socket) and earth termination.
9. Remove flexible pipes from the pump (spigots are about 50mm long).
10. Remove the complete fan, motor and pump assembly through the fan hole. (Observe which of the 2 sets of holes were fixed).
11. Removing the pump from the motor - MARK THE TOP!!
 - (a) Undo the 4 no. M5 nuts (motor end plate clamping studs) from the pump end. (Fig 2)
 - (b) Draw the pump from the motor (plain keyway shaft). Note: Gentle leverage may be required to ease the male and female spigots on the pump/motor apart but be careful not to damage the faces. (Fig 3)



- (c) Once removed, locate two of the M6 fan guard screws in the motor end plate holes, to allow a bar to lock against them preventing the pump from rotating when the 4 no. M6 cap head socket screws are undone allowing the motor end of the pump to be removed. **(Fig 4)**
 - (d) Replace the 'O' ring fitted on the flange of the pump. (If fitted - the one stripped down in the factory did not have one). Make sure the correct one is used. **(Fig 5)**
 - (e) Remove the oil seal and spacer from the pump shaft and replace. **(Fig 6)**
 - (f) Using a drift, remove the bearing block in the motor end plate and replace. Take care to insert the replacement the right way round. (White ceramic disc fits inside the rubber boot, the complete assembly now fits into the motor end plate so that the ceramic disc will touch the replaced seal once assembled)
 - (g) Re-build the pump and motor.
12. Clean out inside of oil cooler.
 13. Replace the pump/motor into the cooler tank.
 14. Re-connecting hoses:- Remove inlet hose from tank union and feed onto pump union first, then back onto the tank union.
 15. Align and fix 10mm AF self tapping screws into base plate (note there may be a packing washer between the bracket and base plate - ensure they go back and the holes used are those that were used originally.
 16. Before tightening these screws fully, ensure that the fan will run freely and not foul anywhere. Be careful the blades are very sharp!
 17. Tighten self tapping screws.
 18. Remove the connecting pipes from the cooler and lift tank (matched) or just the cooler if not matched. Remove the male pipe fittings from the female thread on the cooler, (and tank if fitted), fit a lock nut and dowty seal to each male thread before re-assembly.
 19. Replace the pick up pipe inside the lift tank.
 20. Re-position oil cooler and tighten all hydraulic hose fittings (including those inside the oil cooler) and lock nuts on male threaded adapters into pump unit (if fitted) and oil cooler inlet and outlet points.

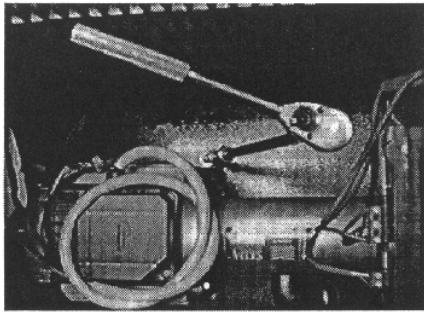


Figure 1

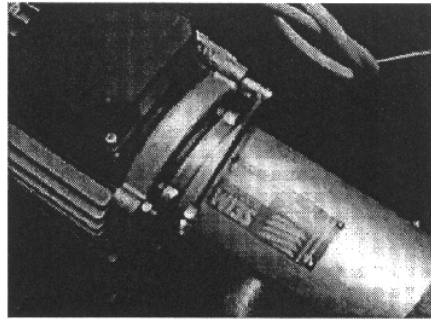


Figure 2

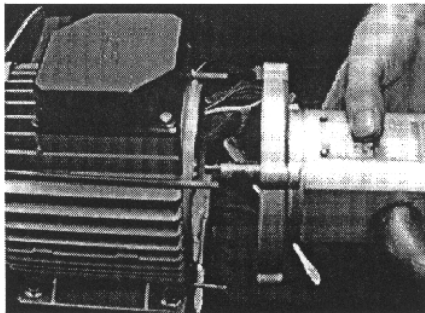


Figure 3

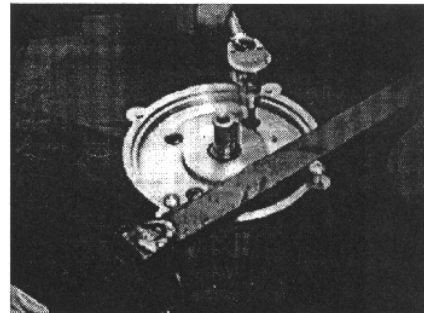


Figure 4

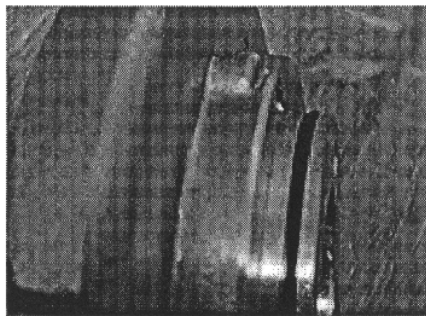


Figure 5

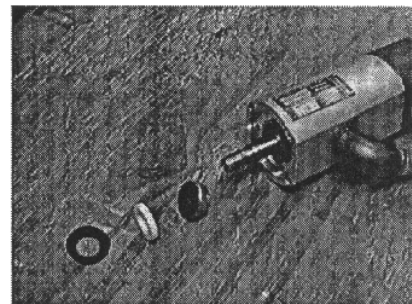


Figure 6

Tools List:

50mm AF Spanner 2 of each 7,8 and 10mm AF OE and Ring spanners
 55mm AF Spanner 6mm AF Socket wrench (allen key)
 Straight blade screw drivers (medium / large) Pozi / Phillips No2 screw driver
 Hammer and blunt drift.

Parts List:

1 x Seal kit, 4 x 1/4 inch BSP Lock nuts, 4 x 1/4 inch dowty seals, Oil absorbent granules, Rags