

# INSTRUCTIONS FOR THE ASSEMBLY AND DISASSEMBLY OF WHEEL-MOUNTED PUMPS FOR TRACTOR SERIES “VG”

**WaterTec**  
IRRIGATION LTD.

## ASSEMBLY:

- 1) Wash all parts of the overgear in order to remove all metal particles from the gearbox which may have been left after machining.
- 2) Mount bearings (15) and (16) on the pinion (6), remembering that the notches of the double-row ball bearings must be positioned on the opposite part of the toothing.
- 3) Insert the pinion with the bearing into the gearbox (1) and close with the lid (4) equipped with the retaining ring (20), fitting the gasket (48) between the two. When the lid (4) is well fixed with the screws (37), the pinion must have an axial clearance of 0.3 to 0.5 mm. If there is no clearance, it is possible to insert other gaskets until the above mentioned clearance is achieved. (For series VG2 and VG3, also mount cover (5) with the relative gasket (50).
- 4) Rest the box on the table of a small press so that the side with the bearing (18) contacts the press table. (In overgears VG2 and VG3, this contact must occur on the inner bearing ring (18) see fig. 1 of the enclosed layout. Use support (A) shown in the figure to facilitate this operation. Mount the bearings (18) in their housing, introduce the crown wheel (7) with the upper part of the hub pointing downwards, allowing it to rest on the inner ring of bearing (18). (For overgears VG2 and VG3, fit spacer (9) together with the crown wheel, resting the upper part of the hub on the spacer itself). Mount the tang (31) and the bearing (17) on the power take-off (8). Insert the pto into the crown wheel using the press. Lift the entire unit allowing bearing (18) to leave its housing and fit the balancing ring (24). (For overgears VG2 and VG3 which do not mount the balancing ring, mount the bearing lid with relative gasket).
- 5) Firmly fix the lid (3) equipped with retaining ring (19) using the screws (36) together with the protection guard (25). (In this case also, the pto of series VG2 and VG3 must have an axial clearance of 0.2 to 0.5 mm. In the absence of this clearance, proceed as per point 3).
- 6) Close the gearbox with the oil sump (2) equipped with oil drain cap (29) and relative gasket (47) firmly fixing with the screws (39).
- 7) Complete overgear assembly with the oil level telltale (27), the oil top-up cap (28) and the water-guard ring (23).
- 8) Mount the pump cover (11) on the overgear, inserting the impeller retaining ring (22), the greased plait (26), the cooling diffuser (14) and relative flange (13).
- 9) Insert the impeller (12) on the pinion (6) with the tang (32) and tighten well with the self-locking nut (41).
- 10) Mount the pump casing (10) together with the impeller retaining ring (21) on the cover (11) remembering to fit the gasket (49) and firmly fix with the screws (40).
- 11) Complete pump casing assembly with the inlet and outlet caps (30) and the stud bolts (35) on the intake flange. Put SAE 90 lubricant oil into the gearbox after which the pump is ready for use.

## DISASSEMBLY:

Proceed in the following way in order to demount series VG pumps:

- 1) Drain the lubricating oil from the gearbox using the plug (29).
- 2) Remove the pump casing (10) by unscrewing the screws (40).
- 3) Demount the Impeller (12) by unscrewing the self-locking nut (41).
- 4) Remove the cover (11) together with all its components.
- 5) Demount the oil sump (2).
- 6) Unscrew the screws (36) and remove the lid (3) with the protection guard (25).
- 7) Extract the pto shaft from the crown wheel using the threaded hole at the top of the shaft or the plug (55) on the opposite part. (For overgears VG2 and VG3 extract the shaft by removing the bearing lid (5) according to fig. 2 of the layout and utilizing a support (B) as indicated in the figure, so that when the crown wheel rests on the relative feet inside the box, this latter will be sufficiently borne by the above mentioned support (B).
- 8) Remove the lid (4) and extract the pinion (6) with the bearings.