

OMEGA CORPORATION MAINTENANCE MANUAL

STORAGE

- Store the gearbox in closed area in packed condition,
- If the gearbox to be stored for more than 60 days, then all machined surfaces, flanges and shafts must be protected with a suitable anti oxidation coating, and further the shaft should be rotated for @10-20 rotation after opening the packing.

INSTALLATION OF GEAR BOX

For the installation of the gearbox the following guidelines should be followed:

- Remove the plastic protection covers on shafts.
- The gearbox to be securely bolted to a rigid base to avoid vibrations.
- If shocks, extended overloads or jamming is expected, hydraulic couplings, torque limiters, clutches etc. should be fitted.
- In case the gearbox is to be painted, the oil seals must be protected to avoid paint drying out the rubber (use adhesive tape to prevent contact of paint with the oil seals) painting of oil seals may lead to premature drying of rubber and result into oil leakage.
- Avoid using solvents on oil seals/ rubber components while cleaning
- Any gears, sprockets or pulleys being fitted to the input or output shafts must have their bores machined to ISO H7 tolerance. The shafts are provided with threaded hole to facilitate the use of tie rods with back plate and nut to push on the gears or sprockets being fitted. Verify the correct radial load for the selected gearbox in case of pinion, pulley etc fitment on the output shaft.
- Fit gear motor/ gear box firmly to the flat machined surface (it is to be bolted with the correct torque to avoid vibrations), for the same reasons all units keyed onto the variation output shaft must be machined to ISO F7 tolerances.
- In order to avoid oxidation and the possible seizing of the above parts, clean mating surfaces before assembly and apply water repellant grease or similar material.
- Bore of hollow shaft of gearbox has tolerance H7, all shaft being fitted usually are machined to H6 if required for the application an interference fit (H7-J6) can be used.
- Please apply **loctite** anti seize 737 or equivalent with Gearbox input hollow shaft and motor solid shaft to avoid oxidation and seizure of motor shaft with input hollow shaft.
- Before operating the machine check that the lubricant level is correct for the mounting position of the gearbox and the lubricant viscosity is correct for the kind or load.
- Adequate guards to be provided for outdoor application to avoid exposure to dust , rain and direct sun light also.

RUNNING- IN- PERIOD

Whenever putting a brand new gearbox, during running in priod limiting of transmitted power to 50-70% of max rating for the first running hours is suggested.

Change oil at the intervals shown in table below

TABLE

OIL TEMPERATURE(deg's)	LUBRICATION INTERVAL(hrs)
< 65	8000 hrs
65-80	4000 hrs
80-95	2000 hrs

OMEGA CORPORATION TO TAKE CARE DURING OPERATION - DOS & DON'T'S

DO'S

- Check gear boxes & gear motors periodically for cleanliness. Avoid accumulation of dust on the gear box, as it prevents the heat transfer and also erode oil seals and cause oil leakage..
- Check the mounting bolts at least once in a month for correct torque, to avoid vibrations.
- Check for the oil level daily, Check the condition of the oil seals, If required, top it up with correct grade oil and quantity, as per the catalogue. Fill oil ISO VG 320 in gear boxes from size our Gearbox size 110 to size 185
- Check the current drawn by the motor periodically as specified in the name plate.
- Apply anti-seize compound once in twelve months on the motor coupling shaft.
- When fitting the belt driven pulleys, make sure that the shafts are perfectly parallel and that the pulleys are aligned with each other.

DONT'S

- Do not block the breather holes if it is provided. This may lead to the internal pressure and consequent leakage of oil from oil seals and rubber caps.
- Do not paint on the oil seals
- Do not hammer the output/ input shafts while fitting the pulley or any other drive mechanism. This may lead to breakage of internals
- Incorrect alignment can cause damage to the motor and the input shaft bearings
- Avoid over-tensioning the belts since excess tension can cause bearing failure in the gearbox

FAULT	POSSIBLE CAUSES	REMEDY
Unusual, regular running noise	A) meshing/grinding noise: bearing damage, defective bearing B) knocking noise: irregularly in the gearing	A) check the oil and cleanness of oil, change bearings. B) contact customer service C) Change the oil.
Unusual, irregular running noise	A) Whistling noise – defective bearing B) Irregular noise - Foreign bodies in the oil C) Cyclic noise – problem may be with profile cut	A) check the oil and cleanness of oil , Change the oil. B) stop the drive, contact customer service
Oil leaking <ul style="list-style-type: none"> • from the gear cover plate • from the motor flange • from the motor oil seal • from the gear unit flange • from the output end oil seal 	A) rubber seal on the gear cover plate leaking B) seal defective C) gear unit not vented D) Flanges/ joints are not tighten properly	A) Tighten the bolts on the gear cover plate and observe the gear unit. Oil still leaking; B) contact customer service C) vent the gear unit.
Oil emerging from breather valve	A) too much oil B) drive used with the wrong mounting position. C) frequent cold starts (oil foams) and / or high oil level	A) correct the oil level B) mount the breather valve correctly, correct the oil level
Output shaft does not turn although the motor is running or the input shaft is rotated	Connection between shaft and hub in gear unit interrupted Motor and gear unit mating surface not jointed correctly.	Pl check the motor and gearbox joint correctly. Send the Gear for repair

OMEGA CORPORATION MAINTAINANCE

Gearboxes supplied with synthetic oil from factory do not require further maintenance. If the gearbox be sitting standstill for a long time in a very humid environment we suggest to verify oil level and full it up with oil before use, Whenever necessary top up can be done with the same compatible lubricant, Before refill the oil remove the oil completely. The proper oil level must be restored when the gearbox is put into operation.

FINAL TEST REPORT

TYPE	RATIO	SERIAL NUMBER

CONTROL PARAMETER	RESULT
Noise Below 80 DB	<input type="checkbox"/> OK, PASSED
Temperature after 2 hours running	<input type="checkbox"/> OK, PASSED
Oil leakage after 2 hours running	<input type="checkbox"/> OK, PASSED
Air leakage under injection of forced air pressure	<input type="checkbox"/> OK, PASSED

<i>Omega Gears Tested Result</i>	<i>Date</i>