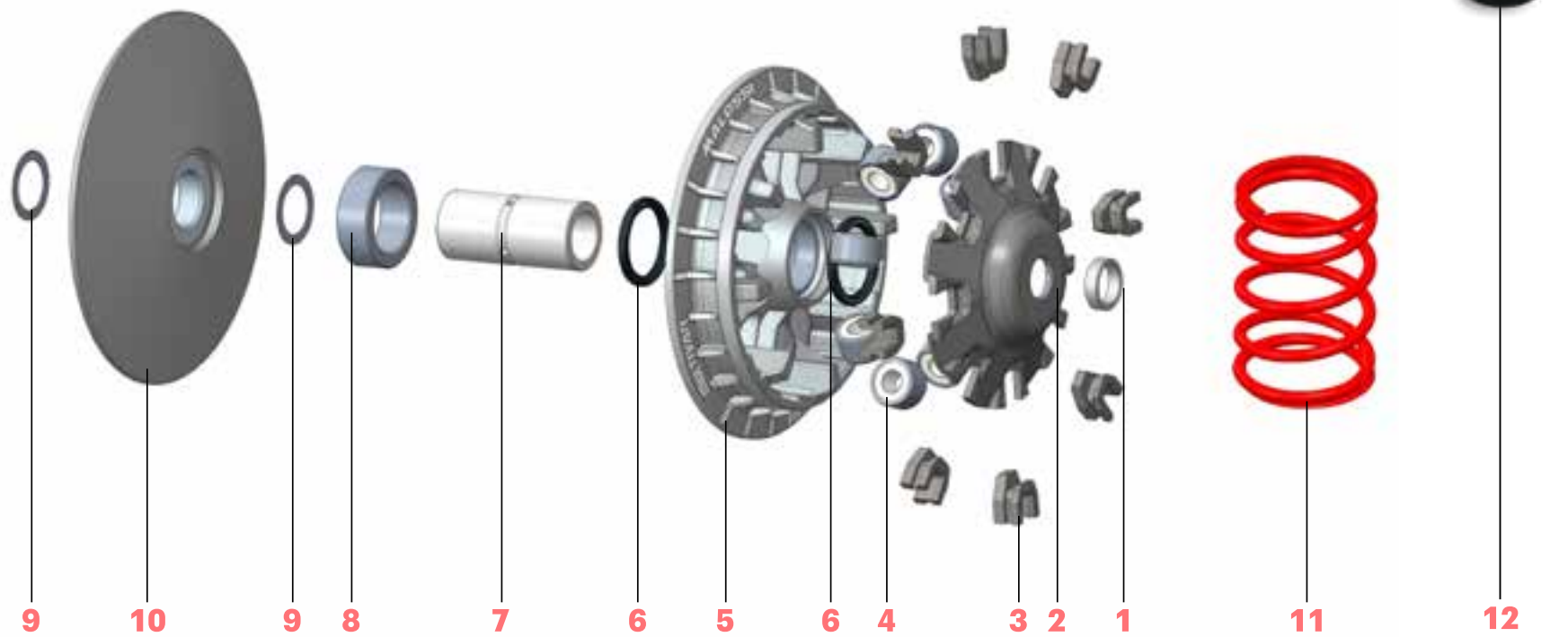


MULTIVAR





MULTIVAR MHR - GENERAL INSTRUCTIONS

ATTENTION:

Multivar is supplied complete of all parts; it is not necessary to fit covers or other parts not provided in our kit. The covers fitted on the original variators have the function of retaining the grease. Multivar works without grease (except for those models whose instructions specify the necessity of lubricating) and the working parts are built with self-lubricating materials; this is the reason why Multivar does not require the cover.

Technical features

- HALF-PULLEY made of aluminium alloy with silicon content, machined on very high-precision CNC machines and diamond-finished, with recalculated profiling of the roller sliding guides.
- HUB made of alloyed steel with sliding surface featuring a hard chromium facing that is ground and lapped.
- CALIBRATED, HIGHLY RESISTANT HTROLL rollers made of CPT with a specific formula.

ATTENTION:

Always verify that the correct components are being used, during assembly, so that the variator nut will seat fully and make sure the hub-spacer assembly, wherever present, has the same total dimension as the original. The ever-changing engine designs may cause a compatibility issue for Malossi products. In order to avoid damage to the vehicle we ask you to make sure the assembly is correct. We are not responsible for any damages to the vehicle.

General assembly instructions (pg. 103)

- 1) Thoroughly clean the external area of the drive side casing where you will be working.
- 2) Disassemble the drive side casing while carefully ensuring that the truing bushes and the screws for the latter (Photo 1a) are not damaged or lost.
- 3) Unscrew the variator lock nut on the crankshaft (Photo 1b).
- 4) Completely remove the entire original variator unit by sliding it off of the crankshaft.
- 5) Disassemble the rear clutch unit in the kit when the spring has been provided to replace the original one (Photo 2).
- 6) To fit the spring, if present in the Malossi kit, the tightening nut on the clutch mass-holder flange (Photos 3a - 3b) must be unscrewed and care must be taken with the thrust of the spring found under the clutch.
- 7) Fit the new spring supplied in the kit (Photo 4).
- 8) Reassemble the clutch unit as it was previously. Check the belt for wear and if it is not in perfect condition, we suggest that you replace it with one of our Malossi K Belts. Remount the clutch unit with the belt inserted in the movable half-pulley and tighten the lock nut according to the manufacturer's instructions (Photo 5).
- 9) Mount the sliders 3 on the cover 2 as shown in the variator assembly diagram. Ensure that they are inserted flush.
- 10) Put the rollers 4 in the movable half-pulley 5 (Photo 6).
- 11) Insert the cover 2 complete with sliders over the movable half-pulley with the rollers inserted (Photo 7).
- 12) Insert the spacer 1, if present, on the crankshaft.
- 13) Insert the hub 7 in the movable half-pulley and carefully slide the complete unit on the crankshaft, ensuring that the rollers do not come out of their guides (Photo 8).
- 14) The variator unit should be positioned flush and then position the belt on the hub. Mount the original fixed half-pulley 10 or otherwise the one supplied with the kit. Mount the small fan and the fastening washer, if present (Photo 9).
- 15) Insert the tightening bolt and tighten it with your fingers (Photo 9).
- 16) Loosen the belt and tighten it in the middle in such a manner that when the crankshaft bolt is being closed, the timing belt is not caught between the pulleys, thereby imitating the packet closure of the entire variator unit (Photos 9a - 9b).
- 17) The bolt on the crankshaft fastening the variator should be tightened at the torque indicated by the manufacturer.

CAUTION: CAREFULLY READ ALSO THE SPECIFIC ASSEMBLY INSTRUCTIONS FOR EACH VEHICLE, IF GIVEN.

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Multivar for Over range (Fig. 2)

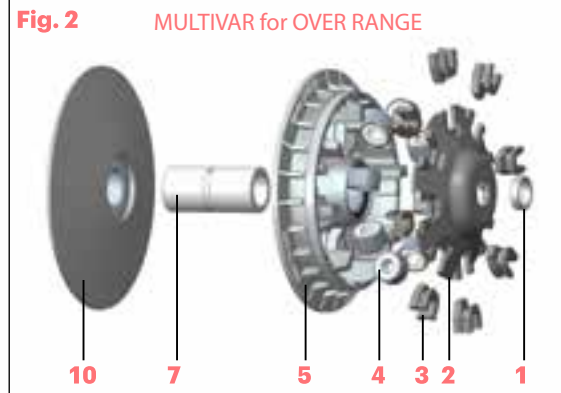
- To install the wider range variator on Minarelli and Yamaha engines, you have to remove the components of the electrical starting system located inside the drive casing (Fig. 3 - 4).
- Fit the cursors 3 on the cover 2 observing the installation diagram of the variator, making sure you insert it up to its stop point.
- Position the rollers 4 on the mobile split pulley 5.
- Fit the cover 2 with cursors above the mobile split pulley with rollers.
- Replace the original spacer with the Malossi one 1 inserted into the kit and insert it on the crankshaft (Fig. 5).
- Fit the hub 7 in the mobile split pulley and carefully insert the entire unit on the crankshaft, making sure that the rollers do not come out of their tracks.
- Install the entire variator unit up to its stop point (Fig. 6), and locate the belt on the hub. Fit the fixed split pulley 10 supplied with the kit, the starting unit and the washer.
- Insert the tightening nut and screw it down with your fingers.
- Loosen the belt, tighten it a mid-point, making sure that when the crankshaft nut is tightened, the timing belt is not tightened between the pulleys, thus de-synchronising pack closure of the entire variator unit.
- Tighten the nut securing the variator on the crankshaft, using the torque recommended by the engine manufacturer.

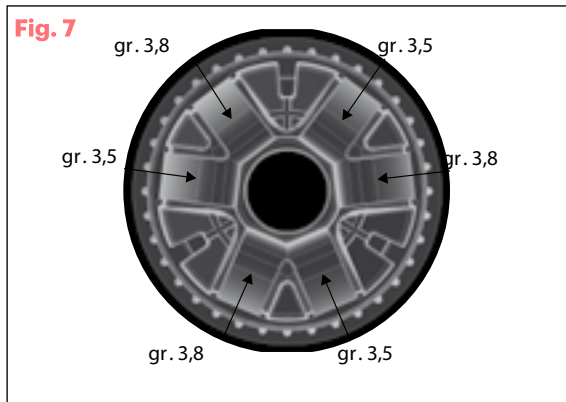
- Finish installation by re-fitting the casing, taking care to tighten all the cover screws to a 1.1 kgm torque.

Suggestions for the setting

The variator is supplied with two different roller sets in order to change the number of revolutions of the gear curve of your vehicle perfectly adjusting its speed and acceleration.

- Tourist use
n° 6 rolls gr. 3,8
- Sports use
n° 3 rolls gr. 3,5 + n° 3 rolls gr. 3,8 placing them in alternate way (Fig. 7)
- Racing use
n° 6 rolls gr. 3,5 (**suggested setting with modified exhaust**)





ASSEMBLING SEQUENCE /

