Drive Unit Changes

1963

1 Drive

- One drive ratio only
- White colored drive unit
- Lower unit uses outboard style shift cam and cam follower (plunger) mechanism.
- Manual tilt with outboard style manual reverse lock assembly
- Manually adjusted trim in position pin
- Separate upper and lower housings (separate vent and drain plugs)

1964

1A Drive

1B Drive

1C Drive

- Three drive ratios
- Early production drive units were white colored, Later production was black colored
- Lower unit uses outboard style shift cam and cam follower (plunger) mechanism
- Manual tilt with outboard style manual reverse lock assembly
- Power Tilt optional on 110 / 120 / 140 / 150 / 190 / 310 models
- Manually adjusted trim in position pin
- Separate upper and lower housings (separate vent and drain plugs)
- Late production units had a hydraulic tilt system (low pressure pump)

1965-1968

1A EZ Drive

1B EZ Drive

1C EZ Drive

0" 60 Drive (1965-1968, Renault 60)

1A, 1B, 1C EZ Drive

- Three drive ratios
- Black colored drive unit
- Lower unit uses current style shift crank and spool shift mechanism (E-Z Shift)
- Manual tilt with outboard style manual reverse lock assembly
- Power Tilt optional on all models
- Four position manual adjustment tilt position pin
- Separate upper and lower housings (separate vent and drain plugs)
- 1965 - 1966 - Hydraulic tilt system (high pressure pump) available
- 1967 - Introduction of the hydraulic Power Trim system (trim and tilt)
- 1968 - Oil passage installed between upper and lower housings-Quad Ring used to seal passage-one vent and one fill plug for the complete drive unit

0" 60 Drive

- 0" 60 Drive was a smaller version drive unit (lower unit was approximately the size of a 50 HP outboard lower unit)
- Mechanical shift with hydraulic actuation
- Water pump was under the drive unit top cover

1967-1982

MC-1 Drive

0" 80 Drive (1967-1969, Renault 80)

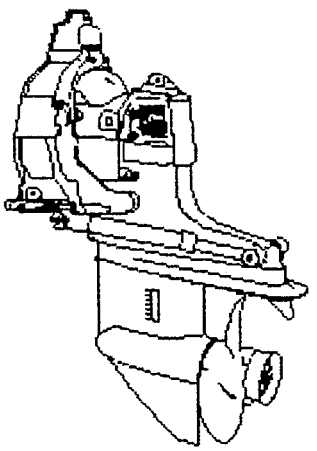
0" 90 Drive (1970-1972, Renault 90)

MC-1 Drive

- Different drive ratios for each package
- MC-1 Drive similar to the 1 (A-B-C) EZ Drive
- Drives now referred to as the "MerCruiser 120", 140, etc.-drives named after the engine HP used in the packages
- Power Tilt optional on all models
- Power Trim was optional on the MerCruiser 120 and 160 models
- Earlier models had tilt stop switch located at top of gimbal ring
- Later models have side mounted rotary trim sender and tilt (cutout) switch
- Shift plate mounted on transom with reverse lockout valve

0" 80 and 90 Drive

- 0" 80 and 90 were similar to the 0" 60 model drive. Different ratios for larger engines.



MC-I Drive Unit

1983-1984

1-R Drive

- Redesigned model
- Upgrade of the drive unit's exterior design: redesigned top cover (lifting eye removed), bell housing (straightened up sides and removed ears), lower unit hydrodynamic shape reconfigured, skeg swept back.

1985

1-MR Drive

- New reverse spiral cut gear housing gears. Gears use to draw together under load. Now they force apart under load. This change was made for greater durability. The drive shaft bearing (below water pump) was changed and a threaded retainer was added to hold the drive shaft bearing cup in position.
- Near-net forged gears
- Letter "A" stamped on end of propshaft to differentiate new MR Drive from R Drive

1986-1991

Alpha One Drive

- Similar to I-MR Drive. Name changed.

- Seals that use to ride on the upper driven gear in the Alpha One driveshaft housing are now located at the bottom end of the Gen II driveshaft housing. They now seal on the driveshaft itself, allowing the gear lube to lubricate the splines at the top of the driveshaft.
- There is a new anodic plate located on the front edge of the drive shaft housing splash plate.
- Lateral wear pads are located on the driveshaft housing where the gimbal ring pads come in contact with the driveshaft housing.
- There is a filler wall positioned just to the rear of the water pump housing which serves as a dam to hold water around the pump housing to prevent the pump from drawing air into the cooling system.

Alpha One Gen II gear housing changes

- The shift shaft bushing is redesigned. It is secured to the gear housing with two bolts and washers. The bushing has a dual duty of supporting and sealing the shift shaft and also providing the connection for the speedometer fitting. There is a small sleeve around the shift shaft that helps to protect the oil seal in the bushing. It is positioned so that it lightly touches the top of the oil seal.
- A new water pump assembly is installed. The housing is stainless steel. A larger floppy veined impeller is used. This is a low pressure, high volume system, as opposed to the older high pressure, low volume system used on the Alpha One models.
- The driveshaft no longer has an O-ring groove near the top end of the shaft. It was removed when the driveshaft housing lower oil seals were installed. Oil in the driveshaft housing now lubricates the drive shaft splined area.
- There is a second filler wall positioned just below the filler wall which is located in the driveshaft housing (to the rear of the water pump housing). This wall assembly works as a dam to hold water around the pump housing to prevent the pump from drawing air into the cooling system.
- Water pickups in the gear housing strut area are now cast in, replacing the inserts that were used in earlier models.
- Skeg trailing edge now has a knife edge.

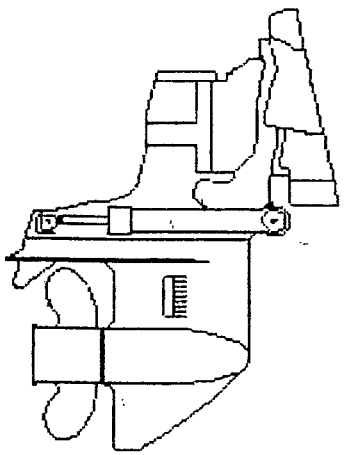
1990-1991

Alpha One Counter-Rotation Drive

1992-Present

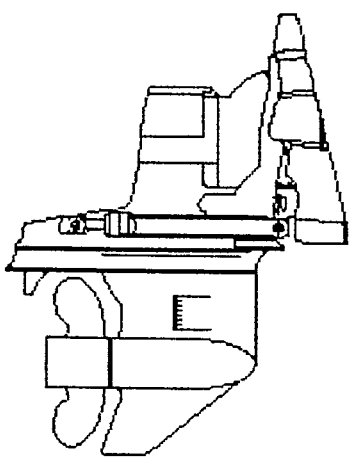
Alpha One Gen II Drive

Alpha One Gen II Counter Rotation Drive



22390

MC-IR, MR, Alpha I Drive Unit



22392

Alpha I, Gen II Drive Unit

Alpha One Gen II driveshaft housing changes

- The driveshaft housing U-joint pinion assembly is similar to the Bravo Drive version. Preload is adjusted in the same manner. The pinion gear is still located by shimming, as in the Alpha One unit.
- There was a dipstick in the top cover, like the one used on early Bravo units. If the Gear Lube Monitor kit was installed the dipstick was replaced with a plug.
- Driveshaft housing to gear housing mounting fasteners have changed from studs to bolts and flange nuts. A bolt has also replaced the front stud.
- The early models had a twist-and-snap speedometer connection. Now a push button, quick-disconnect fitting is used.
- A water tube seal replaces the water pocket cover assembly that was used in Alpha One models. The new water tube is slipped into this seal.