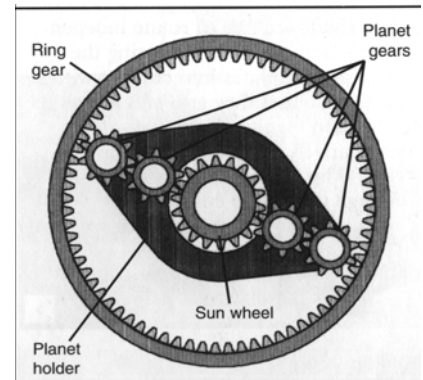
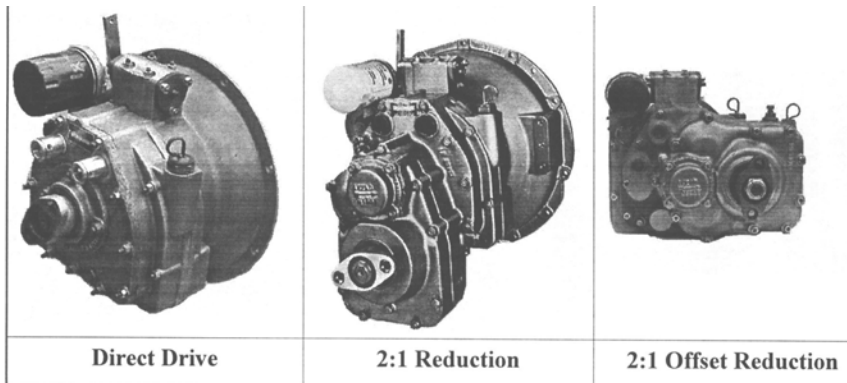


# T M P 12000 Marine Gearbox

(Thamesway Marine Products)

Appleyard Lincoln started fitting Perkins 4.107 diesel engines in many of the Elysian 27's and practically every Elysian 34 that left the yard in Ely. Perkins were supplying TMP gearboxes as part of a 'turn-key' package ,complete with bell housing , drive plate and coupling. From the three popular models listed below, to the best of our knowledge only the 'Direct Drive' model and '2:1 reduction' models were installed into Elysian type boats.

IT SHOULD BE NOTED THAT THIS BOX WAS ALSO PRODUCED BY NICOR MARINE



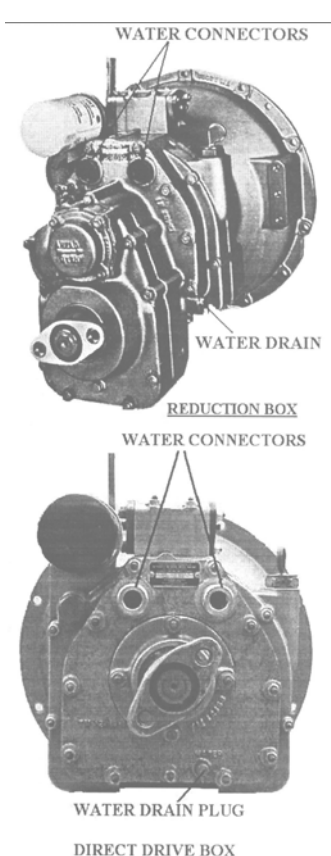
Example of Epicyclic gearbox

## How does it work? (There really is no easy way of explaining this)

The gearbox incorporates an epicyclic gear train for 'Astern' running and the input and output shafts are locked together in ahead to give a direct through drive. There is a small reduction in output speed in 'Astern gear'. In 'Neutral', when the engine is running, the output shaft is prevented from rotating by a hydraulically-actuated automatic brake. When the engine is stopped, the brake retracts, so that the propeller shaft is free to rotate. Gear selection is achieved hydraulically by moving the control lever located on top of the main box. The gearbox contains its own oil pump and oil reservoir. All bearings in the direct drive version are force lubricated and a renewable element filter is fitted. In the case of the 'Reduction' model the bearings are bath lubricated although bearings in the main box are force lubricated as in the case of the 'Direct Drive' version.

## Water Cooling

Water cooling of the gearbox is advisable when used on engines with a maximum rotational speed in excess of 2000 rpm and essential when used on engines with a maximum rotational speed in excess of 3000 rpm. The cooling water may be taken from the engine cooling supply system, but the cooling water must pass through the gearbox water jacket before entering the engine.



## Things to remember

- Do not exceed 4000 rpm
- Always use a good 15/40 multigrade oil
- Do not stop the engine with the gearbox in gear.  
(This may result in the gearbox locking in gear, and require the box to be dismantled to free the lock)
- The gearbox is hydraulic, always keep the oil level to the mark using the dipstick.
- Avoid over filling with oil, it can cause overheating and damage oil seals
- Allow plenty of time between gear changing from forward to reverse.
- The water cooling chamber must be drained completely prior to 'laying up' during the winter as ice formation within the chamber may result in damage to the aluminium casing. In some installations the drain plug is not easy to reach , if this is the case then a 50/50 mix of antifreeze and water should be flushed through the cooling system.

## Want to know more ?

Thamesway Marine Products are still active and provide a full parts/repair service. They have a very good web-site which can be found at the following address:-

[www.thameswaymarineproducts.co.uk](http://www.thameswaymarineproducts.co.uk)

Or contacted at:-

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