

NEWAGE

PRM

PRM260

MARINE GEARBOX

FULL HYDRAULIC OPERATION: IN-LINE OR OFFSET OUTPUT SHAFT

The PRM260 marine gearbox is purpose built for use in both pleasure craft and commercial boats; its twin countershaft design provides separate oil-operated multi-disc clutches (which need no adjustment) for ahead and astern drive allowing full rated power to be transmitted continuously in either direction.

The PRM260 is offered in two different configurations; in-line and with offset output shaft.

A choice of 1.96:1 and 2.94:1 reduction ratios is available; each will provide left-hand or right-hand propeller rotation in "ahead", making the PRM260 particularly well suited to twin engine installations.

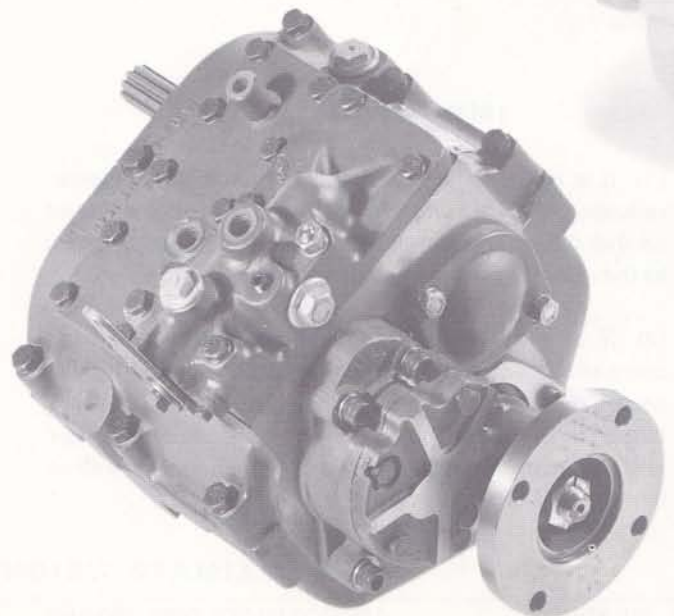
The gearcase is constructed of high grade cast iron, internally ribbed for rigidity and strength, and consists of two separate halves to facilitate servicing, the oil pump and hydraulic control valves being externally mounted for easy accessibility.

The PRM260C input shaft, spline, adaptor flange and mounting pads are as used on Borg Warner (Velvet Drive) and Paragon gearboxes.

The hydraulic operating system functions on normal lubricating oil of the same viscosity as that used in the engine, avoiding the need to use automatic transmission fluid, and ensures rapid response to movements of the operating lever for good boat handling. The operating lever has a positive neutral detent and is suitable for use with proprietary single lever remote control operating systems.

Robust and reliable, the hydraulic system is nevertheless provided with a mechanical lock-up device for added security, so that in the unlikely event of hydraulic failure the boat can be brought safely back to port. Access to this device is via a detachable cover located on top of the main gearcase.

The Newage Trolling Valve is also offered as an optional extra. This is electronically operated which allows variable speed of the propeller to zero whilst allowing a maximum engine speed of up to 1200 rpm.



NOMINAL POWER RATINGS, PRM260 MARINE GEARBOX

RATIOS	PLEASURE		LIGHT COMMERCIAL		HEAVY COMMERCIAL	
	BHP	kW	BHP	kW	BHP	kW
1.96:1	3.65	2.72	3.36	2.51	3.08	2.31
2.94:1	3.65	2.72	3.36	2.51	3.08	2.31

Maximum operating speeds: 4500 rev/min intermittent, 4000 rev/min continuous

Note: These powers are expressed in BHP and kW per 100 rev/min engine operating speed, and are measured at the engine flywheel. Ratings have been established to ensure the long trouble-free life of the gearbox which should not, therefore, be used at powers in excess of those shown.

SERVICE CLASSIFICATION DEFINITIONS

PLEASURE

Limited to planing hull pleasure craft; operation at full engine throttle should not exceed 5% of total time, with balance of usage at 90% of full throttle engine speed, and maximum operating time 500 hours per year. The selection of PRM marine transmissions according to this classification for any commercial boat, or in sport-fishing charter boats or in long-range pleasure cruisers, is not approved.

Newage Transmissions Limited will provide all possible information and assistance to help find solutions to potential torsional problems, but it is the ultimate responsibility of the person assembling the drive and driven equipment to ensure that they are torsionally compatible.

LIGHT COMMERCIAL

Planing or semi-displacement craft used in pleasure or commercial applications may qualify for light commercial rating if annual usage is less than 1500 hours and full throttle operation is limited, with most operating time at partial throttle.

OPERATING PRESSURE

Minimum - 1800 kPa (265 lb/in²), Maximum - 2180 kPa (320 lb/in²). Two tapped holes 1/8" BSP on the top, and M18 on the side of the valve block are provided so that the pressure gauge can be fitted if required.

HEAVY COMMERCIAL

Newage Transmissions Limited recommends that all displacement and semi-displacement craft used for commercial applications should be classed as heavy commercial duty. In vessels of this type (including trawlers, purse seiners, lobster and crab boats, tugs, ferries, offshore supply boats etc.) the marine gearbox is expected to work at full governed engine speed. The power setting of the engine must be known and must be within the gearbox's permissible heavy commercial rating.

OIL COOLING

The normal operating temperature of the oil should be in the 50°C - 80°C range and should not be permitted to exceed 90°C. An oil cooler is necessary to ensure that correct operating temperatures are maintained, and the valve block is provided with two 3/8" BSP connectors to allow it to be fitted.

IMPORTANT NOTE

(1) It is essential for the engine, transmission model, reduction ratio and propeller size to be correctly matched so that the engine can attain its rated speed appropriate to the relevant service classification without labouring.

(2) It is also necessary to ensure the torsional compatibility of the complete propulsion system from engine through to propeller, since disregarding this may result in gear noise, particularly at low speed operation, and may even result in damage to the engine as well as to transmission components.

PROPELLER THRUST

Both ahead and astern thrust is carried by the output shaft bearings which are of adequate capacity for all factory approved ratings.

PROPELLER FREE-WHEELING

The PRM260 output shaft can be rotated continuously with the gearbox in neutral, for instance in motor sailers, auxiliary yachts or multi-engine installations with one or more engines shut down. It is therefore not necessary to fit a propshaft brake in such applications.

APPROXIMATE WEIGHT AND OIL CAPACITY

GEARBOX	APPROXIMATE DRY WEIGHT	OIL CAPACITY
PRM260D	48 kg (106 lb.)	} plus the amount required to fill the cooling circuit.
PRM260C	63 kg (138 lb.)	
	} excluding adaptor, drive coupling and oil cooler.	

FLEXIBLE INPUT COUPLINGS FOR PRM260

PART NUMBER	OUTSIDE DIAMETER		MOUNTING HOLE PATTERN				REMARKS	
	in	mm	NO.	DIAMETER		PITCH CIRCLE DIA.		
				in	mm	in		mm
MT1224	9.50	241.3	8	0.344	8.74	8.750	222.3	SAE 7 $\frac{1}{2}$ in
MT1222	12.375	314.3	6	Multi Punched - Dimensions on application				
			8	0.375	9.53	11.625	295.3	SAE 10 in
MT1162	13.875	352.4	8	0.433	10.99	13.125	333.4	SAE 11 $\frac{1}{2}$ in
MT1213	14.25	362.0	6	0.320	8.13	11.625	295.3	Perkins 4-236
			6	Multi Punched - Dimensions on application				
MT4911	13.875	352.4	8	0.433	10.99	13.125	333.4	SAE 11 $\frac{1}{2}$ in High Deflection
MT4912	14.25	362.0	6	0.320	8.13	11.625	295.3	Perkins 4-236
			6	Multi Punched - Dimensions on application				High Deflection
MT4913	12.375	314.3	6	Multi Punched - Dimensions on application				
			8	0.375	9.53	11.625	295.3	SAE 10 in High Deflection
MT4914	9.50	241.3	8	0.344	8.74	8.750	222.3	SAE 7 $\frac{1}{2}$ in High Deflection
MT1468	14.25	362.0	6	Multi Punched - Dimensions on application				(For 260C)

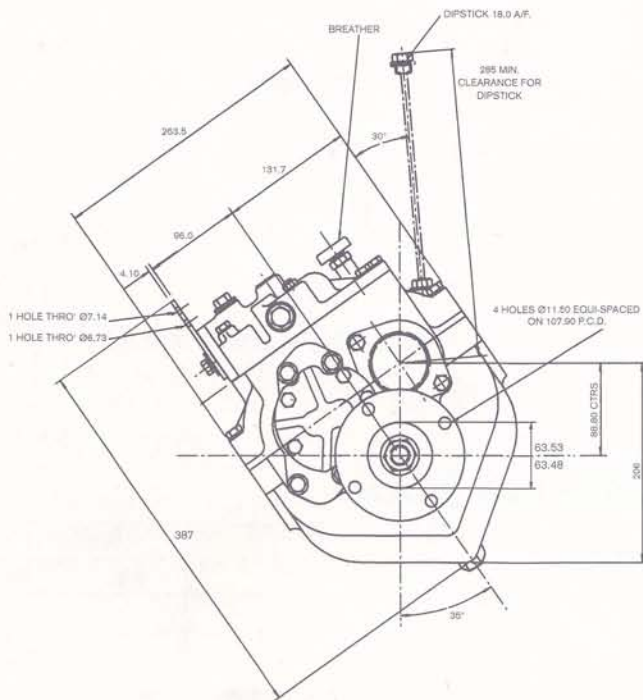
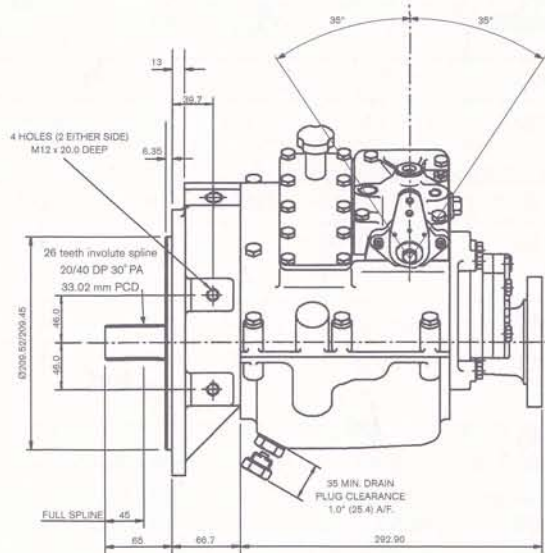
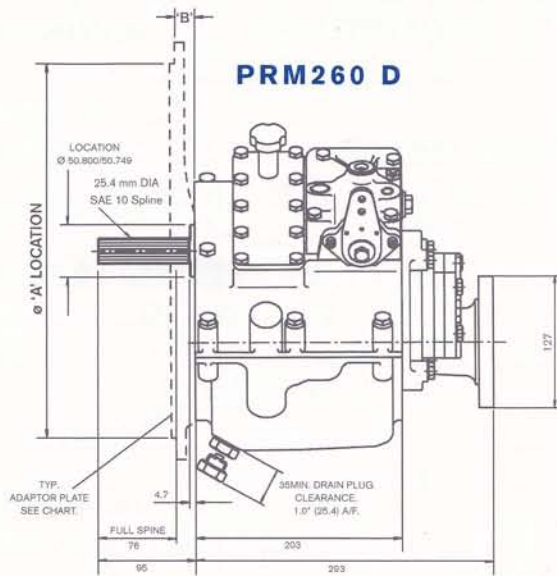
ADAPTOR FLANGES FOR PRM260

PART NUMBER	DESCRIPTION	WEIGHT	
		kg.	lb.
MT8074 S/A	SAE2 adaptor flange	13.0	28.7
MT854 S/A	SAE3 adaptor flange	11.0	24.3
MT1210 S/A	SAE4 adaptor flange	10.0	22.0
MT1209 S/A	SAE5 adaptor flange	7.0	15.4
MT1426 S/A	B/W (Velvet Drive) adaptor flange	4.3	9.5

OTHER ACCESSORIES FOR PRM260

PART NUMBER	DESCRIPTION	WEIGHT	
		kg.	lb.
MT913 S/A	Oil cooler	1.2	2.6
MT915	Oil pipes (pair)	0.5	1.1
MT784	Oil cooler mounting bracket	0.2	0.4
MT771	Tailshaft half coupling (pilot bored)	2.5	5.5
MT1104	Tailshaft flexible coupling	1.5	3.3
MT0214	Neutral safety start switch	0.04	0.1
MT4733	Oil pressure gauge (direct mounting)	0.1	0.2
MT4990	Trolling Valve Assembly 12V	9.5	20.9
MT4991	Trolling Valve Assembly 24V	9.5	20.9

BASIC INSTALLATION DATA - PRM260



IMPORTANT NOTE

All information given in this leaflet is correct at the time of going to press. However, in the interests of technical progress, design specifications are subject to change without notice. Accordingly, data given herein should be regarded as a general guide only and does not form part of any contract. Any specific performance requirements must be made known to us in writing with customer orders for goods. Illustrations are approximate only and do not form part of any contract with us; certified installation drawings are available on request. All goods are supplied in accordance with our standard terms and conditions of sale.

INSTALLATION ANGLE

The maximum fore and aft installation angle permissible at rest is 17°.

ADAPTORS	\varnothing 'A'	'B'
	mm	mm
SAE2	447.67	16.0
SAE3	409.58	15.75
SAE4	361.95	19.05
SAE5	314.33	15.88
B/W	209.55	28.58

NEWAGE



• NEWAGE TRANSMISSIONS LIMITED

- Barlow Road
- Coventry CV2 2LD
- England
- Telephone: (01203) 617141
- Fax: (01203) 611845

