

# GB2144-M - Twin Disc

STATUS

Available

REF. NUMBER

GB2144-M

MANUFACTURE

Twin Disc

TYPE

MG 509

RED.

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FABRIKS NR.

Spec. S-2730 Serie 59??07

VESSEL

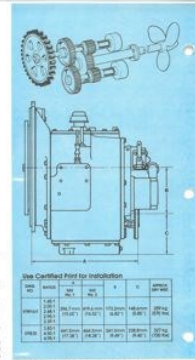
Vos Tiree



## Model MG-509 Maine Transmission



Oil controlled clutch engagement  
 Contoured and hardened gears  
 Emergency come-home brake  
 Built with lightness economy  
 Rubber track drive  
 Ratios: 3.8:1, 3.0:1, 2.4:1, 2.0:1, 1.5:1, 1.4:1  
 and 1.0:1  
 Equipped with either S4E No. 1 or No. 2 housing  
 Dry flywheel housing  
 Both clutches removable with transmission attached  
 to engine  
 Hydraulic clutch and ratio forward or reverse  
 interlocking mechanism  
 The MG-509 Maine Transmission is the most positive  
 marine transmission in its horsepower range.  
 The 1.4:1, 3.0:1, 3.8:1, 4.0:1 and 4.9:1 ratios are  
 identical in design except for the size of the primary and  
 the counter shaft gear. The 3.8:1, 4.0:1 and 4.9:1 ratios  
 use a 1.5:1 ratio gear set in the center of the case.  
 The 2.0:1, 2.4:1, 2.8:1, 3.0:1 and 3.2:1 ratios use  
 gear sets mounted on output bearings on their  
 respective shafts. The knowledge may be purchased with an  
 S4E No. 1 or No. 2 housing.  
 Forwarding rings are available with the No. 2 housing  
 and one driving ring with the No. 1 housing. Minimum  
 tank capacity with No. 1 and 2 housing is 2.000 dm.  
 The MG-509 is designed for all freshwater conditions  
 continuously in either forward or reverse position.  
 An expendable curved heat exchanger, optional, mounted  
 down take-off or mating parallel shaft coupling flange  
 and housing area essentially are available as optional  
 equipment with the MG-509 Maine Transmission. The

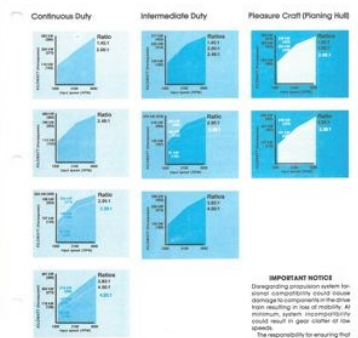


Use Certified Fluid for Installation

Ratio	Input	Output	Input	Output
3.8:1	1.500	0.395	1.500	0.395
3.0:1	1.500	0.500	1.500	0.500
2.4:1	1.500	0.625	1.500	0.625
2.0:1	1.500	0.750	1.500	0.750
1.5:1	1.500	1.000	1.500	1.000
1.4:1	1.500	1.071	1.500	1.071
1.0:1	1.500	1.500	1.500	1.500

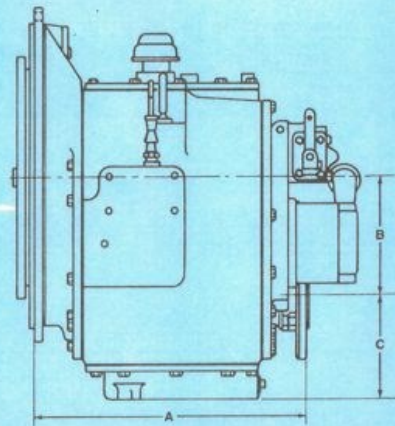
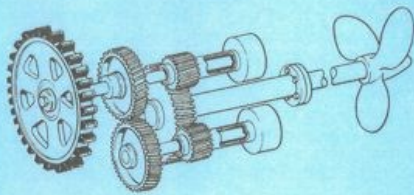
Helix angle is applicable to both right-hand and left-hand propellers.

**Heat Exchanger**  
 Available from Twin Disc is a heat exchanger with flexible hoses and a replaceable filter for installation in the bilge area of the engine compartment. Customers who wish to furnish their own heat exchanger should contact the nearest Twin Disc or Marine Engine distributor. When ordering specify if raw or fresh water to be used in the heat exchanger. Heat exchanger shall be remotely mounted if a top PFD is used.



**IMPORTANT NOTICE**  
 Designing propulsion system for proper compatibility should insure change to compatible gearbox from resulting in loss of mobility. At minimum, correct compatibility should result in gear failure or loss of speed.  
 The responsibility for ensuring that the torsional compatibility of the gearbox matches the torsional capacity of the drive and drive equipment is satisfactory rests with the assembler of the drive and drive equipment.  
 Torsional vibration studies can be made by the engine builder or marine engine distributor. Independent consultants and others. Twin Disc is pleased to assist in finding solutions to potential torsional problems that relate to the marine transmission.

For Service Classification Definitions see book cover



**Use Certified Print for Installation**

DWG. NO.	RATIOS	A		B	C	APPROX. DRY WGT.
		SAE No. 1	SAE No. 2			
X9816-F	1.45:1					
	2.00:1					
	2.48:1	396.7 mm (15.62")	419.6 mm (16.52")	173.2 mm (6.82")	148.6 mm (5.85")	259 kg (570 lbs)
	2.95:1					
	3.39:1					
X9835	3.83:1					
	4.50:1	441.5 mm (17.38")	464.3 mm (18.28")	241.0 mm (9.49")	238.8 mm (9.40")	327 kg (720 lbs)
	4.95:1					

**Model MG-509  
Marine Transmission**

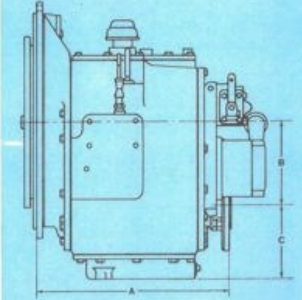
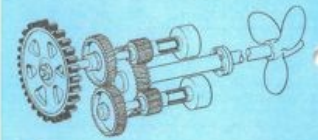


- Oil controlled clutch engagement
- Carbureted and hardened gears
- Emergency come-home feature
- Built with jig bore accuracy
- Rubber block drive
- Ratios: 1.45:1, 2.00:1, 2.48:1, 2.95:1, 3.39:1, 3.83:1, 4.50:1 and 4.95:1
- Equipped with either SAE No. 1 or No. 2 housing
- Dry flywheel housing
- Both clutches removable with transmission attached to engine
- Identical performance and ratios forward or reverse
- Hydraulically-actuated and oil-cooled clutches shift with smooth, fast, fingertip response

The MG-509 Marine Transmission is the most popular marine transmission in its horsepower range. The 1.45:1, 2.00:1, 2.48:1, 2.95:1 and 3.39:1 ratio units are identical in design except for the size of the pinions and the countershaft gear. The 3.83:1, 4.50:1 and 4.95:1 ratio units use a deeper case as the center distance of the gears is greater. The carbureted and hardened gears are straddle-mounted on anti-friction bearings on short, rigid shafts. The transmission may be purchased with an SAE No. 1 or No. 2 housing.

Three driving rings are available with the No. 1 housing and one driving ring with the No. 2 housing. Maximum safe speed with Part No. A-6911 driving ring is 2300 rpm. The MG-509 is designed for full horsepower operation continuously in either forward or reverse position.

An externally-mounted heat exchanger, top-mounted power take-off, a mating propeller shaft coupling flange and a trolling valve assembly are available as optional equipment with the MG-509 Marine Transmission. The



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trolling valve is applicable to both right-hand and left-hand rotation engines turning either right-hand or left-hand propellers.

**Heat Exchanger**

Kits available from Twin Disc consist of a heat exchanger with flexible hoses and necessary fittings for installation on the top cover plate of the transmission. Customers who wish to furnish their own heat exchanger should contact the nearest Twin Disc or marine engine distributor. When ordering, specify if raw or fresh water is to be used in the heat exchanger. Heat exchanger can be remotely-mounted if a top PTO is used.