mercruiser STERN DRIVES & INBOARDS

service bulletin

TO: SERVICE MANAGER ☐ TECHNICIANS ☐
PARTS MANAGER ☐

Revised April 99

No. 97-4

MCI /Alpha One / Alpha One Generation II Gear Case and Bearing Bore Differences

Models

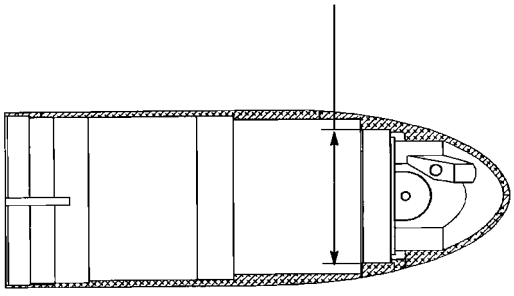
All

Description

Alpha One Generation II

1. Alpha One Generation II Standard Rotation
   a. The Alpha One Generation II with the new smaller forward gear bearing bore started with the 1996 Model Year with serial number 0F680000 & Higher.
   b. Some MCI and Alpha One gear case housings have been changed in the forward gear bearing bore, from 3.4985 - 3.5000 inches I.D. (88.86-88.90 mm) to the new smaller bore of 3.2635 - 3.2650 inches I.D. (82.89-82.93 mm). Drawings of the bearing bore dimensions are shown below for reference.

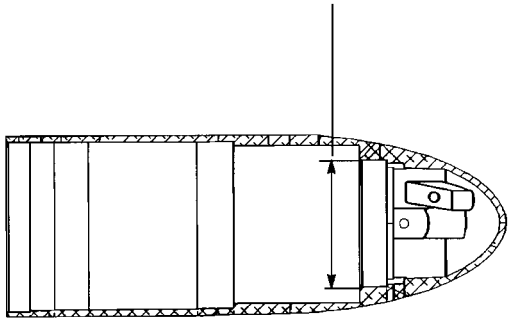
3.4985 - 3.5000 in. I.D.
(88.86-88.90 mm)



75241

0F680153 and Lower

3.2635 - 3.2650 in. I.D.
(82.89-82.93 mm)



75248

0F680154 and Higher

The tables on the following pages list items that have been affected by the change.

   c. The following is a supersession list to use when ordering the MCI / Alpha One or the Alpha One Generation II lower gear housing as a **complete assembly** for replacement of the original lower unit.

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Gear Housing Complete Supersession Listing				
Models	**Ratio**	**(Original) Gear Housing Assy Complete**	**Superseded by**	**Serial No. Range**
120	1.98:1	1623-5356A20	1623-8951A43	4893635 and up
140	1.98:1	1623-5356A20	1623-8951A43	4893635 and up
165	1.65:1	1623-5356A20	1623-8951A43	4890460 and up
470	1.84:1	1623-5356A20	1623-8951A43	4893835 and up
485	1.84:1	1623-5356A20	1623-8951A43	4893835 and up
225 - S	1.50:1	1623-5356A3	1623-8951A43	3856268 thru 4200499
228	1.50:1	1623-5356A3	1623-8951A43	4782330 and up
228	1.50:1	1623-5356A20	1623-8951A43	4898730 and up
233	1.32:1	1623-8951A2	1623-8951A43	4200500 and up
250	1.32:1	1623-5356A3	1623-8951A43	4791300 and up
250	1.32:1	1623-8951A2	1623-8951A43	4791300 and up
260	1.50:1	1623-5356A20	1623-8951A43	4898730 and up
888	1.50:1	1623-4110A6	1623-8951A43	3784374 and below
888	1.50:1	1623-4110A13	1623-8951A43	3784375 thru 3909577
898	1.50:1	1623-8951A2	1623-8951A43	4782330 and up
898	1.50:1	1623-5356A20	1623-8951A43	4898730 and up
470	1.84:1	1623-5356A3	1623-8951A43	4208730 and up
470	1.84:1	1623-8951A2	1623-8951A43	4208730 and up
R	ALL	1623-5356A20	1623-8951A43	6225577 and up
MR	ALL	1623-5356A20	1623-8951A43	6225577 and up
Alpha One	ALL	1623-8951A23	1623-8951A43	6225577 and up
Alpha One	ALL	1623-8951A14	1623-8951A43	6225577 and up
Alpha One Gen II	All STD ROT.	1623-815822A5	1623-815822A32	0D469859 thru 0F679999
Alpha One Gen II	ALL Counter ROT.	1623-815822A7	1623-815822A33	0D469859 thru 0F679999
1623-815822A30		Gen II Style	No Load Pin in the end of the Drive Shaft	
1623-8951A43		Alpha Style	No Load Pin in the end of the Drive Shaft	
1623-5356A20		MC/I Style	With Load Pin in the end of the Drive Shaft	

d. The following is a supersession list to use when ordering the **Gear Housing Only** for replacement of the original lower unit.

provided by http://www.crowleymarine.com

Gear Housing Only Supersession List				
Models	**Ratio**	**(Original) Gear Housing Only**	**Superseded by**	**Serial No. Range**
120	1.98:1	1623-5356A4	None Required	4893635 and up
140	1.98:1	1623-5356A4	None Required	4893635 and up
165	1.65:1	1623-5356A4	None Required	4890460 and up
470	1.84:1	1623-5356A4	None Required	4893835 and up
470	1.84:1	1623-5356A4	None Required	4208730 and up
470	1.84:1	1623-5356A4	None Required	4208730 and up
485	1.84:1	1623-5356A4	None Required	4893835 and up
225 - S	1.50:1	1623-5356A4	None Required	3856268 thru 4200499
228	1.50:1	1623-5356A4	None Required	4782330 and up
228	1.50:1	1623-5356A4	None Required	4898730 and up
233	1.32:1	1623-5356A4	None Required	4200500 and up
250	1.32:1	1623-5356A4	None Required	4791300 and up
250	1.32:1	1623-5356A4	None Required	4791300 and up
260	1.50:1	1623-5356A4	None Required	4898730 and up
888	1.50:1	1623-4110A3	1623-5356A4	3784374 and below
888	1.50:1	1623-4110A3	1623-5356A4	3784375 thru 3909577
888	1.50:1	1623-5356A4	None Required	3909578 and up
898	1.50:1	1623-5356A4	None Required	4782330 and up
898	1.50:1	1623-5356A4	None Required	4898730 and up
R	ALL	1623-5356A4	None Required	6225577 and up
MR	ALL	1623-8951A15	1623-8951A37	6225577 and up
Alpha One	ALL	1623-8951A27 (Black)	1623-8951A37	6225577 and up
Alpha One	ALL	1623-8951A14 (Oyster)	1623-8951A37	6225577 and up
Alpha One Gen II	ALL STD ROT.	1623-815822A6	1623-815822A30	0D469859 thru 0F679999
Alpha One Gen II	ALL Counter ROT.	1623-815822A6	1623-815822A28	0D469859 thru 0F679999
Alpha One Gen II	ALL STD ROT.	1623-815822A36	None Required	0F680000 and up
Alpha One Gen II	ALL Counter ROT.	1623-815822A36	None Required	0F680000 and up

e. Before ordering a replacement **Gear Housing Only** for any of the previously listed units, you will need to look in the housing, at the cavity in front of the trim tab screw hole, for the casting number.

f. Order the appropriate housing number after determining the casting number.

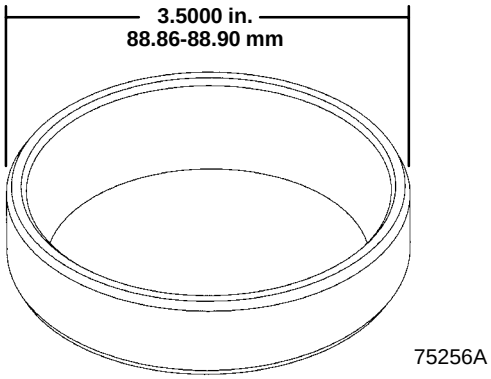
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GEAR HOUSING ONLY	
If Casting Number:	**Order Housing Number:**
1623-8950C 2	1623-8951A37
1623-8266C	1623-5356A4
1623-815822C 3	1623-815822A30

All of the numbers listed above are on the parts Micro-Fiche card.

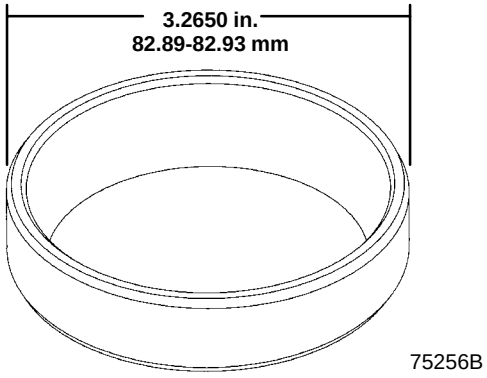
g. The parts and numbers required to replace the 17/28 gears in a 1995 and previous Alpha One Gen II Right Hand Rotation lower unit, with the 13/21 gears are listed. Included is the 3.4985 - 3.5000 inch O.D. (88.86-88.90 mm) bearing to fit the forward gear bearing bore.

43-828072A2 Gear Set includes =	Forward gear	- 43-828072
	Pinion gear	- 43-828071
	Reverse gear	- 43-828073
	Forward gear bearing	- 31-828437A2



Bearing Cup 31-828437A2

h. The 1623-815822A6 Gear Housing Only supersedes to 1623-815822A30. The A30 housing includes one 31-828439A2 forward gear bearing that allows you to install the 17/28 gears and the 14/28 gears into the new housing which has a 3.2635 - 3.2650 inch O.D. (82.89-82.93 mm) forward gear bearing bore.



Bearing Cup 31-828439A2

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When Ordering Gear Housing:	Supersedes To:	Current Part Number:
1623-8951A27 (3.4895-3.5000 in. O.D.) (88.86-88.90 mm) Fwd. Gr. Brg.	➔	1623-8951A37 (3.2635-3.2650 in. O.D.) (82.89-82.93 mm) Fwd. Gr. Brg.
1623-815822A6 (3.4895-3.5000 in. O.D.) (88.86-88.90 mm) Fwd. Gr. Brg.	➔	1623-815822A30 (3.2635-3.2650 in. O.D.) (82.89-82.93 mm) Fwd. Gr. Brg.

When Ordering Gear Housing:	Along With:	Gear Set	Order	Forward Gear Bearing
1623-8951A27	➔	43-828072A2 (13/21)	➔	31-30894A1 (3.2635 - 3.2650 in. OD.) (82.89-82.93 mm)
1623-815822A6	➔	43-828072A2	➔	31-30894A1 (3.2635 - 3.2650 in. OD.) (82.89-82.93 mm)
1623-8951A27	➔	43-828072A3 (13/21)		31-30894A1 (3.2635 - 3.2650 in. OD.) (82.89-82.93 mm) **(Included with Gear Set)**
1623-815822A6	➔	43-828072A3 (13/21)		31-30894A1 (3.2635 - 3.2650 in. OD.) (82.89-82.93 mm) **(Included with Gear Set)**

Housing Type	Gear Tooth Count	Bearing Number	Bearing Cup O.D.	Casting No.
Current Housing	13/21	31-30894A1	3.2635-3.2650 (82.80-82.93 mm)	1623-8950C2
1995 and Prior Housing	13/21	31-828437A2	3.4895-3.5000 (88.86-88.60 mm)	1623-8266C
Old Gears New Housing	14/28	31-828439A2	3.2635-3.2650 (82.80-82.93 mm)	1623-815822C3
	17/28			

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