MerCruiser SERVICE BULLETIN

Section: XII *(Bulletins)*
Number: 67-~~18~~ 10
Date : 8/16/67 x

Cupped Propeller Selection *(For Installation Section II)*

CUPPED PROPELLER SELECTION *(For Installation Section II)*

We have prepared this article to answer the question "When to use a cupped propeller".

"Cupping" refers to altering a propeller by rolling or turning the trailing edge of the blade. The cup causes the propeller to do more work on the water before it slides off the trailing edge of the blade.

When a propeller is cupped, its effective pitch is increased 1" to 2".

There are two basic reasons for using a cupped propeller:

1 - If a standard propeller cavitates (thus allowing the propeller to spin, as if in air, and providing little thrust) when accelerating in a tight turn or above certain speeds on a straight course, this effect may be greatly reduced or eliminated by selecting the next lower pitched cupped propeller. This problem usually exists when the design of the boat bottom has either a large keel or an appendage that causes surface air to feed into the propeller. The cup enables a propeller to still produce thrust.
Cupping probably will not improve top speed, unless the boat suffers from wide-open throttle cavitation.

2 - Finally, the stern drive may have been installed too high on the transom in an effort to obtain higher top speed, and the propeller, subsequently, draws down surface air around the anti-cavitation plate, thereby impeding planing the boat. Here, again, a cupped propeller is required for good performance in a water-air mixture.

A boat, that reaches a relatively severe angle of attack to the water when attempting to plane, may suffer from propeller cavitation. This may require a cupped propeller to achieve planing. Some boaters prefer going to the next lower pitch cupped propeller, because they find that better acceleration is obtained without any loss in top speed.

Cupped propellers are listed in the following chart:

Part No.	MerCruiser Model	Alum. Dia.	Prop Pitch	No. of Blades
B-48-36032A4	IB-IC-120-150-160	16"	27"	2
B-48-36028A4	IB-IC-120-150-160	14½"	27"	3
B-48-36030A4	IA-B-C-120-150-160	16"	25"	2
B-48-36008A4	IA-B-C-120-150-160	14½"	25"	3
B-48-36010A4	IA-B-C-120-150-160	14½"	23"	3
C-48-32386A4	80	13-3/4"	23"	2
B-48-36012A4	IA-B-C-120-150-160	15"	21"	3
C-48-31454A4	80	13-3/4"	21"	2
C-48-32746A4	80	13"	21"	3
B-48-36014A4	IA-B-C-120-150-160	15½"	19"	3
C-48-32388A4	80	13-3/4"	19"	2
C-48-32750A4	80	13"	19"	3
C-48-38396A4	60	10-3/4"	19"	3
B-48-36016A4	IA-B-C-120-150-160	15-3/4"	17"	3
C-48-32264A4	80	13"	17"	3
C-48-38394A4	60	10-3/4"	17"	3
B-48-36018A4	IA-B-C-120-150-160	16"	15"	3
C-48-32390A4	80	14"	15"	3
C-48-38086A4	60	10-3/4"	15"	3
B-48-36020A4	IA-B-C-120-150-160	16"	13"	3
C-48-32392A4	80	13½"	13"	3
C-48-38090A4	60	10-3/4"	13"	3
C-48-38094A4	60	10-3/4"	12"	3
B-48-36022A4	IA-B-C-120-150-160	16"	11"	3
C-48-35936A4	80	14"	11"	3
C-48-38098A4	60	10-3/4"	11"	3
C-48-33774A4	60	10-3/4"	10"	3
C-48-33242A4	80	14"	9½"	3
B-48-36024A4	IA-B-C-120-150-160	16"	9"	3
C-48-32194A4	60	10-3/4"	9"	3
C-48-37314A4	60	11"	8"	3