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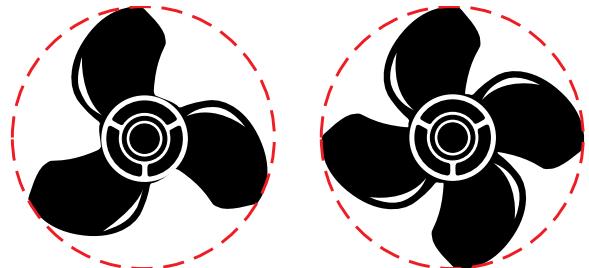
XHS™ Hub Propeller Cross Reference & Motor Application Guide

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PROPELLER BASICS

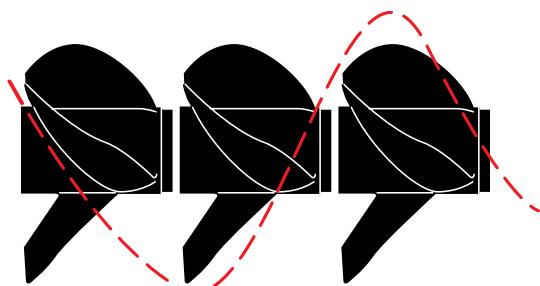
Diameter

Diameter is two times the distance from the center of the hub to the tip of the blade. It also can be looked at as the distance across the circle that the propeller would make when rotating. It is the first number listed when describing a propeller.



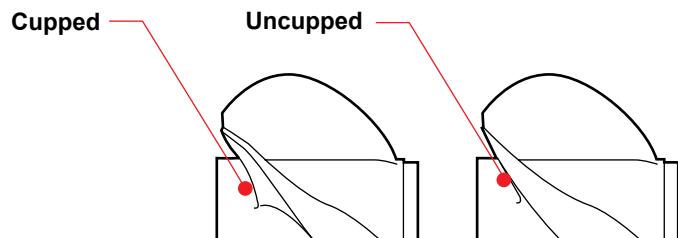
Pitch

Pitch is defined as the theoretical forward movement of a propeller during one revolution — assuming there is no “slippage” between the propeller blade and the water. For most boats, there is slippage and therefore the distance advanced is less than the design pitch. The amount of slippage varies from boat to boat. Pitch is the second number listed in the propeller description.



Cupping

Many of today's propellers incorporate a cup at the trailing edge of the propeller blade. This curved lip on the propeller allows it to get a better bite on the water. This results in reduced ventilation, slipping, and allows for a better hole shot in many cases. A cupped propeller also works very well where the motor can be trimmed so that the propeller is near the surface of the water. The cup will typically result in higher top end speed on one of these applications.

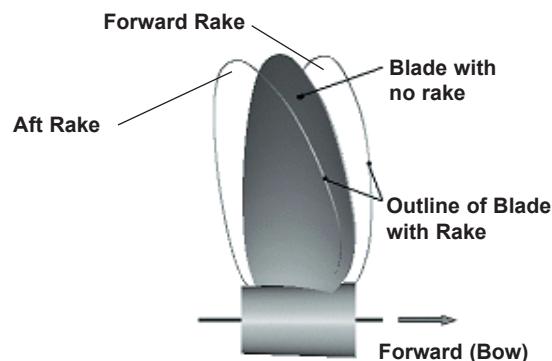


Rake

Rake is the degree that the blades slant forward or backwards in relation to the hub. Rake can affect the flow of water through the propeller, and as implications with respect to boat performance.

Aft Rake helps to trim the bow of the boat upwards, which often results in less wetted surface area and therefore higher top end speed. Aft rake propellers also typically “bite” better on ventilating type applications.

Forward, or negative rake, helps hold the bow of the boat down. This is more common in workboat type applications.



Ventilation

Ventilation is a situation where surface air or exhaust gasses are drawn into the propeller blades. When this situation occurs, boat speed is lost and engine RPM climbs rapidly. This can result from excessively tight cornering, a motor that is mounted very high on the transom, or by over-trimming the engine.

Cavitation

Cavitation, (which is often confused with ventilation), is a phenomena of water vaporizing or “boiling” due to the extreme reduction of pressure on the back of the propeller blade. Many propellers partially cavitate during normal operation, but excessive cavitation can result in physical damage to the propeller's blade surface due to the collapse of microscopic bubbles on the blade.

There may be numerous causes of cavitation such as incorrect matching of propeller style to application, incorrect pitch, physical damage to the blade edges, etc...

Be advised disturbances in the water flow forward of the propeller can result in blade damage which appears to be blade cavitation, but is actually due to non-favorable water flow into the propeller.

PROPELLER CHARACTERISTICS

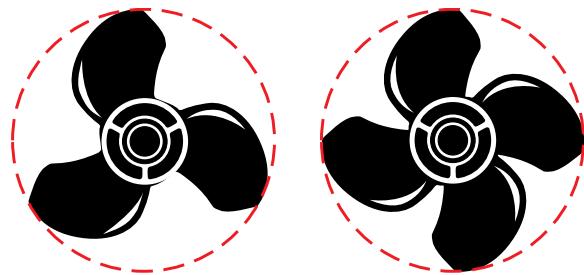
Finding the right match between the propeller, engine type and boat size will optimize the following performance factors — increased top end, faster planing speed, improved low end punch and load carrying capability.

If you want to modify your boat's performance, consider the following before making your selection.

3 blades ... or 4?

We recommend 3-blade propellers for recreational boats with 3, 4, and 6 cylinder outboards and I/O engines. These propellers provide good "hole shot" and top-speed performance.

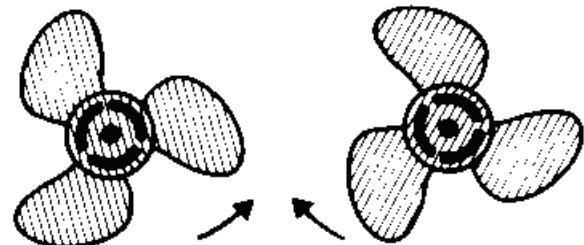
We recommend 4-blade propellers for bass boats and boats with high performance hulls running high horsepower outboard engines. Compared to 3 blades, they provide better "hole shot" performance with less steering torque and less vibration at high speeds.



What's the advantage of a left-hand prop?

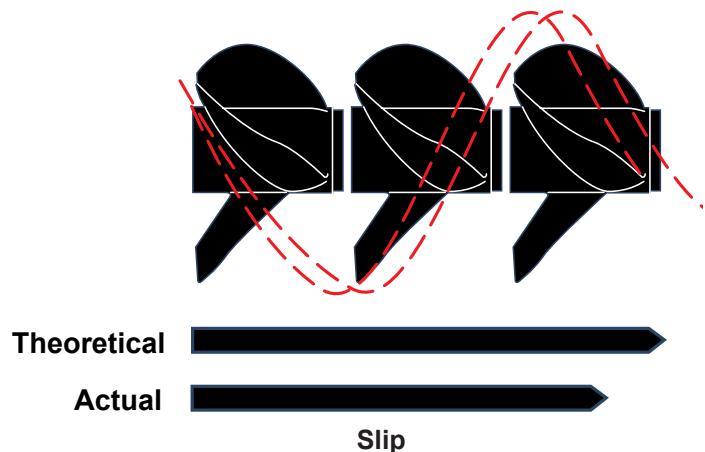
Two propellers spinning the same direction on twin engine boats will create steering torque. In other words, two right-hand propellers pull the stern hard to the right and the bow to the left.

Two opposite-direction propellers on twin engines eliminate this steering torque because the left-hand propeller balances out the right-hand propeller. This results in better straight-line tracking and helm control at high speed.



How does wheel diameter, pitch, and slip affect performance ... and how is it measured?

Slip is the difference between actual and theoretical travel of the propeller blades through water. A properly matched propeller will actually move forward about 80 to 90 percent of the theoretical pitch.



PROPELLER CHARACTERISTICS

What is the difference between thru-hub exhaust, over-hub exhaust, and non thru-hub exhaust?

Thru-hub exhaust propellers consist of a round barrel to which the blades are attached. The exhaust passes through the barrel and out the back, without making contact with the propeller blades. This provides provides a good clean water flow to the blades, usually resulting in good acceleration and hole shot.

Over-hub exhaust propellers have the blades attached directly to the smaller tube that fits over the propeller shaft, eliminating the larger exhaust tube. These types of propellers are often used for attaining maximum top speeds. (On some boats, the hole shot can often suffer due to the extreme exhaust flooding that occurs around the propeller blades during acceleration.)

Thru-hub exhaust and **over-hub exhaust** propellers are used on boats where the exhaust passes out though the rear of the "torpedo" on the lower unit, around the propeller shaft. Most outboards utilize this type of exhaust.

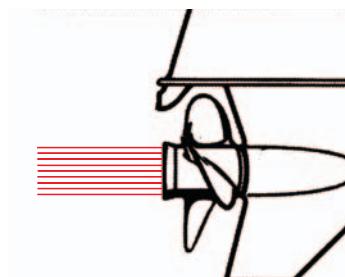
Over/Thru-hub exhaust propellers are a combination of thru-hub and over-hub exhaust propellers. This allows some exhaust to escape at lower RPMs, providing a controlled amount of exhaust flooding. These types of propellers will allow the propeller to be slightly easier to turn during initial acceleration, allowing for a better hole shot on some engine/boat combinations.

Non thru-hub exhaust propellers are used for inboards using shaft driven propellers, sterndrives using through hull exhaust, and on some outboards that don't route the exhaust through the lower unit torpedo.

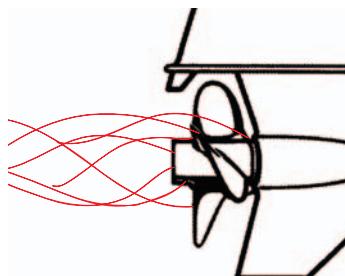
Aluminum vs. Stainless Steel?

Most pleasure boats are factory equipped with aluminum propellers. Aluminum propellers are relatively inexpensive, easy to repair, and under normal conditions can last for many years.

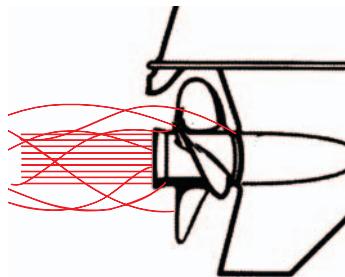
Stainless steel is more expensive, but much stronger and durable than aluminum. If you are looking for better performance than can be provided by your aluminum propeller, such as ultimate top speed or better acceleration, a stainless steel propeller may be required.



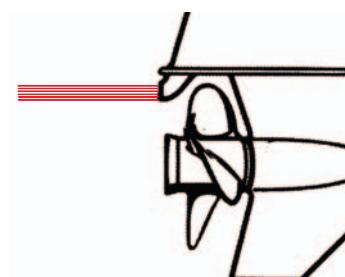
THRU-HUB EXHAUST PROPELLERS



OVER-HUB EXHAUST PROPELLERS



OVER/THRU-HUB EXHAUST PROPELLERS



NON THRU-HUB EXHAUST PROPELLERS

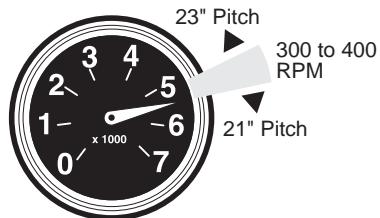
DETERMINING RPM

Now, determine your wide open throttle (WOT) RPM

For safety and efficient performance, it is critical that your engine operates within the RPM range recommended by the manufacturer. Matching the right prop for the load is the most significant factor of RPM adjustment.

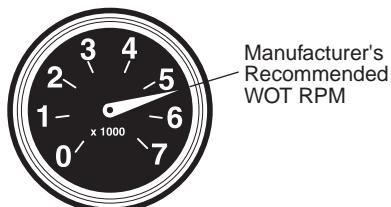
Effect of Prop Pitch on RPM

A pitch change can increase or decrease the RPM's and bring RPM's into the recommended range. A 2" **increase** in pitch (for example, from 21" to 23") typically results in a **decrease** of approximately 300-400 RPM.



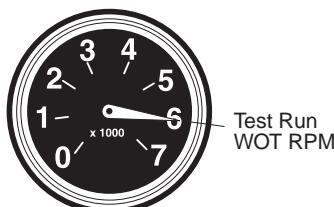
First, Determine Manufacturer's Recommended RPM

Find the manufacturer's recommended RPM range in the owner's manual or ask your dealer.



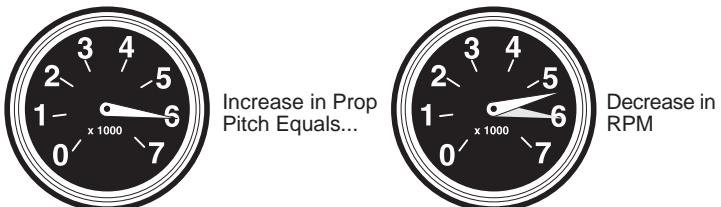
Test for Maximum RPM

Using the existing propeller or a new propeller, make test runs to determine the maximum RPM and boat speed. Vary the trim angle for optimum performance.



RPM Higher Than Recommended

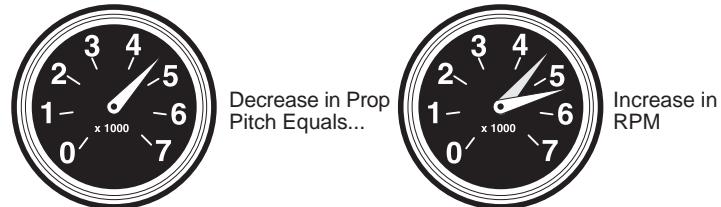
If the actual WOT RPM's are **above** the recommended RPM range, install the next larger pitch propeller to **decrease** your WOT RPM. Re-test the WOT RPM.



RPM Lower Than Recommended

If the actual WOT RPM range is below the recommended range, install the next smaller pitch propeller to **increase** your WOT RPM. Re-test the WOT RPM.

When you combine all these factors, you have the information you need to select the correct propeller for maximum performance, safety, and fuel efficiency.



ABOUT MICHIGAN MATCH™ PROPELLERS

The perfect replacement prop!

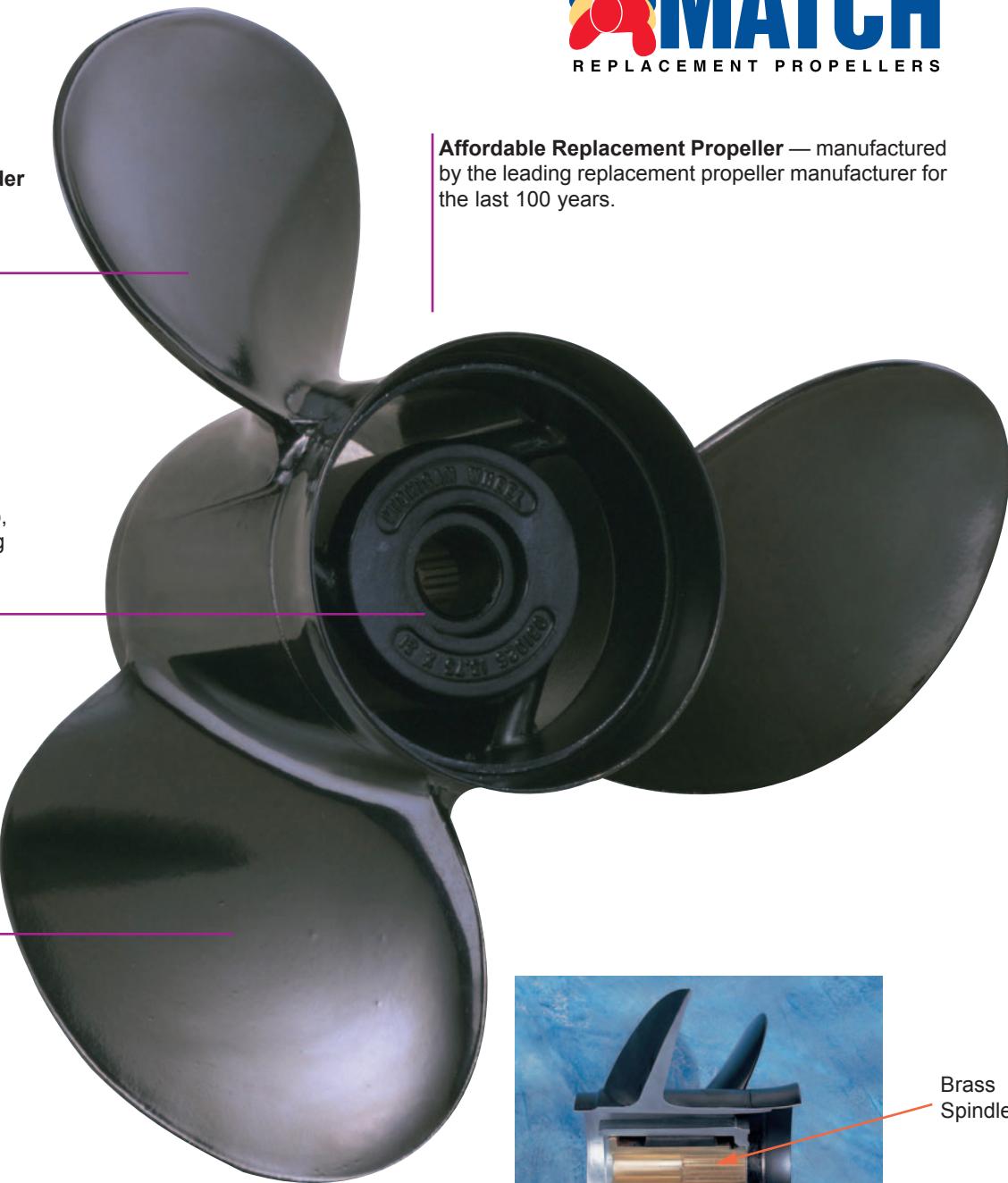


High gloss black powder coat finish, minimizes speed loss from drag, protects aluminum.

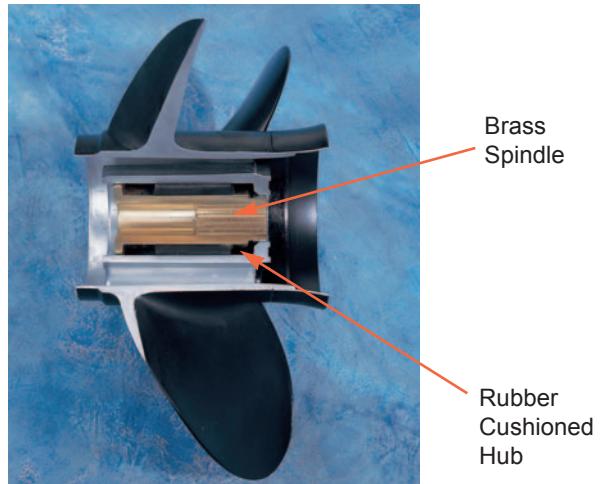
Cushioned rubber hub, absorbs impact reducing the potential for lower unit damage.

Warranty, Michigan Match propellers are backed by Michigan Wheel's limited lifetime warranty.

Affordable Replacement Propeller — manufactured by the leading replacement propeller manufacturer for the last 100 years.



Cutaway of Propeller and Bushing Assembly



Brass Spindle

Rubber Cushioned Hub

ABOUT RAPTURE™ PROPELLERS

This is Rapture™.



Cupped trailing blade edge extends past the blade tip to better grab and hold water, dramatically enhancing performance and efficiency.

Sharply thinned leading edges maximize acceleration and reduce speed-robbing drag.

Thickly tapered trailing edge provides durability, and makes the blade easy to repair after heavy impact.

High performance blade geometry features a high rake and progressive pitch design to provide the optimum combination of dead start acceleration, bow lift, and flat out speed.

One piece cast construction of premium 15-5 stainless steel alloy provides superior strength under conditions where welded blades typically fail.

Buffed mirror finish minimizes speed loss from drag, reduces corrosion, and looks great doing it.

Large blade area easily meets high horsepower demands, maximizing thrust and reducing performance-draining phenomena like ventilation or cavitation.

Flared hub design keeps exhaust from causing speed-robbing ventilation blow-out.

Optimal blade thickness means each blade is carefully engineered thin enough to maximize speed, but thick enough to take punishment.

Vent hole plugs** let you fine tune hole shot and acceleration performance to your unique application.

Precision drilled vent holes** give you maximum hole shot and acceleration from a dead start.

** Only available on V-4 & V-6 Applications.

ABOUT BALLISTIC™ PROPELLERS

Advantages That Make A Difference.



Tapered leading edge minimizes drag, provides performance characteristics of racing style props while maintaining optimum blade strength and thickness

Optimized power tip for peak efficiency; blade tip and cup combine to improve bite and reduce power losses caused by cavitation

Use of **standard OEM hub geometry** simplifies installation, repair and replacement

One-piece investment cast construction from 15-5ph stainless steel, the ideal material for strength and corrosion resistance

High luster mirror finish adds appeal and enhances corrosion resistance

Shock-absorbing hub prevents damage to gears and shaft caused by shifting and prop impact

Highly cambered blade sections provide for higher speed and better bow lift

Blades are hand balanced during finishing to assure consistency and minimize vibration



13-inch models feature solid-cast flared hub to prevent performance loss from ventilation

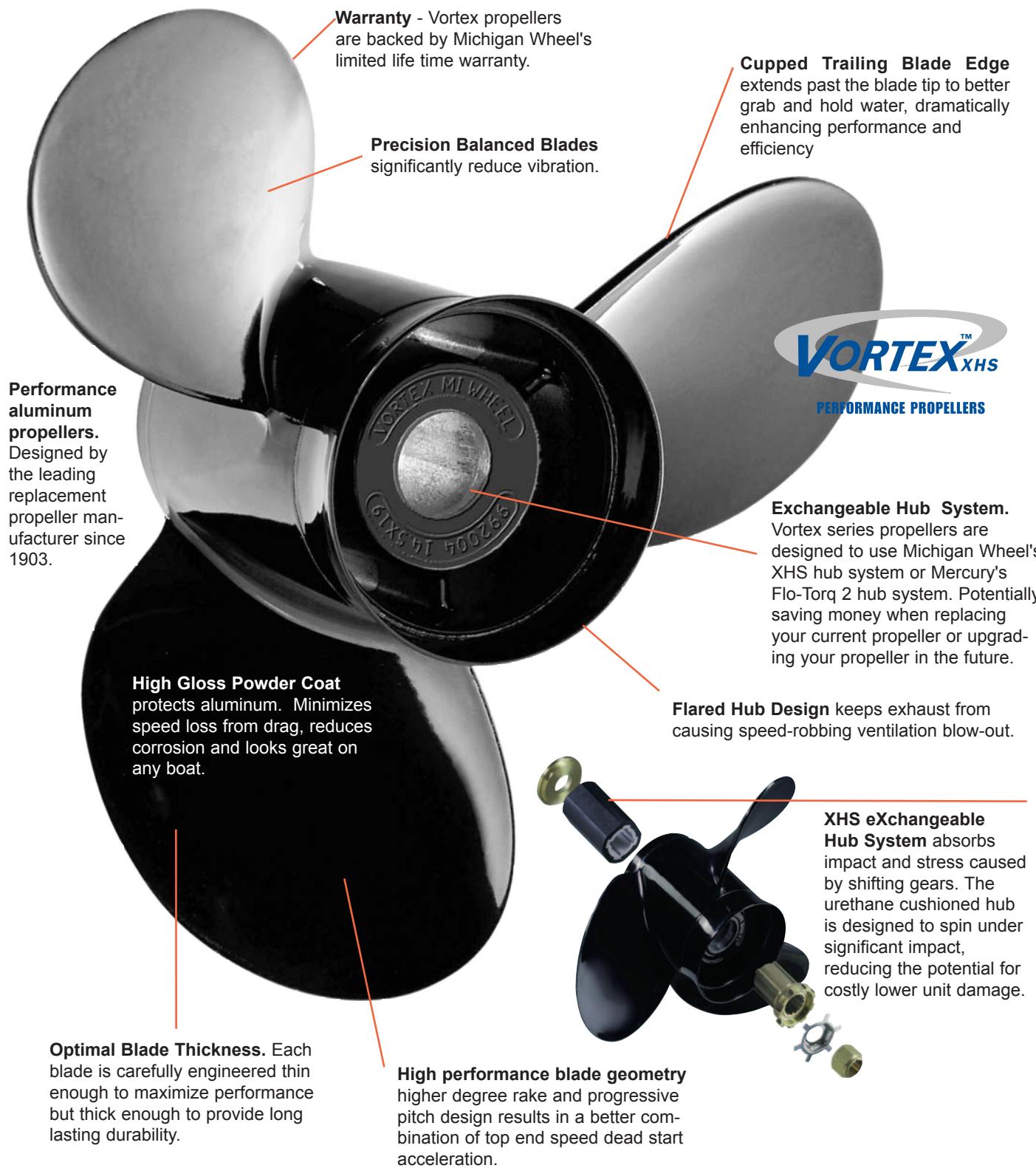


V-6 Series

14-inch models with high pitch (21", 23" and 25") have a vented hub design that allows the engine to come up to speed and get on plane quickly

ABOUT VORTEX™ PROPELLERS

Vortex™ propellers and XHS™ Exchangeable Hub Systems...performance and versatility.



AMBUSH-2002

Smooth power times four.

The **Ambush4™** is a new, highly polished precision balanced 4 blade NiBrAl propeller designed specifically for the ski and wakeboard enthusiast. We have

developed a manufacturing process that offers you the greatest combination of performance characteristics while offering blade consistency that significantly minimizes vibration, a combination that will help your driver maintain the steady speed you need.



Ambush™

The polish. The pull. The prop to remember.

Part Number	Dia. x Pitch	Rotation	Bore
635101	13 x 13	LH	1"
635103	13 x 13	LH	1-1/8"
635300	13 x 16	RH	1"
635302	13 x 16	RH	1-1/8"
635400	14 x 18	RH	1"
635401	14 x 18	LH	1"
635402	14 x 18	RH	1-1/8"
635403	14 x 18	LH	1-1/8"
635404	14 x 18	RH	1-1/4"
635405	14 x 18	LH	1-1/4"
Available Fall 2002:			
635443	14 x 20	LH	1-1/8"



Eat My Wake

**Michigan
Wheel
Corporation**

Outboard/Sterndrive Division
2685 Northridge Ave. N.W.
Suite G
Grand Rapids, MI 49544
Phone: (616) 452-6941
Fax: (616) 246-1440

Inboard Division
1501 Buchanan Ave. S.W.
Grand Rapids, MI 49507
Phone: (616) 452-6941
Fax: (616) 247-0227

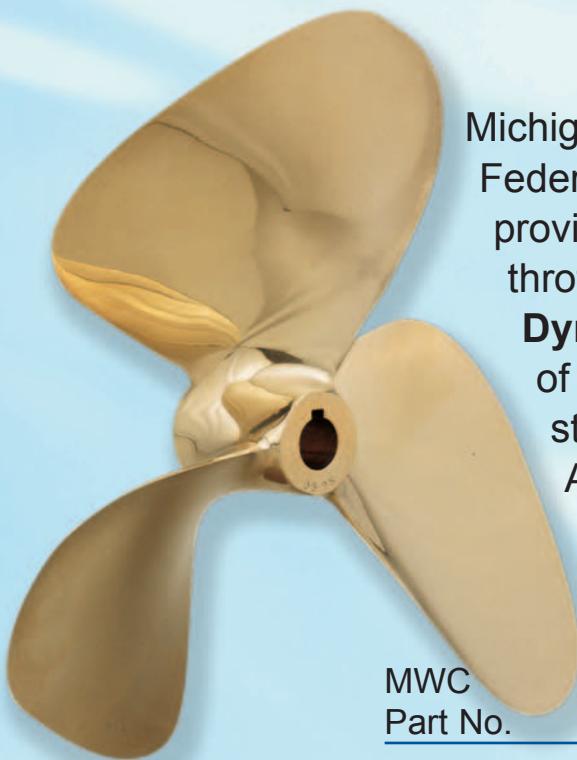
E-mail: info@miwheel.com
Web site: www.miwheel.com

Application Guide

Manufacturer	Application	Transmission	4-Blade	Ambush P/N
Brendella	Prior to 1992	1:1	13 x 13 LH 1"	635101
	After 1992	1:1	13 x 13 LH 1-1/8"	635103
	N/A	1.23:1	14 x 16 LH 1"	*
Centurian	Eclipse / Elite	1:1	13 x 13 LH 1-1/8"	635103
Correct Craft	Ski Nautique	1:1	13 x 13 RH 1"	*
	Ski Nautique	1.23:1	13 x 16 RH 1"	635300
	V-Drives	1.46:1	14 x 18 RH 1-1/8"	635402
	Barefoot w/454	1:1	14 x 14 RH 1"	*
Malibu	Prior to 1992	1:1	13 x 13 LH 1"	635101
	After 1992	1:1	13 x 13 LH 1-1/8"	635103
	Boats w/320 HP	1:1	13 x 14 LH 1-1/8"	*
	V-Drives	1.46:1	14 x 18 LH 1-1/8"	635403
	8.1 Litre	1.5	14 x 20 LH 1-1/8"	635443
Mastercraft	N/A	1:1	13 x 13 LH 1"	635101
	N/A	1.5:1	14 x 18 LH 1-1/8"	635403
	Boats w/454	1:1	13 x 14 LH 1"	*
	1988 TBI Eng.	1:1	13 x 13 LH 1"	635101
	1998 TBI Eng.	1.5:1	14 x 20 LH 1-1/8"	635443
M.B. Sports	N/A	1:1	13 x 13 LH 1-1/8"	635103
Moomba	Kanga, Mobius Pro	1:1	13 x 13 LH 1	635101
	Outback	1:1	13 x 13 LH 1	635101
	Kamberra, Mobius V	1.5	14 x 18 LH 1-1/8"	635403
Sanger	Prior to 1992	1:1	13 x 13 LH 1"	635101
	After 1992	1:1	13 x 13 LH 1-1/8"	635103
Supra	N/A	1:1	13 x 13 LH 1"	635101
	N/A	1.23:1	13 x 16 RH 1"	635300
	Boats w/454	1:1	N/A	*
Tige	201 / 2100 Riders	1:1	13 x 13 LH 1-1/8"	635103
	2100 V LTD, 21 V Riders	1.5	14 x 18 LH 1-1/8"	635403
	2300 V LTD	1.5	14 x 18 LH 1-1/8"	635403

*Call for availability. Ski Nautique is a registered trademark of Correct Craft.

DYNA-JET CUPPED



Michigan Wheel Corporation's Federal Series ski boat propellers provide consistent response to your throttle commands. The **3-blade Dyna-Jet Cupped** Propellers are made of a NiBrAl alloy which provides extra strength, less flex, and greater durability. All are cupped to minimize the performance draining effects of cavitation.

MWC Part No.	Dia. x Pitch	Rot.	Bore
310649	13 x 12	LH	1
310625	13 x 12-1/2	LH	1-1/8
310660	3 x 12-1/2	LH	1-1/8
310661	13 x 13	LH	1
310659	13 x 13	LH	1-1/8
310705	13 x 13-1/2	LH	1-1/8
310724	13 x 14	RH	1
310725	13 x 14	LH	1
310727	13 x 14	LH	1-1/8
310763	13 x 15	LH	1
310765	13 x 15	LH	1-1/8
310801	13 x 15-1/2	LH	1-1/8
310836	13 x 17	RH	1
311244	14 x 15	RH	1
311284	14 x 16	RH	1
311360	14 x 18	RH	1-1/8
311361	14 x 18	LH	1-1/8

•All styles are Dyna Jet Cup

•Dynamic Balancing

HOW TO USE THIS SECTION

- If original equipment part number (OEM) is known and a size or style change is not desired, then refer to Part Number Cross Reference on pages 14-26 to locate the equivalent Michigan propeller.
- If an original part number is not known, the part number can not be found in the Part Number reference, or a propeller size or style change is desired, use the following procedure for selecting a propeller.

- Locate the brand of outboard or sterndrive using the table of contents.
- Locate the **Horsepower/Model** and **Year** that corresponds with the engine brand.
- Under the corresponding "Propeller Application" heading, locate the range of your boat's length, and the boat use that best describes your vessel and usage.
- Once this is located, read across to obtain the **Diameter & Pitch** of the recommended propeller for your application.

The propeller sizes to the right of the Boat Length/Description are suggested for that application. Often two or more pitch sizes are listed for a given Boat Length. The higher the pitch, the more top speed potential, but less power for acceleration. The lower the pitch, the less top speed potential but more power for acceleration.

- Order the propeller using the **Michigan Part Number**.

If aluminum is desired, read across to the correct column for the part number. If stainless steel is desired read across to the correct column for the part number.

Note: This is a "general" application guideline for determining the appropriate propeller size for your vessel. Performance characteristics may vary due to the many kinds of boats, hull styles, loads and style of boating.

Example Application: 18' Runabout used mainly for skiing and cruising with the family.
1988, 120 HP Johnson Outboard. Customer wants a cupped, aluminum propeller.

EVINRUDE®, JOHNSON®

85-140 HORSEPOWER • V4 GEARCASE

85 HP	1969-80, 1991-95	110 HP	1986-89	125 HP	1971-72
88 HP	1981-1996	112 HP	1994-96	135 HP	1973-76
90 HP	1981 & Newer	115 HP	1973 & Newer	140 HP	1977-94
100 HP	1979-80, 1988-93	120 HP	1986-94		

(13 SPLINES & THRU HUB EXHAUST)

Boat Length/Description	Diameter Rot. & Pitch	Blade#	Aluminum Part No.		Stainless Part No.		Rapture Performance Stainless			Ballistic High Performance Stainless			
			OEM	Michigan	OEM	Michigan	Dia. x Pitch	Blades	RH	LH	Dia. x Pitch	Blades	RH	LH
CR, HB	14 R 10	4		012074									
CR, HB	14 R 10	4		★011036									
CR, HB	14 R 11	3	382761	012047									
CR, HB	14 R 11	3		★011038									
CR, HB	14 R 12	4		012075									
CR, HB	14 R 12	4		★011037									
CR, HB	14 R 13	3	391668	*011001									
20-24' - AL, SK	13-3/4 R 15	3	391198	*01102	389948	013028	13-1/4 x 15	3	►013076		13-5/8 x 15	3	335030
19-22' - AL, SK	13-1/4 R 17	3	391199	*01103			13-1/4 x 17	3	►013077		13-1/2 x 17	3	335031
19-22' - AL, SK	13-3/8 R 17	3			389948	013030							
19-22' - AL, SK	14 R 17	3	176214	*011024									
17-19' - AL, SK	13 R 19	3	390896	*011004	389510	013033	13-1/4 x 19	3	►013078		13-3/8 x 19	3	335032
17-19' - AL, SK	14 R 19	3	176215	*011025									
15-18' - AL, SK	12-3/4 R 21	3	389788	*011005	389512	013034	13-1/4 x 21	3	►013079		13-1/8 x 21	3	335033
15-18' - AL, SK	14 R 21	3	176216	*011026									
High Performance										Ballistic 3 XL	13-1/2 x 22	3	335034
High Performance										Ballistic 3 XL	13-1/2 x 24	3	335035

Key to abbreviations: LL: Light Loads; SB: Sailboat; AL: All Loads; SK: Skiboat; WB: Workboat; HB: Houseboat; CR: Cruisers; HL: Heavy Loads; WD: Weedless

★ Indicates Cupped Propeller

* If currently using uncupped propeller, use cupped propeller having 2" less pitch. Boats with power trim use same pitch.

► LIMITED INVENTORY ITEMS.

MICHIGAN WHEEL ALPHA-NUMERIC CROSS REFERENCE

Alpha Numeric	Numeric	Page #	Alpha Numeric	Numeric	Page #	Alpha Numeric	Numeric	Page #
AM431	012067	.28	PJ 95	012054	.29	PR126	012094	.56
AMC308	072014	.33,34	PJ 96	012055	.29	PR151	032089	.42,54
AMC310	072131	.35	PJ 97	012056	.29	PR153	032090	.42,54
AMC314	072133	.35	PJ 98	012057	.29	PR155	032091	.42,54
AMC316	072134	.35	PJ199-C	011015	.33,55,57	PR155-C	031001	.42
AMC394	072132	.35	PJ200-C	011016	.33,55,56,57	PR157	032092	.42,54
AMC422	012068	.28	PJ201-C	011006	.33,55,56,57	PR157-C	031002	.42
AMC490	152002	.34	PJ202-C	011007	.33,55,56,57	PR159	032093	.42,54
AMC580-S	032077	.40	PJ203-C	011008	.33,55,56,57	PR159-C	031003	.42
DQ320	012074	.31,32	PJ204-C	011009	.33,55,56,57	PR161	032094	.42,54
DQ328	012075	.31,32	PJ205-C	011010	.33,55,56,57	PR161-C	031004	.42
EWC19	012076	.29,38	PJ300	012060	.28	PR276	072054	.36
G 20	072017	.34	PM 8	032014	.39,40	PR278	072055	.36
G 30	152014	.34	PM 19	032019	.39,40	PR339	032099	.41
NP 74	302001	.32,56	PM 20	032020	.39,40	SMC 18	012101	.28,48
PC 12	072024	.34	PM 21	032021	.39,40	SMC 39	012102	.29,40,49
PC 20	072026	.34	PM 22-C	031047	.35,40	SMC292	082022	.58
PC 32	072121	.34	PM 23-C	031048	.35,40	SMC293	082021	.58
PC 28	072122	.34	PM 24-C	031049	.35,40	SMC295	082023	.58
PC112	072123	.34	PM 39	022001	.40,49	SMC348	082033	.58
PJ 3	012001	.28	PM 40	022002	.40,49	SMC349	082034	.58
PJ 7	012004	.28	PM 42	022003	.40,49	SMC374-C	031035	.54
PJ 8	012005	.28	PM211-C	031021	.43,52,50	SMC376-C	031036	.54
PJ 9	012006	.28,38	PM213-C	031022	.43,52,50	SMC378-C	031037	.54
PJ 10	012007	.28	PM215-C	031023	.43,52,50	SMC380-C	031038	.54
PJ 11	012008	.28,48	PM217-C	031024	.43,52,50	SMC382-C	031039	.54
PJ 15	012010	.29,38,40,49	PM219-C	031025	.43,52,50	SMC504-C	031034	.54
PJ 16	012011	.29,38,40,49	PM221-C	031026	.43,52,50	SMC921	082045	.59
PJ 18	012013	.29,38,40,49	PM223-C	031027	.43,52,50	SMC980	082057	.59
PJ 19	012109	.29,38	PM311-C	031054	.37,39,42	SPC180	072107	.36
PJ 21	012014	.29,38	PM313-C	031055	.37,39,42	SPC182	072108	.36
PJ 22	012015	.29	PM315-C	031041	.37,39,42	SPC184	072109	.36
PJ 24	012016	.29	PM317-C	031042	.37,39,42	SSC315-C	073002	.36
PJ 29	012021	.29	PM319-C	031043	.37,39,42	SSC317-C	073003	.36
PJ 30	012022	.30	PM321-C	031044	.37,39,42	SSC319-C	073004	.36
PJ 31	012023	.30	PM323-C	031045	.37,39,42	SSM212-C	033001	.35,41
PJ 32	012024	.30	PM513	032039	.41,47,49	SSM245-C	033002	.43,52
PJ 35	012025	.30	PM515	032040	.41,47,49	SSM247-C	033003	.43,52
PJ 40	012026	.30	PM518	032041	.41,47,49	SSM249-C	033004	.43,52
PJ 41	012027	.30	PM521	032042	.41,47,49	SSM251-C	033005	.43,52
PJ 42	012028	.30	PM524	032043	.41,47,49	SSM253-C	033006	.43,52
PJ 45	012030	.29	PM527	032044	.41,47,49	SSM350-C	033007	.54
PJ 47	012031	.28	PM530	032045	.41,47,49	SSM354-C	033008	.54
PJ 49	012032	.28	PM600-C	031015	.35,41	SSM358-C	033009	.54
PJ 50	012033	.31,35	PM612-C	031016	.35,41	SSM615-C	033016	.37,39,42
PJ 58	012036	.30	PM613-C	031017	.35,41	SSM617-C	033017	.37,39,42
PJ 59	012037	.30	PM614-C	031018	.35,41	SSM619-C	033018	.37,39,42
PJ 60	012038	.30	PM615-C	031019	.35,41	SSM621-C	033019	.37,39,42
PJ 61	012039	.30	PM617-C	031020	.35,41	SSO315-C	013010	.30
PJ 62	012040	.30	PR 33	032084	.32,35	SSV171-C	083001	.58
PJ 74	012042	.32,56	PR 35	032085	.41,54	SSV172-C	083002	.58
PJ 75	012043	.32,56	PR 37	032086	.41,54	SSV191-C	083003	.58
PJ 76	012044	.32,56	PR 39	032087	.41,54	SSV192-C	083004	.58
PJ 77	012045	.32,56	PR 78	072032	.36	SSV211-C	083005	.58
PJ 83-C	011005	.31,32,55,57	PR 80	072033	.36	SSV212-C	083006	.58
PJ 87	012047	.31,32,55,57	PR 82	072034	.36	SSY615-C	103025	.50
PJ 88-C	011001	.31,32,55,57	PR115	012089	.32,56	SSY617-C	103026	.50
PJ 89-C	011002	.31,32,55,57	PR118	012090	.32,56	SSY619-C	103027	.50
PJ 90-C	011003	.31,32,55,57	PR120	012091	.56	SSY717-C	103018	.51,59
PJ 91-C	011004	.31,32,55,57	PR122	012092	.56	SSY719-C	103020	.51,59
PJ 94	012053	.29	PR124	012093	.56	SSY721-C	103022	.51,59

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EVINRUDE, JOHNSON, OMC											
174811 . . . VIPER™(LH)	013069	345063	345555	33,55,56,57		178814 . . . VIPER™	013068	013068	013068	33,55,57	
174812 . . . VIPER™(LH)	013071	345064		33,55,56,57		203120	012001	012001	012001	28	
174813 . . . VIPER™(LH)	013073	345065		33,55,56,57		203682	012001	012001	012001	28	
174814 . . . VIPER™	013068	345033		33,55,56,57		203919	012001	012001	012001	28	
174815 . . . VIPER™	013070	345034		33,55,56,57		204347	012001	012001	012001	28	
174816 . . . VIPER™	013072	345035		33,55,56,57		277212	012076	012076	012076	29	
174889 . . . VIPER™	013066	345032		33,55,56,57		277440	012060	012060	012060	28	
174890 . . . VIPER™(LH)	013067	345062		33,55,56,57		277443	012076	012076	012076	29	
174926 . . . SST II®	013052	013064	345031	33,55,56,57		277580	012024	012024	012024	30	
174927 . . . SST II® (LH)	013051	013065		33,55,56,57		277581	012024	012024	012024	30	
174950	012111				29	277583	012076	012076	012076	29	
175190	012055				29	277595	012006	012006	012006	28	
175191	012056	305029			29	277599	012011	012011	012011	29	
175738 . . . Renegade™ Bass		435036			33	277617	012028	012028	012028	30	
175739 . . . Renegade™ Bass		435037			33	277896	012033	012033	012033	31	
176058 . . . Renegade™ Bass		435035			33	278155	012033	012033	012033	31	
176196 . . . Renegade™ Bass	013079			55,57		278194	012026	012026	012026	30	
176214	011024	013077	335031	31,32,55,57		375605	012109	012109	012109	29	
176215	011025	013078	335032	31,32,55,57		376072	012060	012060	012060	28	
176216	011026	013079	335033	31,32,55,57		376506	012076	012076	012076	29	
176421	011027	013082	325030		30	376732	012024	012024	012024	30	
176422	011028	013083	325031		30	376735	012109	012109	012109	29	
176423	011029	013084			30	376737	012076	012076	012076	29	
176572 . . . SST II®	013077	335031		31,32,55,57		376738	012027	012027	012027	30,56	
176573 . . . SST II®	013078	335032		31,32,55,57		376777	012060	012060	012060	28	
176574 . . . SST II®	013079	335033		31,32,55,57		376805	012011	012011	012011	29	
176575 . . . Renegade™ O.S.(RH)	013066	345032		33,55,56,57		376841	012109	012109	012109	29	
176576 . . . Renegade™ O.S.(RH)	013068	345033		33,55,56,57		376917	012028	012028	012028	30	
176577 . . . Renegade™ O.S.(RH)	013070	345034		33,55,56,57		376968	012060	012060	012060	28	
176578 . . . Renegade O.S.(LH)	013067	345062		33,55,56,57		377410	012023	012023	012023	30	
176579 . . . Renegade O.S.(LH)	013069	345063		33,55,56,57		377632	012060	012060	012060	28	
176580 . . . Renegade O.S.(LH)	013071	345064		33,55,56,57		377635	012007	012007	012007	28	
176615 . . . Swept-Blade™	013066	345032		33,55,56,57		377636	012011	012011	012011	29	
176616 . . . Swept-Blade™(LH)	013067	345062		33,55,56,57		377978	012044	012044	012044	32,56	
176617 . . . Swept-Blade™	013068	345033		33,55,56,57		378039	012045	012045	012045	32,56	
176618 . . . Swept-Blade™(LH)	013069	345063		33,55,56,57		378040	012043	012043	012043	32,56	
176619 . . . Swept-Blade™	013070	345034		33,55,56,57		378571	012026	012026	012026	30	
176620 . . . Swept-Blade™(LH)	013071	345064		33,55,56,57		378579	012025	012025	012025	30	
176623 . . . VIPER™	013077	335031		31,32,55,57		378580	012022	012022	012022	30	
176624 . . . VIPER™	013078	335032		31,32,55,57		378581	012023	012023	012023	30	
176625 . . . VIPER™	013079	335033		31,32,55,57		379260	012042	012042	012042	32,56	
176626 . . . Swept-Blade™	013066	345032		33,55,56,57		379717	012109	012109	012109	29	
176627 . . . Swept-Blade™	013068	345033		33,55,56,57		380104	012004	012004	012004	28	
176628 . . . Swept-Blade™	013070	345034		33,55,56,57		380637	012024	012024	012024	30	
176629 . . . Swept-Blade™(LH)	013067	345062		33,55,56,57		380958	012005	012005	012005	28	
176630 . . . Swept-Blade™(LH)	013069	345063		33,55,56,57		381185	012091	012091	012091	56	
176902 . . . Swept-Blade™(LH)	013071	345064		33,55,56,57		381186	012092	012092	012092	56	
176969 . . . SST®	013068			33,55,56,57		381187	012093	012093	012093	56	
176970 . . . SST®	013068			33,55,56,57		381446	012044	012044	012044	32	
176971 . . . SST®	013070			33,55,56,57		381801	012011	012011	012011	29	
176973 . . . SST® (LH)	013067			33,55,56,57		382017	012090	012090	012090	32,56	
176999 . . . Renegade O.S.(RH)	013072			33,55,57		382676	012089	012089	012089	32,56	
177000 . . . Renegade O.S.(LH)	013073			33,55,57		382761	012047	012047	012047	31,32,55,57	
177034 . . . SST®	013064			33,55,57		382762	011001	011001	011001	31,32,55,57	
177035 . . . SST®	013066			33,55,57		382763	011002	013076	013076	31,32,55,57	
177042 . . . VIPER™	013076			31,55,56		382764	011003	013077	013077	31,32,55,57	
178811 . . . VIPER™(LH)	013069			33,55,57		382765	011004	013078	013078	31,32,55,57	

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EVINRUDE, JOHNSON, OMC (continued)											
382766	011005 . . . 013079				31,32,55,57	389923 . . . SST II®	013048 . . . 013070 . . . 345034			33,55,56,57	
390725 . . . SST®		345036			33,55,57	389924 . . . SST II®	013046 . . . 013068 . . . 345033			33,55,56,57	
390729 . . . SST®		305029			29	389944	012030			29	
390730 . . . SST®		305030			29	389948 . . . SST II®	013030 . . . 013077			31,32,55,57	
389925 . . . SST®		345032			33	389949 . . . SST II®	013028 . . . 013076 . . . 335030			31,32,55,57	
393160 . . . Aluminum	011025 . . . 013078				31,32,55,57	390113 . . . SST®	013033 . . . 013078			31,32,55,57	
383287	012094				56	390114 . . . SST®	013030 . . . 013077			31,32,55,57	
383315	012008				28	390237	012032			28	
383629	012011				29	390380	012057	305030		29	
384139 . . . SST®	013030 . . . 013077				31,32,55,57	390821 . . . SST II® (LH)	013045 . . . 013069 . . . 345063			33,55,56,57	
384140	011005 . . . 013079				31,32,55,57	390822 . . . SST II® (LH)	013047 . . . 013071 . . . 345064			33,55,56,57	
384141 . . . SST®	013034 . . . 013079				31,32,55,57	390823 . . . SST II® (LH)		013073 . . . 345065		33,55,56,57	
384142 . . . SST®	013033 . . . 013078				31,32,55,57	390830	012031			28	
384144 . . . SST®	013028 . . . 013076				31,32,55,57	390833	012024			30	
384460	012028				30	390849 . . . SST®	013024 . . . 013081			30	
384702 . . . SST®	013034 . . . 013079				31,32,55,57	390850 . . . SST®	013010 . . . 013082 . . . 325030			30	
385319	012005				28	390851 . . . SST®	013026 . . . 013083 . . . 325031			30	
385940 . . . SST®	012008				28	390852 . . . SST®	013032 . . . 013084			30	
385955	012023				30	390896	011004 . . . 013078			31,32,55,57	
386118	012111				29	391096	012031			28	
386317	012054				29	391198	011002 . . . 013076 . . . 335030			31,32,55,57	
386637	012055				29	391199	011003 . . . 013077			31,32,55,57	
386669	012113				29	391200	011007 . . . 013066 . . . 345032			33,55,56,57	
386786	012038 . . . 013082				29	391201	011008 . . . 013068 . . . 345033			33,55,56,57	
386841	012039 . . . 013083				30	391202	011009 . . . 013070 . . . 345034			33,55,56,57	
386907	012036 . . . 013080				30	391203	011010 . . . 013072 . . . 345035			33,55,56,57	
386908	012040 . . . 013084				30	391290 . . . SST II®	013044 . . . 013066 . . . 345032			33,55,56,57	
386909	012037 . . . 013081				30	391534	012101			28	
386933	012056				29	391535	011006 . . . 013064 . . . 345031			33,55,56,57	
386955	012005				28	391536	011016			33,55,56,57	
386980 . . . SST®	013026 . . . 013083				30	391668	011001			31,32,55,57	
386981 . . . SST®	013010 . . . 013082				30	391863 . . . SRX™ (RH)				32	
386982 . . . SST®	013024 . . . 013081				30	394752 . . . Raker®	013066 . . . 345032			33,55,56,57	
387158	011016				33,55,56,57	394753 . . . Raker®	013068 . . . 345033			33,55,56,57	
387159	011006 . . . 013064				33,55,56,57	394754 . . . Raker®	013070 . . . 345034 . . . 345041			33,55,56,57	
387160	011007 . . . 013066				33,55,56,57	394755 . . . Raker®	013072 . . . 345035 . . . 345037			33,55,56,57	
387161	011008 . . . 013068				33,55,56,57	394756 . . . Raker®	013074 . . . 345036 . . . 345038			33,55,56,57	
387162	011009 . . . 013070				33,55,56,57	394758 . . . Raker®	013077 . . . 335032			31,32,55,57	
387163	011010 . . . 013072				33,55,56,57	394759 . . . Raker®	013078 . . . 335033			31,32,55,57	
387320	012053				29	394760 . . . Raker®	013079	335034	31,32,55,57		
387334	012008				28	394761 . . . Raker®		335035	31,32,55,57		
387519 . . . SST®	013046 . . . 013068				33,55,56,57	398126 . . . 012112		29			
387520 . . . SST®	013048 . . . 013070				33,55,56,57	398502 . . . Raker® (LH)	013069 . . . 345063			33,55,56,57	
387636	012056				29	398503 . . . Raker® (LH)	013071 . . . 345064			33,55,56,57	
388088	012013				29	398504 . . . Raker® (LH)	013073			33,55,56,57	
388294	012102				29	398505 . . . Raker® (LH)	013075			33,55,56,57	
388883	012016				29	431717 . . . SHOOTER®	013036			33	
389019 . . . SST II®	013050 . . . 013072 . . . 345035				33,55,56,57	431718 . . . SHOOTER®	013038			33	
389029 . . . SST®	013032 . . . 013084				30	431719 . . . SHOOTER®	013040			33	
389068	012021				29	431930 . . . SST II® (LH)	013043 . . . 013067 . . . 345062			33,55,56,57	
389069	012015				29	5911389	012060			28	
389510 . . . SST II®	013033 . . . 013078				31,32,55,57	5911920	012024			30	
389512 . . . SST II®	013034 . . . 013079				31,32,55,57	5911925	012076			29	
389619	012015				29	5911978	012060			28	
389627	012101				28	592038	012076			29	
389788	011005 . . . 013079				31,32,55,57	592063	012060			28	
389855	012023				30	592959	012076			29	
						3850299	161001 . . . 163012 . . . 346031			59	

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EVINRUDE, JOHNSON, OMC (continued)											
3850300	161002	163014	346032		59	48-77348A40	031044	033087	335133		37
3850301	161003	163016	346033		59	48-77348A45 . Black Max™	031044	033087	335133		37
TA2002X	Black Diamond	011015			33,55,57	48-77350A40	031045				37
TA2230T	Black Diamond	032042	033095	395929	30	48-77350A45 . Black Max™	031045				37
TA3030T	Black Diamond	012047			31,32,55,57	48-79792A4 . QSS™	033001	033089			35
TA3032T	Black Diamond	011001			31,32,55,57	48-79792A5 . Vengeance	033001	033089			35
TA3034T	Black Diamond	011002	013076	335030	31,32,55,57	48-816702A40	031056	033089			35
TA3036T	Black Diamond	011003	013077	335031	31,32,55,57	48-816704A40	031057	033090	395129		35
TA3038T	Black Diamond	011024	013077	335031	31,32,55,57	48-816706A40	031058	033091			35
TA3040T	Black Diamond	011004	013078	335032	31,32,55,57	48-819334A40	072133				35
TA3150T	Black Diamond	012011			29	48-819335A40	072132				35
TA3152T	Black Diamond	012013			29	48-819336A40		072131			35
FORCE, CHRYSLER, U.S. MARINE											
48-16986A5 . QSS™	033016	033084	335130		37	48-819337A40	072014				33
48-16986A45 . Vengeance	033016	033084	335130		37	48-819337A45	072014				33
48-16988A40 . QSS™	033017	033085	335131		37	48-85632A40 . Black Max™	031053				35
48-16988A45 . Vengeance	033017	033085	335131		37	48-855858A5 . Vengeance	031057	033090			35
48-16990A40 . Laser II™	033018	033086	335132		37	48-FP19	072017				34
48-16990A45 . Laser II™	033018	033086	335132		37	48-FP372	072033				36
48-16992A40 . Laser II™	033019	033087	335133		37	48-FP488 . Black Max™	072123				34
48-16992A45 . Laser II™	033019	033087	335133		37	48-FP6430 . Black Max™	072026				34
48-19638A40 . Black Max™	031049				35	48-FP669-1	071035				36
48-19640A40 . Black Max™	031048		305129		35	48-FP669-2	071035				36
48-19642A40 . Black Max™	031047		305130		35	48-FP669-3	071035				36
48-42738A10 . Black Max™	032141				35	48-FP685-1	071036				36
48-42740A10 . Black Max™	032142				35	48-FP685-2	071036				36
48-64724A1	031020				35	48-FP685-3	071036				36
48-64724A4	031020				35	48-FP686-1	071037				36
48-73132A4	031015	033088			35	48-FP686-3	071037				36
48-73132A40 . Black Max™	031015	033088			35	48-FP686-4	071037				36
48-73134A4	031016	033089			35	48-FP692-1	072127				36
48-73134A40 . Black Max™	031016	033089			35	48-FP692-2	072127				36
48-73136A4	031017	033090	395129		35	48-FP692-3	072127				36
48-73136A40 . Black Max™	031017	033090	395129		35	48-FP694	071038				36
48-73138A4	031018	033091			35	48-FP70 . Black Max™	072024				35
48-73138A40 . Black Max™	031018	033091			35	FA282265	072132				35
48-73140A4	031019	033092	395130		35	FA287265	072131				35
48-73140A40 . Black Max™	031019	033092	395130		35	FA378265	072132				35
48-73144A4	031020				35	FP273	072133				35
48-73144A40 . Black Max™	031020				35	FP274	072014				34
48-76228A4 . QSS™	033090	395129			35	FP276	072014				34
48-76228A5 . Vengeance	033090	395129			35	FP277	072131				35
48-76230A4 . QSS™	033028	033091			35	FP278	072014				34
48-76230A5 . Vengeance	033028	033091			35	FP282	072132				35
48-76232A4 . QSS™	033092	395130			35	FP286	072026				34
48-76232A5 . Vengeance	033092	395130			35	FP287	072131				35
48-77338A40	031054				35	FP293	072132				35
48-77338A45 . Black Max™	031054				35	FP319	072121				34
48-77340A40	031055				37	FP324	152002				34
48-77340A45 . Black Max™	031055				37	FP327	072121				34
48-77342A40	031041	033084	335130		37	FP328	072014				34
48-77342A45 . Black Max™	031041	033084	335130		37	FP330	072026				34
48-77344A40	031042	033085	335131		37	FP366	072014				34
48-77344A45 . Black Max™	031042	033085	335131		37	FP372	072033				36
48-77350A45 . Black Max™	031045				37	FP378	072132				35
48-77346A40	031043	033086	335132		37	FP383	072034				36
48-77346A45 . Black Max™	031043	033086	335132		37	FP389	072032				36
48-77346A40	031043	033086	335132		37	FP395 . Black Max™	072121				34
48-77346A45 . Black Max™	031043	033086	335132		37	FP408	072026				34

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FORCE, CHRYSLER, U.S. MARINE (continued)											
FP472 Black Max™ 072122	34	TA2076T Black Diamond 031057 033090 395129	35								
FP501 072054	36	TA2080T Black Diamond 031058 033091	35								
FP509 073008	36	TA2084T Black Diamond 031019 033092 395130	35								
FP510 073004	36	TA2102T Black Diamond 031049	35								
FP511 073010	36	TA2106T Black Diamond 031048	35								
FP519 072055	36	TS1116 Silverado 033016 033084 335130	37								
FP523 072107	36	TS1118 Silverado 033017 033085 335131	37								
FP524 072108	36	TS1120 Lightspeed 033086 335132	37								
FP526 072109	36	TS1122 Lightspeed 033087 335133	37								
FP539 073003	36	TS1164T Silverado 033001 033089	35								
FP540 073004	36	TS1166T Silverado 033090 395129	35								
FP623 072107	36	TS1168T Silverado 033028 033091	35								
HONDA											
FP654 072108	36	58110-ZV4-300 102005	38								
FP664 073007	36	58110-ZV4-DT15 112004	38								
FP665 071035	36	58130-881-840ZA 012109	38								
FP668 073008	36	58130-881-840ZB 012109	38								
FP669 071035	36	58133-ZV5-010AH 033093	38								
FP669-1 071035	36	58133-ZV5-012AH 033094	38								
FP682 072127	36	58133-ZV5-013AH 033095 395929	38								
FP685 072128	36	58133-ZV5-014AH 033096	38								
FP685-1 072128	36	58133-ZV5-015AH 033096	38								
FP686 072129	36	58133-ZW1-A15AH 033084 335130	39								
FP686-1 071037	36	58133-ZW1-A17AH 033085 335131	39								
FP686-2 072129	36	58133-ZW1-A19AH 033086 335132	39								
FP692 072127	36	58130-935-000N 012109	38								
FP692-1 072127	36	58130-935-600N 012109	38								
FP694 071038	36	58130-ZV4-000ZA 102005	38								
FP695 073009	36	58130-ZV4-010ZA 102005	38								
FP696 073010	36	58130-ZV4-020ZA 102005	38								
FP699 073007	36	58130-ZV4-030ZA 102005	38								
FPM736 031020	35	58130-ZV4-030ZB 102005	38								
FPM738 031019 033092	35	58130-ZV4-700ZA 102004	38								
FPM752 QSS™ 033028 033091	35	58130-ZV4-701ZA 102004	38								
FPM754 QSS™ 033001 033089	35	58130-ZV4-702ZA 102004	38								
FPM756 031015 033088	35	58130-ZV4-703ZA 102004	38								
FPS501 072054	36	58130-ZV4-703ZB 102004	38								
FPS509 073008	36	58130-ZV5-000ZA 032042 033095 395929	38								
FPS510 073004	36	58130-ZV5-850ZA 032043 033094	38								
FPS511 073010	36	58130-ZV5-860ZA 032045 033093	38								
FPS519 072055	36	58130-ZV5-870ZA 032040 033097 395930	38								
FPS523 072107	36	58130-ZW1-V01 033017 033085 335131	39								
FPS524 072108	36	58130-ZW1-V11 033018 033086 335132	39								
FPS526 072109	36	58130-ZW1-V31 033019 033087 335133	39								
FPS623 072107	36	58130-ZW1-W01ZA 031054	39								
FPS625 072108	36	58130-ZW1-W11ZA 031055	39								
FPS626 072109	36	58130-ZW1-W21ZA 031041 033084 335130	39								
FPS654 072108	36	58130-ZW1-W31ZA 031042 033085 335131	39								
FPS686 072129	36	58130-ZW1-W41ZA 031044 033087 335133	39								
FS501265 072054	36	58130-ZW1-W51ZA 031045	39								
TA2034 Black Diamond 031041 033084	37	58130-ZW1-W61ZA 031043 033086 335132	39								
TA2036 Black Diamond 031042 033085	37	58130-ZW1-W91 033016 033084 335130	39								
TA2038 Black Diamond 031043 033086	37	58110-ZV5-E30 033094	38								
TA2040 Black Diamond 031044 033087	37	58110-ZV5-E20 033095 395929	38								
TA2060T Black Diamond 032141	35	58110-ZV5-E10 033096	38								
TA2064T Black Diamond 031015 033088	35	58110-ZV5-E00 033097 395930	38								
TA2070T Black Diamond 031053	35	08M60-ZW7-A00 033084 335130	39								
TA2072T Black Diamond 031053	35	08M60-ZW7-A10 033085 335131	39								

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HONDA (continued)											
08M60-ZW7-A20		033086	335132			39	48-13706A46. Mirage®Plus	033036			43
08M60-ZW7-A30		033087	335133			39	48-13707A41. Mirage®(LH)	033035			43
TA3150T . Black Diamond	012011					38	48-13707A45. Mirage®Plus(LH)	033035			43
TA3152T . Black Diamond	012013					38	48-13707A55. Mirage®Plus(LH)	033057			53
TA3902T . Black Diamond	102003					38	48-137706A55. Mirage®Plus	033058			53
TA3906T . Black Diamond	102003					38	48-16312A 4 . QSS™	033002	033072	345131	43,52
TA3914T . Black Diamond	102005					38	48-16312A 5 . QSS™	033002	033072	345131	43,52
MERCURY, MARINER, MERCRAUISER											
48-11070A40. Laser™		033078				43,52,54	48-16312A 46. Vengeance	033002	033072	345131	43,52
48-11074A40. Laser™		033080				43,52,54	48-16314A 4 . QSS™	033003	033074	345132	43,52
48-11320A40.	031050	033072				43,52	48-16314A 45. Vengeance	033003	033074	345132	43,52
48-11322A40.	031051	033074				43,52	48-16314A 46. Vengeance	033003	033074	345132	43,52
48-11324A40.	031052	033076				43,52	48-16315A 4 . QSS™ (LH)	033075	345162		43,52
48-11324A45. Black Max™	031052	033076				43,52	48-16315A 5 . QSS™ (LH)	033075	345162		43,52
48-13242A 5 . Mirage®	033052					53	48-16315A 45. Vengeance(LH)	033075	345162		43,52
48-13242A 50. Mirage®	033052					53	48-16316A 4 . QSS™	033004	033076	345133	43,52
48-13243A 5 . Mirage®(LH)	033053					53	48-16316A 5 . QSS™	033004	033076	345133	43,52
48-13243A 50. Mirage®(LH)	033053					53	48-16316A 45. Vengeance	033004	033076	345133	43,52
48-13244A 5 . Mirage®	033054					53	48-16316A 46. Vengeance	033004	033076	345133	43,52
48-13244A 50. Mirage®	033054					53	48-16317A 4 . QSS™ (LH)	033077	345163		43,52
48-13245A 5 . Mirage®(LH)	033055					53	48-16317A 5 . QSS™ (LH)	033077	345163		43,52
48-13245A 50. Mirage®(LH)	033055					53	48-16317A 45. Vengeance(LH)	033077	345163		43,52
48-13246A 5 . Mirage®	033056					53	48-16318A 4 . QSS™	033005	033078	345134	43,52
48-13246A 50. Mirage®	033056					53	48-16318A 5 . QSS™	033005	033078	345134	43,52
48-13247A 5 . Mirage®(LH)	033057					53	48-16318A 45. Vengeance	033005	033078	345134	43,52
48-13247A 50. Mirage®(LH)	033057					53	48-16318A 46. Vengeance	033005	033078	345134	43,52
48-13248A 5 . Mirage®	033058					53	48-16319A 4 . QSS™ (LH)	033079	345164		43,52
48-13248A 50. Mirage®	033058					53	48-16319A 5 . QSS™ (LH)	033079	345164		43,52
48-13700A40. Mirage®	033030		345133			43,52	48-16319A 45. Vengeance(LH)	033079	345164		43,52
48-13700A41. Mirage®	033030		345133			43,52	48-16320A 4 . QSS™	033006	033080	345135	43,52
48-13700A45. Mirage®	033030		345133			43,52	48-16320A 4 . QSS™	033006	033080	345135	43,52
48-13700A46. Mirage®	033030		345133			43,52	48-16320A 5 . QSS™	033006	033080	345135	43,52
48-13700A55. Mirage®	033030		345133			43,52	48-16320A 5 . QSS™	033006	033080	345135	43,52
48-13701A40. Mirage®(LH)	033029		345163			43,52	48-16320A45. QSS™	033006	033080	345135	43,52
48-13701A41. Mirage®(LH)	033029		345163			43,52	48-16320A45. Vengeance	033006	033080	345135	43,52
48-13701A45. Mirage®Plus(LH)	033029		345163			43,52	48-16320A46. Vengeance	033006	033080	345135	43,52
48-13702A40. Mirage®	033032		345134			43,52	48-16321A 4 . QSS™ (LH)	033081	345165		43,52
48-13702A41. Mirage®	033032		345134			43,52	48-16321A 5 . QSS™ (LH)	033081	345165		43,52
48-13702A45. Mirage®Plus	033032		345134			43,52	48-16321A45. Vengeance(LH)	033081	345165		43,52
48-13702A46. Mirage®Plus	033032		345134			43,52	48-16322A 4 . QSS™	033082	345136		43,52
48-13702A55. Mirage®Plus	033054		345134			53	48-16322A45.	033085	345136		43,52
48-13703A40. Mirage®(LH)	033031		345164			43	48-16322A46. Vengeance	033082	345136		43,52
48-13703A41. Mirage®(LH)	033031		345164			43	48-16436A40.	031063			43,52
48-13703A45. Mirage®Plus(LH)	033031		345164			43	48-16436A45. Black Max™	031063			43,52
48-13703A55. Mirage®Plus(LH)	033053		345164			53	48-16438A40.	031050	033072		43,52
48-13704A40. Mirage®	033034		345135			43	48-16438A45. Black Max™	031050	033072		43,52
48-13704A41. Mirage®	033034		345135			43	48-16440A40.	031051	033074		43,52
48-13704A45. Mirage®Plus	033034		345135			43	48-16440A45. Black Max™	031051	033074		43,52
48-13704A46. Mirage®Plus	033034		345135			43	48-16543A40. Laser II™(LH)	033077	345163		43,52
48-13704A55. Mirage®Plus	033056		345135			53	48-16543A41. Laser II™(LH)	033077	345163		43,52
48-13705A40. Mirage®(LH)	033033		345165			43	48-16543A45. Laser II™(LH)	033077	345163		43,52
48-13705A41. Mirage®(LH)	033033		345165			43	48-16544A40. Laser II™	033076	345133		43,52
48-13705A45. Mirage®Plus(LH)	033033		345165			43	48-16544A41. Laser II™	033076	345133		43,52
48-13705A55. Mirage®Plus(LH)	033033		345165			43	48-16544A45. Laser II™	033076	345133		43,52
48-13706A40. Mirage®	033036		345136			43	48-16544A46. Laser II™	033076	345133		43,52
48-13706A41. Mirage®	033036		345136			43	48-16545A40. Laser II™(LH)	033079	345164		43,52
48-13706A45. Mirage®Plus	033036		345136			43	48-16545A41. Laser II™(LH)	033079	345164		43,52

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MERCURY, MARINER, MERCRAUISER (continued)											
48-16545A45. Laser II™(LH).....	033079	345164				43,52	48-32264A 4	031002	033085		42
48-16546A40. Laser II™	033078	345134				43,52	48-32386A 3	032094	033086		42
48-16546A41. Laser II™	033078	345134				43,52	48-32386A 4	031045			42
48-16546A45. Laser II™	033078	345134				43,52	48-32388A 3	032093	033085		42
48-16547A40. Laser II™(LH).....	033081	345165				43,52	48-32388A 4	031003	033086		42
48-16547A41. Laser II™(LH).....	033081	345165				43,52	48-32390A 3	032091			42,54
48-16547A45. Laser II™(LH).....	033081	345165				43,52	48-32390A 4	031001	033084		42
48-16548A40. Laser II™	033080	345135				43,52	48-32392A 3	032090			42,54
48-16548A41. Laser II™	033080	345135				43,52	48-32392A 4	032091			42,54
48-16548A45. Laser II™	033080	345135				43,52	48-32746A 3	032094	033086		42
48-16549A40. Laser II™(LH).....	033083					43,52	48-32746A 4	031004	033087		42
48-16549A41. Laser II™(LH).....	033083					43,52	48-32748A 3	032093	033085		42
48-16549A45. Laser II™(LH).....	033083					43,52	48-32748A 4	031003	033086		42
48-16550A40. Laser II™	033082	345136				43,52	48-32750A 3	032093	033085		42,54
48-16550A41. Laser II™	033082	345136				43,52	48-32750A 4	031003	033086		42
48-16550A45. Laser II™	033082	345136				43,52	48-33480A 1	032135			39
48-16550A45. Laser II™	033082	345136				43,52	48-33482A 1	032136			39
48-16986A 5 . QSS™	033016	033084				42	48-33772A 1	032084			41,54
48-16986A45. Vengeance	033016	033084				42	48-33772A 4	032084			41,54
48-16988A 5 . QSS™	033017	033085				42	48-33774A 1	032084			41,54
48-16988A45. Vengeance	033017	033085				42	48-33774A 4	032084			41,54
48-16990A40. Laser II™	033018	033086	335132			42	48-35936A 3	032090			42,54
48-16990A45. Laser II™	033018	033086	335132			42	48-35936A 4	032039			41
48-16992A40. Laser II™	033019	033087	335133			42	48-36008A 1	031039	033080		54
48-16992A45. Laser II™	033019	033087	335133			42	48-36010A 1	031038	033078		54
48-17874A12.....	032050					39	48-36010A 4	031039	033080		54
48-19638A40. Black Max™	031049					40	48-36012A 1	031037	033076		54
48-19640A40. Black Max™	031048		305129			40	48-36012A 4	031038	033078		54
48-19642A40. Black Max™	031047		305130			40	48-36012A 5	031036	033074		54
48-22575A 2	032077					40	48-36014A 1	031036	033074		54
48-29658A 4	031003	033086				42	48-36014A 4	031037	033076		54
48-30388A 1	032093	033085				42	48-36014A1.....	031036	033074		54
48-30390A 1	032092	033084				42	48-36014A4.....	031037	033076		54
48-30396A 1	032089					42,54	48-36016A 1	031035	033072		54
48-30396A 3	032089					42,54	48-36016A 4	031036	033074		54
48-30396A 4	032089					42,54	48-36016A1.....	031035	033072		54
48-31072A 4	032092	033084				42	48-36016A4.....	031036	033074		54
48-31080A 1	032093	033085				42	48-36018A 1	031034			54
48-31082A 1	032092	033084				42	48-36018A 4	031035	033072		54
48-31454A 3	032094	033086				42	48-36018A4.....	031035	033072		54
48-31454A 4	031004	033087				42	48-36020A 1	031034			54
48-31456A 3	032093	033085				42	48-36020A 4	031034			54
48-31456A 4	031003	033086				42	48-36022A 1	031021			43,52
48-31458A 3	032092	033084				42	48-36022A 4	031021			43,52
48-31458A 4	031002	033085				42	48-37902A 4	032093	033085		42
48-32180A 1	032087					41,54	48-38090A 1	032087			41,54
48-32180A 4	032087					41,54	48-38094A 1	032086			41,54
48-32182A 1	032087					41,54	48-38094A 4	032087			41,54
48-32182A 4	032087					41,54	48-38098A 1	032085			41,54
48-32184A 1	032086					41,54	48-38098A 4	032086			41,54
48-32184A 4	032086					41,54	48-42518A10.....	032060			39
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362-64108-0	142019					45	3858027 . . . VIPER™(RH)	103048			59
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3B7-64536-0	142011	103057	335931			46	3858029 . . . VIPER™(LH)	103047			59
3B7-64541-0	142012	103057	335932			46	3858030 . . . VIPER™(LH)	103049			59
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3C7645140	142012	103057	335932			46	813226	082045			59
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3850307-4	163004	163014	346032			59	850865-7	082014-1			58
3850308 . . . SST®	163006	163016	346033			59	850866-5	082015-1			58
3850308-2	163006	163016	346033			59	850867-3	082016-1			58
3850309 . . . SST®	163008	163018	346034			59	851035-6	082089-1			58
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3850317 . . . SST® (LH)	163005	163017	346063			59	852138-7	083004			58
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3850318 . . . SST® (LH)	163007	163019	346064			59	854146-8	082032-1			58
3850318-1	163007	163019	346064			59	854147-6	082031-1			58
3850319 . . . SST® (LH)	163009	163021	346065			59	854148-4	082030-1			58
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6G5-45949-00-EL	101030	103052				51,59	MAR-GYT3B-L6-18 (LH)	103047	345963		51,59
6G5-45952-00-98	101026	103044				51,59	MAR-GYT3B-L6-20 (LH)	103049	345964		51,59
6G5-45952-00-EL	101026	103044				51,59	MAR-GYT3B-L6-22 (LH)	103051	345965		51,59
6G5-45970-00-98		103044				51,59	MAR-GYT3B-V4-18	103057	335932		51,59
6G5-45970-01-98		103044				51,59	MAR-GYT3B-V4-20	103058	335933		51,59
6G5-45970-02-98		103044	345931			51,59	MAR-GYT3B-V4-22	103059			51,59
6G5-45972-00-98		103022	103050			51,59	MAR-GYT3B-V6-16	103044	345932		51,59
6G5-45972-01-98		103022	103050			51,59	MAR-GYT3B-V6-18	103046	345933		51,59
6G5-45972-02-98		103022	103050	345934		51,59	MAR-GYT3B-V6-20	103048	345934		51,59
6G5-45972-03-98		103022	103050			51,59	MAR-GYT3B-V6-22	103050	345935		51,59
6G5-45974-00-98		103020	103048			51,59	MAR-GYT3B-V6-24	103052	345936		51,59
6G5-45974-01-98		103020	103048			51,59	MAR-GYT3B-V6-25	103054			51,59
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6G5-45974-03-98		103020	103048	345933		51,59	MAR-GYT4B-V6-22	103030		435935	51
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6G5-45978-01-98		103018	103046			51,59	MAR-VMAX3-04-20	103058	335933		50
6G5-45978-02-98		103018	103046			51,59	MAR-VMAX3-04-22	103059			50
6G5-45978-03-98		103018	103046	345932		51,59	MAR-VMAX3-06-16	103044	345932		51,59
6H5-45943-00-EL		032040	033097	395930		49	MAR-VMAX3-06-18	103046	345933		51,59
6H5-45945-00-EL		032042	033095	395929		49	MAR-VMAX3-06-20	103048	345934		51,59
6H5-45958-00-EL			033096			49	MAR-VMAX3-06-22	103050	345935	435935	51,59
6H5-45952-00-EL		032043	033094			49	MAR-VMAX3-06-24	103052	345936	435936	51,59
6J9-45970-B0-00			103054			51,59	MAR-VMAX3-06-26	103054		435937	51,59
6J9-45972-B0-00			103052		345937	51,59	MAR-VMAX3-C6-18 (LH)	103047	345963		51,59
6J9-45976-10-00			103050		345941	50	MAR-VMAX3-C6-20 (LH)	103049	345964		51,59
6K1-45947-00-98		031024	033074	345932		50	MAR-VMAX3-C6-22 (LH)	103053	345965		51,59
6K1-45945-00-98		031025	033076	345933		51	MAR-VMAX4-06-22	103030			51,59
6K1-45970-00-98 (LH)			103045			51,59	MAR-VMAX4-06-24	103032			59
6K1-45970-01-98 (LH)			103045			51,59	MAR-VMAX4-06-26	103034			59
6K1-45972-00-00 (LH)			103051			51,59	TA2000X Black Diamond	031021			50
6K1-45972-00-98 (LH)			103051			51,59	TA3150T Black Diamond	012011			49
6K1-45972-01-98 (LH)			103051	345964		51,59	TA3152T Black Diamond	012013			49
6K1-45974-00-00 (LH)			103049			51,59	TA3808T Black Diamond	022002			49
6K1-45974-00-98 (LH)			103049			51,59	TA3902T Black Diamond	102003			48
6K1-45974-01-98 (LH)			103049			51,59	TA3906T Black Diamond	102004			48
6K1-45974-02-98 (LH)			103049	345963		51,59	TA3914T Black Diamond	102005			48
6K1-45976-00-98 (LH)			103053	345965		51,59					
6K1-45976-01-98 (LH)			103053			51,59					
6K1-45978-00-00 (LH)			103047			51,59					
6K1-45978-00-98 (LH)			103047			51,59					
6K1-45978-01-98 (LH)			103047			51,59					
6R1-45976-AO-00 (LH)			103045			51,59					
6R1-45978-AO-00 (LH)			103047			51,59					
6R1-45970-AO-00 (LH)			103049			51,59					
6R1-45972-AO-00 (LH)			103051			51,59					
6R1-45974-AO-00 (LH)			103053			51,59					
6R4-45976-AO-00 SALTWATER			103044			51,59					
6R4-45978-AO-00 SALTWATER			103046			51,59					
6R4-45970-AO-00 SALTWATER			103048			51,59					
6R4-45972-AO-00 SALTWATER			103050			51,59					
6R4-45974-AO-00 SALTWATER			103052			51,59					
MAR-GYT3B-03-13 STAINLESS			033095			49					

OUTBOARDS APPLICATIONS



EVINRUDE®, JOHNSON®

2-4 HORSEPOWER

2, 3.3 HP 2000 & Newer 3-4 HP Weedless 1952-73

Boat Length/Description	Diameter Rot. & Pitch Blade#	Aluminum Part No. OEM Michigan	Stainless Part No. OEM Michigan	Rapture Performance Stainless Dia. x Pitch Blades RH LH	Ballistic High Performance Stainless Dia. x Pitch Blades RH LH
Std. Replacement	6-1/8 R 4-1/2 3	203919 ●012001			

4-8 HORSEPOWER

4 HP 1980-83 4.5 HP Deluxe 1986-95 6, 7.5, 8 HP 1980 & Newer
(PIN DRIVE)

Boat Length/Description	Diameter Rot. & Pitch Blade#	Aluminum Part No. OEM Michigan	Stainless Part No. OEM Michigan	Rapture Performance Stainless Dia. x Pitch Blades RH LH	Ballistic High Performance Stainless Dia. x Pitch Blades RH LH
Heavy Boats, HB	8-1/2 R 7 3	391096 012031			
Std. Replacement	8-1/2 R 9 3	390237 012032			

5 HORSEPOWER

5 HP 1965-68

Boat Length/Description	Diameter Rot. & Pitch Blade#	Aluminum Part No. OEM Michigan	Stainless Part No. OEM Michigan	Rapture Performance Stainless Dia. x Pitch Blades RH LH	Ballistic High Performance Stainless Dia. x Pitch Blades RH LH
12-14' - LL	8 L 7-1/2 3	380104 012004			

5.5-6 HORSEPOWER

5.5-6 HP 1954-65

Boat Length/Description	Diameter Rot. & Pitch Blade#	Aluminum Part No. OEM Michigan	Stainless Part No. OEM Michigan	Rapture Performance Stainless Dia. x Pitch Blades RH LH	Ballistic High Performance Stainless Dia. x Pitch Blades RH LH
14-16' - LL	7-3/4 R 6-1/2 3		012067		
12-14' - LL	8 R 7-1/4 2	376968	012060		

10 HORSEPOWER

10 HP 1951-57

Boat Length/Description	Diameter Rot. & Pitch Blade#	Aluminum Part No. OEM Michigan	Stainless Part No. OEM Michigan	Rapture Performance Stainless Dia. x Pitch Blades RH LH	Ballistic High Performance Stainless Dia. x Pitch Blades RH LH
12-14' - AL	9 R 8 3	277595 012006			

6-15 HORSEPOWER

6 HP 1966-79 10 HP 1958-63 8-15 HP 2000 & Newer
9.5 HP 1964-73 10, 12, 14 HP *** 1982-94
(PIN DRIVE)

Boat Length/Description	Diameter Rot. & Pitch Blade#	Aluminum Part No. OEM Michigan	Stainless Part No. OEM Michigan	Rapture Performance Stainless Dia. x Pitch Blades RH LH	Ballistic High Performance Stainless Dia. x Pitch Blades RH LH
14-16' - LL	7-3/4 R 6-1/2 3		012068		
14-16' - AL, SK	8-1/4 R 8 3	387334	012008		
14-16' Runabouts	8-1/4 R 9 3	391534	012101		
12-14' - LL	8 R 7-1/4 3	376968	012005		
12-14' - LL	8-1/4 R 8-1/2 3	377635	012007		

Key to abbreviations: LL: Light Loads; SB: Sailboat; AL: All Loads; SK: Skiboat; WB: Workboat; HB: Houseboat; CR: Cruisers; HL: Heavy Loads; WD: Weedless

*** Engines offered in European Market Only

● Hub is not included.

OUTBOARDS APPLICATIONS



EVINRUDE®, JOHNSON®

9.9-15 HORSEPOWER

9.9-15 HP 1974 & Newer 8, 9.9, 15 HP (4-Stroke) 1995 & Newer
 (13 SPLINE & THRU HUB EXHAUST)

Boat Length/Description	Diameter			Aluminum Part No.		Stainless Part No.		Rapture Performance Stainless			Ballistic High Performance Stainless			
	Rot. & Pitch	Blade#	OEM	OEM	Michigan	OEM	Michigan	Dia. x Pitch	Blades	RH	LH	Dia. x Pitch	Blades	RH	LH
Heavy Bts., SB	10	R 5	3	386669	012113									
14-16' - AL, SK	10	R 7	3	398126	012112									
Std. Replacement	9-1/2	R 10	3	174950	012111									

15-25 HORSEPOWER

15 HP 1953-56 20 HP 1969-73 25 HP 1969-77
 18 HP 1957-73
 (PIN DRIVE)

Boat Length/Description	Diameter			Aluminum Part No.		Stainless Part No.		Rapture Performance Stainless			Ballistic High Performance Stainless			
	Rot. & Pitch	Blade#	OEM	OEM	Michigan	OEM	Michigan	Dia. x Pitch	Blades	RH	LH	Dia. x Pitch	Blades	RH	LH
CR, HB, SB	9-1/4	R 7	3	388294	012102									
16-18' - HL	9	R 8	3		012014									
Weedless	9	R 10	3	592959	012076									
14-16' - HL	9	R 9	3	379717	012109									
12-14' - HL	9	R 10	3	383629	012011									
12-14' - LL	9-1/4	R 11	3	388088	012013									
12-14' - LL	9-1/4	R 12	3		012010									

14-28 HORSEPOWER

14 HP 1989 25 HP § 1978-91 28 HP 1986-96
 25 HP 1978-84
 (SPLINE DRIVE)

Boat Length/Description	Diameter			Aluminum Part No.		Stainless Part No.		Rapture Performance Stainless			Ballistic High Performance Stainless			
	Rot. & Pitch	Blade#	OEM	OEM	Michigan	OEM	Michigan	Dia. x Pitch	Blades	RH	LH	Dia. x Pitch	Blades	RH	LH
16-18' - HL	9	R 9	3	389068	012021									
16-18' - HL	9	R 9	3		★011030									
15-17' - AL, SK	9	R 10	3	389069	012015									
15-17' - AL, SK	9	R 10	3		★011031									
14-17' - AL, SK	9-1/4	R 11	3	388883	012016									
14-17' - LL	9-1/4	R 12	3	389944	012030									

20-35 HORSEPOWER

20 HP 2 Cyl. 1984-97 25 HP 2 & 3 Cyl. 1984 & Newer 35 HP 2 & 3 Cyl. 1976 & Newer
 25 HP (Commercial) 1993 & Newer
 (THRU HUB EXHAUST)

Boat Length/Description	Diameter			Aluminum Part No.		Stainless Part No.		Rapture Performance Stainless			Ballistic High Performance Stainless			
	Rot. & Pitch	Blade#	OEM	OEM	Michigan	OEM	Michigan	Dia. x Pitch	Blades	RH	LH	Dia. x Pitch	Blades	RH	LH
CR, HB	11-1/4	R 7	3	387320	012053									
CR, HB	11-1/4	R 7	3		★011032									
17-20' - AL, SK	11	R 9	3	386317	012054									
17-20' - AL, SK	11	R 9	3		★011033									
16-18' - AL, SK	10-1/2	R 11	3	175190	012055									
15-17' - AL, SK	10	R 13	3	175191	012056							10-1/8 x 13	3	305029
13-15' - AL, SK	10	R 15	3	390380	012057							10-1/8 x 15	3	305030

Key to abbreviations: LL: Light Loads; SB: Sailboat; AL: All Loads; SK: Skiboat; WB: Workboat; HB: Houseboat; CR: Cruisers; HL: Heavy Loads; WD: Weedless

★ New Cupped Version.

§ Commercial & Workhorse Engines

OUTBOARDS APPLICATIONS



EVINRUDE®, JOHNSON®

25-40 HORSEPOWER

25 HP	1951-55	33 HP	1965-70	40 HP	1960-76
28 HP	1962-64	35 HP	1957-59	40 HP \$	1978-85
30 HP	1956				
(PIN DRIVE)					

Boat Length/Description	Diameter Rot. & Pitch	Blade#	Aluminum Part No.	Stainless Part No.		Rapture Performance Stainless			Ballistic High Performance Stainless								
			OEM	Michigan	OEM	Michigan	Dia.	x	Pitch	Blades	RH	LH	Dia.	x	Pitch	Blades	RH	LH
CR, HB, SB	10-1/2 R 10	3	376738	012027													
17-19' - AL, SK	10-3/8 R 11-1/2	3	385955	012023													
14-16' - AL, SK	10-3/8 R 12-1/2	3	378580	012022													
14-16' - AL, SK	10-1/2 R 12	3	380637	012024													
14-16' - LL	10-3/8 R 13-1/2	3	378579	012025													
14-16' - LL	10-1/2 R 13	3	384460	012028													
12-14' - LL	10-3/8 R 14	3	378571	012026													

40-50 HORSEPOWER (4-Stroke)

40 HP (4-Stroke) 1999 & Newer 50 HP (4-Stroke) 1999 & Newer

Boat Length/Description	Diameter Rot. & Pitch	Blade#	Aluminum Part No.	Stainless Part No.		Rapture Performance Stainless			Ballistic High Performance Stainless								
			OEM	Michigan	OEM	Michigan	Dia.	x	Pitch	Blades	RH	LH	Dia.	x	Pitch	Blades	RH	LH
18-21' - AL	12-1/4 R 10	3		032045			10-1/2	x	10	3	033093						
18-21' - AL	12-1/4 R 10	3		★031072													
17-19' - AL	12 R 11	3		032044													
17-19' - AL	12 R 11	3		★031073													
16-18' - LL	10-5/8 R 12	3				►113001	10-1/2	x	12	3	033094						
15-17' - LL	11-3/4 R 12	3		032043													
14-16' - LL	11-1/2 R 13	3		032042							10-1/2 x 13	3	033095	10-1/8 x 13	3	395929	
13-15' - LL	10-1/4 R 14	3				►113002	10-1/2	x	14	3	033096						
12-14' - LL	11-1/4 R 14	3		032041							10-1/2 x 15	3	033097	10-1/8 x 15	3	395930	
12-14' - LL	11 R 15	3		032040													
12-14' - LL	10-3/4 R 16	3		032039													

40-75 HORSEPOWER • SMALL GEARCASE

40 HP 2 Cyl.	1984 & Newer	55 HP 2 Cyl.	1976-79	Sprint	1986-92
48 HP	1987-96	60 HP 2 Cyl.	1980-85	Formula E	1986-92
50 HP 2 Cyl.	1975 & Newer	75 HP 3 Cyl.	1975-85		
(SMALL GEARCASE & THRU HUB EXHAUST)					

Boat Length/Description	Diameter Rot. & Pitch	Blade#	Aluminum Part No.	Stainless Part No.		Rapture Performance Stainless			Ballistic High Performance Stainless								
			OEM	Michigan	OEM	Michigan	Dia.	x	Pitch	Blades	RH	LH	Dia.	x	Pitch	Blades	RH	LH
CR, HB	13 R 11	3	386907	012036			11-3/4	x	11	3	013080						
CR, HB	13 R 11	3		★011034													
15-18' - AL, SK	12-1/2 R 13	3	386909	012037	390849	013024	11-3/4	x	13	3	013081						
15-18' - AL, SK	12-1/2 R 13	3		★011035													
14-17' - AL, SK	12-1/4 R 15	3	176421	★011027													
14-17' - AL, SK	12-1/4 R 15	3	386786	012038	390850	013010	11-3/4	x	15	3	013082	12-3/8 x 15	3	325030			
13-15' - LL	11-3/4 R 17	3	176422	★011028													
13-15' - LL	11-3/4 R 17	3	386841	012039	390851	013026	11-3/4	x	17	3	013083	12 x 17	3	325031			
12-14' - LL	11-1/2 R 19	3	176423	★011029													
12-14' - LL	11-1/2 R 19	3	386908	012040													
12-14' - LL	11-1/2 R 19	3			390852	013032											

Key to abbreviations: LL: Light Loads; SB: Sailboat; AL: All Loads; SK: Skiboat; WB: Workboat; HB: Houseboat; CR: Cruisers; HL: Heavy Loads; WD: Weedless

★ New Cupped Version.

§ Commercial & Workhorse Engines

► LIMITED INVENTORY ITEMS.

OUTBOARDS APPLICATIONS



EVINRUDE®, JOHNSON®

50 HORSEPOWER

50 HP V-4 (PIN DRIVE) 1958-59

Boat Length/Description	Diameter Rot. & Pitch	Blade#	Aluminum Part No.		Stainless Part No.		Rapture Performance Stainless			Ballistic High Performance Stainless			
			OEM	Michigan	OEM	Michigan	Dia. x Pitch	Blades	RH	LH	Dia. x Pitch	Blades	RH	LH
14-16' - AL, SK	12-1/8 R 14	3	278155	►012033									

45-75 HORSEPOWER • LARGE GEARCASE

45 HP 2 Cyl. Commercial 1986 & Newer

50 HP 2 Cyl. Pleasure 1971-74

65 HP 3 Cyl. Pleasure 1972-73

50 HP 2 Cyl. Commercial 1977-79

50 HP 3 Cyl. Pleasure 1994 & Newer

70 HP 3 Cyl. Pleasure 1974 & Newer

55 HP 2 Cyl. Commercial 1980 & Newer

55 HP 3 Cyl. Pleasure 1968-69

75 HP 3 Cyl. Pleasure 1975-84

65 HP 3 Cyl. Commercial 1984 & Newer

60 HP 3 Cyl. Pleasure 1970-71, 1986 & Newer

(LARGE GEARCASE & THRU HUB EXHAUST)

Boat Length/Description	Diameter Rot. & Pitch	Blade#	Aluminum Part No.		Stainless Part No.		Rapture Performance Stainless			Ballistic High Performance Stainless			
			OEM	Michigan	OEM	Michigan	Dia. x Pitch	Blades	RH	LH	Dia. x Pitch	Blades	RH	LH
CR, HB	14 R 10	4		012074									
CR, HB	14 R 10	4		★011036									
CR, HB	14 R 11	3	382761	012047									
CR, HB	14 R 11	3		★011038									
CR, - HB	14 R 13	3	391668	*011001									
19-22' - AL	14 R 12	4		012075									
19-22' - AL	14 R 12	4		★011037									
17-19' - AL, SK	13-3/4 R 15	3	391198	*011002	389949	013028	13-1/4 x 15	3	013076		13-5/8 x 15	3	335030
15-18' - AL, SK	13-1/4 R 17	3	391199	*011003			13-1/4 x 17	3	013077		13-1/2 x 17	3	335031
15-18' - AL, SK	13-3/8 R 17	3			389948	013030							
15-18' - AL, SK	14 R 17	3	176214	*011024									
14-16' - AL, SK	13 R 19	3	390896	*011004	389510	013033	13-1/4 x 19	3	013078		13-3/8 x 19	3	335032
14-16' - AL, SK	14 R 19	3	176215	*011025									
13-15' - AL, SK	12-3/4 R 21	3	389788	*011005	389512	013034	13-1/4 x 21	3	013079		13-1/8 x 21	3	335033
13-15' - AL, SK	14 R 21	3	176216	*011026									

60-70 HORSEPOWER (4-STROKE)

60, 70 + (4-STROKE) 1998 & Newer

Boat Length/Description	Diameter Rot. & Pitch	Blade#	Aluminum Part No.		Stainless Part No.		Rapture Performance Stainless			Ballistic High Performance Stainless			
			OEM	Michigan	OEM	Michigan	Dia. x Pitch	Blades	RH	LH	Dia. x Pitch	Blades	RH	LH
17-19' - AL, SK	13-3/4 R 15	3		*061001		►063001	13-1/4 x 15	3	►063042		13-5/8 x 15	3	335530
15-18' - AL, SK	13-1/4 R 17	3		*061002		►063002	13-1/4 x 17	3	►063043		13-1/2 x 17	3	335531
14-16' - AL, SK	13 R 19	3		*061003		►063003	13-1/4 x 19	3	►063044		13-3/8 x 19	3	335532
14-16' - LL	13 R 21	3		*061004			13-1/4 x 21	3	►063045		13-1/8 x 21	3	335533

Key to abbreviations: LL: Light Loads; SB: Sailboat; AL: All Loads; SK: Skiboat; WB: Workboat; HB: Houseboat; CR: Cruisers; HL: Heavy Loads; WD: Weedless

★ New Cupped Version

+ Use stopper 57632-87E10, Spacer 57633-95501, Washer 09160-18018

* If currently using uncupped propeller, use cupped propeller having 2" less pitch. Boats with power trim use same pitch.

► LIMITED INVENTORY ITEMS.

OUTBOARDS APPLICATIONS



EVINRUDE®, JOHNSON®

60-90 HORSEPOWER

V-4 HP (PIN DRIVE)

60,65,75,80,85,901960-68

◆ Small Hub Prop uses special small nut #302001

Boat Length/Description	Diameter Rot. & Pitch	Blade#	Aluminum Part No. OEM Michigan	Stainless Part No. OEM Michigan	Rapture Performance Stainless Dia. x Pitch Blades RH LH	Ballistic High Performance Stainless Dia. x Pitch Blades RH LH
17-19' - AL, SK	10 R 9-1/4	3	379260 ◆012042			
17-19' - AL, SK	10-1/4 R 10	3	378040 012043			
16-17' - AL, SK	10 R 11	3	377978 012044			
14-16' - AL, SK	10 R 12	3	378039 012045			

100 HORSEPOWER

100 HP (PIN DRIVE)1966-68

Boat Length/Description	Diameter Rot. & Pitch	Blade#	Aluminum Part No. OEM Michigan	Stainless Part No. OEM Michigan	Rapture Performance Stainless Dia. x Pitch Blades RH LH	Ballistic High Performance Stainless Dia. x Pitch Blades RH LH
20-24' - 1 Engine	14 R 11	3	382676 012089			
20-24' - 1 Engine	14 R 12	3	382017 012090			

85-140 HORSEPOWER • V4 GEARCASE

85 HP1969-80, 1991-95 110 HP1986-89 125 HP1971-72

88 HP1981-1996 112 HP1994-96 135 HP1973-76

90 HP1981 & Newer 115 HP1973 & Newer 140 HP1977-94

100 HP1979-80, 1988-93 120 HP1986-94

(13 SPLINES & THRU HUB EXHAUST)

Boat Length/Description	Diameter Rot. & Pitch	Blade#	Aluminum Part No. OEM Michigan	Stainless Part No. OEM Michigan	Rapture Performance Stainless Dia. x Pitch Blades RH LH	Ballistic High Performance Stainless Dia. x Pitch Blades RH LH
CR, HB	14 R 10	4	012074			
CR, HB	14 R 10	4	★011036			
CR, HB	14 R 11	3	382761 012047			
CR, HB	14 R 11	3	★011038			
CR, HB	14 R 12	4	012075			
CR, HB	14 R 12	4	★011037			
CR, HB	14 R 13	3	391668 *011001			
20-24' - AL, SK	13-3/4 R 15	3	391198 *011002	389949 013028	13-1/4 x 15 3 ▶013076	13-5/8 x 15 3 335030
19-22' - AL, SK	13-1/4 R 17	3	391199 *011003		13-1/4 x 17 3 ▶013077	13-1/2 x 17 3 335031
19-22' - AL, SK	13-3/8 R 17	3		389948 013030		
19-22' - AL, SK	14 R 17	3	176214 *011024			
17-19' - AL, SK	13 R 19	3	390896 *011004	389510 013033	13-1/4 x 19 3 ▶013078	13-3/8 x 19 3 335032
17-19' - AL, SK	14 R 19	3	176215 *011025			
15-18' - AL, SK	12-3/4 R 21	3	389788 *011005	389512 013034	13-1/4 x 21 3 ▶013079	13-1/8 x 21 3 335033
15-18' - AL, SK	14 R 21	3	176216 *011026			
High Performance					Ballistic 3 XL	13-1/2 x 22 3 335034
High Performance					Ballistic 3 XL	13-1/2 x 24 3 335035

Key to abbreviations: LL: Light Loads; SB: Sailboat; AL: All Loads; SK: Skiboat; WB: Workboat; HB: Houseboat; CR: Cruisers; HL: Heavy Loads; WD: Weedless

★ New Cupped Version

+ Use stopper 57632-87E10, Spacer 57633-95501, Washer 09160-18018

► LIMITED INVENTORY ITEMS.

* If currently using uncupped propeller, use cupped propeller having 2" less pitch. Boats with power trim use same pitch.

◆ Available from Michigan Wheel Distributors - order part number 302001 (NP74)

OUTBOARDS APPLICATIONS



EVINRUDE®, JOHNSON®

90-300 HORSEPOWER • V6 GEARCASE

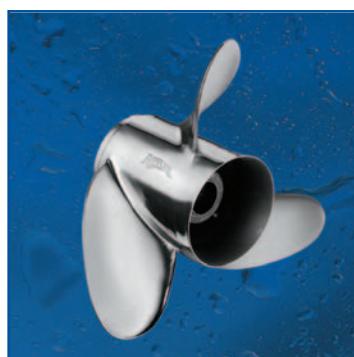
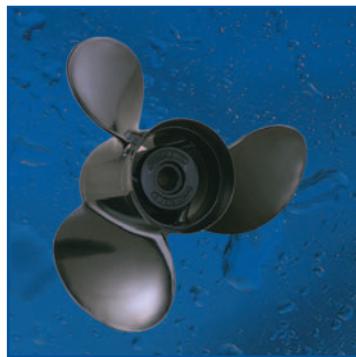
90 HP V-4	1995 & Newer	150 HP V-6 Commercial	1993 & Newer	235 HP V-6	1978-85
100 HP V-4 Commercial	1984 & Newer	155 HP V-6 Commercial	1978 & Newer	250 HP V-6	2001 & Newer
115 HP V-4	1995 & Newer	175 HP V-6	1977 & Newer	2.6 Liter V-6	1984-85
130 HP V-4	1995 & Newer	185 HP V-6	1984-85	250 HP V-8	1991 & Newer
120-140 HP V-4	1985	200 HP V-6	1976 & Newer	275 HP V-8	1986-88
140 (25) HP V-4	1989-94	200 HP V-6	2000 & Newer	300 HP V-8	1986-95
150 HP V-6	1978 & Newer	225 HP V-6	1986 & Newer	3.6 Liter V-8	1986-87
(15 SPLINES & THRU HUB EXHAUST)					

Boat Length/Description	Diameter Rot. & Pitch	Blade#	Aluminum Part No.		Stainless Part No.		Rapture Performance Stainless				Ballistic High Performance Stainless						
			OEM	Michigan	OEM	Michigan	Dia.	x	Pitch	Blades	RH	LH	Dia.	x	Pitch	Blades	RH	LH
CR, HB	15-1/2 R 10	3	1011015														
CR, HB	15-1/2 R 13	3	391536	011016													
CR, HB	15-1/2 R 15	3	391535	011006													
CR, HB	15 R 15	3			174926	013052	14-1/4 x 15	3	►013064	►013065	14-7/8 x 15	3	345031				
CR, HB	15 L 15	3			174927	013051											
20-26' Bts. - AL, SK	15 R 17	3	391200	011007	391290	013044	14-1/4 x 17	3	►013066	►013067	14-3/4 x 17	3	345032	345062			
20-26' Bts. - AL, SK	15 L 17	3			431930	013043											
18-22' Bts. - AL, SK	14-1/2 R 19	3	391201	011008	389924	013046	14-1/4 x 19	3	►013068	►013069	14-1/2 x 19	3	345033	345063			
18-22' Bts. - AL, SK	14-1/2 L 19	3			390821	013045											
17-19' Bts. - AL, SK	14-1/4 R 21	3	391202	011009	389923	013048	14-1/4 x 21	3	►013070	►013071	14-3/8 x 21	3	345034	345064			
17-19' Bts. - AL, SK	14-1/4 L 21	3			390822	013047											
15-18' Bts. - AL, SK	14-1/4 R 23	3	391203	011010	389019	013050	14-1/4 x 23	3	►013072	►013073	14-1/4 x 25	3	345035	345065			
Up to 17'							14-1/4 x 25	3	►013074	►013075							
High Performance											Ballistic 3 XL		14-1/2 x 22	3	345041		
High Performance											Ballistic 3 XL		14-1/2 x 24	3	345037		
High Performance											Ballistic 3 XL		14-1/2 x 25	3	345038		

High Performance 4 Blade Propellers

50-62 MPH	13-3/4 R 22	4		►** 013036			Ballistic 4 XL	13-3/4 x 23	4	435035
55-67 MPH	13-3/4 R 24	4		►** 013038			Ballistic 4 XL	13-3/4 x 25	4	435036
60-72 MPH	13-3/4 R 26	4		►** 013040			Ballistic 4 XL	13-3/4 x 27	4	435037

Key to abbreviations: LL: Light Loads; SB: Sailboat; AL: All Loads; SK: Skiboat; WB: Workboat; HB: Houseboat; CR: Cruisers; HL: Heavy Loads; WD: Weedless



RAPTURE

BALLISTIC™
HIGH PERFORMANCE STAINLESS STEEL PROPS

¶ 2-1/2" of skeg must be removed for proper fit. Use thrust washer 333592.
 ►** Forward thrust washer A-9500-111 comes with propeller and replaces the standard OMC thrust washer, except when used on a 1991 or 1992. 1994 through current model engines use OMC thrust washer 12869.

OUTBOARDS APPLICATIONS



FORCE®, CHRYSLER, U.S. MARINE

3.5-3.6 HORSEPOWER

3.5-3.6 HP 1969-76

Boat Length/Description	Diameter Rot. & Pitch Blade#	Aluminum Part No. OEM Michigan	Stainless Part No. OEM Michigan	Rapture Performance Stainless Dia. x Pitch Blades RH LH	Ballistic High Performance Stainless Dia. x Pitch Blades RH LH
Std. Replacement	7-1/2 L 4-1/2 2	48-FP19 072017			

3.5-8 HORSEPOWER

3.5 HP 1980-84
(SPLINED SHAFT)

Boat Length/Description	Diameter Rot. & Pitch Blade#	Aluminum Part No. OEM Michigan	Stainless Part No. OEM Michigan	Rapture Performance Stainless Dia. x Pitch Blades RH LH	Ballistic High Performance Stainless Dia. x Pitch Blades RH LH
Std. Replacement	7-1/4 R 5-1/2 3	48-FP488 072123			

5 HORSEPOWER

5 HP 1975-77

Boat Length/Description	Diameter Rot. & Pitch Blade#	Aluminum Part No. OEM Michigan	Stainless Part No. OEM Michigan	Rapture Performance Stainless Dia. x Pitch Blades RH LH	Ballistic High Performance Stainless Dia. x Pitch Blades RH LH
Std. Replacement	7-1/2 L 5-1/2 2		0152014		

6-10 HORSEPOWER

6-10 HP Sailor 1976-78

Sailor 180-250 1979-84

Boat Length/Description	Diameter Rot. & Pitch Blade#	Aluminum Part No. OEM Michigan	Stainless Part No. OEM Michigan	Rapture Performance Stainless Dia. x Pitch Blades RH LH	Ballistic High Performance Stainless Dia. x Pitch Blades RH LH
SB	10-3/8 R 10 3	FP-278	072014		

9.9-15 HORSEPOWER

9.9 HP 1968-98
10 HP 1974-78
(SPLINED SHAFT)

Boat Length/Description	Diameter Rot. & Pitch Blade#	Aluminum Part No. OEM Michigan	Stainless Part No. OEM Michigan	Rapture Performance Stainless Dia. x Pitch Blades RH LH	Ballistic High Performance Stainless Dia. x Pitch Blades RH LH
Std. Replacement	8-1/8 R 8-1/4 3	FP408	072026		
14-16' - LL	8-1/4 R 6 3	FP395	072121		
12-14' - LL	8-1/4 R 8-1/4 2	48-FP70	072024		
12-14' - LL	8 R 9 3	FP472	072122		

20-25 HORSEPOWER

20-25 HP 1968-78
(SPLINED SHAFT)

Boat Length/Description	Diameter Rot. & Pitch Blade#	Aluminum Part No. OEM Michigan	Stainless Part No. OEM Michigan	Rapture Performance Stainless Dia. x Pitch Blades RH LH	Ballistic High Performance Stainless Dia. x Pitch Blades RH LH
Std. Replacement	8-1/2 R 8-1/2 3	FP324	0152002		

Key to abbreviations: LL: Light Loads; SB: Sailboat; AL: All Loads; SK: Skiboat; WB: Workboat; HB: Houseboat; CR: Cruisers; HL: Heavy Loads; WD: Weedless

► LIMITED INVENTORY ITEMS.

OUTBOARDS APPLICATIONS



FORCE®, CHRYSLER, U.S. MARINE

25 HORSEPOWER

25 HP 3 Cyl. 1995-98

Boat Length/Description	Diameter Rot. & Pitch	Blade#	Aluminum Part No.		Stainless Part No.		Rapture Performance Stainless			Ballistic High Performance Stainless			
			OEM	Michigan	OEM	Michigan	Dia. x Pitch	Blades	RH	LH	Dia. x Pitch	Blades	RH	LH
15-19'	10-3/8 R 11	3	48-19638A40	031049									
13-17'	10-3/8 R 13	3	48-19640A40	031048							10-1/8 x 13	3	305129
Up to 14'	10-1/4 R 14-1/2	3	48-19642A40	031047							10-1/8 x 15	3	305130

20-60 HORSEPOWER

20-25 HP	1979-81	40 HP	1992 - 94	50 HP	1982-94
30 HP	1966-82	45 HP	1966 - 84	55-60 HP❖❖	1966-84
35 HP	1966-91				
(SPLINED SHAFT)					

Boat Length/Description	Diameter Rot. & Pitch	Blade#	Aluminum Part No.		Stainless Part No.		Rapture Performance Stainless			Ballistic High Performance Stainless			
			OEM	Michigan	OEM	Michigan	Dia. x Pitch	Blades	RH	LH	Dia. x Pitch	Blades	RH	LH
CR, HB, SB	10-3/8 R 10	3	48-819337A40	072014									
17-19' - AL, SK	10-3/8 R 11-1/2	3	48-819336A40	072131									
16-17' - AL, SK	10-3/8 R 12-1/2	3	48-819335A40	072132									
14-16' - AL SK	10-3/8 R 13-1/2	3	48-819334A4	072133									
14-16' - LL	10-3/8 R 14-1/2	3		072134									

40-75 HORSEPOWER

40, 50 HP 1995-98 70 HP 1991-95 75 HP 1996-98

Boat Length/Description	Diameter Rot. & Pitch	Blade#	Aluminum Part No.		Stainless Part No.		Rapture Performance Stainless			Ballistic High Performance Stainless			
			OEM	Michigan	OEM	Michigan	Dia. x Pitch	Blades	RH	LH	Dia. x Pitch	Blades	RH	LH
19' and Up	12-1/2 R 8	3	48-42738A10	032141									
19' and Up	12-1/2 R 8	3		★031070									
17-19' - AL, SK	11-1/4 R 10	3	48-73132A40	031015			10-1/2 x 10			033088			
16-18' - AL, SK	12 R 10-1/2	3	48-42740A10	032142									
16-18' - AL, SK	12 R 10-1/2	3		★031071									
16-18' - AL, SK	10-7/8 R 11	3	48-85632A40	031053									
15-17' - AL, SK	10-3/4 R 12	3	48-816702A40	031056									
15-17' - AL, SK	10-5/8 R 12	3	48-73134A40	031016	48-79792A5	033001	10-1/2 x 12	3	033089				
14-17' - AL, SK	10-1/2 R 13	3	48-816704A40	031057			10-1/2 x 13			033090			
14-17' - AL, SK	10-3/8 R 13	3	48-73136A40	031017							10-1/8 x 13	3	395129
14-16' - LL	10-3/8 R 14	3	48-816706A40	031058									
14-16' - LL	10-1/4 R 14	3	48-73138A40	031018	48-76230A5	033028	10-1/2 x 14	3	033091				
13-15' - LL	10-1/8 R 15	3	48-73140A40	031019			10-1/2 x 15			033092			
Up to 15' Bts.	10 R 17	3	48-73144A40	031020							10-1/8 x 15	3	395130

80 HORSEPOWER

80 HP❖❖ 1961-65

Boat Length/Description	Diameter Rot. & Pitch	Blade#	Aluminum Part No.		Stainless Part No.		Rapture Performance Stainless			Ballistic High Performance Stainless			
			OEM	Michigan	OEM	Michigan	Dia. x Pitch	Blades	RH	LH	Dia. x Pitch	Blades	RH	LH
16-17' - AL, SK	12-1/8 R 14	3	FP-84	►012033									

Key to abbreviations: LL: Light Loads; SB: Sailboat; AL: All Loads; SK: Skiboat; WB: Workboat; HB: Houseboat; CR: Cruisers; HL: Heavy Loads; WD: Weedless

★ New Cupped Version.

❖❖ Two piece lower unit

► LIMITED INVENTORY ITEMS.

OUTBOARDS APPLICATIONS



FORCE®, CHRYSLER, U.S. MARINE

70-135 HORSEPOWER

70-135 HP♦♦ 1970-79
(18 SPLINES)

Boat Length/Description	Diameter Rot. & Pitch	Blade#	Aluminum Part No. OEM Michigan	Stainless Part No. OEM Michigan	Rapture Performance Stainless Dia. x Pitch Blades RH LH	Ballistic High Performance Stainless Dia. x Pitch Blades RH LH
16-17' - AL, SK	13-1/8 R 15	3	FP-389	072032		
14-16' - AL, SK	13-1/8 R 17	3	48-FP372	072033		
Light Runabouts - LL	13-1/8 R 19	3	FP-383	072034		

70-140 HORSEPOWER

70-140 HP♦ 1977-89
(15 SPLINES)

Boat Length/Description	Diameter Rot. & Pitch	Blade#	Aluminum Part No. OEM Michigan	Stainless Part No. OEM Michigan	Rapture Performance Stainless Dia. x Pitch Blades RH LH	Ballistic High Performance Stainless Dia. x Pitch Blades RH LH
17-19' - AL, SK	14 R 13	3	FPS501	072054		
16-17' - AL, SK	13-1/8 R 15	3	FPS519	072055		
16-17' - AL, SK	13-3/4 R 15	3		073002		
14-16' - AL, SK	13-1/4 R 17	3	FPS623	072107	FP539 073003	
14-16' - LL	13 R 19	3	FPS625	072108	FP540 073004	
High Perf. Racing	13 R 21	3	FPS526	072109		

85-150 HORSEPOWER • SINGLE EXHAUST UNITS

85, 125 HP 1988-89 90 HP L-Drive 1989-91
90, 120 HP 1990-94 120 HP L-Drive 1989-91
150 HP 1989-94 150 HP L-Drive 1991

(15 SPLINES & THRU HUB EXHAUST)

Boat Length/Description	Diameter Rot. & Pitch	Blade#	Aluminum Part No. OEM Michigan	Stainless Part No. OEM Michigan	Rapture Performance Stainless Dia. x Pitch Blades RH LH	Ballistic High Performance Stainless Dia. x Pitch Blades RH LH
17-22' - AL, SK	13-1/2 R 15	3	48-FP669-1	*071035		
17-22' - AL, SK	13-1/2 R 15	3	48-FP692-1	072127		
17-22' - AL, SK	13-3/4 R 15	3		FP699 *073007		
16-20' - AL, SK	13-1/2 R 17	3	48-FP685-1	*071036		
16-20' - AL, SK	13-1/2 R 17	3	48-FP685-1	072128		
16-20' - AL, SK	13-1/4 R 17	3		FP668 *073008		
16-18' - AL, SK	13 R 19	3	48-FP686-1	*071037	FP695 *073009	
16-18' - AL, SK	13 R 19	3	48-FP686-1	072129		
Up to 16' - AL, SK	12-5/8 R 21	3	48-FP694	*071038		
Up to 16' - AL, SK	13 R 21	3		FP69 *073010		

Key to abbreviations: LL: Light Loads; SB: Sailboat; AL: All Loads; SK: Skiboat; WB: Workboat; HB: Houseboat; CR: Cruisers; HL: Heavy Loads; WD: Weedless

♦ One piece lower unit.

♦♦ Two piece lower unit.

► LIMITED INVENTORY ITEMS.

* If currently using uncuffed propeller, use cuffed propeller having 2" less pitch. Boats with power trim use same pitch.

OUTBOARDS APPLICATIONS



FORCE®, CHRYSLER, U.S. MARINE

75-150 HORSEPOWER • DUAL EXHAUST UNITS

75 HP	1999 & Newer	150 HP +	1989-94	120 HP L-Drive +	1990-91
90, 120 HP +	1990-94	90 HP L-Drive +	1990-91	150 HP L-Drive +	1991
90, 120 HP ++	1995-98				

Boat Length/Description	Diameter Rot. & Pitch	Blade#	Aluminum Part No.		Stainless Part No.		Rapture Performance Stainless			Ballistic High Performance Stainless			
			OEM	Michigan	OEM	Michigan	Dia. x Pitch	Blades	RH	LH	Dia. x Pitch	Blades	RH	LH
25' and Up - AL	14 R 11	3	48-77338A40	031054									
22' and Up - AL	14 R 13	3	48-77340A40	031055									
19-24' - AL, SK	13-3/4 R 15	3	48-77342A40	031041	48-16986A5	033016	13-1/4 x 15	3	►033084		13-5/8 x 15	3	335130
17-20' - AL, SK	13-1/4 R 17	3	48-77344A40	031042	48-16988A5	033017	13-1/4 x 17	3	►033085		13-1/2 x 17	3	335131
16-19' - AL, SK	13 R 19	3	48-77346A40	031043	48-16990A40	★033018	13-1/4 x 19	3	►033086		13-3/8 x 19	3	335132
15-18' - AL, SK	12-3/4 R 21	3	48-77348A40	031044			13-1/4 x 21	3	►033087		13-1/8 x 21	3	335133
15-18' - AL, SK	13 R 21	3			48-16992A40	★033019							
Up to 17' - LL	12-1/2 R 23	3	48-77350A40	031045									
High Performance										Ballistic 3 XL		13-1/2 x 22	3 ★335134
High Performance										Ballistic 3 XL		13-1/2 x 24	3 ★335135

Key to abbreviations: LL: Light Loads; SB: Sailboat; AL: All Loads; SK: Skiboat; WB: Workboat; HB: Houseboat; CR: Cruisers; HL: Heavy Loads; WD: Weedless

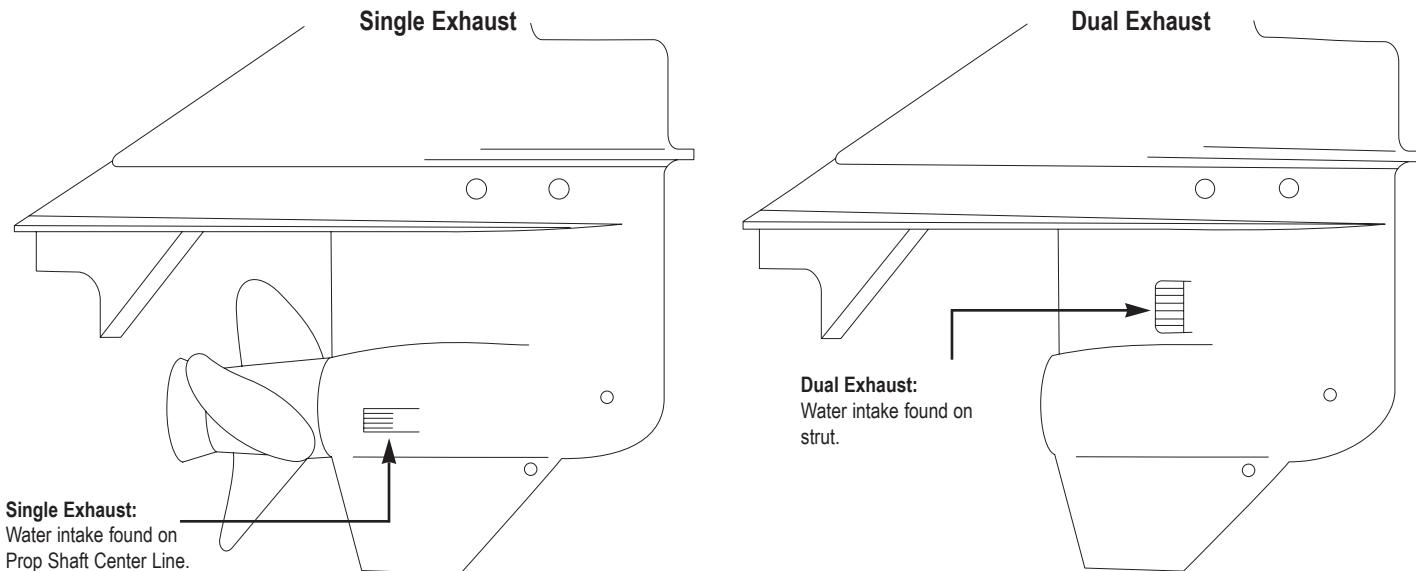
† For dual exhaust units only & requires thrust washer 23-819057.

★ Requires special exhaust snout Part No. F744116 for proper fit.

++ For all units 1995 thru current. Requires thrust washer 13191A1.

► LIMITED INVENTORY ITEMS.

Single vs. Dual Exhaust



OUTBOARDS APPLICATIONS



HONDA

7.5-10 HORSEPOWER

BF 7.5 1978-87 BF 8 1987 & Newer BF 100 (10 HP) All Years
 (PIN DRIVE)

Boat Length/Description	Diameter	Blade#	Aluminum Part No.	Stainless Part No.		Rapture Performance Stainless			Ballistic High Performance Stainless								
	Rot. & Pitch		OEM	Michigan	OEM	Michigan	Dia.	x	Pitch	Blades	RH	LH	Dia.	x	Pitch	Blades	RH	LH
SB	9-1/4 R 7	3		012102													
14-16'	9 R 8	3		012014													
14-16' - WD	9 R 8	3		012006													
14-16' - LL	9 R 9	3	58130-881-840ZA	012109													
12-14'	9 R 10	3		012011													
12-14' - WD	9 R 10	3		012076													
12-14' - LL	9-1/4 R 11	3		012013													
12-14' - LL	9-1/4 R 12	3		012010													

9.9-15 HORSEPOWER

BF 9.9 1988 & Newer BF 15 All Years

Boat Length/Description	Diameter	Blade#	Aluminum Part No.	Stainless Part No.		Rapture Performance Stainless			Ballistic High Performance Stainless									
	Rot. & Pitch		OEM	Michigan	OEM	Michigan	Dia.	x	Pitch	Blades	RH	LH	Dia.	x	Pitch	Blades	RH	LH
HL, HB	9-3/4 R 6-1/2	3	58110-ZV4-DT15	112004														
13-17' - AL	9-1/4 R 8	3		102003														
12-15' - AL	9-1/4 R 9	3	58130-ZV4-701ZA	102004														
12-15' - LL	9-1/4 R 10-1/2	3	58130-ZV4-030ZA	102005														

25-35 HORSEPOWER

25 HP All Years 35 HP All Years

Boat Length/Description	Diameter	Blade#	Aluminum Part No.	Stainless Part No.		Rapture Performance Stainless			Ballistic High Performance Stainless								
	Rot. & Pitch		OEM	Michigan	OEM	Michigan	Dia.	x	Pitch	Blades	RH	LH	Dia.	x	Pitch	Blades	RH	LH
14-17' - AL													10-1/8 x 13	3	305229		
13-15' - AL													10-1/8 x 15	3	305230		

35-50 HORSEPOWER

BF 35 1991-94 BF 45 1991-94
 BF 40 1995 & Newer BF 50 / 50A 1995 & Newer

Boat Length/Description	Diameter	Blade#	Aluminum Part No.	Stainless Part No.		Rapture Performance Stainless			Ballistic High Performance Stainless									
	Rot. & Pitch		OEM	Michigan	OEM	Michigan	Dia.	x	Pitch	Blades	RH	LH	Dia.	x	Pitch	Blades	RH	LH
19-21' - AL, SK	12-1/4 R 10	3	58130-ZV5-860ZA	032045						10-1/2 x 10	3	033093						
19-21' - AL, SK	12-1/4 R 10	3		★031072														
17-19' - AL, SK	12 R 11	3		032044														
17-19' - AL, SK	12 R 11	3		★031073														
16-17' - AL, SK	11-3/4 R 12	3	58130-ZV5-850ZA	032043						►113001	10-1/2 x 12	3	033094					
15-17' - AL, SK	10-3/8 R 12	3								►113001	10-1/2 x 12	3	033094					
15-17' - AL, SK	11-1/2 R 13	3	58130-ZV5-000ZA	032042						►113001	10-1/2 x 13	3	033095					
14-16' - AL, SK	11-1/4 R 14	3		032041						►113002	10-1/2 x 14	3	033096					
14-16' - AL, SK	10-1/4 R 14	3								►113002	10-1/2 x 14	3	033096					
13-15' - AL, SK	11 R 15	3	58130-ZV5-870ZA	032040						►113002	10-1/2 x 15	3	033097					
12-14' - AL, SK	10-3/4 R 16	3		032039						►113002	10-1/2 x 15	3	033097					

Key to abbreviations: LL: Light Loads; SB: Sailboat; AL: All Loads; SK: Skiboat; WB: Workboat; HB: Houseboat; CR: Cruisers; HL: Heavy Loads; WD: Weedless

★ New Cupped Version.

► LIMITED INVENTORY ITEMS.

OUTBOARDS APPLICATIONS



HONDA

75-225 HORSEPOWER

75 HP 1995 & Newer 115 HP 1998 & Newer 200 HP 2001 & Newer
 90 HP 1995 & Newer 130 HP 1998 & Newer 225 HP 2001 & Newer

Boat Length/Description	Diameter Rot. & Pitch Blade#			Aluminum Part No.		Stainless Part No.		Rapture Performance Stainless				Ballistic High Performance Stainless		
	OEM	Michigan	OEM	Michigan	Dia.	x Pitch	Blades	RH	LH	Dia.	x Pitch	Blades	RH	LH
25' & Up - AL	14	R 11	3	58130-ZW1-W01ZA	031054									
22' & Up - AL	14	R 13	3	58130-ZW1-W11ZA	031055									
20-24' - AL, SK	13-3/4	R 15	3	58130-ZW1-W21ZA	031041	58130-ZW1-W91	033016	13-1/4 x 15	3	►033084		13-5/8 x 15	3	335130
17-19' - AL, SK	13-1/4	R 17	3	58130-ZW1-W31ZA	031042	58130-ZW1-V01	033017	13-1/4 x 17	3	►033085		13-1/2 x 17	3	335131
16-18' - AL, SK	13	R 19	3	58130-ZW1-W61ZA	031043	58130-ZW1-V11	033018	13-1/4 x 19	3	►033086		13-3/8 x 19	3	335132
15-18' - AL, SK	12-3/4	R 21	3	58130-ZW1-W41ZA	031044									
15-18' - AL, SK	13	R 21	3			58130-ZW1-V31	033019	13-1/4 x 21	3	►033087		13-1/8 x 21	3	335133
14-16' - AL, SK	12-1/2	R 23	3	58130-ZW1-W51ZA	031045									
High Performance										Ballistic 3 XL		13-1/2 x 22	3	335134
High Performance										Ballistic 3 XL		13-1/2 x 24	3	335135

MERCURY™, MARINER™, SEA RAY

7.5-10 HORSEPOWER

Merc. 7.5, 9.8 1968-85 110 1968-79
(THRU HUB EXHAUST)

Boat Length/Description	Diameter Rot. & Pitch		Aluminum Part No. OEM		Stainless Part No. OEM		Rapture Performance Stainless Dia. x Pitch Blades RH LH			Ballistic High Performance Stainless Dia. x Pitch Blades RH LH		
	Blade#	Michigan	Michigan									
SB, HL	8-1/4	R 6	2		032014							
Std. Replacement	9	R 9	2	48-47922A10	032021							
Lt. Runabouts, - LL	9	R 10	2	48-47926A10	032019							
14'- AL, SK	9	R 7	3	48-47670A10	032020							

6-15 HORSEPOWER

6, 8, 9.9 HP (2-Stroke) 1986 & Newer 10 HP 1995 & Newer 15 HP (2 & 4-Stroke) 1989 & Newer
9.9 HP (4-Stroke) 2002 10, 15 HP (Sea Pro/Marathon) 1995 & Newer

Does not include Bigfoot.
(THRU HUB EXHAUST)

20 HORSEPOWER - MERCURY

Merc. 20 1963-81

Key to abbreviations: LL: Light Loads; SB: Sailboat; AL: All Loads; SK: Skiboat; WB: Workboat; HB: Houseboat; CR: Cruisers; HL: Heavy Loads; WD: Weedless

► LIMITED INVENTORY ITEMS.

OUTBOARDS APPLICATIONS



MERCURY™, MARINER™, SEA RAY

9.9-25 HORSEPOWER

9.9, 15 HP (Bigfoot, 4-Stroke)	1999 & Newer	20 HP (Mercury)	1986 & Newer	25 HP (Mariner 2-Stroke)	1985 & Newer
18 HP (Mercury)	1980 - 85	25 HP (Not 4-Stroke)	1980 & Newer	25 HP (Sea Pro/Marathon)	
(THRU HUB EXHAUST)					

Boat Length/Description	Diameter Rot. & Pitch	Blade#	Aluminum Part No. OEM Michigan	Stainless Part No. OEM Michigan	Rapture Performance Stainless Dia. x Pitch Blades RH LH	Ballistic High Performance Stainless Dia. x Pitch Blades RH LH
15-19'	10-3/8 R 11	3	48-19638A40 031049			
13-17'	10-3/8 R 13	3	48-19640A40 031048			10-1/8 x 13 3 305129
Up to 14'	10-1/4 R 14-1/2	3	48-19642A40 031047			10-1/8 x 15 3 305130

15-25 HORSEPOWER - MARINER

15 HP	1976-81	W15	1977-85	25 HP	1977-79
15A	1979-82	20 HP	1976-79		
(PIN DRIVE)					

Boat Length/Description	Diameter Rot. & Pitch	Blade#	Aluminum Part No. OEM Michigan	Stainless Part No. OEM Michigan	Rapture Performance Stainless Dia. x Pitch Blades RH LH	Ballistic High Performance Stainless Dia. x Pitch Blades RH LH
HB, SB	9-1/4 R 7	3	48-96628 012102			
12-14' - HL	9 R 10	3	48-96625 012011			
12-14' - AL, SK	9-1/4 R 11	3	48-96623 012013			
12-14' - LL	9-1/4 R 12	3	48-96622 012010			

25-30 HORSEPOWER - MARINER

25 HP	1980-84	28 HP	1976-79	30 HP	1979-90
(PIN DRIVE& FLOW-THRU EXHAUST)					

Boat Length/Description	Diameter Rot. & Pitch	Blade#	Aluminum Part No. OEM Michigan	Stainless Part No. OEM Michigan	Rapture Performance Stainless Dia. x Pitch Blades RH LH	Ballistic High Performance Stainless Dia. x Pitch Blades RH LH
16-18' - AL, SK	9-7/8 R 9	3	48-81647 022001			
16-18' - AL, SK	9-7/8 R 9	3		★021001		
14-17' - AL, SK	9-7/8 R 10-1/2	3	48-81649 022002			
13-16' - LL	9-3/8 R 12	3	48-82826 022003			

40-45 HORSEPOWER - MERCURY

40 HP (Mercury)	1973-75	45 HP (Mercury)	1973-81
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Boat Length/Description	Diameter Rot. & Pitch	Blade#	Aluminum Part No. OEM Michigan	Stainless Part No. OEM Michigan	Rapture Performance Stainless Dia. x Pitch Blades RH LH	Ballistic High Performance Stainless Dia. x Pitch Blades RH LH
Std. Replacement	8-1/4 R 6	2	48-63494A10 032014			
15-17' - AL, SK	9 R 9	2		032021		
14-17' - AL, SK	9 R 10	2		032019		
13-15' - LL	9 R 7	3		032020		

COMPACT ENGINE - 11 SPLINE

Mark 35A, 50, 55 1956-61

Mark 58, 58A

Models 300, 350, 400, 500

Boat Length/Description	Diameter Rot. & Pitch	Blade#	Aluminum Part No. OEM Michigan	Stainless Part No. OEM Michigan	Rapture Performance Stainless Dia. x Pitch Blades RH LH	Ballistic High Performance Stainless Dia. x Pitch Blades RH LH
16-17' - AL, SK	10 R 10	3	48-22575A2 032077			

Key to abbreviations: LL: Light Loads; SB: Sailboat; AL: All Loads; SK: Skiboat; WB: Workboat; HB: Houseboat; CR: Cruisers; HL: Heavy Loads; WD: Weedless

★ New Capped Version.

► LIMITED INVENTORY ITEMS.

OUTBOARDS APPLICATIONS



MERCURY™, MARINER™, SEA RAY

MODELS 300, 350, 400, 450, 500 - (11 SPLINE)

300, 350, 400, 450, 5001962-69 (THRU HUB EXHAUST)

Boat Length/Description	Diameter Rot. & Pitch	Blade#	Aluminum Part No.		Stainless Part No.		Rapture Performance Stainless			Ballistic High Performance Stainless			
			OEM	Michigan	OEM	Michigan	Dia. x Pitch	Blades	RH	LH	Dia. x Pitch	Blades	RH	LH
17-19' - AL, SK	10-1/4 R 10	3	48-33774A1	032084									
16-17' - AL, SK	10-1/4 R 11	3	48-38098A1	032085									
14-16' - AL, SK	10-1/4 R 12	3	48-38094A1	032086									
14-16' - LL	10-1/4 R 13	3	48-38090A1	032087									

MODELS 400, 402, 500 - (13 SPLINE)

400, 402, 5001970-73 (THRU HUB EXHAUST)

Boat Length/Description	Diameter Rot. & Pitch	Blade#	Aluminum Part No.		Stainless Part No.		Rapture Performance Stainless			Ballistic High Performance Stainless			
			OEM	Michigan	OEM	Michigan	Dia. x Pitch	Blades	RH	LH	Dia. x Pitch	Blades	RH	LH
14-16' - AL, SK	10-1/4 R 13	3	48-56236A1	032099									

MODELS 402-500, 650, 60 HP

402-5001974-76 6501972-76 60 HP (Mariner)1976

Boat Length/Description	Diameter Rot. & Pitch	Blade#	Aluminum Part No.		Stainless Part No.		Rapture Performance Stainless			Ballistic High Performance Stainless			
			OEM	Michigan	OEM	Michigan	Dia. x Pitch	Blades	RH	LH	Dia. x Pitch	Blades	RH	LH
19-22' - AL	12-1/4 R 10	3	48-61812A1	032045			10-1/2 x 10	3	033093				
19-22' - AL	12-1/4 R 10	3		★031072									
17-19' - AL, SK	12 R 11	3	48-61814A1	032044									
17-19' - AL, SK	12 R 11	3		★031073									
16-17' - AL, SK	10-5/8 R 12	3			►113001		10-1/2 x 12	3	033094				
15-18' - AL, SK	11-3/4 R 12	3	48-61816A1	032043									
14-16' - LL	1-1/2 R 13	3	48-61818A1	032042			10-1/2 x 13	3	033095		10-1/8 x 13	3	395929
13-15' - LL	10-1/4 R 14	3			►113002		10-1/2 x 14	3	033096				
12-14' - LL	11-1/4 R 14	3	48-61820A1	032041									
12-14' - LL	11 R 15	3	48-61822A1	032040			10-1/2 x 15	3	033097		10-1/8 x 15	3	395930
12-14' - LL	10-3/4 R 16	3	48-61824A1	032039									

25-80 HORSEPOWER

Model 402-500-700 .....1977-84	40 HP (Sea Pro/Marathon) .....1977 & Newer	60 HP (Mariner) .....1976
25 HP Bigfoot (4-Stroke) .....1999 & Newer	45 HP .....1986-89	60 HP (Not Bigfoot or Sea Pro) .....1978 & Newer
30 HP (2 & 4-Stroke) .....1994 & Newer	48 HP (Mariner) .....All Years	60 HP (2-Stroke) .....1978 & Newer
30 HP (Sea Pro/Marathon) .....1994 & Newer	50 HP (2& 4-Stroke) (Not Bigfoot) .....1977 & Newer	70 HP .....Thru 1983
35 HP .....1984-89	55 HP (Mercury/Sea Pro/Marathon) 1995 & Newer	80 HP Mariner .....1977
40 HP (2 & 4-Stroke) (Not Bigfoot) .....1977 & Newer		

Boat Length/Description	Diameter Rot. & Pitch	Blade#	Aluminum Part No.		Stainless Part No.		Rapture Performance Stainless			Ballistic High Performance Stainless			
			OEM	Michigan	OEM	Michigan	Dia. x Pitch	Blades	RH	LH	Dia. x Pitch	Blades	RH	LH
19' & Up	12-1/2 R 8	3	48-42738A10	032141									
19' & Up	12-1/2 R 8	3		★031070									
17-19' - AL, SK	11-1/4 R 10	3	48-73132A40	031015			10-1/2 x 10	3	033088				
16-18' - AL, SK	12 R 10-1/2	3	48-42740A10	032142									
16-18' - AL, SK	12 R 10-1/2	3		★031071									
16-18' - AL, SK	10-7/8 R 11	3	48-85632A40	031053									
15-17' - AL, SK	10-3/4 R 12	3	48-816702A40	031056									
15-17' - AL, SK	10-5/8 R 12	3	48-73134A40	031016	48-79792A5	033001	10-1/2 x 12	3	033089				
14-17' - AL, SK	10-1/2 R 13	3	48-816704A40	031057									
14-17' - AL, SK	10-3/8 R 13	3	48-73136A40	031017			10-1/2 x 13	3	033090		10-1/8 x 13	3	395129
14-16' - LL	10-3/8 R 14	3	48-816706A40	031058									
14-16' - LL	10-1/4 R 14	3	48-73138A40	031018	48-76230A5	033028	10-1/2 x 14	3	033091				
13-15' - LL	10-1/8 R 15	3	48-73140A40	031019			10-1/2 x 15	3	033092		10-1/8 x 15	3	395130
Up to 15' - LL	10 R 17	3	48-73144A40	031020									

Key to abbreviations: LL: Light Loads; SB: Sailboat; AL: All Loads; SK: Skiboat; WB: Workboat; HB: Houseboat; CR: Cruisers; HL: Heavy Loads; WD: Weedless

OUTBOARDS APPLICATIONS



MERCURY™, MARINER™, SEA RAY

3 CYLINDER, 4 & 6 IN LINE CYLINDER

650 4 Cyl. (2:1)	1961-70	800-850 4 Cyl.	1972-77	50 HP (Yamaha)	1977
650 2 Cyl.	Thru 1971	900-1500 Models	Thru 1977	80 HP (Mariner)	1977
800-850 6 Cyl.	Thru 1972				

Boat Length/Description	Diameter Rot. & Pitch	Blade#	Aluminum Part No.		Stainless Part No.		Rapture Performance Stainless				Ballistic High Performance Stainless						
			OEM	Michigan	OEM	Michigan	Dia.	x	Pitch	Blades	RH	LH	Dia.	x	Pitch	Blades	RH	LH
20-24' Boats	13 R 11	3	48-35936A3	►032089													
19-22' Boats	13 R 13	3	48-58826A3	►032090													
17-19' - AL, SK	13 R 15	3	48-32390A3	►032091													
17-19' - AL, SK	13 R 15	3			►031001												
17-19' - AL, SK	13-3/4 R 15	3			48-16986A5	≈033016	13-3/4	x	15	3	≈033084						
16-17' - AL, SK	13 R 17	3	48-65022A1	►032092													
16-17' - AL, SK	13 R 17	3			►031002												
16-17' - AL, SK	13-1/4 R 17	3			48-16988A5	≈033017	13-3/4	x	17	3	≈033085						
15-18' - AL, SK	13 R 19	3	48-65024A1	►032093													
15-18' - AL, SK	13 R 19	3			►031003	48-16990A40	▼033018	13-1/4	x	19	3	≈033086					
14-16' - AL, SK	13 R 21	3	48-67280A1	►032094													
14-16' - AL, SK	13 R 21	3			►031004	48-16992A40	▼033019	13-1/4	x	21	3	≈033087					

60-140 HORSEPOWER • 3 CYLINDER, 4 & 6 IN LINE CYLINDER

60 HP (Bigfoot /Sea Pro Only, not 4-Stroke) 1995 & Newer	100 HP	1988 & Newer	650 2 Cyl.	Thru 1971	
60 HP (Sea Pro/Marathon)	1995 & Newer	115 HP	800-850 6 Cyl.	Thru 1972	
70 HP	1987-89	115 HP 4-Stroke	2001 & Newer	800-850 4 Cyl.	1972-77
75 HP (2 & 4-Stroke)	1984 & Newer	125 HP	900-1500 Models	Thru 1977	
75 HP (Sea Pro/Marathon)	All Years	140 HP (Includes Sea Pro & Offshore)	1978 - 81	80 HP (Yamaha)	1977
80 HP	1978-89	650 4 Cyl. (2:1)	1961-70	80 HP (Mariner)	1977-83
90 HP (2 & 4-Stroke)	1978 & Newer				

Boat Length/Description	Diameter Rot. & Pitch	Blade#	Aluminum Part No.		Stainless Part No.		Rapture Performance Stainless				Ballistic High Performance Stainless								
			OEM	Michigan	OEM	Michigan	Dia.	x	Pitch	Blades	RH	LH	Dia.	x	Pitch	Blades	RH	LH	
25' & Up - AL	14 R 11	3	48-77338A40	▼031054															
22' & Up - AL	14 R 13	3	48-77340A40	▼031055															
19-24' - AL	13-3/4 R 15	3	48-77342A40	≈031041	48-16986A5	≈033016	13-1/4	x	15	3	≈033084		13-5/8	x	15	3	335130		
17-20' - AL, SK	13-1/4 R 17	3	48-77344A40	≈031042	48-16988A5	≈033017	13-1/4	x	17	3	≈033085		13-1/2	x	17	3	335131		
16-19' - AL, SK	13 R 19	3	48-77346A40	▼031043	48-16990A40	▼033018	13-1/4	x	19	3	≈033086		13-3/8	x	19	3	335132		
15-18' - AL, SK	12-3/4 R 21	3	48-77348A40	▼031044															
15-18' - AL, SK	13 R 21	3			48-16992A40	▼033019	13-1/4	x	21	3	≈033087		13-1/8	x	21	3	335133		
Lt. Runabouts, LL	12-1/2 R 23	3	48-77350A40	▼031045									Ballistic 3 XL		13-1/2	x	22	3	335134
High Performance													Ballistic 3 XL		13-1/2	x	24	3	335135
High Performance																			

Key to abbreviations: LL: Light Loads; SB: Sailboat; AL: All Loads; SK: Skiboat; WB: Workboat; HB: Houseboat; CR: Cruisers; HL: Heavy Loads; WD: Weedless

► Use thrust washer 65091. LIMITED INVENTORY ITEMS.

▼ Use thrust washer 13191A1.

≈ To avoid damage or injury, replace standard trim tab with trim tab 82277A1 and thrust washer 13191A1 MUST be used.

OUTBOARDS APPLICATIONS



MERCURY™, MARINER™, SEA RAY

135-300 HORSEPOWER • V-6 GEARCASE

135 HP	1987 & Newer	220 HP	1987-88	275 HP	1990-94
150 HP	1978 & Newer	225 HP	1980 & Newer	300 HP	1983, 1999 & Newer
175 HP	1978 & Newer	225 HP (Sea Pro/Marathon)	All Years	3.4 Litre	1984-86
200 HP	1978 & Newer	250 HP	1994 & Newer		

Includes DFI, EFI, Magnum, Offshore, Optimax, Sea Pro & XRI

Use thrust washer 13171

Add 4" pitch for twin motors

Boat Length/Description	Diameter			Aluminum Part No.		Stainless Part No.		Rapture Performance Stainless					Ballistic High Performance Stainless								
	Rot. & Pitch	Blade#	OEM	OEM	Michigan	OEM	Michigan	Dia.	x	Pitch	Blades	RH	LH	Dia.	x	Pitch	Blades	RH	LH		
CR, HB	16	R 11	3	48-78112A40	031021																
CR, HB	16	R 12	3	48-16436A40	031063																
CR, HB	16	R 13	3	48-78114A40	031022																
22-25' - AL	16	R 14	3	48-16438A40	031050																
21-24' - AL	15-1/4	R 15	3	48-78116A40	031023																
21-24' - AL	14-1/2	R 15	3			48-16312A4	033002	14-1/4	x	15	3	►033072	►033073	14-7/8	x	15	3	345131			
20-23' - AL, SK	16	R 16	3	48-16440A40	031051																
19-23' - AL, SK	14-1/2	R 17	3	48-78118A40	031024	48-16314A4	033003	14-1/4	x	17	3	►033074	►033075	14-3/4	x	17	3	345132	345162		
19-23' - AL, SK	15	R 17	3	48-832828A45	■031064																
19-22' - AL, SK	15-1/2	R 18	3	48-11324A45	031052																
18-22' - AL, SK	14	R 19	3	48-78120A40	031025	48-16316A4	033004	14-1/4	x	19	3	►033076	►033077	14-1/2	x	19	3	345133	345163		
18-22' - AL, SK	14-1/2	R 19	3	48-832830A45	■031065																
18-20' - AL, SK	13-3/4	R 21	3	48-78122A40	031026	48-16318A4	033005	14-1/4	x	21	3	►033078	►033079	14-3/8	x	21	3	345134	345164		
18-20' - AL, SK	14-1/4	R 21	3	48-832832A45	■031066																
17-20' - AL, SK	13-1/2	R 23	3	48-78124A40	031027	48-16320A4	033006	14-1/4	x	23	3	►033080	►033081	14-1/4	x	23	3	345135	345165		
17-20' - AL, SK	14	R 23	3	48-832834A45	■031068																
Up to 18'	13-3/8	R 25	3	48-78126A40	031067			14-1/4	x	25	3	►033082	►033083	14-1/4	x	25	3	345136			
High Performance															Ballistic 3 XL		14-1/2	x	22	3	345141
High Performance															Ballistic 3 XL		14-1/2	x	24	3	345137
High Performance	(EFI Engine)														Ballistic 3 XL		14	x	24	3	345139
High Performance															Ballistic 3 XL		14-1/2	x	26	3	345138
High Performance	(EFI Engine)														Ballistic 3 XL		14	x	26	3	345140

High Performance 4 Blade Propellers

50-62 MPH	13-3/4	R 22	4			*	033038								Ballistic 4 XL		13-3/4	x	23	4	435135
55-67 MPH	13-3/4	R 24	4			*	033040								Ballistic 4 XL		13-3/4	x	25	4	435136
60-72 MPH	13-3/4	R 26	4			*	033042								Ballistic 4 XL		13-3/4	x	27	4	435137

Stainless Steel Performance Propellers for Offshore or Heavy Boats

18-21' - AL, SK	15-1/4	R 19	3			48-13700A41	►033030														
18-20' - AL, SK	14-3/4	R 21	3			48-13702A41	►033032														
17-20' - AL, SK	14-5/8	R 23	3			48-13704A41	►033034														
16-19' - AL, SK	14-1/2	R 25	3			48-13706A41	►033036														
	15-1/4	L 19	3			48-13701A41	►033029														
	14-3/4	L 21	3			48-13703A41	►033031														
	14-5/8	L 23	3			48-13705A41	►033033														
	14-1/2	L 25	3			48-13707A41	►033035														

Key to abbreviations: LL: Light Loads; SB: Sailboat; AL: All Loads; SK: Skiboat; WB: Workboat; HB: Houseboat; CR: Cruisers; HL: Heavy Loads; WD: Weedless

■ Larger blade area design used primarily on 1997 and newer applications.

► To avoid damage or injury, replace standard trim tab with trim tab 822777A1.

♦ LIMITED INVENTORY ITEMS.

Note: When replacing Flo-TorqII™ plastic hub props, aft castle washer 12-31211A2 and conductivity washer 13-42351-1 are required in addition to other hardware supplied with original propeller. For complete details, see page 46.

* Use thrust washer A-9500-110 provided with propeller.



Replacing a Flo-Torq™ Hub with Michigan Propellers

Replacing a Flo-Torq II™ Drop In Hub Design with Michigan Propellers

Propellers supplied from Mercury™, Mariner™ and Force® since 1996 come with Flo-Torq II™ drop in hubs equipped with attaching hardware A,B,C,F & G per the following illustrations. When switching to Michigan Match™ or Rapture™ propellers, change the attaching hardware set up as follows.

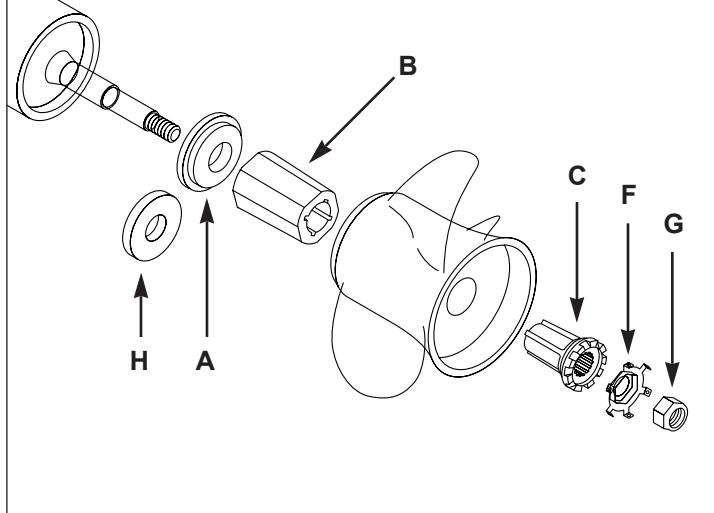
When converting to a Michigan Propeller on a **4 cylinder gear-case**, eliminate B & C, replace A with H and use existing hardware F & G.

When converting to a Michigan Propeller on a **V-6 gear-case**, eliminate B & C and use A, D, E, F & G as attaching hardware (D & E replaces C). Be sure to use high-performance trim tab 822777A1 for Rapture™ installations.

Michigan Wheel offers the following attaching hardware kits for these installations:

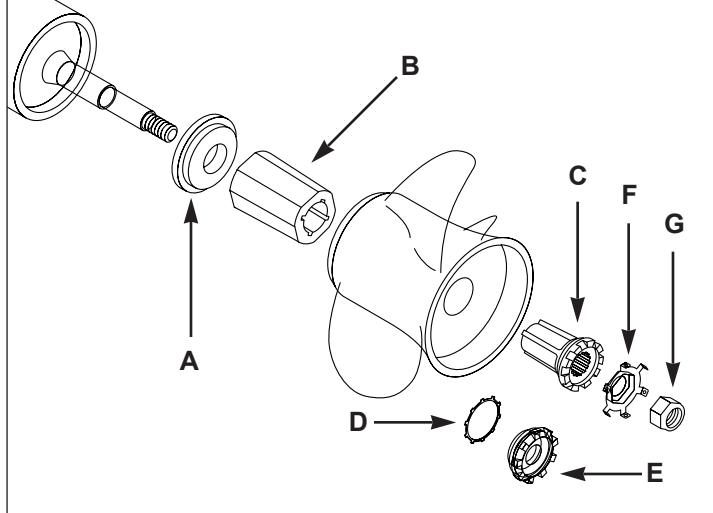
- | | |
|--------|---|
| 990312 | Includes D & E for the V-6 gearcase. |
| 990332 | Includes Forward Thrust Washer H for 4-cylinder gearcase. |
| 9661-1 | Includes A, D, E, F & G for the V-6 gearcase. |
| 9660-1 | Includes H, F & G for the 4 cylinder gearcase. |

4 Cylinder Gearcase
Example part No. 031042



- A) 12-835467 Forward Thrust Washer
- B) 827703 Plastic Drive Sleeve
- C) 826074-1 Metal Sleeve adapter
- D) 13-42351-1 Conductivity (star) washer

V-6 Gearcase Motor
Example Part No. 031025



- E) 12-31211A2 Aft Castle Thrust Washer
- F) 14-816629 Locking Tab Washer
- G) 11-827614 Shaft Prop Nut
- H) 13191A1 Forward Thrust Washer

OUTBOARDS APPLICATIONS



NISSAN, TOHATSU

9.9-18 HORSEPOWER

9.9 HP	1984 & Newer	12 HP	1985-88	15, 18 HP	1985 & Newer
9.9 HP (4-Stroke)	2000 & Newer	15 HP (4-Stroke)	2000 & Newer	18 HP (4-Stroke)	2001 & Newer
Boat Length/Description	Diameter Rot. & Pitch Blade#	Aluminum Part No. OEM Michigan	Stainless Part No. OEM Michigan	Rapture Performance Stainless Dia. x Pitch Blades RH LH	Ballistic High Performance Stainless Dia. x Pitch Blades RH LH
14-18' - AL	9.2 R 6.9 3	362-64105-0 142015			
12-16' - AL	9.2 R 8.4 3	362-64102-0 142017			
10-14' - AL	9.2 R 9.8 3	362-64108-0 142019			

25-30 HORSEPOWER

25 HP	1986 & Newer	30 HP	1985 & Newer		
Boat Length/Description	Diameter Rot. & Pitch Blade#	Aluminum Part No. OEM Michigan	Stainless Part No. OEM Michigan	Rapture Performance Stainless Dia. x Pitch Blades RH LH	Ballistic High Performance Stainless Dia. x Pitch Blades RH LH
16-20' - AL	10.2 R 8.3 3	346-64106-5 142020			
14-18' - AL	9.8 R 10.2 3	346-64102-5 142022			
12-16' - AL	9.9 R 13.1 3	346-64104-5 142024			10-1/8 x 13 3 305429
12-16' - AL					10-1/8 x 15 3 305430

35-50 HORSEPOWER

35 HP (35B only)	Thru 1984	40 HP	1984 & Newer	50 HP	1992 & Newer
50 HP (50D only)	1991				
Boat Length/Description	Diameter Rot. & Pitch Blade#	Aluminum Part No. OEM Michigan	Stainless Part No. OEM Michigan	Rapture Performance Stainless Dia. x Pitch Blades RH LH	Ballistic High Performance Stainless Dia. x Pitch Blades RH LH
20' & Up - AL				10-1/2 x 10 3 143001	
17-21' - AL	10.6 R 11.3 3	361-64113-0 142001			
16-17' - AL	10.6 R 11.7 3	361-64114-0 142002		10-1/2 x 12 3 143002	
14-16' - AL	10.3 R 12.7 3	348-64102-0 142003		10-1/2 x 13 3 143003	
12-14' - AL	10.2 R 13.9 3	348-64103-0 142004		10-1/2 x 14 3 143004	
Up to 13' - AL				10-1/2 x 15 143005	

50-70 HORSEPOWER

50 HP (50C only)	1987-91	60 HP	1986 & Newer	70 HP	1981 & Newer
55 HP	1981-88				
Boat Length/Description	Diameter Rot. & Pitch Blade#	Aluminum Part No. OEM Michigan	Stainless Part No. OEM Michigan	Rapture Performance Stainless Dia. x Pitch Blades RH LH	Ballistic High Performance Stainless Dia. x Pitch Blades RH LH
CR, HB	11.6 R 11 3	353-64103-0 142005		11-3/4 x 11 3 013080	
15-18' - AL, SK	11.5 R 13 3	353-64105-0 142006			
15-18' - AL, SK	12-1/2 R 13 3		013024	11-3/4 x 13 3 013081	
14-17' - AL, SK	11 R 15 3	353-64107-0 142007			
14-17' - AL, SK	12-1/4 R 15 3		013010	11-3/4 x 15 3 013082	12-3/8 x 15 3 325030
13-15' - AL, SK	10.7 R 16.4 3	353-64108-0 142008			
13-15' - AL, SK	11-3/4 R 17 3		013026	11-3/4 x 17 3 013083	12 x 17 3 325031
12-14' - AL, SK	10.9 R 17.6 3	353-64109-0 142009			
12-14' - AL, SK	11-1/4 R 19 3		013032	11-3/4 x 19 3 013084	

Key to abbreviations: LL: Light Loads; SB: Sailboat; AL: All Loads; SK: Skiboat; WB: Workboat; HB: Houseboat; CR: Cruisers; HL: Heavy Loads; WD: Weedless

OUTBOARDS APPLICATIONS



NISSAN, TOHATSU

90-140 HORSEPOWER

90 HP 1987 & Newer 120 HP 1988 & Newer 140 HP 1988 & Newer
 115 HP 1992 & Newer

Boat Length/Description	Diameter Rot. & Pitch	Blade#	Aluminum Part No. OEM Michigan	Stainless Part No. OEM Michigan	Rapture Performance Stainless Dia. x Pitch Blades RH LH	Ballistic High Performance Stainless Dia. x Pitch Blades RH LH
20-24' - AL, SK	13.5 R 14.6	3	3B7-64532-0	142010		
20-24' - AL, SK	13-3/4 R 15	3		103025	13-1/4 x 15 3 ▶103056	13-5/8 x 15 3 335930
17-19' - AL, SK	13.5 R 15.7	3	3B7-64536-0	142011		
17-19' - AL, SK	13-1/4 R 17	3		103026	13-1/4 x 17 3 ▶103057	13-1/2 x 17 3 335931
16-18' - AL, SK	12.9 R 17.6	3	3B7-64541-0	142012		
16-18' - AL, SK	13 R 19	3		103027	13-1/4 x 19 3 ▶103058	13-3/8 x 19 3 335932
15-18' - AL, SK	12.6 R 19.9	3	3B7-64545-0	142013		
15-18' - AL, SK					13-1/4 x 21 3 ▶103059	13-1/8 x 21 3 335933

SUZUKI

9.9-15 HORSEPOWER

DT 9.9 1983-87 DT 15 1983-88 DT 15 (4-Stroke) 1997 & Newer
 DF 9.9 (4-Stroke) 1997 & Newer DT 15C 1989-97

Boat Length/Description	Diameter Rot. & Pitch	Blade#	Aluminum Part No. OEM Michigan	Stainless Part No. OEM Michigan	Rapture Performance Stainless Dia. x Pitch Blades RH LH	Ballistic High Performance Stainless Dia. x Pitch Blades RH LH
14-20' - AL	9-1/4 R 7	3	58100-93703-019	062015		
14-18' - AL	9-1/4 R 9	3	58100-93723-019	062016		
14-16' - AL	9-1/4 R 11	3	58100-93743-019	062017		

25-30 HORSEPOWER

DT 25C 1989 & Newer DT 30, 30C 1987-97 DF 25 (4-Stroke) 2000 & Newer
 DT 20, 25 1987-88 DT 30 @ 1983-86 DF 30 (4-Stroked) 200 & Newer
 DT 20, 25 @ 1983-86

Boat Length/Description	Diameter Rot. & Pitch	Blade#	Aluminum Part No. OEM Michigan	Stainless Part No. OEM Michigan	Rapture Performance Stainless Dia. x Pitch Blades RH LH	Ballistic High Performance Stainless Dia. x Pitch Blades RH LH
16-18' - AL	10-1/4 R 11	3	58100-96420-019	062012		
16-18' - AL	10-1/4 R 11	3	★061006			
14-16' - AL	10-1/4 R 12	3	58100-96430-019	062013		
14-16' - AL	10-1/4 R 13	3	58100-96440-019	062014		10-1/8 x 13 3 305529
						10-1/8 x 15 3 305530

Key to abbreviations: LL: Light Loads; SB: Sailboat; AL: All Loads; SK: Skiboat; WB: Workboat; HB: Houseboat; CR: Cruisers; HL: Heavy Loads; WD: Weedless

★ New Capped Version.

@ Use stopper 57632-96400



OUTBOARDS APPLICATIONS



SUZUKI

35-65 HORSEPOWER

DT 35C	1987-90	DT 55	1987-90	DF 40 (4-Stroke) .....	.1999 & Newer
DT 40	1983 & Newer	DT 60	1983-84	DF 50 (4-Stroke) .....	.1999 & Newer
DT 50 & 50M	1983-84	DT 65	1985-97		

Boat Length/Description	Diameter Rot. & Pitch	Blade#	Aluminum Part No.	Stainless Part No.	Rapture Performance Stainless	Ballistic High Performance Stainless		
			OEM	Michigan	OEM	Michigan	Dia. x Pitch Blades RH LH	Dia. x Pitch Blades RH LH
18-21' - AL	12-1/4 R 10	3	58100-95212-019	032045			10-1/2 x 10 3 033093	
18-21' - AL	12-1/4 R 10	3	58100-95212-019	★031072				
17-19' - AL	12 R 11	3	58100-95222-019	032044				
17-19' - AL	12 R 11	3	58100-95222-019	★031073				
16-18' - LL	10-5/8 R 12	3			►113001		10-1/2 x 12 3 033094	
15-17' - LL	11-3/4 R 12	3	58100-95393-019	032043				
14-16' - LL	11-1/2 R 13	3	58100-94313-019	032042			10-1/2 x 13 3 033095	10-1/8 x 13 3 395929
13-15' - LL	10-1/4 R 14	3			58100-94401	►113002	10-1/2 x 14 3 033096	
12-14' - LL	11-1/4 R 14	3	58100-95353-019	032041				
12-14' - LL	11 R 15	3	58100-95363-019	032040			10-1/2 x 15 3 033097	10-1/8 x 15 3 395930
12-14' - LL	10-3/4 R 16	3	58100-95373-019	032039				

90-115 HORSEPOWER (4-STROKE)

DF 90 (4-Stroke) 2001 & Newer DF 115 (4-Stroke) 2001 & Newer DF140 (4-Stroke)2002 & Newer

Boat Length/Description	Diameter Rot. & Pitch	Blade#	Aluminum Part No.	Stainless Part No.	Rapture Performance Stainless	Ballistic High Performance Stainless		
			OEM	Michigan	OEM	Michigan	Dia. x Pitch Blades RH LH	Dia. x Pitch Blades RH LH
25' - AL	14 R 11	3		101036				
22' - AL	13-5/8 R 13	3		101031				
20-24' - AL, SK	13-1/2 R 15	3		101032				
20-24' - AL, SK	13-3/4 R 15	3			688-45978-60-98 103025	13-1/4 x 15 3 ►103056	13-5/8 x 15 3 335930	
17-19' - AL, SK	13-1/4 R 17	3	58100-90J00-019	101033	688-45930-02-98 103026	13-1/4 x 17 3 ►103057	13-1/2 x 17 3 335931	
16-18' - AL, SK	13 R 19	3	58100-90J10-019	101034	688-45970-03-9 103027	13-1/4 x 19 3 ►103058	13-3/8 x 19 3 335932	
15-18' - AL, SK	12-5/8 R 21	3	58100-90J20-019	101035		13-1/4 x 21 3 ►103059	13-1/8 x 21 3 335933	
High Performance						Ballistic 3 XL	13-1/2 x 22 3 335934	
High Performance						Ballistic 3 XL	13-1/2 x 24 3 335935	

60-140 HORSEPOWER

DF 60, 70 + (4-Stroke) 1998 & Newer DT 85 ++ 1992 & Newer DT 100 + 1989 & Newer
 DT 75 ++ 1992-97 DT 85 # 1979-91 DT 115, 140 ++ 1992 & Newer
 DT 75 # 1983-91 DT 90 + 1989-97 DT 115, 140 # 1981-91

Boat Length/Description	Diameter Rot. & Pitch	Blade#	Aluminum Part No.	Stainless Part No.	Rapture Performance Stainless	Ballistic High Performance Stainless	
			OEM	Michigan	OEM	Michigan	Dia. x Pitch Blades RH LH	Dia. x Pitch Blades RH LH
17-19' - AL, SK	13-3/4 R 15	3	58100-95500-019	*061001	99105-00100-16P ►063001	13-1/4 x 15 3 ►063042	13-5/8 x 15 3 335530
15-18' - AL, SK	13-1/4 R 17	3	58100-95511-01	*061002	99105-00100-18P ►063002	13-1/4 x 17 3 ►063043	13-1/2 x 17 3 335531
14-16' - AL, SK	13 R 19	3	58100-95521-019	*061003	99105-00101-20P ►063003	13-1/4 x 19 3 ►063044	13-3/8 x 19 3 335532
14-16' - LL	13 R 21	3	58100-95530-019	*061004		13-1/4 x 21 3 ►063045	13-1/8 x 21 3 335533
High Performance						Ballistic 3 XL	13-1/2 x 22 3 335534
High Performance						Ballistic 3 XL	13-1/2 x 24 3 335535

Key to abbreviations: LL: Light Loads; SB: Sailboat; AL: All Loads; SK: Skiboat; WB: Workboat; HB: Houseboat; CR: Cruisers; HL: Heavy Loads; WD: Weedless

★ New Cupped Version

► LIMITED INVENTORY ITEMS.

★ If currently using uncupped propeller, use cupped propeller having 2" less pitch. Boats with power trim use same pitch.

Requires stopper 57635-95503, Spacer 57633-95501, Lock Washer 09160-18028 (supplied with Engine)

+ Use stopper 57632-87E10, Spacer 57633-95501, Washer 09160-18028

OUTBOARDS APPLICATIONS



SUZUKI

150-225 HORSEPOWER

DT 150 1986 & Newer DT 200 1986 & Newer DT 225 1990 & Newer
 DT 175 1986 - 92

Boat Length/Description	Diameter Rot. & Pitch	Blade#	Aluminum Part No.		Stainless Part No.		Rapture Performance Stainless				Ballistic High Performance Stainless				
			OEM	Michigan	OEM	Michigan	Dia.	x Pitch	Blades	RH	LH	Dia.	x Pitch	Blades	RH	LH
17-19' - AL, SK							14-1/4	x 15	3	►★063030	►★063031	14-7/8	x 15	3	345531
15-18' - AL, SK							14-1/4	x 17	3	►★063032	►★063033	14-3/4	x 17	3	345532
14-16' - AL, SK							14-1/4	x 19	3	►★063034	►★063035	14-1/2	x 19	3	345533
14-16' - LL							14-1/4	x 21	3	►★063036	►★063037	14-3/8	x 21	3	345534
12-14' - LL							14-1/4	x 23	3	►★063038	►★063039	14-1/4	x 23	3	345535
12-14' - LL							14-1/4	x 25	3	►★063040	►★063041	14-1/4	x 25	3	345536
High Performance							Ballistic 3 XL				Ballistic 3 XL				345541
High Performance							Ballistic 3 XL				Ballistic 3 XL				345537
High Performance							Ballistic 3 XL				Ballistic 3 XL				345538

High Performance 4 Blade Propellers

High Performance												Ballistic 4 XL	13-3/4	x 23	4	435535
High Performance												Ballistic 4 XL	13-3/4	x 25	4	435536
High Performance												Ballistic 4 XL	13-3/4	x 27	4	435537

YAMAHA

6-8 HORSEPOWER

6 HP 1986 & Newer 8 HP 1986 & Newer

Boat Length/Description	Diameter Rot. & Pitch	Blade#	Aluminum Part No.		Stainless Part No.		Rapture Performance Stainless				Ballistic High Performance Stainless				
			OEM	Michigan	OEM	Michigan	Dia.	x Pitch	Blades	RH	LH	Dia.	x Pitch	Blades	RH	LH
General Usage	8-1/2 R 6-1/2	3	6G1-45947-00-EL	102001											
General Usage	8-1/2 R 7-1/2	3	6G1-45943-00-EL	102002											

8 HORSEPOWER

8 HP 1976-83

Boat Length/Description	Diameter Rot. & Pitch	Blade#	Aluminum Part No.		Stainless Part No.		Rapture Performance Stainless				Ballistic High Performance Stainless				
			OEM	Michigan	OEM	Michigan	Dia.	x Pitch	Blades	RH	LH	Dia.	x Pitch	Blades	RH	LH
14-16' - AL	8-1/4 R 8	3		012008											
14-16' - LL	8-1/4 R 9	3		012101											

9.9-15 HORSEPOWER

9.9 HP 1984 & Newer 15 HP 1984 & Newer

Boat Length/Description	Diameter Rot. & Pitch	Blade#	Aluminum Part No.		Stainless Part No.		Rapture Performance Stainless				Ballistic High Performance Stainless				
			OEM	Michigan	OEM	Michigan	Dia.	x Pitch	Blades	RH	LH	Dia.	x Pitch	Blades	RH	LH
13-17' - HL	9-1/4 R 8	3	683-45947-00-EL	102003											
12-15' - AL	9-1/4 R 9	3	683-45945-00-EL	102004											
12-15' - AL	9-1/4 R 10-1/2	3	683-45943-00-EL	102005											

Key to abbreviations: LL: Light Loads; SB: Sailboat; AL: All Loads; SK: Skiboat; WB: Workboat; HB: Houseboat; CR: Cruisers; HL: Heavy Loads; WD: Weedless

★ To avoid damage or injury, Trim Tab 55125-87D10 must replace standard trim tab. Use stopper A9500-109 supplied with propeller.

► LIMITED INVENTORY ITEMS.

OUTBOARDS APPLICATIONS



YAMAHA

15-28 HORSEPOWER

15 A & W15 HP 1976-83 25 HP 2 Cyl. 1977-79 28 HP 1976-78
 20 HP 1976-78
 (PIN DRIVE)

Boat Length/Description	Diameter Rot. & Pitch	Blade#	Aluminum Part No.		Stainless Part No.		Rapture Performance Stainless			Ballistic High Performance Stainless		
			OEM	Michigan	OEM	Michigan	Dia. x Pitch	Blades RH	LH	Dia. x Pitch	Blades RH	LH
HB, SB	9-1/4 R 7	3	650-45943-01-36	012102								
12-14' - HL	9 R 10	3	651-45947-00-36	012011								
12-14' - AL	9-1/4 R 11	3	653-45941-01-36	012013								
12-14' - LL	9-1/4 R 12	3		012010								

20-30 HORSEPOWER

20 HP 1996-97 25 HP (4-Stroke) 2001 30 HP 1979 & Newer
 25 HP 1980 & Newer 30 HP (4-Stroke) 2001
 (FLOW-THRU EXHAUST)

Boat Length/Description	Diameter Rot. & Pitch	Blade#	Aluminum Part No.		Stainless Part No.		Rapture Performance Stainless			Ballistic High Performance Stainless		
			OEM	Michigan	OEM	Michigan	Dia. x Pitch	Blades RH	LH	Dia. x Pitch	Blades RH	LH
16-18' - AL, SK	9-7/8 R 9	3	664-45941-01-EL	022001								
16-18' - AL, SK	9-7/8 R 9	3		★021001								
14-17' - AL, SK	9-7/8 R 10-1/2	3	664-45945-00-EL	022002								
13-16' - LL	9-3/8 R 12	3	664-45954-00-EL	022003								
14-17' - General Use										10-1/8 x 13	3	305929
13-15' - General Use										10-1/8 x 15	3	305930

40-60 HORSEPOWER

40 HP 1984 & Newer 55 HP 1976-95 FS 40 (4-Stroke) 1999 & Newer
 48 HP 1995 & Newer 60 HP 1976-91 FS 50 (4-Stroke) 1995 & Newer
 50 HP (not T50) 1984 & Newer

Boat Length/Description	Diameter Rot. & Pitch	Blade#	Aluminum Part No.		Stainless Part No.		Rapture Performance Stainless			Ballistic High Performance Stainless		
			OEM	Michigan	OEM	Michigan	Dia. x Pitch	Blades RH	LH	Dia. x Pitch	Blades RH	LH
19-22' - LL	12-1/8 R 9	3	663-45956-01-EL	102016								
19-22' - LL	12-1/4 R 10	3		032045			10-1/2 x 10	3	033093			
19-22' - LL	12-1/4 R 10	3		★031072								
17-19' - AL, SK	12 R 11	3	663-45947-02-EL	032044								
17-19' - AL, SK	12 R 11	3		★031073								
15-18' - AL, SK	10-5/8 R 12	3			663-45972-60-98	►113001	10-1/2 x 12	3	033094			
16-17' - AL, SK	11-3/4 R 12	3	6H5-45952-00-EL	032043								
14-16' - AL, SK	11-1/2 R 13	3	6H5-45945-00-EL	032042			10-1/2 x 13	3	033095	10-1/8 x 13	3	395929
13-15' - LL	10-1/4 R 14	3			663-45930-00-98	►113002	10-1/2 x 14	3	033096			
12-14' - LL	11-1/4 R 14	3	663-45958-01-EL	032041								
12-14' - LL	11 R 15	3	6H5-45943-00-EL	032040			10-1/2 x 15	3	033097	10-1/8 x 15	3	395930
12-14' - LL	10-3/4 R 16	3	663-45949-01-EL	032039								

Key to abbreviations: LL: Light Loads; SB: Sailboat; AL: All Loads; SK: Skiboat; WB: Workboat; HB: Houseboat; CR: Cruisers; HL: Heavy Loads; WD: Weedless

★ New Cupped Version

► LIMITED INVENTORY ITEMS.

OUTBOARDS APPLICATIONS



YAMAHA

50-130 HORSEPOWER

T50 HP	1996 & Newer	80 HP	1997	130 HP	1984 & Newer
60 HP	1992 & Newer	85 HP	1991-97	FS 80 (4-Stroke)	1999 & Newer
70 HP	1984 & Newer	90 HP	1984 & Newer	FS 100 (4-Stroke)	1999 & Newer
75 HP	1994 & Newer	115 HP	1984 & Newer	FS 115 (4-Stroke)	2000 & Newer

Boat Length/Description	Diameter Rot. & Pitch	Blade#	Aluminum Part No.	Stainless Part No.		Rapture Performance Stainless			Ballistic High Performance Stainless				
			OEM	Michigan	OEM	Michigan	Dia. x Pitch	Blades	RH	LH	Dia. x Pitch	Blades	RH	LH
25' - AL	14 R 11	3	6E5-45954-00-EL	101036									
22' - AL	13-5/8 R 13	3	6E5-45949-00-EL	101031									
20-24' - AL, SK	13-1/2 R 15	3	6E5-45947-00-EL	101032									
20-24' - AL, SK	13-3/4 R 15	3			688-45978-60-98	103025	13-1/4 x 15	3	►103056		13-5/8 x 15	3	335930
17-19' - AL, SK	13-1/4 R 17	3	6E5-45945-01-EL	101033	688-45930-02-98	103026	13-1/4 x 17	3	►103057		13-1/2 x 17	3	335931
16-18' - AL, SK	13 R 19	3	6E5-45941-00-EL	101034	688-45970-03-98	103027	13-1/4 x 19	3	►103058		13-3/8 x 19	3	335932
15-18' - AL, SK	12-5/8 R 21	3	6E5-45943-00-EL	101035			13-1/4 x 21	3	►103059		13-1/8 x 21	3	335933
High Performance										Ballistic 3 XL	13-1/2 x 22	3	335934
High Performance										Ballistic 3 XL	13-1/2 x 24	3	335935

80-140 HORSEPOWER

80, 90, 115 HP	1978-83	80 HP	1977	See Mercury section on page 42 for available propellers.
140 HP	1978-79			

Boat Length/Description	Diameter Rot. & Pitch	Blade#	Aluminum Part No.	Stainless Part No.		Rapture Performance Stainless			Ballistic High Performance Stainless				
			OEM	Michigan	OEM	Michigan	Dia. x Pitch	Blades	RH	LH	Dia. x Pitch	Blades	RH	LH
25' and Up - AL	14 R 11	3	031054										
22' and Up - AL	14 R 13	3	031055										
20-24' - AL, SK	13-3/4 R 15	3	031041		033016		13-1/4 x 15	3	►033084		13-5/8 x 15	3	335130
17-19' - AL, SK	13-1/4 R 17	3	031042		033017		13-1/4 x 17	3	►033085		13-1/2 x 17	3	335131
16-18' - AL, SK	13 R 19	3	031043		033018		13-1/4 x 19	3	►033086		13-3/8 x 19	3	335132
15-18' - AL, SK	12-3/4 R 21	3	031044		033019		13-1/4 x 21	3	►033087		13-1/8 x 21	3	335133
14-16' - AL, SK	12-1/2 R 23	3	031045										
High Performance										Ballistic 3 XL	13-1/2 x 22	3	335134
High Performance										Ballistic 3 XL	13-1/2 x 24	3	335135

150-175 HORSEPOWER

150 HP	1979-83	175 HP	1978-79	175 HP (DI & VMAX)	2001
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Boat Length/Description	Diameter Rot. & Pitch	Blade#	Aluminum Part No.	Stainless Part No.		Rapture Performance Stainless			Ballistic High Performance Stainless				
			OEM	Michigan	OEM	Michigan	Dia. x Pitch	Blades	RH	LH	Dia. x Pitch	Blades	RH	LH
CR, HB	16 R 11	3	031021										
CR, HB	16 R 13	3	031022										
20-24' - AL, SK	15-1/4 R 15	3	031023										
20-22' - AL, SK	14-1/2 R 15	3			033002		14-1/4 x 15	3	►033072	►033073	14-7/8 x 15	3	345131
19-21' - AL, SK	14-1/2 R 17	3	031024		033003		14-1/4 x 17	3	►033074	►033075	14-3/4 x 17	3	345132
18-20' - AL, SK	14 R 19	3	031025		033004		14-1/4 x 19	3	►033076	►033077	14-1/2 x 19	3	345133
18-19' - AL, SK	13-3/4 R 21	3	031026		033005		14-1/4 x 21	3	►033078	►033079	14-3/8 x 21	3	345134
17-19' - AL, SK	13-1/2 R 23	3	031027		033006		14-1/4 x 23	3	►033080	►033081	14-1/4 x 23	3	345135
17-18' - AL, SK	13-3/8 R 25		031067				14-1/4 x 25	3	►033082	►033083	14-1/4 x 25	3	345136

Key to abbreviations: LL: Light Loads; SB: Sailboat; AL: All Loads; SK: Skiboat; WB: Workboat; HB: Houseboat; CR: Cruisers; HL: Heavy Loads; WD: Weedless

► LIMITED INVENTORY ITEMS.



YAMAHA

150-250 HORSEPOWER

150 HP	1986 & Newer	220 HP (Special)	1984-85	250 HP (VMAX) .....	.2001
175 HP	1984 & Newer	225 HP (Excel)	1987-88	F200 (4-Stroke) .....	.2002
200 HP	1984 & Newer	225 HP	1986 & Newer	F225 (4-Stroke) .....	.2002
200 HP (VMAX) .....	.2001	250 HP	1990 & Newer		

Boat Length/Description	Diameter Rot. & Pitch	Blade#	Aluminum Part No.		Stainless Part No.		Rapture Performance Stainless				Ballistic High Performance Stainless								
			OEM	Michigan	OEM	Michigan	Dia.	x	Pitch	Blades	RH	LH	Dia.	x	Pitch	Blades	RH	LH	
20-22' - AL, SK	15-1/4 R 15	3	6G5-45941-00-98	101025			14-1/4	x	15	3	►103044	►103045	14-7/8	x	15	3	345931		
20-21' - AL, SK	14-5/8 R 16	3	6G5-45952-00-98	101026															
19-21' - AL, SK	14-1/2 R 17	3	6G5-45947-01-98	101027	6G5-45978-03-98	►103018	14-1/4	x	17	3	►103046	►103047	14-3/4	x	17	3	345932	345962	
18-20' - AL, SK	14 R 19	3	6G5-45945-01-98	101028	6G5-45974-03-98	►103020	14-1/4	x	19	3	►103048	►103049	14-1/2	x	19	3	345933	345963	
18-20' - AL, SK	13-3/4 R 21	3	6H5-45943-01-98	101029	6G5-45972-02-98	►103022	14-1/4	x	21	3	►103050	►103051	14-3/8	x	21	3	345934	345964	
18-19' - AL, SK	13-1/2 R 23	3	6G5-45949-00-98	101030			14-1/4	x	23	3	►103052	►103053	14-1/4	x	23	3	345935	345965	
Up to 18' - AL, SK							14-1/4	x	25	3	►103054	►103055	14-1/4	x	25	3	345936		
High Performance													Ballistic 3 XL		14-1/2	x	22	3	345941
High Performance													Ballistic 3 XL		14-1/2	x	24	3	345937
High Performance													Ballistic 3 XL		14-1/2	x	26	3	345938

High Performance 4 Blade Propellers

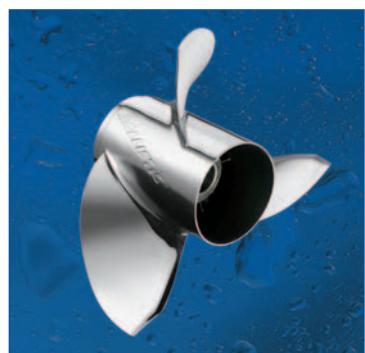
High Performance							Ballistic 4 XL		13-3/4	4	435935
High Performance							Ballistic 4 XL		13-3/4	4	435936
High Performance							Ballistic 4 XL		13-3/4	4	435937

Key to abbreviations: LL: Light Loads; SB: Sailboat; AL: All Loads; SK: Skiboat; WB: Workboat; HB: Houseboat; CR: Cruisers; HL: Heavy Loads; WD: Weedless

► LIMITED INVENTORY ITEMS.

GO BALLISTIC!

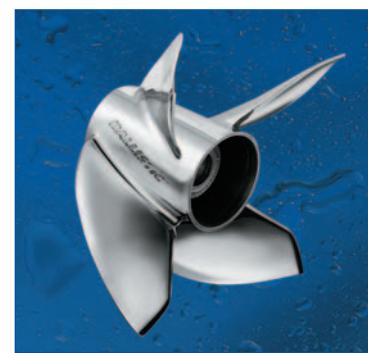
High Caliber Performance For Less!



Power and Control for High Performance Boats

3-blade Ballistic-XL props provide peak top end speed for bass boats and high performance hulls. Advanced rake provides bow lift for reduced hull drag. Enhanced cup design reduces cavitation when the engine is trimmed high for extra bow lift. This combination of rake and cup yields incredible efficiency and speed.

4-blade Ballistic-XL props have the same combination of advanced rake and enhanced cup for less drag and higher efficiency. In addition, the 4-blade XL props deliver better "hole shot" for faster planing. They also produce less steering torque and vibration at higher speeds.



BALLISTIC™
HIGH PERFORMANCE STAINLESS STEEL PROPS

STERNDRIVE APPLICATIONS



MERCRAUISER™

MERCRAUISER™ • ALPHA ONE™ • 110-190 HP

(SEE FOOTNOTES ■ & ▼)

Models 1A, 1B, 1C, 120, 140, 145 DTS & 165	120-190 HP Mercruiser™	1983-85	3.0 L (125-140 HP) Alpha One™	1986 & Newer
Models 228, 470, 485, 888, 898	2.5 L (120 HP) Alpha One™	1986-89	3.7 L (165-190 HP) Alpha One™	1986-89

Boat Length - (MPH)	Diameter			Aluminum Part No.		Stainless Part No.		Rapture Performance Stainless				Ballistic High Performance Stainless					
	Rot. & Pitch	Blade#	OEM	Michigan	OEM	Michigan	Dia.	x Pitch	Blades	RH	LH	Dia.	x Pitch	Blades	RH	LH	
Non-Plane Heavy CR	16	R 11	3	48-78112A40	031021												
Non-Plane Heavy CR	16	R 12	3	48-16436A40	031063												
Non-Plane Heavy CR	16	R 13	3	48-78114A40	031022												
21-26' - (17-28)	16	R 14	3	48-16438A40	031050												
21-26' - (18-31)	15-1/4	R 15	3	48-78116A40	031023												
21-26' - (18-31)	14-1/2	R 15	3			48-16312A4	033002	14-1/4 x 15	3	►033072	►033073		14-7/8 x 15	3	345131		
19-23' - (26-34)	16	R 16	3	48-16440A40	031051												
19-23' - (27-37)	14-1/2	R 17	3	48-78118A40	031024	48-16314A4	033003	14-1/4 x 17	3	►033074	►033075		14-3/4 X 17	3	345132	345162	
19-23' - (27-37)	15	R 17	3	48-832828A45	●031064												
17-21' - (32-39)	15-1/2	R 18	3	48-11324A45	031052												
17-21' - (33-42)	14	R 19	3	48-78120A40	031025	48-16316A4	033004	14-1/4 x 19	3	►033076	►033077		14-1/2 x 19	3	345133	345163	
17-21' - (33-42)	14-1/2	R 19	3	48-832830A45	●031065												
Up to 19' - (37-46)	13-3/4	R 21	3	48-78122A40	031026	48-16318A4	033005	14-1/4 x 21	3	►033078	►033079		14-3/8 x 21	3	345134	345164	
Up to 19' - (37-46)	14-1/4	R 21	3	48-832832A45	●031066												
Up to 18' - (40-50)	13-1/2	R 23	3	48-78124A40	031027	48-16320A4	033006	14-1/4 x 23	3	►033080	►033081		14-1/4 x 23	3	345135	345165	
Up to 18' - (40-50)	14	R 23	3	48-832834A45	●031068												
Up to 18' - (43-55)	13-3/8	R 25	3	48-78126A40	031067			14-1/4 x 25	3	►033082	►033083		14-1/4 x 25	3	345136		
16-19' High Perf.	Lifting Hulls												Ballistic 3 XL	14-1/2 x 22	3	345141	
15-18' High Perf.	Lifting Hulls												Ballistic 3 XL	14-1/2 x 24	3	345137	
Up to 17' High Perf.	Lifting Hulls												Ballistic 3 XL	14-1/2 x 26	3	345138	

MERCRAUISER™ • ALPHA ONE™ • BRAVO ONE™ • 200-320 HP

(SEE FOOTNOTES ■ & ▼)

Models 228, 898, 225S, 233, 255TRS, 260	5.0 L (180-240 HP) Alpha One™	1986 & Newer	6.2 MPI (320 HP) Alpha One™
Models 280TRS, 330TRS	5.7 L (210-260 HP) Alpha One™	1986 & Newer	5.0 L (220-240 HP) Bravo One™
200-260 HP Mercruiser™	262 Magnum (205 HP) Alpha One™	1997 & Newer	5.7 L (210-280 HP) Bravo One™
4.3 L (155-210 HP) Alpha One™	350 Magnum (240-300 HP)	1987 & Newer	350 Magnum (300 HP) Bravo One™

Boat Length - (MPH)	Diameter			Aluminum Part No.		Stainless Part No.		Rapture Performance Stainless				Ballistic High Performance Stainless					
	Rot. & Pitch	Blade#	OEM	Michigan	OEM	Michigan	Dia.	x Pitch	Blades	RH	LH	Dia.	x Pitch	Blades	RH	LH	
Non-Plane Heavy CR	16	R 11	3	48-78112A40	031021												
Non-Plane Heavy CR	16	R 12	3	48-16436A40	031063												
HB - (18-26)	16	R 13	3	48-78114A40	031022												
23-27' - (18-31)	16	R 14	3	48-16438A40	031050												
23-28' - (19-38)	15-1/4	R 15	3	48-78116A40	031023												
23-28' - (19-38)	14-1/2	R 15	3			48-16312A4	033002	14-1/4 x 15	3	►033072	►033073		14-7/8 x 15	3	345131		
22-26' - (26-35)	16	R 16	3	48-16440A40	031051												
21-26' - (29-45)	14-1/2	R 17	3	48-78118A40	031024	48-16314A4	033003	14-1/4 x 17	3	►033074	►033075		14-3/4 X 17	3	345132	345162	
21-26' - (29-45)	15	R 17	3	48-832828A45	●031064												
21-25' - (34-42)	15-1/2	R 18	3	48-11324A45	031052												
19-25' - (35-49)	14	R 19	3	48-78120A40	031025	48-16316A4	033004	14-1/4 x 19	3	►033076	►033077		14-1/2 x 19	3	345133	345163	
19-25' - (35-49)	14-1/2	R 19	3	48-832830A45	●031065												
17-23' - (41-56)	13-3/4	R 21	3	48-78122A40	031026	48-16318A4	033005	14-1/4 x 21	3	►033078	►033079		14-3/8 x 21	3	345134	345164	
17-23' - (41-56)	14-1/4	R 21	3	48-832832A45	●031066												
Up to 20' - (47-62)	13-1/2	R 23	3	48-78124A40	031027	48-16320A4	033006	14-1/4 x 23	3	►033080	►033081		14-1/4 x 23	3	345135	345165	
Up to 20' - (47-62)	14	R 23	3	48-832834A45	●031068												
Up to 18' - (47-65)	13-3/8	R 25	3	48-78126A40	031067			14-1/4 x 25	3	►033082	►033083						
High Performance	Lifting Hull												Ballistic 3 XL	14-1/2 X 22	3	345141	
High Performance	Lifting Hull												Ballistic 3 XL	14-1/2 X 24	3	345137	
High Performance	Lifting Hull												Ballistic 3 XL	14-1/2 X 26	3	345138	

Key to abbreviations: LL: Light Loads; SB: Sailboat; AL: All Loads; SK: Skiboot; WB: Workboat; HB: Houseboat; CR: Cruisers; HL: Heavy Loads; WD: Weedless

■ When replacing Flo-Torq II™ plastic hub props, aft castle thrust washer 12-31211A2 and conductivity (star) washer 13-42351-1 are required in addition to the other hardware supplied with original propeller.

For complete details, see page 34. All suggestions are based upon single engine boats. Add 4° of pitch for twin applications.

▼ Caution: Use standard trim tab 34127A1 (except for Rapture™ use 822777A1) and forward thrust washer 13191A1.

● Larger blade area design used primarily on 1997 and newer applications.

► When using Rapture™ and Ballistic™ propellers, to avoid damage or injury, replace standard trim tab with trim tab 822777A1 and use forward thrust washer 12-835467.

► LIMITED INVENTORY ITEMS.

STERNDRIVE APPLICATIONS



MERCRAUISER™

ALPHA ONE™ 1987 & NEWER • 365 HP & LOWER (RUBBER HUB) (SEE FOOTNOTES ■ & ▼)

Boat Length/Description	Diameter Rot. & Pitch	Blade#	Aluminum Part No. OEM Michigan	Stainless Part No. OEM Michigan	Rapture Performance Stainless Dia. x Pitch Blades RH LH	Ballistic High Performance Stainless Dia. x Pitch Blades RH LH
23-28' - AL					14-1/4 x 15 3 D033072	14-7/8 x 15 3 345131
23-28' - AL					14-1/4 x 15 3 D033073	
21-26' - AL, SK					14-1/4 x 17 3 D033074	14-3/4 x 17 3 345132
21-26' - AL, SK					14-1/4 x 17 3 D033075	14-3/4 x 17 3 345162
22-25' - AL, SK	15-1/4 R 19	3		48-13700A41 D033030	14-1/4 x 19 3 D033076	14-1/2 x 19 3 345133
22-25' - AL, SK	15-1/4 L 19	3		48-13701A41 D033029	14-1/4 x 19 3 D033077	14-1/2 x 19 3 345163
21-23' - AL, SK	14-3/4 R 21	3		48-13702A41 D033032	14-1/4 x 21 3 D033078	14-3/8 x 21 3 345134
21-23' - AL, SK	14-3/4 L 21	3		48-13703A41 D033031	14-1/4 x 21 3 D033079	14-3/8 x 21 3 345164
Up to 22' - AL, SK	14-5/8 R 23	3		48-13704A41 D033034	14-1/4 x 23 3 D033080	14-1/4 x 23 3 345135
Up to 22' - AL, SK	14-5/8 L 23	3		48-13705A41 D033033	14-1/4 x 23 3 D033081	14-1/4 x 23 3 345165
Up to 20' - AL, SK	14-1/2 R 25	3		48-13706A41 D033036	14-1/4 x 25 3 D033082	14-1/4 x 25 3 345136
Up to 20' - AL, SK	14-1/2 L 25	3		48-13707A41 D033035	14-1/4 x 25 3 D033083	

BRAVO ONE™ • 1988 & NEWER • 365 HP & LOWER (RUBBER HUB) (SEE FOOTNOTES ■ & ▼)

5.7 L (250-280 HP)	1995 & Newer	350 Magnum (300 HP)	1996 & Newer	7.4 L (300-330 HP)	1988 & Newer
320 EFI (320 HP)	1988-89	454 Magnum (350-365 HP)	1988 & Newer		

Boat Length/Description	Diameter Rot. & Pitch	Blade#	Aluminum Part No. OEM Michigan	Stainless Part No. OEM Michigan	Rapture Performance Stainless Dia. x Pitch Blades RH LH	Ballistic High Performance Stainless Dia. x Pitch Blades RH LH
23-28' - AL					14-1/4 x 15 3 D033072	14-7/8 x 15 3 345131
23-28' - AL					14-1/4 x 15 3 D033073	
21-26' - AL, SK					14-1/4 x 17 3 D033074	14-3/4 x 17 3 345132
21-26' - AL, SK					14-1/4 x 17 3 D033075	14-3/4 x 17 3 345162
25-30' - AL, SK	15-1/4 R 19	3		48-13700A41 D033030	14-1/4 x 19 3 D033076	14-1/2 x 19 3 345133
25-30' - AL, SK	15-1/4 L 19			48-13701A41 D033029	14-1/4 x 19 3 D033077	14-1/2 x 19 3 345163
23-27' - AL, SK	14-3/4 R 21	3		48-13702A41 D033032	14-1/4 x 21 3 D033078	14-3/8 x 21 3 345134
23-27' - AL, SK	14-3/4 L 21	3		48-13703A41 D033031	14-1/4 x 21 3 D033079	14-3/8 x 21 3 345164
22-25' - AL, SK	14-5/8 R 23	3		48-13704A41 D033034	14-1/4 x 23 3 D033080	14-1/4 x 23 3 345135
22-25' - AL, SK	14-5/8 L 23	3		48-13705A41 D033033	14-1/4 x 23 3 D033081	14-1/4 x 23 3 345165
21-24' - AL, SK	14-1/2 R 25	3		48-13706A41 D033036	14-1/4 x 25 3 D033082	14-1/4 x 25 3 345136
21-24' - AL, SK	14-1/2 L 25	3		48-13707A41 D033035	14-1/4 x 25 3 D033083	

BRAVO ONE™ • OVER 365 HP (SOLID HUB) (SEE FOOTNOTES ■ & ▼)

454 Magnum (385 HP)	1995 & Newer	450 HP	1995	500 HP	1993 & Newer
502 Magnum (390-415 HP)	1990 & Newer	465 HP	1991-94	525 HP (SC) (490-500)	1992 & Newer

Boat Length/Description	Diameter Rot. & Pitch	Blade#	Aluminum Part No. OEM Michigan	Stainless Part No. OEM Michigan	Rapture Performance Stainless Dia. x Pitch Blades RH LH	Ballistic High Performance Stainless Dia. x Pitch Blades RH LH
26-32'	15-1/4 R 19	3		48-13242A50 D033052		
24-30'	14-3/4 R 21	3		48-13244A50 D033054		
24-30'	14-3/4 L 21	3		48-13243A50 D033053		
23-28'	14-5/8 R 23	3		48-13246A50 D033056		
23-28'	14-5/8 L 23	3		48-13245A50 D033055		
21-26'	14-1/2 R 25	3		48-13248A50 D033058		
21-26'	14-1/2 L 25	3		48-13247A50 D033057		

Key to abbreviations: LL: Light Loads; SB: Sailboat; AL: All Loads; SK: Skiboat; WB: Workboat; HB: Houseboat; CR: Cruisers; HL: Heavy Loads; WD: Weedless

- When replacing Flo-Torq II™ plastic hub props, aft castle thrust washer 12-31211A2 and conductivity (star) washer 13-42351-1 are required in addition to the other hardware supplied with original propeller. For complete details, see page 34. All suggestions are based upon single engine boats. Add 4" of pitch for twin applications.
- LIMITED INVENTORY ITEMS.
- ▼ Wave Propellers used on Alpha One™ drives require use of anodic plate 76214A5 or high performance trim tab 822777A1 in place of standard trim tab.
- Solid Hub Wave Propellers include forward thrust washer 9500-120 and should be used in place of the existing one.
- ✉ When using Rapture™ and Ballistic™ propellers, to avoid damage or injury, replace standard trim tab with trim tab 822777A1 and use forward thrust washer 12-835467.

STERNDRIVE APPLICATIONS



MERCRAUISER™

MERCRAUISER - MODEL O

HP Range: 60 HP

For twin installation increase pitch 2".

Boat Length/Description	Diameter Rot. & Pitch	Blade#	Aluminum Part No.		Stainless Part No.		Rapture Performance Stainless			Ballistic High Performance Stainless			
			OEM	Michigan	OEM	Michigan	Dia. x Pitch	Blades	RH	LH	Dia. x Pitch	Blades	RH	LH
HB, Barges	10-1/4 R 10	3	48-33774A1	032084									
22-35'	10-1/4 R 11	3	48-38098A1	032085									
28-21'	10-1/4 R 12	3	48-38094A1	032086									
Up to 17'	10-1/4 R 13	3	48-38090A1	032087									

MERCRAUISER I ('62 - '63) • MERCRAUISER 80, 90

HP Range: 80-140 HP

For twin installation increase pitch 2".

Boat Length/Description	Diameter Rot. & Pitch	Blade#	Aluminum Part No.		Stainless Part No.		Rapture Performance Stainless			Ballistic High Performance Stainless			
			OEM	Michigan	OEM	Michigan	Dia. x Pitch	Blades	RH	LH	Dia. x Pitch	Blades	RH	LH
HB, Barges	13 R 11	3	48-35936A3	032089									
22-25'	13 R 13	3	48-58826A3	032090									
20-23'	13 R 15	3	48-32390A3	032091									
19-22'	13 R 17	3	48-65022A1	032092									
18-21'	13 R 19	3	48-65024A1	032093									
Up to 17'	13 R 21	3	48-67280A1	032094									

MERCRAUISER THRU 1982 • 110-330 HORSEPOWER

(SEE FOOTNOTES ■)

Models 1A, 1B, 1C, 120, 140, 145 DTS & 165

Models 228, 470, 485,888, 898,225S, 233, 255TRS, 260, 280TRS, & 330TRS

Boat Length/Description	Diameter Rot. & Pitch	Blade#	Aluminum Part No.		Stainless Part No.		Rapture Performance Stainless			Ballistic High Performance Stainless			
			OEM	Michigan	OEM	Michigan	Dia. x Pitch	Blades	RH	LH	Dia. x Pitch	Blades	RH	LH
24' & Up	16 R 13	3	48-36020A4	◆031034									
22-26' - AL	16 R 15	3	48-79570A4	◆031035			14-1/4 x 15	3	◆033072 ◆033073		14-7/8 x 15	3	▼345131
21-25' - AL	15-3/4 R 17	3	48-79572A4	◆031036			◆033007	14-1/4 x 17	3	◆033074 ◆033075	14-3/4 x 17	3	▼345132 ▼345162
20-24' - AL	15-1/2 R 19	3	48-79574A4	◆031037			◆033008	14-1/4 x 19	3	◆033076 ◆033077	14-1/2 x 19	3	▼345133 ▼345163
19-23' - AL	15-1/4 R 21	3	48-79576A4	◆031038			◆033009	14-1/4 x 21	3	◆033078 ◆033079	14-3/8 x 21	3	▼345134 ▼345164
18-22' - AL	15 R 23	3	48-79578A4	◆031039				14-1/4 x 23	3	◆033080 ◆033081	14-1/4 x 23	3	▼345135 ▼345165
Up to 17' - AL								14-1/4 x 25	3	◆033082 ◆033083	14-1/4 x 25	3	▼345136

MERCRAUISER (THRU 1990 ONLY)

Mercruiser II-TR, 215E & 215H, TR, Bravo Two

For twin installation increase pitch 2".

Boat Length/Description	Diameter Rot. & Pitch	Blade#	Aluminum Part No.		Stainless Part No.		Rapture Performance Stainless			Ballistic High Performance Stainless			
			OEM	Michigan	OEM	Michigan	Dia. x Pitch	Blades	RH	LH	Dia. x Pitch	Blades	RH	LH
25-34'	20 R 17	3	48-77896A10	032113									
25-34'	20 L 17	3	48-77897A10	032114									
25-30'	19-3/4 R 19	3	48-77898A10	032115									
25-30'	19-3/4 L 19	3	48-77899A10	032116									
22-28'	19-1/2 R 21	3	48-77900A10	032117									
22-28'	19-1/2 L 21	3	48-77901A10	032118									

Key to abbreviations: LL: Light Loads; SB: Sailboat; AL: All Loads; SK: Skiboat; WB: Workboat; HB: Houseboat; CR: Cruisers; HL: Heavy Loads; WD: Weedless

- When replacing Flo-Torq II™ plastic hub props, aft castle thrust washer 12-31211A2 and conductivity (star) washer 13-42351-1 are required in addition to the other hardware supplied with original propeller. For complete details, see page 34. All suggestions are based upon single engine boats. Add 4° of pitch for twin applications.
- ◆ Caution: Use standard trim tab 34127A1 (except for Rapture™ use 822777A1) and forward thrust washer 13191A1. **LIMITED INVENTORY ON THESE ITEMS.**
- ◆ When using Rapture™ and Ballistic™ propellers, to avoid damage or injury, replace standard trim tab with trim tab 822777A1 and use forward thrust washer 12-835467.
- ▼ Caution: Use standard trim tab 34127A1 (except for Rapture™ use 822777A1) and forward thrust washer 13191A1.



OMC - OUTBOARD MARINE

MODEL 400, COBRA®

Model 400	Cobra®
2.3 L (120 HP) Thru 1991	2.3 L (128 HP) 1988-91
2.5 L (120 HP) 1978-84	2.5 L (120 HP) 1985-87
3.0 L (140 HP) Thru 1989	3.0 L (140 HP) 1985-87

Boat Length - (MPH)	Diameter			Aluminum Part No.		Stainless Part No.		Rapture Performance Stainless				Ballistic High Performance Stainless					
	Rot. & Pitch	Blade#	OEM	Michigan	OEM	Michigan	Dia.	x	Pitch	Blades	RH	LH	Dia.	x	Pitch	Blades	RH	LH
Workboats - (6-16)	14	R 11	3	382761	012047												
CR, HB - (14-26)	14	R 13	3	391668	011001												
19-22' - (24-37)	13-3/4	R 15	3	391198	011002	389949	013028	13-1/4	x 15	3	►013076						
17-20' - (30-45)	13-1/4	R 17	3	391199	011003			13-1/4	x 17	3	►013077						
17-20' - (30-45)	13-3/8	R 17	3			389948	013030										
17-20' - (30-45)	14	R 17	3	176214	011024												
16-19' - (36-50)	13	R 19	3	390896	011004	389510	013033	13-1/4	x 19	3	►013078						
16-19' - (36-50)	14	R 19	3	176215	011025												
15-18' - (41-53)	12-3/4	R 21	3	389788	011005	389512	013034	13-1/4	x 21	3	►013079						
15-18' - (41-53)	14	R 21	3	176216	011026												

MODEL 800, KING COBRA®, COBRA®

3.0 L 1990-93	3.8 L 1978-85	5.0 L 1978-93
3.2 L (Diesel) 1992-93	4.3 L 1985-93	5.8 L (Cobra) 1989-93
Includes H.O. & EFI Models Use Thrust Washer 126870		
(15 SPLINE & THRU HUB EXHAUST)		

Boat Length - (MPH)	Diameter			Aluminum Part No.		Stainless Part No.		Rapture Performance Stainless				Ballistic High Performance Stainless					
	Rot. & Pitch	Blade#	OEM	Michigan	OEM	Michigan	Dia.	x	Pitch	Blades	RH	LH	Dia.	x	Pitch	Blades	RH	LH
Non-Plane Heavy CR	15-1/2	R 10	3		011015												
Non-Plane Heavy CR	15-1/2	R 13	3	391536	011016												
22-26' - (22-32)	15-1/2	R 15	3	391535	011006												
19-24' - (28-35)	15	R 15	3			174926	013052	14-1/4	x 15	3	►013064						
19-24' - (28-35)	15	L 15	3			174927	013051	14-1/4	x 15	3	►013065						
18-24' - (30-39)	15	R 17	3	391200	011007	391290	013044	14-1/4	x 17	3	►013066						
18-24' - (30-39)	15	L 17	3			431930	013043	14-1/4	x 17	3	►013067						
17-20' - (36-44)	14-1/2	R 19	3	391201	011008	389924	013046	14-1/4	x 19	3	►013068						
17-20' - (36-44)	14-1/2	L 19	3			390821	013045	14-1/4	x 19	3	►013069						
16-19' - (40-49)	14-1/4	R 21	3	391202	011009	389923	013048	14-1/4	x 21	3	►013070						
16-19' - (40-49)	14-1/4	L 21	3			390822	013047	14-1/4	x 21	3	►013071						
15-20' - (45-56)	14-1/4	R 23	3	391203	011010	389019	013050	14-1/4	x 23	3	►013072						
15-20' - (45-56)								14-1/4	x 23	3	►013073						
High Perf. - (50-60)								14-1/4	x 25	3	►013074						
High Perf. - (50-60)								14-1/4	x 25	3	►013075						
16-18' High Perf.	Lifting Hulls							Ballistic 3 XL									
15-18' High Perf.	Lifting Hulls							Ballistic 3 XL									

Key to abbreviations: LL: Light Loads; SB: Sailboat; AL: All Loads; SK: Skiboat; WB: Workboat; HB: Houseboat; CR: Cruisers; HL: Heavy Loads; WD: Weedless

► LIMITED INVENTORY ITEMS.

STERNDRIVE APPLICATIONS



OMC - OUTBOARD MARINE

MODEL 800, KING COBRA®, COBRA®

5.7 L 1978-93 7.4 L 1990-93 8.2 L 1992-93
 5.8 L (King Cobra) 1992-94 7.5 L 1987-90
 Includes H.O. & EFI Models
 (15 SPLINE & THRU HUB EXHAUST)

Boat Length - (MPH)	Diameter			Aluminum Part No.		Stainless Part No.		Rapture Performance Stainless					Ballistic High Performance Stainless						
	Rot. & Pitch	Blade#	OEM	OEM	Michigan	OEM	Michigan	Dia.	x	Pitch	Blades	RH	LH	Dia.	x	Pitch	Blades	RH	LH
Heavy CR - (25-32)	15-1/2 R 13	3	391536	011016															
22-28' - (30-27)	15-1/2 R 15	3	391535	011006															
19-26' - (33-39)	15 R 15	3			174926	013052	14-1/4 x 15	3	◆	013064				14-7/8 x 15	3	345031			
19-26' - (33-39)	15 L 15	3			174927	013051	14-1/4 x 15	3	◆	013065									
19-26' - (35-46)	15 R 17	3	391200	011007	391290	013044	14-1/4 x 17	3	◆	013066				143/4 x 17	3	345032			
19-26' - (35-46)	15 L 17	3			431930	013043	14-1/4 x 17	3	◆	013067				143/4 x 17	3		345062		
18-24' - (40-52)	14-1/2 R 19	3	391201	011008	389924	013046	14-1/4 x 19	3	◆	013068				14-1/2 x 19	3	345033			
18-24' - (40-52)	14-1/2 L 19	3			390821	013045	14-1/4 x 19	3	◆	013069				14-1/2 x 19	3		345063		
17-22' - (46-60)	14-1/4 R 21	3	391202	011009	389923	013048	14-1/4 x 21	3	◆	013070				14-3/8 x 21	3	345034			
17-22' - (46-60)	14-1/4 L 21	3			390822	013047	14-1/4 x 21	3	◆	013071				14-3/8 x 21	3		345064		
High Perf. - (51-66)	14-1/4 R 23	3	391203	011010	389019	013050	14-1/4 x 23	3	◆	013072				14-1/4 x 23	3	345035			
High Perf. - (51-66)							14-1/4 x 23	3	◆	013073				14-1/4 x 23	3		345065		
High Perf. - (55-66)							14-1/4 x 25	3	◆	013074				14-1/4 x 25	3	345036			
High Perf. - (55-66)							14-1/4 x 25	3	◆	013075									
High Performance										Ballistic 3 XL				14-1/2 x 22	3	345041			
High Performance										Ballistic 3 XL				14-1/2 x 24	3	345037			
High Performance										Ballistic 3 XL				14-1/2 x 26	3	345038			

OMC SAILDRIVE® (PIN DRIVE)

Saildrive

Boat Length - (MPH)	Diameter			Aluminum Part No.		Stainless Part No.		Rapture Performance Stainless					Ballistic High Performance Stainless						
	Rot. & Pitch	Blade#	OEM	OEM	Michigan	OEM	Michigan	Dia.	x	Pitch	Blades	RH	LH	Dia.	x	Pitch	Blades	RH	LH
	10-1/2 R 10	3	376738	012027															

MODEL 14 LARGE GEARCASE 1967-77 (PIN DRIVE)

HP Range: 120 -245	14 R 11	3	382676	012089															
	14 R 12	3	382017	012090															
	14 R 14	3	381185	012091															
	14 R 16	3	381186	012092															
	14 R 18	3	381187	012093															
	14 R 20	3	383287	012094															

Suggestion: For twin installation increase pitch 2".

80-90 HP CYCLE SMALL GEARCASE 1968 (PIN DRIVE) • MARINE DRIVE SYSTEMS/RANGER

HP Range: 80-120	10-1/4 R 10	3	378040	012043															
	10 R 11	3	377978	012044															
	10 R 12	3	378039	012045															
	10 R 9-1/4	3	379260	◆012042															

Suggestion: For twin installation increase pitch 2".

Key to abbreviations: LL: Light Loads; SB: Sailboat; AL: All Loads; SK: Skiboat; WB: Workboat; HB: Houseboat; CR: Cruisers; HL: Heavy Loads; WD: Weedless

◆ Small Hub Propeller - uses special nut part number 302001



OMC - OUTBOARD MARINE

SEA DRIVE® 1982 & NEWER • 4-1/4" GEARCASE

1.6 L V-4 1982 & Newer 1.8 L V-4 1987 & Newer

For twin installation increase pitch 2".

Boat Length - (MPH)	Diameter Rot. & Pitch Blade#			Aluminum Part No.		Stainless Part No.		Rapture Performance Stainless Dia. x Pitch Blades RH LH				Ballistic High Performance Stainless Dia. x Pitch Blades RH LH			
	OEM	Michigan	OEM	Michigan	13-1/4 x 15	3	D013076	13-5/8 x 15	3	D335030	13-1/2 x 17	3	D335031		
Barges, - HB - (1-18)	14 R 11	3	382761	012047											
26' and Up - (14-28)	14 R 13	3	391668	011001											
22-26' - (24-36)	13-3/4 R 15	3	391198	011002	389949	013028	13-1/4 x 15	3	D013076	13-5/8 x 15	3	D335030			
19-22' - (30-40)	13-1/4 R 17	3	391199	011003			13-1/4 x 17	3	D013077	13-1/2 x 17	3	D335031			
19-22' - (30-40)	13-3/8 R 17	3			389948	013030									
19-22' - (30-40)	14 R 17	3	176214	011024											
17-20' - (38-50)	13 R 19	3	390896	011004	389510	013033	13-1/4 x 19	3	D013078	13-3/8 x 19	3	D335032			
17-20' - (38-50)	14 R 19	3	176215	011025											
15-18' - (44-56)	12-3/4 R 21	3	389788	011005	389512	013034	13-1/4 x 21	3	D013079	13-1/8 x 21	3	D335033			
15-18' - (44-56)	14 R 21	3	176216	011026											

SEA DRIVE® 1982 & NEWER • 4-3/4" LARGE GEARCASE

2.0 L V-4 1989 & Newer 2.7 L V-6 1987 & Newer 3.6 L V-8 1987 & Newer

2.5 L V-6 1982-87 3.0 L V-6 1989 & Newer 4.0 L V-8 1989 & Newer

2.6 L V-6 1982 & Newer

Following suggestions based on Twin Engines - Deduct 4" pitch for single engine application.

Boat Length - (MPH)	Diameter Rot. & Pitch Blade#			Aluminum Part No.		Stainless Part No.		Rapture Performance Stainless Dia. x Pitch Blades RH LH				Ballistic High Performance Stainless Dia. x Pitch Blades RH LH			
	OEM	Michigan	OEM	Michigan	14-1/4 x 15	3	D013064	14-7/8 x 15	3	D345031	14-3/4 x 17	3	D345032		
Barges, HB - (10-25)	15-1/2 R 13	3	391536	011016											
32-36' Twin - (24-34)	15-1/2 R 15	3	391535	011006											
32-36' Twin - (27-36)	15 R 15	3			174926	013052	14-1/4 x 15	3	D013065	14-7/8 x 15	3	D345031			
32-36' Twin - (27-36)	15 L 15	3			174927	013051	14-1/4 x 15	3	D013065	14-3/4 x 17	3	D345032			
30-33' Twin - (30-40)	15 R 17	3	391200	011007	391290	013044	14-1/4 x 17	3	D013066	14-3/4 x 17	3	D345062			
30-33' Twin - (30-40)	15 L 17	3			431930	013043	14-1/4 x 17	3	D013067	14-3/4 x 17	3	D345062			
27-30' Twin - (36-47)	14-1/2 R 19	3	391201	011008	389924	013046	14-1/4 x 19	3	D013068	14-1/2 x 19	3	D345033			
27-30' Twin - (36-47)	14-1/2 L 19	3			390821	013045	14-1/4 x 19	3	D013069	14-1/2 x 19	3	D345063			
25-28' Twin - (42-54)	14-1/4 R 21	3	391202	011009	389923	013048	14-1/4 x 21	3	D013070	14-3/8 x 21	3	D345034			
25-28' Twin - (42-54)	14-1/4 L 21	3			390822	013047	14-1/4 x 21	3	D013071	14-3/8 x 21	3	D345064			
23-25' Twin - (50-62)	14-1/4 R 23	3	391203	011010	389019	013050	14-1/4 x 23	3	D013072	14-1/4 x 23	3	D345035			
23-25' Twin - (50-62)	14-1/4 L 23	3					14-1/4 x 23	3	D013073	14-1/4 x 23	3	D345065			
18-22' Twin - (56-68)							14-1/4 x 25	3	D013074	14-1/4 x 25	3	D345036			

FOR OMC COBRA® (1994 & NEWER), SX COBRA™, VOLVO PENTA SX™ SEE PAGE

Key to abbreviations: LL: Light Loads; SB: Sailboat; AL: All Loads; SK: Skiboat; WB: Workboat; HB: Houseboat; CR: Cruisers; HL: Heavy Loads; WD: Weedless

► LIMITED INVENTORY ITEMS.

STERNDRIVE APPLICATIONS



VOLVO PENTA

AQUAMATIC 200, 250, 270, 275, 280, 290 SP

Motor HP	Gear Ratio	Approximate Boat Length			
		Thru 17'	18-21'	22-25'	Houseboats Barges
110-140 HP	1.35:1	14 x 15			
	1.62:1	14 x 17	14 x 15	14 x 15	
	2.15:1	14 x 19	14 x 17	14 x 17	15 x 13
150-185 HP	1.35:1	14 x 17	14 x 17	15 x 13	
	1.61:1	14 x 21	14 x 21	15 x 17	15 x 15
	1.89:1	14 x 19	14 x 19	15 x 15	15 x 13
190-255 HP	1.35:1	14 x 21	15 x 19	15 x 17	
	1.61:1	14 x 23	16 x 17	16 x 17	16 x 13
	1.61:1	14 x 23	14 x 23	15 x 21	
230-260 HP	1.61:1	14 x 23	14 x 23	14 x 21	
290 HP	1.61:1	14 x 23	14 x 23	14 x 21	



Volvo Long Hub Aluminum



Volvo Standard Hub Aluminum

Long Hub Propellers					
Nearest Michigan Match™ OEM Equivalent (17 Spline)					
Dia. x Pitch	Rot.	Blades	Aluminum Part Number		Stainless Steel Part Number
			OEM	Michigan	
14 x 17	RH	3	854286-4	082002-1♦	
14 x 17	LH	3	854977-6	082001-1♦	084006
14 x 19	RH	3	854993-3	082004-1♦	
14 x 19	LH	3	854978-4	082003-1♦	084008
14 x 21	RH	3	851139-6	082010-1♦	
14 x 21	LH	3	854979-2	082009-1♦	
15 x 17	RH	3	854997-4	082012-1♦	
15 x 17	LH	3	854982-6	082011-1♦	
15 x 19	RH	3	854998-2	082014-1♦	
15 x 19	LH	3	854983-4	082013-1♦	
15 x 21	RH	3	854999-0	082016-1♦	
15 x 21	LH	3	854984-2	082015-1♦	
16 x 13	LH	3	854986-7	082089-1	
16 x 15	RH	3	872001-3	082090-1	
16 x 15	LH	3	854987-5	082091-1	
16 x 17	RH	3	872002-1	082092-1	
16 x 17	LH	3	854988-3	082093-1	
15-1/4 x 17	RH	3	SSV Series Stainless		852155-1v
15-1/4 x 17	LH	3	SSV Series Stainless		083002♦
15 x 19	RH	3	SSV Series Stainless		852138-7v
15 x 19	LH	3	SSV Series Stainless		083004♦
14-1/2 x 21	RH	3	SSV Series Stainless		852137-9v
14-1/2 x 21	LH	3	SSV Series Stainless		083006♦



PERFECT MATCHED PROPELLERS

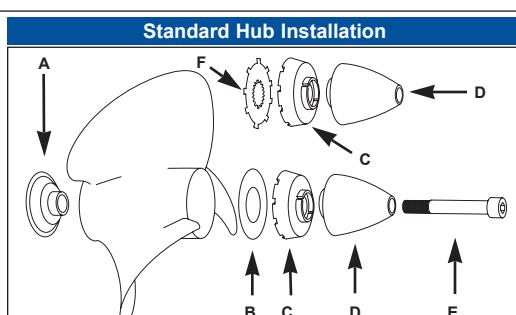
Standard Hub Propellers					
Nearest Michigan Match™ OEM Equivalent (17 Spline)					
Dia. x Pitch	Rot.	Blades	Aluminum Part Number		Michigan
			OEM	Michigan	
14 x 15	RH	3	814631-8	082026-1	
14 x 15	LH	3	814626-8	082025-1	
14 x 17	RH	3	814632-6	082028-1	
14 x 17	LH	3	814627-6	082027-1	
14 x 19	RH	3	814633-4	082032-1	
14 x 19	LH	3	814628-4	082031-1	
14 x 21	RH	3	814634-2	082034	
14 x 21	LH	3	814629-2	082033	
15 x 13	LH	3	813316-7	082087-1	
15 x 15	RH	3	814615-1	082060-1	
15 x 15	LH	3	814611-0	082059-1	
15 x 17	RH	3	814616-9	082030-1	
15 x 17	LH	3	814612-8	082029-1	
15 x 19	RH	3	—	082022	
15 x 19	LH	3	—	082021	
15 x 21	LH	3	—	082023	

♦ Note: Bushings for above propellers suggested for max. 240 HP UNLESS marked with a ♦.

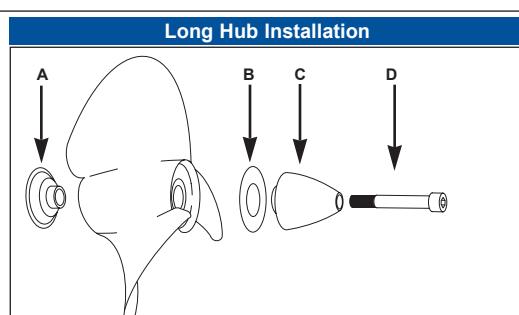
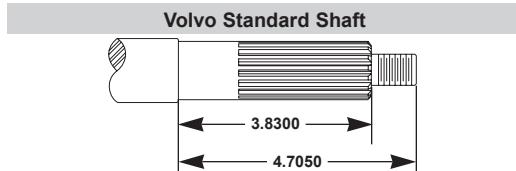
SSV Series: 1) Designed for boats with power to weight ratios of 12:1 and below. 2) Boats must have power trim. 3) Anti-cavitation plate height 1" above boat bottom. 4) Blades cambered must run in ventilated condition. 5) Use 2" less pitch if current aluminum prop. is cupped, 3" less if uncupped. Parts 083005 & 083006 will not fit a 270 outdrive.

Long Hub Propellers are for use with model 275, 280 & 290 outdrives and late production 270 outdrives which have drilled propeller shaft.
Standard Hub Propeller installations are from outdrive serial #PZ2877179, and are NOT for use with V-6 diesel engines.
Propeller Hardware is available thru Volvo Distributors.

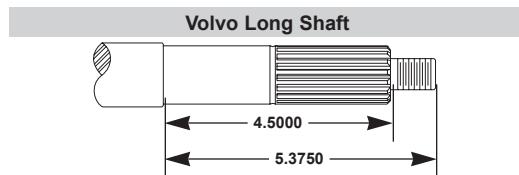
♦ LIMITED INVENTORY ITEMS.



Standard Hub Propeller installations require:
A) Thrust Washer #839534-5 (Depth: 625")
B) Washer #850888-9 or F) Washer #897367-9
C) Spacer Ring #854047-8
D) Propeller Cone #8504045-2
E) Allen bolt #850889-7



Long Hub Propeller Hardware:
A) Thrust Washer #839423-1 (Depth: 1.3")
B) Washer #850888-9
C) Propeller Cone #8504045-2
D) Allen bolt #850889-7



STERNDRIVE APPLICATIONS



VOLVO PENTA

VOLVO PENTA 100-110: EATON MODEL B (PIN DRIVE)

Boat Length - (MPH)	Diameter Rot. & Pitch	Blade#	Aluminum Part No.	OEM Michigan	Stainless Part No.	OEM Michigan	Rapture Performance Stainless Dia. x Pitch Blades RH LH	Ballistic High Performance Stainless Dia. x Pitch Blades RH LH
HP Range: 110-150	14 L 10	3	813226	082057				
	14 L 12	3	813228	082045				

SX COBRA™, VOLVO PENTA SX, OMC COBRA® (1994 & NEWER) - 19 SPLINE

3.0 L	1994 & Newer	7.4 L	1997 & Newer	DPX 385 (385 HP) .....	.2001 & Newer
4.3 L	1994 & Newer	8.2 L	1997	DPX 415 (415 HP) .....	.2001 & Newer
5.0 L	1994 & Newer	8.1 GI (375 HP) .....	.2001 & Newer	DPX 500 (475 HP) .....	.2001 & Newer
5.7 L	1994 & Newer	8.1 GSI (420 HP) .....	.2001 & Newer	DPX 600 (560 HP) .....	.2001 & Newer
5.8 L	1994-97				

Following suggestions based on Twin Engines - Deduct 4" pitch for single engine application.

Boat Length - (MPH)	Diameter Rot. & Pitch	Blade#	Aluminum Part No.	OEM Michigan	Stainless Part No.	OEM Michigan	Rapture Performance Stainless Dia. x Pitch Blades RH LH	Ballistic High Performance Stainless Dia. x Pitch Blades RH LH
24-28' - (26-36)	15-1/2 R 15	3	3850299	161001				
24-28' - (26-36)	15 R 15	3			3850305	163002	14-1/4 x 15 3 D163012 D163013	14-7/8 x 15 3 346031
22-27' - (34-44)	15 R 17	3	3850300	161002	3850307	163004	14-1/4 x 17 3 D163014	14-3/4 x 17 3 346032
22-27' - (34-44)	15 L 17	3			3850316	163003	14-1/4 x 17 3 D163015	14-3/4 x 17 3 346062
19-25' - (39-50)	14-1/2 R 19	3	3850301	161003	3850308	163006	14-1/4 x 19 3 D163016	14-1/2 x 19 3 346033
19-25' - (39-50)	14-1/2 L 19	3			3850317	163005	14-1/4 x 19 3 D163017	14-1/2 x 19 3 346063
17-22' - (39-50)	14-1/4 R 21	3	3850302	161004	3850309	163008	14-1/4 x 21 3 D163018	14-3/8 x 21 3 346034
17-22' - (39-50)	14-1/4 L 21	3			3850318	163007	14-1/4 x 21 3 D163019	14-3/8 x 21 3 346064
17-20' - (44-57)	14-1/4 R 23	3	3850303	161005	3850310	163010	14-1/4 x 23 3 D163020	14-1/4 x 23 3 346035
16-19' - (48-62)	14-1/4 R 23	3			3850319	163009	14-1/4 x 25 3 D163022 D163023	14-1/4 x 25 3 346036

YAMAHA

130-205 HORSEPOWER

3.0 L (130 HP) EST/PSR1989-93 4.3 L (205 HP) EST/YEMS/PRS ...1989-93

Boat Length - (MPH)	Diameter Rot. & Pitch	Blade#	Aluminum Part No.	OEM Michigan	Stainless Part No.	OEM Michigan	Rapture Performance Stainless Dia. x Pitch Blades RH LH	Ballistic High Performance Stainless Dia. x Pitch Blades RH LH
21-26' - (18-31)	15-1/4 R 15	3	6G5-45941-00-98	101025			14-1/4 x 15 3 D103044 D103045	14-7/8 x 15 3 345931
20-24' - (25-34)	14-5/8 R 16	3	6G5-45952-00-98	101026				
19-23' - (27-37)	14-1/2 R 17	3	6G5-45947-01-98	101027	6G5-45978-03-98	103018	14-1/4 x 17 3 D103046 D103047	14-3/4 x 17 3 345932 345962
17-21' - (33-42)	14 R 19	3	6G5-45945-01-98	101028	6G5-45974-03-98	103020	14-1/4 x 19 3 D103048 D103049	14-1/2 x 19 3 345933 345963
18-19' - (37-46)	13-3/4 R 21	3	6G5-45943-01-98	101029	6G5-45972-03-98	103022	14-1/4 x 21 3 D103050 D103051	14-3/8 x 21 3 345934 345964
17-19' - (39-48)	13-1/2 R 23	3	6G5-45949-00-98	101030			14-1/4 x 23 3 D103052 D103053	14-1/4 x 23 3 345935 345965
Up to 18' - (40-50)							14-1/4 x 25 3 D103054 D103055	14-1/4 x 25 3 345936
16-20' High Perf.	Lifting Hulls						Ballistic 3 XL	14-1/2 x 22 3 345941
15-18' High Perf.	Lifting Hulls						Ballistic 3 XL	14-1/2 x 24 3 345937
Up to 17' High Perf.	Lifting Hulls						Ballistic 3 XL	14-1/2 x 26 3 345938

205-300 HORSEPOWER

5.0 L (205 HP) EST/PSR/YEMS ...1989-93 5.7 L (260 HP) EST/PSR/YEMS ...1989-93 7.4 L (300 HP) Hydra Drive (EST) ..1992-93

Boat Length - (MPH)	Diameter Rot. & Pitch	Blade#	Aluminum Part No.	OEM Michigan	Stainless Part No.	OEM Michigan	Rapture Performance Stainless Dia. x Pitch Blades RH LH	Ballistic High Performance Stainless Dia. x Pitch Blades RH LH
23-28' - (19-38)	15-1/4 R 15	3	6G5-45941-00-98	101025			14-1/4 x 15 3 D103044 D103045	14-7/8 x 15 3 345931
22-27' - (24-42)	14-5/8 R 16	3	6G5-45952-00-98	101026				
21-26' - (29-45)	14-1/2 R 17	3	6G5-45947-01-98	101027	6G5-45978-03-98	103018	14-1/4 x 17 3 D103046 D103047	14-3/4 x 17 3 345932 345962
19-25' - (35-49)	14 R 9	3	6G5-45945-01-98	101028	6G5-45974-03-98	103020	14-1/4 x 19 3 D103048 D103049	14-1/2 x 19 3 345933 345963
18-23' - (41-56)	13-3/4 R 21	3	6G5-45943-01-98	101029	6G5-45972-03-98	103022	14-1/4 x 21 3 D103050 D103051	14-3/8 x 21 3 345934 345964
17-22' - (43-58)	13-1/2 R 23	3	6G5-45949-00-98	01030			14-1/4 x 23 3 D103052 D103053	14-1/4 x 23 3 345935 345965
Up to 17' - (45-59)							14-1/4 x 25 3 D103054 D103055	

Key to abbreviations: LL: Light Loads; SB: Sailboat; AL: All Loads; SK: Skiboat; WB: Workboat; HB: Houseboat; CR: Cruisers; HL: Heavy Loads; WD: Weedless

► LIMITED INVENTORY ITEMS.

RAPTURE^{XHS™}



NEW FOR 2003!

Michigan Wheel introduced the XHS™ (Xchangeable Hub System) system in the 2002 season in the Vortex™ aluminum propeller series. The response from the marine industry was overwhelmingly positive! We have decided to build on this successful system by offering the system in our Rapture™ Stainless Steel Performance series propellers!

Watch for it in the 2003 season!

Look for XHS™ to join the Ballistic™ product line in the upcoming season.

VORTEX™
XHS

PERFORMANCE PROPELLERS



NEW FOR 2003!

VORTEX™ 4-BLADE PROPELLER

HOW TO USE THIS SECTION

- ♦ If you know your current propeller part number (OEM), then use the Part Number Cross Reference Charts on page 4 to locate the equivalent Vortex™ propeller.
- ♦ If the Michigan Match™ part number is known, use the Cross Reference Chart on page 5 to locate the equivalent Vortex™ propeller.
- ♦ If an original part number is not known, use the following procedure for selecting a propeller.
 - ① Locate the brand of outboard or sterndrive using index below.
 - ② Locate the **Horsepower/Model** and **Year** that corresponds with the engine brand.
 - ③ Select the propeller **Diameter & Pitch** that best meets your vessel and usage.
(If unsure, reference Page 3 on how to properly size a propeller.)
 - ④ Order the propeller using the **Vortex™ Part Number**.
 - ⑤ If needed, order the **XHS™ hub kit** as indicated.

Unless otherwise noted: The XHS™ hub kit is sold separately from the propeller. See page 15 for XHS™ hub kit and miscellaneous hardware information. Vortex™ propellers fit existing Mercury® Flo-Torq II™ hubs. Check existing hub for wear or damage and replace if necessary, with Michigan Wheel® XHS™ Hub.

1 HONDA

75-90 HORSEPOWER

Propeller Series B (4-1/4" Gearcase)

2 ENGINES - MODEL & YEAR

75 HP	1995-98
90 HP	19 98

3 PROPELLER APPLICATION

Diameter & Pitch	Blade #	Vortex	Rapture Performance Stainless Steel				
			H	Diameter & Pitch	Blade#	RH	LH
13-3/4 x 15	3	103		13-3/8 x 15	3	★993103	
13-1/4 x 17	3	92107		13-1/8 x 17	3	★993104	
13 x 19	3	92105		13 x 19	3	★993105	
12-3/4 x 21	3	992106		13 x 21	3	★993106	

* Note: Use Gearcase adapter ring supplied with propeller.

4

5

Use XHS™ Hub
Kit 102

HOW TO PROPERLY SIZE AN XHS™ PROPELLER

First locate your engine horsepower category then find the closest range of your boat length and use. Once this is located, read across to the right to determine the correct diameter and pitch for your application.

Note: This is a "general" application guideline for determining the appropriate propeller size for your vessel. Performance characteristics may vary due to the many kinds of boats, hull styles, loads and style of boating.

Propeller Series A

4-3/4" V6/V8 Outboard & I/O Gearcase

Propeller Dia. x Pitch	Vortex™ Part #	Rapture Performance Dia. x Pitch	Stainless Steel RH	Steel LH
15-1/4 x 15	992002	14-1/2 x 15	993002	993012
15 x 17	992003	14-1/4 x 17	993003	993013
14-1/2 x 19	992004	14-1/4 x 19	993004	993014
14-1/4 x 21	992005	14-1/4 x 21	993005	993015
14 x 23	992006	14-1/4 x 23	993006	993016
		14-1/4 x 25	993007	993017

Propeller Series B

4-1/4" V4 Gearcase

Propeller Dia. x Pitch	Vortex™ Part #	Rapture Performance Dia. x Pitch	Stainless Steel RH	Steel LH
13-3/4 x 15	992103	13-3/8 x 15	993103	
13-1/4 x 17	992104	13-1/8 x 17	993104	
13 x 19	992105	13 x 19	993105	
12-3/4 x 21	992106	13 x 21	993106	

50-75HP with V4 (4-1/4") Gearcase (Propeller Series B)

Boat Description	Approx. Gross Wt.	Current MPH	Dia. x Pitch	Blades
16-18' Runabouts, Ski Boats	1600-2300	25-35	13-3/4" x 15"	3
15-17' Runabouts, Ski Boats	1400-2100	30-48	13-1/4" x 17"	3
14-16' Runabouts, Ski Boats	900-1500	36-46	13" x 19"	3
13-15' Runabouts, Ski Boats	800-1200	40-50	12-3/4" x 21"	3

80-140HP with V4 (4-1/4") Gearcase (Propeller Series B)

Boat Description	Approx. Gross Wt.	Current MPH	Dia. x Pitch	Blades
19-22' Runabouts, Ski Boats	2300-4000	24-36	13-3/4" x 15"	3
18-21' Runabouts, Ski Boats	2100-3600	30-42	13-1/4" x 17"	3
17-20' Runabouts, Ski Boats	1900-3100	38-50	13" x 19"	3
15-18' Runabouts, Ski Boats	1300-2300	44-56	12-3/4" x 21"	3

90-175HP with V6 (4-3/4") Gearcase (Propeller Series A)

Boat Description	Approx. Gross Wt.	Current MPH	Dia. x Pitch	Blades
22-26' Cruisers	2800-4700	24-36	15-1/4" x 15"	3
20-24' Runabouts	2200-4000	30-42	15" x 17"	3
18-22' Runabouts	1700-3300	36-49	14-1/2" x 19"	3
16-20' Runabouts	1400-2600	42-56	14-1/4" x 21"	3
15-19' High Performance	1200-2300	50-64	14" x 23"	3

200-300HP WITH V6 (4-3/4") Gearcase (Propeller Series A)

Boat Description	Approx. Gross Wt.	Current MPH	Dia. x Pitch	Blades
24-28' Cruisers	3000-5000	24-36	15-1/4" x 15"	3
22-26' Cruisers	2800-4700	30-42	15" x 17"	3
19-22' Runabouts	2200-4000	36-49	14-1/2" x 19"	3
17-20' Runabouts	1700-3300	42-56	14-1/4" x 21"	3
15-19' High Performance	1400-2600	50-64	14" x 23"	3

OEM-XHS™ CROSS REFERENCE

CROSS REFERENCE

Original Equipment Manufacturer Part# & Trade Mark	Michigan Wheel Corporation					Original Equipment Manufacturer Part# & Trade Mark	Michigan Wheel Corporation				
	Vortex Part#	Rapture Part#	XHS Kit Part #	Michigan Match	Catalog Page #		Vortex Part#	Rapture Part #	XHS Kit Part #	Michigan Match	Catalog Page #
EVINRUDE, JOHNSON, OMC											
176214	992104 .....	.993104	106 .....	.011024	68	48-31456A 3 .....	.992105 .....	.993105	102 .....	.032093	71, 76
176215	992105 .....	.993105	106 .....	.011025	68	48-31456A 4 .....	.992105 .....	.993105	102 .....	.031003	71, 76
68176216	992106 .....	.993106	106 .....	.011026	68	48-31458A 3 .....	.992104 .....	.993104	102 .....	.032092	71, 76
382763	992103 .....	.993103	106 .....	.011002	68	48-32264A 3 .....	.992104 .....	.993104	102 .....	.032092	71, 76
382764	992104 .....	.993104	106 .....	.011003	68	48-32264A 4 .....	.992104 .....	.993104	102 .....	.031002	71, 76
382765	992105 .....	.993105	106 .....	.011004	68	48-32386A 3 .....	.992106 .....	.993106	102 .....	.032094	71, 76
382768	992106 .....	.993106	106 .....	.011005	68	48-32388A 3 .....	.992105 .....	.993105	102 .....	.032093	71, 76
384140	992106 .....	.993106	106 .....	.011005	68	48-32388A 4 .....	.992105 .....	.993105	102 .....	.031003	71, 76
3850299	992002 .....	.993002	105 .....	.161001	69	48-32390A 4 .....	.992103 .....	.993103	102 .....	.031001	71, 76
3850300	992003 .....	.993003	105 .....	.161002	69	48-32746A 3 .....	.992106 .....	.993106	102 .....	.032094	71, 76
3850301	992004 .....	.993004	105 .....	.161003	69	48-32746A 4 .....	.992106 .....	.993106	102 .....	.031004	71, 76
3850302	992005 .....	.993005	105 .....	.161004	69	48-32748A 3 .....	.992105 .....	.993105	102 .....	.032093	71, 76
387159	992002 .....	.993002	See Note 2 .....	.011006	69	48-32748A 4 .....	.992105 .....	.993105	102 .....	.031003	71, 76
387160	992003 .....	.993003	See Note 2 .....	.011007	69	48-32750A 3 .....	.992105 .....	.993105	102 .....	.032093	71, 76
387161	992004 .....	.993004	See Note 2 .....	.011008	69	48-32750A 4 .....	.992105 .....	.993105	102 .....	.031003	71, 76
387162	992005 .....	.993005	See Note 2 .....	.011009	69	48-36008A1 .....	.992006 .....	.993006	102 .....	.031039	71, 76
387163	992006 .....	.993006	See Note 2 .....	.011010	69	48-36010A1 .....	.992005 .....	.993005	102 .....	.031038	71, 76
389788	992106 .....	.993106	106 .....	.011005	68	48-36010A4 .....	.992006 .....	.993006	102 .....	.031039	71, 76
390896	992105 .....	.993105	106 .....	.011004	68	48-36012A1 .....	.992004 .....	.993004	102 .....	.031037	71, 76
391198	992103 .....	.993103	106 .....	.011002	68	48-36012A4 .....	.992005 .....	.993005	102 .....	.031038	71, 76
391199	992104 .....	.993104	106 .....	.011003	68	48-36012A5 .....	.992003 .....	.993003	102 .....	.031036	71, 76
391200	992003 .....	.993003	See Note 2 .....	.011007	69	48-36014A1 .....	.992003 .....	.993003	102 .....	.031036	71, 76
391201	992004 .....	.993004	See Note 2 .....	.011008	69	48-36014A4 .....	.992004 .....	.993004	102 .....	.031037	71, 76
391202	992005 .....	.993005	See Note 2 .....	.011009	69	48-36016A1 .....	.992002 .....	.993002	102 .....	.031035	71, 76
391203	992006 .....	.993006	See Note 2 .....	.011010	69	48-36016A4 .....	.992003 .....	.993003	102 .....	.031036	71, 76
391535	992002 .....	.993002	See Note 2 .....	.011006	69	48-36018A4 .....	.992002 .....	.993002	102 .....	.031035	71, 76
393160	992105 .....	.993105	106 .....	.011025	68	48-37902A 4 .....	.992105 .....	.993105	102 .....	.032093	71, 76
FORCE, U.S. MARINE, CHRYSLER											
48-77342A40	992103 .....	.993103	See Note 3 .....	.031041	70	48-49632A 3 .....	.992105 .....	.993105	102 .....	.032093	71, 76
48-77342A45 Black Max™	992103 .....	.993103	See Note 3 .....	.031041	70	48-49632A 4 .....	.992106 .....	.993106	102 .....	.032094	71, 76
48-77346A40	992105 .....	.993105	See Note 3 .....	.031043	70	48-49634A1 .....	.992004 .....	.993004	102 .....	.031037	71, 76
48-77348A40	992106 .....	.993106	See Note 3 .....	.031044	70	48-49634A4 .....	.992004 .....	.993004	102 .....	.031037	71, 76
48-77348A45 Black Max™	992106 .....	.993106	See Note 3 .....	.031044	70	48-53892A 3 .....	.992106 .....	.993106	102 .....	.032094	71, 76
TA2034 Black Diamond	992103 .....	.993103	See Note 3 .....	.031041	70	48-53892A 4 .....	.992106 .....	.993106	102 .....	.031004	71, 76
TA2038 Black Diamond	992105 .....	.993105	See Note 3 .....	.031043	70	48-53896A4 .....	.992105 .....	.993105	See Note 3 .....	.031043	71, 76
TA2040 Black Diamond	992106 .....	.993106	See Note 3 .....	.031044	70	48-53900A 3 .....	.992104 .....	.993104	102 .....	.032092	71, 76
HONDA											
58130-ZW1-W21ZA	992103 .....	.993103	See Note 3 .....	.031041	70	48-53900A 4 .....	.992104 .....	.993104	102 .....	.031002	71, 76
58130-ZW1-W31ZA	992104 .....	.993104	See Note 3 .....	.031042	70	48-58422A1 .....	.992003 .....	.993003	102 .....	.031036	71, 76
58130-ZW1-W41ZA	992106 .....	.993106	See Note 3 .....	.031044	70	48-58422A4 .....	.992004 .....	.993004	102 .....	.031037	71, 76
58130-ZW1-W61ZA	992105 .....	.993105	See Note 3 .....	.031043	70	48-58424A1 .....	.992004 .....	.993004	102 .....	.031037	71, 76
MERCURY, MARINER, MERCRAUISER											
48-11322A40	992003 .....	.993003	102 .....	.031051	71, 76	48-58426A4 .....	.992006 .....	.993006	102 .....	.031039	71, 76
48-11324A40	992004 .....	.993004	102 .....	.031052	71, 76	48-65022A 1 .....	.992104 .....	.993104	102 .....	.032092	71, 76
48-11324A45 Black Max™	992004 .....	.993004	102 .....	.031052	71, 76	48-65022A 4 .....	.992103 .....	.993103	102 .....	.031001	71, 76
48-16440A40	992003 .....	.993003	102 .....	.031051	71, 76	48-65024A 1 .....	.992105 .....	.993105	102 .....	.032093	71, 76
48-16440A45 Black Max™	992003 .....	.993003	102 .....	.031051	71, 76	48-65024A 4 .....	.992105 .....	.993105	102 .....	.031003	71, 76
48-29658A 4	992105 .....	.993105	102 .....	.031003	71, 76	48-65480A1 .....	.992006 .....	.993006	102 .....	.031039	71, 76
48-30388A 1	992105 .....	.993105	102 .....	.032093	71, 76	48-65588A 1 .....	.992105 .....	.993105	102 .....	.032093	71, 76
48-30390A 1	992104 .....	.993104	102 .....	.032092	71, 76	48-65588A 4 .....	.992105 .....	.993105	102 .....	.032093	71, 76
48-31072A 4	992104 .....	.993104	102 .....	.032092	71, 76	48-65748A 1 .....	.992104 .....	.993104	102 .....	.032092	71, 76
48-31080A 1	992105 .....	.993105	102 .....	.032093	71, 76	48-65748A 4 .....	.992104 .....	.993104	102 .....	.031002	71, 76
48-31082A 1	992104 .....	.993104	102 .....	.032092	71, 76	48-65992A1 .....	.992005 .....	.993005	102 .....	.031038	71, 76
48-31454A 3	992106 .....	.993106	102 .....	.032094	71, 76	48-65992A4 .....	.992005 .....	.993005	102 .....	.031038	71, 76
48-31454A 4	992106 .....	.993106	102 .....	.031004	71, 76	48-66432A1 .....	.992003 .....	.993003	102 .....	.031036	71, 76
						48-66432A4 .....	.992004 .....	.993004	102 .....	.031037	71, 76

OEM-XHS™ CROSS REFERENCE

CROSS REFERENCE

Original Equipment Manufacturer Part# & Trade Mark	Michigan Wheel Corporation					Original Equipment Manufacturer Part# & Trade Mark	Michigan Wheel Corporation								
	Vortex Part#	Rapture Part#	XHS Kit Part #	Michigan Match	Catalog Page #		Vortex Part#	Rapture Part #	XHS Kit Part #	Michigan Match	Catalog Page #				
MERCURY, MARINER, MERCRAUISER (Continued)															
48-66450A4 .....	.992003	.993003	.102	.031036	71, 76	TA2202 Black Diamond .....	.992106	.993106	.See Note 3	.031044	71, 76		
48-66452A4 .....	.992002	.993002	.102	.031035	71, 76	TA2204 Black Diamond .....	.992105	.993105	.See Note 3	.031043	71, 76		
48-67280A1 .....	.992106	.993106	.102	.032094	71, 76	TA2206 Black Diamond .....	.992104	.993104	.See Note 3	.031042	71, 76		
48-67280A4 .....	.992106	.993106	.102	.031004	71, 76	TA2208 Black Diamond .....	.992103	.993103	.See Note 3	.031041	71, 76		
SUZUKI															
48-67874A4 .....	.992006	.993006	.102	.031039	71, 76	58100-95500-019 .....	.992103	.993103	.110	.061001	72		
48-73504A4 .....	.992002	.993002	.102	.031023	71, 76	58100-95511-019 .....	.992104	.993104	.110	.061002	72		
48-73506A4 .....	.992003	.993003	.102	.031024	71, 76	58100-95521-019 .....	.992105	.993105	.110	.061003	72		
48-73508A4 .....	.992004	.993004	.102	.031025	71, 76	58100-95530-019 .....	.992106	.993106	.110	.061004	72		
48-73510A4992005	.993005	.02	.031026	71, 76	TOHATSU & NISSAN									
48-74872A4 .....	.992003	.993003	.102	.031036	71, 76	3B7-64532-0 .....	.992103	.993103	.109	.142010	72		
48-74874A4 .....	.992004	.993004	.102	.031037	71, 76	3B7-64536-0 .....	.992103	.993103	.109	.142011	72		
48-74876A4 .....	.992005	.993005	.102	.031038	71, 76	3B7-64541-0 .....	.992104	.993104	.109	.142012	72		
48-74886A4 .....	.992004	.993004	.102	.031037	71, 76	3B7-64545-0 .....	.992105	.993105	.109	.142013	72		
48-74888A4992005	.993005	.102	.031038	71, 76	VOLVO									
48-75760A4 .....	.992002	.993002	.102	.031023	71, 76	3850299-3 .....	.992002	.993003	.105	.161001	79		
48-77342A4 .....	.992103	.993103	.See Note 3	.031041	71, 76	3850300-9 .....	.992003	.993003	.105	.161002	79		
48-77344A4 .....	.992104	.993104	.See Note 3	.031042	71, 76	3850301-7 .....	.992004	.993004	.105	.161003	79		
48-77344A40 .....	.992104	.993104	.See Note 3	.031042	71, 76	3850302-5 .....	.992005	.993005	.105	.161004	79		
48-77344A45 Black Max™992104	.993104	.See Note 3	.031042	71, 76	YAMAHA									
48-77346A4 .....	.992105	.993105	.See Note 3	.031043	71, 76	6E5-45941-00-36 .....	.992105	.993105	.See Note 1	.101034	73-75, 79		
48-77346A45 Black Max™ .....	.992105	.993105	.See Note 3	.031043	71, 76	6E5-45941-00-EL .....	.992105	.993105	.See Note 1	.101034	73-75, 79		
48-77348A4 .....	.992106	.993106	.See Note 3	.031044	71, 76	6E5-45943-00-36 .....	.992106	.993106	.See Note 1	.101035	73-75, 79		
48-78116A4 .....	.992002	.993002	.102	.031023	71, 76	6E5-45943-00-EL .....	.992106	.993106	.See Note 1	.101035	73-75, 79		
48-78116A40 .....	.992002	.993002	.102	.031023	71, 76	6E5-45945-00-36 .....	.992104	.993104	.See Note 1	.101033	73-75, 79		
48-78116A45 Black Max™ .....	.992002	.993002	.102	.031023	71, 76	6E5-45945-00-EL .....	.992104	.993104	.See Note 1	.101033	73-75, 79		
48-78118A4 .....	.992003	.993003	.102	.031024	71, 76	6E5-45945-01-EL .....	.992104	.993104	.See Note 1	.101033	73-75, 79		
48-78118A40 .....	.992003	.993003	.102	.031024	71, 76	6E5-45947-00-36 .....	.992103	.993103	.See Note 1	.101032	73-75, 79		
48-78118A45 Black Max™ .....	.992003	.993003	.102	.031024	71, 76	6E5-45947-00-EL .....	.992103	.993103	.See Note 1	.101032	73-75, 79		
48-78120A4 .....	.992004	.993004	.102	.031025	71, 76	6G5-45941-00-36 .....	.992002	.993002	.103	.101025	73-75, 79		
48-78120A40 .....	.992004	.993004	.102	.031025	71, 76	6G5-45941-00-98 .....	.992002	.993002	.103	.101025	73-75, 79		
48-78120A45 Black Max™ .....	.992004	.993004	.102	.031025	71, 76	6G5-45941-00-EL .....	.992002	.993002	.103	.101025	73-75, 79		
48-78122A4 .....	.992005	.993005	.102	.031026	71, 76	6G5-45943-00-36 .....	.992005	.993005	.103	.101029	73-75, 79		
48-78122A40 .....	.992005	.993005	.102	.031026	71, 76	6G5-45943-00-EL .....	.992005	.993005	.103	.101029	73-75, 79		
48-78122A45 Black Max™ .....	.992005	.993005	.102	.031026	71, 76	6G5-45947-01-98 .....	.992005	.993005	.103	.101029	73-75, 79		
48-79570A4 .....	.992002	.993002	.102	.031035	71, 76	6G5-45945-00-36 .....	.992004	.993004	.103	.101028	73-75, 79		
48-79572A4 .....	.992003	.993003	.102	.031036	71, 76	6G5-45945-00-EL .....	.992004	.993004	.103	.101028	73-75, 79		
48-79574A4 .....	.992004	.993004	.102	.031037	71, 76	6G5-45945-01-98 .....	.992004	.993004	.103	.101028	73-75, 79		
48-79576A4 .....	.992005	.993005	.102	.031038	71, 76	6G5-45945-01-EL .....	.992004	.993004	.103	.101028	73-75, 79		
48-79578A4 .....	.992006	.993006	.102	.031039	71, 76	6G5-45947-01-98 .....	.992003	.993003	.103	.101027	73-75, 79		
48-832828A45 .Black Max™ .....	.992003	.993003	.102	.031064	71, 76	6G5-45947-01-EL .....	.992003	.993003	.103	.101027	73-75, 79		
48-832830A45 .Black Max™ .....	.992004	.993004	.102	.031065	71, 76	6G5-45949-00-36 .....	.992006	.993006	.103	.101030	73-75, 79		
48-832832A45 .Black Max™ .....	.992005	.993005	.102	.031066	71, 76	6G5-45949-00-98 .....	.992006	.993006	.103	.101030	73-75, 79		
48-832834A45 .Black Max™ .....	.992006	.993006	.102	.031068	71, 76	6G5-45949-00-EL .....	.992006	.993006	.103	.101030	73-75, 79		
TA2008 Black Diamond .....	.992002	.993002	.102	.031023	71, 76	6G5-45952-00-98 .....	.992003	.993003	.103	.101026	73-75, 79		
TA2010 Black Diamond .....	.992003	.993003	.102	.031051	71, 76	6G5-45952-00-EL .....	.992003	.993003	.103	.101026	73-75, 79		
TA2012 Black Diamond .....	.992003	.993003	.102	.031024	71, 76	6K1-45945-00-98 .....	.992004	.993004	.102	.031025	73-75, 79		
TA2014 Black Diamond .....	.992004	.993004	.102	.031052	71, 76	6K1-45947-00-98 .....	.992003	.993003	.102	.031024	73-75, 79		
TA2016 Black Diamond992004	.993004	.102	.031025	71, 76	XHS™ Hub Cross Reference									
TA2018 Black Diamond992005	.993005	.102	.031026	71, 76										
TA2036 Black Diamond992104	.993104	.See Note 3	.031042	71, 76										
TA2038 Black Diamond992105	.993105	.See Note 3	.031043	71, 76										
TA2048 Black Diamond992103	.993103	.See Note 3	.031041	71, 76										
TA2050 Black Diamond992104	.993104	.See Note 3	.031042	71, 76										
TA2052 Black Diamond992105	.993105	.See Note 3	.031043	71, 76										
TA2054 Black Diamond992106	.993106	.See Note 3	.031044	71, 76										

MI MATCH-XHS™ CROSS REFERENCE

CROSS REFERENCE

MI Match Part #	Vortex Part #	Rapture Part#	XHS Kit #	Series	Engine Application	Diameter	Pitch
011002	.992103	.993103	.106	.V4	Evinrude/Johnson	.13.75	.15
011003	.992104	.993104	.106	.V4	Evinrude/Johnson	.13.25	.17
011004	.992105	.993105	.106	.V4	Evinrude/Johnson	.13	.19
011005	.992106	.993106	.106	.V4	Evinrude/Johnson	.12.75	.21
011006	.992002	.993002	See Note 2	.V6	Evinrude/Johnson	.15.5	.15
011007	.992003	.993003	See Note 2	.V6	Evinrude/Johnson	.15	.17
011008	.992004	.993004	See Note 2	.V6	Evinrude/Johnson	.14.5	.19
011009	.992005	.993005	See Note 2	.V6	Evinrude/Johnson	.14.25	.21
011010	.992006	.993006	See Note 2	.V6	Evinrude/Johnson	.14.25	.23
011024	.992104	.993104	.106	.V4	Evinrude/Johnson	.14	.17
011025	.992105	.993105	.106	.V4	Evinrude/Johnson	.14	.19
011026	.992106	.993106	.106	.V4	Evinrude/Johnson	.14	.21
031001	.992103	.993103	.102	.V4	Mercury (old)	.13	.15
031002	.992104	.993104	.102	.V4	Mercury (old)	.13	.17
031003	.992105	.993105	.102	.V4	Mercury (old)	.13	.19
031004	.992106	.993106	.102	.V4	Mercury (old)	.13	.21
031023	.992002	.993002	.102	.V6	Mercury/Mariner/Yamaha(old)	.15.25	.15
031024	.992003	.993003	.102	.V6	Mercury/Mariner/Yamaha(old)	.14.5	.17
031025	.992004	.993004	.102	.V6	Mercury/Mariner/Yamaha(old)	.14	.19
031026	.992005	.993005	.102	.V6	Mercury/Mariner/Yamaha(old)	.13.75	.21
031027	.992006	.993006	.102	.V6	Mercury/Mariner/Yamaha(old)	.13.5	.23
031035	.992002	.993002	.102	.I/O	Mercury thru 1982	.16	.15
031036	.992003	.993003	.102	.I/O	Mercury thru 1982	.15.75	.17
031037	.992004	.993004	.102	.I/O	Mercury thru 1982	.15.5	.19
031038	.992005	.993005	.102	.I/O	Mercury thru 1982	.15.25	.21
031039	.992006	.993006	.102	.I/O	Mercury thru 1982	.15	.23
031041	.992103	.993103	See Note 3	.V4	Mercury/Mariner/Force/Yamaha (old)/Honda	.13.75	.15
031042	.992104	.993104	See Note 3	.V4	Mercury/Mariner/Force/Yamaha (old)/Honda	.13.25	.17
031043	.992105	.993105	See Note 3	.V4	Mercury/Mariner/Force/	.13	.19
031044	.992106	.993106	See Note 3	.V4	Mercury/Mariner/Force/Yamaha (old)/Honda	.12.75	.21
031051	.992003	.993003	.102	.V6	Mercury/Mariner	.16	.16
031052	.992004	.993004	.102	.V6	Mercury/Mariner	.15.5	.18
031064	.992003	.993003	.102	.V6	Mercury/Mariner	.15	.17
031065	.992004	.993004	.102	.V6	Mercury/Mariner	.14.5	.19
031066	.992005	.993005	.102	.V6	Mercury/Mariner	.14.25	.21
031068	.992006	.993006	.102	.V6	Mercury/Mariner	.14	.23
032092	.992104	.993104	.102	.V4	Mercury (old)	.13	.17
032093	.992105	.993105	.102	.V4	Mercury (old)	.13	.19
032094	.992106	.993106	.102	.V4	Mercury (old)	.13	.21
061001	.992103	.993103	.10	.V4	Suzuki	.13.75	.15
061002	.992104	.993104	.110	.V4	Suzuki	.13.25	.17
061003	.992105	.993105	.110	.V4	Suzuki	.13	.19
061004	.992106	.993106	.110	.V4	Suzuki	.13	.21
101025	.992002	.993002	.103	.V6 & I/O	Yamaha (current)/Yamaha I/O	.15.25	.15
101026	.992003	.993003	.103	.V6 & I/O	Yamaha (current)/Yamaha I/O	.14.625	.16
101027	.992003	.993003	.103	.V6 & I/O	Yamaha (current)/Yamaha I/O	.14.5	.17
101028	.992004	.993004	.103	.V6 & I/O	Yamaha (current)/Yamaha I/O	.14	.19
101029	.992005	.993005	.103	.V6 & I/O	Yamaha (current)/Yamaha I/O	.13.75	.21
101030	.992006	.993006	.103	.V6 & I/O	Yamaha (current)/Yamaha I/O	.13.5	.23
101032	.992103	.993103	See Note 1	.V4	Yamaha (current)	.13.5	.15
101033	.992104	.993104	See Note 1	.V4	Yamaha (current)	.13.25	.17
101034	.992105	.993105	See Note 1	.V4	Yamaha (current)	.13	.19
101035	.992106	.993106	See Note 1	.V4	Yamaha (current)	.12.625	.21
142010	.992103	.993103	.109	.V4	Nissan/Tohatsu	.13.5	.14.6
142011	.992103	.993103	.109	.V4	Nissan/Tohatsu	.13.5	.15.7
142012	.992104	.993104	.109	.V4	Nissan/Tohatsu	.12.9	.17.6

MI MATCH-XHS™ CROSS REFERENCE

CROSS REFERENCE

MI Match Part #	Vortex Part #	Rapture Part#	XHS Kit #	Series	Engine Application	Diameter	Pitch
142013 .....	.992105	.993105	.109	V4	.Nissan/Tohatsu	12.6	.19.9
161001 .....	.992002	.993002	.105	I/O	.Volvo SX/OMC Cobra SX	15.5	.15
161002 .....	.992003	.993003	.105	I/O	.Volvo SX/OMC Cobra SX	15	.17
161003 .....	.992004	.993004	.105	I/O	.Volvo SX/OMC Cobra SX	14.5	.19
161004 .....	.992005	.993005	.105	I/O	.Volvo SX/OMC Cobra SX	14.25	.21

Note 1	Yamaha	
	T50, 1996 to Present, 15 tooth spline	108
	60-100 HP Including 4-Stroke, 1984 to present, 15 tooth spline	108
	80-140 HP, 1978 thru 1983, 15 tooth spline	102
	115-130 HP, 1984 to present, 15 tooth spline	103

Note 2	Evinrude/Johnson Outboards	
	90-140 Large Gearcase, 1976 thru 1990, 15 tooth spline	101
	90-140 Large Gearcase, 1991 to present, 15 tooth spline	100
	150-300 HP, 1976 thru 1990, 15 tooth spline	101
	150-300 HP, 1991 to present, 15 tooth spline	100
	OMC/Cobra Sterndrives	
	Model 800/Cobra/King Cobra, 1978 thru 1990, 15 tooth spline	101
	Model 800/Cobra/King Cobra, 1991 thru 1994, 15 tooth spline	100

Note 3	Mercury/Mariner	
	60 HP Bigfoot, 15 tooth spline	102
	70-140 HP Except 135 HP, 1961 to present, 15 tooth spline	102
	XR-4, XR-6, 15 tooth spline	102
	Honda Outboards	
	75-90 HP, thru 1988, 15 tooth spline	102
	75-90 HP, 1999 to present, 15 tooth spline	107
	115-130 HP, 1998 to present, 15 tooth spline	107
	Force	
	75-150 HP, 1995 to present, 15 tooth spline	102
	Yamaha	
	80-140 HP, 1978 thru 1983, 15 tooth spline	102

XHS™ Hub System Cross Reference to Mercury Flo-Torq® Hub System

XHS™ Hub Kit #	Mercury Flo-Torq® Part #	XHS™ Hub Kit#	Mercury Flo-Torq® Part #
835257A1 .....	.102	835272A1 .....	.108
835265A1 .....	.100	835277A1 .....	.102
835266A1 .....	.106	8.35279A1 .....	.107
835267A1 .....	.101	835281A1 .....	.104
835270A1 .....	.105	835282A1 .....	.110
835271A1 .....	.103	835284A1 .....	.109



EVINRUDE®, JOHNSON®

45-75 HORSEPOWER • LARGE GEARCASE

Propeller Series B (4-1/4" Gearcase)

ENGINES - MODEL & YEAR

45 HP 2 Cyl. Commercial	1986 & Newer	50 HP 3 Cyl. Pleasure	1994 & Newer
50 HP 2 Cyl. Commercial	1977-79	55 HP 3 Cyl. Pleasure	1968-69
55 HP 2 Cyl. Commercial	1980 & Newer	60 HP 3 Cyl. Pleasure	1970-71, 1986 & Newer
65 HP 3 Cyl. Commercial	1984 & Newer		
50 HP 2 Cyl. Pleasure	1971-74		

(LARGE GEARCASE & THRU HUB EXHAUST)

PROPELLER APPLICATION

Diameter & Pitch	Blade #	Vortex	Rapture Performance Stainless Steel			
		RH	Diameter & Pitch	Blade#	RH	LH
13-3/4 x 15	3	992103	13-3/8 x 15	3	★993103	
13-1/4 x 17	3	992104	13-1/8 x 17	3	★993104	
13 x 19	3	992105	13 x 19	3	★993105	
12-3/4 x 21	3	992106	13 x 21	3	★993106	

**Use XHS™ Hub
Kit 106**

* Do NOT use Gearcase Adapter Ring supplied with propeller.

85-140 HORSEPOWER • V-4 GEARCASE

Propeller Series B (4-1/4" Gearcase)

ENGINES - MODEL & YEAR

85 HP	1969-80, 1991-95	115 HP	1973 & Newer
88 HP	1981-96	120 HP	1986-94
90 HP	1981 & Newer	125 HP	1971-72
100 HP	1979-80, 1988-93	135 HP	1973-76
110 HP	1986-89	140 HP	1977-94

(13 SPLINE & THRU HUB EXHAUST)

PROPELLER APPLICATION

Diameter & Pitch	Blade #	Vortex	Rapture Performance Stainless Steel			
		RH	Diameter & Pitch	Blade#	RH	LH
13-3/4 x 15	3	992103	13-3/8 x 15	3	★993103	
13-1/4 x 17	3	992104	13-1/8 x 17	3	★993104	
13 x 19	3	992105	13 x 19	3	★993105	
12-3/4 x 21	3	992106	13 x 21	3	★993106	

**Use XHS™ Hub
Kit 106**

* Do NOT use Gearcase Adapter Ring supplied with propeller.

* Available 2003 Season.

Propeller and Hub sold separately. Vortex™ Series propellers must be used with Michigan Wheel XHS™ hub system or Mercury Flo-Torq® hub system. Complete Kits are available by combining propeller and XHS™ hub kit part numbers. Example: 992002-100



EVINRUDE®, JOHNSON® (continued)

90-300 HORSEPOWER • V-6 GEARCASE (1991 & NEWER)

Propeller Series A (4-3/4" Gearcase)

ENGINES - MODEL & YEAR

90 HP V-4	1995 & Newer	155 HP V-6 Commercial	1991 & Newer
100 HP V-4 Commercial	1991 & Newer	175 HP V-6	1991 & Newer
115 HP V-4	1995 & Newer	200 HP V-6	1991 & Newer
130 HP V-4	1995 & Newer	200 HP V-6	2000 & Newer
140 (25") HP V-4	1991-94	225 HP V-6	1991 & Newer
150 HP V-6 Commercial	1993 & Newer	250 HP V-8	1991 & Newer
150 HP V-6	1991 & Newer	300 HP V-8	1991-95
(15 SPLINE & THRU HUB EXHAUST)			

PROPELLER APPLICATION

Diameter & Pitch	Blade #	Vortex	Rapture Performance Stainless Steel				
		RH	Diameter & Pitch	Blade#	RH	LH	
15-1/4 x 15	3	992002	14-1/4 x 15	3	*993002	*993012	
15 x 17	3	992003	14-1/4 x 17	3	*993003	*993013	
14-1/2 x 19	3	992004	14-1/4 x 19	3	*993004	*993014	
14-1/4 x 21	3	992005	14-1/4 x 21	3	*993005	*993015	
14 x 23	3	992006	14-1/4 x 23	3	*993006	*993016	
			14-1/4 x 25	3	*993007	*993017	
14-3/4 x 16	4	992202					
14-1/2 x 18	4	992203					
14-1/4 x 20	4	992204					

**Use XHS™ Hub
Kit 100**

90-300 HORSEPOWER • V-6 GEARCASE (1976-90)

Propeller Series A (4-3/4" Gearcase)

ENGINES - MODEL & YEAR

100 HP V-4 Commercial	1984-90	155 HP V-8 Commercial	1978-90
120-140 HP V-4	1985	175 HP V-8	1977-90
140 (25") HP V-4	1989-90	200 HP V-8	1976-90
150 HP V-6	1978-90	225 HP V-8	1986-90
185 HP V-6	1984-85	275 HP V-8	1986-88
235 HP V-6	1978-85	300 HP V-8	1986-90
2.6 Liter V-6	1984-85	3.6 Liter V-8	1986-87
(15 SPLINE & THRU HUB EXHAUST)			

PROPELLER APPLICATION

Diameter & Pitch	Blade #	Vortex	Rapture Performance Stainless Steel				
		RH	Diameter & Pitch	Blade#	RH	LH	
15-1/4 x 15	3	992002	14-1/4 x 15	3	*993002	*993012	
15 x 17	3	992003	14-1/4 x 17	3	*993003	*993013	
14-1/2 x 19	3	992004	14-1/4 x 19	3	*993004	*993014	
14-1/4 x 21	3	992005	14-1/4 x 21	3	*993005	*993015	
14 x 23	3	992006	14-1/4 x 23	3	*993006	*993016	
			14-1/4 x 25	3	*993007	*993017	
14-3/4 x 16	4	992202					
14-1/2 x 18	4	992203					
14-1/4 x 20	4	992204					

**Use XHS™ Hub
Kit 101**

* Available 2003 Season.

Propeller and Hub sold separately. Vortex™ Series propellers must be used with Michigan Wheel XHS™ hub system or Mercury Flo-Torq® hub system. Complete Kits are available by combining propeller and XHS™ hub kit part numbers. Example: 992002-100



FORCE®, CHRYSLER, U.S. MARINE

75-150 HORSEPOWER • DUAL EXHAUST UNITS

Propeller Series B (4-1/4" Gearcase)

ENGINES - MODEL & YEAR

75-150 HP 1995-Present

PROPELLER APPLICATION

Diameter & Pitch	Blade #	Vortex		Rapture Performance Stainless Steel			
		RH	Diameter & Pitch	Blade#	RH	LH	
13-3/4 x 15	3	992103	13-3/8 x 15	3	★993103		
13-1/4 x 17	3	992104	13-1/8 x 17	3	★993104		
13 x 19	3	992105	13 x 19	3	★993105		
12-3/4 x 21	3	992106	13 x 21	3	★993106		

**Use XHS™ Hub
Kit 102**

★ Note: Use Gearcase adapter ring supplied with propeller.

HONDA

75-90 HORSEPOWER

Propeller Series B (4-1/4" Gearcase)

ENGINES - MODEL & YEAR

75 HP 1995-98

90 HP 1995-98

PROPELLER APPLICATION

Diameter & Pitch	Blade #	Vortex		Rapture Performance Stainless Steel			
		RH	Diameter & Pitch	Blade#	RH	LH	
13-3/4 x 15	3	992103	13-3/8 x 15	3	★993103		
13-1/4 x 17	3	992104	13-1/8 x 17	3	★993104		
13 x 19	3	992105	13 x 19	3	★993105		
12-3/4 x 21	3	992106	13 x 21	3	★993106		

**Use XHS™ Hub
Kit 102**

★ Note: Use Gearcase adapter ring supplied with propeller.

75-130 HORSEPOWER

Propeller Series B (4-1/4" Gearcase)

ENGINES - MODEL & YEAR

75 HP 1999 & Newer

115 HP 1998 & Newer

90 HP 1999 & Newer

130 HP 1998 & Newer

PROPELLER APPLICATION

Diameter & Pitch	Blade #	Vortex		Rapture Performance Stainless Steel			
		RH	Diameter & Pitch	Blade#	RH	LH	
13-3/4 x 15	3	992103	13-3/8 x 15	3	★993103		
13-1/4 x 17	3	992104	13-1/8 x 17	3	★993104		
13 x 19	3	992105	13 x 19	3	★993105		
12-3/4 x 21	3	992106	13 x 21	3	★993106		

**Use XHS™ Hub
Kit 107**

★ Note: Use Gearcase adapter ring supplied with propeller.

* Available 2003 Season.

Propeller and Hub sold separately. Vortex™ Series propellers must be used with Michigan Wheel XHS™ hub system or Mercury Flo-Torq® hub system. Complete Kits are available by combining propeller and XHS™ hub kit part numbers. Example: 992002-100



MERCURY™, MARINER™, SEA RAY

60-140 HORSEPOWER • 3 CYLINDER, 4 & 6 IN LINE CYLINDER

Propeller Series B (4-1/4" Gearcase)

ENGINES - MODEL & YEAR

60 HP Bigfoot (Not 4-Stroke)	1995 & Newer	80 HP	1978-89
650 Model 4 Cylinder (2:1)	1961-70	80 HP (Yamaha)	1977
650 Model 2 Cylinder	Thru 1971	80 HP (Mariner)	1977
70 HP	1987-89	90 HP	1978 & Newer
75 HP	1984 & Newer	100 HP	1988 & Newer
800-850 Models 6 Cylinder	Thru 1972	115 HP	1978 & Newer
800-850 Models 4 Cylinder	1972-77	125 HP	1994 & Newer
900-1500 Models	Thru 1977	140 HP Includes Sea Pro & Offshore	

PROPELLER APPLICATION

Diameter & Pitch	Blade #	Vortex	Rapture Performance Stainless Steel			
		RH	Diameter & Pitch	Blade#	RH	LH
13-3/4 x 15	3	992103	13-3/8 x 15	3	*993103	
13-1/4 x 17	3	992104	13-1/8 x 17	3	*993104	
13 x 19	3	992105	13 x 19	3	*993105	
12-3/4 x 21	3	992106	13 x 21	3	*993106	

**Use XHS™ Hub
Kit 102**

* Note: Use Gearcase adapter ring supplied with propeller.

135-300 HORSEPOWER • V-6 GEARCASE

Propeller Series A (4-3/4" Gearcase)

ENGINES - MODEL & YEAR

135 HP	1986 & Newer	225 HP	1980 & Newer
150 HP	1978 & Newer	250 HP	1994 & Newer
175 HP	1978 & Newer	275 HP	1990-94
200 HP	1978 & Newer	300 HP	1983, 1999 & Newer
220 HP	1987-88	3.4 Liter	1984-86

Includes DFI, EFI, Magnum, Offshore, Optimax, Sea Pro & XRi

PROPELLER APPLICATION

Diameter & Pitch	Blade #	Vortex	Rapture Performance Stainless Steel			
		RH	Diameter & Pitch	Blade#	RH	LH
15-1/4 x 15	3	992002	14-1/4 x 15	3	*993002	*993012
15 x 17	3	992003	14-1/4 x 17	3	*993003	*993013
14-1/2 x 19	3	992004	14-1/4 x 19	3	*993004	*993014
14-1/4 x 21	3	992005	14-1/4 x 21	3	*993005	*993015
14 x 23	3	992006	14-1/4 x 23	3	*993006	*993016
			14-1/4 x 25	3	*993007	*993017
14-3/4 x 16	4	992202				
14-1/2 x 18	4	992203				
14-1/4 x 20	4	992204				

**Use XHS™ Hub
Kit 102**

* Available 2003 Season.

Propeller and Hub sold separately. Vortex™ Series propellers must be used with Michigan Wheel XHS™ hub system or Mercury Flo-Torq® hub system. Complete Kits are available by combining propeller and XHS™ hub kit part numbers. Example: 992002-100



NISSAN, TOHATSU

90-140 HORSEPOWER

Propeller Series B (4-1/4" Gearcase)

ENGINES - MODEL & YEAR

90 HP	.....	1987 & Newer	120 HP	.....	1988 & Newer
115 HP	.....	1992 & Newer	140 HP	.....	1988 & Newer

Excludes TRP Drive

PROPELLER APPLICATION

Diameter & Pitch	Blade #	Vortex	Rapture Performance Stainless Steel			
		RH	Diameter & Pitch	Blade#	RH	LH
13-3/4 x 15	3	992103	13-3/8 x 15	3	★993103	
13-1/4 x 17	3	992104	13-1/8 x 17	3	★993104	
13 x 19	3	992105	13 x 19	3	★993105	
12-3/4 x 21	3	992106	13 x 21	3	★993106	

Use XHS™ Hub
Kit 109

* Note: Use Gearcase adapter ring supplied with propeller.

SUZUKI

60-140 HORSEPOWER

Propeller Series B (4-1/4" Gearcase)

ENGINES - MODEL & YEAR

DF 60,70	.....	1998 & Newer	DT 90	.....	1989-97
DT 75	.....	1992-97	DT 100	.....	1989 & Newer
DT 75	.....	1983-91	DT 115, 140	.....	1992 & Newer
DT 85	.....	1992 & Newer	DT 115, 140	.....	1981-91
DT 85	.....	1979-91			

PROPELLER APPLICATION

Diameter & Pitch	Blade #	Vortex	Rapture Performance Stainless Steel			
		RH	Diameter & Pitch	Blade#	RH	LH
13-3/4 x 15	3	992103	13-3/8 x 15	3	★993103	
13-1/4 x 17	3	992104	13-1/8 x 17	3	★993104	
13 x 19	3	992105	13 x 19	3	★993105	
12-3/4 x 21	3	992106	13 x 21	3	★993106	

Use XHS™ Hub
Kit 110

* Note: Do NOT use Gear adapter ring supplied with propeller.

* Available 2003 Season.

Propeller and Hub sold separately. Vortex™ Series propellers must be used with Michigan Wheel XHS™ hub system or Mercury Flo-Torq® hub system. Complete Kits are available by combining propeller and XHS™ hub kit part numbers. Example: 992002-100



SUZUKI

150-225 HORSEPOWER

Propeller Series A (4-3/4" Gearcase)

ENGINES - MODEL & YEAR

DT 150	1986 & Newer	DT 200	1986 & Newer
DT 175	1986-92	DT 225	1990 & Newer

PROPELLER APPLICATION

Diameter & Pitch	Blade #	Vortex RH	Rapture Performance Stainless Steel				
			Diameter & Pitch	Blade#	RH	LH	
15-1/4 x 15	3	992002	14-1/4 x 15	3	*993002	*993012	
15 x 17	3	992003	14-1/4 x 17	3	*993003	*993013	
14-1/2 x 19	3	992004	14-1/4 x 19	3	*993004	*993014	
14-1/4 x 21	3	992005	14-1/4 x 21	3	*993005	*993015	
14 x 23	3	992006	14-1/4 x 23	3	*993006	*993016	
			14-1/4 x 25	3	*993007	*993017	
14-3/4 x 16	4	992202					
14-1/2 x 18	4	992203					
14-1/4 x 20	4	992204					

**Use XHS™ Hub
Kit 104**

YAMAHA

50-100 HORSEPOWER

Propeller Series B (4-1/4" Gearcase)

ENGINES - MODEL & YEAR

T50 HP	1996 & Newer	80 HP	1997
60 HP	1992 & Newer	85 HP	1991-97
70 HP	1984 & Newer	90 HP	1984 & Newer
75 HP	1994 & Newer	FS80 (4-Stroke)	1999 & Newer
		FS100 (4-Stroke)	1999 & Newer

PROPELLER APPLICATION

Diameter & Pitch	Blade #	Vortex RH	Rapture Performance Stainless Steel				
			Diameter & Pitch	Blade#	RH	LH	
13-3/4 x 15	3	992103	13-3/8 x 15	3	*993103		
13-1/4 x 17	3	992104	13-1/8 x 17	3	*993104		
13 x 19	3	992105	13 x 19	3	*993105		
12-3/4 x 21	3	992106	13 x 21	3	*993106		

**Use XHS™ Hub
Kit 108**

* Note: Use Gearcase adapter ring supplied with propeller.

* Available 2003 Season.

Propeller and Hub sold separately. Vortex™ Series propellers must be used with Michigan Wheel XHS™ hub system or Mercury Flo-Torq® hub system. Complete Kits are available by combining propeller and XHS™ hub kit part numbers. Example: 992002-100



YAMAHA

115-130 HORSEPOWER

Propeller Series B (4-1/4" Gearcase)

ENGINES - MODEL & YEAR

115 HP	1984 & Newer	FS115 (4-Stroke)	2000 & Newer
130 HP	1984 & Newer		

PROPELLER APPLICATION

Diameter & Pitch	Blade #	Vortex	Rapture Performance Stainless Steel			
		RH	Diameter & Pitch	Blade#	RH	LH
13-3/4 x 15	3	992103	13-3/8 x 15	3	★993103	
13-1/4 x 17	3	992104	13-1/8 x 17	3	★993104	
13 x 19	3	992105	13 x 19	3	★993105	
12-3/4 x 21	3	992106	13 x 21	3	★993106	

Use XHS™ Hub
Kit 103

* Note: Use Gearcase adapter ring supplied with propeller.

80-140 HORSEPOWER

Propeller Series B (4-1/4" Gearcase)

ENGINES - MODEL & YEAR

80-90-115 HP	1978-83	80 HP	1977
140 HP	1978-79		

PROPELLER APPLICATION

Diameter & Pitch	Blade #	Vortex	Rapture Performance Stainless Steel			
		RH	Diameter & Pitch	Blade#	RH	LH
13-3/4 x 15	3	992103	13-3/8 x 15	3	★993103	
13-1/4 x 17	3	992104	13-1/8 x 17	3	★993104	
13 x 19	3	992105	13 x 19	3	★993105	
12-3/4 x 21	3	992106	13 x 21	3	★993106	

Use XHS™ Hub
Kit 102

* Note: Use Gearcase Adapter Ring supplied with propeller.

150-175 HORSEPOWER

Propeller Series A (4-3/4" Gearcase)

ENGINES - MODEL & YEAR

150 HP	1979-83	175 HP (DE & VMAX)	2001
175 HP	1978-79		

PROPELLER APPLICATION

Diameter & Pitch	Blade #	Vortex	Rapture Performance Stainless Steel			
		RH	Diameter & Pitch	Blade#	RH	LH
15-1/4 x 15	3	992002	14-1/4 x 15	3	★993002	★993012
15 x 17	3	992003	14-1/4 x 17	3	★993003	★993013
14-1/2 x 19	3	992004	14-1/4 x 19	3	★993004	★993014
14-1/4 x 21	3	992005	14-1/4 x 21	3	★993005	★993015
14 x 23	3	992006	14-1/4 x 23	3	★993006	★993016
			14-1/4 x 25	3	★993007	★993017
14-3/4 x 16	4	992202				
14-1/2 x 18	4	992203				
14-1/4 x 20	4	992204				

Use XHS™ Hub
Kit 102

* Available 2003 Season.

Propeller and Hub sold separately. Vortex™ Series propellers must be used with Michigan Wheel XHS™ hub system or Mercury Flo-Torq® hub system. Complete Kits are available by combining propeller and XHS™ hub kit part numbers. Example: 992002-100



YAMAHA

150-250 HORSEPOWER

Propeller Series A (4-3/4" Gearcase)

ENGINES - MODEL & YEAR

150 HP	1986 & Newer	225 HP	1986 & Newer
175, 200 HP	1984 & Newer	250 HP	1990 & Newer
220 HP (Special)	1984-85	F200 (4-Stroke)	2002 & Newer
225 HP (Excel)	1987-88	F225 (4-Stroke)	2002 & Newer

PROPELLER APPLICATION

Diameter & Pitch	Blade #	Vortex	Rapture Performance Stainless Steel				
		RH	Diameter & Pitch	Blade#	RH	LH	
15-1/4 x 15	3	992002	14-1/4 x 15	3	*993002	*993012	
15 x 17	3	992003	14-1/4 x 17	3	*993003	*993013	
14-1/2 x 19	3	992004	14-1/4 x 19	3	*993004	*993014	
14-1/4 x 21	3	992005	14-1/4 x 21	3	*993005	*993015	
14 x 23	3	992006	14-1/4 x 23	3	*993006	*993016	
			14-1/4 x 25	3	*993007	*993017	
14-3/4 x 16	4	992202					
14-1/2 x 18	4	992203					
14-1/4 x 20	4	992204					

Use XHS™ Hub
Kit 103



**VORTEX™
XHS™**
PERFORMANCE PROPELLERS



**RAPTURE™
XHS™**

* Available 2003 Season.

Propeller and Hub sold separately. Vortex™ Series propellers must be used with Michigan Wheel XHS™ hub system or Mercury Flo-Torq® hub system. Complete Kits are available by combining propeller and XHS™ hub kit part numbers. Example: 992002-100

MERCURYTMMERCURYTM, ALPHA ONETM, BRAVO ONETM • 120-300 HP (1983 & NEWER)

Propeller Series A (4-3/4" Gearcase)

ENGINES - MODEL & YEAR

120 -190 HP Mercruiser™ (includes 470, 488, 898) .1983-85	5.0L (180-240 HP) Alpha One™ .....1986 & Newer
200-260 HP Mercruiser™ (includes 228, 898) .....1983-85	5.7L (210-260 HP) Alpha One™ .....1986 & Newer
2.5 L (120 HP) Alpha One™ .....1986-89	262 Magnum (205 HP) Alpha One™ .....1997 & Newer
3.0L (125-140 HP) Alpha One™ .....1986 & Newer	350 Magnum (240-300 HP) Alpha One™ .....1987 & Newer
3.7L (165-190 HP) Alpha One™ .....1986-89	5.0L (220-240 HP) Bravo One™ .....1998 & Newer
4.3L (155-210 HP) Alpha One™ .....1986 & Newer	5.7L (210-280 HP) Bravo One™ .....1995 & Newer
	350 Magnum (300 HP) Bravo One™ .....1996 & Newer

PROPELLER APPLICATION

Diameter & Pitch	Blade #	Vortex RH	Rapture Performance Stainless Steel				
			Diameter & Pitch	Blade#	RH	LH	
15-1/4 x 15	3	992002	14-1/4 x 15	3	★993002	★993012	
15 x 17	3	992003	14-1/4 x 17	3	★993003	★993013	
14-1/2 x 19	3	992004	14-1/4 x 19	3	★993004	★993014	
14-1/4 x 21	3	992005	14-1/4 x 21	3	★993005	★993015	
14 x 23	3	992006	14-1/4 x 23	3	★993006	★993016	
			14-1/4 x 25	3	★993007	★993017	
14-3/4 x 16	4	992202					
14-1/2 x 18	4	992203					
14-1/4 x 20	4	992204					

Use XHS™ Hub
Kit 102

MERCURYTM • 120-330 HP (THRU 1982)

Propeller Series A (4-3/4" Gearcase)

ENGINES - MODEL & YEAR

1A, 1B, 1C	Thru 1982	225S, 233	Thru 1982
120, 140, 145 DTS	Thru 1982	225TRS, 260	Thru 1982
165, 228, 470, 485, 888, 898	Thru 1982	280TRS, 330TRS	Thru 1982

PROPELLER APPLICATION

Diameter & Pitch	Blade #	Vortex RH	Rapture Performance Stainless Steel				
			Diameter & Pitch	Blade#	RH	LH	
15-1/4 x 15	3	992002	14-1/4 x 15	3	★993002	★993012	
15 x 17	3	992003	14-1/4 x 17	3	★993003	★993013	
14-1/2 x 19	3	992004	14-1/4 x 19	3	★993004	★993014	
14-1/4 x 21	3	992005	14-1/4 x 21	3	★993005	★993015	
14 x 23	3	992006	14-1/4 x 23	3	★993006	★993016	
			14-1/4 x 25	3	★993007	★993017	
14-3/4 x 16	4	992202					
14-1/2 x 18	4	992203					
14-1/4 x 20	4	992204					

Use XHS™ Hub
Kit 102

★ Available 2003 Season.

Propeller and Hub sold separately. Vortex™ Series propellers must be used with Michigan Wheel XHS™ hub system or Mercury Flo-Torq® hub system. Complete Kits are available by combining propeller and XHS™ hub kit part numbers. Example: 992002-100



OMC-OUTBOARD MARINE CORP.

MODEL 400 • COBRA®

Propeller Series B (4-1/4" Gearcase)

ENGINES - MODEL & YEAR

2.3L (120 HP) Model 400	Thru 1991	2.3L (128 HP) Cobra®	1988-91
2.5L (120 HP) Model 400	1978-84	2.5L (120 HP) Cobra®	1985-87
3.0L (140 HP) Model 400	Thru 1989	3.0L (130 HP) Cobra®	Thru 1989
		3.0L (140 HP) Cobra®	1985-87

PROPELLER APPLICATION

Diameter & Pitch	Blade #	Vortex	Rapture Performance Stainless Steel			
		RH	Diameter & Pitch	Blade#	RH	LH
13-3/4 x 15	3	992103	13-3/8 x 15	3	*993103	
13-1/4 x 17	3	992104	13-1/8 x 17	3	*993104	
13 x 19	3	992105	13 x 19	3	*993105	
12-3/4 x 21	3	992106	13 x 21	3	*993106	

* Note: Do NOT use Gearcase Adapter Ring supplied with propeller.

**Use XHS™ Hub
Kit 106**

MODEL 800, KING COBRA®, COBRA® (1978-90) - 15 SPLINE

Propeller Series A (4-3/4" Gearcase)

ENGINES - MODEL & YEAR

3.0 Liter	1990	5.7 Liter	1978-90
3.8 Liter	1978-85	5.8 Liter	1989-90
4.3 Liter	1985-90	7.4 Liter	1990
5.0 Liter	1978-90	7.5 Liter	1987-90

PROPELLER APPLICATION

Diameter & Pitch	Blade #	Vortex	Rapture Performance Stainless Steel			
		RH	Diameter & Pitch	Blade#	RH	LH
15-1/4 x 15	3	992002	14-1/4 x 15	3	*993002	*993012
15 x 17	3	992003	14-1/4 x 17	3	*993003	*993013
14-1/2 x 19	3	992004	14-1/4 x 19	3	*993004	*993014
14-1/4 x 21	3	992005	14-1/4 x 21	3	*993005	*993015
14 x 23	3	992006	14-1/4 x 23	3	*993006	*993016
			14-1/4 x 25	3	*993007	*993017
14-3/4 x 16	4	992202				
14-1/2 x 18	4	992203				
14-1/4 x 20	4	992204				

**Use XHS™ Hub
Kit 101**

MODEL 800, KING COBRA®, COBRA® (1991-94) - 15 SPLINE & THRU HUB EXHAUST

Propeller Series A (4-3/4" Gearcase)

ENGINES - MODEL & YEAR

3.0 Liter	1991-93	5.8 Liter (Cobra)	1991-93
3.2 Liter	1992-93	5.8 Liter (King Cobra)	1992-94
4.3 Liter	1991-93	7.4 Liter	1991-93
5.0 Liter	1991-93	8.2 Liter	1992-93
5.7 Liter	1991-93	Includes H.O. & EFI Models	

PROPELLER APPLICATION

Diameter & Pitch	Blade #	Vortex	Rapture Performance Stainless Steel			
		RH	Diameter & Pitch	Blade#	RH	LH
15-1/4 x 15	3	992002	14-1/4 x 15	3	*993002	*993012
15 x 17	3	992003	14-1/4 x 17	3	*993003	*993013
14-1/2 x 19	3	992004	14-1/4 x 19	3	*993004	*993014
14-1/4 x 21	3	992005	14-1/4 x 21	3	*993005	*993015
14 x 23	3	992006	14-1/4 x 23	3	*993006	*993016
			14-1/4 x 25	3	*993007	*993017
14-3/4 x 16	4	992202				
14-1/2 x 18	4	992203				
14-1/4 x 20	4	992204				

**Use XHS™ Hub
Kit 100**

* Available 2003 Season.

Propeller and Hub sold separately. Vortex™ Series propellers must be used with Michigan Wheel XHS™ hub system or Mercury Flo-Torq® hub system. Complete Kits are available by combining propeller and XHS™ hub kit part numbers. Example: 992002-100



OMC-OUTBOARD MARINE CORP.

SEA DRIVE® (1991 & NEWER) • LARGE GEARCASE

Propeller Series A (4-3/4" Gearcase)

ENGINES - MODEL & YEAR

1.6 Liter V-4	1991 & Newer	2.7 Liter V-6	1991 & Newer
1.8 Liter V-4	1991 & Newer	3.0 Liter V-6	1991 & Newer
2.0 Liter V-4	1991 & Newer	3.6 Liter V-8	1991 & Newer
2.6 Liter V-6	1991 & Newer	4.0 Liter V-8	1991 & Newer

PROPELLER APPLICATION

Diameter & Pitch	Blade #	Vortex	Rapture Performance Stainless Steel				
		RH	Diameter & Pitch	Blade#	RH	LH	
15-1/4 x 15	3	992002	14-1/4 x 15	3	★993002	★993012	
15 x 17	3	992003	14-1/4 x 17	3	★993003	★993013	
14-1/2 x 19	3	992004	14-1/4 x 19	3	★993004	★993014	
14-1/4 x 21	3	992005	14-1/4 x 21	3	★993005	★993015	
14 x 23	3	992006	14-1/4 x 23	3	★993006	★993016	
			14-1/4 x 25	3	★993007	★993017	
14-3/4 x 16	4	992202					
14-1/2 x 18	4	992203					
14-1/4 x 20	4	992204					

**Use XHS™ Hub
Kit 100**

SEA DRIVE® (1982-90) • LARGE GEARCASE

Propeller Series A (4-3/4" Gearcase)

ENGINES - MODEL & YEAR

1.6 Liter V-4	1982-90	2.6 Liter V-6	1982-90
1.8 Liter V-4	1987-90	2.7 Liter V-6	1987-90
2.0 Liter V-4	1989-90	3.0 Liter V-6	1989-90
2.5 Liter V-4	1982-87	3.6 Liter V-8	1987-90
		4.0 Liter V-8	1989-90

PROPELLER APPLICATION

Diameter & Pitch	Blade #	Vortex	Rapture Performance Stainless Steel				
		RH	Diameter & Pitch	Blade#	RH	LH	
15-1/4 x 15	3	992002	14-1/4 x 15	3	★993002	★993012	
15 x 17	3	992003	14-1/4 x 17	3	★993003	★993013	
14-1/2 x 19	3	992004	14-1/4 x 19	3	★993004	★993014	
14-1/4 x 21	3	992005	14-1/4 x 21	3	★993005	★993015	
14 x 23	3	992006	14-1/4 x 23	3	★993006	★993016	
			14-1/4 x 25	3	★993007	★993017	
14-3/4 x 16	4	992202					
14-1/2 x 18	4	992203					
14-1/4 x 20	4	992204					

**Use XHS™ Hub
Kit 101**

* Available 2003 Season.

Propeller and Hub sold separately. Vortex™ Series propellers must be used with Michigan Wheel XHS™ hub system or Mercury Flo-Torq® hub system. Complete Kits are available by combining propeller and XHS™ hub kit part numbers. Example: 992002-100



VOLVO PENTA

SX Cobra™, Volvo Penta SX™, OMC Cobra™ (1994 - Present) - 19 Spline

Propeller Series A (4-3/4" Gearcase)

ENGINES - MODEL & YEAR

3.0 Liter	.....	1994 - Present	5.8 Liter	.....	1994 - 97
4.3 Liter	.....	1994 - Present	7.4 Liter	.....	1997 - Present
5.0 Liter	.....	1994 - Present	8.2 Liter	.....	1997
5.7 Liter	.....	1994 - Present			

PROPELLER APPLICATION

Diameter & Pitch	Blade #	Vortex RH	Rapture Performance Stainless Steel				
			Diameter & Pitch	Blade#	RH	LH	
15-1/4 x 15	3	992002	14-1/4 x 15	3	*993002	*993012	
15 x 17	3	992003	14-1/4 x 17	3	*993003	*993013	
14-1/2 x 19	3	992004	14-1/4 x 19	3	*993004	*993014	
14-1/4 x 21	3	992005	14-1/4 x 21	3	*993005	*993015	
14 x 23	3	992006	14-1/4 x 23	3	*993006	*993016	
			14-1/4 x 25	3	*993007	*993017	
14-3/4 x 16	4	992202					
14-1/2 x 18	4	992203					
14-1/4 x 20	4	992204					

**Use XHS™ Hub
Kit 105**

YAMAHA

Yamaha Sterndrive

Propeller Series A (4-3/4" Gearcase)

ENGINES - MODEL & YEAR

3.0L (130 HP) EST/PSR	.....	1989 - 93	5.7L (260 HP) EST/PSR/YEMS	.....	1989 - 93
4.3L (205 HP) EST/YEMS/PRS	.....	1989 - 93	7.4L (300 HP) Hydra Drive (EST)	.....	1992 - 93
5.0L (205 HP) EST/PSR/YEMS	.....	1989 - 93			

PROPELLER APPLICATION

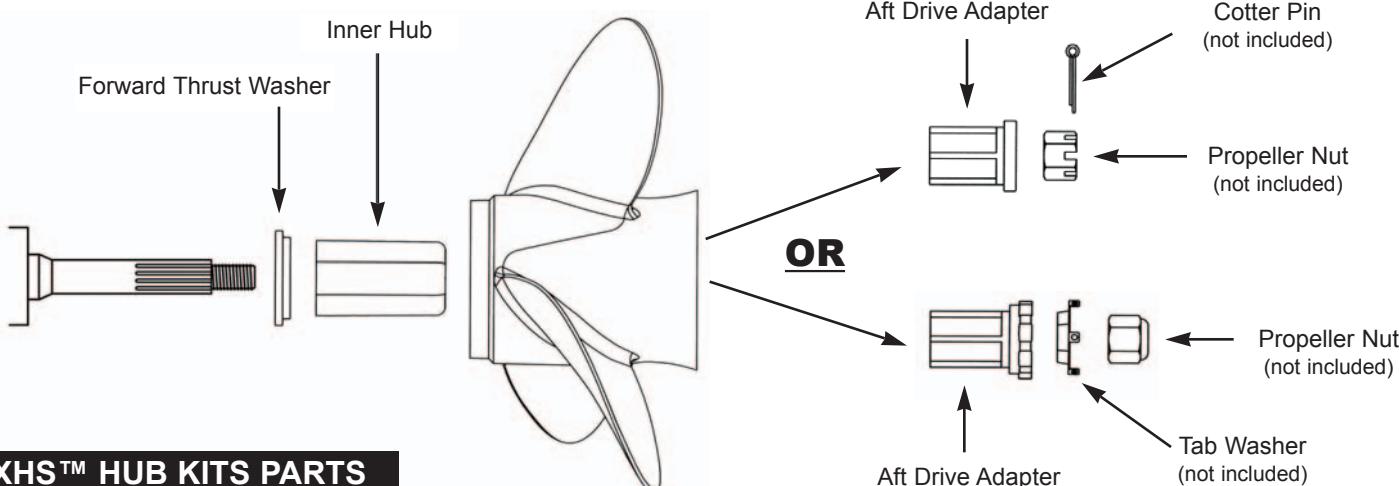
Diameter & Pitch	Blade #	Vortex RH	Rapture Performance Stainless Steel				
			Diameter & Pitch	Blade#	RH	LH	
15-1/4 x 15	3	992002	14-1/4 x 15	3	*993002	*993012	
15 x 17	3	992003	14-1/4 x 17	3	*993003	*993013	
14-1/2 x 19	3	992004	14-1/4 x 19	3	*993004	*993014	
14-1/4 x 21	3	992005	14-1/4 x 21	3	*993005	*993015	
14 x 23	3	992006	14-1/4 x 23	3	*993006	*993016	
			14-1/4 x 25	3	*993007	*993017	
14-3/4 x 16	4	992202					
14-1/2 x 18	4	992203					
14-1/4 x 20	4	992204					

**Use XHS™ Hub
Kit 103**

* Available 2003 Season.

Propeller and Hub sold separately. Vortex™ Series propellers must be used with Michigan Wheel XHS™ hub system or Mercury Flo-Torq® hub system. Complete Kits are available by combining propeller and XHS™ hub kit part numbers. Example: 992002-100

XHS™ PROPELLER ACCESSORIES



XHS™ HUB KITS PARTS

Hub Kit	Description	Parts
100	Evinrude/Johnson Outboards - OMC Sterndrives (V6/V8 Gearcase 1991 to present)	991202 Forward Thrust Washer 991201 Inner Hub 991203 Aft Drive Adapter
101	Evinrude/Johnson Outboards - OMC Sterndrives (V6/V8 Gearcase 1984 - 1990)	991204 Forward Thrust Washer 991201 Inner Hub 991203 Aft Drive Adapter
102	Mercury/Mariner 60HP Bigfoot, 70-125 HP Mercury/Mariner/Force 135-250 HP Force 90-120 HP Honda Outboards 75-90 HP thru 1998 Yamaha Outboards thru 1983	991204 Forward Thrust Washer 991201 Inner Hub 991205 Aft Drive Adapter
103	Yamaha Outboards & Sterndrives (115-130 HP, 150-250 HP, V6 Gearcase 1984 to present)	991213 Forward Thrust Washer 991201 Inner Hub 991206 Aft Drive Adapter
104	Suzuki Outboards (150-225 HP, V6 Gearcase)	991207 Forward Thrust Washer 991201 Inner Hub 991208 Aft Drive Adapter
105	Volvo SX Sterndrives (19 tooth spline 1994 to present)	991202 Forward Thrust Washer 991201 Inner Hub 991208 Aft Drive Adapter
106	Evinrude/Johnson Outboards - OMC Sterndrives (V4 Gearcase 1968 to present)	991210 Forward Thrust Washer 991201 Inner Hub 991211 Aft Drive Adapter
107	Honda Outboards (115-130 HP 1998 to present, 75-90 HP 1999 to present)	991207 Forward Thrust Washer 991201 Inner Hub 991205 Aft Drive Adapter
108	Yamaha Outboards (50-100 HP, splined front thrust washer)	991212 Forward Thrust Washer 991201 Inner Hub 991206 Aft Drive Adapter
109	Nissan/Tohatsu Outboards (90-140 HP)	991213 Forward Thrust Washer 991201 Inner Hub 991214 Aft Drive Adapter
110	Suzuki V4 Outboards (60-140 HP)	991215 Forward Thrust Washer 991201 Inner Hub 991211 Aft Drive Adapter



Limited Lifetime Warranty

Michigan Wheel Corporation warrants to the original consumer purchaser that for the life of the motor originally fitted with the Michigan Match™, Vortex™, Rapture™ or Ballistic™ Propeller, under normal pleasure boat usage, the body of the propeller will be free of any defect in material or workmanship that results in blade or hub fracture or failure. Michigan Wheel Corporation also warrants to the original consumer purchaser, under the same parameters of use described above, that the propeller bushing will be free from any defect in material or workmanship for a period of one year from the date of purchase.

Some surface discoloration is unavoidable in a cast stainless steel alloy, and will not be covered by this warranty. This warranty also does not cover normal wear, accidental damage, modification, improper installation, improper maintenance, or other circumstances that are not the direct result of a defect in the material or workmanship of the propeller.

The sole obligation of Michigan Wheel Corporation under this warranty is to repair or replace the propeller, in the sole discretion of Michigan Wheel Corporation, and at its expense. In order to make a replacement claim, please contact the Michigan Wheel Corporation Customer Service Department, at (616) 452-6941, for a "Return Goods Authorization" number (RGA#), and shipping address instructions. The warranty will not cover any expense of propeller removal, shipping, or reinstallation of the propeller. The RGA# is to be indicated along with our given address on the label, and the shipping carton should include your return shipping address, your phone number, and your original purchase receipt.

The above warranty is Michigan Wheel Corporation's sole warranty for the Michigan Match™, Vortex™, Rapture™ or Ballistic™ Propeller. Michigan Wheel Corporation expressly disclaims all other warranties, expressed or implied, including, without limitation, the warranties of merchantability and fitness for a particular purpose and excludes all liability for incidental or consequential damages, loss of use of the propeller, costs, and expenses.

Any actions arising out of this warranty and the sale of this product shall be governed by Michigan law and may only be brought, heard and decided in Kent County Circuit Court, in the State of Michigan, U.S.A., or in the United States District Court for the Western District of Michigan.

Michigan Wheel Corporation
Outboard & Sterndrive Division
2685 Northridge Avenue NW, Suite G
Grand Rapids, MI 49544
Phone: (616) 452-6941

Need your Propeller Repaired?

Congratulations, you have chosen a top quality propeller. Should it become damaged during use, you want a qualified trained technician to repair it. Contact the **National Marine Propeller Association (NMPA)** at phone: 616.235.6672, fax: 616.235.0144 or visit them on the web: www.nmpa.net for a certified propeller repair shop near you.

Warranty claims are to be addressed directly to **Michigan Wheel Corporation** per instructions on this warranty statement and not to the **NMPA**.



PROP-IT-RIGHT ANALYSIS FORM



A free service from:

Find the prop that matches your needs.

1. Please complete all information listed below.
2. If you do not know all the information, refer to the owners manual or to the actual vessel you are re-proping.
3. Ideally, all spaces are to be filled in. However, if certain information is unknown, focus on the spaces marked with an asterisk (*).
4. Our suggestion can only be as good as the information you provide. Inaccurate data will have an effect on the propeller(s) we suggest.
5. Please note any desires, concerns or history of performance in the comment section.
6. When complete, return this form to Michigan Wheel Corporation or a Michigan Wheel distributor. You will be contacted when your Prop-It-Right analysis is ready.

Name: _____

Street: _____

City/State: _____

Zip: _____ Phone: _____

Fax: _____ Date: _____

2685 Northridge Ave. N.W., Suite G, Grand Rapids, MI 49507

Phone: (616) 452-6941 Fax: (616) 246-1440

PLEASURE BOAT – OUTBOARD & STERN DRIVE

Boat Data

Manufacturer: _____ Model / Year: _____

*Overall Length (OAL): _____ Waterline Length (WL): _____

Beam: _____ Draft: _____ Loaded Weight in Pounds: _____

*Boat Hull Material: Fiberglass Steel Aluminum Wood Other: _____

Present Hull Speed: _____ Desired Hull Speed: _____ Knots MPH

Boat Use: _____

Outboard & Stern Drive Engine Data

Motor – Manufacturer: _____ Model: _____

Year: _____ Gas Diesel

*Engine Mfg. Rating: _____ HP @ Engine Operating Range of _____ to _____ RPM
(low to high)

Cubic Inch Displacement (CID): _____

*Full-throttle RPM and speed produced with existing propeller:

RPM: _____ Speed: _____

*Gear Ratio: _____ :1 *No. of Engines: Single Twin

Does your boat have hydraulic power trim? Yes No

Stern Drive – Manufacturer: _____

Model: _____ Year: _____

Propeller Data

*Present Propeller: _____ diam. x _____ pitch Number of Blades: _____

Manufacturer: _____ Model: _____

Material: Aluminum Stainless Steel Other: _____

Part No. _____

*Shaft Size: _____

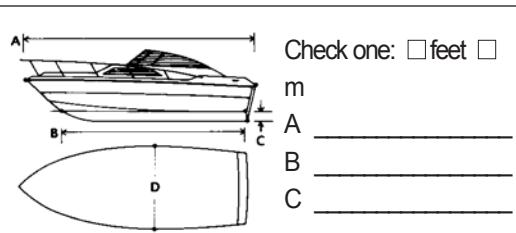
Your Comments:

For Michigan Wheel Corp. use only _____

Suggested Propeller Size: _____ diam. x _____ pitch Part No.: _____

Blades: _____ Material: _____

Comments: _____



Circle boat type. Check hull type.

