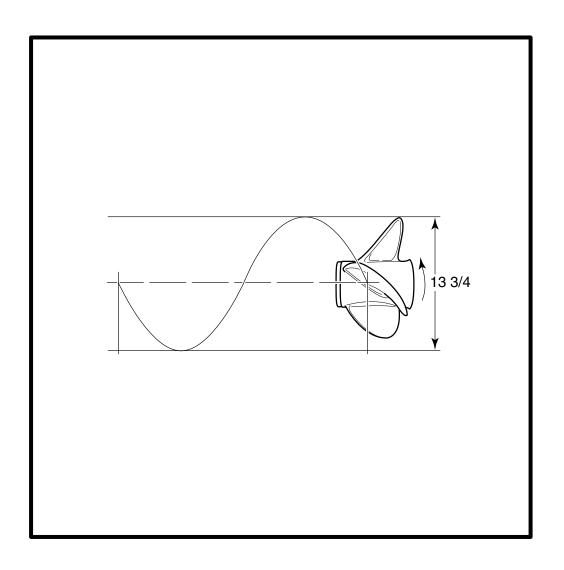
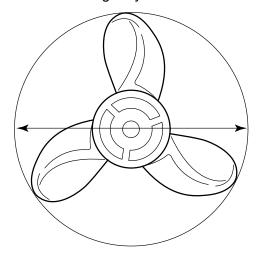
PROPELLER BASICS



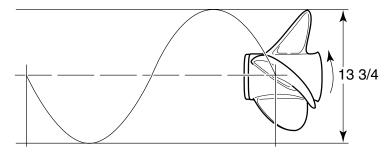
General Definitions

General Definitions

Diameter – the distance across the imaginary circle made when the propeller rotates.



Pitch – the theoretical distance, in inches, that a propeller travels forward during one revolution. Think of pitch as speed. The higher the the propeller pitch that the engine can turn, the faster the boat will usually go. You only need to choose the correct pitch propeller for the boat and engine. The correct diameter for that propeller has been predetermined by the engineers at Mercury.



ACAUTION

Operating the engine outside of the recommended RPM range can cause severe damage to you customer's engine and may void the engine warranty. Always test the boat on the water after you install a new propeller.

Determining the Correct Pitch

Consult the engine owner's manual to find the recommended wide—open—throttle (WOT) range for your customer's engine. If his current propeller is giving him a WOT RPM within the specified RPM range, select a replacement or upgrade propeller with the same pitch as he's been using.

If his current propeller isn't giving him a WOT RPM within the recommended RPM range, select a replacement or upgrade propeller with a larger or smaller pitch using the following rules:

- Adding 1 inch of propeller pitch will reduce WOT RPM by 150 to 200.
- Subtracting 1 inch of propeller pitch will increased WOT RPM by 150 to 200.
- If you're upgrading from a three blade to a four blade propeller, remember that a four blade propeller generally turns 50 to 100 RPM less than a three blade prop with the same pitch.

Propeller Materials

Mercury Marine makes most of its propellers in either aluminum or stainless steel. Aluminum is inexpensive and suitable for general purpose use. Stainless steel is more expensive, but it's over five times more durable than aluminum.

4-Blade Propeller Facts

Four blade propellers usually:

- Plane the boat faster than 3-blade propellers.
- Keep the boat on plane at a lower speed.
- Give improved mid–range speed at the same RPM as a 3–blade propeller
- Provide guicker acceleration than most 3-blade propellers.
- Run smother than 3-blade propellers.
- Have better holding power in rough conditions.
- Are less likely to ventilate in sharp turns.
- Provide better low speed handling.
- Are not quite as fast on the top end as a comparable 3-blade propeller.

Outboard-Powered Boats Prop selector by family

riop selector by failing						
	Aluminum	Stainless Steel		Aluminum	Stainless Steel	
Inflatable		Fiberglass Fish-Type 17 21'				
9.9-15 HP	Black Max		(fish & ski, si	(fish & ski, side console, center console, cuddy)		
20-25 HP	Black Max	Vengeance	75 HP	Black Max	Vengeance, Laser II	
25 4-stroke	Black Max	Vengeance	135-150 HP	Black Max	Vengeance, Laser II	
30–40 HP	Black Max	Vengeance, Trophy Sport	150–175 HP	Black Max	Vengeance, Laser II	
Aluminum (under 14')			200–225 HP	Black Max	High Five, Offshore Vengeance, Laser II,	
9.9–15 HP	Black Max	.,			Mirage Plus, High Five,	
20–25 HP	Black Max	Vengeance			Offshore	
25 4–stroke 30–40 HP	Black Max Black Max	Vengeance Vengeance, Trophy Sport	Fiberglass Ba	ass 14'–21'		
3-1-7-1			75 HP	Black Max	Vengeance, Laser II,	
Aluminum 1			70111	Black Max	Trophy Plus	
9.9–15 HP	Black Max	.,	135-150 HP	Black Max	Vengeance, Laser II,	
20–25 HP	Black Max	Vengeance			Trophy Plus, Tempest	
25 4–stroke 30–60 HP	Black Max	Vengeance	450 455 415	D	Plus, High Five	
(incl. 4–stroke)	Black Max	Vengeance, Trophy Sport	150–175 HP	Black Max	Vengeance, Laser II	
75 HP	Black Max	Vengeance, Laser II,			Trophy Plus, Tempest	
70111	Black Wax	Trophy Plus	200-225 HP	Black Max	Plus, High Five Vengeance, Laser II	
135-225 HP	Black Max	Vengeance, Laser II,	200-225111	DIACK WILL	Trophy Plus, Tempest	
		Trophy Plus, High Five			Plus, High Five	
Fiberglass to	o 14'		Fiberglass Fi	shina 21' ±	, 3	
9.9–15 HP Black Max			(side console, center console, cuddy)			
20–25 HP	Black Max	Vengeance	•	•		
25 4-stroke	Black Max	Vengeance	135–150 HP	Black Max	Vengeance, Laser II, High Five, Offshore	
Fiberglass F	Runabout 14–17	,	150-175 HP	Black Max	Vengeance, Laser II,	
•	or bowrider, sa				High Five, Offshore	
30–60 HP	, , ,	,	200-225 HP	Black Max	Vengeance, Laser II,	
(incl. 4-stroke)	Black Max	Vengeance, Trophy Sport			Mirage Plus, Offshore,	
75 HP	Black Max	Vengeance, Laser II,			Revolution 4	
		Trophy, Plus	Aluminum Po	ntoon 16'-28'		
135–150 HP	Black Max	Vengeance, Laser II	9.9-15 HP	Black Max		
		Trophy Plus, High Five	20-25 HP	Black Max	Vengeance	
Fiberglass Fish-Type 14-17'			25 4–stroke	Black Max	Vengeance	
(fish & ski, side console, center console)			30–60 HP	Dioak May	Vangaanaa	
30-60 HP			(incl.4–Stroke) 40 4–Stroke	Black Max	Vengeance	
(incl. 4-stroke)	Black Max	Vengeance, Trophy Sport	BigFoot	Black Max		
75 HP	Black Max	Vengeance, Laser II,	50 4–Stroke	2.00.1.110.1		
405 450 115	51 1 14	Trophy Plus,	BigFoot	Black Max		
135–150 HP	Black Max	Vengeance, Laser II,	60 4-Stroke			
		Trophy Plus, High Five, Offshore	BigFoot	Black Max	Vengeance	
5 11	d d d d 2 1	Olishore	135–225 HP	Black Max	Vengeance, Offshore,	
					High Five, Mirage Plus	
30–60 HP	DI 1.14		Eiborglass Da	okhoot 16' 24'		
(incl. 4-stroke) 75 HP	Black Max Black Max	Vengeance, Trophy Sport,	_	eckboat 16'-24'		
/5 NP	DIACK IVIAX	Vengeance, Laser II, Trophy Plus	30–60 HP	DI 1.14		
135-150 HP	Black Max	Vengeance, Laser II,	(incl. 4–Stroke) 40 4–Stroke	Black Max	Vengeance	
100 100111	Black Max	Trophy Plus, Tempest	BigFoot	Black Max		
		Plus, High Five	50 4–Stroke	DIACK WILL		
Fiberglass Runabout 17–21'			BigFoot	Black Max		
(closed deck or bowrider, same hull)			60 4-Stroke			
75 HP	Black Max	Vengeance, Laser II	BigFoot	Black Max	Vengeance	
135–150 HP	Black Max	Vengeance, Laser II,	75 HP	Black Max	Vengeance	
100-100111	DIGUN IVIAN	High Five	135–150 HP	Black Max	Vengeance, High Five,	
150-175 HP	Black Max	Vengeance, Laser II,	200–225 HP	Black Max	Offshore Vengeance, Mirage Plus,	
-		High Five, Offshore	200–220 I IF	DIACK IVIAX	High Five, Offshore	
200-225 HP	Black Max	Vengeance, Laser II,			. light ivo, Ollonoie	
		Mirage Plus, High Five,				
		Offshore				