

This guide is provided as a no charge service . The more you know about pontoon boats the more likely you are to purchase a boat you will be satisfied with.

Introduction:

If you are currently considering the purchase of a new pontoon boat you may be bewildered by the number of models, manufacturers, motor sizes and types you have to choose from. This guide is intended to help you decide the model, power selection and level of construction quality that will provide you the best overall boating value to fit your needs. Remember that price is not the only barometer of value. Low price without quality construction, durability, adequate warranties and product satisfaction is not money invested but money wasted. The most expensive boat you will ever buy is the **WRONG** one!

How to choose the right type of boat:

Obviously, if one size boat and one floor plan were right for everybody, then all manufacturers would build that one boat. The trick then, is to determine what boat suits *your* specific needs.

The following series of questions will help you to determine just that.

1. Three out of four trips, how many people will be on your boat?
2. 2 – 6 = 18' to 20' boat
6 – 10 = 22' to 24' boat
10 or more = 25 ' boat or larger
3. Fishing will constitute what percentage of your time on the pontoon boat?
4. 70%- 100% = Dedicated Fishing Model
10% - 70% = Fish and Cruise Model
0% = Dedicated Cruising Model
5. Do you want to cruise and pull water toys and tubes, or do you wish to pull adult skiers.
6. 18 to 22 foot boat: Cruising and pulling toys =40 hp. Min.
Pulling skiers = 60 hp. "bigfoot" min.
24-foot boat: Cruising and pulling toys 50 hp min.
Pulling skiers = 75 hp min
28 foot boat Cruising and pulling toys = 50 hp min.
Pulling skiers = 80 hp min.
7. Do you plan long cruises on your pontoon? Do you want a "sleep over" capability? Is someone in your family highly sensitive to the sun?

If the answer is yes features like a changing room with a potti, double bimini's, enclosure packages, sinks, grills and sleeper couches may be important features to assure your satisfaction with your purchase.

Final Note:

If skiing and higher speed cruising are critical factors in your purchase a ***pontoon may not be the right boat!*** The rising popularity of **Deck Boats** has given the marine consumer an alternative choice. **Deck Boats** feature the basic layout and convenience of a pontoon with the performance of a sport boat. **Deck Boats** utilize a monohull or catamaran design which results in a planing boat as opposed to a pontoon that merely displaces water. Even tritoon pontoons do not approach the performance and efficiency of a deckboat. If enhanced performance is truly an important consideration discuss the possibility of a **Deck Boat** with your dealer.

Once you have answered the above the above questions you should have some guidelines as to the size, power and layout of the pontoon that best fits your needs. While that should help you narrow your purchase selection there are still a number of manufacturers to choose from. At this point what we recommend is to compare construction features to determine not just the price but the value of any particular pontoon boat. The following comparisons will prove valuable in determining the quality of construction of any boat.

Construction and Design

Key structural stress points:

Bolted Versus Screwed:

Any pontoon requires fasteners to attach the rails to the decks, the decks to the cross members and the cross members to the supports on the pontoons. A pontoon boat, because of its design (two independent "hulls") is subject to a great deal of twisting and stress as each pontoon crosses a wave independently. This stress can tear a pontoon apart over time if the proper fasteners are not utilized. While self-tapping plated screws offer significant cost advantages stainless steel bolts offer superior durability in this application. We strongly suggest that you actually *crawl underneath* any brand of pontoon you are considering and see for yourself how these critical stress points are addressed.

Deck Materials:

A question that often comes up is what is the *best* deck material. Decking on a pontoon boat fulfills several key functions other than just a surface to walk on:

- A. Structural Member: The rigidity of the decking adds to the structural durability of any pontoon. The more rigid the deck material the less torsional stress is transferred to the fasteners and other structural members.
 - B. Sound insulation: The design of a pontoon results in a spray of water beating continuously on the bottom of the decking. The higher the speed the more intense the stream of water. The primary sound insulation against this noise is the sound characteristics of the decking itself.
 - C. Thermal insulation: Since pontoons are typically used during the hottest seasons the decking is exposed to high temperatures. The ability of the deck material to maintain lower temperatures in this environment can have a direct effect on the comfort of the occupants.
 - D. Base platform for the carpeting or other deck covering: Carpet is the most common deck covering used in the pontoon industry. Carpet life is a key factor in a pontoon maintaining its attractive appearance. To maximize carpet life the underlying material must have a level surface with a maximum possible panel span. That is, the fewer seams under the carpet the less opposing panel shifting will occur. If the underlying material works back and forth at each seam it tends to wear at the backing material and adhesives shortening the carpet life significantly. Therefore the fewer seams across the overall length of the boat the less stress on the carpet.
1. With these factors in mind you can evaluate the utility of the various deck materials available.

Decking Options:

Aluminum: One material that is available as a deck material from various manufacturers is aluminum. Aluminum is generally offered to ease consumer fears concerning other materials potential for decay. Indeed aluminum does offer confidence for the consumer in the area of decay and has become a major marketing point for those manufacturers that use it. However when considering some of the characteristics that were described previously aluminum does have some shortcomings to consider as a deck material. First, aluminum has poor panel span strength and rigidity. To counteract this most manufacturers lay aluminum in sections of six to eight inches wide. In comparison most other materials are laid in four-foot wide sections. The increased number of seams requires a much larger number of fasteners. To reduce cost most manufacturers use self-tapping screws to offset this expense. The additional seams also result in increased stress on the carpeting over time. Aluminum also has poor insulating qualities for both sound and heat. However many people feel that the prospects of no decay offset these other concerns.

Composites: In recent years more manufacturers have made composite decking materials available. A desire to meet consumer demand for a *decay proof* deck material without all the structural drawbacks of aluminum has resulted in this advancement. Composites are typically made of recycled plastic materials in panels of similar size and thickness to wood. Composites have far superior insulating qualities to aluminum. Composite rigidity is generally superior to aluminum but inferior to wood. Early versions of these panels did suffer from sagging over time. However later versions of this type of decking utilize fiberglass reinforcement that has overcome these earlier concerns. In addition composite panels are generally four feet wide, which results in less stress on carpet life. This peace of mind does come at a price however and composite decking is often a more expensive option.

Wood: Wood is the most traditional of all decking materials. In most of the above characteristics it has the most desirable qualities. Wood has the greatest rigidity and panel strength of all available materials. Its insulating qualities are equal to that of composites. It also is one of the least stressful substrates when used with carpet. However wood can, and has, exhibited decay.

Like any organic material if left untreated it has poor survivability in wet environments. However in this case the *grade* of wood becomes critical. Wood, as a decking material is available in three grades. *Construction grade* panels are untreated versions of common plywood. When this grade of wood is used in a pontoon boat (and in some cases they still are!) the expected life of a wood deck is only a few years. *Marine grade* plywood is plywood which has a surface treatment. This is far superior to construction grade. However since the surface preservatives only penetrate a few mils into the wood problems can arise. As each fastener penetrates the wood it gives moisture a pathway into the untreated center of the panel. This can result in a situation where the wood decays from the center out. The resulting damage is undetectable until it is too late.

Pressure treated plywood is the highest grade of wood paneling available. In the case of this material the preservatives are driven throughout the wood under high pressure. This prevents moisture from attacking either the inside or the exterior of the wood. Most manufacturers offer lifetime warranties on this type of panel.

As you can see there are many considerations when evaluating which decking material fulfills your performance and budget requirements.

Pontoon Design:

Today there are three major types of pontoon tube designs. *Foam filled "U" shaped* pontoons, *single chamber baffled round* pontoons, and round pontoons with *discrete*

airtight compartments. As you go from dealer to dealer each will probably have a reason why each style is the *best*. However a true definition of *best* would be " The lowest cost to produce, the most efficient to operate, the safest, and the easiest to repair". Unfortunately **none** of the above designs is the *best* in each category. Each offers certain advantages and disadvantages.

Foam filled "U" shaped pontoons: The primary advantage of a foam filled pontoon is the safety afforded by having a backup flotation system (the foam itself). Foam filled pontoons also offer manufacturers cost savings in production in that the "U" shaped pontoons are inherently easier to produce. Often these manufacturers use a thinner gage wall material because the foam backing prevents "oil canning" that would usually occur with the thin walled "U" shape. The positive backup flotation usually precludes the use of baffles in the tubes, which also lowers cost. However there are some disadvantages. The "U" shaped tubes are usually fairly narrow (from 19 to 21 inches). It is the **width** of a pontoon, which displaces the water and determines how high above the water a pontoon floats. These narrower pontoons coupled with the additional weight of the foam (80 lbs. of foam or 80 lbs. of lead is *still* 80 lbs.) results in these tubes riding lower in the water. The additional wetted surface area results in more drag and reduced fuel efficiency. In addition if water does enter the pontoon and stay there the foam can begin to absorb the water and waterlog. This condition is impossible to efficiently repair. Most "U" shaped pontoons feature a rear drain plug so that their owners can efficiently drain the pontoon to prevent this. This does require that the boat be out of the water. Finally if a pontoon is punctured this style of pontoon offers significant repair problems. Welding the affected area typically repairs pontoon punctures. However the heat required to do this will seriously degrade the foam backing resulting in numerous problems in achieving a desirable repair.

Single Chamber or "Baffled" round pontoons: Round pontoons in general offer some significant advantages. Geometrically a cylinder is the strongest shape that you can form aluminum into.

The symmetrical design means that your diameter is the same wherever measured. That is a 23-inch pontoon has 23 inches of width to displace water. The reparability is enhanced by the fact that once drained it is fairly simple to weld up the tube. The single chamber design is also a lower cost to produce due to the fact that there is less welding involved and less testing of the integrity of the tubes. There is a significant disadvantage to this design however. In the case of a ruptured tube water can fill the *entire* tube resulting in your pontoon losing up to 50% of your buoyancy at once. This is a *significant* safety concern.

Round pontoons with Discrete Airtight Chambers: This style of pontoon usually features at least three distinct airtight chambers per tube (six per boat). This style of pontoon offers all of the efficiency and reparability of the baffled style pontoon. The airtight chambers also offer outstanding safety due to the compartmentalized design. However this is clearly the most labor-intensive style of pontoon and you should expect that this design would result in the highest cost for the manufacturer.

Other Critical Structural Features:

You should have each dealer show you the other critical structural and design features, which will impact the durability and operating qualities of your boat. A number to consider are:

- A. **Corner castings and side rails:** These areas absorb the bulk of any impact inflicted on your boat. They should be made of a material that can absorb such impacts. Also the side rails should exhibit a design which is resistant to such impacts.
- B. **Tube to frame attachment methods:** One of the key stress points in any boat is where the tube attaches to the bracket (if there is a bracket) and how the tube or bracket is attached to the frame. Is the welding adequate or is it marginal spot welding? Does the design of the bracketry lend itself to resisting weld failure? Are key components bolted or screwed? If brackets aren't used are the tubes flange mounted or is there a superior method employed?
- C. **Keels:** Does the boat feature full keels to limit shallow water or floating object damage? Does the keel design itself prevent damage or does it actually run the risk of increasing it?
- D. **Panel Systems:** Probably the number one complaint from many pontoon owners is panel rattling. Does the boat you are evaluating use a panel mounting system that precludes this annoying characteristic? Also are the panels and side rails through bolted for maximum durability? Are the rails mounted in such a way that allows easy drainage of the deck area thereby inhibiting the growth of carpet mold and vinyl mildew?
- E. **Seat Base Design:** It is generally accepted that rotocast plastic seat bases offer better water management and do not develop the musty odors associated with more traditional wood bases.
- F. **Transom design:** The most stressful area on any boat is the transom where the outboard is mounted. What features does each boat you are looking at have that will ensure a durable mounting system?
- G. **Vinyl quality:** Probably the easiest area for a manufacturer to cut corners is in the vinyl selected for each boat. Almost all vinyl looks good new. Does the manufacturer use a less expensive fuzzy backed vinyl or the superior woven backed *expanded* vinyl.

Motor Types and Selection

Today there are a dizzying number of choices in outboard power. The driving force behind this has been the recent implementation of new EPA regulations, which began to phase in 1998. By 2006 each manufacture must reduce total emissions of its entire lineup of outboards by 78%. While currently there are no plans to ban existing outboards next generation production must be *cleaner* versions. The fallout from this legislation is more than just environmentally friendly outboards. This new cleaner technology also results in much **quieter** and **fuel efficient** engines. However during the phased in transition you have a number of old and new technologies to choose from. The older technologies include conventional cross-charged and loop charged two cycle engines. These engines come in oil injected and non-oil injected versions and carb and conventional EFI models. The replacement technology is primarily exotic high-pressure direct injected two strokes and a new broader lineup of four stroke outboards. To add to the confusion terms like computer controlled ignition, bigfoot gearcases, and EFI span all of the available technologies.

Conventional two stroke technology:

- A. **Cross-charged two stroke engines:** Typically the lowest cost option in outboard power cross-charged engines are also the oldest and *dirtiest* outboards available. Generally these designs date back to a period before computer aided design. Cross charge engines use the mechanical design and shape of the piston to drive exhaust gasses out of the cylinder after combustion. Due to the design of the pistons this style of engine must run a

very rich fuel/air mixture resulting in the poorest fuel economy of any engine available. Impending EPA restrictions has doomed these engines for obsolescence. Most industry analysts expect the few remaining models to disappear in months. This may raise parts availability concerns in the future.

- B. **Loop charged two stroke engines:** In this engine design the fuel charge *loops* into the cylinder where the pulsing action of the piston scavenges the exhaust gasses. This style of engine is typically 15% to 20% more fuel-efficient than the above design. These motors are offered in both oil injected and non-oil-injected engines. All two strokes burn gas and oil simultaneously. In an oil-injected engine the motor mixes the fuel and oil automatically for the operator. In the non-oil-injected engine the gas and oil must be pre-mixed in the fuel tank.

Exotic two stroke technology:

Due to the fact that two stroke engines don't have valves conventional two strokes experience a period of time that both the exhaust port and the intake port are open (the piston closes them off) at the same time. During this period a portion of the fuel/air/oil charge passes directly out of the cylinder prior to combustion. This results in emission, which will be in violation of upcoming EPA regulations. In the new exotic two stroke high-pressure fuel injected engines the fuel charge is injected directly into the combustion chamber after the piston closes the exhaust port. This however creates some significant logistical problems. Due to the brief window available the fuel charge has to bypass the manifold area and be atomized almost instantly in the cylinder. At the same time piston temperatures must be controlled. This is exciting technology, which will probably preserve two stroke outboards beyond 2006. The desirability of two strokes is greatest when torque and acceleration are at a premium (i.e. bassboats). All exotic two strokes are oil injected.

Four Stroke Outboards:

In response to the impending EPA regulations four stroke outboards are the fastest growing segment of outboard power. Currently all four-stroke outboards (or at least the major components) come from offshore manufacturers. Domestic outboard companies currently license, or purchase complete engines or major components from these offshore builders. This has resulted in some future parts availability concerns for the domestic suppliers. However even with these concerns these are very hot selling models for every company that offers them. Four stroke outboards have caught the imagination of many consumers for the following reasons:

- A. **Fuel economy:** Typically a four stroke offers 30% or better fuel economy improvement.
- B. **Less vibration and noise:** Again 30% to 40% improvements are common.
- C. **Operating economy:** Typically you use one gallon of two-stroke oil for every 48 gallons of gas. This oil can cost up to \$19 per gallon. This cost is totally eliminated with a four-stroke engine since they utilize an oil pan and spin on filter like your car.
- D. **Durability:** In commercial operation four stroke outboards have proven that with comparable maintenance they have a lifespan that is usually *double* of their two stroke counterparts. In some cases manufacturers of four stroke outboards offer up to a **three year warranty** at no extra charge!
- E. **Proven Technology:** Unlike exotic two-stroke technology four stroke motors are based on time tested designs proven for years in automotive and motorcycle applications.

Other features to consider:

To add to the confusion there are some important crossover features for all of the available technologies to consider:

- A. **Bigfoot high thrust gearcases:** Large boats that do not plane out (such as pontoons) perform better with larger diameter props. In response to this some manufacturers now make 50 HP and 60 HP *bigfoot* motors especially for pontoon applications. These motors use oversize lower unit gearcases which allow these 50 HP and 60 HP motors to use the same size props as 130 hp motors. A 60 HP *bigfoot* motor can out perform a 75 hp motor with a smaller conventional lower unit with a smaller prop. These new *bigfoot* engines allow increased performance without significantly increased cost.
- B. **Computer controlled starting and ignition:** Outboards of years past have been infamous for their difficult starting characteristics. These older motors relied on mechanical linkages and standard manual chokes. Turnkey starting is now available on EFI engines and those carb versions which feature microcomputer controlled ignitions. This is a significant improvement in reliability and convenience.

Warranties

As you go from dealership to dealership you will never hear someone say "We have great prices but our quality and construction is frankly, pretty poor!" Instead terms like *best* and *highest quality* are more commonly heard regardless of price or design style. To cut through the confusion and marketing clutter can be difficult at times. As you look at any pontoon, remember the least expensive feature on any product is *the warranty!* A warranty which accurately predicts the life of every covered component never costs the manufacturer more *than the paper it's printed on!* The most accurate gage of the quality of components and durability of design is the length of the warranty offered by that manufacturer. Nobody has better data on the life expectancy of each component or system than the original manufacturer! Most consumers only focus on the deck warranty of any boat. The following are some key warranties that should be considered prior to any purchase.

Deck Warranties:

This is one area that is usually complicated with lots of *fine print*. It is an area that requires a good understanding of the costs associated with the replacement of any deck material to understand the strength of the warranty coverage. To replace a pontoon deck is a very labor-intensive process. All of the furniture, railings, console, and trim must be removed and replaced. The carpeting or deck covering is destroyed in the process and must be replaced. Most pontoon companies have a *limited lifetime warranty*. The key is in discovering what costs are fully covered.

- A. **Deck panel cost:** Commonly covered under material cost this is the cost of the replacement panels *only*.
- B. **Direct labor cost:** This is the labor *directly* related to the panel replacement cost.
- C. **Full labor cost:** This is the cost related to the labor required to remove and replace furniture etc.
- D. **Full material cost:** This is the cost of all support materials such as carpet, glue and fasteners.

A *lifetime deck warranty* can mean many things. It may cover the deck panels only or the deck panels and direct labor or it may cover all of the above. A warranty that covers all of the above is called a *full cost of replacement warranty*. Many warranties are *pro-rated* which means that as the boat ages the consumer must pay a larger and larger portion of all of the same costs. Some warranties change from full cost of replacement to parts and labor warranties only after a period of time. As you can see any *lifetime* Warranty requires careful evaluation.

Structural warranties:

A pontoons framing, tubes and superstructure are subject to tremendous stresses. The quality of materials and reliability of design will determine the life of the boat and its durability. You need to know how long the tubes, welds and other structural components are warranted for.

Vinyl warranty:

No area of the boat is subject to as much use/abuse as the vinyl. How this area of the boat holds up is critical to your long-term satisfaction. Nothing is more unsightly than split seams or cracked vinyl seating. It is very important that you evaluate this area of the purchase closely.

Engine warranty:

Once you select an engine (and an engine technology) it is important to evaluate the warranty of this unit. No other area of the boat has the potential to generate higher repair costs. The peace of mind and protection from high repair costs that a longer warranty provides is a very important consideration.

Fabric warranties:

Most pontoons today feature bimini tops. The warranties of the fabrics used in these tops are another consideration. Carpet warranties are another area overlooked by most consumers.

Popular Options

There are some common popular options that can increase the enjoyment of your boat. The following list highlights just a few you may want to consider.

- A. **Mooring cover:** The best way to protect your investment is to invest in a custom fit mooring cover. The best covers cover the entire boat (including those deck sections outside the railing).
- B. **Individual seat covers:** As a convenience item these are hard to beat. However they afford no protection to your floor covering.
- C. **Enclosure package:** Side curtains and enclosure packages can significantly extend your boating season and offer a sleep over capability.
- D. **Changing rooms:** When combined with the porta potti a changing room creates a lot of comfort and convenience for your family.
- E. **Ladder:** A pontoon is a great swimming platform, as long as you can get back on!
- F. **Depth finder:** For fishing and safe navigation this is a popular option.
- G. **Livewell:** Fishing is one of the most popular sports in America. A livewell gives any pontoon layout added flexibility as a fishing platform.
- H. **Vinyl decks:** Gaining popularity with fisherman and consumers who want a more maintenance free floor covering than carpet.

Picking a Dealer

Now that you are narrowing your selection down you one or two models and power options your final evaluation criteria should be the dealer. Remember that the dealer you choose will have to be your source of service. It is unlikely that another dealership will be willing to offer timely service on your boat. To properly evaluate your dealer you may want to consider the following:

- A. Does your dealer have a dedicated marine service department? Meet the service manager and make sure that factory trained mechanics are on hand to service your motor, The facility should be adequate to handle the sales volume of that particular dealership. The dealership should maintain an adequate parts inventory also. If you are purchasing your pontoon without a trailer does the dealership maintain a fleet of service trailers?
- B. Are pontoons a significant part of this dealers main business? Are you dealing with a dedicated and committed Marine Dealer or are you competing for his attention with his automotive or RV customers?
- C. How long has this dealer been selling this line of boats? Turnover of lines is a real problem at many dealerships. When a dealership drops a line it can cause real problems if you ever need parts.
- D. Is this an established dealer with a proven track record? The marine business is a very cyclical business. If your dealer goes out of business (or goes out of the *marine* business) you could be without parts or service. A dealership with a history of stability and commitment is a great resource.
- E. Does the dealer offer any special service packages? How does the dealer handle on water service?

We hope that this guide has proven helpful in choosing the right boat and motor package *for you*. Regardless of where you choose to buy a high quality pontoon boat is one of the most versatile, enjoyable and cost effective boating investments you can find. The last page of the guide will serve as a comparison check list to assist your purchasing decision.

Good luck and safe boating. Remember to wear your PFD and that alcohol and boat driving don't mix!

This pontoon guide is provided as a no cost reference document. It does not constitute a warranty of any kind. Manufacturer specifications and warranties are subject to change without notice.

FEATURES	Godfrey	Brand B	Brand C
Model			
Size of boat			
Size of motor			
Type of motor			
Motor features			
Tube design			
Gage of tubes			
Bolted deck			

Shimmed rails			
Stainless fasteners			
Rub rail			
Rotocast seat bases			
Changing room			
Potti			
Ladder			
Stereo			
Anodized rail			
Deck warranty			
Structural warranty			
Vinyl warranty			
Top warranty			
Sink			
Canvas			
Trailer			
Total Investment			