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SEVILLE

86,87,88

OWNER'S MANUAL



A BRUNSWICK MARINE Company

TABLE OF CONTENTS

I. GENERAL INFORMATION	
A. Owners Responsibilities	2
B. Dealers Responsibilities	2
C. Limited Warranty	3
II. YOUR SEVILLE BOAT (BY SEA RAY)	
A. Construction	4
B. Care	4
C. Winterizing	7
III. PLACING YOUR BOAT INTO SERVICE	
A. Delivery and General Preparation	7
B. Trailering and Launching	8
C. Boat Handling and "Rules of the Road"	11
IV. OPERATING INSTRUCTIONS	
A. General Familiarization	14
B. Starting Your Engine	26
C. After Starting Your Engine	27
V. SAFETY	
A. Passengers	27
B. Swimming — Water Skiing — Diving	27
C. Regulations — Safety Procedures and Equipment	30
VI. TECHNICAL DATA	
A. Wiring Diagrams	34
B. Launching and Service Guide	35

WELCOME

With your new Seville you will discover many new and different experiences with each cruise you make. Every journey lets you enjoy the excitement of a new adventure without leaving the convenience of your own familiar world behind. You are now a part of a world-wide fraternity which is represented on every continent and almost every country.

Your new Seville is more than a boat; it is a way of living. Our organization is dedicated to providing pleasure and fulfillment by offering product quality, performance and dependability.

You will be guided to years of trouble-free boating if you take the time to read the material which has been prepared to help you understand your new companion.

We have made every effort to make this manual as accurate as possible in order to reflect information available at the time of publication. Products are constantly being improved, and we endeavor to upgrade our installations accordingly. *If the equipment in your Seville differs from some descriptions contained herein, disregard that section of the manual instructions and follow the manual provided with that particular piece of equipment.*

Keep this owner's manual in your Seville for handy reference. Get to know your new boat and how it operates. You should

carefully read and understand these instructions and any other information supplied by manufacturers of separately warranted products, since they contain important operating, safety, and maintenance instructions.

Your purchase of our product is a considerable investment. You can protect that investment and retain its value by a planned program of proper operation, routine periodic maintenance, and attention to safety inspections. When questions arise that are not adequately covered by this manual or the manufacturer's instructions, consult your authorized dealer for assistance. If he cannot satisfactorily answer your questions, he will refer you to our staff for assistance.

We thank you for selecting the Seville. It features quality material, attractive lines, functional interiors and skilled craftsmanship — all of which are meant to bring you carefree family fun for many years to come.

Every effort has been made to provide you with a safe, dependable product. Seville boats comply with the safety standards set by the United States Coast Guard and are designed and engineered in accordance with numerous other recommended practices of the National Marine Manufacturers Association (B.I.A.) and the American Boat and Yacht Council.

I. GENERAL INFORMATION

We are particularly interested in maintaining only the best of customer relations. Only by having your complete confidence and satisfaction with our product and its service can we assure our continued success as manufacturers of recreational craft. We have found that continuing a pleasant and effective relationship through our dealers is equally as important as maintaining the technical excellence of our product. Your authorized dealer will cordially assist you in providing service, maintenance, selection of options, and instructions concerning the operation of your Seville.

Most problems arise from misunderstandings concerning warranty and service, and can usually be solved at the dealer level.

Please have all the pertinent information such as serial numbers, model numbers, etc., when contacting your dealer.

You are entitled to all the benefits and services as contained in the warranties for your Seville boat and separately warranted products. With your help we intend to see that you fully receive those benefits and services. It is important that you become familiar with the proper procedures for obtaining service and parts, in and out of warranty. Your dealer is instructed to provide you with orientation in these matters at the time of delivery, as a supplement to these instructions.

A. Owner's Responsibilities

1. Before operating your boat, it is necessary to read and fully understand this manual, and the engine manufacturer's manual.

2

2. *Upon reaching the specified engine break-in period, it is the owner's responsibility to return the boat to the selling dealer for inspection (Consult your dealer for rates).*

3. It is the owner's responsibility to properly maintain and service the product in accordance with the enclosed service guide.

B. Dealer's Responsibilities

1. Provide the customer with an adequate orientation in the general operation of his Seville and use of its systems and components, and safety considerations concerning the use of those systems.

2. Insure that the customer receives a complete owner's packet containing warranty cards and various registrations for the Seville boat and separately warranted products, and accompanying literature, including all operating, installation and maintenance instructions as required.

3. Carefully review all warranty entitlements with the customer, pointing out the importance of mailing warranty cards and registrations to various manufacturers within the required time limits. Assist the customer in properly completing these forms if he desires. Request that the customer read all the warranty information at his earliest convenience and contact the dealer to clear up any provisions which are not understood.

4. Instruct the customer on how to obtain local service and out-of-area service on his Seville and its separately warranted products during and out of warranty periods.

C. LIMITED WARRANTY

For a period of one year from the date of delivery to the original retail purchaser, SEA RAY BOATS warrants each Seville to be free from defects caused by faulty workmanship or materials.

During this period, warranty repairs will be made without charge by the selling Seville dealer at that dealer's store or service center, or at SEA RAY's option, at one of the Seville manufacturing plants. Transportation costs to and from the selling Seville dealer's service center or to the SEA RAY plant are the responsibility of the purchaser. All warranty repairs must be approved by an authorized SEA RAY representative.

Engines, outdrives, controls, batteries, and other equipment or accessories carrying their own individual warranties provided by their respective manufacturers are not covered by the provisions of this warranty.

This warranty does not cover boats owned by other than the original retail purchaser: windshield breakage; gelcoat craz-

ing, fading or blistering; upholstery damage; scratches or tears; leakage around windshields, hatches and canvas; or boats or parts which have been altered or subjected to misuse or negligence.

The obligation of SEA RAY BOATS under this warranty shall be limited to the repair or replacement of any part which is judged defective by SEA RAY BOATS. SEA RAY BOATS WILL NOT BE LIABLE FOR HAUL OUT, LAUNCH, TOWING OR STORAGE CHARGES, INCONVENIENCE OR LOSS OF TIME OR INCOME, OR ANY OTHER SPECIAL OR CONSEQUENTIAL DAMAGES OF ANY KIND OR NATURE. IMPLIED WARRANTIES, IF ANY, SHALL BE LIMITED TO THE DURATION OF THIS WRITTEN LIMITED WARRANTY. Some states do not allow the exclusion or limitation of incidental or consequential damages or limitations on how long an implied warranty lasts, so the limitations and exclusions stated in this paragraph may not apply to you. This warranty gives you specific legal rights, and you may also have other rights that may vary from state to state.

II. Your Seville Boat

A. Construction:

Your Seville complies with the safety standards set by the United States Coast Guard and is designed and engineered in accordance with numerous other recommended practices of the Boating Industry Association and the American Boat and Yacht Council. The black and yellow capacity plate located near the helm carries important information regarding maximum persons capacity in pounds and the maximum total weight capacity your boat is capable of carrying safely under normal conditions. Be sure to familiarize yourself with these capacities and observe them.

An index is located in the rear of this manual. Check there to find information on the electrical system, fuel system, steering system, and any of the other systems your boat may have.

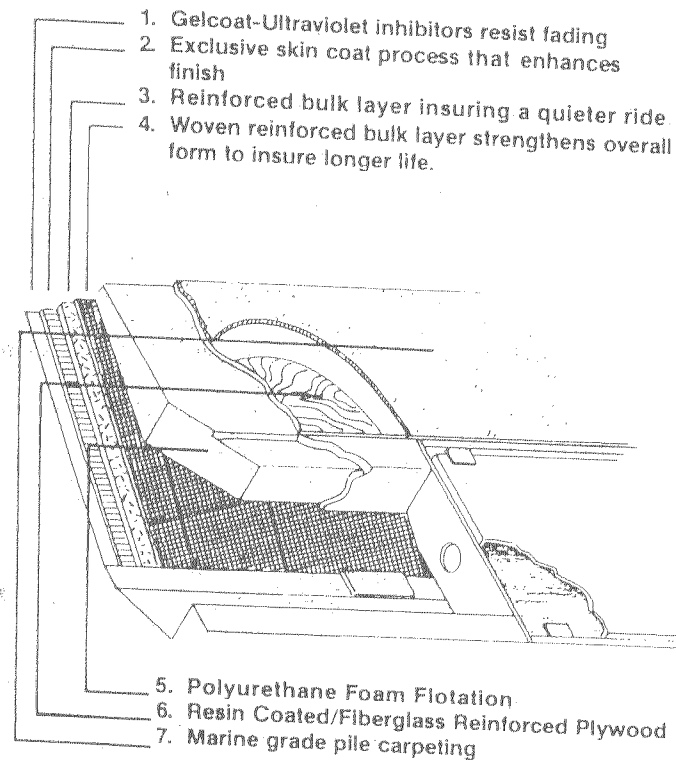
B. Care:

Fiberglass

Fiberglass, although impervious to many of the hazards normally associated with wood and other boatbuilding materials, does have some maintenance requirements which are unique.

The fiberglass hull or sections, when received by the owner, consist of the molded shell and exterior gelcoat. The gelcoat is the outer surface, often colored, and presents the shiny smooth appearance which is associated with fiberglass products. In some areas this gelcoat surface has decorative taping to enhance the boat's appearance.

Wash the fiberglass regularly with clean fresh water. Wax gelcoated surfaces to maintain the lustre. In northern climates, a pre-launching waxing may suffice for the season. In southern climates, a semi-yearly application of wax will be required for adequate protection. A product which contains a polishing compound and a wax is suggested.



If your boat should lose some of its original lustre and cannot be restored by the above method, it should respond to hand buffing with a rubbing compound such as DuPont No. 7, or power buffing with Mirror-Glaze No. 1, then waxing.

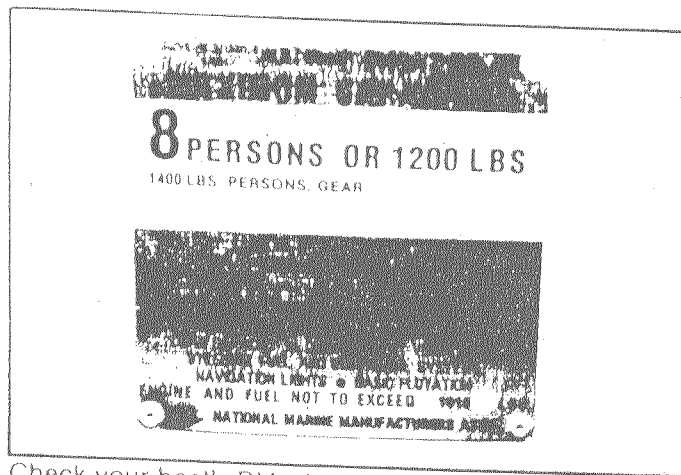
Stains and Scratches

Gelcoat surfaces are very resistant to deep stains. Common surface stains on gelcoat may be removed with diluted household detergents provided these detergents do not contain ammonia or chlorine. **Porcelain-cleaning powders are too abrasive and often contain chlorine and ammonia, either of which would permanently discolor the gelcoat.** Alcohol or kerosene may be used for difficult stains but these liquids should be washed away promptly with a mild detergent and water. **Never use acetone or any ketone solvents.**

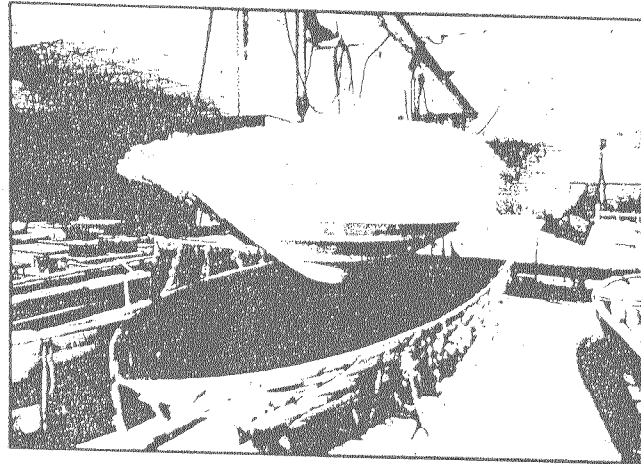
Minor scratches, and deeper stains which do not penetrate the gelcoat, may be removed by light sanding and buffing.

Bottom Care

If your boat is to be left in salt water for any length of time, the bottom should be painted with a good anti-fouling marine bottom paint. In certain fresh water areas where algae or grass are prevalent, it may also be necessary to paint the bottom of your boat with anti-fouling paint. **Residues and chemicals found in some waters can stain the hull bottom:** again, a coat of anti-fouling paint may be helpful. Consult your Seville dealer regarding local conditions and recommendations as to bottom painting.



Check your boat's BIA plate for carrying capacity.



If your Seville is used primarily for trailer boating and only left in the water for a few days at a time, bottom painting is usually not necessary. But remember to scrub the bottom of your boat periodically to prevent a build-up of marine growth. If possible, try to clean the boat immediately after hauling it out of the water. Marine growth is a lot easier to remove while it is still wet than if it is allowed to dry and harden.

Hardware

Automotive chrome and metal cleaners can be used to restore the gloss to the metal hardware on your new Seville. A frequent application of paste wax helps seal the pores in the metal to prevent oxidation and pitting. In addition all metal fittings, including dash panel, instruments, railings and hardware, should be sprayed with a rust inhibitor similar to WD-40 every three months when exposed to salt water and annually in fresh water. If not maintained on a regular basis, stainless steel railings and fittings will discolor.

Teak

Teak is a low maintenance wood which is most beautiful in its natural state. **Never varnish teak.** Teak is rich in natural oils which give it the deep coloring. As the oils evaporate, the teak will get lighter in color and the surface will become rough. To keep teak looking fresh, it should be treated with teak oil at least twice a year (more often if exposure is severe). If the teak is in particularly bad condition, the teak oil should be rubbed in after using 220 grit wet and dry sand paper.

Windshields and Windows

Safety glass is used in Seville windshields. No special clean-

ing agents are required, but remember that **safety glass will scratch so don't use any abrasive cleaners or metal scrapers on your windshield.**

Convertible Tops and Curtains

Your convertible top and vinyl curtains may be cleaned with a good vinyl cleaner or detergent. **Never fold or stow any tops or curtains when dirty or wet** — the abrasive effect will cause premature wear. Special care should be taken of the transparent curtains. To prevent scratching, use only fresh water and **never wipe with anything but a soft and completely dirt-free cloth.** When stowing the transparent curtains, it is recommended to roll them up in a towel or tissue to prevent them from sticking together in hot areas rather than folding flat. This prevents creases or cracks from forming.

Interior

CAUTION: Cleaning the vinyl products with anything other than mild soap and water may result in removal of mildew inhibitors or damage of the product.

The vinyl upholstery may be cleaned with a mild soap solution. **Never use bleaches or solvents** — they can permanently damage the upholstery.

The floor carpeting in your Seville will not stain, discolor, or soak up water with proper maintenance. It can be cleaned by vacuuming. If necessary an occasional washing and hose down should remove any residual sand or dirt. Raise the bow and be sure the boat is thoroughly dry before storing.

Bilge

Over a period of time the bilge may accumulate dirt. Bilge cleaners are available which will loosen this grime and allow it to be drained into a proper receptacle. Check with your dealer or at any marine supply house.

C. Winterizing

When boating season is over, follow these suggestions to protect your boat through the winter:

1. Drain and winterize your engine. *Refer to the engine manufacturer's owner's manual for procedures for winterizing your engine.* Be sure ALL water drain plugs are removed from the engine and stern drive.
2. Clean your boat thoroughly inside and out. If the hull has any growth or residue on the bottom, clean it.
3. Remove the stern drain plug so that any water in the boat can drain out. Operate the bilge pump for a few minutes. This removes all water from the bilge pump system.
4. If your boat is stored for the winter with fuel in the fuel tank, be sure to add a preservative such as Stabil to the fuel. A full fuel tank also prevents condensation and water accumulation in the fuel.
5. If your boat is stored on a trailer, make certain that the hull is resting properly on the trailer bunks. Raise the bow of the boat higher than the stern so that any moisture that accumulates from condensation can drain out of the boat. Release the hold down straps so that your boat will not be held in a stressed position throughout the winter.
6. Block the trailer tires off the ground. Repack the trailer wheel bearings with heavy duty marine grease.
7. Cover your boat as completely as possible for winter storage.

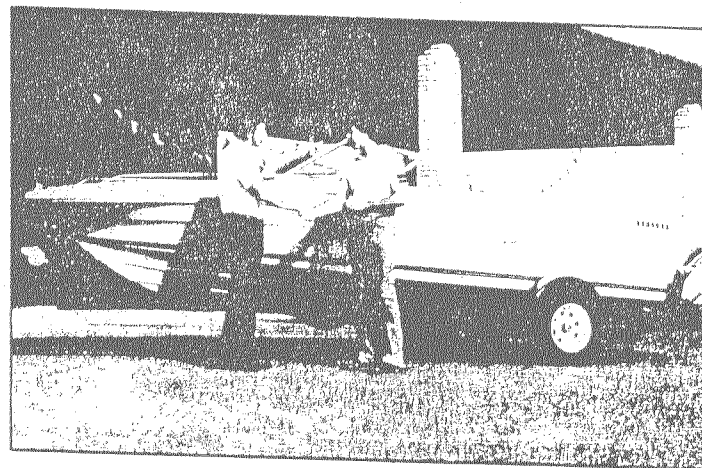
Note: For additional winterizing instructions, refer to your *Marine Engine Owners Manual*.

III. PLACING YOUR NEW BOAT INTO SERVICE

A. Making Delivery and General Preparation

Your Seville is a product which has undergone a series of rigid inspections by highly qualified factory personnel throughout the manufacturing process. Our final factory check by quality control inspectors before shipment to the dealer is not the last one before you take a delivery. Your dealer has been trained to perform additional pre-delivery inspections and systems checks, condition and service your Seville, and assist you in understanding and completing warranty registration forms.

In addition to the usual inspection and servicing of the boat, we recommend that special emphasis be given the following to prevent unnecessary inconvenience:



1. **Make certain the hull drain plug is in place before launching (this requires a wrench).**
2. Install propeller (Consult engine manufacturer's manual)
3. Check all wiring for loose connections. Ask dealer to show you location of the central electrical panels and the proper operation of switches and equipment installed.
4. Before taking on any fuel, inspect all fuel line fittings and connections to be certain none of them are loose and/or unattached. Check overflow vent connections. Fill fuel tank. Inspect the entire system thoroughly for leaks.
5. Examine the complete exhaust system. All connections, including any exhaust hose clamps, and engine drain plugs, must be in place and properly tightened. Recheck with engine running, after launching, and within a few minutes after the engine is first started.

B. Trailering and Launching

If you trailer your new Seville, there are some things you will want to remember to extend the life of your boat and your trailer.

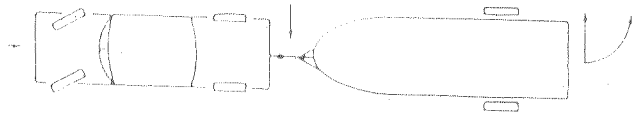
1. Make certain that your trailer is adjusted to fit your boat. The trailer bunks and rollers should be adjusted so that the majority of the weight of your boat is supported at the keel and transom. Avoid a situation where the boat is being supported at only one or two points — this may damage the hull bottom.
2. Make certain that your trailer is adjusted so that you have the correct weight on your trailer hitch. For specific recommendations, consult your Seville dealer. Too much or too little weight may cause trailer sway.
3. When trailering your boat, it is recommended that you secure the boat to the trailer by tie downs.

4. Some trailer tires require more air pressure than automobile tires. Check your trailer owners' manual for recommended pressures. Under-inflated tires can lead to blow outs, trailer sway or rapid tire wear.
5. At least once a year you should clean and repack your trailer wheel bearings with waterproof marine grease. A service station can do this. Trailer wheel bearing lubrication is important because of the repeated immersion in water during launching. This is especially important in salt water areas, where more frequent repacking may be required. Carry a spare tire for your trailer and tools for changing tires or for other minor repairs or adjustments.
6. Make certain that your trailer is equipped with safety chains and that you attach them when trailering your boat.
7. Speed limits for cars towing trailers are often lower than posted on highway signs. Make certain you know what the legal speed limit is. If in doubt, check with your local or state police.
8. Before starting on a trip check the following:
 - a) Make certain hitch coupler and safety chains are secure and trailer ball is tight.
 - b) Turn on car lights and make certain that your trailer lights, turn signals, and brake lights are working.
 - c) Secure convertible top cover for travel. Stow loose gear so that it will not slide around or be blown out of your boat. **Do not trailer your boat with your convertible top and curtains up.**

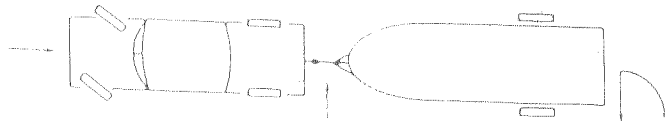
How to Back Up a Trailer

We will attempt to show you how it is done in pictures. Practice makes perfect however, so we suggest practicing in an empty parking lot.

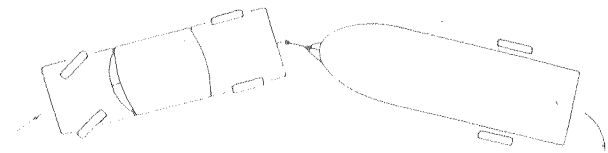
Backing To Right



Backing To Left



Following Thru Turn

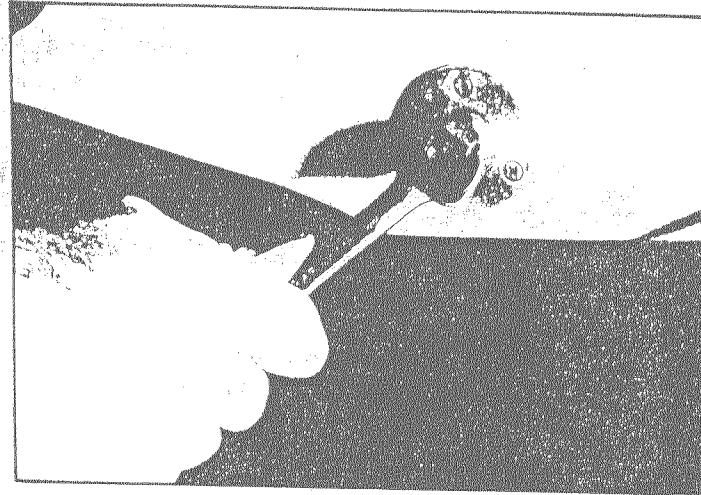


1. Turn the front wheels of the car the opposite direction from which you want the trailer to go.
2. Once turn is started, follow the trailer as you would normally backing the car.
3. When rounding turns on highways or streets, do not cut corners.
4. Equip your vehicle with a right hand mirror — a real benefit when passing and parking.

NOTE: When backing, be sure to have a lookout — your visibility may be severely impaired.

Launching

Your Seville can be safely launched with a crane and hoist. The boat may be lifted by means of slings under the hull, or by attaching hooks through the stainless-steel bow and stern eyes. In either case, however, be sure to use spreader bars to prevent undue stress on the hull.

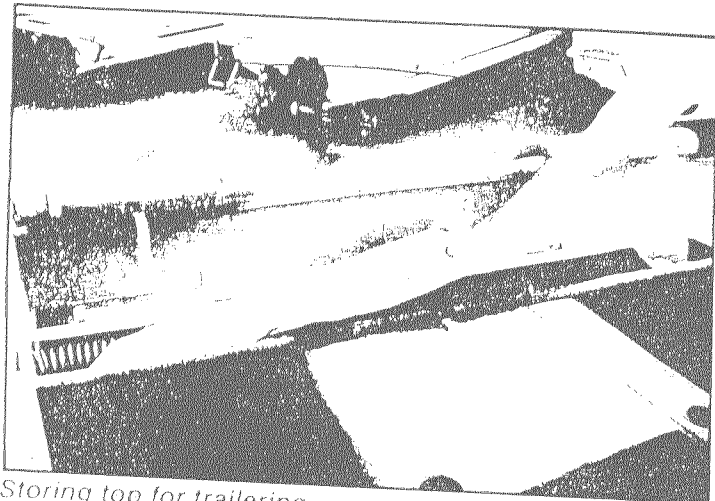


Installation of drain plug

Loading

The capacity plate attached to a boat states the maximum persons capacity in pounds and the maximum weight capacity for persons, motor, and gear in pounds that the boat will handle safely under normal conditions.

These load capacity ratings are computed from a formula determined by the U.S. Coast Guard.



Storing top for trailering

Overloading is a very significant cause of accidents in boating. Improper loading can be equally as hazardous.

The number of seats in a boat is *not* an indication of the number of persons it can carry safely.

The performance of a boat is affected by the amount and distribution of the load it is carrying.

When loading a boat, step or climb into the cockpit. Never jump into a boat.

Have someone on the dock pass the gear aboard. Secure all gear firmly so that it will not shift or interfere with the operation of the boat. Place heavy gear in the boat so that the load is balanced and will not affect the trim of the boat.

Have the passengers board one at a time and seat them so as to maintain an even trim of the boat from port to starboard and forward to aft.

Do not exceed the load capacity rating as stated on the U.S. Coast Guard Capacity Information plate.

Do not allow passengers to ride on the bow of a boat with feet hanging over the side.

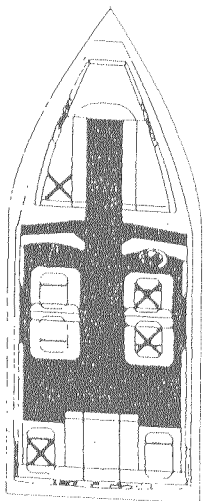
Do not allow several passengers to ride in the open bow of small boats causing the bow to "plow".

Do not allow passengers to ride sitting on the stern or gunnels of the boat. Falling from moving boats is a major cause of boating accidents.

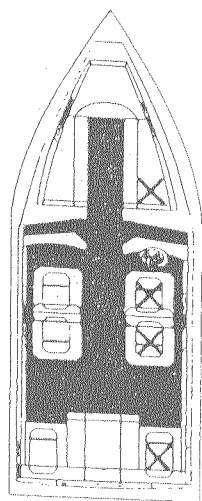
Remember that the presence of the capacity plate does not relieve the boatsman from the responsibility of using common sense or sound judgment. Rough water and adverse weather conditions will reduce the capacity of the boat. Advance knowledge of weather forecasts and water conditions are recommended.

Overloading is a violation of Coast Guard regulations.

OVERLOADING AND IMPROPER DISTRIBUTION OF WEIGHT ARE SIGNIFICANT CAUSES OF ACCIDENTS. CAPACITY PLATES INDICATE MAXIMUM LOADS UNDER NORMAL CONDITIONS. GIVE YOURSELF AN EXTRA MARGIN OF SAFETY IN ROUGH WATER.



*Proper Load Distribution
(one of several)*



*Improper Load Distribution
(one of several)*

C. Boat Handling and Rules of the Road

It is beyond the scope of this manual to offer a complete course in seamanship. This section will provide basic instructions in small boat handling plus recommended safety precautions. Complete courses covering all phases of boating are offered by both the United States Coast Guard and United States Power Squadron. Different courses are available for novice as well as experienced boaters, and in general the instruction is free with the only charges being for books and materials used. Additionally, many states have their own boating education programs — check with your Seville dealer for details.

Basic Maneuvering

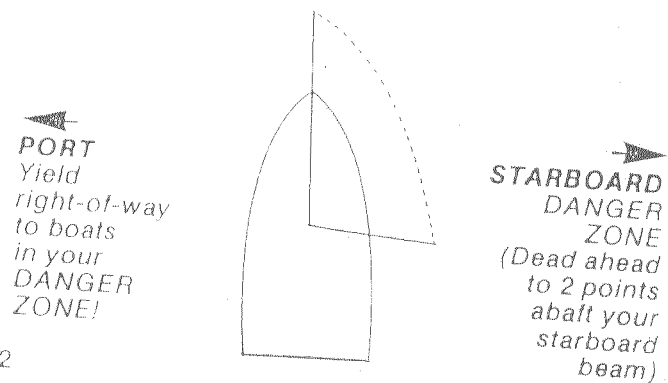
Remember that all boats steer by the stern (the feeling is much like steering your automobile in reverse). For example, when you turn the steering wheel to the left, the stern of the boat will swing to the *right* as the boat goes into a left turn. This is especially important to keep in mind when docking and operating in close quarters with other boats.

There are no brakes on a boat. Stopping is accomplished by allowing the boat to slow down (under 5 m.p.h.) and then putting the engine in reverse. Gently increasing reverse power will allow you to stop the boat in a very short distance. A boat does not respond to steering in reverse nearly as well as it does when going forward, so don't rely on being able to accomplish tight turning maneuvers when backing up.

Skillful docking maneuvers can be learned quite easily with a little practice. Get to know the "feel" of your new Seville at low speeds, and then practice docking a few times at a vacant pier before attempting to pull into your local marina on a crowded afternoon.

Whenever possible, approach a dock *against* the wind or current — whichever is greater. Approach slowly at a slight angle, and just before the bow touches the pier, turn the steering wheel into the pier, shift into reverse, and give a short burst of power. This will swing the stern in and bring the boat to a stop parallel to the pier. Remember to have your dock lines handy so that bow and stern can be properly tied as soon as the boat comes to a stop and the engine is shut down.

There are two basic procedures for pulling away from a pier depending on wind and current conditions. If the wind or current is *incoming* and holding your boat against the pier, push the stern out as far as possible by hand and slowly back out turning the steering wheel away from the pier so that the propeller will pull the stern out. When well clear of the pier and other boats, shift into forward and proceed slowly ahead. If the wind or current is going away from the pier, push the boat away, and when it is clear of the pier and other boats, proceed ahead slowly in forward gear. Don't attempt to turn away too sharply — remember that your boat steers from the stern and too sharp a turn can swing the stern back into the pier or other boats.



REMEMBER THESE RULES

1. **OVERTAKING-PASSING:** Boat being passed has the right-of-way. **KEEP CLEAR.**
2. **MEETING HEAD-ON:** Keep to the right.
3. **CROSSING:** Boat on right has the right-of-way. Slow down and permit him to pass.

WHISTLE SIGNALS

ONE LONG BLAST: Warning signal (Coming out of slip)

ONE SHORT BLAST: Pass on my port side

TWO SHORT BLASTS: Pass on my starboard

THREE SHORT BLASTS: Engines in reverse

FOUR OR MORE BLASTS: Danger signal

Boat Trim

The riding attitude of your Seville is important in that it affects performance and passenger comfort. If you will consider both lateral and longitudinal trim, there is much you can do to improve the ride of your boat.

Proper lateral trim is mainly a function of weight distribution within your boat. As batteries, gear and passengers are added, any significant lateral weight imbalance will cause your boat to list to one side or the other when at rest, at idle, and probably up through cruising speeds. If this situation occurs, it can be corrected by transferring weight from one side of your boat to the other.

Engine torque and wind direction may also affect lateral trim. All boats tend to lean into the wind when underway. You can

compensate for this by switching passenger weight around or selecting a better heading. Make certain that the trim tab on your stern drive is properly adjusted. If it is not, you will experience steering torque *and* a list when underway. Your engine owner's manual covers how this adjustment can be made.

Longitudinal trim is affected by weight distribution and by the angle of the stern drive cavitation plate in relation to the bottom of your boat. Too much gear and passenger weight too far aft will result in a bow high attitude and slow planing. Your engine is equipped with MerCruiser Power Trim or OMC SelecTrim. A little experimenting will allow you to find the setting which achieves the best running attitude in any given set of conditions.

Rules of the Road

The most basic rule to remember is when two boats are approaching at an angle (from dead ahead to two points aft of the starboard beam) the boat on the starboard (right) has the right of way. The boat on the port (left) is required to alter course or speed. If two boats are approaching each other from dead ahead, both should swing slightly starboard and pass port to port. When overtaking another boat from the stern, you may pass on either side, but keep well clear since that boat has the right of way. The law requires you to give way to all boats under sail. Probably the best rule of the road is to use common sense and courtesy. Operate your boat cautiously and defensively. In a crowded harbor or river don't presume all boaters to be totally observant of the strict rules. Be courteous and yield to boats under sail, boats pulling water skiers, boats trolling, and other boats less maneuverable than yours. ***Watch your wake — you are legally responsible for damage caused by the wake of your boat!***

Types of Buoys

Channels and rivers are often marked with buoys as an aid to navigation. When entering a channel, the red even-numbered buoys mark the right-hand side of the channel. The black odd-numbered buoys mark the left side. An easy way to remember on which side to pass these buoys is to memorize this phrase: "Red - Right - Returning" (*Red* buoy on your *Right* when *Returning* to or entering a channel). Black and white vertically striped buoys are mid-channel markers and may be passed on either side.

CHANNEL BUOY GUIDE

Entering port or going upstream

PORT SIDE

Color: Black
odd numbers



Lighted



Can



Spar



Unlighted Bell



Unlighted Whistle

MID-CHANNEL

Color: Black & White
no numbers



Lighted



Can



Spar



Nun

JUNCTION



Red and Black
Lighted



Can



Spar



Nun

STARBOARD

Color: Red
even numbers



Lighted



Spar



Nun



Unlighted Bell



Unlighted Whistle

IV. OPERATING INSTRUCTIONS

A. General Familiarization

An important part of your understanding of your Seville and how to operate it is the indoctrination you receive from your Seville dealer at the time you take delivery. During this session, operation of the engine and all components and systems are covered. If some further question occurs to you as you read this manual, jot it down and check back with your dealer. If he doesn't have an answer, he will get it for you.

The Marine Engine

This manual does not dwell on the engine in detail. Necessary information concerning your engine is in the Engine Operator's Manual. It will be found in the Owner's Information Envelope and you are urged to familiarize yourself with it. The life and performance you receive from your engine depends greatly upon the way it is cared for. Adherence to a good maintenance schedule will result in many hours of pleasurable boating. Your engine is the finest obtainable—take good care of it.

Watch the oil level. Change oil as recommended and use only approved lubricants.

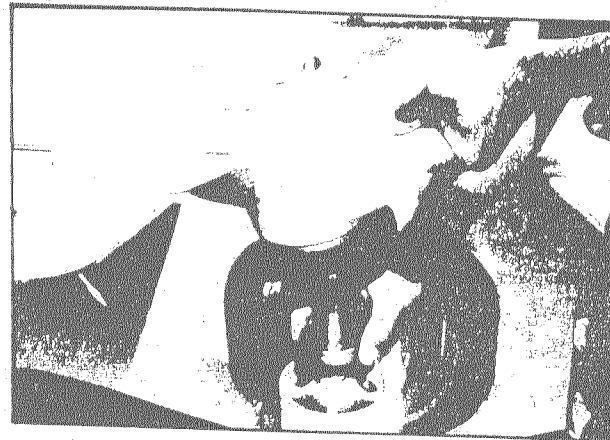
If the engine misfires, loses RPM or is hard to start, locate the cause and correct it. Continued operation may cause damage.

Do not tolerate a spark knock, detonation or "pinging". It may be evidence of too lean a mixture, improper fuel, or an improperly adjusted ignition system. Burned valves, abnormal wear of piston rings, pistons, and bearings, and even

destruction of the piston heads may result if this condition is permitted to continue.

Erratic operation of an engine and hard starting, sometimes blamed on distributor, coil, carburetor and other expensive items, may be due to an often overlooked but simple cause—high tension cables in poor condition. Spark plug and coil wires (the engine ignition wiring harness) more than a year old and subject to the high temperature and humidity conditions inherent in a boat, may develop leakage sufficient to affect the engine performance. In any case, cables more than two years old should be replaced.

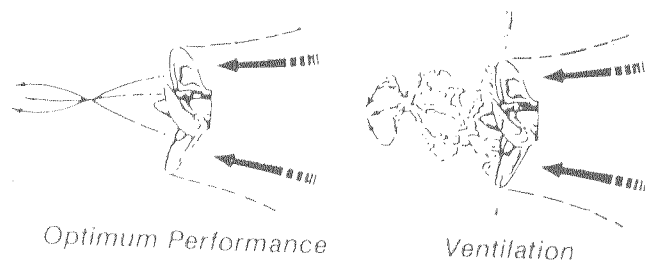
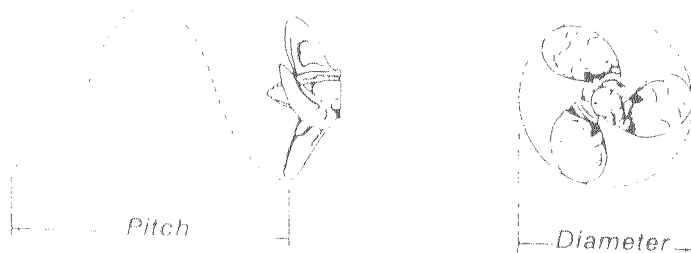
Do not replace original spark plugs with other types having different temperature characteristics or length without first consulting your Seville dealer.



The propeller on your Seville should be periodically removed and the shaft and splines greased to prevent the propeller from freezing up on the shaft.

Propellers

Your Seville has been equipped with the propeller which our tests have shown to be the best suited for general use under normal conditions and load. In some situations you may wish to change propellers to give your boat slightly different performance characteristics. In general, changing to a *lower* pitched propeller will increase acceleration and load-pulling ability, but with a slight decrease in top speed. Conversely, moving to a *higher* pitched propeller will attain higher top speed with a light load, but will sacrifice acceleration and power. Your particular requirements should be discussed with your Seville dealer. ***Under no circumstances use a propeller which allows the engine to operate at higher than recommended RPM's.***



Basic Propeller Characteristics:

Propellers have two basic characteristics: diameter and pitch. Diameter is that distance measured across the propeller hub line from the outer edge of the 360° that is made by the propeller's blades during a single rotation. Pitch is the angle of the blades from a flat plane, expressed in inches in terms of the propeller's theoretical advance through the water in one complete rotation.

For example, a propeller with a 12-inch pitch, when rotated 360° would, theoretically, advance 12 inches through the water. Actually, no propeller applied to any boat is 100% efficient. No 12-inch pitch blade will, in a single rotation, advance a boat 12 inches. This variance is referred to as slippage.

Ventilation, Its Causes and Corrections:

While often called cavitation, ventilation is really a different effect. At times when a boat enters or leaves a sharp turn, the propeller seems to slip and lose thrust and the engine may overspeed. This problem is normally caused by air or aerated water entering the propeller (a damaged propeller can also cause ventilation). The correction can usually be accomplished by one or more of the following:

1. Replace the damaged or incorrect propeller with the recommended one.
2. Set the outboard or outdrive at a lesser trim angle (trim the unit inward).
3. Try a cupped propeller, if not so equipped.

Cavitation, Its Causes and Corrections:

Cavitation is a phenomenon that occurs in all propeller-driven craft under certain conditions.

The surfaces of propeller blades are not perfectly flat, and, as water is drawn through the blades to be discharged aft into the propeller's slip stream, the water flowing over the curved surface of the blade encounters areas of greater and lesser pressure.

In those areas of reduced pressure gas bubbles are formed. When they move out of the low pressure area these bubbles collapse. If they collapse while in contact with an object such as part of the propeller blade or the trim tab, the bubbles create such high localized forces that they erode the surface of the object. In the case of the propeller such damage is sometimes called a "burn." It may be caused by an irregularity in the propeller's leading edge, and it should be corrected by reconditioning the prop or replacement.

Cavitation is a normal occurrence in modern sport boats, and prop inspection should be part of routine maintenance.

Propeller Torque and Its Correction:

Some of the more powerful motors create a considerable torque effect; that is, a twisting motion causing the boat to ride with one sheer lower than the other. This twisting reaction is caused by the direction of propeller rotation lifting one side of the boat. This causes an uneven drag, so that a boat's bow may tend to fall off in one direction or the other from the intended course given by the wheel.

Good hull design offsets a majority of this tendency in Seville Boats, but some torque action may occur when maximum or close to maximum rated horsepower is applied. Any slight torque may be offset by shifting passenger or gear weight laterally to the high side of the boat.

Replace Damaged Propellers:

Badly damaged propellers should be replaced. Those that are chipped, bent, or merely knocked out of shape can be reconditioned by your marine dealer. If damaged beyond repair, replace the malfunctioning propeller with a new one.

Propellers should be free from nicks, excessive pitting, and any distortions that alter the propellers from their original design.

When doing extensive cruising, it is always advisable to carry an extra propeller aboard.

Operating your boat with a damaged propeller will reduce its top speed, may introduce undesirable handling characteristics, and will definitely increase fuel cost.

A damaged propeller may also create unpleasant vibrations leading to an increased sound level. These excessive vibrations will hasten wear to rotating and reciprocating engine components, and may cause costly damage.

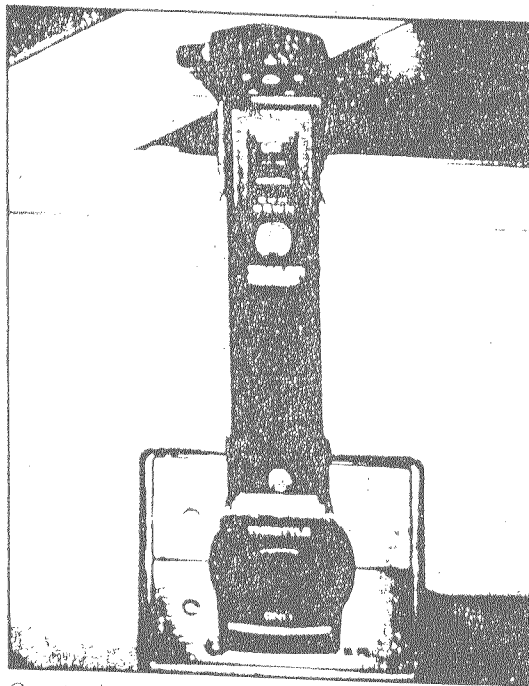
Shift and Throttle Controls and Steering

The single lever control on your Seville activates both the shifting mechanism and the throttle advance. The control must be in the neutral position to start your engine. Moving the lever forward engages the forward gear and then the throttle advance. To reverse power, bring the control lever back to the neutral position, then move it further back to engage the reverse gear and increase reverse thrust.

Reversing the shift mechanism will act as a "braking action" when maneuvering the boat at low speeds. Care should be taken in using reverse throttle for "braking action" as sudden

slowing of the boat from forward motion will create a following wake which may rise above the transom and flood the boat if the boat is moving at too great a speed. All propellers are designed to provide maximum forward thrust, so that the reverse thrust of the propeller will not be as efficient.

Controls vary slightly depending on the particular Seville model and engine combination.

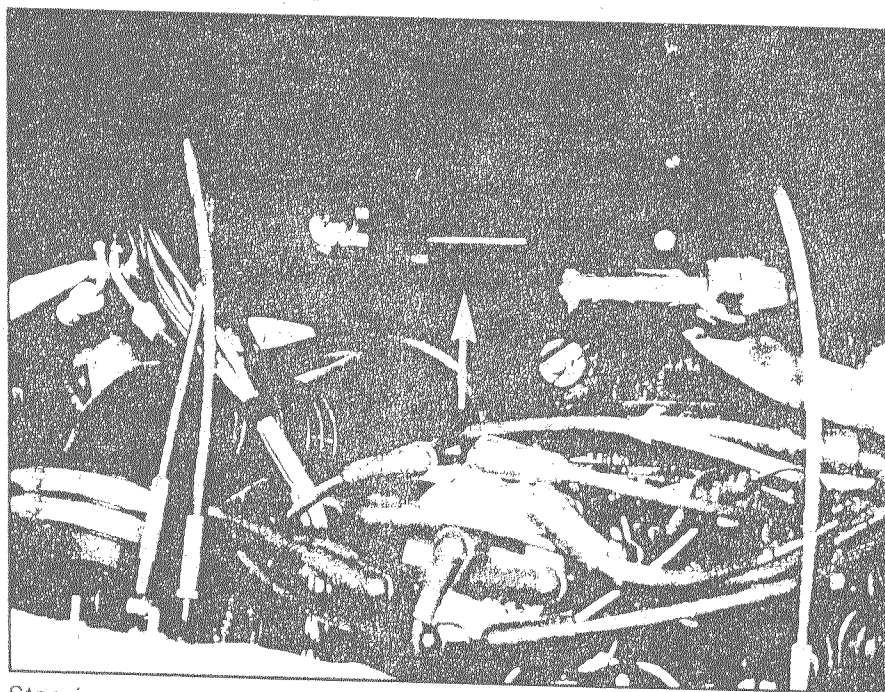


Controls

Steering System:

The standard steering used in all Seville boats is a mechanical system with enclosed cable.

The steering wheel at the helm position is connected to the stern drive by cable. The cable connections at the helm and at the outdrive should be inspected and tightened at least twice a year. **A loose connection can result in sudden loss of steering and control.**



Steering

All mechanical steering systems require periodic maintenance to be trouble-free and safe. Regular checks of the complete system, whichever system your boat may have, is essential.

Push-pull cable steering should be checked for proper lubrication of the cable, proper alignment, with no binding or looseness, and no interference in the system. Cable and attachments to the stern drive should be checked for wear, rust, or corrosion on a regular basis and be properly lubricated. Check the anchor post at the aft end of the cable to be sure it is secure and free from rust and corrosion.

Note: Operation in salt water is considered "severe service."

Sea Ray recommends that all repairs and/or replacements to steering systems be made only by qualified dealers authorized by the manufacturer of the steering system of your boat.

Caution: Boat steering is not self centering. Steering is affected by engine and propeller torque, trim tab setting, wave and current action, and the speed of the hull through the water. Constant attention and control of the direction of the boat is required for safe operation.

Fuel Systems:

The fuel system in your Seville boat is designed to provide the aspect of safety in the prevention of fire and explosion, and to provide a continuous flow of clean fuel to the engine.

The system is designed and built to conform to, or exceed, all standards set by the U.S. Coast Guard at time of manufacture.

It is most important that you check and maintain your fuel system at frequent intervals. The entire system must be kept liquid and vapor tight within the hull interior.

(A half tea cup of gasoline can create enough explosive vapor to totally destroy a large boat.)

The fuel tank installed in your Seville boat is baffled aluminum. A hatch is located over the tank for easy access to the fittings and for tank removal if necessary. The tank is equipped with an anti-syphone valve to prevent fuel from filling the bilge due to a broken line.

In some instances contaminated fuel could cause the check valve to malfunction.

Do not attempt to repair the valve — replace it with a new one. During winter storage or in the case of contaminated fuel a fuel conditioner is recommended.

Check all hoses and connections for leakage and tightness of fittings each time the boat is fueled and before each use.

Keep your tank filled when the boat is not in use to prevent condensation in the tank.

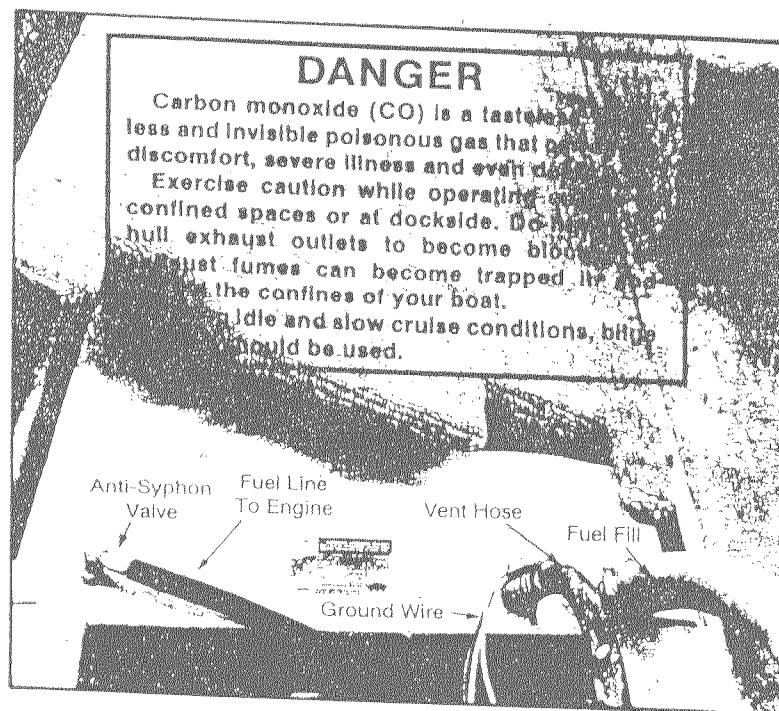
Keep the bilge and engine compartment area clean and well ventilated. Do not keep oily rags or flammable materials anywhere on the boat.

Have your dealer inspect your entire fuel system on a regular basis (at least once a year) including all components that are

hidden from view. Replace all deteriorated hoses and corroded clamps, connections and fittings. Never repair a leaking fuel tank. Have it replaced with a new tank.

Fuel Recommendations:

Do not use gasoline with alcohol additives. Alcohol can deteriorate fuel system components.



Electrical System

D.C. Electrical System (12 volt)

The direct current (D.C.) electrical system derives its power from the battery, which is kept charged by an engine-driven alternator. The battery charge is indicated by the voltmeter. The batteries supply power through a central fuse or circuit breaker panel to various items such as navigation lights, instruments and accessories.

The negative terminal is attached to the grounding stud of the propulsion engine. (Also connected to the negative battery terminal is a common bonding system connecting together all the underwater gear, gas tanks and gas fill plates.) This is, of course, known as a "negative ground system" and is the approved system for marine D.C. electrical systems.

If any additional D.C. items are added to the boat's electrical system, they must be adaptable to the negative ground D.C. system.

When installing additional equipment, it will be necessary to stipulate that its current supply be taken from the central distribution panel. If additional fusing is required, it should be added in that area. Do not allow any power feeds for accessory equipment to be taken from the voltmeter terminals.

Enlist the aid of your dealer for a careful analysis of D.C. power needs on your boat.

Battery Maintenance

Under the cap of each cell there may be a grid to prevent foreign matter from falling into the cells. The water level of each cell should be about $\frac{1}{2}$ " above that grid. This leaves a large space above the cell to take care of the electrolyte

expansion during charging, so that none will be forced through the vent in the cell cap. (Certain batteries may not be equipped with filler caps.)

Any spilled acid on batteries, battery boxes or other parts should be neutralized and cleaned up with baking soda in warm water. The terminals and clamp bolt nuts may be cleaned in the same manner. The battery manufacturer recommends that the terminal and the battery tops be coated with Dow Corning Compound #3 or an equivalent as a corrosion preventative.

The specific gravity of the electrolyte is 1.260 full charge. A hydrometer with temperature reading and correction factor combination should be used to test each cell.

Do not test batteries right after adding water.

To accurately test the batteries, the charging devices must be turned off for at least 20 minutes.

The average charge at different specific gravity readings will be:

Full Charge • Specific Gravity 1.260
¾ Charge • Specific Gravity 1.220
½ Charge • Specific Gravity 1.190

In freezing weather, discharged batteries will freeze and damage their containers. We recommend that all batteries should be kept at a 1.230 specific gravity reading in freezing weather.

20

The freezing points are:

Specific Gravity

1.260 Full Charge

1.230

1.200

1.170

1.125

1.100

Freezing Point

-70° F

-40° F

-18° F

0° F

+14° F)above

+20° F)zero

When adding water to battery cells in freezing weather, be sure to recharge sufficiently to thoroughly mix with electrolyte to prevent freezing.

Batteries in storage or idle for months at a time should be kept under trickle charge or should be fully charged once a month.

A battery that has its electrolyte under 1.230 for long periods will have internal chemical damage due to standing in a discharged condition.

Caution: A battery will explode if a flame or spark ignites the free hydrogen given off by the battery during charging. For this reason, never use an open flame in the battery storage area. Also, avoid striking sparks at terminals. Be sure battery covers are always installed to prevent shorting by any other means. Always recheck battery terminals for tightness and never disconnect under load.

Trouble Shooting

Before installing a battery, clean the terminal posts with a wire brush or steel wool and then attach the cables. After cable clamps are tightened down, smear posts and clamps with petroleum jelly or grease to exclude air and acid. Do not apply grease before attaching and tightening terminal clamps. Examine all wiring.

A very low battery — less than 9 volts rather than the normal 12 volts — may not actuate the voltage regulator even though it might start the engine. Consequently, the alternator cannot deliver a charge to the battery and it will be necessary to have it recharged ashore.

Caution: *Always disconnect the "positive" battery cable before doing any work on the engine electrical or alternator wiring, to prevent sparking or damage to the alternator.*

Switches

Switches for the navigation lights, cockpit and cabin lights, bilge pump, bilge blower, horn, and other accessories are located at the helm position. Each switch is individually fused.

Navigation Lights. Navigation lights must be displayed while underway from sunset to sunrise. The term "underway" denotes not at anchor or dock. Trolling or drifting with power off is considered underway, and normal running lights must be used. At anchor, in open water, a 32 point white anchor light must be displayed.

The navigation lights are operated by the three-position toggle switch on the helm switch panel. The center position of this switch is the off position. The two outside positions are for running lights and anchor light.

Ignition Switch. The ignition switch on your boat has three positions — "off", "on", and "start". The start position is spring loaded and the key should be held in this position until the engine starts. After the engine starts, release the key and it will return to the on position. Always turn the key to the off position when the engine is not running to prevent discharging the battery. ***Do not operate the engine starter motor for more than 15 seconds at one time as the motor will overheat.***

Instrumentation

The various instruments located at the helm position of your Seville are there for your safety and convenience. Form the habit of looking at them frequently, especially when first starting the engine and during warmup.

Oil Pressure Gauge. This is a most important instrument. Very little serious trouble can occur inside an engine without it showing up on the oil pressure gauge. Generally readings of 10 to 15 pounds pressure at idle and/or 15 to 25 pounds pressure at cruise are satisfactory. Your engine owner's manual is more specific on this subject. ***If a complete loss of oil pressure occurs, shut off the engine at once.***

Water Temperature Gauge.

The water temperature gauge indicates the temperature of the cooling water circulating inside the engine. Your engine is equipped with a thermostat so that a predetermined engine temperature should be reached soon after starting the engine and maintained thereafter while the engine is running. Temperatures of 150 to 170° F. are in the normal operating range. ***If the temperature approaches the red zone on your gauge, shut down the engine at once.***

Fuel Gauge.

The fuel gauge indicates the fuel level in your fuel tank. The most accurate reading of the fuel gauge is at idle speeds when your boat is in an approximately level position. At slow plane when your boat is in a bow up position, the gauge will read inaccurately (on the low side) because the fuel in the tank flows to the rear of the tank and away from the fuel tank sending unit.

Since boats are subject to considerably more stress than automobiles due to rough water conditions, the fuel gauge may not provide accurate readings at all times even at idle speeds. Become familiar with your engine's hourly fuel consumption at various speeds and use this along with your running time as a backup check against the reading on your fuel gauge.

Speedometer.

The speedometer indicates the speed of your boat in miles per hour. It operates by transferring the water pressure at the pitot tube mounted on the transom to the gauge. To insure an accurate reading, make sure that the pitot tube is in the down position and its opening is not clogged.

Maintenance

1. A clogged water pickup will render the speedometer inoperative. Clean with a piece of wire or blow out with compressed air. Before blowing out with compressed air, disconnect speedometer tubing from pitot tube or bayonet fitting.
2. Drain the system of water completely before storage. Remove tubing from speedometer fitting and blow thru tubing to remove water.

Tachometer.

The tachometer indicates the RPM's at which your engine is running. Your engine owner's manual states the maximum full throttle RPM at which the engine should operate. This should not be exceeded. The tachometer should also be used to determine the most comfortable and economical cruising RPM. Generally, an RPM range of 2800 - 3100 RPM will give you the best range and most comfortable ride in calm seas. In rough seas, a lower RPM will give you the most comfortable ride.

Voltmeter.

The primary function of the voltmeter is to indicate battery voltage.

Bilge Blower

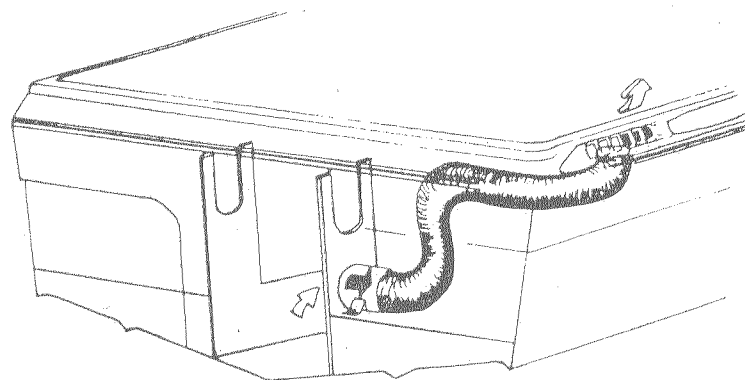
Your Seville has a ventilation system that ventilates the engine compartment when your boat is underway. In addition, your boat is equipped with an electric bilge blower to provide forced ventilation of the engine compartment before starting the engine and when operating below cruising speeds. The bilge blower is located in the engine compartment near the transom.

Caution: Use of the bilge blower should never take the place of checking the bilge visually and "smelling" for fumes.

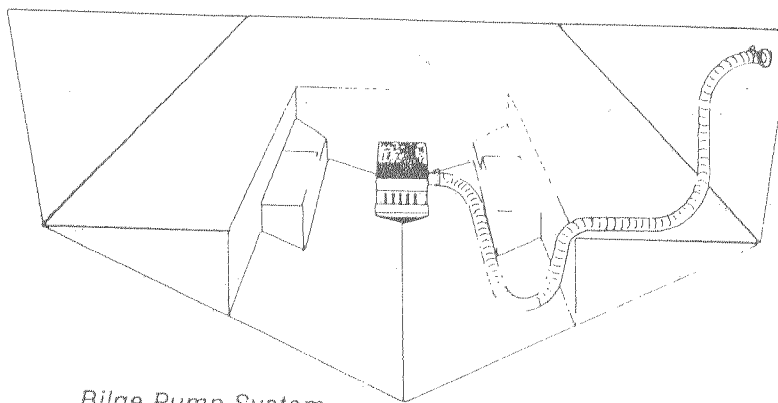
Operation

The bilge blower is operated by a two-position fused switch located on the helm switch panel. **Operate the blower a minimum of four minutes and check the engine compartment for fumes before starting the engine.**

Caution: DO NOT operate blower while refueling.



Exhaust Blower System



Bilge Pump System

Maintenance

Your bilge blower should be checked periodically to insure that the hoses are securely fastened to the blower. Check for corrosion of wires and make sure the 12v. wires are secured in place.

Trouble Shooting

If your bilge blower fails to operate:

1. Check the fuse at the helm switch panel.
2. Check to see if the blower hose is fastened to the blower.

Bilge Pump

Your Seville is equipped with a Bilge Pump which is located underneath the engine. It is easily removable for cleaning, winterizing or replacement.

Operation

Should water accumulate in your boat, it will drain to the sump underneath the engine. Use your bilge pump to pump it overboard.

Caution: *The pump motor is water-cooled, so never run it "dry" for any length of time.*

Maintenance

Your bilge pump should be checked and cleaned periodically to insure that the pump is operating at its maximum flow.

1. Remove pump from sump under engine. Do not disconnect wiring or discharge hose.
2. Disassemble (Two tabs secure the halves together.)
3. Clean the strainer slots at the bottom of the strainer

base and the small slot at the top of the cylindrical motor well.

4. Reassemble.

Trouble Shooting

If the water does not come out of the discharge hose

1. Check the fuse at the switch panel.
2. Remove the power module to see if the impeller rotates with the power on.
3. Remove any debris that may have accumulated in the white nozzle section or strainer base.
4. Check hose and connection on hull side for debris and proper connections.

Canvas

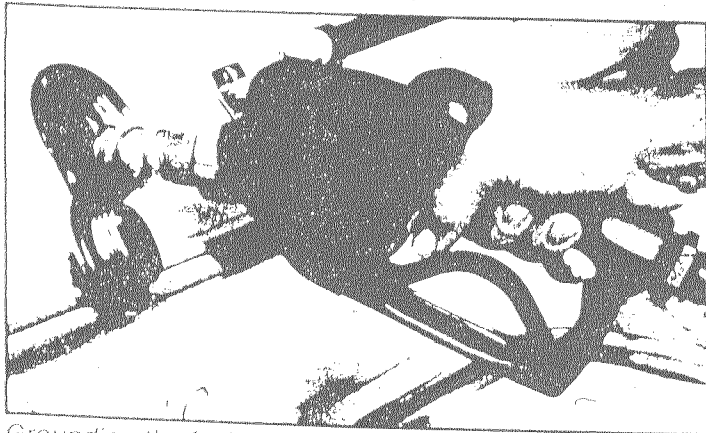
To put your convertible top up, snap the top to the windshield and then lay the top back so that it is in the up position. The rear hold down straps may then be easily clipped in place by pulling the rear bow down with one hand and attaching the strap with the other.

There is considerable adjustment that can be made in the fit of the top by tightening or loosening the bow support straps and rear hold down straps. If you attempt such adjustment, please bear in mind that it will also affect the fit of the side and aft curtains and especially their snap locations.

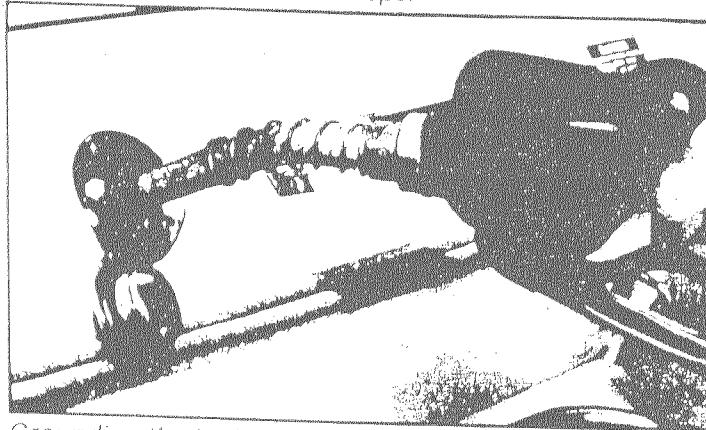
Your convertible top and aft curtain are constructed of a fabric backed vinyl. In cold weather this material tends to stiffen and shrink a bit which will make your canvas more difficult to handle than in summer months.

The convertible top, side curtains, and aft cover on your

Seville should always be dry before folding and storing. This will prevent possible mildew. **Do not trailer your boat at highway speeds with the top and curtains up since this can result in torn fabrics or broken snaps.**



Grounding the fuel hose — Proper



Grounding the fuel hose— Improper

Safety Precautions Prior to Starting Engine

Drain Plug:

All Sevilles are fitted with a brass garboard drain plug. This is a threaded plug which is installed through the outside of the transom. We recommend that you remove the drain plug when trailering or storing your boat. **MAKE SURE YOU REPLACE THE DRAIN PLUG BEFORE LAUNCHING.**

Fueling Precautions

Before fueling, close all ports, windows, hatches, engine boxes, and doors. Do not operate engine, or electrical equipment while fueling. Do not operate bilge blower while fueling. Avoid smoking.

Always ground the fueling hose nozzle by holding it against the fill pipe before any fuel is pumped. Sparks of static electricity can occur if this precaution is not taken.

Do not overfill fuel tanks. Avoid waste by allowing room for fuel expansion due to temperature change. Fuel pumped from cool underground tanks can expand from 2 to 6 percent. However, tanks should be kept as full as practical to minimize condensation and accumulation of moisture in the fuel system.

After taking on fuel, and before starting engine(s):

1. **Open windows, hatches, engine compartments, and doors, and ventilate all enclosed spaces;**
2. **Operate bilge blower at least five minutes — but do not depend on the blower to eliminate fumes;**
3. **Always check bilge by visual inspection and smell. Leave engine hatches and engine boxes open until after the engine has started and run for some time.**

The tank fill pipe is of sufficient size to assure easy and safe filling. The fill pipe cap is located on deck with provision that any overflow will drain overboard and not into the boat.

Your boat is equipped with a fuel tank vent. This type of vent serves a dual purpose of pressure or vacuum release and safety overflow. The through-hull vent fitting is also a flame arrester. Keep the screen in this vent fitting clean. Replace screen immediately if damaged or displaced. The fuel pickup at the (gasoline tank) has an anti-siphon device for safety in case of line failure.

Fuel lines, tank, filters, and engine fuel system components should be checked at the start of each season and periodically thereafter, particularly after any work has been done aboard the boat which might have affected any part of the system. Be certain that all are in proper condition and that the entire system is fuel tight. Only a qualified marine mechanic should be allowed to work on the fuel system. Damage can be done to fuel system components by inexperienced or indiscriminate tightening of connections, including flexible fuel line sections.

Caution: Never start an engine until you are certain that gasoline fumes are not present in the engine compartment or elsewhere in the bilge of the boat.

Check the engine oil level. The oil "dip stick" is marked to indicate both high and low levels. Always fill to the high mark, but not over.

Boat Performance

Boat speeds are affected by a great many factors. Some such as temperature and altitude, you can't do anything about.

You can affect other factors. They are:

1. Loading: Take with you only the necessary equipment. As you add weight to your boat it slows down. Keep weight low in the boat and evenly distributed.
2. Propeller: Keep it in good repair and the correct pitch for your particular situation. The factory standard equipment propeller may not be the best one for your particular boat and load conditions. The engine should be able to come up to it's rated r.p.m. on a normally loaded boat. If the engine r.p.m. at full throttle is less than the maximum rated, try a prop of less pitch. If the engine r.p.m. exceeds the maximum rated, try a prop of greater pitch. A slightly bent or nicked propeller will adversely affect the performance of your boat.
3. Weeds, barnacles and other growth: Keep your boat bottom clean. When your boat starts "growing grass" it will slow down greatly, even to the point it will not plane. Anti-fouling paint that does not contain mercury or copper is recommended. Base materials, such as copper, will accelerate electrolysis and possibly damage underwater gear. Marine growth varies from one area to another so it's best to consult your dealer for the best bottom paint for your particular area.

Starting Your Engine

1. To facilitate starting when engine is cold, disengage shift control and move throttle lever back and forth 3 or 4 times while starter is operating. This will actuate the carburetor accelerator pump and feed more fuel to the engine for starting. **DO NOT move throttle lever back and forth if engine is hot, as this will cause flooding.**
2. Turn ignition key clockwise to "Start" position. As soon as engine starts, release key and allow switch to return

to "Run" position.

Important: Do not continue to operate starter for more than 15 seconds without pausing to allow starter motor to cool off for 2 minutes. This also will allow battery to recover between starting attempts.

3. Check engine RPM on tachometer as soon as engine starts. Do not allow RPM to exceed 1500. Move neutral throttle lever down to decrease RPM.

Caution: Do not race engine before turning ignition key off nor turn key off with engine running above idle. This could cause water to be drawn into engine via the exhaust system and result in internal damage.

After Starting Engine

After the engine is running, these few rules will assure you that the engine is functioning properly:

1. Check the oil pressure indicator for normal reading.
2. Check for proper water circulation. The temperature gauge should show normal after a few minutes. **REFER TO ENGINE OWNER'S MANUAL FOR CORRECT TEMPERATURE.**
3. Make a visual inspection for any leaks related to fuel, exhaust, oil or water lines and correct as necessary. All engines and electrical equipment (motors) should be shut off if fuel leaks are found.
4. Water test the boat after properly warming up the engine. Drive at top speed for only a moment, if you are in open waters and conditions permit such practice, to note maximum RPM developed and general operation of the boat, its instruments and the engine. Follow

detailed instructions on "Engine Break-In" in the Engine Operator's Manual.

FOR DETAILED INFORMATION ON YOUR NEW ENGINE, REFER TO THE ENGINE OPERATOR'S MANUAL.

It is good safety practice and we recommend that all numbered precautions in the above paragraphs be observed each time the engine is started after a period of non-use. It is best that you check items on which the safety of your boat and the personnel aboard depends, rather than entrust this to others.

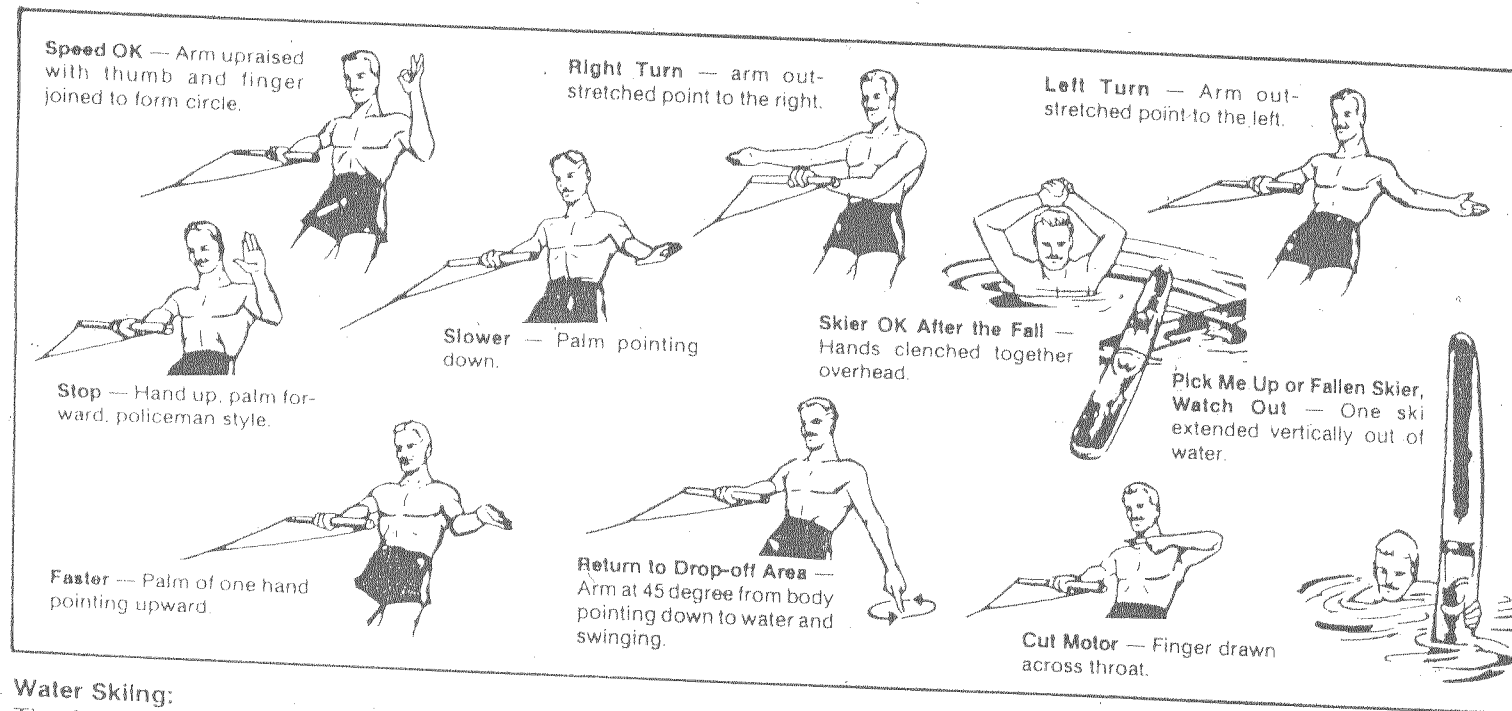
V. SAFETY

A. Passenger Safety

As a skipper, it is up to you to look out for the safety of your passengers. As noted, the Coast Guard requires you to have one approved flotation device for each passenger aboard. Make sure that all children and non-swimmers actually wear jackets while boating. Request that your guests wear soft-soled, non-skid deck shoes. Hard-soled shoes are slippery and can result in a fall. Always see that your passengers are properly seated while underway. **Never allow passengers to sit on the fore deck, gunwale, or on top of seat backs while the boat is in motion.** Instruct at least one passenger on the proper operation of your Seville just in case something should happen to you.

B. Swimming & Waterskiing — Diving

These pastimes are three of the greatest joys connected with boating, but they also represent a potential danger if performed carelessly around a boat.



Water Skiing:

The following guides will do much to reduce the hazards while water skiing.

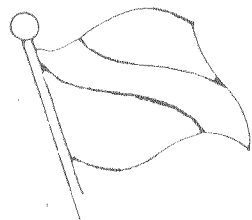
1. Water ski only in safe areas, away from other boats and swimmers, out of channels, and in water free of under-water obstructions.
2. Do not allow anyone who cannot swim to water ski.
3. Be sure that the skier is wearing a proper U.S.C.G.A. flotation device. A properly designed ski vest is intended to keep a stunned or unconscious person afloat.
4. Always carry a second person on board to observe the

skier so that full attention may be given to your operation of the boat and the waters ahead.

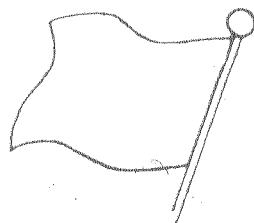
5. Approach a skier in the water from the starboard side, and be certain to stop your motor before coming in close proximity to the skier.
6. Give immediate attention to a fallen skier.

Above you will find a set of hand signals recommended by the A.W.S.A. (American Water Skiing Association). Skier, observer and boat operator should all know and understand these simple signals from the skier.

When skiing, always have two people in the boat — one to concentrate on operating the boat and watching the water ahead; the other to keep an eye on the skier. Some states require the observer to be at least 12 years old (it's the law). Insist that all skiers wear a C.G.A. properly fitting ski vest. Always keep your boat a safe distance from bathing beaches and areas in which skin divers may be operating. **A spinning propeller is extremely dangerous.** Always turn off the engine when taking swimmers or skiers aboard, or when putting them overboard.



Danger



Distress

Diving:

Respect These Flags

Danger (Red)

The SPORT DIVERS FLAG indicates a diver in the water. You should keep a *minimum* of 30 yards between your boat and this flag. "A life is worth more than a few feet of water."

Distress (Orange)

The DISTRESS FLAG indicates a boat or passenger in serious trouble. When seeing it, you should respond and render any assistance possible. Remember — it could be your boat displaying this flag.

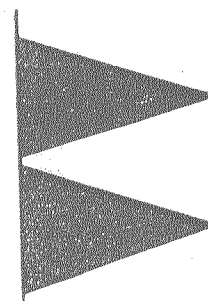
Storms/Rough Weather

A wise boatman keeps a sharp eye out for impending storms or high winds. When a storm is detected approaching, head for the nearest shelter and wait it out. If you are unfortunate enough to be caught in open water during a storm, have everybody put on life jackets and sit low in the boat. Keep the bow headed into the waves with enough power to maintain slow headway.

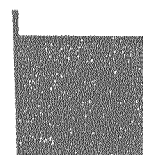
Storm Warnings



RED FLAG
Small craft
(winds to
33 knots)



2 RED FLAGS
Gale
(up to
47 knots)



SQUARE RED
FLAG—BLACK
BOX
(Storm)

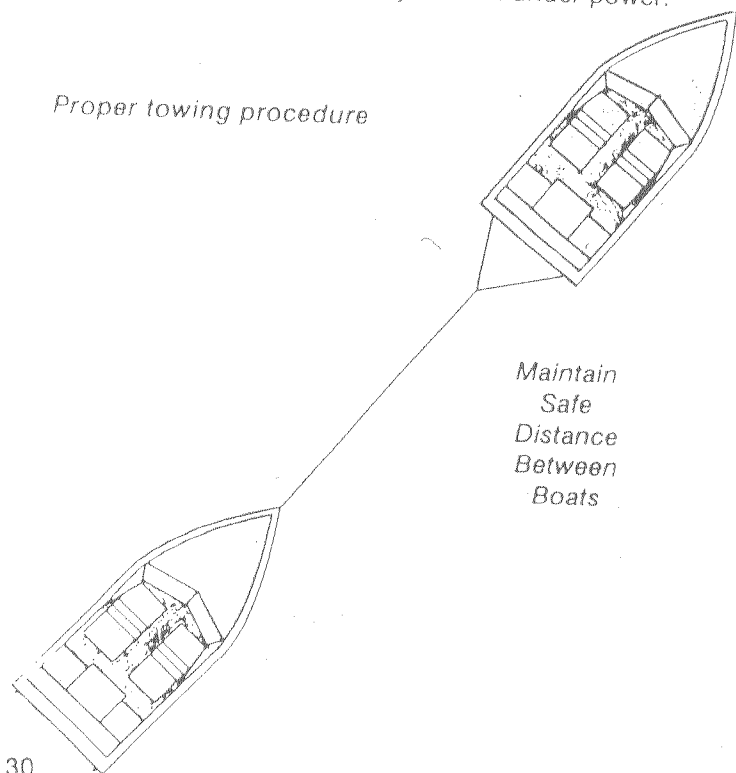


2 SQUARE
RED FLAGS
BLACK BOX
(Hurricane)

Towing a Distressed Vessel

1. Tow with line of suitable diameter and tensile strength.
2. Fasten line to bow eye or stern eyes. Do not *fasten to cleats or rails*.
3. Tow at very slow speed.
4. Always be cautious of "Back-lash" should tow line snap while underway. (Flexible line is not recommended)
5. Keep ample distance between the two boats as towed boat will not slow as quickly as boat under power.

Proper towing procedure



Boating Safety Courses

Your local Coast Guard Auxiliary or Power Squadron generally puts on a Safe Boating Class several times a year. They are very comprehensive and generally of minimal cost to you. Call your local US Coast Guard Auxiliary or Power Squadron Flotilla for the time and place of the next class.

C. Regulations — Safety Procedures and Safety Equipment Government Regulations

The Coast Guard is an ever-present help to the boating public. Its boating regulations prescribe minimum standards of safety and you should equip your Seville so that it complies with these regulations.

Safety Procedure and Equipment

The safety equipment you own and the procedures you follow depend solely on you, the boat owner. Many safety features have been incorporated in your Seville but more can be added as needed to meet your particular requirements.

Signal flares, for instance, should be carried by boats going offshore, but not necessarily by a runabout on a very small lake.

The Coast Guard regulations, however, make it obligatory to carry certain items of equipment. These vary with the size of vessel and are detailed below:

- A. An approved hand held fire extinguisher.
- B. At least one Coast Guard approved, personal flotation

device for each person aboard (life jackets).

- C. At least one approved throwable device (ring buoy or buoyant cushion).
- D. One hand, mouth, or power-operated whistle or horn, audible for at least one mile.

In addition, it is recommended that you carry an anchor, anchor line, tie-up lines, fenders, first aid kit, waterproof flashlight, distress flares, spare fuses and electrical tape.

Fueling Practices and Procedures

Gasoline fumes aboard a boat can be extremely dangerous.

To minimize the chances of an unfortunate accident, observe the following safety precautions:

1. Before taking on fuel:
 - Turn off the engine.
 - Shut off all electrical systems.
 - Extinguish galley stove burners.
 - Extinguish cigarettes, other tobacco, and matches.
 - Close all hatches and cabin door.
2. During fueling:
 - Keep hose nozzle in contact with the fill pipe. (This provides a ground against a static spark.) Fill the tank slowly to avoid any spillage.
3. After fueling:
 - Wash any spilled fuel off deck and hull with fresh water.
 - Open doors and hatches.
 - Open engine cover and sniff for any fumes. **OPERATE BILGE BLOWER FOR AT LEAST FOUR MINUTES BEFORE STARTING ENGINE. IF ANY GASOLINE FUMES ARE DETECTED, DO NOT ATTEMPT TO START ENGINE.**

Think of yourself and others.

For your personal safety and that of your passengers and other boaters, please note the following recommendations:

Boats should not be operated by inexperienced persons until complete instructions in the use of all instruments and controls, handling characteristics at all speeds and water conditions, and driver check-out is completed under the supervision of a qualified person.

Passengers should be made aware of the possibility of being thrown to the deck, or even from the boat, if they are not carefully seated while the boat is under power, depending on speed and water conditions.

Be especially careful in the proximity of other boats, pilings, underwater obstructions, sea walls, or other obstacles.

More frequent checks and preventative maintenance are required for high performance boats. Mechanical failure at high speeds may cause very serious consequences to persons and property.

Remember that the person in control of the boat is responsible for his own acts of negligence, carelessness, irresponsible operation or damage caused by his wake.

The following guidelines should always be followed:

- Do not "show off" in tight areas or around docks.
- Every experienced boatman knows that danger can attend high speed boating if trouble signs and prudent operation are ignored.
- Every experienced skipper knows that choppy water demands slower speeds.

And he knows that vigilant maintenance is essential to safety in operation.

Maximum throttle should be used for brief periods only.

Be certain atmospheric conditions assure clear visibility and straight runs at least one mile ahead.

Be sure that there is no possibility of other boats coming into your course from the sides.

The operator is responsible for the safety of his passengers. Do not let passengers stand up.

Avoid sharp turns at high speed; keep one hand on the throttle at all times ready to reduce speed.

Do not load the boat heavily forward as it will affect performance and steering of deep V-boats.

Speed According to Boat Traffic.

Modify speed in keeping with weather and sea conditions.

Modify speed depending upon debris.

Always throttle back whenever boat leaves the water to prevent over revving of the engine and undue stress on the outdrive unit when boat re-enters the water. You will damage your engine if the propeller leaves the water without an instant reduction of R.P.M.

Some things to Check:

Achieving good performance requires regular and above average attention to hull, engine, mechanical and electrical equipment.

The bottom must be clean and smooth and checked regularly.

Passengers load and trim should be adjusted for best performance.

The propeller must match the boat and engine and be in perfect balance and condition.

Engines must be expertly tuned for maximum power output.

Consult the Engine Operator's Manual and your servicing dealer for details.

Safety Review

As a boat owner, you have the responsibility for the safety of all occupants of your boat. To protect yourself, your passengers, and other boaters, follow these suggestions for safety:

1. Be careful with gasoline and gasoline fumes. **Gas in the bilge is very dangerous.** Use care when refueling. If gasoline is spilled inside your boat, clean it up immediately. Make certain there are no fumes in your boat before starting the engine.
2. Check all gas lines and connections periodically. Open the engine compartment and "sniff" for fumes before starting your engine.
3. Periodically check your fire extinguisher, life preservers and other safety equipment to make certain they are in good condition. Make certain that there is a U.S. Coast Guard approved life preserver for each person aboard plus one approved throwable device for man overboard protection. **Children and non-swimmers should wear life preservers at all times.**
4. Keep an alert lookout for swimmers, divers, skiers and other boats. Be extra cautious at night or in inclement weather.
5. Watch the weather. Be especially watchful for strong winds or electrical storms. Small craft storm signals are for your information and safety. Learn them and be guided accordingly.

6. Instruct at least one of your passengers in the basic fundamentals of the handling of your boat in case you are disabled or fall overboard.
7. Turn off your engine when taking swimmers or skiers aboard or when putting them overboard. **Never permit use of the transom swim platform while your engine is running.**
8. Do not overload or improperly load your boat. **Don't permit passengers to ride on parts of your boat not designed for such use.**
9. Know your fuel tank capacity and your engine's hourly fuel consumption. Compute your fuel usage and use this as a backup check against the reading of your fuel gauge.
10. Watch your wake. It might capsize a smaller boat or do considerable damage to boats or property along the shore.
11. Obey the rules of the road. Neglect of this is the greatest single cause of collisions.
12. Watch your footing when on board or boarding. Require that good boat shoes be worn by your passengers to avoid the possibility of slipping.
13. Know the meaning of the buoys. Never moor to one. It is a federal offense.
14. If uncertain as to the depth of the water ahead, proceed with caution. In rough water — slow down — keep the bow headed into the waves with enough power to maintain headway.
15. Check and tighten shift and throttle and steering cable connections at least twice a year. A loose connection can result in sudden loss of steering and control.
16. Water ski in areas that are clear of other boats and always have an observer in your boat to maintain a proper look out.

ON BOARD TOOL CHEST

Whether you are doing some extended cruising or just enjoying a lazy day at the lake, minor repairs can easily be made without spoiling the day.

Suggested Tools:

Screwdriver set, slotted and phillips head
 Hacksaw
 Allen wrenches
 Hammer
 Jackknife
 Ratchet, sockets and extension
 Feeler gauges
 Visegrip pliers, regular pliers
 Combination box and end wrenches
 Flashlight
 Lubricating oil
 Battery jumper cables
 Water pump pliers

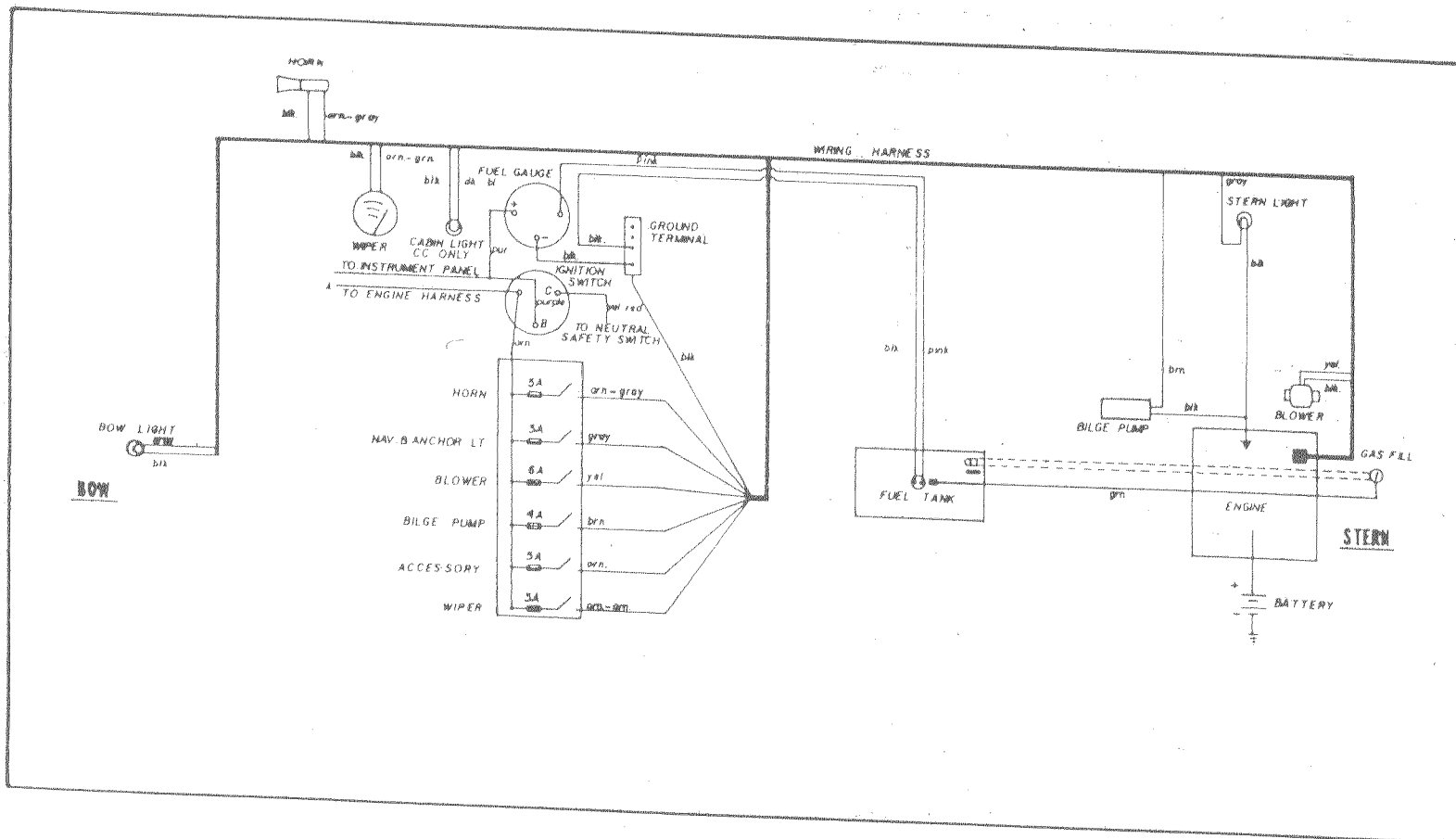
Suggested Spare Parts:

Set of spark plugs
 Alternator belt and or water pump belt

Distributor cap
 Breaker points
 Condensors
 Gear lubricant
 WD-40
 Navigation light bulbs
 number GE-90
 Propeller nut and washers
 Drive pin, if required
 Spare propeller
 Fuses number AGC/SFC
 2, 3, 5, 10, 15, and 20
 Anti Syphon Valve

Other Suggested Items:

Electrical tape
 Friction tape
 Hose clamps
 Assorted screws, bolts, nuts, and washers
 Penetrating oil
 Water proof matches



LAUNCHING RECORD

Dealer _____

Owner _____

Boat Length & Model _____

Operation before Launching

Check if OK

1. Propeller ☐
2. Shaft turns free ☐
3. Thru-hull fittings ☐
4. Drain plug tight ☐
5. Bottom clean and paint ☐
6. Hull sides clean and finish ☐
7. Bright work clean and finish ☐
8. Decks clean and finish ☐
9. Interior finish ☐
10. Upholstery clean ☐
11. Bilge cleaned ☐

With Boat In Water

12. No water leaks at stern drive ☐
13. No water leaks at thru hull fittings ☐
14. Hose tested for windshield leaks ☐
15. Make sure negative terminal of battery is
wired to ground stud on propulsion engine ☐
16. All electrical equipment operated ok including:
horn ☐, running lights ☐, bilge pump ☐,
bilge blower ☐, w/wiper ☐
17. With fuel tanks full, no fuel leaks at fill pipe,
over-flow vent, or at any fuel line connections ☐

Operation Before Starting Engine (See Engine Operator's Manual)

Check if
OK

18. Distributor lubricated ☐
19. Distributor points adjusted ☐
20. Ignition wires in correct firing order ☐
21. Spark plugs and coil ☐
22. Alternator, regulator, starting motor wired
correctly, connections tight ☐
23. Throttle control and cable travel ☐
24. Shift control and cable travel ☐
25. Crankcase oil level at FULL mark ☐

Starting Engines

26. Oil pressure ☐
27. No fuel leaks in fuel lines, at fittings, at fuel filter,
fuel pump, carburetor ☐
28. No engine water leaks ☐
29. No engine oil leaks ☐
30. Ignition timing checked with timing light, with
idling speed at 500 RPM ☐
31. Valve tappets adjusted ☐
32. Idling speed set at 500 to 700 RPM ☐
33. Reverse gear shifts thru all positions and is in
proper adjustment ☐

Water Test Boat

Check if OK

34. Boat performance ☐
35. Engine performance ☐
36. Instruments register properly ☐
37. Top RPM wide-open throttle for one minute
after warm-up ☐

Final Check

38. All accessory equipment operated ok ☐
39. All loose equipment on boat ☐
40. All boat, engine, accessory literature ready for
new owner ☐

Inspection Completed

BY: _____

DATE: _____

LOCATION: _____

NOTES

USEFUL SERVICE INFORMATION

OWNER _____

HOME PORT _____

BOAT NAME _____

REGISTRATION NUMBER _____ STATE _____

HULL NUMBER _____

WARRANTY REGISTRATION DATE _____

ENGINE MAKE AND MODEL _____ H.P. _____

ENGINE SERIAL NUMBER _____

DRIVE SERIAL NUMBER _____

PROPELLER SIZE _____ STYLE _____

PART NUMBER _____

FUEL CAPACITY _____

KEY NUMBER, IGNITION _____ DOOR _____

RADIO CALL LETTERS _____

SELLING DEALER _____

CITY AND STATE _____

LENGTH _____

BEAM _____

DRAFT _____

VERTICAL CLEARANCE _____

ESTIMATED WEIGHT _____

TRAILER MAKE _____ MODEL _____

SERIAL NUMBER _____ GVW _____

INSURANCE COMPANY _____

POLICY NUMBER _____

PHONE NUMBER _____

SERVICE GUIDE

*REFER TO ENGINE OPERATOR'S MANUAL FOR DETAILS.

	After 1st 20 Hrs. of Operation	Every 50 Hours of Operation	Every 100 Hours of Operation	Once Each Year
Change Engine Oil	•	•		•
Replace Oil Filter	•			•
Clean Alternator External Screen	•	•		•
Clean Flame Arrester			•	•
Clean Crankcase Ventilating System	•		•	•
Check Water Pump & Alternator Belts for Tension	•		•	•
Change Water Separating Fuel Filter	•	•		•
Check Fuel System Lines & Connections for Leaks	•			•
Replace Carburetor Fuel Inlet Filter	•	•		•
Check Condition of Spark Plugs	•			•
Check Battery Electrolyte Level				•
Check All Electrical Connections	•	•		
Check Cooling System Hoses & Connections for Leaks	•			•
Tighten Engine Mount Fasteners	•		•	•
Lubricate Throttle & Shift Linkage Pivot Points	•			•
Check for Loose, Damaged or Missing Parts	•			•
Inspect Propeller for Possible Damage	•		•	•
Inspect Zinc Anodes, Replace When Necessary	•	•		•
Check Fuel Pump Sight Glass for Leaking Diaphragm	•			•
Check Exhaust System for Leaks		•		•
Inspect the Fresh Water Pump & System	•		•	•

After 20 hours, an inspection should be performed by the selling dealer at local rates and paid for by the owner. After the 20 hour check, your Seville should be taken to the selling dealer every 6 months or 100 hours of operation — or at least once a year for lube change, tune up, etc.

The inspection and service schedule above is based on average operating conditions. Under severe operating conditions, intervals should be shortened.

COMMONLY USED NAUTICAL TERMS:

abeam — object 90 degrees to center line on either side of boat
abaft — a point on a boat that is aft of another
aft — toward the rear or stern of the boat
beam — the greatest width of a boat
bilge — the lower interior area of the hull
bow — the fore part of a boat
bulkhead — vertical partition in a boat
chine — meeting juncture of topside and bottom of boat
chock — deck fitting, used as guides for mooring or anchor lines
cleat — deck fitting with arms or horns on which lines may be made fast
deck — upper structure which covers the hull
draft — depth of water required to float boat
fathom — six feet
freeboard — height of topside from water line to the deck
gunwale (or gunnel) — meeting junction of hull and deck
hatch — an opening in deck to provide access below
head — a toilet or toilet area in a boat
headroom — vertical distance between the deck and cabin or canopy top

helm — steering consol
hull — the basic part of a boat, a watertight vessel that provides buoyancy to float the weight of the craft and its load
keel — the major longitudinal member of a hull — the lowest external portion of a boat
knot — unit of speed in nautical miles per hours
lee — the side that is sheltered from the wind
port — term designating left side of the boat
scupper — holes permitting water to drain overboard from deck or cockpit
sheer — curve or sweep of the deck as viewed from the side
starboard — lateral direction term designating right side of the boat
stern — the aft end of a boat
stern drive — inboard/outboard unit (I/O)
stringer — longitudinal members fastened inside the hull for additional structural strength
transom — vertical part of stern
wake — disturbed water that a boat leaves behind as a result of the forward motion
windward — toward the direction from which the wind is blowing

INDEX

Basic Maneuvering	11	Launching Record	35
Boat Trim	12	Loading	9
Battery Maintenance	19	Nautical Terms	39
Bilge Blower	23	Oil Pressure	22
Maintenance	24	Propellers	15
Bilge Pump	24	Safety	27
Maintenance	24	Service Guide	38
Boat Construction	4	Speedometer	22
Buoy Guide	13	Maintenance	22
Canvas	24	Steering System	17
Drain Plug	25	Tachometer	23
Electrical System	19	Tools	33
Engine	26	Towing	30
Cold Starting	26	Trailing & Launching	8
Fiberglass Maintenance	4	Warranty	3
Fuel System	18	Water Temperature Gauge	22
Fueling Instructions	31	Winterizing	7
Ignition	22	Wiring Diagram	34

