



1997 COBALT BOATS

Your concern for the proper operation, care and maintenance will provide you with many years of boating satisfaction.

This manual has been prepared to acquaint you with the operation and maintenance of your Cobalt. We suggest you read this manual carefully and follow the recommendations to assure enjoyable and trouble-free operation.

As you read this manual, remember that “common sense” and “courtesy” are the most valuable traits you can have to fully enjoy safe boating.

It is also to your own personal advantage to become well acquainted with the rules and general “know how” of boating. For service and assistance, remember to call on your Cobalt dealer. He will be happy to assist you in matters concerning maintenance, warranty and any other questions you may have concerning your Cobalt.





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EQUIPMENT AND GOVERNMENT REGULATIONS

LIGHTS

Motor boats underway between sunset and sunrise must display proper lights. A boat at anchor must display a white anchor light less than 20 feet over the hull and must be visible for at least one mile to a boat approaching from any direction.

The lighting on your Cobalt complies with N.M.M.A., U.S. Coast Guard and A.B.Y.C. standards.



NOTE

Consult your local and regional navigational authority for any additional lighting requirements.

WHISTLE OR HORN

All boats over 16 feet in length are required to have an operational horn or whistle which is audible at least one mile. Your Cobalt is so equipped.



NOTE

Check your horn periodically for proper operation.

FIRE EXTINGUISHER

All I/O boats are required to carry appropriate portable fire extinguishers. Your Cobalt is “standard equipped” to meet the fire extinguisher regulations.



NOTE

Check your fire extinguisher gauge frequently to determine proper charge.

LIFESAVING DEVICES

All boats must carry one Coast Guard approved type 1, 2, or 3, (wearable) device for every person on board. In addition, each boat over 16 feet in length is required to carry one approved type 4 throwable life saving device such as a ring life buoy or buoyant cushion. When the approval stamps are no longer legible and the equipment cannot otherwise be identified as being approved, the equipment must be replaced with currently approved equipment.

ADDITIONAL RECOMMENDED EQUIPMENT

Cobalt Boats wants your recreation time to be enjoyable and without incident. We suggest the following items be aboard in the event of an accident or problem situation:

- Compass
- Distress signal flares
- Flashlight
- First Aid Kit
- Anchor and anchor line
- Tool Kit



NOTE

It is recommended that you consult with your dealer for the appropriate types of safety devices for the area in which you boat.

INLAND LAKES

All boats operating on inland lakes are under the jurisdiction of state governments. You should check with your dealer for the source of the rules and regulations that will affect you on your local inland waterway.

INTRACOASTAL WATERS

Regulations governing equipment necessary while operating in intracoastal waters are different than inland rules. Make sure you have the proper equipment on board. The best source for information regarding rules and regulations for intracoastal waters is the U.S. Coast Guard.



NOTE

The U.S. Coast Guard has all the information you will require for safe and legal operation of your boat in intracoastal waters. They also provide numerous informational pieces regarding general practices for safe and enjoyable boating. Your dealer will advise you on how to contact the U.S. Coast Guard or you may wish to call 202/267-0973.



NATIONAL MARINE MANUFACTURERS ASSOCIATION CERTIFICATION

National Marine Manufacturers Association is a national trade association serving all elements of the Recreational Boating Industry.

Its members include manufacturers of all types of boating equipment - outboard and inboard boats, marine engines, outboard motors, boat trailers, boating accessories and supplies.

N.M.M.A. certification means that you, a new Cobalt owner, can rest assured lighting, ventilation, steering, flotation, capacity, fuel system, and anything that will insure your safety is within the rigid U.S. Coast Guard requirements. Your Cobalt is N.M.M.A. Certified, and meets U.S. Coast Guard and A.B.Y.C. standards.



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INTERIOR/EXTERIOR CARE



VINYL INTERIOR/UPHOLSTERY CARE

The vinyl fabric in your Cobalt's interior has been especially selected to take the tough punishment of the elements and hard usage of an active boater. With all its toughness and wear qualities, it is no match for a screwdriver you forgot to take out of your pocket before sitting down - avoid sharp objects coming in contact with vinyl.

As you probably know, the vinyl in your Cobalt is treated with PreFixx. However, this does not mean that it cannot be stained. There are three families of sunscreen ingredients which may contribute to the staining of the vinyls in your Cobalt.

- Aminobenzoic acids - e.g. PABA
- Hydroxy benzophenones - e.g. Oxybenzone
- P-methoxycinnamic acid - e.g. Octyl methoxycinnamate

This list should not be considered inclusive, although it does represent a large selection of sunscreens which are known to stain vinyls, even treated with PreFixx. In actuality, almost any sunscreen with a high percentage - two percent or above - of active ingredients is a potential stainer.

Special care should be taken to prevent dark colored rubber products from coming in contact with the vinyl upholstery. The optional mooring cover comes with black rubber straps and these straps could stain the vinyl permanently.

CARE AND CLEANING - VINYL & FABRICS

Day-to-day soil. Remove ordinary dirt and smudges with a mild soap and warm water solution. Dry with a soft, lint-free cloth or towel. For more difficult stains, use of a stronger detergent is recommended; provided the detergent manufacturer's instructions are followed closely.

Special cleaning problems. The following steps are recommended to clean stains on PreFixx-protected vinyl upholstery. Many difficult stains can be removed when

these cleaning agents are used in the following order.

Step 1 cleaners: Nonabrasive household cleaners to be used with a cloth, damp sponge or fine bristle brush.

- All-Purpose Spray Cleaner.
- Clorox™, Soft Scrub® with bleach.
- Household cleaners and bleaches. Rinse cleansed area with fresh water and dry with a clean cloth.

Step 2 cleaners:* Solvent-type cleaner to be liberally applied with a cloth, damp sponge or fine bristle brush.

- Rubbing alcohol (isopropyl alcohol).
- Lighter fluid (naphtha). Rinse cleansed area with fresh water and dry with a clean cloth.

Step 3 cleaners: Strong, active cleaners to be applied with a soft cloth or damp sponge. Use no more than six rubs; if stain persists, contact manufacturer. Dry with another cloth, then rinse with clear water and dry.

- Nail polish remover (acetone/water)



NOTE *It is extremely important to clean the stained area as quickly as possible, making sure the recommended cleaning steps are followed in order.*



CAUTION *THESE SOLVENTS ARE HIGHLY FLAMMABLE. EXERCISE PROPER CARE IN CLEANING AND NOTIFY PERSONNEL IN AREA OF DANGER. WEAR RUBBER GLOVES DURING ALL CLEANING ACTIVITY. USE CAUTION IN CLEANING AROUND STITCHING AND WOODEN OR OTHER DECORATIVE TRIM, SINCE THESE SOLVENTS COULD SERIOUSLY DAMAGE SUCH AREAS.*



DANGER *FLAMMABLE LIQUIDS ARE EXTREMELY DANGEROUS AND SHOULD BE USED ONLY WITH THE GREATEST OF PRECAUTIONARY MEASURES. DO NOT USE A FLAMMABLE LIQUID IN YOUR BOAT WHEN ANOTHER CLEANER CAN BE USED.*

Recommended Cleaning solutions for PreFixx-coated Nautolex vinyls

Staining Agent	Cleaning Step
Spray paint	1 - 2 - 3
Ballpoint pen	1 - 2 - 3
Lipstick	1 - 2 - 3
Yellow mustard	1 - 2 - 3
Bird droppings	1 - 2 - 3
Crayons	1 - 2
Eye shadow	1 - 2
Oily spot	1 - 2
Petroleum Products	1 - 2
Coffee	1
Tea	1
Hair oil tonic	1
Blood	1
Urine	1
Grape juice	1
Olive oil	1
Chocolate	1
Ketchup	1
Baby oil	1

DARK STORAGE AREAS

Often, when a boat is stored completely covered or in a dark building, the vinyl will darken or become “dingy” looking. If this happens, simply place the boat in direct sunlight for a few hours and the vinyl will brighten up.

LEATHER CARE

For Spots and Spills wipe up excess liquid immediately with a clean absorbent cloth or sponge. If necessary, use clean luke warm water only and let air dry naturally. If water is used, clean the entire area where the spot occurred. An example would be the entire seat cushion or entire arm. Do not dry wet areas with hair dryers, etc.

For Stubborn Spots and Stains use a mild non-detergent cleaner such as a bar of Ivory soap or Amway L.O.C.. Apply the soap to a clean wet sponge, wash, then rinse well. Let air dry naturally.

For Butter, Oil or Grease wipe excess butter, oil or grease off the leather with a clean dry cloth, then leave it alone as the spot should dissipate into the leather in a short period of time. Do not apply water or try to wash a butter, oil or grease spot.

Do Not Use Saddle Soap, cleaning solvents, furniture polish, oils, varnish, abrasive cleaners, soaps or ammonia water.



NOTE

1) These are recommended or suggested methods of cleaning, but the manufacturer is not responsible for damage incurred while cleaning. 2) Always try the cleaning method in a hidden area first to convince yourself of the results.

VACUUMING

A very effective and easy way to keep your interior ship shape is giving it a good vacuuming. You may use your own canister type or the ones available at a car wash. The vacuum cleaner allows you to reach in tight areas such as under the bow, jump and lounge seats. It's also a great way to clean up any debris in the bilge area. (If you're at a car wash, it's a good idea to use the pressure nozzle to wash the bilge area prior to vacuuming, using care not to directly spray the engine, carburetor, distributor, alternator or starter.)

CARPET CARE

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The carpet in your Cobalt is made of the finest materials available. Scrubbing with soapy water will handle most tough jobs. A simple hosing for mild cleanups will bring out that new look. If your Cobalt has snap-in carpet you can remove it and power wash at a coin operated car wash. Please thoroughly air dry before reinstallation into your boat. Your dealer can suggest methods of cleaning difficult stains in your carpet.

**DANGER**

FLAMMABLE LIQUIDS ARE EXTREMELY DANGEROUS AND SHOULD BE USED ONLY WITH THE GREATEST OF PRECAUTIONARY MEASURES. DO NOT USE A FLAMMABLE LIQUID IN YOUR BOAT WHEN ANOTHER CLEANER CAN BE USED.

TEAKWOOD CARE, 22 TRADITION

If the care of teakwood is completely ignored, you can expect its color to turn gray. In addition to the fading of its color, the surface finish will tend to become rough. This roughing gradually becomes more apparent as the oil in the wood evaporates or dries out causing a shrinking and separation of the wood's grain.

For appearance sake and to avoid this "roughing", it is suggested that you use a periodic application of Cobalt teak oil. Instructions for use are on the label.

CANVAS TOP CARE

Boat canvas, in most cases, is subjected to more severe punishment than any other type of canvas or fabric item. Moisture, dirt, heat, ultraviolet rays, salt water, and chemicals from industrial fallout are all factors anxious to destroy your boat canvas. These elements can do serious damage if left unchecked. Following are some ways to slow the destructive process of canvas:

Moisture can cause shrinkage, mold, and mildew. The best method of prevention is to allow all canvas items to dry thoroughly while installed on the boat. Shrinkage can occur anytime an article is allowed to dry while loose. Most shrinkage will

occur the first few months after initial installation. When canvas items are erected on the boat and properly adjusted, shrinkage will only occur in areas of looseness. Mold and mildew can be avoided by keeping the canvas clean and well ventilated.

Dirt can create a starting point for mold when moisture is present. Cleaning periodically with a mild detergent and water while unit is erected on the boat will extend the canvas life and provide a better appearance. Cleaning can be accomplished with a sponge, soft scrub brush or by using one of the serve-yourself car washes. The unit should always be erected fully and adjusted to a tight, smooth appearance before washing. Allow unit to air dry thoroughly before removing.

Chemicals from industrial fallout can cause decay of vinyls and fabrics if allowed to accumulate. There are many different types of chemicals involved. Keeping your canvas clean and covered is the best answer to prevent decay from chemical fallout.

Heat. Any vinyl coated fabric when enclosed in a polyethylene container and subjected to sunlight is subjected to potential cracks in the vinyl component and a stiffening effect on the fabric. Polyethylene bags or tubes are meant only for protection during shipping and handling.



NOTE

Do not use polyethylene bags or tubes for stowage of canvas.

Ultraviolet degradation. Most synthetic fabrics or nylon parts today are U.V.R. treated to resist ultraviolet effects. The best protection, however, is to avoid long periods of stowage in areas subject to direct sunlight.

Salt water. Corrosive effects of salt water, as well as chemicals from industrial fallout, can corrode brass or aluminum fittings or fasteners. Your canvas has snap fasteners made of stainless steel. These can be protected by keeping them clean and occasionally lubricating them with petroleum jelly.

In summary, the things you can do to protect your canvas items for extended years of enjoyment are:

1. Keep it clean. **DO NOT** use harsh cleaners.
2. Side curtains and the rear window demand extra care to prevent scratching. Ideally, they should be washed with clear water, preferably hosed off, wiping them with your hand at the same time. Do not attempt to use a cloth or chamois skin. Any dirt or grit in the cloth may result in scratches. Clear water and using your (clean) hand is the safest way. When storing canvas with windows or side curtains, they should be rolled rather than folded to prevent kinking and cracking.
3. Be sure that the top is completely dry before stowing.
4. Keep unit well ventilated when stowed. **NO POLY BAGS.**
5. Keep fasteners clean and lubricated.

**NOTE**

The materials used to produce your boat top and curtains are the best obtainable. Reasonable care will assure them of a long life and many years of service.

For storage, we recommend an optional mooring cover of duck canvas that has the ability to breathe. Do not use convertible tops, side curtains, aft curtains, tonneau covers, etc. for long term storage. These tops were not designed for long term storage and do not provide good protection for your boat. Adequate ventilation is not possible and mold/mildew will form. For more information on appropriate covering for long term storage, please see your Cobalt Dealer.

3 FIBERGLASS FINISH CARE

The finish on your Cobalt is known as gelcoat. The gelcoat used by Cobalt is the finest available on the market today. It is also applied thicker than the average in the marine industry giving more protection to your new boat. However, with all its properties it is not impervious to the elements and many types of water conditions.

The best way of taking care of your gelcoat finish is with prevention and proper care.

After each use, it is a good idea to rinse the gelcoat surface with fresh water.

Example: If a boat has been used in brackish or salt water, a mild soap should be used in the washdown. A non-abrasive detergent is recommended. When removing your boat from the water for trailering or storage, wipe off the finish with a damp towel or chamois. When the finish is wet, the water stains will normally come off easily. If left to dry, these water stains will require much more effort to remove.

If you cover your boat between uses, a mooring cover should be used to protect the finish from direct sunlight. Do not cover with anything that will not allow moisture to evaporate. Remember, some products such as sheet plastic trap moisture against the gelcoat surface.

Waxing. Even the best gelcoat is unable to stand up to direct sunlight over long periods of time without damage or dullness occurring. A good coat of an automotive paste wax, especially a carnuba wax, will help seal and protect the gelcoat finish. This will also improve the appearance of the finish. There are waxes and polishes designed for fiberglass but automotive paste wax with carnuba will render the best protection.

Covers. Although thorough and frequent waxing will slow the aging process, the only way to prevent the aging process is to keep sunlight from the finish when the boat is not in use. Tonneau covers, although supplying adequate short term protection to the interior, will not protect the gelcoat finish. Cobalt recommends the use of duck canvas mooring covers totally covering the top of the boat for maximum protection to the deck gelcoat surfaces. Additionally, if your boat is to be stored

where the sun is constantly on the side or transom of the boat, for example, you should consider having some custom skirting made to compliment the mooring cover. Please check with your Cobalt dealer for further information on this subject.

STAINLESS STEEL CARE AND CLEANING

All stainless steel is an alloy. A protective film forms on the surface giving it greater corrosion resistance than other types of metals. However, stainless steel is not stain or rust proof. When subjected to the corrosive properties of salt water, and in some cases “fresh” water, it can stain, rust, or even corrode.

The key, as in all other surfaces, is proper maintenance. The following is a list of suggestions for proper maintenance.

1. Stainless should be cleaned frequently with fresh water and a cleaner. Glass cleaner works well.
2. Remove any rust spots immediately. If left, pitting will form under these spots which is not removable. A good cleaner would be stainless, brass, silver, or chrome cleaner.
3. Protection with a good automotive wax is a good idea.
4. Do not use coarse abrasives like steel wool. Steel wool can actually cause rusting of stainless.
5. Do not clean with acids or bleach.
6. Do not let other types of metals come in contact with the stainless. An example: If a screw were replaced in a deck fitting, make sure it is stainless. If a steel screw is used, corrosion will occur.



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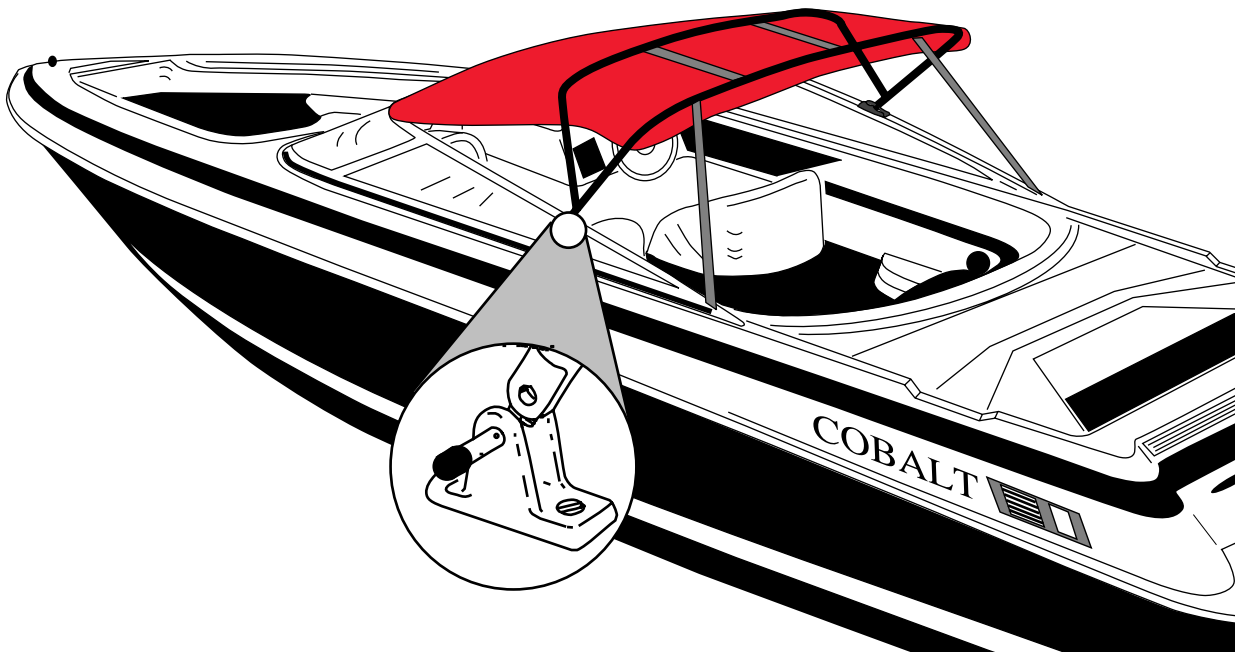
BOAT OPERATION



ERECTING CONVERTIBLE TOP

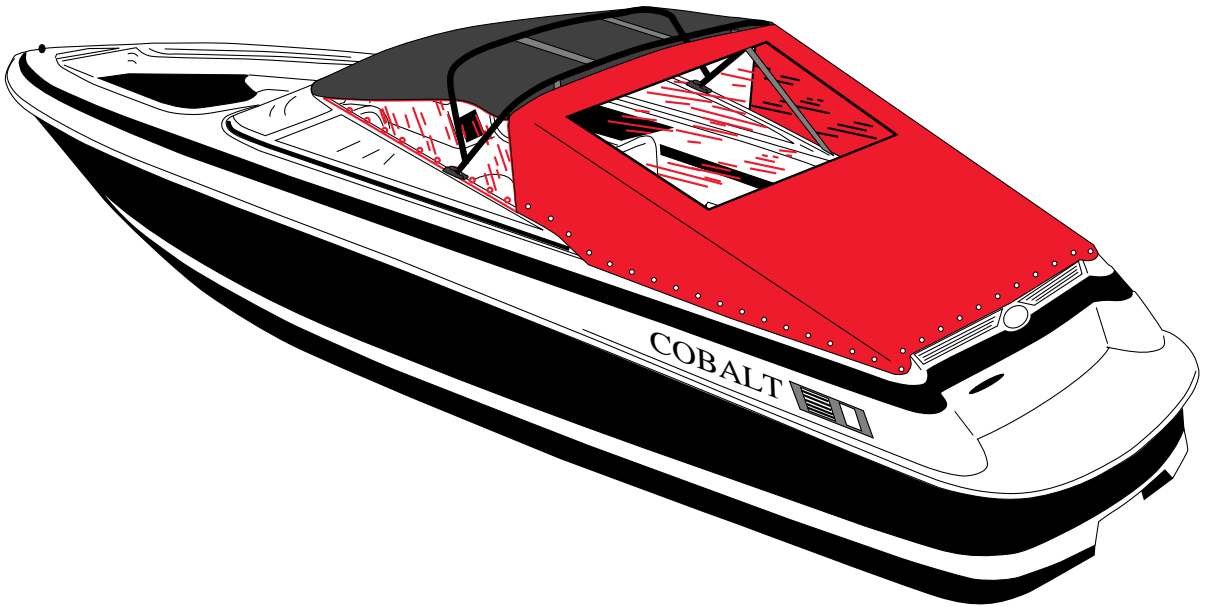
1. Remove canvas top assembly from “top storage area”.
2. Attach top bow ends to top mounts on each side of the boat. Use quick disconnect pins.
3. Remove storage boot and unroll canvas top.
4. Open frame and snap front of canvas to windshield.
5. Snap the straps to the eyelets on the windshield frame or deck.
6. Adjust straps for tight fit.

4



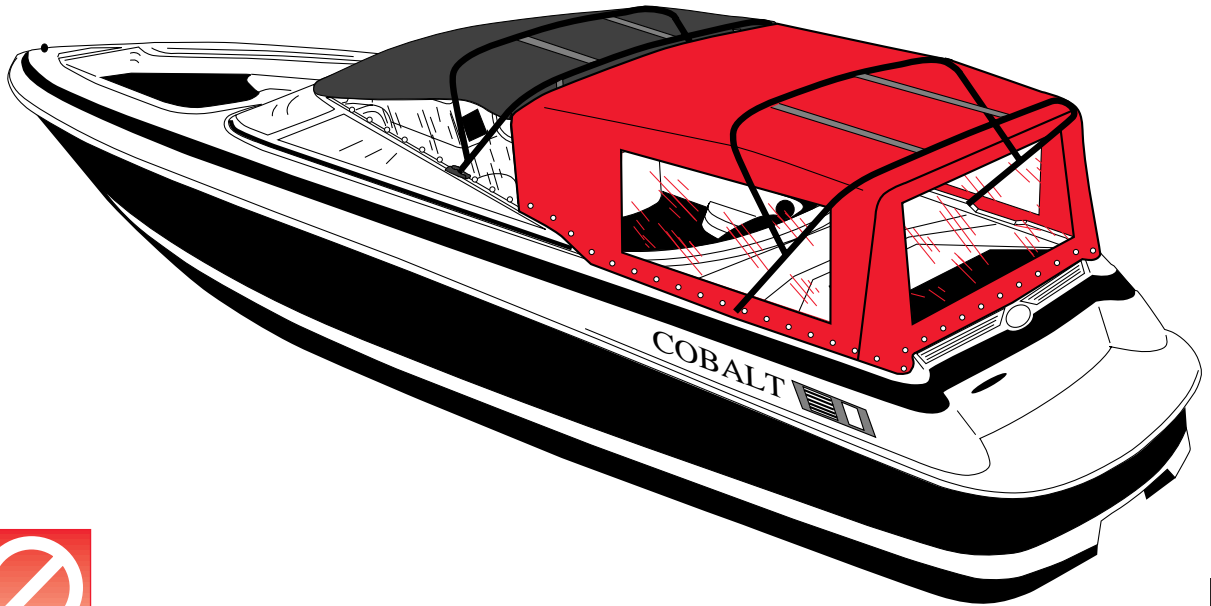
SIDE CURTAINS & STERN CURTAIN - OPTIONAL

1. Zip the side curtains to the top.
2. Snap curtains to windshield and deck.
3. Zip the stern curtain to the canvas top, snap the curtain to the deck, starting at the center rear of the curtain and working forward evenly.



CAMPER TOP - OPTIONAL

1. Install “Convertible Top” as outlined.
2. Remove “Camper Top” from storage area.
3. Attach legs to “Camper Top” mounts (toward rear of boat) on each side of the boat.
4. Remove storage boot and unroll “Camper Top” canvas.
5. Open “Camper Top” frame and zip front of “Camper Top” canvas to rear of “Convertible Top”.
6. Zip side curtains to “Convertible Top”.
7. Zip aft curtain to “Camper Top”, starting at the center rear of the curtain and working forward evenly.
8. Snap side curtains and camper top to deck and/or windshield.

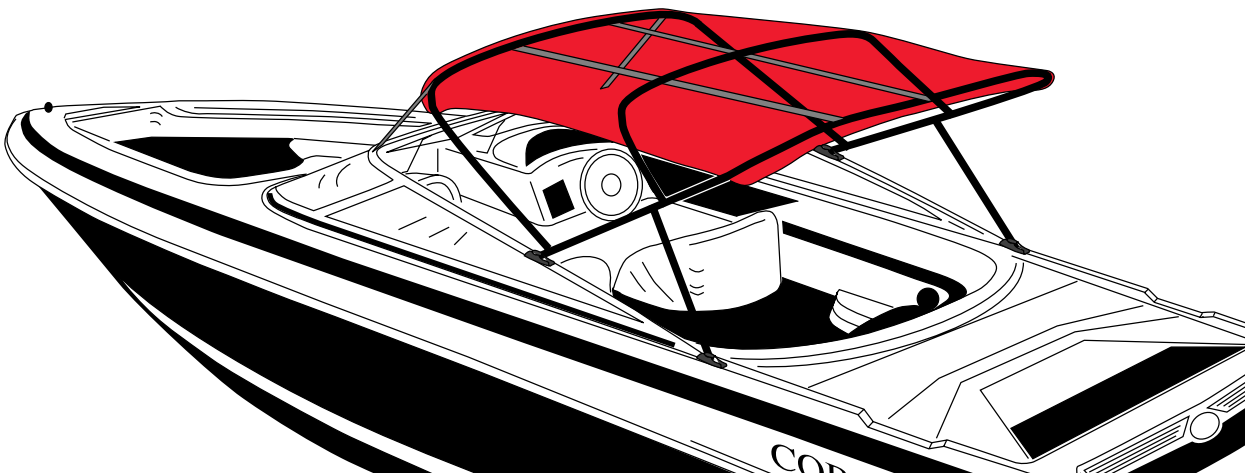
**DANGER**

DO NOT OPERATE YOUR COBALT WITH THE STERN CURTAIN OR CAMPER TOP CANVAS COMPLETELY CLOSED. THE COCKPIT MUST BE OPEN FOR FUEL COMPARTMENT VENTILATION.

4

BIMINI TOP - OPTIONAL

1. Due to the length of the bows, there is no storage provided for the optional bimini top.
2. Attach top bow to top mount on each side of the windshield wing.
3. Install support legs to top and mounting brackets on the deck aft of the windshield. Some models use adjustable straps in lieu of the support legs.
4. Attach forward straps to the eyelets on the windshield and adjust straps for tightness of the canvas.



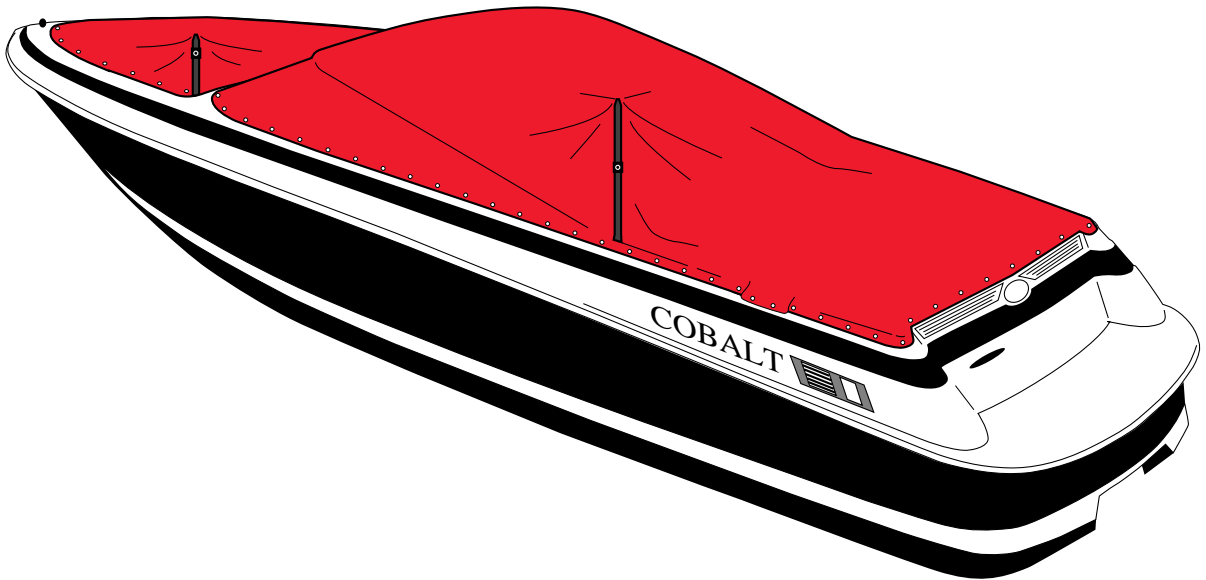
**WARNING**

THE OPTIONAL “BIMINI TOP” IS FOR LOW SPEED OPERATION ONLY, (LESS THAN 15 MPH AIR SPEED). IF IT IS USED IN HIGHER AIR SPEED THAN 15 MPH, IT COULD COME LOOSE OR COMPLETELY OFF, CAUSING INJURY TO THE OCCUPANTS OF THE BOAT.

BOW TONNEAU COVER - OPTIONAL(BOWRIDERS ONLY)

1. Open walk-thru doors.
2. Starting at bow and working aft, snap cover to boat.
3. Close windshield center door and snap the canvas to the underside of the door.
4. Install the adjustable tonneau cover pole thru the grommet and adjust to “tent” the cover.
5. Walk-thru doors may be closed if desired.

4

**COCKPIT TONNEAU COVER - OPTIONAL**

1. Unroll cover and snap to the deck starting at the center of the windshield. Snap to the forward outside edge of the windshield only.
2. Install tonneau support pole to underside of cover (just in front of rear seat) with snap and adjust pole to approximate height of windshield. Some models have two support poles.
3. Snap aft end of cover to back deck starting in center and working outboard (note: you may have to readjust the support pole for proper fit).
4. Continue snapping up sides.

MOORING COVERS - OPTIONAL

Cobalt mooring covers are made from Army Duck Canvas, a cotton material, the best material for storage of your Cobalt. It has the ability to breathe properly, a trait other materials, especially synthetics, do not have to the same degree. Mooring covers are recommended by Cobalt for any storage longer than a few days. Tonneau covers are available, but they are not designed for long term storage. They work very well for overnight and are recommended for trailering but not for anything else. Mooring covers, on the other hand, are not recommended for trailering in that they cannot be tied down tightly enough in trailering conditions to keep them from moving around slightly on the gelcoated fiberglass surface. This movement can damage the gelcoat causing a dullness or even scratching.



NOTE

For storage, we recommend an optional mooring cover of duck canvas that has the ability to breathe. Do not use convertible tops, side curtains, aft curtains, tonneau covers, etc. for long term storage. These tops were not designed for long term storage. Adequate ventilation is not possible and mold/mildew will form. For more information on appropriate covering for long term storage, please see your Cobalt Dealer.

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STOWAGE OF THE CANVAS TOP

The following is the recommended procedure for folding and storage of the top:

- a. Disconnect the straps from the side of the boat and allow them to hang free.
- b. Disconnect the top snaps from the windshield. (At this point, the two bows should still be separated.)
- c. Grasp the bows and fold them together. (Allow the canvas to gather between the bows.)
- d. Roll the canvas around the bows. (As you roll the canvas, assure its tightness and pull the side of the canvas to prevent wrinkling.)
- e. Slide the boot over the canvas and zip.
- f. Remove the top from the top mounts and stow the top in the “top storage area”.



NOTE

Make sure all canvas is completely dry before storage to prevent mildew.

CANVAS MAINTENANCE

The fabric is first soaked (with occasional agitation) in a solution with the following proportions of Clorox and Ivory Flakes.

- 1/2 cup (4 oz.) Clorox
- 1/2 cup (4 oz.) Ivory
- 1 gallon lukewarm water
- Let the fabric remain soaking in this solution until most of the stains disappear or for 20 minutes.
- The fabric may be washed in an automatic washer on the COLD cycle using 2 cups (16 oz.) Clorox and one cup (8 oz.) Ivory Flakes. Line dry the canvas.



NOTE

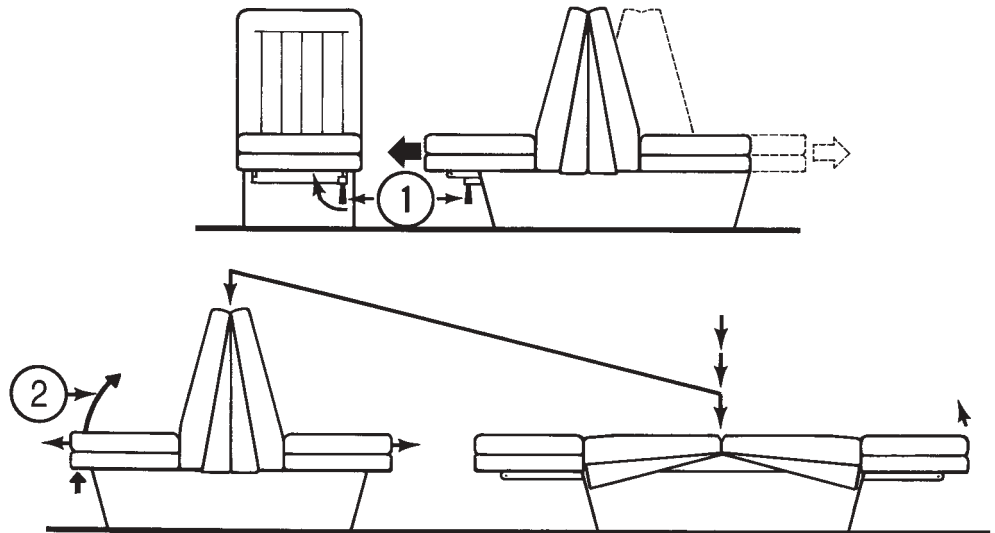
UNDER NO CIRCUMSTANCE are these fabrics to be put in HOT WATER. UNDER NO CIRCUMSTANCE are these fabrics to be run through the HOT drying cycle of an automatic dryer. FABRIC SHOULD BE LINE DRIED. UNDER NO CIRCUMSTANCE ARE THESE FABRICS TO BE STEAM PRESSED AT A DRY CLEANER.

4

If leaking occurs after washing this may be the result of insufficient rinsing. If the fabric continues to leak after a very thorough rinsing, it may be necessary to apply a coat of silicone, air drying water repellent. This should be done on a warm, sunny day, giving the application sufficient time to completely dry. Such silicone water repellents are available through Scotchgard or 3-M Company products.

SLEEPER SEAT ADJUSTMENT AND OPERATION, 22 TRADITION

The driver's seat is adjustable fore and aft. To attain desired position, lift the release handle (mounted under the forward lip of the driver's seat cushion), move seat, and release handle. Make sure handle retracts fully and seat is locked in place. The passenger's seat is not adjustable.



To adjust the sleeper seat to the reclining position, grasp the forward edge of the seat cushion (2) and lift until the mechanism releases. Extend the seat into the reclining position. On the driver's side, it will also be necessary to lift the release handle (1) to slide the front of the mechanism to its most forward position. Reverse this procedure to replace in sitting position.

CAPTAIN'S CHAIRS ADJUSTMENT AND OPERATION

Pedestal Mount - all models except 190 The captain's chairs are adjustable fore and aft and also rotate. There are two large handles under the seat. Turning counter-clockwise loosens the slide mechanism and swivel and clockwise tightens them. Loosen either or both, place the chair in the desired position and tighten securely to hold in place.

Your captain's chair(s) has the flip-up position for greater visibility and maneuverability while docking. You can sit on the raised cushion or stand in front of the cushion. We recommend the driver and passengers remain seated at any speeds greater than idle.

Model 190 The driver's captain's chair is adjustable fore and aft and also rotates. There is a large handle on the inboard side of the mechanism that when loosened, allows the seat to slide fore and aft.

To rotate the seat assembly, there is a handle on the forward edge of the mechanism that can be lifted. The chair can be turned while holding the handle up. Releasing the handle will allow the rotation mechanism to lock in increments of 45°.



WARNING

DRIVING WHILE STANDING UP IS AN EXTREMELY HAZARDOUS PRACTICE. DO NOT DRIVE WHILE STANDING AT SPEEDS GREATER THAN "IDLE SPEED".



CAUTION

ALL SEATS MUST BE IN A LOCKED/SECURED POSITION WHILE THE BOAT IS UNDERWAY.

MOTOR BOX ASSEMBLY



WARNING

Manual - The motor box raises and lowers manually. Do not allow to slam shut when closing.

RUNNING THE ENGINE WITH THE MOTOR BOX OPEN EXPOSES ROTATING MACHINERY WHICH CAN CAUSE INJURY TO THE OCCUPANTS OF THE BOAT.

Electric - The electric motor box assembly is controlled by a switch on the dash. If you experience a battery failure, the assembly can be opened manually. In the 272 make sure the side seat is completely closed or the electric motor box will not open.

**CAUTION**

THE MOTOR BOX IS HEAVY. WHILE OPENING, ASK A PASSENGER TO PROPERLY SECURE THE SAFETY SUPPORT ROD LOCATED ON THE UNDERSIDE OF THE ASSEMBLY (ONE ON EACH SIDE IN A 272) INTO THE FLOOR RECEPTACLE.

**WARNING**

RUNNING THE ENGINE WITH THE MOTOR BOX OPEN EXPOSES ROTATING MACHINERY WHICH CAN CAUSE INJURY TO THE OCCUPANTS OF THE BOAT.

4

Bench Seat Lounge Position (22T) Release the slide bolts on the front of the seat cushion. This will allow the cushion to slide forward forming a berthing area.

**CAUTION**

THE SEAT SHOULD BE IN THE UPRIGHT AND LOCKED POSITION WHEN THE ENGINE IS RUNNING.

CUDDY CABIN ACCESS DOOR

Sliding Door, 233, 253, 293 The sliding door assembly can be in the open or closed position while running. Make sure the door is secured in either the open or closed position. Do not allow to slide free.

INSTRUMENT PANEL(PLEASE REFER TO PAGES 4.11 - 4.14)

1. Fuel Gauge - shows approximate amount of fuel remaining in tank.
2. Voltmeter/Dynamo - shows the condition of charge in the battery. It only indicates while the ignition is in the "ON" position. With the engine at idle or not running, it may show as low as 10 to 12 volts. With the engine running at cruising speeds and above, it should show 12 to 14 volts.
3. Speedometer (Miles Per Hour)
4. Tachometer - (Revolutions Per Minute)
5. Oil Pressure Gauge - Pressure can vary according to type of engine. It is normal

for a hot engine to have low pressure at idle, (depending on type of oil, pressure may drop as low as 10 PSI at idle).

Please consult the engine owner's manual supplied with your boat concerning the oil pressure the engine in your boat should attain.

6. Temperature Gauge - Temperature may fluctuate slightly while running. Maximum temperature may vary depending on type of engine.



WARNING

SHOULD WATER TEMPERATURE REACH 180 DEGREES FAHRENHEIT, YOUR ENGINE IS OVERHEATING AND SHOULD BE CHECKED IMMEDIATELY FOR PROBABLE CAUSE.

7. Trim Gauge - Shows the position of the drive unit in reference to the bottom of the boat.

8. Horn Button - The horn, itself, is located under the deck.

9. 12 VDC Receptacle

10. Two Position Switch - Controls equipment as labeled.

11. Three Position Exterior Light Switch NAV. position - navigation (running) lights, bow light and stern light.

Center position - off.

ANC. position - stern light only.



WARNING

NEVER OPERATE YOUR BOAT AT NIGHT WITHOUT ALL OF THE REQUIRED LIGHTS OPERATING. (THIS INCLUDES BOW LIGHT AND STERN LIGHT.)

12. Circuit Breakers - Push to reset if necessary. If the button continues to pop out, consult your Authorized Cobalt Dealer.

13. Ignition Key Switch



NOTE

Items 14 thru 17 apply to 22T only.

14. Low Fuel Indicator - When ignition is first turned on indicator will momentarily light. It will indicate with approximately 1/8 tank or less of fuel.

15. High Temperature Indicator - When ignition is first turned on indicator will

momentarily light. It will indicate when engine temperature exceeds approximately 170 degrees.

16. Low Oil Pressure Indicator - When ignition is first turned on indicator will momentarily light. If the engine is not started, and the ignition key is left on, it will indicate after approximately 30 to 60 seconds (warm up). It will immediately indicate when oil pressure drops below 5 - 7 lbs.



NOTE

Many V-8 engines will idle when hot with pressure in the 5-7 pound range which will make the indicator light flicker slightly. This is normal. If the light indicates steadily, have your dealer check the system before further use.

17. Low Voltage - When ignition is first turned on indicator will momentarily light. It will indicate if the electrical system drops below 10.8 volts. If the engine is not running with the ignition on, or at a dead idle, and you have many electrical items turned on such as lights, blower, pump, etc., the light may indicate. If the engine is accelerated above approximately 1500 RPM, the light should go off after a few seconds. If it does not, please consult your Authorized Cobalt Dealer.

18. Motor box electric actuator - Controls motor box electrically. If battery is low or disconnected, the motor box can be raised manually. Simply grasp the lower forward edge of the assembly and raise. Use the safety support rod to support the assembly in the open position.



NOTE

The motor box assembly is very heavy. Caution should be exercised when opening manually.

19. Hour meter - Indicates engine running time.



NOTE

Items 20 - 22 are dealer adjustable to suit your individual needs.

20A. Depth Sounder, Lowrance - 22T, 272. Your Cobalt is equipped with a Lowrance Depth Sounder. Included in your owners packet are the instructions pertaining to the operation of this unit. Also, your dealer can help with its operation.

20B. Depth Sounder Humminbird- All models except 22T & 272. Your Cobalt may be standard or optionally equipped with a Humminbird Depth sounder. Included in your owner's packet are the instructions pertaining to the operation of this unit. Also, your dealer can help with its operation.

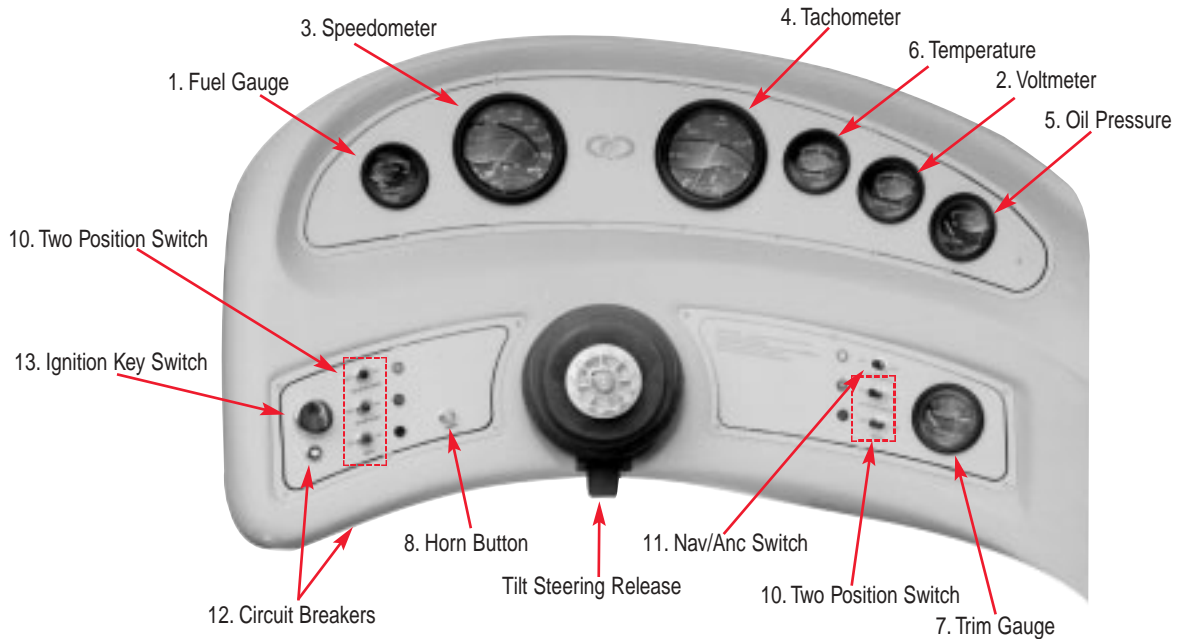
21. Outside water temperature gauge - optional. Indicates outside water temperature when ignition is in on position. It may not be accurate at speeds above 30 m.p.h..

22. Compass - 232 & 252. Your Cobalt is equipped with an electronic compass. The

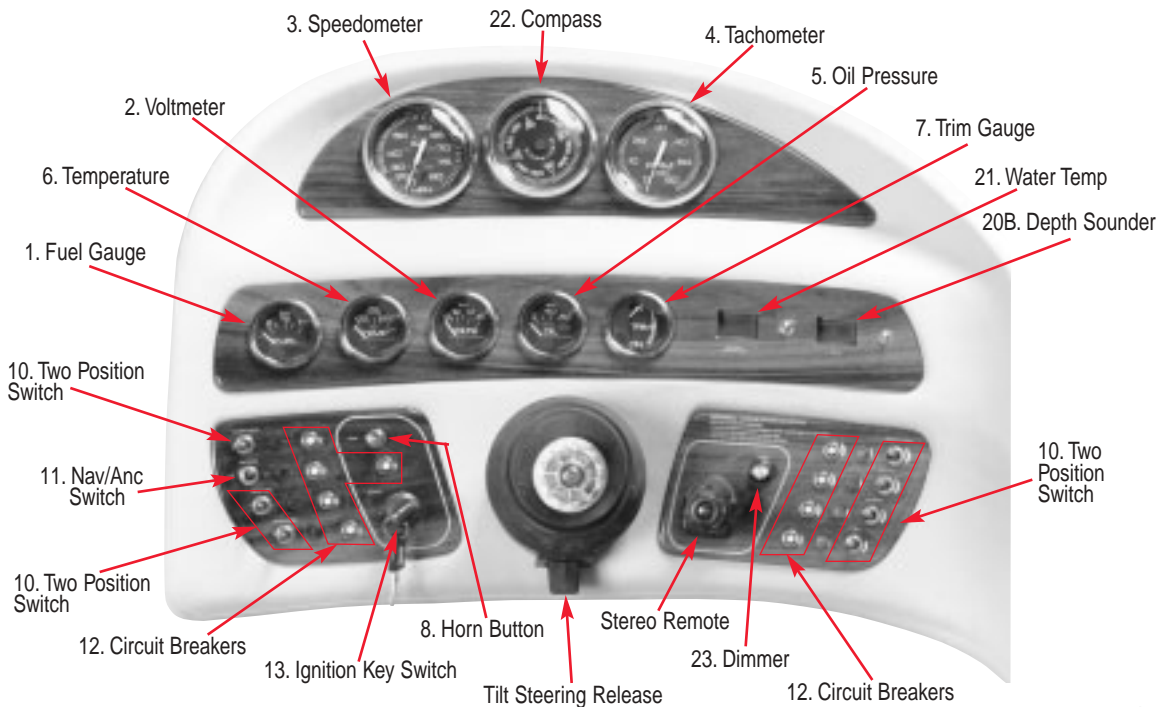
sensor is located in the anchor locker and is adjustable. Please consult with your Cobalt dealer for further information.

23. Dimmer Switch - All models except 190. Controls intensity of dash lights including the optional compass light.

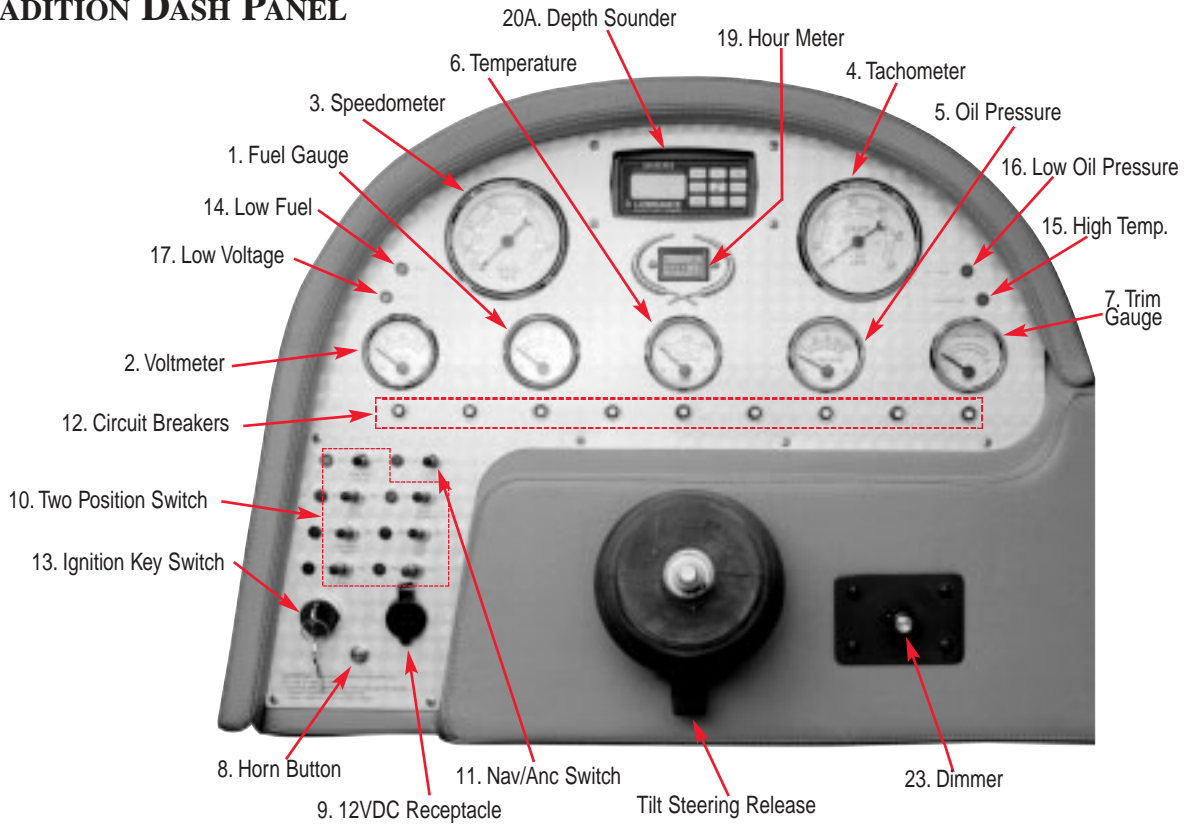
190 DASH PANEL



200, 220 DASH PANEL

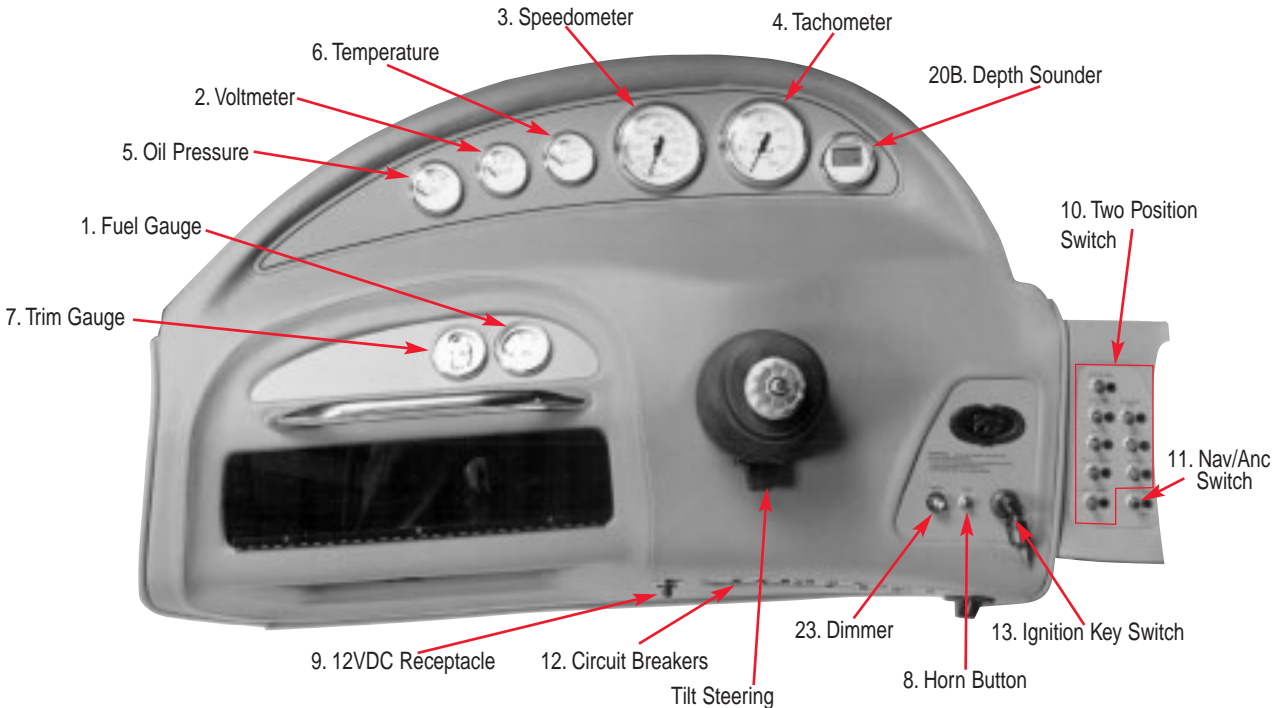


22 TRADITION DASH PANEL

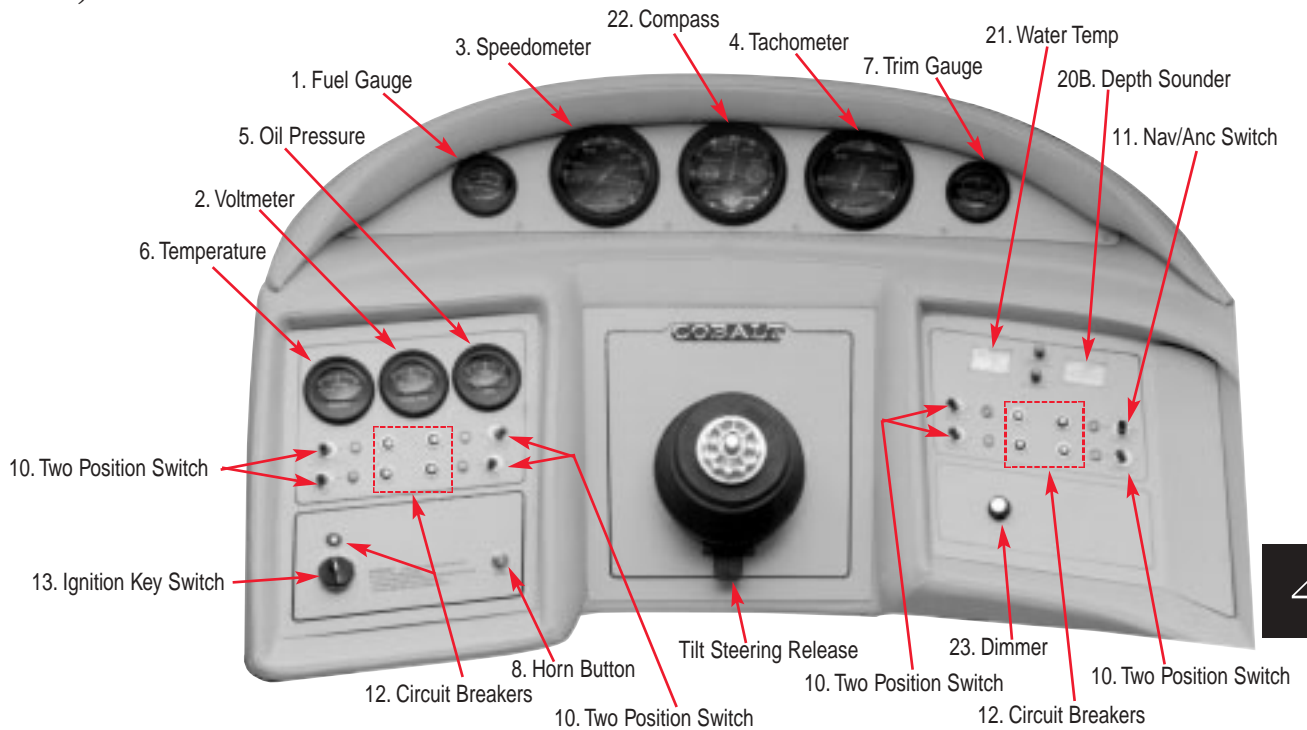


4

23LS DASH PANEL

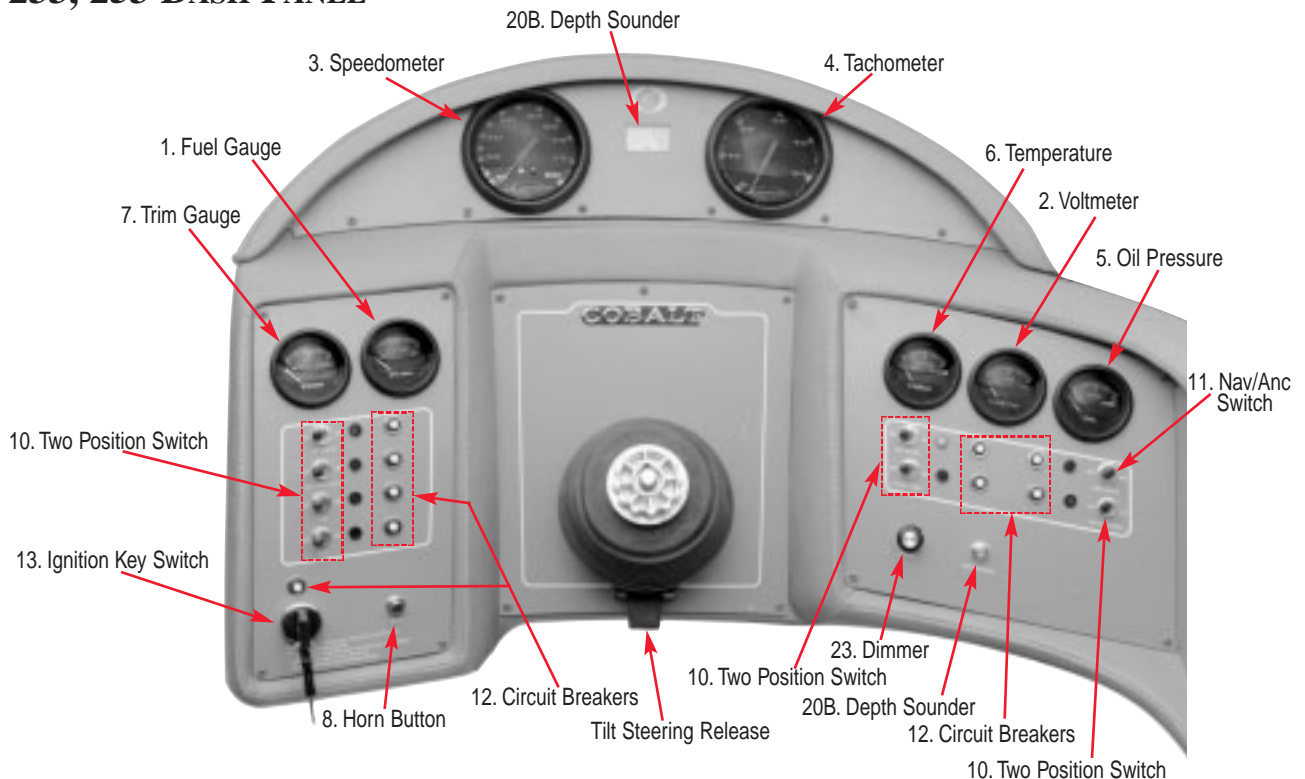


232, 252 DASH PANEL

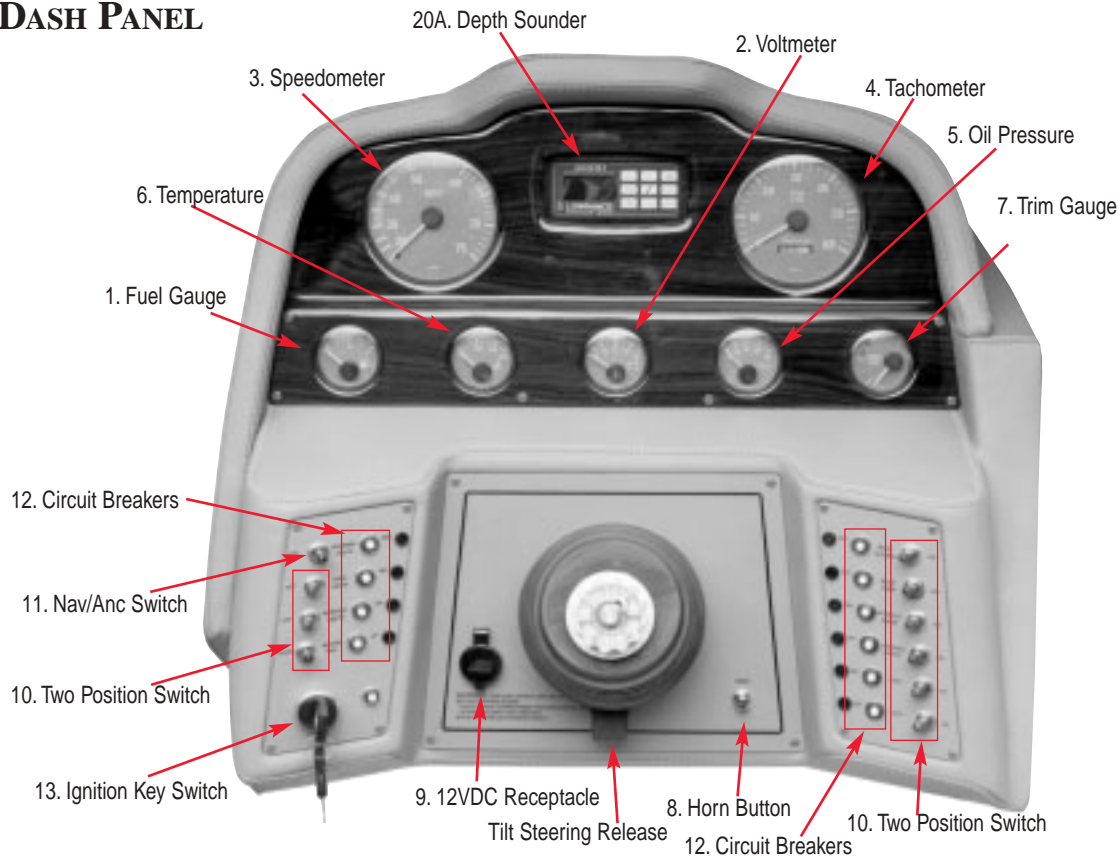


4

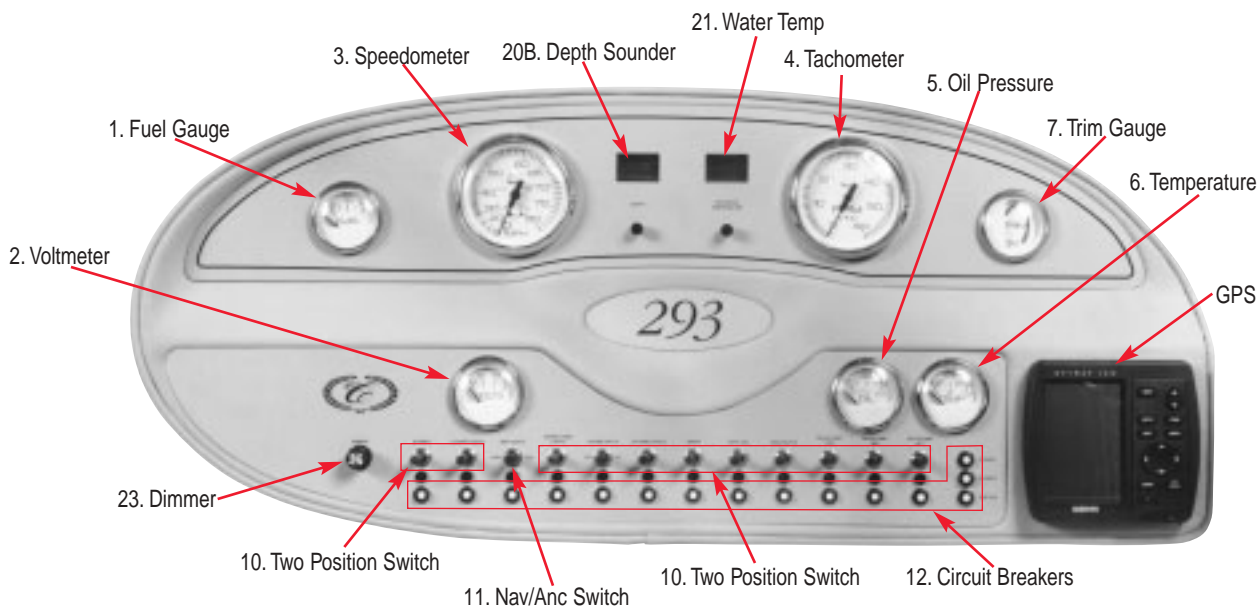
233, 253 DASH PANEL



272 DASH PANEL



293 DASH PANEL



ENGINE CONTROL

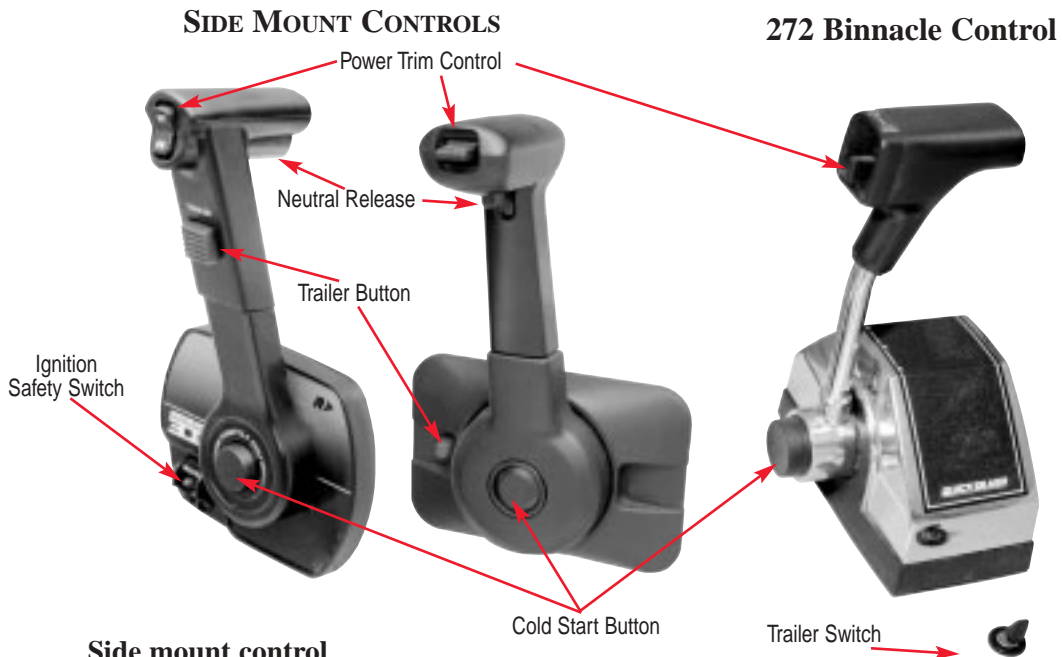


NOTE

The engine controls shifting, throttle and incorporates the power trim control which is covered in another section entitled “Power Trim”.

We cannot overemphasize the importance of proper use of the throttle/shift control, especially from the standpoint of safety. Please consult the engine owner’s manual supplied with your new Cobalt and consult your Authorized Cobalt Dealer for specific instructions about your throttle/shift control.

The following are general instructions:



Side mount control

The engine will start only in neutral. To move handle from neutral position squeeze the button on the handle. Moving handle forward engages forward gear initially. Continuing forward movement will advance throttle. Moving handle aft engages reverse gear initially. Continued aft movement will advance throttle.

Cold Starting - While handle is in the neutral position, depress button in the center of the bottom of the handle and move forward. Please consult the engine owner’s manual.

BINNACLE MOUNT CONTROL

The operation of this control is the same as the side mount control except there is no button on the handle to release the control from neutral. All other throttle shift functions remain the same.

**WARNING**

JAMMING THE THROTTLE INTO THE FORWARD OR REVERSE POSITION CAN CAUSE A SUDDEN, UNCONTROLLABLE BURST OF SPEED. DO NOT JAM THE THROTTLE LEVER FORWARD OR BACKWARD.

POWER TRIM**General**

The power trim changes the drive unit angle in reference to the transom of the boat. Regardless of engine type, a few basic operating techniques should be applied.

1. The drive unit should be lowered fully prior to initial acceleration.
2. After the boat has attained planing speed (18-24 MPH), the trim should be raised for maximum speed and handling characteristics.
3. If the trim is raised too high, porpoising (bouncing) and cavitation (propeller slippage) can occur.
4. It will be necessary to readjust the trim angle as boat speed changes and the attitude of the boat changes. Also, load changes in the boat can require readjustment of the trim angle.

4

IGNITION SAFETY SWITCH

Your Cobalt is equipped with an ignition safety switch. It is located on the face of the side mount control or near the lower edge of the driver's control panel.

The driver should always attach the lanyard to his or her person. If the driver leaves the driver's station, the lanyard will shut off the ignition immediately preventing the boat from moving under power.

If the lanyard is lost, the switch may be overridden for temporary engine operation but only in emergencies. Contact your Cobalt dealer immediately if a replacement lanyard is needed.

**NOTE**

If this occurs, the engine must be placed in neutral and restarted immediately to prevent internal damage to the engine. Please consult your Cobalt dealer for further information.

**CAUTION**

DO NOT ALLOW YOUR COBALT TO BE OPERATED WITHOUT THE PROPER USE OF THE IGNITION SAFETY SWITCH AND LANYARD.

STEERING SYSTEM

The steering system in your Cobalt is the finest available in the boating industry today. It is a mechanical system, with power assist in all installations.

Steering/Propeller Torque

Steering or propeller torque is always present in any drive system. In some systems, it is more noticeable than in others. Your boat has power steering and you should not encounter this torque to any significant degree. If you encounter movement in the steering wheel when released, please check with your dealer. It may be necessary to adjust the power steering assembly. These adjustments should only be made by a qualified service person. The steering system in your Cobalt is one of the most important systems and should be checked on a regular basis by an Authorized Cobalt Service Dealer for proper operation.

Wandering/Fishtailing

Wandering is a characteristic of all deep vee bottom boats at slow speed. There is no cure for wandering, however, a very basic operational technique can be applied which will minimize this characteristic. If the steering wheel is moved back and forth to compensate for wandering, invariably, the situation will be accentuated. If the steering wheel is left in a centered position, the boat will wander back and forth slightly, however, the overall course of the boat will be a straight one.



WARNING

THE STEERING IS THE MOST IMPORTANT SYSTEM IN THE ENTIRE BOAT FROM A SAFETY STANDPOINT. HAVE THIS SYSTEM INSPECTED AND MAINTAINED ON A FREQUENT, PERIODIC BASIS BY A QUALIFIED SERVICE TECHNICIAN.

WARNING LABELS

Your Cobalt has several warning labels displayed to point out safety hazards. The areas are as follows:

Boarding Ladder/Swim Platform

**DO NOT USE BOARDING LADDER
WHILE ENGINE IS RUNNING**

Engine Flame Arrestor



WARNING



LEAKING FUEL IS A FIRE AND EXPLOSION HAZARD. INSPECT SYSTEM REGULARLY. EXAMINE FUEL SYSTEM FOR LEAKS OR CORROSION AT LEAST ANNUALLY.

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Dashboard

WARNING - GASOLINE VAPORS CAN EXPLODE.
BEFORE STARTING ENGINE:
-CHECK ENGINE COMPARTMENT FOR GASOLINE OR VAPORS
-OPERATE BLOWER FOR 4 MINUTES
-RUN BLOWER BELOW CRUISING SPEED.

Cabin Door

WARNING!
SECURE DOOR WHEN CRUISING
DO NOT SIT, STAND, OR PLACE
HEAVY OBJECTS ON DOOR.

KEEP CABIN DOOR CLOSED WHEN
ENGINES OR GENERATOR ARE RUNNING.

DO NOT USE
CAUSTIC MATERIALS TO CLEAN.
WASH WITH MILD SOAP AND WATER.

4

Windshield Wing, Driver's Side Cobalt Check List

COBALT CHECK LIST

For maximum enjoyment and safety, check each of these items BEFORE you start your engine:

- DRAIN PLUG (Securely in place?)
- LIFE-SAVING DEVICES (One for every person on board?)
- STEERING SYSTEM (Working smoothly and properly?)
- FUEL SYSTEM (Adequate fuel? Leaks? Fumes?)
- BATTERY (Fully charged? Proper water level?)
- ENGINE (In neutral?)
- CAPACITY PLATE (Are you overloaded?)
- WEATHER CONDITIONS (Safe to go out?)
- ELECTRICAL EQUIPMENT (Lights, horn, pump, etc.?)
- EMERGENCY GEAR (Fire Extinguisher, Bailer, Paddle, Anchor and Line, Signalling Device, Tool Kit, Etc.?)

RECOMMENDED SAFETY RULES

- REMAIN SEATED WHILE UNDERWAY.
- AVOID USING REAR PAD OR SUNDECK WHILE ENGINE IS RUNNING.
- DO NOT USE BOARDING LADDER WHILE ENGINE IS RUNNING.
- TURN OFF ENGINE AND ALL ELECTRICAL SYSTEMS WHILE RE-FUELING.
- TURN OFF ENGINE(S) WHEN SWIMMERS ARE NEAR BOAT.



WARNING

MANEUVERABILITY ABOVE 50 MPH IS LIMITED. SUDDEN TURNS MAY CAUSE LOSS OF CONTROL. (NOT ALL BOATS ARE REQUIRED TO HAVE THIS DECAL).

HIGH SPEED OPERATION

a. Maneuverability

When operating any boat at high speed, a great deal of caution must be exercised. This is particularly true during turns. Gradual turns can be completed at high speed by a competent driver but it must be emphasized that sudden turns at any speed and particularly at high speed can be especially dangerous. It is possible to throw passengers from their seats and even from the boat if caution is not exercised. Remember, common sense is the rule for safe boating.

**WARNING**

WAKE JUMPING - YOUR COBALT IS NOT DESIGNED FOR WAKE JUMPING. WHEN CROSSING ANOTHER BOAT'S WAKE, THROTTLE BACK TO PREVENT YOUR BOAT FROM LEAVING THE WATER. WAKE JUMPING IS VERY DANGEROUS. IT IS POSSIBLE FOR THE BOAT TO RE-ENTER THE WATER ON ITS SIDE, TRANSOM, OR BOW. YOU AND YOUR PASSENGERS COULD SUFFER SERIOUS INJURY. ALSO, DAMAGE TO THE BOAT COULD TAKE PLACE CAUSING A HAZARDOUS CONDITION.

LIFTING YOUR COBALT**WARNING**

Please consult your Cobalt dealer for the proper method of lifting your Cobalt.

THE SKI TOW CANNOT BE USED TO LIFT THE BOAT. IT CAN ONLY BE USED FOR WATER SKIING. IT IS NOT STRESSED FOR TOWING ANOTHER BOAT OR FOR PARASAILING. THE TRANSOM MOUNTED EYES SHOULD BE USED FOR PULLING A HEAVIER LOAD.

FOLD DOWN BOARDING LADDER

THIS LADDER MUST ONLY BE USED WHILE ENGINE IS OFF. (See warning label section). To lower, unsnap securing strap, and lower. Be sure ladder is raised and secured prior to starting engine. Caution should be used while using this ladder, in that any substance can be slippery when wet.

**DANGER**

DO NOT USE BOARDING LADDER WHILE ENGINE IS RUNNING. CAUTION: THE STERN DRIVE UNIT HAS MANY SHARP EDGES, ESPECIALLY THE PROPELLER. EXERCISE CAUTION WHEN NEAR THE STERN DRIVE UNIT.

WATER SKI TOWING**WARNING**

The ski tow hook may be used for one or more lines for water ski towing only.

WHENEVER A SKIER OR SWIMMER IS CLOSE TO THE BOAT, SHUT OFF THE ENGINE TO PREVENT SERIOUS INJURY.

**WARNING**

THE SKI TOW CANNOT BE USED TO LIFT THE BOAT. IT CAN ONLY BE USED FOR WATER SKIING. IT IS NOT STRESSED FOR TOWING ANOTHER BOAT OR FOR PARASAILING. THE TRANSOM MOUNTED EYES SHOULD BE USED FOR PULLING A HEAVIER LOAD.

**CAUTION**

THE STERN DRIVE UNIT HAS MANY SHARP EDGES, ESPECIALLY THE PROPELLER. EXERCISE CAUTION WHEN NEAR THE STERN DRIVE UNIT.

DECK HATCH**Cabin Models**

The deck hatch is manually operable. To open, simply release the one or two hasps on the forward edge of the hatch, make sure the support bracket adjusters are loose, and raise the hatch to the desired position and secure the adjusters.

**CAUTION**

DO NOT USE A RAISED HATCH FOR A SUPPORT OR HAND HOLD WHILE ON THE DECK.

FUEL FILLING

The fuel system in your Cobalt is externally vented. This allows air into the fuel tank as the engine uses fuel and allows air out of the tank as the tank is being filled. The vent fitting is on the side of the boat and is chrome in appearance.

When filling your Cobalt, a small amount of overflow can occur when the tank becomes full. Be prepared to wash down the area to protect the fiberglass finish and the gunwale trim. The trim is made of a vinyl material and fuel may stain it if not cleaned promptly.

**WARNING**

YOUR FUEL SYSTEM SHOULD BE CHECKED BEFORE EACH OPERATION. AT LEAST ONCE A YEAR, HAVE A THOROUGH CHECK OF YOUR FUEL SYSTEM BY A CERTIFIED COBALT SERVICE MAN. GASOLINE IS HIGHLY FLAMMABLE; EXTREME CAUTION SHOULD BE USED AT ALL TIMES.

**DANGER**

GASOLINE IS HIGHLY FLAMMABLE. USE EXTREME CAUTION WHEN HANDLING GASOLINE!

HEAD COMPARTMENT - 23LS, 252, 272, 293

1. Make sure the head compartment door assembly is closed and latched while the boat is underway. Do not allow to swing freely.
2. The light also turns on the ventilation blower.
3. For operation of porta potti, pump out, or macerator, please check the manuals supplied in your owner's packet.

SIDE BENCH SEAT, 272

4

1. This seat can only be used with the motor box in the closed position.
2. To open, pull support leg out and down. Then slide seat assembly away from the side of the boat.
3. To close, simply reverse the process.
4. Make sure the side seat is securely closed or the electric motor box will not work.

**NOTE**

Do not attempt to raise the motor box with this seat open or damage to the seat will occur.

RETRACTABLE SWIM PLATFORM - 272

1. The battery switch must be in the "ON" position to operate the platform.
2. Can be raised or lowered by operating the toggle switch on the upper back deck or by the second switch under the lower edge of the platform on the port side.
3. Before raising platform, make sure the boarding ladder is completely stowed and the retaining strap is fastened in place.

**WARNING**

MAKE SURE THE ENGINE IS SHUT OFF BEFORE USING THE SWIM PLATFORM.

SWIM PLATFORM (TRADITION ONLY)

The swim platform cannot be jumped on. Jumping on the swim platform can be dangerous and can also do permanent damage to the structural integrity of the mounting brackets.

**WARNING**

MAKE SURE THE ENGINE IS SHUT OFF BEFORE USING SWIM PLATFORM.

AM/FM STEREO CASSETTE

There are separate instructions in the owner's packet that give specific instructions for operation.

DOCKING LIGHTS - OPTIONAL

Docking lights are to be used for docking only. It is illegal to use your docking lights away from docks, the shoreline, etc. Please consult with your Cobalt dealer for further information.

TRIM TABS - OPTIONAL

The trim tabs are a separate system in themselves and are not to be used in lieu of the engine power trim system.

- Before accelerating, make sure the tabs are both fully raised.
- Do not use the tabs until the boat has reached the desired speed and the power trim has been adjusted to the proper setting.
- Operate only one tab at a time and in small increments. As the tab takes effect, you will notice it causes the boat to veer off course slightly. Correct for this as it happens. In other words, it will be necessary to use the trim tab and steering simultaneously.

Basic operating techniques - Bow high attitude

1. Make sure both tabs are fully raised.
2. Lower both tabs simultaneously for approximately five seconds.
3. Accelerate the boat to planing speed and see if the desired affect is attained.
4. If not, raise or lower both tabs until desired attitude is obtained.
5. After desired attitude is obtained, one trim tab may be adjusted independently of the other to compensate for listing.
6. Make it a habit to raise both tabs each time the boat is slowed to less than planing speed.

**NOTE**

If in doubt, raise the tabs completely and start over again.

EXTRA BATTERY AND SWITCH - OPTIONAL

This option gives you the ability to isolate the entire boat from the batteries, and switch to either or both batteries. Under normal situations, the switch should be in “position 1” or “position 2” rather than the “all” position. This will keep one battery in reserve should the other fail. Battery selection should be made with engine off only. We recommend alternating batteries on a daily basis. In the off position, the entire boat is isolated electrically, including the automatic bilge pump circuit and the radio memory circuit.

PORTABLE HEAD - OPTIONAL

Please consult the owner’s manual supplied with the head for proper operation.

5

PROPELLERS



PROPELLERS - GENERAL

Nothing is more important to the proper performance of your boat than the condition of the propeller(s). Even minor damage (often invisible to the naked eye) can adversely affect the boat's performance. Common symptoms of damage to propellers are a sudden drop in RPM, vibration or sudden loss of speed.

A propeller is measured by two dimensions: 1) the diameter; and, 2) the pitch. The diameter is determined by measuring the distance from the center of the propeller to the tip of one blade and multiplying that figure by two. Pitch is expressed in the number of inches a prop will advance in a solid medium in one revolution.

Operational characteristics of your boat, including its speed, may change due to several factors: atmospheric conditions; additions of extra equipment and accessories or passengers; marine growth on the bottom; and, engine condition. Other factors include damage to the prop(s), tides, water temperature and direction of wind. Some of these factors are directly correctable by repair or maintenance. Others are beyond human control. A few which may be considered permanent operating conditions may be compensated for by a change in prop(s). Such a change should not usually be undertaken without the advice of your dealer. Unless you are prepared to spend much time and money on hit and miss methods of prop selection, it is strongly recommended that you talk with your Cobalt Dealer.



INCORRECT PROPELLER APPLICATION CAN CAUSE ADVERSE HANDLING CHARACTERISTICS. DO NOT CHANGE TYPE OR SIZE OF PROPELLER WITHOUT CONSULTING YOUR COBALT DEALER!

STAINLESS STEEL

Some Cobalts are standard equipped with stainless propellers. In this instance, do not substitute aluminum propellers. Adverse handling and top speed characteristics may be experienced.

PULLING POWER

If you need extra pulling power, you can obtain this by decreasing the pitch of your propeller(s) by two degrees. This will not endanger the engine or drive unit as long as the manufacturer's recommended top RPM's are not exceeded.

PROPELLER SIZE APPLICATION CHART

Model	Mfg	Engine	Drive	Fuel system	std. ratio	Option	php	Prop Dscpt	Mfg. part #
190	Merc	4.3LX GEN+	ALpha	2 BBL	1.81	1.94	190	14 x19	48-78120A40
190	Merc	4.3LXH GEN+	ALpha	4 BBL	1.62	1.81	205	14 x19	48-78120A40
190	Merc	5.7L	ALpha	2 BBL	1.62	1.81	210	14 x19	48-78120A40
190	Merc	5.7L EFI	ALpha	TBI	1.62	1.81	220	13 3/4 x 21	48-78122A40
190	Merc	5.7L EFI	Bravo 3	TBI	2.00	2.20	220	26's	48-82367A6/68-A6
190	Volvo	4.3GL	SX	2 BBL	1.85	1.97	190	14 1/4 x 21 RH	3850302-5
190	Volvo	4.3GS	DP	4 BBL	1.95	2.30	205	F5	3851495-6
190	Volvo	4.3GS	SX	4 BBL	1.85	1.97	205	14 1/4 x 21 RH	3850302-5
190	Volvo	5.7GL	DP	2 BBL	1.95	2.30	215	F6	3851496-4
190	Volvo	5.7GL	SX	2 BBL	1.60	1.66	215	14 1/4 x 21 RH	3850302-5
190	Volvo	5.7GLi	DP	TBI	1.95	2.30	225	F7	3851497-2
190	Volvo	5.7GLi	SX	TBI	1.60	1.66	225	14 1/4 x 21 RH	3850302-5
Model	Mfg	Engine	Drive	Fuel system	std. ratio	Option	php	Prop Dscpt	Mfg. part #
200	Merc	4.3LX GEN+	ALpha	2 BBL	1.81	1.94	190	14 x19	48-78120A40
200	Merc	4.3LXH GEN+	ALpha	4 BBL	1.62	1.81	205	14 x19	48-78120A40
200	Merc	5.7L	ALpha	2 BBL	1.62	1.81	210	14 x19	48-78120A40
200	Merc	5.7L EFI	ALpha	TBI	1.62	1.81	220	14 x19	48-78120A40
200	Merc	5.7L EFI	Bravo 3	TBI	2.00	2.20	220	24's	48-823665A6/66A6
200	Merc	5.7LX	ALpha	4 BBL	1.47	1.62	250	14 x19	48-78120A40
200	Merc	5.7LX	Bravo 3	4 BBL	2.00	2.20	250	24's	48-823665A6/66A6
200	Merc	5.7LX EFI	ALpha	TBI	1.47	1.62	250	13 3/4 x 21	48-78122A40
200	Merc	5.7LX EFI	Bravo 3	TBI	2.00	2.20	250	24's	48-823665A6/66A6
200	Volvo	4.3GL	SX	2 BBL	1.85	1.97	190	14 1/4 x 21 RH	3850302-5
200	Volvo	4.3GS	DP	4 BBL	2.30	na	205		
200	Volvo	4.3GS	SX	4 BBL	1.85	1.97	205		
200	Volvo	5.7GL	DP	2 BBL	1.95	na	215	F5	3851495-6
200	Volvo	5.7GL	SX	2 BBL	1.60	1.66	215	14 1/2 x 19 RH	3850301-7
200	Volvo	5.7GLi	DP	TBI	1.95	na	225	F6	3851496-4
200	Volvo	5.7GLi	SX	TBI	1.60	1.66	225	14 1/2 x 19 RH	3850301-7
200	Volvo	5.7GS	DP	4 BBL	1.95	na	250	F6	3851496-4
200	Volvo	5.7Gi	DP	TBI	1.95	na	250	F	3851496-4
Model	Mfg	Engine	Drive	Fuel system	std. ratio	Option	php	Prop Dscpt	Mfg. part #
220	Merc	5.7L EFI	ALpha	TBI	1.62	1.81	220		
220	Merc	5.7L EFI	Bravo 3	TBI	2.00	2.20	220		
220	Merc	5.7LX	ALpha	4 BBL	1.47	1.62	250	14 x19	48-78120A40
220	Merc	5.7LX	Bravo 3	4 BBL	2.00	2.20	250	24's	48-823665A6/66A6
220	Merc	5.7LX EFI	ALpha	TBI	1.47	1.62	250	14 x19	48-78120A40
220	Merc	5.7LX EFI	Bravo 3	TBI	2.00	2.20	250	24's	48-823665A6/66A6
220	Merc	5.7LX EFI GEN+	Bravo 1	TBI	1.50	1.65	280	15 1/4 x 19 RH	48-13700A40
220	Merc	5.7LX EFI GEN+	Bravo 3	TBI	2.00	2.20	280	26's	48-82367A6/68-A6

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220	Merc	350 Mag MPI GEN+	Bravo 3	MPI	2.00	na	300	26's	48-82367A6/68-A6
220	Merc	7.4L	Bravo 1	4 BBL	1.50	1.65	300	14 5/8 x 23 LH	48-13705A41
220	Merc	7.4L	Bravo 3	4 BBL	1.81	2.00	300	28's	48-823669A6/70A6
220	Merc	7.4LX EFI	Bravo 3	4 BBL	1.81	2.00	300	28's	48-823669A6/70A6
220	Merc	7.4LX MPI	Bravo 1	MPI	1.50	1.65	330	14 3/4 x 21 LH	48-13703A41
220	Merc	7.4LX MPI	Bravo 3	MPI	1.81	2.00	330	28's	48-823669A6/70A6
220	Merc	454 Mag MPI	Bravo 1	MPI	1.50	1.65	385	14 5/8 x 23 LH	48-13705A41
220	Merc	454 Mag MPI	Bravo 3	MPI	1.81	2.00	385	28's	48-823669A6/70A6
220	Merc	502 Mag MPI	Bravo 1	MPI	1.50	1.65	415	14 1/2 x 25 LH	48-13707A41
220	Merc	502 Mag MPI	Bravo 3	MPI	1.81	2.00	415	28's	48-823669A6/70A6
220	Volvo	5.7GLi	SX	TBI	1.60	1.66	225	14 1/2 x 19 RH	3850301-7
220	Volvo	5.7GLi	DP	TBI	1.95	na	225	F5	3851495-6
220	Volvo	5.7GS	DP	4 BBL	1.95	na	250	F6	3851496-4
220	Volvo	5.7Gi	DP	TBI	1.95	na	250	F6	3851496-4
220	Volvo	5.7GSi	DP	TBI	1.95	na	280		
220	Volvo	7.4GL	DP	4 BBL	1.78	1.95	300	F7	3851497-2
220	Volvo	7.4Gi	DP	MPI	1.68	1.95	330	F7	3851497-2
220	Volvo	7.4GSi	DP	MPI	1.68	1.95	385		
220	Volvo	8.2GSi	DP	MPI	1.68	1.95	415		
Model	Mfg	Engine	Drive	Fuel system	std. ratio	Option	php	Prop Dscpt	Mfg. part #
22T	Merc	5.7LX	ALpha	4 BBL	1.47	1.62	250	14 x19	48-78120A40
22T	Merc	5.7LX	Bravo 3	4 BBL	2.00	2.20	250	24's	48-823665A6/66A6
22T	Merc	5.7LX EFI	ALpha	TBI	1.47	1.62	250		
22T	Merc	5.7LX EFI	Bravo 3	TBI	2.00	2.20	250		
22T	Merc	5.7LX EFI GEN+	Bravo 3	TBI	2.00	2.20	280		
22T	Merc	350 Mag MPI GEN+	Bravo 3	MPI	2.00	na	300		
22T	Merc	7.4L	Bravo 1	4 BBL	1.50	1.65	300	14 3/4 x 21 LH	48-13703A41
22T	Merc	7.4L	Bravo 3	4 BBL	1.81	2.00	300	26's	48-82367A6/68-A6
22T	Merc	7.4LX EFI	Bravo 3	4 BBL	1.81	2.00	300	26's	48-82367A6/68-A6
22T	Merc	7.4LX MPI	Bravo 1	MPI	1.50	1.65	330	14 3/4 x 21 LH	48-13703A41
22T	Merc	7.4LX MPI	Bravo 3	MPI	1.81	2.00	330		
22T	Merc	454 Mag MPI	Bravo 1	MPI	1.50	1.65	385	14 3/4 x 21 LH	48-13703A41
22T	Merc	454 Mag MPI	Bravo 3	MPI	1.81	2.00	385	26's	48-82367A6/68-A6
22T	Merc	502 Mag MPI	Bravo 1	MPI	1.50	1.65	415	14 5/8 x 23 LH	48-13705A41
22T	Merc	502 Mag MPI	Bravo 3	MPI	1.81	2.00	415		
22T	Volvo	5.7GS	DP	4 BBL	1.95	na	250		
22T	Volvo	5.7Gi	DP	TBI	1.95	na	250	F6	3851496-4
22T	Volvo	5.7GSi	DP	TBI	1.95	na	280		
22T	Volvo	7.4GL	DP	4 BBL	1.78	1.95	300	F5	3851495-6
22T	Volvo	7.4Gi	DP	MPI	1.68	1.95	330	F7	3851497-2
22T	Volvo	7.4GSi	DP	MPI	1.68	1.95	385		
22T	Volvo	8.2GSi	DP	MPI	1.68	1.95	415		
Model	Mfg	Engine	Drive	Fuel system	std. ratio	Option	php	Prop Dscpt	Mfg. part #
232	Merc	5.7LX	ALpha	4 BBL	1.47	1.62	250	14 x19	48-78120A40
232	Merc	5.7LX	Bravo 3	4 BBL	2.00	2.20	250	24's	48-823665A6/66A6
232	Merc	5.7LX EFI	ALpha	TBI	1.47	1.62	250	14 x19	48-78120A40
232	Merc	5.7LX EFI	Bravo 3	TBI	2.00	2.20	250	24's	48-823665A6/66A6
232	Merc	5.7LX EFI GEN+	Bravo 3	TBI	2.00	2.20	280	24's	48-823665A6/66A6
232	Merc	350 Mag MPI GEN+	Bravo 3	MPI	2.00	na	300	26's	48-82367A6/68-A6
232	Merc	7.4L	Bravo 1	4 BBL	1.50	1.65	300	14 3/4 x 21 RH	48-13702A41
232	Merc	7.4L	Bravo 3	4 BBL	1.81	2.00	300	26's	48-82367A6/68-A6
232	Merc	7.4LX EFI	Bravo 3	4 BBL	1.81	2.00	300	26's	48-82367A6/68-A6
232	Merc	7.4LX MPI	Bravo 1	MPI	1.50	1.65	330	14 3/4 x 21 RH	48-13702A41

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232	Merc	7.4LX MPI	Bravo 3	MPI	1.81	2.00	330	26's	48-82367A6/68-A6
232	Merc	454 Mag MPI	Bravo 1	MPI	1.50	1.65	385	14 5/8 x 23 LH	48-13704A41
232	Merc	454 Mag MPI	Bravo 3	MPI	1.81	2.00	385	26's	48-82367A6/68-A6
232	Merc	502 Mag MPI	Bravo 1	MPI	1.50	1.65	415	14 1/4 x 25 RH	48-13706A41
232	Merc	502 Mag MPI	Bravo 3	MPI	1.81	2.00	415	28's	48-823669A6/70A6
232	Volvo	5.7GL	DP	2 BBL	1.95	na	215	F5	3851495-6
232	Volvo	5.7GS	DP	4 BBL	1.95	na	250	F5	3851495-6
232	Volvo	5.7Gi	DP	TBI	1.95	na	250	F5	3851495-6
232	Volvo	5.7GSi	DP	TBI	1.95	na	280	F6	3851496-4
232	Volvo	7.4GL	DP	4 BBL	1.78	1.95	300	F6	3851496-4
232	Volvo	7.4Gi	DP	MPI	1.68	1.95	330	F5	3851495-6
232	Volvo	7.4GSi	DP	MPI	1.68	1.95	385		
232	Volvo	8.2GSi	DP	MPI	1.68	1.95	415		
Model	Mfg	Engine	Drive	Fuel system	std. ratio	Option	php	Prop Dscpt	Mfg. part #
233	Merc	5.7LX	ALpha	4 BBL	1.47	1.62	250	14 x19	48-78120A40
233	Merc	5.7LX	Bravo 3	4 BBL	2.00	2.20	250	24's	48-823665A6/66A6
233	Merc	5.7LX EFI	ALpha	TBI	1.47	1.62	250	14 x19	48-78120A40
233	Merc	5.7LX EFI	Bravo 3	TBI	2.00	2.20	250	24's	48-823665A6/66A6
233	Merc	5.7LX EFI GEN+	Bravo 3	TBI	2.00	2.20	280	24's	48-823665A6/66A6
233	Merc	350 Mag MPI GEN+	Bravo 3	MPI	2.00	na	300	26's	48-82367A6/68-A6
233	Merc	7.4L	Bravo 1	4 BBL	1.50	1.65	300	14 3/4 x 21 RH	48-13702A41
233	Merc	7.4L	Bravo 3	4 BBL	1.81	2.00	300	26's	48-82367A6/68-A6
233	Merc	7.4LX EFI	Bravo 3	4 BBL	1.81	2.00	300	26's	48-82367A6/68-A6
233	Merc	7.4LX MPI	Bravo 1	MPI	1.50	1.65	330	14 3/4 x 21 RH	48-13702A41
233	Merc	7.4LX MPI	Bravo 3	MPI	1.81	2.00	330	26's	48-82367A6/68-A6
233	Merc	454 Mag MPI	Bravo 1	MPI	1.50	1.65	385	14 5/8 x 23 LH	48-13704A41
233	Merc	454 Mag MPI	Bravo 3	MPI	1.81	2.00	385	26's	48-82367A6/68-A6
233	Merc	502 Mag MPI	Bravo 1	MPI	1.50	1.65	415	14 1/4 x 25 RH	48-13706A41
233	Merc	502 Mag MPI	Bravo 3	MPI	1.81	2.00	415	28's	48-823669A6/70A6
233	Volvo	5.7GL	DP	2 BBL	1.95	na	215	F5	3851495-6
233	Volvo	5.7GS	DP	4 BBL	1.95	na	250	F5	3851495-6
233	Volvo	5.7Gi	DP	TBI	1.95	na	250	F5	3851495-6
233	Volvo	5.7GSi	DP	TBI	1.95	na	280	F6	3851496-4
233	Volvo	7.4GL	DP	4 BBL	1.78	1.95	300	F6	3851496-4
233	Volvo	7.4Gi	DP	MPI	1.68	1.95	330	F5	3851495-6
233	Volvo	7.4GSi	DP	MPI	1.68	1.95	385		
233	Volvo	8.2GSi	DP	MPI	1.68	1.95	415		
Model	Mfg	Engine	Drive	Fuel system	std. ratio	Option	php	Prop Dscpt	Mfg. part #
23LS	Merc	5.7LX	ALpha	4 BBL	1.47	1.62	250	14 x19	48-78120A40
23LS	Merc	5.7LX	Bravo 3	4 BBL	2.00	2.20	250	24's	48-823665A6/66A6
23LS	Merc	5.7LX EFI	ALpha	TBI	1.47	1.62	250	14 x19	48-78120A40
23LS	Merc	5.7LX EFI	Bravo 3	TBI	2.00	2.20	250	24's	48-823665A6/66A6
23LS	Merc	5.7LX EFI GEN+	Bravo 3	TBI	2.00	2.20	280	24's	48-823665A6/66A6
23LS	Merc	350 Mag MPI GEN+	Bravo 3	MPI	2.00	na	300	26's	48-82367A6/68-A6
23LS	Merc	7.4L	Bravo 1	4 BBL	1.50	1.65	300	14 3/4 x 21 RH	48-13702A41
23LS	Merc	7.4L	Bravo 3	4 BBL	1.81	2.00	300	26's	48-82367A6/68-A6
23LS	Merc	7.4LX EFI	Bravo 3	4 BBL	1.81	2.00	300	26's	48-82367A6/68-A6
23LS	Merc	7.4LX MPI	Bravo 1	MPI	1.50	1.65	330	14 3/4 x 21 RH	48-13702A41
23LS	Merc	7.4LX MPI	Bravo 3	MPI	1.81	2.00	330	26's	48-82367A6/68-A6
23LS	Merc	454 Mag MPI	Bravo 1	MPI	1.50	1.65	385	14 5/8 x 23 LH	48-13704A41
23LS	Merc	454 Mag MPI	Bravo 3	MPI	1.81	2.00	385	26's	48-82367A6/68-A6
23LS	Merc	502 Mag MPI	Bravo 1	MPI	1.50	1.65	415	14 1/4 x 25 RH	48-13706A41
23LS	Merc	502 Mag MPI	Bravo 3	MPI	1.81	2.00	415	28's	48-823669A6/70A6

23LS	Volvo	5.7GL	DP	2 BBL	1.95	na	215	F5	3851495-6
23LS	Volvo	5.7GS	DP	4 BBL	1.95	na	250	F5	3851495-6
23LS	Volvo	5.7Gi	DP	TBI	1.95	na	250	F5	3851495-6
23LS	Volvo	5.7GSi	DP	TBI	1.95	na	280	F6	3851496-4
23LS	Volvo	7.4GL	DP	4 BBL	1.78	1.95	300	F6	3851496-4
23LS	Volvo	7.4Gi	DP	MPI	1.68	1.95	330	F5	3851495-6
23LS	Volvo	7.4GSi	DP	MPI	1.68	1.95	385		
23LS	Volvo	8.2GSi	DP	MPI	1.68	1.95	415		
Model	Mfg	Engine	Drive	Fuel system	std. ratio	Option	php	Prop Dscpt	Mfg. part #
252	Merc	5.7LX	ALpha	4 BBL	1.47	1.62	250		
252	Merc	5.7LX	Bravo 3	4 BBL	2.00	2.20	250	24's	48-823665A6/66A6
252	Merc	5.7LX EFI	ALpha	TBI	1.47	1.62	250		
252	Merc	5.7LX EFI	Bravo 3	TBI	2.00	2.20	250	24's	48-823665A6/66A6
252	Merc	5.7LX EFI GEN+	Bravo 3	TBI	2.00	2.20	280		
252	Merc	350 Mag MPI GEN+	Bravo 3	MPI	2.00	na	300		
252	Merc	7.4L	Bravo 1	4 BBL	1.50	1.65	300	14 3/4 x 21 RH	48-13702A41
252	Merc	7.4L	Bravo 3	4 BBL	1.81	2.00	300	26's	48-82367A6/68-A6
252	Merc	7.4LX EFI	Bravo 3	4 BBL	1.81	2.00	300	26's	48-82367A6/68-A6
252	Merc	7.4LX MPI	Bravo 1	MPI	1.50	1.65	330	14 3/4 x 21 RH	48-13702A41
252	Merc	7.4LX MPI	Bravo 3	MPI	1.81	2.00	330	26's	48-82367A6/68-A6
252	Merc	454 Mag MPI	Bravo 1	MPI	1.50	1.65	385	14 5/8 x 23 RH	48-13704A41
252	Merc	454 Mag MPI	Bravo 3	MPI	1.81	2.00	385	26's	48-82367A6/68-A6
252	Merc	502 Mag MPI	Bravo 1	MPI	1.50	1.65	415	14 5/8 x 23 RH	48-13704A41
252	Merc	502 Mag MPI	Bravo 3	MPI	1.81	2.00	415	28's	48-823669A6/70A6
252	Volvo	5.7GS	DP	4 BBL	1.95	na	250		
252	Volvo	5.7Gi	DP	TBI	1.95	na	250	F5	3851495-6
252	Volvo	5.7GSi	DP	TBI	1.95	na	280		
252	Volvo	7.4GL	DP	4 BBL	1.78	1.95	300	F5	3851495-6
252	Volvo	7.4Gi	DP	MPI	1.68	1.95	330	F6	3851496-4
252	Volvo	7.4GSi	DP	MPI	1.68	1.95	385		
252	Volvo	8.2GSi	DP	MPI	1.68	1.95	415		
Model	Mfg	Engine	Drive	Fuel system	std. ratio	Option	php	Prop Dscpt	Mfg. part #
253	Merc	5.7LX	ALpha	4 BBL	1.47	1.62	250		
253	Merc	5.7LX	Bravo 3	4 BBL	2.00	2.20	250	24's	48-823665A6/66A6
253	Merc	5.7LX EFI	ALpha	TBI	1.47	1.62	250		
253	Merc	5.7LX EFI	Bravo 3	TBI	2.00	2.20	250	24's	48-823665A6/66A6
253	Merc	5.7LX EFI GEN+	Bravo 3	TBI	2.00	2.20	280		
253	Merc	350 Mag MPI GEN+	Bravo 3	MPI	2.00	na	300		
253	Merc	7.4L	Bravo 1	4 BBL	1.50	1.65	300	14 3/4 x 21 RH	48-13702A41
253	Merc	7.4L	Bravo 3	4 BBL	1.81	2.00	300	26's	48-82367A6/68-A6
253	Merc	7.4LX EFI	Bravo 3	4 BBL	1.81	2.00	300	26's	48-82367A6/68-A6
253	Merc	7.4LX MPI	Bravo 1	MPI	1.50	1.65	330	14 3/4 x 21 RH	48-13702A41
253	Merc	7.4LX MPI	Bravo 3	MPI	1.81	2.00	330	26's	48-82367A6/68-A6
253	Merc	454 Mag MPI	Bravo 1	MPI	1.50	1.65	385	14 5/8 x 23 RH	48-13704A41
253	Merc	454 Mag MPI	Bravo 3	MPI	1.81	2.00	385	26's	48-82367A6/68-A6
253	Merc	502 Mag MPI	Bravo 1	MPI	1.50	1.65	415	14 5/8 x 23 RH	48-13704A41
253	Merc	502 Mag MPI	Bravo 3	MPI	1.81	2.00	415	28's	48-823669A6/70A6
253	Volvo	5.7GS	DP	4 BBL	1.95	na	250		
253	Volvo	5.7Gi	DP	TBI	1.95	na	250	F5	3851495-6
253	Volvo	5.7GSi	DP	TBI	1.95	na	280		
253	Volvo	7.4GL	DP	4 BBL	1.78	1.95	300	F5	3851495-6
253	Volvo	7.4Gi	DP	MPI	1.68	1.95	330	F6	3851496-4
253	Volvo	7.4GSi	DP	MPI	1.68	1.95	385		

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253	Volvo	8.2GSi	DP	MPI	1.68	1.95	415		
Model	Mfg	Engine	Drive	Fuel system	std. ratio	Option	php	Prop Dscpt	Mfg. part #
272	Merc	350 Mag MPI GEN+	Bravo 3	MPI	2.00	na	300		
272	Merc	7.4L	Bravo 1	4 BBL	1.50	1.65	300	15 1/4 x 19 LH	48-13701A41
272	Merc	7.4L	Bravo 3	4 BBL	1.81	2.00	300	24's	48-823665A6/66A6
272	Merc	7.4LX EFI	Bravo 3	4 BBL	1.81	2.00	300	24's	48-823665A6/66A6
272	Merc	7.4LX MPI	Bravo 1	MPI	1.50	1.65	330		
272	Merc	7.4LX MPI	Bravo 3	MPI	1.81	2.00	330	24's	48-823665A6/66A6
272	Merc	454 Mag MPI	Bravo 1	MPI	1.50	1.65	385	14 5/8 x 23 LH	48-13705A41
272	Merc	454 Mag MPI	Bravo 3	MPI	1.81	2.00	385	26's	48-82367A6/68-A6
272	Merc	502 Mag MPI	Bravo 1	MPI	1.50	1.65	415	14 5/8 x 23 LH	48-13705A41
272	Merc	502 Mag MPI	Bravo 3	MPI	1.81	2.00	415	26's	48-82367A6/68-A6
272	Volvo	7.4GL	DP	4 BBL	1.78	1.95	300	F5	3851495-6
272	Volvo	7.4Gi	DP	MPI	1.68	1.95	330	F5	3851495-6
272	Volvo	7.4GSi	DP	MPI	1.68	1.95	385		
272	Volvo	8.2GSi	DP	MPI	1.68	1.95	415		
Model	Mfg	Engine(s)	Drive	Fuel system	std. ratio	Option	php	Prop Dscpt	Mfg. part #
293	Merc	7.4L	Bravo 3	4 BBL	2.00	2.20	300	24's	48-823665A6/66A6
293	Merc	7.4LX EFI	Bravo 3	4 BBL	2.00	2.20	300		
293	Merc	7.4LX MPI	Bravo 1	MPI	1.50	1.65	330		
293	Merc	7.4LX MPI	Bravo 3	MPI	1.81	2.00	330		
293	Merc	454 Mag MPI	Bravo 1	MPI	1.50	1.65	385		
293	Merc	454 Mag MPI	Bravo 3	MPI	1.81	2.00	385		
293	Merc	502 Mag MPI	Bravo 1	MPI	1.50	1.65	415		
293	Merc	502 Mag MPI	Bravo 3	MPI	1.81	2.00	415	22's	48-823663A6/64A6
293	Volvo	7.4GL	DP	4 BBL	1.78	1.95	300		
293	Volvo	7.4Gi	DP	MPI	1.68	1.95	330		
293	Volvo	7.4GSi	DP	MPI	1.68	1.95	385		
293	Volvo	8.2GSi	DP	MPI	1.68	1.95	415		
293	Merc	Twin 5.7L EFI	ALpha	TBI	1.62	1.81	220		
293	Merc	Twin 5.7L EFI	Bravo 3	TBI	2.00	2.20	220		
293	Merc	Twin 5.7LX	ALpha	4 BBL	1.47	1.62	250		
293	Merc	Twin 5.7LX	Bravo 3	4 BBL	2.00	2.20	250		
293	Merc	Twin 5.7LX EFI	ALpha	TBI	1.47	1.62	250		
293	Merc	Twin 5.7LX EFI	Bravo 3	TBI	2.00	2.20	250		
293	Merc	Twin 5.7LX EFI GEN+	Bravo 3	TBI	2.00	2.20	280		
293	Volvo	Twin 5.7GLi	SX	TBI	1.60	1.66	225		
293	Volvo	Twin 5.7GLi	DP	TBI	1.95	na	225		
293	Volvo	Twin 5.7GS	DP	4 BBL	1.95	na	250		
293	Volvo	Twin 5.7Gi	DP	TBI	1.95	na	250		
293	Volvo	Twin 5.7GSi	DP	TBI	1.95	na	280		

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NOTE

Blank spaces indicate the engine/boat combination have not been tested as of printing date.



TECHNICAL INFORMATION

ENGINE OPERATION/MAINTENANCE/SERVICING

Included with your owner's packet is your engine manual(s). This manual was prepared by the engine manufacturer and contains virtually everything you'll need to know concerning operation and care of your engine. Please read this manual thoroughly and become acquainted with this information.

It is advisable to maintain a service log to record service checks, such as oil changes, so you can determine when it's time for servicing. A maintenance log is also required when requesting warranty using the extended warranty supplied with your new Cobalt.

THE BREAK-IN PERIOD

We cannot stress enough, the importance of reading your engine manual(s) and following the manufacturer's instructions for breaking-in your engine(s).

WINTERIZING AND OFF-SEASON STORAGE

It is vital that your Cobalt be stored with the bow slightly elevated; i.e., the same attitude as if the boat were floating at rest. If the boat is stored with the bow down, moisture will not be able to move to the engine bilge area and out of the boat. Mold and mildew may form as a result of the inability of moisture to escape. This can create structural damage to the internal stringer system as well as cause mold and mildew.

Preparing for winter lay up is vital for the preservation of your Cobalt. In frigid zones, you must be particularly attentive to items that can be damaged by freezing. Freeze damage is not covered by warranty.

Step by step instructions on what must be done to your engine(s) for winter storage are outlined in your engine manual(s). Follow these essential instructions carefully. This manual also details procedures for returning your engine(s) to service for in-season usage.

Good storage is very important, be it indoors or outdoors. Proper storing or blocking is necessary to properly support the hull when stored dry. Most boat trailers provide sufficient support for long term storage.

Provide adequate ventilation if canvas covered. Be sure there are openings at both ends so that a draft is created.

Do not use convertible top, stern curtain, side curtains, cockpit tonneau cover, bow tonneau cover, or camper top for storage. They will not provide ventilation nor are they designed to be waterproof. The only material that should be used for storage is army duck canvas such as Cobalt's optional Mooring Cover.

Cobalt also advises against the use of temporary poly covers such as shrink wrap covers unless adequate ventilation is supplied.

Remove battery. Store on wooden shelf or wood base. Store in dry, covered place, charged to capacity and check it periodically during the off-season. Recharge monthly.

**WARNING**

BATTERY ACID CAN CAUSE BLINDNESS IF SPLASHED IN EYES, BURNING OF SKIN AND SEVERE GASTROINTESTINAL DAMAGE IF INGESTED. AVOID CONTACT WITH BATTERY ACID. USE EXTREME CAUTION.

Remove drain plug from transom.

FUEL REQUIREMENTS

6

At Cobalt, we are most concerned with the safety aspect of the life of the fuel line between the fuel tank and the fuel inlet of the engine. This line is made of a synthetic, flexible material and although it is the best material available, alcohol can deteriorate it, especially during periods of storage. For this reason, it is suggested that you have your Cobalt dealer inspect this fuel line at least annually and replace, if necessary.

**WARNING**

YOUR FUEL SYSTEM SHOULD BE CHECKED BEFORE EACH OPERATION. AT LEAST ONCE A YEAR, HAVE A THOROUGH CHECK OF YOUR FUEL SYSTEM BY A CERTIFIED, COBALT SERVICE TECHNICIAN. GASOLINE IS HIGHLY FLAMMABLE; EXTREME CAUTION SHOULD BE USED AT ALL TIMES.

CIRCUIT BREAKERS

Most electrical standard equipment devices are controlled with circuit breakers. These breakers will activate if overloaded and cut power to the switch. To restore power, simply push the breaker button in and release. (Breakers do not require fuse replacement). The 190 breaker panel is located under the dash.

FUSES

Some electrical components have in-line fuses with them. Check behind the failed component for the possibility of an in-line fuse if a tripped circuit breaker is not found.

Examples of in-line fuse components: in dash depth sounder, trim tab control, stereo.

LIGHTING/BULB REPLACEMENT

External Lights

Bow Light Bulb(s)	#71
Stern Light Bulb	#1004

Internal Lights

Open Bulb Utility Light	#1004 or #211
Cuddy Cabin Reading Light	#1141
Black Rectangular Courtesy Light	#1044
Chrome Courtesy Light (Round)	#90
Overhead Console Light	GE 912
Dome Light	#211

Instrument Lights

Tachometer	194 SF2
Speedometer	194 SD2
Voltmeter	658 S11
Oil Pressure	658 SH2
Temperature	658 SC2
Fuel	658 SC2
Trim	658 SC2

22 Tradition

All bulbs	#600802
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SPECIFICATIONS

190

Centerline18'6"5.64 m
 Beam8' 1"2.46 m
 Dry Weight2825lbs. .1281 kg
 Deadrise20 deg. .20 deg
 Fuel Capacity40 gal. . .151 L
 Draft(drive up)20"50 cm
 Freeboard(fwd)35"88 cm
 Freeboard(aft)26"66 cm
 Transom Height . . .38"96 cm
 Bridge Clearance . .54"137 cm

200

Centerline19'6"5.94 m
 Beam8' 2"2.49 m
 Dry Weight3080lbs. .1397 kg
 Deadrise20 deg. .20 deg
 Fuel Capacity40 gal. . .151 L
 Draft(drive up)20"50 cm
 Freeboard(fwd)35"88 cm
 Freeboard(aft)26"66 cm
 Transom Height . . .38"96 cm
 Bridge Clearance . .54"137 cm

220

Centerline21'11"6.68 m
 Beam8' 5"2.57 m
 Dry Weight3410lbs. .1547 kg
 Deadrise20 deg. .20 deg
 Fuel Capacity50 gal. . .189 L
 Draft(drive up)17"43 cm
 Freeboard(fwd)34"86 cm
 Freeboard(aft)25"63 cm
 Transom Height . . .42"106 cm
 Bridge Clearance . .54"137 cm

22T

Centerline22'6.7 m
 Beam8' 6"2.59 m
 Dry Weight4000 lbs. .1814kg
 Deadrise20 deg. .20 deg
 Fuel Capacity88 gal. . .333 l
 Draft(drive up)19"48 cm
 Freeboard(fwd)48"121 cm
 Freeboard(aft)42"106 cm
 Transom Height . . .40"101 cm
 Bridge Clearance . .60"152 cm

232

Centerline23' 2"7.06 m
 Beam8' 6"2.59 m
 Dry Weight3880 lbs. .1533 kg
 Deadrise20 deg. .20 deg
 Fuel Capacity55 gal. . .208 l
 Draft(drive up)17"43 cm
 Freeboard(fwd)34"86 cm
 Freeboard(aft)21"53 cm
 Transom Height . . .43"109 cm
 Bridge Clearance . .54"137 cm

233

Centerline23' 2"7.06 m
 Beam8' 6"2.59 m
 Dry Weight3880 lbs. .1533 kg
 Deadrise20 deg. .20 deg
 Fuel Capacity55 gal. . .208 l
 Draft(drive up)17"43 cm
 Freeboard(fwd)34"86 cm
 Freeboard(aft)21"53 cm
 Transom Height . . .43"109 cm
 Bridge Clearance . .54"137 cm

23LS

Centerline23' 2"7.06 m
 Beam8' 6"2.59 m
 Dry Weight3880 lbs. .1533 kg
 Deadrise20 deg. .20 deg
 Fuel Capacity55 gal. . .208 l
 Draft(drive up)17"43 cm
 Freeboard(fwd)34"86 cm
 Freeboard(aft)21"53 cm
 Transom Height . . .43"109 cm
 Bridge Clearance . .54"137 cm

252

Centerline25'7.62 m
 Beam8' 6"2.59 m
 Dry Weight4350lbs. .1973 kg
 Deadrise20 deg. .20 deg
 Fuel Capacity73 gal. . .276 l
 Draft(drive up)20"50 cm
 Freeboard(fwd)41"104 cm
 Freeboard(aft)26"66 cm
 Transom Height . . .48"121 cm
 Bridge Clearance . .57"144 cm

253

Centerline25'7.62 m
 Beam8' 6"2.59 m
 Dry Weight4350lbs. .1973 kg
 Deadrise20 deg. .20 deg
 Fuel Capacity73 gal. . .276 l
 Draft(drive up)20"50 cm
 Freeboard(fwd)41"104 cm
 Freeboard(aft)26"66 cm
 Transom Height . . .48"121 cm
 Bridge Clearance . .57"144 cm

272

Centerline27' 3"8.3 m
 Beam8' 6"2.59 m
 Dry Weight4930lbs. .2236 kg
 Deadrise20 deg. .20 deg
 Fuel Capacity97 gal. . .367 l
 Draft(drive up)23"58 cm
 Freeboard(fwd)39"99 cm
 Freeboard(aft)34"86 cm
 Transom Height . . .52"132 cm
 Bridge Clearance . .60"152 cm

293

Centerline28'10"8.8 m
 Beam9' 6"2.89 m
 Dry Weight(single) .6950 lbs. .3051 kg
 Dry Weight(twin) . .7950 lbs. .3606 kg
 Deadrise(transom) .20 deg. .20 deg
 Draft(sngl, dr up) . .19"0.48 m
 Draft(twn dr up) . . .21"0.53 m
 Cockpit Freeboard .53"1.3 m
 Transom Height . . .23"0.6 m
 Bridge Clearance) . .75"1.9 m
 Fuel Capacity113 gal. .428 l
 Freshwater Capacity .31 gal. .117 l



WARRANTY PROCEDURE AND OWNER RESPONSIBILITY

COBALT WARRANTY

Ten-year limited transferable warranty on hull and deck structure, two-year limited transferable warranty on other component parts.

Cobalt Boats warrants the hull and deck, including floor, stringers, motor mounts, transom and deck/hull joints, of each new Cobalt boat to be free from structural defects in material and workmanship under normal recommended use for a period of ten (10) years from the date of delivery to the original retail purchaser.

Cobalt Boats warrants the gelcoat finish, upholstery, components not having their own warranty and all components manufactured by Cobalt Boats, other than the hull and deck, of each new Cobalt boat to be free from structural defects in material and workmanship under normal recommended use for a period of two (2) years from the date of delivery to the original retail purchaser.

This warranty does not apply to (1) engines, outdrives, controls, batteries, or other equipment or accessories which are separately warranted by the manufacturers thereof (appropriate adjustments therefore being provided by the respective manufacturer); (2) engines or accessories installed by persons or parties other than Cobalt Boats; (3) windshield leakage, upholstery damage, carpet damage and gelcoat damage; and (4) any Cobalt boat which has been altered, subject to misuse, negligence or accident, or used for racing or commercial purposes.

The rights and benefits granted under this warranty to the original retail purchaser of a new Cobalt boat shall extend to any owner of such Cobalt boat during the applicable warranty period, commencing with the date of delivery to the original retail purchaser, as set forth herein, provided this warranty is validated by such owner, as set forth herein. In no event shall the owner of any Cobalt boat, covered by this warranty, have any rights or benefits under this warranty which are greater than the rights and benefits which would have been available under this warranty to the original retail purchaser of such Cobalt boat had the original retail purchaser

remained the owner of such Cobalt boat.

Cobalt Boats shall not be liable for special or consequential damages, such as, but not limited to, damages for cost of replacement goods, or damages for claims of third parties against the purchaser, or damages for loss of profits.

To validate this warranty, the original retail purchaser must return the warranty registration card to Cobalt Boats within ten (10) days after purchase of any new Cobalt boat covered by this warranty, and any subsequent owner of a Cobalt boat during the applicable warranty period must give written notice of acquisition of a Cobalt boat to Cobalt Boats within ten (10) days after such purchase.

Notification of any warranty claim, arising within the applicable warranty period, as set forth above, must be made in writing by the owner of the Cobalt boat or by an authorized Cobalt Boats dealer to Cobalt Boats within thirty (30) days after the discovery of the alleged basis for any warranty claim.

During the applicable warranty period, as set forth above, warranty repairs shall be made without charge by an authorized Cobalt Boats dealer or, at the option of Cobalt Boats, by Cobalt Boats at its plant in Neodesha, Kansas. All warranty repairs shall be subject to the authorization of factory-trained personnel of Cobalt Boats, whose decision will be final. Transportation to and from an authorized Cobalt Boats dealer, and/or to and from the Cobalt Boats plant in Neodesha, Kansas, for warranty repairs, shall be at the owners' expense.

In no event shall the liability of Cobalt Boats under this warranty exceed the purchase price of the specific item or items to which this warranty relates.

This warranty constitutes the only express warranty covering a new Cobalt boat. Any implied warranty, which may be determined to pertain to any component of a new Cobalt boat, is limited to ten (10) years on the hull and deck structure, and limited to two (2) years on all other component parts covered by the express warranty as set forth above, except in those states which have other limitations on the duration of an implied warranty.

This warranty gives you specific rights and remedies. In addition, you may also have other rights and remedies which vary from state to state.

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OWNER RESPONSIBILITY/WARRANTY PROCEDURE

Before operating your new Cobalt, it is necessary you read and understand this manual. Also, take the time to read the other manuals supplied to you by your dealer.

Warranty Service Requirements

All Cobalt warranty service must be completed by an authorized Cobalt dealer. If you are not able to return your boat to your selling dealership, you must contact him so he may assist you in coordinating the warranty repairs. Any claims against Cobalt

Boats without prior approval from Cobalt Boats on repairs completed by a non-authorized dealership may be denied.

EXTENDED POWERTRAIN WARRANTY

Your Cobalt warranty includes an Extended Limited Powertrain Warranty. Your dealer submitted the necessary forms to implement this warranty. Please read the contract supplied to you by your dealer.

It is important you have your Cobalt serviced per the engine manufacturer's recommended instructions. You must keep, in your possession, records of all service performed should the extended powertrain warranty be needed. This is to prove the required maintenance has been performed.

If you have any questions referencing your Extended Powertrain Warranty, please contact your Cobalt dealer.

IF YOU SELL YOUR COBALT

Your warranties are transferable. If you sell your Cobalt to anyone other than an authorized Cobalt dealer, please call Cobalt Boats for the appropriate warranty transfer information (800-468-5764 or 316-325-2653). If the proper transfer procedures are not followed, future warranty may be denied.



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TROUBLE SHOOTING



ENGINE WON'T START

Lack of Fuel - Check fuel.

Clogged anti-syphon valve - See Authorized Cobalt Dealer.

Clogged fuel tank pick-up - See Authorized Cobalt Dealer.

Clogged fuel filter - See Authorized Cobalt Dealer.

Plugged fuel line or defective pump. - Fuel pump may be defective. Inspect pump sight glass for fuel leakage from fuel pump. See Authorized Cobalt Dealer.

Carburetor float valve stuck - Tap float chamber with a screw driver handle to free needle valve.

Damp spark plugs - Dry spark plug ceramic with clean, dry cloth.

High tension leads wet and/or loose - Dry and tighten connections at spark plugs, distributor and coil.

No spark - Check for loose connections on coil.

No spark - Check high tension lead on coil.



WARNING

WHENEVER CHECKING FOR ELECTRICAL PROBLEMS USE EXTREME CAUTION. GASOLINE IS FLAMMABLE!



WARNING

Water in fuel supply or old gasoline - Check fuel supply for water contamination. If gasoline is old or if water is present, drain fuel tank and flush with fresh gasoline.

GASOLINE IS FLAMMABLE USE EXTREME CAUTION WHEN HANDLING GASOLINE!

Ignition Safety Switch. - Your Cobalt is equipped with an ignition safety switch located on the lower lip of the dashboard. Make sure the lanyard is installed with the switch holding the lanyard in place.

STARTER WON'T CRANK ENGINE

Ignition switch if inoperative - see Authorized Cobalt Dealer.

Throttle position - Check to see that remote control is in start or neutral position. Change position of throttle only slightly.

Dead battery - Check level of electrolyte, disconnect battery. Charge battery.



WARNING

BATTERY ACID CAN CAUSE BLINDNESS IF SPLASHED IN EYES; BURNING OF SKIN AND SEVERE GASTROINTESTINAL DAMAGE IF INGESTED. USE EXTREME CAUTION.

Battery connections loose or corroded - Check for loose connections and corrosion. Clean connections and tighten.

Starter connections loose - Check connections and tighten. If solenoid clicks when attempting to start engine, check battery connections. If condition persists, see your Authorized Cobalt Service Dealer.

ENGINE RUNS ERRATICALLY

Automatic choke out of adjustment - See your Authorized Cobalt Dealer.

Water and/or dirt in fuel filter - Clean and inspect filter.



WARNING

GASOLINE IS FLAMMABLE. USE EXTREME CAUTION.

Fuel pump malfunction - Check operation of pump. Replace fuel pump. See your Authorized Cobalt Dealer

Fuel tank vent and line plugged - Check for restriction in line and vent. Blow out line and vent.

ENGINE VIBRATES

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Propeller condition - Check for bent, broken or damaged propeller. Check for weeds on propeller or gear case.

Carburetor out of adjustment. - See Authorized Cobalt Dealer.

Spark plug condition - Check spark plug electrodes and ceramic. Clean and regap. Replace plugs, if necessary.

High tension leads loose or deteriorated - Insure all connections are clean and tight. See Authorized Cobalt dealer.

Incorrect firing order - Correct firing order, see engine manufacturer's owner's manual.

Engine out of time - See Authorized Cobalt Dealer.

ENGINE RUNS BUT BOAT MAKES LITTLE OR NO PROGRESS

Fouled or damaged propeller - Stop and shut off engine. Check for weeds on propeller, bent or broken propeller. See your Authorized Cobalt Dealer.

PERFORMANCE LOSS

Throttle not fully open - Check to see that throttle opens fully at carburetor.

Improper fuel - Fill tank with correct fuel.

Overheating - Check cooling system. Remove weeds from water intake. Check alternator belt tension.

Boat overloaded - Reduce load.

Boat trim - Distribute boat load evenly.

Improper propeller selection - Select proper propeller pitch and diameter. (See chart in owner's manual).

Excessive bilge water - Check for excessive water, drain bilge.

Boat hull condition - Clean if marine growth is present.

FUEL INJECTION ENGINES

Fuel injection engines have safety circuitry built in that monitors many different functions of the engine and drive system. In many of these engines, a malfunction that you the operator might not even be aware of, can trigger a safety circuit in the engine causing it to automatically slow down and run rough. Should such a circumstance occur, please check with your Cobalt dealer as soon as possible.



