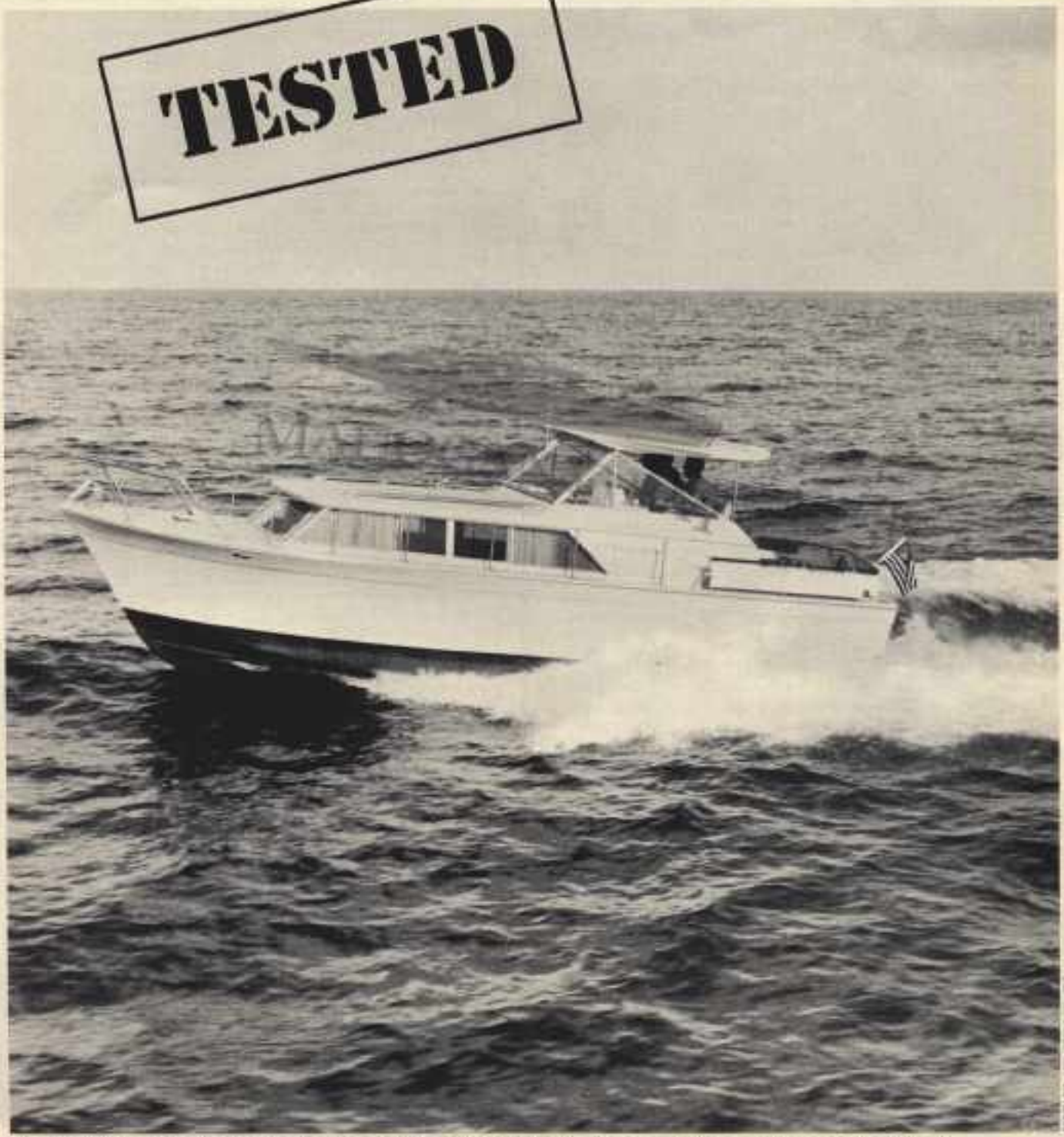
REPRINTED FROM
POPULAR

DECEMBER 1965

# Boating

AMERICA'S MOST WIDELY READ BOATING MAGAZINE

TESTED



The 31' Commander's flared keel gives the stability and fast ride of a planing hull without tenderness at low speeds.

# THE CHRIS-CRAFT 31′ COMMANDER

BY MOULTON H. FARNHAM

*This handsome new addition to the popular Commander fleet of fiberglass cruisers combines a feeling of luxury and space in a hull that handles easily at all speeds*

To starboard the lumpy sea of the Gulf Stream stretched to the far horizon. To port the Florida coastline above Fort Lauderdale went by at an impressive 28 knots. And ahead, just visible through the curtains of a distant rain squall, the tall black skeleton of Hillsboro Inlet Light loomed above the palm trees. The 31′ Commander responded smartly to increased throttle as we gunned her along, testing her motion and handling on the last few miles of an offshore run. She leaped ahead under the drive of her twin 210-hp engines like a racehorse heading for the finish.

Earlier, with Chuck Keuth, from Chris-Craft's Pompano headquarters, we had put her through her paces in a series of repeated runs at different speeds back and forth over a measured mile on the Intracoastal Waterway below Fort Lauderdale. This was the windup of a day of intensive testing.

We had been gratified when the Chris-Craft Corporation invited POPULAR BOATING to test-ride Hull No. 1 of this newest addition to their Commander fleet of all-fiberglass luxury cruisers, the 31′ Commander. It was an acknowledgment by the largest motorboat builder of the widespread interest in our boat-testing program. But, more importantly, it indicated an eagerness on the builder's part to secure unbiased outside judgment on improvements that might still be made in the new boat before its production standards were finally locked up.

So Jack Seville and I had reported in at Chris-Craft's Pompano Beach Research Center early that morning and begun our standard procedure of putting the magnifying glass on every phase of the 31′ Commander's equipment and operation.

It started with a minute examination of the boat's hull as she hung suspended in the slings of a movable crane before launching.

We noted the gracefully flared bow, the flared keel, and the unique inset chine that deflects spray. This inset runs the entire length of the hull and across the width of the slightly V'd transom. Later, in both calm water and on the open sea we observed the efficiency of this design; it really keeps the boat dry

## SPECIFICATIONS

**Dimensions:**

| | | | |
|---|---|---|---|
| Length overall | 31′ | Freeboard forward | 4′6¾″ |
| Waterline length | 27′1½″ | Freeboard aft | 3′2½″ |
| Beam | 11′2⅝″ | Cabin headroom | over 6′1″ |
| Draft (twin screw) | 3′3¾″ | Bridge clearance* | 9′11″ |

*Waterline to top of anchor light

**Displacement:** 9,500 lbs.

**Accommodations:** Sleeps six, with four in main cabin and two on V-berths in separate forward stateroom. Dinette in main cabin converts to sleep two; main cabin lounge converts into upper and lower berths. L-shaped galley with plate and glass rack and pot locker. Head-lavatory amidships on port side.

**Construction:** Fiberglass, hand layup, with resin applied by spray gun. Bottom is 6-ply—one layer of ¾-oz. mat, one layer of 6-oz. cloth, and four plies of Duo-Glass, which is Chris-Craft's own weave consisting of alternate layers of 1½-oz. mat and 20-oz. woven roving stressed for extra strength athwartships. Sides of hull are 4-ply—one layer of 1½-oz. mat, one layer of 6-oz. cloth, and two plies of Duo-Glass. Extra layers of Duo-Glass are added to beef up important areas around the rudder, along the keel, under the engines, and on the inset chine all around the hull. The stringer complex is built of fiberglass in hollow hat sections, with transverse floors and engine bed stringers fiberglassed to the stringers. A .15-mil. high-gloss gel coat gives the hull its finish and color. Philippine mahogany interior cabinet-work and trim. Safety glass in windshield.

**Equipment:** International Rule navigation lights; electric horn; bell; 6 life jackets, 2 Kidde 2½-lb. dry chemical fire extinguishers; Morse Submersible Automatic Electric Bilge Pump; 20-lb. Danforth anchor; 75′ of ½″ manila anchor line; 2 dock lines of ½″ manila; stainless steel handrails on cabin top; mahogany handrail around aftes deck; bow pole and pennant; mast with anchor light; stern pole and ensign; chrome-plated brass deck hardware; molded fiberglass ventilating hatch on foredeck; helmsman's seat; 4″ polyurethane foam cushions and mattresses; foam-backed nylon carpeting; 100% linen, Scotch-guarded draperies; screens; convertible dinette; stainless steel galley sink; manual, cold fresh water system; Homestrand Model 206 2-burner alcohol stove; 100-lb. capacity 5.5 cu. ft. icebox; Groco Model K Manual Marine Toilet; fiberglass washbasin; medicine cabinet with mirror; 25-gal. hot-dipped galvanized steel water tank; two 50-gal. hot-dipped galvanized steel fuel tanks; fused 12-v electrical system with color coded wiring; two 12-v 53 amp-hr Willard batteries; full engine instrumentation; Morse custom throttle and shift controls; Steermaster cable steering.

**Propulsion and Performance:** see page 61.

**Price:** With above equipment and propulsion listed on page 61, $16,790. FOB Holland, Mich. The test boat, equipped with twin Chris-Craft 210-hp Model 327 Fs ($200), bilge blower ($55), bow pulpit and side rails ($390), hard top ($690), and other extras, had a retail value of $18,490.

**Designer:** Chris-Craft Corporation

**Builder:** Chris-Craft Corporation, Pompano Beach, Fla.

when running at speed, even in a moderate sea.

An important secondary value of the inset is to permit venting the exhaust and other through-hull fittings below the chine. This, we found, reduces noise somewhat and effectively carries exhaust fumes away from the wake.

The boat's bottom is not a constant V-shape from stem to stern. As the sharp entry of the keel sweeps aft it flares into a broad, horizontal surface. The virtue claimed for this hull design is the stability and fast ride of a planing hull without the tenderness or lack of maneuverability of a typical deep V-hull. On the basis of Hull No. 1's performance in our testing,

*The high-gloss finish and trueness of the Commander's lines show the sophistication of Chris-Craft's molding.*

which covered all speeds, both claims seem justified.

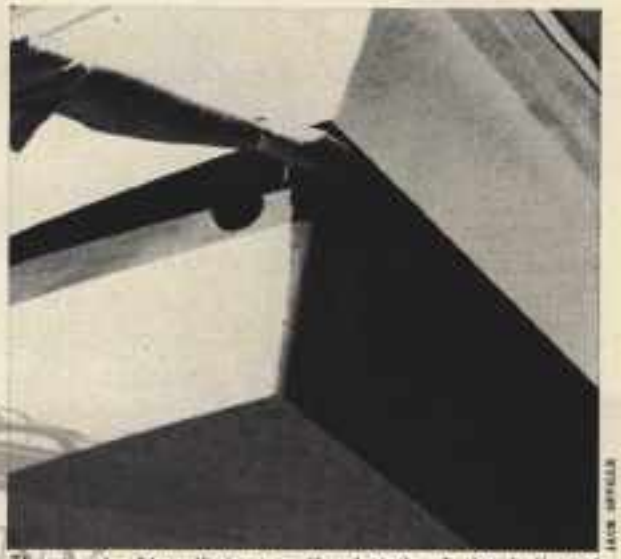
Another hull detail, not so apparent, is the pair of longitudinal stabilizers along the underbody on both sides of the keel. These serve a dual purpose, steadying the boat in turns and heavy seas, and providing additional stiffness to the hull. It isn't possible to pinpoint their efficiency as sharply as that of the inset chine, but the 31' Commander was a singular pleasure to handle at all speeds, and held her course with impressive sureness on the lumpy waters of the Gulf Stream.

With Hull No. 1 hanging in the slings, we could sight along her fiberglass sides and bottom and check the trueness of her lines. From rail to keel there was neither dent nor wriggle in their flow. They were smooth and without visible flaw. The high gloss finish of the boat's topsides indicated highly sophisticated skill in precision molding.

How Chris-Craft achieves this precision was reported to us later by publisher Syd Rogers. He spent a whole day observing construction techniques and production methods at Chris-Craft's Holland, Michigan plant, where the Commanders are built.

"In fiberglass, Chris-Craft has established rigid standards of their own that exceed the usual industry specifications," Rogers said. "Every batch of resin they buy is laboratory tested before and during use—this guarantees production uniformity. Their quality control is so close it permits a variance of only 1% in molding—less than 50 lbs., for example, in a hull weighing 4,700 lbs."

When the boat was lowered into the water, we noted that this new Commander seems much bigger than her actual 31' L.O.A. She has an air of luxury and space. And unlike some boats of this size that look merely like the forward half of a much larger boat, the 31' Commander looks like a complete boat. Chris-Craft has successfully scaled down the lines of



*The inset chine that runs the length of the hull and across the transom deflects spray and gives a dry ride.*

the 38' Commander and retained their big boat feeling.

From rounded stem to square stern, she is handsome. Her big deckhouse with large forward and side windows; her wide, clean deck space; and her roomy cockpit all promise comfortable living inside and out.

Below decks, this promise of comfort is fulfilled with a large main cabin that sleeps four and an attractive separate forward stateroom with two V-berths. Headroom throughout is over 6'1". With curtains parted, light from the sliding side windows and fixed windows forward floods the interior.

The nylon-carpeted main cabin has a convertible lounge to starboard and a convertible dinette to port. The lounge provides ideal sleeping for youngsters. It makes up into an upper and lower berth, with the top bunk measuring 5'11" x 29", while the bottom one is the same length but tapers in width from 37" aft to 25" forward.

To convert the dinette for sleeping, the table collapses and seats and backs slide together to form a berth 6'3" long, tapering from a 43" width aft to 38" forward. The V-berths in the forward stateroom are over 6' long and taper from 32" aft to 26" forward.

Particular commendation is due Chris-Craft for skillful planning of space in the forward stateroom, avoiding the cramped feeling so often given by V-

berth layouts. The 31' Commander arrangement could more properly be termed a U-plan, since the forward end of the two bunks provides a broad settee. A large molded, adjustable ventilating hatch overhead gives direct access to the forward deck.

Forward of the stateroom, a chain locker is concealed behind a bulkhead, with access through a small door.

All seats throughout the boat are equipped with 4" polyurethane foam cushions, composed of 2" of virgin foam and 2" of bonded foam to give both resiliency and support. All berths are fitted with similar mattresses of the same thickness.

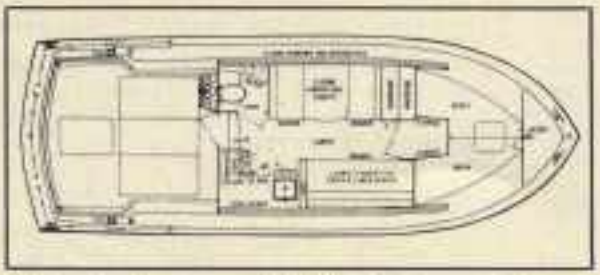
*This view forward of a 31' Commander fiberglass hull in the making shows full-length stiffeners along sides; also how inset chine contributes extra stiffening. Wooden engine beds are fiberglassed to full-length hull stringers.*

Storage space in both cabins is generous. Drawers beneath the seats of the dinette, under the lounge, and below V-berths are of ample size. In addition, wardrobe compartments on both sides of the port bulkhead between the main and forward cabins are big enough to hang a good supply of shore clothes.

Immediately to starboard, as you step down from the 31' Commander's bridge deck into the main cabin, is the L-shaped galley; it is well situated for serving the ship's company either below or in the cockpit.

The galley contains a rectangular stainless steel sink with cold fresh water system and manual pump, set into a Formica counter top that measures 4'8½" along the outboard leg of the L and 3'5" along the athwartships leg. A lid in the counter lifts for access to a Homestrand No. 206 2-burner alcohol stove. Compartments for dishes and glasses run the length of the counter outboard, within easy reach. A 100 lb. capacity, 5 cu. ft. icebox, utensil drawer, and good-sized food storage and pot lockers are below the counter. The icebox can be converted to 12 v DC electrical refrigeration, but the option carries a price tag of $560!

One small, easily-corrected fault we found in the galley of Hull No. 1 was a sharp square corner on the counter top next to the companionway. This could be rounded off to eliminate the hazard of someone bruising himself when coming down the steps in a seaway. The same correction might be applied to the square corners of the shelf on top of the half-bulkhead between the galley and the lounge.



*Flaring bow design permits U-plan for forward stateroom, avoiding cramped effect often found in V-berth layouts.*

The boat's toilet and washroom facilities are centrally located to port of the companionway, opposite the galley. The head-lavatory is equipped with a fine large fiberglass washbasin counter with water pump, medicine cabinet with mirror, and Model K (manual) Groco Marine Toilet than can be electrified as an optional extra. Under the washbasin is a large linen locker with sliding door.

On Hull No. 1 the medicine cabinet was hung on the after bulkhead, directly over the toilet. This location involves some bumping hazard, and would be improved by shifting the cabinet to the forward bulkhead.

An open phenolic distribution panel for the boat's electrical system is also located in the head-lavatory, in a handy spot on the after bulkhead. Each of the fused circuits is marked clearly and has a UL-approved push-pull switch.

On the back of the head-lavatory door was hung a plastic envelope with instructions for the new owner. Chris-Craft has done an outstanding job with this kit, which includes an operating manual for the engine, the boat's complete wiring diagram, and a combination manual for operations of the head, sink, steering mechanism, etc. This last manual also contains Rules of the Road, hints on boat etiquette and operation, and instructions for safety; it is the finest piece of its type we've ever seen.

Access to the boat's automatic Morse Submersible Electric Bilge Pump is through a hatch in the sole of the main cabin. On Hull No. 1 we noted the pump placed so far aft under this hatch that it would be virtually impossible to reach for emergency clearing. Chris-Craft has since informed us a production change has been made on all 31' Commanders to correct this condition by moving the pump about 2' forward.

Out in the cockpit, we checked the engine compartment. Access to the big twin engines is excellent. Three sectional hatches can be folded back out of the way and latched with holding straps to permit working on one engine at a time or both together.

Fiberglass intake and exhaust ventilation ducts, we noticed, go deep into the bilge, as will be required next year by the new Coast Guard regulations that become effective June 1, 1966.

The two batteries on Hull No. 1, however, sat unsecured in their boxes on the centerline between the two engines, without straps to hold them in place during heavy weather or in rough seas. Straps are so

**Propulsion:** Twin Chris-Craft V-8 185-hp Model 283 F, 4-cycle 8-cylinder, valve-in-head gasoline engines, rated 185 hp at 4000 rpm, with 1½:1 reduction gears, and 15" x 15" Chris-Craft T-36 manganese bronze 3-bladed propellers.

Note The test boat was equipped with the power option—twin Chris-Craft V-8 210-hp Model 327 F gasoline engines, with 1½:1 reduction gears, and swung 15" x 17" Chris-Craft T-36 manganese bronze 3-bladed propellers.

Performance with 3 persons on board and 75 gals. of gasoline.

| rpm | mph | gph* | mpg |
|---|---|---|---|
| 2200 | 13.19 | 11.4 | 1.15 |
| 2400 | 15.90 | 13.0 | 1.22 |
| 2600 | 18.78 | 15.0 | 1.25 |
| 2800 | 22.14 | 17.2 | 1.28 |
| 3000 | 25.11 | 19.8 | 1.26 |
| 3200 | 27.22 | 23.2 | 1.17 |
| 3400 | 29.10 | 27.0 | 1.08 |
| 3600 | 30.91 | 30.8 | 1.00 |
| 3800 | 32.87 | 34.2 | .96 |
| 4000 | 34.82 | 37.6 | .92 |

*Combined consumption, both engines, measured by Chris-Craft engineering department

Speed based on clocked times over measured statute mile

Sound level at 800m:

Idling—83 dbs. Cruising speed—97 dbs. Full throttle—100 dbs.

Sound level in main cabin:

Idling—83 dbs. Cruising speed—95 dbs. Full throttle—100 dbs.

easily added and so inexpensive, we feel they should be standard equipment on all boats equipped with power. Another desirable addition would be a removable pegboard cover over the batteries. This would give needed ventilation, yet prevent accidental sparking from tools falling across the terminals.

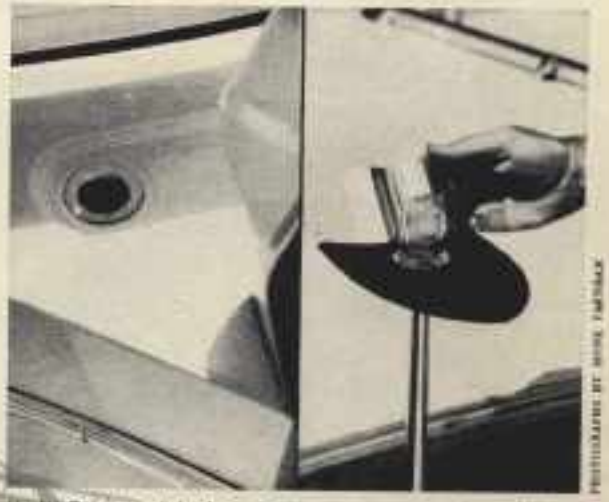
Twin 185-hp V-8 Model 283-F Chris-Craft marine engines are standard equipment on the 31' Commander, although our test boat had a pair of the optional Chris-Craft engines—the 210-hp V-8 Model 327-F. Both these models are equipped with a 40-ampere alternator instead of the usual DC generator.

Two 50-gallon, galvanized, self-equalizing gas tanks lie across the after end of the engine compartment. As our running tests over the Rodi measured mile on the Intracoastal Waterway subsequently indicated, this should give the boat a range of about 115 miles when cruising at slightly over 22 mph, or about 85 miles with throttles wide open and a speed somewhat over 34 mph.

On the cockpit deck aft of the engine hatches a separate hatch leads to a lazarette with abundant stowage space for dock lines, fenders, swimming ladders and other deck gear.

The cockpit itself is king-size—8'4" wide x 9'7" long—a total of 80 square feet, enough to accommodate the helmsman and an observer, and to seat several people comfortably in deck chairs without crowding. It is enclosed by a handsome mahogany rail and vinyl-coated nylon weather cloth—an appealing area for outdoor living. A nonskid surface molded into the fiberglass of the cockpit sole gives secure footing regardless of the weather.

The forward deck, though not so sheltered, also has a pleasant spaciousness. The main cabin deckhouse top, with stainless steel handrails on both sides, is well adapted to sun bathing, especially at anchor. The safety glass windows in the windshield



*(Left) Recessed deck drainage scuppers are of ample size. (Right) 20-pt. running light becomes 32-pt. anchor light.*

are a precaution of which we approve. Safety could be promoted still further, by giving this cabin top and that of the optional hardtop the same nonskid finish as the cockpit and deck surfaces, sacrificing the showroom eye appeal of the gloss finish for better footing at sea.

One ingenious piece of equipment—a Chris-Craft design—is the 20-point white navigation light that projects on a rod amidships above the forward side of the hardtop. It is fitted with a hinged shield that folds back to convert the navigation light into a 32-point anchor light.

The 31' Commander's steering and control station, located amidships, to port of the main cabin companionway, is compact and well-planned. Though the view ahead from this position is all right because of the bridge deck's height above the water, we always prefer a starboard location for steering—as on the Chris-Craft Cavaliers—since it gives the helmsman a better view of the boat's Danger Zone.

We experienced a Walter Mitty thrill in handling the dual airplane-type Morse throttle controls, located directly before the two large tachometer dials. These controls are custom made for Chris-Craft. With one hand on the twin levers and one on the wheel you can gentle the boat through a continuous climb from idling to full throttle, and keep the two engines synchronized all the way up. This we checked in our many runs over the measured mile.

On the way to the measured mile, we learned too

late that our Ongaro Flowmeter, for measuring gasoline consumption, cannot work on a Chris-Craft engine without a custom hook-up. Chris-Craft gas tanks are fitted with a special cut-off valve to prevent flooding the bilges with gasoline should there be a break anywhere in the fuel line; the action of this valve makes the Flowmeter's readings erratic.

Accordingly, to determine approximate miles-per-gallon for the propulsion data on page 61, we made our measured mile test runs at various rpm's for speed, then combined these times with consumption figures (gph) from Chris-Craft engineering tests of their 210-hp Model 327-F under simulated propeller loads. It should be noted that Chris-Craft owners report these test stand gph figures are conservative; in actual use on a boat, the engines burn less gasoline.

Each test run over the measured mile at a given rpm was in two directions, upstream and down. To get the speed for the run, time was taken each way and averaged, thus equalizing the effect of wind and current.

After the series of runs on the sheltered reaches of the Inland Waterway, we headed Hull No. 1 down the Fort Lauderdale channel for the open sea and the final part of our test, a 17-mile offshore run to Hillsboro Inlet.

By now we had been at the boat's wheel long enough to wish that the fixed helmsman's seat could be made adjustable to better accommodate the helmsman's arm and leg length. The seat itself is comfortable enough, but so wide we weren't able to use the back rest while steering. An owner could remedy this, of course, by shifting the seat brackets to fit his own dimensions.

Rain squalls had kicked up a bit of sea outside, but the boat surged ahead with great power. The hardtop, however, developed a certain amount of sideways motion in the lumpy going, indicating the need for additional stiffening or support. As we go to press we learn that Chris-Craft has now stiffened this hardtop attachment through improved support from the windshield.

As rain shut in, we were forced to close and latch both windshields. But the latches wouldn't stay shut; they kept jiggling open from the boat's vibration. When this detail was checked after the test it was found that Hull No. 1's latches had not been made to specifications. Windshield latches on later hulls, we have been assured, work as they should.

The 17-mile run to Hillsboro was exhilarating. The boat took the seas well, steered beautifully, and was remarkably dry. Though a baby would not have slept well in the forward cabin at wide-open speed, he'd be comfortable at cruising speed.

All too soon we were racing whitecaps through Hillsboro Inlet with a wild rain squall bending the palm trees on shore. We slowed to a crawl to negotiate the narrow bridge into the Intracoastal Waterway and headed back for Pompano Beach.

It had been a crowded day, getting to know the 31' Commander. But we found it a most pleasant experience. We rate her a comfortable, smart handling, yacht-like cruiser, with instant and surging power. ⚓

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