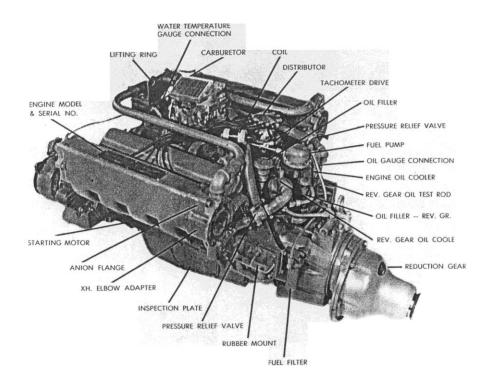
431 MODEL

MODEL
V8 THERMOCON
MARINE ENGINE

MARINE ENGINES BY CHRIS-CRAFT POMPANO BEACH, FLORIDA THE MARINERS' MU CHRIS CRAF NEWPORT NEWS, VA

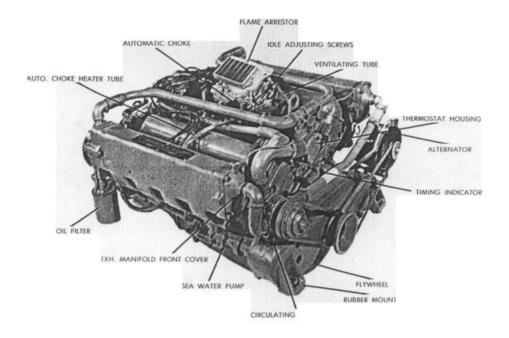




## MODEL 431 MARINE ENGINE

**	
TYPE	4 Cycle Valve In Head V-8
NUMBER OF CYLINDERS	8
HORSEPOWER	
PISTON DISPLACEMENT	
BORE	
STROKE	2.70 Inches CHRIS CRAST
NOMINAL COMPRESSION RATIO	
MINIMUM RECOMMENDED IDLE SPEED	
OIL PRESSURE	
OIL PAN CAPACITY	8 to 9 Quarts, Capacity will vary with running angle.
WEIGHT (Without Oil and Water)	Direct Drive 1192 lbs. 1.50:1 1252 lbs. 2.03:1 1298 lbs. 2.54:1 1293 lbs. (The above weights are approximate)
REVERSE GEARS - (Paragon Gear Co.)	Hydraulic heavy duty gears are standard. Simplified installation of shifting controls. Reverse gears independently lubricated and cooled.
ELECTRICAL SYSTEM	12 Volt - 40 Amp. Alternator charges batteries even at idle speed.  Marine engineered, Mallory ignition system featuring a balanced coil and distributor.

EACH CHRIS-CRAFT MARINE ENGINE HAS A MINIMUM 3 HOUR TEST

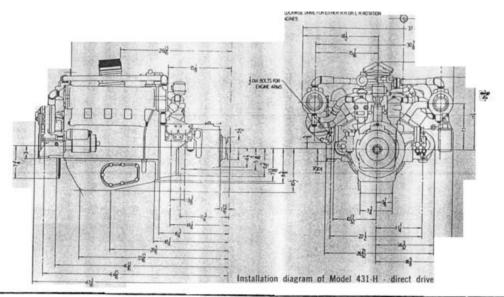


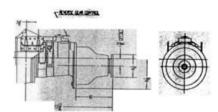
NATIVES AND VALVE TRANS	
VALVES AND VALVE TRAIN	Specially selected materials and treatment to provide durability for marine use. Mechanical valve lifters, rotating exhaust valves, and bronze valve guides.
PISTONS	Heavy duty type with special ring combination.
CONNECTING RODS	Short I-Beam pyramid construction for maximum strength.
CRANKSHAFT	Custom-Built, precision machined and balanced; 5 main bearings.  Torsion coupling between crankshaft and reverse gear.
CRANKCASE VENTILATION	Positive - closed ventilation system.
CARBURETOR	Downdraft, 4 barrel design permits economical operation at mid- throttle, automatic choke; fast idle mechanism for fast efficient warm up.
COOLING SYSTEM	THERMOCON-DEVALVO a special system of temperature control using a large volume of water at high velocity, thermostatically controlled to a constant temperature at all engine speeds - reduces engine wear, gives greater efficiency and fuel economy. Available only on Chris-Craft Marine Engines.
EXHAUST MANIFOLDS	Durable cast iron.
ANGLE OF INSTALLATION	
GASOLINE REQUIREMENTS	Standard automotive grade, 92 octane research method. Expensive grades are not needed.
ENGINE BALANCE	Yes, the crankshaft and pistons are balanced by electronic machines.  A torsion damper helps keep the engine smoother and assures longer life and better performance.
All illustrations and specifications contained in this is reserved to make changes at any time without notic ratings obtained at factory under favorable conditions	literature are based on the latest product information available at the time of publication approval. The right in prices, colors, materials, equipment, specifications and models, and also to discontinue models. Horsepower, and are not guaranteed.

CHRIS-CRAFT CORPORATION . POMPANO BEACH, FLORIDA

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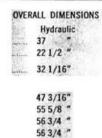


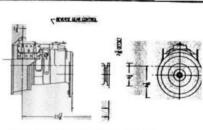


Model 431H-20 - reduction drive (ratio 2.

Wie	dth			195	1.400
1	At wi	dest	po	int	
1	Betwe	en	Eng	ine	Brkts.
Hei	ght				
Len	ngth				
1	Direct	Dr	ive		130
1	1.5:1		*****		
					130

2.5:1

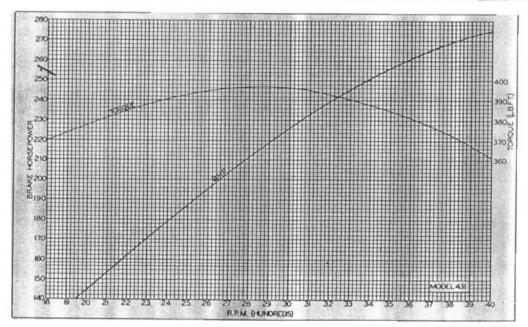




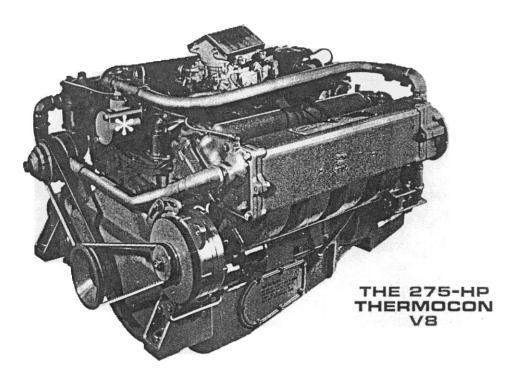
Model 431H-25 - reduction drive (rat

FUEL CONSUMPTION — These figures were obtained by running engines on a test star under simulated propeller loads and are not guaranteed.

	2200 RPM	2400 RPM	2600 RPM	2800 RPM	3000 RPM	3200 RPM	3400 RPM	3600 RPM	3800 RPM	4000 RPM
	7.7	8.7	9.5	11.2	12.6	15.6	17.2	18.1	19.0	23.0 gal.



TH



## Now from Chris-Craft...a temperature-controlled engine that warms up quicker, runs smoother, needs less service, and has a longer life by far!

What's the big secret that makes this new engine perform so beautifully? The answer's simple: Water. Or more specifically, the water that cools the engine. By thermostatically controlling the temperature of the water and increasing both the volume of the water and its speed as it passes through the engine, Chris-Craft has solved many of the problems that have long plagued marine engine builders.

How? By keeping the engine temperature constant (after warm-up of course). To do this, the Thermocon cooling system pumps a large volume of water through the engine at an incredible rate of speed. For example, in order to maintain the running temperature (which is a low 140°) at 4,000 RPM, seventy gallons of water rush through the engine every minute. This high velocity, by the way, has a beneficial "side effect". With what engineers call a "scrubbing action", the high velocity promotes uniform cooling and eliminates "hot spots". Also,

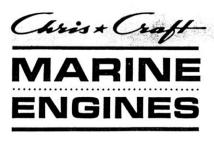
the "scrubbing action" prevents deposits from collecting in the cooling system, because it keeps all matter in constant suspension. So the main principle—more water delivered fast—is applied to the Thermocon engine to achieve what internal combustion engineers have strived for years to develop—a water-cooled engine that maintains almost the same temperature at all speeds!

Think what effect running at a constant temperature would have on some basic parts of the engine. Spark plug life is extended. Valve wear is reduced. And gasoline economy is increased. Engine life from every standpoint is lengthened.

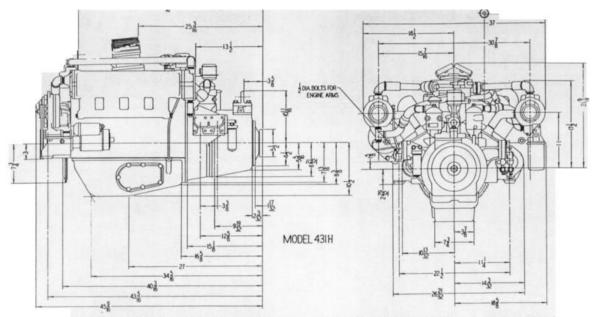
Standard equipment on the new Chris-Craft Thermocon V8 Marine Engine is a 40-amp alternator generator, which charges the batteries even at idling speeds (and if you're a trolling fisherman, you'll like this feature).

Better see your Chris-Craft Marine Engine dealer and let him show you the new Thermocon V8, the most durable, most dependable 275 horses you can put in your boat! For infor-

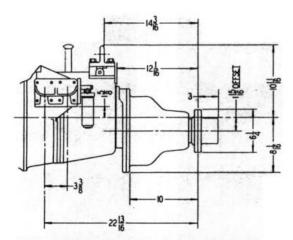
> mation and name of your nearest dealer, write Marine Engine Division, Chris-Craft Corporation, Pompano Beach, Fla. Subsidiary of NAFI Corp.



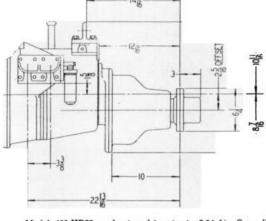
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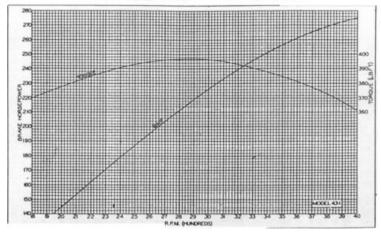
Installation diagram of model 431-H—direct drive. Over-all engine length 45-9/16 in. Total weight (without oil and water) 1199 lbs. Tachometer drive for standard and opposite rotation engines shown turns at one-half engine speed.



Model 431-HR20—reduction drive (ratio 2.03:1). Over-all engine length 55-11/16 in. Total engine weight (without oil and water)—1283 lbs.



Model 431-HR25—reduction drive (ratio 2.54:1). Over-nll engine length 55-11/16 in. Total engine weight (without oil and water)—1273 lbs.



Sustained speed in excess of 4000 rpm voids factory was Specifications subject to change without notice.

MARINE ENGINE DIVISION

CHRIS-CRAFT CORPORATION, POMPANO BEACH, FLORIDA

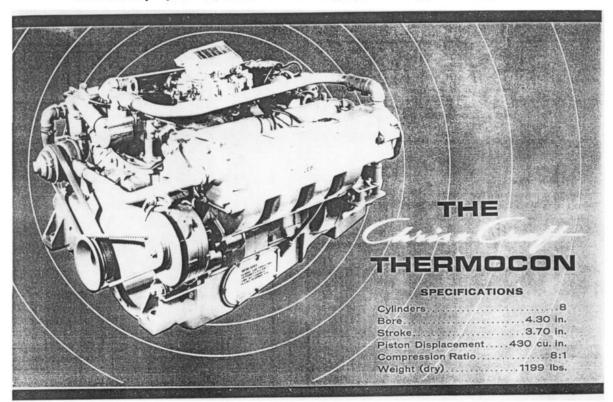
A Complete Line of Marine Engines...60 through 275 Horsepower

Chris & Craft

WORLD'S LARGEST BUILDERS OF MOTOR BOATS

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## Warms up quicker, runs smoother, has a longer life by far



## Chris-Craft Model 431 Thermoc

- 1—THERMOSTATIC CONTROL dual water pump system supplies a large volume of water at a high velocity, which provides uniform water temperature at all speeds; this greatly prolongs engine life and gives better fuel economy.
- 2-EXHAUST MANIFOLDS are long wearing, durable cast iron
- 3 VALVES & VALVE TRAIN durable, high alloy steel, specially faced exhaust valves. Individual operating mechanism for each valve. Rotating exhaust valves, completely water jacketed; seats are induction hardened, eliminating need for seat inserts.
- 4 CARBURETOR downdraft, 4-barrel design permits economical 2-barrel operation at mid-throttle; automatic choke; fast idle mechanism for fast efficient warm up.
- 5 CUSTOM-BUILT CRANKSHAFT precision machined and balanced; 5 main bearings. Torsion coupling between crankshaft and reverse gear.
- 6-PISTONS- heavy-duty type with special ring combination.

- **7-ELECTRICAL AND IGNITION**—12V—40-Amp. Alternator-Generator (standard equipment) charges batteries even at idle speeds. Marine-designed 12-volt system, featuring balanced coil and distributor.
- 8 ENGINE BLOCK compact, light weight; in-block combustion chamber design.
- 9 FUEL PUMP diaphragm-mechanical, driven by camshaft eccentric. Features: self priming, calibrated springs are used to shut off flow of fuel in response to float mechanism in the carburetor.
- 10 REVERSE GEARS hydraulic standard, twin clutch design, one for forward, one for reverse. No drum or bands. Clutch engaging members are integral with main drive shaft. Power is transmitted directly to prop shaft from crankshaft by forward clutch engagement. Reverse gear independently lubricated and cooled.
- 11-MOLDED RUBBER ENGINE MOUNTS-bonded to metal for flexibility and stability.
- 12 CONNECTING RODS heavy-duty; short I-Beam pyramid construction for maximum strength.

MARINE ENGINE DIVISION, Chris-Craft Corporation, Pompano Beach. Florida