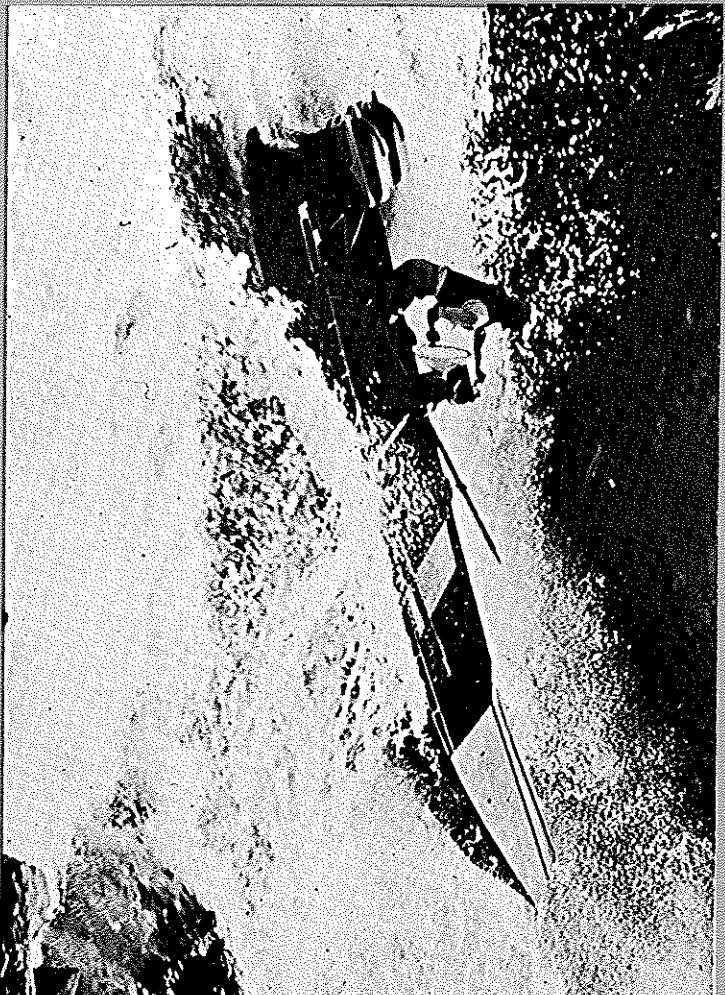


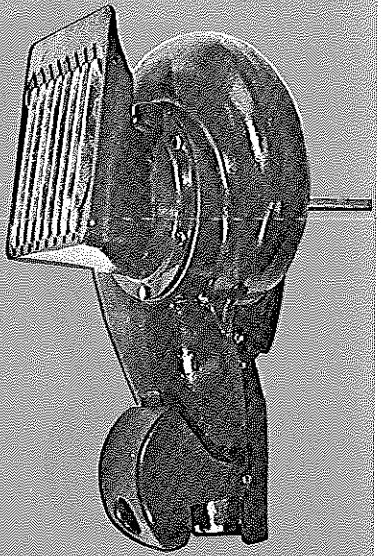
**OUTBOARD JETS**  
of California  
DIVISION OF SPECIALTY MFG. CO.

***Go places...***

***...Where no propeller motor can take you***

***with Outboard Jets***





## The Outboard Jet

The Outboard Jet is a conversion unit for outboard motors designed to allow a boat to be used in locations where a propeller driven boat is unable to operate — in water only ankle deep, through white water rapids, over sandbars, shoals, etc. The absence of whirling propeller blades gives swimmers and skiers maximum safety in the water and in this respect major consideration should be given to converting the family boat to Outboard Jet.

The jet conversion kit comes complete with all hardware and assembly instructions. The unit is attached to the motor in place of the propeller and gearbox assembly. Time taken to do the conversion is one to two hours for the novice. Only hand tools are used and no special skill is required.

Jet units are manufactured from aluminum and stainless steel with a powder coat finish; and no modifications are made to the motor which prevents its later use as a propeller motor.

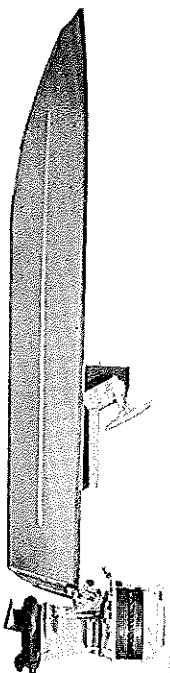
**The outboard motor, using our jet drive, must be mounted 6-7 inches higher on the boat transom than when using the propeller drive. It is desirable to use the short shaft motors where possible.**

Construction of a transom bracket is explained in the owners manual.

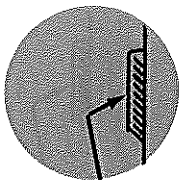
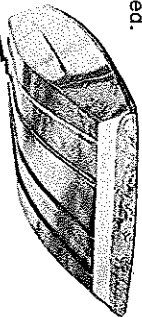
### HOW IT WORKS

Newton's Third Law, "For every force there is an equal and opposite force of reaction," explains the principle upon which the Outboard Jet is based.

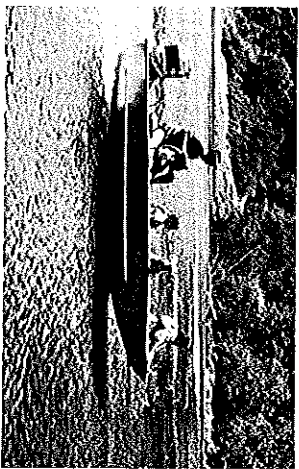
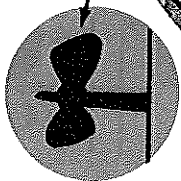
Water is drawn into the unit through an intake grill by an impeller driven directly by the engine driveshaft. This water is then forced at high pressure and volume through a nozzle directed astern of the boat. The velocity imparted to this mass of water creates an opposite force, according to Newton's Law, and drives the boat forward. When the boat reaches planing speed, the jet discharges freely into the air and only the skimming intake grill touches the water. To reverse, a cup is swung into position over the jet stream directing it in the opposite direction creating a force to propel the boat backwards. Conventional controls are used for throttle, reverse and steering.



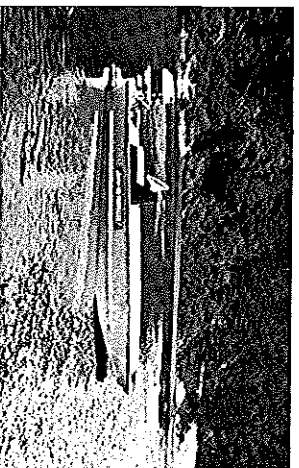
A side view of the jet unit and hull clearly shows why the Outboard Jet is able to operate in water only ankle deep. Notice that the rear of the intake grill extends only an inch or so below the line of the hull. In actual practice, the boat tends to ride on its own wave which it creates at speed.



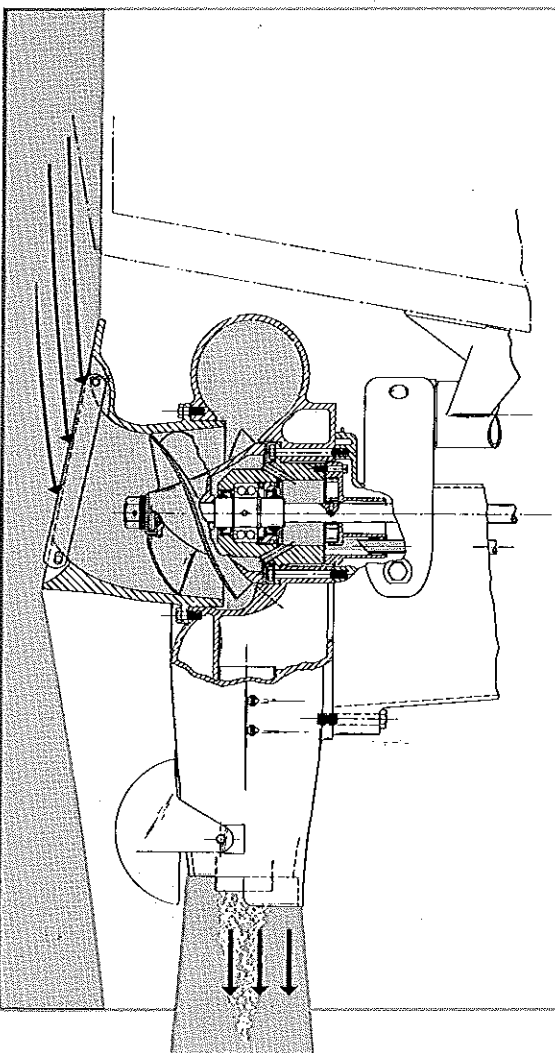
A "fish eye view" gives a further comparison of the difference in depth between a propeller driven boat and an Outboard Jet unit. Remember, with the jet unit there are no whirling blades to harm swimmers.



Even a canoe would have to be walked through this shallow section of water. Above, the Outboard Jet is running easily in 4 inches of water at 25 MPH.



Note the ease of landing this 14' aluminum boat. The motor does not have to be tipped. The sled design allows the passengers to step directly ashore, high and dry.





# Performance

In high power applications, jet propulsion can approximate the speed of a propeller drive. Designing for high speed, however, limits load carrying ability. In order to carry a heavy load, the dimensions of the jet can be such that a larger volume of water is pumped per minute but at a lower pressure, using the same horsepower. In much the same manner that a lower pitch propeller is used to carry heavier loads, but at reduced speeds. This increases the thrust of the jet but reduces the top speed. The Outboard Jet has been designed not for maximum speed but for average speed under reasonable load conditions. Speeds of 80-90% of stock propeller speeds are attained.

This speed loss is outweighed by the ability of the boat to operate in ankle deep water — areas that are inaccessible to propeller drives. The jet drive is much less susceptible to underwater collision damage and the elimination of gears, clutches and propeller makes the unit relatively maintenance free. Only the shaft bearing must be periodically lubricated through a grease fitting provided on the unit.

## HULL SELECTION

Best performance is obtained on light, shallow draft hulls with a relatively flat, wide bottom. Hulls with deep vee or multi-vee bottom not only require more depth but also exhibit more drag when acted upon by the high line of thrust of the jet.

Aluminum is most popular due to its light weight and durability. The following manufacturers build aluminum sleds which work well with the Outboard Jet. The long gentle upward sweep of the bow gives excellent steering control in rough water rapids and cross currents and allows running right onto the beach for easy loading. Broad beam stability with plenty of room are also features. Write to these manufacturers for details and dealer location.

### WOOLDRIDGE BOATS, INC.

9224 M.L. King Way South  
Seattle, Washington 98118  
206-722-8998

### ALUMA-WELD, XPRESS

199 Extrusion Place  
Hot Springs, Arkansas 71901  
501-262-5300

### ALUMAWELD BOATS, INC.

2000 Rogue River Drive  
Eagle Point, Oregon 97526  
541-826-3831

### G III BOATS

901 Cowan Drive  
Lebanon, Missouri 65536  
417-538-9787

### NORTH RIVER BOAT MFG. CO.

247 Kester Road  
Roseburg, Oregon 97470  
800-874-3434

### ALUMACRAFT

315 West St. Julian Street  
St. Peter, Minnesota 56082  
507-931-1050

### SNYDERS WELDING & AIRBOATS

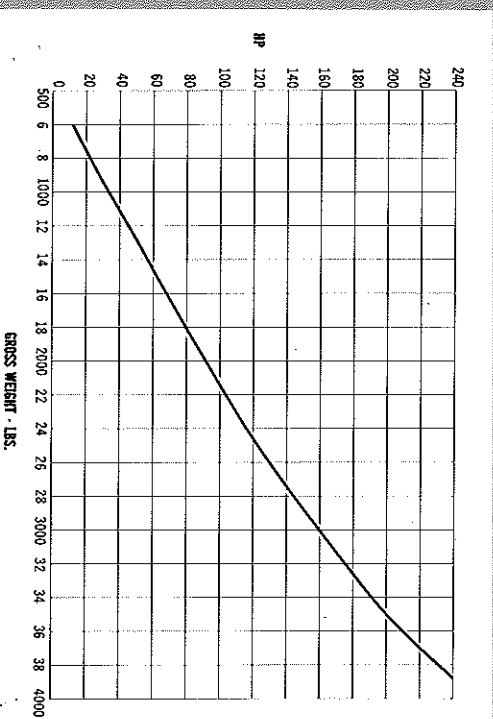
594 Wisconsin Street  
Millersburg, PA 17061  
717-692-4294

### OUTLAW MARINE JETS, LTD.

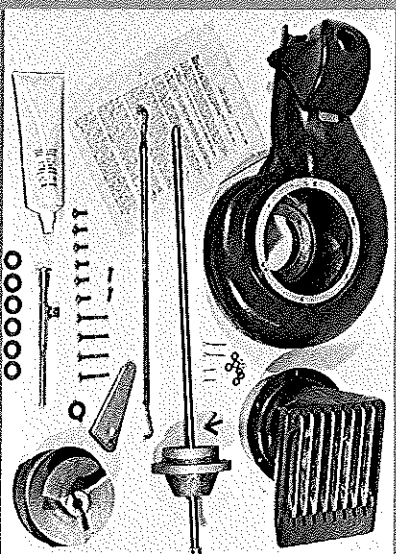
7457-49 Ave. Crescent  
Red Deer, Alberta, Canada  
T4P-1X6 403-347-4565

# Horsepower Selection

A boat operating at slow speed requires considerably more depth than one which is planing on the surface of the water. It is important therefore to use sufficient horsepower and not to overload your boat beyond its ability to plane. The following table is based on experience obtained with sled type boats using the Outboard Jet. The gross weights shown include the motor, hull, fuel, people and all gear carried. For a given horsepower loading beyond these weights will give less than good performance.

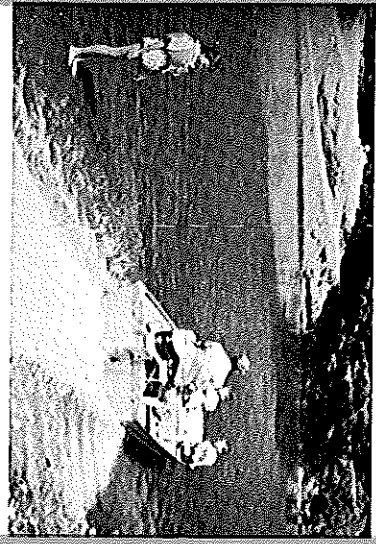


# Jet Drive Kits



Kits are available for most makes of outboard motors from 18-235 HP. See price list for details.

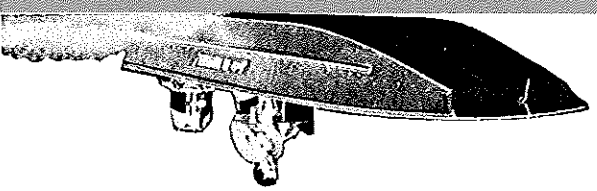
*Adventure  
begins with  
Outboard Jets...*



*Experience the excitement and satisfaction of going to those out of the way places where other craft cannot go. Fishermen can get up to those remote headwaters where the big ones lurk. Troll slowly with big motors. Skiers and swimmers can feel confident in the knowledge that there are no whirling blades in the water. Drive straight up onto the shore, without tipping your motor, to land your passengers. Only jet units allow you to land in this manner. Gone are the embarrassing days when you ask your passengers to wade ashore in shallow water. Get the satisfaction of full enjoyment out of your boat with the highest degree of safety . . .*

*Go Outboard Jets*

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