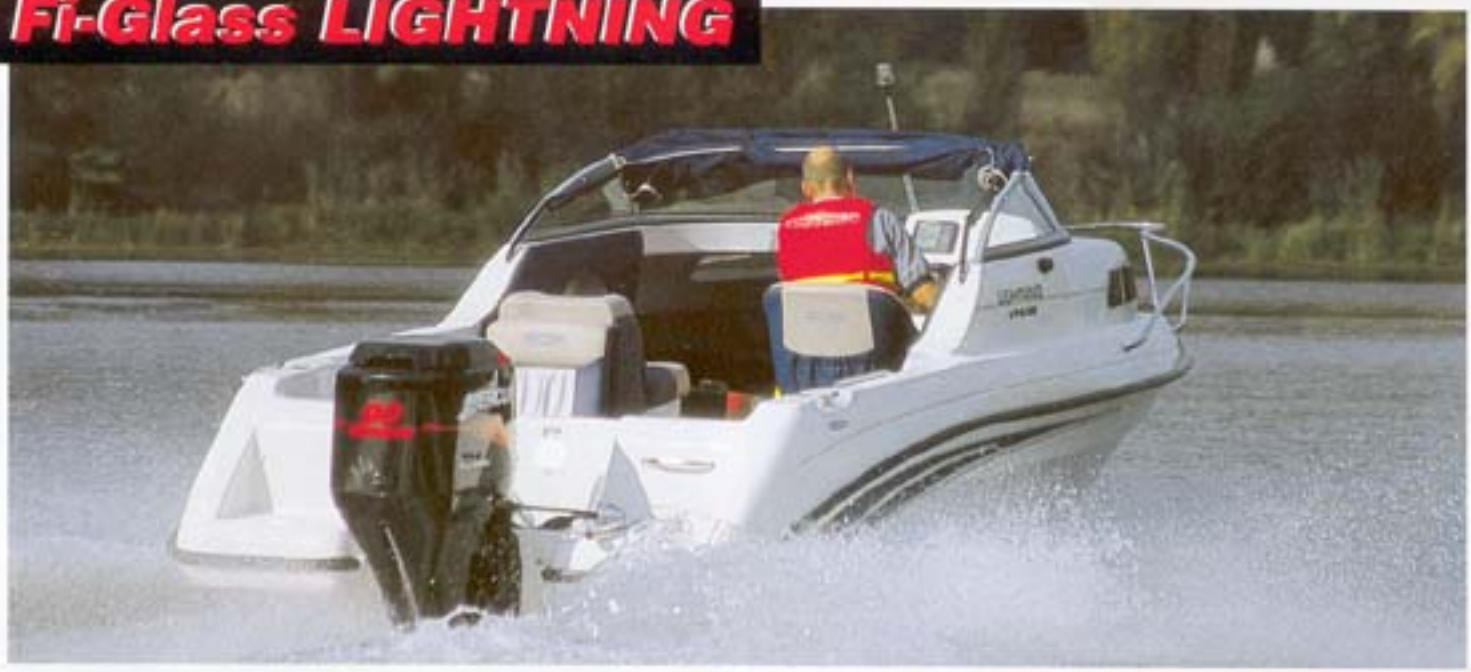
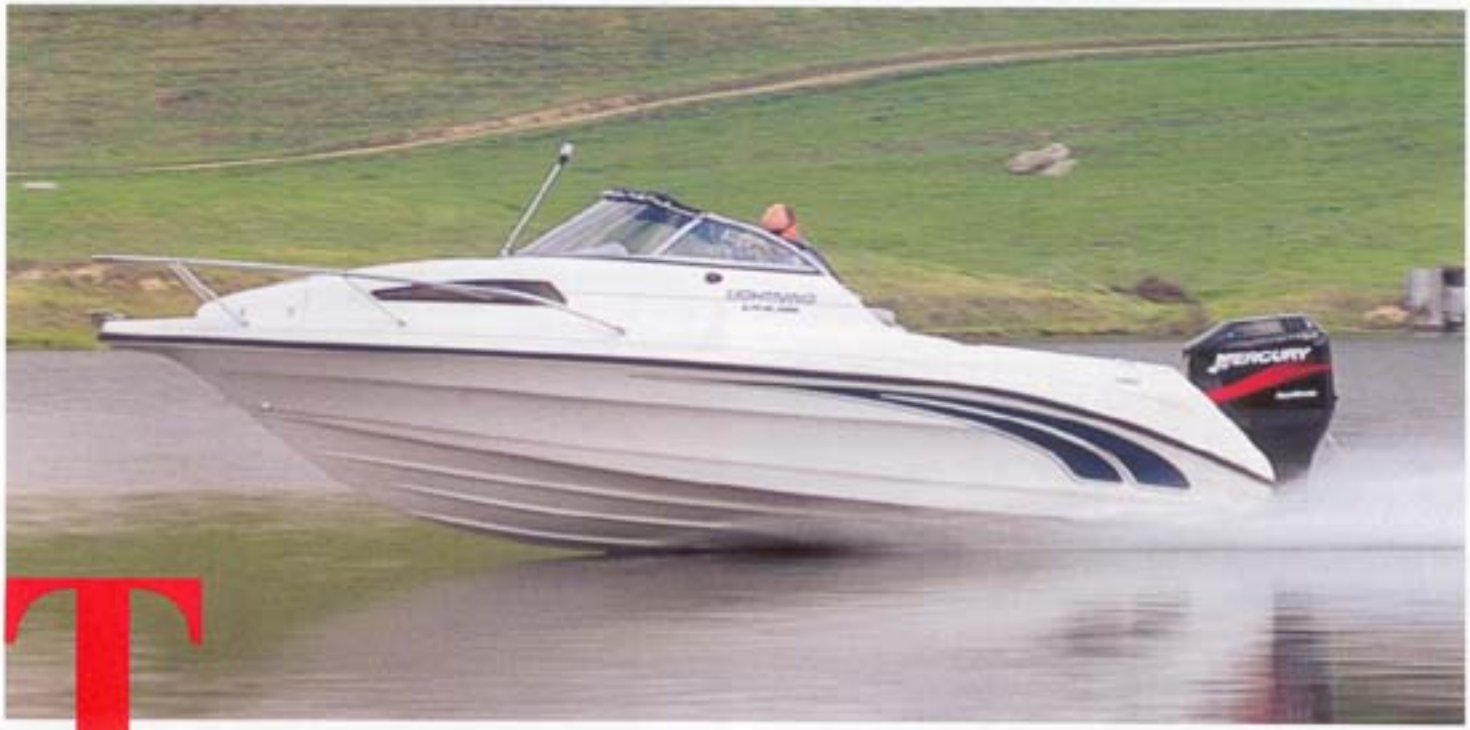


LIGHTNING STRIKES TWICE



Two years after South Island powerboat designer Frank Simpson of Fi-Glass Boats relaunched his Warrior design, he has relaunched another of his early designs: the Lightning.

The new Lightning is basically a smaller sister to the Warrior. Like the Warrior, its restyling was also a team effort with significant input on the hull and mould construction from Frank Simpson's sons, Griff and Michael.

Courtesy of Dave Hanks from Cambridge Marine, we had been given the chance to take the new Lightning for a review and compare the performances of two outboards from Mercury Marine: the two-stroke carburetted 115hp model and the latest technology four-stroke 90hp carburetted model from Mercury.

Origins

Lightnings thundered onto the powerboat scene in 1968-69 as Frank Simpson's racing boats - he has a photo on his office wall showing just how well they went. The demand for more comfort led to a fibreglass cabin top being bolted on, known in those days as a Lightning with a lid.

By the time 1972 had rolled along Simpson had designed a one-piece cabin and deck mould which made the boats slightly faster to build, and look like they were meant to be a cabin boat.

With the cabin added, the Lightnings were sold in two models: the deluxe version with all the bells and whistles and a standard version, which in those days of understatement, meant the fishing model.

When the larger Warrior model came along in 1977 the deluxe

Lightning was dropped from production. The cheaper, standard, bare timber finished, fishing version continued in production until 1979. The early Lightnings, which had a build of 450 boats, had lasted for 10 years and had sold well.

To promote the Lightning name, the Fi-Glass Lightning ski boats were powered with 135hp Mercury outboards and supplied free for the waterski nationals for three years.

This early Lightning model was a popular waterski boat because of the generous internal volume for its length so the whole family could throw in the skis, go somewhere for a picnic and enjoy a ski before heading home. The new Lightning continues this take-the-family philosophy.

Design

The new Lightning has more turn down on the chine, with bigger flats on the after sections, than on the Warrior. It has more fairing of the hull in the underwater central sections, but has the same beam as the new Warrior, with a "whisker of a difference" in the cockpit area.

Underneath there are two planing strakes either side of the deep keel. The hull has a 22-degree deadrise at the transom and a variable deadrise running forward to a fine entry. The overall length of the Lightning is down two feet on the Warrior, and features the same distinctive scalloping of the hull topsides.

Accommodation/decor

The 2m x 1.8m carpet lined cockpit uses its width to give buoyancy aft, more than enough to handle the slightly extra weight of the Mercury four-stroke used in our test. There is ample storage in the wide side trays - which take skis, standard fishing rod racks underneath the coamings and underfloor between the two forward seats for four dive bottles.

This ability to put things away maintains the impression of a roomy cockpit. Twin pedestal seats would mean one less seat but even more room.

The driver has a fully adjustable Softrider pedestal seat, while the passenger has a back-to-back upholstered leather-look seat with storage underneath. Either quarter at the stern has a small seat, removable for when fishing and using the telescopic swim ladder mounted on the portofino stern.

Airtight compartments provide buoyancy either side of the central locker and in foam-filled compartments under the bunks in the forward cabin. The fuel tank is under the cockpit floor.

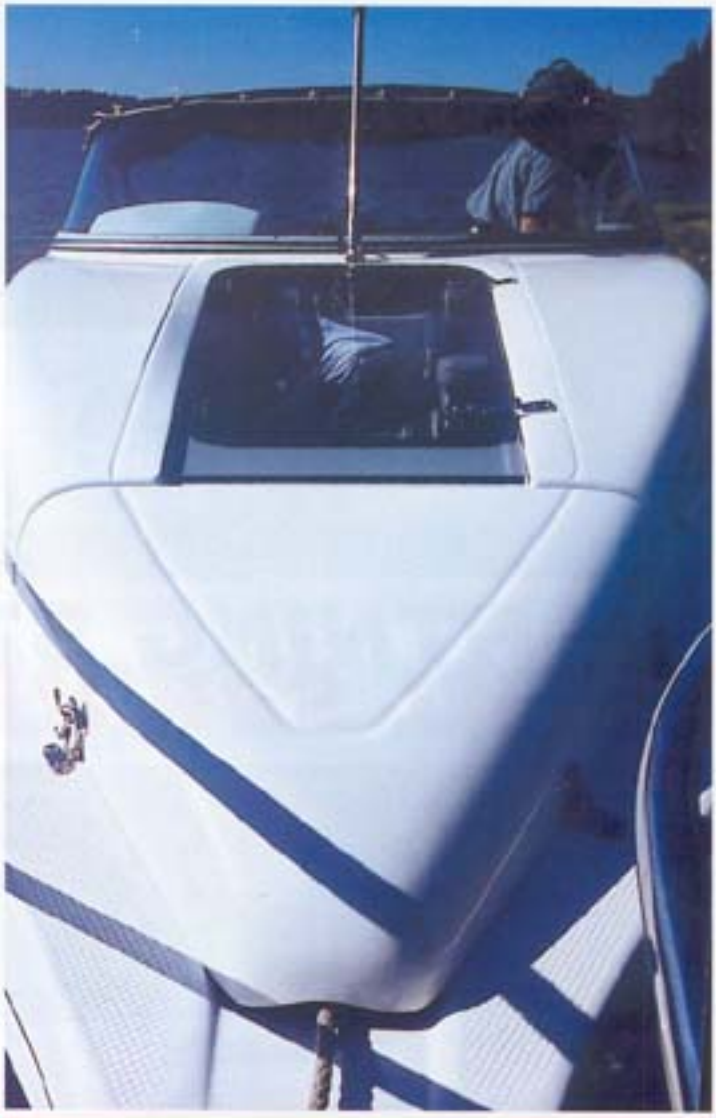
Handling

We reviewed this new Lightning with the 115hp two-stroke Mercury and the new release 90hp Mercury four-stroke. The conditions were flat on Lake Karipiro. Rowing or water skiing would have been better pastimes but under the slowly withering leaves of the local poplars we made do with the conditions.

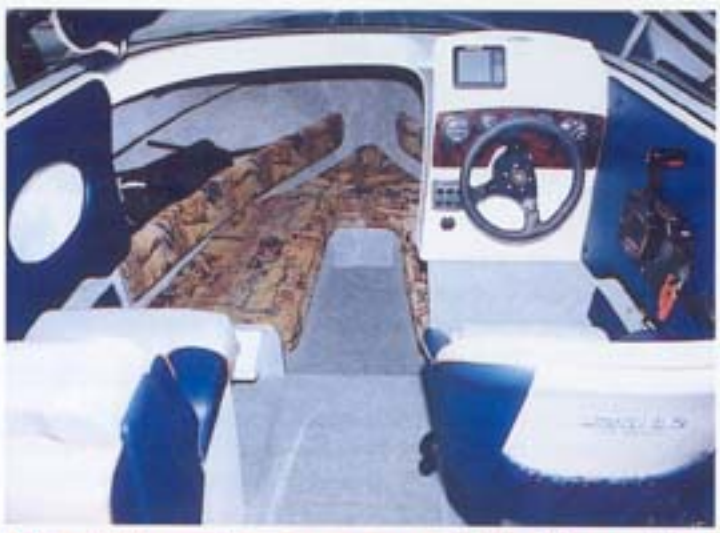
Sitting at the helm was comfortable and sheltered from the chill autumn air, but still provided good visibility forward and to either side. The forward sloping cabin top drops away from the screen helping the forward visibility, yet still gives good headroom when sitting below. There was no need to stand until it was time for us to put the boat back onto its trailer.

The steering was light and predictable as we put the boat through hard turns, with the hull maintaining its grip on the black water. The boat preferred running fairly flat in the calm water. At slower speeds the flat after sections turned the water down effectively as it left the chine.

The portofino stern with its buoyancy showed little sign of wanting to bury itself when going astern.



Anchoring is done from either the walkround deck or through the big side opening hatch. The anchor locker open to the side, but has a niche moulded in for the anchor warp.



The cabin has a big entrance way, with the helm position alongside. The softrider helm seat is adjustable, allowing the driver to stand if he wants. We found that driving the boat sitting down, was just as good, especially seeing as its winter!

Comfortable on the DMW trailer, the underwater shape of the Lightning can be appreciated. The deep vee hull has two spray rails either side of the keel with a wide spray chine which flattens out at the transom.

The already roomy cockpit has space saved with its big ski width trays either side, and the built in rod holders under them. Further storage for dive bottles or fishbin is between the passenger and helm seats.

Motive power

The chance to sea trial a brand new boat and engine combination is always approached with anticipation, and here we were with the old and the new lined up together. Thanks to the efficiencies of Dave Hanks at his Cambridge Marine workshop and his efficient technician Brian King back in the workshop, the Lightning had an expeditious engine change to enable us to trial the same boat with different engines in the one day.

First out was the 115hp Mercury two-stroke. This technology has been the basis of the outboard motor industry, but is under threat from emission control regulations which recognise the two stroke's downside: its exhaust emissions.

To comply with new rules and regulations world wide which will limit the use of two-strokes on the water, Mercury and other engine manufacturers, have explored different engineering in outboard power. One of these is the four-stroke technology which, as in the auto engine, has little or no oil emission when underway.

How would the extra weight of the smaller capacity motor affect the performance - or would it just come down to dollars, in capital cost and fuel economy?

These questions we set out to answer, from the comfort of the Lightning.

Our comparison figures were prepared for us by John Menzies of Dieselcraft Evaluations on a calm Lake Karipiro.

The acceleration differences, with two people on board, was unexpected, too. The four-stroke pulled the boat out of the hole faster, only being passed by the two-stroke when it really got working on all four cylinders 10 seconds later.

The Mercury 115 has what Mercury call a 2+2 facility where the motor uses two of its four cylinders for smoother idling and trolling, below 1800rpm, bringing all four cylinders into play when the revs pass the 1800 mark.

The slightly heavier four-stroke seemed to suit the Lightning set up. Being broad in the beam for her length with plenty of buoyancy in her after sections, the Lightning showed no alteration in trim with the heavier motor, and should find favour with owners for this reason as well.

Sea trial

A chance to further review the performance of this new model in the open sea came a week later when we took the Lightning, with the 90hp four-stroke engine, for a run outside the Tauranga Harbour.

Conditions were typical wind against tide at the harbour entrance which left big holes between sudden crests as the tide rushed out to sea again.

Poking the anchor fairlead, which extends beyond the stem, into the back of one of these sudden monsters made use of the fine entry sections. The boat swooped up on its buoyant bow section, popping the bow up and out of the sea without even wetting the foredeck.

After negotiating this turbulent water with caution, we found a half metre sea with breaking crests running further out. Beam-on and at moderate speed the Lightning's motion was comfortable, and again the decks stayed dry.

Turning into it, the deep vee of the hull really began to work as the boat thumped through the waves. The boat ran well before these building seas, with the bow showing no tendency to bow steer or broach, down the face of a wave. While at times some of the water looked like it was going to dump right on us, the Lightning pushed up and over it all. The two small seats in the stern were the only sign of rough water. Here is where the bow spray lands when working in the rough stuff.

Conclusion

The new owner will have to weigh up several factors when comparing the two engines, with the price at purchase time being the most serious factor for many. Paying $2,400 more for a four-stroke compared to a two-stroke engine which burns more petrol, but is still acceptable to operate in this country, is a lot of petrol in anybody's language, and may prevent the "clean green" alternative from being a serious contender on this rig.

On the other hand, having an engine that produces lots of torque from the start, and one that is quieter from outside the boat, while giving the owner the confidence that he is doing his thing for the environment may prove a winner.

The Lightning is a handsome boat, well finished, and its space will prove popular with boating families. The roomy internal layout is great for fishing, while the upholstered finish and cosy cabin will appeal to those who want to just cruise. The enormous underfloor locker will easily carry water skis, dive bottles, or a picnic basket/chilly bin following the legacy of the first Lightnings from 30 years ago, when a family day out was on the water in their Lightning.

Specifications	
loa	5.8m
beam	2.3m
recommended hp	90-150hp
deadrise transom	22deg
cockpit size	2m x 1.8m
trailerable weight	1200kg
weight of bare boat	850kg
price of bare boat	$19,600
price of 115hp	$11,400
price of 90hp	$13,800
price of DMW multi-roller trailer	$3850
price as tested, including canopy, electronics and road cover with 115hp	$38,500
price as tested, including canopy, electronics and road cover with 90hp	$40,900
designer	Frank Simpson
builder	Fi-Glass Boats Ltd

Engine Comparison	
The carburetted two-stroke Mercury:	
horsepower	115
capacity	1848cc
weight	158kg
cost	$11,400
The carburetted four-stroke Mercury:	
horsepower	90
capacity	1596cc
weight	175kg
cost	$13,800

Fuel Consumption	
The two stroke, 115hp:	
top end speed	43.8mph
burning	45.8 litres/hr
The four stroke, 90hp:	
top speed	40.1mph
burning	28.5 litres/hr

DIESELCRAFT EVALUATIONS

Len Gilbert and John Menzies
Marine Performance Check

Date 4/05/00
Owner Cambridge Marine Ltd
Address cambridge

Len
29Karaka Rd
Beachlands
Phone/Fax 09 536 6989
Mobile 025 993 644

John
PO Box 87 042
Auckland
Phone/Fax 09 524 8534
Mobile 025 967 002

Vessel: Fi-Glass lightning
Dimensions: 5.8m

Gear Ratio: 2.07 to 1
Prop: 16" Vengeance
Fuel Capacity: 145Ltr
Power: **Mercury 90, 4 stroke**

Indicated Eng. RPM	Litres/Hour	Galls/hour	Speed Knots	Speed MPH	Litres per Mile	Miles per Gall	Range Miles
2500	7.2	1.58	7.5	8.6	0.84	5.43	156
3000	6.5	1.43	11.2	12.9	0.50	9.02	259
3500	10.4	2.29	18.6	21.4	0.49	9.35	269
4000	15.1	3.32	22.4	25.8	0.59	7.77	223
4500	19.6	4.31	25.5	29.4	0.67	6.82	196
5000	26.7	5.87	31.3	36.0	0.74	6.13	176
5500	28.5	6.27	34.8	40.1	0.71	6.40	184

Gear Ratio: 2.07 to 1
Prop: 20" Lazer
Fuel Capacity: 145Ltr
Power: **Mercury 115, 2 stroke**

Indicated Eng. RPM	Litres/Hour	Galls/hour	Speed Knots	Speed M.P.H	Litres per Mile	Miles per Gall	Range Miles
2500	11.6	2.55	6.7	7.7	1.51	3.02	87
3000	14.2	3.12	14.9	17.2	0.83	5.51	158
3500	17.8	3.92	20.7	23.9	0.74	6.10	175
4000	22.8	5.02	25.1	28.9	0.79	5.76	165
4500	26.1	5.74	30.4	35.0	0.75	6.10	175
5000	36.0	7.92	34.9	40.2	0.90	5.08	146
5500	45.8	10.07	38.0	43.8	1.05	4.35	125

Story and pictures by Mike Hunter