

Cost Savings for Boat Operators

Levi Surface Drives

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Fuel Savings up to 52 % can be archived by using Levi Surface Drives with Diesel engines .

On 30.1.2007 a fuel consumption test using two identical, fiberglass Malay fishing boats was carried out. Similar boats are used by tour operators and transport companies.

Test conditions

The "Defender" was a brand new fiberglass 25 foot long, 7 foot wide Malay fishing boat equipped with a new 60 hp Yamaha 2 stroke petrol engine.

The "Challenger" was a 25 foot, 7 foot wide, 2 year old Malay Fishing boat equipped with a Levi Drive 170-150 coupled to a Koysan Gearbox and a marinised Isuzu 4JB1 second hand truck engine.

Both boats were produced from the same mold and by the same builder.

Each boat had two crew members.

The estimated total weight of the "Defender" was about 1200 kg. The estimated weight for the "Challenger" was in the ranged of 1500 kg.

The difference in weight is due to the heavier diesel engine, gearbox and Levi Surface Drive.



The test was done over a distance of 10 nautical miles (Penang Seagate, to Jelutong return to Seagate). The wind and sea conditions during the test were calm.

The two boats were traveling at the same speed (about 27 knots) side by side.

Test result

The fuel consumed of the "Defender" was 20.2 liters of outboard engine petrol fuel (petrol plus 2% two stroke oil).

The fuel consumed by the "Challenger" was 9.7 liters of diesel.

The fuel savings using "Levi Surface Propulsion" and "Inboard Diesel Engines" amounts to 52 % measured in liters. The environmental emission is drastically reduced.

The monetary savings would even be higher since diesel oil is in most countries cheaper than petrol and diesel engines don't require two stroke oil.

Drive Train Description

The Drive Train of the Levi Surface Propeller driven Boat exists out of the following components:

- *Levi Drive Model LD 170-150*
- *Koysan hydraulic marine gearbox H4*
- *Marinised Isuzu 4JB1 second hand truck engine*

Levi Drive Model LD 170-150



- up to 90 hp
- max . prop. 17 inch
- prop. shaft dia. 1,5inch
- hand or hydraulic steering
- drive material 316L
- special order galvanized steel
- prop material Mg Bronze
- bearings cutlass rubber



Isuzu Diesel Engine 4JB1 with Koysan Marine gearbox H4



- *Isuzu 4JB1 marinised second hand truck engine*
- *55 hp @ 2500 rpm*
- *Koysan hydraulic gearbox H4*

Levi Surface Drive Boat during Test

(Penang bridge in the background)



Levi Drive LD170-150 in Action

(27 knots)

*Owner Mr. Choong and
Mr. Rudof Scholz on board*

