Fuel Economy

The cost of fuel is one of the major running costs of a fishing vessel. It is important that the vessel be operated as economically as possible. Large savings in fuel costs can be made by following a few simple rules.
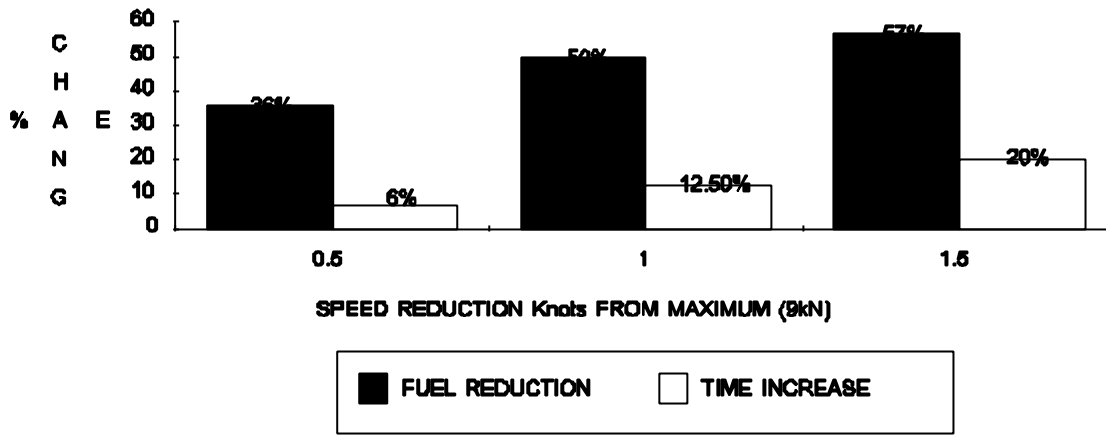
Keep you engine running efficiently.

- Dirty air filters reduce efficiency. Follow the manufacturers' recommendations. Clean oil bath filters at recommended intervals and replace dry type air filters when dirty.

- Dirty fuel strainers and filters make it hard for the injectors to work efficiently and may allow dirt to get to the injectors. Follow the makers' instructions and change the filter elements at recommended intervals.

- Dirty injectors reduce efficiency. Check them at recommended intervals and whenever there is any sign of trouble such as a smoky exhaust.

- Dirty turbocharger blades reduce efficiency. Keep them clean.

- Water in fuel damages the injectors and reduces efficiency. Drain any water from fuel tanks regularly and be sure to do it after you fuel up.

Vessel Operation

- Keep your vessel as near the design trim as possible. It takes less power to drive it that way.

- Don't load up your vessel with equipment you don't need. Every ton of equipment lowers the vessel in the water. This makes it harder to drive the vessel and takes more power.

- Typical savings of 50% of fuel used whilst steaming can be made by reducing your steaming speed by one know.

PERCENTAGE CHANGE IN FUEL & TIME DUE TO A
REDUCTION IN STEAMING SPEED

Chart: CHANGE % — vertical axis labelled 0 to 60 (C H A N G E, %)

- 0.5: FUEL REDUCTION 36%, TIME INCREASE 6%
- 1: FUEL REDUCTION 50%, TIME INCREASE 12.50%
- 1.5: FUEL REDUCTION 57%, TIME INCREASE 20%

SPEED REDUCTION Knots FROM MAXIMUM (9kN)

■ FUEL REDUCTION   □ TIME INCREASE

Explanation

The free running performance of a vessel may be expressed by a term known as V/√L (ship speed divided by the square root of the length) where V is the ship speed in knots and L is the length between Perpendiculars of the vessel in feet. This value may easily be found using a pocket calculator.

The maximum speed of a fishing vessel is generally designed to occur at a V/√L of 1.2 to 1.3. Once a V/√L of 1.1 has been reached the thrust required to propel the vessel increases rapidly (by about 100% in reaching a V/√L value of 1.26) and hence the fuel consumed by the engine also rapidly increases.

In order to make savings in fuel costs in the free running mode the speed of the vessel should be reduced so that the V/√L value approaches 1.1