

**National Standard for Commercial Vessels (NSCV)
Part C — Design and Construction
Section 5 — Engineering
Subsection 5A — Machinery**



NSCV part C — Design and Construction, Engineering, Machinery		
NSCV reference	Topic	Comment
2.8	Engine monitoring	Means must be provided for monitoring the condition of all engines essential for the safe operation of the vessel. Original equipment manufacturers' specifications are to be followed as guidelines for compliance.
2.14.1	Design and manufacture Main engines shall either be designed and manufactured specifically for marine use or shall be adapted for that purpose	Accredited designers are to be aware of this requirement and comments should be attached to drawings. Accredited surveyors must be aware when signing a Certificate of Compliance for machinery that they are declaring that the main engine is compliant to NSCV.
2.16.4	Automatic shut down of propulsion machinery not permitted. Propulsion machinery shall not be fitted with automatic shutdown devices, notwithstanding that the manufacturer may specify and supply such devices	Accredited Designers should be aware of this and note this on drawings. This has always been the case but some have been allowed through. Some engines do not have manual override to the automatic shut off. Automatic shut down of propulsion engines is not permitted. Public comments on the RIS (May 2001) suggested that the relevant clause be modified to emphasize requirement for manual remote shutdown, not automatic. Most marine engines have a warning/alarm for loss of oil pressure and overheating. The operator then has the ability to manually shut down. Some engine manufacturers do have automatic shut down. These have an override button that can be activated by the operator. The manufacturer has the ability to program the electronics so that the system works on a warning light/alarm, ramp down or shut down. Oil pressure shut down allows three overrides. Coolant shut down allows for 11 overrides. NSCV does not allow any automatic shut down of propulsion engines even with a manual override.
2.20.2	Water cooling In water cooled engines, a system of keel cooling for the engine jacket water may be installed as an alternative to a water circulation system	Keel cooling is now able to be used as an alternative cooling for main propulsion engines.
2.21 2.21.3	Ventilation of machinery spaces Forced ventilation	Machinery space ventilation now considers forced fed ventilation, taking into account the manufacturer's requirement for engine air consumption and heat radiation from the main engine and auxiliary engines within the space.
2.21.5	Machinery space ventilator openings	This section ties ventilation to the requirements for coaming heights in part C subsection 2A (Watertight and Weathertight Integrity — Loadline Vessels) of the NSCV or part C Subsection 2B (Watertight and Weathertight Integrity — Non-loadline Vessels) of the NSCV. As these sections of the NSCV are not completed as yet, refer to the requirements of the old USL Code.

3.14.3	Mechanical stern glands	Mechanical seals may be fitted provided they are type approved by a classification society. This means that ceramic seals can be used as long as they are classification society approved.
3.14.4	Flexible stern glands	Flexible stern glands may be fitted to the propeller shaft where the shaft is not greater than 64 millimetres in diameter. There is more flexibility in the set up of shafts and stern glands.
4.7	Fuel tanks	This section deals with fuel tanks and is very comprehensive. It covers modern materials and the specific requirements for the construction and appendages to the tanks. Again it should be noted that a Certificate of Compliance for machinery covers all of this equipment.
5.7.3.3 5.8.4.3	Rigid plastic piping Rigid plastic piping shall meet the requirements contained in International Maritime Organization (IMO) Resolution A.753 (18) or the requirements of a classification society	The IMO Resolution is specific about tests that must be done on materials and the certification required. The IMO resolution is also specific where the pipe can be used in the vessel. Certification documents are to be retained.
6.7.7	Rudder position indicator	The standard mandated a rudder position indicator on all vessels of 15 metre measured length and over fitted with power operated steering gear.