

#### SP 970

This entry only applies to internal combustion engines (including machinery or equipment powered by such engines) to fuel cell engines, and to vehicles powered by flammable liquid, flammable gas and fuel cells containing flammable liquid or gas (including hybrid electric vehicles, see SP 312 or SP 240). For the purposes of this entry vehicles are defined as road vehicles (e.g. cars, motorcycles), boats, aircraft, wheeled or tracked construction or farming equipment and any other self-propelled apparatus designed to carry one or more persons or goods.

For internal combustion engines where the requirement of Special Provisions 961 or 962 are not met, an appropriate name and description shall be selected and the relevant provisions of this Code shall apply.

If a vehicle is powered by a flammable liquid and a flammable gas internal combustion engine, it shall be assigned to UN 3166 VEHICLE, FLAMMABLE GAS POWERED.

#### SP 961

Internal combustion engines, fuel cell engines, vehicles, and battery-powered equipment are not subject to the provisions of this Code if any of the following conditions are met:

.1 Internal combustion engines, fuel cell engines vehicles, and battery-powered equipment are stowed on the vehicle, special category and ro-ro spaces or on the weather deck of a roll-on/roll-off ship or a cargo space designated by the Administration (flag State) in accordance with SOLAS 74, chapter II-2, regulation 20 as specifically designed and approved for the carriage of vehicles and there are no signs of leakage from the battery, engine, fuel cell, compressed gas cylinder or accumulator, or fuel tank when applicable. When packed in a cargo transport unit the exception does not apply to container cargo spaces of a ro-ro ship. Vehicles powered solely by lithium batteries and hybrid electric vehicles powered by both an internal combustion engine and lithium metal or ion batteries, the battery is of a type proved to meet the requirements of the United Nations Manual of Tests and Criteria, part III, subsection 38.3, unless otherwise approved by the competent Authority;

.2 Internal combustion engines, vehicles powered by a flammable liquid fuel with a flashpoint of 38°C or above, there are no leaks in any portion of the fuel system, the fuel tank(s) contains 450 l of fuel or less and installed batteries are protected from short-circuit.

.3 Internal combustion engines with a fuel tank attached and vehicles powered by a flammable liquid fuel with a flashpoint less than 38°C, the fuel tank(s) are empty and installed batteries are protected from short circuit. The internal combustion engines or vehicle are considered to be empty of flammable liquid fuel when the fuel tank has been drained and the vehicle cannot be operated due to a lack of fuel. Engine components such as fuel lines, fuel filters and injectors do not need to be cleaned, drained or purged to be considered empty. The fuel tank does not need to be cleaned or purged;

.4 Internal combustion engines with an attached fuel tank and vehicles powered by a flammable gas (liquefied or compressed), the fuel tank(s) are empty and the positive pressure in the tank does not exceed 2 bar, the fuel shut-off or isolation valve is closed and secured, and installed batteries are protected from short circuit;

.5 Vehicles or battery powered equipment solely powered by a wet or dry electric storage battery or a sodium battery, and the battery is protected from short circuit;

.6 Internal combustion engines powered by a flammable liquid or flammable gas have been cleaned, drained and purged of all flammable liquids and gases or the engine has been sealed to prevent leakage of any residues; or

.7 Fuel cell engines are protected from inadvertent operation by closing fuel supply lines or by other means and the fuel supply reservoir has been drained and sealed. The fuel supply reservoir does not need to be cleaned or purged.

Notwithstanding above, dangerous goods required for the operation of the internal combustion engines or the vehicle or for the safety of the operator such as fire extinguishers, compressed gas cylinders, accumulators, airbag inflators, starter batteries, etc., shall be securely mounted. All other dangerous goods in the vehicle shall be separately packaged and consigned for transport, as appropriate, in accordance with this Code.

For fuel cell engines, all dangerous goods other than fuel and fuel cells shall be separately packaged and consigned for transport, as appropriate, in accordance with this Code.

#### SP 962

Internal combustion engines, vehicles, fuel cell engines, or battery powered equipment not meeting the conditions of special provision 961 shall be assigned to class 9 and shall meet the following requirements:

.1 internal combustion engines, vehicles, combustion engines, fuel cell engines or battery powered equipment shall not show signs of leakage from batteries, engines, fuel cells, compressed gas cylinders or accumulators, or fuel tank(s) when applicable;

.2 for flammable liquid powered vehicles and internal combustion engines the fuel tank(s) containing the flammable liquid shall not be more than one fourth full and in any case the flammable liquid shall not exceed 250 l unless otherwise approved by the competent authority;

.3 for flammable gas powered vehicles and internal combustion engines, the fuel shut-off valve of the fuel tank(s) shall be securely closed;

.4 installed batteries shall be protected from damage, short circuit, and accidental activation during transport. Lithium ion or lithium metal batteries shall be of a type proved to meet the requirements of the United Nations Manual of Tests and Criteria, part III, subsection 38.3, unless otherwise approved by the competent authority; and

notwithstanding above dangerous goods required for the operation of the internal combustion engines or the vehicle or for the safety of the operator such as fire extinguishers, compressed gas accumulators, airbag inflators, starter batteries, etc., shall be securely mounted.

The provisions of this Code relevant to marking, labelling, placarding and marine pollutants shall not apply.