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# Marine Clean Plus+

Multi-Purpose Cleaner



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## Oil/Water Separation

There are challenges involved with oil/water separation. Unknowingly, many ships' personnel introduce the wrong cleaning products into the bilge collection areas that inhibit the efficient operation of oil/water separators.

Use of traditional cleaners and detergents may create environmental compliance issues and unnecessary maintenance expense for vessel owners. A solution is to use advanced Parker Racor "liquid" technology - Marine Clean Plus+.

### The Problem:

- In the oil agglomeration process, use of polypropylene/polyethylene materials that have a high lipophilic (oil loving) affinity create an environment where micro-sized oil particles are attracted to the poly surface in a loose chemical bond. As more oil particles bond to the surface, they join to form larger particles. Once they are large enough, the buoyancy force of the oil particle becomes stronger than the chemical bond to the poly material and the particle floats to the surface to be easily skimmed.
- Detergent additives, known as surfactants, are powerful oil emulsifiers and dispersants. Like the products used for oil/fuel dispersion in spills, surfactants in common cleaners react the same way. This causes two major problems in the effective operation of your oil water separation systems.
- Emulsified oil is chemically bonded to the water in bilge effluent and will not agglomerate. Removal of the oil content that has been washed from the vessel will be done solely by the filtration membrane. This creates an environment that will cause premature failure of the membrane.
- When free detergents enter your system, the lipophilic poly materials chemically bond with surfactants. The active bonding surfaces of the poly materials are then completely bonded with the surfactant. Once this happens, the micro-sized particles that typically agglomerate will now pass freely into your filtration membrane. As with the emulsified oils, this free pass into the membrane will cause premature failure of the membrane.

### The Solution:

The marine industry has long struggled with this issue and Parker Racor has developed the solution. Parker Racor Marine Clean Plus+ is the only product that will allow your oil/water separation equipment to fully function as designed and is the only product that is tested, approved, and recommended for use in Parker Racor oil/water separation equipment. (See bulletin 7882)

## Marine Clean Plus+

Marine Clean Plus+ is specifically formulated by Parker Racor to be compatible with oil/water separation systems. The detergent chemistry can be utilized with both fresh water and sea water wash and rinse operations, and is designed specifically for owners of Racor oil/water separation equipment (see bulletin 7882). It is an environmentally safe product that can also be used for cleaning in other areas of your vessel.



- Improved cleaning power over traditional detergents
- Compatible with sea water wash operations
- Environmentally safe cleaning solution
- Biodegradable, non-toxic cleaning solution
- Advanced formula is engineered to help start the oil separation process before the bilge water enters the oil/water separator
- Extends oil water separation membrane life compared to using standard detergents or cleaners in your engine room

Use Marine Clean Plus+ for the following applications:

- General Surface Cleaning
- Heavy Duty Degreasing
- Fuel Tank & Bilge Cleaning
- Engine Degreasing
- Hull Cleaning

Marine Clean Plus+ is available in the following container size. The two adjacent columns indicate the amount of cleaning solution that can be made with Parker Racor Marine Clean Plus+ concentrated marine cleaner. Order part number 85-2031.

Container Size	Heavy Duty Cleaning	General Cleaning
5 gallon	Use as is	Mix 1/2 water to 1 cleaner

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