

Worldwide Marine Customer Support



MAKTM

CATERPILLAR[®]

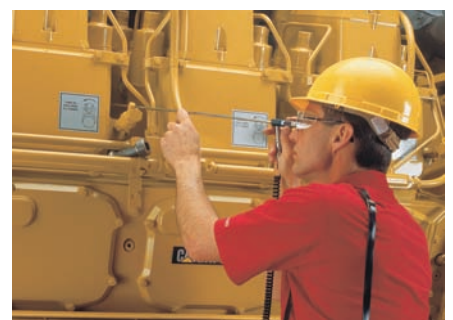
Customer Support for Cat[®] and MaK[™] Marine Engines

Caterpillar Marine Power Systems has one simple goal: to exceed our customers' expectations by providing outstanding sales and service support in a professional and consistent manner.

When you choose Caterpillar, you receive our commitment to provide comprehensive sales and service support for both Cat[®] and MaK[™] engine brands. Caterpillar Marine Power Systems has regional headquarters covering Europe, Africa, the Middle East, Asia Pacific, and the Americas to work with our extensive global dealer network. We offer a full range of services from the project phase through the sales process and product commissioning, to parts supply and parts logistics, maintenance, repair, and engine upgrade. Our experts are available to help you protect your investment and achieve maximum engine life, maintain reliability, and minimize downtime.

Caterpillar and MaK Marine dealers have a variety of solutions to help you minimize your owning and operating costs, including Customer Support Agreements, Extended Service Coverage, S•O•SSM oil sampling, and remanufactured products. All of these offerings are customized specifically for you, to provide the exact support you need to make the most of your investment.

You can rely on your Cat and MaK Marine dealer to deliver complete solutions wherever you are when you need support. Ongoing dealer education ensures that dealer personnel are always current on the newest marine products and programs. To find your nearest dealer and to access the Caterpillar network, go to www.cat-marine.com or www.mak-global.com.



Customer Support Agreements (CSAs)

A Customer Support Agreement (CSA) is one of the most convenient and affordable ways for you to take advantage of Caterpillar dealer resources. Each CSA is custom designed to meet your specific needs.

One of the most important advantages of a CSA is flexibility. There are no pre-determined requirements or specific products or services that you must agree to buy. Instead, every CSA is an individualized plan that fits your needs and your budget. Costs can be based on a flat rate monthly fee, the type of service or repairs performed, or actual engine operating hours.

CSAs cover many aspects of inspection, maintenance, and repair. These highly flexible agreements can range from scheduled inspections and preventive maintenance to before-failure overhauls. The services you include in your CSA will depend on your equipment, installation, and the technical capabilities of your crew – factors we will carefully analyze with you before an agreement is proposed. Every CSA has one primary goal: to save your valuable time and money.



Why Choose a CSA?

- Simplifies budgeting
- Improves asset and cash flow management
- Maximizes return on investment
- Guarantees use of genuine parts
- Eliminates need for costly diagnostic tools and parts inventory
- Permits convenient scheduling of service and maximizes availability
- Makes good business sense

Total Maintenance and Repair

A Total Maintenance and Repair (TM&R) agreement covers all maintenance and repair costs during a specified time period. Instead of paying for maintenance or repairs as they are needed, you pay one flat rate to cover a broad range of parts and services. Your Cat dealer will analyze your current costs and compare them with the cost of the specific services provided in the agreement.

Preventive Maintenance

A Preventive Maintenance (PM) agreement covers specified maintenance at a fixed cost. You maintain reliability and efficiency because the maintenance is performed by a highly skilled technician at a guaranteed cost. You avoid downtime because maintenance is performed on a defined schedule, where and when it's most convenient for you.

Effective Maintenance Practices

It is essential to develop an effective engine maintenance program to protect your investment, achieve maximum engine life, and maintain engine reliability. An effective maintenance program allows you to make decisions that will reduce downtime and minimize owning and operating costs.

Regular engine inspection, scheduled oil sampling, and planned maintenance such as oil and filter changes, based on operations and maintenance schedules and dealer recommendations, help predict potential component or engine failures. Pre-failure repairs are usually less costly than post-failure repairs.



S•O•SSM Oil Sampling

The S•O•S program monitors your engine's performance through regularly scheduled oil samplings.

A comprehensive analysis of the engine oil sample:

- Identifies excessive wear
- Identifies contaminated fluids
- Measures wear materials and dirt
- Detects water, fuel, and antifreeze in oil
- Measures soot, oxidation, and sulfur contaminants.

Accurate Record Keeping

An accurate record keeping system will help you:

- Identify potential problem areas
- Track completed maintenance
- Manage costs
- Improve engine resale value

Caterpillar offers both manual and electronic record keeping systems to help you with this process.

FOR CATERPILLAR® ENGINES:

- Record Keeping and Control Manual
- Maintenance Control System (software application)

FOR MaK ENGINES:

- DIMOS (software application)

Caterpillar Maintenance Products

The Caterpillar Product Support group gives top priority to the design, testing, and distribution of preventive maintenance products. They provide recommendations on the use of these products to ensure the highest level of engine performance.

Caterpillar dealers are committed to providing these preventive maintenance products to their customers. Key preventive maintenance products are described below.

CATERPILLAR DIESEL ENGINE OIL (DEO)

Cat DEO is premium oil specifically developed and tested for Cat diesel engines. Caterpillar uses industry specifications as the basis for DEO performance, then goes beyond those specifications to develop an oil that meets the needs of Cat engines in severe applications.

CATERPILLAR ADVANCED EFFICIENCY ENGINE OIL FILTERS

The new oil filters increase contamination control performance, providing for a much cleaner-running engine lubrication system. The Cat 1R1807 and 1R1808 filters contain an improved high efficiency filter media to accumulate dirt more quickly while maintaining excellent dirt holding capacity.

CATERPILLAR HIGH EFFICIENCY FUEL FILTERS

These filters fight fuel contamination more effectively than standard fuel filters, removing more than 98 percent of particles two microns and larger. They are engineered and built to remove more contaminants, so they provide maximum protection of injectors, pumps, and other fuel system components.

CATERPILLAR RADIAL SEAL AIR FILTERS

This rugged filter provides up to 50 percent more capacity for longer service life and one-piece urethane end caps for a more consistent bond to the filter media.

CATERPILLAR EXTENDED LIFE COOLANT (ELC)

ELC reduces engine coolant and additive costs by as much as 500 percent compared to conventional coolants. It eliminates the need for supplemental coolant additives, extends coolant change-out intervals, and reduces disposal requirements.

CATERPILLAR BATTERIES

These batteries are designed to meet stringent Caterpillar design specifications, which provide industry-leading cold cranking amps (CCA) capability and maximum vibration resistance. Caterpillar offers both Premium High Output and General Service Line batteries in both wet and dry configurations.



Engine Repair Options

If you identify a problem with your engine, your Caterpillar dealer can help you determine the best repair option to minimize downtime and return your engine to service as quickly as possible. The scope of repair options available from your Caterpillar dealer includes:

NEW – Cat and MaK engine parts are designed and manufactured to perform as a system, and be rebuilt for a second life, with processes that are continually improved to ensure state-of-the-art quality. Cat and MaK parts are built to exact tolerances and undergo rigid testing to ensure reliable performance, long life, and lower owning and operating costs.

REMANUFACTURED PARTS for Cat and MaK engines – provide same-as-new performance and reliability at fraction-of-new cost, with the same warranty as new parts. The results are maximum engine productivity and lower life cycle cost. Remanufacturing also is environmentally friendly as it limits waste to an absolute minimum.

EXCHANGE – Caterpillar dealers offer a number of Cat parts that meet Caterpillar Reusability Guidelines. Rebuilt by the dealer, these exchange parts eliminate the need to wait for repair of the respective part or replacement with a new component, thereby lowering engine owning and operating costs.

STANDARD OVERHAUL – Caterpillar dealers offer comprehensive overhauls for MaK and Caterpillar engines. The dealer will offer the most cost effective solution using genuine new or remanufactured parts. Overhauls can also include available engine updates.

ENGINE UPGRADES – Caterpillar dealers offer specific Caterpillar engine solutions for upgrading Caterpillar engines to match tighter requirements or legislations, i.e. SOLAS or emission regulations. These solutions allow customers to continue to run their engines or to run them more efficiently or with lower emission levels, contributing to the protection of the environment.

CATERPILLAR CERTIFIED ENGINE REBUILD is a program where Cat 3500 or 3600 engines can be rebuilt for a second life – at a fraction of the cost of an engine replacement, protecting the customer's investment. Rebuild specifications meet all Caterpillar standards, providing the quality customers expect. Trained dealer and Caterpillar service professionals perform these rebuilds at the local Cat dealership, using only Cat parts. The latest required updates and optional performance enhancement upgrades could result in improved fuel consumption, reduced emissions, matching SOLAS requirements and reduced owning and operating costs.

Genuine Parts

Caterpillar continually strives to improve component design and manufacturing. We understand that normal engine operation subjects components to extreme stresses and temperatures. Tests have consistently proven that the use of Cat and MaK parts (as opposed to competitive parts) greatly improves engine performance and reliability, and reduces overall owning and operating costs.



We Are Where You Are

Our global dealer network makes you feel at home. You can count on personal support and experts who will serve you with dedication, experience, and know-how for your Cat and MaK engines.

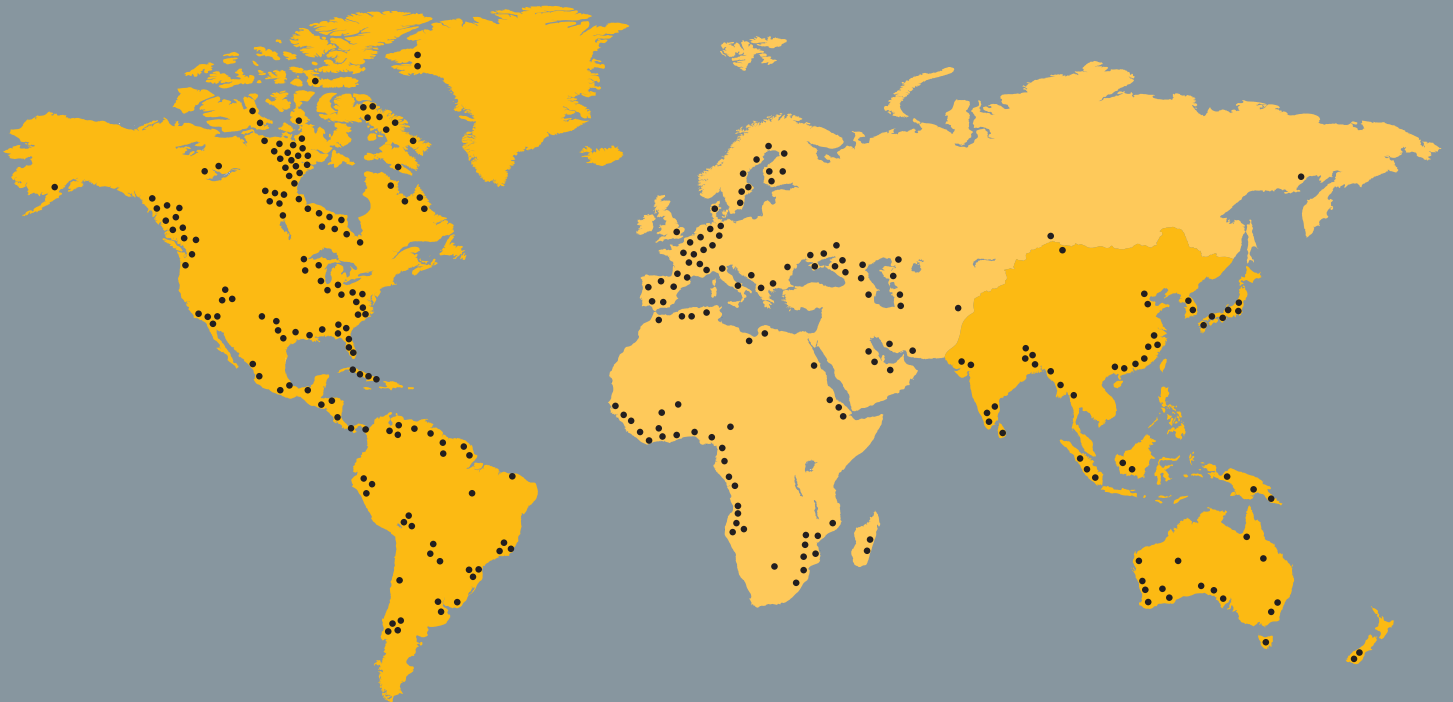
The Caterpillar dealer network is the strongest around the world. With 182 locally owned businesses, 1700+ dealer branch stores and more than 100,000 employees, our worldwide dealer organization has the local expertise, specialists, and extensive spare parts inventory you'll need – no matter where your vessel sails around the world.

In addition to our dealer network you can find further support from more than 400 Authorized Marine Dealers situated in ports and marinas around the world.

With the best service network in the industry, you are always connected with an expert. Our worldwide service network means you'll get the product support solution you need when you need it.

Wherever you are when you need support, simply call your local Cat or MaK dealer. To find your nearest dealer simply go to:

**www.cat-marine.com or
www.mak-global.com**



Caterpillar Marine Power Systems

HEADQUARTERS

Caterpillar Marine Power Systems

Neumühlen 9
22763 Hamburg/Germany

Phone: +49 40 2380-3000
Telefax: +49 40 2380-3535

EUROPE, AFRICA, MIDDLE EAST

Caterpillar Marine Power Systems

Neumühlen 9
22763 Hamburg/Germany

Phone: +49 40 2380-3000
Telefax: +49 40 2380-3535

AMERICAS

Caterpillar Marine Power Systems

3450 Executive Way
Miramar Park of Commerce
Miramar, FL. 33025/USA

Phone: +1 954 447 71 00
Telefax: +1 954 447 71 15

ASIA-PACIFIC

Caterpillar Marine Trading (Shanghai) Co., Ltd.

25/F, Caterpillar Marine Center
1319, Yan'an West Road
200050 Shanghai, P.R. China

Phone: +86 21 62262200
Telefax: +86 21 62264500

Caterpillar Marine Asia Pacific Pte Ltd

14 Tractor Road
Singapore 627973/
Singapore

Phone: +65 68287-600
Telefax: +65 68287-624

For more information please visit www.mak-global.com or www.cat-marine.com

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