Upgrades lead to higher efficiency which means more fuel savings and lower maintenance costs for you. ABB Turbocharging’s tailor-made solutions significantly improve a turbocharger’s capabilities and its life span – savings is just one positive effect.

Change for the better
An upgrade is the process of essentially replacing an old turbocharger for a new and improved one so that it will run more efficiently and perform better for you and your business.

An ABB turbocharger utilizes the latest technology to enhance your investment and your engine’s performance. You can choose to upgrade your entire turbocharger or simply isolated parts of it – the decision is easy because we work with you to find out which option makes the most sense.

Upgrades answer your challenge
Upgrading your turbocharger is a very low-risk operation with benefits ranging from reduced fuel consumption, reduced emissions to increased speed margin, improved containment and reduced or prevented de-rating depending on the application.

You also receive new rotating components that ensure a safer, more reliable operation. And, by matching the latest turbocharger technology with an engine in an iterative process, ABB Turbocharging ensures an ideal fit. This is what makes the engine more fuel efficient – saving you on fuel costs annually.

Expect savings
The modifications made in an upgrade can considerably reduce the exhaust gas temperature of the engine, thereby reducing the thermal load on the turbocharger and engine. Thermal load is the main factor affecting the deterioration of the engine. The lower thermal load translates into less maintenance.

Furthermore, the cost of the upgrade pays itself back in savings quickly – in less than two years given the right conditions and technical specifications.

Solutions made easy
The available solutions with upgrades are as versatile as our customers’ expectations. To reach the optimum operating level in any given situation, a tailor-made solution is essential – and only a technology leader like ABB Turbocharging can provide it.

The easiest upgrade solution is to exchange single components of an existing turbocharger. Usually, these modifications can be done during a normal overhaul of the turbocharger without additional engine downtime. Alternatively, an existing turbocharger can be replaced by a new unit featuring different properties such as higher efficiency compressor stages or turbine stages, or components with special coatings.

Our experienced and expert engineers will choose the best approach that offers you the optimum benefit.
Optimization for you
The following optimizations are examples of how different types of upgrades may have a positive effect on your operations.

Potential benefits:
- Reduction in fuel consumption
- Longer time between overhauls (TBO)
- Increased efficiency stability
- Reduced thermal loading of components
- Resolution of operational restrictions
- Competitiveness of installation maintained
- Spare part availability
- Emissions (e.g. NOx) reduction

Cruise ship study
Together with an engine builder, ABB Turbocharging have started to look at upgrading turbochargers in cruise ships. The basis of the upgrade involves fitting a new design of compressor wheel to the existing turbochargers on the generator sets’ engines. The benefit? Increasing the efficiency of the turbochargers and the engine.

The new compressor wheel brings additional benefits via an increase in turbocharger speed margin and reduced engine exhaust gas temperature.

In the preparatory project, testing has confirmed that this upgrade will raise the engine’s fuel efficiency by a 0.5 percent and upward, amounting to a saving worth well over USD 40,000 per year for every 10 MW of engine power.

Upgrades are glocal
ABB offers a local presence and a global standard that you can rely on. More than 200,000 turbochargers are covered 24/7 365 days a year at 100+ ABB Service Stations in over 50 countries worldwide. So no matter where you are or where you need support, our qualified ABB Service Station specialists always work according to our high service standards. We offer a single point of contact who can work with you on all your service needs in your language and on your time. Our customer fulfillment is better than 98 percent.

For more about how to significantly improve your turbocharger’s capabilities, contact:

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