

# MAHLE Turbochargers

## **Turbochargers: a growing business segment ...**

Turbochargers are a key component to enhance performance, reduce fuel consumption, and lower exhaust emissions.

Inevitably, the number of turbocharged gasoline engines will undergo a significant rise worldwide.

Experts estimate that in 10 years time, there will be about 160 million cars and roughly 16 million trucks running on this key technology, and the tendency will continue to rise. As a result, the turbocharger segment represents one of the largest growth markets in the automotive industry worldwide.

## **Turbochargers: a growing business segment for the Aftermarket also...**

The rising number of turbocharged vehicles also offers a high sales potential for the aftermarket. Although the service life of a turbocharger is normally identical to that of the engine, defects may occur that require premature replacement, for example poor vehicle maintenance, inadequate lubrication, or excessive exhaust-gas temperatures.

However, it is not only the turbocharger itself that offers sales opportunities. Car repair shops that are service and sales-oriented also have the chance of making additional business in the segment of servicing or reconditioning.

**What:** Turbo Chargers 101

**Where:** Pizza Ranch

3116 Floyd Blvd

Sioux City, IA

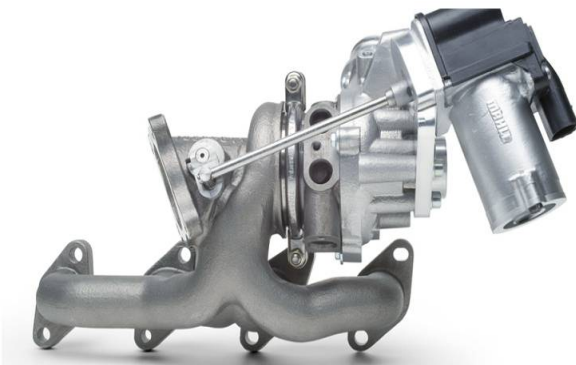
Banquet Room

**When:** March 25th, 2020

11:00am—2:00pm Seminar

Lunch Buffet at Noon

**Who:** Tim Golema—Mahle Senior Technical Specialist



## **- Turbo Chargers 101 -**

A turbocharger is designed and built to match the service life of the engine. However, the high-tech components in the exhaust gas system are exposed to several risk factors which could lead to their failure: for example foreign bodies that penetrate the turbine, dirty oil, a faulty oil supply or excessively high exhaust gas temperatures. This makes the mechanic's know-how all that more important. This high tech training seminar will help technicians become more familiar with maintenance requirements of turbo charged engines, how to diagnosis root cause of turbo failures, how to have the conversations with the customer, and best practices for a successful R and R.

**Turbos Fact and Fantasy** - This area will cover the basic principals of turbo chargers. lube, spool speed, size, pressure, etc.

**Failure Modes and Installation**- No one wants a groundhogs day, fixing a symptom may not fix the problem.

**Vehicle Owner Conversation** - This one small item will be the difference for every independent repair facility in America.

**Vehicle Maintenance** - Oil change intervals, quality of oil, and driving conditions are just a few items that effect Turbos.

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