

# TURBODRIVEN

OCTOBER 2019

## We've Got the Ford F-150 Covered: Reman, New or Upgrade

The Ford EcoBoost 3.5L gasoline engines are one of the largest service opportunities in the aftermarket today—and the BorgWarner Turbo Aftermarket portfolio has a complete suite of reman, new service and performance upgrade options available so you can meet every customer's needs.

As the 2011-2016 Ford F-150 models enter their service life, we're here to support you and match your customer requests with the right product. Not only is BorgWarner the only manufacturer with all three options—reman, new service and performance upgrade—but we also offer another unique advantage.

“BorgWarner is the first fit for this vehicle platform,” says Patrick Harcourt, Category Manager for Performance Products. “If you want the best performance for your truck, our original equipment replacements or upgrades are a perfect match. You can be assured that our turbochargers—whether they are reman, new service or performance—will offer the same durability and quality as the OEM units. That should give you and your customers confidence.”

### Ford F-150 Part Numbers

We launched four reman options late last year, and recently rolled out four new service and four performance upgrade parts for the Ford F-150 models for 2011-2016.

OEM Reference	BW Reman P/N	BW New P/N	BW Upgrade P/N
DL3Z 6K682 A	53039900469	53039880469	53039881002
DL3E 6C879 AA	53039900469	53039880469	53039881002
DL3Z 6K682 B	53039900470	53039880470	53039881003
DL3E 6K682 AA	53039900470	53039880470	53039881003
CL3Z 6K682 C	53039901004	53039881004	53039881006
BL3E 9G438 UA	53039901004	53039881004	53039881006
CL3E 6K682 A	53039901004	53039881004	53039881006
BL3Z 6K682 C	53039901004	53039881004	53039881006
CL3Z 6K682 A	53039901004	53039881004	53039881006
BL3Z 6K682 E	53039901004	53039881004	53039881006
BL3E 9G438 VA	53039901005	53039881005	53039881007
BL3Z 6K682 D	53039901005	53039881005	53039881007
CL3E 6K682 B	53039901005	53039881005	53039881007
CL3Z 6K682 D	53039901005	53039881005	53039881007
CL3Z 6K682 B	53039901005	53039881005	53039881007
BL3Z 6K682 VB	53039901005	53039881005	53039881007
DL3E 6K682 AC	53039900470	53039880470	53039881003
DL3E 6C879 AA	53039900469	53039880469	53039881002
DL3Z 6K682 A	53039900469	53039880469	53039881002
DL3E 6C879 AD	53039900469	53039880469	53039881002
DL3Z 6K682 E	53039900469	53039880469	53039881002
DL3E 6C879 AF	53039900469	53039880469	53039881002
DL3E 6C879 AE	53039900469	53039880469	53039881002
DL3Z 6K682 A	53039900469	53039880469	53039881002
DL3Z 6K682 C	53039900469	53039880469	53039881002
DL3E 6K682 AF	53039900470	53039880470	53039881003
DL3Z 6K682 D	53039900470	53039880470	53039881003
DL3Z 6K682 B	53039900470	53039880470	53039881003
DL3Z 6K682 F	53039900470	53039880470	53039881003
DL3E 6K682 AE	53039900470	53039880470	53039881003
DL3E 6K682 AD	53039900470	53039880470	53039881003

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## Tech Tip: Diagnosing Oil Leakages with Turbochargers

If you've ever had a turbocharger start leaking or smoking, you may have thought the turbocharger was faulty. This is a common misperception, but, most of the time it has nothing to do with the turbocharger functionality. More than 95 percent of the time, oil leakage is caused by a few issues:

- Oil drain line that is too small
- Oil drain line restricting oil flow
- Excessive blow-by

To determine if this is one of the reasons for the oil leakage, follow these steps:

- 1) **Check the size of the oil drain line.** It should be equal to or larger than the bearing housing oil drain—and, the larger the oil drain, the better (within reason). “The inner diameter of the pipe should not be smaller than the drain hole in the bearing housing because this could cause the oil to back up and leak into the end housings,” says Seth Temple, Senior Application Engineer. “If the drain line is smaller than the hole size, then it can create restrictions.” He also recommends making sure the gasket is equally sized.
- 2) **Check to see how the oil is returning back to the engine.** The oil drain line should be straight and downhill, with no level spots or upturns, to remain free-flowing with no restrictions. It's important to avoid 90° bends, so the drain line can enter the oil pan above the static oil line and not in line with the throw of the crank.

“The goal is to make sure the oil flows freely to the top of the oil pan with no restrictions,” Temple says. “So, it's critical the oil line is as vertical as possible to promote good oil flow. If you have restriction in the oil drain line, oil can back up and leak out of the compressor or turbine end. The oil will follow the path of least resistance.”

- 3) **Check to see if the engine has excess crankcase pressure/blow-by.** If the engine has high mileage and is in need of rebuilding, this can cause excessive blow-by. This essentially creates a higher pressure or restriction in the oil drain and does not promote good oil flow, causing the oil to follow the least path of resistance.

If you follow these steps and determine it is not an improperly sized or restricted oil line, or excessive blow-by, then the leakage also may be due to excessive tilt of the turbocharger, a damaged bearing system, or worn or collapsed piston rings.

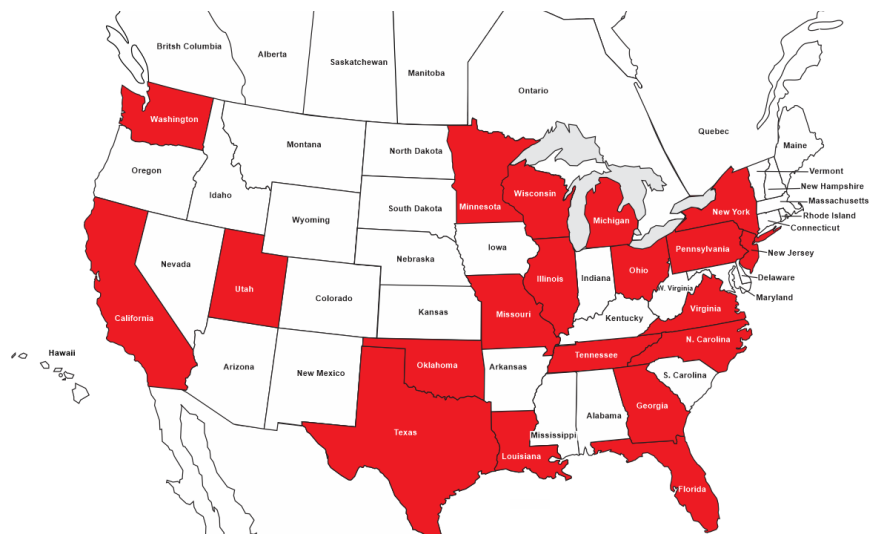
## We've Got the Ford F-150 Covered: Reman, New or Upgrade

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### Ford F-150 Turbochargers: Millions of Service Opportunities

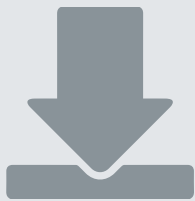
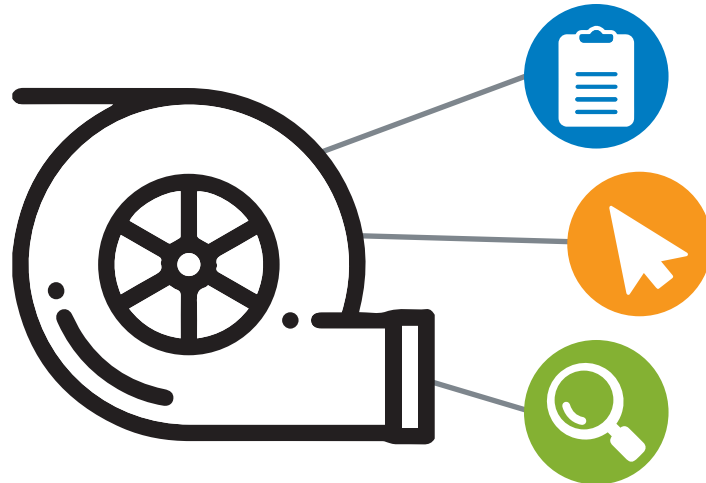
With millions of the Ford F-150 turbochargers on the road, the opportunity for service and sales is significant. With the widest range of products, readily available inventory, and products you can count on, BorgWarner is the logical choice to help you respond to customer needs.

### Active Hot Spots for the Ford F-150



# Maximizing Our TurboDriven Interactive Database

BorgWarner's TurboDriven 3.4 (DB-Version 1.16.18)\* catalog software has proven it can give distributors the boost they need! This robust database gives you access to dozens of BorgWarner turbo part numbers as well as all the applicable cross-references. Plus, it's packed with features that allow you to use, manipulate and leverage the data for your specific needs.



## How to Download TurboDriven 3.4

<https://bit.ly/32pM3JW>

Instructions:

- Unzip the file.
- Run 'setup.exe' and follow the instructions on screen.

The main features of the TurboDriven 3.4 include:

- **Flexible program screen** that allows you to set up and display individual screens to your preference. Adjustable columns allow you to move or hide columns so you can display data the way you want to see it.
- **Cross-reference section** to search for interchangeable BorgWarner products with components and assemblies of other manufacturers. This section allows you to compare turbo and cartridge assemblies side by side to evaluate similarities and differences.
- **Where used section** that lists turbochargers or cartridge assemblies for certain component uses.
- **Repair and installation manuals** with instructions, notes and tips for reconditioning BorgWarner turbochargers.
- **Bill of material function** that shows side-by-side comparisons of turbo and spare part assemblies in a quick and easy view window.
- **Virtual notepad** to help you memorize remarks and pieces of information.

### Need to Update to TurboDriven 3.4?

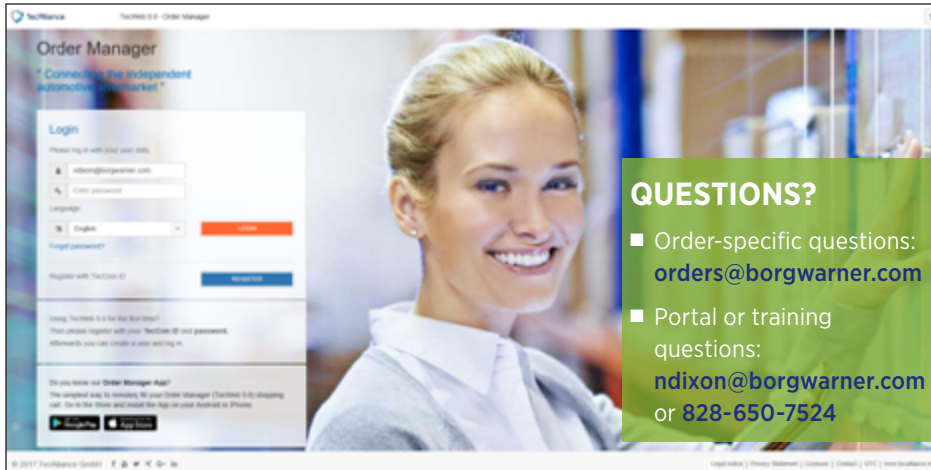
If you already have TurboDriven but need to update to our newest version, it's simple and quick! Once you are on the TurboDriven database, go to the Extras tab in the top navigation. Select "Internet Update" and follow the on-screen instructions. (Note: This software currently is not compatible with Apple OS.)

In future issues of *TurboDriven*, we'll provide tips and highlight various features of TurboDriven 3.4. If there's something you want to know about using the software, please email [ndixon@borgwarner.com](mailto:ndixon@borgwarner.com) with your question.

\* If your version does not have DB-Version 1.16.18, then you need to update your version. See box on this page for how to update your version of TurboDriven.

# TURBODRIVEN

## TechWeb – Easy, Convenient and 24/7 Access



**QUESTIONS?**

- Order-specific questions:  
[orders@borgwarner.com](mailto:orders@borgwarner.com)
- Portal or training questions:  
[ndixon@borgwarner.com](mailto:ndixon@borgwarner.com)  
or 828-650-7524

We make working with us easy with our eCommerce solution: **TecWeb / Order Manager from TecAlliance**. Designed specifically for the turbo aftermarket, the new system offers distributors a more streamlined experience and 24/7 access.

**Check it out at [tecweb.tecalliance.net](http://tecweb.tecalliance.net).**

## Visit Us at **AAPEX** and **SEMA**

We always look forward to connecting with customers at industry shows. If you'll be at the AAPEX or SEMA shows in November, be sure to stop by the BorgWarner booth!

### AAPEX

**Sands Expo Convention Center – Las Vegas  
Nov. 5-7, 2019**

BorgWarner Highlights:

- Aftermarket release of new turbos for Hyundai Veloster 1.6L engines
- Reman and new service turbos for 3.5L Ford EcoBoost applications
- Turbochargers for various on-highway, construction and marine applications

**Booth  
33009**

### SEMA

**Las Vegas Convention Center – Las Vegas  
Nov. 5-8, 2019**

BorgWarner Highlights:

- Release of three new, higher flowing Engineered For Racing (EFR) turbochargers, each with anodized compressor wheels:
- EFR 8474 – 67mm inducer, 95 lb/min, 500 to 950 HP
  - EFR 9274 – 72mm inducer, 105 lb/min, 600 to 1,050 HP
  - EFR 9280 – 74mm inducer, 110 lb/min, 600 to 1,100 HP

**Booth  
25125**

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