### **TURBOCHARGER KITS & RELATED PARTS** Highlights



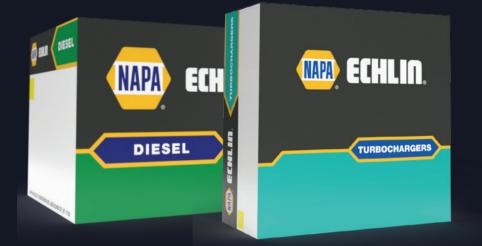
More than 140 New, No-Core and Remanufactured Turbocharger Kits for Gas, Diesel, Domestic and Import applications



Turbocharger Kits include everything needed for a complete, efficient repair



Drop Ship Program available on the entire Turbo line



### What's in your box?™



**ECHLIN** LOOKS RIGHT. FITS RIGHT. PERFORMS RIGHT.



### Growing Market

In an effort to improve fuel economy, reduce emissions, and improve performance, vehicle manufacturers have added turbocharged vehicles to their lineups at a rapid rate.

#### Did you know

Ford introduced their first turbocharged EcoBoost engine in 2010. They now produce 9 different turbocharged EcoBoost engines for their vehicle lineup and many vehicles are equipped with two turbochargers.

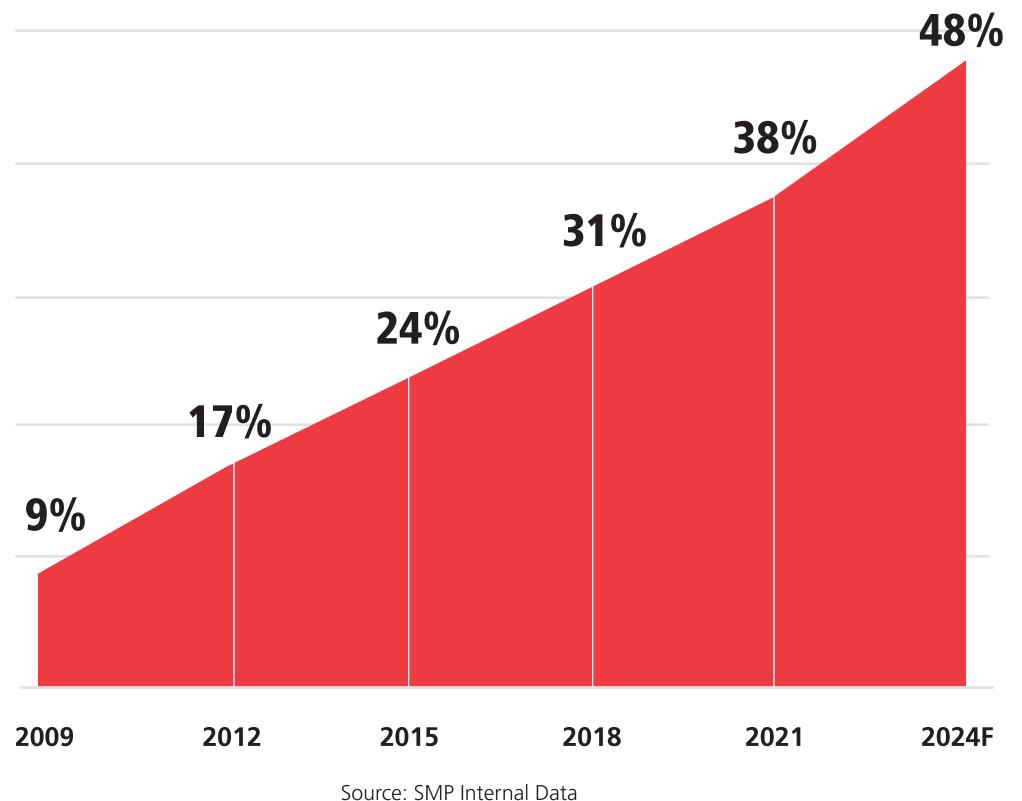
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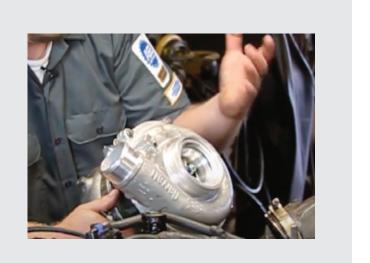
#### **Service Opportunities:**

An additional 28 million vehicles with turbochargers will enter the Aftermarket "Sweet Spot" in the next 5 years, during which their turbochargers and related parts may need to be serviced or replaced.



### **New Vehicles Equipped with Turbochargers**





# Sales **Opportunities**

The GM 1.4L Ecotec engines may develop an oil leak around the PCV valve and plugs on the front engine cover. (GM Service Bulletins PIP5197/PIO957)

The loss of oil can starve the turbocharger of lubrication, causing the turbocharger to fail prematurely.

#### **NAPA<sup>®</sup> Echlin<sup>®</sup> Training Tip**

**ECHLIN** Turbocharger Kits

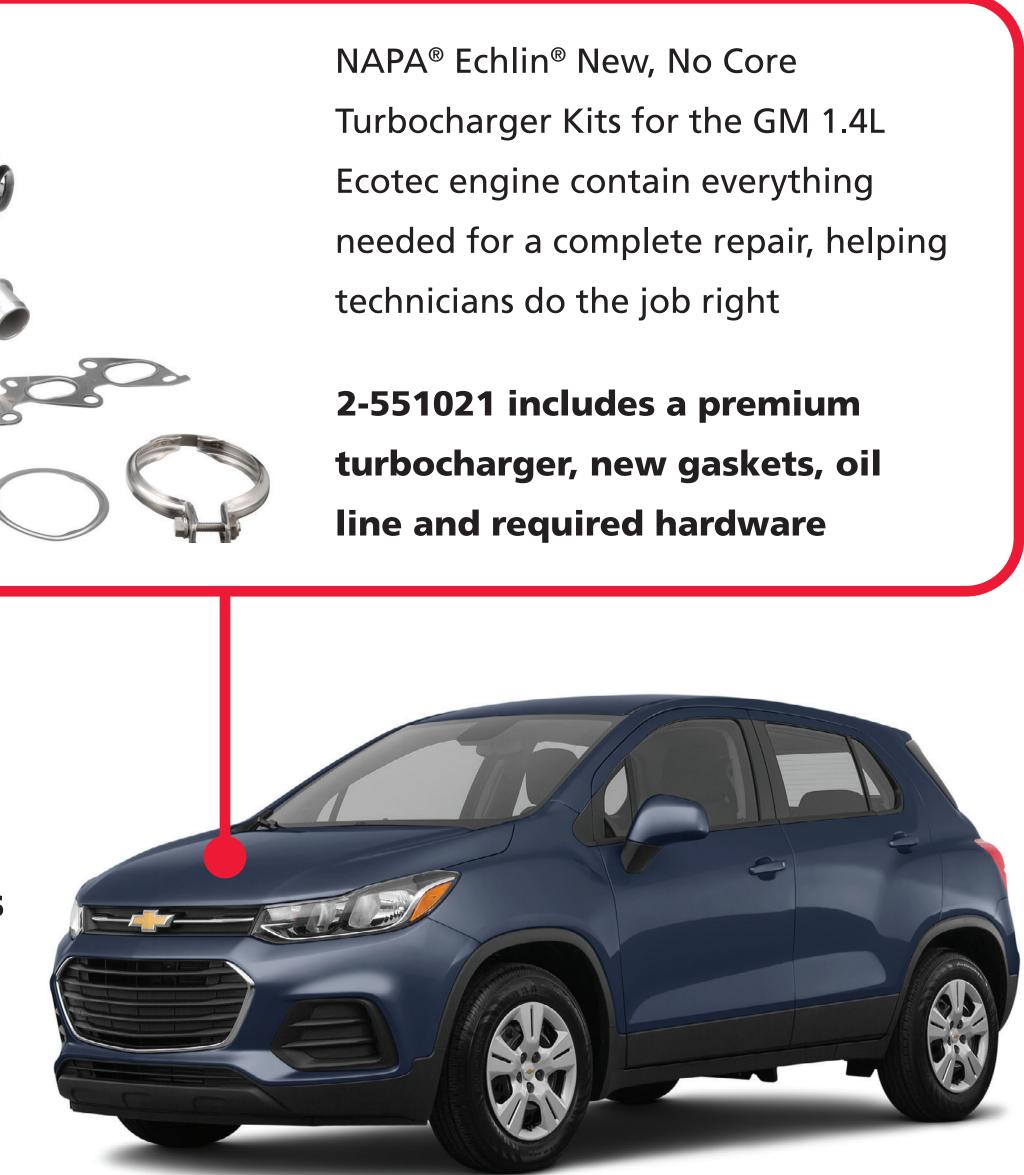
Before installing a replacement turbo on a GM 1.4L, carefully check for any oil leaks. It is likely the original turbo failed due to a lack of lubrication.



2-551021

Buick Encore (2018-13) Chevrolet Trax (2018-13) Chevrolet Cruze (2016-11) **Chevrolet Sonic (2019-12)** 

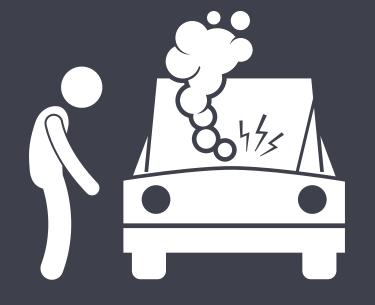
2-551021 includes a premium



### **GM 1.4L Ecotec Engines**

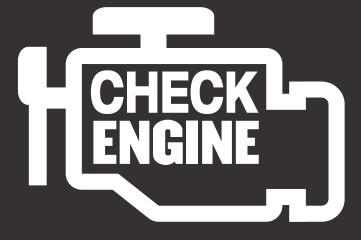


### Impact on Engine Systems



When a turbocharger fails, the motorist will likely experience a lack of power and reduced fuel mileage — The engine may also begin to operate at higher temperatures





A turbo failure can send oil and metal debris through the intake — The entire intake system, including the intercooler, should be thoroughly inspected



Turbos usually don't fail on their own — The primary causes of turbo failure are contamination and lack of oil



### What's New

New, No-Core Turbocharger Kits are one of the fastest growing categories in the industry. NAPA<sup>®</sup> Echlin<sup>®</sup> is committed to regularly introducing new Turbocharger Kits.

For the most recent applications, check the online catalog at NAPAEchlin.com.



2551099 Ford Mustang (2020-15) **VIO: 213K** 





2551100 Ford / Lincoln Trucks & SUVs (2020-18) **VIO: 847K** 

**TRB214N Ford Vans** (2019-15) **VIO: 26K** 







# What's New

### **RELATED PARTS**

From sensors and actuators to coolant and oil lines, regularly introducing related parts for the turbocharger system is a staple of NAPA<sup>®</sup> Echlin's complete Turbo Program.

For the most recent applications, check the online catalog at NAPAEchlin.com.



Turbocharger **Coolant Line** 

2-56108

BMW Cars & SUVs (2019-13) **VIO: 76K** 



Turbocharger **Gasket Set** 

257004

Ford Explorer (2019-13) VIO: 1.4M







2-56053

Ford SUVs (2019-13) VIO: 1.5M



#### **Turbocharger Speed** Sensor

#### **TBS302**

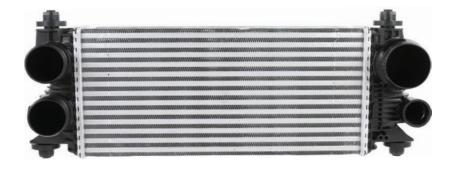
**RAM Trucks (2020-14) VIO: 830K** 



Turbocharger Wastegate Solenoid

#### 2-17000

GM Cars and Trucks (2021-2020) **VIO: 106K** 



#### **Charge Air Cooler**

#### 2-59007

Ford Trucks & SUVs (2021-16) **VIO: 1.4M** 

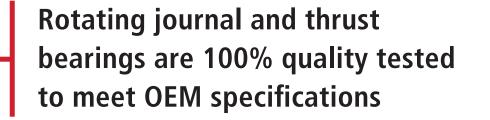


# NAPA<sup>®</sup> Echin<sup>®</sup> Quality

Turbochargers operate at temperatures in excess of 1700°F with the turbine spinning up to 200,000 RPM. Using quality components to manufacture a premium replacement is critical to optimal turbocharger performance.







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All NAPA<sup>®</sup> Echlin<sup>®</sup> **Turbochargers are designed** and tested to match OEM quality and performance across the entire RPM range

Premium cast housing for superior durability

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# Testing and Warranty

In the lab and on-vehicle, all NAPA® Echlin® Turbochargers go through a rigorous testing regimen that includes hot gas stand and burst test validation to ensure structural integrity, durability and performance. In fact, NAPA® Echlin® Turbochargers are 100% end-of-line tested through the full RPM range.

That's why all NAPA<sup>®</sup> Echlin<sup>®</sup> Turbocharger Kits come with a 3-year / 36,000-mile limited warranty.



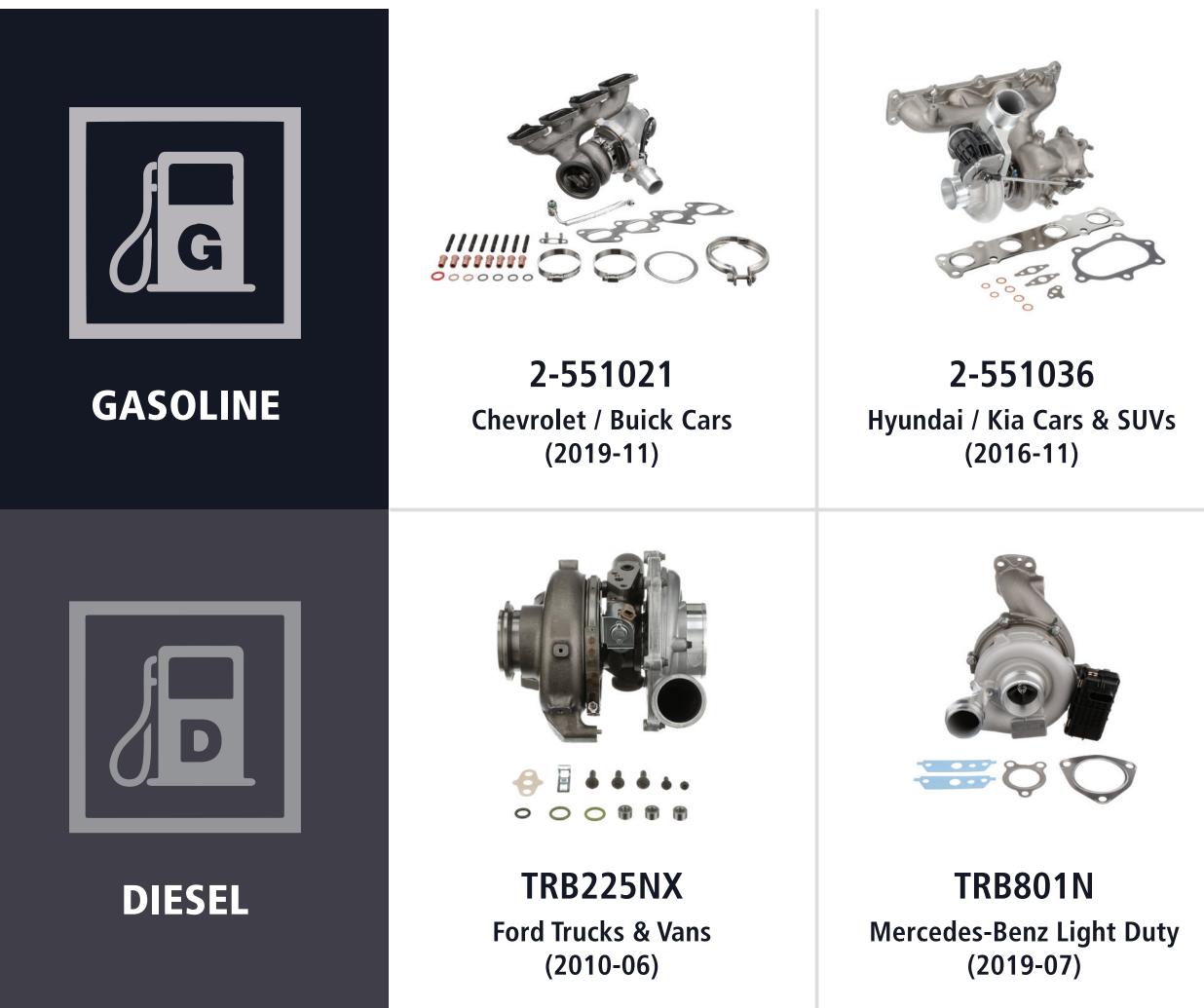
**100%** End-of-Line Testing



### **3/36** 3-Year / 36,000-Mile Limited Warranty



# **Top Movers: Turbocharger Kits**







2-551037 Hyundai / Kia Cars & SUVs (2020-15)



2-551053 Audi / VW Cars & SUVs (2017-08)



2-551043 Ford Cars & SUVs (2019-14)



**TRB302N RAM 2500** (2018-13)





TRB800N Dodge, Jeep, Mercedes-Benz (2009-07)



TRB230N **Ford Trucks** (2007-05)





### **Related** Parts

In addition to the highest quality replacement Turbos, NAPA<sup>®</sup> Echlin<sup>®</sup> offers a full line of components to repair the turbocharger system including the actuators, solenoids and sensors technicians are looking for.



#### **Turbo Actuators**

**Direct OE replacement for Ford and GM diesel trucks** 



#### **Turbo Wastegate Solenoids**

Regulates the amount of boost on turbocharged engines

Coverage for GM, Ford, Chrysler, Hyundai and Kia through 2021











#### **MAP Sensors**

Measures turbo manifold pressure to the ECM, calculates air density and required fuel delivery for optimum combustion

45 SKUs with coverage through 2023



#### **Turbo Bypass Valves**

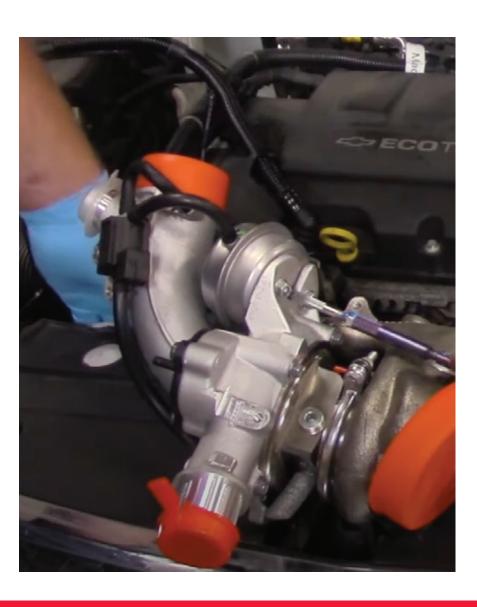
**Includes an upgraded internal spring** to help the turbo spool up faster, and maintain constant boost pressure

Import and domestic coverage through 2022



#### **Turbo Speed Sensors**

**Provides the ECM with a speed** reading which helps prevent excessive turbo RPM that can cause turbo and/or engine damage









### **Related** Parts

The NAPA<sup>®</sup> Echlin<sup>®</sup> Turbo Program includes all related components to do the job right: coolant lines, oil lines, drain tubes, gasket sets and charge air coolers.

#### **NAPA<sup>®</sup> Echlin<sup>®</sup> Pro Training Tip**

Be sure to inspect the oil lines when installing a new replacement turbo. Cooked oil build-up can clog the lines and is a common cause of turbo failure.



### **Turbo Coolant Lines**

**Exact OEM fitment engineered to** provide cooling on turbochargers

Growing category with coverage through 2022



#### **Turbo Gasket Sets**

NAPA<sup>®</sup> Echlin's Turbos come complete with gaskets, but sometimes, the tech only needs gaskets





### **Turbo Oil Drain Tubes**

**Upgraded**, **zinc-coated steel resists** corrosion. Includes a new gasket\*

**Coverage through 2022** 



#### Water to Air Coolers

**Cools the air using heat transfer** between water and intake air before it enters the intake manifold.

**Coverage for GM, Ford and Chrysler** through 2021



#### **Turbo Oil Lines**

Helps keep the turbo lubricated as designed for a longer service life. Includes new gaskets\*

25 SKUs with coverage through 2022



#### **Air to Air Coolers**

**Cools the air using heat transfer** between ambient air and intake air before it enters the intake manifold











### Packaging with a Purpose

The most complete Turbo Program includes complete support. That's why NAPA<sup>®</sup> Echlin<sup>®</sup> provides illustrated installation instructions and on-thebox alert labels for every New, No-Core Turbo Kit, to help technicians perform a successful install.

#### NAPA® ECHLIN® Step-by-Step Turbocharger Removal and Installation Instructions



harness from mounts. Move the wiring harness out of the way t improve access. Retirer le couvercle en plastique situé sur le dessus du compart iment moteur et détacher le faisceau électrique des supports



Retire la cubierta de plástico del compartimiento del motor y

desconecte de su montaje el arnés de cableado. Ponga a un lado

2 Remove turbocharger intake tube. Retirer le tube d'admission du turbocompresseur. Desconecte la tubería de entrada del turbocompreso



3. Disconnect charge air cooler inlet pipe. Débrancher le tuyau d'admission du refroidisseur d'air de suralimentation. Desconecte la tubería de entrada del interenfriado



4. Disconnect turbocharger variable vane hydraulic control valv electrical connector. Débrancher le connecteur électrique de la soupape de commande hydraulique à aube fixe à incidence variable du turbocompresseur. Desconecte el conector eléctrico de la válvula de control hidráulico de las paletas variables del turbocom



**Detailed installation videos available** on NAPA<sup>®</sup> Echlin's YouTube channel





5. Remove fasteners connecting the oil supply line to the turbo. Discard gasket REUSE fasteners Retirer les pièces qui fixent la canalisation d'huile au

Desinstale los sujetadores que conectan la línea de suministro de aceite al turbocompresor. • Deseche la empaquetadura. VUELVA A UTILIZAR los sujetadores



Remove fastener on the flange of oil supply line connected to the oil cooler. Discard O-ring & fastener.

Retirer la pièce de fixation située sur la bride de la canalisation d'huile branchée au refroidisseur d'huile Jeter le joint torique et la pièce de fixation. Desinstale el sujetador en la brida de la línea de suministro aceite conectada al enfriador de aceit · Deseche la junta tórica y el sujetado



7. Remove and discard the fastener and the wire retainer Retirer et jeter la pièce de fixation et la bride de retenue Desinstale y deseche el sujetador y el retén del cable.



turbine du turbocompresse Desinstale la abrazadera de apriete de tornillo del tubo de salida de la turbina del turbocompresor.



9. Remove Marman clamp from the turbocharger turbine inlet.

Desinstale la abrazadera de apriete de tornillo del tubo de entrada de la turbina del turboo



10. Loosen the exhaust inlet pipe-to-EGR cooler clamp. Desserrer le collier de serrage qui unit le tuyau d'entrée des gaz d'échappement au refroidisseur du système RGE. Afloje la abrazadera que conecta la tubería de entrada del



8. Remove Marman clamp from the turbocharger turbine outle Retirer la bride de serrage Marman de l'orifice de sortie de la



Retirer la bride de serrage Marman de l'orifice d'entrée de la turbine du turbocompr

escape al enfriador de EGF

4. Install & properly position turbocharger inlet Marman clamp. Installer et positionner correctement la bride de serrage Marman sur l'orifice d'entrée du turbocompre Instale y coloque correctamente la abrazadera de apriete de tornillo de la tubería de ingreso del turbocompresor

5. Install exhaust inlet pipe-to-EGR cooler clamp. Installer le collier de serrage qui unit le tuyau d'admission des gaz d'échappement à la tubulure d'échappemen Instale la abrazadera que conecta la tubería de entrada del escape al el enfriador EGR.



6. Install LH and RH exhaust inlet pipe-to-exhaust manifold nuts. Alternate tighten the bolts on each side of the engine to draw inlet pipes equally to each exhaust manifold flange. Note: Gap between pipe flange and exhaust manifold should be even for both exhaust connections on the engine.

Installer les écrous qui unissent le tuyau d'admission des gaz d'échappement à la tubulure d'échappement, du côté gauche et du côté droit du moteur. Serrer les boulons alternativement de chaque côté du moteur afin de caler les tuvaux d'admission mément sur la bride de chacune des tubulures

Note : L'espace libre entre la bride de tuyau et la tubulure d'échappement doit être exactement le même pour les deux raccordements de tuyaux d'échappement sur le moteur.

Instale las tuercas del lado izquierdo y lado derecho del múltiple que conecta la tubería de entrada al escape. Apriete alternadamente los pernos en cada lado del motor de manera que las tuberías de entrada se asienten de manera pareja er da brida del múltiple del escape Nota: El espacio entre la brida de la tubería y el múltiple de



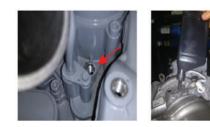
Install turbocharger exhaust Marman clamp Installer la bride de serrage Marman de l'échappement du Instale la abrazadera de apriete de tornillo en el escape del



8. Install wire retainer & fastener. Reconnect the turbocharger ariable vane hydraulic control valve connector

Installer la pièce de fixation et la pièce de retenue métallique Rebrancher le connecteur électrique de la soupape de mmande hydraulique à aube fixe à incidence variable du rbocompresser

Instale el retén del cable y el sujetador. Vuelva a conectar el conector de la válvula de control hidráulico de las paletas variables del turbocompreso



9. Install oil supply tube, then pour a quart of new engine oil into the inlet hole of the turbocharge

installer la canalisation d'huile, puis verser 946 ml d'huile moteur fraîche dans l'orifice de remplissage d'huile du

Instale la tubería de suministro de aceite. luego vierta un cuarto de galón de aceite nuevo de motor por el agujero de entrada del turbocompresor.



10. Position oil supply line with new gasket, then install origina

Positionner correctement la canalisation d'huile sur le nouveau joint d'étanchéité, puis installer les pièces de fixation d'origine.

Coloque la línea de suministro de aceite con una empaquetadura nueva, luego instale los sujetadores originale



11. Install inlet & outlet air hoses to the turbocharger compressor

Installer les tuyaux flexibles de prise d'air et de sortie d'air sur e compresseur du turbocompress

Instale las mangueras de aire de entrada y salida al

#### ALERT: **PROPER DIAGNOSIS IS REQUIRED**

BEFORE REPLACING THE TURBO Failure to properly diagnose the root cause can lead to a repeat problem and void the warranty

#### ALERTE : UN DIAGNOSTIC PRÉCIS DOIT ÊTRE POSÉ AVANT DE PROCÉDER AU REMPLACEMENT

**DU TURBOCOMPRESSEUR** Tout défaut de poser un diagnostic précis de la cause peut entraîner la répétition du problème et invalider la garantie

#### ALERTA: ANTES DE REEMPLAZAR EL TURBOCOMPRESOR

DEBE HACER UN DIAGNÓSTICO APROPIADO Si no hace el diagnóstico apropiado, la causa del fallo puede producir un problema repetido

y anular la garantía





#### NAPAEchlin.com

escape debe ser igual en ambas cone del motor.



# NAPA<sup>®</sup> Echlin<sup>®</sup> **Pro Training Tech Tip**

NAPA<sup>®</sup> Echlin<sup>®</sup> Pro Trainers have installed hundreds of turbos and trained thousands of technicians. Here's what they say to look out for during a turbo install.

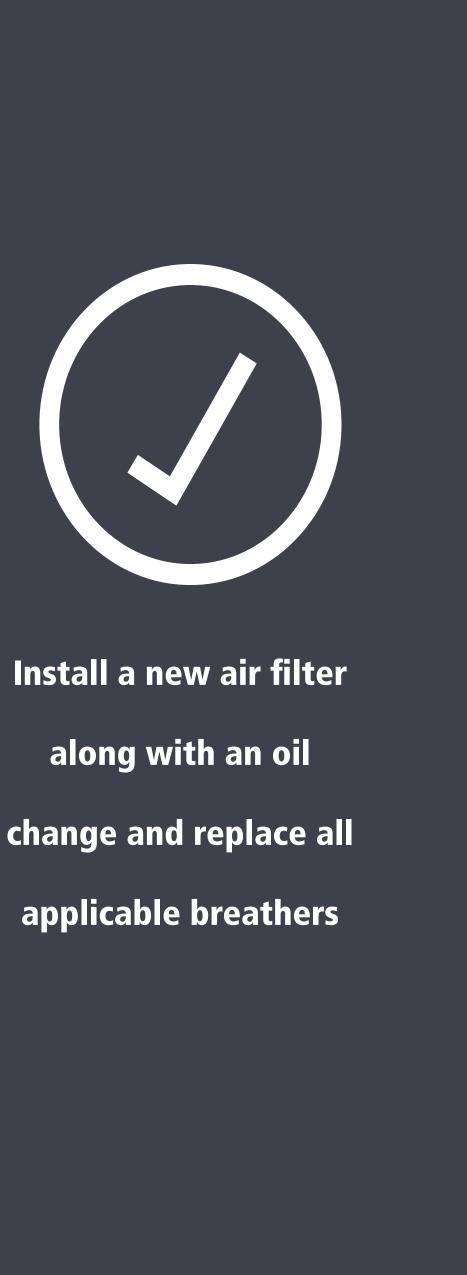


Air ductwork must be sealed and perfectly clean





**Ensure there is proper** lubrication and cooling at the turbo — Bleed fresh engine oil through the new turbo before starting the engine



# NAPA<sup>®</sup> Echin<sup>®</sup> Professional Training

### Award-Winning In-Person, Live Virtual, and Online Learning

NAPA<sup>®</sup> Echlin<sup>®</sup> Pro Training delivers accredited classes that educate technicians in the latest automotive repair technologies, and techs can earn CEU credits.

An extension of NAPA<sup>®</sup> Echlin<sup>®</sup> training, our extensive YouTube video library has over 500 technical and installation videos.





**Available Classes** 

**6.7 Powerstroke Tips** 

**Duramax Diesel Updates** 

Ford EcoBoost

6.7 Cummins Tips and Tricks



**Forced Air Induction Technologies** 



**Available Classes** 

**6.7 Powerstroke Diesel Problems** and Solutions **Duramax Diagnosis and Service Ford EcoBoost** 

**Cummins Diagnostics and Repairs** 



For information on replacing turbochargers and components, search "Turbo" on the NAPA® Echlin® YouTube channel

