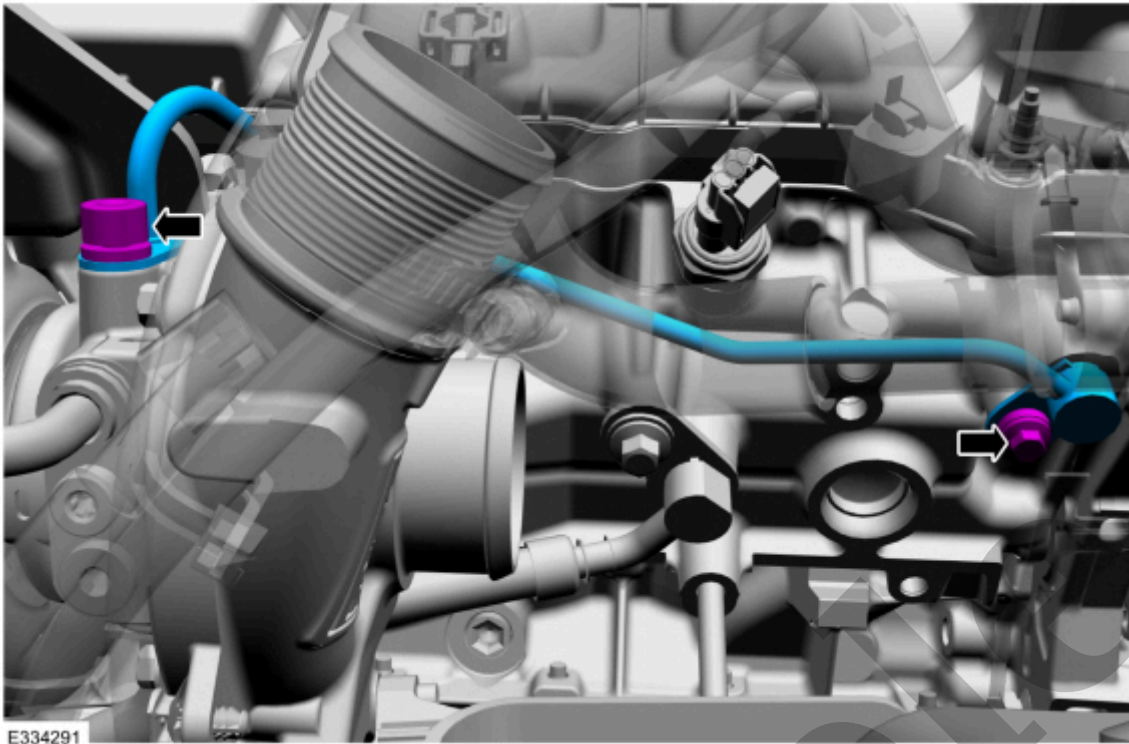


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## 2024 Ford Explorer Service and Repair Manual

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22. **NOTE**

Frame removed for clarity.

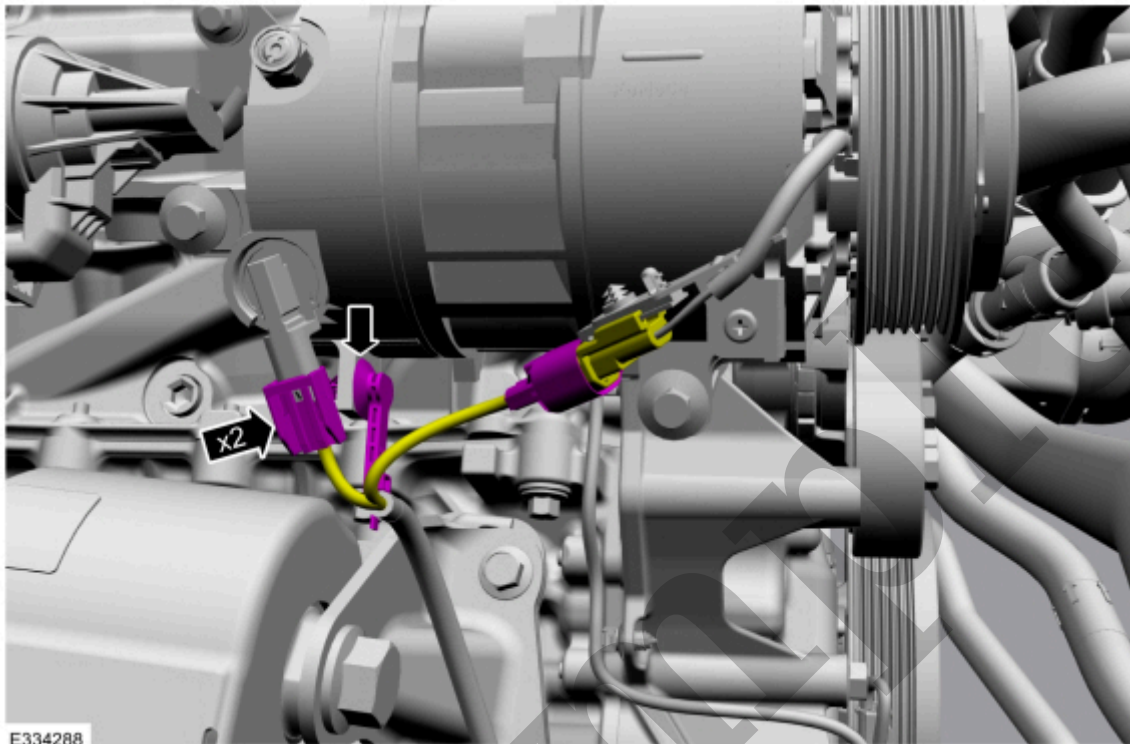
Install the A/C (air conditioning) compressor and bolts, then tighten the bolts in the sequence shown.

**Torque** : 18 lb.ft (25 Nm)

24. **NOTE**

Frame removed for clarity.

Connect the electrical connectors and attach the wiring harness retainer.



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25. If equipped, install the secondary generator.

Refer to: [Generator - 2.7L EcoBoost \(238kW/324PS\)](#)(414-02 Generator and Regulator, Removal and Installation).

26. Install the air cleaner outlet pipe RH.

Refer to: [Air Cleaner Outlet Pipe RH](#)(303-12A Intake Air Distribution and Filtering - 2.7L EcoBoost (238kW/324PS), Removal and Installation).

27. Install the right front fender splash shield.

Refer to: [Fender Splash Shield](#)(501-02 Front End Body Panels, Removal and Installation).

28. If equipped, the underbody skid plate, then install and tighten the bolts.

**Torque :**

1: : 22 lb.ft (30 Nm)

## Wastegate Control Actuator LH

<b>303-04F Fuel Charging and Controls - Turbocharger - 2.7L EcoBoost (238kW/324PS)</b>	<b>2022 F-150</b>
<b>Removal and Installation</b>	<b>Procedure revision date: 08/19/2021</b>

### Wastegate Control Actuator LH

#### Removal

##### NOTICE

The turbocharger compressor vanes can be damaged by even the smallest particles. When removing any turbocharger or engine air intake system component, ensure that no debris enters the system. Failure to do so may result in damage to the turbocharger.

##### NOTE

The production turbocharger may have the upper jam nut welded to the wastegate control actuator question mark upper linkage lever as an anti-tamper feature.

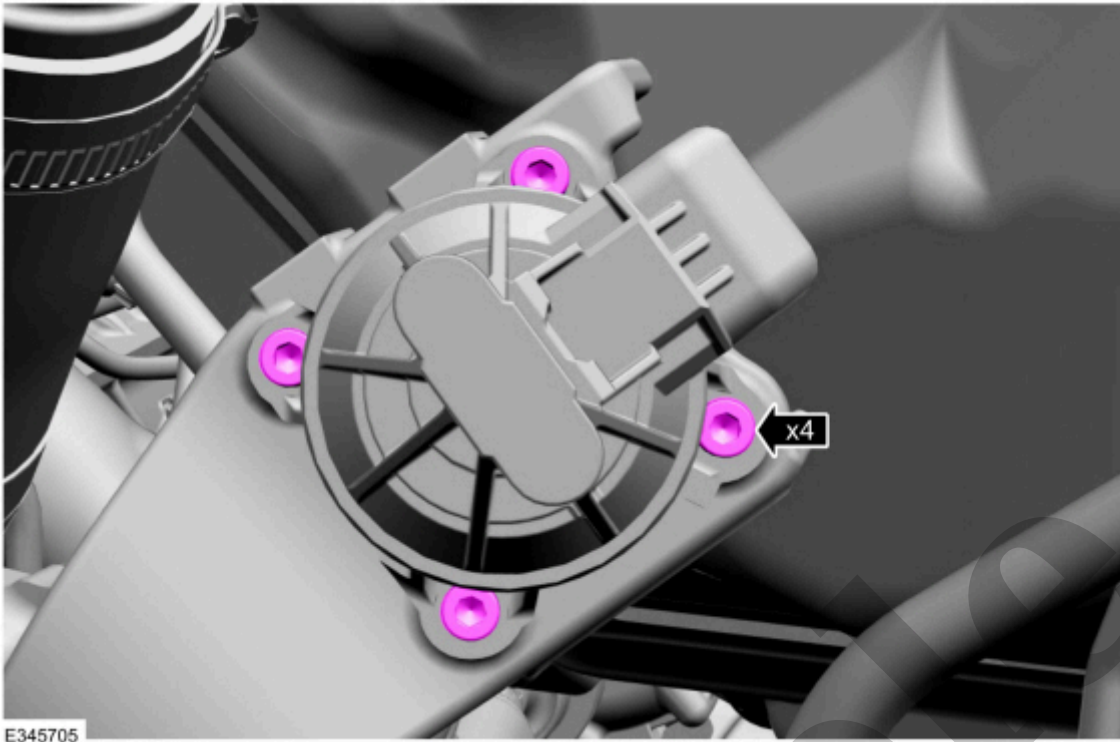
1. With the vehicle in NEUTRAL, position it on a hoist.

Refer to: [Jacking and Lifting - Overview](#)(100-02 Jacking and Lifting, Description and Operation).

2. Remove the left front fender splash shield.

Refer to: [Fender Splash Shield](#)(501-02 Front End Body Panels, Removal and Installation).

3. **NOTE**

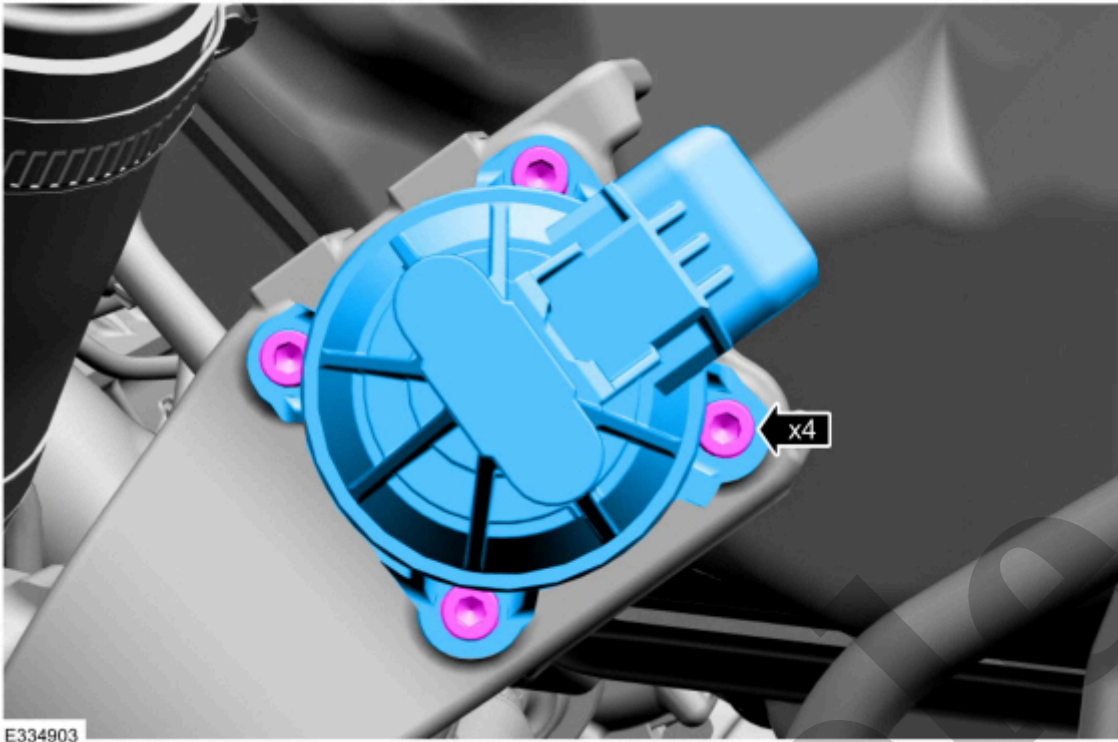


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5. **NOTE**

Make note of orientation of the question mark upper linkage lever and the lower dog-bone linkage assembly, to aid in proper installation.

Remove and discard the E-clip, disconnect the dog-bone linkage lever from the wastegate lever arm, then remove the wastegate control actuator assembly from the turbocharger. Remove and discard the NVH wave washer.

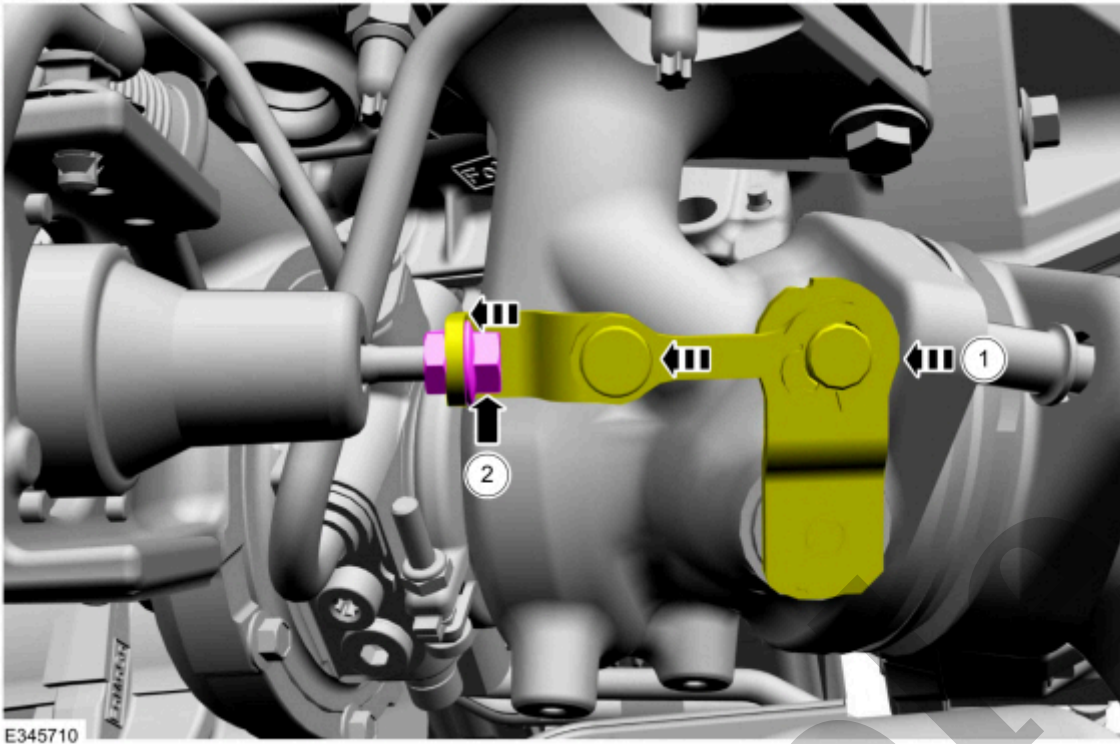


[Click here to learn about symbols, color coding, and icons used in this manual.](#)

## 2. NOTE

Make sure you have the correct orientation as shown, for the question mark upper linkage lever and the lower dog-bone linkage assembly. If reversed, it will bind slightly on the turbocharger housing.

1. Connect the wastegate control actuator question mark upper linkage lever to the wastegate control actuator. Loosely install the new lower wastegate control actuator jam nut.
2. Install the new NVH wave washer, connect the dog-bone linkage to the wastegate lever arm, then install the new E-clip.



[Click here to learn about symbols, color coding, and icons used in this manual.](#)

4. 1. Pull the wastegate control actuator shaft, at the wastegate control actuator jam nuts, away from the wastegate control actuator body to put slack into the system.

2. **NOTE**

In this step the upper wastegate control actuator jam nut should still be fully loosened toward the actuator.

Hold the wastegate control actuator lever arm in the closed position, (rotated toward the wastegate control actuator until it stops).

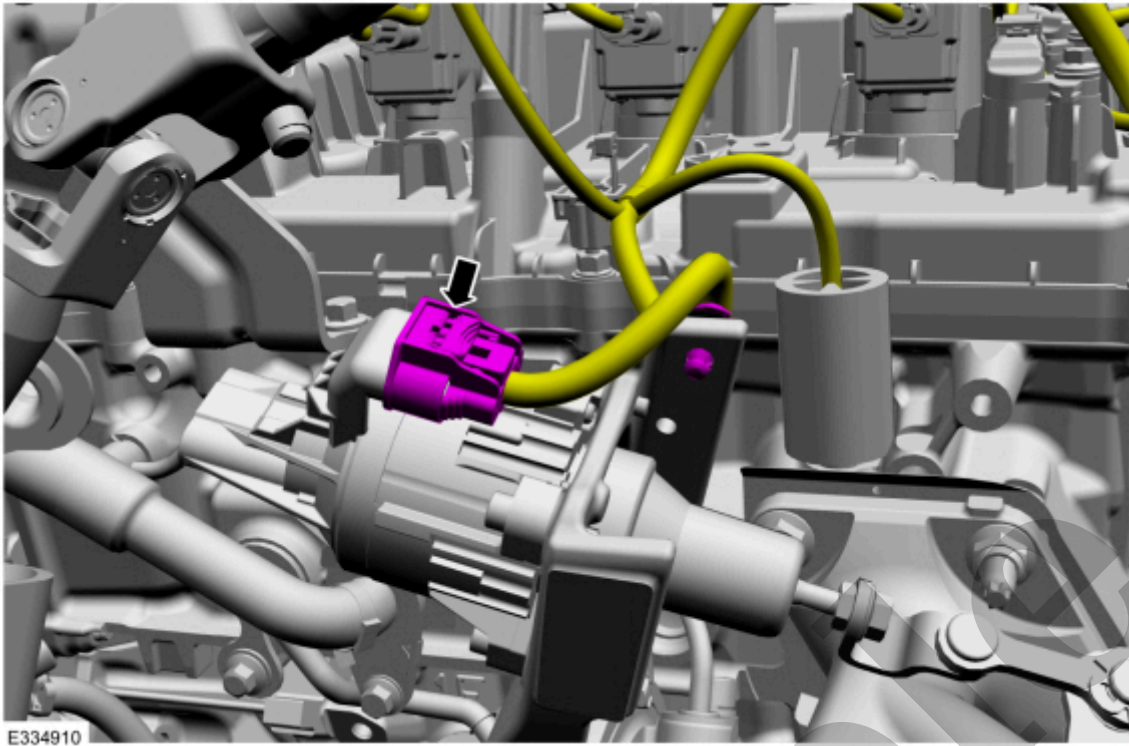
3. Tighten the lower wastegate control actuator jam nut so that 4 to 5 threads are protruding beyond the lower jam nut.

4. **NOTICE**

2 wrenches must be used in this step, failure to do so may damage the wastegate control actuator.

Hold the lower jam nut in position and tighten the upper jam nut, this will pull the wastegate control actuator shaft and linkage into the correct position.





[Click here to learn about symbols, color coding, and icons used in this manual.](#)

## 6. NOTICE

Substantial opening and closing torque is applied by this system. To prevent injury, be careful to keep fingers away from wastegate mechanism when actuated. Failure to follow these instructions may result in personal injury.

1. With the KOEO (key on, engine off) , using a diagnostic scan tool, clear the PCM (powertrain control module) DTC's and reset the KAM (keep alive memory) .
2. With the KOEO (key on, engine off) , using a diagnostic scan tool, view the PCM (powertrain control module) PID (parameter identification) .
3. Using a diagnostic scan tool, select the PCM (powertrain control module) PID (parameter identification) WGATE\_B\_V. Press the accelerator pedal to the floor for 3 seconds and slowly release, record the minimum voltage immediately (within 1 second) after the pedal is fully released. Is the voltage between 1.0-1.2V?
  - No, then go to step 7.
  - Yes, then go to step 8.



## Wastegate Control Actuator RH

<b>303-04F Fuel Charging and Controls - Turbocharger - 2.7L EcoBoost (238kW/324PS)</b>	<b>2022 F-150</b>
<b>Removal and Installation</b>	<b>Procedure revision date: 06/17/2022</b>

### Wastegate Control Actuator RH

#### Removal

##### NOTICE

The turbocharger compressor vanes can be damaged by even the smallest particles. When removing any turbocharger or engine air intake system component, ensure that no debris enters the system. Failure to do so may result in damage to the turbocharger.

##### NOTE

The production turbocharger may have the upper jam nut welded to the wastegate control actuator question mark upper linkage lever as an anti-tamper feature.

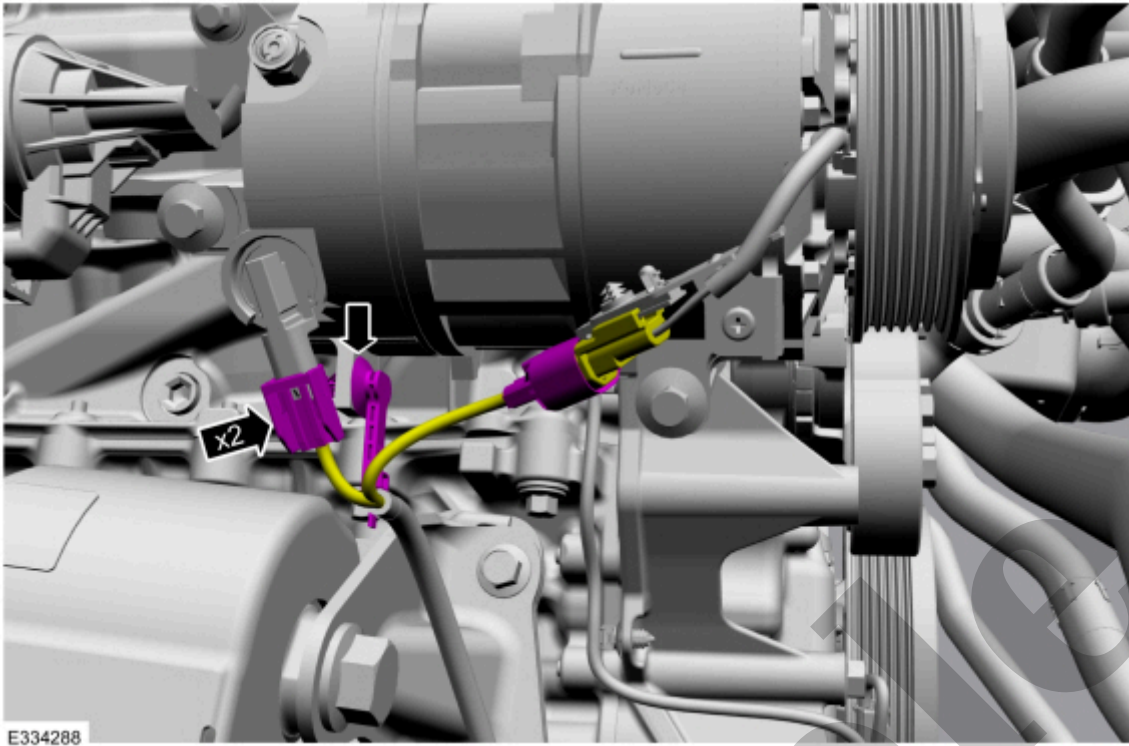
1. With the vehicle in NEUTRAL, position it on a hoist.

Refer to: [Jacking and Lifting - Overview](#)(100-02 Jacking and Lifting, Description and Operation).

2. Remove the right front fender splash shield.

Refer to: [Fender Splash Shield](#)(501-02 Front End Body Panels, Removal and Installation).

3. If equipped, remove the secondary generator.



[Click here to learn about symbols, color coding, and icons used in this manual.](#)

6. **NOTE**

Frame removed for clarity.

Loosen the bolts, then position the A/C (air conditioning) compressor out of the way.