Your Ultimate Source for OEM Repair Manuals

FactoryManuals.net is a great resource for anyone who wants to save money on repairs by doing their own work. The manuals provide detailed instructions and diagrams that make it easy to understand how to fix a vehicle.

2006 FORD Focus 3 Doors OEM Service and Repair Workshop Manual

Go to manual page

Front Suspension Height Sensor

204-05 Vehicle Dynamic Suspension	***2022 F-150***
Removal and Installation	***Procedure revision date: 10/24/2022***

Front Suspension Height Sensor

Removal

NOTE

Removal steps in this procedure may contain installation details.

1. Remove the wheel and tire.

   Refer to: Wheel and Tire(204-04A Wheels and Tires, Removal and Installation).

2. **NOTE**

   Note the position of the components before removal.

   NOTE

   LH (left-hand) height sensor assembly shown, RH (right-hand) similar.

   1. Disconnect the height sensor electrical connector.
   2. Remove the bolt and detach the height sensor arm from the upper control arm.

      Torque : 177 lb.in (20 Nm)

   3. Remove the height sensor bracket bolt and remove the height sensor.

Rear Suspension Height Sensor - Raptor

204-05 Vehicle Dynamic Suspension	***2022 F-150***
Removal and Installation	***Procedure revision date: 10/24/2022***

Rear Suspension Height Sensor - Raptor

Removal

NOTE

Removal steps in this procedure may contain installation details.

NOTE

Left hand (LH) shown, right hand (RH) similar.

1. Position vehicle on a hoist.

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

2. **NOTE**

   Note the position of the components before removal.

   Remove the rear suspension height sensor.

   1. Disconnect the height sensor electrical connector.
   2. Remove the bolt and detach the height sensor arm from the lower control arm.

      Torque : 177 lb.in (20 Nm)

Rear Suspension Height Sensor

204-05 Vehicle Dynamic Suspension	***2022 F-150***
Removal and Installation	***Procedure revision date: 06/23/2021***

Rear Suspension Height Sensor

Removal

NOTE

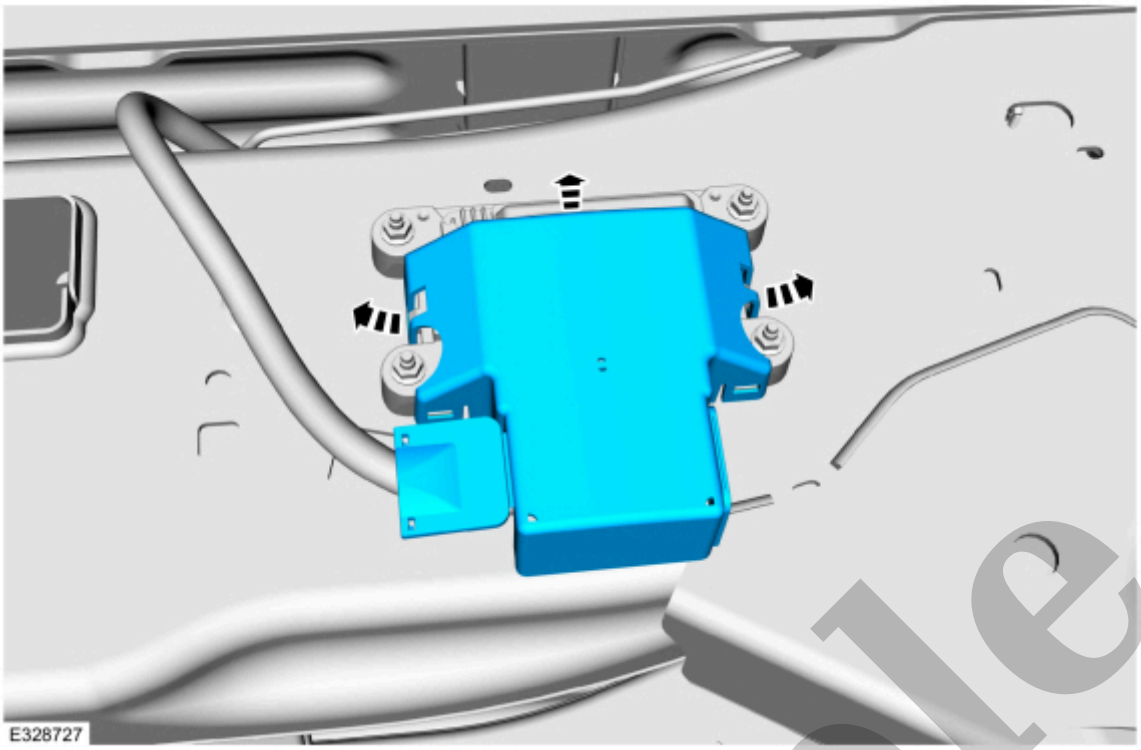
The rear suspension height sensor is integral to the rear dynamic shock absorber and cannot be serviced separately.

1. Remove the rear shock absorber.

   Refer to: Rear Shock Absorber - Vehicles With: Dynamic Suspension(204-02 Rear Suspension, Removal and Installation).

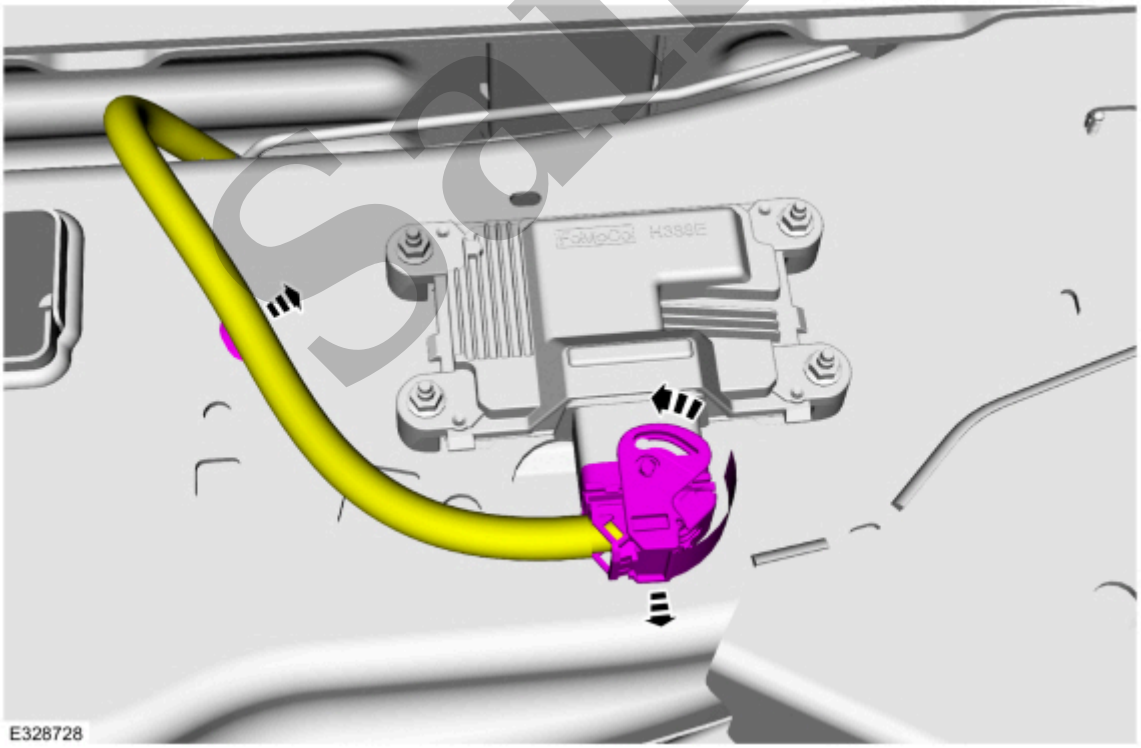
Installation

1. To install, reverse the removal procedure.



Click here to learn about symbols, color coding, and icons used in this manual.

4. Disconnect the VDM (vehicle dynamics control module) electrical connector, release the clip and position the harness aside.



Click here to learn about symbols, color coding, and icons used in this manual.

Safety Precautions - Overview

204-04A Wheels and Tires	***2022 F-150***
Description and Operation	***Procedure revision date: 07/16/2019***

Safety Precautions - Overview

Overview

Before beginning any service procedure in this manual, refer to health and safety warnings in section 100-00 General Information. Failure to follow this instruction may result in serious personal injury.

WARNING

Before servicing any tire, ask the customer if anyone injected a tire sealant into the tire. Tire sealants may be flammable and can burn or explode if exposed to an ignition source. Failure to follow this instruction may result in serious personal injury.

NOTICE

Do not clean aluminum wheels with steel wool, abrasive-type cleaners or strong detergents or damage to the wheel finish may occur.

NOTICE

When removing balance weights from a wheel, use only industry standard tools. To remove clip-on style balance weights, use designated wheel weight removal pliers. For adhesive style balance weights, use designated adhesive weight removal pliers or a non-metal adhesive weight scraper tool. Never use a screwdriver or any other sharp metallic instrument to remove adhesive wheel weights. If needed,

Wheels and Tires

204-04A Wheels and Tires	***2022 F-150***
Diagnosis and Testing	***Procedure revision date: 05/19/2021***

Wheels and Tires

Preliminary Inspection

1. Verify the customer concern by carrying out a road test on a smooth road. If any vibrations are apparent, Refer to the Symptom Chart: NVH.
2. To maximize tire performance, inspect for signs of incorrect inflation and uneven wear, which may indicate a need for balancing, rotation or front suspension alignment.
3. Correct tire pressure and driving techniques have an important influence on tire life. Heavy cornering, excessively rapid acceleration and unnecessary sharp braking increase tire wear.

Replacement tires must follow the recommended:

- tire sizes.
- speed rating.
- load range.
- tire construction type.

The use of any other tire/wheel size, load range or type can seriously affect:

- ride.
- handling.
- speedometer/odometer calibration.
- vehicle ground clearance.

Tread wear indicators are molded into the bottom of the tread grooves. Install a new tire when the indicator bands become less than measurement 1.6mm (2/32 inch).

Tire Wear

Tire wear is commonly defined as a loss of tread depth. Tire tread wear occurs due to friction with the contact surface (road/pavement). The tread should wear down uniformly all the way around the circumference of the tire and all the way across the tread face. When this does not occur, the tire may have abnormal/incorrect wear.

Normal Tire Wear

Normal tire wear is identified as even wear around and across the tread. Because there are many factors (driving style, road surfaces, type of vehicle, type of tire) that can affect tire wear, there is no absolute mileage expectation for a normal wear condition. A tire is considered worn-out when the tread has worn to the level of the tread-wear indicators.

Abnormal/Incorrect Tire Wear

Abnormal/incorrect tire wear is identified as tire wear that is not even around or across the tread and that creates performance-related issues.

Abnormal/incorrect wear can be caused by numerous factors, some of which include driving style (aggressive, passive), climate (hot, cold), road conditions, vehicle loading and maintenance (correct tire pressure, rotation intervals and balance). It is important to determine the root cause of wear on a vehicle before carrying out repair. Tires exhibiting abnormal/incorrect tire wear may still be serviceable provided that the minimum tread depth is greater than 1.6mm (2/32 inch) and the tire is not causing a vehicle performance (noise/vibration) concern.

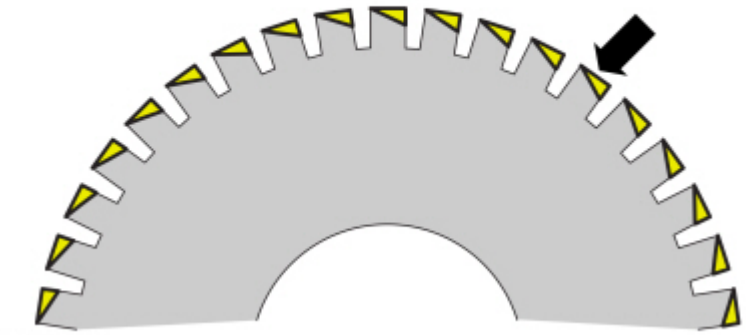
Inner Edge/Shoulder Wear

Inner edge (or shoulder) wear occurs on the inside edge of the tire and is usually caused by excessive toe out and/or excessive negative camber. If the tread depth of the outer shoulder is at least 50% greater than the tread depth of the inner shoulder, the tire is experiencing inner edge/shoulder wear. To determine whether tires have this type of wear, visually inspect the tires. In some instances, it may be necessary to measure the tread depth of each rib and compare it to that of the shoulder.

NOTE

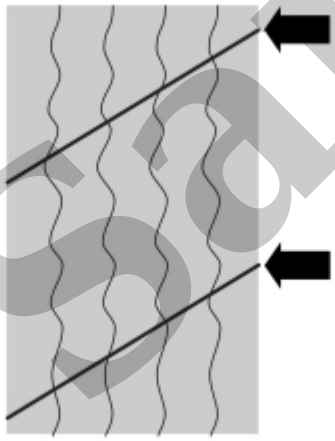
Right Front tire shown, others similar.

shoulder ribs. In some instances, it may be necessary to measure the difference in tread depth of leading versus trailing edge of each lug in the inside and outside shoulder rib.


E145723

Diagonal Wear

Diagonal wear occurs diagonally across the tread area and around the circumference of the tire. To determine whether tires have this type of wear, visually inspect the tires to determine if the wear pattern runs diagonally across the tread and around the circumference of the tire. In some instances, the difference in tread depth along the diagonal wear pattern may need to be measured.


E145724

Symptom Chart(s)

Diagnostics in this manual assume a certain skill level and knowledge of Ford-specific diagnostic practices.

REFER to: Diagnostic Methods

(100-00 General Information, Description and Operation).

WARNING

Vehicle vibration	GO to Pinpoint Test F

Pinpoint Tests

PINPOINT TEST A : INNER EDGE, SHOULDER WEAR

Normal Operation and Fault Conditions

REFER to: Safety Precautions - Overview(204-04A Wheels and Tires, Description and Operation).

Possible Sources

- Excessive toe out and/or negative camber
- Incorrect wheel and tire assembly rotation intervals
- High-speed cornering

A1 MEASURE THE TREAD DEPTH

- Using a tread depth gauge or similar tool, measure the inside edge/shoulder tread depth.

Is the tread depth greater than 1.588 mm (0.0625 in) ?

Yes	ROTATE the wheel and tire assemblies. CHECK and ADJUST the toe to nominal +0.15 degrees (toe in). CHECK and ADJUST caster and camber to nominal. REFER to: Front Camber and Caster Adjustment (204-00 Suspension System - General Information, General Procedures).
No	INSTALL a new tire(s). CHECK and ADJUST the toe to nominal. CHECK and ADJUST caster and camber to nominal. REFER to: Front Camber and Caster Adjustment (204-00 Suspension System - General Information, General Procedures).

PINPOINT TEST B : OUTER EDGE, SHOULDER WEAR

Normal Operation and Fault Conditions

REFER to: Safety Precautions - Overview(204-04A Wheels and Tires, Description and Operation).

Possible Sources

- Excessive toe in and/or positive camber
- Incorrect wheel and tire assembly rotation intervals