




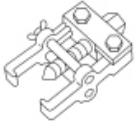


## Front Suspension - Wheel Knuckle - Removal and Installation

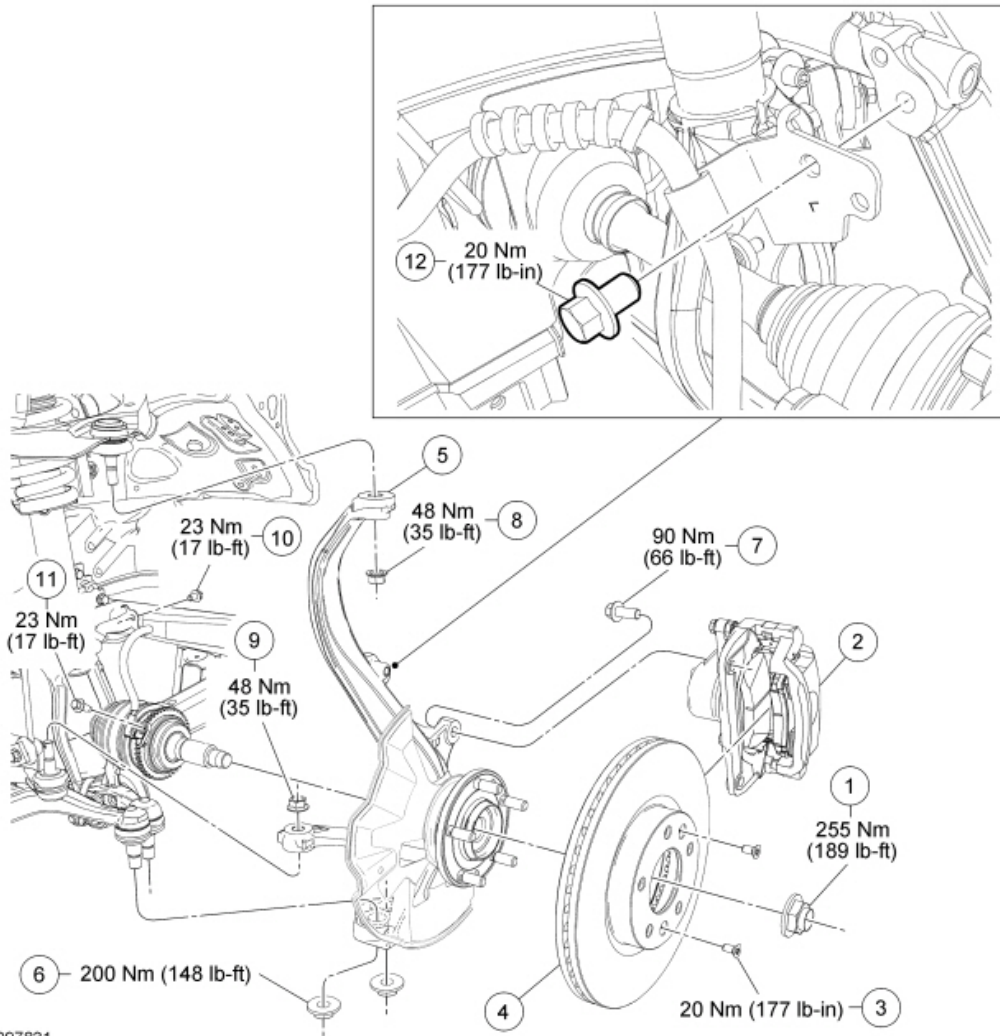
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204-01 Front Suspension	2010 Fusion, Milan, MKZ, Fusion Hybrid, Milan Hybrid
REMOVAL AND INSTALLATION	Procedure revision date: 03/27/2009

### Wheel Knuckle

#### Special Tool(s)

 <p>ST2646-A</p>	<p>Adapter for 204-592 204-592/1</p>
 <p>ST2138-A</p>	<p>Installer, Halfshaft 204-161 (T97P-1175-A)</p>
 <p>ST2330-A</p>	<p>Remover, Front Hub 205-D070 (D93P-1175-B) or equivalent</p>
 <p>ST1263-A</p>	<p>Remover, Steering Arm 211-003 (T64P-3590-F)</p>
 <p>ST1408-A</p>	<p>Remover, Tie-Rod End 211-105 (T85M-3395-A)</p>
 <p>ST2945-A</p>	<p>Separator, Ball Joint 204-592</p>



N0097831

Item	Part Number	Description
1	3N405	Wheel hub nut
2	—	Brake caliper and anchor plate assembly
3	W505741	Brake disc bolt (2 required)
4	1032	Brake disc
5	3K171 LH/ 3K170 RH	Wheel knuckle
6	3C499	Lower ball joint nut (2 required)
7	W711241	Brake caliper anchor plate bolt (2 required)
8	3C498	Upper ball joint nut
9	3D000	Tie-rod end nut
10	W500020	Wheel speed sensor harness bolt
11	W500222	Wheel speed sensor bolt
12	W505263	Brake flexible hose bracket-to-wheel knuckle bolt

## Removal

**NOTICE: Suspension fasteners are critical parts because they affect performance of vital components and systems and their failure may result in major service expense. New parts must be installed with the same part numbers or equivalent part, if replacement is necessary. Do not use a replacement part of lesser quality or substitute design. Torque values must be used as specified during reassembly to make sure of correct retention of these parts.**

1. Remove the wheel and tire. For additional information, refer to [Section 204-04](#).
2. If equipped, remove the wheel speed sensor bolt.
3. If equipped, remove the wheel speed sensor harness bolt and position the wheel speed sensor aside.
4. Remove the brake flexible hose bracket-to-wheel knuckle bolt and position the hose and bracket aside.
5. **NOTE:** *Apply the brake to keep the halfshaft from rotating.*

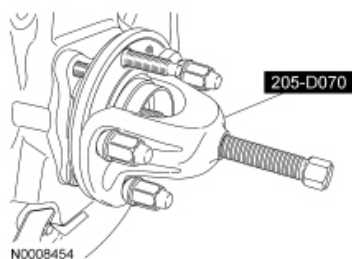
Remove and discard the wheel hub nut.

6. **NOTICE: Do not allow the caliper and anchor plate assembly to hang from the brake hose or damage to the hose can occur.**

Remove the bolts and position the caliper and anchor plate assembly aside.

- Support the caliper and anchor plate assembly using mechanic's wire.

7. Remove the 2 brake disc bolts and the brake disc.
8. Using the Front Hub Remover, separate the halfshaft from the wheel hub.

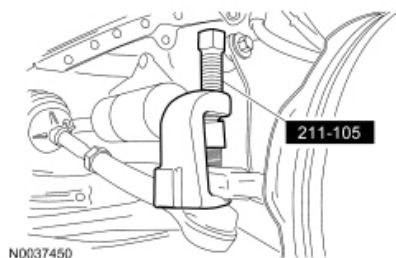


9. Remove and discard the upper ball joint nut.
10. Using the Steering Arm Remover, separate the upper ball joint from the wheel knuckle.



11. Remove and discard the tie-rod end cotter pin and nut.
12. **NOTICE: Do not use a hammer to separate the tie-rod end from the wheel knuckle or damage to the wheel knuckle can result.**

Using the Tie-Rod End Remover, separate the tie-rod end from the wheel knuckle.

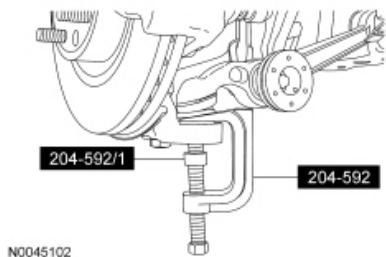


13. Remove and discard the 2 lower ball joint nuts.

14. **NOTICE:** When the lower ball joint is separated from the wheel knuckle, the lower arm may strike the outer Constant Velocity (CV) joint boot with enough force to damage the boot clamp. This will result in a loss of grease from the outer CV joint. Place a block of wood, or similar item, between the lower arm and the outer CV joint to prevent the lower arm from striking the outer CV joint.

**NOTE:** Once pressure is applied to the ball joint with the Ball Joint Separator and Adapter, it may be necessary to tap the wheel knuckle at the ball joint area to separate the ball joint from the wheel knuckle.

Using the Ball Joint Separator and Adapter, separate the 2 lower ball joints from the wheel knuckle and remove the wheel knuckle.

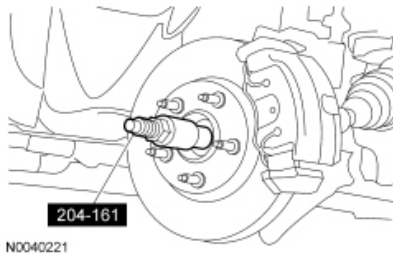


## Installation

1. Position the wheel knuckle and install the 2 new lower ball joint nuts.
  - Tighten to 200 Nm (148 lb-ft).
2. Position the tie-rod end and install the new nut and cotter pin.
  - Tighten to 48 Nm (35 lb-ft).
3. Position the upper ball joint and install the new nut.
  - Tighten to 48 Nm (35 lb-ft).
4. If equipped, position the wheel speed sensor and install the bolt.
  - Tighten to 23 Nm (17 lb-ft).
5. If equipped, install the wheel speed sensor harness bolt.
  - Tighten to 23 Nm (17 lb-ft).
6. Position the brake flexible hose bracket and install the bolt.
  - Tighten to 20 Nm (177 lb-in).
7. Position the brake caliper and anchor plate assembly and install the 2 bolts.
  - Tighten to 90 Nm (66 lb-ft).
8. Install the brake disc and the 2 brake disc bolts.

- Tighten to 20 Nm (177 lb-in).

9. Using the Halfshaft Installer, install the halfshaft into the wheel hub.



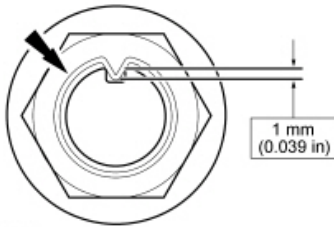
10. **NOTICE:** Do not tighten the halfshaft nut with the vehicle on the ground. The nut must be tightened to specification before the vehicle is lowered onto the wheels. Wheel bearing damage will occur if the wheel bearing is loaded with the weight of the vehicle applied.

**NOTE:** Apply the brake to keep the halfshaft from rotating.

Install the wheel hub nut.

- Tighten to 255 Nm (189 lb-ft).

11. Stack the new nut in line with the keyway to a recommended depth of 1 mm (0.039 in) below the keyway diameter to engage the locking feature.



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