

IRS Cross-Axis Joint Press Tool & Individual Cross-Axis Joint Installation Instructions
(MMT-10)

This Kit Contains



Description	QTY
Joint Removal Cup (T-1007)	1
Installation Washer (T-019)	1
7/16-20 x 5" Long G8 Bolt	2
7/16-20 x 4" Long G8 Bolt	2
7/16-14 x 2-3/4" Long G5 Bolt	1
7/16 G8 Washer	4
7/16-20 G8 Nut	4
7/16-14 G5 Nut	1
Installation Instructions	1

Thank you for purchasing the MMT-10 IRS Cross-Axis Joint Press Tool Kit!

Read all instructions before beginning work. Following instructions in the proper sequence will ensure the best and easiest installation.

Required Tools:

- Standard assortment of hand tools
- Torque wrench
- Jack and 2 jack stands
- Grease or anti-seize compound
- Snap ring pliers (recommended)

Installation Time

Shop: 1.5

Home Mechanic: 2.5

Supplemental Installation Note

- These instructions are written assuming an individual MMIRSB-3.1 replacement cross-axis joint is being installed. If control arm bushings are being installed, we recommend following the subframe removal procedure included with those installation instructions.

Component Identification



Vehicle Disassembly

1. Raise the rear of the vehicle and safely support it on jack stands.
2. Remove the rear wheel required to gain access to the cross-axis joint being replaced.
3. If replacing the upper cross-axis joints, use an awl or other sharp object now to mark the position of the eccentric camber adjustment bolt on the upper control arm.

NOTE: Aligning these marks during reassembly will help maintain the original camber setting.



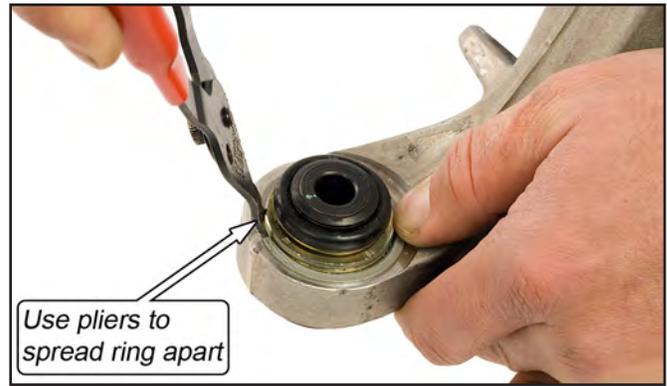
4. Remove the control arm mounting bolt securing the cross-axis joint that needs to be replaced.

Cross-Axis Joint Removal

NOTE: The spindle has been removed in the following photos for illustrational purposes only. It is NOT necessary to remove the spindle for installation of the cross-axis joints.

5. Remove the retaining ring holding the stock cross-axis joint in position. Spread the retaining ring apart using a flat blade screwdriver, or snap ring pliers if available. Then, using an awl or another flat blade screwdriver, pry the retaining ring out of the groove.

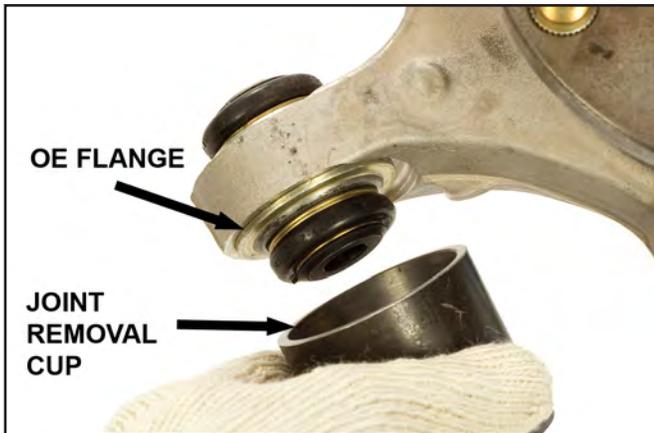
WARNING: Wear safety glasses! The retaining ring can be ejected at a high velocity during removal, potentially causing severe eye injury.



6. Coat both sides of the supplied Grade 8 washers and the threads of both bolts with grease or anti-seize compound.



- Place two of the washers under the head of the shorter supplied 7/16" bolt.
- Place the Cross-Axis Joint Removal Cup on the flanged side of the OE cross-axis joint. The edge of the Removal Cup should sit flush on the aluminum face.



- Place the bolt through the Removal Cup and through the cross-axis joint.
- Place the other two supplied washers on the end of the bolt.
- Thread the supplied nut onto the bolt.



- Using a pair of wrenches, tighten the bolt to pull the cross-axis joint into the Removal Cup.

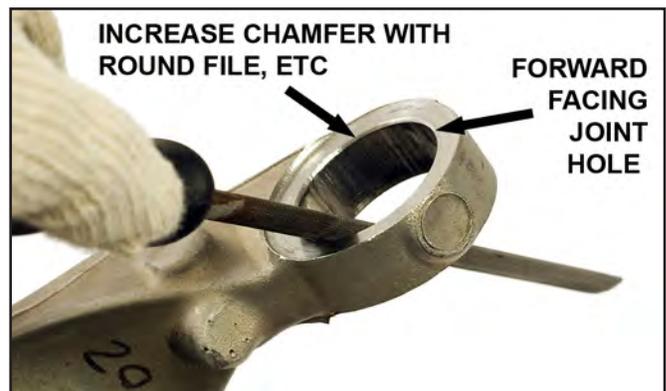


MM Cross-Axis Joint Installation

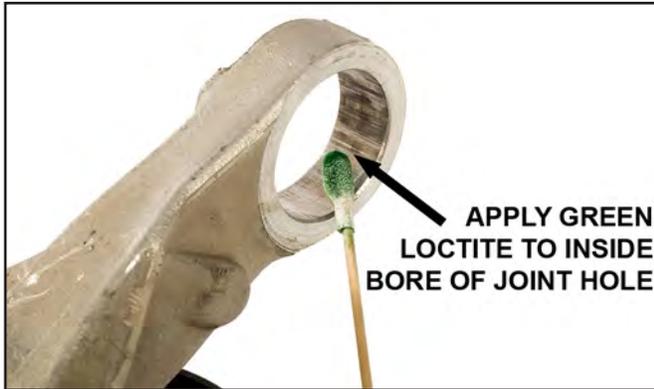
The following steps detail the installation of an MM Cross-Axis Joint. *Under no circumstances* should the joint be installed by applying a load directly to its spherical bearing, as damage to the bearing will occur. For this reason, the Bearing Insert on the flanged side of the MM Cross-Axis Joint is not installed until after the joint has been pressed into the spindle. All the necessary tooling is included to press the joint in by properly applying the load to its bearing cup flange.



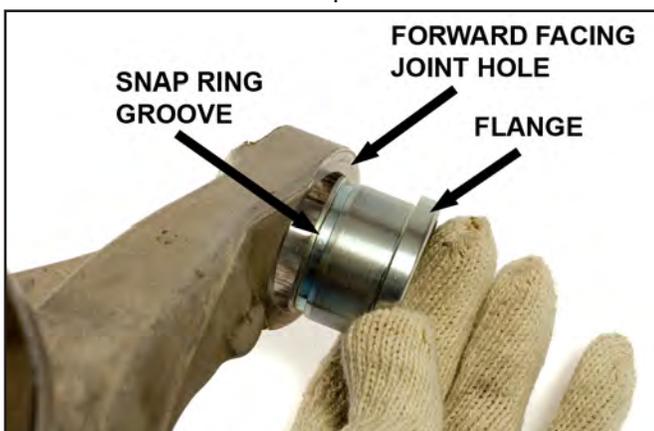
- Using a small hand file or sanding drum, slightly increase the chamfer on the inside diameter of forward facing (towards the front of the car) cross-axis joint hole.



14. Apply a thin layer of the supplied Green Loctite to the inside diameter of the aluminum spindle's cross-axis joint hole, and to the minor outside diameter of the MM Cross-Axis Joint. The surfaces must be wiped clean of any grease prior to the application of Loctite. Brake cleaner or Acetone is recommended, but any non-water based cleaner will work.



15. Slide one of the MM Cross-Axis Joints into an open cross-axis joint hole in the aluminum spindle until the groove on the outer diameter of the assembly is no longer visible. The MM Cross-Axis Joint should be inserted from the front side of the spindle so that the flange on the Bearing Assembly is facing the front of the vehicle. The front of the aluminum spindle is the side opposite of where the brake caliper mounts.

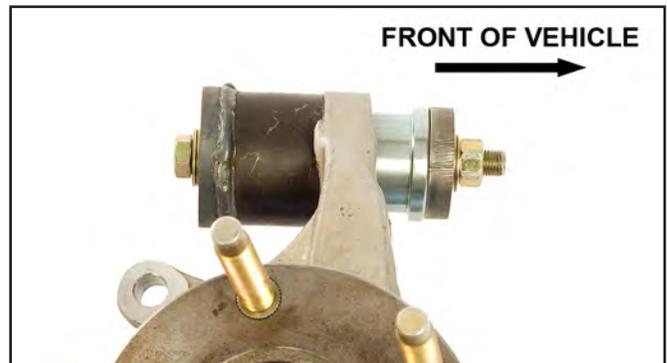


16. Place the Cross-Axis Joint Removal Cup on the corresponding rearward face of the spindle.

17. Place two greased washers under the head of the longer supplied 7/16" bolt and pass the bolt through the Removal Cup, and then through the MM Cross-Axis Joint. The end of the bolt should be facing the front of the vehicle.

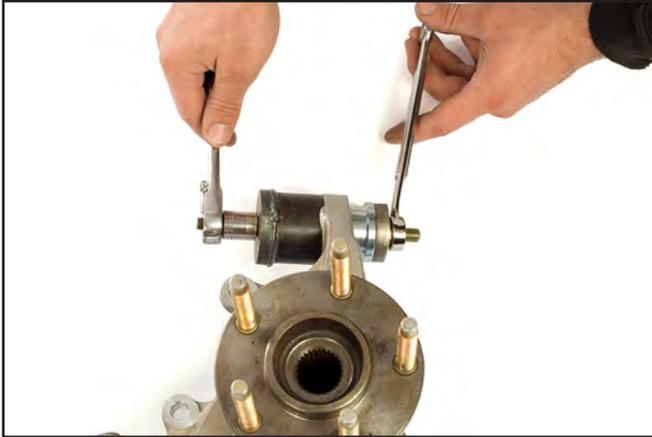
18. Slide the Installation Washer onto the bolt until it rests against the flanged portion of the MM Cross-Axis Joint.

19. Place two greased washers and the nut on the end of the bolt. Reapply grease to the bolt threads if necessary.



20. Using a pair of wrenches, draw the MM Cross-Axis Joint into the aluminum spindle by tightening the bolt until it runs out of threads. Switch to the shorter bolt when this happens, and finish drawing the joint into the spindle until the flanged portion is resting against the face of the spindle.

WARNING: Make sure the MM Cross-Axis Joint goes in evenly. If it's crooked, damage to the IRS aluminum spindle will result.



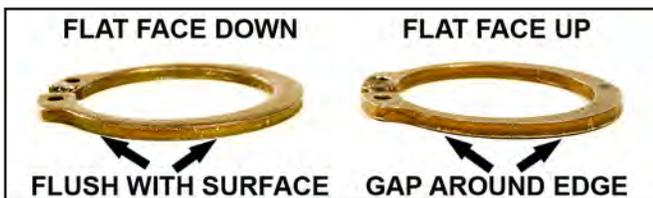
21. Remove the installation tool.

Orienting the Snap Ring

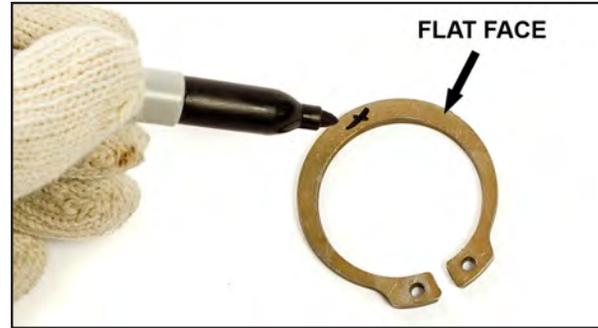
The snap ring supplied with the MMIRSB-3.1 kit has a flat face and a curved face due to the nature of their production. This curvature decreases the contact area between the snap ring and the retaining groove in the MM Cross-Axis Joint. Because of this, it's important to orient the curved face toward the spindle.

To identify the flat and curved face of the snap ring:

22. Place the supplied snap ring on a flat surface and view it from the side. When properly oriented, a small gap should be visible around the outer diameter of the ring and the surface. If no gap is visible, flip the snap ring over until a gap is visible. The snap ring face with the small gap is the curved face and conversely, the side without the gap is the flat face.



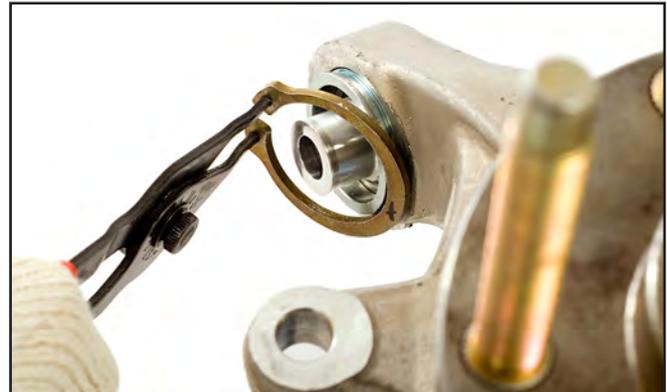
23. Using a felt marker or paint pen, mark the top, **FLAT** face of the snap ring.



24. Install the supplied snap ring into the groove on the MM Cross-Axis Joint, with the **FLAT** face of the snap ring facing **AWAY** from the spindle.

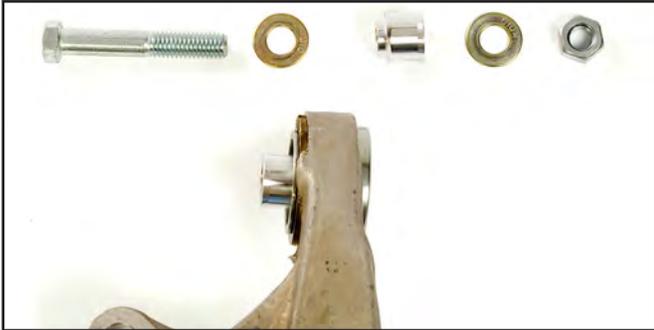
NOTE: The mark indicating the flat face made in the previous step should be visible after installation of the snap ring.

NOTE: Make sure that the snap ring is fully seated in the groove. When properly installed, the gap between the two ends of the snap ring should be less than 1/4".



Bearing Insert Installation

One Bearing Insert comes preinstalled in the MM Cross-Axis Joint. The remaining Bearing Insert must be installed to complete the assembly. The following procedure uses the provided 7/16-14 x 2-3/4 bolt to install the Bearing Insert.



25. Place two greased washers under the 7/16-14 x 2-3/4 bolt head and pass the bolt through the preinstalled Bearing Insert.
26. Place the supplied Bearing Insert onto the bolt so the reduced-diameter shoulder of the insert is facing the bearing.
27. Place a washer and the provided 7/16-14 nut on the end of the bolt.



25. Draw the Bearing Insert into the spherical bearing by tightening the bolt with a pair of wrenches. Make sure the Insert seats flush against the face of the spherical bearing.



Vehicle Reassembly

28. Reconnect the disconnected control arm.
29. Torque the mounting bolts to the following values:
Upper Control Arm: 66 ft-lbs
Lower Control Arm: 85 ft-lb
NOTE: If made, use the alignment mark on the eccentric bolt made in Step 3 to set the camber.
30. Install the rear wheel.
31. Lower the car safely to the ground. Torque the rear lug nuts to the manufacturer's specifications.
32. Test drive and enjoy! Recheck and retorque all components after 1,000 miles.

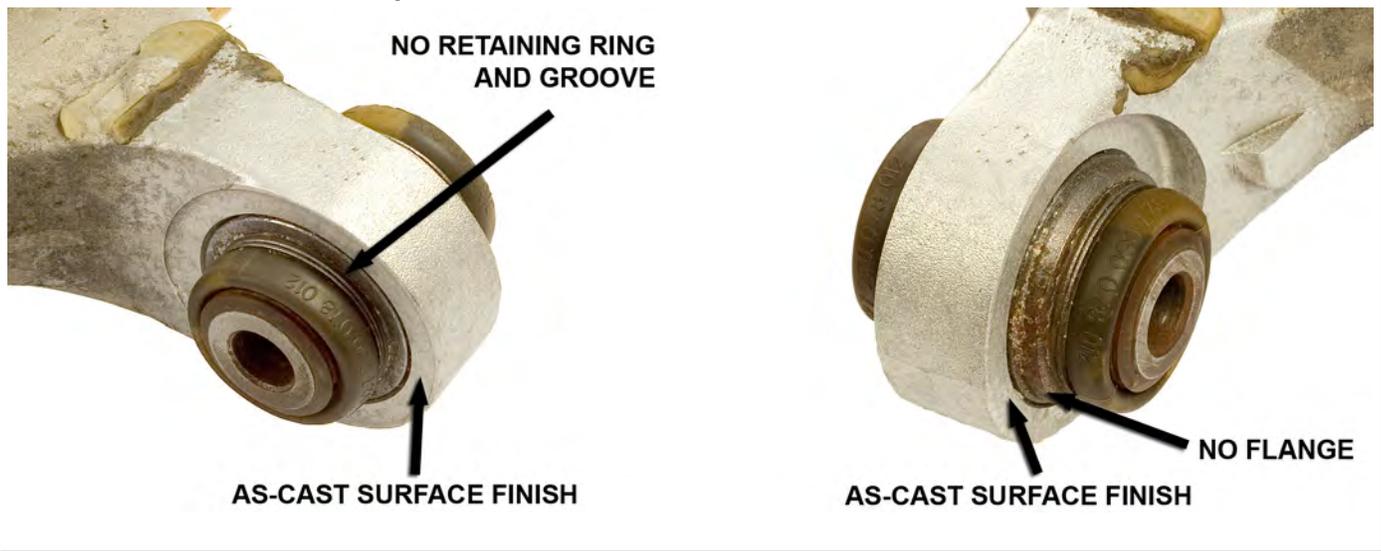
1999 Mustang Cobra Rear Spindle Comparison

Ford recalled the IRS rear spindles in 1999 Mustang Cobras due to issues arising from the design of the cross-axis joints. All post-1999 Mustangs equipped with an IRS have the new style rear spindles. All of the older style rear spindles should have been replaced in the recall, but there still may be some floating around. The following comparison photos should help you identify what rear spindles you have.

Note: The MMIRSB-3 and -3.1 IRS Cross-Axis Replacement Joints are only compatible with the new style rear spindles



Recalled 1999 Cobra Rear Spindle



Revised 1999+ Cobra Rear Spindle

