Using the Microstop Countersink Kit.

Overview

The Microstop Countersink Kit provides precise depth control for cutting angled holes for the installation of countersunk rivets.

Microstop Countersink Kit (KIT, COUNTERSINK, PAN AMERICA, Tesla part number 1133101-00-A)

The Microstop Countersink Kit includes the following components:

Description	Tesla Part Number	Quantity
Countersink bits for 4.8 mm (3/16 in) rivets – COUNTERSINK, HIGH SPEED STEEL, 100 DEG (SPN: 27-263)	1065946-00-A	1
Countersink bits for 6.5 mm (1/4 in) rivets – CNTRSINK, HIGH SPD, 100 DEG, G BIT (SPN: 27-246)	1133099-00-A	1
Countersink cage assembly – CAGE, MICRO STOP COUNTERSINK (SPN: 19-360)	1133100-00-A	1

Microstop Countersink Tool (Assembled)

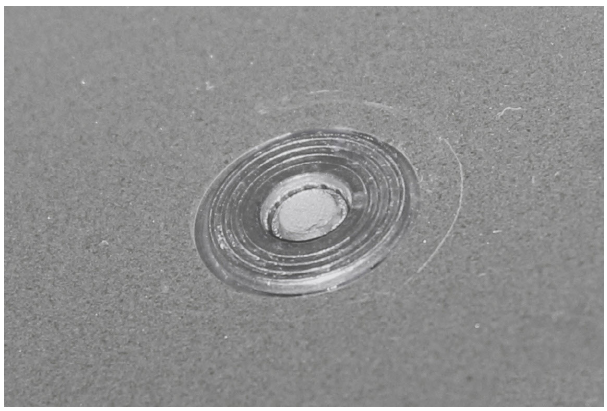
The Microstop Countersink tool is made up of the following parts:

1	Shaft
2	Locking ring
3	Cage
4	Countersink bit
5	Nylon foot
6	Chuck

Using the Microstop Countersink Kit

Use the Microstop Countersink Kit to countersink holes for countersunk rivets:

A correctly countersunk hole allows the top of the installed rivet to sit flush to the surface of the surrounding material.



CAUTION: Adjust the depth of the countersink cage assembly on scrap material before attempting to countersink a hole on a vehicle being repaired.

1. Use a drill with the appropriate size pilot bit to drill a pilot hole in a piece of scrap material.
   Pilot bit sizes:
   - 4.8 mm (3/16 in)
   - 6.5 mm (1/4 in)

   CAUTION: When performing a repair, drill holes far enough away from corners and other obstructions to provide enough clearance (approximately 18 mm or 11/16 in) for the countersink cage assembly.

   CAUTION: Always use the countersunk rivet size specified in the applicable repair procedure.

2. Select the appropriate countersink bit.
   Countersink bit sizes:
   - 4.8 mm (3/16 in)

   - 6.5 mm (1/4 in)

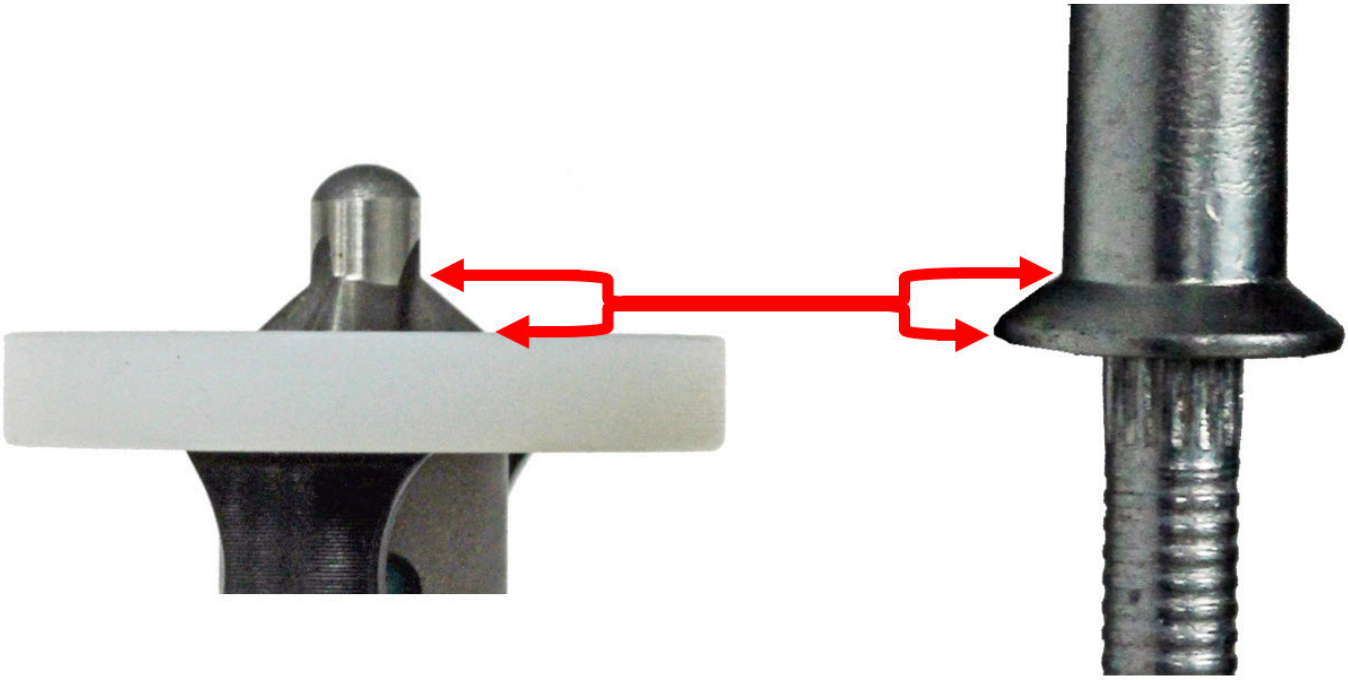
3. Screw the countersink bit into the threaded insert of the countersink cage.

4. Compare the adjustment of the countersink cage assembly to the head of the countersunk rivet to be installed.

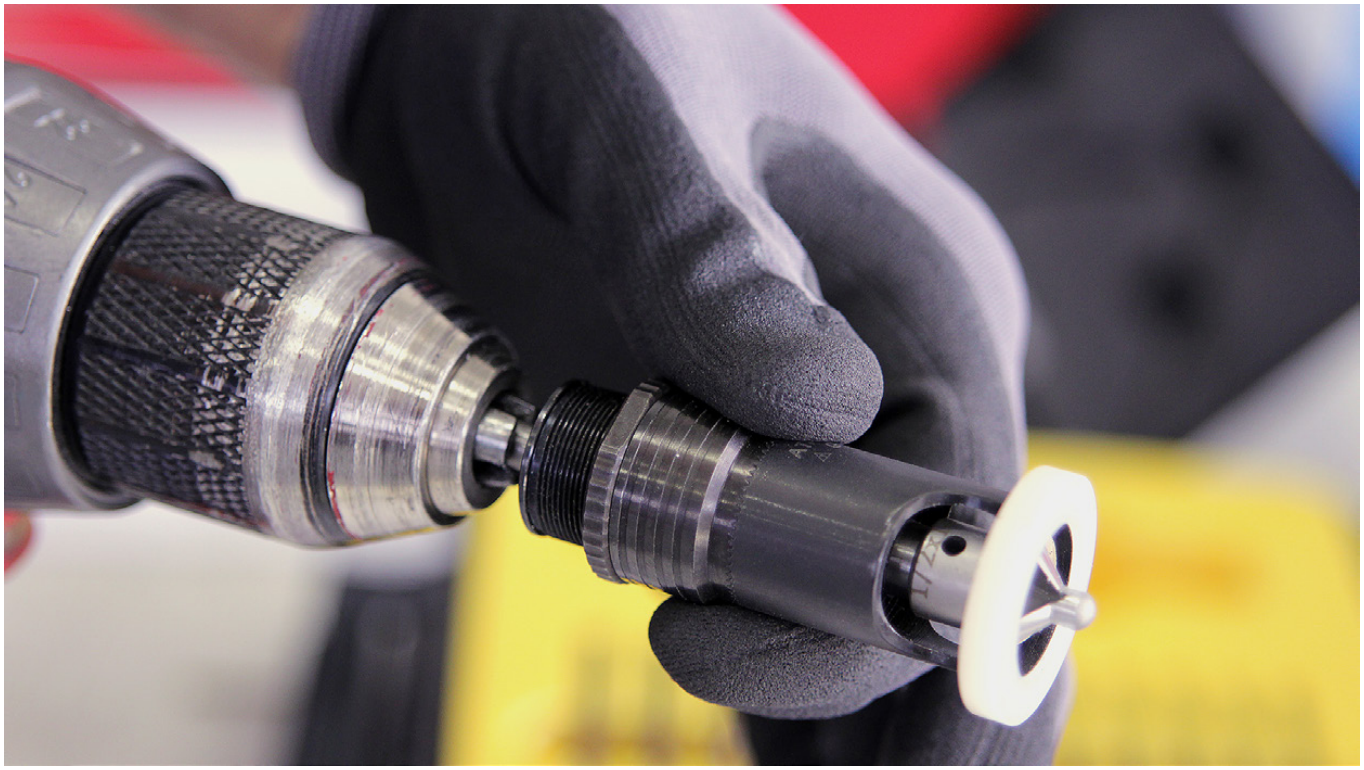
   NOTE: The distance that the angled portion of the countersink bit protrudes from the nylon foot when the shaft is fully extended should be slightly less than the distance of the angled portion of the countersunk rivet head.

   If the countersink cage setting does not need adjustment, continue with Step 5 on page 7.

   To adjust the countersink cage setting, follow the steps described in Adjusting the Depth of the Countersink Hole on page 10.



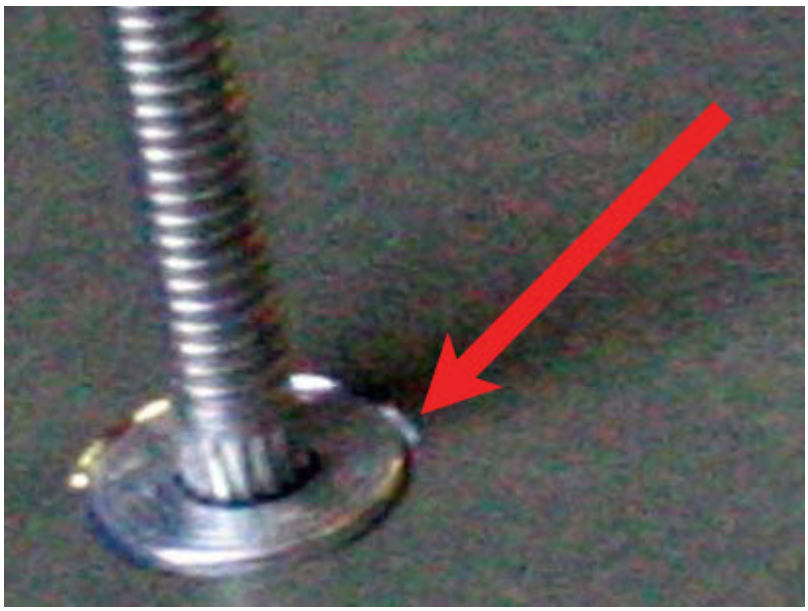
5. Install the countersink cage assembly onto the drill.



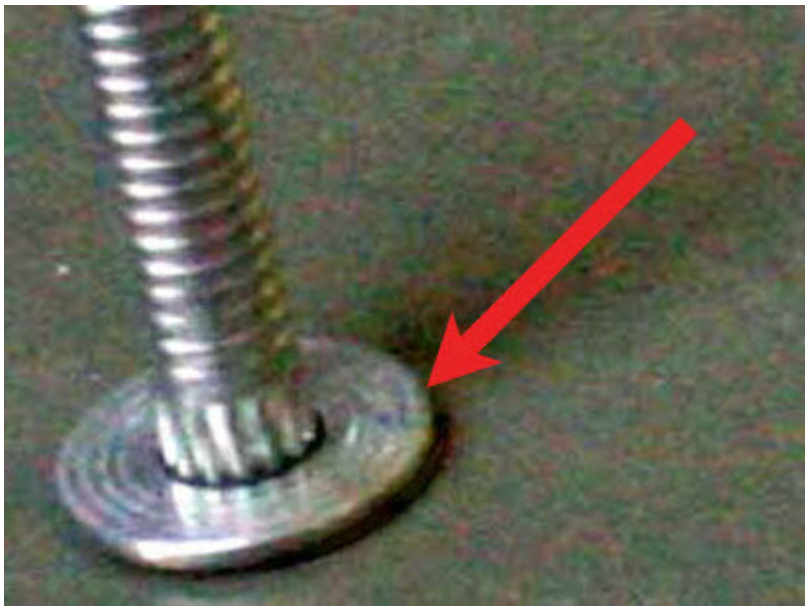
6. Use the drill with the countersink cage assembly to countersink the pilot hole drilled previously (Step 1 on page 4).

   NOTE: Continue drilling until the shaft of the countersink cage assembly reaches the end of its travel and no more debris comes out of the hole.

7. Insert a countersunk rivet into the hole and test the flushness of the rivet head.
   - **If the rivet head is flush with the surface of the material**, continue with step 8 on page 9.



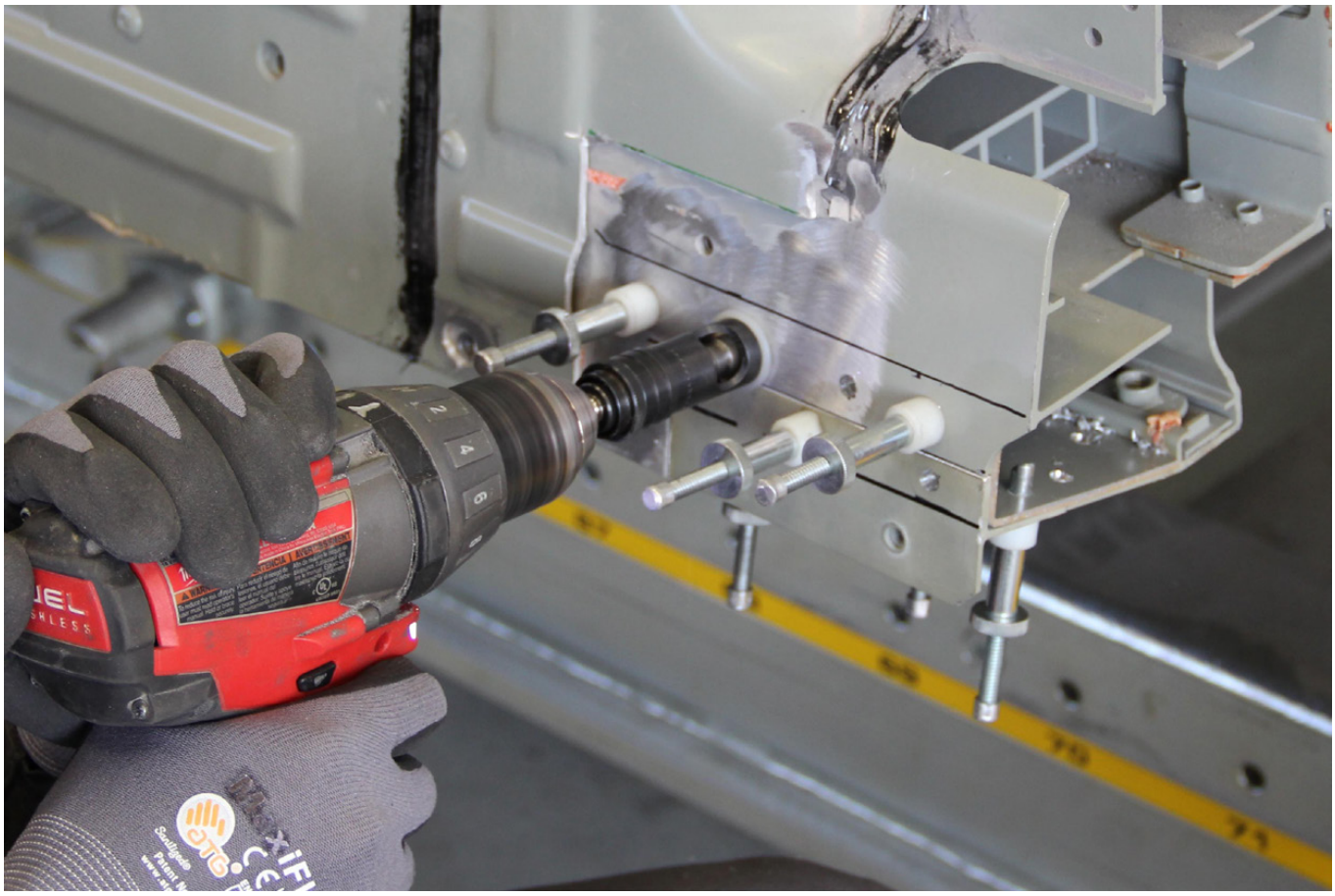
   - **If the rivet head protrudes above the surface of the material**, adjust the countersink cage setting, as described in Adjusting the Depth of the Countersink Hole on page 10 and then repeat Step 7 on page 8 until the rivet head is flush with the surface of the material.



8. Use a drill with the appropriate size pilot bit to drill pilot holes in the repair area.

9. Use a drill with the adjusted countersink cage assembly to countersink the holes in the repair area.

   NOTE: Continue drilling until the countersink cage assembly reaches the end of its travel and no more debris comes out of the hole.



Adjusting the Depth of the Countersink Hole

If an adjustment to the countersink cage assembly is required, adjust the countersink cage assembly so that the initial countersink depth is slightly less than the rivet head to avoid making the countersink hole too deep.

1. Loosen the locking ring.

2. Pull the chuck back to disengage it from the cage.

3. Adjust the cage.
   Turn the cage:
   - Counterclockwise to shorten the cage (increase the amount of countersink)
   - Clockwise to lengthen the cage (reduce the amount of countersink)

4. Release the chuck.

5. Check the depth setting by pushing the shaft forward to the limit of its extension. Repeat steps 2 on page 11 through 4 on page 13 until the cage is in the desired position.

6. Tighten the locking ring.