

# BIG-SERT®

## M14x1.25 SPARKPLUG SHORT REPAIR KIT P/N 5141S-457 WITH INSERTS

		INSERTS		TOOLS		
	1	51401	Washer seat 9.4mm (copper)	1	Wrench	
	2	51407	Washer seat 16.8mm (copper)	1	Reamer	
	1	51409	Washer seat 23mm (copper)	1	Tap	
	1	51453	Taper seat 11mm (silver)	1	Driver	
	2	51457	Taper seat 16.8mm (silver)	1	Setting tool	
	1	51469	Taper seat 24mm (silver)	1	key 3/16	
				1	key 1/8	
		<b>Note:</b>	<b>Use appropriate length and style</b>		1	Sealer
			<b>of insert for each spark plug application</b>			Oil

**Stop: Check that the valves are not open!**

**Possible work around: this is a 2 man job.**

Have someone turn the engine over by hand with a socket from the front of the engine. Turn the engine over until it is going up on the compression stroke. Place your thumb at the top of the sparkplug hole at the same time to block off the air. When you feel the engine compression stop pushing air against your thumb the piston will be top dead center. Turn the engine a little more to be on the down stroke, both valves should be closed at this point, and the piston should be all the way down and out of the way.

Instructions are using a block of aluminum, which makes for better viewing. Repair can be done with out removing the head

### 1) Ream the hole

Using the Wrench provide, place the reamer into the square inside wrench.

**Tip:** Packing the flutes with grease will help to catch any stray chip from going into the cylinder.



The reamer will also cut the Countersink for the flange of the insert to seat into. When you start getting close to the stop collar coming in contact with the head, you will want to clean the chips from the reamer so you have a positive stop on the head without having any chips interfering.



A:

A: Ream the hole until black stop collar touches the head.



B:

This will create the 45 degree countersink seen in picture "B"

### 2) Tap the hole

Tap the hole with the wrench provided. There is a pilot at the front of the tap to help guide it straight into the hole.

Use contact or brake cleaner to thoroughly clean out any remaining chips and oil.



**Mechanics Tip 1:** Packing the flutes with grease will help to catch any stray chip from going into the cylinder.

**Mechanics Tip 2:** Using a shop-vac with a thin hose taped to the nozzle is helpful removing any remaining chips in the cylinder.

### 3) Setting tool



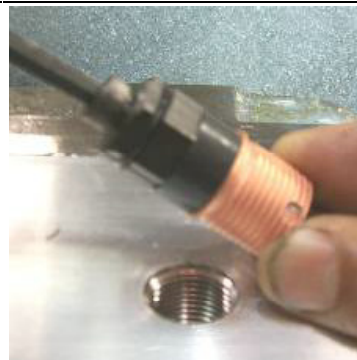
Note:

Remove collar for Triton and Ztech style inserts!  
P/N 51459 P/N 51460



A:

A: Screw the setting tool into the insert.



B:

B: Lightly tighten the socket cap screw.

C: Using the wrench provided place the setting tool into the wrench.

D: Place Lock-tite around the middle of the insert and into the clean prepared hole.

Screw the insert into the hole until the flange of the insert is seated.

*Approximately 20 foot pounds.*



C:



D:

E: Place the allen key through the wrench and in a counter-clockwise rotation, untighten the cap screw. This will allow the setting tool to release itself from the insert.

F: You can now remove the setting tool from the insert.



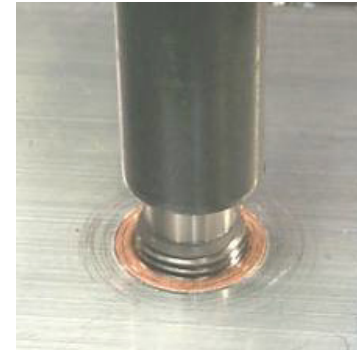
E:



F:

### 4) Insert driver tool

Oil the bottom threads of the insert driver with a few drops of driver oil. This can also be 30wt motor oil. While screwing the driver into the insert you will feel the driver start to tighten up, with a little more power continue through the insert until it loosens up.



*Use wrench provided.*

Remove driver, repair is complete.

