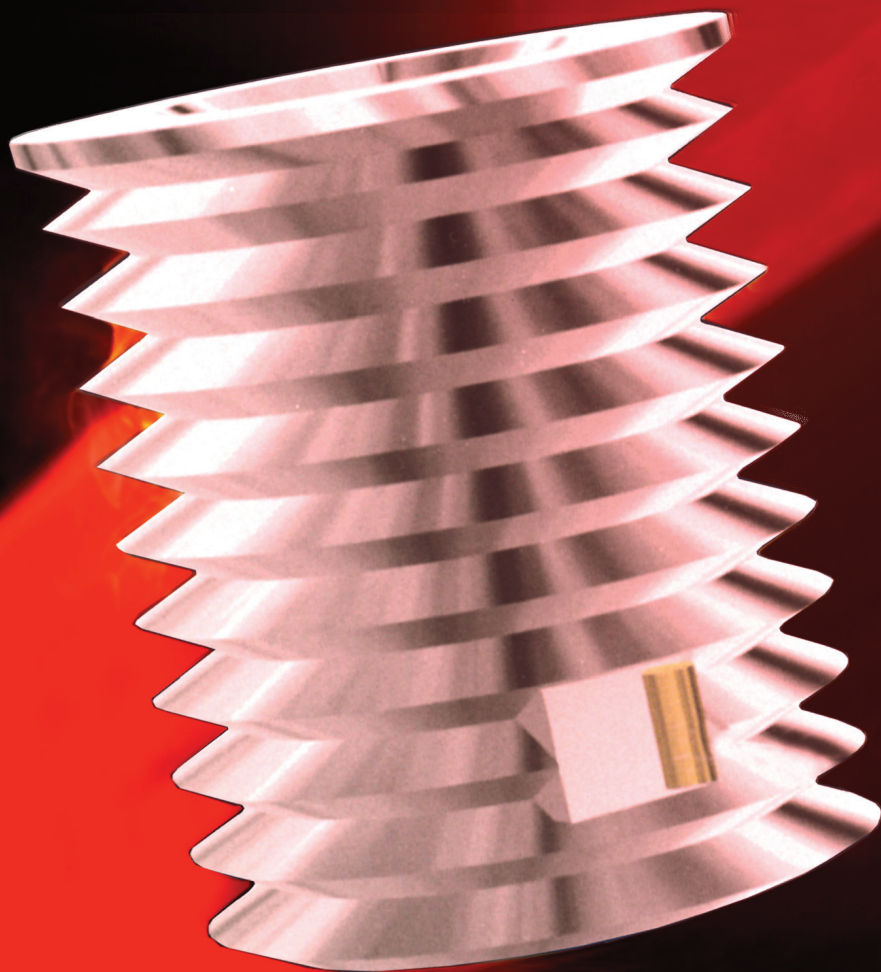


BIG-SERT®

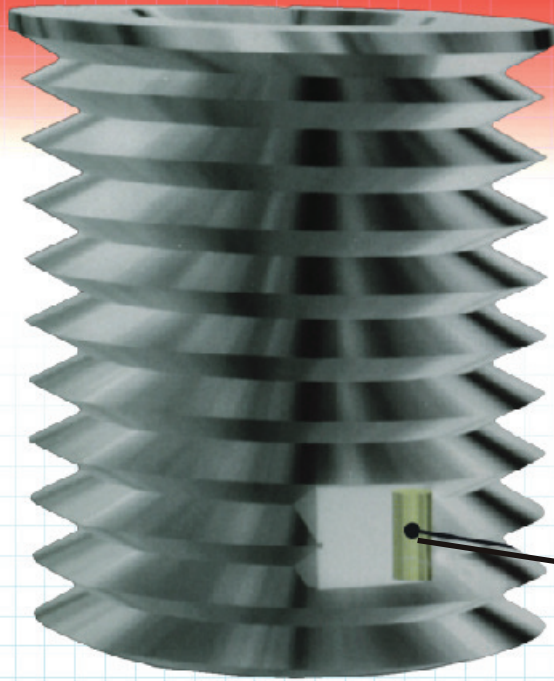
OVERSIZED REPAIRS



SCREW THREAD INSERTS

BIG-SERT®

OVERSIZED REPAIRS



BIG-SERT® IS A HEAVY WALL SOLID BUSHING. EASY TO INSTALL WITH POSITIVE PLACEMENT.

BIG-SERT® GIVES INCREASED LOAD PROTECTION FOR CRITICAL USE.

BIG-SERT® WILL REPAIR OVERSIZE HOLES WHICH HAVE BEEN REPAIRED.

SOCKET WITH A METAL PIN

NOTE: BOTTOM FEW INTERNAL THREADS ARE INCOMPLETE THE INSERT DRIVER (ROLL FORM TAP) SEATS THE INSERT AND COMPLETES THE BOTTOM THREADS. THIS PUSHES THE PIN OUT TO CONTACT THE THREADED HOLE. BACK OUT OF THE INSERT IS PREVENTED BY THE CAM LOCK EFFECT OF THE PIN.

KIT CONTENTS

DRILL
COUNTERBORE
TAP
INSERT DRIVER
FIVE (5) STEEL INSERTS



ENGINEERING DATA

INCH

INSERT	DRILL		C.BORE		TAP
	DRILL	SIZE	MIN. DIA.	MIN. DEPTH	MAJOR DIA.
1/4 - 20	7.8mm	.307	.355	.050	.359
1/4 - 28	L	.290	.330	.055	.330
5/16 - 18	13/32	.406	.474	.085	.474
5/16 - 24	13/32	.406	.474	.085	.474
3/8 - 16	31/64	.484	.552	.085	.552
3/8 - 24	31/64	.484	.552	.085	.552
7/16 - 14	37/64	.578	.634	.085	.634
7/16 - 20	37/64	.578	.634	.085	.634
1/2 - 13	41/64	.640	.701	.085	.701
1/2 - 20	41/64	.640	.701	.085	.701

METRIC

INSERT	DRILL		C.BORE		TAP
	DRILL	SIZE	MIN. DIA.	MIN. DEPTH	MAJOR DIA.
M5x0.8	D	.246	.290	.050	.290
M6x1.0	L	.290	.330	.085	.330
M8x1.25	13/32	.406	.474	.085	.474
M10x1.0	31/64	.484	.552	.085	.552
M10x1.25	31/64	.484	.552	.085	.552
M10x1.5	31/64	.484	.552	.085	.552
M12x1.5	37/64	.578	.634	.085	.634
M12x1.75	37/64	.578	.634	.085	.634
M12x1.25	37/64	.578	.634	.085	.634

KITS AND INSERTS

INCH

KIT		INSERT LENGTH		INSERTS
SIZE	PART#	INCHES	MM	PART#
1/4 - 20	5420	.380	9.4	54201
		.500	12.7	54203
1/4 - 28	5448	.380	9.4	54481
		.500	12.7	54483
5/16 - 18	5561	.450	11.4	55611
		.620	15.7	55613
5/16 - 24	5562	.450	11.4	55621
		.620	15.7	55623
3/8 - 16	5381	.400	10.1	53810
		.520	13.2	53811
		.750	19.0	53813
		1.000	25.4	53815
		1.250	31.7	53817
3/8 - 24	5382	.520	13.2	53821
		.750	19.0	53823
7/16 - 14	5761	.600	15.2	57611
		.870	22.0	57613
		1.000	25.4	57615
		1.250	31.7	57617
7/16 - 20	5762	.600	15.2	57621
		.870	22.0	57623
1/2 - 13	5121	.480	12.2	51210
		.650	16.5	51211
		1.000	25.4	51213
1/2 - 20	5122	.650	16.5	51221
		1.000	25.4	51223

METRIC

KIT		INSERT LENGTH		INSERTS
SIZE	PART#	INCHES	MM	PART#
M5x0.8	5508	.300	7.6	55081
		.394	10.0	55083
M6x1.0	5610	.370	9.4	56101
		.470	12.0	56103
M8x1.25	5812	.460	11.7	58121
		.640	16.2	58123
		.708	18.0	58125
M10x1.0	5011	.360	9.0	50111
		.600	15.0	50113
M10x1.25	5012	.550	14.0	50121
		.800	20.0	50123
		.960	24.5	50125
M10x1.5	5015	.550	14.0	50151
		.800	20.0	50153
		.960	24.5	50155
M11x1.25	5112D	1.180	30.0	51125
M12x1.5	5215	.360	9.2	52150
		.640	16.2	52151
		.950	24.0	52153
		1.180	30.0	52155
M12x1.75	5217	.472	12.0	52170
		.640	16.2	52171
		.950	24.0	52173
		1.180	30.0	52175
M12x1.25	5212	.360	9.0	52120
		.600	15.0	52121
		.689	17.5	52122
		.950	24.0	52123
		1.180	30.0	52125

BIG-SERT SPARK PLUG M14X1.25

M14x1.25 Spark Plug Repair Kits & Inserts

Repair Oversized holes as large as .660 inches or 16.8mm

KIT PART NO. 5141S



KIT PART NO. 5141E



**FORD TRITON
KIT PART NO. 5553**



WASHER SEAT

BIG-SERT® M14x1.25 Spark Plug Inserts Carbon Steel						
SPARK PLUG	KIT SIZE	PART NO.	WASHER INSERTS		WASHER SEAT INSERTS	
	M14x1.25 SHORT	5141S	.370	9.4		51401
	M14x1.25 EXTENDED	5141E	.430	11.0		51403
			.600	15.0		51405
5141S & 5141E KITS "DO NOT" INCLUDE INSERTS order separately			.660	16.8	51407	
			.905	23.0	51409	

TAPER SEAT

BIG-SERT TAPER SEAT INSERTS FOR FULLY THREADED SPARK PLUGS	TAPER INSERTS		PART NO.	TAPER SEAT INSERTS
	.430	11.0	51453	
	.600	15.0	51455	
	.660	16.8	51457	
FORD TRITON		.660	16.8	51459
FORD Z-tech		.950	24.0	51460

ALUMINUM WASHER SEAT INSERTS

BIG-SERT M14x1.25 Spark Plug Inserts Aluminum				
ALUMINUM INSERTS BIG-SERT WASHER SEAT INSERTS FOR FULLY THREADED SPARK PLUGS	WASHER INSERTS		PART NO.	WASHER SEAT INSERTS
	.370	9.4	51401A	
	.430	11.0	51403A	
	.600	15.0	51405A	
		.660	16.8	51407A

ALUMINUM TAPER SEAT INSERTS

BIG-SERT M14x1.25 Spark Plug Inserts Aluminum				
ALUMINUM INSERTS BIG-SERT TAPER SEAT INSERTS FOR FULLY THREADED SPARK PLUGS	WASHER INSERTS		PART NO.	TAPER SEAT INSERTS
	.370	9.4	51451A	
	.430	11.0	51453A	
	.600	15.0	51455A	
	.660	16.8	51457A	
	.960	24.0	51458A	
FORD TRITON		.660	16.8	51459A
FORD Z-tech		.950	24.0	51460A

BIG-SERT SPARK PLUG REPAIR

The following instructions are for kits 5141S and 5141E



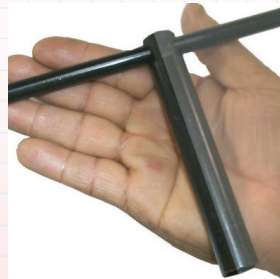
Stop: Check that the valves are not open!

The only 100% way to know the valves are not open is to remove the valve cover and inspect the cam, making sure that it is not depressing the valves on the damaged spark plug hole. Not recommended for holes larger than .660 inches or 16.8mm

An optional way to check that the valves are closed, this is a 2 man job.

Have someone turn the engine over by hand with an 18mm 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 spark plug 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 going down on the Power stroke, both valves should be closed at this point, and the piston should be all the way down.

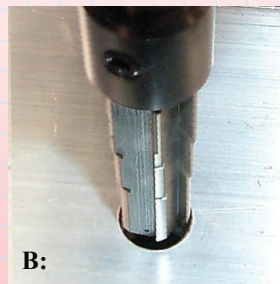
1) Place the Reamer into the square of the wrench and tighten the setscrew to secure the reamer in place. Picture A:



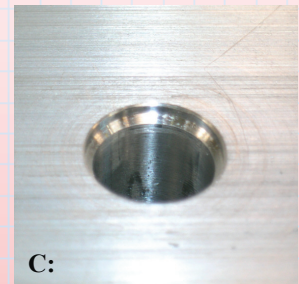
A:

Ream the hole picture B : until black "Stop collar" touches the head.

This will create the 45 degree countersink seen in picture C:



B:



C:

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 for removing any remaining chips in the cylinder.

Continue instructions next page

BIG-SERT SPARK PLUG REPAIR

3) Setting tool.

A: Screw the setting tool into the insert.

B: Then lightly tighten the socket cap screw.

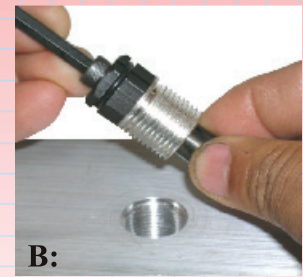
Setting tool Note:

Remove collar for Triton and Ztech style inserts!

P/N 51459 P/N 51460



A:



B:

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.



C:



D:

Screw the insert into the hole until the flange of the insert is seated to the head. This is approximately 20 foot pounds.

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

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



E:



F:

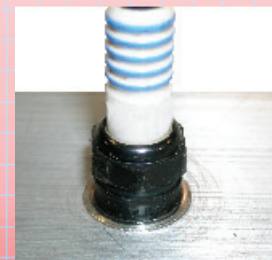
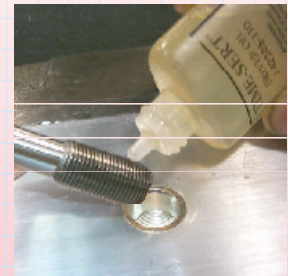
4) Install driver tool

Using the wrench provided, place the driver tool into the square and tighten the setscrew to secure the driver in place.

Oil the bottom threads of the install driver with a few drops of driver oil or 30wt motor oil.

Screw the driver into the insert. The driver will cold roll the last few threads of the insert. 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.

Remove driver, repair is complete.



UNIVERSAL BIG-SERT HEAD BOLT KITS

Normally used when a Helicoil or coil style insert has failed.
BIG-SERT Universal head bolt kits can be used in any application of bolt size listed below.
 A simple tool setup is all that is required.



Universal M10x1.25 head bolt
 Kit Part No.6250BS Insert Part No. 50125
 Includes 10 inserts of a M10x1.25x25mm length

Universal M10x1.5 head bolt
 Kit Part No.7580BS Insert Part No. 50155
 Includes 10 inserts of a M10x1.5x24.5mm length

Universal M11x1.25 head bolt
 Kit Part No.11125BS Insert Part No. 51125
 Includes 10 inserts of a M11x1.25x28mm length

Universal M11x1.5 head bolt
 Kit Part No.2200BS Insert Part No. J-42385-507BS
 Includes 10 inserts of a M11x1.5x30mm length

Universal M11x2.0 head bolt
 Kit Part No.3700BS Insert Part No. 37004
 Includes 10 inserts of a M11x2.0 x30mm length

Universal M12x1.25 head bolt
 Kit Part No.4700BS Insert Part No. 52125
 Includes 10 inserts of a M12x1.25x30mm length

Universal M12x1.5 head bolt
 Kit Part No.4800BS Insert Part No. 52155
 Includes 10 inserts of a M12x1.5x30mm length

Universal M12x1.75 head bolt
 Kit Part No.4900BS Insert Part No. 52175
 Includes 10 inserts of a M12x1.75x30mm length

TAP GUIDES

Tap Guides are used with Standard Big-Sert kits

Tap guides insure that the threads are square to the surface of the hole.



The lower portion of the tap guide should remain as square as possible to the engine surface. Turn the tap slowly while making sure the guide remains flush.

INCH TAP GUIDES

SIZE	PART NO.
1/4-20	75405
1/4-28	75405
5/16-18	75515
5/16-24	75515
3/8-16	75315
3/8-24	75315
7/16-14	57655
7/16-20	57655
1/2-13	75115
1/2-20	75115

METRIC TAP GUIDES

SIZE	PART NO.
M6 x 1.0	75605
M8 x 1.25	75825
M10 x 1.0	75025
M10 x 1.5	75025
M10 X 1.25	75025
M12 X 1.5	75255
M12 X 1.25	75255
M12 X 1.75	75255

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