

# TIME-SERT®

## SCREW THREAD INSERTS



**THIN WALL  
SELF-LOCKING  
SOLID BUSHING  
POSITIVE PLACEMENT**

# TIME-SERT®

## PROFESSIONAL THREAD REPAIR SYSTEM SCREW THREAD INSERTS AMERICAN & METRIC SIZES

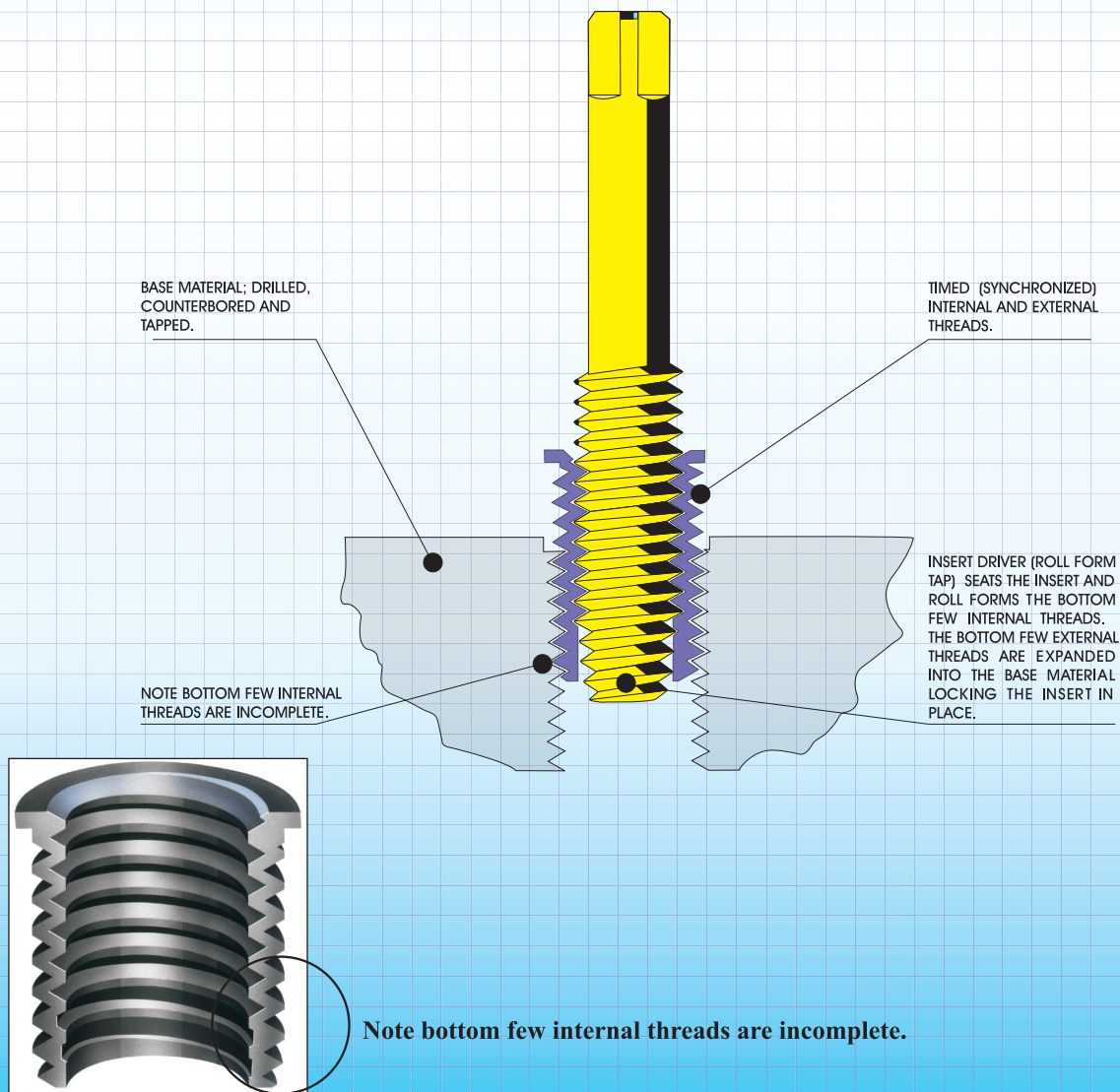
### ADVANTAGES WHICH ARE CONVINCING:

**TIME-SERT®** is a **solid bushing** insert. This guarantees easy installation and allows for full load use of tapped hole, ensuring protection against stress and vibration.

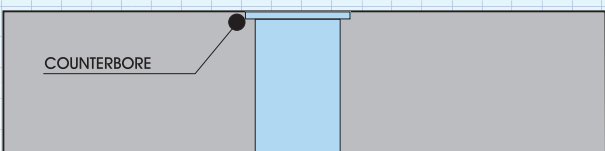
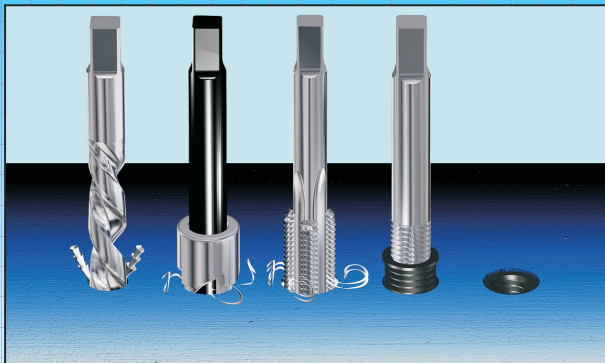
**TIME-SERT®** is **thin walled** due to synchronized internal external threads. Thin cross sectional area allows for installation in areas of limited space and clearance material.

**TIME-SERT®** has **positive placement**. Having a flange on the top of the insert will insure that the insert will have positive placement and cannot wind down into the newly repaired hole.

**TIME-SERT®** is **self locking**. On installation the bottom internal threads of the insert are cold rolled to expand the mating external threads into the base material locking the insert in place. Locking mechanism is at the bottom of the insert.



# ENGINEERING DATA



Counterbores are flat bottom. We recommend step drills for production applications.

Use of a cutting fluid is recommended for drilling, counterboring and tapping.

Oil must be used on the insert driver.

Tool kits are designed for a suitable tap wrench, or power tools such as: drill press, electric or air hand drills and tappers.

Carbon steel inserts are phosphate coated. Stainless steel inserts are 303 or equivalent.

## INCH

INSERT	DRILL		C.BORE		TAP
	SIZE	DRILL SIZE	MIN. DIA.	MIN. DEPTH	MAJOR DIA.
4 - 40	#31	.120	.170	.055	.147
6 - 32	#26	.147	.218	.070	.182
8 - 32	#17	.173	.241	.065	.208
10 - 24	13/64	.203	.288	.075	.247
10 - 32	13/64	.203	.274	.075	.234
12 - 24	#1	.228	.307	.075	.265
12 - 26	#1	.228	.307	.075	.265
1/4 - 20	17/64	.265	.352	.075	.319
1/4 - 28	G	.261	.340	.075	.300
1/4 - 32	G	.261	.340	.075	.300
5/16 - 18	21/64	.328	.430	.085	.388
5/16 - 24	P	.323	.410	.080	.368
3/8 - 16	X	.397	.495	.085	.460
3/8 - 24	W	.386	.473	.080	.432
7/16 - 14	29/64	.453	.571	.110	.534
7/16 - 20	29/64	.453	.547	.085	.506
7/16 - 24	29/64	.453	.547	.085	.506
1/2 - 13	33/64	.515	.648	.110	.604
1/2 - 20	33/64	.515	.610	.085	.569
9/16 - 12	19/32	.593	.711	.130	.675
9/16 - 18	37/64	.578	.668	.110	.638
5/8 - 11	21/32	.656	.787	.135	.748
5/8 - 18	41/64	.640	.740	.110	.701
3/4 - 10	25/32	.781	.935	.135	.885
3/4 - 16	49/64	.765	.870	.110	.835

## METRIC

INSERT	DRILL		C.BORE		TAP
	SIZE	DRILL SIZE	MIN. DIA.	MIN. DEPTH	MAJOR DIA.
M3 x 0.5	1/8	.125	.170	.055	.140
M4 x 0.7	# 19	.166	.226	.065	.194
M5 x 0.8	# 8	.199	.279	.075	.238
M6 x 1.0	D	.246	.319	.075	.290
M7 x 1.0	L	.290	.351	.075	.330
M8 x 1.0	P	.323	.409	.080	.369
M8 x 1.25	P	.323	.419	.080	.381
M9 x 1.0	U	.368	.440	.080	.408
M9 x 1.25	U	.368	.440	.080	.422
M10 x 1.0	13/32	.406	.466	.080	.449
M10 x 1.25	13/32	.406	.500	.085	.463
M10 x 1.5	13/32	.406	.500	.085	.474
M11 x 1.25	29/64	.453	.542	.085	.503
M11 x 1.5	29/64	.453	.552	.085	.516
M12 x 1.25	31/64	.484	.560	.085	.540
M12 x 1.5	31/64	.484	.595	.085	.552
M12 x 1.75	1/2	.500	.605	.110	.567
M13 x 1.5	17/32	.531	.612	.085	.594
M14 x 2.0	37/64	.578	.685	.110	.660
M14 x 1.5	37/64	.578	.668	.110	.634
M16 x 1.5	21/32	.656	.743	.110	.713
M16 x 2.0	21/32	.656	.787	.115	.741
M18 x 1.5	23/32	.718	.837	.125	.794
M20 x 1.5	51/64	.797	.925	.120	.890
M22 x 1.5	7/8	.875	.950	.100	.940
M24 x 1.5	24.5	.963	1.030	.750	1.010

## TAPER PIPE

INSERT	DRILL		C.BORE		TAP
	SIZE	DRILL SIZE	MIN. DIA.	MIN. DEPTH	MAJOR DIA.
1/8-27	13/32	.406	.466	.055	.449
1/4-18	37/64	.578	.668	.075	.638
3/8-18	23/32	.718	.837	.075	.794
1/2-14	55/64	.859	1.000	90° CSK	.942
3/4-14	1 3/32	1.093	1.300	90° CSK	1.194

# MASTER SETS

EACH SET CONTAINS 5 COMPLETE TOOL KITS AND 20 INSERTS OF EACH SIZE ( TOTAL 100 INSERTS )

## INCH

## METRIC

COARSE	FINE	COARSE	FINE
1/4-20	1/4-28	M5 x 0.8	M5 x 0.8
5/16-18	5/16-24	M6 x 1.0	M6 x 1.0
3/8-16	3/8-24	M8 x 1.25	M8 x 1.25
7/16-14	7/16-20	M10 x 1.5	M10 x 1.25
1/2-13	1/2-20	M12 x 1.75	M12 x 1.5
CARBON STEEL PART NO. 0010	CARBON STEEL PART NO. 0020	CARBON STEEL PART NO. 1000	CARBON STEEL PART NO. 1001
STAINLESS STEEL PART NO. 0011	STAINLESS STEEL PART NO. 0021	STAINLESS STEEL PART NO. 1002	STAINLESS STEEL PART NO. 1003

# MINI MASTER

EACH SET CONTAINS 3 COMPLETE TOOL KITS AND 20 INSERTS OF EACH SIZE ( TOTAL 60 INSERTS )

## INCH

## METRIC

COARSE	FINE	COARSE	FINE
1/4-20	1/4-28	M6 x 1.0	M6 x 1.0
5/16-18	5/16-24	M8 x 1.25	M8 x 1.25
3/8-16	3/8-24	M10 x 1.5	M10 x 1.25
CARBON STEEL PART NO. 1203	CARBON STEEL PART NO. 1204	CARBON STEEL PART NO. 1201	CARBON STEEL PART NO. 1202
STAINLESS STEEL PART NO. 1205	STAINLESS STEEL PART NO. 1206	STAINLESS STEEL PART NO. 1207	STAINLESS STEEL PART NO. 1208

# MEGA MASTER

Kit includes 10 complete tool kits with tap guides and a total of 300 inserts in multiple lengths

### METRIC MEGA MASTER 10 KITS!

M5x0.8, M6x1.0, M8x1.25, M10x1.5, M10x1.25  
M12x1.5, M12x1.25, M12x1.75, M14x1.5,  
M18x1.5

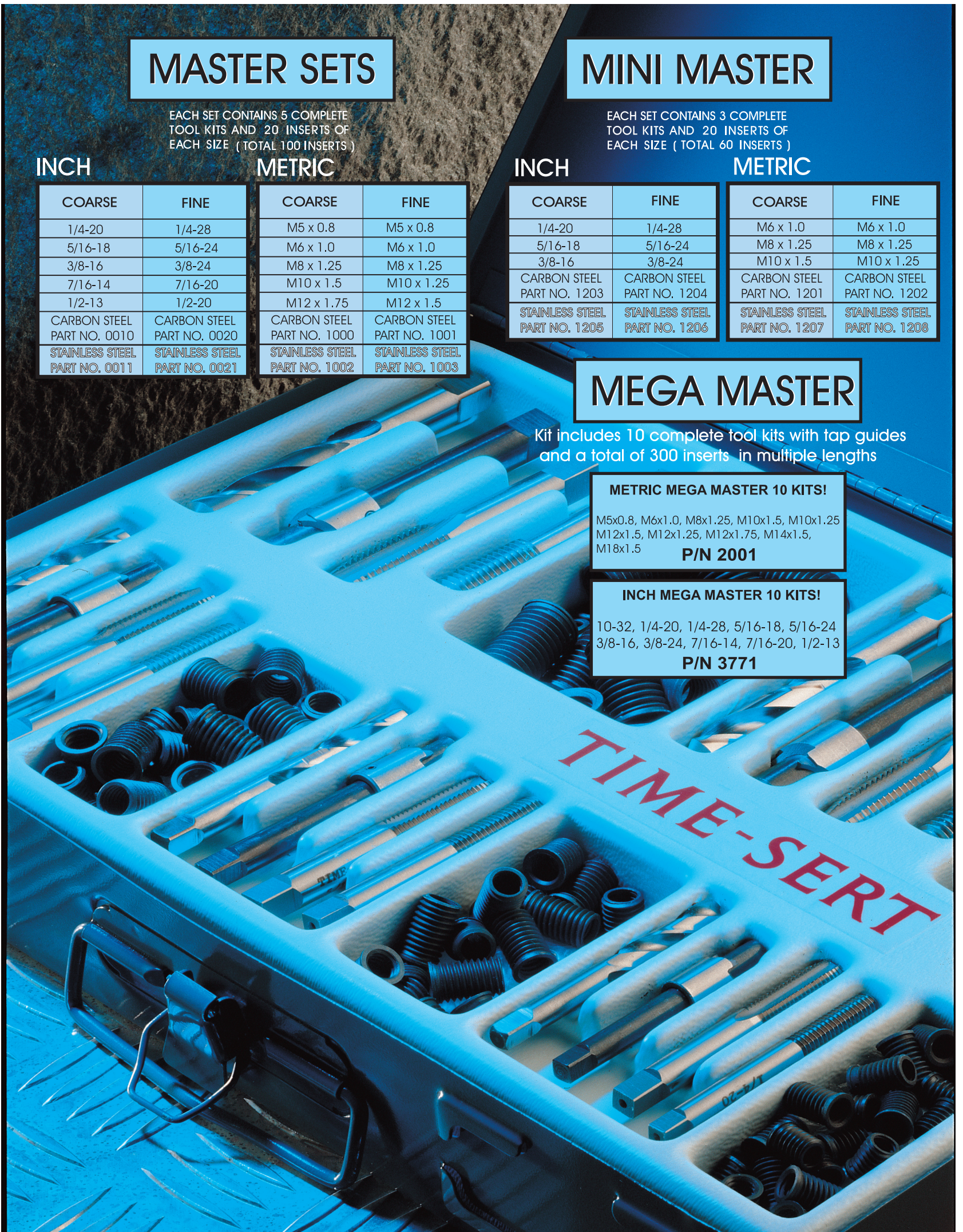
**P/N 2001**

### INCH MEGA MASTER 10 KITS!

10-32, 1/4-20, 1/4-28, 5/16-18, 5/16-24  
3/8-16, 3/8-24, 7/16-14, 7/16-20, 1/2-13

**P/N 3771**

**TIME-SERT**



# METRIC THREAD REPAIR KITS AND INSERTS



## KIT CONTENTS

Drill Counterbore Cutting tap Insert driver Five (5) steel inserts

**Bold text are insert lengths supplied in kits**

METRIC KITS		INSERT LENGTH		INSERTS	
SIZE	PART NO.	MM	INCHES	CARBON STEEL PART NO.	STAINLESS STEEL PART NO.
M3x0.5	1305	<b>4.3</b>	<b>.169</b>	13051	13052
		6.0	.240	13053	13054
M4x0.7	1407	4.0	.157	14077	—
		<b>6.0</b>	<b>.240</b>	14071	14072
		8.0	.320	14073	14074
M5x0.8	1508	5.0	.199	15080	150802
		<b>7.6</b>	<b>.300</b>	15081	15082
		10.0	.400	15083	15084
		12.0	.470	15085	—
M6x1.0	1610	5.0	.199	16100	161002
		8.0	.315	16105	16106
		<b>9.4</b>	<b>.370</b>	16101	16102
		12.0	.470	16103	16104
		15.0	.600	161031	—
		17.0	.669	16107	—
M7x1.0	1710	10.0	<b>.400</b>	17101	—
		14.0	.550	17103	—
		18.0	.708	17105	—
		20.0	.800	17107	—
M8x1.0	1810	7.5	.295	18100	—
		<b>11.7</b>	<b>.460</b>	18101	—
M8x1.25	1812	8.0	.315	—	18128
		9.0	.360	181210	—
		10.0	.400	18125	—
		<b>11.7</b>	<b>.460</b>	18121	18122
		14.0	.550	18129	18126
		16.2	.640	18123	18124
		18.0	.708	18127	181226
		20.0	.800	181213	181224
30.0	1.180	181217	—		
M8x1.75 GM Rare	1817	16.2	<b>.640</b>	18173	—
M9x1.0	1910	9.0	.354	19101	—
		<b>12.0</b>	<b>.470</b>	19103	—
		14.0	.550	19105	—
		18.0	.710	19107	—
M9x1.25	1912	9.0	.354	19120	—
		<b>13.0</b>	<b>.510</b>	19121	—
		18.0	.710	19123	—
		22.0	.866	19127	—
M10x1.0	1010	6.2	.244	10100	10106
		8.0	.315	10105	—
		9.0	.360	10101	10102
		<b>15.0</b>	<b>.600</b>	10103	10104
M10x1.25	1012	9.0	.354	10127	—
		14.0	.550	10121	10122
		15.0	.600	101215	—
		<b>16.2</b>	<b>.650</b>	10123	10124
		20.0	.800	10125	10126
		25.0	.984	10129	—
M10x1.5	1015	9.4	.370	10157	10150
		11.0	.433	101511	—
		<b>14.0</b>	<b>.550</b>	10151	10152
		17.0	.669	101517	—
		20.0	.800	10153	10154
		22.0	.866	101522	—
		24.5	.960	10155	—
		30.0	1.180	10159	10158
40.0	1.575	101591	—		
M11x1.25	1112	<b>22.0</b>	<b>.870</b>	11123	—
		28.0	1.100	11121	—
		30.0	1.180	11127	—

SIZE	PART NO.	INSERT LENGTH		INSERTS	
		MM	INCHES	CARBON STEEL PART NO.	STAINLESS STEEL PART NO.
M11x1.5	1115	<b>16.0</b>	<b>.630</b>	11151	—
		22.0	.870	11153	—
		30.0	1.180	11155	—
M11x2.0	3700	30.0	1.180	112030	<b>HEAD BOLT KIT ONLY</b>
M12x1.25	1212	9.0	.360	12121	—
		11.0	.430	12129	—
		<b>15.0</b>	<b>.600</b>	12123	12124
		24.0	.950	12125	12126
M12x1.5	1215	6.7	.263	12157	—
		9.2	.360	12151	—
		13.5	.531	121501	—
		<b>16.2</b>	<b>.640</b>	12153	12152
		20.0	.800	121505	—
		24.0	.950	12155	12154
M12x1.75	1217	10.0	.400	12177	—
		12.0	.472	12170	—
		<b>16.2</b>	<b>.640</b>	12171	12172
		20.0	.800	12175	12176
		24.0	.950	12173	12174
M13x1.5	1315	14.0	.551	13151	—
		<b>19.0</b>	<b>.748</b>	13153	—
		24.0	.950	13155	—
		28.0	1.102	13157	—
M14x1.5	1415	6.6	.260	14151	—
		9.4	.370	14153	14154
		12.7	.500	14155	14156
		16.0	.630	141552	—
		<b>17.8</b>	<b>.700</b>	14157	141550
		24.0	.950	14158	141551
		26.0	1.023	141553	141554
		28.0	1.100	14159	141556
M14x2.0	1420	12.0	.472	14201	—
		<b>18.0</b>	<b>.710</b>	14203	14204
		24.0	.950	14205	—
		30.0	1.180	14207	—
M16x1.5	1615	7.0	.270	16151	16150
		<b>12.7</b>	<b>.500</b>	16153	16152
		16.0	.630	16159	16156
		20.0	.800	161575	16158
		24.0	.950	16155	16154
		32.0	1.250	16157	—
M16x2.0	1620	16.0	.630	16200	16202
		<b>24.0</b>	<b>.950</b>	16201	16204
		32.0	1.250	16203	16206
		38.0	1.496	16205	—
M18x1.5	1815	10.0	.400	18151	—
		15.0	.600	18157	—
		<b>18.3</b>	<b>.720</b>	18153	—
		27.0	1.060	18155	—
M20x1.5	2015	9.0	.354	20150	—
		12.0	.472	20151	—
		<b>17.0</b>	<b>.669</b>	20153	—
		30.0	1.180	20155	—
M22x1.5	2215C	<b>10.0</b>	<b>.400</b>	22151	—
		15.0	.590	22153	—
		20.0	.800	22155	—
M24x1.5	2415C	<b>7.6</b>	<b>.300</b>	24150	—
		10.0	.400	24151	—
		15.0	.590	24153	—
		20.0	.800	24155	—
		30.0	1.200	24157	—

# INCH THREAD REPAIR KITS AND INSERTS



## KIT CONTENTS

Drill Counterbore  
Cutting tap Insert driver  
Five (5) steel inserts

**Bold text are insert lengths supplied in kits**

INCH KITS		INSERT LENGTH		INSERTS	
SIZE	PART NO.	INCHES	MM	CARBON STEEL PART NO.	STAINLESS STEEL PART NO.
4-40	0440	<b>.200</b>	<b>5.0</b>	04401	04402
6-32	0632	<b>.250</b>	<b>6.3</b>	06321	06322
8-32	0832	<b>.250</b> .320	<b>6.3</b> 8.0	08321 08323	08322 08324
10-24	0024	.240 <b>.300</b> .370	6.1 <b>7.6</b> 9.4	00240 00241 00243	00246 00242 00244
10-32	0032	.150 .187 .240 <b>.300</b> .370	3.8 4.7 6.1 <b>7.6</b> 9.4	00329 00325 00320 00321 00323	00327 00328 00326 00322 00324
12-24	0124	.300 <b>.370</b> .472	7.6 <b>9.4</b> 12.0	01241 01243 01245	01242 01244 01246
1/4-20	0140	.280 <b>.380</b> .500 .750 1.000	7.1 <b>9.4</b> 12.7 19.0 25.4	01400 01401 01403 01405 01407	01406 01402 01404 01408 01409
1/4-28	0148	.280 <b>.380</b> .500	7.1 <b>9.4</b> 12.7	01480 01481 01483	01486 01482 01484
1/4-26 BSF British	0146	<b>.380</b> .500	<b>9.4</b> 12.7	01461 01463	— —
1/4-24 Harley Davidson	0144	.280 <b>.380</b> .500	7.1 <b>9.4</b> 12.7	01441 01443 01445	— — —
1/4-32	0142	.180 .250 <b>.380</b> .500	4.5 6.3 <b>9.4</b> 12.7	01421 01423 01425 01427	01422 01424 01426 01428
5/16-18	0561	.350 <b>.450</b> .620 .750	8.9 <b>11.4</b> 15.7 19.0	05610 05611 05613 05615	05617 05612 05614 05616
5/16-24	0562	.350 <b>.450</b> .620 .750	8.9 <b>11.4</b> 15.7 19.0	05620 05621 05623 05625	— 05622 05624 —
3/8-16	0381	.312 .400 <b>.520</b> .620 .750 .900 1.000 1.200	7.9 10.0 <b>13.2</b> 15.7 19.0 22.8 25.4 30.4	03818 03819 03811 03813 03815 03819 03810 03817	038182 038192 03812 03814 03816 — 038102 —

**Bold text are insert lengths supplied in kits**

INCH KITS		INSERT LENGTH		INSERTS	
SIZE	PART NO.	INCHES	MM	CARBON STEEL PART NO.	STAINLESS STEEL PART NO.
3/8-24	0382	.300 .350 <b>.520</b> .750	7.6 8.9 <b>13.2</b> 19.0	— 03825 03821 03823	03820 — 03822 03824
7/16-14	0761	.400 <b>.600</b> .870 1.000 1.250 1.500	10.0 <b>15.2</b> 22.0 25.4 31.7 38.0	07610 07611 07613 076135 07615 07617	— 07612 07614 07619 07618 —
7/16-20	0762	.250 .370 .480 <b>.600</b> .870 1.000 1.370	6.3 9.4 12.2 <b>15.2</b> 22.0 25.4 34.7	07629 076320 07627 07621 07623 076231 07625	— — — 07622 07624 — —
7/16-24	0764	.500 <b>.600</b> .800	12.7 <b>15.2</b> 20.3	07641 07643 07645	07642 — —
1/2-13	0121	.400 <b>.650</b> 1.000 1.250 1.500	10.0 <b>16.5</b> 25.4 31.7 38.0	01217 01211 01213 01219 01215	— 01212 01214 — —
1/2-20	0122	.400 .500 <b>.650</b> 1.000 1.370	10.0 12.7 <b>16.5</b> 25.4 34.7	01225 01220 01221 01223 01227	01226 — 01222 01224 —
9/16-12	0961	.500 1.120 1.500	12.7 28.4 38.0	09610 09611 09615 09617	— — — —
9/16-18	0968	.350 .450 <b>.750</b> 1.120	8.9 11.4 <b>19.0</b> 28.4	09687 09685 09681 09683	— — — —
5/8-11	0581	.500 <b>.850</b> 1.250 1.500	12.7 <b>21.6</b> 31.7 38.0	05810 05811 05813 05815	— 05812 05814 —
5/8-18	0588	.320 .450 <b>.850</b> 1.250	8.1 11.4 <b>21.6</b> 31.7	05881 05887 05883 05885	— — — —
3/4-10	0341	.750 <b>1.100</b> 1.500	19.0 <b>28.0</b> 38.0	03415 03411 03413	— — —
3/4-16	0346	.650 <b>1.100</b> 1.500	16.5 <b>28.0</b> 38.0	03460 03461 03463	— — —

# DRAIN PAN APPLICATIONS

All kits include all the tools plus 5 inserts and tap guide.



Drain Pans Kits

M22 & M24 Drain Pans Kits

## 1/2-13 Drain Pan

Kit Part number 0121C Insert Part No.01217  
Contains:Drill, Cbore, Tap, Driver, Tapguide, 5 inserts .400 length

## 1/2-20 Aluminum Drain Pan

Kit Part number 0122A Insert Part No.01225  
Contains:Drill, Cbore, Tap, Driver, Tapguide, 5 inserts .400 length

## FORD Drain Pan

1/2-20 "TIN PANS ONLY"  
Kit Part number 0765 Insert Part No.07629  
This kit reduces the hole size from "1/2-20 to 7/16-20"  
Contains: Cbore, Driver tools, 5 inserts, 5 drain plugs with washers

## 5/8-18 Drain Pan

Kit Part number 0588C Insert Part No.05887  
Contains:Drill, Cbore, Tap, Driver, Tapguide, 5 inserts .450 length

## 3/4-16 Drain Pan

Kit Part number 0346C Insert Part No.03460  
Contains:Drill, Cbore, Tap, Driver, Tapguide, 5 inserts .650 length

## 3/4-10 Drain Pan

Kit Part number 0341C Insert Part No.03415  
Contains:Drill, Cbore, Tap, Driver, Tapguide, 5 inserts .750 length

## M8x1.25 Drain Pan

Kit Part number 1015A Insert Part No.18125  
Contains:Drill, Cbore, Tap, Driver, Tapguide, 5 inserts 10mm length

## M10x1.25 Drain Pan

Kit Part number 1012A Insert Part No.10127  
Contains:Drill, Cbore, Tap, Driver, Tapguide, 5 inserts 9.0mm length

## M10x1.5 Drain Pan

Kit Part number 1812C Insert Part No.10157  
Contains:Drill, Cbore, Tap, Driver, Tapguide, 5 inserts 9.4mm length

## M12x1.25 Drain Pan

Kit Part number 1212C Insert Part number12121  
Contains:Drill, Cbore, Tap, Driver, Tapguide, 5 inserts 9mm length

## M12x1.5 Drain Pan

Kit Part number 1215C Insert Part No.12151  
Contains:Drill, Cbore, Tap, Driver, Tapguide, 5 inserts 9.2mm length

## M12x1.75 Drain Pan

Kit Part number 1217C Insert Part No.12170  
Contains:Drill, Cbore, Tap, Driver, Tapguide, 5 inserts 12mm length

## M14x1.5 Volkswagen, Chrysler...

Same as the 1415C but has a longer insert 12.7mm  
Kit Part number 1415A Insert Part No.14155  
Contains:Drill, Cbore, Tap, Driver, Tapguide, 5 inserts 12.7mm length

## M14x1.5 "Aluminum Pans"

Kit Part number 1415C Insert Part No.14153  
This kit can restore any aluminum drain pan back to it's original size  
Contains:Drill, Cbore, Tap, Driver, Tapguide, 5 inserts 9.4mm length

## M14x1.5A-PRO "Aluminum Pans"

Kit Part number 1415A-PRO Insert Part No.14155  
This kit is more for the professional which requires high volume repairs.  
Contains:Drill, Cbore, Tap, Driver, Tapguide, 10 inserts 12.7mm length

## Honda and Acura Drain Pan Repair "Tin Pans Only"

This kit reduces the hole size from M14 x 1.5 to M12 x 1.5  
Kit Part number 1485 Insert Part No.12151

## M14x1.25 Drain Pan

Kit Part number 14125A Insert Part No.44127  
Contains:Drill, Cbore, Tap, Driver, Tap guide, 5 inserts 11mm length

## M16x1.5 Drain Pan

Kit Part number 1615C Insert Part No.16153  
Contains:Drill, Cbore, Tap, Driver, Tap guide, 5 inserts 12.7mm length

## M18x1.5 Drain Pan

Kit Part number 1815C Insert Part No.18151  
Contains:Drill, Cbore, Tap, Driver, Tap guide, 5 inserts 10mm length

## M20x1.5 Drain Pan

Kit Part number 2015A Insert Part No.20151  
Contains:Drill, Cbore, Tap, Driver, Tap guide, 5 inserts 12mm length

## M22x1.5 Drain Pan

Kit Part number 2215C Insert Part No.22151  
Contains:Step Reamer, Tap, Driver, Tap guide, 5 inserts 10mm length

## M24x1.5 Drain Pan

Kit Part number 2415C Insert Part No.24150 VW touareg length  
Contains: Step Reamer, Tap, Driver, Tap guide, 5 inserts 7.6mm length

## Master oil pan kit Metric p/n 3300 5 Full KITS

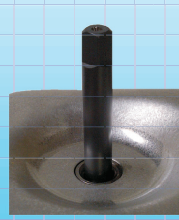
M12x1.5, M12x1.25, M12x1.75, M14x1.5 M18x1.5  
Contains:Drill, Cbore, Tap, Driver, Tap guide, 30 inserts per kit short medium long

## Seat Recondition Cutters

Used to clean seat if leaking or not square to hole. Use with appropriate kits.  
"Driver tool required to use this cutter"



Seat Cutter



Start driver tool into the hole, continue until the driver tool is approx. 1/4 inch below the surface



Using a 23mm socket rotate the seat cutter FULL 360 degrees rotations. After a few turns lift the seat cutter to inspect the seat. Repeat this operation until the seat is cleaned up.



Remove tools. REPAIR COMPLETE: Drain plug will now seal on new reconditioned seat.

## Special Oil Pan Seat cutter

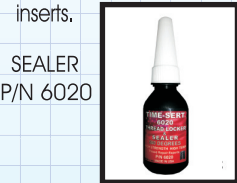
12x1.5 P/N 32176

1/2-20 P/N 32176

14x1.5 P/N 34156

18x1.5 P/N 38156

# SPARK PLUG KITS



**RECONDITION SEAT CUTTERS**  
Used with kits 4412 and 4412E



SPARK PLUG TYPES		WASHER SEAT		TAPER SEAT				
		Washer seat spark plugs seal with a washer on plug.		Sealer must be used when installing taper seat inserts.				
KIT SIZE		PART NO.	LENGTH MM	LENGTH INCHES	PART NO.	LENGTH MM	LENGTH INCHES	PART NO.
1/4-32 RC engines	0142SP	4.5	.180	01421	Sealer required for all Taper seat inserts. P/N 6020			
M10 x 1.0 Standard Kit	4010 No INSERTS	9.0	.360	40101	—	—	—	
M10 x 1.0 Deep Hole Kit Honda MotorCycle	4010E No INSERTS	12.0	.472	40102	—	—	—	
M10 x 1.0 Standard Kit With (5) inserts	4010-103 (2) 9mm inserts (3) 15mm inserts	15.0	.600	40103	—	—	—	
M10 x 1.0 Extended Kit With (5) inserts	4010EXT-133 (2) 9mm inserts (3) 15mm inserts	9.0	.360	40101	—	—	—	
M10 x 1.0 GLOW PLUG	4010GP (5) 12mm inserts	15.0	.600	40103	—	—	—	
M10 x 1.25 DuraMax 6.6L Diesel GLOW PLUG	5000 (5) 16.2mm inserts Aluminum inserts	12.0	.472	40102	—	—	—	
M12 x 1.25 Standard Kit	4212 No INSERTS	16.2	.650	10123ANF	—	—	—	
M12 x 1.25 Deep Hole Kit	4212E No INSERTS	9.0	.360	42121	—	—	—	
M12 x 1.25 With (6) inserts	4212-125 (2) 9mm inserts (2) 15mm inserts (2) 17.5mm inserts	15.0	.600	42123	—	—	—	
M12 x 1.25 2008 FORD 3 VALVE	4212H (5) 21mm inserts And Sealer	17.5	.690	42125	—	—	—	
M14 x 1.25 Standard Kit	4412 Inserts sold separately	9.0	.360	42121	—	—	—	
M14 x 1.25 Deep Hole Kit	4412E Inserts sold separately	8.0	.320	44123	—	—	—	
M14 x 1.25 Imports: Washer Seat repair	4412E-111 (5) 16.8mm inserts Washer seat inserts	9.4	.370	44125	—	—	—	
M14 x 1.25 Domestic Vehicles Taper Seat repair	4412E-187 (2) 10mm inserts (2) 15.7mm inserts (2) 24mm inserts And Sealer	11.0	.430	44127	—	—	—	
M18 X 1.5	4815 No INSERTS	13.5	.530	44113	—	—	—	
M14 x 1.25 Short and long tooling	4490 Assorted length inserts 20 total	15.0	.600	44129	15.7	.620	44185	
M14 x 1.25	4412E	16.8	.660	44111	16.8	.660	44186	
M14 x 1.25	4412E-111	23.0	.905	44112	24.0	.950	44187	
M14 x 1.25	4412E-187	16.8	.660	44111	Sealer required for all Taper seat inserts. Not washer seat P/N 6020			
M14 x 1.25	4490	10.0	.400	44183	10.0	.400	44183	
M14 x 1.25	4412E-111	15.7	.620	44185	15.7	.620	44185	
M14 x 1.25	4412E-187	24.0	.950	44187	24.0	.950	44187	
M14 x 1.25	4490	(2) p/n 44125 9.4mm, (2) p/n 44127 11mm, (2) p/n 44113 13.5mm, (2) p/n 44129 15mm, (2) p/n 44111 16.8mm, (2) p/n 44112 23mm, Taper style inserts (2) p/n 44183 10mm, (2) p/n 44185 15.7mm, (2) p/n 44186 16.8mm, (2) p/n 44187 24mm						
M18 X 1.5	4815	10.0	.400	48151	10.0	.400	48181	
M18 X 1.5	4815	18.3	.720	48153	—	—	—	
7/8-18	4718 No INSERTS	11.0	.430	47181	—	—	—	
7/8-18	4718	20.0	.780	47183	—	—	—	
7/8-18	4718	24.5	1.000	47185	—	—	—	

Note: M14x1.25 inserts also Available in Aluminum



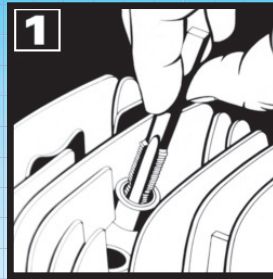
# SPARK PLUG THREAD REPAIR

The following instructions for kit part numbers 4412 and 4412E.



**KIT CONTENTS**  
Step Tap  
Wrench  
Seat Cutter  
Insert driver

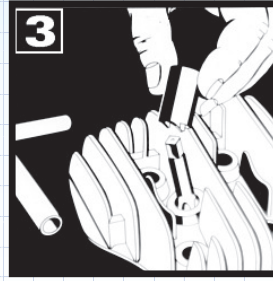
Spark plug kits do not contain inserts, order separately.



Start the step tap into the hole to be repaired keeping as straight as possible.

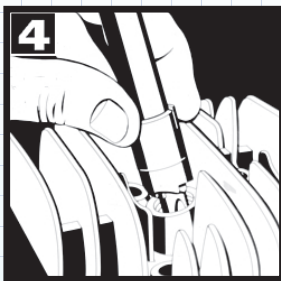


Use the wrench provided, place wrench over tap and tap new threads. Continue to tap through until the cutting edges are approximately  $\frac{1}{4}$  inch below surface. Leaving the tap  $\frac{1}{4}$  inch below the surface ensures that the seat cutter will not hit the back of the tap flutes.



Leave the step tap in the hole. Place the seat cutter over the shank. The seat cutter does two operations. First the seat cutter will cut the countersink for the flange of the insert, then it cuts a new seat for the sparkplug washer.

*This operation is the same for the taper seat inserts.*



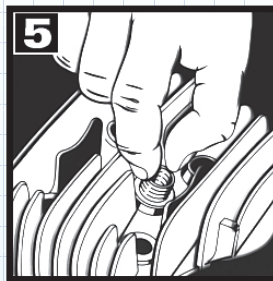
Using the wrench rotate the seat cutter. After a few turns lift the seat cutter to inspect the seat. Repeat operation until the seat is completely cleaned up. Remove the step tap from the hole.



Good Seat Complete



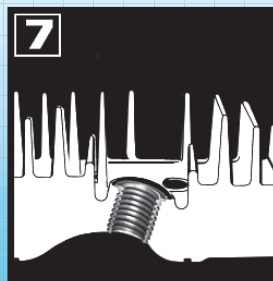
Bad Seat incomplete



Make sure the hole is clean and dry. Lubricate the driver tool with Time-Sert driver oil. Screw the insert onto the prepared hole. If doing deep hole repairs: Lubricate the driver tool with Time-Sert driver oil or 30wt Oil. Screw the insert onto the driver then into the prepared hole.



Using the wrench provided rotate the driver into the insert. When the insert is seated the driver will tighten up. With increased pressure continue to rotate the driver through the insert until it loosens up. Then back the driver tool out of the insert.



Repair is complete. Solid steel threads are square to the reconditioned seat, insuring a good spark plug seal.

## Note: Taper seat inserts

These inserts are silver plated and require sealer p/n 6020 on the outside of the insert.

# MANUFACTURER KITS

## GENERAL MOTORS



### “2015” LS9 M12x1.75

Kit p/n EN-42385-50 Used in:  
Insert P/N EN-42385-58 6.2L 4.3L 5.3L 6.2L

### "2013 ECOTEC"

**GEN2 11x2.0 2.0 LTG / 2.5 LCV**  
Kit P/N 9530 Insert P/N 112030

### L850 or "ECOTEC" 2.2 liter 4 cylinder

J-42385-500 kit with Insert P/N 11155  
J-42385-871 Bushing

### NORTH STAR 4.0/4.6 HEAD BOLT M11x1.5 HEAD BOLT

35mm from top of block to first thread.  
Kit Part No. J-42385-500 Insert Part No. 11155

**NORTH STAR 4.0/4.6 Oversize**  
M11x1.5 HEAD BOLT BIG-SERT Second repair  
Kit P/N. J-42385-500BS Insert P/N J-42385-507BS

**NORTH STAR MAINBEARING 4.0/4.6**  
M10x1.5 MAIN BEARING  
Kit Part No. J-42385-300 Insert Part No. J-42385-514

**NORTH STAR 2000 HEAD BOLT**  
M11x1.5 There are 2 depths of holes for this block  
35mm and 51mm from top of block to first thread.  
Kit Part No. J-42385-2000 Insert Part No. 11155

**North Star 2004 HEAD BOLT**  
M11x2.0 PV8 LH2 4.6 liter LXR  
Kit Part number J-42385-2030 Insert Part No. 112030

**M11x2.0 High Feature 3.0 3.6 liter**  
USED IN BLOCKS WHERE THE FIRST THREAD STARTS  
Approx. 60mm or 2.360"  
Kit Part number J7330 Insert p/n 1012030

**LL8 Straight 6 M11x2.0 Head Bolt**  
2002 -2004 GMC Envoy  
2002-2004 Trail blazer  
Kit Part No. 4001 Insert Part No. 112030

**PV6 M11x1.5 Head bolt LX5 3.5L**  
1999-2002 Oldsmobile Intrigue  
2001-2002 Oldsmobile Aurora  
Kit Part No. 6001 Insert Part No. 11155

**General Motors GEN3**  
M11x2.0 HEAD BOLT  
1997-2004 C5 Corvette base model  
1998-2002 Chevrolet Camaro Z28, SS  
1998-2002 Pontiac Firebird Formula and Trans-Am  
2004 Pontiac GTO  
2001-2005 Holden Monaro  
Kit Part number J-42385-100 Insert p/n 112030

## HONDA



### HONDA D16 HEAD BOLT M10x1.25 Headbolt

1996-2000 Civic 1988-1991 Civic/CRX 1992-1995 Civic/Del Sol  
Kit Part No. 4160 Insert Part No. 10129

### HONDA Odyssey HEAD BOLT M12x1.5 Headbolt

For threads that start at approx. 51mm "Includes"  
1999-2005 Odyssey 2003-2005 Pilot 1998-2005 Accord V6  
1997-2003 3.0-3.2 CL 1999-2005 3.2TL 2001- 2005 MDX  
2005 RL  
Kit Part No. 7220 Insert Part No. 12159

**Honda Civic Hybrid Head Bolt**  
M9x1.25 2003-2005  
Kit Part No. 9210 Insert Part No. 19127

**HONDA/ACURA HEAD BOLT**  
M11x1.5 for threads that start at approx. 57mm  
Honda B16 2002-2005 CR-V 2003-2005 Accord L4  
2003-2005 Element 1999-2005 Civic SI 2002-2005 RSX  
1986-2001 Integra 1986-1995 Legend 1991-2005 NSX  
1996-2004 RL  
Kit Part No. 7111 Insert Part No. 11155

**HONDA/ACURA HEAD BOLT Oversize**  
M11x1.5 BIG-SERT Second repair  
Honda B16 2002-2005 CR-V 2003-2005 Accord L4  
2003-2005 Element 1999-2005 Civic SI 2002-2005 RSX  
1986-2001 Integra 1986-1995 Legend 1991-2005 NSX  
1996-2004 RL  
Kit Part No. 7111BS Insert Part No. J-42385-507BS

**HONDA MOTORS Special Kit 1/8-28 BSBP**  
Kit Part No. 0128 Insert Part number 01281

**Honda and Acura**  
M14x1.5 "TIN Pans Only"  
This kit reduces the hole size from M14 x 1.5 to M12 x 1.5  
Kit Part number 1485 Insert Part No.12151

**Honda and Acura**  
M14x1.5 "Aluminum Pans"  
This kit can restore any aluminum drain pan back to it's original size  
Kit Part number 1415C Insert Part No.14153

**Honda & Acura M10x1.25**  
Alternator bolt thread repair  
M10x1.25 Alternator bolt  
1999-2005 Odyssey 2003-2005 Pilot 1998-2005 Accord V6  
1997-2003 3.0-3.2 CL 1999-2005 3.2TL 2001- 2005 MDX  
2005 RL Kit Part number 1012C Insert Part No. 10125

# MANUFACTURER KITS

## FORD

### FORD SPARK PLUG REPAIR

M14x1.25 Triton 2 and 4 valve  
1.9/3.8/4.6/5.4 liter engines



Kit Part No. 5553  
Insert Part No 51459

### FORD SPARK PLUG REPAIR

M16x1.5 3 Valve Heads



Kit Part No. 3221  
Insert Part No 32214

### FORD TRIPLE OVERSIZED SPARK PLUG REPAIR

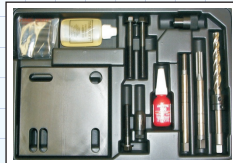
M14x1.25 2 & 4 Valve Heads



Kit P/N 5600

## TOYOTA

### Universal M11x1.5 head bolt kit



Kit Part No. 2200  
Insert Part No 11155

We do not have a specific kit for Toyota head bolt.  
We commonly sell the Universal M11x1.5 for the  
Camry and Rav4 models which use the M11x1.5 head bolt.

## Harley Davidson

3/8-16 x 1.000 used in  
Harley Davidson Head Bolt  
Where depth of hole  
is 1.250 deep.



Kit Part No. 0381D  
Insert Part No 03810

3/8-16 x 1.000

**BIG-SERT OVERSIZED**  
Use after a helicoil failure.



Kit Part No. 5381D  
Insert Part No 53815

## VOLKSWAGEN

### VOLKSWAGEN Touareg

Drain Pan kit M24x1.5



Kit Part No. 2415C  
Insert Part No. 24150

### V.W & PORSCHE CASE

KIT FOR M10 x 1.5 CASE STUDS

Kit Part No. 1085 Insert Part No. 10155



### M14x1.5 Drain Pan Repair

Contains:Drill, Cbore, Tap, Driver, Tapguide and  
5 inserts of a 12.7mm length

Kit Part number 1415A Insert Part No.14155



Optional Tap Guide Plate  
VW and Porsche 911 style.  
This plate is placed on top of  
the cylinder to ensure a  
straight tapped hole.



Plate Part No. 31084

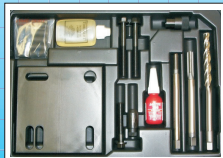
VW SOLEX Carburetor  
M8x1.0 Kit P/N 1881

VW SOLEX Carburetor  
M11x1.0 Kit P/N 1181

## BMW

This tooling will install a M10x1.5x24.5mm  
length insert in a 6mm deep countersink.

**Standard kit**  
first time repair  
Kit Part No. 1090  
Insert Part No 10155



**BIG-SERT OVERSIZED**  
Use after a helicoil failure.  
Kit Part No. 1090BS  
Insert Part No 50155



## SPECIAL APPLICATIONS

### M6x1.0 Extended kit



This tooling has no counterbore.  
The hole must be at least 8mm or  
.315 inches for the tap to access the hole

**Kit Includes**  
6" extension drill, 4" tap, 4" driver,  
5 inserts of a 17mm length.  
**Kit Part number 1610E2**

### M8x1.25 CORE KIT **Rocker Arm**



The core drill included will allow a  
special 11.7mm length no flange  
insert to be installed deeper than  
a standard kit.

**Kit Includes**  
Core drill, tap, driver, tap guide,  
5 inserts of the 11.7mm no flange  
**Kit Part number 1812CORE**

### M8x1.25 CORE KIT Extended



The core drill included will allow a  
16.2mm length insert to be installed  
deeper than the standard kit.

**Kit Includes**  
Core drill, tap, driver,  
5 inserts of the no flange  
16.2mm length.  
**Kit Part number 1812ECORE**

### M10x1.5 CORE KIT



The core drill included will allow a  
11mm length insert to be installed  
deeper than the standard kit.

**Kit Includes**  
Core drill, tap, driver, tap guide,  
5 inserts of the 11mm length  
**Kit Part number 1015CORE**

### **Rocker Arm**

### 10x1.5 30mm Flush Surface kit



Kit Part No. 1015D30  
Insert Part No. 10159

### M10x1.5 Gm Stripped starter bolt repair



Kit Part No. 1380  
Insert Part No. 10153

### 3/8-16 Gm stripped starter bolt repair



Kit Part No. 1535  
Insert Part No. 153501

### M18x1.5 O2 SENSOR KIT



Kit Part No.1815SENSOR  
Insert Part No. 18152NF

M18x1.5  
kit includes:  
Reamer, tap,  
tap guide, install driver,  
5 inserts 7.5mm stainless.

# UNIVERSAL HEAD BOLT KITS

Universal head bolt kits can be used in any application of bolt size listed below. A simple tool setup is all that is required.



## TIME-SERT Standard first time repair

### Universal M10x1.25 head bolt

Kit Part No.6250 Insert Part No. 10129  
Includes 10 inserts of a M10x1.25x25mm length

### Universal M10x1.5 head bolt

Kit Part No.7580 Insert Part No. 10155  
Includes 10 inserts of a M10x1.5x24.5mm length

### Universal M11x1.25 head bolt

Kit Part No.11125 Insert Part No. 11127  
Includes 10 inserts of a M11x1.25x30mm length

### Universal M11x1.5 head bolt

Kit Part No.2200 Insert Part No. 11155  
Includes 10 inserts of a M11x1.5x30mm length

### Universal M11x2.0 head bolt

Kit Part No.3700 Insert Part No. 112030  
Includes 10 inserts of a M11x2.0 x30mm length

### Universal M12x1.25 head bolt

Kit Part No.4700 Insert Part No. 12127  
Includes 10 inserts of a M12x1.25x30mm length

### Universal M12x1.5 head bolt

Kit Part No.4800 Insert Part No. 12159  
Includes 10 inserts of a M12x1.5x30mm length

### Universal M12x1.75 head bolt

Kit Part No.4900 Insert Part No. 12179  
Includes 10 inserts of a M12x1.75x30mm length

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.



## BIG-SERT OVERSIZED SECOND REPAIR

### 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

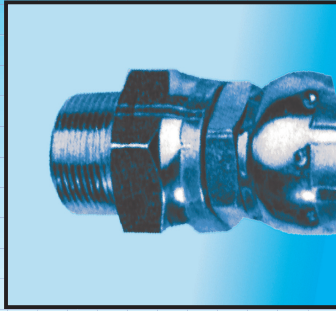
### Universal M12x1.75 head bolt

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

# TAPER PIPE THREAD KITS

## National Pipe Taper Thread (NPT)

### PIPE KITS CARBON STEEL



KIT	SIZE	KIT PART NO.	INSERT PART NO.
	1/8-27	0127	01271 .360 length
	1/8-28 BSPT	0128	01281 .360 length
	1/4-18	0118	01181 .360 length
	3/8-18	0318	03181 .450 length
	1/2-14	0214	02141 .500 length
	3/4-14	0414	04141 .605 length



### PIPE KITS STAINLESS STEEL

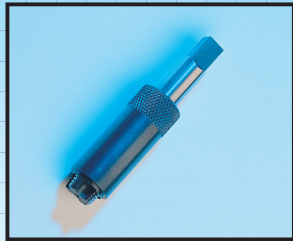
KIT SIZE	PART NO.	INSERT PART NO.
1/8-27	0127S	01272
1/4-18	0118S	01182
3/8-18	0318S	03182
1/2-14	0214S	02142

## SAE 9/16-18 Port Repair Kit P/N 1682



# USEFUL TOOLS

## TAP GUIDES



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.

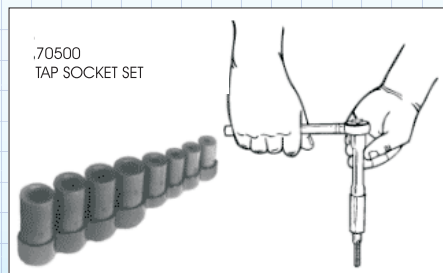
### AMERICAN TAP GUIDES

SIZE	PART NO.
1/4-20	31420
1/4-28	31420
5/16-18	35168
5/16-24	35168
3/8-16	33816
3/8-24	33824
7/16-14	37164
7/16-20	37162
1/2-13	31213
1/2-20	31225
5/8-18	25885
3/4-10	33415
3/4-16	33416

### METRIC TAP GUIDES

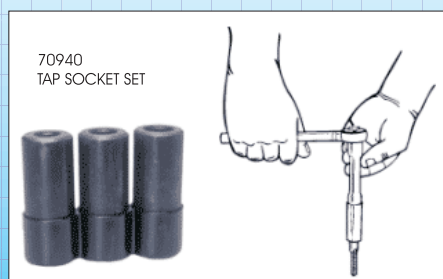
SIZE	PART NO.
M6 x 1.0	36105
M7 x 1.0	37105
M8 x 1.25	38125
M9 x 1.25	39125
M10 x 1.0	30105
M10 x 1.5	30155
M10 X 1.25	30125
M11 X 1.25	31125
M11 X 1.5	31155
M12 X 1.5	32155
M12 X 1.25	32125
M12 X 1.75	32175
M14 X 1.5	34155
M14 X 2.0	34255
M16 X 1.5	36155
M16 X 2.0	36205
M18 X 1.5	38155
M20 x 1.5	30215
M22 x 1.5	32255
M24 x 1.5	32455

## TAP SOCKET SETS



### For Use in Restricted Areas

Ideal for use in areas where a T handle won't fit. Set of 8 sockets fits all number and fractional M.C.T.I. standard taps thru 1/2". Also fits 1/8" NPT taps and metric tapsthru 12mm - manufactured to M.C.T.I. Standards. Sockets contained on a vinyl holder. Time-Sert taps 4mm to 12mm metric / 4-40 to 1/2 inch Sockets #1 thru #4 use 1/4 drive, rest use 3/8 drive.



### Three Larger Sizes in a Convenient Set

The three largest tap sockets, are now packaged in a three piece set. Ideal for use where a T handle won't fit, especially in restricted areas. For larger, fractional M.C.T.I. standard taps. #9 socket is 5/8" (16mm), #10 is for 11/16" (18mm) and #11 is for 3/4". Sockets contained in a vinyl holder. Time-Sert taps 13mm to 16mm metric 5/8 to 3/4 inch. use 1/2 drive socket.

# USEFUL TOOLS

## TAP WRENCHES



**STRAIGHT TAP WRENCH**

Straight Tap Wrench, Length 5 Inches, Hand Taps Capacity 1/16 to 1/4 Inch, Taps M1.5 to M6 wrench number 00 **P/N C67201**

Straight Tap Wrench, Length 11 Inches, Hand Taps Capacity 5/32 to 1/2 Inch, Taps M4 to M12 Time-Sert taps 4-40 - 7/16 Inch, M3 - M11 Metric wrench number 5 **P/N C67202**

Straight Tap Wrench, Length 15 Inches, Hand Taps Capacity 5/32 to 3/4 Inch, Taps M4 to M19 Time-Sert taps 1/4 - 9/16 Inch, M5 - M14 Metric wrench number 6 **P/N C67203**

Straight Tap Wrench, Length 19 Inches, Hand Taps Capacity 1/4 to 1-1/8 Inch, Taps M12 to M28 wrench number 7 **P/N C67204**

Straight Tap Wrench, Length 40 Inches, Hand Taps Capacity 3/4 to 1-5/8 Inch, Taps M19 to M40 wrench number 8 **P/N C67205**



**T-HANDLE WRENCH**

T-handle wrench, Length 2-3/4 Hand Taps Capacity 1/16" to 1/4" Inch Taps M1.5 to M6 . Time-Sert taps M3 - M5 wrench number T11 **P/N C67208**

**T-HANDLE WRENCH**

T-handle wrench, Length 3-5/8 Hand Taps Capacity 7/32" to 1/2" Inch Taps M5 to M12 Time-Sert taps M5 - M11 wrench number T12 **P/N C67209**

## SCREW EXTRACTORS



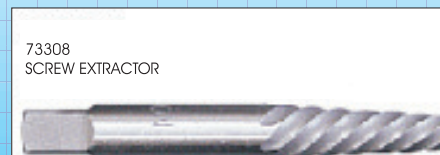
Removes broken bolts 5/8 to 7/8. If removing a Time-Sert insert, this tool will remove inserts from 1/2 to 9/16 inch or 12mm to 14mm metric.



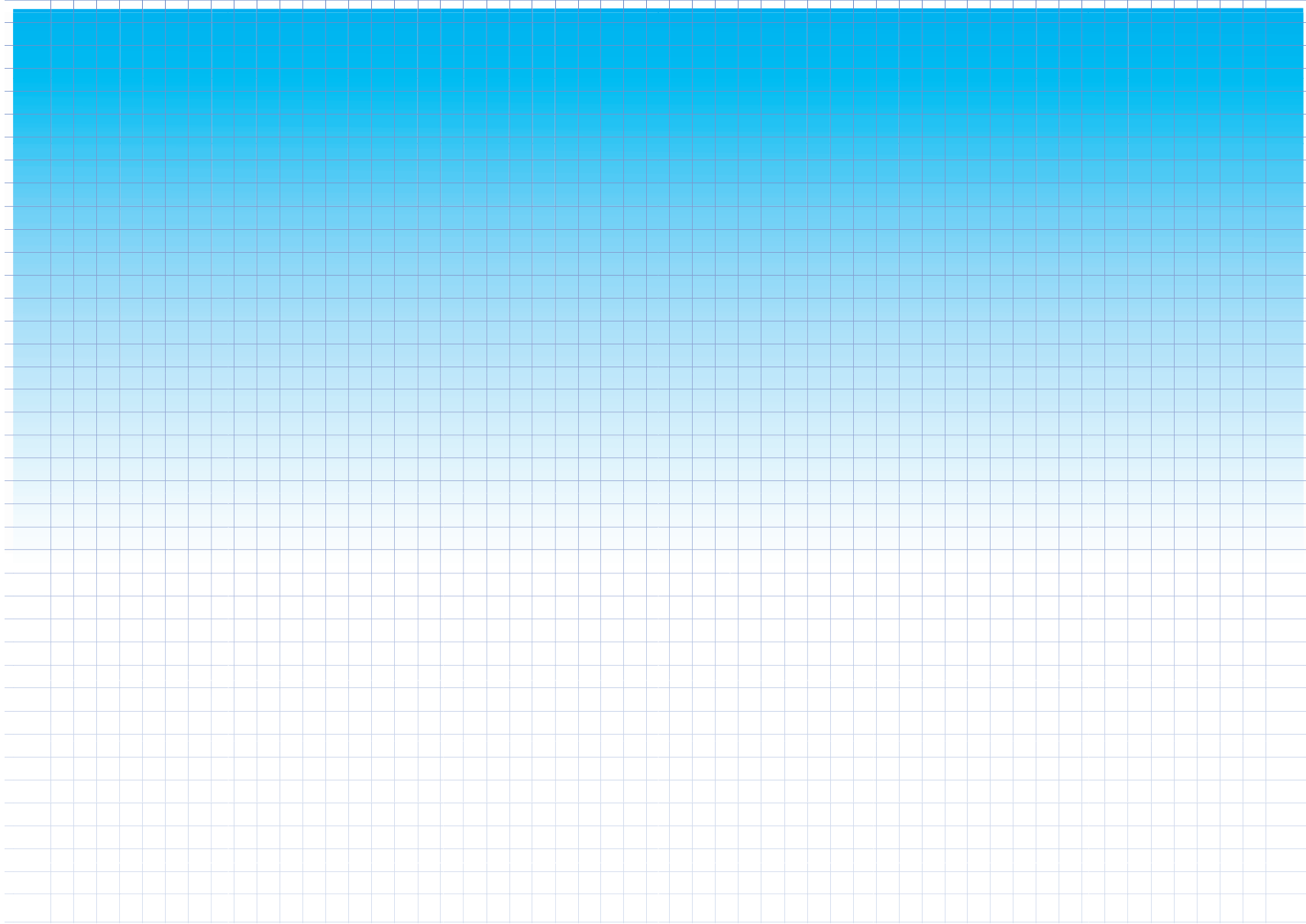
Removes broken bolts 7/8 to 1-1/8. If removing a Time-Sert insert, this tool will remove inserts from 5/8 to 3/4 inch or 16mm to 20mm metric.



5 pc set 3/32 to 5/8 If removing a Time-Sert insert, this set will remove inserts from 4-40 to 7/16 or 4mm to 11mm metric.



Removes broken bolts 1-1/8 to 1-3/8. If removing a Time-Sert insert, this tool will remove our 3/4 pipe insert.



**TIME FASTENER**  
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