

# 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

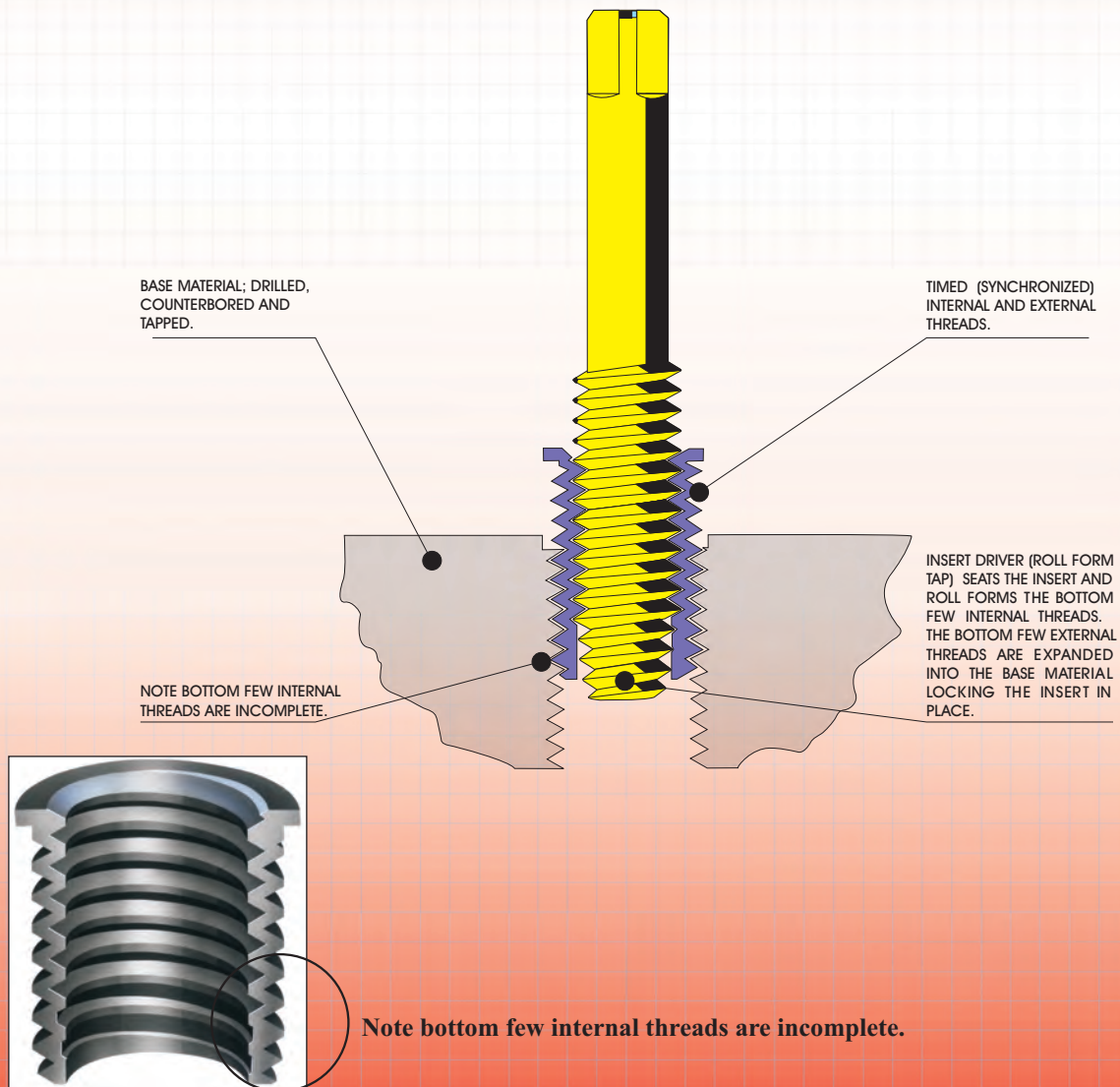
### ADVANTAGES WHICH ARE CONVINCING:

**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.

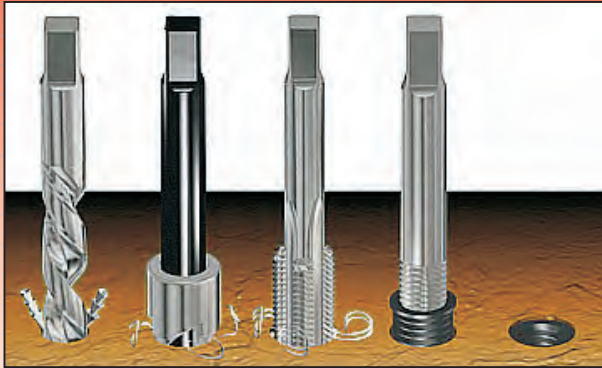
**TIME-SERT®** is **thin walled** due to synchronized internal external threads. Thin cross sectional area allows for installation in areas of limited space and clearance material.

**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.

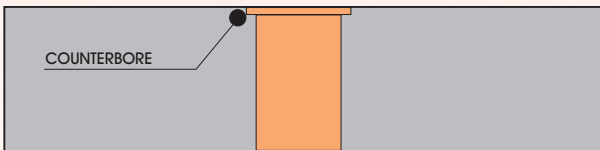


# ENGINEERING DATA



## 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
1/4 - 20	17/64	.265	.352	.075	.319
1/4 - 28	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
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



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.

## 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 1.25	U	.368	.440	.080	.422
M10 x 1.0	13/32	.406	.466	.080	.349
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° <sub>CSK</sub>	.942
3/4-14	1 3/32	1.093	1.300	90° <sub>CSK</sub>	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





# METRIC THREAD REPAIR KITS AND 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	4.3	.169	13051	13052
		6.0	.240	13053	13054
M4x0.7	1407	4.0	.157	14077	—
		6.0	.240	14071	14072
M5x0.8	1508	8.0	.320	14073	14074
		5.0	.199	15080	150802
M5x0.8	1508	10.0	.400	15081	15082
		12.0	.470	15083	15084
M6x1.0	1610	5.0	.199	15085	—
		8.0	.315	16100	161002
M6x1.0	1610	9.4	.370	16105	16106
		12.0	.470	16101	16102
M6x1.0	1610	12.0	.470	16103	16104
		17.0	.669	16107	—
M7x1.0	1710	19.0	.748	16109	—
		10.0	.400	17101	—
M7x1.0	1710	14.0	.550	17103	—
		18.0	.708	17105	—
M8x1.0	1810	20.0	.800	17107	—
		7.5	.295	18100	—
M8x1.0	1810	11.7	.460	18101	—
		8.0	.315	—	18128
M8x1.25	1812	9.0	.360	181210	—
		10.0	.400	18125	—
M8x1.25	1812	11.7	.460	18121	18122
		14.0	.550	18129	18126
M8x1.25	1812	16.2	.640	18123	18124
		18.0	.708	18127	181226
M8x1.25	1812	20.0	.800	181213	181224
		30.0	1.180	181217	—
M8x1.75 GM Rare	1817	16.2	.640	18173	—
M9x1.25	1912	9.0	.354	19120	—
		13.0	.510	19121	—
M9x1.25	1912	18.0	.710	19123	—
		22.0	.866	19127	—
M10x1.0	1010	6.2	.244	10100	10106
		8.0	.315	10105	—
M10x1.0	1010	9.0	.360	10101	10102
		15.0	.600	10103	10104
M10x1.25	1012	9.0	.354	10127	—
		14.0	.550	10121	10122
M10x1.25	1012	16.2	.650	10123	10124
		20.0	.800	10125	10126
M10x1.25	1012	25.0	.984	10129	—
		9.4	.370	10157	10150
M10x1.5	1015	11.0	.433	101511	—
		14.0	.550	10151	10152
M10x1.5	1015	17.0	.669	101517	—
		20.0	.800	10153	10154
M10x1.5	1015	22.0	.866	101522	—
		24.5	.960	10155	—
M10x1.5	1015	30.0	1.180	10159	10158
		40.0	1.575	101591	—
M11x1.25	1112	22.0	.870	11123	—
		28.0	1.100	11121	—
M11x1.25	1112	30.0	1.180	11127	—

## 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.
M11x1.5	1115	16.0	.630	11151	—
		22.0	.870	11153	—
		30.0	1.180	11155	—
M12x1.25	1212	9.0	.360	12121	—
		11.0	.430	12129	—
		15.0	.600	12123	12124
M12x1.25	1212	24.0	.950	12125	12126
		6.7	.263	12157	—
		9.2	.360	12151	—
M12x1.5	1215	13.5	.531	121501	—
		16.2	.640	12153	12152
M12x1.5	1215	24.0	.950	12155	12154
		30.0	1.180	12159	12160
M12x1.75	1217	10.0	.400	12177	—
		12.0	.472	12170	—
M12x1.75	1217	16.2	.640	12171	12172
		24.0	.950	12173	12174
M12x1.75	1217	30.0	1.180	12179	—
		14.0	.551	13151	—
M13x1.5	1315	19.0	.748	13153	—
		24.0	.950	13155	—
M13x1.5	1315	28.0	1.102	13157	—
		6.6	.260	14151	—
M14x1.5	1415	9.4	.370	14153	14154
		12.7	.500	14155	14156
M14x1.5	1415	16.0	.630	141552	—
		17.8	.700	14157	141550
M14x1.5	1415	24.0	.950	14158	141551
		26.0	1.023	141553	141554
M14x1.5	1415	28.0	1.100	14159	141556
		12.0	.472	14201	—
M14x2.0	1420	18.0	.710	14203	14204
		24.0	.950	14205	—
M14x2.0	1420	30.0	1.180	14207	—
		7.0	.270	16151	16150
M16x1.5	1615	12.7	.500	16153	16152
		24.0	.950	16155	16154
M16x1.5	1615	32.0	1.250	16157	—
		16.0	.630	16200	16202
M16x2.0	1620	24.0	.950	16201	16204
		32.0	1.250	16203	16206
M16x2.0	1620	38.0	1.496	16205	—
		10.0	.400	18151	—
M18x1.5	1815	15.0	.600	18157	—
		18.3	.720	18153	—
M18x1.5	1815	27.0	1.060	18155	—
		9.0	.354	20150	—
M20x1.5	2015	12.0	.472	20151	—
		17.0	.669	20153	—
M20x1.5	2015	30.0	1.180	20155	—
		10.0	.400	22151	—
M22x1.5	2215C	15.0	.590	22153	—
		20.0	.800	22155	—
M24x1.5	2415C	7.6	.300	24150	—
		10.0	.400	24151	—
M24x1.5	2415C	15.0	.590	24153	—
		20.0	.800	24155	—
M24x1.5	2415C	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	
				CARBON STEEL	STAINLESS STEEL
SIZE	PART NO.	INCHES	MM	PART NO.	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>	<b>6.3</b>	08321	08322
		.320	8.0	08323	08324
10-24	0024	.240	6.1	00240	00246
		<b>.300</b>	<b>7.6</b>	00241	00242
		.370	9.4	00243	00244
10-32	0032	.150	3.8	00329	00327
		.187	4.7	00325	00328
		.240	6.1	00320	00326
		<b>.300</b>	<b>7.6</b>	00321	00322
		.370	9.4	00323	00324
12-24	0124	.300	7.6	01241	01242
		<b>.370</b>	<b>9.4</b>	01243	01244
		.472	12.0	01245	01246
1/4-20	0140	.280	7.1	01400	01406
		<b>.380</b>	<b>9.4</b>	01401	01402
		.500	12.7	01403	01404
		.750	19.0	01405	01408
		1.000	25.4	01407	01409
1/4-28	0148	.280	7.1	01480	01486
		<b>.380</b>	<b>9.4</b>	01481	01482
		.500	12.7	01483	01484
1/4-32	0142	.180	4.5	01421	01422
		.250	6.3	01423	01424
		<b>.380</b>	<b>9.4</b>	01425	01426
		.500	12.7	01427	01428
5/16-18	0561	.350	8.9	05610	05617
		<b>.450</b>	<b>11.4</b>	05611	05612
		.620	15.7	05613	05614
		.750	19.0	05615	05616
5/16-24	0562	.350	8.9	05620	—
		<b>.450</b>	<b>11.4</b>	05621	05622
		.620	15.7	05623	05624
		.750	19.0	05625	—
3/8-16	0381	.312	7.9	03818	038182
		.400	10.0	03819	038192
		<b>.520</b>	<b>13.2</b>	03811	03812
		.620	15.7	03813	03814
		.750	19.0	03815	03816
		.900	22.8	038190	—
		1.000	25.4	03810	038102
		1.200	30.4	03817	—
3/8-24	0382	.300	7.6	—	03820
		.350	8.9	03825	—
		<b>.520</b>	<b>13.2</b>	03821	03822
		.750	19.0	03823	03824

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

INCH KITS		INSERT LENGTH		INSERTS	
				CARBON STEEL	STAINLESS STEEL
SIZE	PART NO.	INCHES	MM	PART NO.	PART NO.
7/16-14	0761	.400	10.0	07610	—
		<b>.600</b>	<b>15.2</b>	07611	07612
		.870	22.0	07613	07614
		1.000	25.4	076135	07619
		1.250	31.7	07615	07618
7/16-20	0762	1.500	38.0	07617	—
		.250	6.3	07629	—
		.370	9.4	076320	—
		.480	12.2	07627	—
		<b>.600</b>	<b>15.2</b>	07621	07622
		.870	22.0	07623	07624
7/16-24	0764	1.000	25.4	076231	—
		1.370	34.7	07625	—
		.500	12.7	07641	07642
1/2-13	0121	<b>.600</b>	<b>15.2</b>	07643	—
		.800	20.3	07645	—
		.400	10.0	01217	—
		<b>.650</b>	<b>16.5</b>	01211	01212
1/2-20	0122	1.000	25.4	01213	01214
		1.250	31.7	01219	—
		1.500	38.0	01215	—
		.400	10.0	01225	—
9/16-12	0961	.500	12.7	01220	—
		<b>.650</b>	<b>16.5</b>	01221	01222
		1.000	25.4	01223	01224
		1.370	34.7	01227	—
9/16-18	0968	.500	12.7	09610	—
		<b>.750</b>	<b>19.0</b>	09611	—
		1.120	28.4	09615	—
		1.500	38.0	09617	—
5/8-11	0581	.350	8.9	09687	—
		.450	11.4	09685	—
		<b>.750</b>	<b>19.0</b>	09681	—
		1.120	28.4	09683	—
5/8-18	0588	.500	12.7	05810	—
		<b>.850</b>	<b>21.6</b>	05811	05812
		1.250	31.7	05813	05814
		1.500	38.0	05815	—
3/4-10	0341	.320	8.1	05881	—
		.450	11.4	05887	—
		<b>.850</b>	<b>21.6</b>	05883	—
3/4-16	0346	1.250	31.7	05885	—
		.750	19.0	03415	—
		<b>1.100</b>	<b>28.0</b>	03411	—
3/4-24	0341	1.500	38.0	03413	—
		.650	16.5	03460	—
		<b>1.100</b>	<b>28.0</b>	03461	—
3/4-32	0346	1.500	38.0	03463	—
		1.500	38.0	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

## 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 0346C Insert Part No.03415  
Contains:Drill, Cbore,Tap, Driver, Tapguide, 5 inserts .750 length

## M10x1.5 Drain Pan

Kit Part number 1015A 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 number 12121  
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,Chrylser...

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

## 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

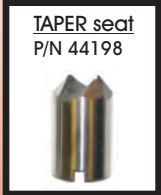


# SPARK PLUG KITS



**INDIVIDUAL RECONDITION SEAT CUTTERS**

These recondition seat cutters can only be used with kits 4412 and 4412E



ANTI- SEIZE



## FORD TRITON

Note: FORD TRITON M14x1.25 repair use P/N 5553 kit comes with all tools and 5 inserts Also used for 1.9 / 3.8 / 4.6 / 5.4 Liter engines

Triton "3 Valve" M16x1.5 use P/N 3221

PART NO. 37229

WASHER SEAT				TAPER SEAT			
SPARK PLUG TYPES				SPARK PLUG TYPES			
Washer seat spark plugs seal with a washer on plug.				Sealer must be used when installing taper seat inserts.			
WASHER SEAT INSERTS				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			
M10 X 1.0 Standard Kit	4010	9.0	.360	40101			
M10 X 1.0 Deep Hole Kit	4010E	12.0	.472	40102			
		15.0	.600	40103			
		23.0	.905	40105			
M10 X 1.0 GLOW PLUG	4010GP	12.0	.472	40102			
M10 X 1.25 GLOW PLUG	4024	16.2	.650	10123			
	DuraMax 6.6LDiesel						
M12 X 1.25	4212	9.0	.360	42121			
		15.0	.600	42123			
		17.5	.690	42125			
		22.0	.866	42127			
M12 X 1.25 2008 FORD 3 VALVE	4212H				21.0	.827	42126
M14 X 1.25 Standard Kit	4412	7.0	.270	44121	7.0	.270	44181
		8.0	.320	44123	10.0	.400	44183
M14 X 1.25 Deep Hole Kit	4412E	9.4	.370	44125			
		11.0	.430	44127			
4412E kit has extended tools for better reach when repairing Sparkplugs in holes 6" deep or more.		13.5	.530	44113			
		15.0	.600	44129	15.7	.620	44185
		16.8	.660	44111	16.8	.660	44186
		23.0	.905	44112	24.0	.950	44187
M18 X 1.5	4815	10.0	.400	48151	10.0	.400	48181
		18.3	.720	48153			
7/8-18	4718	11.0	.430	47181			
		20.0	.780	47183			
		24.5	1.000	47185			

M14x1.25 Aluminum Inserts	WASHER SEAT		PART NO.	TAPER SEAT		PART NO.
	MM	INCHES		MM	INCHES	
<b>Aluminum Inserts</b> For kits 4412 & 4412E	7.0	.270	44121A	7.0	.270	44181A
	8.0	.320	44123A	10.0	.400	44183A
	9.4	.370	44125A	13.5	.530	44184A
	11.0	.430	44127A	15.7	.620	44185A
	13.5	.530	44113A	16.8	.660	44186A
	15.0	.600	44129A	24.0	.950	44187A
	16.8	.660	44111A	Sealer required for all Taper seat inserts. P/N 6020		
	23.0	.905	44112A			

## SPECIAL SEAT CUTTERS

For use on some taper seat spark plug repairs that have limited access to the spark plug hole.

M14 x 1.25 PART NO. 44196

M18 x 1.5 PART NO. 48196

M14 x 1.25 Extended

PART NO. 44196E



## SEALER

This sealer must be used when installing taper seat inserts. PART NO. 6020



## INSERT DRIVER OIL

This oil is superior for installing inserts. PART NO. 6010



## SEAT CUTTER GUIDE

Used when the step tap cannot be threaded deep enough to allow use of the seat cutter.

M14 x 1.25 PART NO. 44195





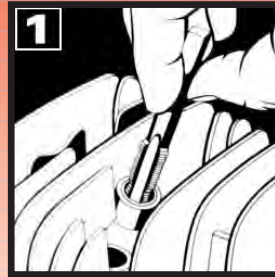
# SPARK PLUG THREAD REPAIR

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.

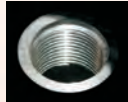
*This operation is the same for the taper seat inserts.*



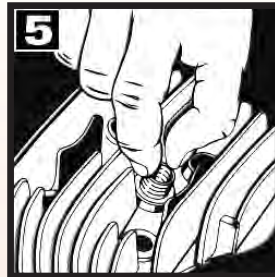
Using the wrench rotate the seat cutter. After a few turns lift the seat cutter to inspect the seat. Repeat operation until the seat is completely cleaned up. Remove the step tap from the hole.



Good Seat Complete



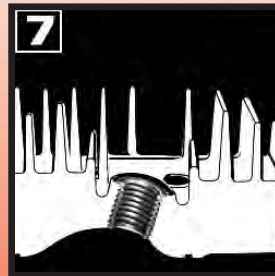
Bad Seat incomplete



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



### **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

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

J-42385-500 kit with

J-42385-871 Bushing Insert P/N 11155

### **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

1999-2005 Holden Commodore as an option

1999-2005 Holden Statesman/Caprice

2001-2005 Holden Monaro

Kit Part number J-42385-100 Insert p/n 112030

### **M10x 2.0 Main Bearing kit 5.7 V8 LS**

Kit Part number J-42385-120 Insert p/n 102022

## 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 SPARKPLUG 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 SPARKPLUG REPAIR M16x1.5 3 Valve Heads



Kit Part No. 3221  
Insert Part No 32214

### FORD HEAD BOLT 4.6/5.4 M11x1.5 HEAD BOLT



Kit Part No. 6111  
Insert Part No. 11155

## 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

## 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

### M10x1.5 24.5mm Head bolt application



Kit Part No. 1087  
Insert Part No 10155

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

## SPECIAL APPLICATIONS

### DIESEL INJECTOR M24 x 2.0 THREAD REPAIR KIT



Kit Part No. 2420  
Insert Part No. 24201

### BENDIX AIRCRAFT WHEEL 1/4-28 THREAD REPAIR KIT



Kit Part No. 01488  
Insert Part No. 014888

### BENDIX AIRCRAFT WHEEL 1/4-28 OVERSIZED THREAD REPAIR KIT



Kit Part No. 01489  
Insert Part No. 014899

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



Kit Part No. 1015D30  
Insert Part No. 10159

### 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



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.

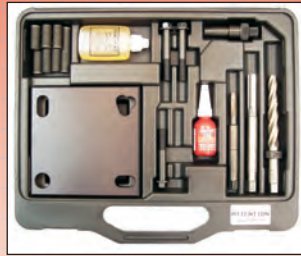
**Kit Includes**  
Core drill, tap, driver,  
5 inserts of the no flange  
16.2mm length.

**Kit Part number 1812ECORE**



# 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.



## **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. 11121

Includes 10 inserts of a M11x1.25x28mm 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

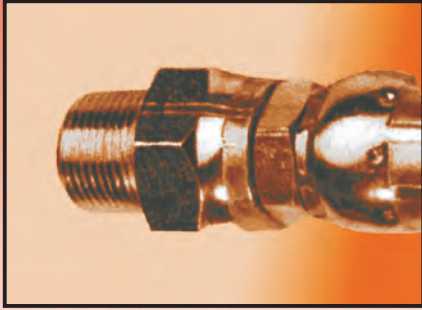
Universal head bolt kits also available in oversize “BIG-SERT” versions.



# 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



# 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.

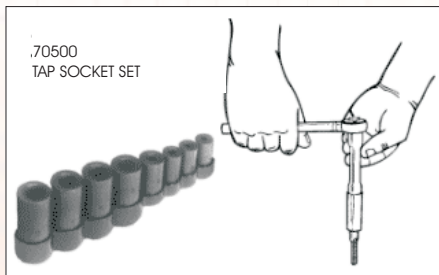
### AMERICAN TAP GUIDES

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
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
M18 X 1.5	38155
M20 x 1.5	30215
M22 x 1.5	32255
M24 x 1.5	32455

## TAP SOCKET SETS



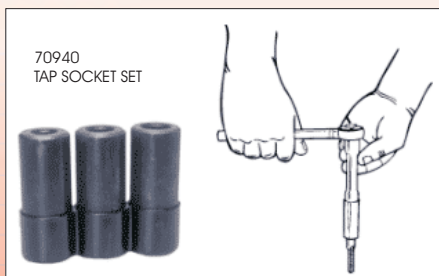
.70500  
TAP SOCKET SET

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.

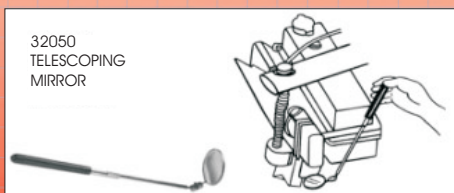


70940  
TAP SOCKET SET

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.



32050  
TELESCOPING  
MIRROR

2 1/4" diameter mirror swivels to any position. Length extends from 10" to 14".



# 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



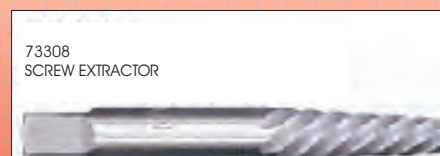
Removes broken bolts 5/8 to 7/8. If removing a Time-Sert insert, this tool will remove inserts from 1/2 to 9/16 inch or 12mm to 14mm metric.



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

**COMPANY INC.**

5301 -G LONGLEY LANE  
RENO NEVADA 89511  
PHONE (775) 829-1026  
PHONE (800) 423-4070  
FAX (775) 829-1989

[www.timesert.com](http://www.timesert.com)

November 2012