

HeliCoil® Thread Repair System

Heli-Coil has the most effective and universally accepted method of thread repair. Heli-Coil inserts quickly and permanently restore **stripped, worn or damaged threads** to their original size and condition.

The inserts work in just about any part or material; **aluminum, magnesium, cast iron, bronze**, etc. The use of light weight (and soft) materials in fuel efficient cars means more thread damage... there is a Heli-Coil insert to repair virtually every application.

Damaged threads can be restored to better than new condition in spark plug ports, carburetor fuel inlets, transmission housings, oil drain plugs, exhaust and intake manifolds, head bolt holes, brake calipers and more!

The Heli-Coil system makes all other thread repair methods basically obsolete: welding, plugging, oversized fasteners and oversized drilling of mating parts. It's faster – you save time, increase your shop's repair capabilities and restore parts that otherwise would have to be scrapped.



Heli-Coil repairs are available in the following standard thread series and size ranges: **Inch Coarse** (#8 thru 1-1/2), **Inch Fine** (#10 thru 1-1/2), **Metric Coarse** (M3 thru M20), **Metric Fine** (M8 thru M18), **Spark Plug** (10mm, 12mm, 14mm, 18mm & 7/8"), and **Pipe Thread** (1/8" thru 1").

In addition to the above, custom sizes are available for various repairs.

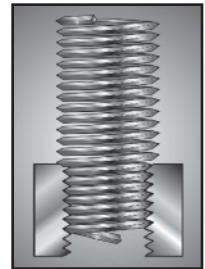
Heli-Coil Stainless Steel Inserts

Heli-Coil inserts are precision formed coils of extremely hard stainless steel (18-8) diamond-shaped wire. When installed into a Heli-Coil tapped hole, the insert provides permanent conventional screw threads. The insert has a driving "tang" for installation which is notched for easy removal.



The Retention Principle

Heli-Coil inserts are larger in diameter before installation than the tapped hole. During installation, the inserting tool reduces the diameter of the leading coil so it can enter the



tapped hole. After the installation, each high tensile stainless steel coil expands outward against the tapped hole to permanently anchor the insert.

Stripped & Fixed

When threads become stripped, worn or damaged for any

reason, the strength and reliability are greatly reduced. Potentially dangerous situations are eliminated when the damaged thread is repaired

with Heli-Coil inserts. The Heli-Coil threaded insert provides stronger, more reliable threads than the original tapped hole and at the same time eliminates the possibility of thread wear, corrosion, galling, seizing and rust.



Installation

Drill

Drill out the damaged threads using the drill size specified on the kit or set. Drill to sufficient depth to accommodate the insert length and bolt or screw being used.



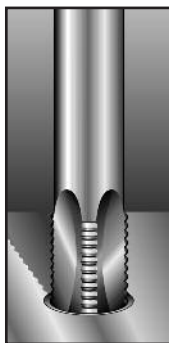
Install

Use the installation tool supplied in the kit or set. Just wind the insert into the hole until the top coil is 1/4 - 1/2 turn into the tapped thread. Now you're back to the original size and the original size fastener can be used.



Tap

Use the Heli-Coil tap supplied in the kit or set. Check the size on the shank to make sure you have the right one. Tap the hole to sufficient depth to accommodate the insert length and bolt or screw being used.



Tang Removal

The tang must be removed to allow full passage of the bolt or screw through the insert. Place square (unchamfered) end of a punch on the tang and strike sharply. For inserts over 1/2", M14 and up, and all spark plug sizes, use long nose pliers. Holding the tang with the pliers, bend it alternately in and out until it comes free.

Note: For **Spark Plug** repairs, **NO** drilling is necessary. The Heli-Coil spark plug kit contains a piloted reamer tap. With this tap, the damaged threads are removed and new threads are cut in one continuous operation.

HeliCoil® Metric Thread Repair Kits

Heli-Coil has all you need in metric thread repair items. Available from stock are Metric Coarse kits in sizes M3 through M20 and Metric Fine kits

in sizes M8 through M20. All Metric kits contain a Heli-Coil tap, installation tool, a quantity of inserts and complete instructions.

METRIC COARSE				Kit Contents and Replacement Parts					
THREAD SIZE + LENGTH	KIT PART NO.	KIT PKG. TYPE	INSERTS PER KIT	TAP PART NO.	INSTALLATION TOOL PART NO.	TOOL TYPE	PACKAGED INSERT PART NO.	PACKAGED INSERT QTY.	DRILL SIZE
M3x0.5 x 4.5mm	5546-3	B	12	2087-3	7751-3	5	R1084-3	12	1/8
M4x0.7 x 6.0mm	5546-4	A	12	2087-4	3747-4	3	R1084-4	12	11/64
M5x0.8 x 7.5mm*†	5546-5	A	12	570-5	3747-5	3	R1084-5	12	13/64
M6x1 x 9.0mm*†	5546-6	A	12	570-6	3747-6	3	R1084-6	12	1/4
M7x1 x 10.5mm	5546-7	A	12	570-7	3747-7	2	R1084-7	12	9/32
M8x1.25 x 12.0mm*†	5546-8	A	12	570-8	3747-8	2	R1084-8	12	21/64
M9x1.25 x 13.5mm	5546-9	A	12	570-9	3747-9	2	R1084-9	12	23/64
M10x1.5 x 15.0mm*	5546-10	A	12	570-10	3747-10	2	R1084-10	12	13/32
M11x1.5 x 16.5mm	5546-11	A	6	580-11	3747-11	3	R1084-11	6	29/64
M12x1.75 x 18.0mm	5546-12	A	6	2087-12	3747-12	2	R1084-12	6	31/64
M14x2 x 21.0mm	5546-14	B	6	2087-14	3747-14	2	R1084-14	6	37/64
M16x2 x 24.0mm	5546-16	B	6	2087-16	3747-16	2	R1084-16	6	21/32
M18x2.5 x 27.0mm	5546-18	B	6	2087-18	3747-18	2	R1084-18	6	47/64
M20x2.5 x 30.0mm	5546-20	B	4	2087-20	3747-20	2	R1084-20	4	13/16

A - Carded B - Pouch

*Sizes included in Master Thread Repair Set - Part No. 5626-150

†Sizes included in Master Thread Repair Set - Part No. 5626-125



METRIC FINE				Kit Contents and Replacement Parts					
THREAD SIZE + LENGTH	KIT PART NO.	KIT PKG. TYPE	INSERTS PER KIT	TAP PART NO.	INSTALLATION TOOL PART NO.	TOOL TYPE	PACKAGED INSERT PART NO.	PACKAGED INSERT QTY.	DRILL SIZE
M8x1 x 12.0mm	5542-8	A	12	573-8	4835-8	3	R4255-8	12	21/64
M10x1 x 15.0mm	5542-10	A	12	573-10	4835-10	3	R4255-10	12	13/32
M11x1 x 16.5mm	5542-11	A	6	573-11	4835-11	3	R4255-11	6	7/16
M10x1.25 x 15.0mm†	5543-10	A	12	575-10	4640-10	3	R4649-10	12	13/32
M11x1.25 x 16.5mm	5543-11	A	6	4944-11	4640-11	3	R4649-11	6	29/64
M12x1.25 x 18.0mm	5543-12	A	6	4944-12	4640-12	3	R4649-12	6	31/64
M12x1.5 x 18.0mm	5544-12	A	6	4976-12	4973-12	3	R3745-12	6	31/64
M14x1.5 x 21.0mm	5544-14	B	6	4976-14	4973-14	3	R3745-14	6	9/16
M16x1.5 x 24.0mm	5544-16	B	6	4976-16	4973-16	3	R3745-16	6	21/32

†Sizes included in Master Thread Repair Set - Part No. 5626-125

HEAVY DUTY APPLICATIONS

SIZE	HELI-COIL KIT PART NO.
Oil & Transmission Pan Screws	
1/4-20	5521-4
5/16-18	5521-5
Cylinder Head Bolts	
7/16-14	5521-7
1/2-13	5521-8
9/16-12	5521-9
M10x1.5	5546-10
M11x1.5	5546-11
M11x1.25	5543-11
M12x1.75	5546-12
Exhaust Manifold Studs	
1/4-20	5521-4
1/4-28	5528-4
5/16-18	5521-5
5/16-24	5528-5
3/8-16	5521-6
3/8-24	5528-6
7/16-14	5521-7
7/16-20	5528-7
1/2-20	5528-8
9/16-18	5528-9
5/8-18	5528-10
3/4-10	5521-12
M5x0.8	5546-5
M6x1	5546-6
M8x1.25	5546-8
M10x1.5	5546-10
M10x1.25	5543-10
Starter Bolts	
3/8-16	5521-6
M10x1.5	5546-10
Alternator Bolts	
5/16-18	5521-5
3/8-16	5521-6
M10x1.5	5546-10
Drain Plugs	
1/2-20	5528-8
5/8-18	5528-10
3/4-16	5528-12
7/8-14	5528-14
M12x1.75	5546-12
M14x1.5	5544-14
M16x1.5	5544-16
Brake Caliper Bolts	
M9x1.25	5546-9
M11x1.25	5543-11

HEAVY DUTY APPLICATIONS

SIZE	HELI-COIL KIT PART NO.
Aux. Transmission Cases (Fuller)	
3/8-16	5521-6
5/16-18	5521-5
Caterpillar Flywheel Bolts	
3/4-16	5528-12
Cummins Head Bolt	
11/16-16	5559-11
Caterpillar Pre-Combustion Chamber	
3/4-12	4922-12
7/8-12	4922-141
1-12	4922-161
1 1/8-12	4922-18
1 1/4-12	4922-20
Wheel Studs	
3/4-10	5521-12
3/4-16	5528-12
Motor Mounts/Bell Housing	
1/2-13	5521-8
5/8-11	5521-10
Oil Pan	
7/16-14	5521-7
Intake Manifolds	
3/8-16	5521-6
After Coolers	
5/16-18	5521-5
Valve Cover	
3/8-16	5521-6
Detroit Diesel Series "92" Block Head Bolt/Main Bearing	
11/16-11	5575-11
Mack-Scania Head Bolt	
M14x1.5	5544-14
American Bosch APE Diesel Fuel Pumps	
1/4-20	5401-4-1-SL
SPARK PLUG HOLE THREADS	
SIZE	HELI-COIL KIT PART NO.
Wire Insert*	
10-1.0mm	5523-10
12-1.25mm	5523-12
14-1.25mm	5523-14
18-1.5mm	5523-18
7/8-18	550
Sav-A-Thread**	
M14x1.25	5334-14 or 5408-14 5409-14

SIZE	HELI-COIL KIT PART NO.
Motorcycle Thread Repair Set	
M6x1, M8x1.25 and M10x1.25 (2 lengths)	4650
Cam Screw Cover, Tappet Guide, Oil Pump Stud and Timer Mounting	
1/4-24	5540-4
Front/Rear Brake Drum	
3/8-20	5540-6
Head Bolt	
7/16-16	5540-7
Drain Plug - Engine and Transmission	
1/2-13	5521-8-2
Drain Plug - Chain Case	
1/2-20	5528-8-2
Timing Plug	
5/8-18	5528-10-2
Generator Case Bolt	
5/16-18	5521-5-2
Transmission Cover	
5/16-18	5521-5-3
Japanese Motorcycle Head Bolt	
M10x1.25	4647-10-1

TYPICAL VOLKSWAGEN APPLICATIONS

SIZE	HELI-COIL KIT PART NO.
VW Electro Magnetic	
M8x1	5542-8
Fuel Cut Off Jet	
M11x1	5542-11
VW Rabbit Head Bolt Threads	
M11x1.25	5546-11
VW Fuel Injection Head Sensor	
M10x1	5542-10-1

PIPE THREAD KITS

SIZE	HELI-COIL KIT PART NO.
1/8-27	5407-2
1/4-18	5407-4
3/8-18	5407-6
1/2-14	5407-8
3/4-14	5407-12
1-11 1/2	5407-16

*For gasket type spark plug assemblies only.

**For Taper seat or gasket type spark plug assemblies.