

SPX KENT-MOORE J-42385-2030 CYLINDER HEAD BOLT THREAD REPAIR KIT TIMESERT®

KIT CONTENTS

INSERT SIZE	INSERT	STEP DRILL	STOP COLLAR	TAP	DRIVER	ATTACHMENT BOLTS
J-42385-						
M11 x 2.0 x 3.0 (Outboard Head Bolt)	108	2031	N/A	2032	2033	2036
M11 x 2.0 x 3.0 (Inboard Head Bolt)	108	2031	2034	2032	2033	2035
LOCTITE #277 (J-42385-109)						
DRIVER OIL (J-42385-110)						

OTHER ITEMS REQUIRED (From J-42385-300 Kit)

FIXTURE PLATE	BUSHING	ALIGNMENT PINS
J-42385-		
301	302	303

CAUTION

Safety glasses must be worn at all times when using this kit,

NOTICE

Ensure the cylinder head bolts, tools and inserts that are being used are the proper pitch or engine damage will occur. The thread pitch on the M11 cylinder head bolts and the engine block cylinder head bolt holes have been revised. In order to install the proper pitch insert it is important to identify which thread pitch is being used. Cylinder head bolts with a pitch of 1.5 mm have a thread length of about 48 mm (1.890 in) long. Cylinder head bolts with a pitch of 2.0 mm have a thread length of about 67 mm (2.638 in) long.

IMPORTANT

Verify the depth of the cylinder head bolt hole and the pitch of the cylinder head bolt threads in the cylinder block. Measure the depth from the deck surface of the block to the bottom of the cylinder head hole. All cylinder head holes should use only one of the bushings. Never use both bushings to repair a block.

Use J-42385-2030 Kit

With M11 bolts with 2.0 mm pitch:

Use the bushing J-42385-302 for inboard holes that measure 73 mm (2.874 in) deep and outboard holes that measure 89.5 mm (3.524 in) deep.

Use J-42385-2000 Kit

With M11 bolts with a 1.5 mm pitch:

* Use the bushing J-42385-2022 for inboard holes that measure 73 mm (2.874 in) deep and outboard holes that measure 89.5 mm (3.524 in) deep.

* Use the bushing J-42385-302 for inboard holes that measure 80 mm (3.150 in) deep and outboard holes that measure 96.5 mm (3.799 in) deep.

* Cutting fluid such as WD40, GM P/N 1052864 (Canadian P/N 992881) or equivalent is necessary for all drilling and tapping operations!

* A drill motor is recommended for all drilling and counterboring operations.

* Driver oil J-42385-110 must be used on the insert driver.

* After each cutting operation clean out the chips using spray cleaner cleaner GM P/N 12346139, GM P/N

12377981 (Canadian P/N 10953463) or equivalent and compressed air.

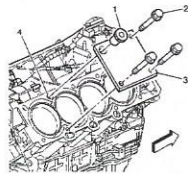
* The stop collar on the step drill-J-42385-2031 is not adjustable! DO NOT adjust! Adjusting the collar will result in incorrect hole depths and possible engine damage.

* Do not allow metal chips or shavings to enter the engine assembly. Cover and clean the engine components as necessary.

INSTRUCTIONS

Step 1

Position the fixture plate (3) with the bushing (1) installed over the cylinder head bolt hole to be repaired (4).

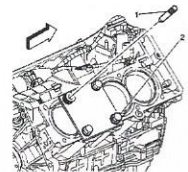


Step 2

Loosely install the fixture plate bolts (2) into the remaining cylinder head bolt holes.

Step 3

Position the alignment pin (1) through the bushing and into the cylinder head bolt hole.

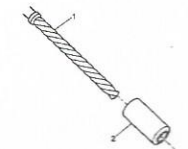


Step 4

With the alignment pin in the desired cylinder head bolt hole, tighten the fixture retaining bolts (2). Tighten to (20 Nm (15 lb ft) DO NOT use impact wrench!

Step 5

Remove the alignment pin (1) from the cylinder head bolt hole.



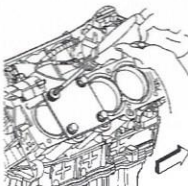
Step 6

For the inboard hole only, install the additional stop collar (2) onto the drill (1).

Step 7

Important

- * During the drilling process, it is necessary to repeatedly remove the drill and clean chips from the hole and the flutes of the drill.
- * Drill the hole until the stop collar contacts the top of the drill bushing.

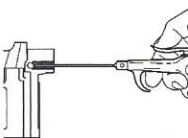


Drill out the threads of the damaged hole.

Step 8

Important

- * All chips must be removed from the drilled hole prior to tapping. Using compressed air, clean out any chips.

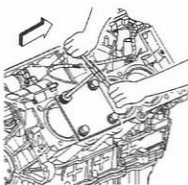


Step 9

Important

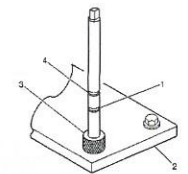
- * During the tapping process, it is necessary to repeatedly remove the tap and clean chips from the hole and the flutes of the tap.
- * Ensure the tap has created full threads at least to the depth equal to the insert length.

Using a suitable tapping wrench, tap the threads of the drilled hole by hand only.



Step 10

In order to tap the new threads for the insert to the proper depth, rotate the tap into the cylinder head bolt hole until the first mark (1) on the tap aligns with the top of the drill bushing (3) for the inboard holes or until the second mark (4) on the tap aligns with the top of the drill bushing (3) for the outboards holes.

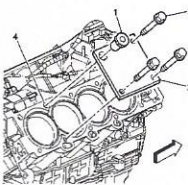


Step 11

Important

- * Remove the fixture plate prior to installing the insert with the installer tool.

Remove the fixture plate bolts (2).



Step 12

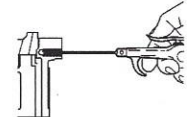
Remove the fixture plate (3) and bushing (1).

Step 13

Important

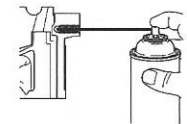
- * All chips must be removed from the tapped hole prior to insert installation.

Using compressed air, clean out any chips.



Step 14

Spray cleaner GM P/N 12346139, GM P/N 12377981 (Canadian P/N 10953463) or equivalent into the tapped hole.

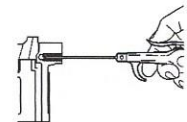


Step 15

Important

- * All chips must be removed from the tapped hole prior to insert installation.

Using compressed air, clean out any chips.

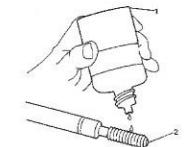


Step 16

Important

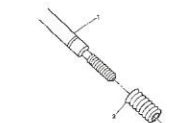
- * Do not allow oil or other foreign material to contact the outside diameter (OD) of the insert.

Lubricate the threads of the driver installation tool (2) with the driver oil (1) J-42385-110.



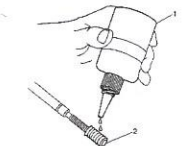
Step 17

Install the insert (2) onto the driver installation tool (1).



Step 18

Apply threadlock sealant GM P/N 12345493, (Canadian P/N 10953488), J-42385-109, LOCTITE 277, or equivalent (1) to the insert OD threads (2).



Step 19

Install the insert and installation driver (1) into the tapped hole by hand only.

Step 20

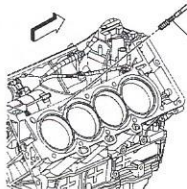
Start the insert into the threaded hole.

Step 21

Important

- * If the insert will not thread down until the flange contacts the counterbored surface remove the insert immediately with a screw extracting tool and inspect the tapped hole for any remaining chips and/or improper tapping.

Install the insert until the flange of the insert contacts the counterbored surface.



Step 22

Important

- * The driver installation tool will tighten up before screwing completely through the insert. This is acceptable. The threads at the bottom of the insert are being formed and the insert is mechanically locking the insert into the base material threads.

Continue to rotate the driver installation tool through the insert.

Step 23

Inspect the insert for proper installation into the tapped hole.

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