

HELICOIL INSERTS - REMOVAL/INSTALLATION

EFFECTIVITY: ALL

1. General

- A. This section gives the procedures to remove and install the helicoil inserts.
- B. The procedures in this section are given in the sequence below. The tasks identified with (◆) are part of the Scheduled Maintenance Requirements Document (SMRD).

TASK NUMBER	DESCRIPTION	EFFECTIVITY
51-44-00-000-801-A	HELICOIL INSERTS - REMOVAL	ALL
51-44-00-400-801-A	HELICOIL INSERTS - INSTALLATION	ALL

TASK 51-44-00-000-801-A

EFFECTIVITY: ALL

2. HELICOIL INSERTS - REMOVAL

A. General

(1) This procedure gives the instructions to remove the helicoil inserts.

B. References

REFERENCE	DESIGNATION
AMM TASK 20-00-00-910-801-A/200	AIRCRAFT SAFE PROCEDURES FOR MAINTENANCE SERVICES - MAINTENANCE PRACTICES

C. Zones and Accesses

Not Applicable

D. Tools and Equipment

Not Applicable

E. Auxiliary Items

Not Applicable

F. Consumable Materials

Not Applicable

G. Expandable Parts

Not Applicable

H. Persons Recommended

QTY	FUNCTION	PLACE
1	Do the task	Helicoil Inserts

I. Preparation

SUBTASK 841-002-A

WARNING: MAKE SURE THAT THE AIRCRAFT IS IN A SAFE CONDITION BEFORE YOU DO THE MAINTENANCE PROCEDURES. THIS IS TO PREVENT INJURY TO PERSONS AND/OR DAMAGE TO THE EQUIPMENT.

(1) Do the procedure to make the aircraft safe for maintenance ([AMM TASK 20-00-00-910-801-A/200](#)).

(2) Put warning signs in the area where you will do the task.

J. Removal ([Figure 401](#))

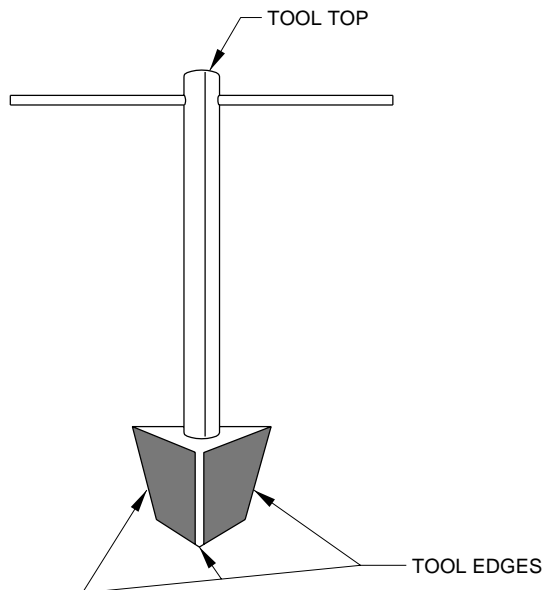
SUBTASK 020-002-A

(1) Install the helicoil insert removal tool (1) into the insert, so that one of the tool edges is positioned ¼ turn from the installed insert end (2).

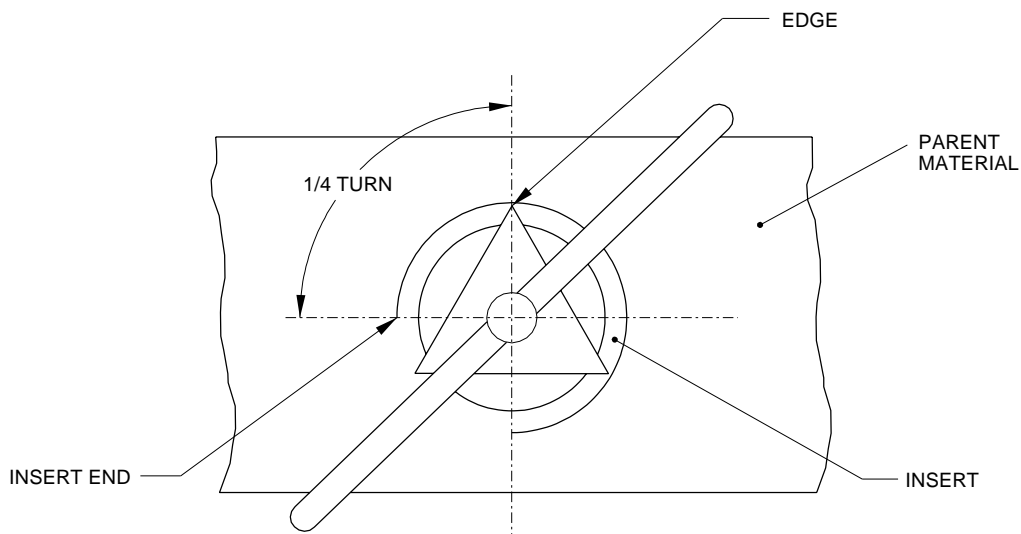
(2) Apply a slight stroke to the tool top with a hammer so as to notch the insert top edge.

- (3) Firmly press the tool against the insert and slowly turn the tool counterclockwise, while you keep the pressure constant, until the insert is removed.
- (4) After the removal, do a visual inspection of the area. If you find any damage to the tapped hole, contact Embraer.

EFFECTIVITY: ALL
 Helicoil Inserts - Removal
 Figure 401



1. HELICOIL INSERT REMOVAL TOOL



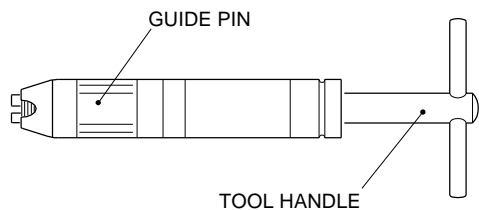
2. INSTALLATION OF THE HELICOIL INSERT REMOVAL TOOL

EM145AMM510113A.DGN

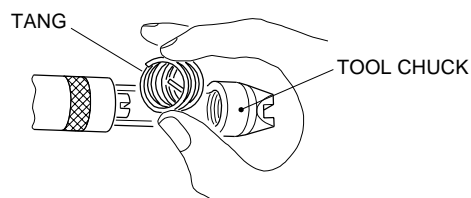
EFFECTIVITY: ALL

Helicoil Inserts - Installation

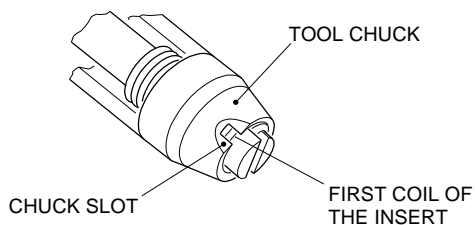
Figure 402



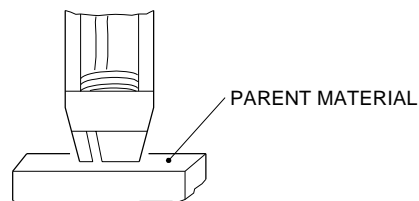
1. SPECIAL HELICOIL INSERT TOOL FOR THE
INSTALLATION OF INSERTS.



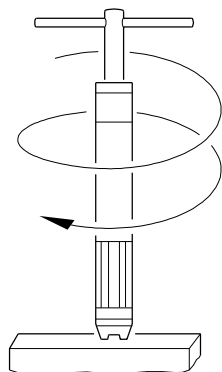
2. INSERT INSTALLATION TO THE TOOL.



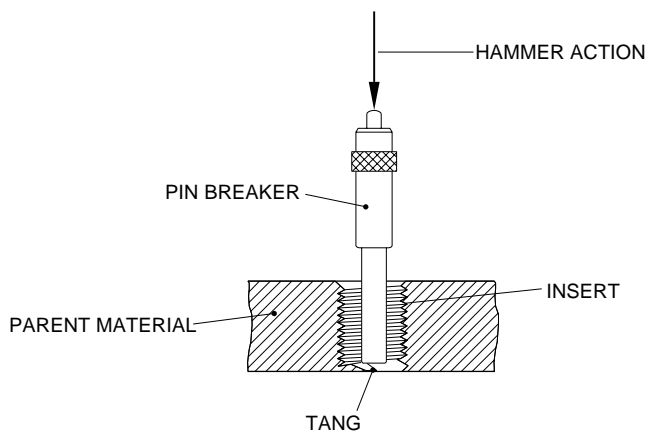
3. FIRST COIL OF INSERT APPEARING IN
THE CHUCK SLOT.



4. ADJUST TOOL ON THE TAPPED HOLE.



5. INSERT INSTALLATION.



6. REMOVAL OF THE TANG FROM A THROUGH HOLE.

EM145AMM510114A.DGN

TASK 51-44-00-400-801-A

EFFECTIVITY: ALL

3. HELICOIL INSERTS - INSTALLATION

A. General

(1) This procedure gives the instructions to install the helicoil inserts.

B. References

REFERENCE	DESIGNATION
AMM TASK 51-44-00-000-801-A/400	HELICOIL INSERTS - REMOVAL

C. Zones and Accesses

Not Applicable

D. Tools and Equipment

Not Applicable

E. Auxiliary Items

Not Applicable

F. Consumable Materials

Not Applicable

G. Expandable Parts

Not Applicable

H. Persons Recommended

QTY	FUNCTION	PLACE
1	Do the task	Helicoil Inserts

I. Preparation

SUBTASK 841-003-A

WARNING: MAKE SURE THAT THE AIRCRAFT IS IN A SAFE CONDITION BEFORE YOU DO THE MAINTENANCE PROCEDURES. THIS IS TO PREVENT INJURY TO PERSONS AND/OR DAMAGE TO THE EQUIPMENT.

(1) Make sure that the aircraft is in the same configuration as it was at the end of the removal task ([AMM TASK 51-44-00-000-801-A/400](#)).

J. Installation (Figure 402)

SUBTASK 420-002-A

- (1) Install the insert with the aid of the special helicoil insert tool (1).
 - (a) Pull or turn the tool handle to withdraw the tool guide pin, in the case of a thread controlled tool.
 - (b) Install the insert into the tool recess (2). The insert tang must face the tool chuck.

- (c) Do not apply pressure when you turn the tool guide so that the insert tang fits into the slot on the tool guide pin end. Continue to turn until the first insert coil shows in the slot of the tool chuck (3).
 - (d) Adjust the insert installation tool on the tapped hole (4). Hold the tool straight with the tapped hole. Let the tool continuously contact the parent material.
 - (e) Turn the guide pin until the insert is fully fitted into the tapped hole (5). The slot in the tool chuck lets you see when the insert is fully fitted. Do not apply axial pressure on the tool guide during the insert installation. Let the insert get smoothly into the tapped hole.
- (2) Install the pin breaker into the insert and let the tang make contact. Break the tang with a strong and sudden stroke on the pin breaker top with the aid of a hammer (6).

K. Follow-on

SUBTASK 842-002-A

- (1) Remove the warning signs in the area where you will do the task.
- (2) Put the aircraft back to its initial condition.

