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INSTALLATION AND MAINTENANCE MANUAL

Manuel référence :
BRG-ALTP-02

Référence document :

MM-STC-011


Equipment reference: STC-011- LAK17A			Statut (à compléter, terminé, approuvé)	Signature du responsable conception
Révisions	Date	Sujet		
0	12.01.2015	Initial edition		
1	03.07.2017	Update of new wheel P/N	Terminé	

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1 General

The BERINGER wheel-brake system is designed for a standard use on the aircraft. All other use of these parts is not allowed.

CAUTION: Disassembly of BERINGER parts without respecting the procedures may cause the failure of the system and cancel the warranty

CAUTION: Use of other parts than BERINGER approved ones may cause the failure of the system and cancel the warranty

1.1 Component list :

See document NP-STC-011(1) for detailed part list.

2 Installation

2.1 Wheel and brake

Remove the old system :

- wheel and brake
- axle
- brake lines or cable
- brake lever

NOTE: The axle bolt is not changed and remains the same.

Installation of the new system :

Wheel and tire are already mounted and tested

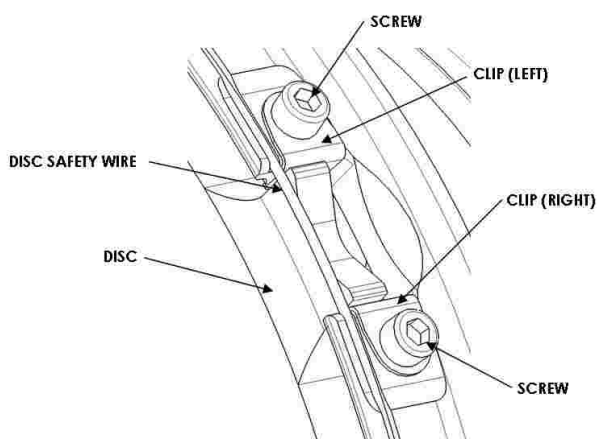
- Insert the wheel axle AV-HPH-003 inside the wheel
- Insert the disc into the caliper: do not disassemble the caliper
- Place the disc and caliper into the wheel, locate the caliper plate onto the axle.
- Present the entire assembly in the landing gear fork
- Insert the bearing spacer AV-LAK-003 and then insert the axle bolt
- Place the washer and nut, torque tighten to the appropriate torque

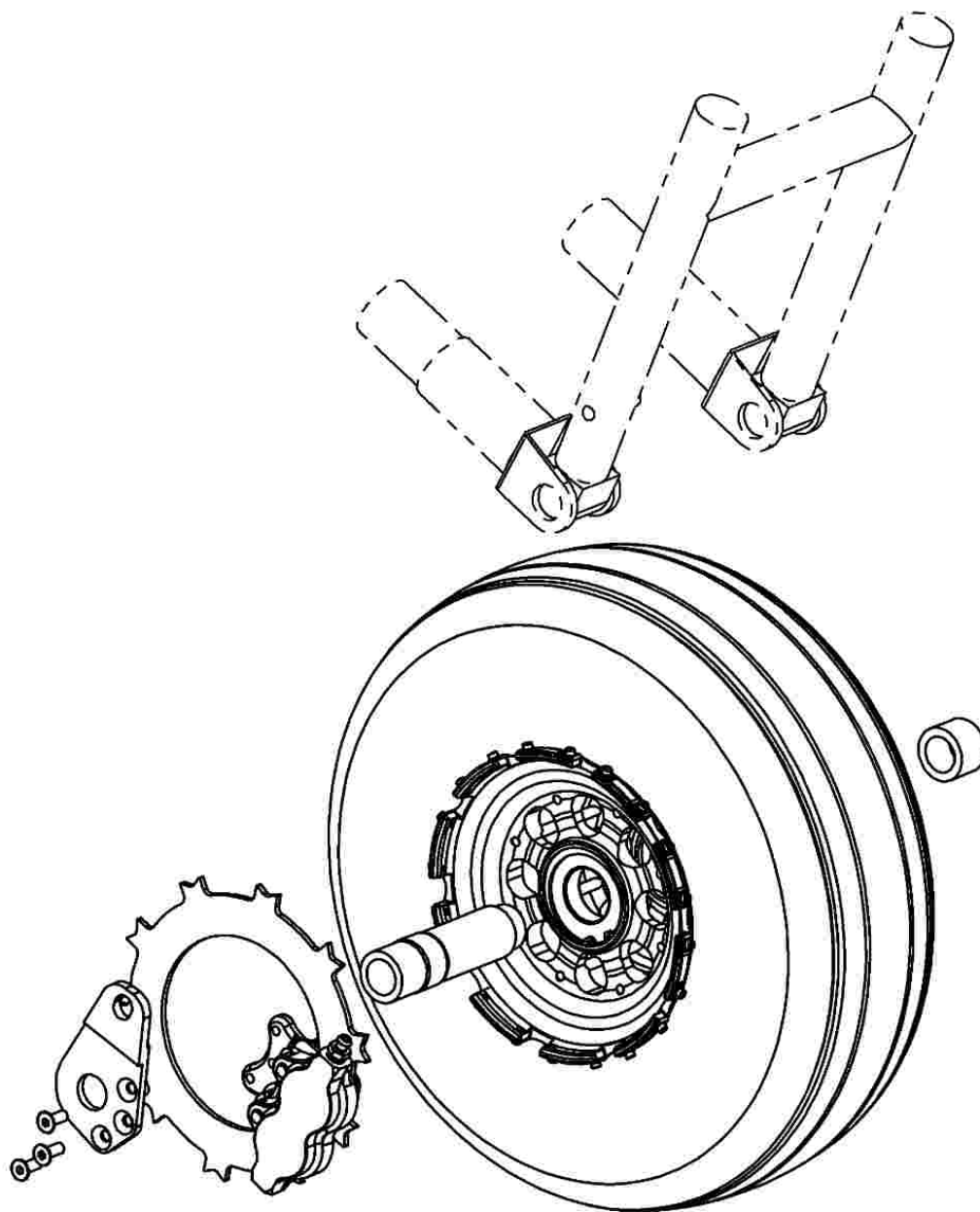
NOTE: Check that the caliper is not moving
Check that the wheel has no axial play

- Place the safety wire all around the disc and twist it on 8mm.

CAUTION: The safety wire must be in place to prevent the disc from going out the slots

NOTE: Check that the wheel is turning freely by hand





7	-	Tire 5.00-5 TUBELESS	1
6	V-FHC-008	Screw	3
5	EA-006E(A)	Caliper assembly	1
4	RF-019(A)	Main Wheel Assy.	1
3	AV-LAK-003(A)	Bearing spacer	1
2	AV-LAK-002(A)	Caliper plate	1
1	AV-HPH-003(A)	Axle	1
REP	PART NUMBER	DESCRIPTION	QTY.



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Wheel - Brake Installation



2.2 Master Cylinder

Remove the old system

- a) Fix the master cylinder on the stick, use the aluminium spacer
- b) Position the master cylinder as on the picture next.
- c) Shorten the plastic grip by around 2cm to shape it around the master cylinder.
- d) Torque the 2 screws to 5 N.m





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e) Check carefully that the lever is not touching anything when moving the stick in all positions

NOTE: The lever of master cylinder can be adjusted in distance with the thumbwheel at the lowest point of the master cylinder



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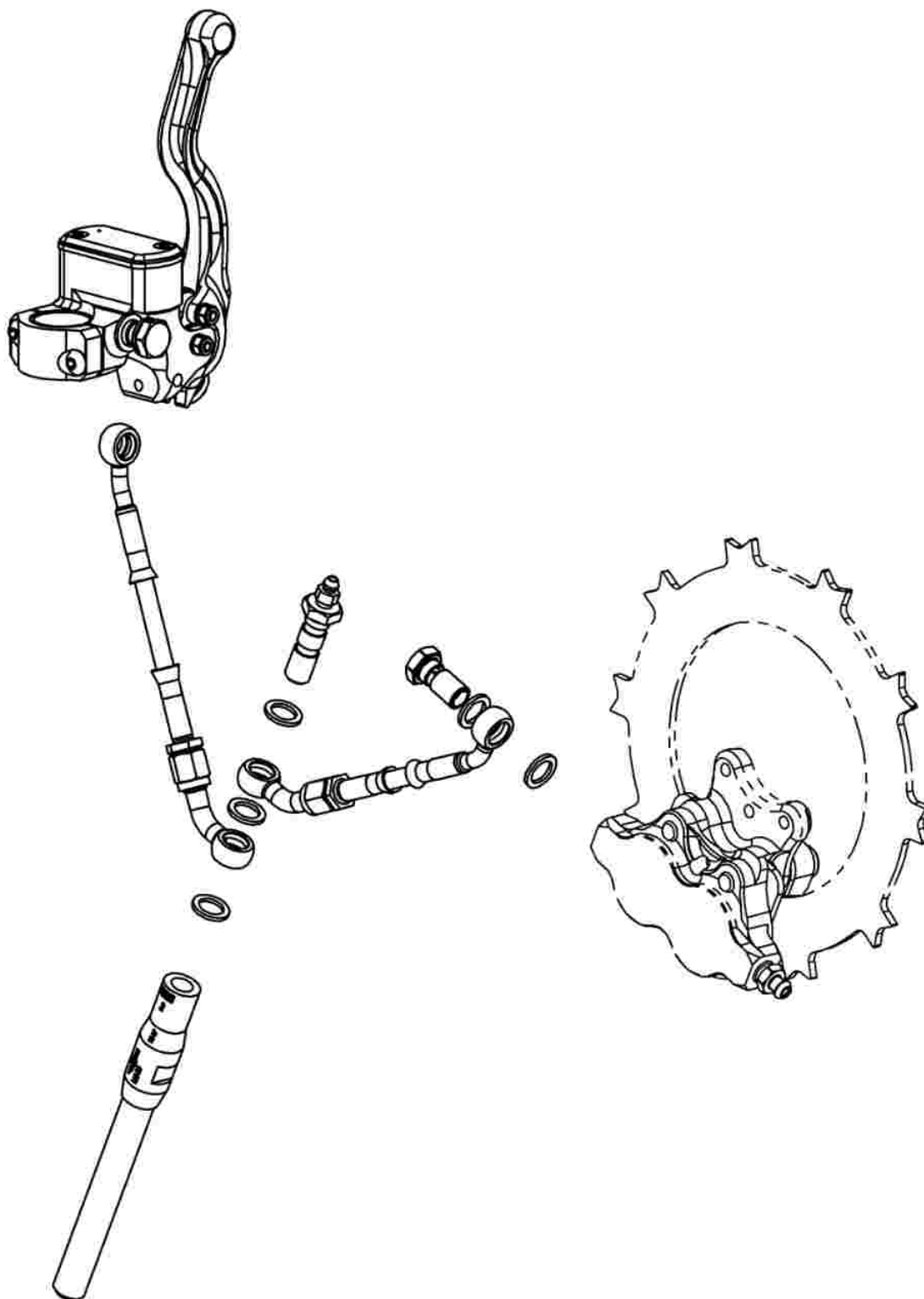
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2.3 Pressure limiter – Brake lines





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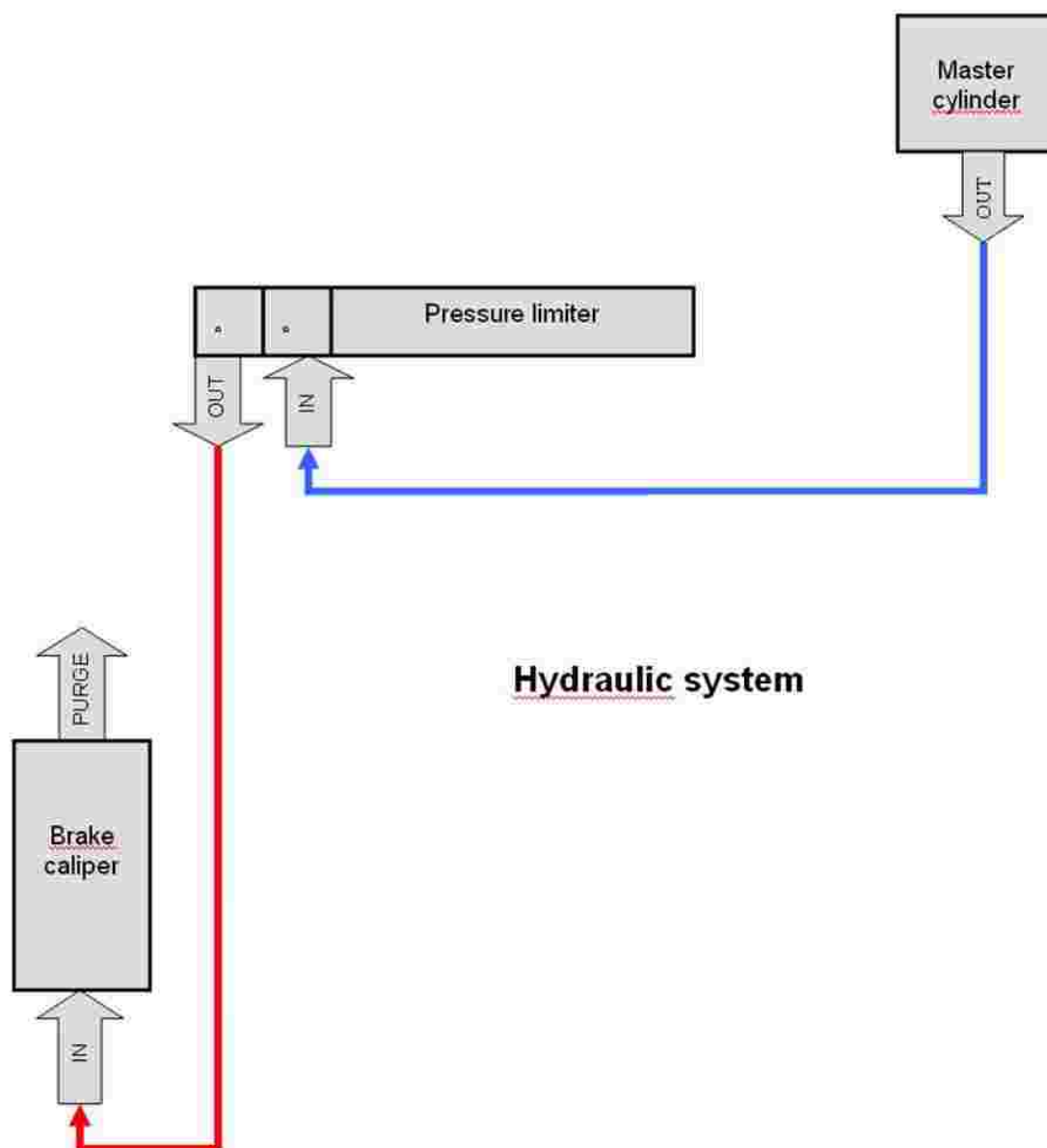
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Next is the hydraulic schematic of the brake system :



- a) Remove old brake lines and cables
- b) Increase the holes diameter to 8mm for the new lines and place the brake line in the same place as the original cable.
- c) Next is the procedure to assemble brake lines to the appropriate length and orientation. Make the two brake lines to the appropriate length as per the procedure next.

1 A banjo fitting is composed in the 3 parts next:



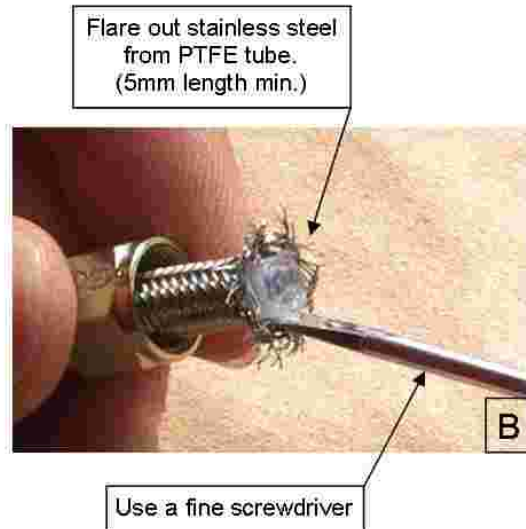
2 Cut the stainless steel hose at the right length:



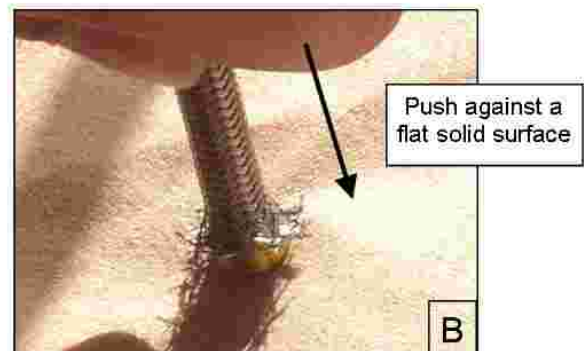
- Using a fine tooth saw blade or cutter plier, cut hose to the required length.
- Clean any loose debris from both the cut ends and inside the hose.
- Then use a flat pliers to make the hole circular, as shown on the picture below.



- 3** Push one socket over the overbraid working and flare out end of stainless steel from the PTFE inner tube.



- 4** Insert olive



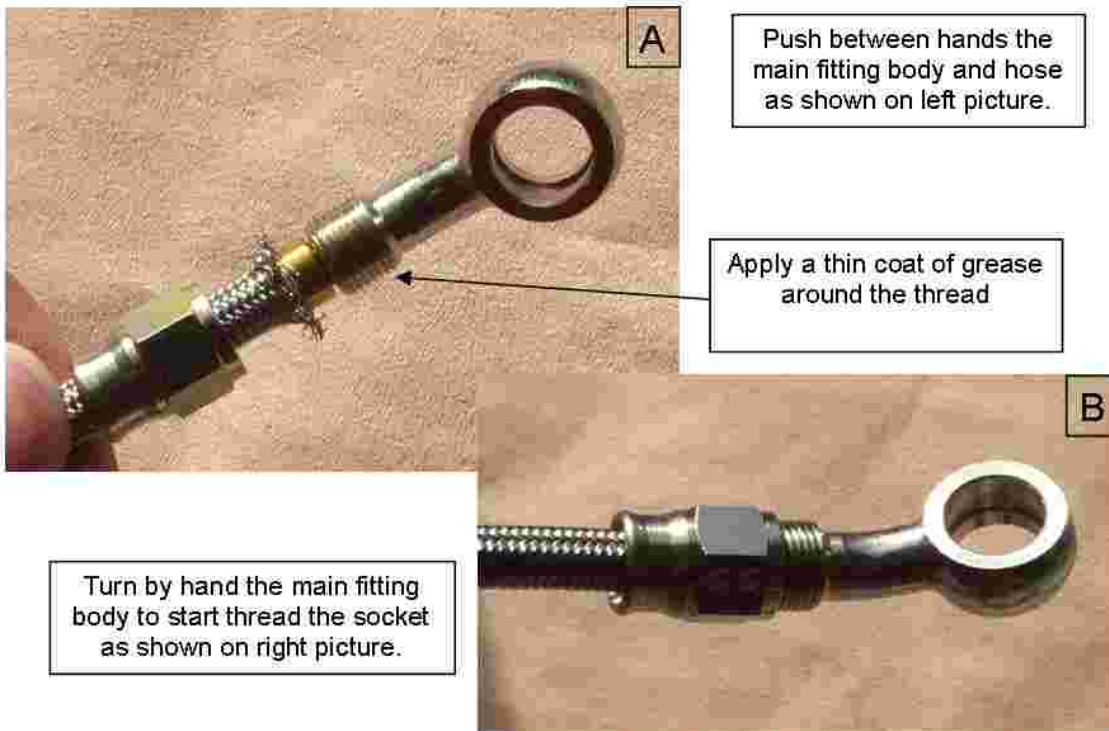
Push an olive onto the end of PTFE inner tube and under the stainless steel. Make sure that all stainless steel filaments are outside the olive.

PTFE tube should be in contact with olive.

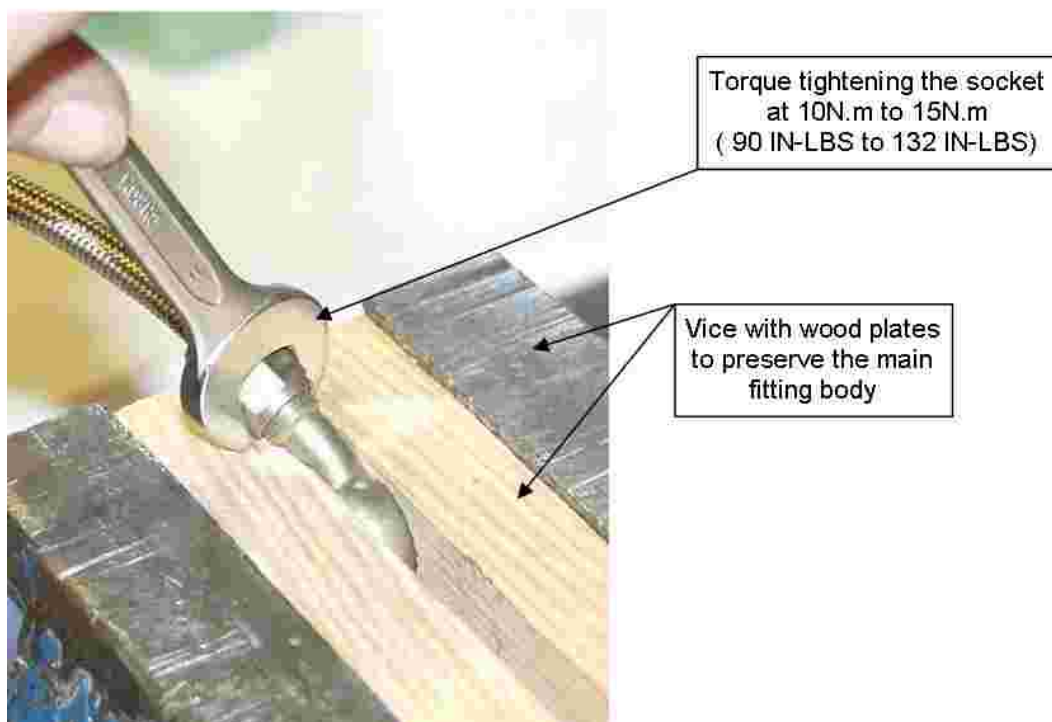
Make sure that PTFE tube is fully home in the olive.



5 Insert main fitting body



7 Finish tightening the socket onto the fitting



- d) Place the brake lines and torque tighten the banjo bolts to 15-17 N.m, Do not twist the brake lines
- e) Use the plastic clamps to fix the brake lines
- f) Fix the pressure limiter with plastic clamps to the cables in the back of the fuselage

WARNING: A wrong positioning of brake lines may block the controls, make sure that all is positioned and fixed properly with no interferences with the controls.

- g) Fill the system from the caliper with brake fluid **DOT4** and only **DOT4** (yellow color used in cars or motorbikes). All other type of fluid is forbidden.

CAUTION: Using another fluid will damage the seals.
If red or green mineral oil has been used, all the parts must be sent back to Beringer to replace the seals

NOTE: To bleed the system properly it is recommended to use a bleeder pump.
Do not try to fill the reservoir and pump, it will not work. Use a bleeder pump or a syringe and push from the caliper.

- h) Place the bleeder down as per the picture below:



3 Maintenance procedures

Please refer to the document **MC-STC-011(1)** for the maintenance of wheel and brake parts.