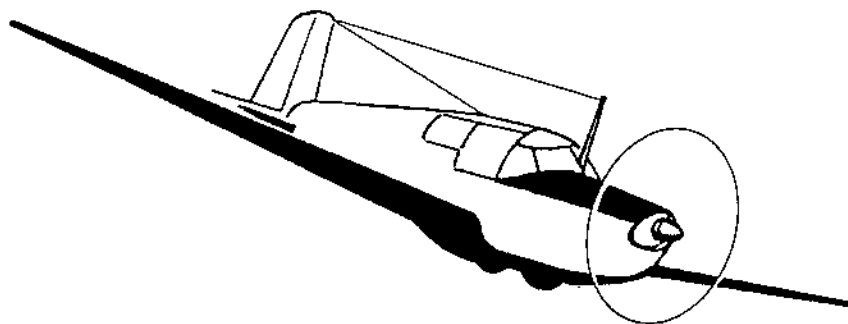


# SAAB 91 SAFIR SERVICE BULLETIN



Number: 91.2.006

Date: 28 April 2000

Subject: Inspection of installation for operating and locking of the main landing gear.

The actions in this document have been classified as  
**MANDATORY**

for aircraft on Swedish Register.

Luftfartsverket

The Swedish Civil Aviation Administration

Date 28 April 2000

*Ingemar Hedh* //(Signed)

Issued by  
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## 1. PLANNING INFORMATION

### A. EFFECTIVETY

Saab Safir 91A, 91B, 91B-2, 91C and 91D, all serial numbers.

### B. REASON

In some aircraft the main landing gear has unintentionally been retracted after landing. This has caused damage on the landing gear installation, propeller and engine.

It could also result in personal injury and damage to the airplane structure. In order to minimize the risk of unintentional retraction of the main landing gear actions according to this SB shall be performed.

### C. DESCRIPTION

This Service Bulletin gives instruction for the following:

- Inspection and if necessary change of all ball bearings in the installations for operating the main landing gear.
- Inspection and if necessary oversize installation of the bolt for attachment of the pivot link to the frame.
- Inspection and if necessary adjustment of the push rods for operating the main landing gear and inspection of the locking function of the main landing gear in extended position.

### D. COMPLIANCE

Mandatory

Inspection according to this bulletin is to be performed within 75 flights after release date of this Service Bulletin but not later than 30 April 2001.

This Service Bulletin is mandatory for A/C on Swedish register.  
Ref Swedish Airworthiness Directive No. SAD 1-154.

### E. APPROVAL

The technical content of this Service Bulletin is LfV approved.

### F. MATERIAL

Modification kit is available at:  
Sven-Göran Bertilsson  
Flygkonsulterna i Malmö AB  
Box 492  
201 24 Malmö  
SWEDEN

## F. TOOLING

Tool No: 1			Ref. figure 3
Angle drill			
Drill template			Ref. figure 3
Locating pin Ø6			Ref. figure 3
Drill Ø7,7	With pilot Ø6	Length=60mm	
Reamer Ø8H9		Length=60mm	
Drill sleeve Ø6			Ref. figure 3
Drill sleeve Ø7,7			Ref. figure 3
Drill sleeve Ø8H9			Ref. figure 3

**Note:** Tools are available at:  
Sven-Göran Bertilsson  
Flygkonsulterna i Malmö AB  
Box 492  
201 24 Malmö  
SWEDEN

## G. REFERENCES

Airplane Manual Saab Safir 91 A,B,B-2,C,D  
Spare Parts Catalogue Saab Safir 91 A,B,B-2,C,D

## 2. ACCOMPLISHMENT INSTRUCTIONS

### A. PREPARATION

- 1 Remove the wings according to the Airplane Manual.
- 2 Jack up the aircraft.

### B CHECKING OF THE PUSHROD BALL BEARINGS

- 1 Remove the pushrods according to figure 1.
- 2 Check that there is no play in the ball bearings.
- 3 Check that the ball bearing dustcovers are undamaged.  
If there are damaged dustcovers and/or bearings with play, new ball bearings shall be installed.

### **C. CHECKING OF THE PIVOT LINK**

- 1 Check by pulling the pivot link backward and forward that there is no play in the attachment to the extrusion, see figure 2.  
If there is play, the bolthole shall be oversized according to "Oversize of bolthole in the pivot link" and "Oversize of bolthole in the extrusion".
- 2 Remove the pivot link.
- 3 Check that there is no play in the ball bearing.
- 4 Check that the ball bearing dustcovers are undamaged.  
If there are damaged dustcovers and/or bearings with play, new ball bearing shall be installed.

### **D. CHECKING OF TORQUE SHAFT BALL BEARING**

- 1 Check that there is no play in the ball bearing, see figure 1.  
If there is a bearing with play, a new ball bearing shall be installed.

### **E. OVERSIZE OF BOLTHOLE IN THE PIVOT LINK**

- 1 Install drill template, shim, drill sleeve  $\text{Ø}6$  and locating pin to the hole  $\text{Ø}6$  in the sheets on the pivot link. See figure 3.
- 2 Tighten the drill template to the pivot link. Check that the locating pin does not jam in the sheets and remove the locating pin.
- 3 Drill the hole to oversize by using drill  $\text{Ø}7,7$  with pilot  $\text{Ø}6,0$  and drill sleeve  $\text{Ø}7,7$ .
- 4 Ream the hole to  $\text{Ø}8\text{H}9$  by using reamer and drill sleeve  $\text{Ø}8\text{H}9$ .
- 5 Remove the drill template.

### **F. OVERSIZE OF BOLTHOLE IN THE EXTRUSION**

- 1 Install tool No. 1 to shaft with washer and nut.  
Install the drill template over hole  $\text{Ø}6$  in extrusion and install the locating pin  $\text{Ø}6$  according to figure 3.
- 2 Tighten the nut on the drill template. Check that the locating pin does not jam in the extrusion and remove the locating pin.
- 3 Drill the hole to oversize by using drill  $\text{Ø}7,7$  with pilot  $\text{Ø}6,0$  and drill sleeve  $\text{Ø}7,7$ .
- 4 Ream the hole to  $\text{Ø}8\text{H}9$  by using reamer and drill sleeve  $\text{Ø}8\text{H}9$ .
- 5 Remove tool No. 1 and the drill template.

## **G. CHECKING OF MAIN LANDING GEAR OPERATION**

- 1 Adjust the locking mechanism according to the Airplane Manual. After the adjustment the function of the locking mechanism shall be tested, on the left and right side of main landing gear, as follows:
- 2 Pull the pushrod between the torque shaft and the main gear leg outwards and retract the main landing gear 100 to 150 mm. Release the landing gear and check that it extends distinctly to the locked position
- 3 If the landing gear does not extend and lock distinctly adjust the pushrods according to pos 1 above. Recheck the main landing gear operation according to pos 2.
- 4 Retract the main landing gear and check that the landing gear stop is correctly adjusted. If necessary adjust the stop.

## **H. RESTORATION**

- 1 Reinstall the wings according to the Airplane Manual.
- 2 Lower the aircraft.

### 3. MATERIAL INFORMATION

**Note:** When accomplishing oversize of bolt hole the following applies:

A. Additional, per aircraft:

Item	Part Number	Qty	Nomenclature	Remarks
	AS211601-8x24	1	Bolt	
	AS211401-1,5x15	6	Cotter pin	
	AS211402-3,2x16	1	Cotter pin	
	AS211401-2x18	2	Cotter pin	
	AS215101-8,1	1	Washer	Steel

B. Removal, per aircraft

Item	Part Number	Qty	Nomenclature	Remarks
	AS211601-6x22	1	Bolt	
	AS211401-1,5x15	6	Cotter pin	
	AS211402-2x12	1	Cotter pin	
	AS211401-2x18	2	Cotter pin	
	AS215101-6,1	1	Washer	Steel

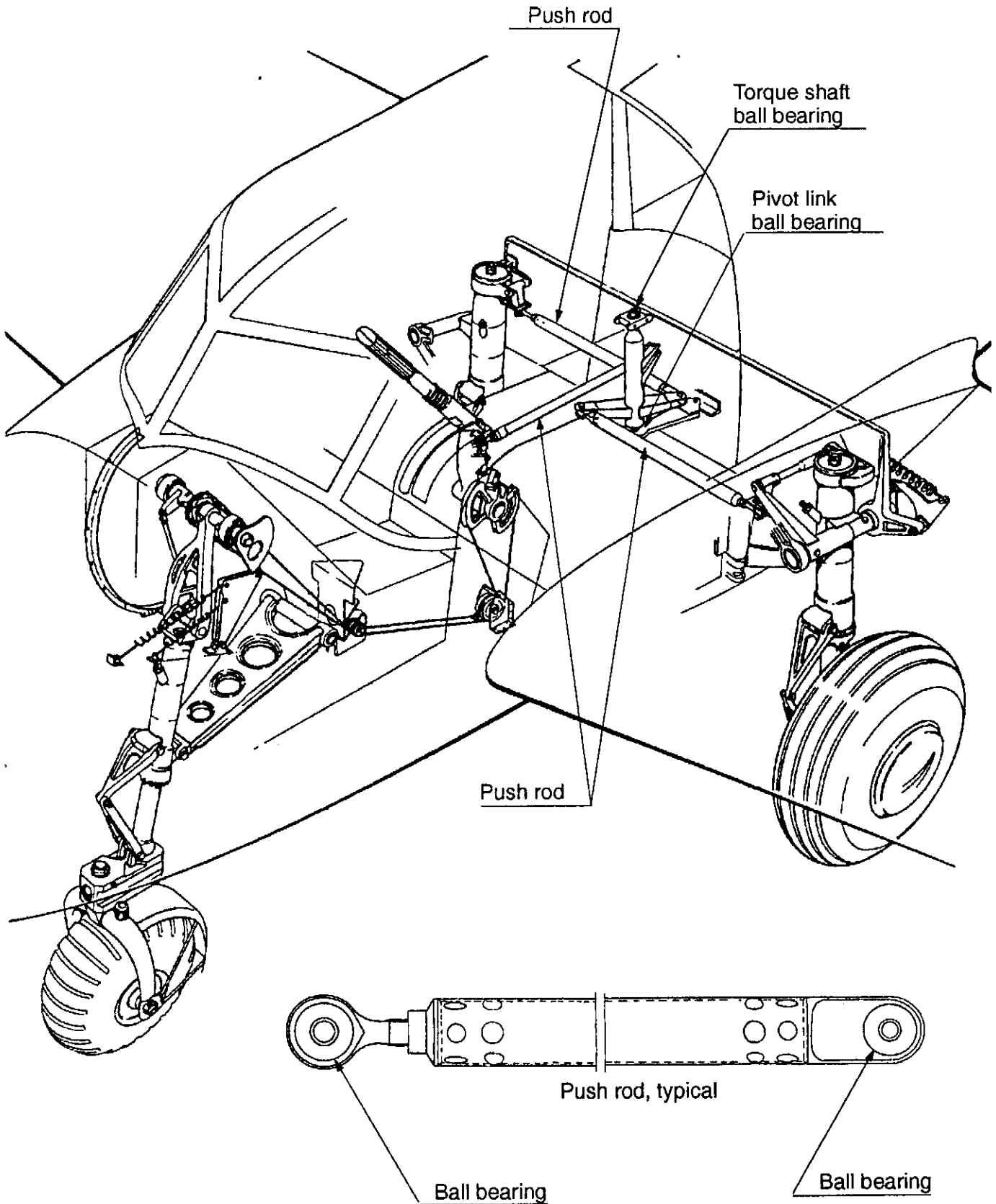


Figure 1.

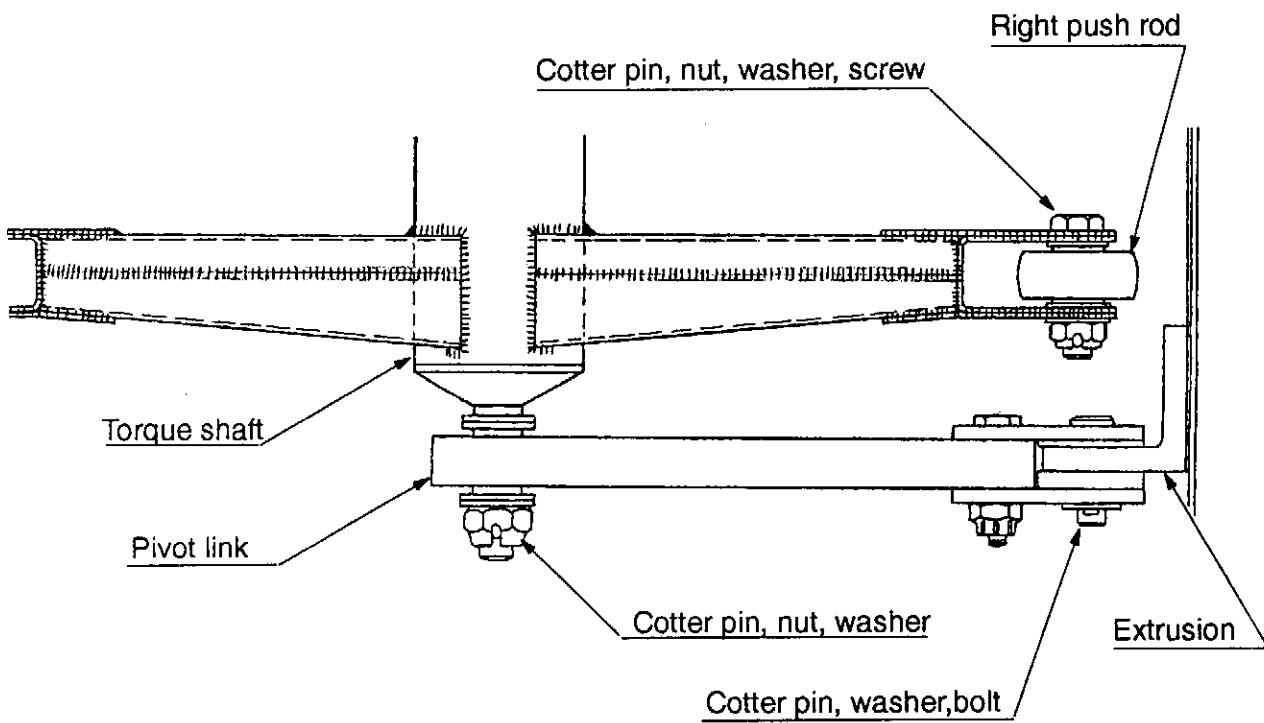
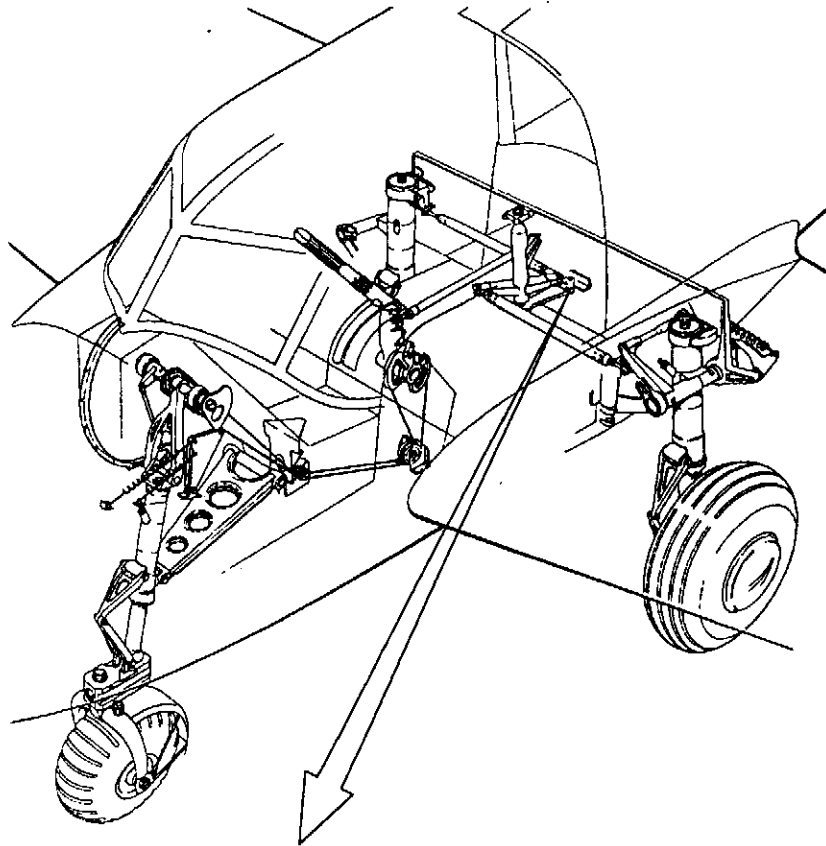


Figure 2

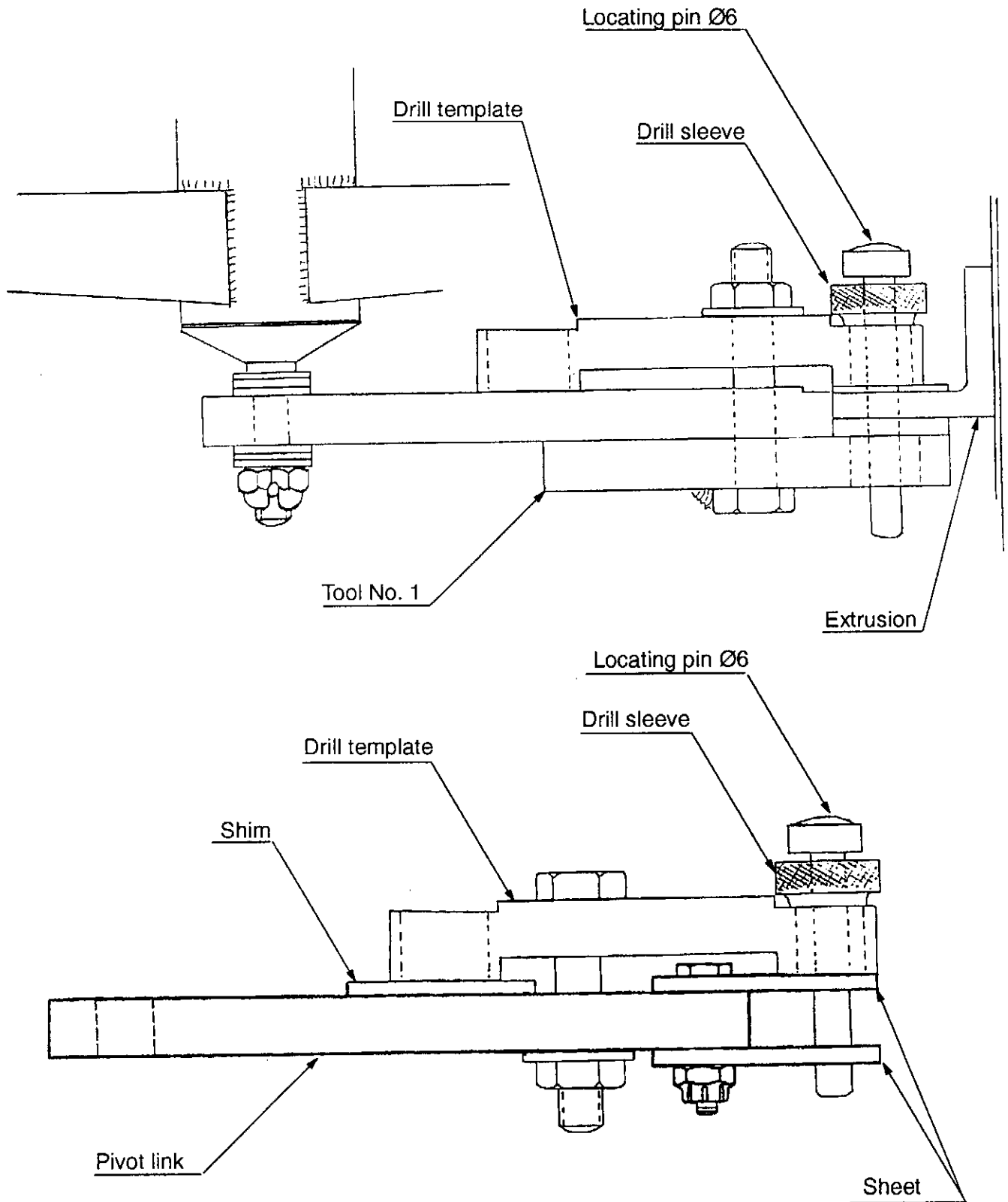


Figure 3