



Modification Bulletin

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Reference Airplane 91B, 91B-2 and 91C. Brake Installation Introducing of brakes of type Goodyear	Date June 8 1962	No. 91.2/9D	
	Saab Service Dept. B Carlsson		
	Saab Design. Dept. S Lundgren		
Urgency IV	Royal Swedish Board of Civil Aviation S Fogelstrom		
Marking After modification of brake valve 1076205-1 the modification number 1 on the manufacturing sign is to be rejected.	Effect on weight distribution		
	Weight change Lbs.	Station In.	Moment change Lbsin.
	-	-	-

Time of delivery for necessary parts
11 months after order
K/K

Drawings: Not essential

Parts required per plane and spare part a:

Item	Ref. figure	1	
01	1	Piston LH	SA 594835
02	1	Piston RH	SA 594836
03:	2	Axle	1137619
04	2	Castle nut	1159421
	2	Split pin	AS 211401-3x50
05	2	Washer	1159423
06	1	Label	1148123
07	1	Label	1148125
08	2	Cover	1137629 ur
09	2	Lock ring	AS 215425-36
10	8	Bolt	1137627
12	2	Stop flange	1137637
13	8	Castle nut	AS 215409-M6
15	8	Washer	AS 215102-6,1
17	8	Split pin	AS 211401-1,5x15
18	2	Wheel	1137635-1 ur alt. 1137635-2 ur
21	4	Drive screw	AS 211508-1,9x3
22	2	Hose	SA 594818
23	2	Sealing washer	AS 215235-14
24	2	Bolt	1144595

Aircraft concerned:

91B, 91B-2 and 91C

Spare parts involved:

a	Leg, main landing gear LH	SA 1075929	To be change
	Leg, main landing gear RH	SA 1075931	
b	Piston	SA 594570	Deleted
	Wheel axle	1038004	
c	Hub	SA 1075922	Deleted
d	Brake unit	SA 1075924	
e	Tyre	1106213	Deleted
	Air valve	1109677 ur	
	Tyre	527584	
	Hose	526348	Deleted
f	Brake cylinder	SA 1076078	
g	Brake valve	SA 1076205-1	-"-

With Goodyear brake E 30681 and tyre 6.00-6 or 7.00-6

25	2	Banjo fitting	AS 252241-4
26	2	Terminal nut	AS 252301-M10x1
27	4	Sealing washer	AS 215235-10
31	6	Sealing Ring	AS 215206-55 Rubber 7228-7

Parts required per plane:

2	Stop	SA 594912
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Parts required per brake cylinder and spare part f:

Alternative I

Item Ref. figure 2

01	1	Cylinder	1152985	
02	1	Piston	1152467	
03	1	Spring attachment	1038155	
04	1	Link	1038157	
05	2	Stop	1038158	
06	1	Spring	1038156	
07	1	Pin	AS 211101-5x18	
08	1	Axle bolt	AS 211601-5x24	
09	1	Axle bolt	AS 211601-5x16	
10	1	Screw	AS 212117-M6x34	
11	2	Lock nut	AS 215402-M6	
12	2	Washer	AS 215101-6,1	Alumin
13	2	Washer	AS 215101-5,1	Alumin
14	1	O-ring	AS 215206-20	Rubber 7228-7
15	1	O-ring	AS 215206-28	Rubber 7228-7
16	2	O-ring	AS 215206-35	Rubber 7228-7
17	1	Label	1152987	
18	2	Drive screw	AS 211508-1,5x5	
19	1	Cylinder casing	1038206	Can be manuf. by exist casing 1076046
20	1	O-ring	AS 215206-25	Rubber 7228-7
21	2	Cotter pin	AS 211401-1,5x10	

Alternative II

1	Brake cylinder	1038151-2
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Parts required for plane with dual control brakes:

Item Ref. figure 4

02 2 Plunger 1144645

Parts required per spare part:

b.	1	Piston LH	SA 594835	
	1	Piston RH	SA 594836	
	2	Axle	1137619	
c.	1	Hub	6101311	
d.	1	Brake unit	6101313	
	1	Brake disc.	6101314	Incl. in 6101313
e.	1	Tyre	6101307 alt. 6101309	
	1	Tube	6101308 alt. 6101310	

The following parts are obsolete:

Main landing gear LH and RH

Piston	SA 594570
Axle	1038004
Plug	1077225 ur
: Lock washer	AS 215427-35
Nut	AS 215417-M35x1,5
Washer	AS 215101-8,1
Castle nut	AS 215401-M8
Split pin	AS 211401-2x18
Wheel hub	SA 1075922
Tyre	1106213 alt. 527584
Air valve	1109677 ur
Tube	526348
Brake unit	SA 1075924
Hose	SA 594544

Brake cylinder:

Piston	1114851
Sealing ring	AS 215206-35
Spring	505626
Spring	1077189
Lock ring	AS 215425-37
Screw	AS 212111-M5x20

Castle nut	AS 215401-M5
Roller	521439
Label	1076077 alt. 1107155

Brake valve:

Plunger	1076207
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Information:

When manufacturing new airplanes wheels with single-disc brakes of type Goodyear are installed. These brakes can also be installed in planes with brakes of type "Saab". In this case the brake cylinders SA 1076078 are to be changed according to alternative I or new brake cylinders 1038151-2 to be installed according to alternative II. On planes with dual control brakes the plunger of the brake valve 1076205-1 is also to be changed.

Work procedure:

Fig. 1

Trestle the plane and let the air out of the main shock absorbers. Drain the pressure fluid of the brake system. Remove the hose to the brake unit. Dismount the torque links at the lower attachment. Remove the lock ring item 30 and loosen nut item 32. Withdraw the piston with its components. Remove the solder on the stop screw item 28 section B-B and loosen the screw. Disassemble the piston and move its components to the new piston. In connection with this introduction of SB 91.2.001 is recommended. Replace the sealing rings in the casing item 33 by the new ones item 31. Mount the piston head item 37 and then drill a hole, \varnothing 6 mm, into the piston for the piston head stop screw item 28 and fit the screw. Secure the screw with tin soldering according to section B-B. Remove excessive tin to make the piston head surface smooth. Fill the piston with pressure fluid. Fit the piston to the cylinder. Connect the new hose item 22 with banjo fitting item 25, bolt 24 and sealing washers item 23 and 27 according to view A-A. Fill up pressure fluid and air and adjust the shock absorbers according to "Airplane Manual 2:3D". Mount the torque links. Remove the existing labels and fit the new ones item 06 and 07.

Fig 2.

Dismount the brake cylinders and remove the obsolete components. Drill and cut the existing cylinder casing according to figure 3. Insert cylinder item 01 with O-rings item 15 and 16 and fit spring attachment item 03 with nut item 11. Mount plunger item 02 with O-rings item 14 and 20 to cylinder item 01, link item 04 and existing arm. Attach the push-pull rod from the pedal set to the arm according to the figure. Fit spring item 06 and stop item 05.

Adjust the measure $2,5 \pm 0,5$ mm for the outer position of the piston by turning the eccentric stop item 05 according to the note at the figure.

Remove existing label and fit the new one item 17.

Mount the brake cylinders and connect the brake system.

Fig. 4. For airplanes with dual control brakes

Remove the fittings item 01, pull out existing plungers and fit the new ones item 02. In case the holes are missing in brake valve item 02, these are to be drilled according to fig. 4. Attach the fittings.

Adjustment of the brakes

Fig. 5.

Fill up pressure fluid and vent the system by the vent screw according to fig. 1 view A-A.

Slacken off adjusting pin nut item 01 and push piston item 02 completely back until it abuts cylinder head item 03. Position spring assembly item 04 so that the ends of the spring rest on the brake housing and check play according to view A.

Adjust the play with washers item 05. Hold the spring assembly in contact with the brake housing and tighten nut item 01 to torque according to Fig. 5.

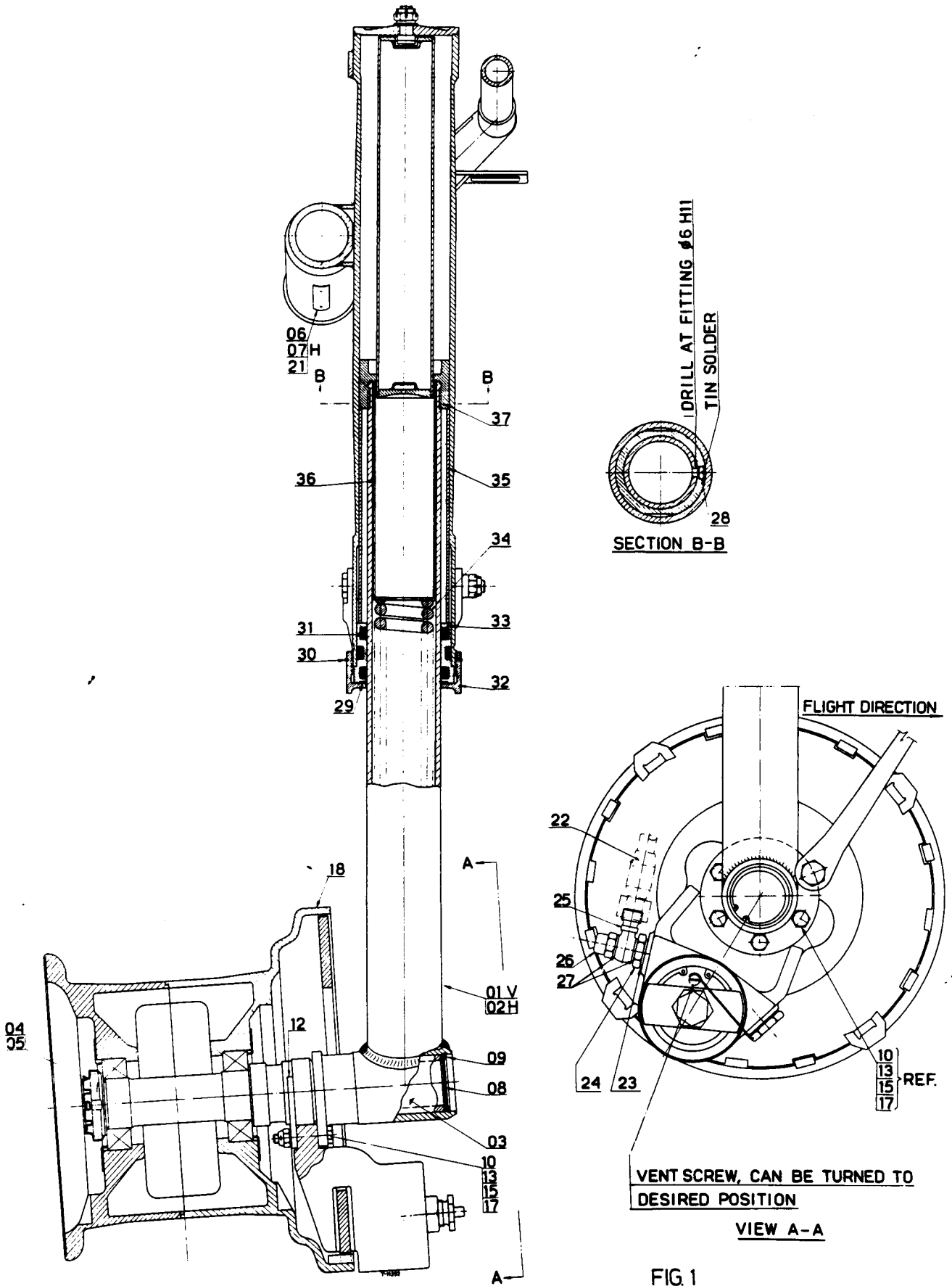
Loosen and torque this nut several times to ensure proper seating of parts. Safety wire the nut.

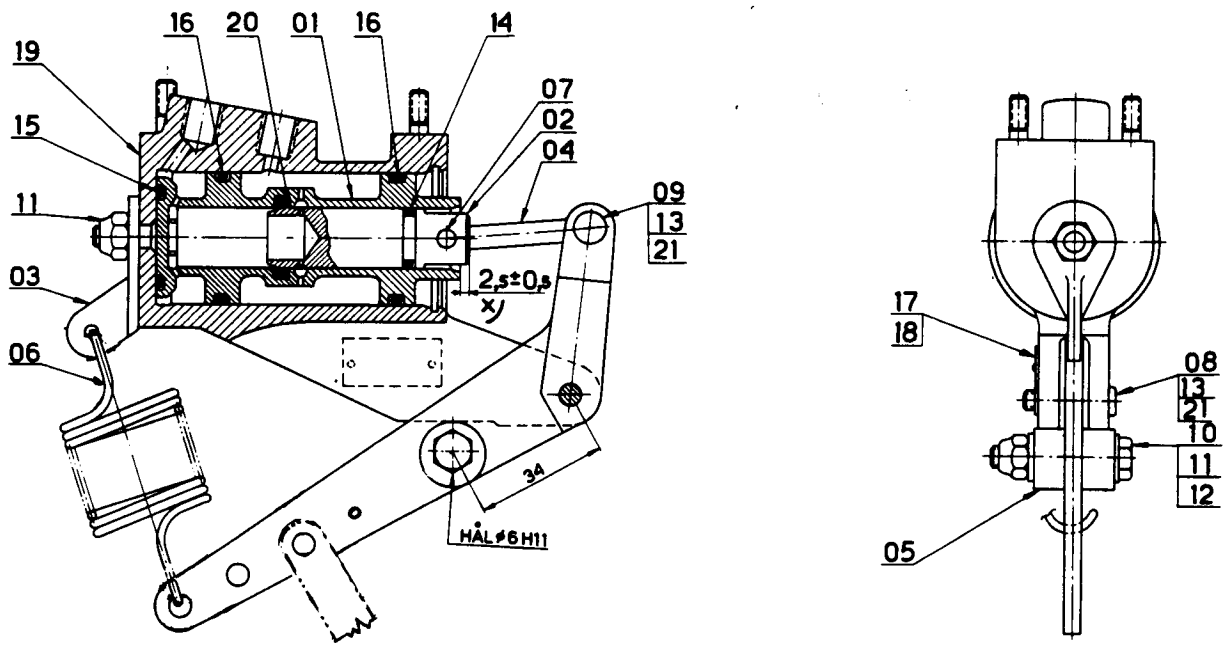
Apply and release the brake several times and check that the disc/lining clearance is 0.13-0.3 mm (0.005-0.015").

NOTE: When new disc and linings have been fitted the brakes must be applied several times during taxiing to bed them in.

Replace of stop

In case the hub touches the stop SA 590603 on the rear spar in the wheel well the existing stop is to be replaced by the new one No. SA 594912.





x) ADJUST MEASURE 2.5 ± 0.5 MM
BY TURNING ITEM 05

FIG. 2

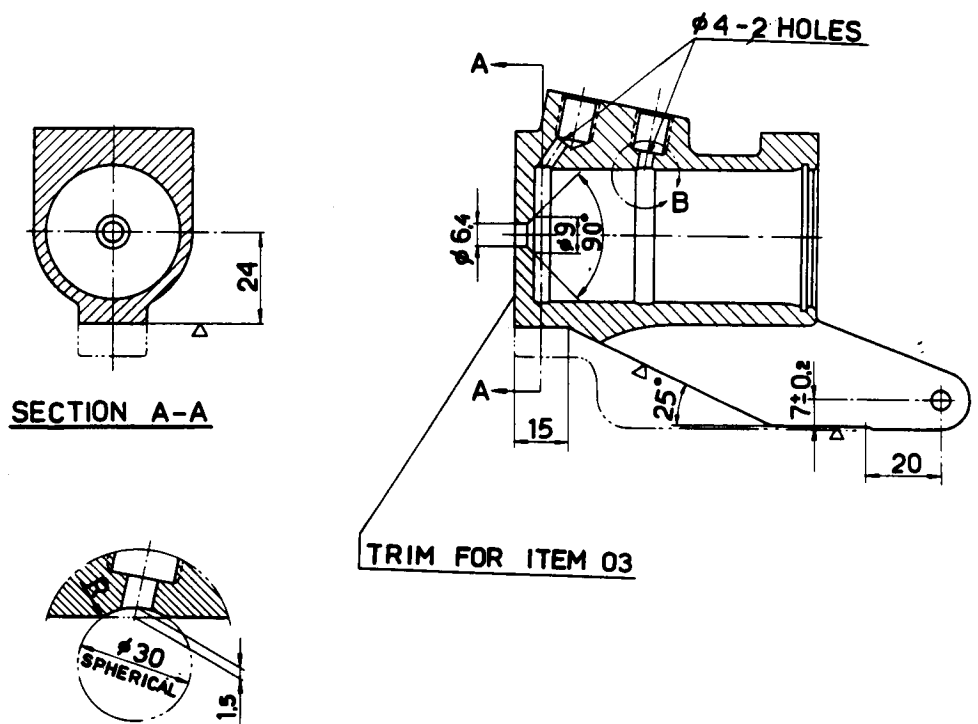
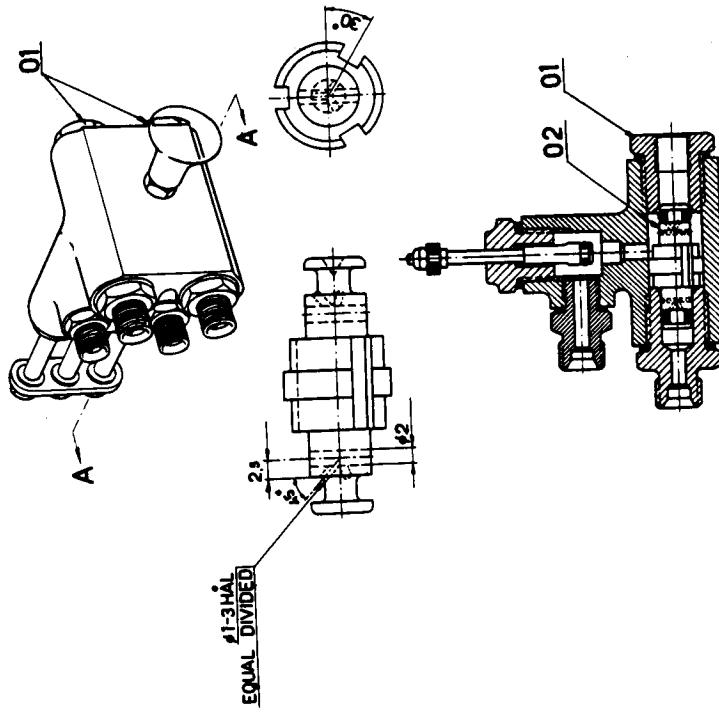


FIG. 3



SECTION A-A

FIG. 4

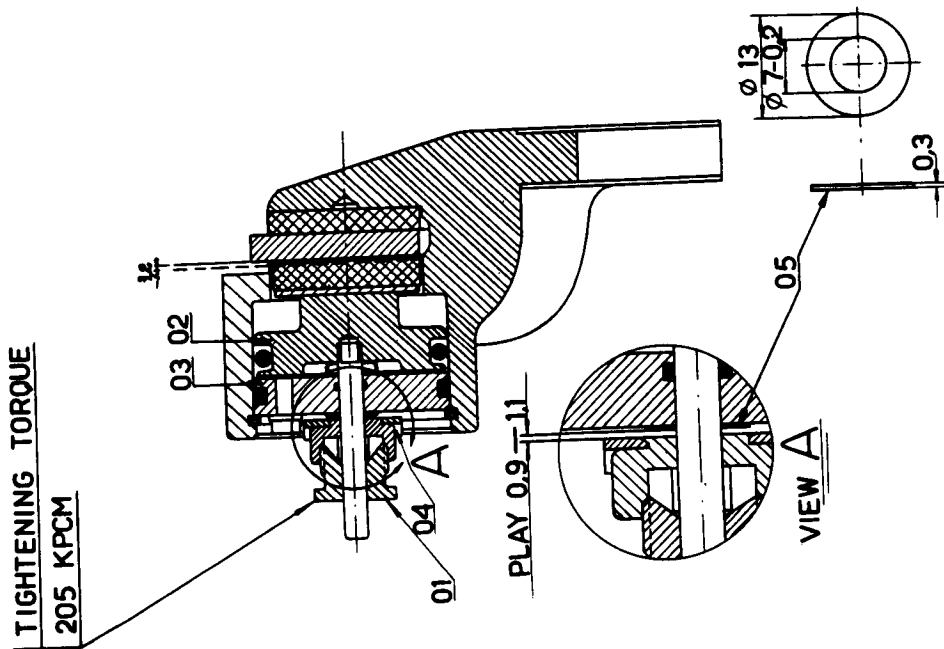


FIG. 5