



Reference 91B, 91B-2, 91C <u>Engine Lycoming O-435-A</u> Replacement of generator, generator coupling and voltage regulator.	Date	No.	
	October 12 1965	91.6/16E	
	Saab Service Dept. B Carlsson <i>Bolm</i>	Replace MB91.6/16 D	
	Saab Design. Dept. S Lundgren <i>Su</i>		
Urgency	Royal Swedish Board of Civil Aviation		
IV	S Fogelström	<i>Su</i>	
Marking	Effect on weight distribution		
	Weight change Lbs	Station In.	Moment change Lbsin.
X/K	-	-	-

Time of delivery for necessary parts

According to the offer.

Drawings: Not essential

- 1038140 Generator coupling
- 1038178 Instructions
- 1141017 Wiring diagram 25 Amp. generator

Aircraft concerned:

All planes 91B, 91B-2 and 91C with Lycoming engine O-435-A.

Spare parts involved:

-

Parts required per plane:

Alt. I

- | | | |
|---|-----------------------------------|------------------|
| 1 | Generator with generator coupling | SA 594803 |
| 3 | Screw | 1158795 ur |
| 1 | Shim | 1038203 |
| 1 | Voltage regulator | 6101402 |
| 1 | Volt-Ampmeter | 6101530 |
| 2 | Automatic Fuse | SA 575946 |
| 1 | Placard | 1149945 |
| 1 | Placard | 1149947 |
| 4 | Screw | AS 212116 - M3x8 |

Ref. fig. 2 (Airplane 91,201-91,320)

- | | | |
|---|-----------------------|-----------------------|
| 1 | Cable 27A | AS 261705-4 Cu L-750 |
| 2 | Identification sleeve | AS 294902-6-27A |
| 1 | Cable clip | AS 264112-6-3,2 |
| 1 | Cable clip | AS 264111-6-5,3 |
| 1 | Cable 28A | AS 261705-4 Cu L-1500 |
| 2 | Identification sleeve | AS 294902-6-28A |
| 1 | Cable clip | AS 264111-6-5,3 |
- Drill the hole
 to diameter
 4,2 mm
 Bend 90° at A6A
 Bend 90°



1	Cable 29A	AS 261705-4 Cu	L=620
2	Identification sleeve	AS 294902-6-29A	
2	Cable clip	AS 264111-6-5,3	
1	Cable 31A	AS 261705-4	L=650
2	Identification sleeve	AS 294902-6-31A	Drill the hole to diameter 4,2 mm
1	Cable clip	AS 264112-6-3,2	
1	Cable clip	AS 264112-6-5,3	
1	Cable 32A	AS 261705-4	L=2400
2	Identification sleeve	AS 294902-6-32A	
1	Cable clip	AS 264111-6-5,3	To be clam- ped and sol- dered
1	Cable clip	AS 264111-16-8,3	
1	Cable 34A	AS 261705-4 Cu	L=600
2	Identification sleeve	AS 294902-6-34A	
1	Cable clip	AS 264111-6-5,3	
1	Cable 56A	AS 261705-4	L=300
2	Identification sleeve	AS 294902-6-56A	Drill the hole to diameter 4,2 mm
1	Cable clip	AS 264112-6-3,2	
1	Cable clip	AS 264112-6-3,2	
1	Cable 57A	AS 261705-4	L=300
1	Identification sleeve	AS 294902-6-57A	Drill the hole to diameter 4,2 mm
1	Cable clip	AS 264112-6-3,2	
1	Cable clip	AS 264112-6-3,2	

Ref. fig. 3 (Airplane 91.321-91.345)

1	Cable 27A	AS 261705-4 Cu	L=750
2	Identification sleeve	AS 294902-6-27A	Drill the hole to diameter 4,2 mm
1	Cable clip	AS 264112-6-3,2	
1	Cable clip	AS 264111-6-5,3	Bend 90° at A6A
1	Cable 28A	AS 261705-4 Cu	L=2800
2	Identification sleeve	AS 294902-28A	
1	Cable clip	AS 264111-6-5,3	
1	Cable clip	AS 264111-6-5,3	Bend 90° at A6+
1	Cable 29A	AS 261705-4 Cu	L=620
2	Identification sleeve	AS 294902-6-29A	
1	Cable clip	AS 264111-6-5,3	



1	Cable 30A	AS 261705-4 Cu	L=2000
2	Identification sleeve	AS 294902-6-30A	
1	Cable clip	AS 264111-6-5,3	
1	Cable 31A	AS 261705-4	L=260
2	Identification sleeve	AS 294902-6-31A	Drill the hole to diameter 4,2 mm
1	Cable clip	AS 264112-6-3,2	
1	Cable clip	AS 264111-6-5,3	
1	Cable 32A	AS 261705-4	L=2400
2	Identification sleeve	AS 294902-6-32A	
1	Cable clip	AS 264111-6-5,3	
1	Cable 33A	AS 261705-4	L=1100
2	Identification sleeve	AS 294902-6-33A	
2	Cable clip	AS 264111-6-5,3	
1	Cable 56A	AS 261705-4	L=300
2	Identification sleeve	AS 294902-6-56A	Drill the hole to diameter 4,2 mm
1	Cable clip	AS 264112-6-3,2	
1	Cable clip	AS 264112-6-3,2	
1	Cable 57A	AS 261705-4	L=300
1	Identification sleeve	AS 294902-6-57A	Drill the hole to diameter 4,2 mm
1	Cable clip	AS 264112-6-3,2	
1	Cable clip	AS 264112-6-3,2	

Alt. II

Generator coupling 1038140-1 consisting of:

Ref. figure 1

01	1	Buffer	1135069-1	} SA 91.01404 SKF 16008
03	1	Cog wheel	1038143	
04	1	Bearing housing	1038144	
08	1	Cover	1038146	
09	1	Washer	1161343	
10	2	Ball Bearing	6101367	
13	1	Lock ring	AS 215425-32	
14	1	Lock ring	AS 215425-68	
15	1	Lock ring	AS 215426-40	
19	1	Washer	1161341	



05	1	Carrier	1038141	
06	1	Busshing	1038145	
07	1	Washer	1135077	
11	2	Gasket	SA 576147	Ly 45786
12	1	Castle nut	SA 576611	Ly STD-15
16	1	Cotter pin	AS 211401-2,5x22	
17	1	Mellanlägg	1038203	
18	3	Screw	1158795	ur

Parts obsolete per plane

Alt. I

Generator	SA 1076722	Delco-Remy 1101889
Generator coupling	LB-1658	
Voltage regulator	SA 1076723	
Volt-Ampermeter	SA 1076724	
Generatorfuse	SA 575631	
Screw	Ly 31-12	

Cable 1A	} Airplane 91.201 - 91.320
Cable 3A	
Cable 6A	
Cable 12A	
Cable 13A	
Cable 4A	
Cable 1A	} Airplane 91.321 - 91.345
Cable 3A	
Cable 6A	
Cable 7A	
Cable 12A	
Cable 13A	
Cable 20A	

Alt. II

Generator coupling	LB-1658
Screw	Ly 31-12

In order to obtain an increased current supply the existing generator can be replaced by a generator of 25 Amp. in which case the generator coupling LB-1658 should be substituted by a new improved coupling 1038140-1.

At the same time the voltage regulator, generator fuse, volt-ammeter and the cables should be replaced according to alt. I.

As it had happened that the existing generator coupling LB-1658 has broken causing metal splinters and fragment of the rubber buffers to enter the engine oil system, it is recommended to change to the new coupling 1038140-1 according to alt. II for airplanes which also in the future shall have a 15 Amp. generator installed.

Work procedure:

Alt. I

Remove existing generator and generator coupling.

Replace the obsolete screws on the engine by the new ones item 18 fig. 1. Install the new generator with generator coupling SA 594803. Check the play to be min. 2 mm between the engine drive gear and the coupling bearing housing item 04 according to figure 1. If this should not be the case, adjust with shim item 17.

Replace the existing voltage regulator by the new one 6101402. Move over existing insulation 1116875 from the obsolete regulator. Cut holes for the automatic fuses SA 575946 in the panel below the fuse panel and mount fuses and placards. Remove the obsolete cables and connect the new ones according to figure 2 and figure 3 alternatively.

Remove generator Fuse.

Remove volt-ammeter and mount the new one No 1601530.

Alt. II

Dismount the generator and remove the obsolete coupling. Replace the obsolete screws on the engine by the new ones item 18 figure 1. Replace the bushing on the generator by bushing item 6. Assemble the generator according to figure 1. Attach the coupling with gasket item 11 to the generator and engine without tightening the screw bolts. Check that there is no play between the bearing housing item 4 and the generator. If so fit another gasket item 11. If play still exists file bushing item 06 as to eliminate the play. Check the play to be 2 mm between the engine drive gear and the coupling bearing housing item 4 according to figure 1. Should this not be the case, adjust with shim item 17. Tighten the bolts that attach the generator and coupling to the engine.

Tightening torque for nut item 12 should be 130-170 Kpcm (115-150 in.lbs).

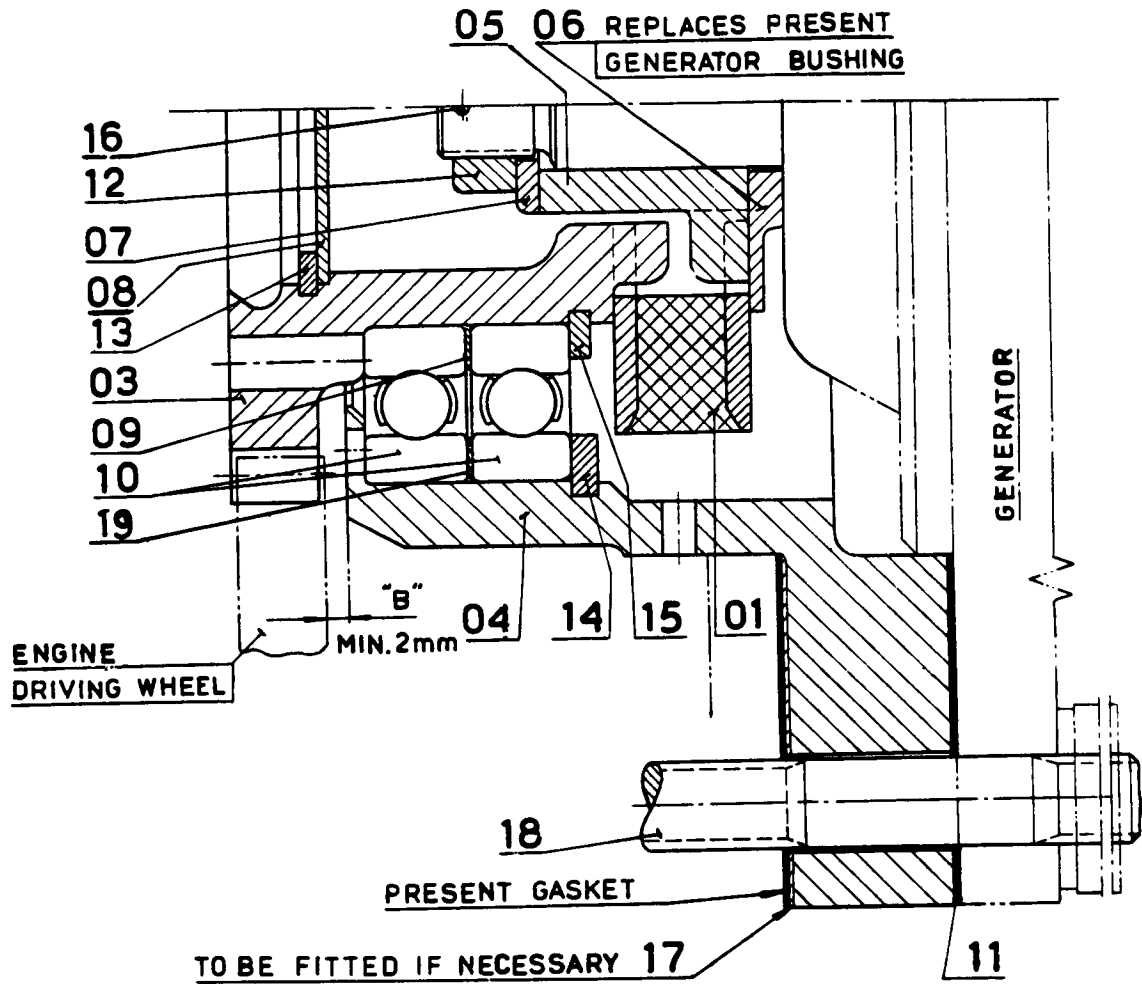


Fig.1

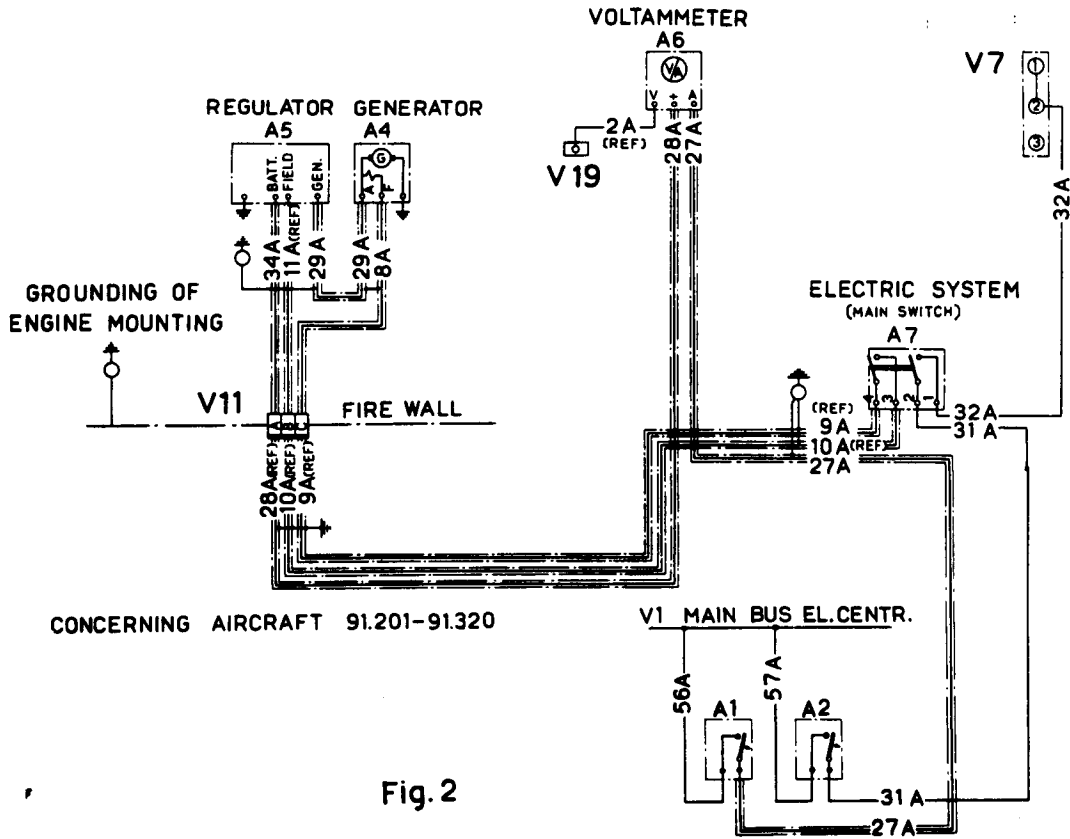


Fig. 2

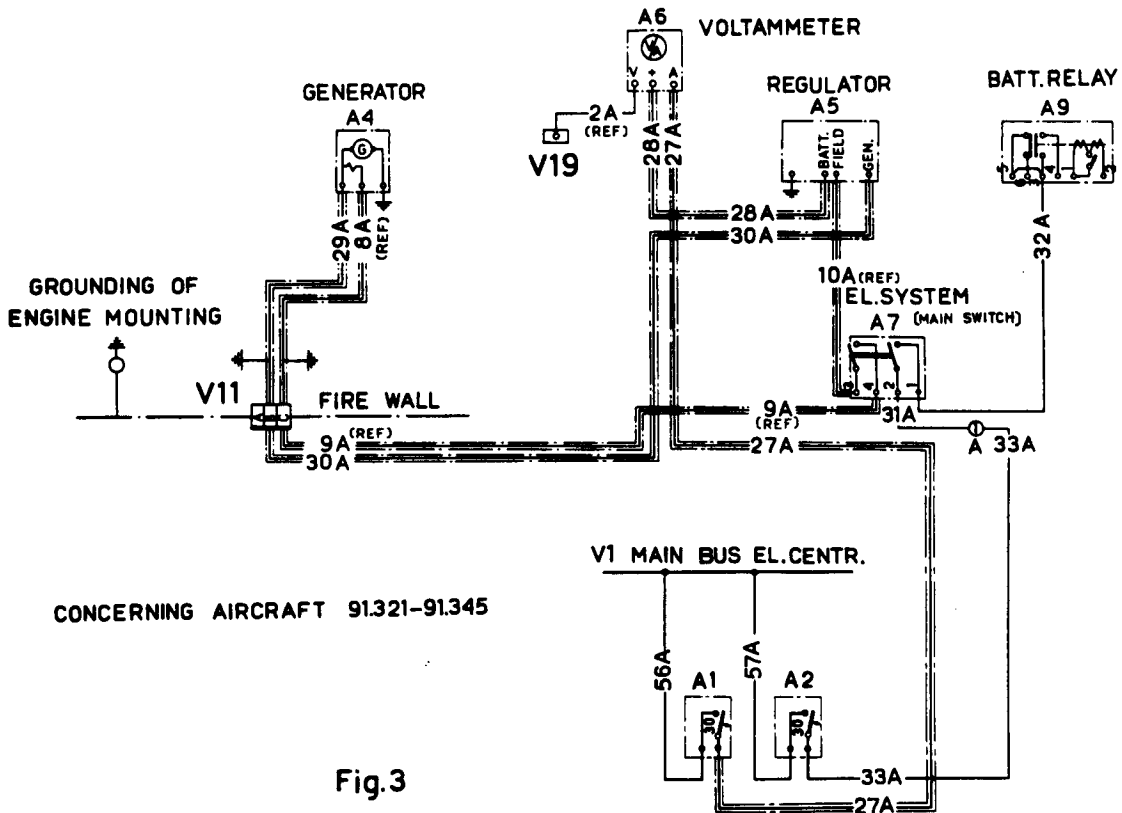


Fig. 3