
CESSNA AIRCRAFT COMPANY

JUNE 14, 1991

SINGLE ENGINE SERVICE BULLETIN SEB91-5 REVISION 1

TITLE:

**IGNITION SWITCH LUBRICATION AND STARTER CONTRACTOR DIODE
INSTALLATION**

EFFECTIVITY:

Cessna and Reims Aviation 1973 thru 1986 Model 150 thru 210 airplanes equipped with a Gerdes Products Company or ACS Products Company ignition switch. All Model 188 series airplanes are not affected.

MODEL YEAR	SERIAL NUMBERS
1973 thru 1977	15074428 thru 15079405
1973 thru 1977	A1500389 thru A1500734
1974 thru 1977	F15001024 thru F15001428
1974 thru 1977	FRA1500212 thru FRA1500336
1978 thru 1985	15279406 thru 15286033
1978 thru 1985	A1520735 thru A1521049
1978 thru 1986	F15201429 thru F15201980
1978 thru 1986	FA1520337 thru FA1520425
1977 thru 1981	R1722000 thru R1723454
1973 thru 1986	17261486 thru 17276673
1974 thru 1986	F17201045 thru F17202254
1974 thru 1981	FR17200441 thru FR17200675
1980 thru 1985	172RG0001 thru 172RG1191
1973 thru 1978	17701890 thru 17702752
1973 thru 1978	177RG0342 thru 177RG1366
1974 thru 1977	F177RG0093 thru F177RG0177
1973 thru 1981	18052317 thru 18053203
1973 thru 1986	18261786 thru 18268615
1974 thru 1976	A182-0137 thru A182-0148
1976 thru 1980	F18200001 thru F18200169
1978 thru 1986	R18200001 thru R18202041
1978 thru 1980	FR18200001 thru FR18200070
1973 thru 1985	18502154 thru 18504448
1973 thru 1986	U20601980 thru U20607020
1973 thru 1984	20700222 thru 20700788
1973 thru 1986	21059893 thru 21065009
1978 thru 1986	P21000001 thru P21000874

PURPOSE:

To inspect and lubricate the ignition switch and install a diode across the starter contactor. The inspection, lubrication and diode installation are recommended to assist in decreasing wear and arcing of the internal contact surfaces of the ignition switch to improve the switch service life.

COMPLIANCE:

Recommended:

- A. Should be accomplished within the next 100 hours of operation or annual inspection, whichever occurs first, or during an equivalent interval for airplanes utilizing the Cessna Progressive Care Inspection program.
- B. After initial compliance with this Service Bulletin, the ignition switch should be inspected and lubricated per Steps 1, 2, 3, 5 and 6 of the Attachment Accomplishment Instructions every 2000 hours of operation.

NOTE: If part A. of the Compliance section of SEB91-5 has previously been accomplished, compliance with part A. of SEB91-5 Revision 1 is not required.

APPROVAL:

FAA approval has been obtained on technical data in this publication that affects airplane type design.

For Reims Aviation Airplanes: DGAC approval has been obtained on technical data in this publication that affects airplane type design.

MAN-HOURS:

Approximately 1.0 man-hour to inspect and lubricate switch.

Approximately 0.5 man-hour to install diode.

MATERIAL:

The following parts are available from the Cessna Supply Division thru an appropriate Cessna Service Station for the suggested list prices shown.

PART NUMBER	DESCRIPTION	QTY./AIRPLANE	PRICE
10-1206	Luberex Grease (2 Oz. tube)	As Required (See Note 1)	\$ 7.56 (PS) ea.
A3600	Ignition Switch Parts Kit	1 (If Req'd.)	\$ 20.40 (A) ea.
0770783-1	Diode Assembly	1 (See Note 2)	\$ 29.70 (S) ea.
0770783-2	Diode Assembly	1 (See Note 3)	\$ 29.70 (S) ea.

NOTE 1: 1 tube of grease will lubricate approximately 50 switches.

NOTE 2: Diode assembly for 1980 & on model airplanes.

NOTE 3: Diode assembly for 1973 thru 1979 model airplanes.

ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE

ACCOMPLISHMENT INSTRUCTIONS:

Revised Ignition Switch Lubrication And Starter Contactor Diode Installation instructions are attached.

CREDIT: Not Applicable.

OWNER NOTIFICATION:

On May 10, 1991 the following Owner Advisory message was sent to applicable owners of record in SEB91-5A.

NOTE: Owners of airplane serials 18052317 thru 18053203 were also sent the following Owner Advisory message.

Dear Cessna Owner:

If your airplane is equipped with a Gerdes Products Company or ACS Products Company manufactured ignition switch, the switch should be inspected and lubricated and a diode installed across the starter contactor to assist in extending the switch service life.

Compliance is recommended: should be accomplished within the next 100 hours of operation or annual inspection, whichever occurs first, or during an equivalent interval for airplanes utilizing the Cessna Progressive Care Inspection program. After initial compliance, switch inspection and lubrication will be required every 2000 hours of operation.

Please contact a Cessna Single Engine Service Station for detailed information and arrange to have this inspection accomplished on your airplane.

CESSNA AIRCRAFT COMPANY

SINGLE ENGINE

APRIL 26, 1991

REVISION 1 JUNE 14, 1991

ATTACHMENT TO SERVICE BULLETIN SEB91-5R1

TITLE: IGNITION SWITCH LUBRICATION AND STARTER CONTACTOR
DIODE INSTALLATION

EFFECTIVITY:

MODEL(S)	SERIAL NUMBERS
150	15074428 thru 15079405
A150	A1500389 thru A1500734
F150	F15001024 thru F 15001428
FRA150	FRA1500212 thru FRA1500336
152	15279406 thru 15286033
A152	A1520735 thru A1521049
F152	F15201429 thru F15201980
FA152	FA1520337 thru FA1520425
172	17261486 thru 17276673
R172	R1722000 thru R1723454
172RG	172RG0001 thru 172RG1191
F172	F17201045 thru F17202254
FR172	FR17200441 thru FR17200675
177	17701890 thru 17702752
177RG	177RG0342 thru 177RG1366
F177RG	F177RG0093 thru F177RG0177
180	18052317 thru 18053203
182	18261786 thru 18268615
R182	R18200001 thru R18202041
A182	A182-0137 thru A182-0148
F182	F18200001 thru F18200169
FR182	FR18200001 thru FR18200070
185	18502154 thru 18504448
U206	U20601980 thru U20607020
207	20700222 thru 20700788
210	21059893 thru 21065009
P210	P21000001 thru P21000874

DESCRIPTION:

The following procedures provide instructions to inspect and lubricate ignition switches manufactured by Gerdes Products Company or ACS Products Company and install a diode across the starter contactor.

APPROVAL:

FAA approval has been obtained on technical data in this publication that affects airplane type design.

For Reims Aviation airplanes: DGAC approval has been obtained on technical data in this publication that affects airplane type design.

REFERENCE: SEB91-5

CHANGE IN WEIGHT AND BALANCE: WEIGHT CHANGE Negligible

MATERIAL INFORMATION:

PART NUMBER	QUANTITY	DESCRIPTION
	AR	Isopropyl Alcohol
	AR	Paint-Red (locally procured)
10-1206	AR	Luberex Grease
A-3600	1 (If Reqd)	Ignition Switch Parts Kit [Includes 3 Contact Cups and 1 Terminal Board]
0770783-2	1	Diode Assembly (1973 thru 1979 airplanes)
0770783-1	1	Diode Assembly (1980 thru 1986 airplanes)

ACCOMPLISHMENT INSTRUCTIONS:

1. Inspect switch to determine manufacturer. If switch is manufactured by Gerdes Products Company. Or ACS Products Company proceed to step 2; however, if it is not manufactured by Gerdes Products Company or ACS Products Company proceed to [step 6](#).
2. Switch removal, disassembly. cleaning and inspection.
 - A. Disconnect battery.
 - B. Remove switch assembly from instrument panel by loosening locknut on the forward side of panel and removing decorative nut on aft side of panel.

NOTE: Wiring need not be removed from posts of switch if wiring is of sufficient length to allow switch assembly to be moved to a position where disassembly can be accomplished. If wiring is to be disconnected tag or mark wires for reinstallation.

- C. Holding switch body (6) in the position shown in [Figure 1](#). remove screws (4) and washers (5). Lift terminal board assembly (3) from body (6) being careful not to lose springs (7) and cups (1).
- D. Using alcohol, clean switch contacts (2) and the three movable contact cups (1).
- E. Inspect movable contact cups (1) and switch contacts on the terminal board assembly (3) for excessive wear or corrosion and for loose contacts or terminals. If the silver plating on the contact cups (1) is worn through to the brass material or they are burned or pitted from arcing or are corroded, they should be replaced. If the contacts on the contact block exhibit any of the above conditions or the terminals are loose, the terminal board assembly (3) should be replaced.

3. Lubrication and reassembly.

- A. Apply a thin coating of Luberex 10-1206 lubricant to switch contacts (2) and the three movable contact cups (1). Be sure all contact areas are covered with lubricant.
- B. Reassemble switch using new parts, if required. by reversing disassembly procedures in step 2B, being careful to position cups (1) and springs (7) in switch body (6) so that no binding occurs. Secure terminal board assembly (3) to switch body (6) with retained washers (5) and screws (4).
- C. Mark switch with a dab of red paint on the terminal board retaining screws (4).
- D. Connect wiring if removed. Install switch in panel and secure.

4. Starter contactor suppression diode installation.
 - A. (Refer to [Figure 2](#), Detail B) Airplanes with the S1991-1 or S1991A1 contactor (12 volt) or the S1577-1 or S1577A1 contactor (24 volt) installed will require the 0770783-2 diode assembly.
 - B. Connect the positive end (small terminal) of the 0770783-2 diode assembly to the single coil terminal (No. 10 stud) on the front of the contactor. Remove one of the bolts that mount the contactor to the firewall. Install the ground end of the diode assembly under the bolt. Assure that there is a good electrical bond between the contactor surface and the mounting surface.
 - C. (Refer to [Figure 2](#), Detail B) On the S2443-2 or S2443-1 contactor, there are two coil terminals. Connect the 0770783-1 diode assembly between these two terminals, observing the diode polarity as shown.

NOTE: The black shrink tubing side of the diode assembly should be installed to the negative (ground) side of the contractors as shown.

5. Functional check.
 - A. Reconnect battery.
 - B. Perform a functional check of switch by starting engine, check magnetos for normal engine rpm drop. reduce the engine rpm to idle and turn the switch off to verify that the OFF position stops the engine. After engine stops, move mixture control to cutoff position.
6. Make an entry in the airplane logbook stating this Service Bulletin has been complied with and method of compliance.

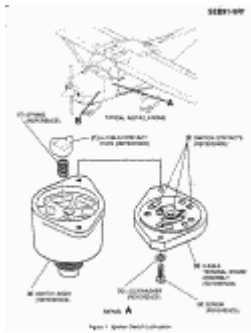


Figure 1. Ignition Switch Lubrication

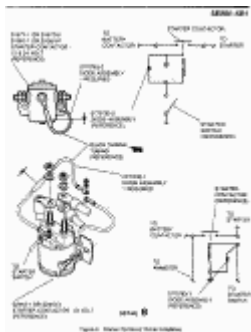


Figure 2. Starter Contactor Diode Installation

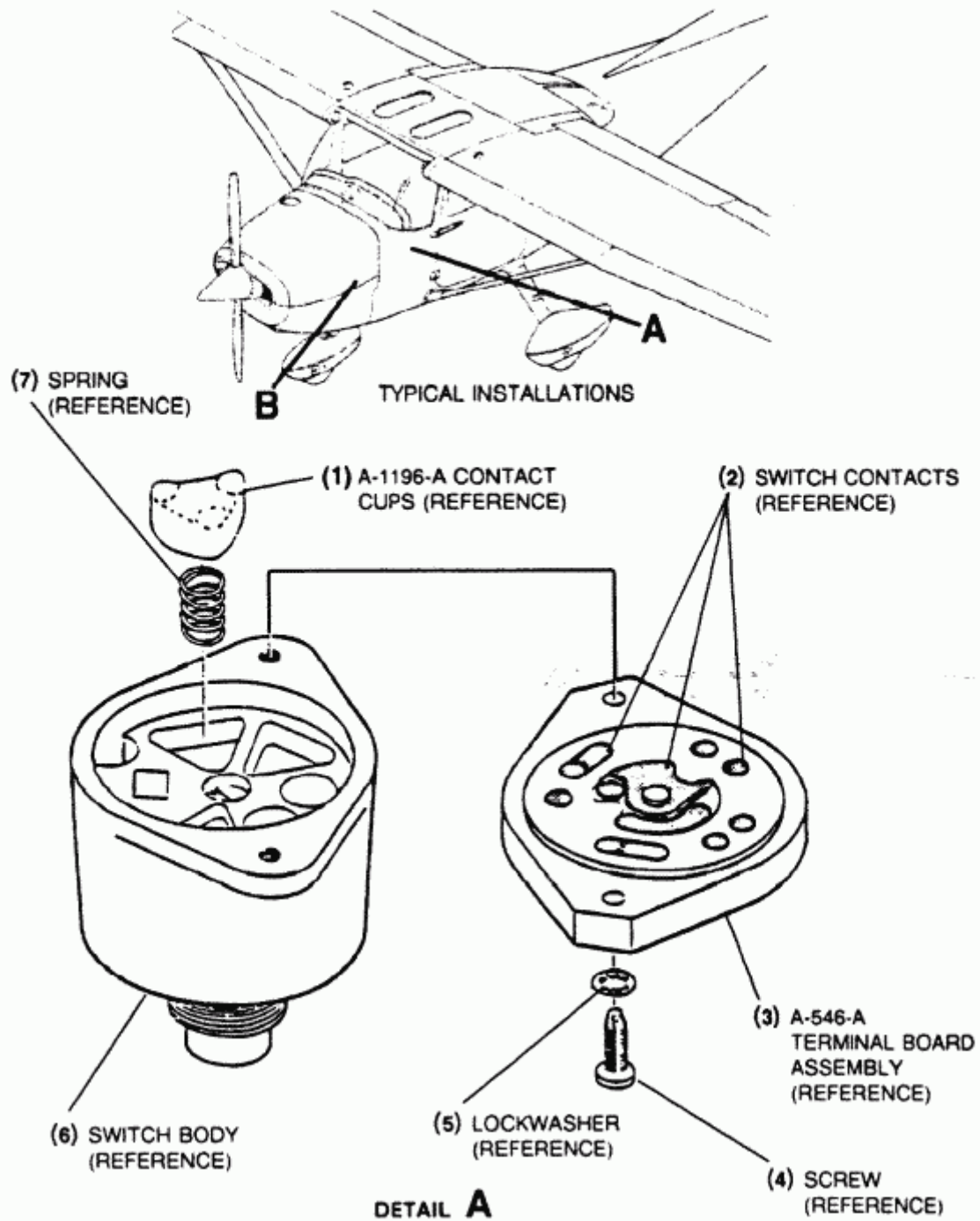


Figure 1. Ignition Switch Lubrication.

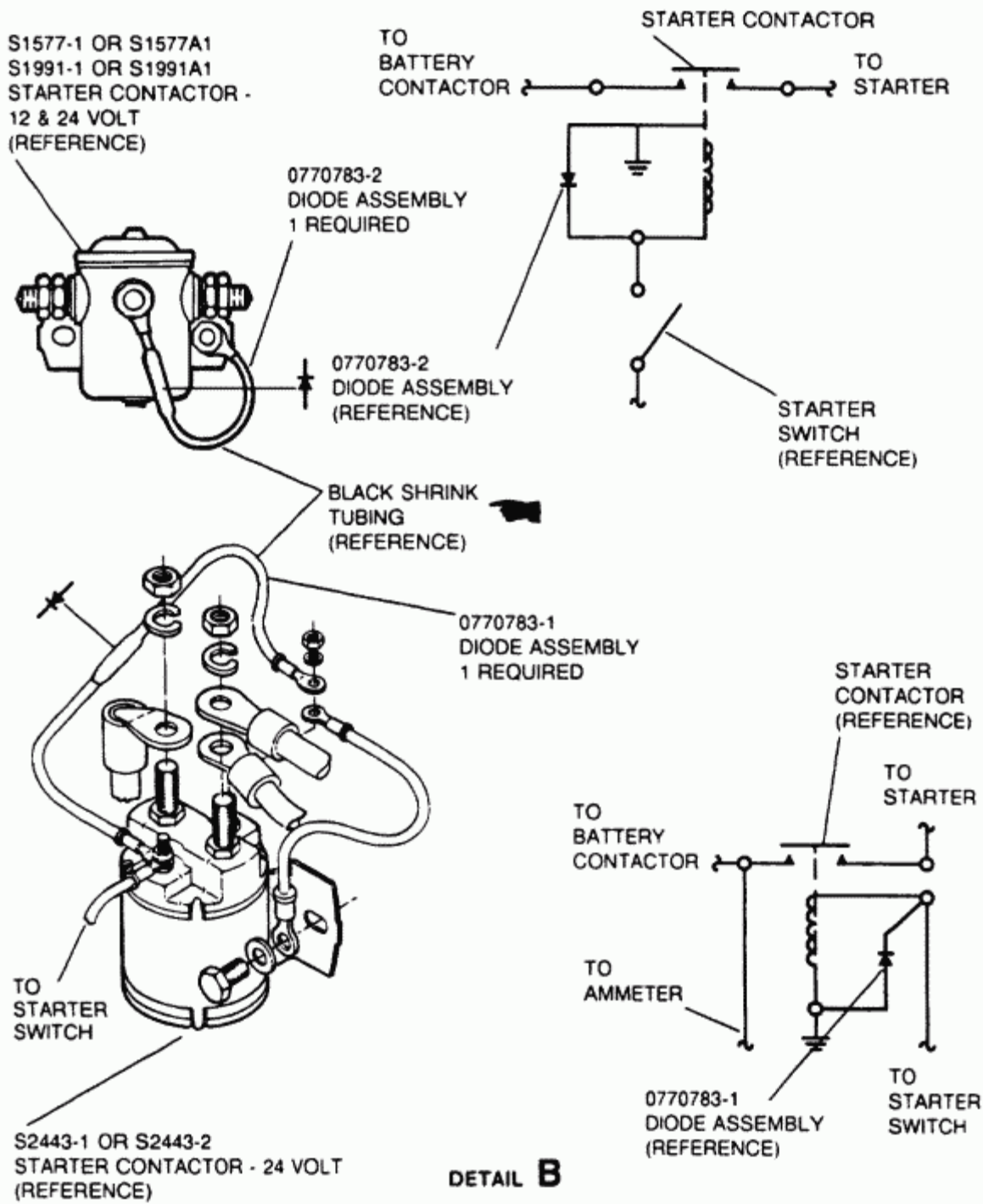


Figure 2. Starter Contactor Diode Installation