

**SUPPLEMENT NO. 8 TO DOC.NO. CR-MM-1-0-00****INSPECTION AND LUBRICATION OF
GERDES OR ACS
IGNITION SWITCHES**

1 LIST OF AIRPLANES COVERED BY THIS SUPPLEMENT

Airplane model	Serial No.	Note
PS-28 Cruiser and SportCruiser / PiperSport – operating under EASA rules		EASA Minor change Approval 10072846, 18.03.2020 Acc. to the ACS Service Bulletin No. SB92-01, Rev.D (2008-11-18)



2 RECORD OF REVISIONS

Rev. No.	Revision name	Changed pages	Issue date	Date and signature
-	Initial issue	1 - 8	2020-01-15	2020-01-15 Koukal

**CHAPTER 1 GENERAL**

No Change

CHAPTER 2 LIMITATIONS / MAINTENANCE CHECKS

No Change

CHAPTER 3 FUSELAGE

No Change

CHAPTER 4 WING

No Change

CHAPTER 5 TAIL UNIT

No Change

CHAPTER 6 CONTROL SYSTEM

No Change

CHAPTER 7 EQUIPMENT

No Change

CHAPTER 8 LANDING GEAR

No Change

CHAPTER 9 FUEL SYSTEM

No Change

CHAPTER 10 POWERPLANT

No Change

CHAPTER 11 ELECTRICAL SYSTEM

No Change

CHAPTER 12 INSTRUMENTS AND AVIONICS**12.4.10 Inspection and lubrication of ignition switch****Type of maintenance:** Line**Authorization to perform:**

Certifying staff in accordance with EU 1321/2014

Tools needed:

Common tools for aircraft maintenance

General

Ignition switch of Gerdes or ACS company is used in PS-28 Cruiser airplane.

This section contains instructions for inspection and lubrication of the ignition switch and for installation of a diode across the starter solenoid coil, if the diode is missing.

12.4.10.1 Disassembly

- a) Move the aircraft to a suitable place to perform the work
- b) Remove engine upper cowling
- c) Disconnect battery terminals
- d) Remove the ignition switch from the instrument panel
- e) Disconnect all wires for re-installation



CAUTION: WHEN THE IGNITION SWITCH WIRES ARE DISCONNECTED, OR WHEN THE IGNITION SWITCH IS DISASSEMBLED (STEP f, BELLOW), BOTH MAGNRTOS ARE "HOT". IF THE PROPELLER IS M OVED DURING THIS TIME, THE ENGINE MAY FIRE AND CAUSE SERIOUSOR OR FATAL INJURY TO PERSONNEL.

- f) Hold the switch assembly with the terminal board on top. Remove two screws and two washers from the terminal board. Lift the terminal board from the switch body, being careful not to lose the springs and triangular caps.
- g) Remove the three springs and three triangular caps from the switch body.

12.4.10.2 Cleaning

Clean the contacts on the terminal board and on the three triangular cups with alcohol.

12.4.11 Inspection

Inspect the contacts on the terminal board and on the three triangular cups for excessive wear or corrosion.

If the silver plating on the terminal board or triangular cups is worn through to the brass or if they are burned or pitted from arcing or are corroded, they should be replaced.

12.4.12 Lubrication

Apply a THIN coating of Mobile Grease 33 lubricant to the contacts on the terminal board and the three triangular cups. Be sure that all contacts are coated but avoid heavy lubricant buildups.

12.4.13 Reassembly

- h) Reassemble the switch, using new parts if required. Position the springs and triangular cups so that there is no binding between the cups and the triangular cavities in the switch body. Secure the terminal board assembly to the switch body with two screws and retaining washers.
- i) Fill the heads of the two screws on the terminal board assembly with red colour.
- j) Connect the labelled wires to the proper terminals on the terminal board assembly.
- k) Reinstall the ignition switch in the panel.

NOTE: The locations of the "S" and "BAT" terminals on the new green terminal board assembly are reversed from their positions on the old white terminal board assembly (see Figure 1).

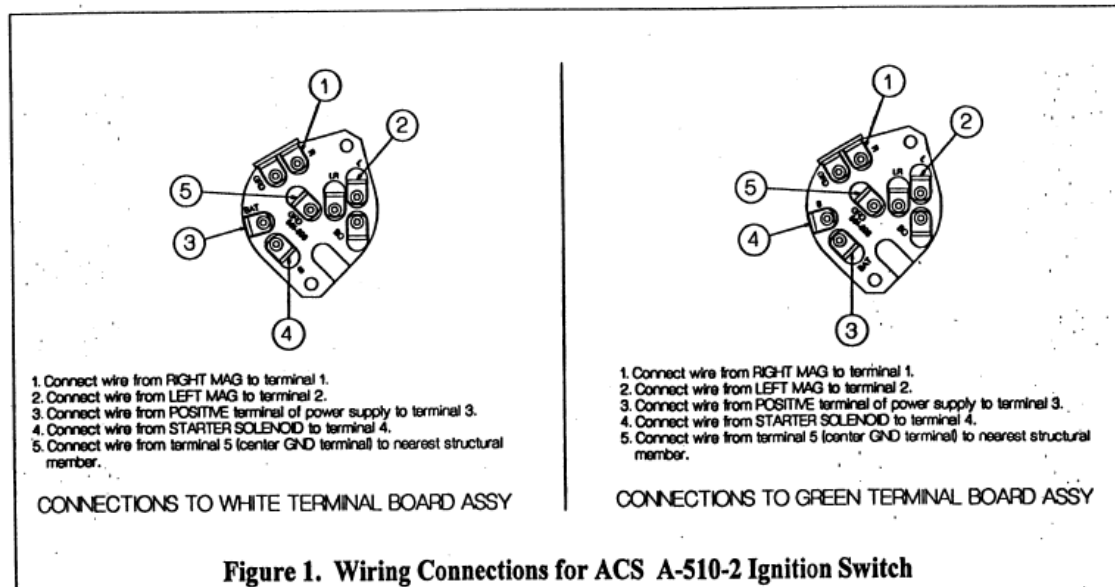


Figure 1. Wiring Connections for ACS A-510-2 Ignition Switch



12.4.14 Check of the ignition switch for presence of starter solenoid surge suppressor diode (diode assembly) and its installation, if missing.

General:

Check the ignition switch for presence of diode assembly located on starter relay, see Figure 2 and 5. If missing, install the diode assembly, P/N 16050-2 on starter relay in accordance with the Figures. Particular external appearance of the relay can differ but the general method of installation remains basically the same, i.e., the small ring terminal of the diode assembly (with red band near the small terminal) is attached to the positive (starter switch) terminal of the solenoid coil of the starter relay and the large ring terminal (with black cover on the diode lead at the terminal) is attached to ground. For order of the diode assembly contact ACS Products Co.

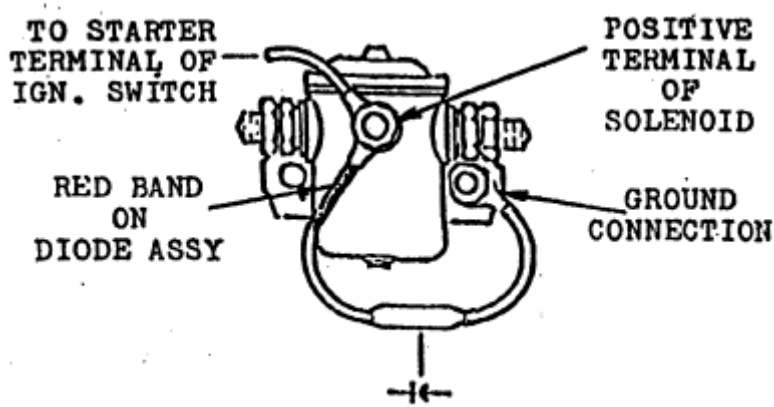


Figure 2. Diode assembly installed on the starter relay – general scheme

Diode assembly adjustment – preliminary operations:

Before installation of the ACS Products Co. diode assembly, the assembly must be adjusted for PS-28 Cruiser, as follows:

- a) Cut off the part (small ring terminal) accordingly to Figure 3.

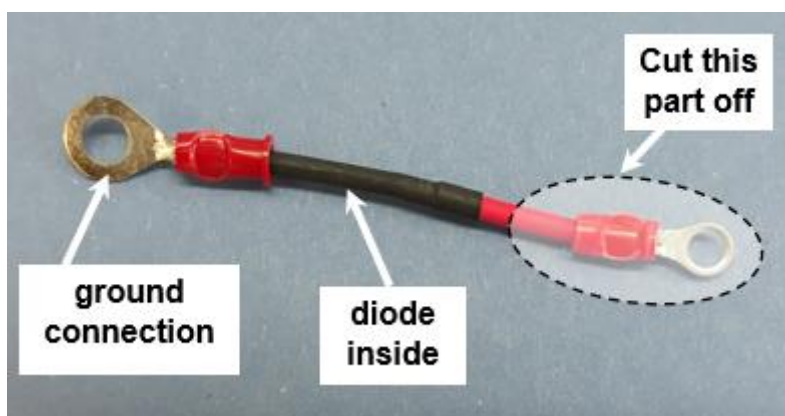


Figure 3. Diode assembly, P/N 16050-2

CAUTION: The ignition switch must be in the “Off” position and the leads to the left and right magnetos must be connected to the ignition switch during installation of the diode assembly to prevent the engine from firing if the propeller is moved.

- b) Solder a sufficient length of AWG20 wire on the diode assembly, see Figure 4.

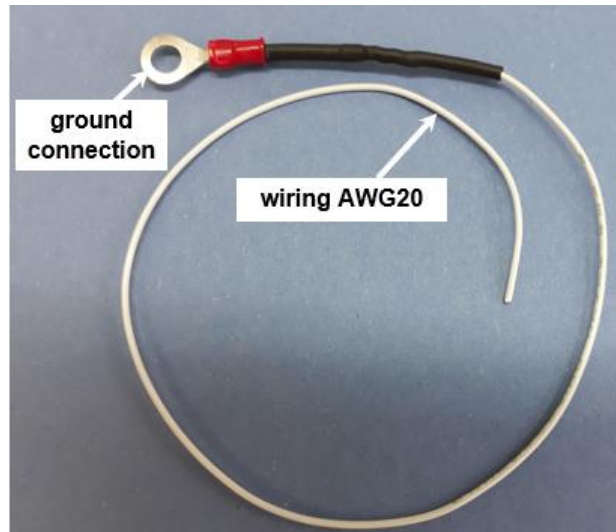


Figure 4. Diode assembly adjusted for installation on PS-28 Cruiser

Diode assembly installation (refer to Figure 5):

- a) Remove connector (female Faston) from the positive terminal on the starter relay and cut the connector away from the wiring. Remove fixing stripes of the wiring as needed and add the soldered AWG20 wiring of the diode assembly and complete new connector. Use fixing stripes as needed to tie the wiring.
- b) Install the connector back in the positive terminal of the starter relay.
- c) Remove one mounting bolt and hardware from the starter relay mounting base.
- d) Place the ground connection ring terminal of the diode assembly on the mounting bolt and reinstall the bolt through the starter relay base. The bolt is now the "ground" connection for the diode assembly, see Figure 5.

Functional check:

- e) Reconnect the battery.
- f) Perform a functional check of the switch by starting the engine and checking the magnetos for normal engine drop. Reduce engine RPM to idle and turn the switch off momentarily to verify that the „Off“ position stops the engine.
- g) Restore aircraft to original operating configuration.

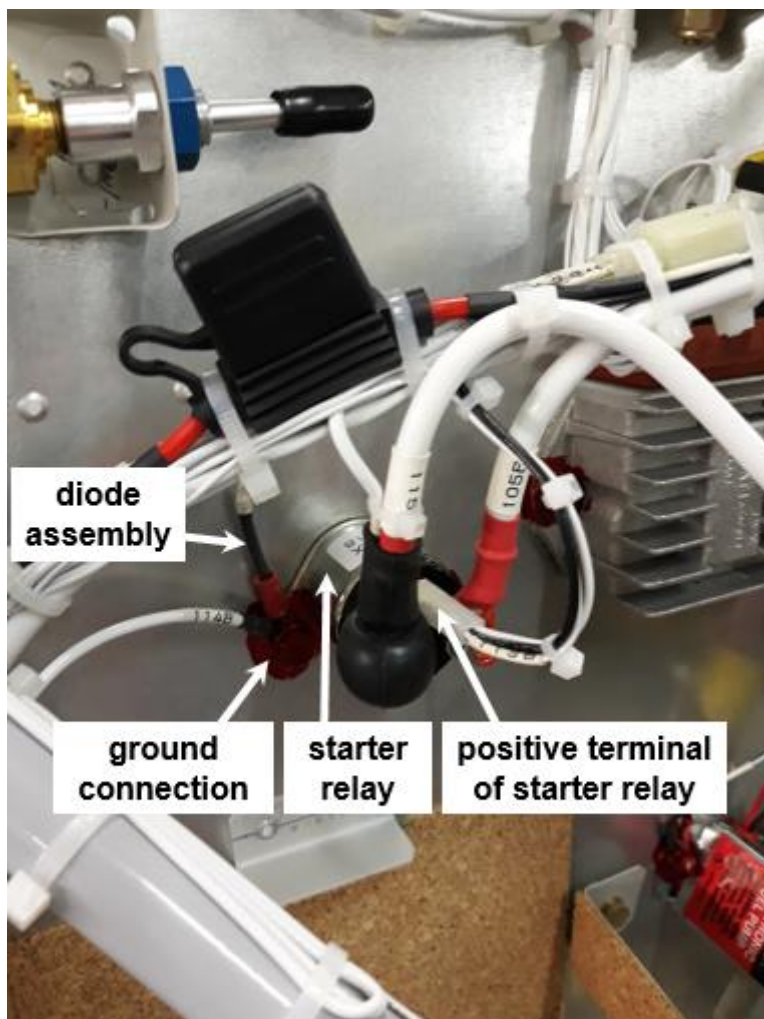


Figure 5. Diode assembly installed on PS-28 Cruiser airplane

CHAPTER 13 VENTING / HEATING

No Change

CHAPTER 14 AIRPLANE HANDLING

No Change

CHAPTER 15 AIRPLANE REPAIRS

No Change

CHAPTER 16 WIRING DIAGRAMS

No Change

CHAPTER 17 APPENDICES

No Change