



Service Bulletin

DATE: June 1, 1977

Service Bulletin No. 12 (Rev B)
Engineering Aspects are
FAA Approved

SUBJECT: Gel/Cell Battery Installation

MODELS AFFECTED: S-15 1-0001 to 1-0054
S-2A 2001 to 2145

TIME OF COMPLIANCE: At Owner's Discretion

The use of lead acid batteries with liquid electrolyte has resulted in continuing problems with acid spills in the aft fuselage interiors of Pitts S-15 and S-2A aircraft, with resultant field service problems. In order to correct this problem, the use of Gel/Cell batteries in these aircraft has recently been approved by the FAA. Two Gel/Cell 6V 20A batteries are used in series in place of the AH3153-1A or Rebat S-25 previously approved. With the Gel/Cell batteries installed it is no longer necessary nor desirable to turn the alternator field switch off during aerobatics since the Gel/Cell battery vent system will vent properly in an inverted position.

The following items are necessary in order to make the conversion.

1. 2 ea Gel/Cell batteries
2. 1 ea 1-241-15/2-2125-13 adapter plate
3. 1 ea 1-241-19/2-7602-37 connector strap
4. 1 ea 1-101-25/2-2125-17 hold down bar
5. 4 ea MS 25171-25 boot

Install the Gel/Cell batteries in the following manner.

- A. Disconnect the leads from the original battery installation.
- B. Remove the original battery from the battery rack.
- C. Check the tubular structure in the aft fuselage area and neutralize any acid spills with bicarbonate of soda and touchup with primer where necessary.
- D. Install adapter plate in battery rack.
- E. Shorten existing threaded rods so they project approximately 3/4" above hold down bar.
- F. Set batteries on adapter plate with positive terminals on outboard side, one at the left front corner and one at the right rear. Install hold down bar with pads on bottom side against the battery cases and tighten

wing nuts on hold down bar until bar begins to bow slightly. (Do not over tighten.)

- G. Safety the wing nuts with safety wire.
- H. Install connector strap between negative pole of one battery to positive pole of the other (at aft end of batteries). Be sure to install MS 25171-2S boots on each terminal
- I. Connect ground strap to negative pole at right forward corner of batteries and the positive lead to the positive pole at the left front corner of the batteries. Use AN 960-416L washers on each side of terminal lugs. Install MS 25171-2S boots on each terminal
- J. Recalculate weight and balance using the following information.

(I) S-2A

	<u>WT</u>	<u>ARM</u>	<u>MOMENT</u>
Old Battery Installation	30 lbs	154.8	4644
New Gel/Cell Installation	20 lbs	154.8	[3096]

(II) S-15

	<u>WT</u>	<u>ARM</u>	<u>MOMENT</u>
Old Battery Installation	30 lbs	108.0	3240
New Gel/Cell Installation	20 lbs	108.0	2160

- K. Complete installation by making log book entry covering battery change in accordance with Pitts Aerobatics Service Bulletin No. 12 (Rev A).