AIR DEPARTMENT
CIVIL AVIATION ADMINISTRATION

APPLICATION FOR APPROVAL OF MAJOR MODIFICATION/REPAIR

AIRCRAFT OR ENGINE TYPE: Model D.II.
Component Affected: AILERON PULLEY INSTN.

General Description of Mod/Repair and reason for introduction:
- Positive attachment of AILERON PULLEY MOUNTING BRACKET.
- To prevent repetition of failure experienced by D-I1 aircraft in Canada.

Does it affect Maintenance or Overhaul Schedules? No.

The following Drawings, Notices, Instructions, Maintenance and Overhaul Schedules will be amended/cancelled:

The following Drawings and Data, together with proposed Amendments to Maintenance and Overhaul Schedules, are introduced:

DRAWING No. AND 177 INTRODUCED.

The Net Total Effect on the Aircraft Weight and Balance will be:

Increase of \text{\textit{NEC.}} \text{lb.} located at \text{\textit{feet}} \text{ in front of} \text{\textit{behind}}

the Datum which is \text{\textit{.........................}}

Note: Aircraft will be weighed on completion.

Firm by which Mod/Repair is submitted:
- Aeroengineering Division
  C.A.A.

Recommended by:
- Mr. J. Bahn
  A.M.E. Licence No. or approved Tech. Officer

FINAL APPROVAL
- TEMPORARY APPROVAL EXPIRING
- EXPERIMENTAL APPROVAL EXPIRING

Approved on behalf of the Minister of Civil Aviation

CONDITIONS OF APPROVAL
Flight Manual Amendment is \text{\textit{required}} \text{not required}
BOLT FITTINGS & ARRANGEMENT
NOT SHOWN ARE IN ACCORDANCE WITH RELEVANT AIRCRAFT BDS.

AN B-7A BOLT, 2 OFF REGD PER ASSY.

DRILL BOLT HEADS & WIDE LOCK.

AN 3/8-3 NUTS, 2 OFF PER ASSY, BRAZED TO
1G E/WG MILD STEEL SHEET. (COMM)
ATTACH BY MEANS OF 2 1/4 X 8 WOOD SCREWS.
ASH BLOCK, 2 OFF REGD.

2 Holes, ⅛ Dia.

1/2 THK. MILD STEEL PLATE, 2-OFF REGD, (COMM)

2 Holes, ⅛ Dia.

AWD 177
ACCIDENT REPORT

Aircraft: Jodel D-11, CF-RFJ (Ultra Light)
Place: 28 miles N.E. of Revelstoke, B.C. (Lat. 51°13'N; Long. 117°44'W)
Date: 27th August 1964. About 1200 hours P.S.T.

SUMMARY

The aircraft was being flown from Red Deer, Alberta to Edgewater, B.C. with the pilot alone on board. After encountering deteriorating weather a 180 degree turn was executed, following which, control difficulties were experienced and an emergency landing was made on a highway. After landing, the aircraft ran off the highway and down a bank and overturned.

The pilot received a minor injury and the aircraft was substantially damaged.

INVESTIGATION

A Flight Permit had been issued for the aircraft and there was no evidence of any fault in the airframe, engine or controls prior to the accident except as discussed later in this report.

The pilot held a Private Pilot Licence and had accumulated a total of 110 hours flying experience. He had flown Jodel D-11 aircraft for 45 hours all in the 90 days prior to the accident.

The weather in the accident area was reported to be ceiling 600 to 1000 feet, limited visibility in fog and rain, temperature 55° to 60°F. and the wind from the west at under 10 mph.

The section of highway used for the landing provided a 45 foot width of asphalt surface. There was a three foot shoulder of gravel on the north side then steeply rising ground. The south shoulder provided six feet of gravel then sloped downward at about a 45 degree angle to a level area about 35 feet below the highway.

The pilot in his report indicates at Albert Canyon the weather ahead had deteriorated with a low ceiling and intermittent rain. He accomplished what he described as a steep stall turn to the left with the intention of returning for a landing at a location where better weather existed. The manoeuvre was accomplished and the aircraft was flown eastbound. The pilot found he was having difficulty in maintaining control as the aileron controls were not responding in a normal manner. He states he had to jerk the control column to obtain response from the ailerons and even then did not consider the response was normal. A decision was made to land on the highway. The landing was successfully accomplished, however, the aircraft swung to the right during the landing roll, continued down the slope south of the highway and overturned.

Investigation determined that effective aileron control was lost when the left wing aileron pulley bracket separated from its anchorage at the rear face of the box spar. This pulley bracket is not secured by bolts or screws, but is hooked over the front end of a compression strut. Aileron cable forces on the assembly tend to pull inboard but movement of the strut and bracket is stopped by a block attached to the rear face of the spar. In this aircraft the block was made of 5/32 inch plywood which proved inadequate to restrain the forward end of the strut and bracket which moved inboard and became detached.

PROBABLE CAUSE

Failure in the aileron control system.