

## AIRCRAFT ACCIDENT INVESTIGATION SUMMARY REPORT

Reference No.

AS/711/1020

## 1. LOCATION OF OCCURRENCE

|                                   |                                 |                 |                      |             |
|-----------------------------------|---------------------------------|-----------------|----------------------|-------------|
| Archerfield Aerodrome, Queensland | Height a.m.s.l. (ft)<br>37 feet | Date<br>10.7.71 | Time (Local)<br>0820 | Zone<br>EST |
|-----------------------------------|---------------------------------|-----------------|----------------------|-------------|

## 2. THE AIRCRAFT

|                                                                                                                                                                                                 |                                                                                    |                                             |                      |                    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------|----------------------|--------------------|
| 2. THE AIRCRAFT                                                                                                                                                                                 |                                                                                    |                                             |                      |                    |
| Make and Model<br>Grumman G164A                                                                                                                                                                 | Registration<br>VH-PUQ                                                             | Certificate of<br>Airworthiness             | Valid from<br>5.1.67 | Valid to<br>4.1.76 |
| Registered Owner<br>Cropair Aviation Pty. Ltd.,<br>P.O. Box 1432,<br>Brisbane, Queensland.                                                                                                      | Operator<br>Cropair Aviation Pty. Ltd.,<br>P.O. Box 1432,<br>Brisbane, Queensland. | Degree of damage to aircraft<br>Substantial |                      |                    |
|                                                                                                                                                                                                 |                                                                                    | Other property damaged<br>Nil               |                      |                    |
| Defects discovered<br>Fatigue crack propagation had occurred in the upper surface of the left main undercarriage leg at a point 8 inches from the inboard end, adjacent to the support bracket. |                                                                                    |                                             |                      |                    |

## 3. THE FLIGHT

|                                                                                     |                           |                                                      |                                              |                                   |
|-------------------------------------------------------------------------------------|---------------------------|------------------------------------------------------|----------------------------------------------|-----------------------------------|
| Last or intended departure point<br>Agricultural Strip 1½ miles<br>north of Dayboro | Time of departure<br>0805 | Next point of intended landing<br>Point of departure | Purpose of flight<br>Fertilizer<br>Spreading | Class of operation<br>Aerial Work |
|-------------------------------------------------------------------------------------|---------------------------|------------------------------------------------------|----------------------------------------------|-----------------------------------|

## THE CREW

| Name                   | Status | Age | Class of licence | Hours on type | Total hours | Degree of injury |
|------------------------|--------|-----|------------------|---------------|-------------|------------------|
| Michael Anthony KEELEY | Pilot  | 36  | Commercial       | 4000          | 9250        | Nil              |

## 5. OTHER PERSONS (All passengers and persons injured on ground)

| Name | Status | Degree of injury | Name | Status | Degree of injury |
|------|--------|------------------|------|--------|------------------|
|      |        |                  |      |        |                  |

## 6. RELEVANT EVENTS

The aircraft was taking off into the south, from a one-way agricultural strip situated along the spine of a mountain ridge. The length of the strip was 1,420 feet. The surface of the strip was generally good but over the last 200 feet at the southern end a number of flat boulders protruded up to 3 inches above the soil and there was a transverse downslope of about 9° to the left. Twenty-six take-offs had been made from the strip at slightly below the maximum take-off weight for the aircraft type. On the twenty-seventh take-off, the aircraft lifted off normally then sank and touched the ground in the area which contained the boulders. The pilot heard a loud "crack". He continued with the flight and after spreading the fertiliser established that the left main landing assembly had broken away from the aircraft. He then flew to Archerfield and landed on a prepared grass surface. As the speed decayed the left lower wing-tip and the propeller contacted the ground. The aircraft skidded 87 feet and swung to the left. The tail rose and the aircraft came to rest balanced on the propeller, the right wing-tips and the right main wheel.

Subsequent examination of the failed leg showed that fatigue cracks had initiated at fretting damage in the decarburised skin. A number of cracks propagated and joined to form a single crack 1 1/8 inches long by approximately 0.050 inches deep. It is considered likely that cracks up to 0.050 inches deep were present when the 5000 landing inspection was carried out on the leg some 150 landings prior to the accident.

## 7. OPINION AS TO CAUSE

The cause of the accident was that the port main landing gear spring leg failed due to the presence of fatigue cracking. It is possible that the surface condition of the strip may have contributed to the ultimate failure of the spring leg.

|                                                       |                                                                         |                 |
|-------------------------------------------------------|-------------------------------------------------------------------------|-----------------|
| Report released<br><i>D. S. Graham</i> D. S. Graham ) | Designation<br>Assistant Director-General<br>(Air Safety Investigation) | Date<br>18.4.72 |
|-------------------------------------------------------|-------------------------------------------------------------------------|-----------------|