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AVRO ARROW GROUND HANDLING EQUIPMENT

USE OF GIRAFFE MODEL IG40

Report # 70/GEQ/3.

Sege Nov. 1957.

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NRC - CISTI
J. H. PARKIN
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ANNEXE
J. H. PARKIN
CNRC - ICIST

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AIRCRAFT ENGINEERING DIVISION
AVRO AIRCRAFT LIMITED, MALTON, ONTARIO.

AVRO ARROW GROUND HANDLING EQUIPMENT

USE OF GIRAFFE MODEL IG40

It was agreed at the 14th meeting of the Arrow G.S.E. Sub-committee that AVRO would investigate the suitability of a Giraffe Model IG40 for the removal and replacement of certain Arrow airframe components which require the use of a lifting device or light crane.

Description

The Giraffe Model IG40 is a hydraulically operated aerial platform, which was primarily designed to lift men or material up to relatively inaccessible areas, such as for the repair of overhead cables, street lamps, etc., The equipment can be mounted on either a truck or trailer chassis. The chassis will also house the hydraulic power unit. The Giraffe can be controlled from either the platform situated at the end of the boom, or from the chassis. By use of outriggers on the chassis the equipment is capable of lifting 1000 lbs. throughout its complete range of movement. The range of movement and loading dimensions are shown in Fig. 1.

Scope

If used to remove and replace Arrow airframe components as listed below, it will be necessary to add a slinging point to the Giraffe platform as shown on Fig. 2. Using the Giraffe as a crane, together with suitable aircraft component slings, it is considered possible to remove and replace the following airframe components.

Aileron	168 lbs.
Aileron Control Box	330 "
Elevator	232 "
Elevator Control Box	410 "
Rudder	124 "
Rudder Control Box	245 "
Turbine - Air Conditioning	87 "
Heat Exchanger	184 "
Boiler	120 "
Seat - Pilot or Navigator plus Emerg. Oxy.	114)
Survival Kit	28) 169 lbs.
Personal Parachute	27)
Cockpit Canopy (Clamshell)	75 lbs. each.

Recommendations

It is recommended that one Giraffe be made available for tests at AVRO and that AVRO be authorised by the R.C.A.F. to design and manufacture a set of the necessary component slings so that a full scale trial can be conducted.



AVRO AIRCRAFT LIMITED
MALTON ONTARIO

TECHNICAL DEPARTMENT

REPORT No. _____

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PREPARED BY _____

DATE _____

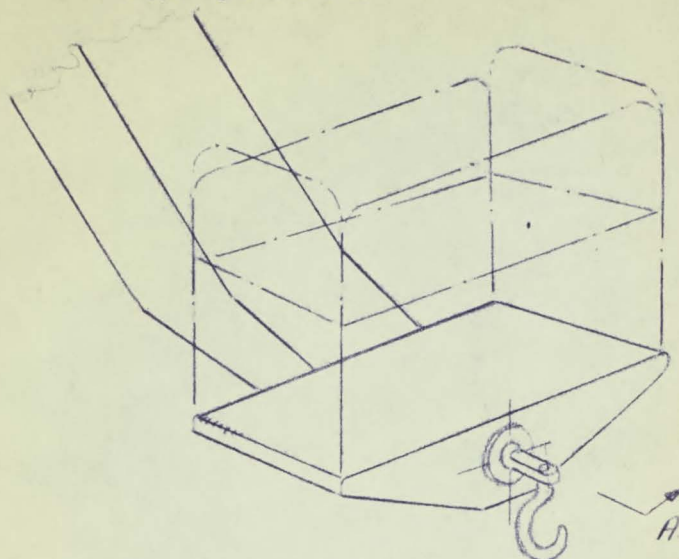
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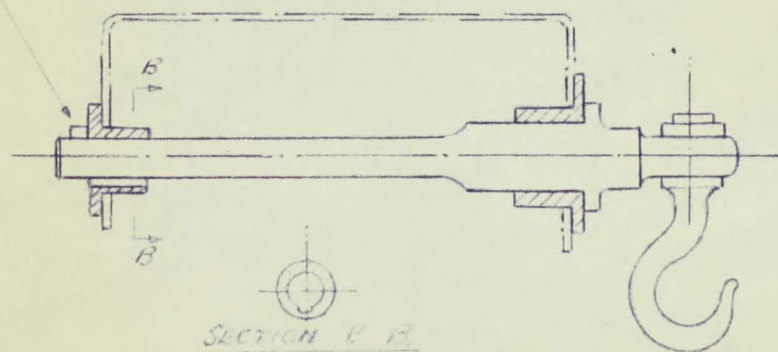
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LIFTING BOOM ATTACHMENT
FOR GIRAFFE

FIG 2.



NOTE - ASSEMBLY BY SLIDING
BOLT HP THROUGH KEYWAY WHEN
HOOK IS IN THE INVERTED POSITION



SECTION ON A SHOWING LIFTING BOOM

