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C.F. 105 MOCK-UP CHAI
REQUEST I PROGRESS REC

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C O N F I D E N T I A L

CF-105

MOCK-UP EVALUATION CHANGE REQUESTS

PROGRESS RECORD

Classification cancelled/changed to.....
by authority of..... (date).....
signature *Robert M. Arnold* Rank *1K*

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1. The attached sheets are designed to provide a record of Engineering action taken against Change Requests published in RCAF/AMTS Development Study Report DAEng-45 "CF-105 MOCK-UP EVALUATION". Replacement sheets on which action is outstanding will be re-issued when further progress can be reported.

2. In explanation of the three sections of the form:-

Section 1 repeats, for ease of reference, the original Change Request from Report DAEng-45.

Section 2 is intended to cover the various major engineering phases from initiation of study to allocation to a production aircraft, dates etc. being inserted as and when each stage is complete. Since this record was commenced in May 1956, in general no earlier date is quoted. The letters N.A. mean "Not Applicable".

Section 3 is to form a record of progress and will be entered up periodically until the Change Request has been dealt with.

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DEFINITION OF CATEGORIES

- Cat. 1 - To be evaluated on the existing Mock-Up and incorporated on the first aircraft. Some items may not require evaluation on the aircraft mock-up but are to be incorporated in the first aircraft.
- Cat. 2 - To be incorporated in time for the RCAF Engineering Evaluation to be carried out on the aircraft (not necessarily the first aircraft).
- Cat. 3 - To be incorporated in the mock-up of the PS-13 powered aircraft.
- Cat. 4 - To be incorporated in the mock-up for evaluation at the same time the mock-up of the Armament System is evaluated.
- Cat. 5 - To be incorporated in the mock-up for evaluation at the same time the mock-up of the Integrated Electronic System is evaluated.
- Cat. 6 - Changes of a nature requiring a study by the contractor or the RCAF.
- Cat. 7 - Changes not acceptable.

C O N F I D E N T I A L

I N D E X

- A - Crew Accommodation
- B - Structures
- C - Engine Installation
- D - Electrical
- E - Air Conditioning
- F - Low Pressure Pneumatics
- G - Fire Detection & Protection
- H - Icing Protection
- I - Fuel System
- J - Telecom & Navigation
- K - Hydraulics
- L - Oxygen
- M - Instruments

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 1

Item: A-1

Sheet: 1

1. Change Request Detail

Initiator: DIEEng

Change Desired: Put wedge behind altimeter to tilt upwards.

Reason: To obtain full view to top area of scale. As mounted the new 10,000 ft index could be out of sight along with most of the graduations.

Action: Cat. 1.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
N.A.			May 15/56	1st & subs.

3. Progress Detail

Date	Remarks
9 May 1956	Mock-up change in work.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 0

Item: A-2

Sheet: 1

1. Change Request Detail

Initiator: DFS

Change Desired:

Reason:

Action: Withdrawn on request of initiator.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation

3. Progress Detail

Date	Remarks
9 May 1956	For record purposes only. No action required.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 1

Item: A-4

Sheet: 1

1. Change Request Detail

Initiator: AMC - CEPE

Change Desired: To manufacture canopy latch access door between cockpit bulkhead in a transparent material.

Reason: To enable the navigator to see the pilot's seat and top of pilot's head.

Important re:- determining if the pilot anoxic or incapacitated, determining if pilot ejected. Psychological effect of being closed in helped.

Action: Cat. 1 - Mirror arrangement mocked-up - door to be openable in flight. Refer: A-8.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
March 1/56				

3. Progress Detail

Date	Remarks
9 May 1956	Pending canopy emergency opening tests. If rigid pipe can be replaced by flexible this CR can be incorporated. Transparent feature will be accommodated in any case, together with opening facility (ref. A-8). Flex. pipe would clear ledge for use as step (ref. A-31).

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Category: 1

Item: A-6

Sheet: 1

1. Change Request Detail

Initiator: AFHQ/DIEEng

Change Desired: The proposed wording on the dials of certain instruments is considered excessive. DIEEng is commenting on oxygen. Turbine outlet thermometer drawing submitted by Avro.

Reason:

Action: Cat. 1 - Cockpit Sub-Committee to present proposal to AVRO.
Refer A-8.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
No				

3. Progress Detail

Date	Remarks
9 May 1956	Awaiting RCAF advice.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 6

Item: A-7

Sheet: 1

1. Change Request Detail

Initiator: Cockpit Sub-Committee

Change Desired: Instrument panel - re-arranged as detailed by Cockpit Sub-Committee.

Reason: To accommodate space provision for an attack scope.

Action: Cat. 6 - AVRO to study and present proposal to meet the change request, i.e., leading to Cat. 1 - Changes to left hand console to be Cat. 1.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
Completed	Yes	March 20/56	May 15/56	1st A/C

3. Progress Detail

Date	Remarks
9 May 1956	<p>Immediately after Mock Up Conference pilot's attack scope reduced from 5 inch to 3 inch diameter. Instrument panel alteration not possible until IDI available. Rearrangement of engine instruments on main panel as requested not possible because of structure interference.</p> <p>Discussed and agreed with Cockpit Sub-Committee on March 20/56.</p>

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CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 7

Item: A-8

Sheet: 1

1. Change Request Detail

Initiator: Cockpit Sub-Committee

Change Desired: Clear view panel separating front and rear cockpit with an access door which can be opened in flight.

Reason: To permit navigator to see into front cockpit and to be able to pass small articles into front cockpit.

Action: Cat. 7 Partially covered by A-4.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation

3. Progress Detail

Date	Remarks
9 May 1956	See A-4.

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CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 7

Item: A-9

Sheet: 1

1. Change Request Detail

Initiator: Cockpit Sub-Committee

Change Desired: Red and amber master warning lights to be flashing and if the flashing feature fails, it must not prevent the functioning of the warning lights in a steady condition.

Reason: More eye catching when flashing.

Action: Cat. 7.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation

3. Progress Detail

Date	Remarks

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 1

Item: A-10

Sheet: 1

1. Change Request Detail

Initiator: Cockpit Sub-Committee

Change Desired: Rudder, elevator and aileron trim position indicators, and a control surfaces movement indicator are required on port console.

Reason: Safety of flight.

Action: Cat. 1.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
Completed	Yes	March 20/56	Yes	1st A/C

3. Progress Detail

Date	Remarks
9 May 1956	Instrument presentation and position approved by Cockpit Sub-Committee March 20/56.

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CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 1

Item: A-11

Sheet: 1

1. Change Request Detail

Initiator: Cockpit Sub-Committee

Change Desired: "Damping System Disconnect" on control column to be renamed "Auto Flight Control System Disconnect" and to be connected to the tit in the "spare" position.

Reason: (a) Control now mis-named.
(b) Should be connected to "spare" tit as less likelihood of it being inadvertently actuated in that position.

Action: Cat. 1 For putting switch on control column. The actual definition of the switch is to be determined as per A-6.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
N.A.	N.A.	N.A.	Yes	1st A/C

3. Progress Detail

Date	Remarks
9 May 1956	The switch has been relocated - switch altered from "Normally Open" to "Normally Closed". Part (a) not yet finalized: for RCAF action.

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CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 6

Item: A-12

Sheet: 1

1. Change Request Detail

Initiator: Cockpit Sub-Committee

Change Desired: Circuit breakers in circuits essential to flight should be in front cockpit.

Reason: Safety factor.

Action: Cat. 6 Refer to D-1, D-29, D-35.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
Yes				

3. Progress Detail

Date	Remarks
9 May 1956	Awaiting RCAF decision - W/C Braham undertook to expedite this item at 26th Co-ordinating Committee Meeting, 18 April 1956.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 1

Item: A-13

Sheet: 1

1. Change Request Detail

Initiator: Cockpit Sub-Committee

Change Desired: Angle of rudder pedals makes full depression of brakes difficult. Shaft should be rotated to correct this defect.

Reason: Safety factor and easier operation.

Action: Cat. 1

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
N.A.	Yes		Yes	1st A/C

3. Progress Detail

Date	Remarks
9 May 1956	Brake system being assessed in Mock Up. Deviation from MIL Spec. appears necessary. Pedal movement for full braking too great.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 6 ➤ 1

Item: A-14

Sheet: 1

1. Change Request Detail

Initiator: Cockpit Sub-Committee

Change Desired: Method of permitting crew members to lean forward without loosening harness straps.

Reason: To provide similar facility to that now in CF-100 or T33.

Action: Cat. 6 leading to Cat. 1 -
harness details not
available.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
Completed			Yes	1st A/C

3. Progress Detail

Date	Remarks
9 May 1956	Mock-up set of harness and reel box have been ordered. Seat specification and order including this feature issued for Production aircraft.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 1

Item: A-15

Sheet: 1

1. Change Request Detail

Initiator: Cockpit Sub-Committee

Change Desired: Method of preventing inadvertent release of harness by accidental operation of quick release on right side of seat.

Reason: Quick release could very easily be inadvertently operated in flight particularly since it is in a similar position to the seat raising lever but on the opposite side of the seat.

Action: Cat. 1.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
Yes			Yes	1st A/C

3. Progress Detail

Date	Remarks
9 May 1956	Shape of handle altered. Will be incorporated in Mock-Up for RCAF evaluation.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 6 - 1

Item: A-16

Sheet: 1

1. Change Request Detail

Initiator: Cockpit Sub-Committee

Change Desired: Rear seat should be raised by two or three inches.

Reason: Only when seat is adjusted to its maximum height is vision out of the windows made facile, and then seat is too high to permit proper actuation of the "D" ring for ejection.

Action: Cat. 6 leading to Cat. 1.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
Complete	No	N.A.	N.A.	N.A.

3. Progress Detail

Date	Remarks
9 May 1956	Seat could not be raised without considerable structural redesign. Lower edge of Navigator's window has been dropped on Mock-Up.

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CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 1

Item: A-17

Sheet: 1

1. Change Request Detail

Initiator: Cockpit Sub-Committee

Change Desired: Map stowage required in rear cockpit.

Reason: Company request. No space in front cockpit.

Action: Cat. 1.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
N.A.				

3. Progress Detail

Date	Remarks
9 May 1956	Request this change be altered to Cat. 5. Mins. of Cockpit Sub-Committee 20 March 56 say "-- position can be established only in relation to other equipment which is not firm."

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 1

Item: A-18

Sheet: 1

1. Change Request Detail

Initiator: Cockpit Sub-Committee

Change Desired: RMI in front and rear cockpits to be replaced by IDI.

Reason: IDI has been selected as the direction indicator for this aircraft.

Action: Cat. 1 - subject to availability.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
Completed				Sub A/C

3. Progress Detail

Date	Remarks
9 May 1956	IDI not available for 1st A/C. Alteration accepted for 6th A/C at Cockpit Sub-Committee Meeting March 20/56.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 2

Item: A-20

Sheet: 1

1. Change Request Detail

Initiator: Cockpit Sub-Committee

Change Desired: Largest possible windows to be installed in rear cockpit.

Reason: The small windows seriously restrict visibility and further will create a morale problem.

Action: Cat. 2 - Not available on first aircraft but to be available on first aircraft accepted by RCAF for test flying. Company to determine weight penalty of larger window plus de-misting covered in A-29, D-13.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
Complete	Yes			On or before 16th A/C

3. Progress Detail

Date	Remarks
9 May 1956	Mock-up to be approved.

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CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 1

Item: A-22

Sheet: 1

1. Change Request Detail

Initiator: AFHQ/DARME

Change Desired: Positive interlock must be provided in the crew ejection system to prevent the ejection seat from attempting to eject through the canopy.

Reason: Present system mock-up provides only a one second delay between canopy opening and seat ejection.

Action: Cat. 1.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
Yes				

3. Progress Detail

Date	Remarks
9 May 1956	System being redesigned to eliminate necessity of interlock - opening of canopy fires seat if seat firing control has been actuated.

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CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 6

Item: A-26

Sheet: 1

1. Change Request Detail

Initiator: Cockpit Sub-Committee

Change Desired: In the event that the IDI is not fitted in the first aircraft and TACAN is fitted, an indication of TACAN range must be made available to the pilot.

Reason: Distance indication to selected TACAN station is required for pilots.

Action: Cat. 6 - Study by AVRO if IDI is not available.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
Yes	N.A.	No	No	Nil

3. Progress Detail

Date	Remarks
9 May 1956	TACAN range <u>repeater</u> not available.

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CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 6

Item: A-27

Sheet: 1

1. Change Request Detail

Initiator: Cockpit Sub-Committee

Change Desired: It has not been proven by tests that this configuration of canopy will open under conditions specified. Such tests should be carried out. Simultaneously, work should be done on design of a conventional type canopy which would be available should the clamshell type prove unsuitable.

Reason: To ensure suitability of this type of canopy.

Action: Cat. 6 (AVRO) Aerodynamics Sub-Committee to monitor - Delete last sentence. Sub-Committee to check with IAM on their requirements.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation

3. Progress Detail

Date	Remarks
9 May 1956	Nothing to report.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 6

Item: A-29

Sheet: 1

1. Change Request Detail

Initiator: Cockpit Sub-Committee

Change Desired: Installation of de-misting and de-icing facility in windows in navigator's cockpit similar to that in pilot's cockpit.

Reason: Flight safety.

Action: Cat. 6 - This request to be cross referred to D-13, A-20.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
Yes				

3. Progress Detail

Date	Remarks
9 May 1956	Will be incorporated with larger window. See A-20.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 6

Item: A-30

Sheet: 1

1. Change Request Detail

Initiator: Cockpit Sub-Committee

Change Desired: Better visibility forward and down. Mock-up required to be placed on truck to re-assess visibility in approach and landing altitudes.

Reasons: Flight safety.

Action: Cat. 6 - Cockpit Sub-Committee to monitor.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
Completed	Yes	Yes	Yes (May/56)	1st A/C

3. Progress Detail

Date	Remarks
9 May 1956	Runway test completed to satisfaction of RCAF (W/C Braham, F/L Wills, S/L Schultz, F/L Kersey, S/L O.B. Philp, etc.) Apr. 23/56.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 1

Item: A-31

Sheet: 1

1. Change Request Detail

Initiator: Cockpit Sub-Committee

Change Desired: The left side of the ledge in the front cockpit immediately in front of the access door into the rear cockpit should be converted into a step.

Reason: To facilitate entry into the front cockpit.

Action: Cat. 1.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
Yes				1st A/C

3. Progress Detail

Date	Remarks
9 May 1956	See A-4.

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CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 6

Item: A-32

Sheet: 1

1. Change Request Detail

Initiator: Cockpit Sub-Committee

Change Desired: Area and adequacy of ground coverage by the landing and taxi lights not known. Mock-up when tried again on the truck should include the lighting system.

Reason: To ensure adequate coverage by landing and taxi lights.

Action: Cat. 6 - Cockpit Sub-Committee to monitor. Refer to A-30.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
Completed	N.A.	N.A.	Yes (May/56)	1st A/C

3. Progress Detail

Date	Remarks
9 May 1956	Runway tests of taxi light satisfactory to RCAF. (W/C Braham, F/L Kersey) April 23/56.

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CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 6

Item: A-34

Sheet: 1

1. Change Request Detail

Initiator: Cockpit Sub-Committee

Change Desired: Inclusion of amber warning light in the warning light system to indicate if undercarriage is not locked down when approaching to land.

Reason: Safety factor.

Action: Cat. 6 - RCAF to study.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
Complete	N.A.	N.A.	N.A.	<u>Nil</u>

3. Progress Detail

Date	Remarks
9 May 1956	Cockpit Sub-Committee Meeting March 20/56 decided not to include the undercarriage indication in master warning light system.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

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Category: 1

Item: A-35

Sheet: 1

1. Change Request Detail

Initiator: DAEEng

Change Desired: Ensure sufficient space at back of seat to accommodate parachute pack containing canopy at least 28 feet in diameter.

Reason: Present pack appears to hold 24 foot diameter canopy. Larger canopy required to provide reduced rate of descent.

Action: Cat. 1.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
Completed	N.A.	N.A.	Yes (May 1956)	1st A/C

3. Progress Detail

Date	Remarks
9 May 1956	Seat being supplied by AVRO will accommodate 28 ft. dia. parachute. RCAF to decide the element of risk involved on a low altitude ejection with 28 ft. dia. canopy. Martin Baker and AVRO recommend 24 ft. dia. canopy.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 1

Item: A-37

Sheet: 1

1. Change Request Detail

Initiator: Cockpit Sub-Committee

Change Desired: Check list to be removed from instrument panel and repositioned in less important area.

Reason:

Action: Cat. 1.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
				100 %/C

3. Progress Detail

Date	Remarks
9 May 1956	Propose leave as is - space otherwise useless.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 1

Item: A-38

Sheet: 1

1. Change Request Detail

Initiator: DFO

Change Desired: Install guard on Master Electric Switch to prohibit accidental movement of switch to off position.

Reason: Flight safety.

Action: Cat. 1.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
N.A.	Yes			1st 1/0

3. Progress Detail

Date	Remarks
9 May 1956	Guard will be fitted.

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Category: 6

Item: B-2

Sheet: 1

1. Change Request Detail

Initiator: AMC - ADC

Change Desired: Replace attachment screws of removable duct wall panels with Camloc type fasteners.

Reason: Increased fastener life, increased removability, increased fastener replacement, no damage to screw holes in duct wall by screws and thus increased duct integrity.

Action: Cat. 6 leading to Cat. 1. 3

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
Complete (May 56)				

3. Progress Detail

Date	Remarks
10 May 1956	Further examination required in conjunction with RCAF Maintenance Sub-Committee.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 1

Item: B-3

Sheet: 1

1. Change Request Detail

Initiator: ADC-AMC

Change Desired: That it be clearly established that all six upper tie bars in each fuel tank can be removed without prejudice to re-installation and if such prejudice exists, that a tool to adjust the structure so as to make installation possible be designed.

Reasons: To obviate any possible re-installation problems.

Action: Cat. 1 - Company to investigate method and Maintenance Sub-Committee to monitor. Refer to B-37.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
Complete (May 56)	N.A.	N.A.	Yes (May 56)	1st A/C

3. Progress Detail

Date	Remarks
10 May 1956	All tie bars can be removed at the same time. and surrounding structure removed and of 1956 for transmission to NAC for vibration strength tests. Results of this investigation are awaited by NAC.

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CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 6

Item: B-4

Sheet: 1

1. Change Request Detail

Initiator: AMCHQ - ADC - DME ng

Change Desired: That all screwed panels requiring reasonably frequent access be completely changed to a reliable quick release fastener.

Reason: Screws wear in service, panel holes are damaged and structural integrity is jeopardized.

Action: Cat. 6 - Test program to determine reliability of quick release fastener to be monitored by the Maintenance Sub-Committee.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
Yes				

3. Progress Detail

Date	Remarks
10 May 1956	RCAF requested and received drawings of typical access door and surrounding structure towards end of 1955 for transmission to NRC for vibration strength tests. Results of this investigation are awaited by Avro.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 6

Item: B-5

Sheet: 1

1. Change Request Detail

Initiator: AMC - ADC

Change Desired: That approval of quick access facility to equipment located behind Electronic Power Bay Panel be deferred until such time as the equipment to be located behind this panel in future aircraft be defined.

Reason: To ensure that quick access facility to equipment located behind this panel in future is not overlooked.

Action: Cat. 6.

2. Progress SummaryStudy
InitiatedMock-Up
ChangedMock-Up
ApprovedProd. Drawings
IssuedProduction
Allocation3. Progress Detail

Date

Remarks

10 May 1956

Noted.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 3

Item: B-6

Sheet: 1

1. Change Request Detail

Initiator: AMC - ADC

Change Desired: That the structure of the rear equipment area be re-designed so as to remove the single vertical tie bars in this area.

Reason: To increase the accessibility of equipment located in this vicinity.

Action: Cat. 3.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
Completed (May 56)				

3. Progress Detail

Date	Remarks
10 May 1956	These vertical tie bars will not be used in PS-43 version.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 6

Item: B-7

Sheet: 1

1. Change Request Detail

Initiator: AMCHQ - ADCHQ

Change Desired: Control boxes and surfaces - Approval in these areas be deferred until these components are available and interchangeability and/inspection facility be confirmed.

Reason: Impossible to observe on these features at this time.

Action: Cat. 6 - Maintenance Sub-Committee to follow up.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
Yes (May 56)				

3. Progress Detail

Date	Remarks
10 May 1956	Noted.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 1

Item: B-9

Sheet: 1

1. Change Request Detail

Initiator: AMC - ADC

Change Desired: That drain holes be provided at all points of the structure at which condensate or spilled fluids are liable to collect.

Reason: To prevent the collection of condensate or spilled fluids in the structure.

Action: Cat. 1 Refer to K-12.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
Yes (May 56)	N.A.	N.A.		

3. Progress Detail

Date	Remarks
10 May 1956	This CR being coordinated by Logistics Engineer on basis of CF-100 experience.

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CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 1

Item: B-10

Sheet: 1

1. Change Request Detail

Initiator: AMC - ADC

Change Desired: Front Inward Engine Attachment - Actuating lever for hinged half of socket to be made more robust and more firmly attached to hinged half of socket.

Reason: Cumulative effects of heat on hinge may make hinge stiff to operate.

Action: Cat. 1.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
Completed (May 56)	Yes (May 56)		Yes (May 56)	1st A/C

3. Progress Detail

Date	Remarks
10 May 1956	Change incorporated.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 4

Item: B-13

Sheet: 1

1. Change Request Detail

Initiator: AMC - ADC

Change Desired: Armament Package - "Bayonet" or "Push-Pull" type connector to be used.

Reason: "Cannon" plug with screw-type lock ring is clumsy to use and wears out rapidly in frequent use.

Action: Cat. 4.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation

3. Progress Detail

Date	Remarks
10 May 1956	Agreed. Work will commence shortly.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 4

Item: B-14

Sheet: 1

1. Change Request Detail

Initiator: AMC - ADC

Change Desired: Armament Package - Hydraulic Connectors - must be more durable, more reliable, and more easily handled than AN642 type.

Reason: AN642 couplings are subject to rapid wear when used frequently and are difficult to operate rapidly.

Action: Cat. 4.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
Completed	N.A.	N.A.	N.A.	Nil

3. Progress Detail

Date	Remarks
10 May 1956	Withdrawn by Maintenance Sub-Committee, April 17/56.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 7

Item: B-15 ✓

Sheet: 1

1. Change Request Detail

Initiator: DMEng

Change Desired: Access Doors - That the company be advised of the danger of assuming the integrity of screws as a fastening medium.

Reason: In service, or even in production, screws are seldom laboratory perfect, and are certainly spots at which damage can occur.

Action: Cat. 7 - Refer to B-4.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation

3. Progress Detail

Date	Remarks

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CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 1

Item: B-21

Sheet: 1

1. Change Request Detail

Initiator: DMEng - ADC - AMC

Change Desired: Main Undercarriage Door - Quick disconnect and strap or stay required for door jack.

Reason: To facilitate access to Air Conditioning/Hydraulic Access Door on fuselage, when undercarriage lowered.

Action: Cat. 1.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
Completed (May 56)				

3. Progress Detail

Date	Remarks
9 May 1956	<p>A quickly removable pin necessitates major redesign of the surrounding details. Further discussion required with RCAF.</p> <p>Frequent removal of this pin does not appear necessary. Hydraulic access in the area is no longer required since pipes have been rerouted. Only access required is for air conditioning pressure reducing valve and then only for replacement. Testing is accomplished using pressure tapping on heat exchanger.</p>

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CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 6

Item: B-22

Sheet: 1

1. Change Request Detail

Initiator: DMEng

Change Desired: Mudguard for nose wheels or covers for equipment in well
or make door cycle from closed position during retraction.

Reason: To keep dirt and water out.

Action: Cat. 6 - The RCAF has experienced considerable trouble with
open wells - Company to fully investigate and
determine portions to be covered. It is noted that
cycling makes retraction time marginal. See K-7.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
Complete (May 56)				

3. Progress Detail

Date	Remarks
10 May 1956	Due to position of wheel during taxiing, and height of wheel well above runway, it is recommended that this request be held until experience is available on an actual aircraft. It is probable that covers will be required. If necessary, a buttoned-on canvas cover could be supplied for critical equipment such as the circuit breaker panel.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 7

Item: B-23

Sheet: 1

1. Change Request Detail

Initiator: AFHQ/DarmE

Change Desired: Armament Pack - Method of fastening access doors unacceptable.

Reason:

Action: Cat. 7 - Refer to B-4 and B-16.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation

3. Progress Detail

Date	Remarks

UNCLASSIFIED
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Category: 7

Item: B-26

Sheet: 1

1. Change Request Detail

Initiator: AFHQ/DarmE

Change Desired: Armament Pack Dolly - Study use of pneumatic tires and possible reduction in size of dolly structural members.

Reasons: To optimize winter and summer condition operation and to cut cost and weight.

Actions: Cat. 7 - With respect to aircraft. This is not an aircraft item, but it is to be considered for the Armament Pack Dolly.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
N.A.				

3. Progress Detail

Date	Remarks
9 May 1956	The features requested will be incorporated.

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CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 5

Item: B-27

Sheet: 1

1. Change Request Detail

Initiator: AFHQ/DARME

Change Desired: Adequacy of the space and weight provisions for the electronic system cannot be determined.

Reason: The space and weight requirements of a system to meet the requirements if Air 7-5 and/or Air 7-6 are not known.

Action: Cat. 5 - Consideration should be given when equipment is specified in Air 7-5 and Air 7-6 to the space available.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation

3. Progress Detail

Date

Remarks

10 May 1956

Agreed.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 6

Item: B-28

Sheet: 1

1. Change Request Detail

Initiator: AFHQ/DarmE

Change Desired: Armament Pack Dolly - Study to determine feasibility of using the Dolly as a reloading rack.

Reason: Possible saving in ground handling equipment and spare Armament Packs.

Action: Cat. 6 - Maintenance Sub-Committee and Readiness Sub-Committee to continue discussion with AVRO and give guidance to the Company.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
Completed (May 56)	N.A.	N.A.	N.A.	Nil

3. Progress Detail

Date	Remarks
9 May 1956	Study has indicated that it is not feasible to incorporate the feature requested and at the same time produce a mechanically sound design in relation to height of aircraft above ground and space required for loading missiles.

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CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 4

Item: B-29

Sheet: 1

1. Change Request Detail

Initiator: AFHQ/DARME

Change Desired: Armament Pack ~~Dolly~~ - Forward up-locks should eliminate linkage, if possible, and provide visual indication of positive up-lock.

Reason: To ensure positive up-lock of the Armament Pack.

Action: Cat. 4 - Similar to B-12.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
Completed (May 56)				

3. Progress Detail

Date	Remarks
May 1956	See B-11, B-12.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 4

Item: B-31

Sheet: 1

1. Change Request Detail

Initiator: AFHQ/DArmE

Change Desired: Armament installation cannot be approved at this time.

Reason: AVRO design for an armament installation has not been established.

Action: Cat. 4.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation

3. Progress Detail

Date

Remarks

10 May 1956

Sparrow II Armament Installation sent to RCAF for consideration April 10/1956.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 6

Item: B-32

Sheet: 1

1. Change Request Detail

Initiator: AMCHQ

Change Desired: Engine duct walls to be installed with quick release fasteners on one side between stations 697 and 591 in 1 or 3 segments, depending on cost and the details of the removal of the floating duct and gill box be made available to allow consideration of its removal to be given.

Reasons: Access to equipment area, generally and in detail.

Action: Cat. 6 leading to Cat. 1

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
Yes (May 56)				

3. Progress Detail

Date	Remarks
10 May 1956	Study has so far shown that no change can be made on J-75 installations due to present investment in design and tooling.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 7

Item: B-33

Sheet: 1

1. Change Request Detail

Initiator: DMEng

Change Desired: Diffused lighting to be placed in equipment compartments where access is difficult. The power can be supplied from a battery cart.

Reason: Self evident. Best locations to be determined by experiment.

Action: Cat. 7.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation

3. Progress Detail

Date	Remarks

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CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 1

Item: B-34

Sheet: 1

1. Change Request Detail

Initiator: TSD - AMC

Change Desired: Make use of as many sealed-for-life bearings as possible, and use one speck of grease only for complete lubrication of aircraft.

Reason: Efficiency, saving of manhours.

Action: Cat. 1 - Agree in principle to be followed up by Maintenance Sub-Committee.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
Continuous (May 56)	N.A.	N.A.	N.A.	1st A/C

3. Progress Detail

Date	Remarks
10 May 1956	Agree in principle.

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CONFIDENTIALCF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 1

Item: B-35

Sheet: 1

1. Change Request Detail

Initiator: TSDs, AVRO

Change Desired: Reference external emergency canopy release on right side of fuselage - Notation "Emergency canopy release" changed to larger red letters - notation added to left side of fuselage "Emergency canopy release - other side".

Reason: Safety aspect should "rescuer" approach aircraft from left side and unfamiliar with CF-105 (ref. CF-100).

Action: Cat. 1 RCAF to specify.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
N.A.			Yes (May 56)	1st A/C

3. Progress Detail

Date	Remarks
10 May 1956	Drawings complete and issued.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 7

Item: B-37

Sheet: 1

1. Change Request Detail

Initiator: DMEng

Change Desired: Structure must be designed to allow simultaneous removal of all struts in either fuel tank.

Reason: To permit ready access for bladder and equipment maintenance.

Action: Cat. 7 - Refer to B-3.

2. Progress SummaryStudy
InitiatedMock-Up
ChangedMock-Up
ApprovedProd. Drawings
IssuedProduction
Allocation3. Progress Detail

Date

Remarks

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 1

Item: B-38

Sheet: 1

1. Change Request Detail

Initiator: TSU

Change Desired: Small inspection doors to have gang release buttons.

Present



Future



Reason: Cold weather operation with mitts.

Action: Cat. 1.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
Yes (May 56)				

3. Progress Detail

Date	Remarks
10 May 1956	This only applies to External Electric Power Supply socket. Study proceeding.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 6

Item: B-39

Sheet: 1

1. Change Request Detail

Initiator: AMC - ADC

Change Desired: Paint interior of equipment area to provide illumination.

Reason:

Action: Cat. 6 - leading to 1 - Type of paint and area to be painted to be determined by Maintenance Sub-Committee and AVRO. Weight penalty to be considered and Co-ordinating Committee advised.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation

3. Progress Detail

Date	Remarks
10 May 1956	Study will be initiated shortly.

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CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 1

Item: C-1

Sheet: 1

1. Change Request Detail

Initiator: ADC

Change Desired: Engine Mount Torque Values - Stencil torque values for mounting bolts on structure.

Reason: To have information readily available. To provide a reminder.

Action: Cat. 1.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
N.A.				

3. Progress Detail

Date	Remarks
9 May 1956	Production drawings in work.

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CONFIDENTIALCF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 1

Item: C-3

Sheet: 1

1. Change Request Detail

Initiator: AMCHQ - ADC

Change Desired: Guide Rail - Either continuous or 'entry' guides at each former to allow smooth entry of the engine guide bars.

Reason: Difficult to man-handle the 20' bar into place because of the successive formers.

Action: Cat. 1.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
Completed (May 56)				

3. Progress Detail

Date	Remarks
9 May 1956	It has been arranged for rail to be guided between Station 803 and 742. Also section of rail has been changed from that shown on Mock-up with a view to increasing rigidity and reducing weight. Mock-up will be revised accordingly.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 3

Item: C-4

Sheet: 1

1. Change Request Detail

Initiator: ADC - AMC

Change Desired: Approval for future engines can only be considered after demonstration.

Reason:

Action: Cat. 3.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
N.A.				

3. Progress Detail

Date	Remarks
9 May 1956	Noted.

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CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 6 - 7

Item: C-6

Sheet: 1

1. Change Request Detail

Initiator: AMC - ADC

Change Desired: Engine Change Stand - Positive mechanical lock be provided to confirm elevation of forward rails.

Reason: Hydraulically achieved elevation may not be sufficiently reliable for transporting engines.

Action: Cat. 7 - With regard to aircraft.

Cat. 6 - With regard to GHE.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
N.A.				

3. Progress Detail

Date	Remarks
9 May 1956	Mock-up not representative. Feature requested is incorporated in design.

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CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 1

Item: C-9

Sheet: 1

1. Change Request Detail

Initiator: AMC - ADC

Change Desired: Outer Rear Engine Mount - The design of the adjustable feature of this mount be considered for high temperature effects, i.e. lubrication etc.

Reason: This unit, if cooked, would conceivably not function.

Action: Cat. 1.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
Yes				

3. Progress Detail

Date	Remarks
9 May 1956	Test in hand on cooking of unit.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 1

Item: C-10

Sheet: 1

1. Change Request Detail

Initiator: ADC - AMCHQ

Change Desired: Re-routing of two lines port of utility hydraulic compensator -- 3/8" line to be bent nearer to the area floor, then run aft to rise to its junction block -- 7/8" line T'd off the compensator charging line be brought off 6" lower than at present.

Reason: To improve access to forward engine mount.

Action: Cat. 1 - Re-route lines to give desired accessibility.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
Complete (May 56)	Completed (May 56)			

3. Progress Detail

Date	Remarks
9 May 1956	Pipes rerouted.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 1

Item: C-11

Sheet: 1

1. Change Request Detail

Initiator: AMC - ADC

Change Desired: Engine pad elbow be redesigned to allow aft in line coupling at aft end of this line with maximum accessibility.

Reason: Present installation impossible.

Action: Cat. 1 - With further demonstration.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
Yes (May 1956)				

3. Progress Detail

Date	Remarks
9 May 1956	Redesign proceeding.

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CONFIDENTIALCF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 1

Item: C-13

Sheet: 1

1. Change Request Detail

Initiator: AMC - ADC

Change Desired: Rear Engine Mount - Outboard Engine Mount Bolt to have locking wire.

Reason: To ensure satisfactory engagement at all times.

Action: Cat. 1.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
N.A.	N.A.	N.A.	Yes (May 56)	1st A/C

3. Progress Detail

Date	Remarks
9 May 1956	Mock-up not representative of Production Drawings which call up split pin.

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CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 1

Item: C-14

Sheet: 1

1. Change Request Detail

Initiator: ADC - AMC - DMEng

Change Desired: Outboard Front and Rear Engine Mounts - Outboard Engine Mount Bolts to be attached to chain.

Reason: To prevent dropping of bolts inside Engine Bay.

Action: Cat. 1.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
N.A.			Yes (May 56)	1st A/C

3. Progress Detail

Date	Remarks
9 May 1956	Mock-up not representative of production drawings which call up chains.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 1

Item: C-15

Sheet: 1

1. Change Request Detail

Initiator: AMC

Change Desired: That some means of checking and replenishing the oil in the fuel pump and right angle gear boxes be provided in the vicinity of the lower access doors.

Reason: It is impossible to check the oil level or replenish the oil in these gear boxes without extensive removal of components.

Action: Cat. 1.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation

3. Progress Detail

Date	Remarks
9 May 1956	Gear boxes affected not yet available.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 1

Item: C-16

Sheet: 1

1. Change Request Detail

Initiator: AFHQ/AMTS

Change Desired: Inboard Forward Engine Mounts - Particular attention should be paid to re-routing of lines between stations 571 and 591 to facilitate access to engine mounts.

Reason: Present working space is rather restricted.

Action: Cat. 1 - See C-10.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
Completed (May 56)	Completed (May 56)			

3. Progress Detail

Date	Remarks
9 May 1956	See C-10.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 1

Item: C-17

Sheet: 1

1. Change Request Detail

Initiator: AFHQ/AMTS

Change Desired: Outside Engine Mounts should be labelled to indicate that it must be loosened prior to inboard mount for engine removal and tightened after inboard mount for engine installation.

Reason:

Action: Cat. 1 - AVRO to determine proper label.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
N.A.				

3. Progress Detail

Date	Remarks
9 May 1956	No progress.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 7

Item: C-18

Sheet: 1

1. Change Request Detail

Initiator: AFHQ/AMTS

Change Desired: Inboard Forward Engine Mounting - Lever required to open up mounting clamp - must be such as to permit easy rotation of clamp prior to engine removal.

Reason: Present lever is very difficult to rotate.

Action: Cat. 7 - Refer to B-10.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
Completed (May 56)	Yes (May 56)		Yes (May 56)	1st A/C

3. Progress Detail

Date	Remarks
10 May 1956	Change incorporated: See B-10.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 1

Item: C-19

Sheet: 1

1. Change Request Detail

Initiator: APHQ/AMTS

Change Desired: Control Tabs adjusting the open and closed position of the lower seal aft of the accessory zone must be clearly marked and positioned such that the access hatch cannot be closed inadvertently with the lower segment not sealed.

Reason: Accessory Section must be "Sealed off" from the hot end.

Action: Cat. 1.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
N.A.			Yes (May 56)	1st A/C

3. Progress Detail

Date	Remarks
9 May 1956	Mock-up not representative of production drawings which call up feature requested.

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CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 2

Item: C-20

Sheet: 1

1. Change Request Detail

Initiator: DMEng

Change Desired: Maintenance instructions are required for almost all operations in the engine and equipment areas.

Reason: Because of density of equipment a sequence of removing equipment to get at other equipment is necessary if time is to be saved.

Action: Cat. 2.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
N.A.	N.A.	N.A.	N.A.	N.A.

3. Progress Detail

Date	Remarks
9 May 1956	The information will be contained in the preliminary Maintenance manual. More detailed removal instructions will be included in final Maintenance manuals.

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CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 3

Item: C-21

Sheet: 1

1. Change Request Detail

Initiator: TSDs - AMC

Change Desired: Accessibility of equipment in rear centre section should be of prime interest in design of PS-13 installations - Request full scale mock-up of PS-13 installation together with equipment arrangement for RCAF evaluation prior to first installation.

Reason: Improve accessibility based on knowledge gained to mock-up stage together with knowledge gained from operating J-75 aircraft prior to PS-13 powered aircraft.

Action: Cat. 3.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
Yes (May 56)				

3. Progress Detail

Date	Remarks
9 May 1956	RCAF request noted. Study proceeding.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 1

Item: C-23

Sheet: 1

1. Change Request Detail

Initiator: TSU

Change Desired: A change in the piping run of the low pressure fuel supply to the engine, at the engine disconnect point. Changes requested to fuel piping run.

- (a) That the 2½ line from the heat exchanger be continued aft to bring the forward disconnect point over the access door area.
- (b) That the engine connection line be brought down and forwarded by a gooseneck elbow which would bring that disconnect point nearer the access door area and provide a more "in-line" connection; these changes will facilitate engine removal and will make these joints more reliable in service.

Reasons: In its present location, access to the wig-o-flex coupling is difficult.

Action: Cat. 1 - With further demonstration.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
Yes (May 56)				

3. Progress Detail

Date	Remarks
9 May 1956	Will be incorporated in Mock-up for demonstration after September 1, 1956. Study proceeding.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 1

Item: C-24

Sheet: 1

1. Change Request Detail

Initiator:

Change Desired: Engine Oil - Fill connections should be made accessible - small door 1 or 2 Camloc only.

Reason: At present 36 screws or Camlocs used on access door.

Action: Cat. 1 - Not necessarily Camloc. Maintenance Sub-Committee to monitor.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
Completed (May 56)				

3. Progress Detail

Date	Remarks
9 May 1956	Access is provided by the small segment of the main engine access doors. Fasteners consist 8 Camlocs and 3 latches. This design has been reviewed by the RCAF Maintenance Appraisal Team at Avro and has been considered satisfactory for J-75 installation.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 1

Item: D-2

Sheet: 1

1. Change Request Detail

Initiator: DMEng - ADC - AMC

Change Desired: Electrical - Cover required for Refueling Indicator Panel - Main Wheel Well.

Reason: Vulnerable to dirt and water from wheels.

Action: Cat. 1.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
Complete (May 56)				

3. Progress Detail

Date	Remarks
9 May 1956	Panel has been moved - (see I-3). This should eliminate necessity for cover. Terminal strips associated with this panel will be covered. Mock-up in work.

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CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 1

Item: D-4

Sheet: 1

1. Change Request Detail

Initiator: AMCHQ - AFHQ - ADC

Change Desired: Hi Energy Ignition Exciter Boxes to be individually fused.

Reason: In present system overload on one half of circuit will result in failure of complete circuit.

Action: Cat. 1.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
Complete (May 56)	N.A.	N.A.	Yes (May 56)	1st A/C

3. Progress Detail

Date	Remarks
9 May 1956	Done.

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CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 7

Item: B-17

Sheet: 1

1. Change Request Detail

Initiator: TSDs - AMC

Change Desired: Full investigation of feasibility of semi-submerged launch of Sparrow missile for anticipated installation in PS-13 powered aircraft - eliminates missile pack.

- Reasons:
- (a) Weight decrease results in increase of performance.
 - (b) Production problems as experienced with CF-100 gun pack greatly reduced - no interchangeability.
 - (c) Tooling required for missile pack not required.
 - (d) GHE for Sparrow missile not as extensive as for the pack.

Action: Cat. 7 - RCAF re-affirm pack concept for operations.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation

3. Progress Detail

Date	Remarks

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CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 4

Item: B-18

Sheet: 1

1. Change Request Detail

Initiator: DMEng

Change Desired: Missile Pack - Front Latch Mechanism - Either eliminate linkage or provide visual evidence of latch engagement.

Reason: Mechanism liable to distortion.

Action: Cat. 4.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
Complete (May/56)				

3. Progress Detail

Date	Remarks
10 May 1956	Linkage geometry rearranged to make it insensitive to distortion. Visual indication provided.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 4

Item: B-19

Sheet: 1

1. Change Request Detail

Initiator: DMEng

Change Desired: Missile Pack - Electrical and Hydraulic Disconnects,
Guides to ensure accurate mating required.

Reason: Probability of damage if connection made with mating
portions misaligned.

Action: Cat. 4.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
Yes (May 56)				

3. Progress Detail

Date	Remarks
10 May 1956	Agreed. Study in progress.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 1

Item: D-23

Sheet: 1

1. Change Request Detail

Initiator: AFHQ/DIEEng - AMC

Change Desired: Open TRU terminals provided with covers.

Reason: Cable terminals on exterior of TRU are not protected.

Action: Cat. 1.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
N.A.			Yes (May/56)	1st A/C

3. Progress Detail

Date	Remarks
9 May 1956	Covers are provided - Mock-up not representative of production drawings.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 6

Item: D-24

Sheet: 1

1. Change Request Detail

Initiator: AFHQ/DIEEng - AMC

Change Desired: Covers provided over exposed terminals.

Reason: Protection against foreign objects.

Action: Cat. 6 - Refer to D-13.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
N.A.			Yes	1st A/C

3. Progress Detail

Date	Remarks
9 May 1956	See D-23. Para. 1 reference to D-13 believed in error.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 6

Item: D-25

Sheet: 1

1. Change Request Detail

Initiator: AFHQ/DIEEng - AMC

Change Desired: Install standard battery with Elkson type quick disconnect.

Reason: Non standard design using terminals and nuts in place of quick disconnect.

Action: Cat. 6 - Inst and Electrical Sub-Committee to determine adequacy and requirements.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
Yes (May 56)				

3. Progress Detail

Date	Remarks
9 May 1956	Avro has met requirement of Spec. AIR 7-4 and it has not yet been proved that Spec. AIR 7-4 should be altered. Tests are being conducted on Ni-Cd battery to substantiate arrangement described in Electrical Brochure E-4. Study in progress on quick disconnect.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 6

Item: D-26

Sheet: 1

1. Change Request Detail

Initiator: AFHQ/DIEEng - AMC

Change Desired: Install larger capacity AN3150, 34 ampere hour battery.

Reason: Battery capacity of 15 ampere hour too low for emergency requirements.

Action: Cat. 6 - Refer to D-25.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
Complete (May 56)				

3. Progress Detail

Date	Remarks
9 May 1956	See D-25. Reference Electrical Brochure E-4 for choice of battery capacity in relation to weight and installation problems.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 6

Item: D-27

Sheet: 1

1. Change Request Detail

Initiator: AFHQ/DIEEng - AMC

Change Desired: Increased capacity of Direct Current output for growth factor.

Reason: TRU rated 100 amperes each, available supply 200 amperes.
Present load is 175 amperes. Insufficient growth factor.

Action: Cat. 6 - Refer to D-13.

2. Progress SummaryStudy
InitiatedMock-Up
ChangedMock-Up
ApprovedProd. Drawings
IssuedProduction
AllocationYes
(May 56)3. Progress Detail

Date

Remarks

9 May 1956

Study in relation to final power requirements of suppliers' equipment cannot be completed at this stage.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 6

Item: D-28

Sheet: 1

1. Change Request Detail

Initiator: AFHQ/DIEEng

Change Desired: Battery compartment and installation facilities provided so that either a standard lead acid or nickel cadmium battery can be installed.

Reason: BuAer have advised that a built-in thermostat acid relay in nickel cadmium batteries is mandatory for aircraft use, in addition, cooling air to battery was supplied. AVRO batteries do not have these units, and the battery installation is not acceptable until thoroughly evaluated to ensure the batteries will never be subject to "vicious cycling" under aircraft battery charging conditions.

Action: Cat. 6 - Refer to D-25.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
Complete (May 56)				

3. Progress Detail

Date	Remarks
May 1956	See D-25 and D-26.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 6

Item: D-29

Sheet: 1

1. Change Request Detail

Initiator: AFHQ/DIEEng

Change Desired: Provide accessibility to flight crews for resetting of breakers in circuits essential to flight and aircraft operational requirements.

Reason: Breakers are inaccessible. System facilities cannot be operated if circuit breakers open during flight. Possible hazardous location for resetting by ground crew when engines operating on ground.

Action: Cat. 6 - Refer to D-1.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation

3. Progress Detail

Date	Remarks
9 May 1956	See A-12.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 6

Item: D-31

Sheet: 1

1. Change Request Detail

Initiator: AFHQ/DIEEng

Change Desired: Space provisions for additional warning lights.

Reason: Future requirements.

Action: Cat. 6 - Refer to A-7.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
Complete (May 56)	No change	Yes (Mar 20/56)		

3. Progress Detail

Date	Remarks
9 May 1956	Present provision agreed as adequate (contains 21 lights, can accommodate 24); ref. Cockpit Sub-Committee Mar. 20/56.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 6

Item: D-36

Sheet: 1

1. Change Request Detail

Initiator: AFHQ/DarmE

Change Desired: The main power supply cannot be approved at this time.

Reason: The power requirements of the electronic system are unknown. Neglecting possible electronic system power requirements, and the possibility of alternator failure, the reserve power planned makes inadequate provision for growth.

Action: Cat. 6 - Refer to D-25.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation

3. Progress Detail

Date	Remarks
9 May 1956	Awaiting requirements on power envelope from RCAF (as D-11).

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 1

Item: D-39

Sheet: 1

1. Change Request Detail

Initiator: TSU

Change Desired: In the rear of navigators bulkhead attach wire bundle on the side of existing channel, instead of on the face.

Reason: To allow clearness of C/F Pressure controller tubing.

Action: Cat. 1.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
Complete (May 56)			Yes (May 56)	1st A/C

3. Progress Detail

Date	Remarks
9 May 1956	Mock-up arrangement not representative.

UNCLASSIFIED
CONFIDENTIALCF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 1

Item: E-1

Sheet: 1

1. Change Request Detail

Initiator: AMC

Change Desired: Introduction of a tapping downstream of the pressure regulating valves.

Reason: To be used as a test point, to test the outlet pressure of the pressure regulating valves.

Action: Cat. 1.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
N.A.	N.A.	N.A.	Yes (May 56)	1st A/C

3. Progress Detail

Date	Remarks
9 May 1956	There is a spare tapping on the Heat Exchanger which should be satisfactory.

UNCLASSIFIED
CONFIDENTIALCF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 6

Item: E-2

Sheet: 1

1. Change Request Detail

Initiator: TSDs AVRO

Change Desired: Design study and structural testing to ascertain fatigue life of piping due to effects of hi-temperature and vibration from airframe and air sources on pipe welding (seam and end coupling).

Reason: As most of piping buried in prime structure and not capable of inspection, pipe reliability of prime importance as leak in line could go undetected and cause structural failure in immediate region.

Action: Cat. 6.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
Yes (May 56)	N.A.	N.A.	N.A.	N.A.

3. Progress Detail

Date	Remarks
9 May 1956	Test program in hand.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 6

Item: E-3

Sheet: 1

1. Change Request Detail

Initiator: AMC - TSDs - AFHQ/DAEng

Change Desired: Presentation of a scheme for periodic pressure testing of air conditioning ducting to determine duct leakage rate, and an indication of permissible leak rates for all ducts.

Reason: To ensure duct integrity.

Action: Cat. 6 - AVRO Maintenance Sub-Committee to monitor.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
Complete (May 56)	N.A.	N.A.	N.A.	N.A.

3. Progress Detail

Date	Remarks
9 May 1956	With the installation of the proposed shut-off valve at the connection of the bleed line to the engine it will be possible to pressurize all the high pressure ducting by attaching an air line to the pressure check point downstream of the pressure reducing and non-return line. An acceptable leak rate will be determined on the first aircraft and this information will be incorporated in the Maintenance manual.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 1

Item: E-4

Sheet: 1

1. Change Request Detail

Initiator: AMC - AFHQ/DAEng - TSDs

Change Desired: An over temperature sensing system to sense an over temperature condition in the vicinity of the main engine bleed air duct up to the heat exchanger; particularly at the joints and flexible areas. When over temperature sensed, main shut-off valve requested in CR No. E5 operated automatically and indication of same in cockpit with light is given.

Reason: To indicate a duct leak.

Action: Cat. 1 - Delete indication in cockpit but indication available during D.I., Maintenance Sub-Committee to monitor.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
Completed (May 56)			Yes (May 56)	1st A/C

3. Progress Detail

Date	Remarks
May 1956	<p>Over-temperature sensing devices will be located at each joint in the bleed air ducting between the engines and the heat exchanger. Two separate systems will be fitted (port and stbd). When a leak is sensed the shut-off valve on the engine will be actuated to the closed position and will remain in this position until reset on the ground. Indication of whether or not the valve is in the open or closed position will be given in a suitable accessible position. Non-return valves will be fitted at the Heat Exchanger inlets.</p> <p>The temperature sensing field is being surveyed so that a suitable system can be selected. A specification for the Non-Return Valve has been written and space provision made.</p>

CONFIDENTIAL
UNCLASSIFIEDCF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 1

Item: E-5

Sheet: 1

1. Change Request Detail

Initiator: AMC - AFHQ/DAEng - TSDs

Change Desired: Reference CR No. E4 - Installation of a shut valve immediately adjacent to the engine air bleed take-off.

Reason: To prevent damage to the structure in case of a leak in the main engine air bleed duct.

Action: Cat. 1.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
Complete (May 56)				

3. Progress Detail

Date	Remarks
9 May 1956	Specification for valve written, presently out for tender. Ducting system modified to accommodate valve. Production drawings in work.

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CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 6

Item: E-6

Sheet: 1

1. Change Request Detail

Initiator: AMC - DAEng

Change Desired: Installation of a device to visually indicate the water level in the boiler up to the full condition during refilling operations.

Reason: To allow the boiler to be accurately and quickly filled without physically measuring the quantity to be added.

Action: Cat. 6 - AVRO study to incorporate in aircraft as soon as possible.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
Yes (May 56)				

3. Progress Detail

Date	Remarks
9 May 1956	Scheme to satisfy this request is complete, to be investigated on test rig.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 1

Item: E-7

Sheet: 1

1. Change Request Detail

Initiator: AMC

Change Desired: Provision of a plug for the engine air take-off point suitable for use during installation of the engine.

Reason: To prevent running the engine after installation without the elbow installed with subsequent damage to structure.

Action: Cat. 1 - If valve called for in E-5 cannot be installed in the engine.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
Complete (May 1956)				

3. Progress Detail

Date	Remarks
9 May 1956	Valve referred to in E-5 installed on engine but plug still required because valve is of the normally open type.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 6

Item: E8

Sheet: 1

1. Change Request Detail

Initiator: DMEng

Change Desired: Recommended heating filler neck and steam outlet.

Reason: In order to remove ice from these areas first, and so remove danger at present associated with overfilling. This will also make filling a very simple operation.

Action: Cat. 6 - Refer to E-6.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
Yes (May 56)				

3. Progress Detail

Date	Remarks
9 May 1956	Refer to E-6.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 6

Item: E-9

Sheet: 1

1. Change Request Detail

Initiator: AMC

Change Desired: That provision for determining on the ground air conditioning air supply temperatures.

Reason: This would be the only check on the function of the air conditioning equipment.

Action: Cat. 6 - AVRO to determine procedures and report to Maintenance Sub-Committee.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
Complete (May 56)				

3. Progress Detail

Date	Remarks
9 May 1956	With the air conditioning ground rig attached to the aircraft it is possible to check the functioning of the cockpit and radar temperature control valves by the use of a thermometer at the various heat or cooling outlets. It is felt that special equipment is not required.

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CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 6

Item: E-10

Sheet: 1

1. Change Request Detail

Initiator: AMC

Change Desired: That approval of the cockpit pressurization system be deferred until an outline of the cockpit pressure test procedure is provided.

Reason: In order that the suitability of the test procedure can be evaluated.

Action: Cat. 6 - AVRO to submit proposal covering test procedure for Maintenance Sub-Committee approval.

2. Progress Summary

Study
Initiated

Mock-Up
Changed

Mock-Up
Approved

Prod. Drawings
Issued

Production
Allocation

3. Progress Detail

Date

Remarks

9 May 1956

A report on cockpit pressurization has been issued by Mr. G. Shaw. Ref. Provision has been made in the cockpit floor for the attachment of an air line. An acceptable leak rate will be established. The procedure will be laid down in the preliminary maintenance manual.

It will be possible to carry out cockpit pressurization tests without having a man in the cockpit if the requirement is raised. It is possible to lock the canopy from outside by inserting a special tool through the top centre deflated canopy seals and forcing the locking bar forward. This procedure would only be carried out for pressurization tests.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 1

Item: E-11

Sheet: 1

1. Change Request Detail

Initiator: TSDs AVRO

Change Desired: The Company should obtain a better duct clamp.

Reason: Present clamp is too stiff to install in confined space.

Action: Cat. 1 - Subject to availability of suitable clamps.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
Yes (May 56)				

3. Progress Detail

Date	Remarks
9 May 1956	<p>An improved type of clamp is under consideration and a test program to determine its suitability will be initiated.</p> <p>Because the change of clamp will change flanges on ducts and equipment this change can only be accommodated under Cat. 3.</p>

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 7

Item: E-12

Sheet: 1

1. Change Request Detail

Initiator: TSDs AVRO

Change Desired: Design study to consider installation of main heat exchanger and turbine/pump in rear equipment area - move ram cooling air inlet from behind intake ramp to bottom of rear equipment area; use turbine/pump to pump all of inlet cooling air from flush intake in bottom - hence smaller heat exchanger required as less heat energy contained for heat exchanger.

Reason: (a) Reduces length of hot air piping from engine to heat exchanger thus reducing source of fatal damage to aircraft.

(b) Adds weight to rear to assist in moving C of G to rear for PS-13 installation.

Action: Cat. 7.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation

3. Progress Detail

Date	Remarks
9 May 1956	No progress.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 5

Item: E-13

Sheet: 1

1. Change Request Detail

Initiator: AFHQ/DarmE

Change Desired: Adequacy of air conditioning provision for the armament installation and the electronics system cannot be determined.

Reason: This approval pending design of the armament installation and selection of an electronics system.

Action: Cat. 5 - Consideration to be given in the selection of equipment to the requirements of Air 7-5 and Air 7-6 to the existing system.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation

3. Progress Detail

Date	Remarks
9 May 1956	Noted.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 6

Item: E-14(1)

Sheet: 1

1. Change Request Detail

Initiator: DADR

Change Desired: (1) Air conditioning of the cockpit when engines are at idling R.P.M. (i.e. at rest, taxiing, and certain descent conditions) is not presently provided but is required.

Action: Cat. 6 - For descent condition, rest, and taxiing monitored by Cockpit Sub-Committee.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
Yes (May 56)	N.A.	N.A.		

3. Progress Detail

Date	Remarks
9 May 1956	<p>At rest and during taxiing provision has been made for 5 lb air/min at a suitable temperature to be supplied to cockpit. Production drawings are in work.</p> <p>Discussions have been held at AFHQ with DOR representatives on descent techniques. We are now awaiting RCAF recommendations.</p>

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 1

Item: E-14 (2)

Sheet: 1

1. Change Request Detail

Initiator: DADR

Change Desired: (2) The system calls for temperature in the cockpits to be not below 55°F at altitudes below 20,000' to prevent fogging in the cockpits. Pilot control of cockpit temperature at all altitudes is required. The defogging switch now included in the system will be adequate to ensure that no fogging occurs.

Action: Cat. 1.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
N.A.			Yes (May/56)	1st A/C

3. Progress Detail

Date	Remarks
9 May 1956	Rheostat control for temperature selection and defog switch have been provided. Altitude switch has been deleted.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 6

Item: E-14 (3)

Sheet: 1

1. Change Request Detail

Initiator: DADR

Change Desired: (3) Under certain conditions the rate of air change in the cockpit is probably at the upper limit for crew comfort. It must be demonstrated that, in fact, the rate of change of air does not exceed acceptable limits.

Action: Cat. 6 - Crew Accommodation Sub-Committee to monitor.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
N.A.	N.A.	N.A.	N.A.	_____

3. Progress Detail

Date	Remarks
9 May 1956	Will be assessed in first aircraft.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 1

Item: E-14 (4)

Sheet: 1

1. Change Request Detail

Initiator: DADR

Change Desired: (4) An amber warning light as part of the warning light system is required to alert the pilot at the earliest possible moment of a failure in the air conditioning system.

Action: Cat. 1 - Provision for varying supplies to crew comfort as well as aircraft equipment.

2. Progress SummaryStudy
InitiatedMock-Up
ChangedMock-Up
ApprovedProd. Drawings
IssuedProduction
Allocation

N.A.

3. Progress Detail

Date

Remarks

9 May 1956

Warning light added.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 6

Item: E-14 (5)

Sheet: 1

1. Change Request Detail

Initiator: DADR

Change Desired: (5) In the event of a failure of the air conditioning system the pilot must be able to select ram air to the cockpits as well as the equipment bays.

Action: Cat. 6 - Crew Accommodation Sub-Committee, AVRO and IAM to determine acceptable condition re crew and equipment.

2. Progress SummaryStudy
InitiatedMock-Up
ChangedMock-Up
ApprovedProd. Drawings
IssuedProduction
AllocationComplete
(May 56)3. Progress Detail

Date

Remarks

9 May 1956

The crew will be on oxygen at all times. There is therefore no reason for ram air ventilation of the cockpit other than for purposes of changing the temperature in the cockpit after failure of the Air Conditioning System. The cockpit will however tend towards the outside skin temperature at all times and the addition of ram air ventilation will merely hasten this process. After failure of the Air Conditioning System it will presumably be desired to retain the cockpit pressure. To obtain ram air ventilation this pressure will have to be dumped.

In our opinion the added complication and weight of a ram air ventilation system cannot be justified under these circumstances merely to hasten a change in cockpit temperature.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 6

Item: E-14(6)

Sheet: 1

1. Change Request Detail

Initiator: DADR

Change Desired: (6) Amber warning light as part of the warning light system is required to indicate excessive cabin pressure leaks.

Action: Cat. 6.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation

3. Progress Detail

Date	Remarks
9 May 1956	Will be raised at May 15th Cockpit Sub-Committee meeting.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 1

Item: F-1

Sheet: 1

1. Change Request Detail

Initiator: AMC

Change Desired: That a drain line be installed from the air filter to a drain point at the aircraft skin.

Reason: This alteration to be carried out if test shows that frequent draining of the moisture trap is necessary - to obviate the necessity for removing a large access panel.

Action: Cat. 1.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation

3. Progress Detail

Date

Remarks

9 May 1956

Which air filter is this? Avro intends to provide a drain from fuel tank pressurization line in roof of armament bay. This drain will lead into fuel cavity drain.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 1

Item: F-2

Sheet: 1

1. Change Request Detail

Initiator:

Change Desired: Provide ground test fittings so that seals can be tested independently.

Action: Cat. 1 - AVRO to develop procedures.

Cat. 7 - For test fittings.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation

3. Progress Detail

Date	Remarks
9 May 1956 F102	This is a requirement on T33 and F101 & F102 aircraft. On the CF105, a pressure line is installed down to the wheel well where an air line may be attached. On the CF105 a "T" fitting will be inserted in the pressure line in the fuselage structure above the screwed access door forward of sta. 255 (72 screws). This will enable the ground crew to test the canopy seals independently.

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1. General Remarks

Initiator: AM

Charge Details: This charge simulates the possibility of explosion in an engine compartment space in the rear aircraft wing.

Remarks: To confirm the possibility of explosion in the rear aircraft wing.

Article: 100.4 - Refer to 100.4

SECTION "G"

FIRE DETECTION & PROTECTION

2. General Remarks

Study Initiated	Study Charge	Study Approved	Prod. Drawings Issued	Production Allocation
Ref.	Ref.	Ref.	Ref.	Ref.

3. Remarks

Date	Remarks
6 May 1956	Reference 100.4 Maintenance Sub-Committee Meeting Minutes Item 11 Item 12 and 13 - 14 items also state that "which charges will at which every minute is considered sufficient to permit initiation of explosive mixture."

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 6

Item: G-1

Sheet: 1

1. Change Request Detail

Initiator: AMC

Change Desired: That the Company investigate the possibility of installing an explosion suppression system in the rear equipment area.

Reason: To counter the possibility of explosion in the rear equipment area.

Action: Cat. 6 - Refer to G-2.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
N.A.	N.A.	N.A.	N.A.	Nil

3. Progress Detail

Date	Remarks
9 May 1956	Reference 15th Maintenance Sub-Committee Meeting Minutes Item 11 Para. 30 and 31 - 19 lb/min air mass flow which changes 50% of volume every minute is considered sufficient to prevent accumulation of explosive mixtures.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 6

Item: G-2

Sheet: 1

1. Change Request Detail

Initiator: DMEng - AMC - ADC

Change Desired: RCAF requests Company assurance that scavenging of this area will positively prevent build-up of explosive mixtures (fuel or hydraulic fluid).

Reason:

Action: Cat. 6 - Further investigation to be carried out by AVRO.
Refer to G-1, G-3, B-20.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
N.A.	N.A.	N.A.	N.A.	Nil

3. Progress Detail

Date	Remarks
9 May 1956	See G-1.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 6

Item: G-3

Sheet: 1

1. Change Request Detail

Initiator: AMC - TSDs AVRO

Change Desired: Redesign of arrangement of components in rear equipment area to reduce possible fire sources. Suggest isolation of possible "trigger" agents, e.g. electrics and gear box.

Reason: As rear equipment area does not meet requirements of fire zone for practical or other reasons, redesign of position of components will reduce fire hazard. Present fire protection considered acceptable if above measures taken to reduce potential fires.

Action: Cat. 6 - Refer to G-2.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
N.A.	N.A.	N.A.	N.A.	Nil

3. Progress Detail

Date	Remarks
9 May 1956	See G-1.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 1

Item: H-1

Sheet: 1

1. Change Request Detail

Initiator: DMEng

Change Desired: Visual indicator in convenient location to indicate whether Radome De-icing System has been used.

Reason: Since system is automatic, between flight check is now a question of checking contents of tank. (Access on top of nose).

Action: Cat. 1.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
Complete (May 56)				

3. Progress Detail

Date	Remarks
9 May 1956	Indication will be provided - wiring drawings in work. Type and supply of equipment being investigated.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 1

Item: H-2

Sheet: 1

1. Change Request Detail

Initiator: AMC

Change Desired: Provision made to prevent leaks of de-icing fluid reaching compartment equipment in the radome.

Reason: Given.

Action: Cat. 1.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
N.A.	N.A.	N.A.		

3. Progress Detail

Date	Remarks
9 May 1956	This provision will be included.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 7

Item: H-3

Sheet: 1

1. Change Request Detail

Initiator: AFHQ/DIEEng

Change Desired: De-icing of both intake ducts in event of single alternator failure instead of one only at present time.

Reason: De-icing of one duct only in event of alternator failure is apparently a restriction imposed by lack of electrical power. Another reason by increased power supplies are considered necessary.

Action: Cat. 7.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation

3. Progress Detail

Date	Remarks

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 1

Item: H-4

Sheet: 1

1. Change Request Detail

Initiator: AFHQ/DARME

Change Desired: The correlation between radome de-icing and radome sensor de-icing should be demonstrated before approval.

Reason: It has not been shown that the dissimilar means of de-icing will be effective to the same degree. The sensor could thus provide inaccurate control.

Action: Cat. 1 - Sensor to be calibrated to be compatible with radome de-icing.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation

3. Progress Detail

Date	Remarks
9 May 1956	Noted.

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CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 6

Item: D-6

Sheet: 1

1. Change Request Detail

Initiator: AMCHQ - AFHQ

Change Desired: Navigation lights Flasher Motor to be hermetically sealed.

Reason:

Action: Cat. 6 - Subject to availability.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
Complete (May 56)				

3. Progress Detail

Date

Remarks

9 May 1956

Unit originally specified hermetically sealed but on proposals of suppliers sealing waived to obtain highest weight unit with consideration that Nav. lights are operated through switch which can give steady light by-passing flasher unit. The flasher unit will be qualified for 60,000 feet. *lightest*

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 1

Item: D-7

Sheet: 1

1. Change Request Detail

Initiator: AFHQ/DIEEng - AMC

Change Desired: Qualification of Alternators.

Reason: Alternators have been uprated from 20 to 30 KVA and are not as yet qualified to meet specifications.

Action: Cat. 1 - Sufficient qualification testing to be carried out for Flight Clearance.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
N.A.	N.A.	N.A.	Yes	

3. Progress Detail

Date	Remarks
9 May 1956	Supplier's schedule is directed to full qualification by 7th and 8th units. Previous to this, units will be flight approved.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 1

Item: D-9

Sheet: 1

1. Change Request Detail

Initiator: AFHQ/DIEEng - AMC

Change Desired: Install parallel feeder lines between alternators and main distribution centres.

Reason: Present installation does not meet specification. To ensure power to systems in event of damage to a power cable.

Action: Cat. 1 - Subject to DIEEng approval of AVRO's deviation.

2. Progress SummaryStudy
InitiatedMock-Up
ChangedMock-Up
ApprovedProd. Drawings
IssuedProduction
AllocationYes
(May 56)3. Progress Detail

Date

Remarks

9 May 1956

Avro has so far been unable to find any specification which calls this up.

Request Specification number so can review.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 6

Item: D-13

Sheet: 1

1. Change Request Detail

Initiator: AMTS/DIEEng

Change Desired: To consider the installation of two 40 KVA oil cooled, brushless type alternators and a parallel A-C system.

Reason: To provide adequate power, growth factor, provision for missile and possible operation of integrated electronic system from main electrical system. Dispense with brush troubles, provide adequate cooling for increased altitude. Ram air cooled alternators are at approximately their limits when operated at 250°F.

Action: Cat. 6 - RCAF to specify requirement for power supply.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation

3. Progress Detail

Date	Remarks
9 May 1956	Noted - See D-11.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 1

Item: D-17

Sheet: 1

1. Change Request Detail

Initiator: DMEng

Change Desired: Nose Gear Door - Micro Switches to be positioned on stbd side of opening.

Reason: For protection against slush, water, etc.

Action: Cat. 1 - Delete position on stbd side. AVRO to advise Maintenance Sub-Committee on proposal.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation

3. Progress Detail

Date	Remarks
9 May 1956	It is felt that this micro switch is in a fairly unexposed area and need not be covered. Cleared with Maintenance Sub-Committee on April 17/56.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 1

Item: D-19

Sheet: 1

1. Change Request Detail

Initiator: ADC

Change Desired: Engraved panel showing connections to TRU put on the front of TRU.

Reason:

Action: Cat. 1.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
Complete (May 56)	No	N.A.	Yes (May 56)	1st A/C

3. Progress Detail

Date	Remarks
9 May 1956	<p>Avro has met the intent of this change request by the following means:- adding ident sleeves to individual wires indicating terminal identity.</p> <p>Engraved panels not placed on TRU face as wiring of Left and Right hand systems is not identical which prevents interchangeability of TRU panels.</p>

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 7

Item: D-20

Sheet: 1

1. Change Request Detail

Initiator: ADC

Change Desired: Battery Disconnect - A slotted type lug be used with a wing tip or knurled type nut on the battery lugs.

Reason: This would allow for quick disconnect in case of an emergency.

Action: Cat. 7 - Refer to D-25.

2. Progress SummaryStudy
InitiatedMock-Up
ChangedMock-Up
ApprovedProd. Drawings
IssuedProduction
Allocation3. Progress Detail

Date

Remarks

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 6

Item: D-22

Sheet: 1

1. Change Request Detail

Initiator: ADC

Change Desired: Delete circuit breaker from battery to battery bus.

Reason: Superfluous.

Action: Cat. 6 - RCAF to determine requirement.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation

3. Progress Detail

Date	Remarks
9 May 1956	Owing to length of cable run from battery through relay to battery bus Avro considers C.B. essential.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 7

Item: I-1

Sheet: 1

1. Change Request Detail

Initiator: AMC

Change Desired: Investigate the possibility of installing fuel system components on the tie bars.

Reason: To obviate the bracketry attached to the tank walls.

Action: Cat. 7.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation

3. Progress Detail

Date	Remarks

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 6

Item: I-2

Sheet: 1

1. Change Request Detail

Initiator: AMC

Change Desired: The non use of locking wires or other locking devices on fuel couplings be justified.

Reason: To ensure fuel leaks do not occur at couplings.

Action: Cat. 6 - Maintenance Sub-Committee to monitor.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation

3. Progress Detail

Date

Remarks

9 May 1956

Locking wires can be used if desired. All tests being done without locking wires and Avro does not propose to incorporate this feature.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 1

Item: I-4

Sheet: 1

1. Change Request Detail

Initiator: AMC

Change Desired: Fuel Quantity Capacitor Units require a more secure method of mounting that is used at present.

Reason:

Action: Cat. 1 - Maintenance Sub-Committee to monitor.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
Yes (May 1956)	N.A.	N.A.	Yes (May 56)	1st A/C

3. Progress Detail

Date	Remarks
9 May 1956	Mock-up not representative. Unit has been obtained and can be demonstrated at next Maintenance Sub-Committee Meeting.

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CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 7

Item: I-6

Sheet: 1

1. Change Request Detail

Initiator: TSDs AVRO

Change Desired: Re-position of access panels to booster pumps and other "valvery" on top surface of wing to eliminate necessity of first removing portion of dorsal cowling.

Reason: Facilitate maintenance of fuel system components in area without removing unnecessary cowling.

Action: Cat. 7.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation

3. Progress Detail

Date	Remarks

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 7

Item: I-7

Sheet: 1

1. Change Request Detail

Initiator: TSD

Change Desired: Design life of engine driven fuel pumps should exceed 2000 hours and no maintenance should be required during life of aircraft.

Reasons: Simple pump, with modern metallurgy -- this should be no problem.

Action: Cat. 7 - This recognized as desirable if available.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation

3. Progress Detail

Date

Remarks

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 1

Item: I-8

Sheet: 1

1. Change Request Detail

Initiator: DMEng

Change Desired: Defueling switch to be moved to position in which it is accessible with aircraft on its belly.

Reason: Otherwise aircraft in this position cannot be defuelled.

Action: Cat. 1 - In principle it is a requirement that the aircraft can be defuelled when on its belly.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation

3. Progress Detail

Date	Remarks
9 May 1956	<p>The aircraft can be defuelled when on its belly. The fuel tender hose may be attached to the refuelling adaptor which is in an invulnerable position and the suction pressure of the fuel tender is sufficient to defuel the aircraft. The fact that the refuelling panel on the bottom of the fuselage is hidden only means that the fuel has to be drained through the flow proportioner rather than through the proportioner by-pass. This only extends the time for defuelling. Since it is not advisable or common practice to put electrical power into a crashed aircraft, moving the refuelling panel to a less vulnerable position would not help the situation.</p> <p>Due to the anhedral angle of the wings it is not practical to defuel through the top access plates in the tanks. It would be possible to drain the fuselage tanks through the top access doors.</p>

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 6

Item: I-9

Sheet: 1

1. Change Request Detail

Initiator: TSDs AVRO

Change Desired: Request design study to find method of ascertaining an error in reading of fuel tank contents along with method of isolating unserviceable capacitance unit.

Reason: To facilitate trouble shooting and maintenance of fuel tank capacitance contents system.

Action: Cat. 6 - AVRO study.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
Completed (May 9/56)				

3. Progress Detail

Date	Remarks
<u>9 May 1956</u>	<p>A requirement has been raised for test equip. from M-H which will answer this problem. By plugging into existing connectors, on the tank capacitance electrical system, it will be possible to determine the contents of each individual tank in percentage of total capacity. Knowing the total tank capacity, this would serve as a check on the capacitance syst. On the other hand if the tanks generally show 25% capacity and one tank shows a different amount; 2 possible sources of malfunction are available: (a) The fuel no air valves or the flow proportioner may be malfunctioning. (b) Capacitance unit in that particular tank may be malfunctioning. Since experience shows that tank capacitance units are fairly reliable, it is recommended that possibility (a) be checked first. If the valves and proportioner appear satisfactory then the capacitance units should be pulled and bench checked.</p>

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 6

Item: J-1

Sheet: 1

1. Change Request Detail

Initiator: AMC - ADC - AFHQ

Change Desired: Request inclusion of a test system, terminating on a multi-purpose plug, so that the performance of the telecommunications system may be determined by measuring RF, AF, and DC energies which are available without modification to the equipments. The test plug is to be immediately accessible through its own access door on a D.I. basis.

Reason: To permit economical D.I. of telecommunication equipment.

Action: Cat. 6 - RCAF requirement to be incorporated in Air 7-6.
Equipment to be included on RCAF aircraft.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
N.A.	N.A.	N.A.		

3. Progress Detail

Date	Remarks
9 May 1956	Noted. Will be incorporated in first RCAF aircraft.

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CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 1

Item: J-2

Sheet: 1

1. Change Request Detail

Initiator: AFHQ/DATel - ADCHQ - AMCHQ

Change Desired: Stays are required to hold the side access doors of the electronic bay open.

Reason: To facilitate removal of equipment from mounts.

Action: Cat. 1 - Maintenance Sub-Committee to approve installation.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation

3. Progress Detail

Date	Remarks
9 May 1956	Will comply. No progress to report.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 1

Item: J-4

Sheet: 1

1. Change Request Detail

Initiator: AFHQ - ADCHQ - AMCHQ

Change Desired: A device to ensure that UHF transmitter is shut down while switching between antennae.

Reason: To preclude damage to equipment due to reflected RF.

Action: Cat. 1.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
Complete (May 56)	N.A.	N.A.		

3. Progress Detail

Date	Remarks
9 May 1956	This provision has been incorporated.

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CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 5

Item: J-5

Sheet: 1

1. Change Request Detail

Initiator: AFHQ/DATel

Change Desired: The present mock-up is not sufficiently advanced to enable a quantitative appraisal to be made on the telecommunication configuration. The equipment location and accessibility as presently installed is acceptable for this mock-up. However, no engineering approval can be given to any installed equipment.

Reason: It is inappropriate to approve this mock-up since there is no assurance that this configuration will guarantee that space, cooling, pressurization, etc., will be adequate for the electronic systems called up under Spec. AIR 7-5 as amended by AIR 7-6 which is an integral part of the overall AIR Spec. 7-4.

Action: Cat. 5 - Consideration to be given to requirement of AIR 7-6 in the light of existing equipment.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation

3. Progress Detail

Date	Remarks
9 May 1956	Agreed.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 4

Item: K-1

Sheet: 1

1. Change Request Detail

Initiator: AFHQ/DarmE

Change Desired: Adequacy of the utility hydraulic system cannot be determined.

Reason: The armament installation design has not been completed.

Action: Cat. 4.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation

3. Progress Detail

Date	Remarks
9 May 1956	Noted.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 6

Item: K-2

Sheet: 1

1. Change Request Detail

Initiator: TSDs

Change Desired: Nose leg - "Telescopic Air Strut" Design change required to eliminate between flight inspection.

Reason: A pressure check is required to ensure closing of undercarriage door.

Action: Cat. 6 - Maintenance Sub-Committee to monitor.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
Complete (May 56)				

3. Progress Detail

Date	Remarks
9 May 1956	Cannot accommodate mechanical spring. Jarry Hydraulics have been asked for performance data on air spring to assess adequacy.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 6

Item: K-6

Sheet: 1

1. Change Request Detail

Initiator: TSDs AVRO

Change Desired: Deletion of anti-skid device on brakes.

Reason: Anti-skid on brakes considered not worth penalty of approximately 50 lbs. in weight, and complexity for maintenance. Present drag chute and normal brakes sufficient to give good braking without additional "luxury" - (F-102 not equipped with anti-skid).

Action: Cat. 6 - AVRO study and investigate.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
Yes (May 56)				

3. Progress Detail

Date	Remarks
9 May 1956	Study in process.

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CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 6

Item: K-7

Sheet: 1

1. Change Request Detail

Initiator: TSDs AVRO

Change Desired: Reconsideration of time interval between undercarriage up and point when aircraft has accelerated to undercarriage design limit speed of 250 K. Present interval is of order of 5 secs in which pilot must assess undercarriage light indication and take action to prevent aircraft accelerating past 250 K - time interval considered too short. Redesign of gear up operation required or pilot drill changed to hold speed down to below 250 K until gear up and locked.

Reason: Prevent damage to undercarriage when down beyond 250 K. Possibility of aircraft accelerating beyond limit much greater than present day aircraft.

Action: Cat. 6 - RCAF and AVRO to study.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation

3. Progress Detail

Date	Remarks
9 May 1956	<p>These conditions were laid down as design criteria for the undercarriage and are not to be regarded as Operating Instructions.</p> <p>Pilot drill will be established during Avro development flight testing.</p>

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CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 6

Item: K-8

Sheet: 1

1. Change Request Detail

Initiator: TSDs AVRO

Change Desired: Replace present pipe-knuckle system of carrying hydraulic fluid to nose undercarriage drag strut lock over drag strut structure joint by flexible line.

Reason: Reduce possibility of leakage - flex line eliminates three movable metal joints. Seems to be sufficient room in nose gear bay to accommodate hose.

Action: Cat. 6 - AVRO and Maintenance Sub-Committee to investigate.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation

3. Progress Detail

Date	Remarks
9 May 1956	No progress.

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CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 6

Item: K-9

Sheet: 1

1. Change Request Detail

Initiator: AMC

Change Desired: Arrange hydraulic pump installation studs so as to allow installation of securing nuts in all instances.

Reason:

Action: Cat. 6 - Refer to K-3.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
Yes (May 56)				

3. Progress Detail

Date	Remarks
9 May 1956	Refer to K-3.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 1

Item: K-10

Sheet: 1

1. Change Request Detail

Initiator: TSDs AVRO

Change Desired: Ground testing of undercarriage and associated wing attachment structure under simulated airborne undercarriage extension with gravity, air loads, and/or "g" loads accelerating gear down at maximum allowable lowering speed.

Reason: Kinetic energy accumulated by gear going down under influence of above forces (especially air loads acting on door or leg) being transformed into hydraulic pressure energy by "buffer" pivot - hence danger of fatigue and bearing failures thought to be large. (Ref. CF-100 main gear problem).

Action: Cat. 1.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
N.A.	N.A.	N.A.	N.A.	N.A.

3. Progress Detail

Date	Remarks
9 May 1956	Already scheduled in Avro/Dowty test program.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 6

Item: K-11

Sheet: 1

1. Change Request Detail

Initiator: TSDs AVRO

Change Desired: Replacement of pipe-knuckle arrangement of hydraulic inlet to main undercarriage drag strut lock with flex hose.

Reason: Present arrangement has 3 moving joints - flex hose decreases leakage possibility - appears to be room for hose stowage on undercarriage retraction.

Action: Cat. 6 - Refer to K-8.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation

3. Progress Detail

Date	Remarks
9 May 1956	No progress.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 1

Item: K-12

Sheet: 1

1. Change Request Detail

Initiator: AMC

Change Desired: That drain points be installed at suitable low points in the hydraulic systems to cater for system draining prior to component removal.

Reason: To prevent spillage of fluid during component removal.

Action: Cat. 1 - Refer to B-9.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
Yes (May 56)				

3. Progress Detail

Date	Remarks
9 May 1956	Drainage of system to major extent may be accomplished through return ground service quick disconnect coupling. Draining facilities will be added in places where more than an estimated 1/2 pint of hydraulic fluid would be trapped inside the system.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 1

Item: K-13

Sheet: 1

1. Change Request Detail

Initiator: AMC

Change Desired: That the Company cater to the requirement for using a torque wrench on high pressure hydraulic fitting connection by design of tools or positioning of components.

Reason: To ensure that torque can be read.

Action: Cat. 1 - In principle RCAF to be assured that all fittings are accessible and method of suitable torquing developed
- lubrication of threads to be considered when torque values are given.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
	N.A.	N.A.	N.A.	N.A.

3. Progress Detail

Date	Remarks
9 May 1956	<p>It is not intended to torque high pressure hydraulic fittings.</p> <p>A procedure will be laid down, based on past experience and an extensive test program, which will instruct maintenance personnel to tighten the fitting to "finger tight" condition plus 1/4 or 1/3 turn depending upon tests. This is standard procedure when dealing with flareless tube fittings. The threads will be lubricated.</p>

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 1

Item: K-14

Sheet: 1

1. Change Request Detail

Initiator: AMCHQ

Change Desired: That the Company initiate design of "open sleeve" wrench for all difficult connections incorporating ratchet operation and torque indication.

Reason:

Action: Cat. 1 - Refer to K-13.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
	N.A.	N.A.	N.A.	N.A.

3. Progress Detail

Date	Remarks
May 1956	Any special wrenches required to service the CF-105 will be supplied as ground handling equipment. The requirement for special wrenches will be determined by carrying out maintenance operations on the CF105 mock-up.

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CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 6

Item: K-15

Sheet: 1

1. Change Request Detail

Initiator: AMC

Change Desired: That a study be made of the possibility of using flexible lines for the main leg brakes lines.

Reason: To eliminate the 24 flexible couplings now used.

Action: Cat. 6 - AVRO and Maintenance Sub-Committee to investigate.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation

3. Progress Detail

Date	Remarks
9 May 1956	No progress.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 6

Item: K-16

Sheet: 1

1. Change Request Detail

Initiator: AMCHQ

Change Desired: The "change over" from utility support of the flying control/compensator to internal support be utilized to connect the pressure side of the flying control system into the brake system to provide braking when the utility accumulator is spent.

Reason:

Action: Cat. 6 - RCAF DAEng to study.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation

3. Progress Detail

Date	Remarks
9 May 1956	No AVRO action required at this stage.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 6

Item: K-19

Sheet: 1

1. Change Request Detail

Initiator: DMEng

Change Desired: Study required for self contained brake system with components located on bogie beam. Actuation electrically. Power derived from wheels. (Similar to current systems).

Reason: Present system very complex.

Action: Cat. 6 - AVRO to investigate.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
Yes (May 56)				

3. Progress Detail

Date	Remarks
9 May 1956	An initial study indicates that the landing gear bogie beam will require redesign to incorporate features requested by RCAF. Further study in connection with this redesign is certain to be a lengthy undertaking and it is accordingly suggested that the RCAF review this request before further work is carried out by AVRO.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 6

Item: K-20

Sheet: 1

1. Change Request Detail

Initiator: AMCHQ - ADC

Change Desired: Provide for powering the parallel and differential servo from each hydraulic system such that should one system fail automatic flight features and damping be retained even under the reduced rate.

Reason:

Action: Cat. 6 - DAEng to study.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation

3. Progress Detail

Date	Remarks
9 May 1956	No AVRO action required at this stage.

C O N F I D E N T I A L

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CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 7

Item: K-23

Sheet: 1

1. Change Request Detail

Initiator: AMCHQ

Change Desired: That the size of the sump be reconsidered.

Reason: It appears that it might be possible to reduce the size of this tank.

Action: Cat. 7 - Installation to be checked on actual aircraft.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
N.A.	N.A.	N.A.	N.A.	N.A.

3. Progress Detail

Date	Remarks
9 May 1956	Tank deleted - replaced by overboard drain. See also K-21.

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CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 6 — 2

Item: L-3

Sheet: 1

1. Change Request Detail

Initiator: ADC

Change Desired: A smaller access panel to remove oxygen converter on Between Flight Servicing.

Reason: At present entire panel must be removed to change converter.
This is very awkward for one man to do.

Action: Cat. 6 - Leading to Cat. 2.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
Yes (May 56)				

3. Progress Detail

Date	Remarks
9 May 1956	Scheme drawings complete.

UNCLASSIFIED

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 1

Item: L-4

Sheet: 1

1. Change Request Detail

Initiator: IAM/DRML

Change Desired: Remove oxygen pressure gauge completely.

Reason: Reads steady 300 psi at all times down to empty tank indication.
 Failure of oxygen pressure always evident to pilot on 100%
 demand system - contents gauge at empty indicates \pm 15 minutes
 before switch to emergency.

Action: Cat. 1 - System will be checked on initial test flying.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
N.A.	Yes (May 56)	N.A.	N.A.	1st A/C

3. Progress Detail

Date	Remarks
9 May 1956	Indicator deleted.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 6

Item: M-1

Sheet: 1

1. Change Request Detail

Initiator: DIEEng

Change Desired: Relocate accelerometer from shock mounted panel to a non-shock mounted location.

Reason: Shock mounting of the accelerometer induces inaccurate indication.

Action: Cat. 6 - Refer to A-7 - Requirement for additional accelerometer to be determined.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation

3. Progress Detail

Date	Remarks
9 May 1956	Awaiting report from RCAF.

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CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category

Item: M-2

Sheet: 1

1. Change Request Detail

Initiator: DIEEng

Change Desired: Minor markings of instrument dials to be finished in matt white major markings and pointer to continue self luminous.

Reason: No ultra violet lighting fitted in aircraft and fluorescent marking is redundant and uneconomical.

Action: Cat. 1 - RCAF to specify requirement.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
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3. Progress Detail

Date

Remarks

9 May 1956

Requirements from RCAF letter S1038-105-4 TSDs/AVRO (ACE) 1 December 1954 contradict this request. Clarification required from RCAF.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 1

Item: M-2

Sheet: 1

1. Change Request Detail

Initiator: DIEEng

Change Desired: Minor markings of instrument dials to be finished in matt white major markings and pointer to continue self luminous.

Reason: No ultra violet lighting fitted in aircraft and fluorescent marking is redundant and uneconomical.

Action: Cat. 1 - RCAF to specify requirement.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation

3. Progress Detail

Date	Remarks
9 May 1956	Requirements from RCAF letter S1038-105-4 TSDs/AVRO (ACE) 1 December 1954 contradict this request. Clarification required from RCAF.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 1

Item: M-3

Sheet: 1

1. Change Request Detail

Initiator: DIEEng

Change Desired: Altimeter presentation to provide extended 10,000 foot pointer with inverted triangular tip and warning flag.
Mod. Kits for 6A1850 altimeters being designed by Sperry Canada.

Reason: To improve accuracy of reading altimeter.

Action: Cat. 1 - Subject to availability.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation

3. Progress Detail

Date

Remarks

9 May 1956

This request will be discussed at the May 15th Cockpit Sub-Committee meeting.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 7

Item: M-4

Sheet: 1

1. Change Request Detail

Initiator: IAM/DRML

Change Desired: Remove instrument completely.

Reason: Aircraft exceeds pilot's capabilities on G. Tolerance and exceeding pilot's capability quite evident from physical sensation. If aircraft tolerance exceeded, pilot incapacitated and aircraft won't return to base.

Action: Cat. 7.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation

3. Progress Detail

Date	Remarks

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 6

Item: M-5

Sheet: 1

1. Change Request Detail

Initiator: AMCHQ

Change Desired: Study to determine if more suitable location available for J4 compass flux valve.

Reason: Relative proximity of main landing gear and present proposed location may prove difficult for compass swinging.

Action: Cat. 6 - AVRO study.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation
Complete (May 56)	N.A.	N.A.	N.A.	N.A.

3. Progress Detail

Date	Remarks
9 May 1956	Study has shown that location as existing is most suitable. Location in outer wing is impossible due to lack of space and excessive vibration.

CF-105 MOCK-UP CHANGE REQUEST PROGRESS RECORD

Category: 7

Item: M-6

Sheet: 1

1. Change Request Detail

Initiator: DRML - TSD (AVRO)

Change Desired: Radio Compass ARN-6 to be removed completely. Excess baggage will be useless for high speed navigation account "P" static. In emergency no standard broadcast band available. Present function as a crutch or substitute for D.R. navigation. 60 lbs. too much penalty for dubious use in checking marker beacons.

Reason: Weight saving approximately 60 lbs. and valuable space requirements instrument panel and bay.

Action: Cat. 7.

2. Progress Summary

Study Initiated	Mock-Up Changed	Mock-Up Approved	Prod. Drawings Issued	Production Allocation

3. Progress Detail

Date	Remarks

