

# INSTRUCTION TO DESIGN OFFICE



AVRO AIRCRAFT LIMITED

TO:

SPECIAL PROJECTS GROUP

All Supervision and Design Personnel

I.D.O. No. S.P. 1

10 January '56

DATE

A/C TYPE

SUBJECT:

Model Identities

Page 1 of 3

1. In order to clarify the situation regarding model identities so that reports can be effectively compiled, a numbering system as shown in the following table has been agreed upon and will be entered in a Model Identity Register.

2. In future all new models and test assemblies will be entered in the register in this manner:

Model No.	Model Scale	Test Facility	Model Dwg. No.	Test Rig Dwg. No.	Area of Investigation
1	$\frac{1}{40}$	Avro Subsonic	3 & 46 SK 21336	SK 21336	Stability and control
2	$\frac{1}{20}$	Avro Subsonic	SK 21339 SK 30081	56 SK 21339 60 SK 30081	Stability and control
3	$\frac{1}{40}$	Avro Subsonic	SK 30029	SK 30029	Stability and control
4	$\frac{1}{40}$	Avro Subsonic	17 SK 30026 SK 30059 17 SK 30064	SK 30026 SK 30069 SK 30064	Stability and control
5	$\frac{1}{44.5}$	Avro Supersonic	2 SK 30195	SK 30195	Stability and control
6	$\frac{1}{44.5}$	Avro Supersonic	3 SK 30195	SK 30195	Stability and control
7	$\frac{1}{44.5}$	Avro Supersonic	4 SK 30195	SK 30195	Stability and control
8	$\frac{1}{40}$	Avro Rig	50 SK 21295	SK 21295	Air cushion
9	$\frac{1}{20}$	Avro Rig	2 SK 30038	SK 30038	Air cushion

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SUBJECT:

Model Identities

(cont'd.)

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Model No.	Model Scale	Test Facility	Model Dwg. No.	Test Rig Dwg. No.	Area of Investigation
10	$\frac{1}{20}$	Avro Rig	77 SK 21295	SK 30038	Air Cushion
11	$\frac{1}{4}$	Avro Subsonic	SK 30008	SK 30008	Intake and exhaust
12	$\frac{1}{45.5}$	Avro Subsonic	77 SK 21295	SK 21295	Air cushion
13		"	91 SK 21295	SK 21295	Air cushion
14		Nobel	36 SK 21283	SK 21283	Intake and exhaust
15	full	Avro rig	SK 35003	SK 30060	Intake and exhaust
16	$\frac{1}{6}$	WADC Subsonic	SK 30082	SK 30082	Stability and control
17	$\frac{1}{10}$	Avro Subsonic	SK 30208	SK 30208	Intake
18	$\frac{1}{20}$		SK 30206		Radial flow feasibility
19	$\frac{1}{12.5}$	M.I.T. Supersonic	SK 30212	SK 30212	Intake and exhaust
20	$\frac{1}{23}$	M.I.T. Supersonic	SK 30213	SK 30213	Stability and control
21	$\frac{1}{44.5}$	M.I.T. Supersonic	SK 30217	M.I.T.	Performance
22	full	Avro rig	SK 30221		Intake and exhaust

I.D.O. No. S.P. 1



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SUBJECT:

Model Identities


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Model No.	Model Scale	Test Facility	Model Dwg. No.	Test Rig Dwg. No.	Area of Investigation
23	full	Avro Rig			Control and stability
24		Avro Rig	sht.3 SK 30197	sht.1 SK 30197	Intake and exhaust
25	full	Avro Rig	SK 30241	SK 30241	Intake and exhaust

All existing drawings and reports will be amended to conform with the above system.

- At the commencement of design of any new model or test assembly, those concerned will inform Mr. B. Roden, regarding the objectives of the test together with parameters to be measured, and he will allocate a model number to conform with report compilation.
- The Secretarial office will be responsible for the posting of the register.

  
Project Designer  
I.D.O. No. S.P. 1

# INSTRUCTION TO DESIGN OFFICE



AVRO AIRCRAFT LIMITED

TO:

SPECIAL PROJECTS GROUP  
All Supervision and Design Personnel

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I.D.O. No. S.P.2

12 Jan. '56

DATE

A/C TYPE

SUBJECT:

Drawing Office Methods

1. The following scales for drawings are to be regarded as standard. No drawing may be made to any other scale reduction except by specific consent of Design Supervision.

$1/2$   $1/4$   $1/5$   $1/10$   $1/20$   $1/40$   $1/50$   $1/100$

Scale increase for small components may be made at the discretion of a Group Leader, but a view of the item showing actual size must appear at the top right of the drawing.

2. All drawings must conform to the standard sheet sizes i.e. 11 x 17, 22 x 17, 22 x 34, 44 x 34. Only in exceptional circumstances will permission be granted by Design Supervision to depart from these standards.

Preliminary schemes may be made to any convenient size at the discretion of a Group Leader.

3. On completion of a design scheme and before detailing is commenced, one print each is to be provided for Stress, Weights, and Planning Departments. Any subsequent changes made to the original scheme must be reported to these Departments by the responsible Group Leader.

4. Complete drawings will be made of all detail parts, sub-assemblies, main assemblies, etc., in order to provide a complete drawing record of the project, and these drawings will be the paramount reference for all stages of design, manufacture, and inspection.

5. All drawings must contain the drawing alteration stamp at the top left corner, in which a brief but accurate description of any drawing change will be entered against the advanced issue and the DQF if any, together with a grid reference for the location of the change where applicable. Where no grid reference is available on the drawing sheet the issue number at which the change is made must be shown in a triangular block adjacent to the area of change.



# INSTRUCTION TO DESIGN OFFICE



AVRO AIRCRAFT LIMITED

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DATE

A/C TYPE

SUBJECT:

Drawing Office Methods

(continued)

6. The material and specification must be quoted on all detail drawings at the bottom right above the title block.
7. All drawings calling up brazing or welding must contain the welding stamp. The type and size of welds must be defined and must be approved by the Welding Engineer, for aircraft applications only.
8. All drawings of detail parts requiring heat treatment must contain the heat treatment stamp with the appropriate particulars.
9. All drawings of detail parts must indicate the location in which the part number may be stamped.
10. All drawing releases for both new and raised issues must be authorized through the medium of the standard ERN (Engineering Release Note) for which a code numbering system will be adopted.
11. All manufacturing requests for drawing change will be made through the medium of the DQF (Drawing Query Form). The D.O. reply will be confined only to agreement with or refusal of the proposed change, and full details of an agreed change will only be entered in the drawing alteration stamp.
12. Concessions relating to manufacturing deviations will be requested by the Inspection Department through the medium of the MR (Material Review Form). These forms will be routed to the Stress Department who will have sole responsibility for disposition of the request.
13. Full scale layout (lofting) of any manufactured part will be made only at the request of the Planning Department, and will be identified by placing the capital L before the component number. It will be the responsibility of the Planning Department to coordinate subsequent alterations to layouts and reproductions.
14. Full Scale layout of contours will be authorized as required by Design Supervision and will be identified by placing the capital L before the component number.



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AVRO AIRCRAFT LIMITED

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A/C TYPE

SUBJECT:

Drawing Office Methods

(continued)

15. The first issue of all drawings must be signed by the Project Designer and the Chief Stressman before release. Subsequent issues may be released at the discretion of a Group Leader.

16. All drawings for issue or re-issue must be handed with the ERN to the print room clerk who will print only the requisite quantities and deliver the prints as follows.

Shop crib .....	one print
Planning Dept. ....	one print
Inspection Dept. ....	one print
D.O. file .....	one print

17. The first and subsequent issue of all loft layouts must be signed by a Group Leader and an Inspector before release, and must be acceptable to Planning requirements.

18. All loft layouts will be delivered to the Planning Department who will provide such reproductions as may be required for manufacturing purposes.

19. All drawings and D.O. prints will be systematically filed in the vault by the filing clerk. A withdrawal card must be filed for any item taken from the vault.

20. When drawings are re-issued the old prints must be recovered by the Print Room clerk and be disposed of with the classified waste.

21. All prints of drawings sent out to other Contractors or Agencies are to be accompanied by a Document Transit form, and the prints must be stamped with the appropriate classification. The register for these drawings will be kept posted by the Secretarial Office.

22. A register will be kept by the Print Room Clerk of all drawing releases within the Company, and a weekly return made to the Project Designer, the Chief Stressman, the Senior Group Leader, and the Weights Engineer.



# INSTRUCTION TO DESIGN OFFICE



AVRO AIRCRAFT LIMITED

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All Supervision and Design Personnel

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A/C TYPE

SUBJECT:

Drawing Office Methods

(continued)

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23. All drawings and prints received from outside companies are to be registered by the Secretarial Office. Filing space will be provided in the vault for these drawings, and withdrawal cards must be filed.

24. In order to transmit special engineering instructions or advance information to the manufacturing departments the standard EI form (Engineering Instruction) must be used.

25. A coding system for identifying components will be introduced for application to the project development program.

All drawings relating to U.S. contracts will continue to use the SK series.

  
Project Designer  
I.D.O. No. S.P.2

# INSTRUCTION TO DESIGN OFFICE



AVRO AIRCRAFT LIMITED

TO:

SPECIAL PROJECTS GROUP

All Design, Aerodynamics, Stress, Planning,  
and Supervisory Personnel

I.D.O. No. S.P. 3

13 January '56

DATE

A/C TYPE

SUBJECT:

Drawing Identity System

Page 1 of 3

1. In order to facilitate Company Cost Accounting methods, a system of coding digits is applied to each and every phase of work connected with the design and manufacture of an aeroplane, and therefore, to subscribe to this system it is desirable to identify drawings and components to suit.

In this regard certain coding digits are applied to the various phases of design which are known as 'fixed functions', while other coding digits are applied to the design breakdown which are known as 'qualifying functions'.

The following coding digits are adopted for use in the Special Projects Group (Design).

## DESIGN PHASES

### CODE

01	Project Schemes
02	Stress (aircraft)
03	Stress (models)
04	Aerodynamics (aircraft)
05	Aerodynamics (models)
06	Weights (aircraft)
07	Weights (models)
08	Mockups & trial installations
09	Models
10	Test Specimens
11	Test Rigs
12	Reports
13	Patents
14	Structural Testing
15	Flight Testing

## DESIGN BREAKDOWN

### CODE

30	Airframe complete
31	Centre section
32	Mid-wing
33	Outer wing
34	Engine compartment
35	Bottom intake
36	Top centre intake
37	Top outer intake
38	Wing tip capsule
39	
40	Power plant
41	Electrics
42	Radio
43	Instruments & panels
44	Engine controls
45	Flying controls
46	Fuel system
47	Oxygen system
48	Air conditioning & pressurization
49	Fire protection
50	Pilots facilities
51	Auxiliary pneumatics
52	Ground handling equipment
53	Flight test instrumentation
54	



# INSTRUCTION TO DESIGN OFFICE



AVRO AIRCRAFT LIMITED

TO:

SPECIAL PROJECTS GROUP

All Design, Aerodynamics, Stress, Planning,  
and Supervisory Personnel

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13 January '56

DATE

A/C TYPE

SUBJECT:

Drawing Identity System

(cont'd.)

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It is mandatory that the coding digits shall be applied within the numbering system of all drawings prepared for either a design phase or a design breakdown.

2. It is essential that the project to which a drawing applies shall be identifiable in the drawing number. The code for the present project is 4, and this digit will immediately precede the design coding digits, e.g. 4-14, 4-30.

3. In order to facilitate filing of drawings it is desirable to identify the size of drawing sheet, and in that regard the following code is adopted.

<u>IDENTITY</u>	<u>SHEET SIZE</u>
A	44 x 34
B	22 x 34
C	22 x 17
D	11 x 17
N	non-standard

The sheet size identity will immediately precede the coding digits, e.g. C-439, A-432.

4. The drawing sheet serial identities within any designated function will prefix the code numbers established above, and they are determined as follows:

<u>IDENTITY</u>	<u>DESCRIPTION</u>
1	General assembly
2 - 9	Geometry or schematic diagram
10 - 99	Subsidiary or component assemblies
100 onward	Detail parts

5. It is required that the General Assembly and Geometry drawings shall be made on size A sheets, therefore, all G.A. drawings will have the prefix 1A, e.g. 1A445 G.A. of Controls, and all Geometry or Schematic drawings will have the prefix 2A, e.g. 2A446 Fuel System Diagram.

# INSTRUCTION TO DESIGN OFFICE



AVRO AIRCRAFT LIMITED

TO:

SPECIAL PROJECTS GROUP

All Design, Aerodynamics, Stress, Planning,  
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S.P. 3

I.D.O. No.

13 January '56

DATE

A/C TYPE

SUBJECT:

Drawing Identity System

(cont'd.)

6. For convenience of filing and shop reference, bills of material will be standardized on 11 x 17 sheets, numbered consecutively. Each bill of material will be identified by the letters BM prefixing the relevant coding digits of the General Assembly to which it refers, e.g. BM 441, Bill of Material Electrics.

7. The front sheet or sheets of a material bill will quote the following particulars.

- a. Number and title of General Assembly drawing
- b. Number and title of Geometry or Schematic drawing
- c. Number and title of Subsidiary or Component assembly drawings
- d. Drawing numbers of all detail parts

8. Subsequent sheets of a material bill will quote the usual particulars against the item number.

Project Designer

I.D.O. No. S.P. 3.



# INSTRUCTION TO DESIGN OFFICE



AVRO AIRCRAFT LIMITED

I.D.O. No. S.P. 3/1

23 April '56  
DATE

A/C TYPE

SUBJECT:

Drawing Identity System

## SPECIAL PROJECTS GROUP

All Design, Aerodynamics, Stress, Planning,  
and Supervisory Personnel

Page 1 of 3

1. In order to facilitate Company Cost Accounting methods, a system of coding digits is applied to each and every phase of work connected with the design and manufacture of an aeroplane, and therefore, to subscribe to this system it is desirable to identify drawings and components to suit.

In this regard certain coding digits are applied to the various phases of design which are known as 'fixed functions'; while other coding digits are applied to the design breakdown which are known as 'qualifying functions'.

The following coding digits are adopted for use in the Special Projects Group (Design).

CODE	DESIGN PHASES	CODE	DESIGN BREAKDOWN
01	Project schemes	30	Airframe complete
02	Stress (aircraft)	31	Lower portion
03	Stress (models)	32	Upper portion
04	Aerodynamics (aircraft)	33	Outer wing
05	Aerodynamics (models)	34	Turbine & Impeller
06	Weights (aircraft)	35	Bottom intake
07	Weights (models)	36	Top intake
08	Mock up & trial installations	37	Bottom tank
09	Models	38	Top Tank
10	Test Specimens	39	Mid wing
11	Test rigs and wind tunnel	40	Engine installation
12	Reports	41	Electrics
13	Patents	42	Radio
14	Structural Testing	43	Instruments & Panels
15	Flight Testing	44	Engine Controls
		45	Flying controls
		46	Fuel System
		47	Oxygen System
		48	Air Conditioning & Pressurization
		49	Fire protection
		50	Pilots facilities
		51	Auxiliary pneumatics
		52	Ground handling equipment
		53	Flight test instrumentation
		54	Exhaust diffuser
		55	Cockpit
		56	Shutters
		99	Aircraft Complete



# INSTRUCTION TO DESIGN OFFICE



AVRO AIRCRAFT LIMITED

## SPECIAL PROJECTS GROUP

All Design, Aerodynamics, Stress, Planning,  
and Supervisory Personnel

I.D.O. No. S. P. 3/1

23 April '56  
DATE

A/C TYPE

SUBJECT:

Drawing Identity System

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It is mandatory that the coding digits shall be applied within the numbering system of all drawings prepared for either a design phase or a design breakdown.

2. It is essential that the project to which a drawing applies shall be identifiable in the drawing number. The code for the present project is 4, and this digit will immediately precede the design coding digits, e.g. 4-14, 4-30.

3. In order to facilitate filing of drawings it is desirable to identify the size of drawing sheet, and in that regard the following code is adopted.

<u>Identity</u>	<u>Sheet Size</u>
A	44 x 34
B	22 x 34
C	22 x 17
D	11 x 17
<u>N</u>	<u>non-standard</u>

The sheet size identity will immediately precede the coding digits, e.g. C-439, A-432.

5. To identify the drawing sheets and items within any designated function, the above coding digits are prefixed by numbers beginning with 1 and running consecutively. It is required that the G.A. and Geometry drawings be made a size 'A' sheet. The G.A. will bear the prefix 1 while the Geometry will bear the prefix 2.

e.g. 1 A 445 G.A. of Controls  
2 A 430 Geometry of Airframe complete

6. For those functions within the 'design phase' group - 08, 09, 10, & 11, it is necessary to add a suffix to the above number to designate component assemblies.

e.g. 1A 410-1 Shutter Assembly  
1A 410-2 Assembly jet pipe

7. For convenience of filing and shop reference, bills of material will be standardized on 11 x 17 sheets, numbered consecutively. Each bill of material will be identified by the letters BM prefixing the relevant coding digits of the General Assembly to which it refers, e.g. BM 441 Bill of Material, Electrics.



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AVRO AIRCRAFT LIMITED

TO:

SPECIAL PROJECTS GROUP

All Design, Aerodynamics, Stress, Planning  
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I.D.O. No. S.P. 3/1

23 April '56

DATE

A/C TYPE

SUBJECT:

Drawing Identity System

8. There will be three types of sheets for the Bills of Material.

Assembly sheet - this sheet will be used for those functions bearing a suffix and will list the various assemblies with their respective suffixes in numerical order. The numbering for this sheet will be A1, A2, etc.

Drawing Sheet - this sheet will list drawings other than assemblies, and item drawings. The numbering for this sheet will be B1, B2, etc.

Drawing Parts List Sheet - this sheet will quote the usual particulars against the item number and will be numbered as follows:

Sheets C1, C2, etc. - Item sheets

Sheets, D1, D2, etc. - Hardware sheets

Sheets E1, E2, etc. - Items from other assemblies.

*Stewart*

Project Designer

I.D.O. No. S.P. 3/1

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TO:

SPECIAL PROJECTS GROUP

All Design, Aerodynamics, Stress, Planning,  
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AVRO AIRCRAFT LIMITED

I.D.O. No. S.P. 3/2

Feb. 7 '58

DATE

A/C TYPE

SUBJECT:

Drawing Identity System

P.V.704

1. In order to facilitate Company Cost Accounting methods, a system of coding digits is applied to each and every phase of work connected with the design and manufacture of an aeroplane, and therefore, to subscribe to this system it is desirable to identify drawings and components to suit.

In this regard certain coding digits are applied to the various phases of design which are known as 'fixed functions'; while other coding digits are applied to the design breakdown which are known as 'qualifying functions'.

The following coding digits are adopted for use in the Special Projects Group:

<u>CODE</u>	<u>DESIGN PHASES</u>	<u>CODE</u>	<u>DESIGN BREAKDOWN</u>
01	Project schemes	30	Airframe complete
02	Stress (aircraft)	33	Outer wing
03	Stress (models)	34	Turbine & compressor
04	Aerodynamics (aircraft)	35	Bottom intake
05	Aerodynamics (models)	36	Top intake
06	Weights (aircraft)	37	Bottom tank
07	Weights (models)	38	Top tank
08	Mock up & trial installations	39	Mid wing
09	Models	40	Engine installation
10	Test Specimens	41	Electrics
11	Test rigs and wind tunnel	42	Radio
12	Reports	43	Instruments & Panels
13	Patents	44	Engine controls
14	Structural Testing	45	Flying controls
15	Flight Testing	46	Fuel system
16	Test Development	47	Oxygen system
		48	Air conditioning & Pressurization
		49	Fire protection
		50	Pilots facilities
		51	pneumatics
		52	Ground handling equipment
		53	Flight test instrumentation
		54	Jet pipe
		55	Cockpit
		56	Shutters
		57	Landing legs
		99	Aircraft complete



# INSTRUCTION TO DESIGN OFFICE



AVRO AIRCRAFT LIMITED

## SPECIAL PROJECTS GROUP

All Design, Aerodynamics, Stress, Planning  
and Supervisory Personnel

I.D.O. No. S.P. 3/2

Feb. 7 '58

DATE

A/C TYPE

SUBJECT:

Drawing Identity System

P.V. 704

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It is mandatory that the coding digits shall be applied within the numbering system of all drawings prepared for either a design phase or a design breakdown.

- It is essential that the project to which a drawing applies shall be identifiable in the drawing number. The code for the present project is 4, and this digit will immediately precede the design coding digits, e.g. 4-14, 4-30.
- In order to facilitate filing of drawings it is desirable to identify the size of drawing sheet, and in that regard the following code is adopted:

<u>Identity</u>	<u>I.D.O. Sheet Size</u>	<u>Loft Sheet size</u>
A	44 x 34	48 x 36
B	22 x 34	24 x 36
C	22 x 17	24 x 18
D	11 x 17	
N	42 x -	48 x 48, 60, 72, 84, & 96

The sheet size identity will immediately precede the coding digits, e.g. C-439, A-432

- To identify the drawing sheets and items within any designated function, the above coding digits are prefixed by numbers beginning with 1 and running consecutively. It is required that the G.A. and Geometry drawings will be made a size 'A' sheet. The G.A. will bear the prefix 1 while the Geometry will bear the prefix 2.

E.g. 1 A 445 G.A. of Controls  
2 A 430 Geometry of Airframe complete

- For those functions within the 'design phase' group - 08, 09, 10, 11 & 16 it is necessary to add a suffix to the above number to designate component assemblies.

e.g. 1A 410-1 Shutter Assembly  
1A 410-2 Assembly jet pipe

- For convenience of filing and shop reference, bills of material will be standardized on 11 x 17 sheets, numbered consecutively. Each bill of material will be identified by the letters BM prefixing the relevant coding digits of the General Assembly to which it refers, e.g. BM 441 Bill of Material, Electrics.

# INSTRUCTION TO DESIGN OFFICE

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## SPECIAL PROJECTS GROUP

All Design, Aerodynamics, Stress, Planning  
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AVRO AIRCRAFT LIMITED

I.D.O. No. S.P. 3/2

Feb. 7'58

DATE

A/C TYPE

SUBJECT:

Drawing Identity System

P.V. 704

7. There will be three types of sheets for the Bills of Material.

Assembly sheet - this sheet will be used for those functions bearing a suffix and will list the various assemblies with their respective suffixes in numerical order. The numbering for this sheet will be: A1, A2, etc.

Drawing Sheet - This sheet will list drawings other than assemblies, and item drawings. The numbering for this sheet will be: B1, B2, etc.

Drawing Parts List Sheet - this sheet will quote the usual particulars against the item number and will be numbered as follows:

Sheets C1, C2, etc. - item sheets  
Sheets D1, D2, etc. - hardware sheets  
Sheets E1, E2, etc. - items from other assemblies.

Project Designer



# INSTRUCTION TO DESIGN OFFICE



AVRO AIRCRAFT LIMITED

TO:

SPECIAL PROJECTS GROUP

All Design, Stress, Aerodynamic, Planning  
and Supervisory Personnel

I.D.O. No. S.P. 4

2 Feb. '56

DATE

A/C TYPE

SUBJECT:

PROJECT 704

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1. On completion of the present program of mock up design, a new program of schematic structure design will be initiated to facilitate preliminary stress analysis, weight computation, material estimate, tool design, and component testing.

2. Project design for this stage of development will embrace extensive scheming of component parts of the structure together with schemes for major assembly joints. Geometry drawings for control of manufacturing dimensions will be an essential part of this program.

3. Schematic drawings will be required to quote proposed material specifications, material gauges, rivet particulars, bolt or screw particulars, welding particulars, etc., together with any other information which will assist the program.

Project Designer

# INSTRUCTION TO DESIGN OFFICE



AVRO AIRCRAFT LIMITED

TO:

SPECIAL PROJECTS GROUP

All Design, Aerodynamics, Stress, Planning and  
Supervisory Personnel

I.D.O. No. S.P. 5

15 March '56

DATE

A/C TYPE

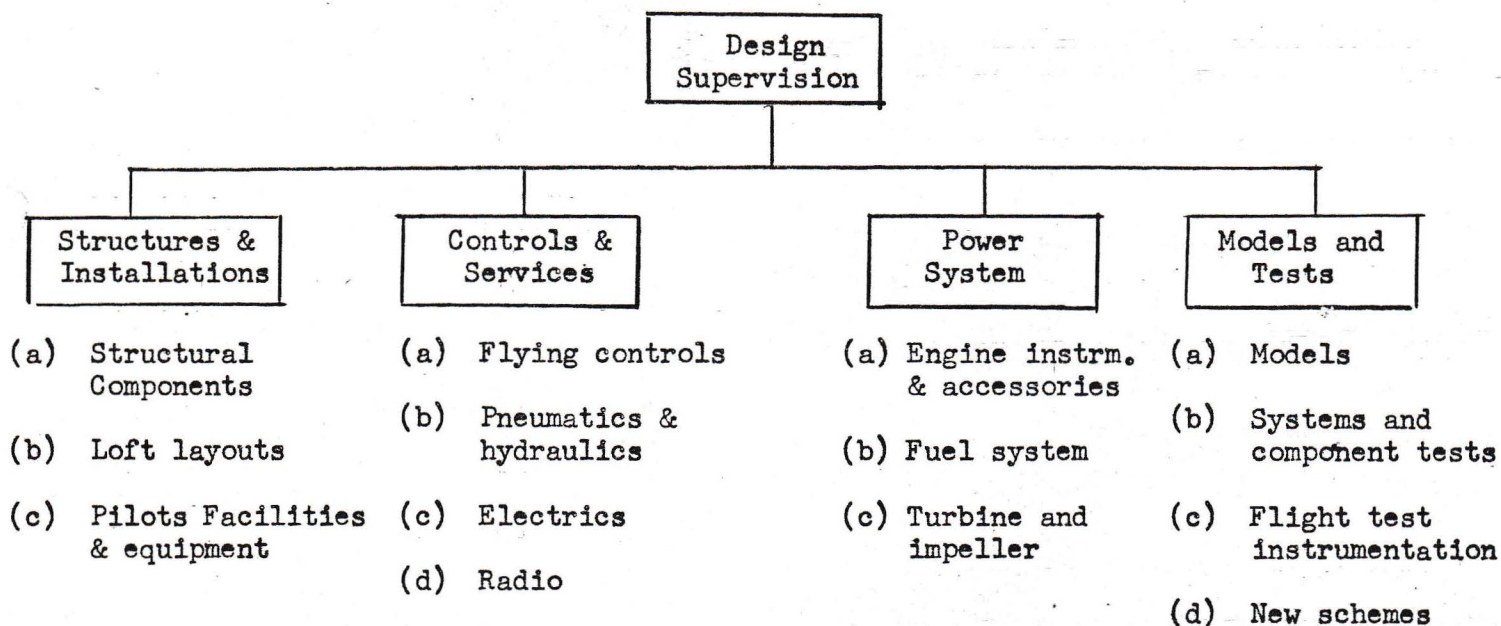
SUBJECT:

Design Department

Organization

Page 1 of 3

1. In connection with our commitment to design a complete aeroplane, the office organization will be developed into four groups, each group being headed by a Senior Designer.
2. The organization chart showing the areas of design responsibility is as follows:



3. The duties and functions of the Senior Designers will generally be as follows:
  - (a) To be responsible for the maintenance of good order and discipline within their group.
  - (b) To be responsible for administrative details and coordination of work within their group.
  - (c) To initiate design schemes as directed by Design Supervision
  - (d) To develop manufacturing and assembly drawings in accordance with the drawing system.



# INSTRUCTION TO DESIGN OFFICE



AVRO AIRCRAFT LIMITED

TO:

SPECIAL PROJECTS GROUP

All Design, Aerodynamics, Stress, Planning and

Supervisory Personnel

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I.D.O. No. S.P. 5

15 March '56

DATE

A/C TYPE

SUBJECT:

Design Department

Organization

(cont'd.)

- (e) To ensure that drawings contain all pertinent information for manufacture and inspection.
  - (f) To maintain a high standard of drawing presentation and accuracy within the group.
4. The Senior Designers will be immediately responsible to a Senior Design Engineer, whose duties and functions will generally be as follows:
- (a) To assist the Project Designer in the maintenance of good order and discipline in the office.
  - (b) To be responsible through the Senior Designers for office administration.
  - (c) To assist the Project Designer in the development and coordination of design work among the four groups.
  - (d) To be responsible for the adequate supply of drawing materials, manuals, standards, etc.
  - (e) To be responsible for ensuring that adequate checking procedures are carried out on all drawings.
  - (f) To direct the Senior Designers on the maintenance of a high standard of drawing presentation.
  - (g) To authorize the release of all drawings of both new and raised issues.

5. The following appointments are made to conform with the foregoing organization:

Senior Design Engineer

Mr. D. Barclay

Senior Designers

Structure and Installations  
Controls and Services  
Power Systems  
Models and Tests

Mr. K. Shaddock  
Mr. C. Williams  
Mr. A. Rose  
Mr. A. Wheelband

# INSTRUCTION TO DESIGN OFFICE



AVRO AIRCRAFT LIMITED

TO:

SPECIAL PROJECTS GROUP

All Design, Aerodynamics, Stress, Planning and  
Supervisory Personnel

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I.D.O. No. S.P. 5

15 March '56

DATE

A/C TYPE

SUBJECT:

Design Department

Organization

(cont'd.)

6. The following personnel are allocated to the groups:

Structure &  
Installations

J. Inglis  
K. Cowieson  
J. Conway  
A. Orr

Controls &  
Services

E. Galbraith  
A. Manning


Power  
System

R. Goodall

Models &  
Tests

R. Takeuchi  
T. Leggett

7. Action is being taken to provide additional facilities for the Special Projects Office which will permit expansion and reinforcement of the aforementioned groups in the near future.

  
Project Designer

  
Engineering Manager

I.D.O. No. S.P. 5



# INSTRUCTION TO DESIGN OFFICE



AVRO AIRCRAFT LIMITED

## SPECIAL PROJECTS GROUP

All Design, Aerodynamics, Stress, Planning and  
Supervisory Personnel

I.D.O. No. S.P. 5/1

Feb. 28 '57  
DATE

A/C TYPE

SUBJECT:

DESIGN DEPARTMENT ORGANIZATION

(Controls & Services Group)

Page 1 of 1

Due to the technical pressure engendered in the development of the aircraft flight control systems, it has been deemed advisable to relieve the Senior Designer of his responsibilities for certain services so that he may devote his whole time to the design, development and testing associated with the Control Systems.

Commencing March 1st, 1957, Mr. E. Galbraith will assume full responsibility for the following services in the capacity of a Senior Designer:

- (a) All electrical installations and services
- (b) All electronic installations and services
- (c) All armament installations and services

No change will be made in the distribution of manpower among the various groups, with the exception that Mr. D. Grittle will be seconded to Mr. Galbraith, until military studies are undertaken.

Project Designer

I.D.O. No. S.P. 5/1

# INSTRUCTION TO DESIGN OFFICE



AVRO AIRCRAFT LIMITED

I.D.O. No. S.P. 6

14 May '56

DATE

A/C TYPE

SUBJECT:

COMPONENT IDENTIFICATION

CONVENTIONS & DEFINITIONS

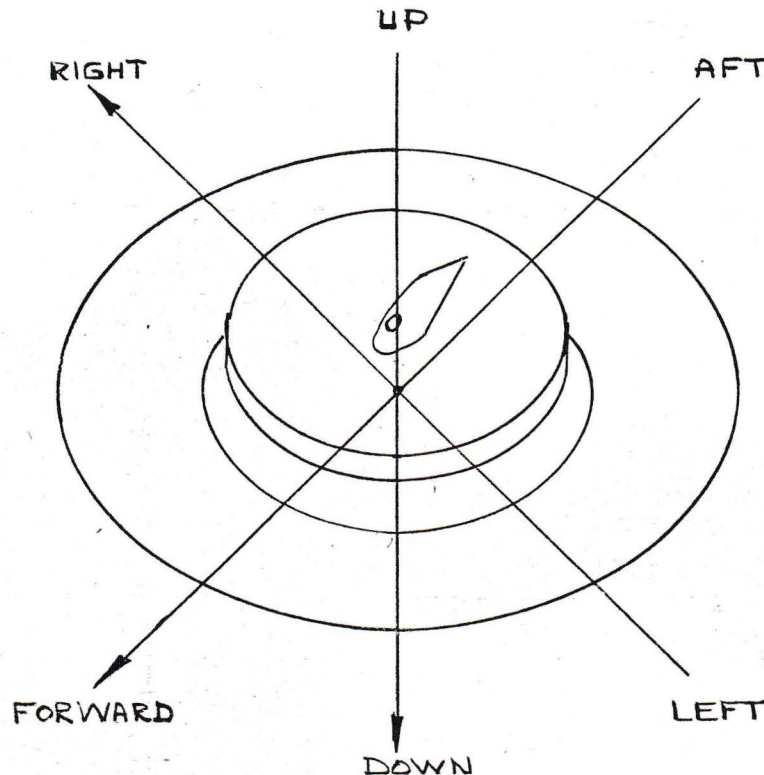
ALL DESIGN, AERODYNAMICS, STRESS, PLANNING

and SUPERVISORY PERSONNEL

Page 1 of 4

The configuration of Project 704 makes it necessary that identification conventions and definitions should be established so that all concerned with design and manufacture should be conversant with certain fixed references. These are established as follows:

## 1. Complete Aircraft



Note:

The Aircraft is viewed from above, and positive directions are indicated by arrows.

I.D.O. No. S.P. 6



# INSTRUCTION TO DESIGN OFFICE



AVRO AIRCRAFT LIMITED

TO:

I.D.O. No. S.P. 6

14 May '56  
DATE

A/C TYPE

SUBJECT:

COMPONENT IDENTIFICATION

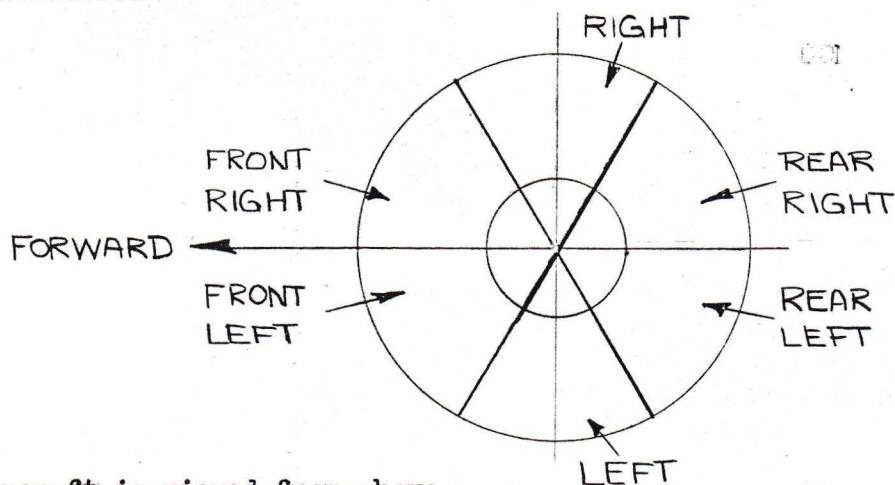
CONVENTIONS & DEFINITIONS

ALL DESIGN, AERODYNAMICS, STRESS, PLANNING

and SUPERVISORY PERSONNEL

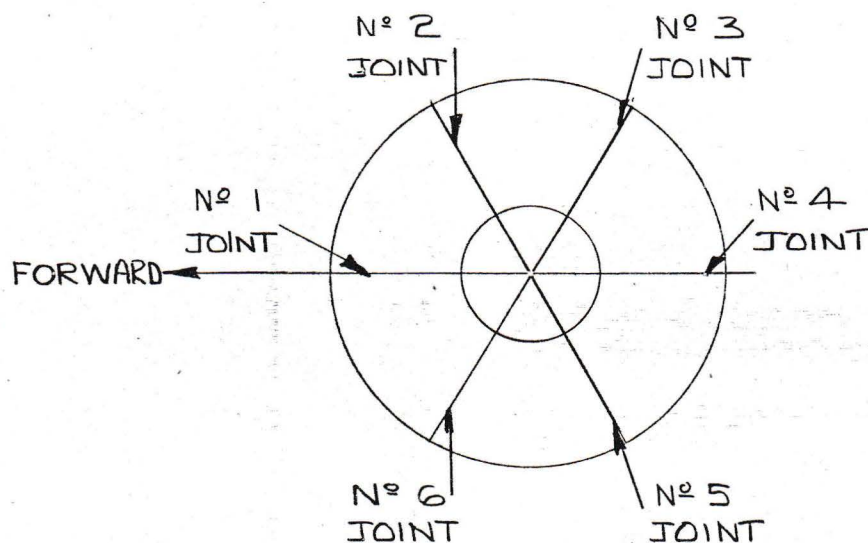
Page 2 of 4

## 2. Structure Segments



Note: The aircraft is viewed from above.

## 3. Segment Joints



Note: The Aircraft is viewed from above

# INSTRUCTION TO DESIGN OFFICE



AVRO AIRCRAFT LIMITED

TO:

ALL DESIGN, AERODYNAMICS, STRESS, PLANNING  
and SUPERVISORY PERSONNEL

I.D.O. No. S.P. 6.

14 May '56

DATE

A/C TYPE

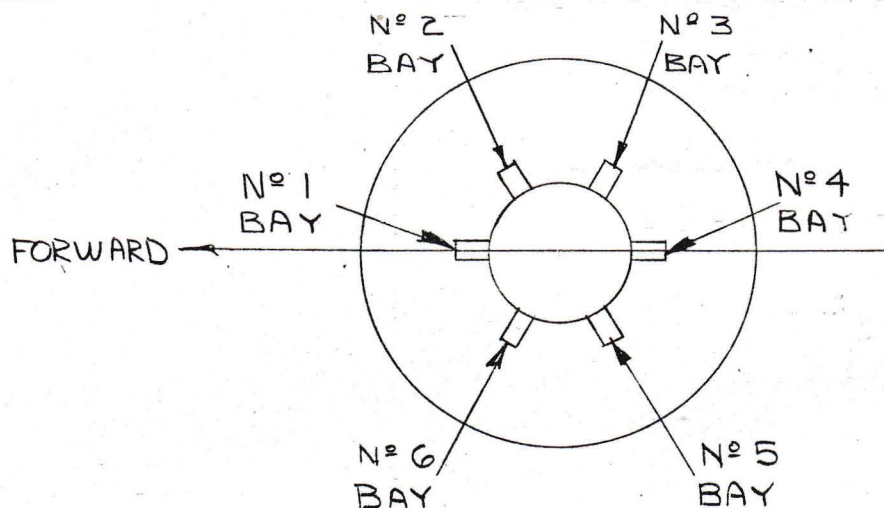
SUBJECT:

COMPONENT IDENTIFICATION

CONVENTIONS & DEFINITIONS

Page 3 of 4

## 4. Engine Bays



Note: The Aircraft is viewed from above.

## 5. Drawing Definitions

- 5.1 Looking Outboard may be used only for components as viewed from the centre of the aircraft along any radius.
- 5.2 Looking Inboard may be used only for components as viewed toward the centre of the aircraft along any radius.
- 5.3 Left-hand and Right-hand of a segmented component are defined as viewed from the centre of the aircraft looking outboard from above.
- 5.4 As Drawn items must be viewed in a clockwise direction, i.e. looking at the left side as defined in para. 5.3.



# INSTRUCTION TO DESIGN OFFICE



AVRO AIRCRAFT LIMITED

ALL DESIGN, AERODYNAMICS, STRESS, PLANNING

and SUPERVISORY PERSONNEL

Page 4 of 4

I.D.O. No. S.P. 6

14 May '56  
DATE

A/C TYPE

SUBJECT:

COMPONENT IDENTIFICATION

CONVENTIONS & DEFINITIONS

## 5. Drawing Definitions (cont'd.)

5.5 Where top and bottom components are mirror opposites, the top component must be considered as drawn and the bottom component opposite.

## 6. Drawing Conventions

6.1 All radial items such as ribs, etc. are to be drawn in accordance with para. 5.4

6.2 All circumferential items are to be drawn in accordance with para. 5.1.

6.3 All segment components are to be drawn looking down, and in accordance with para. 5.5. where applicable.

Project Designer

I.D.O. No.

S.P. 6.

# INSTRUCTION TO DESIGN OFFICE



AVRO AIRCRAFT LIMITED

ALL SPECIAL PROJECTS GROUP PERSONNEL

All Design, Loft, Aerodynamics, Stress, Planning  
and Supervisory Personnel

I.D.O. No. S.P. 7

16 July 1956  
DATE

A/C TYPE

SUBJECT:

STANDARD TOLERANCES

Page 1 of 1

1. Standard Tolerances to be used on the project are defined by CS-D-11 with the following exceptions:

## Section 3

## Static-Skin Gaps

Width of gap between adjacent skin panels shall not exceed .000" to .030" except where allowance must be made for heat expansion

## Section 4

## Rivet Head Flushness

ALL SURFACES Heads of countersunk rivets shall be flush with the adjacent surface, and may vary from  $\pm .002"$  to  $-.002"$

## Section 5

## Standard Holes

Unless otherwise specified, all holes are to be considered as clearance holes

## Section 9

## Screw Head Flushness

ALL SURFACES Heads of countersunk screws shall be flush with the adjacent surface and may vary from  $-.002"$  to  $-.005"$

## Section 10

## Sheet Metal Parts

Sheet metal tolerances to be used on this project will be identical with those listed for the C105 Project.

## CS-D-16

## Rivet Edge Distance Standards

The standard edge distance and edge distance tolerances will be identical with those listed for the C105 Project.

2. Each drawing will specify standard tolerances in accordance with the above.

Project Designer  
I.D.O. No. S.P. 7



# INSTRUCTION TO DESIGN OFFICE



AVRO AIRCRAFT LIMITED

33

TO:

ALL DESIGN, AERODYNAMICS, STRESS, PLANNING AND  
SUPERVISORY PERSONNEL

I.D.O. No. SP.16

21/12/57

DATE

A/C TYPE

SUBJECT:

PROCEDURE FOR MODIFICATION TO  
TEST SPECIMENS

1. The use of the "Shop Instruction" form to specify work required on test specimens and as the formal channel of liaison between Test Dept., Shops and Inspection Dept. is general throughout the company. With our major rigs now coming into the testing stage a formal system of control becomes essential and this system will therefore be adopted for certain test rigs, namely, the balance and overspeed rig, the 6-Viper test rig, future single Viper installations and other rigs or models as may be specified.
2. Normal Design Office procedures are used to control the manufacture and inspection of a test specimen. Upon completion and inspection of the specimen the Shop Instruction system shall be introduced and work of any nature on the specimen itself can then only be arranged through the Shop Instruction form and where design modifications are to be introduced the form shall call up the relevant drawings or sketches. The Design Office system shall, however, continue to apply to manufacture or purchase of items required during the testing and development phase (e.g. parts required for a trial installation, additional instrumentation etc.). An E.I. issued by the Design Office shall serve to introduce the new procedure in each individual case. Shop Instruction forms are issued by the test engineer in charge of the rig and are numbered according to test run number.
3. The master copy of the Shop Instruction shall be located in the shop on a board adjacent to test specimen. Ditto copies shall be sent to all concerned for information only; these shall be processed, for convenience, through production control. Additional items may be added to the master copy as required only with the sanction of the engineer in charge.
4. The Shop Instruction shall contain:
  - i) additional items from previous run which shall be clearly indicated as such, these items are for record purposes only.
  - ii) engine defects translated from log book and supplied by Inspection Dept.
  - iii) Items carried over from previous instruction. That is those items which were signed off as "not required for this run".
  - iv) new items of work including special inspections.
5. The engines shall be operated by a Flight Service Mechanic General, approved to run Gas Turbine Engines. Pre-run checks, repairs and adjustments shall be carried out by the approved Flight Service Mechanic and the inspection of such items may be delegated, where felt necessary by the Inspection Dept.



# INSTRUCTION TO DESIGN OFFICE

34  
AVRO AIRCRAFT LIMITED

TO:

page 2 of 2

I.D.O. No. SP.16

21/12/57

DATE

A/C TYPE

SUBJECT:

PROCEDURE FOR MODIFICATION TO  
TEST SPECIMEN (continued)

The Flight Service Mechanic shall maintain and supply inspection with a complete record of Engine running times, also any repairs or replacements.

6. All removals and installations of structure or equipment for the rig shall be entered on a special history or removal sheet by the operator removing the part. This removal sheet shall be pinned on the board adjacent to the shop instruction.
7. Individual items on the Shop Instruction shall be signed off by shop and inspection personnel. Overall approval shall be indicated by signature of corresponding supervisors. Approval for run shall be given by Inspection Dept. to engineer in charge of test following satisfactory completion of Shop Instruction and removal sheet. The flight service mechanic shall be responsible for engine readiness, eg. fuel supply pressure, air pressure for starting etc.

J. C. M. Frost



# INSTRUCTION TO DESIGN OFFICE



AVRO AIRCRAFT LIMITED

## SPECIAL PROJECTS GROUP

All Design, Aerodynamics, Stress & Planning  
and Supervisory Personnel

I.D.O. No. S.P. 17

Feb. 7'58

DATE

A/C TYPE

SUBJECT:

AVROCAR I

Coding Digits

Page 1 of 2

The following design coding digits shall be applied to the AVROCAR I Project.

Project Code - 5

<u>CODE</u>	<u>DESIGN PHASES</u>	<u>CODE</u>	<u>DESIGN BREAKDOWN</u>
01	Project Schemes	30	Airframe complete
02		31	Wing structure
03		32	
04		33	Wing tip
05		34	Turborotor
06		35	Turbine casing
07		36	Rotor intake
08	Mockup	37	Fuel tank
09	Models	38	Engine intake
10	Test Specimens	39	jet pipe
11	Test Rigs	40	Engine Assembly
12	Reports	41	Electrics
13	Patents	42	Radio
14	Structural Testing	43	Instruments & Panels
15	Flight Testing	44	Engine controls
		45	Flying controls
		46	Fuel system
		47	
		48	
		49	
		50	Pilots facilities
		51	pneumatic system
		52	Ground handling
		53	Flight test instrumentation
		54	trunk doors
		55	Cockpit canopy
		56	Engine cowlings
		57	Landing gear
		99	Aircraft complete

# INSTRUCTION TO DESIGN OFFICE

.O:

## SPECIAL PROJECTS GROUP

All Design, Aerodynamics, Stress & Planning  
and Supervisory Personnel

Page 2 of 2



AVRO AIRCRAFT LIMITED

I.D.O. No. S.P.17

Feb. 7:58  
DATE

A/C TYPE

SUBJECT:

AVROCAR I

Coding Digits

2. The shop drawing identity system associated with the foregoing digits shall be in accordance with the requirements of I.D.O. S.P.3/2 paras. 3, 4, 5, 6 & 7
3. Schematic drawings shall be identified within the relevant breakdown code by the introduction of the prefix SD, preceded by a numerical integer thus:

1 SD 531 Wing structure, general scheme

The schematic drawings must contain an issue block in order that changes can be identified by other departments.

  
Project Designer



# INSTRUCTION TO DESIGN OFFICE



AVRO AIRCRAFT LIMITED

TO:

SPECIAL PROJECTS GROUP

All Design, Aerodynamics, Stress & Planning  
and Supervisory Personnel

I.D.O. No. S.P. 17/2

Mar. 14 '58

DATE

A/C TYPE

SUBJECT:

AVROCAR I

Coding Digits

Page 1 of 2.

The following design coding digits shall be applied to the AVROCAR I Project.

Project Code - 5

<u>CODE</u>	<u>DESIGN PHASES</u>	<u>CODE</u>	<u>DESIGN BREAKDOWN</u>
01	Project Schemes	30	Airframe complete
02	1/5 Scale Model	31	Wing structure
03	1/20 Scale Model	32	
04	Wing Tip model	33	Wing Tip
05		34	Turborotor
06		35	Turbine casing
07		36	Rotor intake
08	Mockup	37	Fuel tank
		38	Engine intake
10	Test Specimens	39	Jet pipe
11	Test rigs	40	Engine assembly
12	Reports	41	Electrics
13	Patents	42	Radio
14	Structural Testing	43	Instruments & Panels
15	Flight Testing	44	Engine controls
		45	Flying controls
		46	Fuel syste,
		47	
		48	
		49	
		50	Pilots facilities
		51	Pneumatic system
		52	Ground handling
		53	Flight test instrumentation
		54	Trunk doors
		55	Cockpit canopy
		56	Engine cowlings
		57	Landing gear
		58	Exhaust box
		99	Aircraft complete

# INSTRUCTION TO DESIGN OFFICE

D:

## SPECIAL PROJECTS GROUP

ALL Design, Aerodynamics, Stress & Planning  
and Supervisory Personnel

Page 2 of 2



AVRO AIRCRAFT LIMITED

I.D.O. No. S.P. 17/2

Mar. 14 '58

DATE

A/C TYPE

SUBJECT:

AVROCAR I

Coding Digits

2. The shop drawing identity system associated with the foregoing digits shall be in accordance with the requirements of I.D.O. S.P.3/2 paras. 3,4,5,6, & 7
3. Schematic drawings shall be identified within the relevant breakdown code by the introduction of the prefix SD, preceded by a numerical integer thus:

1SD 531 Wing Structure, general scheme

The schematic drawings must contain an issue block in order that changes can be identified by other departments.



Project Designer



# INSTRUCTION TO DESIGN OFFICE

TO:

SPECIAL PROJECTS GROUP

All Design, Aerodynamics, Stress

and Supervisory Personnel

Page 1 of 2.



AVRO AIRCRAFT LIMITED

I.D.O. No. S.P. 17/3

Apr. 14'58

DATE

A/C TYPE

SUBJECT:

AVROCAR I

Coding Digits

The following design coding digits shall be applied to the AVROCAR I Project.

Project Code - 5

<u>CODE</u>	<u>DESIGN PHASES</u>	<u>CODE</u>	<u>DESIGN BREAKDOWN</u>
01	Project Schemes	30	Airframe complete
02	1/5 scale model	31	Centre base
03	1/20 scale model	32	Wing segment
04	Wing tip model	33	Wing tip
05		34	Turborotor
06		35	Turbine casing
07		36	Rotor intake
08	Mockup	37	Fuel tank
		38	Engine intake
10	Test Specimens	39	Jet pipe
11	Test rigs	40	Engine assembly
12	Reports	41	Electrics
13	Patents	42	Radio
14	Structural Testing	43	Instruments & Panels
15	Flight Testing	44	Engine controls
		45	Flying controls
		46	Fuel system
		47	
		48	
		49	
		50	Pilots facilities
		51	Pneumatic system
		52	Ground handling
		53	Flight test instrumentation
		54	Trunk doors
		55	Cockpit canopy
		56	Engine cowlings
		57	Landing gear
		58	Exhaust box
		99	Aircraft complete

# INSTRUCTION TO DESIGN OFFICE

TO:

SPECIAL PROJECTS GROUP  
All Design, Aerodynamics, Stress  
and Supervisory Personnel

Page 2 of 2



AVRO AIRCRAFT LIMITED

I.D.O. No. S.P. 17/3

Apr. 14 '58

DATE

A/C TYPE

SUBJECT:

AVROCAR I

Coding Digits

2. The shop drawing identity system associated with the foregoing digits shall be in accordance with the requirements of I.D.O. S.P.3/2 paras. 3, 4, 5, 6 and 7.

3. Schematic drawings shall be identified within the relevant breakdown code by the introduction of the prefix SD, preceded by a numerical integer thus:

LSD 531 Wing Structure, general scheme

The schematic drawings must contain an issue block in order that changes can be identified by other departments.

Project Designer



# INSTRUCTION TO DESIGN OFFICE

TO:

## SPECIAL PROJECTS GROUP

All Design, Aerodynamics, Stress  
and Supervisory Personnel

Page 1 of 2



AVRO AIRCRAFT LIMITED

I.D.O. No. S.P. 17/4

July 13, 59

DATE

A/C TYPE

SUBJECT:

AVROCAR I

Coding Digits

The following design coding digits shall be applied to the AVROCAR I Project.

Project Code - 5

<u>CODE</u>	<u>DESIGN PHASES</u>	<u>CODE</u>	<u>DESIGN BREAKDOWN</u>
01	Project Schemes	30	Airframe complete
02	1/5 scale model	31	Centre base
03	1/20 scale model	32	Wing segment
04	Wing tip model	33	Wing tip
05	Simulator model #1	34	Turborotor
06	Special Avrocar study	35	Turbine casing
07	Simulator model #2	36	Rotor intake
08	Mockup	37	Fuel tank
09	Simulator model #3	38	Engine intake
10	Test Specimens	39	Jet pipe
11	Test rigs	40	Engine installation
12	Reports	41	Electrics
13	Patents	42	Radio
14	Structural Testing	43	Instruments & Panels
15	Flight Testing	44	Engine controls
16	Cockpit simulator model #5	45	Flying controls
17	Ground test rig	46	Fuel system
18	Tethered flight rig	47	Fin
19	Ames tunnel installation	48	Heat insulation
20	Salvage schemes	49	Fire Extinguisher system
21	Simulator model #6	50	Pilots facilities
		51	Pneumatic system
		52	Ground handling
		53	Flight test instrument- ation
		54	Trunk doors
		55	Cockpit canopy
		56	Engine cowlings
		57	Landing gear
		58	Exhaust box
		99	Aircraft complete

# INSTRUCTION TO DESIGN OFFICE

D:

SPECIAL PROJECTS GROUP

All Design, Aerodynamics, Stress  
and Supervisory Personnel

Page 2 of 2



AVRO AIRCRAFT LIMITED

I.D.O. No. S.P. 17/4

July 13' 59

DATE

A/C TYPE

SUBJECT:

AVROCAR I

Coding Digits

2. The shop drawing identity system associated with the foregoing digits shall be in accordance with the requirements of I.D.O. S.P.3/2 paras. 3, 4, 5, 6 and 7.
3. Schematic drawings shall be identified within the relevant breakdown code by the introduction of the prefix SD, preceded by a numerical integer thus:

1 SD 531 Wing Structure - general scheme

The schematic drawings must contain an issue block in order that changes can be identified by other departments.

  
Project Designer

I.D.O. No. S.P. 17/4



# INSTRUCTION TO DESIGN OFFICE



AVRO AIRCRAFT LIMITED

O:

## SPECIAL PROJECTS GROUP

All Design, Aerodynamics, Stress  
and Supervisory Personnel

I.D.O. No. S.P. 22

July 13'59

DATE

A/C TYPE

SUBJECT:

AVROTRUCK I

Coding Digits

Page 1 of 1

1. The following design coding digits shall be applied to the Avrotruck I Project.

Project Code - 6

<u>CODE</u>	<u>DESIGN PHASES</u>	<u>CODE</u>	<u>DESIGN BREAKDOWN</u>
01	Lift Augmentation Model	30	Airframe Complete
		32	Wing segment
		33	Wing tip
		37	Fuel tank
		38	Engine intakes
		39	Exhaust ducts
		40	Engine
		41	Electrics
		42	Radio
		43	Instruments and Panels
		44	Engine controls
		45	Flying controls
		46	Fuel system
		50	Pilots Facilities
		51	Pneumatic system
		55	Cockpit canopy
		56	Engine cowlings
		57	Landing gear
		59	Gyro installation
		99	Aircraft complete

2. At this time, only detail design schemes are required which will permit preliminary performance and strength calculations, and cost forecast.
3. These schematic drawings (SD's) shall be identified in numerical sequence with the appropriate breakdown code number.  
i.e. 1 SD 630 - Airframe complete - General Scheme

I.D.O. No.

# INSTRUCTION TO DESIGN OFFICE



AVRO AIRCRAFT LIMITED

0:

SPECIAL PROJECTS GROUP  
All Design, Aerodynamics, Stress  
and Supervisory Personnel

I.D.O. No. S.P. 23

July 13, 59  
DATE

A/C TYPE

SUBJECT:

SYSTEM 606A

WEAPON SYSTEM

CODING DIGITS

Page 1 of 1

1. The following Design Coding Digits shall be applied to the System 606A - Weapon System Project.

Project Code - 7

<u>CODE</u>	<u>DESIGN PHASES</u>	<u>CODE</u>	<u>DESIGN BREAKDOWN</u>
01	Supersonic Intake Model	30	Airframe Complete
02	Supersonic Exhaust Model	32	Wing Segment
03	Jet Impingement Model	33	Wing Tip
		37	Fuel Tank
		38	Engine Intake
		39	Exhaust Ducts
		40	Engine
		41	Electrics
		42	Radio
		43	Instruments and Panels
		44	Engine Controls
		45	Flying Controls
		46	Fuel System
		50	Pilot's Facilities
		51	Pneumatic System
		55	Cockpit Canopy
		57	Landing Gear
		60	Electronics
		61	Hydraulic System
		62	Afterburner

2. At this time, only detail design schemes are required which will permit preliminary performance and strength calculations, and cost forecast.
3. These schematic drawings (SD's) shall be identified in numerical sequence with the appropriate breakdown code number.  
i.e. 1 SD 73Q - Airframe Complete - General Scheme



# INSTRUCTION TO DESIGN OFFICE



AVRO AIRCRAFT LIMITED

I.D.O. No. GEN. 607/1

Sept. 14/59

DATE

A/C TYPE

SUBJECT:

SYSTEM 606A

SUPERSONIC WEAPON SYSTEM

DRAWING IDENTITY SYSTEM

VTOL GROUP

All Design, Aerodynamics, Stress

and Supervisory Personnel

1. The following Design Coding Digits shall be applied to the System 606A - Weapon System Project for the purposes of design investigation.

Project Code - 7

<u>CODE</u>	<u>DESIGN PHASES</u>	<u>CODE</u>	<u>DESIGN BREAKDOWN</u>
01	Supersonic Intake Model	30	Airframe Complete
02	Supersonic Exhaust Model	31	Fuselage Complete
03	Jet Impingement Model	32	Wing Complete
		33	Wing Tip
		34	Power System
		35	Wing Ducts
		36	Fuselage Structure
		37	Fuel Tank Segments
		38	Engine Intake
		39	Wing Plenum
		40	Engine Installation
		41	Electrical System
		42	Radio
		44	Engine Controls
		45	Flight Control System
		46	Fuel System
		50	Crew Capsule
		57	Main Landing Gear
		58	Stabilizer Landing Gear
		59	Air Conditioning System
		60	Avionics System
		61	Weapon Stowage Compartments
		99	Aircraft Complete

2. At this time, only detail design schemes are required which will permit preliminary performance and strength calculations, and cost forecast.

3. These schematic drawings (SD's) shall be identified in numerical sequence with the appropriate breakdown code number.

i.e. 1 SD 730 - Airframe Complete - General Scheme

I.D.O. No. GEN. 607/1

# INSTRUCTION TO DESIGN OFFICE

O:

VTOL Group  
All Design, Aerodynamics,  
Stress, and Supervisory Personnel



AVRO AIRCRAFT LIMITED

I.D.O. No. GEN 607/2

Nov. 23, 1959

DATE

A/C TYPE

SUBJECT:

AVROCAR I

SECURITY CLASSIFICATION

Will all concerned please note that the security classification of the Avrocar project is downgraded from Secret to Confidential in regard to drawings, photographs, specifications, design and performance information, and reports. This change does NOT authorize public release of information, and does NOT alter present regulations for the transmission of documents.

It is required by Company security regulations that regrading action shall be taken as follows.

## Drawings

The holders of drawings shall have the SECRET notation stroked through in ink and replaced with CONFIDENTIAL in every location. At the lower right hand corner a signed note in ink shall state - 'Reclassified per SRCL dated 15 October 1959'.

## Documents

The holders of documents shall have the SECRET notation on the cover stroked through in ink and replaced with CONFIDENTIAL. On the fly sheet a signed note in ink shall state - 'Reclassified per SRCL dated 15 October 1959'.

THE SECURITY CLASSIFICATION OF SYSTEM 606A IS NOT AFFECTED AND REMAINS SECRET. DRAWINGS AND DOCUMENTS RELATING THERETO MUST BE TREATED ACCORDINGLY.

NOV 25 1959

J. Stewart

I.D.O. No.



# INSTRUCTION TO DESIGN OFFICE

O:

VTOL GROUP



AVRO AIRCRAFT LIMITED

I.D.O. No. 607/3

Jan. 13/60

DATE

A/C TYPE

SUBJECT:

SECURITY REQUIREMENTS

To comply with contractual Security Regulations relating to those projects which are classified SECRET or CONFIDENTIAL the following minimum security requirements must be fulfilled:

1. All documents and blueprints classified SECRET must be safely filed in a barlocked metal cabinet when not in actual use.
2. All documents and blueprints classified CONFIDENTIAL must be safely filed in a spring-locked metal cabinet when not in actual use.
3. All drawing boards carrying current SECRET or CONFIDENTIAL drawings must be covered at cessation of the daily work period.
4. All forms of written, typed, or printed matter containing classified information, also all scheme drawings and any assembly drawing which divulges the configuration of a vehicle, must be stamped in accordance with its assigned classification.
5. All waste material associated with any classified project must be carefully disposed of in a Classified Waste container.
6. The following classifications are currently assigned.

W.S. 606A

SECRET

Avrocar


CONFIDENTIAL

Avroscout

CONFIDENTIAL

Avrotruck

CONFIDENTIAL

  
JAN 14 1960  
J. Stewart

# INSTRUCTION TO DESIGN OFFICE



AVRO AIRCRAFT LIMITED

I.D.O. No. GEN. 607/4

Sept. 13, 1960

DATE

A/C TYPE

SUBJECT:

AVROCAR I

SECURITY CLASSIFICATION

All Engineering Personnel

1. Further to I.D.O. Gen. 607/2 dated Nov. 23, 1959, will Engineering personnel please note that all aspects of the Avrocar I are de-classified, with the proviso that control of visitor access remains essential.
2. All holders of drawings and/or documents relating to the Avrocar I are required to take regrading action, and a rubber stamp for this purpose is available from Engineering Services.
3. Access protection for Restricted Area #1 will continue, and the Security Requirements stated in I.D.O. Gen. 607/3 dated Jan. 13, 1960 must be observed. The classifications currently assigned to projects are as follows.

SECRET —

WS 606A and STOL

CONFIDENTIAL —

Canadian Studies  
GETOL Research

SEP 17 1960

J. Stewart

I.D.O. No. GEN. 607/4



# INSTRUCTION TO DESIGN OFFICE

TO:

ALL ENGINEERING PERSONNEL



AVRO AIRCRAFT LIMITED

I.D.O. No. GEN 607/5

April 14, 1961

DATE

A/C TYPE

SUBJECT:

AVRO SECURITY REGULATIONS

All Engineering Department personnel are reminded that they are personally responsible for the safe custody of every classified document in their immediate possession. These documents must be kept in the lockup filing cabinets provided for the purpose when not in actual use.

Your attention is drawn to the following requirement of the Company Security Manual.

"14. LOSS OF CLASSIFIED DOCUMENTS OR MATERIAL

Where any deficiency of classified documents or material is discovered, the individual concerned is to report the loss immediately to the Chief Security Officer, after preliminary steps towards its recovery have been taken. A report in writing is to be submitted to the Chief Security Officer even if the document is recovered, as it is of the utmost importance to determine if an opportunity occurred for the security of the document or material to be compromised."

A handwritten signature in dark ink, appearing to read "S.V. Meakings".  
S.V. Meakings  
Administrative Supervisor

# INSTRUCTION TO DESIGN OFFICE

D:

J.K. Scott  
S.M. Jenkyns  
VTOL Group



AVRO AIRCRAFT LIMITED

I.D.O. No. GEN. 613/2

May 25, 1960  
DATE

A/C TYPE

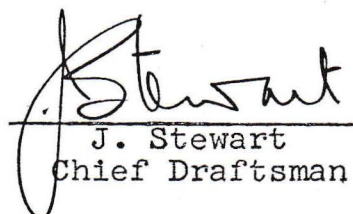
SUBJECT:

ENGINEERING SERVICES

1. After May 27, 1960, printing service and drawing crib service within the VTOL security area will be discontinued.
2. All printing will be done through Mr. A. Sowery (Local 511) who will be responsible for security of drawings and/or prints while in his custody.
3. All vellum drawings of Avrocar, System 606A, etc., together with their card index, are being transferred to the custody of Engineering Services, who will provide a security counter service for withdrawals.
4. Avrocar loft drawings will remain at the present time in the VTOL security area in the custody of the Loft Supervisor.
5. Reference blueprints for Avrocar, System 606A etc. will be retained in the VTOL security area and will be kept up to date by Engineering Services.

As there will be no counter service available it is requested that office personnel should make their own withdrawals and returns. Under these circumstances it is imperative that signed withdrawal cards be filed conscientiously so that the whereabouts of classified prints are known.

6. The reference files of VTOL Reports and the associated distribution records will be retained within the security area and will be in the custody of Mrs. E. Bates (Local 2674).

  
J. Stewart  
Chief Draftsman