

REVIEW CERTIFICATE

(IN ACCORDANCE WITH SCESI VOL 1 PART 2 SECT 3 LEAFLET 11)

1. This Master Work Sheet (MWS) is to be reviewed two years after its initial introduction, and immediately prior to a deferred task being brought back into production.
2. Subsequent updating of this MWS will be by normal amendment or re-write action as a result of a servicing query.

Date Reviewed	Remarks	Signature
MAY 86	ORIGINAL PAGE (ii) SIGNED	

AL17

AMENDMENT CERTIFICATE

1. Amendment lists will be promulgated by the Officer Commanding E & I Wing and will be distributed to all holders.
2. It is the responsibility of recipients to amend the MWS.
3. When incorporating amendments the recipient is to ensure that the relevant AL No is inserted in the margin against amendments made, and complete amendment certificate.
4. The Officer i/c Section is responsible to the Officer Commanding E & I Wing that all copies of the MWS held in the section are amended up to date.

AL NO	DATE	AMENDED BY	DATE
1	18.6.74	<i>[Signature]</i>	18.6.74
2.	5.2.75.	<i>W Edge</i>	5.2.75
3.	24.4.75	<i>W Edge</i>	24.4.75
4.	7.10.75.	<i>W Edge</i>	7.10.75.
5.	27.10.75	<i>W Edge</i>	27.10.75
6.	25.11.75	<i>W Edge</i>	25.11.75
7.	15.7.76.	<i>W Edge</i>	15.7.76
8.	21.10.76	<i>W Edge</i>	21.10.76
9.	26.11.76	<i>W Edge</i>	26.11.76
10.	13.12.76	<i>W Edge</i>	13.12.76
11	22.4.77	<i>[Signature]</i>	22.4.77
12.	25.4.77	<i>W Edge</i>	25.4.77
13.	27.5.77	<i>W Edge</i>	27.5.77
14.	6-11-78	<i>[Signature]</i>	6-11-78
15	9.3.82	<i>A Maller</i>	9.3.82
16	17.11.82	<i>A Staller</i>	17.11.82
17	6.3.85	<i>Po Bunch</i>	22/5/86
18	9.4.85	<i>Po Bunch</i>	22/5/86
19	6.11.85	<i>Po Bunch</i>	22/5/86
20	29.2.88	<i>A Moller</i>	6/5/88

A M E N D M E N T C E R T I F I C A T E

1. Amendment lists will be promulgated by the Officer Commanding TD&S Wing and will be distributed to all holders.
2. It is the responsibility of recipients to amend the MWS.
3. When incorporating amendments the recipient is to insert the relevant AL No in the margin against amendments made, and complete amendment certificate.
4. The Officer IC Section is responsible to the Officer Commanding TD&S Wing that all copies of the MWS held in the section are amended up to date.

[illegible]

INSTRUCTIONS TO USERS

1. This MWS supersedes all previous issues which are to be destroyed.
 2. No alteration is to be made to this document without the authority of an official Amendment List.
 3. This MWS details the Depth "C" maintenance of Inverter . Personnel engaged in this maintenance are to comply with all maintenance instructions and regulations and are to ensure the complete serviceability of the equipment. Nothing contained in this MWS or its associated documents is to be construed as absolving or in any way diminishing the responsibilities of such personnel in the attainment of this aim.
 4. All signatures and initials must be legible and are to be made in black ink or ball point pen. Signatures or initials are legally binding and certify that entries constitute a complete and true record of the work done.
 5. Where detailed in the MWS, the Supervisor is to sign or initial the following:
 - a. Repair Line Work Card MOD Form 720Q/1.
 - b. When raised, the Certificate of Work Continuation Sheet MOD Form 720P.
- The signature or initials of the Supervisor indicates that the tradesman is qualified and has satisfactorily completed the work detailed in the MWS or specification.
6. Signatures, initials and stamps are to be appended as indicated in the MWS, F720Q/1 and F720P. Any difficulties encountered in certification are to be referred to the Officer IC through the Supervisor.
 7. On satisfactory completion of the MWS procedures the Supervisor is to sign the certificate on the F720Q/1 indicating the condition of the subject equipment.
 8. The numbers in brackets preceded by "ST" refer to items listed in the Special Tools and Test Equipment List (Annex B). The numbers in brackets preceded by "item" or "M" refer to items listed in the 30 MU Recommended Range of Spares and Materials (Annex A).
 9. This MWS is written to the latest known modification standard of the equipment concerned at the date of issue (see page 3a).
 10. Errors and/or omissions in the content of this MWS are to be reported to the Supervisor.

11. The completion of the F720Q/1, and when raised the continuation forms F720P and F720Q/2 together with the signatures, initials and stamps, constitutes a certificate and the following provisions apply:

- a. Royal Air Force Personnel. By the Air Force Act it is a punishable offence to sign any certificate knowing it to be false (Section 62-1) or to sign any certificate in relation to aircraft material without ensuring the accuracy thereof (Section 50-1).
- b. Navy and Army Personnel. Navy and Army Personnel who use this document will be subject to the equivalent conditions of their respective Navy and Army Acts as those covered by the Air Force Act given for RAF Personnel as detailed in para 11a.
- c. Civilian Employees. Signing of a certificate, knowing it to be false, or to sign any certificate in relation to an aircraft or aircraft material, without ensuring the accuracy thereof, will be considered a serious offence and may be dealt with under the terms of either MOD Manual 9 (Chap 5) or MOD Manual 11, as appropriate to the status of the individual concerned.

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	8 - 16	Inspection, Repair, and Replacement
	17 - 29	Rebuild
	30 - 37	Preliminary and Final Test
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2. LIST OF ATTACHED FIGURES

1. Inverter test circuit
2. Brush bedding rig adaptor cable (ST27)
3. Inverter circuit

3. LIST OF ATTACHED ANNEXES

- A. Spares and Materials Requirements List
- B. Special Tools and Test Equipment
- C. Overall Maintenance Flowchart
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GENERAL SERVICING NOTES - INDEX

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GENERAL SERVICING NOTES1. Examine in this MWS means:

Carry out a visual survey of the condition of an item. The condition of an item can be impaired by the following:

- a. Insecurity of attachment.
- b. Cracks or fractures.
- c. Corrosion, deterioration or contamination.
- d. Distortion.
- e. Loose or missing rivets.
- f. Chafing, fraying, scoring or wear.
- g. Faulty or broken locking devices.
- h. Loose clips or packing, obstruction of or leaks from pipelines.
- j. External damage.
- k. Discolouration due to overheating or leaking of fluids.
- l. **BADLEY EXECUTED AND/OR DEFECTIVE SOLDERED JOINTS.**

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2. It is essential that all concerned with servicing have the same understanding of the meaning of the following terms which are used:

- a. Inspect Review, by a Supervisor, of the work carried out by tradesmen to ensure it has been performed satisfactorily.
- b. Check Make a comparison of a measurement of time, pressure, temperature resistance, dimension or other quantity with a known figure for that measurement.
- c. Test Ascertain by using the appropriate test equipment that a component or system functions correctly.
- d. Operate Ensure that an item or system functions correctly as far as possible without the use of test equipment or reference to measurement.
- e. Replenish Refill a tank, bottle or other container to predetermined level, pressure or quantity and where necessary:
 - (1) Remove caps or covers from filler orifices and/or drains.
 - (2) Clear orifices.
 - (3) Fill container as directed.

GENERAL SERVICING NOTES (CONT)

- (4) Ensure drains are free from obstruction.
- (5) Ensure gaskets and caps are free from damage.
- (6) Refit caps or covers.
- (7) Fit locking devices as necessary.
- f. Fit Correctly attach one item to another.
- g. Refit Fit an item which has previously been removed.
- h. Replace Remove an item and fit a new or serviced item.
- j. Disconnect Uncouple or detach cables, pipelines or controls.
- k. Reconnect Reverse of disconnect.

3. Where voltages in excess of 50V rms ac, or 120V dc are present, servicing practices contained in AP100B-01, Order No 1300, are to be observed.

4. No attempt is to be made to restore the new appearance but anti-corrosive treatment is to be carried out as necessary.

5. Page 2 lists publications used to compile this IHS. Where procedures are detailed in accordance with (raw) selected paragraphs, attention must be paid to the warnings and cautionary notes included in those paragraphs.

6. Although there is an apparent similarity between British and American screwthreads they are NOT interchangeable and dangerous consequences may arise if it is attempted to mate approximately sized male and female threads.

GENERAL SERVICING NOTES (CONT)

HAZARDOUS CHEMICAL

7. SOLDER RESIN CORED To:

Chemical Handbook
Section 2, Chapter 19, Leaflet S38

Sect Ref

- | | | | | |
|-----------------------------|----|-------------|------|-----|
| 1. BS 219 Grade 5S or 95A | -} | 30B/2015255 | - 16 | SWG |
| BS 441 Type 1 or 2 DTD 599A | -} | 30B/2105256 | - 20 | SWG |
| BS 219 Grade 'C' | - | 30B/9105038 | | |

MANUFACTURER AND ADDRESS

2. Various

DESCRIPTION AND PURPOSE

3. a. Description: An activated resin cored solder.
b. Purpose: General soldering of non ferrous metals.

DANGEROUS PROPERTIES

4. a. Flammable: No.
b. Toxic: No.

STORAGE AND DISPOSAL INSTRUCTIONS

5. a. Storage Instructions: Store in a cool, dry place.
b. Disposal Instructions: Waste to be disposed of as Non Ferrous Scrap.

HANDLING INSTRUCTIONS

6. a. Environmental Requirements. Well ventilated area when high density soldering operations are being carried out when forced ventilation should be used.
b. Protective Clothing. Not required.
c. Method of use. Use with appropriate soldering iron.

FIRST AID TREATMENT

7. a. Inhalation* If irritation of mucous membranes is experienced, move to area of fresh air.
b. Skin Contact* Wash hands with soap and water after handling and always before handling food.

GENERAL SERVICING NOTES (CONT)

HAZARDOUS CHEMICAL

8 I.I.I. - TRICHLOROETHANE (GENKLENE)

Chemical Handbook
Section 2 Chapter 20 Leaflet T5

SECT/REF

1. 33D 2201949 (Drum Form) 33D 2203782
20 litre container

DESCRIPTION

2. A general purpose solvent for cold cleaning and formulation, eg adhesive. Formerly known as Inhibsol.

MANUFACTURER

3. ICI Ltd, Mond Division, Runcorn, Cheshire.

HEALTH HAZARD

4. Inhalation of a high concentration of vapour will cause drowsiness, headache, giddiness and may lead to unconsciousness or can prove suddenly fatal, if the exposure has been severe, ie quantity spillage has occurred. Avoid contact with skin and eyes. First Aid treatment should be carried out as follows:

a. Inhalation: Anyone suffering over exposure to vapour, should be moved into the fresh air, and medical attention immediately sought. If breathing has stopped artificial respiration should be given. The physician's attention must be drawn to the fact that this product is an anaesthetic and Adrenaline or similar sympathomimetic drugs should not be given. Patients recovering from over exposure must not indulge in any exercise for 12 hours after exposure.

b. Eye Contact: Splashes in the eye are mildly irritating but will cause no permanent damage. The eye should be thoroughly irrigated with water for at least 10 minutes whilst the lids are held open, and medical attention should be sought.

c. Swallowing: The accidental swallowing of small splashes will not cause any significant reaction. Following ingestion of any greater amount, the patient should be treated with an emetic such as salty water to induce vomiting. Medical attention should be sought promptly.

d. Skin Contact: If contact occurs, wash affected area with soap and water.

FIRE HAZARD

5. Non flammable.

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GENERAL SERVICING NOTES (CONT)

HAZARDOUS CHEMICAL

SPECIAL INSTRUCTIONS FOR USE

6. a. Use only in a well ventilated area.
- b. Gloves and goggles (where splashing is liable to occur) should be worn.
- c. Do not allow product to be exposed to naked flame, or red hot surfaces, as acidic decomposition products may be formed.
- d. Product may react violently with metals such as sodium, potassium and barium, particularly if finely divided.
- e. In aerosol form following precautions should be taken
- f. Product must not be allowed to enter the public sewer system through gulleys, manholes and grids.
- g. Where specialist cleaning plants have been installed, ENSURE 'water supply' (cooling agent), and where applicable 'ram air cooling', are selected 'ON' and functioning correctly before use.

GENERAL SERVICING NOTES (CONT)

HAZARDOUS CHEMICAL

9. VARNISH ELECT INSULATING DEF 32 TYPE 1

Chemical Handbook
Section 2 Chapter 22 Leaflet V19

SECT/REF

1. 33B/2202088

MANUFACTURER AND ADDRESS

2. International Pinchin Johnson, 380 Richmond Road, Kingston, KT2 5PS, Surrey

DESCRIPTION AND PURPOSE

3. a. Description: One part insulating varnish containing; white spirit, Xylene, Lead Salt of Organic Acid.
b. Purpose: Electrical Insulating

DANGEROUS PROPERTIES

4. a. Flammability: Flammable - Flash point 22°C
b. Toxicity: Toxic = TLV 100 ppm = Xylene
TLV 100 ppm = White Spirit
c. Asphyxiant*: Yes when TLV reached.

STORAGE AND DISPOSAL INSTRUCTIONS

5. a. Storage Instructions: Store in closed container in well ventilated store.
b. Disposal Instructions: All waste to be polythene bagged, labelled and disposed of to the Chemical Waste collection area.

HANDLING INSTRUCTIONS

6. a. Environmental Requirements: Use only in well ventilated area away from heat and naked flame.
b. Protective Clothing: Protective gloves and goggles must be worn.
c. Method of Use: By brush application.

FIRST AID TREATMENT

7. a. Inhalation*: Remove from exposure. Obtain medical attention.
b. Skin Contact*: Wash thoroughly with soap and clean water.
c. Eye Contact*: Irrigate thoroughly with clean water. Obtain medical attention.
d. Ingestion*: Obtain immediate medical assistance.

GENERAL SERVICING NOTES (CONT)

HAZARDOUS CHEMICAL

10. VARNISH ANTI-TRACKING RED

Chemical Handbook
Sect 2, Chap 22, Leaflet V17

SECT/REF

1. 33B/9428917

MANUFACTURER AND ADDRESS

2. ICI Ltd (Paints Division), Wrexham Road, Slough.

DESCRIPTION AND PURPOSE

3. a. Description: Thick red liquid, the solvent is White Spirit/Naptha which has a ATLV of 100 PPM. The binder is a normal Alkyd resin and the pigmentation is a mixture of inert pigment and extender.
- b. Purpose: Anti-tracking, insulating varnish

DANGEROUS PROPERTIES

4. a. Flammability: Flammable - Flash Point 32°C
- b. Toxicity: Low

STORAGE AND DISPOSAL INSTRUCTIONS

5. a. Storage Instructions: Store in accordance with current Wing instructions.
- b. Disposal Instructions: Waste to be segregated (labelled) and placed in Hazardous Waste area for collection by Supply Wing.

HANDLING INSTRUCTIONS

6. a. Environmental Requirements: Well ventilated workshop.
- b. Protective Clothing: Gloves PVC to be worn.
- c. Method of Use: Apply by brushing.

FIRST AID TREATMENT

7. a. Inhalation*: Move to area of fresh air
- b. Skin Contact*: Wash with warm water and soap
- c. Eye Contact*: Irrigate thoroughly with clean water and obtain medical attention.
- d. Ingestion*: Vomitting should be induced, and obtain medical attention.

GENERAL SERVICING NOTES (CONT)

HAZARDOUS CHEMICAL

11. TINTALITE WHITE INK

Chemical Handbook
Section 2, Chapter 20, Leaflet T8

SECT/REF

1. 33C 2244718

DESCRIPTION

2. A shellac based ink containing Titanium oxide.

MANUFACTURER

3. W Canning Co Ltd., Birmingham

HEALTH HAZARD

4. Avoid breathing heavy concentrations of vapour.

FIRE HAZARD

5. Highly flammable. Flash point 55°F. Use carbon dioxide or dry chemical extinguishers. Keep away from naked flames, sparks, etc.

SPECIAL INSTRUCTIONS FOR USE

6. No smoking when used. Wash hands at the end of each working period.

STORAGE INSTRUCTIONS

7. Store in an approved place.

GENERAL SERVICING NOTES (CONT)

HAZARDOUS CHEMICAL

12. VARNISH INSULATING ELECTRICAL

Chemical Handbook
Section 2 Chapter 22 Leaflet V2

SECT REF

1. 33B 9433454 - 500ml container
33B 2250808 - 1 litre container

DESCRIPTION

2. A protective anti-fungicidal varnish used as a printed circuit board replacement coating after repair.

MANUFACTURER

3. International Paint Co.

HEALTH HAZARD

4. Toxic. Avoid all skin contact and inhalation of vapour. Ensure adequate ventilation of working area.

FIRE HAZARD

5. Highly flammable.

Note: Dries to a dirty brown colour giving boards a burnt appearance.

GENERAL SERVICING NOTES (CONT)

HAZARDOUS CHEMICAL

13 OILS AND GREASES

Chemical Handbook
Section 2 Chapter 15 Leaflet 01

SECT/REF

1. See AP 1086

DESCRIPTION

2. Oils and greases in service use for a wide range of applications. They may be mineral, synthetic or vegetable and may have additives of various types, ie detergent, soap, graphite, molybdenum disulphide etc.

MANUFACTURER

3. Subject to Service Contracts.

HEALTH HAZARD

4. Prolonged skin contact with oils and greases can cause dermatitis, in the case of mineral oils it may occasionally cause skin cancer. (HISO Publications SHW 295, SHW 295A and SHW 397 dealing with the effects of mineral oil on the skin, should be brought to the attention of all personnel handling this type of product). Unnecessary and prolonged skin contact should be avoided and if ANY skin trouble occurs, ie sore patches, swellings, cracking of the skin, ulceration etc, medical attention should be obtained immediately.

FIRE HAZARD

5. Varies with product, see containers. If doubt exists treat as flammable.

SPECIAL INSTRUCTIONS FOR USE

6. A high standard of personal hygiene should be maintained by personnel working with these products. Where possible a suitable barrier cream and/or protective gloves should be used. After work and especially prior to going to the toilet, all traces of oil or grease must be removed from hands and exposed skin by washing with soap and water or by use of a suitable skin cleansing fluid followed by washing. Any contaminated clothing should be removed and washed before re-use. Do not place oily rags in trouser pockets. Smoking is not permitted in the work area. Personnel having open cuts, abrasions or any lesions of the skin are not to handle these products (refer to AP 3160 Vol 2).

STORAGE INSTRUCTIONS

7. Store in an approved place, see AP 3160 Vol 2.

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GENERAL SERVICING NOTES (CONT)

HAZARDOUS CHEMICAL

14. METHYLATED SPIRIT

Chemical Handbook
Section 2 Chapter 13 Leaflet M2

SECT/REF

1. 34D/2200985

DESCRIPTION

2. General purpose cleaner and degreasant.

MANUFACTURER

3. Hopkin & Williams, Chadwell Heath, Essex.

HEALTH HAZARD

4. Toxic. Avoid exposure to concentrations of vapour. Skin degreasant avoid frequent or prolonged contact.

FIRE HAZARD

5. Highly flammable.

SPECIAL INSTRUCTIONS FOR STORAGE

6. Must be stored in an approved place

GENERAL SERVICING NOTES (CONT)

HAZARDOUS CHEMICAL

15. TRICHLOROTRIFLUOROETHANE (ARKLONE 'P')

Chemical Handbook
Section 2 Chapter 1 Leaflet A3

SECT/REF

1. 33D/2204018

DESCRIPTION

2. A pure 1, 1, 2 - trichloro -1, 2, 2 - trifluoro-ethane solvent, used in cold cleaning processes. Particularly suitable for vapour cleaning (boiling point 47.6°C). Does not attack plastics, resins, elastomers etc.

MANUFACTURER

3. ICI Ltd, Mond Division, Runcorn, Cheshire.

HEALTH HAZARDS

4. Avoid breathing of vapour unnecessarily. Inhalation of high vapour concentration will cause drowsiness, headaches and giddiness and may lead to unconsciousness, or can prove suddenly fatal, if the exposure has been severe, ie quantity spillage has occurred. Avoid contact with skin and eyes. First Aid treatment should be carried out as follows:

a. Inhalation: Anyone suffering from over-exposure to high vapour concentrations, should be moved into the fresh air, and medical attention immediately sought. If breathing has stopped artificial respiration should be given. The physician's attention should be drawn to the fact that this product is an anaesthetic. Adrenaline or similar sympathomimetic drugs should not be given. Patients recovering from over-exposure must not indulge in any exercise for 12 hours after exposure.

b. Eye Contact: Splashes in the eye are mildly irritating but will cause no permanent damage. The eye should be thoroughly irrigated with water for at least 10 minutes whilst the lids are held open, and medical attention should be sought.

c. Swallowing: The accidental swallowing of small splashes of solvent will not cause any significant reaction. Following ingestion of any greater amount, the patient should be treated with an emetic such as salty water to induce vomiting. Medical attention should be sought promptly.

d. Skin Contact: If contact occurs wash area with soap and water.

FIRE HAZARD

5. Non flammable.

GENERAL SERVICING NOTES (CONT)

HAZARDOUS CHEMICAL

SPECIAL INSTRUCTIONS FOR USE

6. a. Use only in a well ventilated area.
- b. Gloves and goggles (where splashing liable to occur) should be worn.
- c. Do not expose to hot surfaces or naked flame, as acidic decomposition products are formed.
- d. Product must not be allowed to enter the public sewer system through gulleys, manholes and grids.
- e. May react violently with metals such as sodium, potassium and barium, particularly if finely divided.
- f. Where specialist cleaning plants have been installed, ENSURE 'water supply' (cooling agent), and where applicable 'ram air cooling', are selected 'ON' and functioning correctly before use.

GENERAL SERVICING NOTES (CONT)

HAZARDOUS CHEMICAL

16. ARKLONE 'W'

Chemical Handbook
Section 2 Chapter 1 Leaflet A70

SECT/REF

1. 33D/506

DESCRIPTION

2. Arklone 'W' is a Solvent formulation composed of 91.5% Trichlorotrifluoroethane (Arklone 'P'), 6% water and 2.5% surface active agents. It is used for very high quality cleaning of components and for all applications, it is used in conjunction with vapour cleaning plants having either boiling or ultrasonic stages.

MANUFACTURER

3. ICI Ltd, Mond Division, Runcorn, Cheshire.

HEALTH HAZARDS

4. Avoid breathing of vapour unnecessarily. Inhalation of high vapour concentration will cause drowsiness, headaches and giddiness and may lead to unconsciousness, or can prove suddenly fatal, if the exposure has been severe, ie quantity spillage has occurred. Avoid contact with skin and eyes. First Aid treatment should be carried out as follows:

a. Inhalation: Anyone suffering from over-exposure to high vapour concentrations should be moved into the fresh air and medical attention immediately sought. If breathing has stopped artificial respiration should be given. The physician's attention should be drawn to the fact that this product is an anesthetic. Adrenaline or similar sympathomimetic drugs should not be given. Patients recover from over-exposure must not indulge in any exercise for 12 hours after exposure.

b. Eye Contact: Splashes in the eye are mildly irritating but will cause no permanent damage. The eye should be thoroughly irrigated with water for at least 10 minutes whilst the lids are held open and medical attention should be sought.

c. Swallowing: The accidental swallowing of small splashes of solvent will not cause any significant reaction. Following ingestion of any greater amount, the patient should be treated with an emetic such as salty water to induce vomiting. Medical attention should be sought promptly.

d. Skin Contact: If contact occurs wash area with soap and water.

FIRE HAZARD

5. Non flammable.

GENERAL SERVICING NOTES (CONT)

HAZARDOUS CHEMICAL

SPECIAL INSTRUCTIONS FOR USE

6. a. Use only in a well ventilated area.
- b. Gloves, goggles, breathing apparatus and a life line should be worn.
- c. Do not expose to hot surfaces or naked flame, as acidic decomposition products are formed.
- d. Product must not be allowed to enter the public sewer system through gulleys, manholes and grids.
- e. May react violently with metals such as sodium, potassium and barium, particularly if finely divided.
- f. Where specialist cleaning plants have been installed, ENSURE 'water supply' (cooling agent), and where applicable 'ram air cooling', are selected 'ON' and functioning correctly before use.
- g. After cleaning with Arkclone 'W' it is essential to rinse carefully in Arkclone 'P' agitated by boiling or ultrasonics to remove the surface active agent.
- h. Prolonged exposure of Arkclone 'W' to galvanised steel, zinc, zinc alloys and brass should be avoided.

STORAGE

7. a. (1) Keep containers tightly closed when not in use.
x (2) Stow away from direct sun and heat.
(3) Store in a dry place in approved storage bins.
- b. Disposal Instructions: Waste Arkclone 'W' is to be placed in capped containers labelled with contents and passed to Hazardous Waste Area for collection by Supply Wing.

GENERAL SERVICING NOTES (CONT)

HAZARDOUS CHEMICAL

17. CADMIUM AND CADMIUM CARBONATE DUST

Chemical Handbook
Section 2 Chapter 3 Leaflet C21

SECT REF NO AND 30MU TASK

1. Refer to equipment APs and MWS in general use. AP 100B-C1 Order 1703 AL 149 and the relevant order in the Wing Engineering Order Book must be strictly adhered to.

DESCRIPTION

2. Cadmium is a silver-white ductile metal which melts at 321°C. It is used as a protective coating for certain metals and in the manufacture of alloys and paints.

MANUFACTURER

3. Subject to service contracts.

FIRE HAZARD

4. Non-flammable, but gives off highly toxic fumes when heated.

HEALTH HAZARD

5. a. The dust and fumes are highly toxic and prolonged inhalation will cause chronic poisoning. TLV = 0.2 mg/m³.
b. Non-irritant, but cadmium dust should not be handled with bare hands because of the possibility of ingestion.

HANDLING AND FIRST AID INSTRUCTIONS

6. a. Handling

- (1) Never weld or heat an unknown metal.
- (2) Do not place cadmium plated items (eg screws etc) in the mouth.
- (3) Avoid abrasive cleaning of cadmium plated items of equipment.
- (4) If cadmium carbonate dust is found on a chassis or other item of equipment.
 - (a) Carry out all work in the Exhausted Booth.
 - (b) Wear a face mask of lint or gauze that covers the mouth and nostrils.
 - (c) Wear protective clothing, a minimum being approved pattern gloves and protection and overalls.

GENERAL SERVICING NOTES (CONT)

HAZARDOUS CHEMICAL

- (d) Use swabs of cotton wool (Ref No 32B/1250410) soaked in White Spirit (Ref No 34B/9427564 and rub the affected parts until all the visible signs of the deposit are removed.
- (e) Do not allow the swabs to dry and after use place them in the closed container provided.
- (f) Allow the area to dry completely and then apply a coating of Varnish Insulating Electrical (Ref No 33B/2250808).
- (g) Wash the hands thoroughly in warm, soapy water.

b. First Aid

- (1) Skin Contact: Immediately wash the affected area with warm, soapy water. Use disposable paper towels (not cloth towels) for drying.
- (2) Inhalation: Remove the affected person to fresh air and obtain medical attention. Carry out artificial respiration if necessary.
- (3) Ingestion: Induce vomiting and obtain medical attention.

STORAGE AND DISPOSAL INSTRUCTIONS

7. a. Storage Instructions

Store in a cool, dry place in POL lockers provided.

b. Disposal Instructions

Waste to be put into a metal container, sealed and clearly labelled. Place container in hazardous waste area for collection by Supply Wing.

NOTE: Heat must not be applied under any circumstances.

REFERENCES

A. AP 43433 Vol 2

B. AP 113D-0003-1

C. AP 113D-07155-1

D. AP 113D-0120-1

E. CSDE ROS No 7240/792/SEI

F. 30MJ Chemical Handbook

G. AP 3158 Vol 2

H. AP 100B-01

I. AP 113A-0308-1

AL17

MWS MODIFICATION STANDARD

MOD No	CLASS	LFT	DESCRIPTION	30 MU YES/NO	REMARKS
S739	C3	Z2	a. Introduction of longer regular fixing screw, to protrude at least 2 threads, when either anchor nuts or standard lock nut with plain washer is used. b. Armature spacer Pt No 44748/1 change of material from dural to steel to prevent distortion.	Yes	b. Superseded by B107.
B107	D4	Z2	Delete spacer Pt No 44748/1 and increase dia of arm shaft. New armature M44743/1.	Yes	Superseded by B176
B110	D4	Z2	Introduction of new shunt regulator resistor cover Pt No M45453. Increase number of screws from one to four to standardise covers.	Yes	New covers 5UB/5887 have 2 screws and 2 rivets
B119	C3	P1	Change of brushes	Yes	Superseded by B149
B135	D4	Z3	Inverter Rotax Type 100B. Introduction of resistors N112028, N112029 and N112032.	Yes	Superseded by B218
B144	C3	P2	Replace shunt field resistor M43816 by resistor M43816/2 5UB/4920.	Yes	Superseded by B175
B149	C3	Z5	To delete Mod B119 and revert to brushes grade CM6 HAM AC and DC.	Yes	Superseded by B201
B147	C4	Z5	Introduction of MOD Plate Pt No 99120 and screws Pt No NK 160 1-L.	Yes	
B175	D4	Z5	Introduction of Resistor ZA4801/1 (5UB/6058) in place of resistor M43816/2.	Yes	

STI s

STI No	DESCRIPTION	REMARKS
STI70	Defective tapping clips on shunt field resistor.	Satisfied by B175
STI77A	AC end bearing inner race spinning on armature.	Satisfied by B176

AL17

MWS MODIFICATION STANDARD

MOD No	CLASS	LFT	DESCRIPTION	30 MU YES/NO	REMARKS
B176	C3	P4	Introduction of counterbore in collar of fan assembly.	Yes	Satisfied by STI77A
B189	D4	Z6	Replace brush springs N45193 with N45193/1 (5UB/6282)	Yes	
B201	D	Z7	Introduction of High Altitude Brushes F2C(5UB/5958) in place of CM6(5UB/4933) DC Eng F2B (5UB/5959) in place of CM6 (5UB/5964) AC end.	Yes	
B218	B2	P12	Introduction of ballast resistor 1000 ohms (10W/Z244002) in place of 1250 ohms resistance.	Yes	
B611	S00	P31	Introduction of brushes N125843/1 grade KC5EG11 in place of brushes N125843 F2C Inverters become 100D (5UB/4352359).	No	HQ RAFSC Commitment order only
Command MOD Elect/ O/67/MC	?		Introduction of stronger anchor cradle to replace light alloy type as it becomes unserviceable.	Yes	Local Manufacture

STI s

STI No	DESCRIPTION	REMARKS