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MIL-STD-2161B(AS)

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SUPERSEDING

MIL-STD-2161A(AS)

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DEPARTMENT OF DEFENSE STANDARD PRACTICE

PAINT SCHEMES AND EXTERIOR MARKINGS FOR U.S. NAVY AND MARINE CORPS AIRCRAFT



MIL-STD-2161B(AS)

FOREWORD

1. This military standard is approved for use by the Naval Air Systems Command, Department of the Navy, and is available for use by all Departments and Agencies of the Department of Defense.

2. In furtherance of the Defense Standardization Program and to provide a single point of reference that gives clear and concise direction for the paint schemes and exterior markings for United States (U.S.) Navy and Marine Corps aircraft, this document has been prepared to be a readily available reference source to all concerned.

3. This standard contains integrated instructions for paint schemes and exterior marking for U.S. Navy and Marine Corps aircraft. This document supersedes the previous version, MIL-STD-2161A(AS), and includes revised requirements. Paint schemes for aircraft no longer in the active inventory have been deleted, paint schemes for new aircraft added, and certain paint schemes for existing aircraft modified.

4. For additional guidance on the contents of this document, contact the Naval Air Systems Command, Attention: (AIR 4.1.8), NAWC-AD/48110 Shaw Road, Building 2187 Unit 5, Patuxent River, Maryland 20670-1906 or the Naval Air Warfare Center Aircraft Division, Lakehurst (at the address below).

5. Comments, suggestions, or questions should be addressed to: Commanding Officer, Naval Air Warfare Center Aircraft Division, Code 4L8000B120-3, Highway 547, Lakehurst, NJ 08733-5100, or email to michael.sikora@navy.mil. Since contact information can change you may want to verify the currency of this address information using the ASSIST Online database at <http://assist.daps.dla.mil>.

MIL-STD-2161B(AS)

CONTENTS

<u>PARAGRAPH</u>		<u>PAGE</u>
	FOREWORD	ii
1.	SCOPE	1
1.1	General.....	1
1.2	Purpose.....	1
1.3	Foreign government aircraft	1
1.4	Military aircraft used in research projects	1
1.5	Military aircraft attached to designated adversary squadrons.....	1
1.6	Areas of responsibility	1
1.6.1	Cognizant authority.....	1
1.6.2	Major vs. minor modification	2
1.6.3	Squadron markings/Air Wing marking.....	2
2.	APPLICABLE DOCUMENTS	2
2.1	General.....	2
2.2	Government documents	2
2.2.1	Specifications and standards.....	2
2.2.2	Non-Government publications.....	3
2.3	Order of precedence.....	3
3.	DEFINITIONS.....	3
3.1	Arctic paint scheme.....	3
3.2	High visibility paint scheme	4
3.3	Tactical paint scheme.....	4
4.	GENERAL REQUIREMENTS	4
4.1	Paint schemes and insignia markings	4
4.2	Material	4
4.2.1	Finishes	4
4.2.2	Compatibility	4
4.2.3	Applicable limitation	4
4.2.4	Metal marking instruments	4
4.2.5	External finish identification.....	5
4.2.5.1	Record of finish application.....	5

MIL-STD-2161B(AS)

CONTENTS

<u>PARAGRAPH</u>		<u>PAGE</u>
4.3	Drawings	5
4.4	Service requirements.....	5
4.5	Foreign government aircraft	5
4.6	Color and style of marking materials and paint schemes	5
4.6.1	Color standard	6
5.	DETAILED REQUIREMENTS	6
5.1	Aircraft paint schemes	6
5.1.1	High visibility color configurations	6
5.1.1.1	Application and color patterns	7
5.1.2	Arctic paint scheme.....	7
5.1.3	Tactical paint schemes	7
5.1.3.1	Tactical paint scheme materials	8
5.1.3.2	Tactical paint scheme patterns	8
5.1.3.2.1	Aircraft surfaces.....	8
5.1.3.2.2	Bottom surfaces	8
5.1.4	Paint scheme for drones	8
5.1.5	Paint scheme for unmanned aerial vehicles (UAV).....	8
5.1.6	Paint scheme for target aircraft	8
5.1.7	Solar heat reflection	9
5.1.8	Antiglare	9
5.1.9	Glass fiber reinforced plastic assemblies.....	9
5.1.10	Landing gear	9
5.1.10.1	Fixed landing gear.....	9
5.1.10.2	Retractable landing gear	9
5.1.11	Speed brakes, wing flaps, etc.....	9
5.1.12	Wing leading edge slats	10
5.1.13	Walkways and steps.....	10
5.1.14	External stores (including ordnance)	10
5.1.15	Radomes, antennae, and antennae covers	10
5.1.16	Helicopter blades, hubs, transmissions and rotor mechanisms.....	10
5.1.16.1	Rotor blades	10
5.1.16.2	Hubs of helicopters	10
5.1.16.3	Transmission and rotor mechanisms of helicopters.....	10

MIL-STD-2161B(AS)

CONTENTS

<u>PARAGRAPH</u>		<u>PAGE</u>
5.1.17	Jet air intake ducts.....	11
5.1.18	Propeller assemblies.....	11
5.1.18.1	Blades.....	11
5.1.18.2	Spinners.....	11
5.1.18.3	Hubs and domes.....	11
5.1.19	Engine cowling interiors.....	11
5.2	Aircraft exterior markings.....	11
5.2.1	Identification marking.....	11
5.2.1.1	Letter and numeral (character) construction.....	12
5.2.1.1.1	Fixed wing aircraft.....	12
5.2.1.1.2	Rotary wing aircraft (helicopters).....	12
5.2.1.1.3	Research aircraft.....	12
5.2.1.1.4	Experimental aircraft.....	12
5.2.1.1.5	Target aircraft.....	12
5.2.1.1.6	Test and evaluation (T&E) aircraft.....	13
5.2.1.1.7	Unmanned aerial vehicles (UAV).....	13
5.2.2	Mandatory markings for U.S. Navy and Marine Corps aircraft.....	13
5.2.2.1	Changes.....	13
5.2.2.2	Application.....	14
5.2.2.3	National star insignia.....	14
5.2.2.4	Branch of service marking.....	14
5.2.2.4.1	Size.....	14
5.2.2.4.2	Location.....	14
5.2.2.5	Model designation and bureau airplane serial number (BUNO).....	14
5.2.2.5.1	Location.....	14
5.2.2.5.2	Size.....	15
5.2.2.6	Unit aircraft number (MODEX).....	15
5.2.2.6.1	Location.....	15
5.2.2.6.2	Size.....	15
5.2.2.7	Unit identifier.....	15
5.2.2.7.1	Location.....	15
5.2.2.7.2	Size.....	15
5.2.2.8	Station or unit name.....	15
5.2.2.8.1	Location.....	15

MIL-STD-2161B(AS)

CONTENTS

<u>PARAGRAPH</u>		<u>PAGE</u>
5.2.2.8.2	Size.....	15
5.2.2.9	Call numbers	16
5.2.2.9.1	Location	16
5.2.2.9.2	Size.....	16
5.2.2.10	Mandatory safety markings.....	16
5.2.2.10.1	Jet engine intake warning chevrons and signs	16
5.2.2.10.1.1	Application.....	16
5.2.2.10.1.2	Variations.....	16
5.2.2.10.2	Jet engine blast warning.....	17
5.2.2.10.3	Propeller, rotor, and turbine safety markings.....	17
5.2.2.10.3.1	Main rotor blades	17
5.2.2.10.3.1.1	Matched sets.....	17
5.2.2.10.3.1.2	Unmatched sets	17
5.2.2.10.3.1.3	Static balance - preservation and maintenance	17
5.2.2.10.3.1.4	Classification numbers.....	17
5.2.2.10.3.2	Tail rotor blades	18
5.2.2.10.3.3	Helicopter tail boom - warning marking.....	18
5.2.2.10.3.4	Helicopter tail rotor - guards and stabilizers.....	18
5.2.2.10.3.5	Propeller blades - warning markings	19
5.2.2.10.3.6	Fuselage propeller - warning stripe and signs.....	19
5.2.2.10.3.7	Staggered engines	20
5.2.2.10.4	Arresting hooks.....	20
5.2.2.10.4.1	Arresting hook warning marking.....	20
5.2.2.10.5	Loose and jettisonable equipment.....	20
5.2.2.10.6	Identification and markings of emergency escape system.....	20
5.2.2.10.6.1	Application.....	20
5.2.2.10.6.2	Location	20
5.2.2.10.6.3	Lettering size.....	20
5.2.2.10.6.4	Cutout area marking.....	20
5.2.2.10.6.5	Exit control lever markings.....	21
5.2.2.10.6.6	Fire access panel marking	21
5.2.2.10.6.7	Explosive-actuated devices.....	21
5.2.2.10.6.8	Axe and crowbar	21
5.2.2.10.6.9	Fire extinguishers.....	21

MIL-STD-2161B(AS)

CONTENTS

<u>PARAGRAPH</u>		<u>PAGE</u>
5.2.2.10.6.10	First-aid kit.....	21
5.2.2.10.6.11	Ejection seat markings	21
5.2.2.10.6.11.1	Ejection seat markings for multiplace aircraft	22
5.2.2.10.6.11.2	Other cartridge-actuated escape systems	22
5.2.2.10.6.12	Canopy release markings	22
5.2.2.10.6.13	External exit emergency release	22
5.2.2.10.6.14	Transport aircraft	22
5.2.2.10.6.14.1	Internal removable escape panels	23
5.2.2.10.6.14.2	Emergency exit marking	23
5.2.2.10.6.14.3	Handles, releases, catches, and knobs for inside panels	23
5.2.2.10.6.14.4	External removable escape panels	23
5.2.2.10.6.14.5	Markings for forced emergency entry or exit	23
5.2.2.10.6.14.6	Secondary openings	24
5.2.3	Tactical paint scheme markings.....	24
5.2.3.1	Color of markings for aircraft with tactical paint schemes	24
5.2.3.1.1	Tactical paint scheme - general marking policy	24
5.2.3.1.2	Color of MODEX numbers.....	25
5.2.3.2	Size of markings when used on aircraft with tactical paint schemes.....	25
5.2.3.3	Paint scheme deviations approval	25
5.2.4	Marking material.....	25
5.2.5	Exterior maintenance precautionary and warning markings	25
5.2.5.1	Aircraft and missile service point identification symbols and markings	25
5.2.5.1.1	Application of service point identification symbols and markings	25
5.2.5.1.2	Location	26
5.2.5.1.3	Hydraulic system and landing gear/struts	26
5.2.5.2	Fuel nozzle jumper plug receptacles	26
5.2.5.3	Aircraft grounding points.....	26
5.2.5.4	Storage batteries.....	26
5.2.5.5	Instrument static opening markings	26
5.2.5.6	Wing fold warning flag	26
5.2.5.7	Markings for electrical connections.....	27
5.2.5.8	Markings for engine removal.....	27
5.2.5.9	Markings for tank and filler areas	27
5.2.5.9.1	Tank	27

MIL-STD-2161B(AS)

CONTENTS

<u>PARAGRAPH</u>		<u>PAGE</u>
5.2.5.9.2	Filler caps.....	27
5.2.5.10	Lift points, handgrips, caution legends, etc.	27
5.2.5.11	Baggage compartment, life raft stowage, etc.....	27
5.2.5.12	Wing access panel latches and safety straps.....	27
5.2.5.13	Actuating mechanism-warning signs.....	28
5.2.5.14	Recessed lubrication fittings.....	28
5.2.6	Optional markings.....	28
5.2.6.1	Ship names.....	28
5.2.6.2	Squadron designation.....	28
5.2.6.3	Reserve aircraft markings - station names.....	28
5.2.6.4	Battle "E".....	28
5.2.6.5	Safety "S".....	29
5.2.6.6	Hospital aircraft red cross.....	29
5.2.6.7	Aircraft pilot and crew chief names.....	29
5.2.6.8	NAVAIR logo.....	29
5.2.6.8.1	Color.....	30
5.2.6.8.2	Location.....	30
5.2.6.8.3	Size.....	30
5.2.6.8.4	Letter font.....	30
5.2.7	Special purpose marking for U.S. Navy aircraft.....	30
5.2.7.1	Identification of American Legation U.S. Naval Attaché (ALUSNA) aircraft.....	30
5.2.7.1.1	Fuselage marking.....	30
5.2.7.1.2	Naval attaché fuselage marking.....	30
5.2.7.1.2.1	Location.....	31
5.2.7.1.2.2	Size.....	31
5.2.7.1.3	Naval attaché wing marking.....	31
5.2.7.1.3.1	Location.....	31
5.2.7.1.3.2	Size.....	31
5.2.7.1.4	Naval attaché vertical stabilizer marking.....	31
5.2.7.1.4.1	Location.....	31
5.2.7.2	Standard American flag sizes.....	32
5.2.7.3	Presidential and VIP helicopters.....	32
5.2.8	Marking of foreign aircraft.....	32

MIL-STD-2161B(AS)

CONTENTS

<u>PARAGRAPH</u>		<u>PAGE</u>
5.2.9	Access panel identification	32
5.2.10	Walkways and honeycomb panels	32
5.2.10.1	Walkways and steps	32
5.2.11	Honeycomb panels on airplanes	32
5.2.12	Marking of loose and jettisonable equipment	33
5.2.13	Dinghy (raft) release and flotation controls	33
5.2.14	Workmanship	33
6.	NOTES	33
6.1	Intended use	33
6.2	Acquisition requirements	33
6.3	Associated Data Item Descriptions (DIDs)	33
6.4	Toxicity	34
6.4.1	Personnel protective methods	34
6.5	Subject term (key word) listing	34
6.6	International standardization agreement implementation	34
6.7	Changes from previous issue	34
APPENDIX A	STANDARD MARKING, EMERGENCY AND HAZARD WARNING MARKINGS FOR AIRCRAFT	
A.1.	SCOPE	35
A.1.1	Scope	35
A.2.	APPLICABLE DOCUMENTS	35
A.2.1	General	35
A.2.2	Government documents.	35
A.2.2.1	Specifications and standards.	35
A.2.3	Order of precedence.	36
A.3.	GENERAL REQUIREMENTS	36
A.3.1	National insignia.	36
A.3.1.1	National insignia design.	36
A.3.1.1.1	Size	36
A.3.1.1.2	Color	36

MIL-STD-2161B(AS)

CONTENTS

<u>PARAGRAPH</u>		<u>PAGE</u>
A.3.1.1.3	Application.....	36
A.3.1.2	Wing insignia.	37
A.3.1.3	Fuselage or hull insignia.	37
A.3.1.4	Rotary wing aircraft insignia.	37
A.3.1.5	Decalcomanias.	37
A.3.1.6	Decalcomania letter heights.	38
A.3.1.7	Tactical paint scheme national insignia.	38
A.3.2	Aircraft markings.	38
APPENDIX B	SERVICING, GROUND HANDLING, HAZARD WARNING MARKINGS, AND ARMAMENT PLACARD FOR AIRCRAFT	
B.1.	SCOPE	59
B.1.1	Scope.....	59
B.2.	APPLICABLE DOCUMENTS	59
B.2.1	General.....	59
B.2.2	Government documents	59
B.2.2.1	Specifications and standards.	59
B.2.2.2	Non-Government publications.	61
B.2.3	Order of precedence.	62
B.3.	GENERAL REQUIREMENTS	62
B.3.1	Servicing and precautioning marking.	62
B.3.2	Servicing instructions.....	62
B.3.3	Service warning markings.....	62
B.3.4	Printed information.	62
B.3.5	Colors.....	62
B.4.	DETAIL REQUIREMENTS	63
B.4.1	Aircraft markings and placard.	63

MIL-STD-2161B(AS)

CONTENTS

<u>PARAGRAPH</u>	<u>PAGE</u>
APPENDIX C PAINT SCHEMES AND MARKINGS FOR FIXED WING AIRCRAFT	
C.1. SCOPE	79
C.1.1 Scope.....	79
C.2. APPLICABLE DOCUMENTS	79
C.3. GENERAL REQUIREMENTS	79
C.3.1 Aircraft paint schemes.	79
APPENDIX D PAINT SCHEMES AND MARKINGS FOR ROTARY WING AIRCRAFT	
D.1. SCOPE	138
D.1.1 Scope.....	138
D.2. APPLICABLE DOCUMENTS	138
D.3. GENERAL REQUIREMENTS	138
D.3.1 Aircraft paint schemes.	138
APPENDIX E NATIONAL INSIGNIAS FOR FOREIGN AIRCRAFT	
E.1. SCOPE	173
E.1.1 Scope.....	173
E.2. APPLICABLE DOCUMENTS	173
E.3. GENERAL REQUIREMENTS	173
E.3.1 Foreign country national insignias.....	173
TABLES	
I. FED-STD-595 standard colors used on U.S. Navy and Marine Corps aircraft.....	6
II. Mandatory markings for U.S. Navy and Marine Corps aircraft	13

MIL-STD-2161B(AS)

CONTENTS

<u>PARAGRAPH</u>	<u>PAGE</u>
------------------	-------------

FIGURES

APPENDIX A

A-1.	National star insignia.	39
A-2.	National star insignia on swept wing aircraft.	40
A-3.	Arresting hook warning.	41
A-4(a).	Form of letters and numerals (modified vertical block).	42
A-4(b).	Form of letters and numerals (open block – to be used for markings 2 inches high or less) – Continued.	43
A-5.	Color scheme for helicopter blades.....	45
A-6.	Color scheme for reciprocating single and multi-engine aircraft propellers.	46
A-7.	Markings for fire access panel.	47
A-8.	Warning chevron and signs applied adjacent to jet engine intake and exhaust.	48
A-9.	Propeller warning stripes and signs.	49
A-10.	Canopy release location.	50
A-11.	Warning decal.	50
A-12.	Helicopter tail boom markings.....	51
A-13.	Canopy release markings.	51
A-14.	Tactical paint scheme – rescue arrow and arresting hook markings.	52
A-15.	Tactical paint scheme – engine intake chevrons, access door warning and branch of service markings.	53
A-16.	Tactical paint scheme – ejection seat & warning and fuel nozzle port markings.....	54
A-17.	Area cutout markings.....	55
A-18.	American flag dimensions shall be in accordance with DDD-F-416.	56
A-19.	Geneva red cross.	56
A-20.	Placard installation-identification, emergency escape hatch.	57
A-21.	NAVAIR logo.....	58

APPENDIX B

B-1.	Typical symbol dimensioning.....	64
B-2.	Armament placard.....	64
B-3.	NATO codes and markings-filling.....	65
B-4.	NATO codes and markings-filling, ground handling and hazards.	66
B-5.	NATO code number cross-reference.	67

MIL-STD-2161B(AS)

CONTENTS

<u>PARAGRAPH</u>	<u>PAGE</u>
B-5. NATO code number cross-reference – Continued.....	68
B-6. Typical NATO aircraft servicing markings.	69
B-7. Required markings and symbols.	70
B-7. Required markings and symbols – Continued.	71
B-7. Required markings and symbols – Continued.	72
B-8. Decalcomania – ground here, international symbol.	73
B-9. Samples of ground servicing and hazard markings (size and color).	74
B-9. Samples of ground servicing and hazard markings (size and color) – Continued.....	75
B-9. Samples of ground servicing and hazard markings (size and color) – Continued.....	76
B-9. Samples of ground servicing and hazard markings (size and color) – Continued.....	77
B-10. Record of finish marking.	78
 APPENDIX C	
C-1. AV-8B tactical.	80
C-1. AV-8B tactical – Continued.....	81
C-2. BQM-74C/E.....	82
C-2. BQM-74C/E – Continued.	83
C-3. C-2A.....	84
C-3. C-2A – Continued.	85
C-4. C-9B (Navy).....	86
C-4. C-9B (Navy) – Continued.	87
C-5. C-9B (Marine).....	88
C-5. C-9B (Marine) – Continued.	89
C-6. UC-12B/F/M Navy.	90
C-6. UC-12B/F/M Navy – Continued.....	91
C-7. UC-12B/F/M Navy Force Protection.....	92
C-7. UC-12B/F/M Navy Force Protection – Continued	93
C-8. UC-12B/F/M Marines.....	94
C-8. UC-12B/F/M Marines – Continued.	95
C-9. UC-12B/F/M Marines tactical	96
C-9. UC-12B/F/M Marines tactical – Continued.....	97
C-10. TC-12B high visibility.	98
C-10. TC-12B high visibility – Continued.	99
C-11. C-40.....	100

MIL-STD-2161B(AS)

CONTENTS

<u>PARAGRAPH</u>	<u>PAGE</u>
C-11. C-40 – Continued.....	101
C-12. C-130/130J tactical.	102
C-12. C-130/130J tactical – Continued.....	103
C-13. C-130/130J Cargo/Tanker.....	104
C-13. C-130/130J Cargo/Tanker – Continued.....	105
C-14. E-2C.	106
C-14. E-2C – Continued.	107
C-15. E-6A/B.	108
C-15. E-6A/B – Continued.	109
C-16. EA-6B tactical.....	110
C-16. EA-6B tactical – Continued.	111
C-17. F/A-18A/B/C/D tactical.	112
C-17. F/A-18A/B/C/D tactical – Continued.	113
C-18. F/A-18E/F and EA-18G tactical.	114
C-18. F/A-18E/F and EA-18G tactical – Continued.....	115
C-19. P-3C.	116
C-19. P-3C – Continued.....	117
C-20. EP-3E, UP-3, VP-3.	118
C-20. EP-3E, UP-3, VP-3 – Continued.....	119
C-21. S-3B tactical.....	120
C-21. S-3B tactical – Continued.	121
C-22. T-2C aircraft marking (high visibility).	122
C-22. T-2C aircraft marking (high visibility) – Continued.....	123
C-23. T-6 high visibility.	124
C-23. T-6 high visibility – Continued.....	125
C-24. T-34C aircraft marking (high visibility).	126
C-24. T-34C aircraft marking (high visibility) – Continued.....	127
C-25. T-39G/N high visibility.....	128
C-25. T-39G/N high visibility – Continued.....	129
C-26. T-44A high visibility.....	130
C-26. T-44A high visibility – Continued.....	131
C-27. T-45A/C aircraft marking (high visibility).	132
C-27. T-45A/C aircraft marking (high visibility) – Continued.....	133
C-28. Pioneer Unmanned Aerial Vehicle (UAV).	134
C-28. Pioneer Unmanned Aerial Vehicle (UAV) – Continued.	135

MIL-STD-2161B(AS)

CONTENTS

<u>PARAGRAPH</u>	<u>PAGE</u>
C-29. P-8A (MultiMission Aircraft, MMA) (Proposed).	136
C-29. P-8A (MultiMission Aircraft, MMA) (Proposed) - Continued.	137

APPENDIX D

D-1. AH-1W tactical.	139
D-1. AH-1W tactical – Continued.	140
D-2. UH-1N tactical.	141
D-2. UH-1N tactical – Continued.	142
D-3. HH/UH-1N non-combat SAR.	143
D-3. HH/UH-1N non-combat SAR – Continued.	144
D-4. SH-2G tactical.	145
D-4. SH-2G tactical – Continued.	146
D-5. UH-3H non-combat SAR.	147
D-5. UH-3H non-combat SAR – Continued.	148
D-6. UH-3H tactical.	149
D-6. UH-3H tactical – Continued.	150
D-7. VH-3D Presidential helicopter.	151
D-7. VH-3D Presidential helicopter – Continued.	152
D-8. HH-46E high visibility SAR	153
D-8. HH-46E high visibility SAR – Continued	154
D-9. CH-46E tactical.	155
D-9. CH-46E tactical – Continued.	156
D-10. MH-53E Navy tactical.	157
D-10. MH-53E Navy tactical – Continued.	158
D-11. CH-53E Marine tactical.	159
D-11. CH-53E Marine tactical – Continued.	160
D-12. CH-53D Marine tactical.	161
D-12. CH-53D Marine tactical – Continued.	162
D-13. TH-57B/C high visibility.	163
D-13. TH-57B/C high visibility – Continued.	164
D-14. SH-60B/F, CH-60S, MH-60 R/S and HH-60H tactical.	165
D-14. SH-60B/F, CH-60S, MH-60 R/S and HH-60H tactical – Continued.	166
D-15. SH-60F VIP transport	167
D-15. SH-60F VIP transport – Continued.	168
D-16. MH-60S and SH-60F Search and Rescue (SAR)	169

MIL-STD-2161B(AS)

CONTENTS

<u>PARAGRAPH</u>	<u>PAGE</u>
D-16. MH-60S and SH-60F Search and Rescue (SAR) – Continued.....	170
D-17. MV-22 tactical.	171
D-17. MV-22 tactical – Continued.....	172
 APPENDIX E	
E-1. National insignia of Portugal (flash and numbers).	174
E-2. National insignia of Argentina.....	175
E-3. National insignia of Mexico (flash).	176
E-4. National insignia of Great Britain.....	177
E-5. National insignia of Canada (roundel) marking I.	178
E-6. National insignia of Canada (flash) marking II.	179
E-7. National insignia of Netherlands (roundel) marking I.....	180
E-8. National insignia of Netherlands (flash) marking II.	181
E-9. National insignia of France (cocarde) marking I (anchor superimposed when planes are intended for French Navy.).....	182
E-10. National insignia of France (flash) marking II.	183
E-11. National insignia of Australia (roundel) marking I.....	184
E-12. National insignia of Australia (flash) marking II.....	185
E-13. National insignia of Japan (roundel).....	186
E-14. National insignia of Japan (kanji characters).....	187
E-15. National insignia of Uruguay (roundel).....	188
E-16. National insignia of Uruguay.....	189
E-17. National insignia of Brazil (star) marking I.....	190
E-18. National insignia of Brazil (flash) marking II.....	190
E-19. National insignia of Federal Republic of Germany.	191
E-20. National insignia of Federal Republic of Germany.	192
E-21. National insignia of Italy (cocarde).	193
E-22. National insignia of New Zealand (roundel) marking I.....	194
E-23. National insignia of New Zealand (roundel) marking II.	195
 <u>CONCLUDING MATERIAL</u>	 196

MIL-STD-2161B(AS)

1. SCOPE

1.1 General. This military standard establishes the requirements for paint schemes and markings to be applied to the exterior surfaces of U.S. Navy and Marine Corps aircraft, including those procured for other government agencies and foreign countries under Navy contracts. The requirements for paint schemes and markings include size, color, and approximate placement locations, where applicable, as shown in Appendices A – E. This standard also provides a mechanism to obtain approval for deviation from these requirements.

1.2 Purpose. The purpose of this document is to standardize paint schemes and application of naval insignia and markings. In addition, this standard provides procedures to obtain approval for deviations from these requirements.

1.3 Foreign government aircraft. The requirements for the insignia and markings for foreign government aircraft procured under U.S. Navy contracts are as shown in the appendices of this document except that the U.S. national insignia must be replaced by that of the purchasing government, and U.S. Navy insignia must not be applied. Under certain circumstances, temporary U.S. national insignias will be applied for ferrying the aircraft to the purchasing country. Foreign insignia and flash insignia for vertical tail surfaces or rudders and markings are shown in Appendix E. Foreign insignia not shown will be provided to the U.S. Navy contracting activity by the foreign government procuring the aircraft. Paint schemes for foreign government aircraft are as specified by that foreign government and, as such, are not contained in this document.

1.4 Military aircraft used in research projects. The provisions of this standard are not applicable to military aircraft research projects. The color and marking schemes of such aircraft are subject to case-by-case approval by the Naval Air Systems Command (AIR 4.1.8).

1.5 Military aircraft attached to designated adversary squadrons. The provisions of this standard with respect to paint schemes are not applicable to military aircraft attached to designated adversary squadrons. However, provisions of this standard apply to aircraft attached to squadrons, which have a secondary mission of adversary training.

1.6 Areas of responsibility.

1.6.1 Cognizant authority. The Naval Air Systems Command (AIR 4.1.8) is the cognizant authority for all U.S. Navy and Marine Corps aircraft paint schemes and military markings. Navy or Marine Corps activities requesting a change associated with paint schemes and military markings must forward the request to AIR 4.1.8 for consideration. AIR 4.1.8 must evaluate the request and assess its impact as either a minor or a major modification. AIR 4.1.8 is cognizant of minor modifications and must provide final resolution to this type of change request. In case of major modifications, AIR 4.1.8 must forward the change request, along with recommendations, to the Commander Naval Air Forces (CNAF) (N422) for final assessment.

MIL-STD-2161B(AS)

1.6.2 Major vs. minor modification. Examples of minor modifications to MIL-STD-2161B(AS) include letter markings (such as size, position, etc.), temporary applications, differences in paint schemes among variants of the same platform, or paint schemes and exterior marking approvals associated with platforms of similar design but not included specifically in this standard. Examples of major modifications requiring AIR 4.1.8 consultation with CNAF (N422) include complete paint scheme conversions involving all assets within a given platform or new platform designs. Major modifications must be approved by CNAF and their implementation will be the responsibility of the appropriate Program Executive Officer (PEO).

1.6.3 Squadron/Air Wing markings. Squadron markings or logos, typically applied by squadron staff on the tail section of aircraft, are the responsibility of the Type Command (TYCOM) (e.g., AIRLANT, AIRPAC, CNATRA, etc.). AIR 4.1.8 can provide information and recommendations to the TYCOMs concerning squadron markings. NOTE: Squadron/Air Wing markings cannot be applied to aircraft with specialty coatings. CNAF Instruction 4790.2 must be consulted for policy regarding specialty coatings.

2. APPLICABLE DOCUMENTS

2.1 General. The documents listed in this section are specified in sections 3, 4, or 5 of this standard. This section does not include documents cited in other sections of this specification or recommended for additional information or as examples. While every effort has been made to ensure the completeness of this list, document users are cautioned that they must meet all specified requirements of documents cited in sections 3, 4, or 5 of this standard, whether or not they are listed.

2.2 Government documents.

2.2.1 Specifications and standards. The following specifications and standards form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those cited in the solicitation or contract.

FEDERAL STANDARDS

FED-STD-595	-	Colors Used in Government Procurement (Color numbers; 11136, 12197, 13538, 14187, 15044, 15045, 16081, 16099, 16187, 16440, 16515, 17038, 17043, 17875, 17925, 22190, 28915, 31136, 33538, 35044, 35237, 36081, 36099, 36118, 36231, 36320, 36375, 36440, 36495, 37038, 37925.)
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COMMERCIAL ITEM DESCRIPTION

A-A-59485	-	Plastic Material, Pressure Sensitive Adhesive, for Aerospace Identification and Marking
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MIL-STD-2161B(AS)

DEPARTMENT OF DEFENSE SPECIFICATIONS

MIL-PRF-23377	-	Primer Coatings: Epoxy, High Solids
MIL-C-83413/9	-	Connectors and Assemblies, Electrical, Aircraft Grounding: Decalcomania for Grounding Receptacle Identification, Decal
MIL-PRF-85285	-	Coating, Polyurethane, Aircraft and Support Equipment
MIL-PRF-85582	-	Primer Coatings: Epoxy, Waterborne

DEPARTMENT OF DEFENSE STANDARDS

MIL-STD-7179	-	Finishes, Coatings and Sealants for the Protection of Aerospace Weapons Systems
MS29525	-	Cap, Pressure Fuel Servicing, Nominal 2-1/2 Inch Diameter Flush Type
MS90327	-	Aircraft Markings, Access Numbering System

(Copies of these documents are available online at <http://assist.daps.dla.mil/quicksearch> or <http://assist.daps.dla.mil> or from the Standardization Document Order Desk, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094.)

2.2.2 Non-Government publications. The following document forms a part of this document to the extent specified herein. Unless otherwise specified, the issues of this document are those cited in the solicitation or contract.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM) INTERNATIONAL

ASTM-D4956	-	Standard Specification for Retroreflective Sheeting for Traffic Control. (DoD adopted)
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(Copies of this document are available online at <http://www.astm.org> or from ASTM International, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959.)

2.3 Order of precedence. In the event of a conflict between the text of this document and the references cited herein, and unless described as an exception, the text of this document takes precedence. Exceptions to this order of precedence include aircraft detail specifications, aircraft drawings, and aircraft manuals. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

3. DEFINITIONS

3.1 Arctic paint scheme. A paint scheme similar to the high visibility paint scheme except that the top of the fuselage is painted engine gray (FED-STD-595, color number 16081)

MIL-STD-2161B(AS)

instead of insignia white. This scheme is used for spotting downed aircraft against a snow background.

3.2 High visibility paint scheme. A color scheme consisting of international orange (FED-STD-595, color number 12197) and insignia white (FED-STD-595, color number 17925) used to maximize the initial detection range of the aircraft.

3.3 Tactical paint scheme. A color scheme to reduce visual detection comprised of shades of flat gray with exterior markings applied in a contrasting shade of gray.

4. GENERAL REQUIREMENTS

4.1 Paint schemes and insignia markings. Contractors and all U.S. Navy and Marine Corps activities (including organizational level maintenance activities) shall apply all insignia and markings (including identification plates for the aircraft and warning and instruction markings) in accordance with this standard. The following markings are normally applied by organizational level activities, but may be applied by Naval Aviation Depots and contractors, when specified by the Program Managers or Type Commanders:

- a. Unit identifier
- b. Unit aircraft numbers (MODEX)
- c. Station or unit name
- d. Squadron markings
- e. Radio call markings

4.2 Material.

4.2.1 Finishes. Unless otherwise specified by the Program Manager of a specific aircraft, all U.S. Navy and Marine Corps aircraft shall be finished in accordance with MIL-STD-7179. The standard primer coating shall be MIL-PRF-23377 Type I or MIL-PRF-85582 Type I. Type II of both MIL-PRF-23377 and MIL-PRF-85582 is required when the use of tactical grays is specified. The standard topcoat shall be MIL-PRF-85285.

4.2.2 Compatibility. The coating material for insignias and markings shall be the same material or material compatible with the finish on the surface to be marked.

4.2.3 Applicable limitation. Paint or other markings shall not be applied to aircraft or weapon systems when such application interferes with launching, operation, thermal reflection, or aerodynamics.

4.2.4 Metal marking instruments. Sharp-pointed metal marking instruments shall not be used in the layout of insignia or other markings on aircraft or weapon systems.

MIL-STD-2161B(AS)

4.2.5 External finish identification. On all aircraft receiving paint finish coatings on the exterior surfaces there shall be an identification of the finish system. The identification shall be located on the starboard side of the fuselage, under or over the horizontal stabilizer, and contain the following information:

- a. Contractor or overhaul activity and location.
- b. Month, day, and year of completion of paint application.
- c. Identification by military specification number of all paint coating applied to the exterior of the aircraft.

Lettering shall be a minimum of 1/2 inch (12.7mm) in height. Stencils or approved decals may be used for this identification. Appendix B, Figure B-10, is a sample of this identification.

Note: For paint materials not included in a military specification, identification of material and name of manufacturer shall be listed.

4.2.5.1 Record of finish application. Complete information concerning the coating used, identified by the applicable military specification, the preparation of the area to be coated, and the touch-up or replacement procedure for the material used shall be included in the applicable aircraft structural repair instruction(s) and T/M/S Corrosion Control manual.

4.3 Drawings. On all production contracts, the contractor shall submit for approval to Commander, Naval Air Systems Command (AIR 4.1.8), via the contracting officer, three-dimensional drawings, and any revisions thereof, showing paint schemes and the size and location of the insignia and markings (except those markings specified in 4.1) prescribed in this standard. Naval Aviation Depots shall submit for approval to Commander, Naval Air Systems Command (AIR 4.1.8), copies of all paint scheme and marking drawings and revisions thereto.

4.4 Service requirements. Naval Aviation Activities, including Naval Aviation Depots and organizational level maintenance activities, shall apply other markings that are not required to be applied by the contractor. In addition, markings duplicating those specified herein, may be applied to other areas of the aircraft at the discretion of cognizant commands as operational aids, provided such markings are not prohibited by tactical paint scheme requirements or other considerations, and do not conflict with the markings prescribed herein in the area selected.

4.5 Foreign government aircraft. The exterior colors of aircraft procured for foreign governments under naval contracts shall be as specified by that foreign government.

4.6 Color and style of marking materials and paint schemes. The color and gloss of materials shall be as specified in 4.6.1. For nontactical paint scheme aircraft, the marking materials and decalcomania used shall be glossy, unless otherwise specified by the Program Manager. Lusterless marking materials and decalcomania shall be used for aircraft with tactical paint schemes, unless a deviation is authorized by Naval Air Systems Command (AIR 4.1.8).

MIL-STD-2161B(AS)

4.6.1 Color standard. FED-STD-595 colors shall be used on U.S. Navy and Marine Corps aircraft, except for specific vendor equivalent colors specified in Appendices C and D. Table I lists the FED-STD-595 colors used on naval aircraft and weapon systems.

5. DETAILED REQUIREMENTS

5.1 Aircraft paint schemes. Paint schemes for fixed wing aircraft shall be in accordance with Appendix C. Paint schemes for rotary wing aircraft shall be in accordance with Appendix D. This standard does not apply to aircraft attached to designated adversary squadrons. These aircraft may be painted in an appropriate scheme as determined by that squadron. For aircraft attached to squadrons that have a secondary or split mission as adversary training, the requirements of this standard apply.

5.1.1 High visibility color configurations. Aircraft in the training command (excluding reserve training), target control, and search and rescue (SAR) functions (excluding helicopters in combat SAR configuration) shall have a high visibility paint scheme in accordance with Appendices C and D. Additionally, test and evaluation aircraft shall have a high visibility paint scheme. Transparent areas, antiglare areas, hinges, openings, screens, and any part of the exhaust trail shall not be topcoated with a high visibility coating. Request for utilization of high visibility color configuration on other types of aircraft shall be submitted for approval to the Naval Air Systems Command (AIR 4.1.8) via the appropriate Chain of Command.

TABLE I. *FED-STD-595 standard colors used on U.S. Navy and Marine Corps aircraft.*

COLOR	GLOSS	LUSTERLESS
Insignia White (Untinted)	17925	37925
Black	17038	37038
Blue	15045	
Insignia Blue	15044	35044
Blue-Gray		35237
Insignia Red	11136	31136
International Orange	12197	
Orange-Yellow	13538	33538
Gray	16081	36081
	16440	36440
		36320
		36375
		36495
	16099	36099
		36118
		36231
	16187	
Gold	17043	

MIL-STD-2161B(AS)

5.1.1.1 Application and color patterns. General principles applicable to the placement of high visibility paint schemes are as follows:

- a. Wing tip markings are placed on the top and bottom of the wings, extending inboard on the wings about one-third of the length of each wing, but extending inboard no less than 4 feet or more than 8 feet. Unless specific dimensions are given, the strip shall terminate at a natural break in the wing contour. Horizontal control surfaces are not to be coated with high visibility paint.
- b. The entire vertical tail section except control surfaces shall be painted to the zone where the vertical stabilizer flares into the fuselage.
- c. All aircraft, except transports and T-6, shall be painted on the bottom and sides on the front portion of the fuselage starting from the radome, if any, and extending aft and terminating at a line perpendicular to the forward edge of the front canopy. For transports, the bottom and the sides on the front portion of the fuselage shall be painted, starting from aft of the radome and extending aft 12 feet, or aft to a line perpendicular to the most forward portion of the engines, whichever distance is less. The customary insignia, markings, solar reflecting finish, antiglare, walkway materials, rain erosion resistant finish, deicer boots, exhaust trail finish, etc., shall retain the original color and these areas shall not be overpainted.
- d. Wing tip tanks on aircraft finished with the high visibility paint scheme shall be painted international orange, FED-STD-595, color number 12197, except when these tanks are part of the areas where antiglare or polishing is required.
- e. High visibility paint schemes shall not be applied to any transparent or translucent plastic, metal frames, fittings on windows, or painted nose sections having an area of less than 2 square feet.

5.1.2 Arctic paint scheme. The high visibility paint scheme may be advantageous for assisting in spotting downed aircraft against a snow background. Use of this paint scheme, however, shall be in accordance with 5.1.1. Fuselage markings, such as branch of service, etc., shall not be overcoated or overlapped with the high visibility paint scheme. The national insignia on the fuselage and the wings shall not be overcoated or overlapped by the high visibility paint scheme. The national insignia, however, may be applied over the high visibility paint scheme and shall not be altered in its size or location. The remainder of the aircraft shall retain the paint scheme prescribed for the aircraft type, with the exception that upper surfaces of the fuselage shall be painted gray, FED-STD-595, color number 16081, in place of insignia white, FED-STD-595, color number 17925. On helicopters, international orange, FED-STD-595, color number 12197, shall be applied overall, with the exception of areas requiring extensive marking. These areas shall retain the basic aircraft paint scheme.

5.1.3 Tactical paint schemes. Tactical paint schemes are used for reduction of initial detection range and/or to reduce the probability of visual or photographic detection (in flight or

MIL-STD-2161B(AS)

on the ground). Tactical paint scheme patterns are based on optical principles that dictate certain nonreflective colors, color configurations, and color proportions. Arbitrary application of markings and color schemes, other than those prescribed in this standard, are prohibited. Tactical paint schemes are comprised of single or multiple shades of gray or blue-gray with exterior markings applied in a contrasting lusterless gray/blue-gray color (see 5.2.3).

5.1.3.1 Tactical paint scheme materials. The standard topcoat for the tactical paint scheme and insignia markings is polyurethane (lusterless) coating conforming to MIL-PRF-85285. Decals may be used in lieu of paint for insignia and markings that are a maximum of 4 inches in height provided that they are made of a non-reflective decal material meeting the gloss and color requirements of the coating system.

5.1.3.2 Tactical paint scheme patterns. Approved tactical paint scheme patterns shall be in accordance with Appendices C and D.

5.1.3.2.1 Aircraft surfaces. The tactical paint scheme patterns shall be in accordance with the specific aircraft illustrations included in Appendices C and D. These illustrations, however, are intended only as guides. Minor variations in pattern are acceptable. Care shall be taken that proportion and balance of the colors are approximately as shown in the illustrations. Boundaries between colors shown in the illustrations shall be irregular and fade into each other with no sharp lines of demarcation. A 6-inch blend line shall be used at all color boundaries.

5.1.3.2.2 Bottom surfaces. Most tactical paint schemes use a single color on the underside of the fuselage, wings, horizontal stabilizer, and control surfaces. The color on the underside of the aircraft shall be brought up the sides of the fuselage to give the approximate side view appearance in accordance with the application illustration of Appendices C and D. The transition from the underside color to the upper surface pattern shall be an irregular, indistinct, countershaded, 6-inch blend area. A sharp line and any regular repeating pattern (such as a scallop pattern) may raise the risk of visual detection and compromise the overall effect. On low-wing aircraft, the color on the bottom of the fuselage shall be brought into the wing root to meet the color under the wing.

5.1.4 Paint scheme for drones. Drone exterior surfaces shall be painted orange, FED-STD-595, color number 22190. See Appendix C, Figure C-2, for an example of the drone paint scheme.

5.1.5 Paint scheme for unmanned aerial vehicles (UAV). UAVs shall have a tactical paint scheme applied to the exterior surfaces. See Appendix C, Figure C-28 for an example of a UAV paint scheme.

5.1.6 Paint scheme for target aircraft. Exterior surfaces of target aircraft are typically painted fluorescent orange (FED-STD-595, color number 28915), white or gray. Manufacturers provide the color specifications for the white and gray colors. Examples of orange-color targets include BQM-74C, BQM-74E, MA-31, BQM-74F (new replacement for BQM-74E), and BQM-34S (orange-color body with black wing and vertical tail tips). Examples of targets painted with

MIL-STD-2161B(AS)

colors other than orange include AQM-37C and GQM-163A. Follow manufacturer drawings for the specific target aircraft colors. Appendix C, Figure C-2 provides the color scheme for BQM-74C and BQM-74E.

5.1.7 Solar heat reflection. With the exception of where tactical paint schemes are employed, the upper surfaces of the fuselage of all land-based cargo, transport, and utility planes shall be painted insignia white, FED-STD-595, color number 17925. The white color shall begin at the top, forward edge of the pilot's enclosure, extending aft to include the vertical stabilizer and elevator, and extending down each side of the fuselage to the bottom of the windows, in accordance with Appendices C and D. Aircraft used in a VIP transport or staff capacity may employ a stripe below the white area that runs forward to aft down the side of the fuselage and a chevron on the nacelles for decorative purposes.

5.1.8 Antiglare. On all pilot-operated aircraft, nonspecular (lusterless) paint shall be employed on all airframe surfaces that may produce glare in the pilot or copilot's eyes, or induce eyestrain due to excessive brightness. These areas shall be painted nonspecular (lusterless) black, FED-STD-595, color number 37038, with the exception of aircraft painted with tactical paint schemes. Aircraft painted with tactical paint schemes shall use nonspecular gray, FED-STD-595, color number 36320, or blue, FED-STD-595, color number 35237.

5.1.9 Glass fiber reinforced plastic assemblies. The color of assemblies fabricated of glass-fiber reinforced plastic (such as radomes, radio antenna housings, noses, fairings, wing tips, and intake ducts) for which rain-erosion-protective finishes are required, shall match the color of adjacent surfaces.

5.1.10 Landing gear.

5.1.10.1 Fixed landing gear. Fixed landing gear shall be painted to match the prescribed color scheme of the particular aircraft.

5.1.10.2 Retractable landing gear. Retractable landing gear, wheel well areas, wheel assemblies, inner surfaces of landing gear well covers, hydroskis (including the strut and trunnion doors) and nose gear doors (auxiliary, including the strut door), etc., shall be colored insignia white, FED-STD-595, color number 17925. The edges of the landing gear door shall be painted insignia red, FED-STD-595, color number 11136, without overcoating the white. The outer surfaces of the well covers shall be painted to match the prescribed color scheme of the aircraft.

5.1.11 Speed brakes, wing flaps, etc. Interior surfaces of speed brakes and wing flaps shall be colored insignia red, FED-STD-595, color number 11136. Exterior surfaces of speed brakes and wing flaps shall be colored to match the prescribed color scheme of the aircraft. Wing flap areas, which are covered by the wing when they are in the retracted position, shall be colored insignia red, FED-STD-595, color number 11136. Conformance to these requirements, especially with respect to aircraft painted with a tactical paint scheme, shall be determined on a case-by-case basis by the aircraft Program Manager in conjunction with the Naval Air Systems

MIL-STD-2161B(AS)

Command (AIR 4.1.8). In case of hostility, fleet commanders have the authority to overpaint these red areas for tactical advantage.

5.1.12 Wing leading edge slats. The interior (lower) surface and inboard end of wing leading edge slats, and the wing area covered by the slat, when in a fully retracted position, shall be colored insignia red, FED-STD-595, color number 11136, with the exception of new aircraft to be delivered with a tactical paint scheme. On these new aircraft, the interior surface covering color shall be determined by the Program Manager in conjunction with the Naval Air Systems Command (AIR 4.1.8). Exterior surfaces of wing leading edge slats shall be colored to match the required color scheme of the aircraft (see the applicable figures in Appendices C and D).

5.1.13 Walkways and steps. Where anti-skid material is applied, the color shall be as follows: for conventionally painted aircraft, the color shall be gray, FED-STD-595, color number 36231, or black, FED-STD-595, color number 37038. For aircraft with tactical paint schemes, the color shall match the color of adjacent areas.

5.1.14 External stores (including ordnance). External fuel tanks, pylons, rocket launchers, missiles, pods, and other mounted equipment shall be colored to conform to the aircraft paint scheme. For tactical paint schemes, gray, FED-STD-595, color number 36375, shall be used, with the exception of external stores peculiar to the SH-60 aircraft. For these items, the color shall be gray, FED-STD-595, color number 36495. All other paint schemes shall use FED-STD-595, color number 17925. Stores used on multiple aircraft with different color schemes shall be painted to match the primary user. If temperature problems occur, the use of a lighter shade of gray is acceptable upon approval of the Naval Air Systems Command (AIR 4.1.8). Safety color-coded markings shall be applied as specified in other directives.

5.1.15 Radomes, antennae and antennae covers. Blade type antennae, antenna mast, antennae covers, and radomes shall be painted to match the color of adjacent areas, except where prohibited by manufacturer's direction.

5.1.16 Helicopter blades, hubs, transmissions and rotor mechanisms.

5.1.16.1 Rotor blades. Main and tail rotor blades shall be painted black, FED-STD-595 color number 37038, except when the tactical paint scheme is utilized. When the tactical paint scheme is utilized, the color of the rotor blades shall be black, FED-STD-595 color number 37038, or gray. The gray color will depend on the aircraft model and shall match the tactical color used on the upper surface of the aircraft. Marking of the main and tail rotor blades shall be in accordance with 5.2.2.10.3.

5.1.16.2 Hubs of helicopters. Helicopter hubs shall be painted black, FED-STD-595, color number 37038, except aircraft painted with the tactical paint scheme. For aircraft painted with tactical paint scheme, the color of the hubs shall match the tactical paint scheme.

5.1.16.3 Transmission and rotor mechanisms of helicopters. Helicopter transmissions and rotor mechanisms, other than blades and hubs, shall be painted black, FED-STD-595, color

MIL-STD-2161B(AS)

number 37038, with the exception of aircraft painted with a tactical paint scheme. For aircraft with a tactical paint scheme, the color of the transmission and rotor mechanisms shall match the tactical paint scheme.

Note: When the same model/series aircraft is used in both the U.S. Navy and Marine Corps and each service requires a different paint scheme, the transmission and rotor mechanisms (including blades) on all aircraft for that branch of service shall be painted black, FED-STD-595, color number 37038, or gray, respectively. The gray color number will depend on the aircraft model and shall match the tactical color used on the upper surface of the aircraft. The decision on which color to use will be based on which service has the most aircraft of this model series.

5.1.17 Jet air intake ducts. The color of the adjacent aircraft exterior shall be carried around the lip of the duct and into the duct approximately 6 inches (except for the chevrons). All remaining interior surfaces of the duct shall be painted insignia white, FED-STD-595, color number 17925.

5.1.18 Propeller assemblies.

5.1.18.1 Blades. Blades shall be painted black, FED-STD-595, color number 37038, with the exception of aircraft with a tactical paint scheme. For aircraft with a tactical paint scheme, the color of the blades shall match the tactical paint scheme. Markings shall be as specified in 5.2.2.10.3 and 5.2.2.10.3.5.

5.1.18.2 Spinners. Spinners shall be painted black, FED-STD-595, color number 37038, with the exception of aircraft with the tactical paint scheme. For aircraft with a tactical paint scheme, the color of the spinners shall match the tactical paint scheme.

5.1.18.3 Hubs and domes. Hubs and domes shall be painted black, FED-STD-595, color number 37038, with the exception of aircraft with tactical paint schemes. For aircraft with a tactical paint scheme, the color of hubs and domes shall match the tactical paint scheme.

5.1.19 Engine cowling interiors. The interior of engine cowlings shall be painted gray, FED-STD-595, color number 16440, unless a different color is specified by the engine technical manual for the specific aircraft.

5.2 Aircraft exterior markings. Exterior markings for fixed wing aircraft shall be in accordance with Appendix C. Exterior markings for rotary wing aircraft shall be in accordance with Appendix D. Certain marking provisions of this standard are subject to international standardization agreements and shall not be changed, except under emergency conditions, without prior coordination with the North Atlantic Treaty Organization (NATO). Unless otherwise specified, the height of all characters shall be chosen from the following sizes: 12, 16, 20, 24, 30 or 36 inches.

5.2.1 Identification marking. Identification markings for all U.S. Navy and Marine Corps aircraft, with the exception of 5.2.1.1.3 through 5.2.1.1.6, shall be in accordance with 5.2.2

MIL-STD-2161B(AS)

for mandatory markings and 5.2.6 for optional markings. Guidance is provided in 5.2.3 for markings applied to aircraft with the tactical paint schemes.

5.2.1.1 Letter and numeral (character) construction. All letters and numerals (characters) shall be constructed in a modified vertical block form with the exception that open block lettering can be used for markings of 2 inches or less (see Appendix A, Figure A-4). All characters shall be uniform in shape and size. The width of the characters, excluding the dash (-) and the letters G, A, M and W, shall be 75 percent of the height of the character. The dash shall be constructed in accordance with Appendix A, Figure A-4. The width of letters A and M shall be 92 percent of its height. The width of the letter W shall be 108 percent of its height. The width of the letter G, including the overhang on its right side, shall be 83 percent of its height. All overhangs on letters C, G, S and numerals 2, 3, 4, and 9 shall be 1/12 of the character's height. The height of characters shall be a minimum of one inch. In areas where this is not possible due to space limitation, the height of the characters may be reduced to 1/2 inch. Decalcomania conforming to A-A-59485 may be used for application of markings. Only small maintenance marking may be applied by decal to supersonic aircraft and in areas where it may become dislodged and cause foreign object damage (FOD). Decals used shall perform as well or better than the standard topcoat in appearance and durability. Decals shall not be applied where they may be deleterious to the surface to which they are applied. Decals shall not be applied over brazier head rivets.

5.2.1.1.1 Fixed wing aircraft. The typical identification markings for fixed wing aircraft shall be in accordance with applicable figures of Appendix C.

5.2.1.1.2 Rotary wing aircraft (helicopters). The typical identification markings for rotary wing aircraft shall be in accordance with applicable figures of Appendix D.

5.2.1.1.3 Research aircraft. The markings of military aircraft used for research projects are subject to Naval Air Systems Command (AIR 4.1.8) approval in each case.

5.2.1.1.4 Experimental aircraft. Experimental aircraft shall be marked as specified in Appendix C and D, insofar as practicable. In addition, the marking "U.S. NAVY" shall be applied on the upper surface of the right wing and on the bottom surface of the left wing, in a similar location to the national insignia on the opposite wing. The height of the letters shall be the largest possible size that can be accommodated on the aircraft, selected from 5.2.

5.2.1.1.5 Target aircraft. Target aircraft shall have the national insignia applied, in accordance with Appendix A, and shall be marked as specified in Appendices C and D insofar as is practicable. The size of the letters and numerals shall be as specified in Appendices C and D. If there are space limitations, the size may be reduced proportionately.

Target aircraft shall also have the word "TARGET" applied along the port side of the forward and aft sections of the fuselage, the starboard side of the midsection of the fuselage, the top side of each wing assembly, inboard from the wing tips, the top side of each horizontal tail surface (as applicable), inboard from the tips, and the starboard side of each vertical tail surface.

MIL-STD-2161B(AS)

5.2.1.1.6 Test and evaluation (T&E) aircraft. Aircraft assigned to T&E activities shall comply with the provisions of this standard to the extent that is practical. Deviations to meet specific test objectives or safety of flight require Naval Air Systems Command (AIR 4.1.8) approval.

5.2.1.1.7 Unmanned Aerial Vehicles (UAV). The typical identification markings for Unmanned Aerial Vehicles shall be as shown on Figure C-28.

5.2.2 Mandatory markings for U.S. Navy and Marine Corps aircraft. The markings and insignia contained in this section shall be applied to all U.S. Navy and Marine Corps aircraft, as specified herein. Instructions concerning the size and color of markings and insignia for tactical paint schemes are specified in 5.2.3. Appendix A reflects specific instructions, dimensions, etc., for the proper application of these markings and insignia. Table II lists the standard markings and insignia for all aircraft.

TABLE II. *Mandatory markings for U.S. Navy and Marine Corps aircraft.*

GENERAL LOCATION		
ITEM	FIXED WING	ROTARY WING
National star	Wing and fuselage	Fuselage
Branch of service	Fuselage (carrier based) Wing and fuselage (other)	Fuselage
Model designation	Fuselage	Fuselage
Airplane serial number (BUNO)	Fuselage	Fuselage
Unit aircraft number (MODEX)	Fuselage	Fuselage
Unit identifier	Vertical stabilizer	Aft pylon or upper tail boom
Station or unit name	Vertical stabilizer	As specified
Call numbers	Vertical stabilizer	Aft pylon or upper tail boom
Warning markings	As specified	As specified

5.2.2.1 Changes. Dimensioned drawings, showing the size and location of the insignia and markings applied to various types of aircraft, are prepared in accordance with applicable Naval Air Systems Command (AIR 4.1.8) instructions. Any changes proposed to these insignia and markings shall be coordinated with the Naval Aviation Depot (NADEP) that prepared the service drawing and the Naval Air Warfare Center Aircraft Division, Systems Requirements Department (Code 4L8000B120-3) Lakehurst, NJ, 08733-5100. Approval shall be obtained

MIL-STD-2161B(AS)

from the Naval Air Systems Command (AIR 4.1.8) and may require CNAF (N422) approval depending on the magnitude of the change.

5.2.2.2 Application. All identifying information, except the national insignia, on the under surface of the wing shall be applied so that it can be read from left to right when standing in front of, and facing, the aircraft. On swept-back and variable sweep wings, all letters and numerals shall be applied symmetrically along the 50 percent constant chord line, as is required for application of the national insignia. Insofar as is practicable, all letters and numerals shall be positioned on the fuselage and vertical tail surface so as to be perpendicular to the fuselage reference line.

5.2.2.3 National star insignia. The national star insignia shall be applied to all aircraft as delineated in Appendix A, Figure A-1.

5.2.2.4 Branch of service marking. The branch of service marking shall be applied to all aircraft. On aircraft operated by the U.S. Navy and Naval Reserve, the branch of service marking shall consist of "NAVY" or, on cargo/transport aircraft, "UNITED STATES NAVY," as specified in Appendices C and D. On aircraft operated by the U.S. Marine Corps and Marine Corps Air Reserve, the branch of service marking shall consist of the word "MARINES" or, on cargo/transport aircraft "UNITED STATES MARINES", as specified in Appendices C and D. On aircraft operated jointly by the U.S. Navy and Marine Corps, and/or their Reserve components, the branch of service marking shall consist of "NAVY." For tactical paint scheme aircraft, the color requirements specified in 5.2.3 shall apply.

5.2.2.4.1 Size. The size of the lettering of the branch of service marking shall be as large as possible on the aircraft. The height of the letters shall be selected from 5.2. Special sizing instructions for tactical paint scheme markings are contained in 5.2.3, and Appendix A, Figure A-15. The last marking shown on Figure A-15 provides an example of the branch of service marking.

5.2.2.4.2 Location. The location of the branch of service marking shall be both sides of the fuselage, just forward of the empennage (aircraft tail) for all fixed and rotary wing aircraft and on the underside of the left wing for non-carrier based fixed wing aircraft.

5.2.2.5 Model designation and bureau airplane serial number (BUNO). BUNO shall be applied just below the model designation, in accordance with Appendices C and D. For tactical paint schemes, the color requirements specified in 5.2.3 shall apply.

5.2.2.5.1 Location. BUNO shall be centrally located on both sides of the fuselage under the horizontal stabilizer in the position shown in Appendices C and D. For transport (VR) aircraft having twin booms, these markings shall be centrally located on the outboard side of each main boom, between the insignia and the horizontal stabilizer. The BUNO shall be symmetrically located 2 inches below the model designation.

MIL-STD-2161B(AS)

5.2.2.5.2 Size. Model designation numerals and letters shall be 2-inches high and the BUNO shall be 4-inches high.

5.2.2.6 Unit aircraft number (MODEX). The unit aircraft number shall consist of numbers only, to designate the number of the airplane within the unit. Numbers shall be applied in black (FED-STD-595, color number 17038) for non-tactical paint scheme aircraft and gray (color number 36081) or black (color number 37038) for tactical paint scheme aircraft. See Appendices C and D for guidance to current aircraft.

5.2.2.6.1 Location. The unit aircraft number shall be located on the nose of the aircraft and on both sides of the fuselage. The unit aircraft number may also be applied to the vertical tail and wing flaps.

5.2.2.6.2 Size. Unit aircraft numbers shall be a minimum of 10-inches high for tactical paint schemes and for other aircraft shall be the largest possible of the sizes specified in 5.2, not to exceed 50 percent of the height of the projection of the fuselage side at the point of application.

5.2.2.7 Unit identifier. The unit identifier shall consist of letters only, to designate the squadron or group of the airplane (letters are assigned in accordance with CNAF directives). For tactical paint schemes, the color requirements specified in 5.2.3 shall apply.

5.2.2.7.1 Location. The unit identifier shall be applied to both sides of the vertical tail surfaces centered on the vertical surfaces. On multiple tail surfaces, the marking shall appear on the outboard sides only.

5.2.2.7.2 Size. Letters shall be a minimum of 10-inches high and shall be the largest possible specified in 5.2. In case of double letters, the width of each letter may be reduced to accommodate the letters to the shape of the tail surface, retaining maximum clarity, visibility, and symmetry. The size of letters for tactical paint schemes is as specified in 5.2.3.

5.2.2.8 Station or unit name. On shore-based aircraft, where no unit identifiers are assigned, this marking shall consist of the name of the air station, e.g., North Island, Corpus Christi, etc., or abbreviation of the unit's title, e.g., AIRON-81, employed in lieu of the unit identifier. For tactical paint schemes, the color requirements specified in 5.2.3 shall apply.

5.2.2.8.1 Location. On shore-based aircraft, the station or unit name is used instead of the unit identifier and shall be applied on the vertical tail surfaces in the same locations specified in Appendices C and D for the unit identifier.

5.2.2.8.2 Size. The size of the letters shall be such that the station or unit name can be accommodated on the vertical tail surfaces in the specified location. If necessary due to space limitations, the station or unit name may be divided to occupy two lines. If two lines are used for station names, the dash shall be omitted and the letters on the second line shall be centered below those on the top line.

MIL-STD-2161B(AS)

5.2.2.9 Call numbers. Aircraft shall have a call number painted on each side of the vertical stabilizer surface or on each outboard side, as applicable. The call numbers shall consist of at least the last four numbers of the bureau number. Arabic numbers shall be used when applying call numbers. For tactical paint schemes, the requirements specified in 5.2.3 shall apply.

5.2.2.9.1 Location. The call numbers shall be applied to both sides of the vertical stabilizer and rudder assembly, or to each outboard side, as applicable. On rotary wing aircraft, or if space limitations do not permit on other aircraft, these numbers shall be applied aft along the fuselage, or aft along each side of the tail boom, as applicable.

5.2.2.9.2 Size. The height of the numbers shall be the largest size possible of the sizes listed in 5.2. Under no circumstances shall the height of the characters be less than 12 inches unless space prohibits application of 12-inch numbers. The numbers or designators shall be discernible from a distance of 50 yards.

5.2.2.10 Mandatory safety markings. Mandatory standard safety markings are as specified in 5.2.2.10.1 thru 5.2.2.10.6.14.6. For tactical paint schemes, refer to 5.2.3 for special instructions.

5.2.2.10.1 Jet engine intake warning chevrons and signs. The areas of the leading edge of the wing, the fuselage, or the nacelle or pod, or combination thereof, that are adjacent to the sides of a jet engine intake, shall be marked with warning chevrons and signs, as specified in the following subparagraphs. Not applicable to turboprop aircraft.

5.2.2.10.1.1 Application. The chevrons shall be applied such that the ends of their outer sides contact the edge of the intake at points that are three-quarters of the diameter, or three-quarters of the short axis, of the intake port. The outer points of the chevrons shall be located at a distance of 4-feet outboard along the leading edge of the wing, or forward or aft, if applied on the fuselage, or aft, if applied on the nacelle or pod, from the center of the intake. The chevrons shall be 3 inches in width and shall be marked in insignia red, FED-STD-595, color number 11136, with the exception of tactical paint scheme aircraft. Superimposed on one side of a chevron shall be the word "JET" and on the other side the word "INTAKE" in insignia white, FED-STD-595, color number 17925 (see Appendix A, Figure A-8). The letters shall be 2 inches in height. The word "DANGER" (with an arrow directed at the point of the chevron, see Appendix A, Figure A-8) shall be applied along the leading edge of the wing, or on the fuselage, nacelle, or pod, as applicable. The letters and arrows shall be insignia red, FED-STD-595, color number 11136, and shall be superimposed on a stripe of insignia white, FED-STD-595, color number 17925, 3 inches in width. The height of the letters and length of the arrows shall be 2 inches. Aircraft painted with tactical paint schemes shall comply with the color requirements specified in 5.2.3.

5.2.2.10.1.2 Variations. The dimensions specified in 5.2.2.10.1.1 shall be adhered to in general. They may be varied, and the word "DANGER" (with the arrows pointing to the edge of the intake) may be applied within the V of the chevrons if there are space limitations or other

MIL-STD-2161B(AS)

considerations. The general outline and appearance of the warning chevrons shall conform to Appendix A, Figure A-8.

5.2.2.10.2 Jet engine blast warning. The areas of the fuselage, nacelle or pod, or combination thereof, which are adjacent to the sides of a jet engine exhaust shall be marked with the words "Beware of blast" as shown in Appendix A, Figure A-8. Not applicable to turboprop aircraft.

5.2.2.10.3 Propeller, rotor, and turbine safety markings. Application of safety markings to statically balanced propellers and rotor blades shall be limited to new blades or to overhauled blades, in accordance with 5.2.2.10.3.1.3. Only lusterless colors shall be used for propellers and rotor blade identification danger zone marking, for antiglare purposes, unless otherwise noted herein. Letters and numerals shall be 1 inch in height. If there are space limitations, letters and numerals may be reduced in height to 1/2 inch. For tactical paint schemes, the use of identification stripes on rotor blades is dependent upon whether they can be overpainted by field units. If the provisions of 5.2.2.10.3.1.3 can be met, identification stripes shall be used. On all other rotor blades, identification stripes shall be eliminated.

5.2.2.10.3.1 Main rotor blades.

5.2.2.10.3.1.1 Matched sets. For matched sets of main rotor blades, an individual identification stripe shall be painted on both sides of the blade from the tip to 2 inches from the tip. This stripe shall be insignia white, FED-STD-595, color number 17925, for one blade, insignia red, FED-STD-595, color number 11136, for the second blade, and light green, FED-STD-595, color number 14187, for the third blade. In addition, orange-yellow, FED-STD-595, color number 33538, warning stripes shall be applied inboard of the 2-inch stripe on both of the blades, and shall extend from the line 2 inches from the tip to a line 8 inches from the tip (see Appendix A, Figure A-5). FOR TACTICAL PAINT SCHEMES, 5.2.2.10.3 SHALL APPLY.

5.2.2.10.3.1.2 Unmatched sets. For unmatched sets of main rotor blades, orange-yellow warning stripes, FED-STD-595, color number 33538, shall be applied to both sides of the blades from the tip to 6 inches from the tip (see Appendix A, Figure A-5). FOR TACTICAL PAINT SCHEMES, 5.2.2.10.3 SHALL APPLY.

5.2.2.10.3.1.3 Static balance - preservation and maintenance. Paint or other marking, when applied to propellers, rotors, or statically balanced control surfaces for antiglare or protective purposes, shall be applied only by the manufacturer or an authorized facility, except when authorized by the Type Commanders. Between overhauls, when required, marking and finishes shall be retained by a light maintenance touch-up. Touch-up shall be applied to all surfaces in proportionate amounts for retention of proper balance.

5.2.2.10.3.1.4 Classification numbers. Classification numbers shall be stenciled on the main rotor blades of all helicopters by any facility authorized to balance or alter the blade. These numbers shall consist of three parts as follows:

MIL-STD-2161B(AS)

- a. The first shall be the weight in pounds of the blade, expressed in decimal form.
- b. The second shall be the distance in inches from the center of rotation to the center of gravity of the blade.
- c. The third shall be the distance in percent mean aerodynamic chord (MAC) from the leading edge of the blade to the center of gravity of the blade clockwise. For example: 57.2-75.5-32.4, when the blade has a weight of 57.2 pounds with the center of gravity 75.5 inches from the center of rotation and with the chordwise center of gravity at 32.4 percent MAC.

Stenciling, 1/2-inch to 1-inch in height shall be accomplished with a paint that contrasts well with the color of the blade. The classification numbers information shall be marked on the flat surface on the groundside of each blade at the inboard or butt end of the main rotor blade.

5.2.2.10.3.2 Tail rotor blades. Tail rotor blades shall be finished as shown in Appendix A, Figure A-5, starting from the tip and on both sides of the blade, as follows:

- a. A 6-inch wide band of insignia red, FED-STD-595, color number 11136.
- b. A 6-inch wide band of insignia white, FED-STD-595, color number 17925.
- c. A 6-inch wide band of insignia red, FED-STD-595, color number 11136.
- d. A nonspecular black band, FED-STD-595, color number 37038, to within 6 inches of the hub.
- e. A 6-inch wide band of insignia red, FED-STD-595, color number 11136.

FOR TACTICAL PAINT SCHEMES, 5.2.2.10.3 SHALL APPLY.

5.2.2.10.3.3 Helicopter tail boom - warning marking. For helicopters having tail rotor blade(s) revolving in the vertical plane, a warning sign shall be painted on both sides of the tail boom, as shown in Appendix A, Figure A-12. This shall consist of a 33-inch wide band orange-yellow, FED-STD-595, color number 13538, encircling the tail boom. Centrally superimposed on this band shall be applied an insignia red arrow, FED-STD-595, color number 11136, of appropriate size, with the arrow pointing aft as indicated in Appendix A, Figure A-12. Above the arrow shall appear the word "DANGER" and below the arrow shall appear the words "KEEP AWAY." The letters shall be black, FED-STD-595, color number 17038, and shall be approximately 2-inches in height. For tactical paint schemes, the color requirements specified in 5.2.3 shall apply.

5.2.2.10.3.4 Helicopter tail rotor - guards and stabilizers. On helicopters with tail rotor guards and/or stabilizers, the tail rotor guard and/or stabilizer shall have warning markings applied to prevent ground personnel from accidentally running into these components. The

MIL-STD-2161B(AS)

markings shall consist of 2-inch wide alternating stripes of orange-yellow, FED-STD-595, color number 13538, and bright red, FED-STD-595, color number 11136. For tactical paint schemes, the color requirements specified in 5.2.3 shall apply.

5.2.2.10.3.5 Propeller blades - warning markings. Blades shall be painted as shown in Appendix A, Figure A-6. Propeller blades on multi-engine planes, including blades used on aircraft using a tactical paint scheme, shall be painted on both sides from the tip to 3 inches from the tip with insignia white, FED-STD-595, color number 17925, followed by a 6-inch strip of insignia red, FED-STD-595, color number 11136, followed by another 3-inch strip of insignia white, FED-STD-595, color number 17925. The remainder of the blade shall be colored black, FED-STD-595, color number 37038. The black may be eliminated on blades where both the following conditions are met:

- a. Corrosion protection is not required and
- b. The blades are so situated as to produce no brightness in the pilot's or copilot's eyes (in cases where the blades rotate in a plane aft of the pilot's seat).

If the blades are so situated as to produce glare or excessive brightness in the pilot's or copilot's eyes, the insignia red, FED-STD-595, color number 11136, and insignia white, FED-STD-595, color number 17925, shall be replaced by red, FED-STD-595, color number 31136, and white, FED-STD-595, color number 37925, respectively, on the rear face of the blades only. Propeller blades on single engine planes shall be painted on the front side in the same manner as for multi-engine blades; the rear face, however, shall be colored black, FED-STD-595, color number 37038, with a 4-inch band of orange-yellow, FED-STD-595 color number 33538, at the tip for blades of less than 15 feet basic diameter or in a 6-inch band, orange-yellow, FED-STD-595, color number 33538, for larger diameter blades.

5.2.2.10.3.6 Fuselage propeller - warning stripe and signs. That area of the fuselage which is in the plane of the propeller path shall be marked with an insignia red stripe, FED-STD-595, color number 11136, 3-inches wide extending completely around the fuselage, as shown in Appendix A, Figure A-9. For aircraft having a solar reflective white paint, FED-STD-595 color number 17925, on the top portion of the fuselage, the stripe shall only encompass the portion around the fuselage that excludes this area. The word "Propeller" reading vertically from top to bottom, on both sides, shall be superimposed on this stripe in insignia white, FED-STD-595, color number 17925, letters 2 inches in height, at sufficiently frequent intervals to indicate the dangerous area. The signs "DANGER" and "DANGER" shall be applied perpendicular to and centered with respect to the word "PROPELLER," one sign on each side thereof, with the arrow pointing toward the stripe. The letters and arrows shall be insignia red, FED-STD-595, color number 11136 and shall be superimposed on a stripe of white, FED-STD-595, color number 17925, 3 inches in width. The height of the letters and length of the arrows shall be 2 inches and 4 inches respectively. For tactical paint schemes, the color requirements specified in 5.2.3 shall apply.

MIL-STD-2161B(AS)

5.2.2.10.3.7 Staggered engines. On aircraft having engines staggered in the wing, a marking similar to that described in 5.2.2.10.3.6 shall also be placed on the cowlings of the next inboard engine to mark the plane of rotation of the propeller disk.

5.2.2.10.4 Arresting hooks. Arresting hooks shall be painted with gloss black, FED-STD-595, color number 17038, and insignia white, FED-STD-595, color number 17925, in alternate bands 4-inches wide, to produce maximum visibility. For tactical paint schemes, the arresting hook shall be painted in the surrounding gray/blue paint scheme. Paint shall not be applied to the arresting hook point.

5.2.2.10.4.1 Arresting hook warning marking. For aircraft having arresting hooks, a warning sign shall be painted on both sides of the fuselage (Appendix A, Figure A-3, and A-14) and shall be located in proximity to the hook point when in the retracted position. The marking shall be clearly visible to maintenance personnel.

5.2.2.10.5 Loose and jettisonable equipment. The following loose equipment shall be marked in a contrasting color, using a stencil or other suitable marking, with the call numbers: life rafts, tool kits peculiar to the airplanes, aircraft covers (engine covers, dust covers, etc.).

5.2.2.10.6 Identification and markings of emergency escape system. All exits to be used in an emergency shall be identified by the words "EMERGENCY EXIT, RESCUE, AUXILIARY EXIT" or other appropriate wording, followed by applicable instructions or symbols. Painted insignia, letters, and markings shall be visible in the dark. Painting shall be compatible with finishes applied to adjacent surfaces. Decals shall conform to the requirements specified herein and shall be edge-sealed with a clear finish (see Appendix A, Figure A-20).

5.2.2.10.6.1 Application. All surfaces to be lettered shall be prepared to ensure good contrast between lettering and background. Standard application shall be black, FED-STD-595, color number 17038, letters on an orange-yellow, FED-STD-595, color number 13538 background. In some applications, orange-yellow, FED-STD-595, color number 13538, lettering on a black, FED-STD-595, color number 17038, background shall be specified. Other color combinations shall not be used without approval of the procuring activity. The background border shall extend 1/2 inch beyond the lettering. For tactical paint scheme aircraft the color requirements specified in 5.2.3 shall apply.

5.2.2.10.6.2 Location. Lettering and marking of the emergency escape system shall be placed so as to be easily readable.

5.2.2.10.6.3 Lettering size. All lettering shall be gothic type. Exit release signs shall have 2-inch high lettering. The lettering of instruction shall be at least 1-inch high.

5.2.2.10.6.4 Cutout area marking. Each area of the aircraft intended to be cutout for emergency rescue shall be marked with the wording "CUT HERE FOR EMERGENCY RESCUE" and corner markings at the limits of the cutout area (see Appendix A, Figure A-17). The horizontal and vertical lines of the corner marking shall be 3-inches long and 1-inch wide.

MIL-STD-2161B(AS)

This marking scheme shall be applied to the interior and exterior of the aircraft at the intended cutout point. The lettering shall be a minimum of 2 inches in height.

5.2.2.10.6.5 Exit control lever markings. Handles and levers used to actuate doors on hatches shall be identified by alternating orange-yellow, FED-STD-595, color number 13538, and black, FED-STD-595, color number 17038, stripes in a width ratio of 3 to 1, orange-yellow, FED-STD-595, color number 13538, to black, FED-STD-595, color number 17038. The orange-yellow stripes, FED-STD-595, color number 13538, shall be widths of 3/16-inch, 3/8-inch, or 3/4-inch; the black stripes, FED-STD-595, color number 17038, shall be corresponding widths of 1/16-inch, 1/8-inch, or 1/4-inch. Background striping shall be applied at a 45-degree angle from the vertical, rotated clockwise. Small handles and levers shall be striped with alternate colored rings with the above ratio and background. The striping shall not interfere with other types of markings. If the handles or levers are visible in the aircraft's clean flight configuration, markings of aircraft with tactical paint schemes shall be in accordance with 5.2.3.

5.2.2.10.6.6 Fire access panel marking. A marking conforming to Appendix A, Figure A-7 shall identify the fire access panel in the engine cowling. The words "FIRE PANEL" in red letters shall be placed inside the rectangle. For tactical paint scheme aircraft the color requirements specified in 5.2.3 shall apply.

5.2.2.10.6.7 Explosive-actuated devices. Ejection seats and canopies, separable capsule escape system, or encapsulated ejection seats, which are actuated explosively, shall be marked at appropriate locations on the fuselage (see Appendix A, Figure A-11 and A-16).

5.2.2.10.6.8 Axe and crowbar. When an axe and/or crowbar are carried aboard the aircraft, and are accessible from the outside of the aircraft, their positions shall be shown externally by the words "AXE (CROWBAR) STOWED HERE" in 1-inch high letters. The position of the axe and/or crowbar may be further identified by a silhouette. For tactical paint schemes, the color requirements specified in 5.2.3 shall apply.

5.2.2.10.6.9 Fire extinguishers. When fire extinguishers are carried aboard the aircraft and are accessible from the outside of the aircraft, their positions shall be shown by the words "FIRE EXTINGUISHER STOWED HERE" and may be further identified by a silhouette of a fire extinguisher. For tactical paint schemes, the color requirements specified in 5.2.3 shall apply.

5.2.2.10.6.10 First-aid kit. When a first-aid kit is carried aboard the aircraft and is accessible from the outside through an emergency exit or access panel, a red, FED-STD-595 color number 11136, Geneva cross on a white, FED-STD-595, color number 17925, background shall be placed on the fuselage adjacent to this exit or panel (see Appendix A, Figure A-19). For tactical paint scheme aircraft, the color requirements specified in 5.2.3 shall apply.

5.2.2.10.6.11 Ejection seat markings. All parts of the ejection seat escape system shall be marked with a triangle, colored insignia red, FED-STD-595, color number 11136. A triangle, insignia red, FED-STD-595, color number 11136, shall be placed over each crew entrance to

MIL-STD-2161B(AS)

indicate that the aircraft has such a system. The applicable words “EJECTION SEAT” or “ESCAPE CAPSULE” shall be applied in 1-inch high letters under the triangle. Triangles shall be located on each side of the fuselage at approximately the midpoint of the canopy for fighter, fighter-trainer, and similar aircraft. The following warning shall be applied by using 3/4-inch high painted or decal letters, on an orange-yellow, FED-STD-595, color number 13538, background, beneath the triangles: “WARNING - THIS AIRCRAFT CONTAINS A CARTRIDGE-ACTUATED EMERGENCY ESCAPE SYSTEM EQUIPPED WITH EXPLOSIVE CHARGES” (see Appendix A, Figure A-11 and A-16). See Appendix A for complete instructions. For tactical paint scheme aircraft, the color requirements specified in 5.2.3 shall apply.

5.2.2.10.6.11.1 Ejection seat markings for multiplace aircraft. If an aircraft is equipped with cartridge-actuated escape provisions other than ejection seats, at certain crew stations, along with ejection seats at other stations, the markings located on the exterior of the aircraft at each crew entrance not equipped with ejection seats shall read “CARTRIDGE-ACTUATED DEVICES” instead of “ESCAPE CAPSULE” or “EJECTION SEAT” under the triangle. In the event all crewmembers use the same entrances, both notes shall be printed under the triangle with the warning.

5.2.2.10.6.11.2 Other cartridge-actuated escape systems. For aircraft equipped with cartridge-actuated escape systems, such as hatch jettisoning systems, equipment stowage systems, etc., but no means to forcibly separate crew members from the aircraft, the marking shall read “CARTRIDGE-ACTUATED DEVICES.”

5.2.2.10.6.12 Canopy release markings. External canopy release access on aircraft shall be painted orange-yellow, FED-STD-595, color number 13538. Release instructions from the outside shall be painted in black, FED-STD-595, color number 17038. A reflective placard applied near the canopy on the side of the flag opposite the canopy release shall show the location of the release. For tactical paint scheme aircraft, the color requirements specified in 5.2.3 shall apply.

5.2.2.10.6.13 External exit emergency release. A “RESCUE” arrow applied on the fuselage shall identify each external exit emergency release or handle. The arrow shall be in accordance with Appendix A, Figure A-13, colored orange-yellow, FED-STD-595, color number 13538. Other markings (i.e., “STEP” or “ACCESS DOOR”) may be omitted to accommodate this marking. For tactical paint scheme aircraft, the color requirements specified in 5.2.3 and Figure A-14 shall apply.

5.2.2.10.6.14 Transport aircraft. The compartments of transport aircraft shall be marked with individual compartment horizontal dimensional references, the compartment centroids, the compartment letter designations, and the compartment maximum structural capacity in pounds. Cargo compartments shall also be marked in inches from the horizontal reference datum at 20-inch intervals. This requirement does not apply to transport aircraft with executive interior configurations.

MIL-STD-2161B(AS)

5.2.2.10.6.14.1 Internal removable escape panels. Identification marking of escape hatches, doors, and exits shall be colored orange-yellow, FED-STD-595, color number 13538, on non-yellow surfaces. On yellow surfaces, the marking shall be colored black, FED-STD-595, color number 17038. Retroreflective material, conforming to ASTM-D4956 shall be used for this marking. An intermittent band, colored orange-yellow FED-STD-595, color number 13538, shall identify the periphery of the escape panels. The segments of the band shall be a minimum of 1-inch width and a maximum of 2-inch length, divided equally between the door mount and the escape door. In locations where the door lining hides or covers the marking on the inside of the aircraft, the marking shall continue onto the lining.

5.2.2.10.6.14.2 Emergency exit marking. The words “EMERGENCY EXIT” colored orange-yellow, FED-STD-595, color number 13538, shall be painted or stenciled onto the escape hatch, door or exit, or any covering thereof, in the most readily visible location. Letters shall be a minimum of 2-inches high and shall not be less than 1-inch wide. For tactical paint schemes, the color requirements specified in 5.2.3 shall apply.

5.2.2.10.6.14.3 Handles, releases, catches, and knobs for inside panels. Handles, releases, catches, and knobs for inside hatches, exit doors, and their soundproofing (or lining) shall be painted orange-yellow, FED-STD-595, color number 13538. Suitable descriptive wording, readily visible, shall be painted or stenciled on the door or structure of the aircraft, whichever is nearer to the emergency release, to identify and explain its operation. This wording shall be at least 1/2-inch high, using standard English terminology such as “PULL,” “PUSH,” “TURN,” or “SLIDE.” Exits which are adequate for air, ground, and ditching escape shall have the words “EMERGENCY EXIT” centered in the most visible location on the inside of the door or hatch. Exits which are not adequate for the above three methods of escape shall be marked “EMERGENCY EXIT,” and for specific usage, “GROUND USE ONLY,” “GROUND AND DITCHING USE ONLY,” etc.

5.2.2.10.6.14.4 External removable escape panels. Markings identifying external removable escape hatches, doors, and exits on the outside of aircraft shall be orange-yellow, FED-STD-595, color number 13538. If the substrate is yellow, black, FED-STD-595, color number 17038, shall be used. Retroreflective material conforming to ASTM-D4956 shall be used for these markings to facilitate identification in the dark. Mark all external releases for operation of emergency exit panels “EXIT RELEASE” on the outside of the aircraft to facilitate identification. The writing that describes the operation of the exit release shall be standard English terminology such as “PULL,” “PUSH,” “TURN,” or “SLIDE.” Letters shall be at least 1-inch high. For tactical paint scheme aircraft, the color requirements specified in 5.2.3 shall apply.

5.2.2.10.6.14.5 Markings for forced emergency entry or exit. Markings for aircraft emergency entry or exit shall be orange-yellow, FED-STD-595, color number 13538. Black, FED-STD-595, color number 17038, shall be used on yellow-orange backgrounds. Retroreflective material conforming to ASTM-D4956 shall be used for these markings. For tactical paint scheme aircraft, the color requirements specified in 5.2.3 shall apply.

MIL-STD-2161B(AS)

5.2.2.10.6.14.6 Secondary openings. Secondary openings, such as auxiliary exits, windows, and navigator's domes, are usually smaller than primary openings, making entrance or exit more difficult. If the structure immediately surrounding secondary openings is free from heavy structural members (such as bulkheads and the main longitudinal member), and from oxygen, fuel and oil lines, and battery leads, it shall be marked with an orange-yellow, FED-STD-595, color number 13538, broken band. The band shall be located at the extreme boundary of the above-described area, both inside and outside of the fuselage. Segments of the broken band shall be 1/2-inch wide, 1-inch long, and approximately 12-inches apart. Where the band is covered with soundproofing, the soundproof (or lining) shall also be marked. "CUT HERE FOR EMERGENCY RESCUE" shall be printed or stenciled inside of and parallel with the broken band identifying the area on the exterior of the aircraft where forced entry can be made for rescue purposes. Appendix A, Figure A-17, provides guidance for this marking. "CUT HERE FOR EMERGENCY EXIT" shall be painted on a similar location inside the aircraft. Letters shall be 1-inch high. If the area to receive the lettering is covered by soundproofing (or lining), the letters shall also be stenciled on the soundproofing (or lining). Both exterior and interior markings shall be located inside of and adjacent to the broken band. For tactical paint scheme aircraft, the color requirements specified in 5.2.3 shall apply.

5.2.3 Tactical paint scheme markings. All markings specified in 5.2.2 and 5.2.5 are applicable to aircraft that have a tactical paint scheme (TPS). Requirements for the colors of all the markings and the size of some of the markings differ when applied to aircraft possessing the tactical paint scheme. These differences in requirements are specified in 5.2.3.1 thru 5.2.4.

5.2.3.1 Color of markings for aircraft with tactical paint schemes. All exterior markings specified in 5.2.2 and 5.2.5 applied to aircraft possessing a tactical paint scheme shall be applied in a contrasting shade of gray, the color of which is dependent on the gray colors used for the specific tactical paint scheme and the location of the marking. See Appendices for examples.

5.2.3.1.1 Tactical paint scheme - general marking policy. Tactical paint schemes are comprised of one, two, or three shades of gray. If the tactical paint scheme is comprised of only one color, use another color of gray for the markings, which provides sufficient contrast. For example, if the scheme is comprised of FED-STD-595, color number 36081, then use FED-STD-595, color number 35237 for the markings. If the tactical paint scheme is comprised of only two colors, the contrasting color specified is the color used in the scheme, which is not located in the area where the marking is applied. If the tactical paint scheme is comprised of three colors, the following guidelines apply:

- a. If the background color is the darkest gray, medium gray is used for the marking.
- b. If the background color is the medium gray, the darkest gray is used for the marking.
- c. If the background color is the lightest gray, the medium gray is used for the marking.

MIL-STD-2161B(AS)

5.2.3.1.2 Color of MODEX numbers. MODEX numbers applied to aircraft with the tactical paint scheme shall be gray, FED-STD-595, color number 36081 or black, FED-STD-595, color number 37038. See Appendices C and D for guidance on current aircraft.

5.2.3.2 Size of markings when used on aircraft with tactical paint schemes. The size of the markings when used on tactical paint scheme painted aircraft are the same sizes as specified in 5.2.2 and 5.2.5 except that the branch of service marking, call number, and national insignias shall follow those specified in Appendices A-D. For platforms not listed in Appendices A-D, these markings shall be a maximum of 12-inches high on carrier based tactical paint scheme aircraft.

5.2.3.3 Paint scheme deviations approval. Deviations to paint schemes for one aircraft may be approved by the Type Commander. Deviations for more than one aircraft require prior approval by the Naval Air Systems Command (AIR 4.1.8). Additional approval from CNAF (N422) may be required depending on the magnitude of the deviation(s), as specified in 1.6.1.

5.2.4 Marking material. Marking materials shall conform to the gloss and IR requirements of the coating used to apply tactical paint schemes. Decals may be used for small markings (maximum of 4 inches) if all other requirements are met.

5.2.5 Exterior maintenance precautionary and warning markings.

5.2.5.1 Aircraft and missile service point identification symbols and markings. Service point identification and precautionary warning markings shall be applied on all aircraft as required (see Appendix B, Figures B-7, B-8, and B-9). All NATO markings, as referenced in 5.2, are required. The location of NATO markings are detailed in Appendix B, Figures B-3, B-4, B-5, and B-6. The location of these markings may vary with airframe configuration and country of interest. Each marking shall be displayed to provide the following:

- a. Rapid identification of each required servicing point.
- b. Identification of the type of ground servicing required.
- c. Hazard warning of safety precautions, which will prevent injury to personnel or damage to aircraft equipment.
- d. Rapid entry or exit from vehicle under emergency conditions.

5.2.5.1.1 Application of service point identification symbols and markings. When applying these symbols and markings, the instructions provided in Appendix B shall be adhered to. The symbols shall not exceed 4 inches in width or height. Application may be accomplished using paint or decals conforming to A-A-59485. When paint is used, stencils incorporating capital letters and Arabic numerals not exceeding 1-1/4 inches in height shall be used; freehand application is prohibited. When applied to a gray or white background, the marking shall be black, FED-STD-595, color number 17038. On other backgrounds, the marking shall be white, FED-STD-595, color number 17925. A decal similar to Appendix B, Figure B-6, shall be

MIL-STD-2161B(AS)

located inside the nose wheel well, or nose wheel door, defining the location of service points. For tactical paint scheme aircraft, the color requirements specified in 5.2.3 shall apply.

5.2.5.1.2 Location. The location of each service point marking shall be based upon the existing available space. They may be situated on the equipment concerned, directly below, adjacent to, or on applicable access panels. In the event that the service point or marking is concealed, arrows may be used to point out the location of the service point. The arrows shall bear a brief identification of the purpose for which it is applied.

5.2.5.1.3 Hydraulic system and landing gear/struts. Servicing instructions for hydraulic systems, landing gear, and shock struts, shall be provided on metal instruction plates, or stenciled in a permanent and legible manner, adjacent to charging points and test connections. For tactical paint schemes, the color requirements specified in 5.2.3 shall apply.

5.2.5.2 Fuel nozzle jumper plug receptacles. Fuel nozzle plug receptacles shall be marked in accordance with MIL-C-83413/9. For tactical paint schemes, the color requirements specified in 5.2.3 shall apply.

5.2.5.3 Aircraft grounding points. All grounding points on all U.S. Navy and Marine Corps aircraft shall be marked in accordance with Appendix B, figures B-3, B-8, and B-9. For tactical paint schemes, the color requirements specified in 5.2.3 shall apply.

5.2.5.4 Storage batteries. On all battery access doors, the word "BATTERY" shall be painted in insignia red, FED-STD-595, color number 11136. The marking shall be in 1-inch high letters. The lettering shall also be 1-inch high on aircraft with a tactical paint scheme and the color shall be in accordance with 5.2.3. On the left side of the fuselage, as viewed from the rear of the aircraft, there shall be a notation "BATTERY LOCATION _____." The exact location shall replace the line _____. The fore and aft positioning of the markings shall be approximately in line with the trailing edge of the wings, and the vertical positioning 2 to 3 feet above the bottom of the fuselage. For instances where there are windows, enclosures, etc., in this position, the storage battery for marking shall be placed as near to the specified position as possible. Where there are battery locations interior to the aircraft the word "BATTERY" or "BATTERIES," as applicable, shall be permanently and conspicuously affixed to the battery casing or compartment. For tactical paint scheme aircraft, the color requirements specified in 5.2.3 shall apply.

5.2.5.5 Instrument static opening markings. Instrument static openings shall have no finish applied within a 1-inch diameter circle around the opening. A red, FED-STD-595, color number 31136, 1/2-inch wide circular band shall be applied around this area. The following legend shall also be applied adjacent to the marking: "INSTRUMENT STATIC OPENING -DO NOT COVER." Aircraft painted with the tactical paint schemes shall be painted in accordance with 5.2.3.

5.2.5.6 Wing fold warning flag. On aircraft having wing fold warning flags, the flags shall be painted red, FED-STD-595, color number 31136.

MIL-STD-2161B(AS)

5.2.5.7 Markings for electrical connections. The following caution note shall be placed at points where it is necessary to break electrical connections when folding back or removing wings, or removing tail surfaces, etc: “CAUTION, DISCONNECT ELECTRICAL WIRING BEFORE REMOVING PART.” The color of the letters shall be black, FED-STD-595, color number 17038.

5.2.5.8 Markings for engine removal. All points of disconnect shall be painted either black, FED-STD-595, color number 17038, or with contrasting gray for tactical paint schemes (see 5.2.3).

5.2.5.9 Markings for tank and filler areas.

5.2.5.9.1 Tank. Aircraft tanks shall have notations indicating tank capacity, type of liquid, and level restrictions. Tank markings shall be black, FED-STD-595, color number 17038. Additional data, such as coolant mixture, water-alcohol mixture, and grade of liquid shall be stenciled near the filler caps in letters 1/2-inch high in the same color as that used to indicate tank capacity. Stenciling on the fuel tanks shall read: “USE _____ OCTANE FUEL OR BETTER,” or “USE GRADE _____ OR BETTER,” as applicable. For tactical paint scheme aircraft, the color requirements specified in 5.2.3 shall apply.

5.2.5.9.2 Filler caps. Filler caps for fuel and oil tanks and other external parts and attachments for which identification is necessary and desirable shall be painted the color assigned to the applicable fitting and shall be indicated by appropriate markings. Where flush-type pressure fueling caps, conforming to MS29525 are installed, three radial black lines, FED-STD-595, color number 37038, 3/8-inch wide by 1-inch long, shall be located as to form extensions to the lines on the cap when the cap is in the locked position. Tactical paint scheme aircraft shall be painted in accordance with 5.2.3. The type and grade of fuel to be employed in the aircraft shall be indicated adjacent to the filler caps in accordance with Appendix B, Figure B-3, and B-5.

5.2.5.10 Lift points, handgrips, caution legends, etc. Appropriate wording painted in black, FED-STD-595, color number 17038, adjacent to the applicable location shall identify these items. For tactical paint scheme aircraft, the color requirements specified in 5.2.3 shall apply. Appendix B, figures B-4 and B-7 provide examples of this marking.

5.2.5.11 Baggage compartment, life raft stowage, etc. These shall be indicated by means of appropriate signs painted in black, FED-STD-595, color number 17038, adjacent to the area. For tactical paint scheme aircraft, the color requirements specified in 5.2.3 shall apply.

5.2.5.12 Wing access panel latches and safety straps. On aircraft which have wing access panel latches and safety straps, the inside lever and wing area under the latch safety strap shall be painted insignia red, FED-STD-595, color number 11136, in such a manner that no red color shall show when the latches and straps are properly secured.

MIL-STD-2161B(AS)

5.2.5.13 Actuating mechanism-warning signs. A black warning sign, FED-STD-595, color number 17038, shall be located adjacent to any actuating mechanism which can cause damage to the weapon systems from improper or out-of-sequence operation. For tactical paint scheme aircraft, the color requirements specified in 5.2.3 shall apply.

5.2.5.14 Recessed lubrication fittings. Flush type (female receptacle) grease fittings, recessed set screws, or depressed adjustments, such as may be found on rotor control and drive shafts, but which require periodic servicing or inspection, shall be identified with a circumscribed band of orange, FED-STD-595, color number 12197, not exceeding 1 inch in width. For tactical paint scheme aircraft, the color requirements specified in 5.2.3 shall apply.

5.2.6 Optional markings.

5.2.6.1 Ship names. For carrier aircraft, the ship name may be applied to both sides of the fuselage above the branch of service markings. If applied, the letters shall be a maximum of 6-inches high and applied in a contrasting shade of gray for tactical paint schemes and black for conventional paint schemes.

5.2.6.2 Squadron designation. The squadron designation identifies with letters and numerals of the squadron to which the aircraft is assigned. It shall be placed on both sides of the fuselage, just forward of the empennage, and centered under the branch of service marking. If this is not practical due to space limitations, the squadron designation shall be applied in an aft location designated by the cognizant command. The squadron designation on low-wing transports shall be applied along the centerline on both sides of the fuselage, just forward of the empennage. On high-wing transports, if the branch of service marking is placed on the fuselage either under the wing or aft of the trailing edge of the wing, the squadron designation shall be centered symmetrically under the marking. If this is not practical, it shall be centered under the marking, or placed aft, along the fuselage, below the centerline. Color of this marking shall be black, FED-STD-595, color number 17038, except for tactical paint scheme aircraft. For these aircraft the tactical paint scheme markings specified in 5.2.3 shall apply.

5.2.6.3 Reserve aircraft markings - station names. The name of the home station may be placed on both sides of the fuselage just forward of the empennage and centered under the branch of service marking. This shall be in addition to the station letter on both sides of the vertical fin and rudder. On transport aircraft (VR), where the branch of service marking is placed along the fuselage above the windows, the station name shall be placed along the centerline on both sides of the fuselage, just forward of the empennage. This shall be in addition to the station letter on both sides of the vertical fin and rudder. The letters used for reserve station identification shall be one half the size of the branch of service marking. Color of this marking shall be black, FED-STD-595, color number 17038, except for tactical paint scheme aircraft, where the color requirements specified in 5.2.3 apply.

5.2.6.4 Battle "E". Squadrons selected for the battle "E" are entitled to display a white, FED-STD-595, color number 17925, letter "E" on all assigned aircraft for the length of one competitive cycle following the date of award. The "E" shall be painted on the starboard side of

MIL-STD-2161B(AS)

the aircraft in the vicinity of the cockpit, in a rectangular block type letter not to exceed 8 inches in height and proportional in width. Where the “E” is awarded to the same squadron for consecutive competitive cycles, a service hash mark shall be painted under the letter. This hash mark shall be the width of one stroke and of the same color as the “E.” The hash mark shall be 30 degrees to the horizontal from the lower left hand of the “E.” When applied to aircraft with a tactical paint scheme, the color of the “E” and hash mark shall be gray, FED-STD-595, color number 36081 or color number 37038.

5.2.6.5 Safety “S”. Squadrons winning this award are authorized to display an “S” for safety marking on their aircraft. Authorization shall extend through the calendar year subsequent to the year for which the award was won. An appropriate hash mark is approved only for squadrons who are repeat winners in consecutive years. The “S” for safety shall be white, FED-STD-595, color number 17925, or black, FED-STD-595, color number 17038, and shall be of an appropriate size not more than 8 inches in height. It is to be displayed under the squadron insignia (when used) and shall not interfere with required markings. For tactical paint schemes, the color of the “S” shall be gray, FED-STD-595, color number 36081. Lettering shall be in accordance with 5.2.1.1. Consecutive year marking shall be accomplished in the same way as the battle “E” hash mark (see 5.2.6.4).

5.2.6.6 Hospital aircraft red cross. When aircraft are assigned air evacuation or hospital duty, this marking is mandatory. It shall be centered on both sides of the vertical tail surface, above the horizontal stabilizer, in the space normally allotted to the unit identifier. It shall also be placed on the upper surface of the right wing with the center of the marking at a distance from the wing tip equal to one third of the distance from the fuselage to the wing tip, and in a similar location to the national insignia of the opposite wing, and on the under surface of the right wing, located symmetrically between the national insignia and fuselage. Hospital aircraft shall be identified by a Geneva Red Cross consisting of a symmetrical glossy insignia red cross, FED-STD-595, color number 11136, on a glossy white disc, FED-STD-595, color number 17925 (see Appendix A, Figure A-19). The insignia shall consist of five red squares arranged in the form of a symmetrical cross, centered inside the white circumscribed circle. The length of the red cross shall be 15/19 of the diameter of the circumscribed circle. The diameter of the circumscribed circle shall be 2/3 of the mean chord of the vertical tail surface.

5.2.6.7 Aircraft pilot and crew chief names. The names of the regular aircraft pilot and/or the aircraft crew chief may be applied to the fuselage side below the aircraft transparency at the option of the Type Commander. Block lettering 2-inches high in black, FED-STD-595, color number 17038, shall be used for these markings. For tactical paint schemes, the color requirements specified in 5.2.3 shall apply.

5.2.6.8 NAVAIR logo. The application of this marking is a symbol of Naval Air Systems Command’s commitment to support the Fleet. It will be displayed proudly to identify the promise of delivering the world’s best technology to the Warfighter. The logo will be displayed as a secondary, not mandatory, marking and as such is the responsibility of NAVAIR to be applied during acquisition or at otherwise scheduled Depot inductions. It is not a

MIL-STD-2161B(AS)

requirement to maintain the logo once it is introduced to the fleet. See Appendix A, Figure A-21.

5.2.6.8.1 Color. The lettering, the oval, and the lightning bolt shall be applied in black, FED-STD-595, color number 17038. For tactical paint scheme aircraft, the color requirements specified in 5.2.3 shall apply.

5.2.6.8.2 Location. Two inches, centrally located, above or below the external finish specification, depending on aircraft configuration. Note: the logo shall be applied to the starboard side of the aircraft only, similar to the external finish specification.

5.2.6.8.3 Size. The size of the letters shall be 1/2-, 1-, or 2-inches in height. The logo's aspect ratio is 12.45 inches in length per 1-inch letter height. The oval and lighting bolt shall be proportionally larger than the letter height. This size also applies to aircraft with the tactical paint scheme.

5.2.6.8.4 Letter font. The logo uses a Blank Gothic Md Bt – medium type font and has set spacing between characters and therefore shall not follow 5.2.1.1. However, the logo shall conform to 5.1.3.1 and 5.2.4.

5.2.7 Special purpose marking for U.S. Navy aircraft. Unless otherwise specified, the dimensions, colors, and materials shall also apply to special purpose markings. Due to variance in equipment configuration and restrictions in the uses of some markings, special purpose markings may or may not be applicable to all aircraft. However, when applicable and authorized for use, special purpose markings shall be applied in the dimensions, colors and locations as specified herein.

5.2.7.1 Identification of American Legation U.S. Naval Attaché (ALUSNA) aircraft. The marking for naval attaché also applies to naval mission. Either marking may be applied, as applicable.

5.2.7.1.1 Fuselage marking. The U.S. Navy marking shall be located on the fuselage in the same place as for the transport aircraft (see 5.2.2.4). The lettering shall be the largest possible size that can be accommodated on the aircraft, selected from 5.2.

5.2.7.1.2 Naval attaché fuselage marking. ALUSNA markings may be deleted on the basis of local, diplomatic, or other considerations. Fuselage markings for ALUSNA aircraft shall consist of the following words: "UNITED STATES NAVAL ATTACHÉ TO (NAME OF COUNTRY)." For the benefit of foreign personnel, the same wording in the language of the country to which the attaché is accredited shall be placed approximately 2-inches below the American wording. This foreign language inscription shall be applied under the supervision of personnel who have a thorough knowledge of the foreign language involved. In the event that there is more than one form of script of the foreign language, the selection shall be determined by the foreign country. All letters shall be painted or stenciled in white on a dark background or in black on a light background.

MIL-STD-2161B(AS)

5.2.7.1.2.1 Location. The attaché fuselage marking shall be forward on the aircraft, approximately under the pilot's cockpit, on both sides of the fuselage. For C-2A and larger aircraft, the English language inscription shall be located above the centerline of the fuselage and the foreign language inscription shall be located below the centerline of the fuselage. For smaller aircraft, the English and foreign language inscriptions shall be located just below the pilot's window.

5.2.7.1.2.2 Size. For C-2A and larger aircraft, the lettering of the English and foreign language inscription shall be 4-inches high. For smaller aircraft, the size of the lettering shall be reduced proportionately.

5.2.7.1.3 Naval attaché wing marking. The wing marking for attaché aircraft shall consist of an American flag, conforming to Appendix A, Figure A-18.

5.2.7.1.3.1 Location. The American flag shall be located on the underside of the left wing, approximately under the national insignia on the topside of the left wing. The branch of service marking shall not be used on the wing for ALUSNA aircraft. The flag shall be centered and applied so that an observer on the ground, with airplane approaching, shall view the flag with the blue field forward and to his left, and with the stripes extending outboard. If more positive identification is required because of local conditions or other considerations, an additional American flag may be applied to the topside of the right wing on an interim basis. This flag shall be removed when local considerations permit. The flag size shall be the same as that applied to the underside of the left wing and shall be located approximately over the national insignia on the underside of the right wing.

5.2.7.1.3.2 Size. The flag markings shall use a length-to-height ratio of 1.9-to-1.0 (for example, 36-inches long by 19-inches high), in accordance with standard American flag requirements. In no case, however, shall the width exceed 75 percent of the distance between the leading edge of the wing and the aileron cutout at the point of application. In all cases, the largest size flag, which can be accommodated on the wing, shall be used.

5.2.7.1.4 Naval attaché vertical stabilizer marking. The vertical tail surface marking for naval attaché aircraft shall consist of an American flag.

Note: At the discretion of cognizant commands, American flags, similar to the configuration specified for ALUSNA aircraft, may be applied (except on tactical paint scheme aircraft) on both sides, or on the two outboard sides of the vertical tail surface of transport aircraft performing diplomatic missions, VIP missions, or for other important considerations. Such markings shall be deleted after their purpose has been served.

5.2.7.1.4.1 Location. The American flag shall be positioned horizontally and in such a manner that the union shall be uppermost on both sides of the vertical tail surfaces. For aircraft having multiple vertical tail surfaces, the flag shall appear only on the two outboard sides. On both sides of the aircraft, the flag shall be applied with the blue field forward and the stripes

MIL-STD-2161B(AS)

extending aft. The bars of the flag shall appear to be trailing at all times. The flag shall be centered on the surface and placed above all other markings (see Appendix A, Figure A-18).

5.2.7.2 Standard American flag sizes. The following standard sizes (length by height) are examples of American flag markings used on U.S. Navy aircraft (see Appendix A, Figure A-18):

- a. 36 x 19 inches
- b. 40 x 21 inches
- c. 48 x 25 inches
- d. 60 x 31.4 inches

The flag or national insignia/emblem of any country, other than the United States of America, shall not be displayed on any U.S. Navy or Marine Corps aircraft for any reason.

5.2.7.3 Presidential and VIP helicopters. For layout and description of markings required on presidential helicopters, refer to Appendix D, Figure D-7. For VIP helicopters, refer to Appendix D, Figure D-15.

5.2.8 Marking of foreign aircraft. Aircraft procured by foreign countries through the Department of Defense shall be marked in accordance with this standard, except that the U.S. national insignia shall be replaced with the foreign country's national insignia. National insignias for various countries are provided in Appendix E.

5.2.9 Access panel identification. Exterior aircraft panels, plates, and access doors which require opening or removal at the time of inspection or overhaul shall be identified by the access numbering system in accordance with MS90327.

5.2.10 Walkways and honeycomb panels. Walkways and honeycomb panels shall be marked as specified in 5.2.10.1 thru 5.2.11.

5.2.10.1 Walkways and steps. In cases where they do not contrast in color with adjacent areas, walkway areas shall be bounded by a camouflage black line, FED-STD-595, color number 37038 for a light background or a camouflage white line, FED-STD-595, color number 37925 for a dark background, 1/2-inch wide, and marked with the word "WALKWAY" at sufficiently frequent intervals to indicate the walkway area. Steps shall be suitably indicated at all points on the aircraft. For exterior walkway areas on tactical paint scheme aircraft, the color requirements of 5.2.3 shall apply.

5.2.11 Honeycomb panels on airplanes. Honeycomb panels (thin skin) for wing upper surfaces shall be distinctly marked by a 1-1/2 inch wide stripe of hash marks; each hash mark shall be 2-inches long, measured along the stripe with 2 inches between marks. The marks shall slope 45 degrees. The markings shall be painted on, with a material that is compatible with the finish on the aircraft, in the area of application. For exterior markings on honeycomb panels used on tactical paint scheme aircraft, the color requirements of 5.2.3 shall apply.

MIL-STD-2161B(AS)

5.2.12 Marking of loose and jettisonable equipment. The following loose equipment shall be marked in a contrasting color, using a stencil or other suitable marking, with the call numbers: life rafts; tool kits peculiar to the airplanes; aircraft covers, (e.g., engine covers, dust covers, etc.), equipment specifically calibrated for the airplane, such as drift meters, tuning units, etc., and jettisonable equipment such as canopies, wing tanks, and ejection seats. Ejection seats shall include abbreviation of the operator, such as PLT, CO-PLT, NAV. For tactical paint schemes, the color requirements specified in 5.2.3 shall apply.

5.2.13 Dinghy (raft) release and flotation controls. Operating handles and levers shall be striped orange-yellow and black alternating lines; the title and operating instructions shall be orange-yellow. The letters of titles shall be at least 1-inch high and the letters of operating instructions not less than 1/2-inch high. If the control is in the form of a switch, then the size of the letters may be reduced to a size appropriate to the location. For tactical paint schemes, the color requirements specified in 5.2.3 shall apply.

5.2.14 Workmanship. Insignia and markings shall be uniform in quality and shall be free from irregularities, defects, or foreign material that could adversely affect performance, reliability or durability. Insignia or markings not applied in accordance with acceptable level of workmanship or not in accordance with the requirements of this standard shall be removed and reapplied.

6. NOTES

(This section contains information of a general or explanatory nature that may be helpful, but is not mandatory.)

6.1 Intended use. The purpose of this standard is to specify paint schemes and insignia markings for all U.S. Navy and Marine Corps aircraft, including identification plates for the aircraft and warning and instruction markings.

6.2 Acquisition requirements. Acquisition documents should specify the following:

Title, number, and date of this standard.

6.3 Associated Data Item Descriptions (DIDs). This standard has been assigned an Acquisition Management Systems Control (AMSC) number authorizing it as the source document for the following DID. When it is necessary to obtain the data, the applicable DID must be listed on the Contract Data Requirements List (DD Form 1423).

Reference Paragraph	DID Number	DID Title	Suggested Tailoring
4.3, 5.2.2.1	DI-SESS-81000C	Engineering drawing	Use contractor format

MIL-STD-2161B(AS)

The above DID was current as of the date of this standard. The ASSIST database should be researched at <http://assist.daps.dla.mil/quicksearch/> or <http://assist.daps.dla.mil> to ensure that only current and approved DIDs are cited on the DD Form 1423.

6.4 Toxicity. Some free isocyanate is released during the mixing and application of multi-component polyurethane coatings. Released free isocyanates can produce a significant irritation to the skin, eyes, and respiratory tract. Personnel exposed to free isocyanates may develop an allergic pulmonary sensitization, particularly if there is an inhalation of the vapor and mist produced during spray application. This sensitization may cause an asthmatic reaction with wheezing, dyspnea, and cough. Once sensitized, further exposure cannot be tolerated. For this reason, there is a restriction of the issuance and use of this material. Personnel exposed to free isocyanates on a regular basis should receive a periodic medical exam in accordance with OPNAVINST 5100.23 that includes a chest roentgenograph (X-ray), pulmonary function tests, and an evaluation of any respiratory disease or history of allergy. Periodic testing of pulmonary functions may aid in detecting the onset of pulmonary sensitization.

6.4.1 Personnel protective methods. Eye protection and appropriate clothing to prevent repeated or prolonged skin contact should be worn while applying material that contains free isocyanates. Refer to NAVAIR 01-1A-509 Aircraft Weapon Systems Cleaning and Corrosion Control.

6.5 Subject term (key word) listing.

Aircraft color patterns
Emergency warnings
Hazard warnings
Identification
Insignias

6.6 International standardization agreement implementation. This standard implements ASCC AIR STD 25/1, "Pressure Replenishment Connections for Engine Lubricating Oil"; ASCC AIR STD 15/9, "Interchangeability Chart of Standardized Aviation Fuels, Lubricants, and Allied Products"; NATO STANAG 3109, "Aircraft Hazard Markings"; and NATO STANAG 1135, "Interchangeability Chart of NATO Standardized Fuels, Lubricants and Associated Products." When changes to, revision, or cancellation of this standard are proposed, the preparing activity must coordinate the action with the U.S. National Point of Contact for the international standardization agreement, as identified in the ASSIST database at <http://assist.daps.dla.mil>.

6.7 Changes from previous issue. Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extent of the changes.

MIL-STD-2161B(AS)

APPENDIX A

STANDARD MARKING, EMERGENCY AND HAZARD WARNING MARKINGS FOR AIRCRAFT

A.1 SCOPE

A.1.1 Scope. This appendix specifies the design of standard markings (including the national insignia), emergency, and hazard warning markings for fixed wing and rotary wing aircraft. This appendix is a mandatory part of this standard. The information contained herein is intended for compliance.

A.2 APPLICABLE DOCUMENTS

A.2.1 General. The documents listed in this section are specified in section A.3 of this standard. This section does not include documents cited in other sections of this standard or recommended for additional information or as examples. While every effort has been made to ensure the completeness of this list, document users are cautioned that they must meet all specified requirements of documents cited in section A.3 of this standard, whether or not they are listed.

A.2.2 Government documents.

A.2.2.1 Specifications and standards. The following specifications and standards form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those cited in the solicitation or contract.

FEDERAL SPECIFICATION

DDD-F-416 - Flag, National, United States of America,
and Flag, Union Jack

DEPARTMENT OF DEFENSE SPECIFICATION

MIL-F-18264 - Finishes, Organic, Weapons System, Application and
Control of

(Copies of these documents are available online at <http://assist.daps.dla.mil/quicksearch> or <http://assist.daps.dla.mil> or from the Standardization Document Order Desk, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094.)

MIL-STD-2161B(AS)

APPENDIX A

A.2.3 Order of precedence. In the event of a conflict between the text of this document and the references cited herein, and unless described as an exception, the text of this document takes precedence. Exceptions to this order of precedence include aircraft detail specifications, aircraft drawings, and aircraft manuals. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

A.3 GENERAL REQUIREMENTS

A.3.1 National insignia.

A.3.1.1 National insignia design. The design of the national insignia shall conform to the requirements of this standard. As illustrated in Figure A-1, it shall consist of an insignia-white, five-pointed star inside an insignia-blue circumscribed circle. A white rectangle, one radius of the blue circle in length and 1/2 radius of the blue circle in width, shall be located on each side of the star. The top edges of the rectangle shall be placed to form a straight line with the top edges of the horizontal two star points beneath the top star point. An insignia-red horizontal stripe, 1/6 the radius of the star, shall be centered in the white rectangles at each end of the insignia. A blue border, having a width of 1/8 the radius of the blue circle, shall outline the entire design except that when the insignia is to be applied on a sea blue, dark blue, or black background, the blue circle and border may be omitted. The inside edge of each interior rectangle shall be concave, and shall have the same arc as the inside blue circle. The inside edge of each outer rectangle shall not be depicted.

A.3.1.1.1 Size. The blue circle of the insignia for wing application, exclusive of border, shall have a maximum diameter of 40 inches and a minimum diameter of 10 inches. Sizes may vary by 5-inch increments in diameter. The blue circle diameter selected shall be the size that is closest to, but does not exceed, 50 percent of the distance between the leading edge of the wing and the aileron cutout at the point of application. For fuselage application the blue circle shall have a maximum diameter of 40 inches and a minimum diameter of 10 inches. The diameter selected for fuselage application shall be closest to but not exceeding that which is 50 percent of the height of the projection of the fuselage or hull side. The most practical diameter shall be selected for helicopters and tilt rotor aircraft.

A.3.1.1.2 Color. The standard colors of the national insignia are insignia red, FED-STD-595, color number 11136, insignia white, FED-STD-595, color number 17925, and insignia blue, FED-STD-595, color number 15044. Corresponding semi-gloss or lusterless finishes of the above listed gloss colors may be used to match adjacent surfaces only when specified by the procuring activity. For tactical paint schemes the color requirements specified in 5.2.3 shall apply.

A.3.1.1.3 Application. Application of the national insignia by painting shall be in accordance with MIL-F-18264. When applying the national insignia by painting, a stencil shall

MIL-STD-2161B(AS)

APPENDIX A

be used to produce a sharp outline. The insignia shall be applied with coatings compatible with the finish applied to adjacent surfaces. Decals may be used in lieu of paint for application of the national insignia (see A.3.1.5). The national insignia shall be so applied on horizontal surfaces that, in the normal flight attitude of the aircraft, the top star point of the insignia points forward, and a line through that point and the star's center is parallel to the line of flight, except for the swept wing or variable sweep wing configurations. On these aircraft, the national insignia shall be placed so that it will not extend onto flaps, slats, or control surfaces (see Figure A-2). The constant 50 percent chord line of the wing shall pass through the center of the star. For fuselage application, the insignia shall be placed so that the top star point points upward, and a line through that point and the star's center is perpendicular to the line of flight.

A.3.1.2 Wing insignia. On fixed wing aircraft, the national insignia shall be applied to the upper surface of the left wing, on the lower surface of the right wing, and on the fuselage, as shown in the figures of Appendix C. The insignia shall be placed at a distance from the wingtip equal to $1/3$ of the distance from the fuselage to the wingtip, measured from the center of the insignia. It may be moved inboard where impractical. The insignia shall not be applied to the wings of research aircraft when interference with aerodynamics can result. The size selected shall be that which is closest to, but does not exceed, 50 percent of the distance between the leading edge of the wing and the aileron cutout at the point of application. The wing insignia or other markings shall be omitted from the underside of wings or other surfaces on which thermal-resistant finishes are applied.

A.3.1.3 Fuselage or hull insignia. On fixed wing aircraft, the national insignia shall be applied to each side of the fuselage or hull. These locations are illustrated in the figures in Appendix C. The fuselage or hull insignia may extend over doors and emergency exits, but shall not extend over windows or openings used during combat. For aircraft with a tactical paint scheme the insignia shall be 12 inches in diameter of a contrasting color, and placed as directed by the applicable Naval Aviation Depot directive.

A.3.1.4 Rotary wing aircraft insignia. Four national star insignias shall be applied to rotary wing aircraft, so as to be visible from either side and from above and below (see Appendix D). If the configuration permits, an additional insignia may be applied to the nose of rotary wing aircraft for frontal identification. Symmetry of size and location shall be maintained on all like-model series aircraft.

A.3.1.5 Decalcomanias. Decals may be used for all small markings (4 inches or less in size). For interior application, where they should not be affected by weather conditions, and for exterior application on low-performance aircraft, decals may be applied. For exterior application on high-performance aircraft and where subjected to extremes of temperature, speed, and altitude, A-A-59485 shall apply. A-A-59485 decals may be furnished with perforation holes upon request. These decals may be applied only over the complete paint system. Decal

MIL-STD-2161B(AS)

APPENDIX A

application shall not be deleterious to the aircraft surface. Decals shall not be applied over brazier head rivets.

A.3.1.6 Decalcomania letter heights. Letter heights shall be as follows:

Small:	1, 2, 3, 4½, and 6-inches high
Medium:	9, 12, 15, 18, and 21-inches high
Large:	24, 30, 42, and 48-inches high

Decals larger than 48 inches in height may increase by 12-inch increments. Dimensions for letters shall maintain a 1/3 ratio for height, width, and stroke.

A.3.1.7 Tactical paint scheme national insignia. See 5.2.3 and Figure A-1.

A.3.2 Aircraft markings. The following figures illustrate standard (including the national insignia), emergency, and hazard warning for fixed wing and rotary wing aircraft.

******* NOTE: ACTUAL COLORS SHOWN ON ALL ILLUSTRATIONS IN APPENDICES A-D ARE STRICTLY FOR ILLUSTRATIVE PURPOSE. SPECIFIC FED-STD-595 COLOR DESIGNATIONS INDICATED ON THE ILLUSTRATIONS SHALL BE USED. *******

MIL-STD-2161B(AS)

APPENDIX A

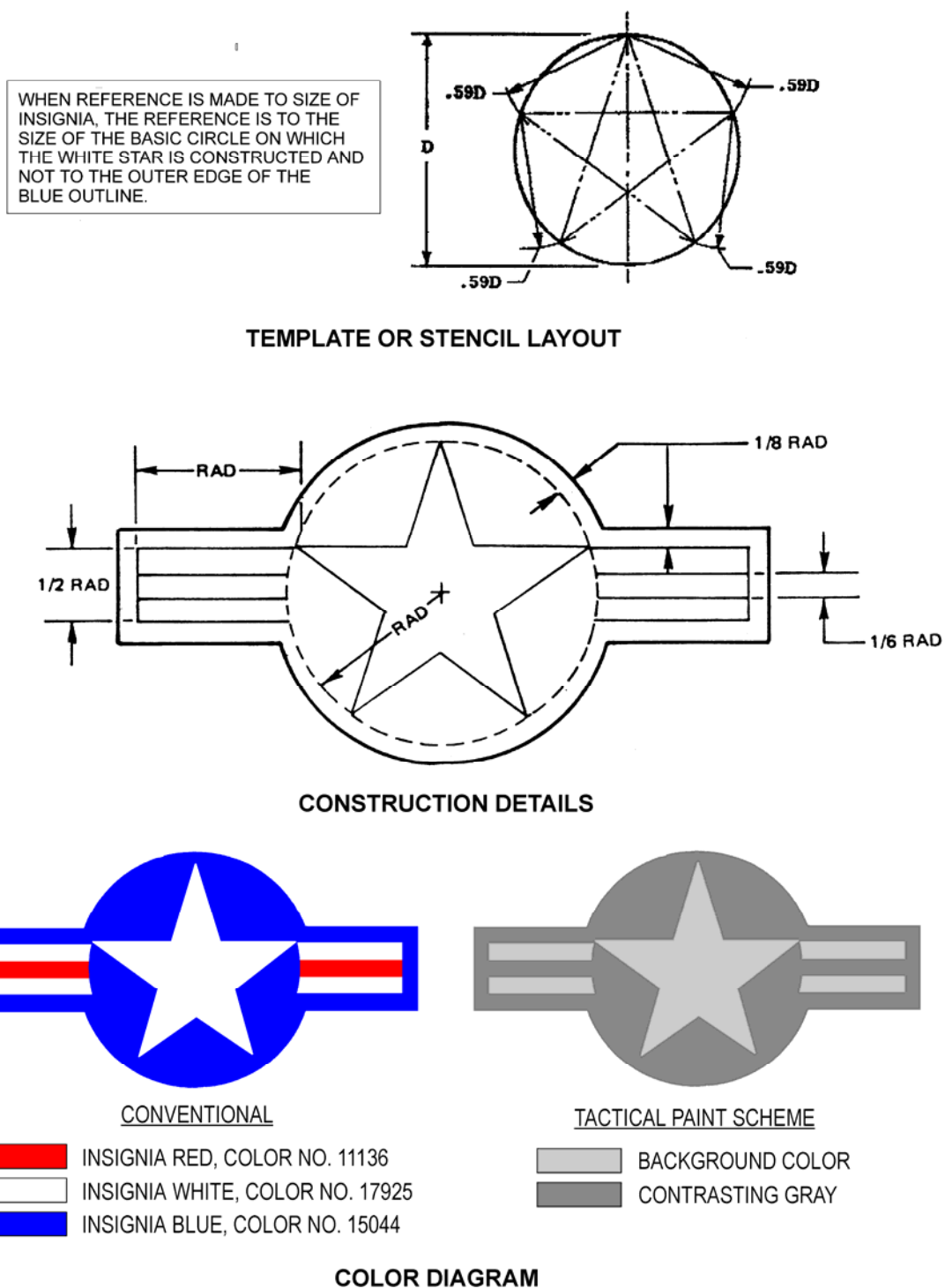


FIGURE A-1. National star insignia.

MIL-STD-2161B(AS)

APPENDIX A

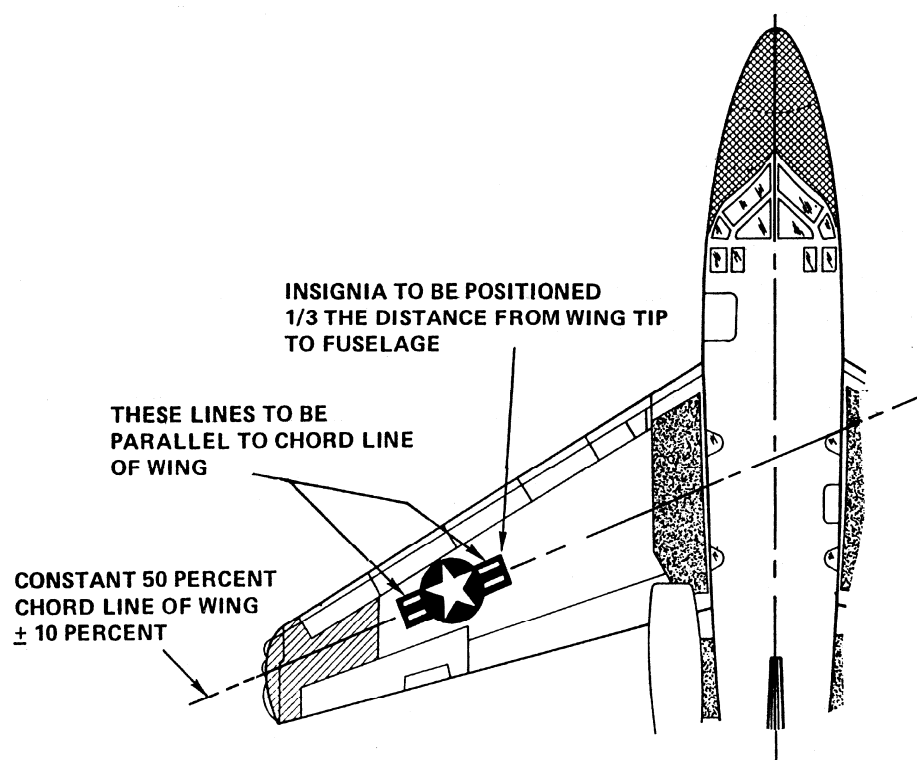


FIGURE A-2. National star insignia on swept wing aircraft.

MIL-STD-2161B(AS)

APPENDIX A

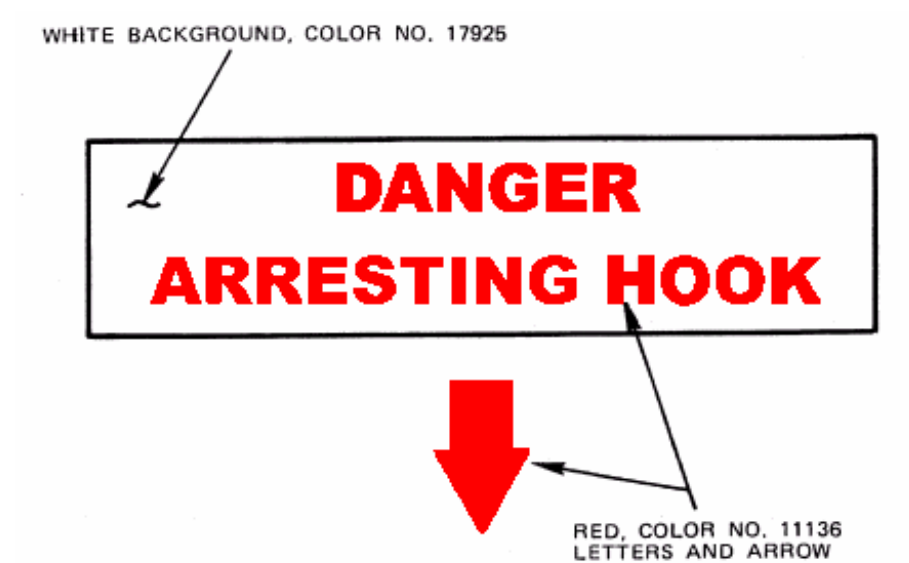


FIGURE A-3. Arresting hook warning.

MIL-STD-2161B(AS)

APPENDIX A

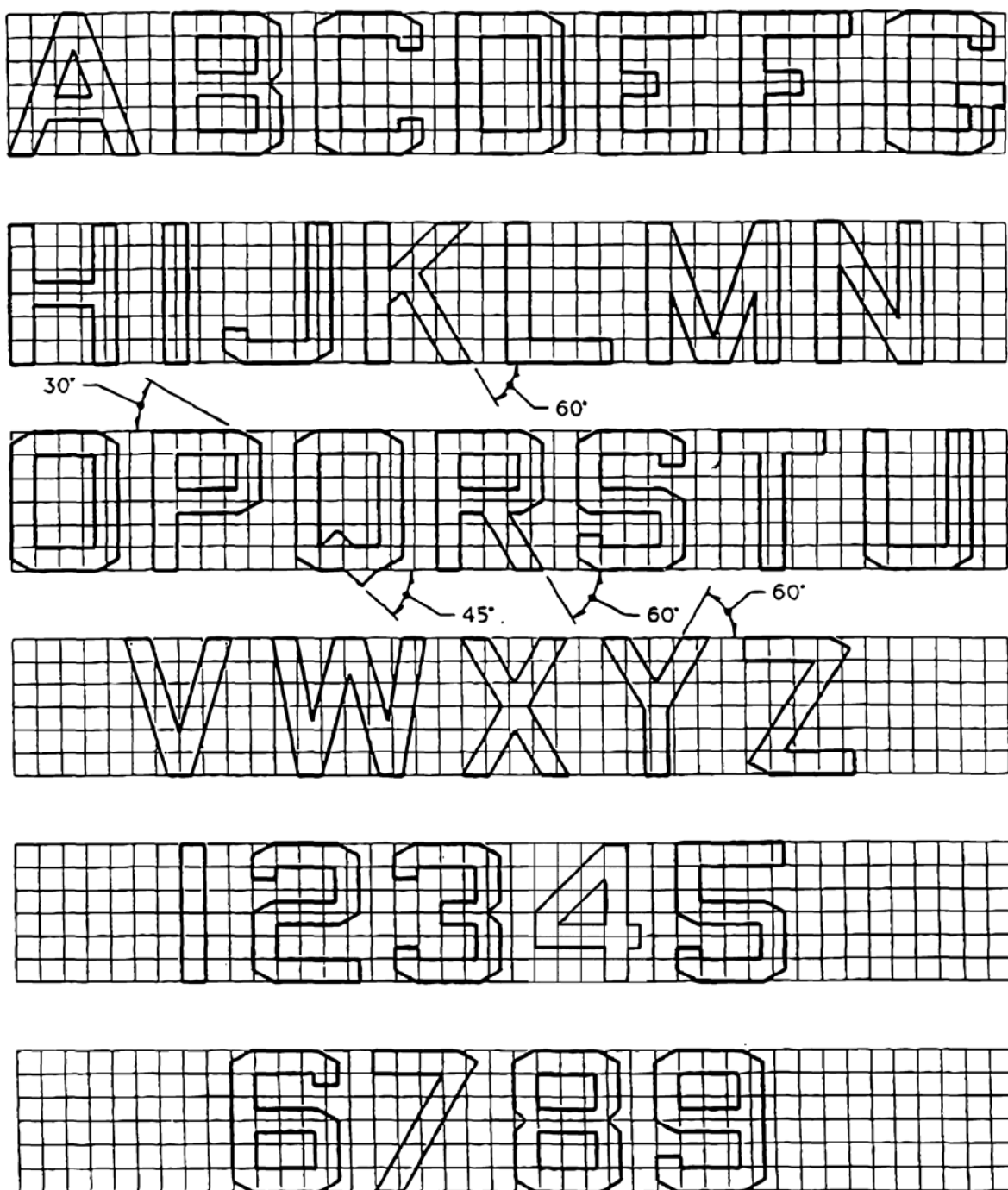


FIGURE A-4(a). Form of letters and numerals (modified vertical block) (See notes following Figure A-4(b).

MIL-STD-2161B(AS)

APPENDIX A

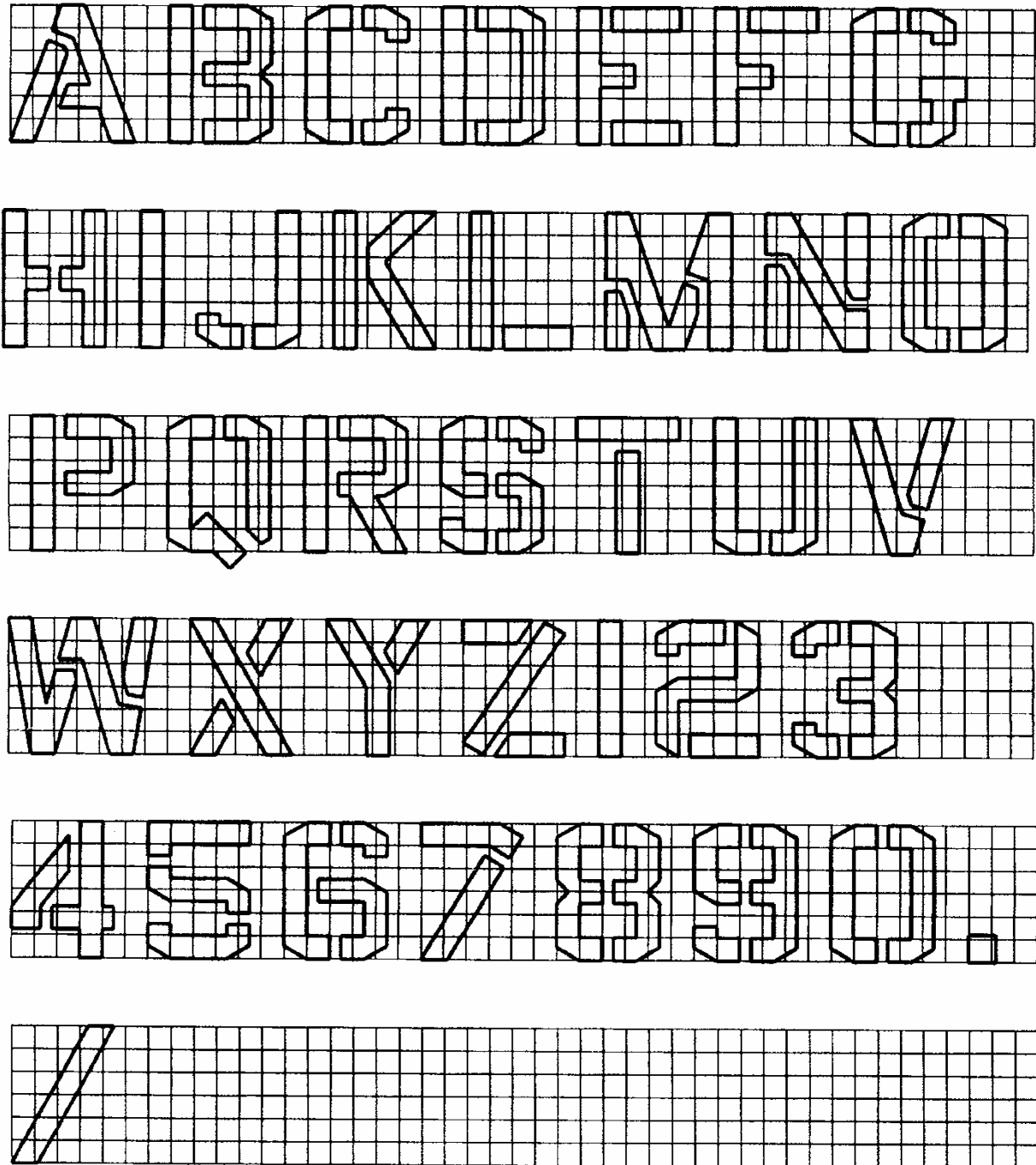


FIGURE A-4(b). Form of letters and numerals (open block – to be used for markings 2 inches high or less) – Continued (See notes following this figure).

MIL-STD-2161B(AS)

APPENDIX A

NOTES FOR FIGURES A-4(a) AND A-4(b):

1. The width of all letters and numbers (characters) shall be measured between the widest points of the characters.
2. The width of the characters is calculated as a percentage of the height. For example, as on the previous page:
 - a. All letters and numerals are 6 blocks high and 4.5 blocks wide; therefore, the width of letters and numerals shall be 75 percent of the height.
 - b. The width of letters A and M shall be 5.5 blocks wide therefore, 92 percent of the letter's height.
 - c. The width of the letter W shall be 6.5 blocks wide therefore, 108 percent of its height.
 - d. The width of the letter G, including the overhang, shall be 5 blocks wide therefore, 83 percent of its height.
3. To obtain the percentage of the height, divide the width of the character by its height.
4. The sides of the characters containing a corner wedge (e.g., B, C, D, G, 2, 3, etc.) shall be made to include an angle of 30 degrees to the horizontal, as shown on the previous page.
5. The spacing between characters shall be $\frac{1}{6}$ of the height of the letter or numeral. This spacing shall be measured from the point on each character nearest the other. An exception to this requirement is when certain characters are coupled such as AV, AW, AY, VA, WA, YA and 74.
6. The dash (-) character width is dictated by the height of the letters and shall be vertically centered. Spacing of the dash and adjoining characters shall be $\frac{1}{6}$ the height of the adjoining characters.
7. All overhangs (letters C, G, S and numerals 2, 3, 4, 9) shall be $\frac{1}{12}$ the character's height.
8. Gothic lettering may be utilized for markings less than 2 inches high.

MIL-STD-2161B(AS)

APPENDIX A

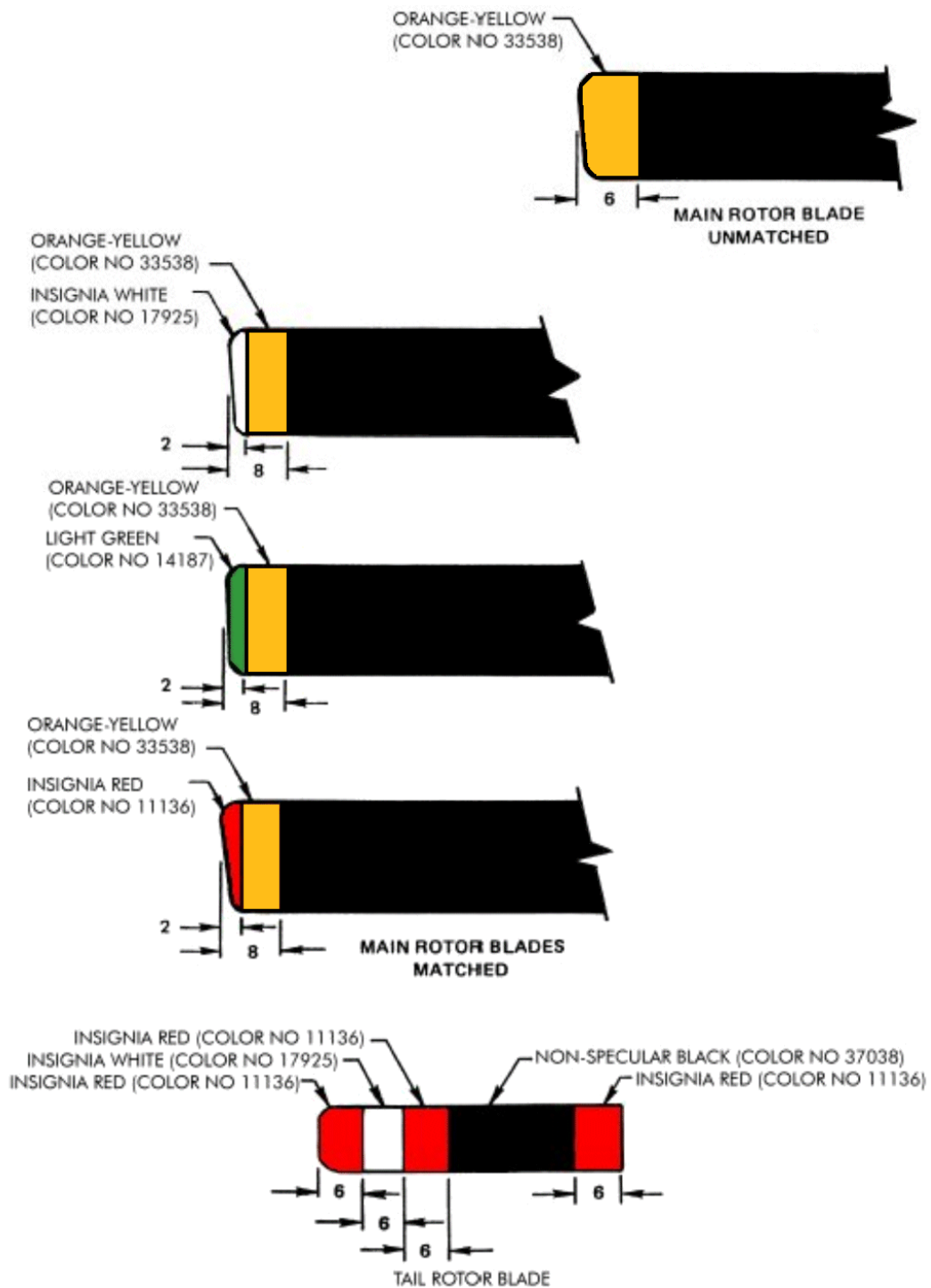


FIGURE A-5. Color scheme for helicopter blades.

MIL-STD-2161B(AS)

APPENDIX A

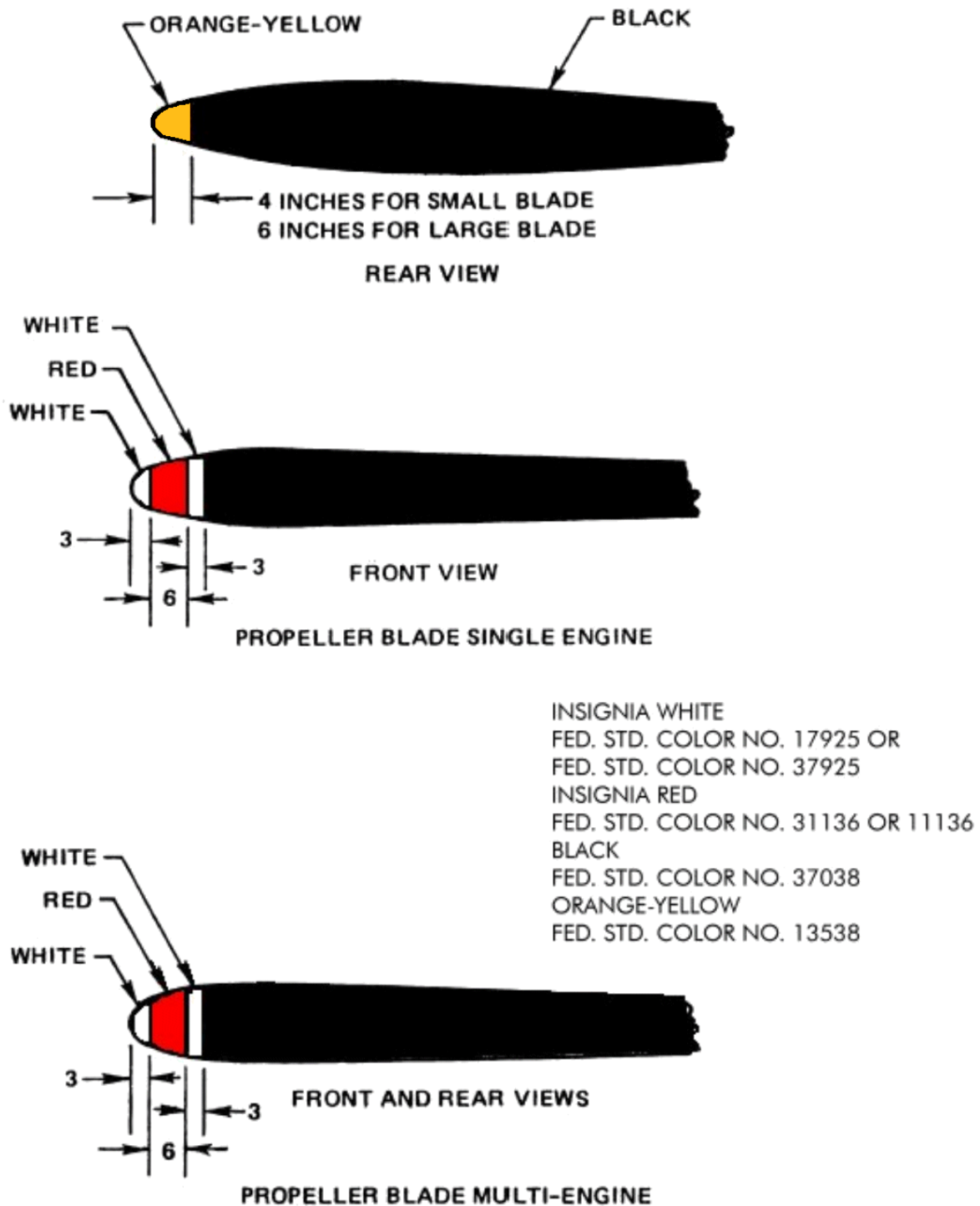


FIGURE A-6. Color scheme for reciprocating single and multi-engine aircraft propellers.

MIL-STD-2161B(AS)

APPENDIX A

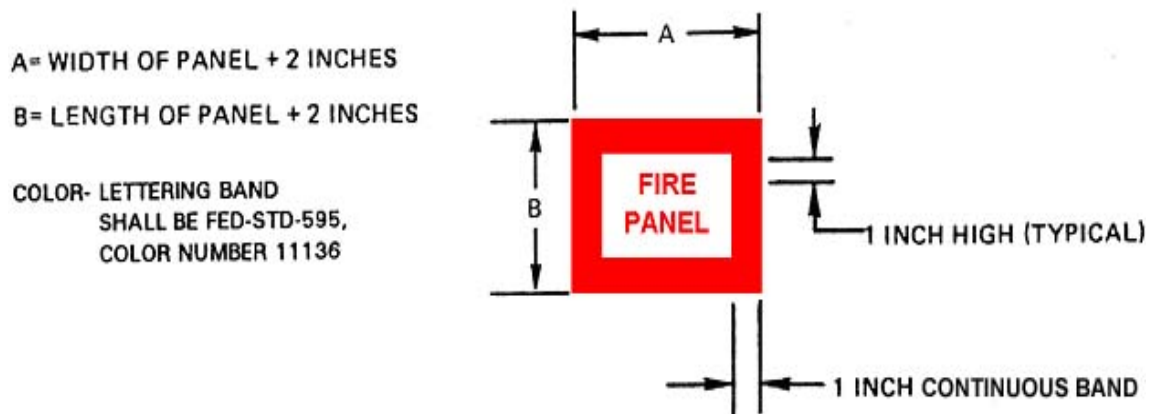
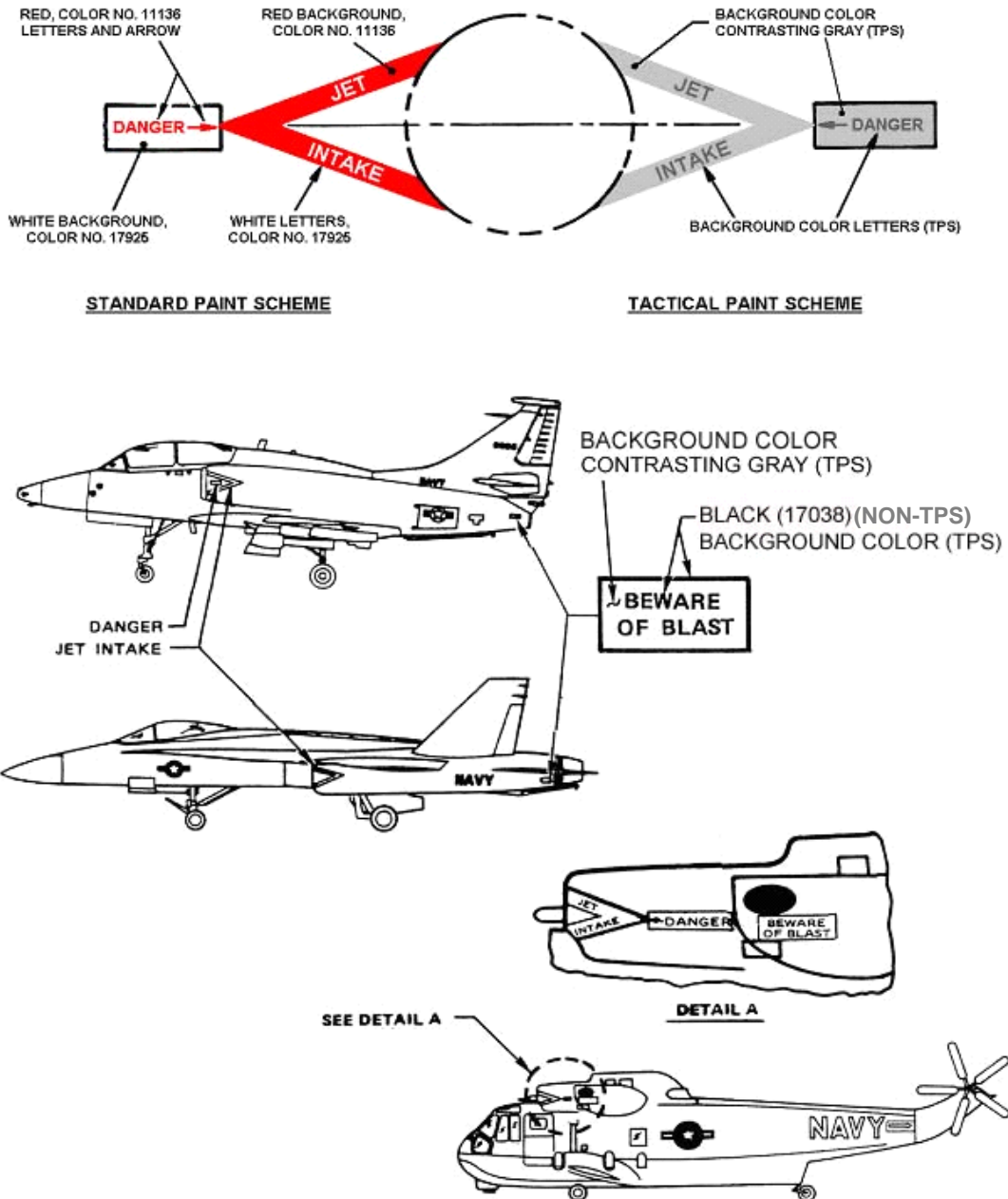


FIGURE A-7. Markings for fire access panel.

MIL-STD-2161B(AS)

APPENDIX A

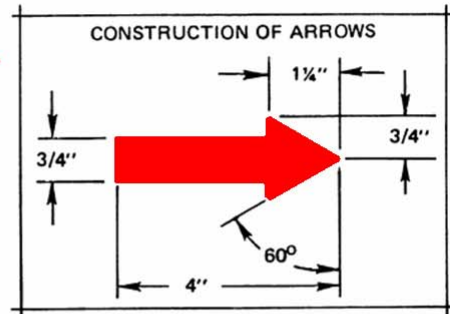
FIGURE A-8. Warning chevron and signs applied adjacent to jet engine intake and exhaust.

MIL-STD-2161B(AS)

APPENDIX A

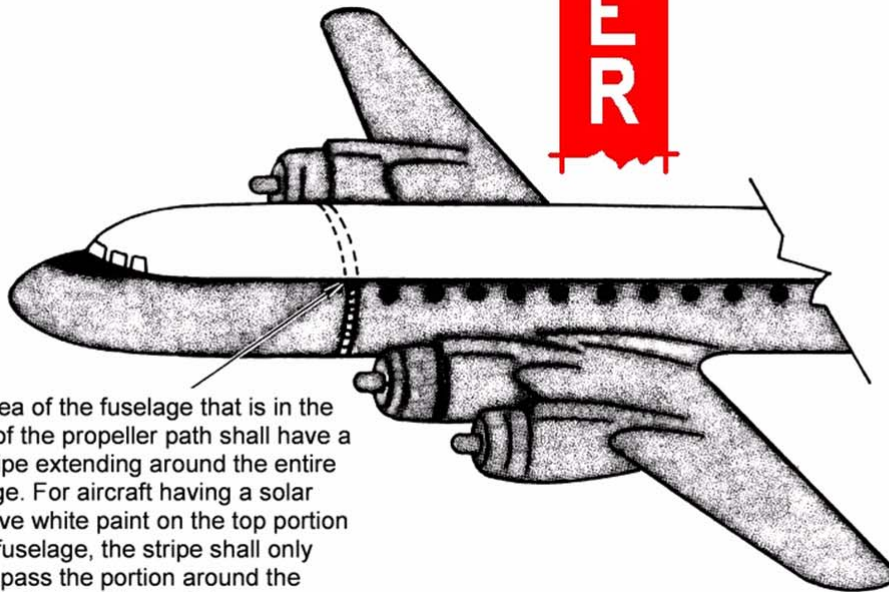
PROPELLER WARNING STRIPES AND SIGNS

INSIGNIA RED, COLOR NO. 11136, CAUTION BAND TO BE 3" WIDE.
 INSIGNIA WHITE, COLOR NO. 17925, LETTERS, SUPERIMPOSED ON BAND, TO BE 2" HIGH.
 INSIGNIA RED, COLOR NO. 11136, WORDS, DANGER, TO BE 2" HIGH.
 INSIGNIA RED, COLOR NO. 11136, ARROWS TO BE 4" LONG.



DANGER →

← **DAN**



The area of the fuselage that is in the plane of the propeller path shall have a red stripe extending around the entire fuselage. For aircraft having a solar reflective white paint on the top portion of the fuselage, the stripe shall only encompass the portion around the fuselage that excludes this area.

FIGURE A-9. Propeller warning stripes and signs.

MIL-STD-2161B(AS)

APPENDIX A

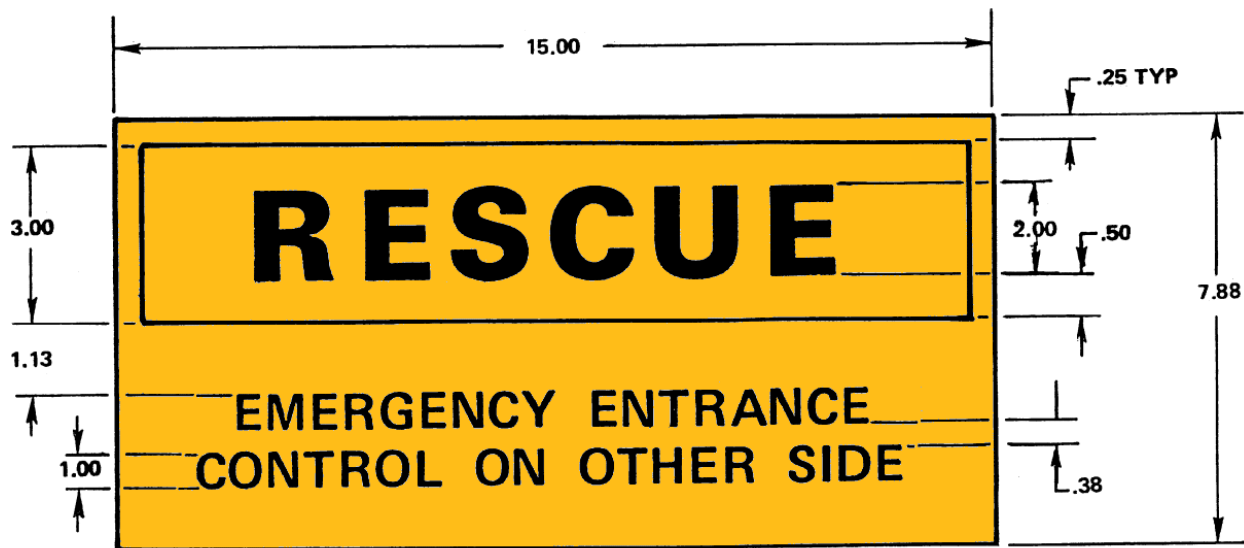


FIGURE A-10. Canopy release location.

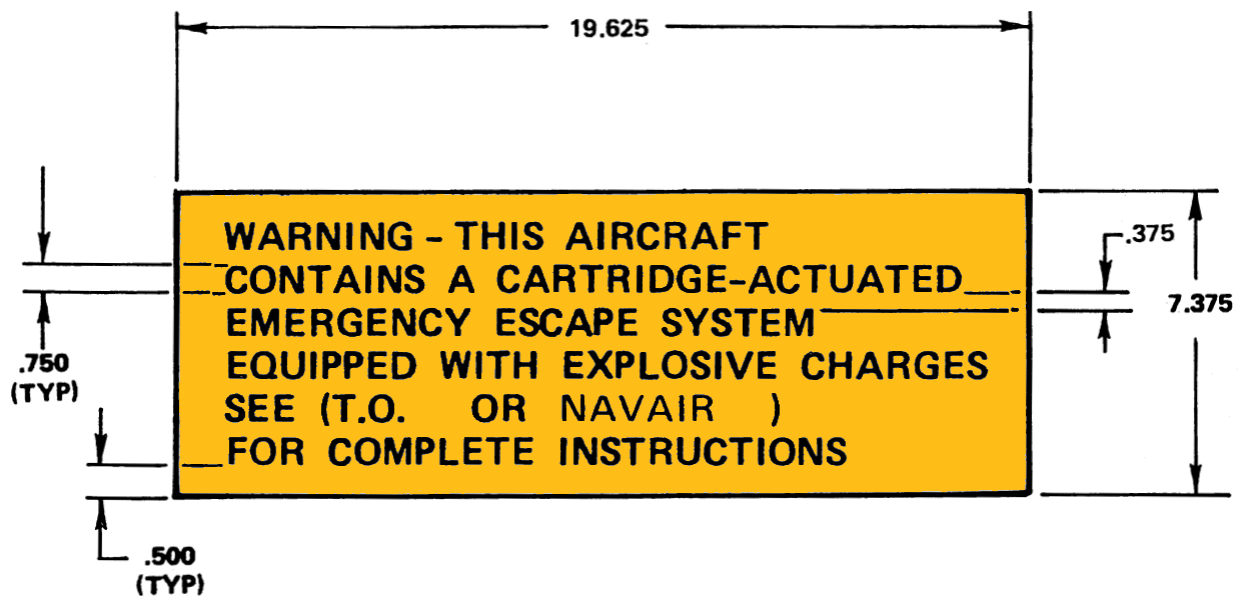


FIGURE A-11. Warning decal.

MIL-STD-2161B(AS)

APPENDIX A

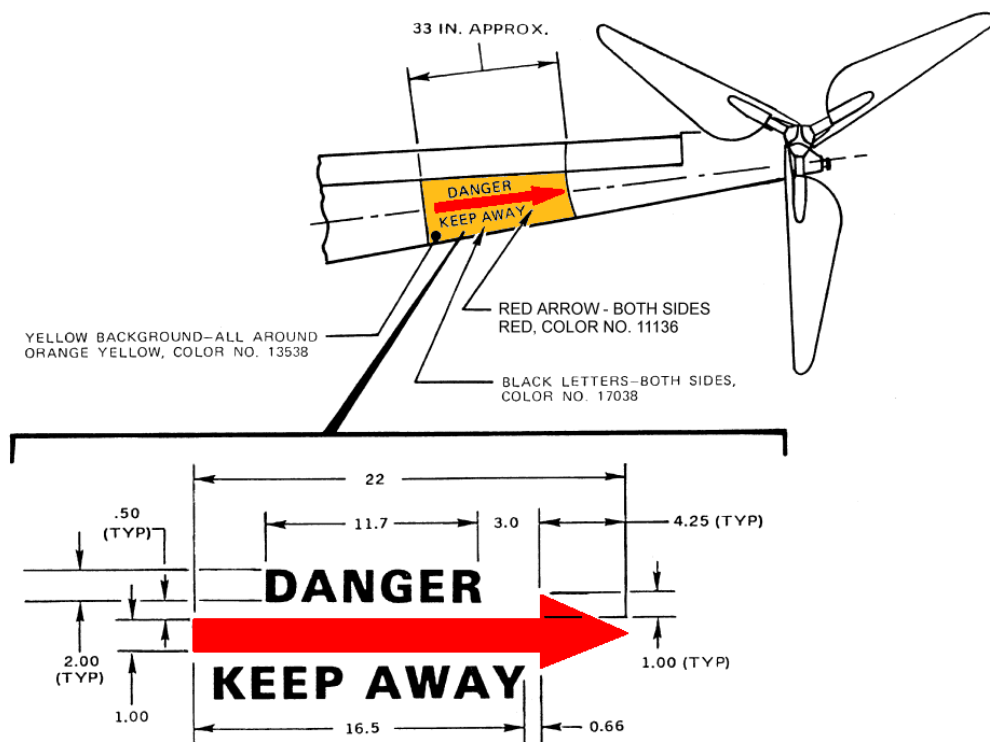


FIGURE A-12. Helicopter tail boom markings.

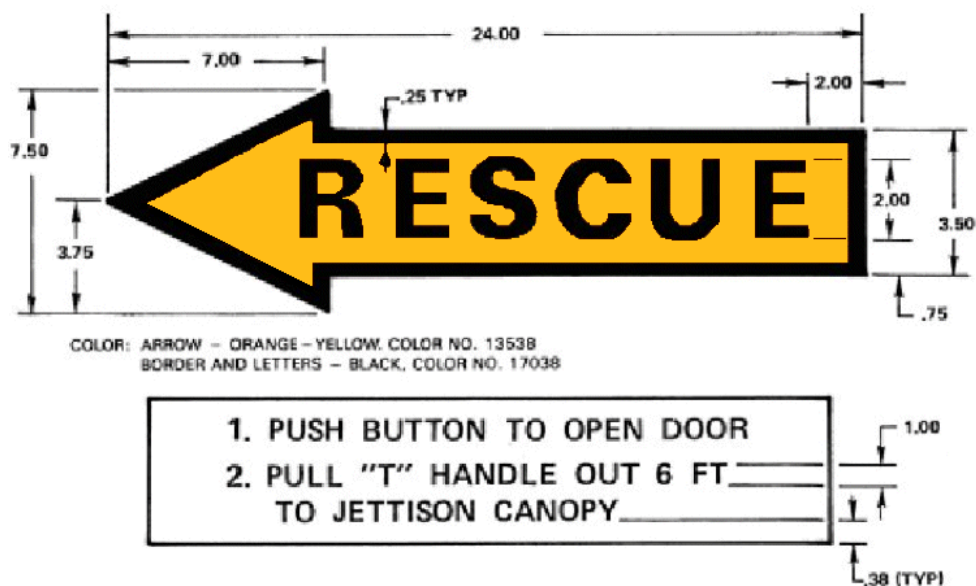


FIGURE A-13. Canopy release markings.

MIL-STD-2161B(AS)

APPENDIX A

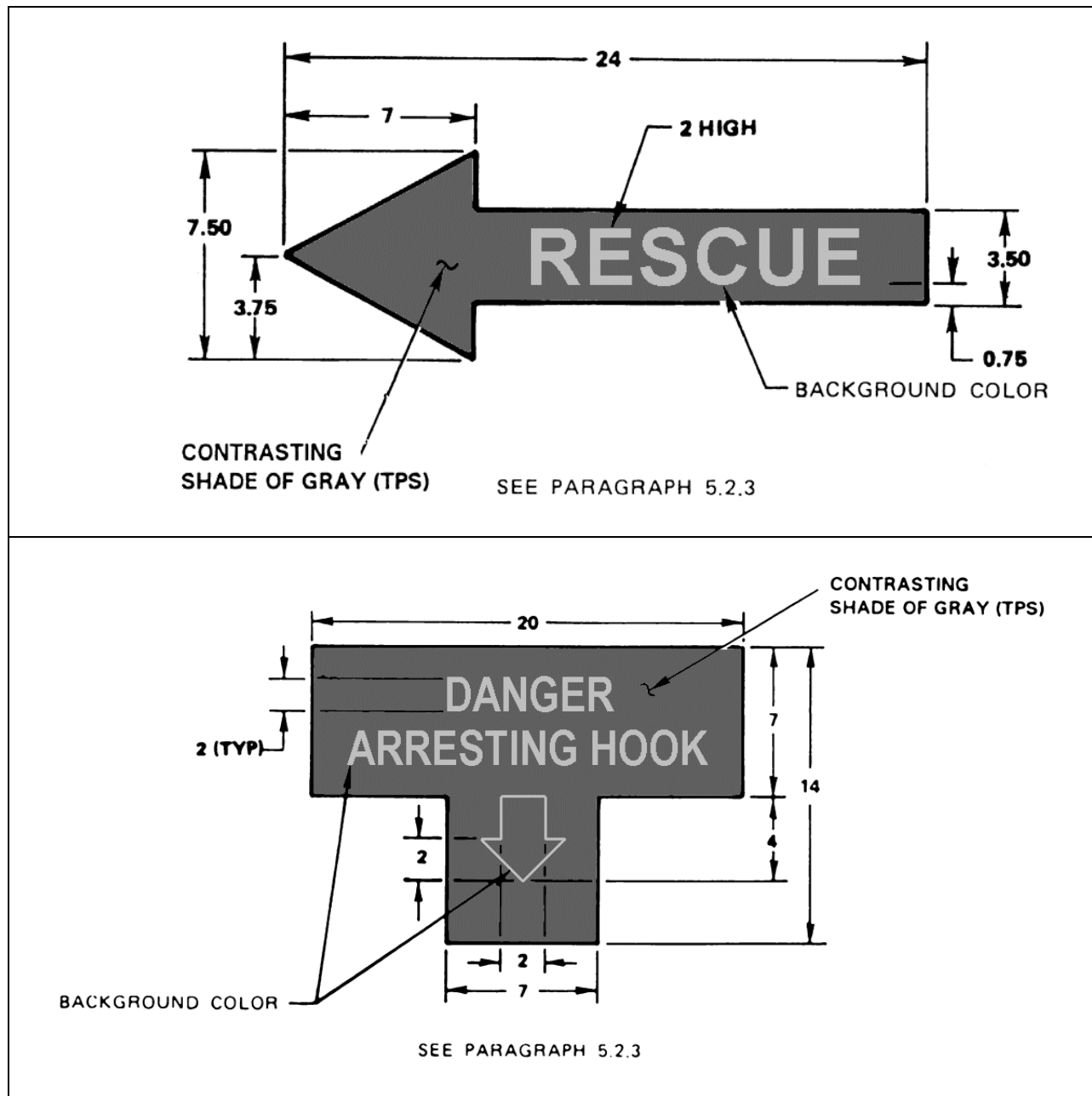


FIGURE A-14. Tactical paint scheme – rescue arrow and arresting hook markings.

MIL-STD-2161B(AS)

APPENDIX A

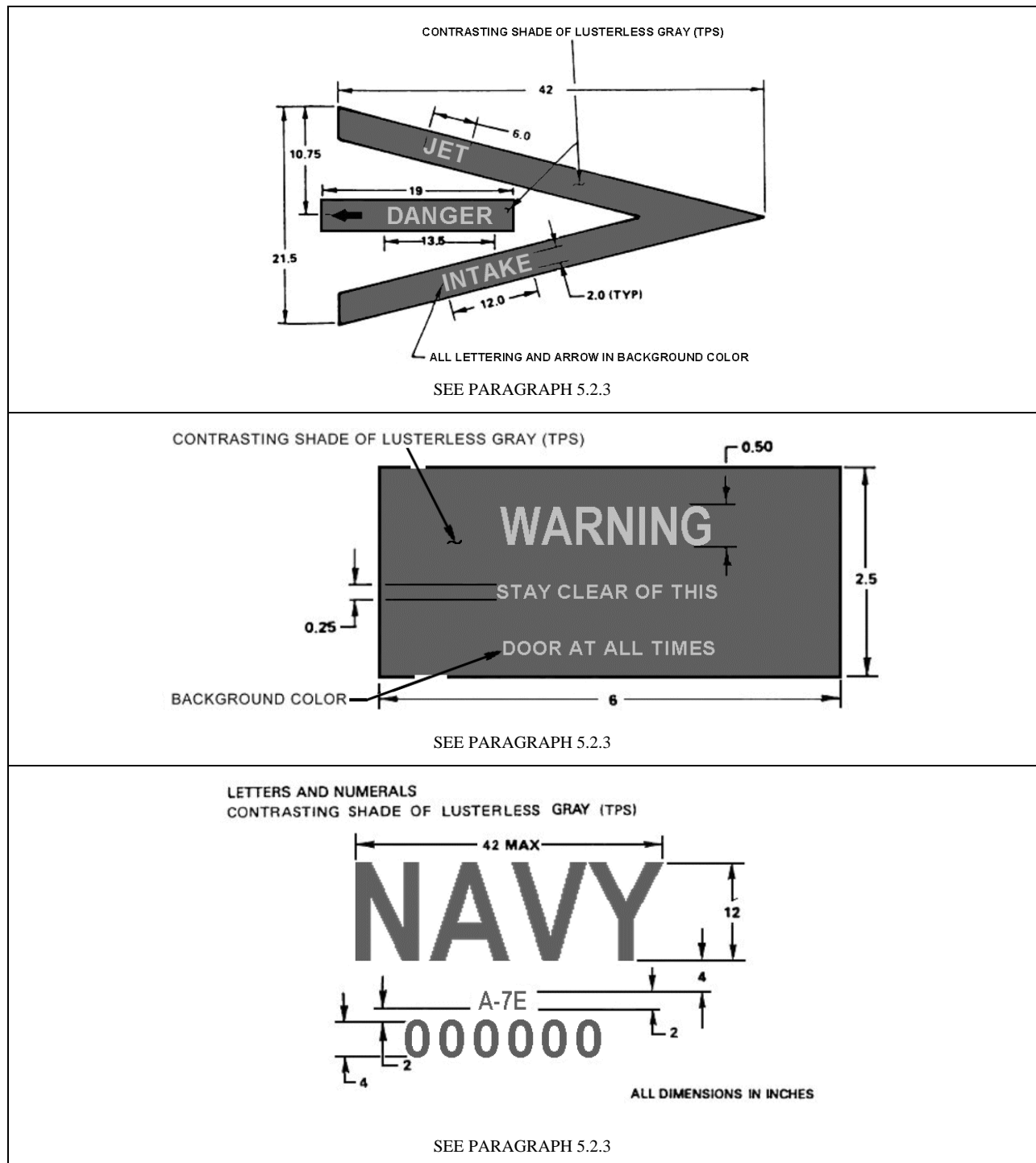


FIGURE A-15. Tactical paint scheme – engine intake chevrons, access door warning and branch of service markings.

MIL-STD-2161B(AS)

APPENDIX A

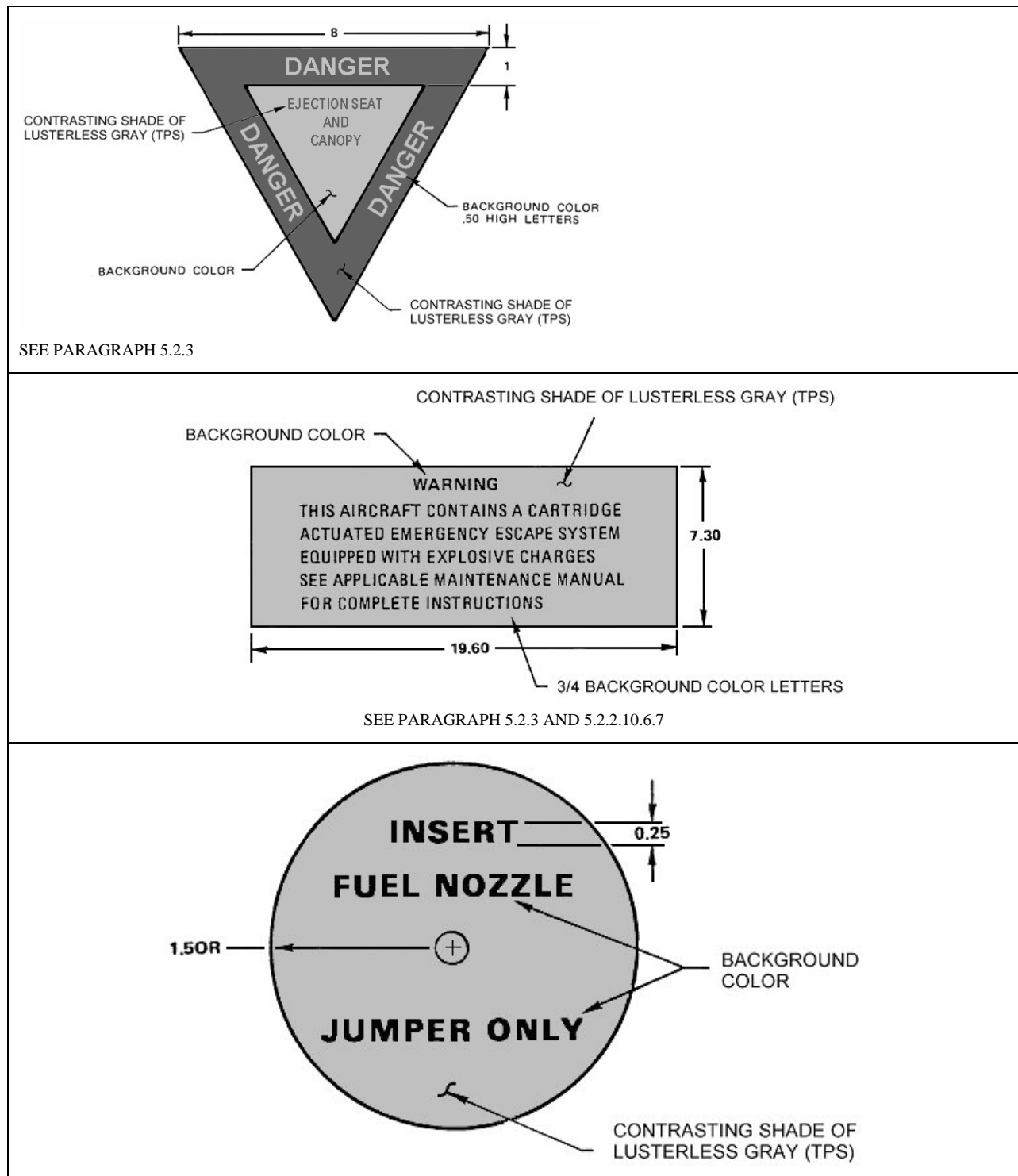


FIGURE A-16. Tactical paint scheme – ejection seat & warning and fuel nozzle port markings.

MIL-STD-2161B(AS)

APPENDIX A

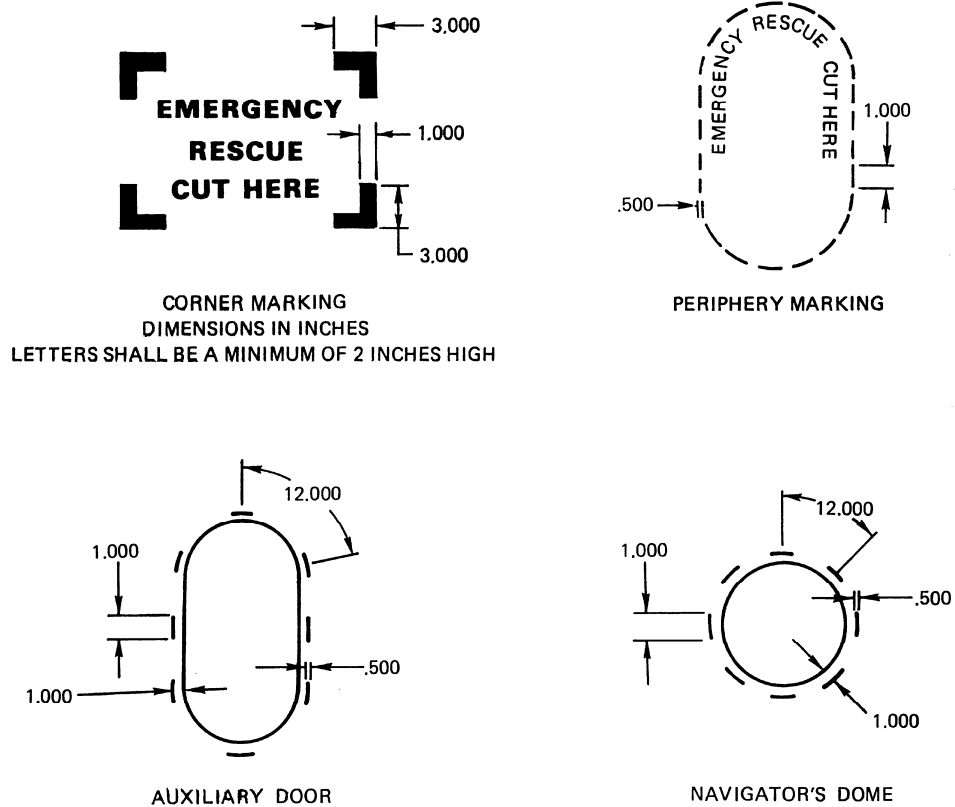


FIGURE A-17. Area cutout markings.

MIL-STD-2161B(AS)

APPENDIX A

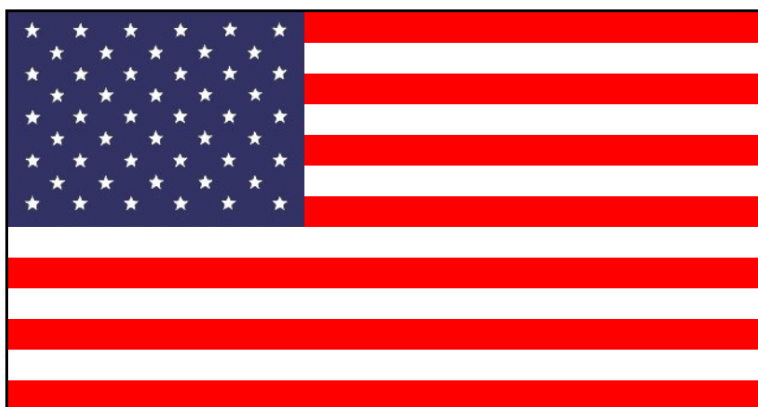


FIGURE A-18. American flag dimensions shall be in accordance with DDD-F-416.

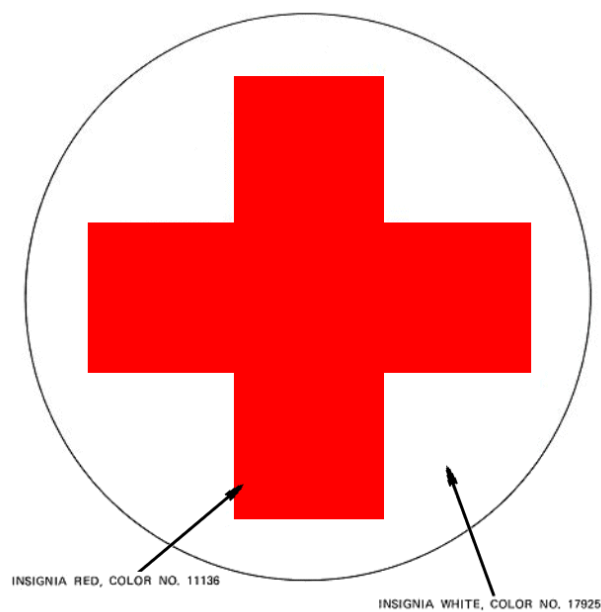


FIGURE A-19. Geneva red cross.

MIL-STD-2161B(AS)

APPENDIX A

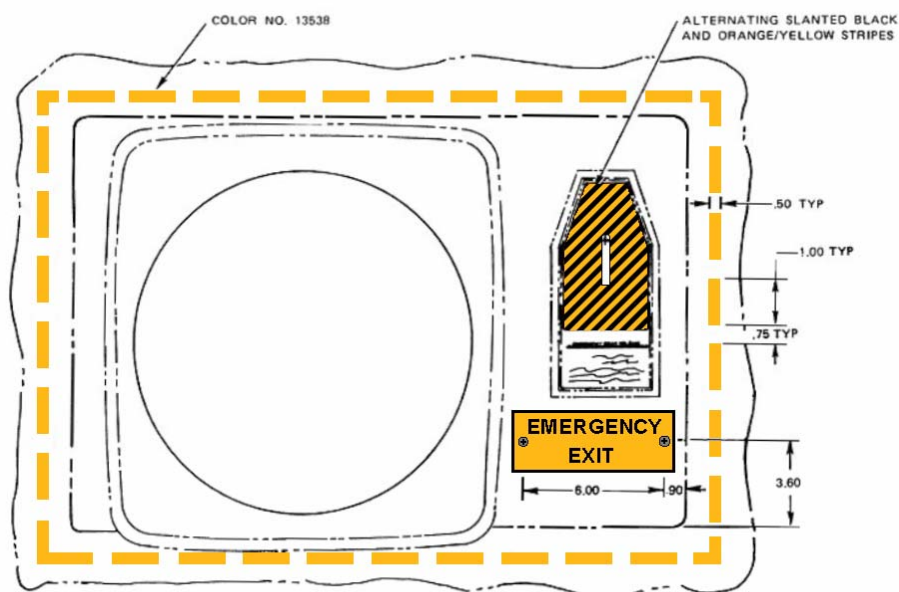


FIGURE A-20. Placard installation-identification, emergency escape hatch.

MIL-STD-2161B(AS)

APPENDIX A



H = ½ inch; L = 6.225 inches

H = 1 inch; L = 12.45 inches

H = 2 inch; L = 24.90 inches

FIGURE A-21. NAVAIR logo.

MIL-STD-2161B(AS)

APPENDIX B

SERVICING, GROUND HANDLING, HAZARD WARNING MARKINGS,
AND ARMAMENT PLACARD FOR AIRCRAFT

B.1 SCOPE

B.1.1 Scope. This appendix specifies aircraft servicing markings and appropriate NATO code number for cross servicing. Hazard warning markings for ground handling are included. This appendix is a mandatory part of this standard. The information contained herein is intended for compliance.

B.2 APPLICABLE DOCUMENTS

B.2.1 General. The documents listed in this section are specified in sections B.3 and B.4 of this standard. This section does not include documents cited in other sections of this standard or recommended for additional information or as examples. While every effort has been made to ensure the completeness of this list, document users are cautioned that they must meet all specified requirements of documents cited in sections B.3 and B.4 of this standard, whether or not they are listed.

B.2.2 Government documents.

B.2.2.1 Specifications and standards. The following specifications and standards form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those cited in the solicitation or contract.

INTERNATIONAL STANDARDIZATION AGREEMENT

NORTH ATLANTIC TREATY ORGANIZATION (NATO)

STANAG 1135 - Interchangeability Fuels, Lubricants and Associated
Products Used by the Armed Forces of the North Atlantic
Treaty Nations

FEDERAL SPECIFICATIONS

O-M-232	-	Methanol (Methyl Alcohol)
SS-G-659	-	Graphite, Dry (Lubricating)
TT-I-735	-	Isopropyl Alcohol
VV-P-236	-	Petrolatum, Technical

COMMERCIAL ITEM DESCRIPTION

A-A-51693	-	Alcohol, Dehydrated, USP
A-A-58092	-	Tape, Antiseize, Polytetrafluorethylene

MIL-STD-2161B(AS)

APPENDIX B

DEPARTMENT OF DEFENSE SPECIFICATIONS

MIL-C-4339	-	Corrosion Preventive, Soluble Oil for Water Injection Systems (NATO Code Number C-630)
MIL-DTL-5020	-	Liquid, Compass, Aircraft
MIL-PRF-5606	-	Hydraulic Fluid, Petroleum Base, Aircraft, Missile and Ordnance
MIL-DTL-5624	-	Turbine Fuel, Aviation, Grades JP-4, JP-5
MIL-PRF-6081	-	Lubrication Oil, Jet Engine
MIL-PRF-6083	-	Hydraulic Fluid, Petroleum Base, for Preservation and Operation
MIL-PRF-6085	-	Lubricating Oil: Instrument, Aircraft, Low Volatility
MIL-PRF-6086	-	Lubricating Oil, Gear, Petroleum Base
MIL-C-6529	-	Corrosion Preventive, Aircraft Engine
MIL-PRF-7808	-	Lubricating Oil, Aircraft Turbine Engine, Synthetic Base
MIL-PRF-7870	-	Lubricating Oil, General Purpose, Low Temperature
MIL-PRF-8188	-	Corrosion-Preventive, Aircraft Turbine Engine, Synthetic Base
MIL-C-11796	-	Corrosion Preventive Compound, Petrolatum, Hot Application
MIL-PRF-16173	-	Corrosion Preventive Compound, Solvent Cutback, Cold Application
MIL-L-23398	-	Lubricant, Solid Film, Air Cured, Corrosion Inhibiting, NATO Code Number S-749
MIL-PRF-23699	-	Lubricating Oil, Aircraft Turbine Engine, Synthetic Base, NATO Code Number 0-156
MIL-PRF-23827	-	Grease, Aircraft and Instrument, Gear and Actuator Screw, NATO Code Number G-354
MIL-G-25013	-	Grease, Aircraft, Ball and Roller Bearing, NATO Code Number G-372, Metric
MIL-G-25537	-	Grease, Aircraft, Helicopter, Oscillating Bearing, NATO Code Number G-366, Metric
DOD-L-25681	-	Lubricant, Molybdenum Disulfide, Silicone
MIL-PRF-81322	-	Grease, Aircraft, General Purpose, Wide Temperature Range, NATO Code G-395
MIL-PRF-81329	-	Lubricant, Solid Film, Extreme Environment, NATO Code Number S-1737
MIL-DTL-83133	-	Turbine Fuels, Aviation, Kerosene Types, NATO F-34 (JP-8), NATO F-35, and JP-8 +100 (NATO F-37)

MIL-STD-2161B(AS)

APPENDIX B

- MIL-PRF-83282 - Hydraulic Fluid, Fire Resistant, Synthetic Hydrocarbon Base, Metric, NATO Code Number H-537
- MIL-PRF-83363 - Grease, Transmission, Helicopter
- MIL-DTL-85470 - Inhibitor, Icing, Fuel System, High Flash, NATO Code Number S-1745

(Copies of these documents are available online at <http://assist.daps.dla.mil/quicksearch> or <http://assist.daps.dla.mil> or from the Standardization Document Order Desk, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094.)

B.2.2.2 Non-Government publications. The following documents form a part of this document to the extent specified herein. Unless otherwise specified, the issues of this document are those cited in the solicitation or contract.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM) INTERNATIONAL

- ASTM-D910 - Standard Specification for Aviation Gasolines

(Copies of this document are available from ASTM International, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959 or online at <http://www.astm.org>.)

SOCIETY OF AUTOMOTIVE ENGINEERS (SAE) INTERNATIONAL

- SAE-AMS1424 - Deicing/Anti-icing Fluid, Aircraft, SAE Type I. (DoD adopted)
- SAE-AMS2518 - Thread Compound, Anti-Seize, Graphite- Petrolatum. (DoD adopted)
- SAE-AMS-G-4343 - Grease, Pneumatic System. (DoD adopted)
- SAE-AMS-G-6032 - Grease, Plug Valve, Gasoline and Oil Resistant NATO Code Number G-363, Metric. (DoD adopted)
- SAE-AMS-M-7866 - Molybdenum Disulfide, Technical, Lubrication Grade. (DoD adopted)
- SAE-AS8660 - Silicone Compound NATO Code Number S-736. (DoD adopted)
- SAE-J1899 - Lubricating Oil, Aircraft Piston Engine (Ashless Dispersant). (DoD adopted)
- SAE-J1966 - Lubricating Oils, Aircraft Piston Engine (Nondispersant Mineral Oil). (DoD adopted)

(Copies of these documents are available from <http://www.sae.org> or from the Society of Automotive Engineers, 400 Commonwealth Drive, Warrendale, PA 15096-0001.)

MIL-STD-2161B(AS)

APPENDIX B

B.2.3 Order of precedence. In the event of a conflict between the text of this document and the references cited herein, and unless described as an exception, the text of this document takes precedence. Exceptions to this order of precedence include aircraft detail specifications, aircraft drawings, and aircraft manuals. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

B.3 GENERAL REQUIREMENTS

B.3.1 Servicing and precautioning marking. The servicing and precautionary markings for aircraft shall be in accordance with the symbols shown and as specified herein. Symbols shall be approximately 4 inches in the lowest dimension, except where otherwise specified. However, smaller sized lettering which supplement the symbols may be used if required by the item or area to be marked. Lettering which supplements the symbols shall be in the scale 1 to 4 in relation to the symbol (see figure B-1).

B.3.2 Servicing instructions. Servicing instructions for hydraulic systems, hydraulic reservoirs, landing gear shock struts, wheels and tires, and pneumatic systems shall be provided on instruction plates or in a permanent and legible manner adjacent to charging points and test connections. Access doors or panels to servicing points shall be marked with the appropriate servicing symbol(s).

B.3.3 Service warning markings. Service markings shall be used to give warning and minimize possible errors in servicing, handling of aircraft and safety of flight. Symbols approved by international agreement shall be displayed on all "in production" and "in service" aircraft. These symbols shall be in accordance with those shown on figures B-6 and B-7. Markings for trainer and liaison aircraft shall be included. Paint or decals may be used when applying service point identification and precautionary service markings. Decalcomanias shall be in accordance with ASTM-D4956 and plastic material per A-A-59485.

B.3.4 Printed information. Information required in connection with symbols shall be printed in accordance with 5.2.5.1, unless specified by the procuring activity.

B.3.5 Colors. Colors for ground handling, hazard warning, filling and atomic flash markings shall be as follows:

a. Ground handling: The servicing symbols used to mark ground handling servicing points shall be orange yellow, FED-STD-595, color number 13538.

b. Hazard: Hazard symbols shall be insignia red, FED-STD-595, color number 11136.

MIL-STD-2161B(AS)

APPENDIX B

c. Filling points: The servicing symbols used to mark filling points shall be colored in black, FED-STD-595, color number 17038 or insignia white, FED-STD-595, color number 17925, according to the background.

d. Atomic flash: Aircraft, which may be subjected to atomic flash, will have servicing markings painted in suitable pale colors, having a reflectivity of at least 50 percent.

B.4 DETAIL REQUIREMENTS

B.4.1 Aircraft markings and placard. The following figures illustrate aircraft armament placards, NATO codes and markings, ground handling and hazards and NATO code numbers for cross servicing.

******* NOTE: ACTUAL COLORS SHOWN ON ALL ILLUSTRATIONS IN APPENDICES A-D ARE STRICTLY FOR ILLUSTRATIVE PURPOSE. SPECIFIC FED-STD-595 COLOR DESIGNATIONS INDICATED ON THE ILLUSTRATIONS SHALL BE USED. *******

MIL-STD-2161B(AS)

APPENDIX B

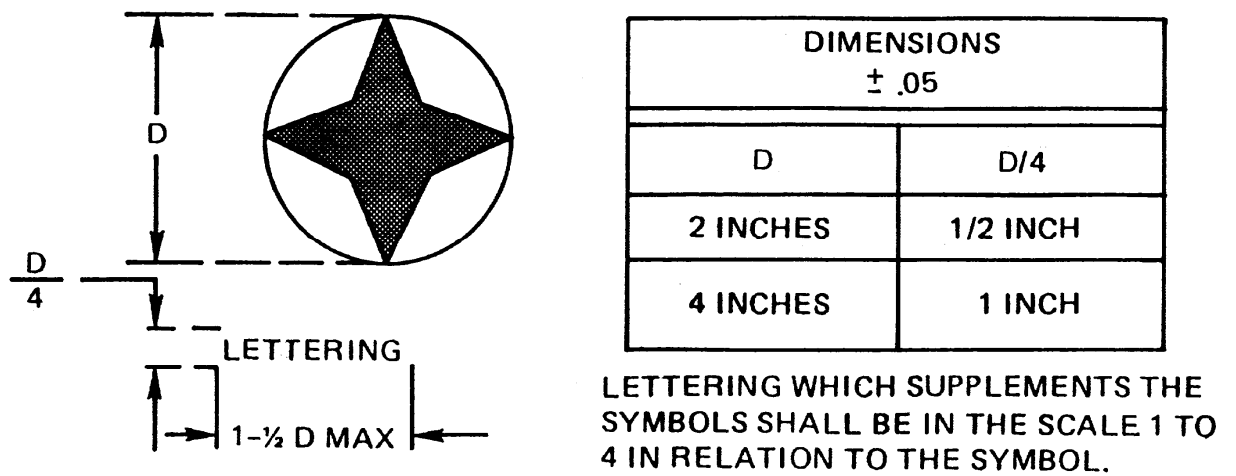


FIGURE B-1. Typical symbol dimensioning.

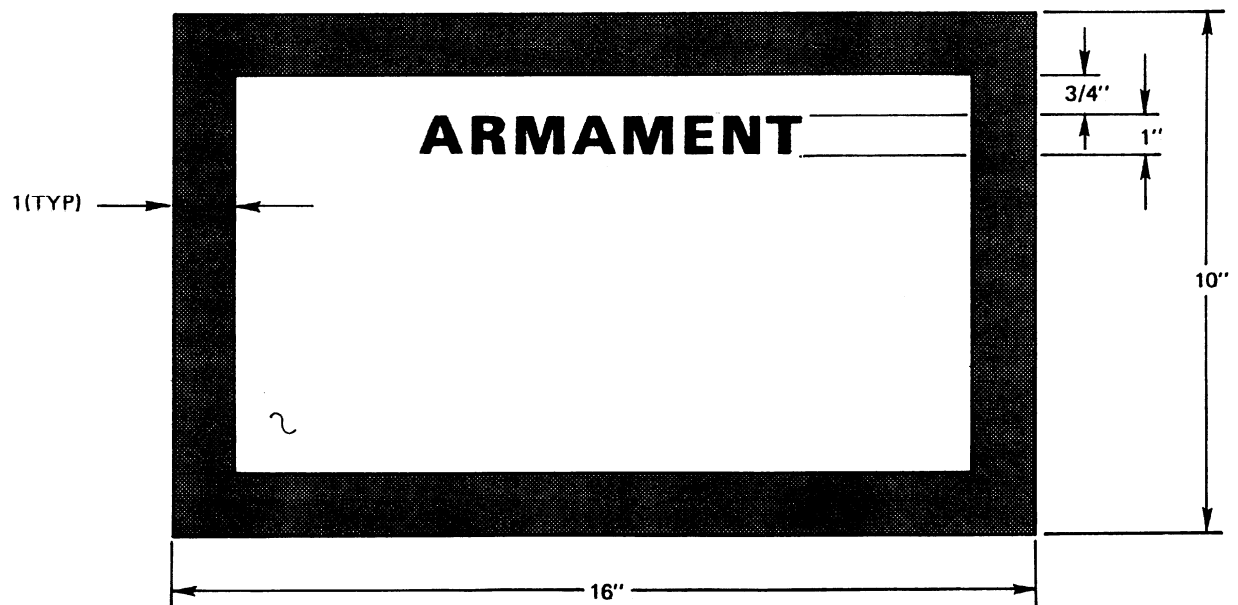





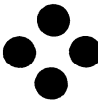












FIGURE B-2. Armament placard.

MIL-STD-2161B(AS)

APPENDIX B

FILLING (a)		
FUELING	FILLED FOUR POINTED STAR WITH NOTATION OF NATO CODE NUMBER FOR FUEL  (NATO CODE NO.)	OXYGEN (BREATHING) TWO HORIZONTAL FILLED RECTANGLES WITH NOTATION OF EITHER "GAS" OR "LIQUID" FOR GASEOUS OXYGEN INCLUDE CHARGING PRESSURES IN ENGLISH AND METRIC UNITS. FOR LIQUID OXYGEN INCLUDE CAPACITY IN LITRES.  ____ psi ____ Kg/Cm ² ____ LITRES WHEN NECESSARY
ROCKET FUELS	FILLED FOUR POINTED STAR IN CRESCENT WITH NOTATION OF NATO CODE NUMBER FOR ROCKET FUEL  (NATO CODE NO.)	ANTI-DETONANT OR THRUST AUGMENTATION FILLED CHEVRON WITH NOTATION OF NATO CODE NUMBER  (NATO CODE NO.)
ROCKET OXIDIZER	FILLED CRESCENT WITH NOTATION OF NATO CODE NUMBER FOR ROCKET OXIDIZER  (NATO CODE NO.)	AIR CONDITIONING DOT PATTERN 
ENGINE LUBRICATING OIL	FILLED SQUARE WITH NOTATION OF NATO CODE NUMBER FOR ENGINE LUBRICATING OIL  (NATO CODE NO.)	NITROGEN SERVICES FILLED SQUARE WITH A QUARTER ARC REMOVED FROM EACH CORNER, WITH TYPE OF GAS USED AND PRESSURE IN ENGLISH AND METRIC UNITS  NITROGEN ____ psi ____ Kg/Cm ²
HYDRAULIC FLUID	FILLED CIRCLE WITH NOTATION OF NATO CODE NUMBER FOR HYDRAULIC FLUID  (NATO CODE NO.)	FIRE EXTINGUISHING SYSTEM A FILLED DIAMOND WITH NOTATION SHOWING NATO CODE NUMBER  (NATO CODE NO.)
DE-ICING	FILLED TRIANGLE WITH NOTATION OF NATO CODE NUMBER FOR DE-ICING FLUID  (NATO CODE NO.)	EXTERNAL ELECTRICAL CONNECTIONS FILLED "E" WITH LOWER LIMB SHORTENED STATING SERVICE AND VOLTAGE DETAILS  SERVICING STARTING ETC. 28V OR 112 V DC 115/200V, 400 CYCLES
COOLANT	TWO FILLED HORIZONTAL S's WITH NOTATION OF NATO CODE NUMBER FOR COOLANT AND PERCENTAGE COMPOSITION IF NECESSARY  (NATO CODE NO.) WATER _____ % SOLUBLE OIL _____ %	GROUNDING OR EARTHING RECEPTACLE A FILLED INVERTED "T" WITH TWO PARALLEL BARS UNDERNEATH WHICH DIMINISH IN SIZE  GROUND (EARTH) HERE
PNEUMATIC SYSTEM	FILLED X WITH NOTATION OF MAXIMUM CHARGING PRESSURE IN ENGLISH AND METRIC UNITS  MAXIMUM ____ psi ____ Kg/Cm ²	INSPECTION OF BATTERY A FILLED ELECTRIC FLASH SIGN 

(a) COLOR - BLACK OR WHITE ACCORDING TO BACKGROUND.

FIGURE B-3. NATO codes and markings-filling.

MIL-STD-2161B(AS)

APPENDIX B





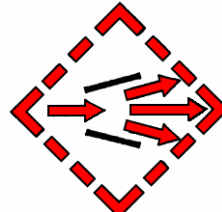




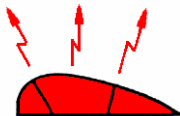
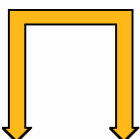
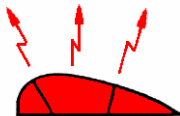
FILLING COLOR - BLACK OR WHITE ACCORDING TO BACKGROUND		HAZARD (b) COLOR - RED #11136	
PNEUMATIC STARTER CONNECTION	A FILLED X CIRCUMSCRIBED BY A FILLED RING  — PSI — kPa	EXPLOSIVE ACTUATED DEVICES	MARK BOTH SIDES OF FUSELAGE RED FILLED EQUILATERAL TRIANGLE, APEX DOWN, OF THE LARGEST PRACTICABLE SIZE UP TO A 9 INCH (23cm) SIZE TO BE APPLIED TO THE EXTERNAL PART OF AIRCRAFT ADJACENT TO THE EXPLOSIVE DEVICE. THE WORD "DANGER" TO BE WITH ITS TOP TO A SURROUNDING PERIPHERAL RED LINE. IT IS PERMISSIBLE FOR THE WORD "DANGER" TO BE APPLIED IN ANY 3 DIFFERENT LANGUAGES, PROVIDED THAT ENGLISH IS ONE OF THEM. THE WORDS "EJECTION SEAT", "CANOPY" ETC OR AN APPROPRIATE SYMBOL MAY BE ADDED IN WHITE ON THE CENTRAL RED TRIANGLE.  
REFRIGERANT REPLENISHMENT	TWO FILLED TRIANGLES WITH APEXES JOINED ON HORIZONTAL CENTER LINE WITH NOTATION SHOWING TYPE OF REFRIGERANT 		
GROUND HANDLING (b) COLOR AVIATION - YELLOW #13538			
JACKING POINT	ORANGE YELLOW FILLED SQUARE WITH TWO SLANTED LEGS ON BOTTOM SIDE 		
SLINGING OR HOISTING POINTS	ORANGE YELLOW FILLED HOOK ON A HORIZONTAL LINE 		
MOORING OR PICKETING	ORANGE YELLOW FILLED ANCHOR 		
TOWING (c)	ORANGE YELLOW FILLED RING 		
LIFTING AREA (EXTERNAL STORES)	FILLED HORIZONTAL BAR WITH DOWNWARD POINTING ARROWS AT EACH END OF THE BAR 		
(b) OUTLINE SYMBOLS IN BLACK OR WHITE ACCORDING TO THE BACKGROUND. (c) OPTIONAL :HERE TOWING POINT IS OBVIOUS AND SUITABLE LOCATION FOR SYMBOL IS NOT AVAILABLE.		OPTIONAL - WHEN USED SHALL BE ADDITIONAL TO HAZARD: EXPLOSIVE ACTUATED DEVICES. 	

FIGURE B-4. NATO codes and markings-filling, ground handling and hazards.

MIL-STD-2161B(AS)

APPENDIX B

GENERAL TYPE OF PRODUCT		NATO NUMBER ¹	APPLICABLE SPECIFICATION ²
I.	Piston engine fuels		
II.	Turbine engine fuels		
	Kerosene type, high flashpoint	F-44	MIL-DTL-5624
	Gasoline type, wide cut (JP-4)	F-40	MIL-DTL-5624
	Aviation, kerosene type (JP-8)	F-34	MIL-DTL-83133
	Kerosene type	F-35	MIL-DTL-83133
III.	Starter fuels		
IV.	Thrust augmentation fluids		
	Methanol	S-747	O-M-232 Grade A
	Soluble oil	C-630	MIL-C-4339
V.	Piston engine oils		
	Non-dispersant mineral oil	O-117	SAE-J1966 Grade 1100
	Non-dispersant mineral oil	O-113	SAE-J1966 Grade 1065
	Ashless dispersant	O-128	SAE-J1899 Type II
	Ashless dispersant	O-123	SAE-J1899 Type III
VI.	Turbine engine oils		
	Aircraft turbine lubricating oil	O-133	MIL-PRF-6081 Grade 1010
	Synthetic type 3cSt	O-148	MIL-PRF-7808
	Synthetic type 5cSt	O-156	MIL-PRF-23699
VII.	Aviation greases		
	Grease, molybdenum disulfide, high and low temperatures	G-353	
	General purpose ³	G-382	
	High temperature ³	G-359	
	Ball and roller bearing wide temperature range ³	G-359	
	Extreme pressure synthetic	G-354	MIL-PRF-23827
	Hydrocarbon resistant	G-363	SAE-AMS-G-6032
	Pneumatic system	G-392	SAE-AMS-G-4343
	Helicopter oscillating bearing	G-366	MIL-G-25537
	Extreme high temperature	G-372	MIL-G-25013
	Aircraft, multipurpose	G-395	MIL-PRF-81322 Grade A
	Aircraft, PTFE	G-396	MIL-PRF-83363
VIII.	Hydraulic fluids		
	Petroleum base	H-515	MIL-PRF-5606
	Fire resistant, synthetic	H-537	MIL-PRF-83282
IX.	Miscellaneous oils		
	Gear oil light (mineral type)	O-153	MIL-PRF-6086 Grade L
	Gear oil medium (mineral type)	O-155	MIL-PRF-6086 Grade M
	General purpose light oil	O-142	MIL-PRF-7870
	Synthetic oil instruments	O-147	MIL-PRF-6085

FIGURE B-5. NATO code number cross-reference.

MIL-STD-2161B(AS)

APPENDIX B

GENERAL TYPE OF PRODUCT		NATO NUMBER ¹	APPLICABLE SPECIFICATION ²
X.	Specialty products		
	Liquid, compass, aircraft	S-712	MIL-DTL-5020
	Deicing and defrosting fluid	S-742	SAE-AMS1424 Type I
	Isopropanol	S-737	TT-I-735 Grade B
	Ethanol	S-738	A-A-51693 Type III
	Petrolatum	S-743	VV-P-236
	Molybdenum disulfide lubricant (dry)	S-740	SAE-AMS-M-7866
	Antiseize graphite-petroleum	S-720	SAE-AMS2518
	Graphite	S-732	SS-G-659
	Electrical insulating and sealing compound	S-736	SAE-AS8660
	Lubricant, solid film airdrying	S-749	MIL-L-23398
	Molybdenum disulfide silicone base high temperature	S-1735	DOD-L-25681
	Antiseize compound, lead free	S-716	
	Methanol, technical	S-747	O-M-232
	Fuel system deicing inhibitor	S-748	MIL-DTL-85470
	Antiseize aircraft oxygen systems	S-1736	A-A-58092
	Lubricant, solid film, extreme environment	S-1737	MIL-PRF-81329
	Fuel system icing inhibitor	S-1745	MIL-DTL-85470
XI.	Preservative compounds		
	Aircraft engine corrosion preventive oil concentrate	C-608	MIL-C-6529 Type I
	Aircraft piston engine corrosion preventive oil	C-609	MIL-C-6529 Type II
	Aircraft turbine engine corrosion preventive oil	C-610	MIL-C-6529 Type III
	Heavy oil or wax thickened type	C-612	
	Corrosion preventive oil, gas turbine (synthetic base)	C-638	MIL-PRF-8188
	Hydraulic equipment corrosion preventive oil	C-635	MIL-PRF-6083
	Hard film cold application	C-632	MIL-PRF-16173 Grade 1
	Hard film hot application	C-633	MIL-C-11796 Grade 1
	Soft film cold application	C-620	MIL-PRF-16173 Grade 2
	Soft film hot application	C-627	MIL-C-11796 Grade 3
	Hydraulic fluid, rust inhibited, fire resistant, synthetic	H-544	

¹ NATO Numbers are in accordance with STANAG 1135, Interchangeability Chart of NATO Standardized Fuels, Lubricants and Associated Products.

² Latest issues apply.

³ There is no U.S. implementing military document for this lubricant.

FIGURE B-5. NATO code number cross-reference – Continued.

MIL-STD-2161B(AS)

APPENDIX B

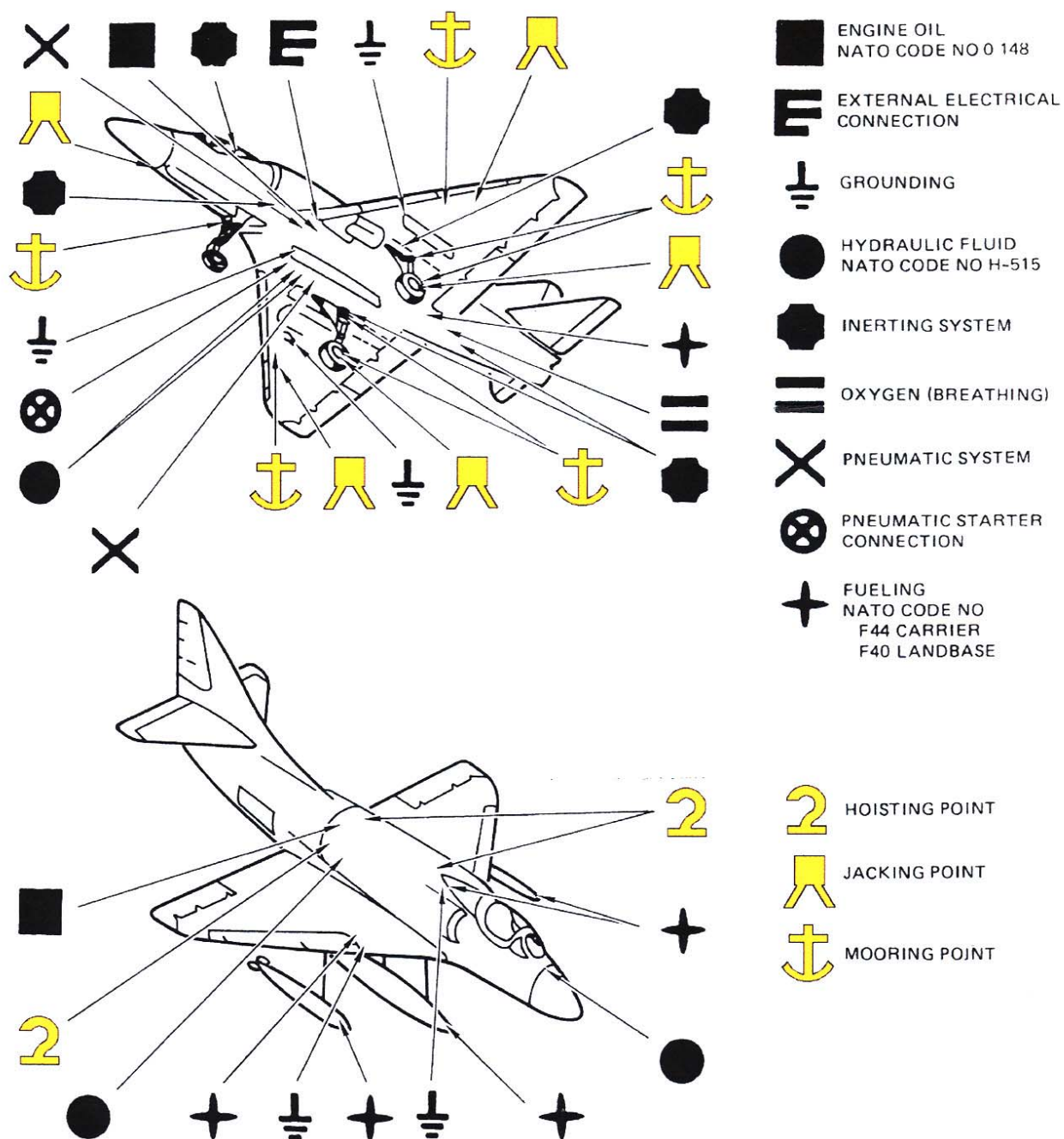


FIGURE B-6. Typical NATO aircraft servicing markings.

MIL-STD-2161B(AS)

APPENDIX B

SECTION I

MAINTENANCE

COLOR - AVIATION
YELLOW NO. 13538



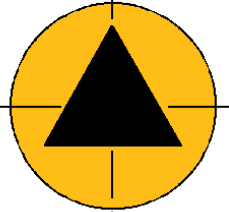
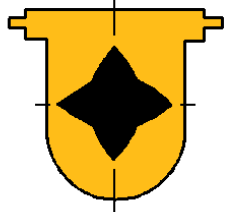
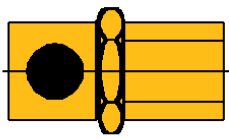
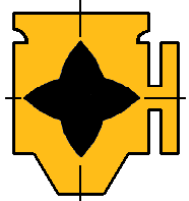
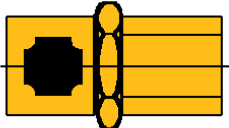
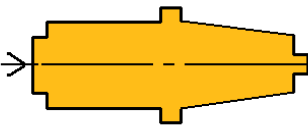
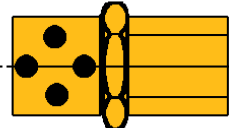
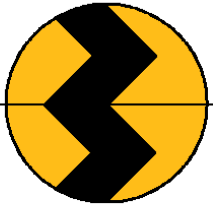
FUNCTION	SYMBOL	FUNCTION	SYMBOL
DINGHY STORAGE		INSPECTION OF ELECTRONIC INSTALLATION	
INSPECTION OF DE-ICING CIRCUIT		INSPECTION OF FUEL FILTER	
HYDRAULIC SYSTEM TEST POINT		FUEL TANK WATER DRAIN OFF	
INERTING FLUID TANK SYSTEM TEST POINT		IGNITION PLUG FOR STARTING JET ENGINE	
CABIN PRESSURE TEST POINT		INSPECTION OF STATIC CONNECTION (VENTS)	

FIGURE B-7. Required markings and symbols.

MIL-STD-2161B(AS)

APPENDIX B





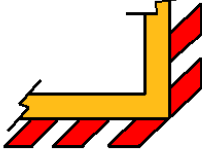




SECTION II			GROUND HANDLING		
FUNCTION	DESCRIPTION	SYMBOL	FUNCTION	DESCRIPTION	SYMBOL
NO GRIP	FILLED HAND WITH RED FILLED DIAGONAL CROSS SUPERIMPOSED		DRINKING WATER REPLENISHMENT	ORANGE YELLOW DISC SURROUNDING THE SYMBOL	
TAIL SUPPORT	ORANGE YELLOW CIRCLE AROUND THE POINT OF SUPPORT		TOILET SERVICING	ORANGE YELLOW DISC SURROUNDING THE SYMBOL	
WALKWAYS	SURROUNDED BY AN ORANGE YELLOW BORDER WITH RED FRINGE ON THE OUTSIDE		TELEPHONE CONNECTION GROUND TO COCKPIT	FILLED ORANGE YELLOW SYMBOL AS SHOWN	
NO STEP	A FILLED FOOTPRINT WITH A RED DIAGONAL CROSS SUPERIMPOSED		FLIGHT DATA RECORDER	BLACK SYMBOLS ON WHITE BACKGROUND OR WHITE SYMBOLS ON BLACK BACKGROUND	
LOCKING OF DROP TANK	ORANGE YELLOW DISC CONTAINING FUEL SYMBOL IN RED				

FIGURE B-7. Required markings and symbols – Continued.

MIL-STD-2161B(AS)

APPENDIX B

SECTION III. HAZARD		COLOR - RED NO. 11136
FUNCTION	PART TO BE MARKED	SYMBOL
LOCKING OF CONTROLS AND UNDER CARRIAGE	UPRIGHTS AND CROSS-BARS	PAINTED RED AND WHITE AND FITTED WITH A RED PENNANT INCORPORATING REFLECTIVE STRIPES
AIRCRAFT POSITION OF LOCKS	POSITION OF UPRIGHTS AND CROSS-BARS	PAINTED RED
PITOT TUBE COVERING	COVER	PAINTED RED AND FITTED WITH A RED PENNANT INCORPORATING REFLECTIVE STRIPES
CAMERA GUN COVERING	CAMERA GUN CAP	
JET ENGINE COVERING	TAMPIONS	
ROCKET CONTROL	ELECTRIC PLUG	RED AND WHITE PENNANT
ANTIFIRING CONTROL	SHUNT	RED PENNANT WITH BLACK SKULL AND CROSS-BONES
PROHIBITION OF ACCESS	WEAKER PARTS OF AIRCRAFT	BORDER BAND AND CROSS OF ST. ANDREW IN RED

OPTIONAL MARKINGS








SECTION IV. ARMAMENT AND AMMUNITION		COLOR - GREEN NO. 14187
FUNCTION	PART TO BE MARKED	SYMBOL
GUN		
FIRING	SHUNT FOR CUTTING OUT FIRING SAFETY CONTROL	
FEEDING OF GUNS	CARTRIDGE	
CARTRIDGE CONTAINER	CARTRIDGE CASE	
LINKS CONTAINER	CONTAINER	
ROCKETS CONTROL	SELECTION PLUG	
BOMB HOIST	ATTACHMENT POINT FOR HOIST	

FIGURE B-7. Required markings and symbols – Continued.

MIL-STD-2161B(AS)

APPENDIX B

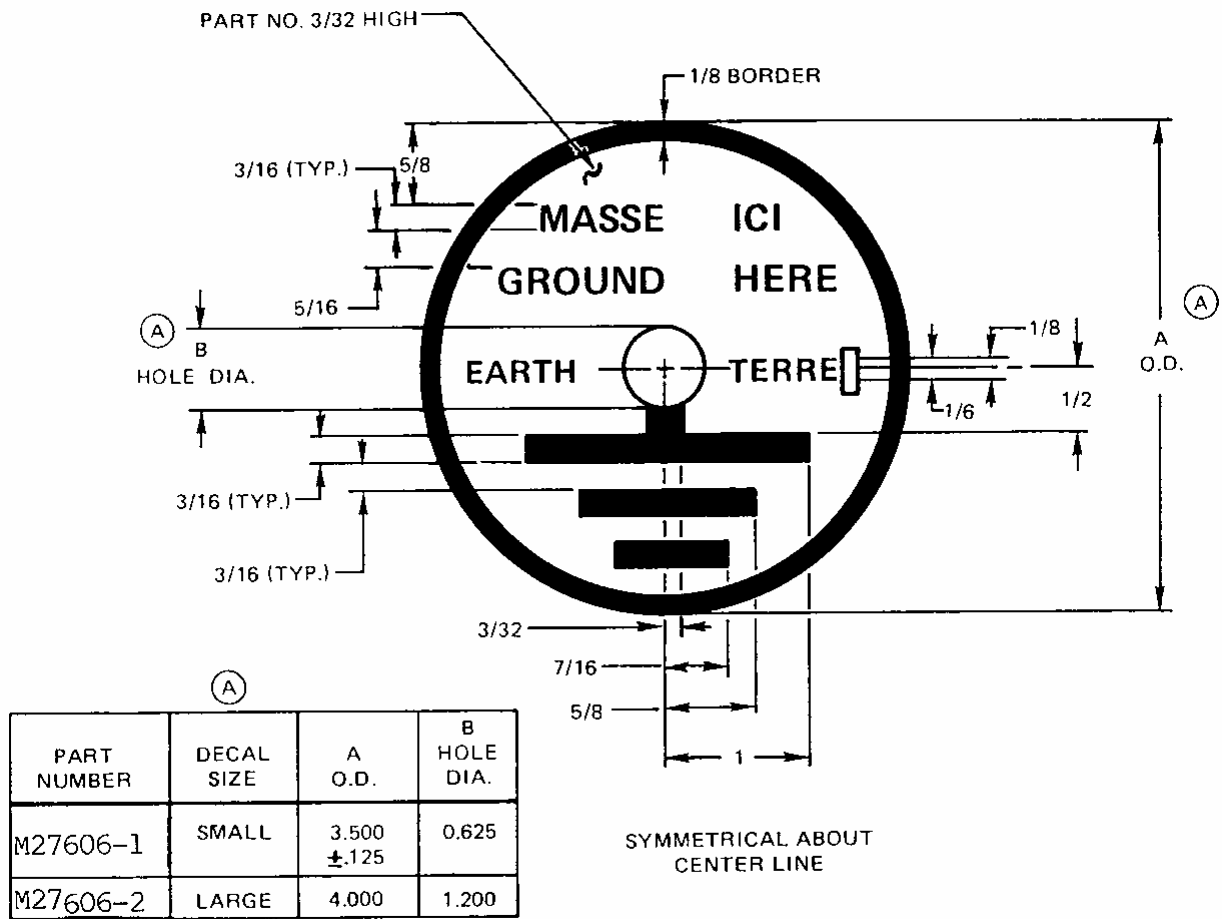


FIGURE B-8. Decalcomania – ground here, international symbol.

MIL-STD-2161B(AS)

APPENDIX B

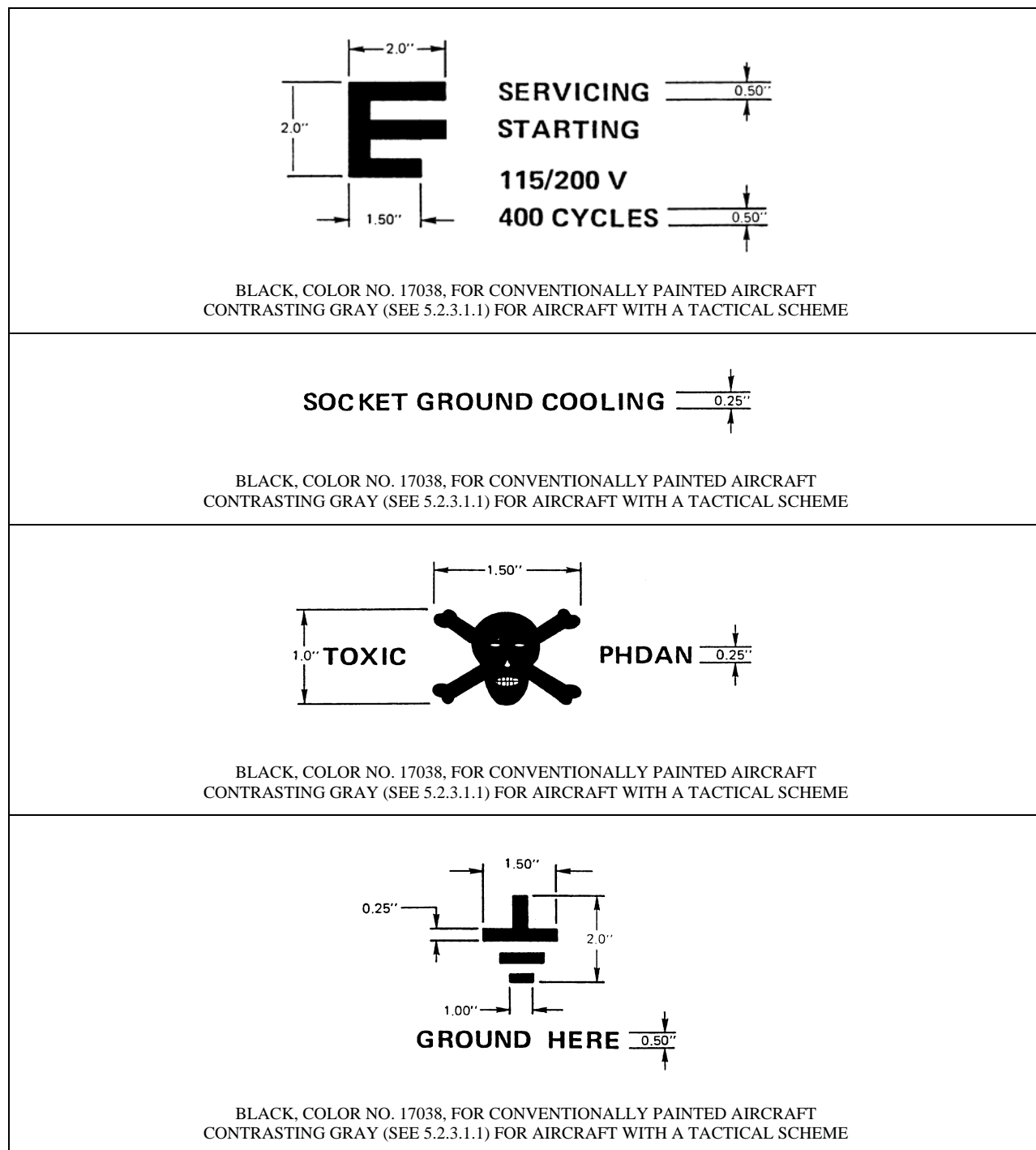


FIGURE B-9. Samples of ground servicing and hazard markings (size and color).

MIL-STD-2161B(AS)

APPENDIX B

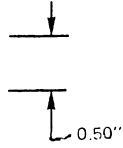
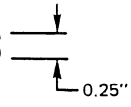
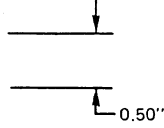
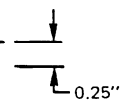


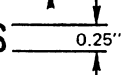
<p>CANOPY RELEASE HANDLE</p>  <p>BLACK, COLOR NO. 17038, FOR CONVENTIONALLY PAINTED AIRCRAFT CONTRASTING GRAY (SEE 5.2.3.1.1) FOR AIRCRAFT WITH A TACTICAL SCHEME</p>
<p>SELF-LOCKING SCREWS</p>  <p>DO NOT PAINT</p> <p>BLACK, COLOR NO. 17038, FOR CONVENTIONALLY PAINTED AIRCRAFT CONTRASTING GRAY (SEE 5.2.3.1.1) FOR AIRCRAFT WITH A TACTICAL SCHEME</p>
<p>WARNING</p>  <p>DOOR MUST BE INSTALLED WHEN AMMO COMPARTMENT DOORS ARE REMOVED</p>  <p>BLACK, COLOR NO. 17038, FOR CONVENTIONALLY PAINTED AIRCRAFT CONTRASTING GRAY (SEE 5.2.3.1.1) FOR AIRCRAFT WITH A TACTICAL SCHEME</p>
<p>CAUTION</p>  <p>STRESS PANEL FASTENER</p>  <p>DO NOT USE POWER TOOLS</p>  <p>BLACK, COLOR NO. 17038, FOR CONVENTIONALLY PAINTED AIRCRAFT CONTRASTING GRAY (SEE 5.2.3.1.1) FOR AIRCRAFT WITH A TACTICAL SCHEME</p>

FIGURE B-9. Samples of ground servicing and hazard markings (size and color) – Continued.

MIL-STD-2161B(AS)

APPENDIX B

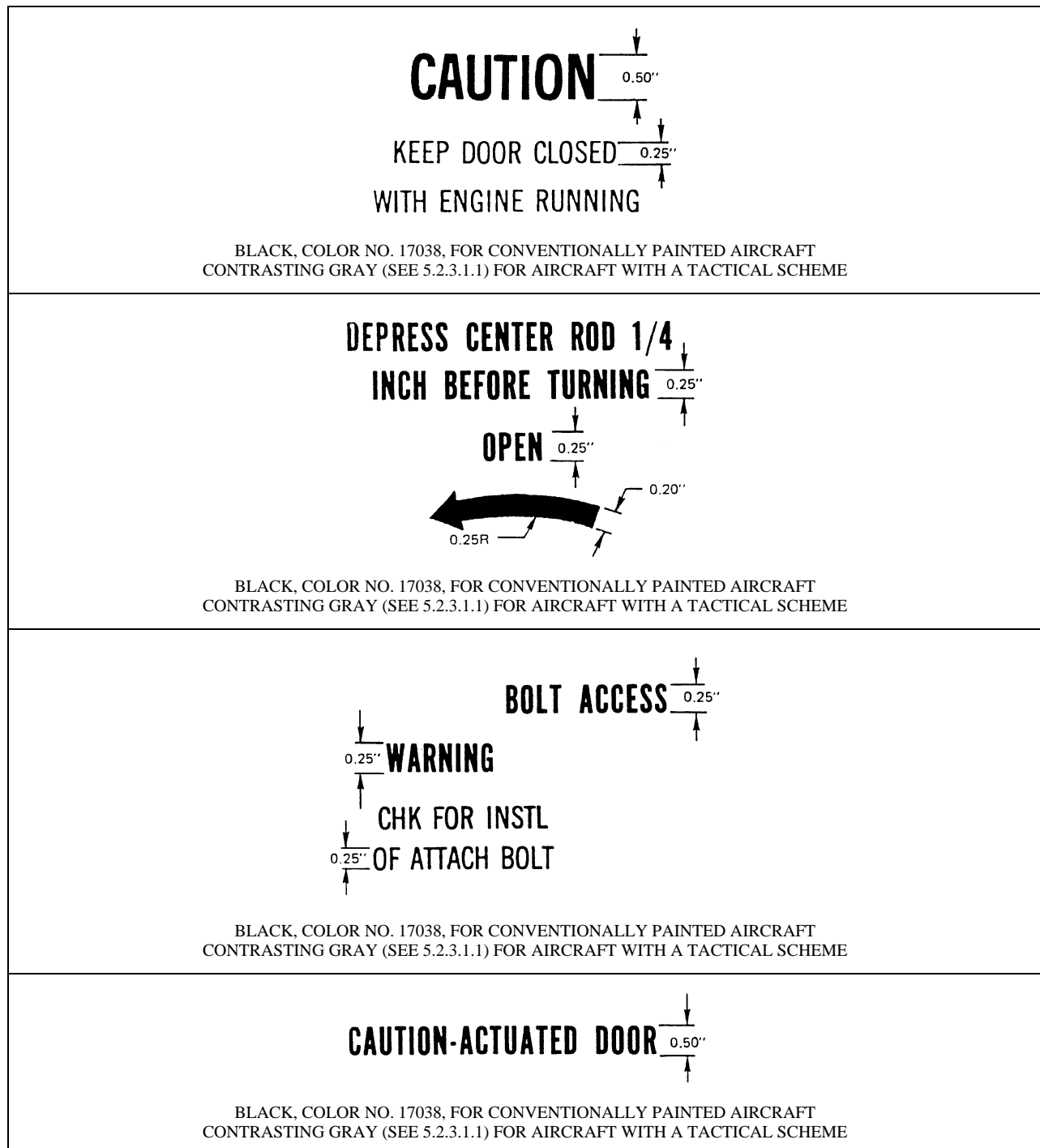


FIGURE B-9. Samples of ground servicing and hazard markings (size and color) – Continued.

MIL-STD-2161B(AS)

APPENDIX B

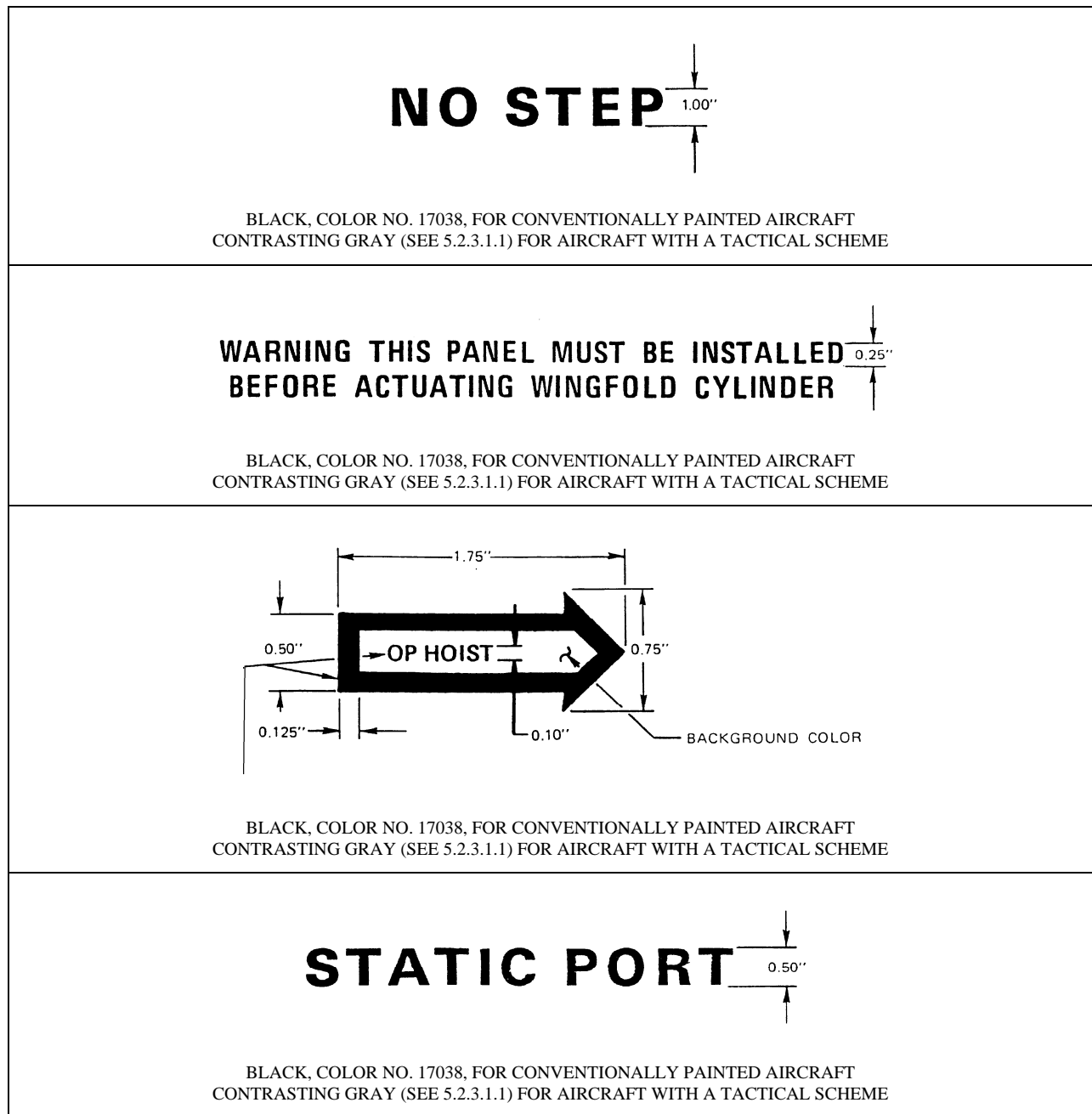





FIGURE B-9. Samples of ground servicing and hazard markings (size and color) – Continued.


MIL-STD-2161B(AS)

APPENDIX B

PAINTED BY: _____  OVERHAUL
ACTIVITY OR
CONTRACTOR AND
THEIR LOCATION

DATE: ____ / ____ / ____  MONTH/DAY/YEAR

PRIMERS: _____  MILITARY
SPECIFICATIONS

TOPCOAT: _____ 

BLACK COLOR NO. 17038 FOR CONVENTIONALLY PAINTED AIRCRAFT;
CONTRASTING GRAY (SEE 5.2.3.1.1) FOR AIRCRAFT WITH A TACTICAL SCHEME

FIGURE B-10. Record of finish marking.

MIL-STD-2161B(AS)

APPENDIX C

PAINT SCHEMES AND MARKINGS FOR FIXED WING AIRCRAFT

C.1 SCOPE

C.1.1 Scope. This appendix illustrates the different paint schemes for fixed wing aircraft. This appendix is a mandatory part of this standard. The information contained herein is intended for compliance.

C.2 APPLICABLE DOCUMENTS

N/A

C.3 GENERAL REQUIREMENTS

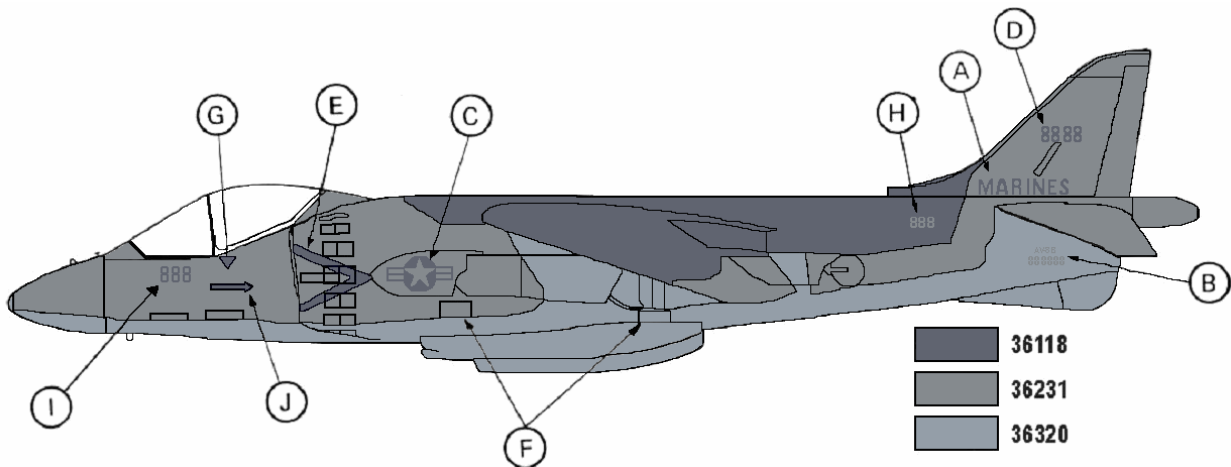
C.3.1 Aircraft paint schemes. The following figures illustrate aircraft finish and marking specifications for fixed wing aircraft.

******* NOTE: ACTUAL COLORS SHOWN ON ALL ILLUSTRATIONS IN APPENDICES A-D ARE STRICTLY FOR ILLUSTRATIVE PURPOSE. SPECIFIC FED-STD-595 COLOR DESIGNATIONS INDICATED ON THE ILLUSTRATIONS SHALL BE USED. *******

MIL-STD-2161B(AS)

APPENDIX C

1. MARKING	2. LOCATION	3. SIZE	4. COLOR NO/CODE
A. MARINES	Lower Vertical Stabilizer Upper R.H. Wing	7" 12"	35237 35237, Figure A-15
B. Model Designation, Acft BUNO	Lower Aft Fuselage	2" 4"	36375, Figure A-15
C. National Star	Fwd. Fuselage Upper L.H. Wing Lower R.H. Wing	20" 25" 25"	35237 35237, Figure A-1 36375
D. Call Numbers	Vertical Stabilizer	7"	35237
E. Intake Warning	Engine Intake Nacelles	See Para. 5.2.2.10.1	35237, Figure A-15
F. Beware of Blast	Engine Exhaust Nacelles		35237/36375, Figure A-8
G. Ejection Seat Warning	Below Canopy Rail	8"	35237, Figure A-16
H. Unit Identifier	Upper Aft Fuselage	4"	35237
I. Unit Aircraft Numbers	Fwd. Fuselage	12"	35237
J. Rescue Arrow	R. H. and L.H. Sides of Canopy	24"	35237, Figure A-14

FIGURE C-1. AV-8B tactical.

MIL-STD-2161B(AS)

APPENDIX C

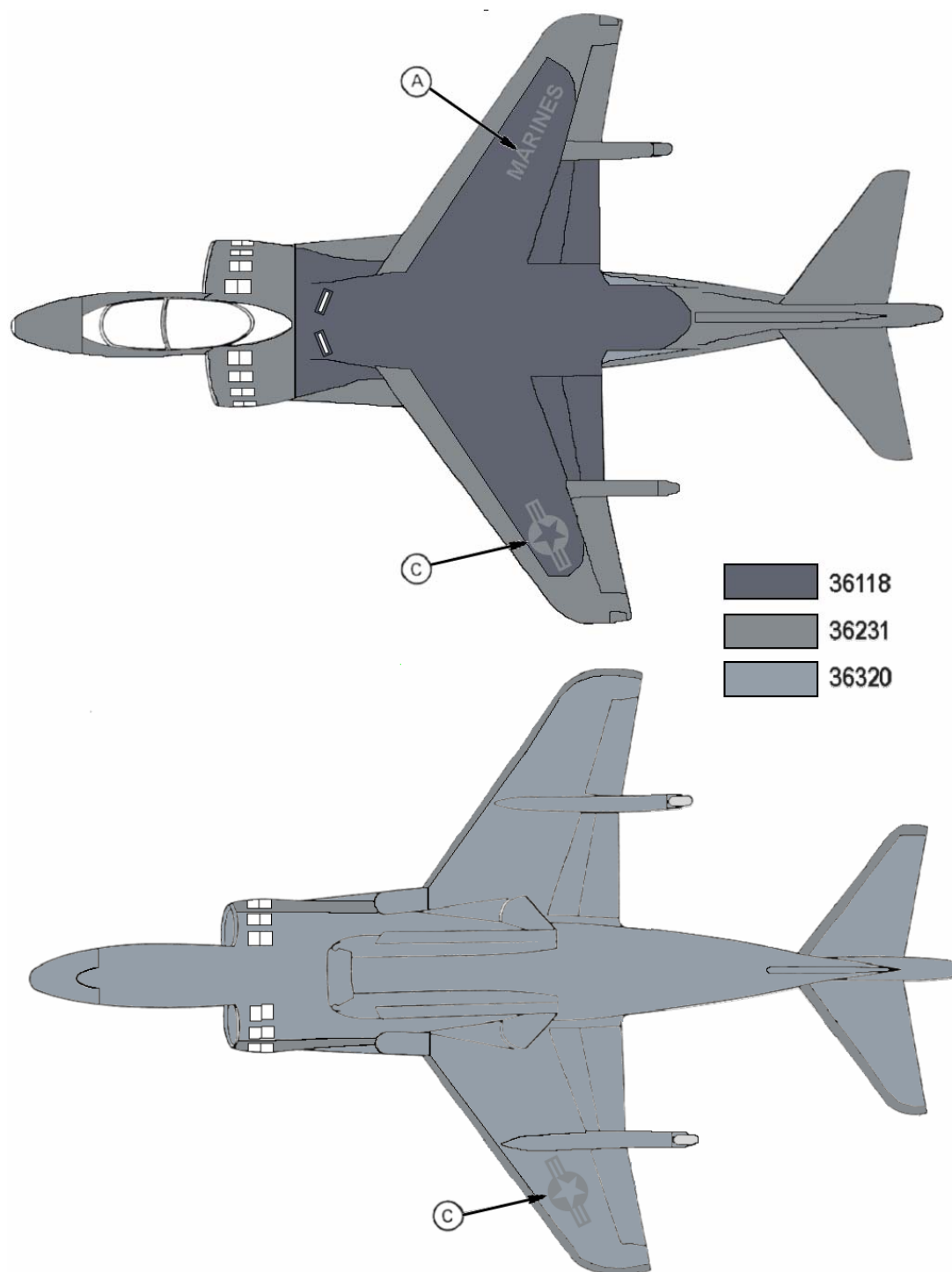
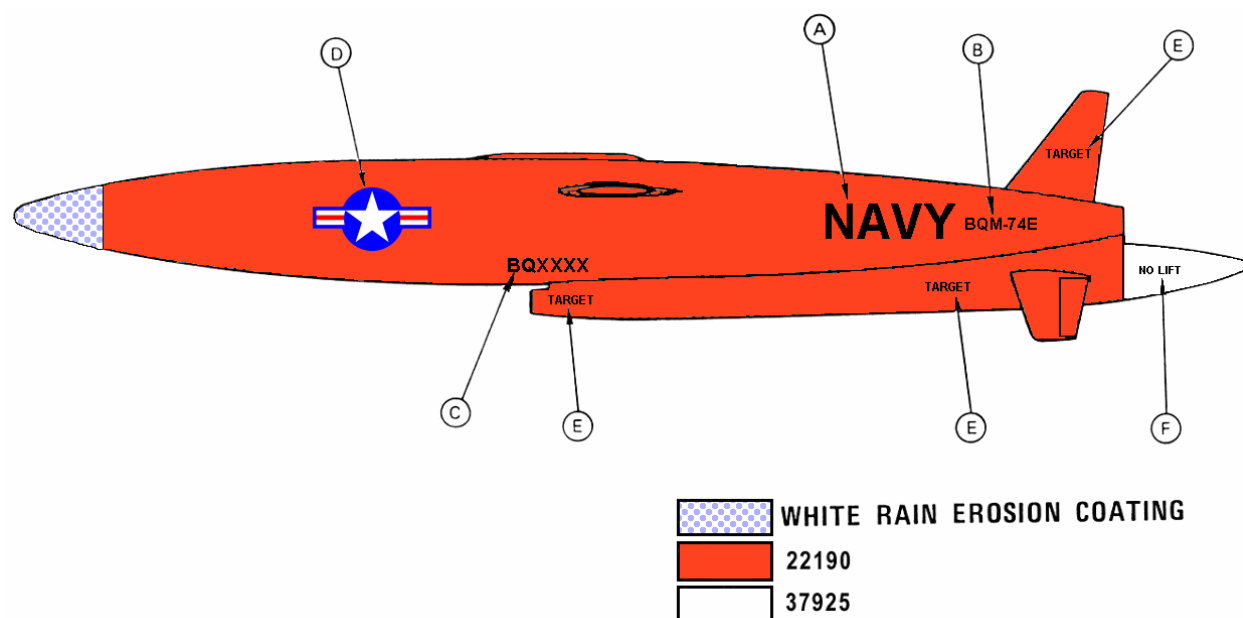


FIGURE C-1. AV-8B tactical – Continued.

MIL-STD-2161B(AS)

APPENDIX C

1. MARKING	2. LOCATION	3. SIZE	4. COLOR NO/CODE *
A. NAVY	Aft Fuselage	5"	17038/37038
	Lower L. H. Wing Surface	5"	17038/37038
B. Model Designation	Aft Fuselage	2 ½" (Decal 94743-17)	17038/37038
C. Drone Serial No.	Center Fuselage Above Air Scoop	2" (Decal 94743-18)	17038/37038
D. National Star	Fwd. Fuselage	NV-STD-158-8	17925/11136/15044
	Lower R. H. Wing Surface		17925/11136/15044
	Upper L. H. Wing Surface		17925/11136/15044
E. Target	Air Scoop, Aft Fuselage, Upper R. H. & L. H. Wing Tips, & Vertical Stabilizer	(Decal 32962-1)	17038
F. No Lift	Center of Tail Cone	(Decal 32962-2)	17038



* **NOTE:** Follow paint scheme provided in manufacturer drawings for other targets, such as BQM-34S, AQM-37C, GQM-163A and MA-31. See 5.1.6 for additional detail.

FIGURE C-2. BQM-74C/E.

MIL-STD-2161B(AS)

APPENDIX C

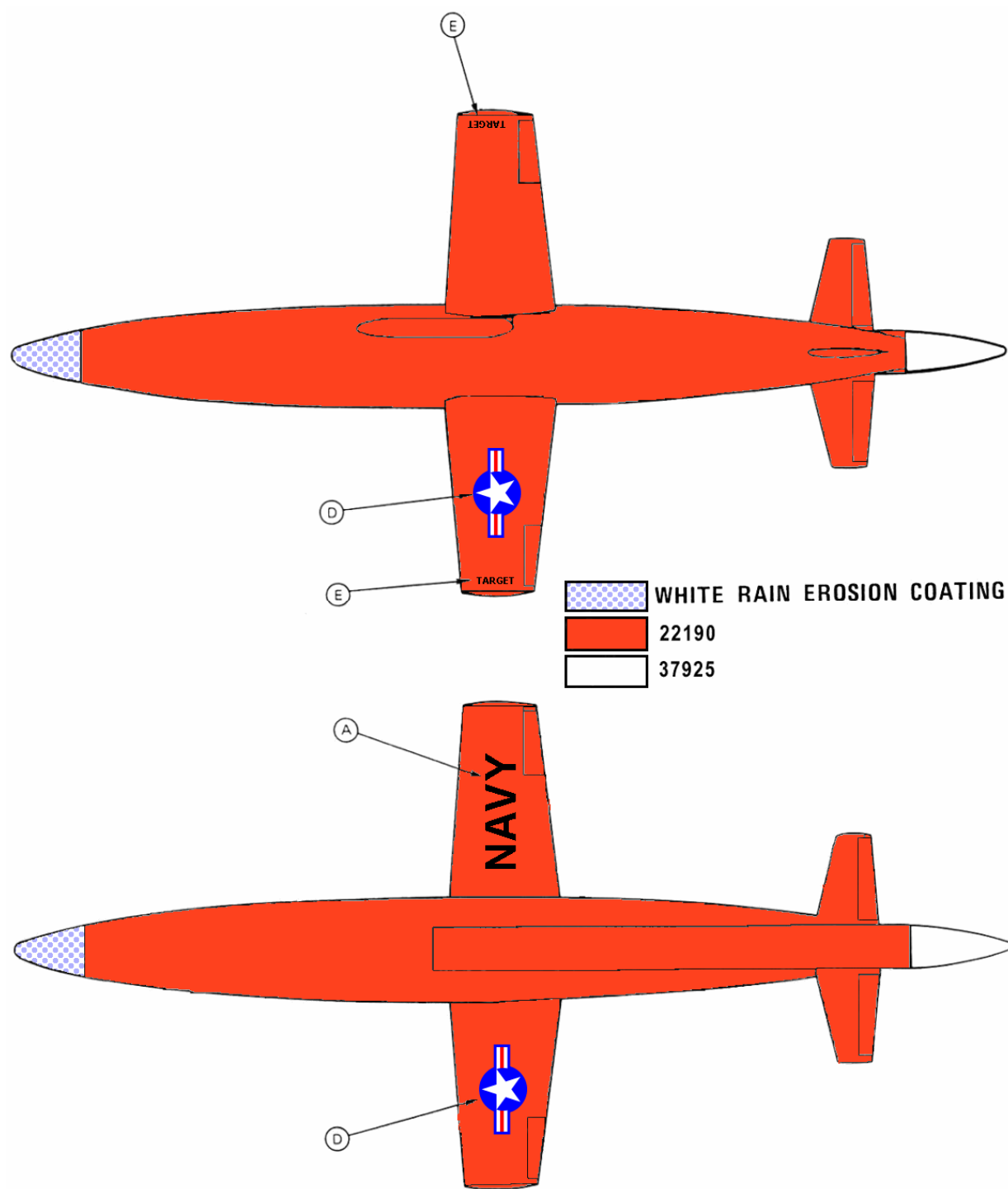


FIGURE C-2. BQM-74C/E – Continued.

MIL-STD-2161B(AS)

APPENDIX C

1. MARKING	2. LOCATION	3. SIZE	4. COLOR NO/CODE
A. UNITED STATES NAVY	Center Fuselage	12"	17038
B. Model Designation, Acft BUNO	Aft Fuselage	2" 4"	17038
C. National Star	Aft Fuselage Upper L.H. Wing Lower R.H. Wing	40" 40" 40"	17925/11136/15044 17925/11136/15044 17925/11136/15044
D. Call Numbers	Mid Vertical Stabilizer (Outsides Only)	12"	17038
E. Propeller Tips	N/A	3"/6"/3"	17925/11136/17925 See Figure A-6
F. Anti-Glare	Nose & Propeller Hubs	N/A	37038
G. Arresting Hook Marking	Aft Fuselage Doors	13"	17038
H. Walkway	Per Drawing	Per Drawing	37038
I. Propeller Warning Band	Fwd. Fuselage	3" (See Figure A-9)	11136/17925
J. Rescue Arrow	Fwd. Fuselage Toward Pilot Compartment Door	24"	17038
K. Anti-Rain Erosion Coating	Nose	N/A	37038
L. Unit Aircraft Numbers	Fwd. Fuselage	Per Drawing	17038
M. Unit Identifier	Vertical Fin Upper Right Wing	Per Drawing Per Drawing	17038

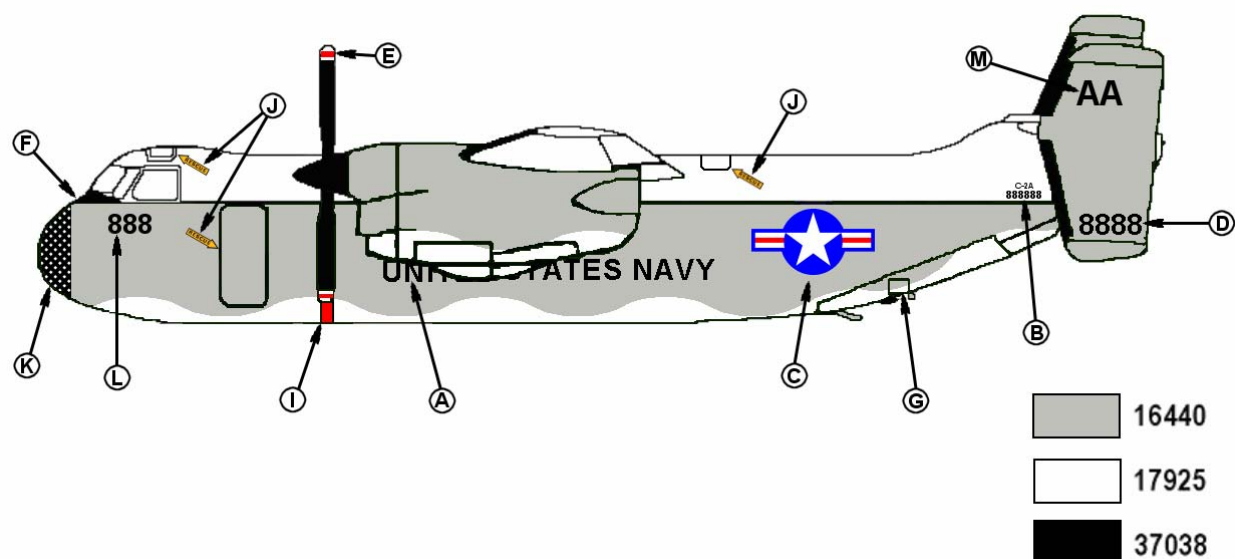


FIGURE C-3. C-2A.

MIL-STD-2161B(AS)

APPENDIX C

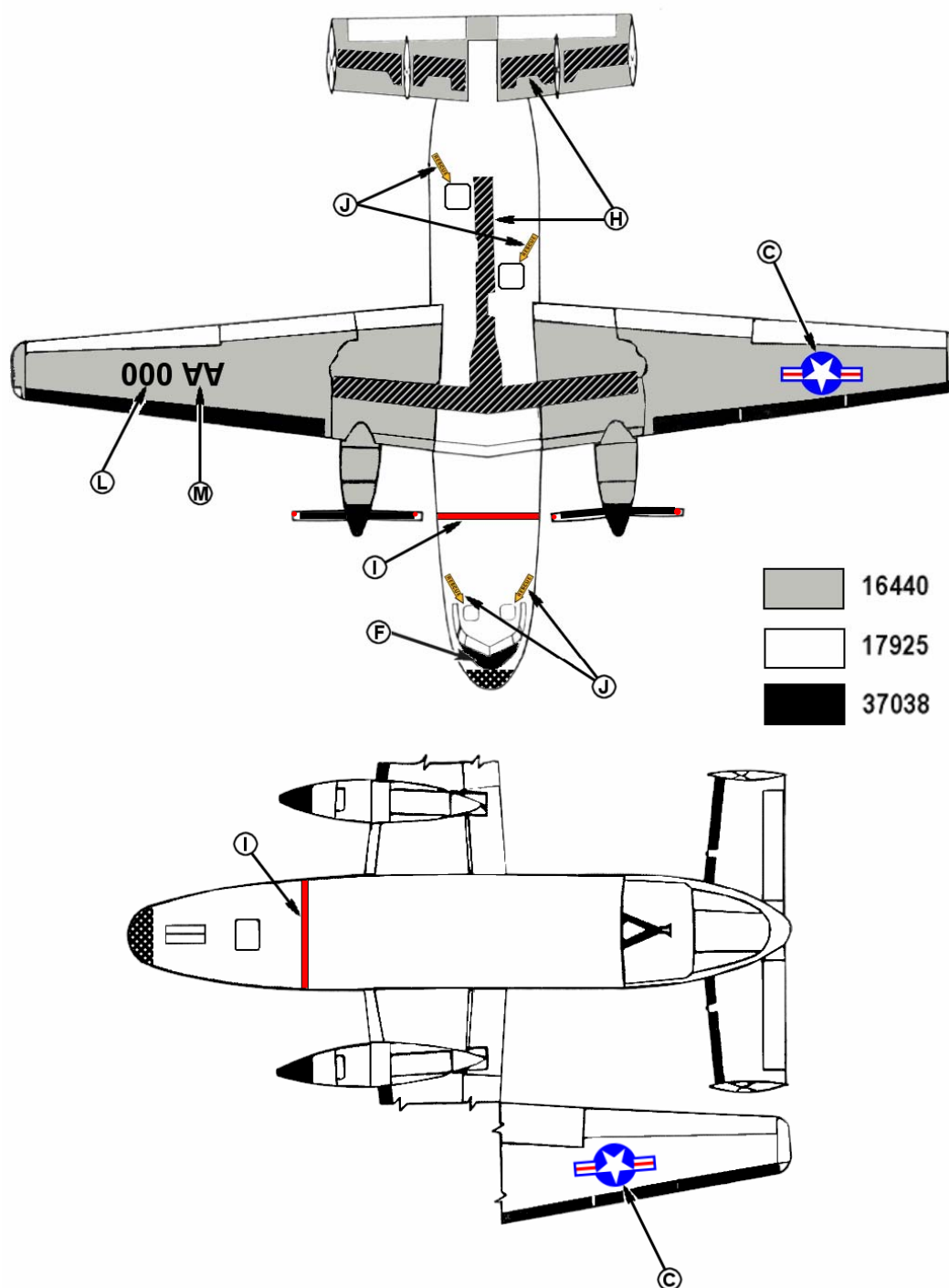


FIGURE C-3. C-2A – Continued.

MIL-STD-2161B(AS)

APPENDIX C

1. MARKING	2. LOCATION	3. SIZE	4. COLOR NO/CODE
A. UNITED STATES NAVY	Fwd. Fuselage	16"	17038
B. Model Designation, Acraft BUNO	Aft Fuselage	2" 4"	17038
C. National Star	Engine Pod Upper L.H. Wing Lower R.H. Wing	28" 34" 34"	17925/11136/15044 17925/11136/15044 17925/11136/15044
D. Call Numbers	Vertical Stabilizer	16"	17038
E. Navy	Lower L.H. Wing	36"	17038
F. Bare Metal	Wing Leading Edge Cap (Slats); Engine Tail Pipe; Forward Portion Flap Hinge Fairings; Leading Edge, Engine Pylons; Engine Fwd. Nacelles; & Rub Area, Horizontal Stabilizer	Per Drawing	N/A
G. Gold Stripe	Center Fuselage	6"	Gold
H. Blue Stripe	Center Fuselage	12"	15044
I. Unit Aircraft Numbers	Wings Fwd. Fuselage	16" 16"	17038
J. Anti-Glare	Fwd. Of Cockpit	N/A	37038
K. Unit Identifier	Vertical Fin Upper Right Wing Lower Left Wing	36" 16" 16"	17038 17038 17038
L. Logo (Optional)	Upper Fwd. Fuselage		
M. Flag	Upper Vertical Fin	26" X 46"	11136 15044 17925
N. Erosion Boot	Nose	Per Drawing	17038
O. Activity Name	Nose	3"	17038
P. Squadron Designation	Forward Fuselage	Per Drawing	17038

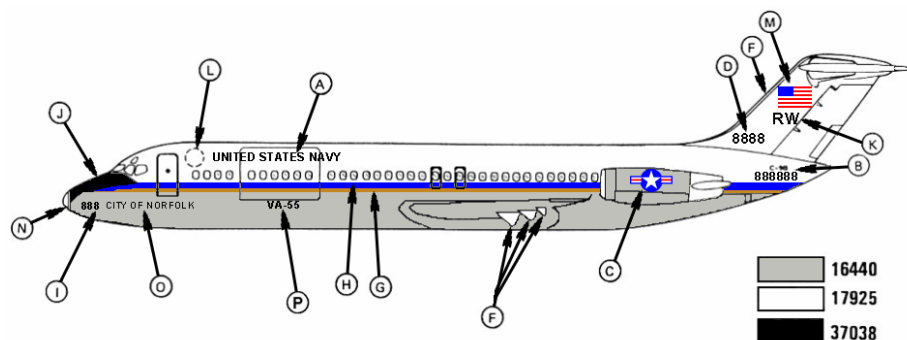


FIGURE C-4. C-9B (Navy).

MIL-STD-2161B(AS)

APPENDIX C

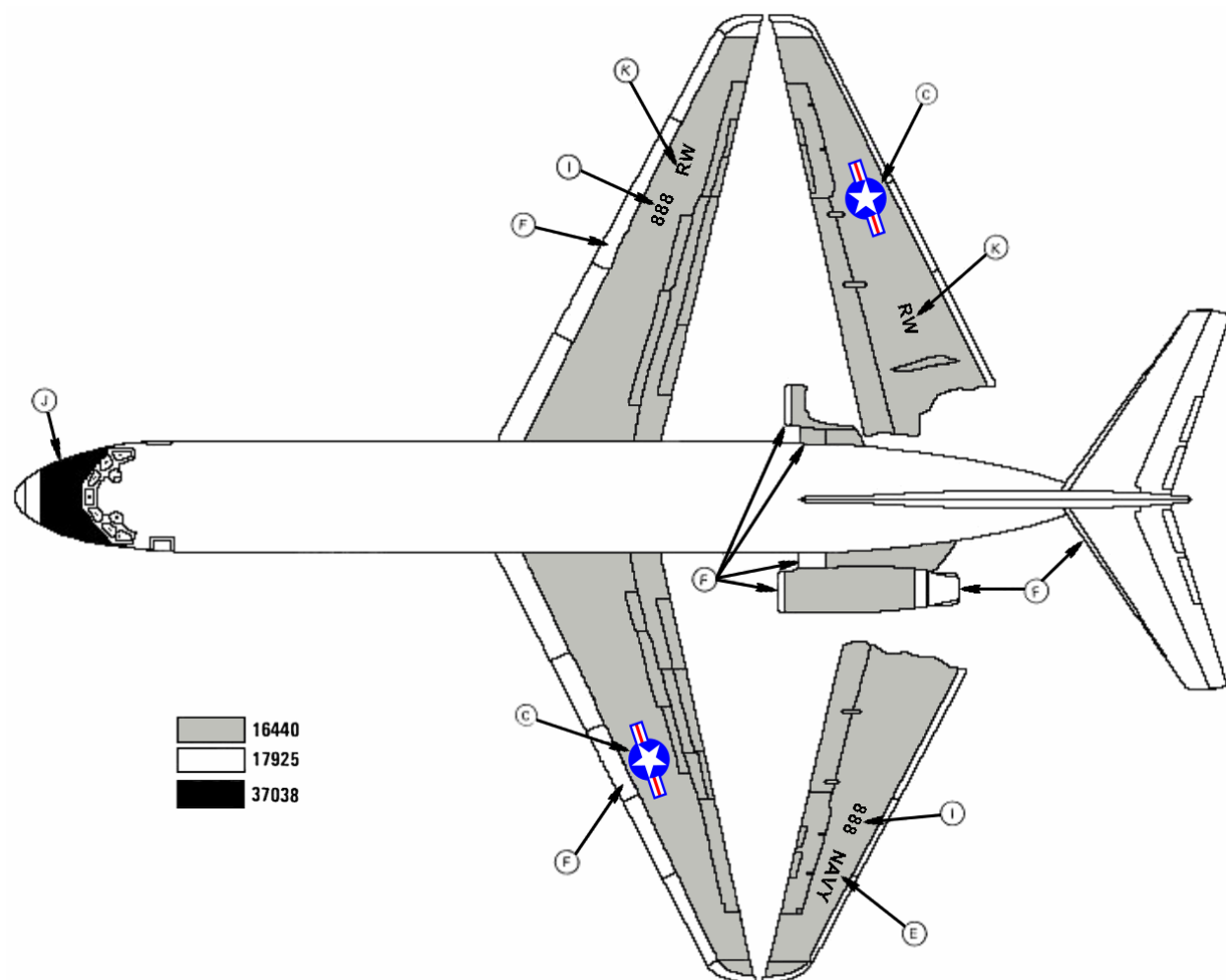


FIGURE C-4. C-9B (Navy) – Continued.

MIL-STD-2161B(AS)

APPENDIX C

1. MARKING	2. LOCATION	3. SIZE	4. COLOR NO/CODE
A. UNITED STATES MARINES	Fwd. Fuselage	12"	17038
B. Model Designation, Acft BUNO	Aft Fuselage	2" 4"	17038
C. National Star	Engine Pod Upper L.H. Wing Lower R.H. Wing	25" 30" 30"	17925/11136/15044 17925/11136/15044 17925/11136/15044
D. Call Numbers	Vertical Stabilizer	10"	17038
E. Marines	Upper R.H. Wing Lower L.H. Wing	30"	17038
F. Bare Metal	Engine Inlet Nacelle Engine Exhaust Cowling Thrust Reverses Passenger Windows Borders	Per Drawing	N/A
G. Red Stripe	Center Fuselage	6"	11136
H. Yellow Stripe	Center Fuselage	12"	13538
I. Unit Aircraft Numbers	Fwd. Fuselage	12"	17038
J. Anti-Glare	Fwd. of Cockpit	N/A	37038
K. Squadron Designation	Fwd. Fuselage	6"	17038
L. Logo (Optional)	Center Fuselage	34"	IAW Squadron Policy
M. Flag	Upper Vertical Stabilizer	25" X 48"	11136 17925 15044
N. Erosion Boot	Nose	Per Drawing	17038

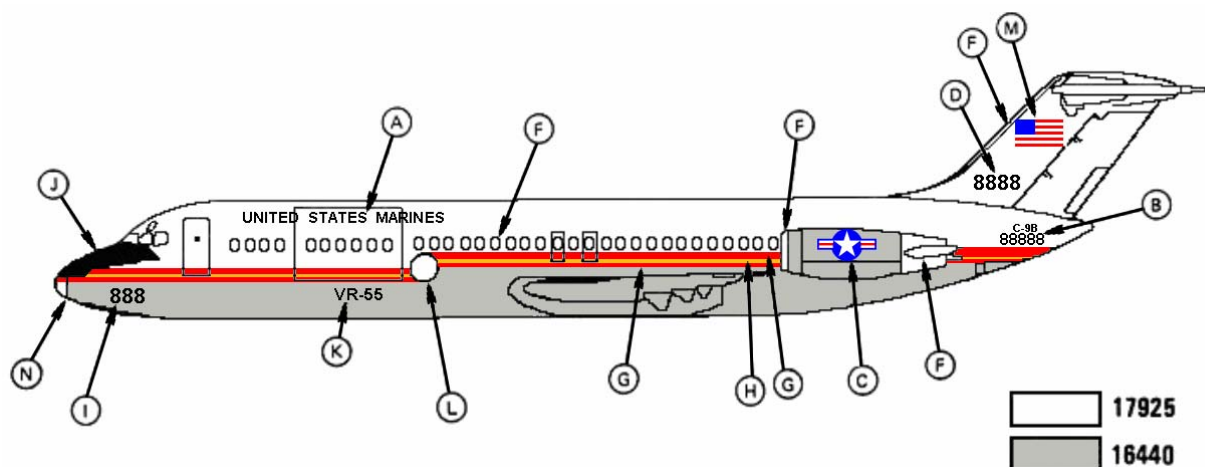


FIGURE C-5. C-9B (Marine).

MIL-STD-2161B(AS)

APPENDIX C

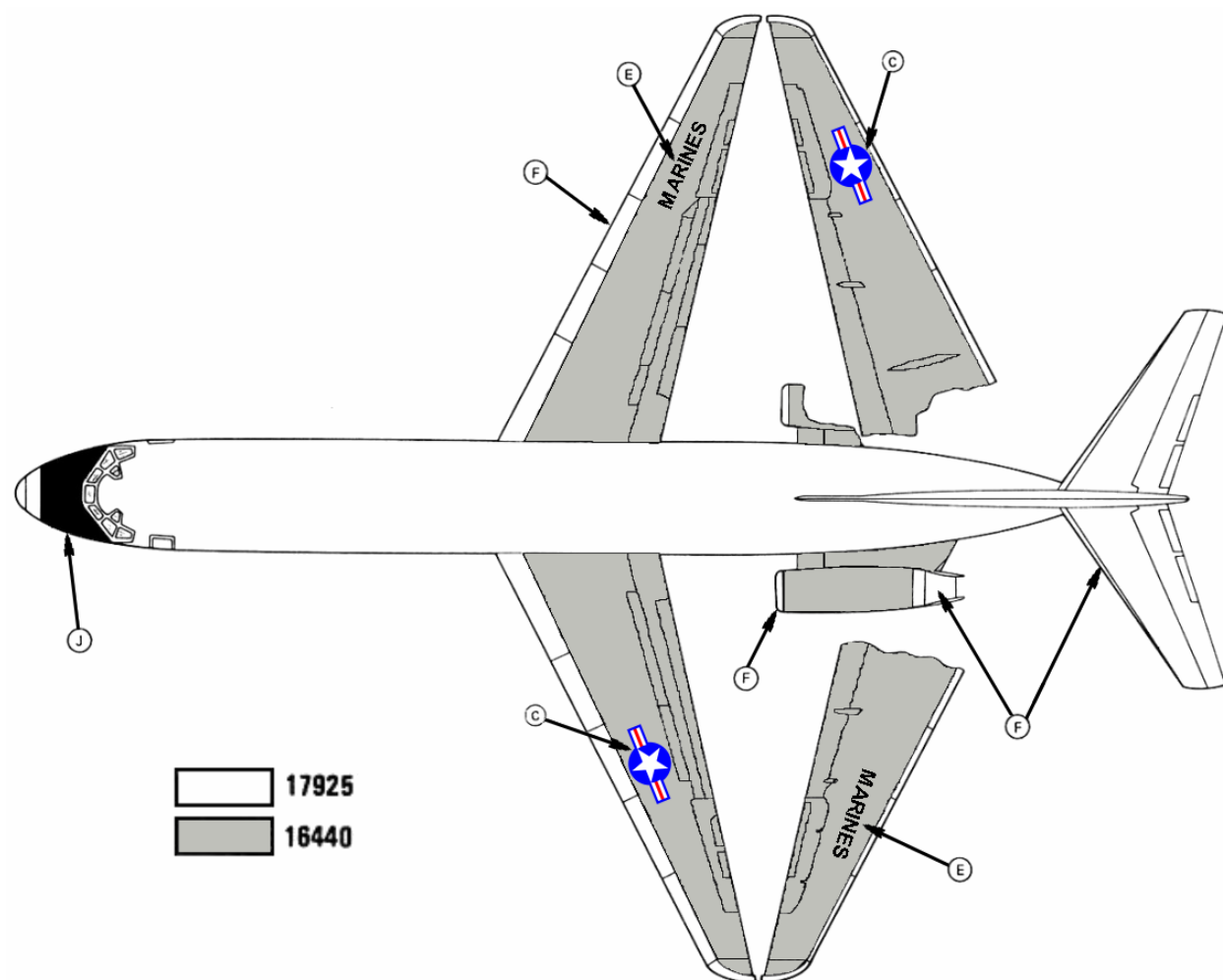
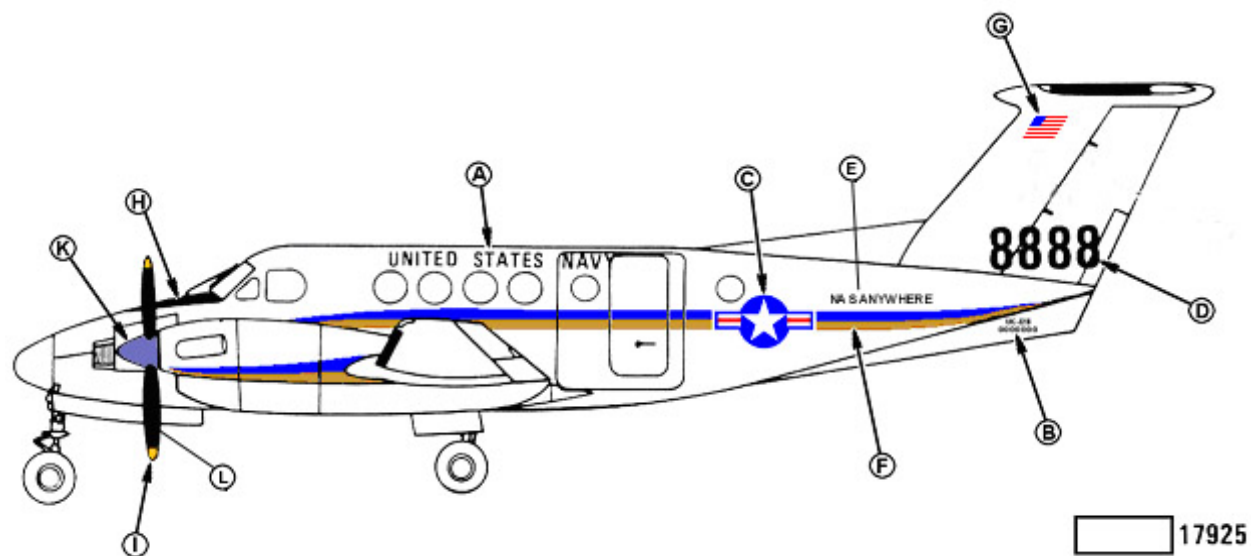


FIGURE C-5. C-9B (Marine) – Continued.

MIL-STD-2161B(AS)

APPENDIX C

1. MARKING	2. LOCATION	3. SIZE	4. COLOR NO/CODE*
A. UNITED STATES NAVY NAVY	Center Fuselage Lower L.H Wing	8" 20"	17038 17038
B. Model Designation, Acft BUNO	Side Aft Fuselage	2" 4"	17038
C. National Star	Aft Fuselage Upper L. H. Wing Lower R. H. Wing	20" 20" 20"	17925/11136/15044 17925/11136/15044 17925/11136/15044
D. Call Numbers	Vertical Stabilizer Upper R.H. Wing	12" 20"	17038 17038
E. Station Identifier	Aft of National Star	3"	17038
F. Accent Stripes NAVY	Center Fuselage	6" each	Upper 15045/Lower 17043
G. Flag - United States	Upper Vertical Stabilizer	See Para. 5.2.7.2	11136/15044/17925
H. Anti-Glare	Nose Fwd. of Wind Screen Inside L. and R. Nacelles	N/A	37038
I. Propeller Tips	L. and R. Engine Propellers	3"/6"/3"	17925/11136/17925, See Fig. A-6
J. Propeller Warning Band	Fwd. Fuselage	3" wide	11136/17925
K. Hubs	Center of L. and R. Engines	N/A	Bare Polished Metal
L. Propellers	L. and R. Engines	N/A	37038, See P. A-6



* Equivalent Non- FED-STD-595 colors may be used by contractors painting the aircraft.

FIGURE C-6. UC-12B/F/M Navy.

MIL-STD-2161B(AS)

APPENDIX C

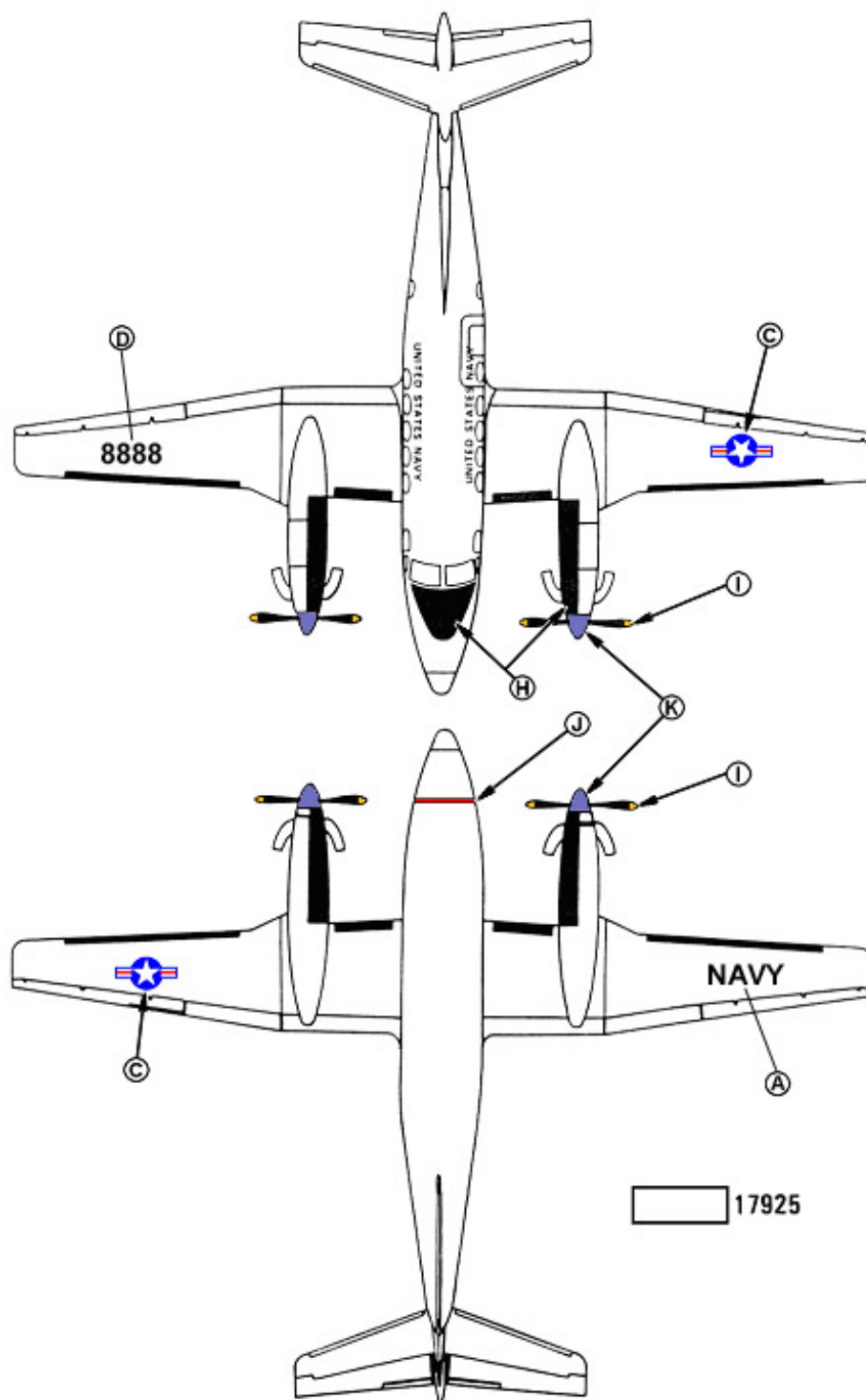
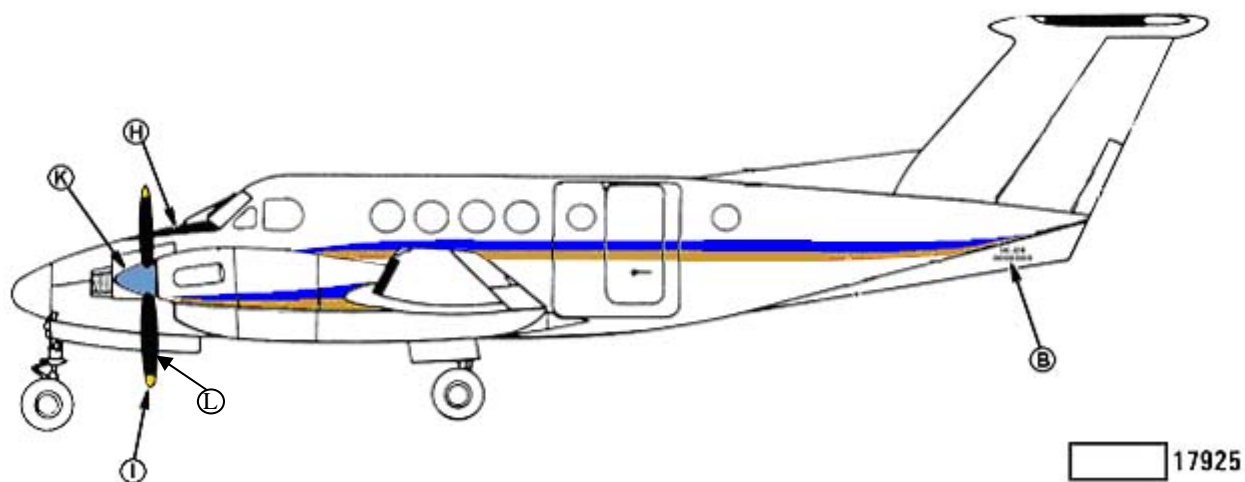


FIGURE C-6. UC-12B/F/M Navy – Continued.

MIL-STD-2161B(AS)

APPENDIX C

1. MARKING	2. LOCATION	3. SIZE	4. COLOR NO/CODE*
A. UNITED STATES NAVY	Not applicable		
B. Model Designation, Acft BUNO	Side Aft Fuselage	2" 4"	17038
C. National Star	Not applicable		
D. Call Numbers	Not applicable		
E. Unit Identifier	Not applicable		
F. Accent Stripes NAVY	Center Fuselage	6" each	Upper 15045/Lower 17043
G. Flag - United States	Not applicable		
H. Anti-Glare	Nose Fwd. of Wind Screen Inside L. and R. Nacelles	N/A	37038
I. Propeller Tips	L. and R. Engine Propellers	3"/6"/3"	17925/11136/17925, See Fig. A-6
J. Propeller Warning Band	Fwd. Fuselage	3" wide	11136/17925
K. Hubs	Center of L. and R. Engines	N/A	Bare Polished Metal
L. Propellers	L. and R. Engines	N/A	37038, See P. A-6



* Equivalent Non- FED-STD-595 colors may be used by contractors painting the aircraft. Follow aircraft drawings for Navy Force Protection variant for specific markings directions.

FIGURE C-7. UC-12B/F/M Navy Force Protection.

MIL-STD-2161B(AS)

APPENDIX C

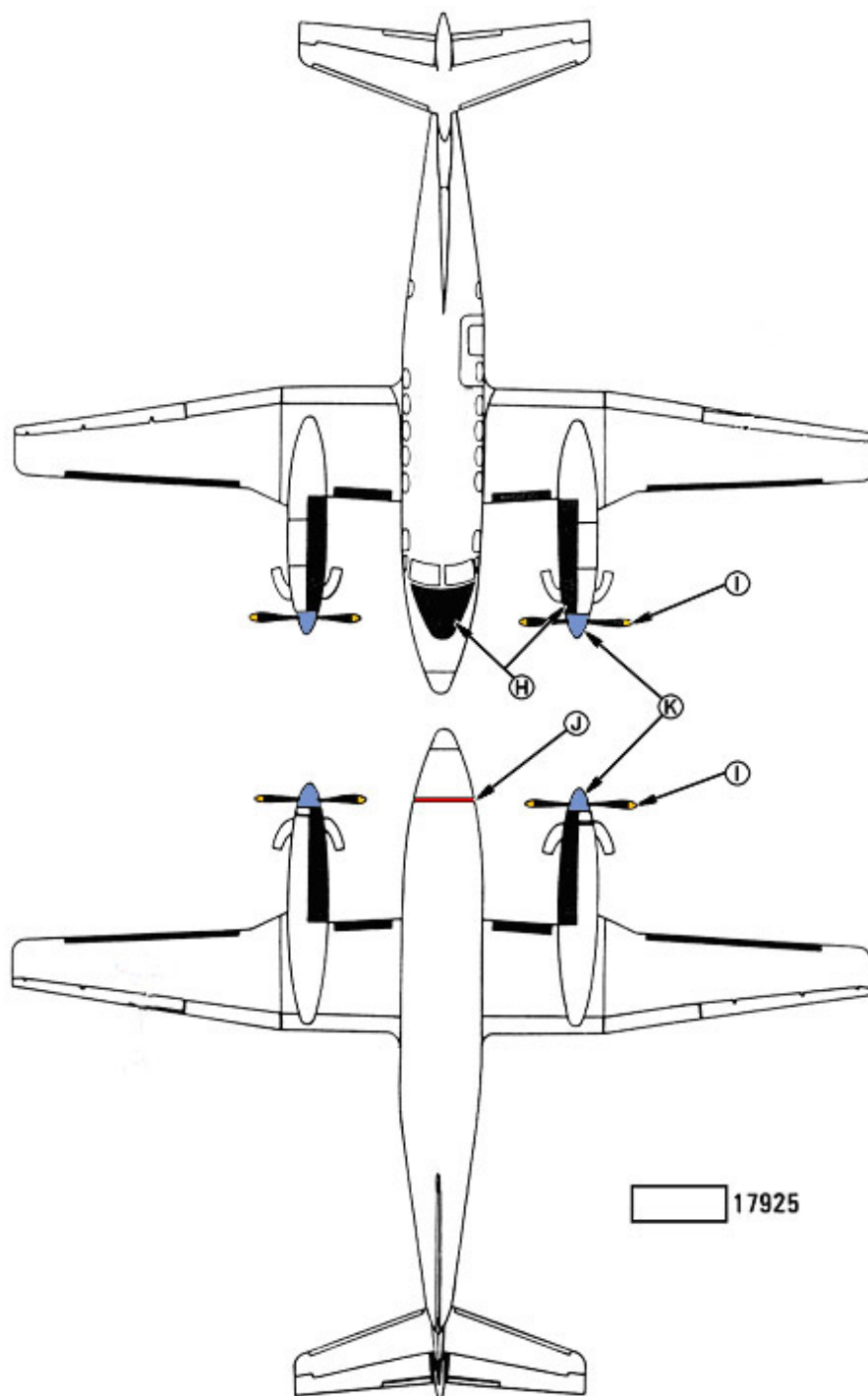
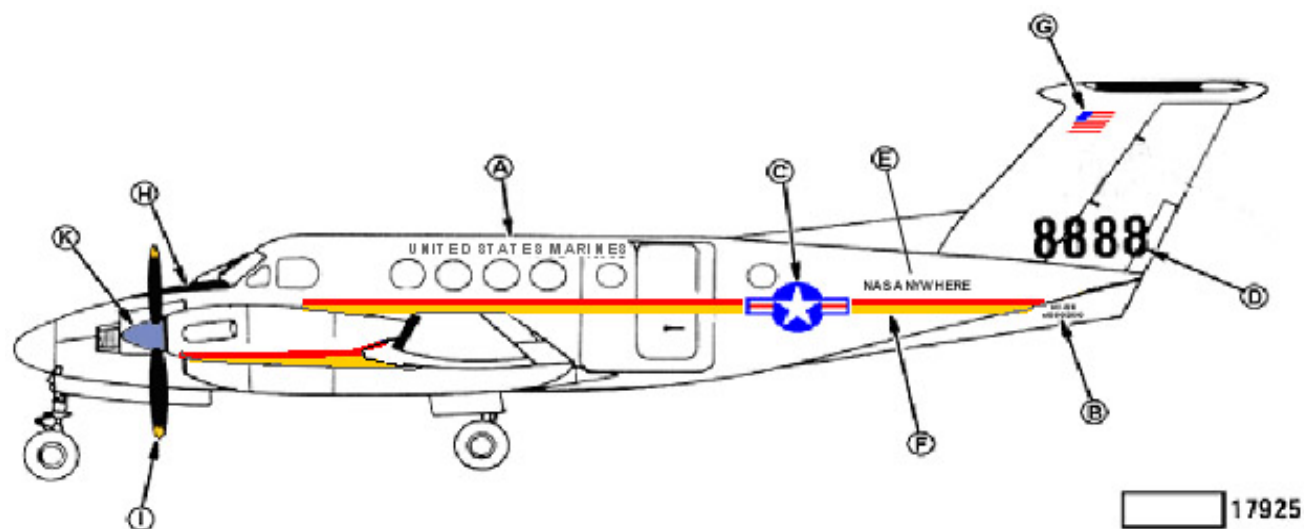


FIGURE C-7. UC-12B/F/M Navy Force Protection – Continued.

MIL-STD-2161B(AS)

APPENDIX C

1. MARKING	2. LOCATION	3. SIZE	4. COLOR NO/CODE*
A. UNITED STATES MARINES MARINES	Center Fuselage Lower L.H. Wing	8" 20"	17038 17038
B. Model Designation, Acft BUNO	Side Aft Fuselage	2" 4"	17038
C. National Star	Aft Fuselage Upper L. H. Wing Lower R. H. Wing	20" 20" 20"	17925/11136/15044 17925/11136/15044 17925/11136/15044
D. Call Numbers	Vertical Stabilizer Upper R.H. Wing	12" 20"	17038 17038
E. Station Identifier	Aft of National Star	3"	17038
F. Accent Stripes MARINES	Center Fuselage	6" each	Upper 11136/Lower 17043
G. Flag - United States	Upper Vertical Stabilizer	See Para. 5.2.7.2	11136/15044/17925
H. Anti-Glare	Nose Fwd. of Wind Screen Inside L. and R. Nacelles	N/A	37038
I. Propeller Tips	L. and R. Engine Propellers	3"/6"/3"	17925/11136/17925, See Fig. A-6
J. Propeller Warning Band	Fwd. Fuselage	3" wide	11136/17925
K. Hubs	Center of L. and R. Engines	N/A	Bare Polished Metal
L. Propellers	L. and R. Engines	N/A	37038, See P. A-6



* Equivalent Non-FED-STD-595 colors may be used by contractors painting the aircraft.

FIGURE C-8. UC-12B/F/M Marines.

MIL-STD-2161B(AS)

APPENDIX C

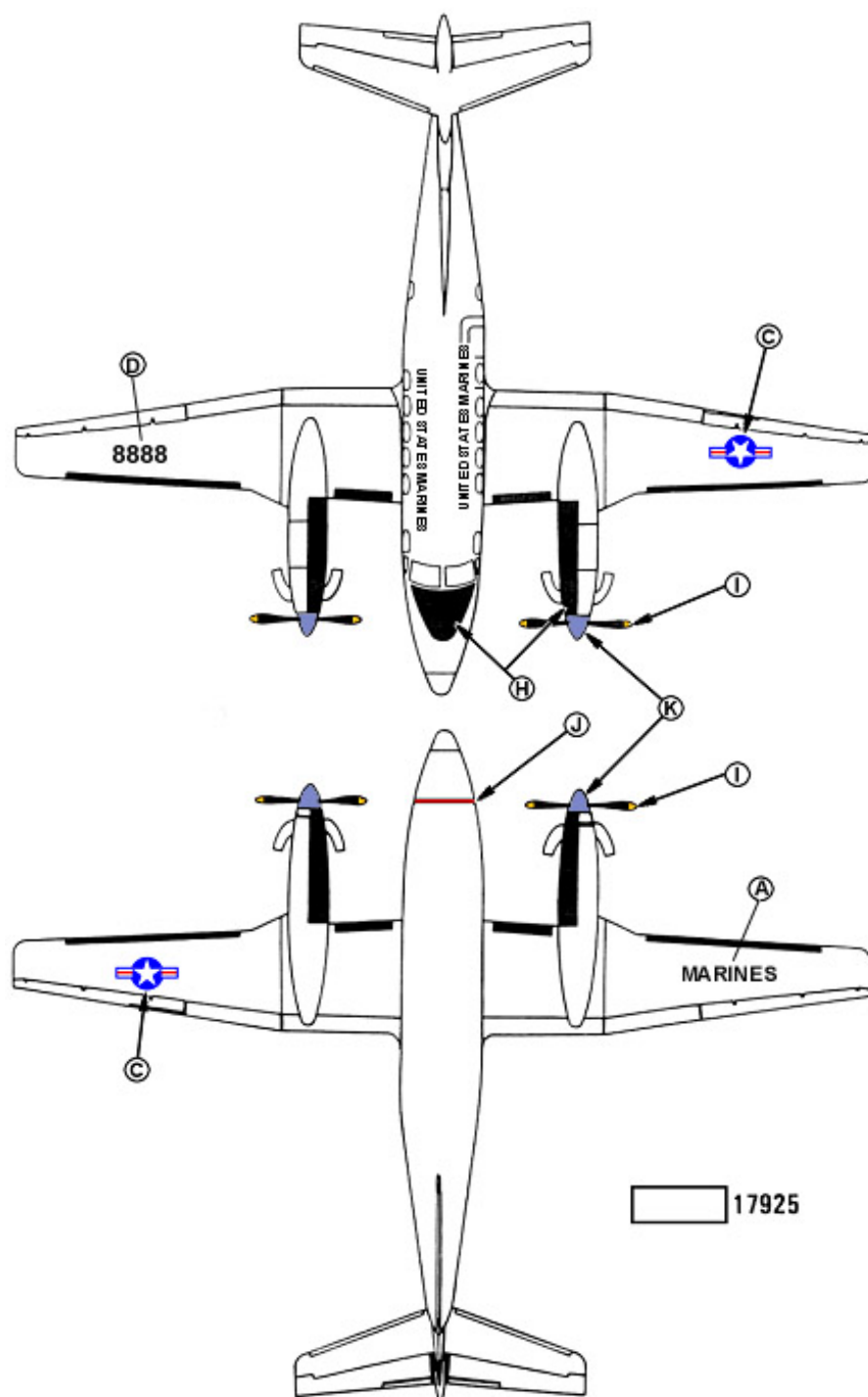
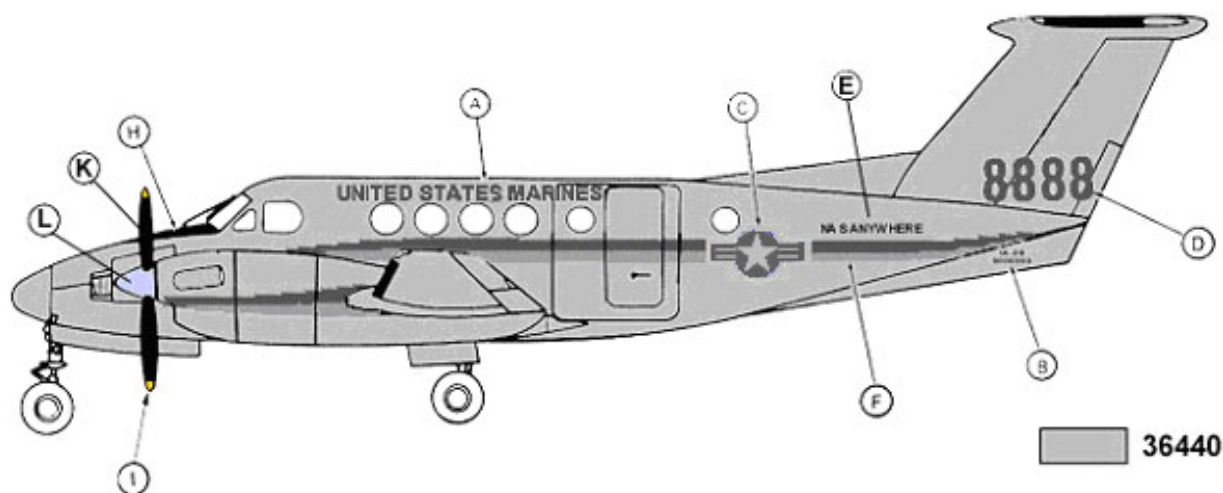


FIGURE C-8. UC-12B/F/M Marines – Continued.

MIL-STD-2161B(AS)

APPENDIX C

1. MARKING	2. LOCATION	3. SIZE	4. COLOR NO/CODE*
A. UNITED STATES MARINES MARINES	Center Fuselage Lower L. H. Wing	8" 20"	35237 35237
B. Model Designation, Acft BUNO	Side Aft Fuselage	2" 4"	35237
C. National Star	Aft Fuselage Upper L. H. Wing Lower R. H. Wing	20" 20" 20"	35237 35237 35237
D. Call Numbers	Vertical Stabilizer Upper R.H. Wing	12" 20"	35237 35237
E. Station Identifier	Aft of National Star	3"	17038
F. Accent Stripes MARINES	Center Fuselage	6" each	Upper 35237/Lower 36320
G. Flag - United States	N/A		
H. Anti-Glare	Nose Fwd. of Wind Screen Inside L. and R. Nacelles	N/A	37038
I. Propeller Tips	L. and R. Engine Propellers	3"/6"/3"	17925/11136/17925, See Fig. A-6
J. Propeller Warning Band	Fwd. Fuselage	3" wide	11136/17925
K. Propeller	L. and R. Side Engine	N/A	37038, See P. A-6
L. Hub	Front of L. and R. Engine	N/A	Bare polished metal



* Equivalent Non- FED-STD-595 colors may be used by contractors painting the aircraft.

FIGURE C-9. UC-12B/F/M Marines tactical.

MIL-STD-2161B(AS)

APPENDIX C

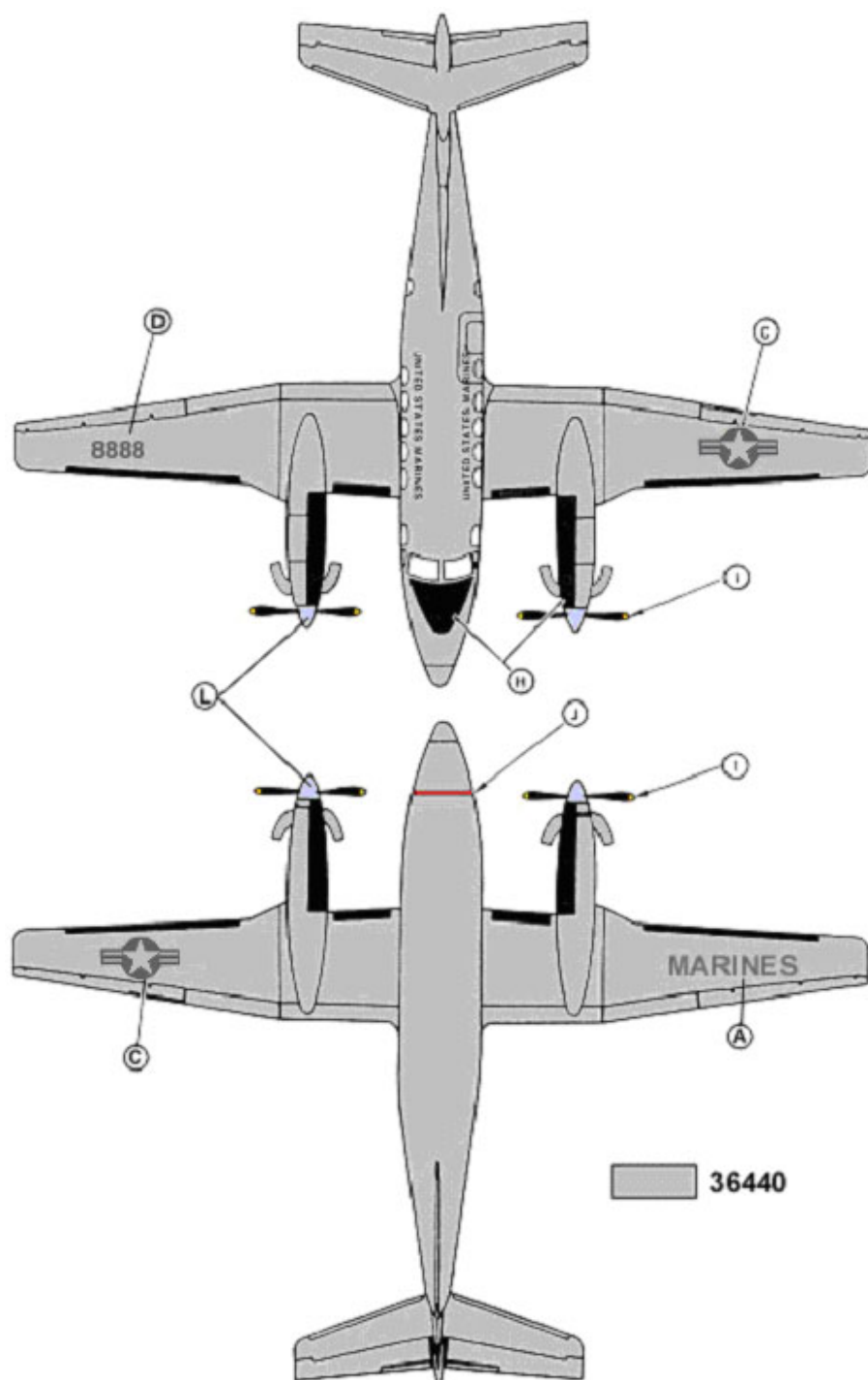
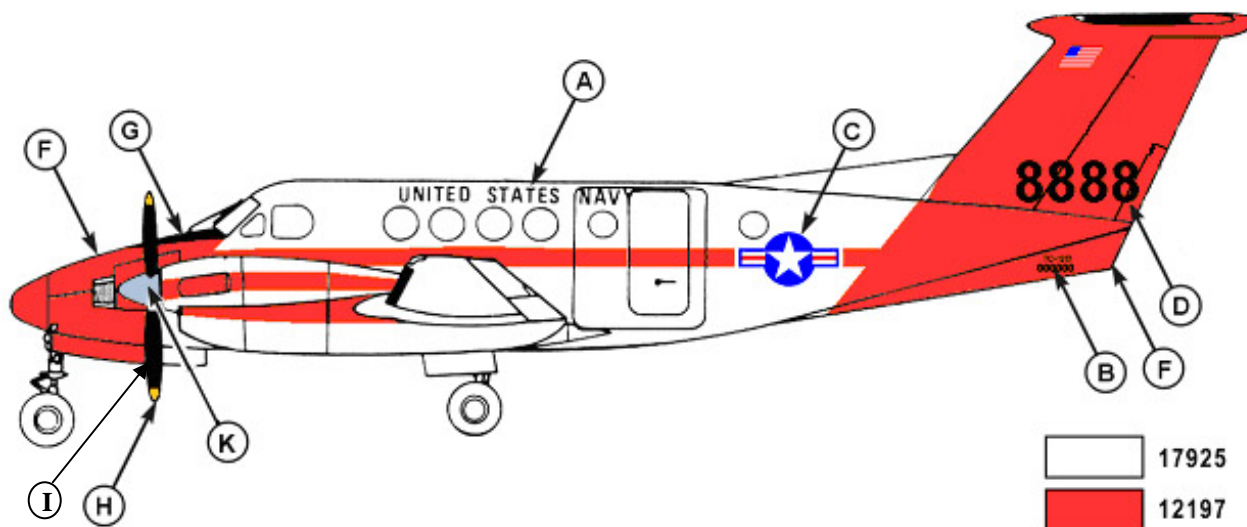


FIGURE C-9. UC-12B/F/M Marines tactical – Continued.

MIL-STD-2161B(AS)

APPENDIX C

1. MARKING	2. LOCATION	3. SIZE	4. COLOR NO/CODE*
A. UNITED STATES NAVY NAVY	Center Fuselage	8"	17038
	Lower L.H. wing	20"	17038
B. Model Designation, Acft BUNO	Side Aft Fuselage	2" 4"	17038
C. National Star	Aft Fuselage	20"	17925/11136/15044
	Upper L. H. Wing	20"	17925/11136/15044
	Lower R. H. Wing	20"	17925/11136/15044
D. Call Numbers	Vertical Stabilizer	12"	17038
	Upper R.H Wing	20"	17038
E. Station Identifier	Not applicable		
F. Conspicuity Marking	Per Drawing	See Para. 5.1.1.1	12197
G. Anti-Glare	Nose Fwd. of Wind Screen Inside L. and R. Nacelles	N/A	37038
H. Propeller Tips	L. and R. Engine Propellers	3"/6"/3"	17925/11136/17925, See Fig. A-6
I. Propellers	L. and R. Engines	N/A	37038, See Fig. A-6
J. Propeller Warning Band	Fwd. Fuselage	3" wide	11136/17925
K. Hub	Front of L. and R. Engine	N/A	Bare polished metal



* Equivalent Non-FED-STD-595 colors may be used by contractors painting the aircraft.

FIGURE C-10. TC-12B high visibility.

MIL-STD-2161B(AS)

APPENDIX C

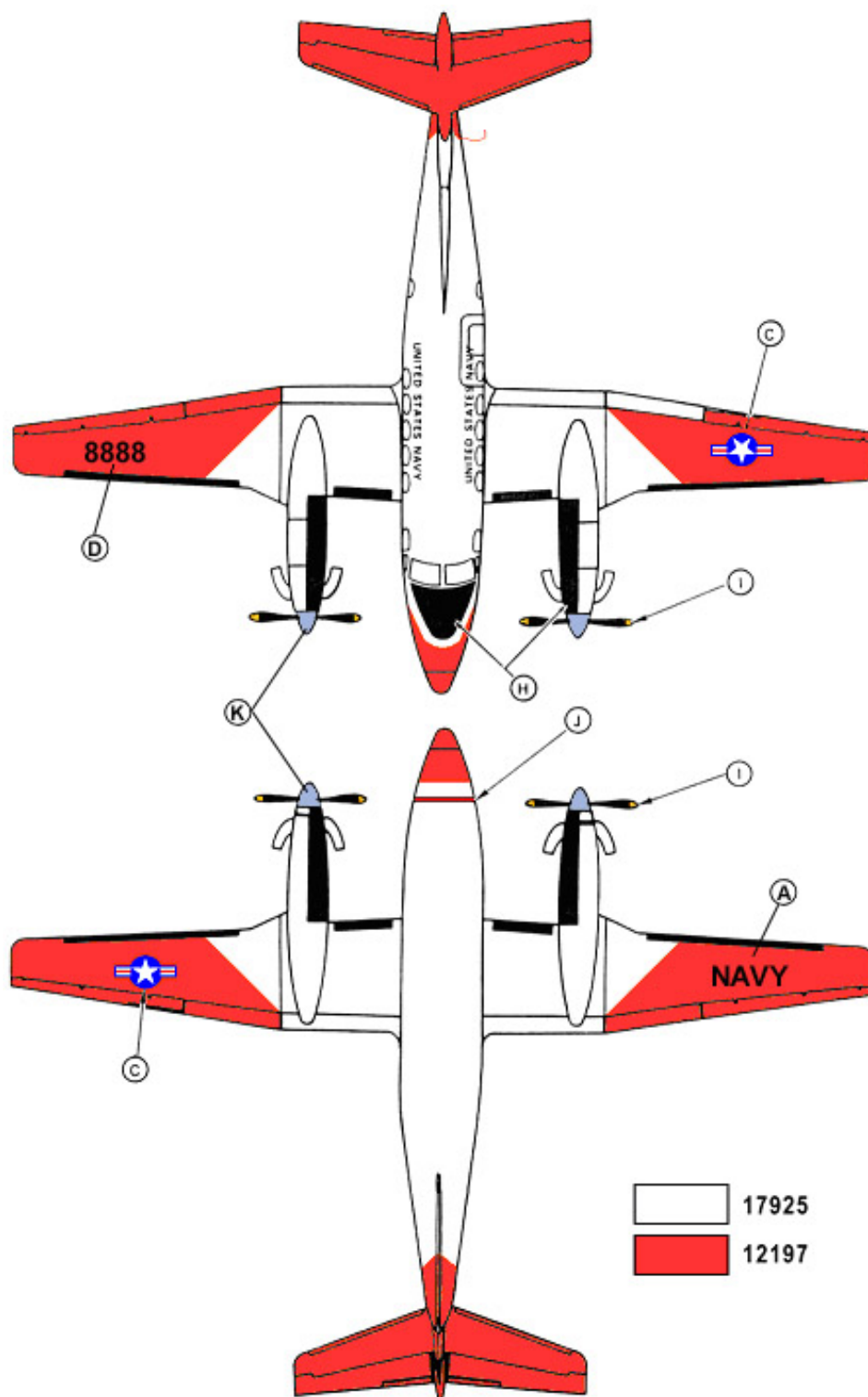


FIGURE C-10. TC-12B high visibility – Continued.

MIL-STD-2161B(AS)

APPENDIX C

1. MARKING	2. LOCATION	3. SIZE	4. COLOR NO/CODE
A. UNITED STATES NAVY	Upper Center Fuselage	20"	17038
B. National Star	Aft Fuselage	60"	17875/11136/15044
	Upper L. H. Wing	34"	17875/11136/15044
	Lower R. H. Wing	34"	17875/11136/15044
C. Call Numbers	Vertical Stabilizer	16"	17038
D. NAVY	Lower L. H. Wing	36"	17038
E. Gold Stripe	Center Fuselage	2"	17043
F. Blue Stripe	Center Fuselage	2"	15044
G. Unit Aircraft Number	Forward Fuselage	16"	17038
	Lower L. H. Wing	16"	17038
	Upper R. H. Wing	16"	17038
H. Unit Identifier	Vertical Fin	36"	17038
	Lower R. H. Wing	36"	17038
	Upper R. H. Wing	36"	17038
I. Flag - United States	Upper Vertical Fin	24" x 45.6"	17875/11136/15044
J. Activity Name	Forward Fuselage	4.8"	17038
K. Squadron Designation	Forward Fuselage	8"	17038

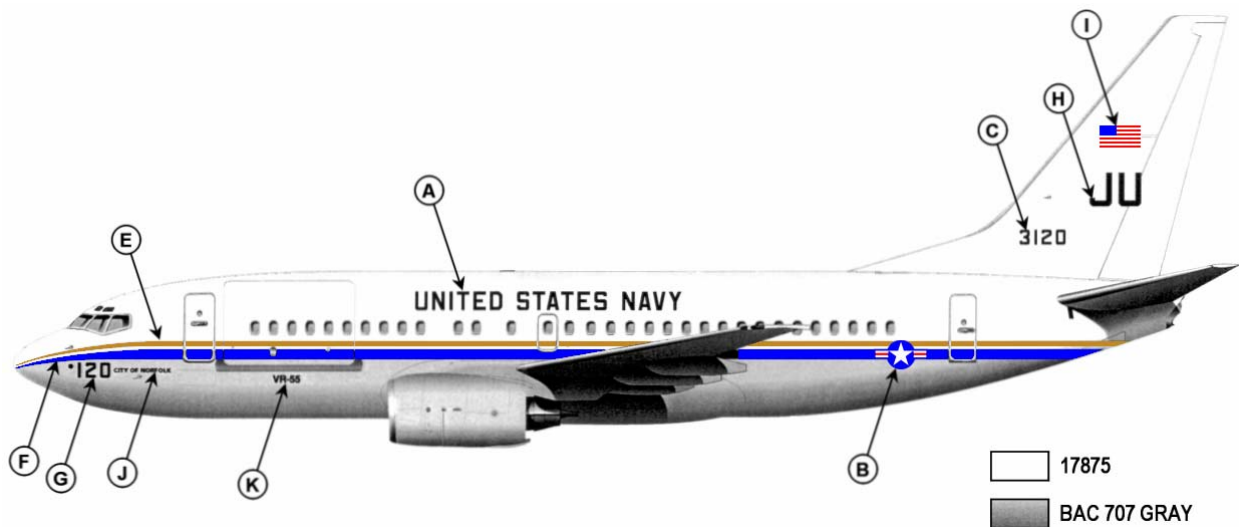


FIGURE C-11. C-40.

MIL-STD-2161B(AS)

APPENDIX C

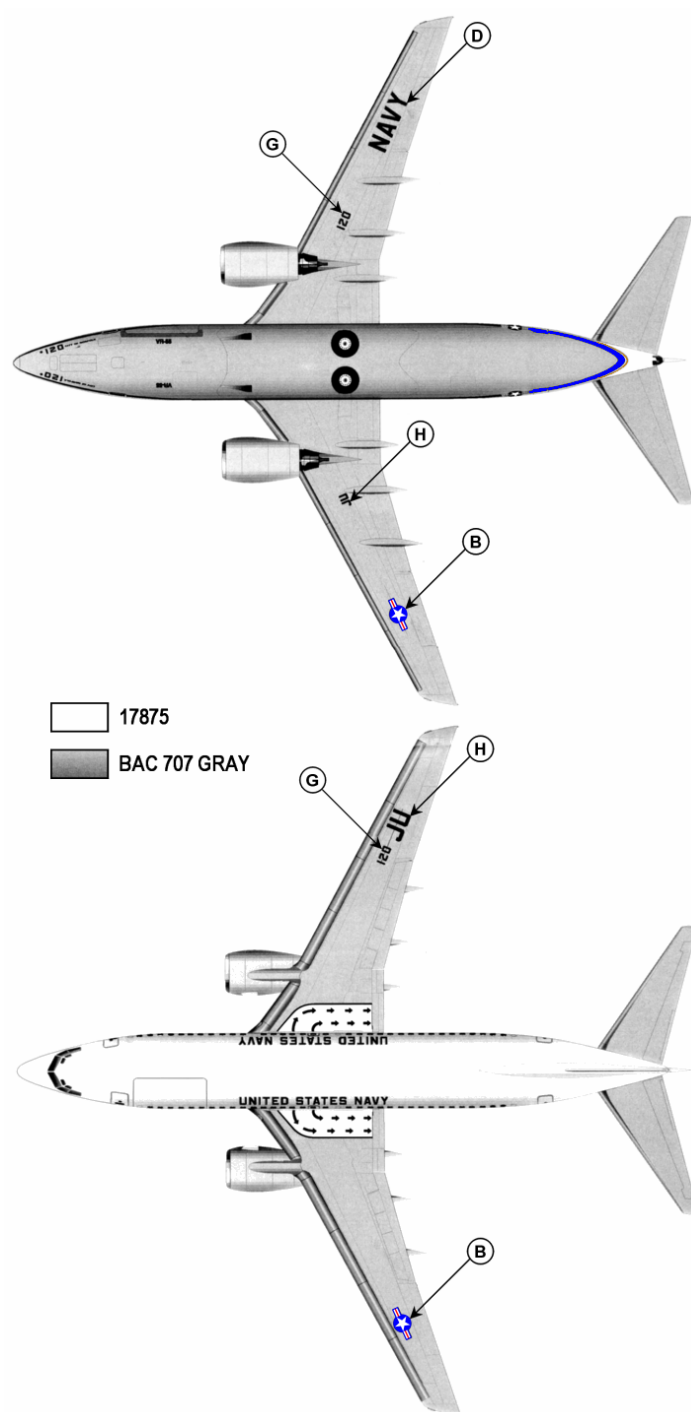


FIGURE C-11. C-40 – Continued.

MIL-STD-2161B(AS)

APPENDIX C

1. MARKING	2. LOCATION	3. SIZE	4. COLOR NO/CODE
A. UNITED STATES NAVY/ MARINES	Center Fuselage	10"	35237
B. Model Designation, Acraft BUNO	Aft Fuselage	2" 4"	35237
C. National Star	Aft Fuselage Lower R.H. Wing Upper L.H. Wing	40" 40" 40"	35237 36320 36320
D. Call Numbers	Vertical Stabilizer	30"	35237
E. Propeller Tips ^{1,2}	N/A	3"/6"/3"	17925/11136/17925, see Figure A-6
F. NAVY/MARINES	Lower L.H. Wing	30"	36320
G. Walkway	Top of Wing & Fuselage	Per Drawing	35237
H. Propeller Warning Band	Fwd. Fuselage	3"	35237/36320
I. Unit Aircraft Numbers	Fwd. Fuselage Upper R.H. Wing	24" 30"	37038
J. Unit Identifier	Lower R.H. Wing Upper R.H. Wing Vertical Stabilizer	30" 30" 30"/36"	36320 36320 35237
K. Anti-Glare	Nose	Per Drawing	35237
L. Emergency Rescue Notice	Wing/Fuselage Joint, R.H. & L.H. Sides	2"	35237
M. Propellers C/KC-130	L. and R. Engines	N/A	Polished metal up to tip
KC-130J only	L. and R. Engines	N/A	37038

Note 1: C/KC-130F/R/T aircraft – A single 6-inch wide red (color 11136) or black (color 17038) stripe at the tip of each propeller blade is allowed.

Note 2: KC-130J aircraft – One 3-inch wide white (color 17925) stripe at the tip of the blade and one 3-inch wide white (color 17925) stripe starting 9 inches inboard of the tip is allowed.

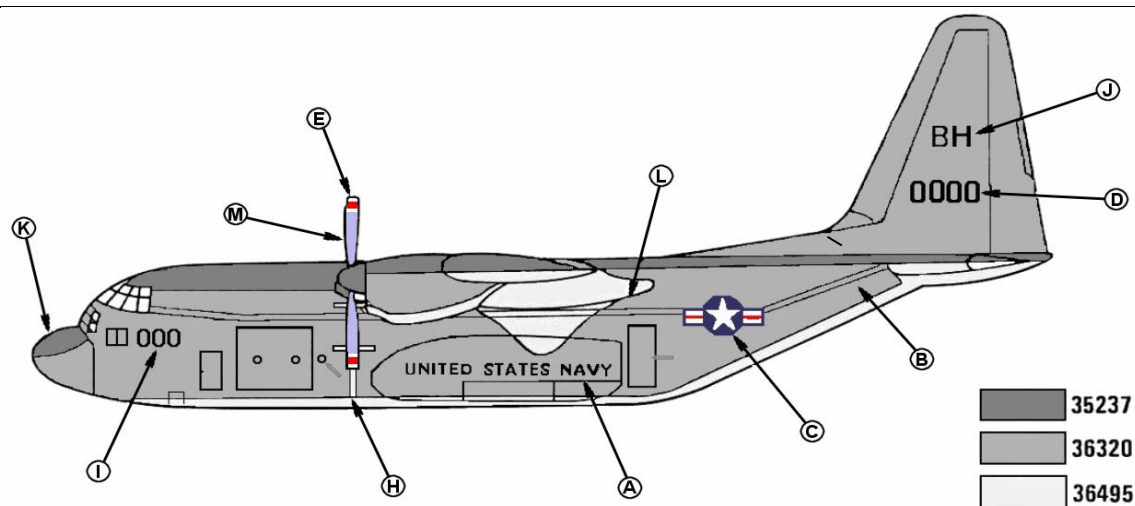


FIGURE C-12. C-130/130J tactical.

MIL-STD-2161B(AS)

APPENDIX C

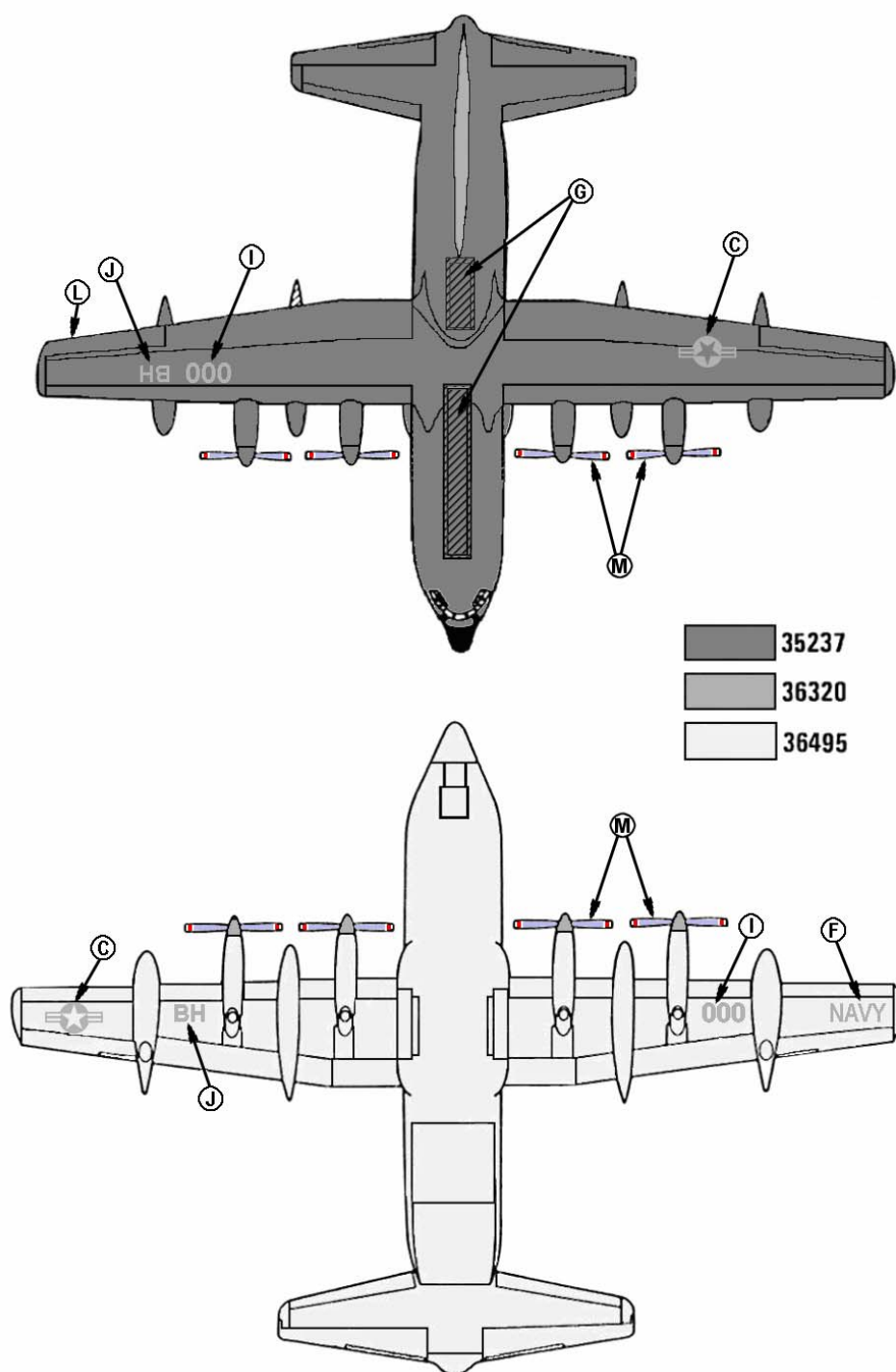


FIGURE C-12. C-130/130J tactical – Continued.

MIL-STD-2161B(AS)

APPENDIX C

1. MARKING	2. LOCATION	3. SIZE	4. COLOR NO/CODE
A. UNITED STATES NAVY/ MARINES	Center Fuselage	10"	17038
B. Model Designation, Acraft BUNO	Aft Fuselage	2" 4"	17038
C. National Star	Aft Fuselage Lower R.H. & L.H. Wings	40" 40"	17925/11136/15044 17925/11136/15044
D. Call Numbers	Vertical Stabilizer	30"	17038
E. Propeller Tips ^{1,2}	N/A	3"/6"/3"	17925/11136/17925, see Figure A-6
F. NAVY/MARINES	Lower L.H. Wing	30"	17038
G. Walkway	Top of Wing & Fuselage	Per Drawing	36231
H. Propeller Warning Band	Fwd. Fuselage	3"	11136/17925
I. Unit Aircraft Numbers	Fwd. Fuselage Upper R.H. Wing	24" 30"	17038
J. Unit Identifier	Upper & Lower R.H. Wing Vertical Stabilizer	30" 30"	17038
K. Anti-Glare	Nose	Per Drawing	17038
L. Emergency Rescue Notice	Wing/Fuselage Joint, R.H. & L.H. Sides	24"	13538
M. Black Stripe	Center Fuselage	Per Drawing	17038
N. Propellers C/KC-130	L. and R. Engines	N/A	Polished metal until tip markings
KC-130J only	L. and R. Engines	N/A	37038

Note 1: C/KC-130F/R/T aircraft – A single 6-inch wide red (color 11136) or black (color 17038) stripe at the tip of each propeller blade is allowed.

Note 2: KC-130J aircraft – One 3-inch wide white (color 17925) stripe at the tip of the blade and one 3-inch wide white (color 17925) stripe starting 9 inches inboard of the tip is allowed.

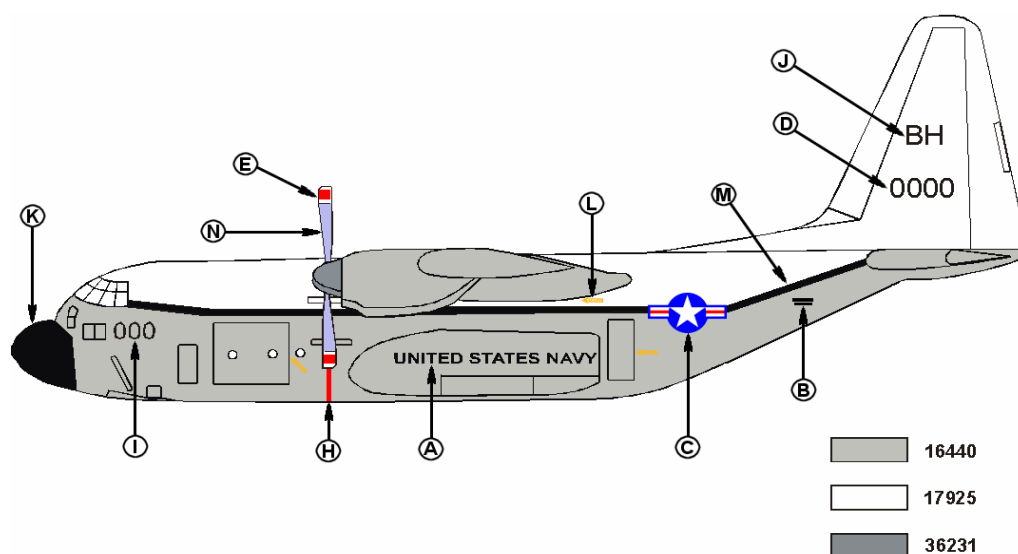


FIGURE C-13. C-130/130J Cargo/Tanker.

MIL-STD-2161B(AS)

APPENDIX C

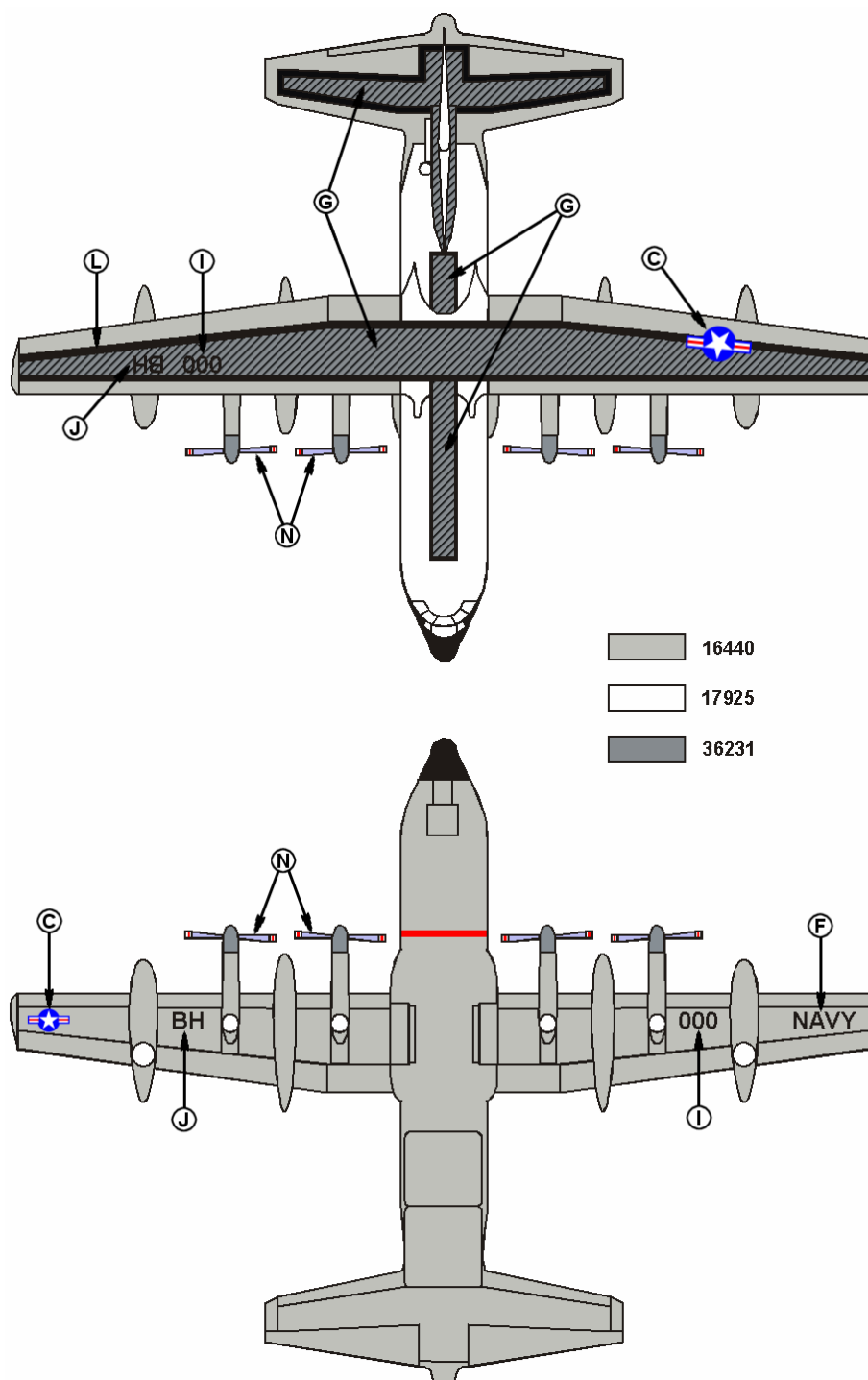


FIGURE C-13. C-130/130J Cargo/Tanker – Continued.

MIL-STD-2161B(AS)

APPENDIX C

1. MARKING	2. LOCATION	3. SIZE	4. COLOR NO/CODE
A. NAVY	Aft Fuselage	20"	17038
B. Model Designation, Acft BUNO	Aft Fuselage	2" 4"	17038
C. National Star	Aft Fuselage Lower L.H. Wing Upper R.H. Wing	40" 40" 40"	17925/11136/15044 17925/11136/15044 17925/11136/15044
D. Call Numbers	Vertical Stabilizer	12"	17038
E. Anti-Glare	Fwd. of Cockpit	N/A	37038
F. Beware of Blast	Engine Exhaust Cowling	12"	17038
G. Arresting Hook Marking	Aft Fuselage	7"	17038
H. Propeller Warning Band	Fwd. Fuselage	3"	11136/17925
I. Walkway	Top Horizontal Tail Surface Top Center of Wing	N/A	IAW Para. 5.1.13
J. Unit Identifier	Vertical Stabilizer	30"/36"	17038
K. Unit Aircraft Numbers	Fwd. Fuselage	24"	17038
L. Propeller Tips	N/A	3"/6"/3"	17925/11136/17925, see Figure A-6
M. Rescue Arrow	L.H. Side Fuselage Near Door Top Fwd. Fuselage Aft of Cockpit	24"	13538 17038
N. Anti-Rain Erosion Coating	Nose Inlet	N/A	37038

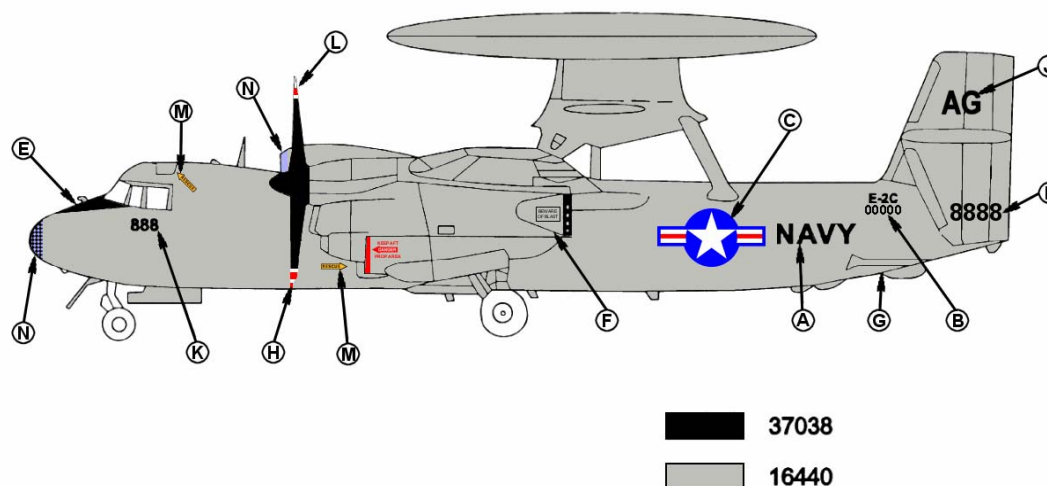


FIGURE C-14. E-2C.

MIL-STD-2161B(AS)

APPENDIX C

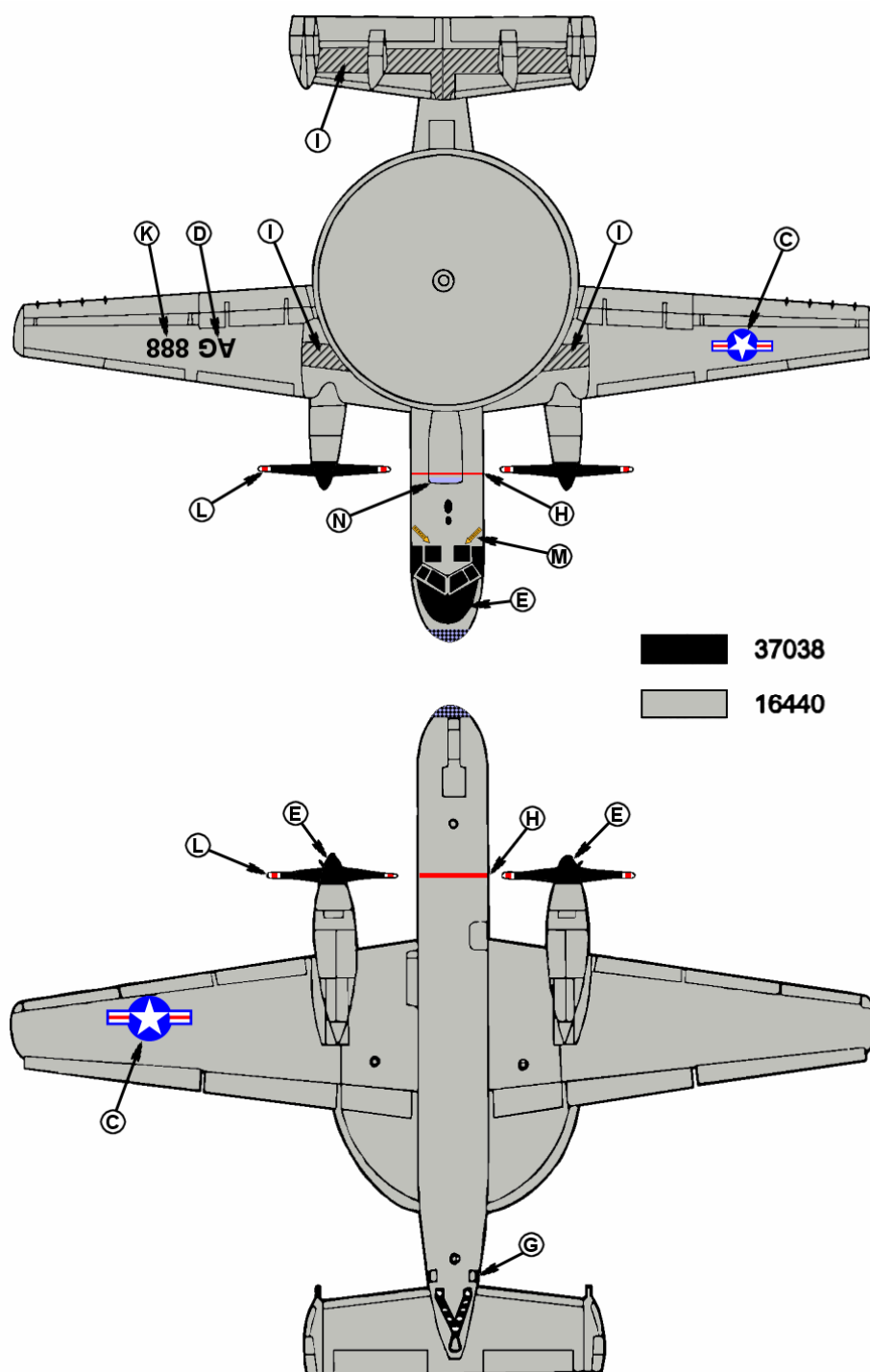
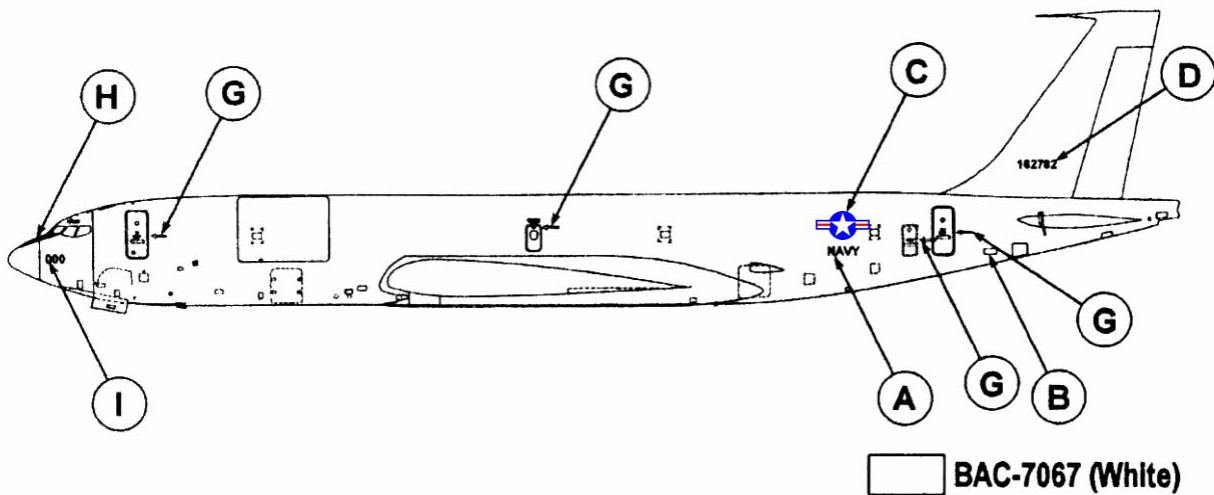


FIGURE C-14. E-2C – Continued.

MIL-STD-2161B(AS)

APPENDIX C

1. MARKING	2. LOCATION	3. SIZE	4. COLOR NO/CODE
A. NAVY	Aft Fuselage	16"	16515
B. Model Designation, Acft BUNO	Aft Fuselage	2"	17038
		4"	17038
C. National Star	Aft Fuselage	30"	BAC-7067/11136/15044
	Lower L.H. Wing	30"	BAC-7067/11136/15044
	Upper R.H. Wing	30"	BAC-7067/11136/15044
D. Call Numbers	Lower Vertical Tail	12"	17038
E. Intake Warning	Engine Intake Nacelles	See 5.2.2.10.1	IAW Figure A-15 BAC-7067/11136
F. Beware of Blast	Aft Engine Nacelles	7"	BAC-7067/11136
G. Rescue Arrows	Fuselage (4)	24"	13538/17038
H. Anti-Glare Area	Forward of Cockpit	N/A	17038
I. Unit Aircraft Numbers	Fwd. Fuselage	12"	17038

FIGURE C-15. E-6A/B.

MIL-STD-2161B(AS)

APPENDIX C

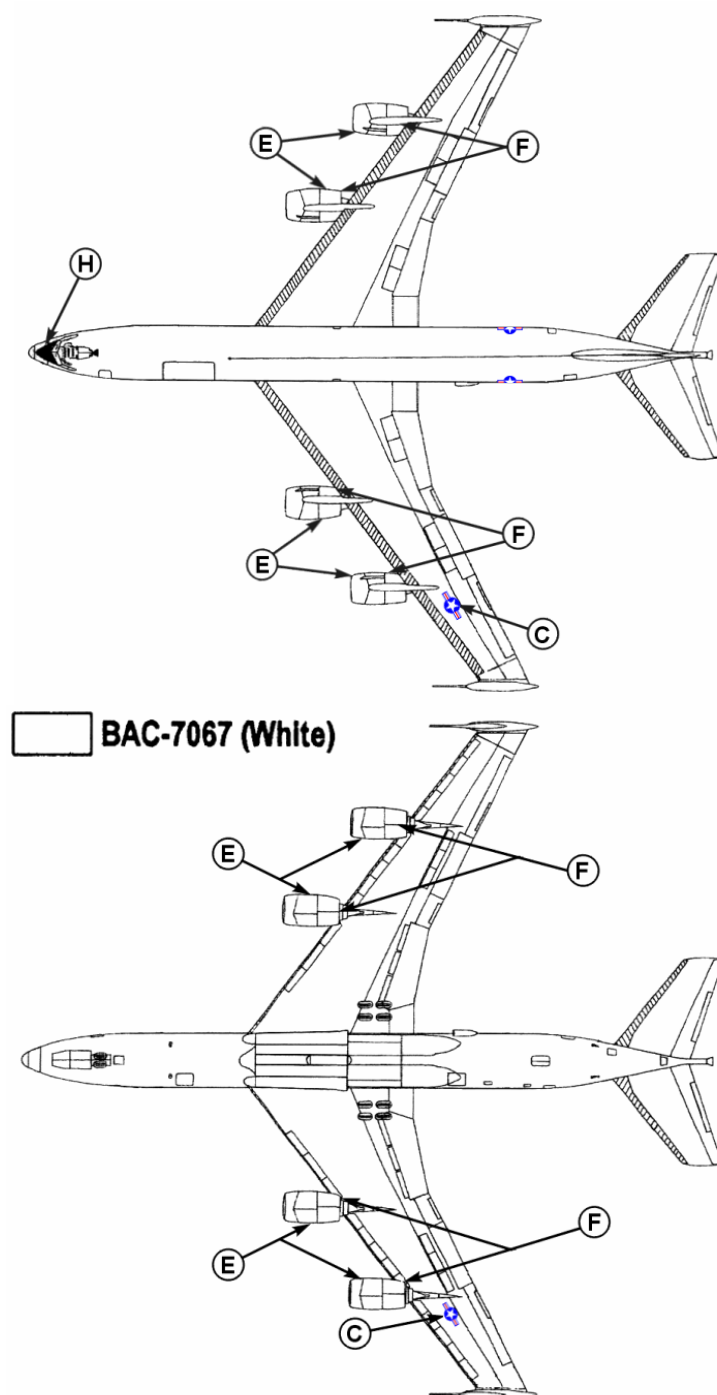


FIGURE C-15. E-6A/B – Continued.

MIL-STD-2161B(AS)

APPENDIX C

MARKING	LOCATION	SIZE	COLOR NO/CODE
A. NAVY	Aft Fuselage	12"	35237, Figure A-15
B. Model Designation, Acft BUNO	Below National Star	2" 4"	35237
C. National Star	Aft Fuselage Lower L.H. Wing Upper R.H. Wing	12" 12" 12"	35237 36320, Figure A-1 35237
D. Call Numbers	Lower Vertical Stabilizer	12"	35237
E. Intake Warning	Engine Intake Nacelles	See 5.2.2.10.1	35237, Figure A-15
F. Beware of Blast	Aft Engine Exhaust Outlet	15"	36320
G. Arresting Hook Marking	Aft Fuselage	13"	36320, Figure A-14
H. Ejection Seat Warning	Below Canopy Rail	8"	35237, Figure A-16
I. Walkway	Wings Next to Fuselage	N/A	IAW Para. 5.1.13
J. Unit Identifier	Upper R.H. Wing Vertical Stabilizer	30" 30"	35237
K. Unit Aircraft Numbers	Forward Fuselage Upper R.H. Wing	12" 24"	35237
L. Rescue Arrow	R.H. & L.H. Sides of Fuselage Aft of Intake Warning	24"	35237, Figure A-14
M. Radome	Top of vertical tail	N/A	35237

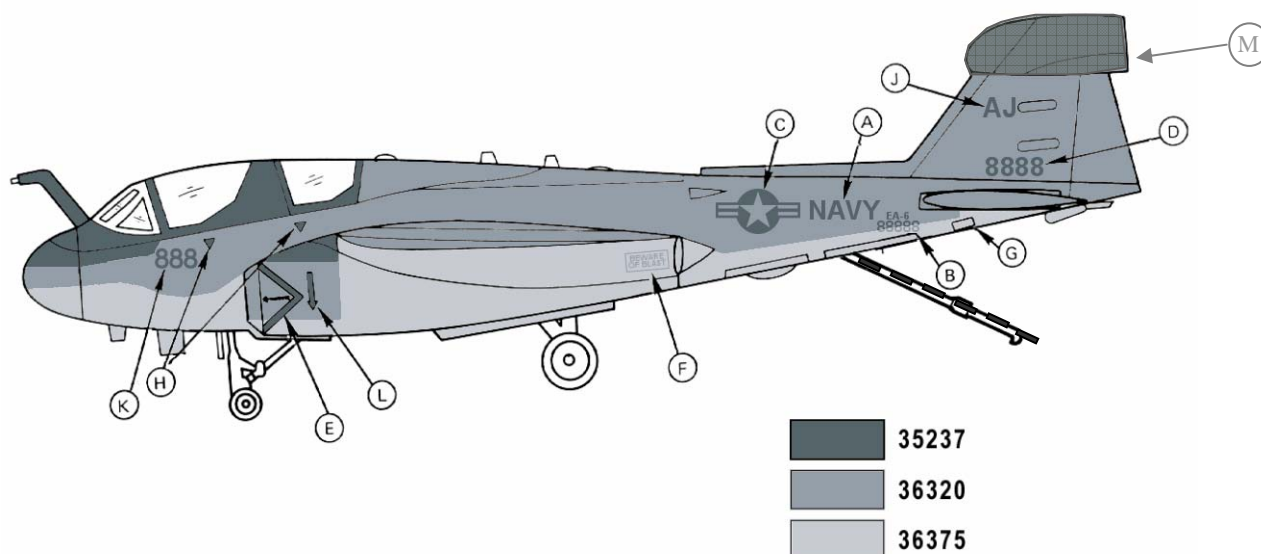


FIGURE C-16. EA-6B tactical.

MIL-STD-2161B(AS)

APPENDIX C

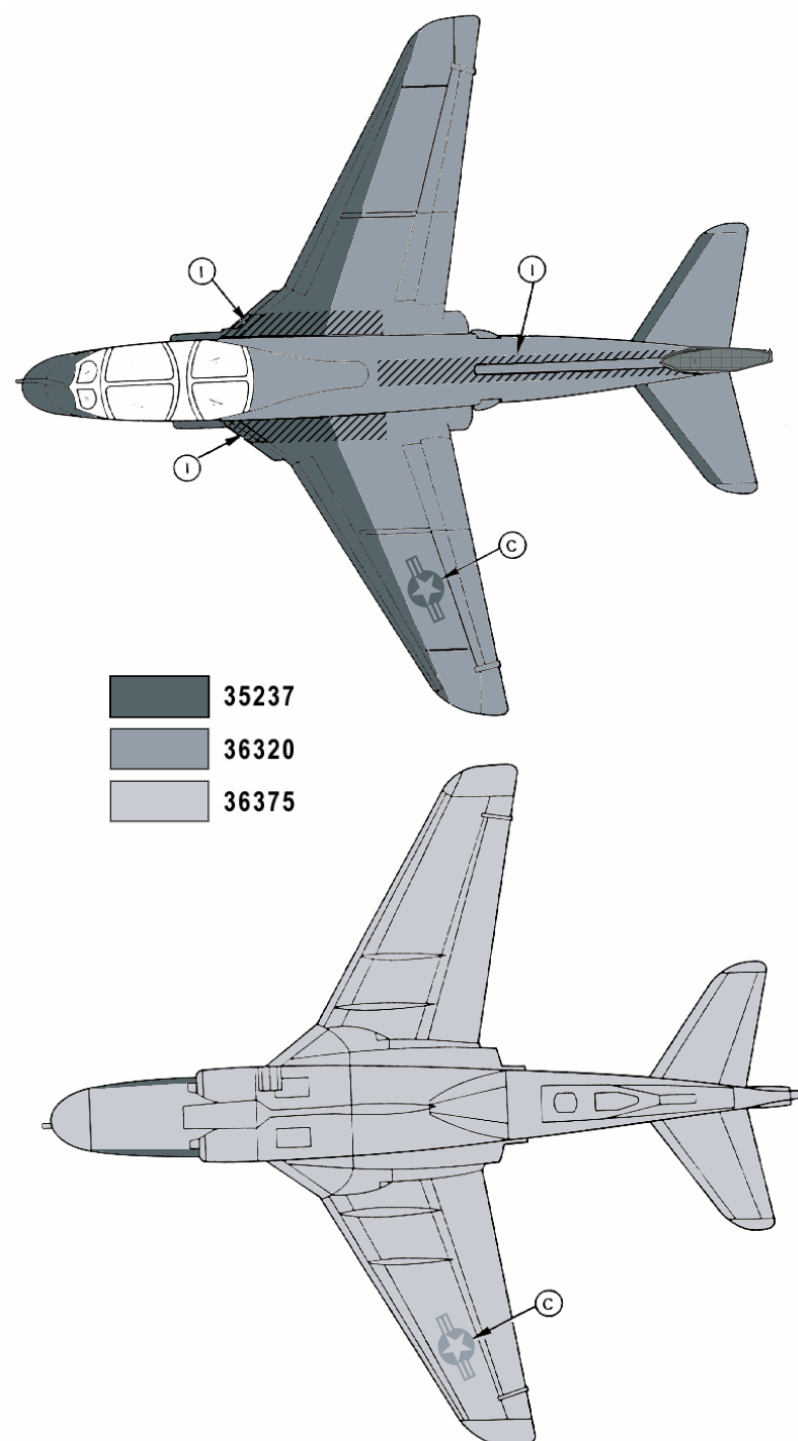
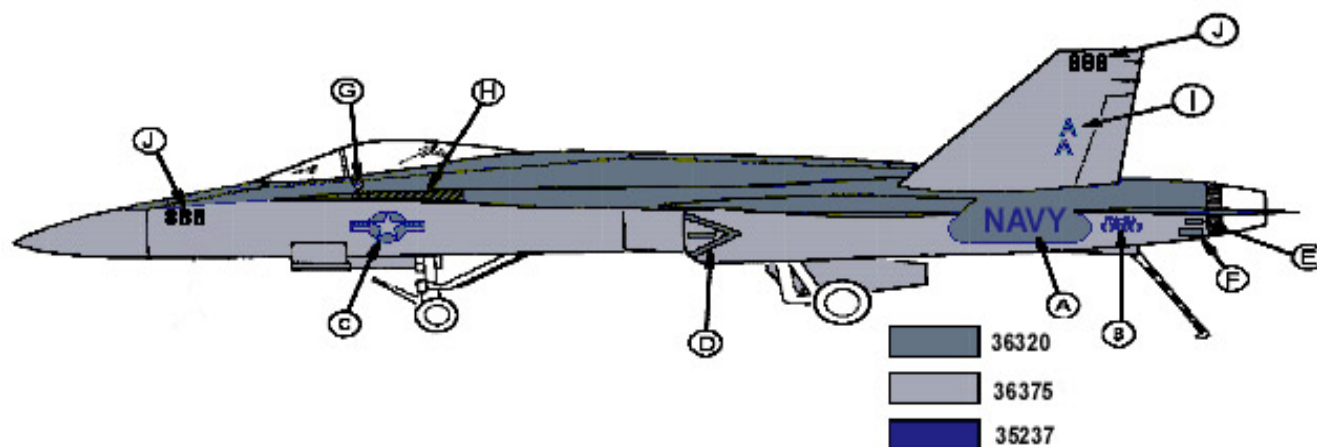


FIGURE C-16. EA-6B tactical – Continued.

MIL-STD-2161B(AS)

APPENDIX C

1. MARKING	2. LOCATION	3. SIZE	4. COLOR NO/CODE (*See note below)
A. NAVY/MARINES	L/R Aft Fuselage	10"/12"	35237 (See Figure A-15)
B. Model Designation, Acft BUNO	L/R Aft Fuselage L/R Aft Fuselage	2" 4"	35237 (See Figure A-15) 35237
C. National Star	L/R Fwd. Fuselage Lower R.H. Wing Upper L.H. Wing	12" 12" 12"	35237 (See Figure A-1) 35237 35237
D. Intake Chevron & Warnings	L/R Fwd Engine Intake	Stripe width – 3" "Jet" marking – 2" "Danger" marking – 2" "Intake" marking – 2"	35237 (See Figure A-15) 36375 36375 36375
E. Beware of Blast	L/R Aft Fuselage	1" Letters 4-1/2" x 8" Block	36375 (See Figure A-8) 36320
F. Arresting Hook Marking (T-Shaped Marking)	L/R Aft Fuselage	IAW Figure A-14	36375/36320 (See Figure A-14)
G. Ejection Seat Warning	Upper Canopy Rail	0.5" W x 1.0" H Letters 8" x 9" Triangle	36320/36375 (See Figure A-16)
H. Walkway (non-skid)	L/R LEX	Not Applicable	Not Applicable
I. Unit Identifier	Outside Vertical Stabilizers	20"	35237
J. Unit Aircraft Numbers (MODEX)	L/R Fwd. Fuselage L/R T/E Flap L/R Vertical Fin Cap	10" 12" 10"	37038 37038 37038
K. Arresting Hook	Aft Lower Fuselage	Per aircraft drawing	Alternate bands of contrasting grays per aircraft drawing

FIGURE C-17. F/A-18A/B/C/D tactical.

MIL-STD-2161B(AS)

APPENDIX C

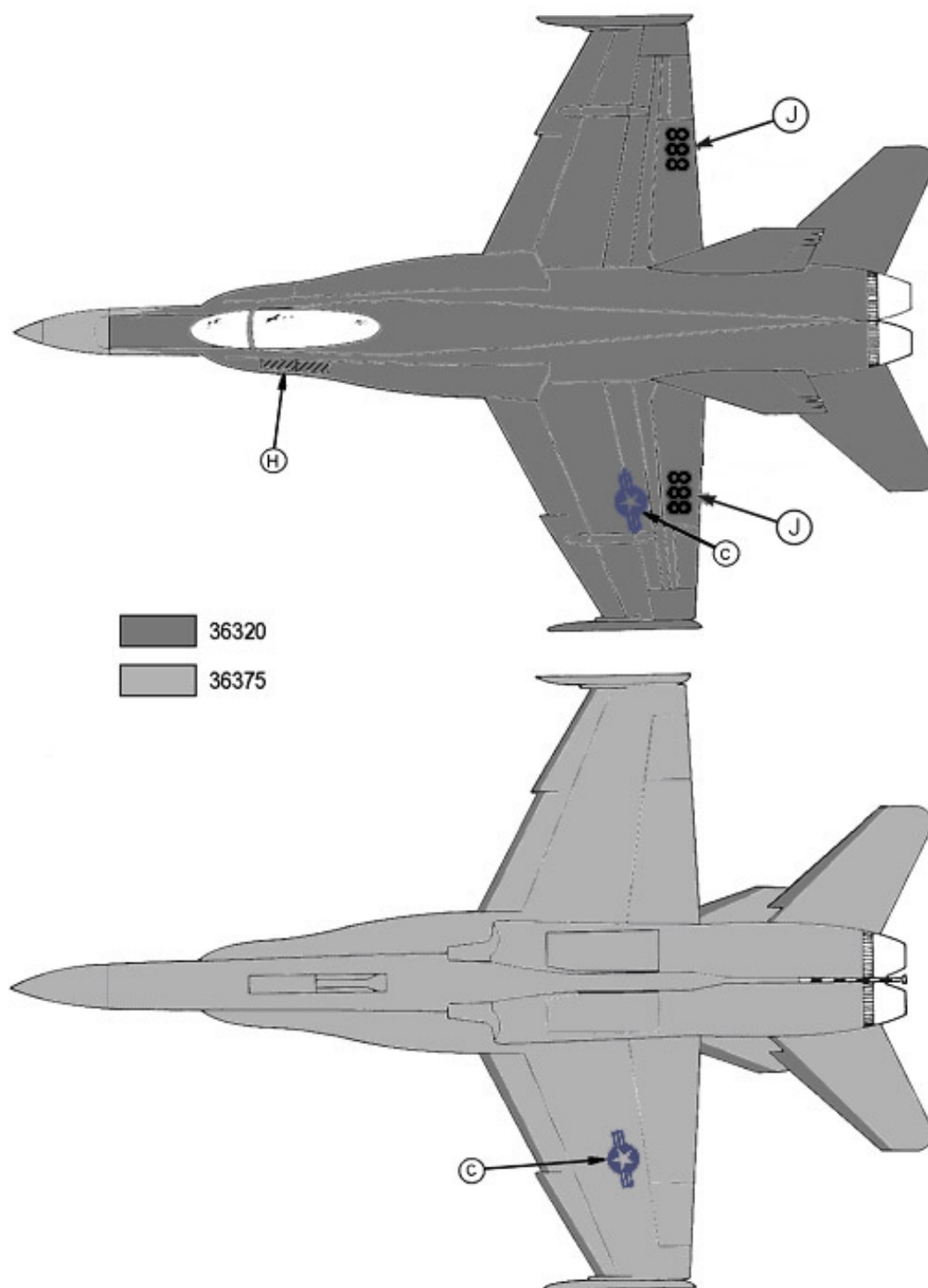
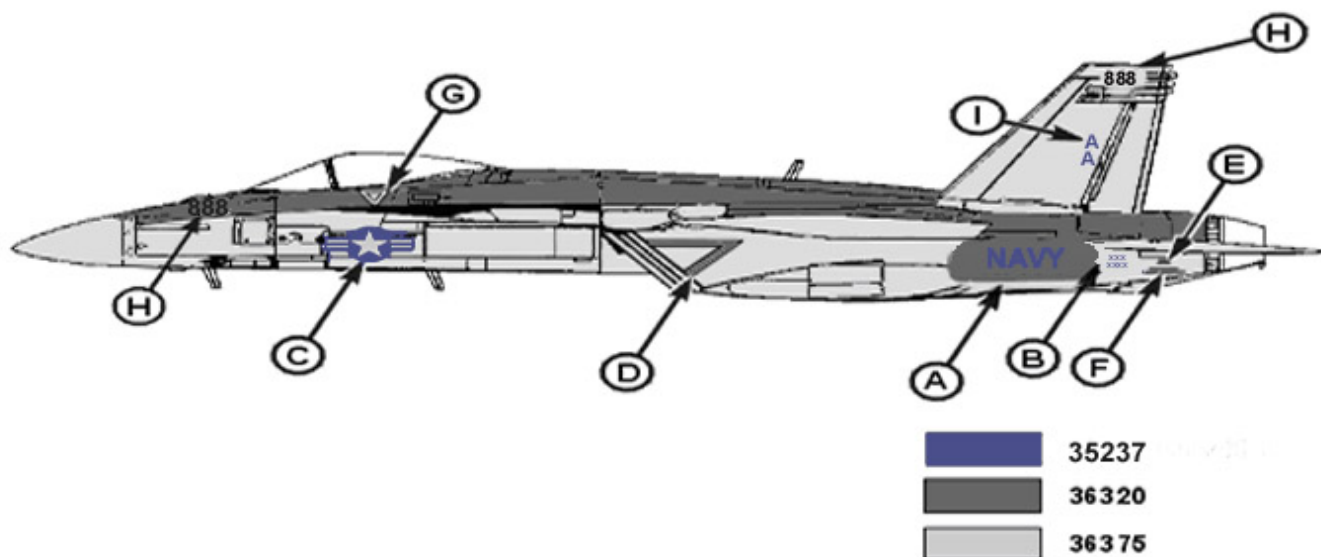


FIGURE C-17. F/A-18A/B/C/D tactical – Continued.

MIL-STD-2161B(AS)

APPENDIX C

1. MARKING	2. LOCATION	3. SIZE	4. COLOR NO/CODE
A. NAVY/MARINES	L/R Aft Fuselage	10"/12"	35237 (See Figure A-15)
B. Model Designation, Acft BUNO	L/R Aft Fuselage	2"	35237 (See Figure A-15)
	L/R Aft Fuselage	4"	35237
C. National Star	L/R Fwd Fuselage	15"	35237 (See Figure A-1)
	Lower R/H Wing	15"	35237
	Upper L/H Wing	15"	35237
D. Intake Chevron & Warnings	L/R Fwd Engine Intake	3" Stripe	35237 (See Figure A-15)
	"Jet" Marking	2"	36375
	"Danger" Marking	2"	36375
	"Intake" Marking	2"	36375
E. Beware of Blast	L/R Aft Fuselage	1" Letters 4-1/2" x 8" Block	36375/36320 (See Figure A-8)
F. Arresting Hook Marking	L/R Aft Fuselage	IAW Figure A-14	36375/36320 (See Figure A-14)
G. Ejection Seat Warning	L/R Fwd Fuselage (below canopy)	0.5" W x 1.0" H Letters 8" x 9" Triangle	36320/36375 (See Figure A-16)
H. Unit Aircraft Numbers (MODEX)	L/R Fwd Fuselage	10"	37038
	L/R T/E Flap	12"	37038
	L/R Vertical Fin Cap	10"	37038
I. Unit Identifier	O/B Vertical Stabilizers	20"	35237
J. Walkway coating	L/R LEX	N/A	36320
K. Arresting Hook	Aft Lower Fuselage	Per aircraft drawing	Alternating bands of contrasting grays per aircraft drawing

FIGURE C-18. F/A-18E/F and EA-18G tactical.

MIL-STD-2161B(AS)

APPENDIX C

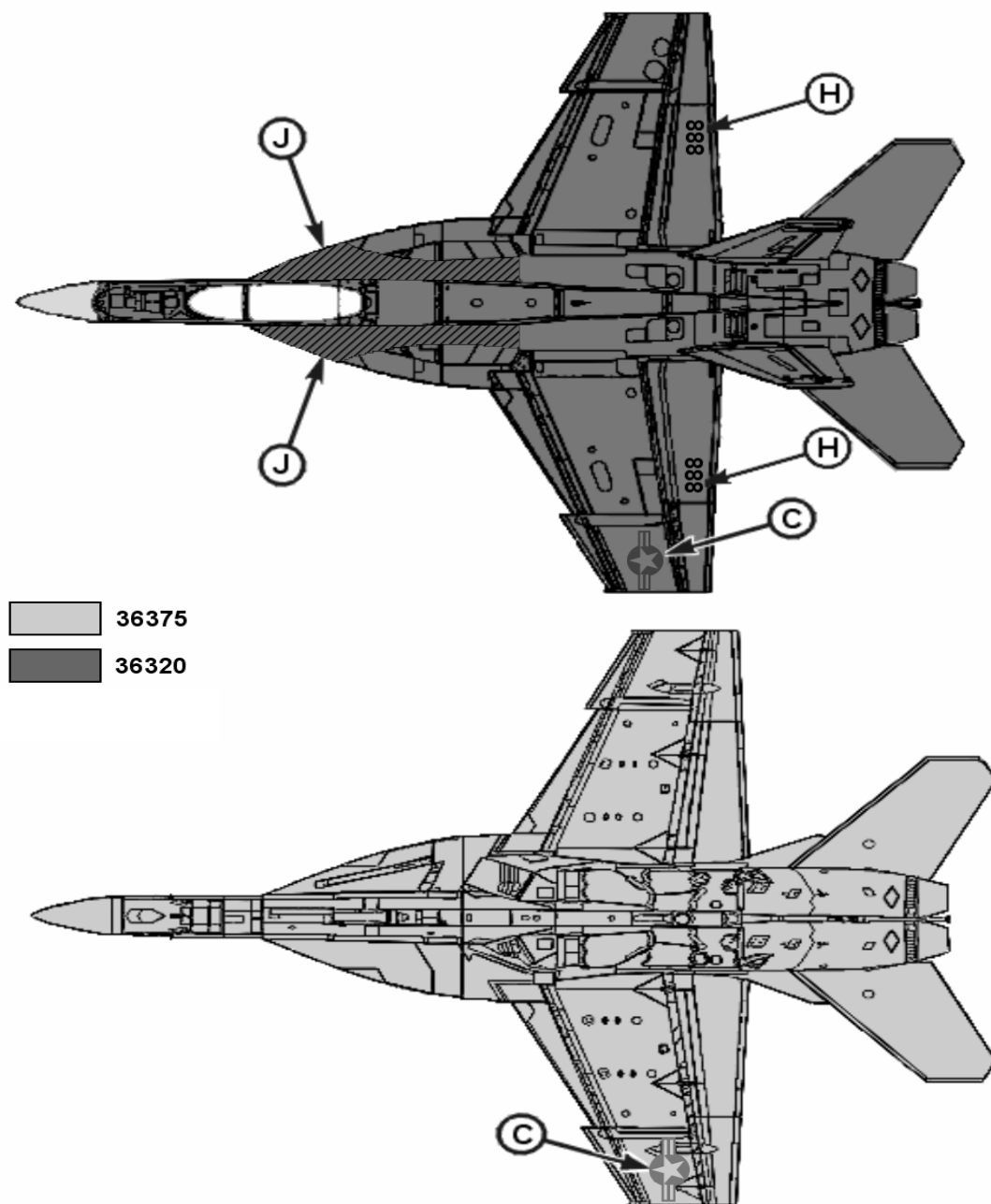


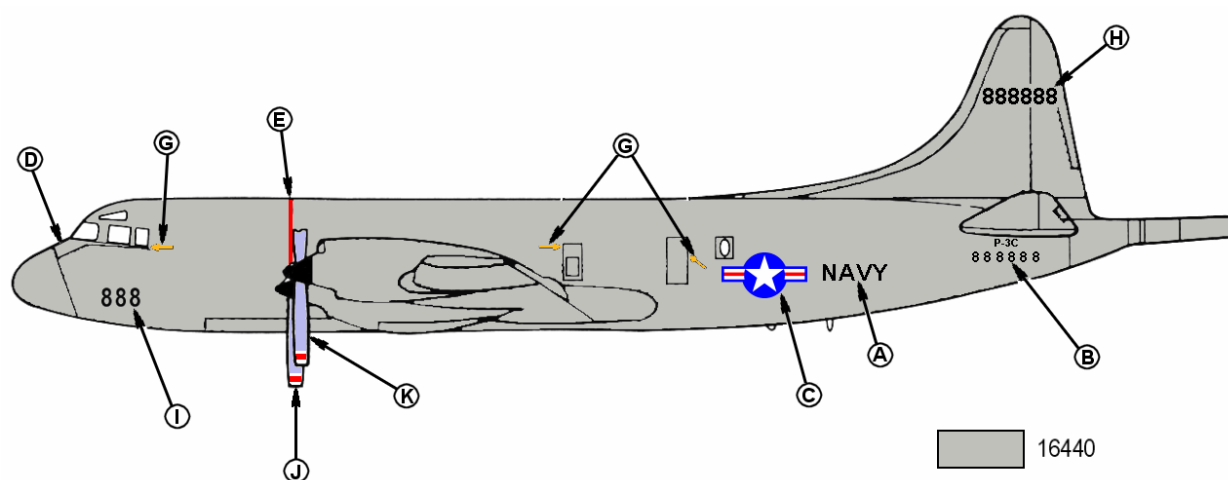
FIGURE C-18. F/A-18E/F and EA-18G tactical – Continued.

MIL-STD-2161B(AS)

APPENDIX C

1. MARKING	2. LOCATION	3. SIZE	4. COLOR NO/CODE
A. NAVY	Aft Fuselage Lower L.H. Wing	24" 24"	17038
B. Model Designation, Acft BUNO	Aft Fuselage Under Horizontal Stabilizer	2" 4"	17038
C. National Star	Aft Fuselage Upper L.H. Wing Lower R.H. Wing	50" 50" 50"	17925/11136/15044 17925/11136/15044 17925/11136/15044
D. Anti-Glare	Fwd. of Cockpit	N/A	36440
E. Propeller Warning Band	Forward Fuselage	3"	11136/17925
F. Walkway	Top Surface of Wings	N/A	16440
G. Rescue Arrows	Fwd. Fuselage Aft of Cockpit Windows Mid Fuselage at Doors Top of Fuselage Aft of Hatch	24"	13538
H. Call Numbers	Vertical Stabilizer	12"	17038
I. Unit Aircraft Numbers	Fwd. Fuselage	12"	17038
J. Propeller Tips ¹	Blades on L. and R. Engines	N/A	17925/11136/17925, see Figure A-6
K. Propellers	L. and R. Side Engines	N/A	Bare metal until tip markings

Note 1: A single 6-inch wide red (color 11136) or black (color 17038) stripe at the tip of each propeller blade is allowed.

FIGURE C-19. P-3C.

MIL-STD-2161B(AS)

APPENDIX C

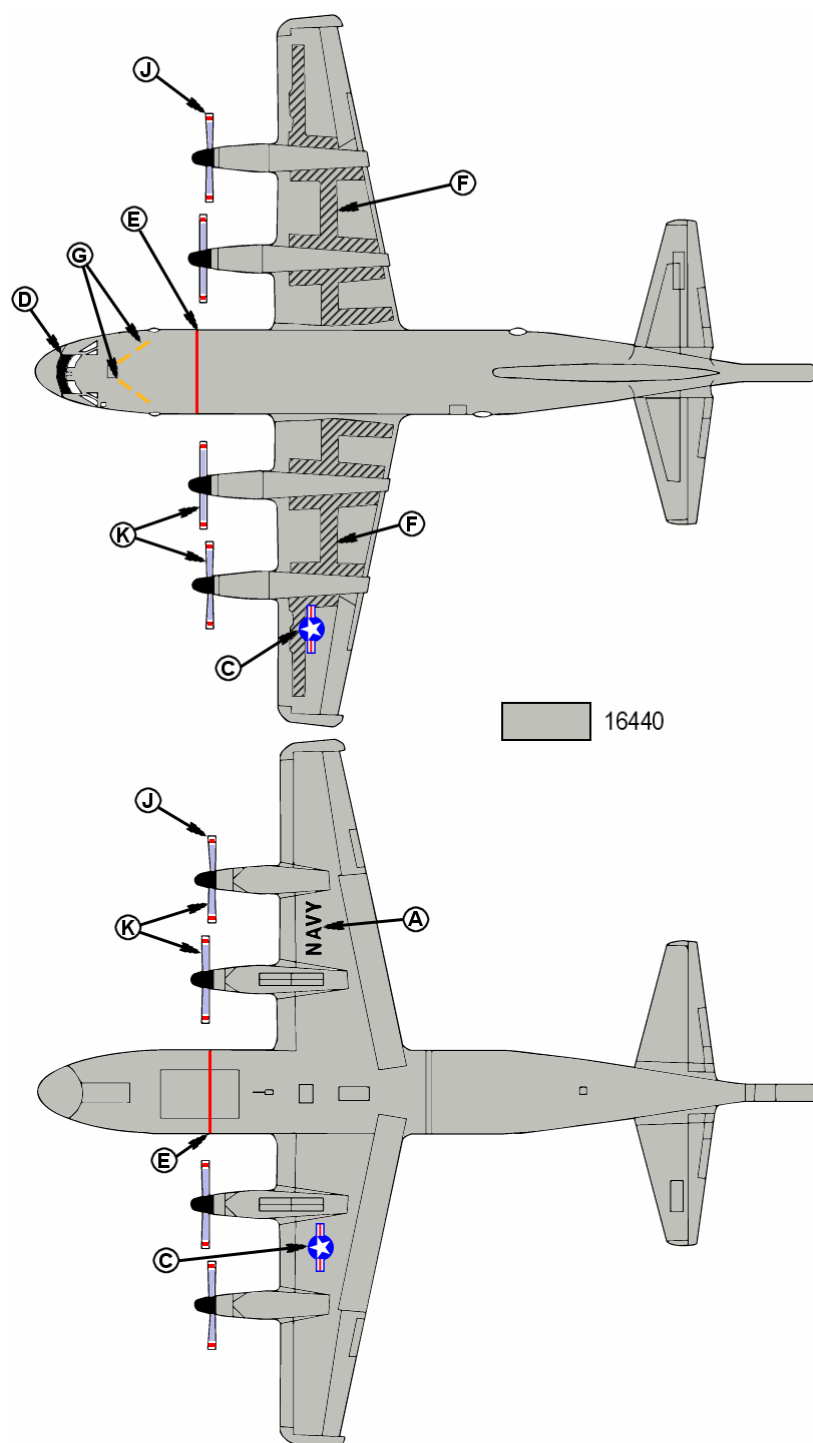


FIGURE C-19. P-3C – Continued.

MIL-STD-2161B(AS)

APPENDIX C

1. MARKING	2. LOCATION	3. SIZE	4. COLOR NO/CODE
A. NAVY	Aft Fuselage Lower L.H. Wing	24" 30"	17038
B. Model Designation, Acft BUNO	Aft Fuselage Under Horizontal Stabilizer	2" 4"	17038
C. National Star	Aft Fuselage Upper L.H. Wing Lower R.H. Wing	50" 50" 50"	17925/11136/15044 17925/11136/15044 17925/11136/15044
D. Anti-Glare	Fwd. Of Cockpit	N/A	36440
E. Propeller Warning Band	Forward Fuselage	3"	11136/17925
F. Walkway	Top Surface of Wings	N/A	36440
G. Rescue Arrows	Fwd. Fuselage Aft of Cockpit Windows Mid Fuselage at Doors Top of Fuselage Aft of Hatch	24"	17038/13538
H. Call Numbers	Vertical Stabilizer	12"	17038
I. Unit Aircraft Numbers	Fwd. Fuselage	12"	17038
J. Propeller Tips ¹	Blades on L. and R. Side Engines	N/A	17925/11136/17925, see Figure A-6
K. Propellers	L. and R. Side Engines	N/A	Bare metal until tip markings

Note 1: A single 6-inch wide red (color 11136) or black (color 17038) stripe at the tip of each propeller blade is allowed.

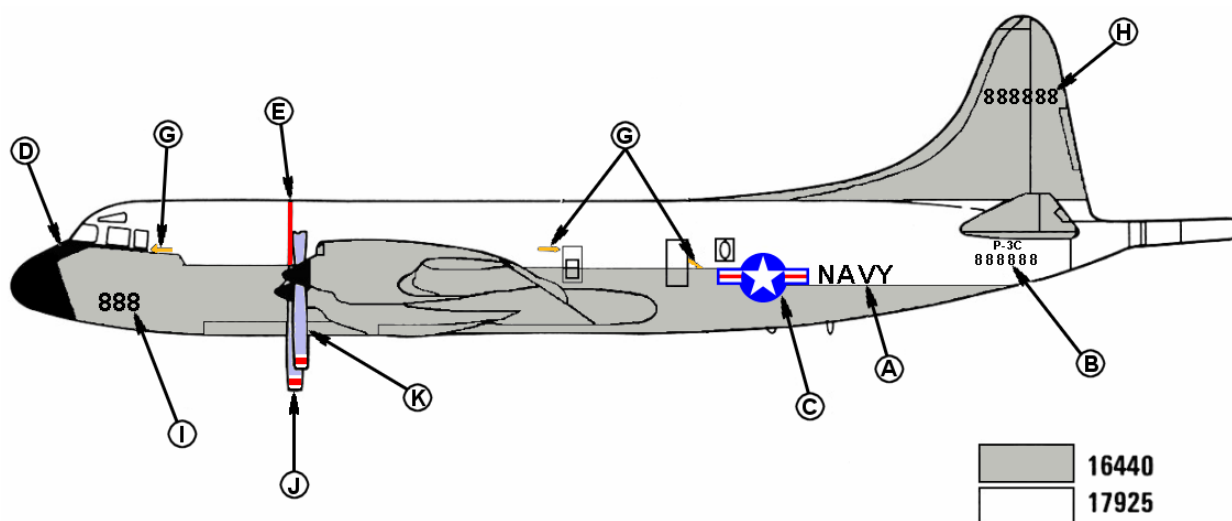


FIGURE C-20. EP-3E, UP-3, VP-3.

MIL-STD-2161B(AS)

APPENDIX C

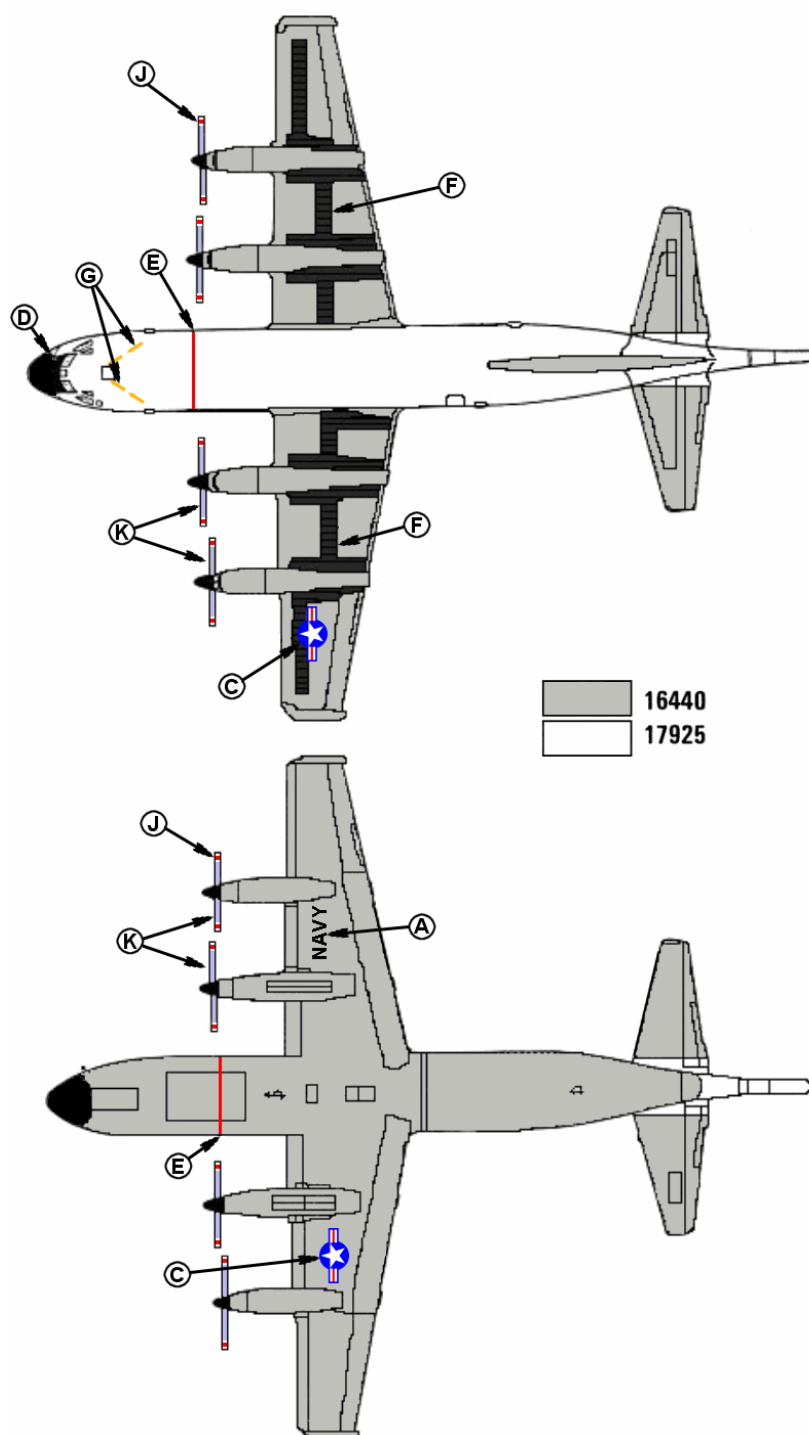
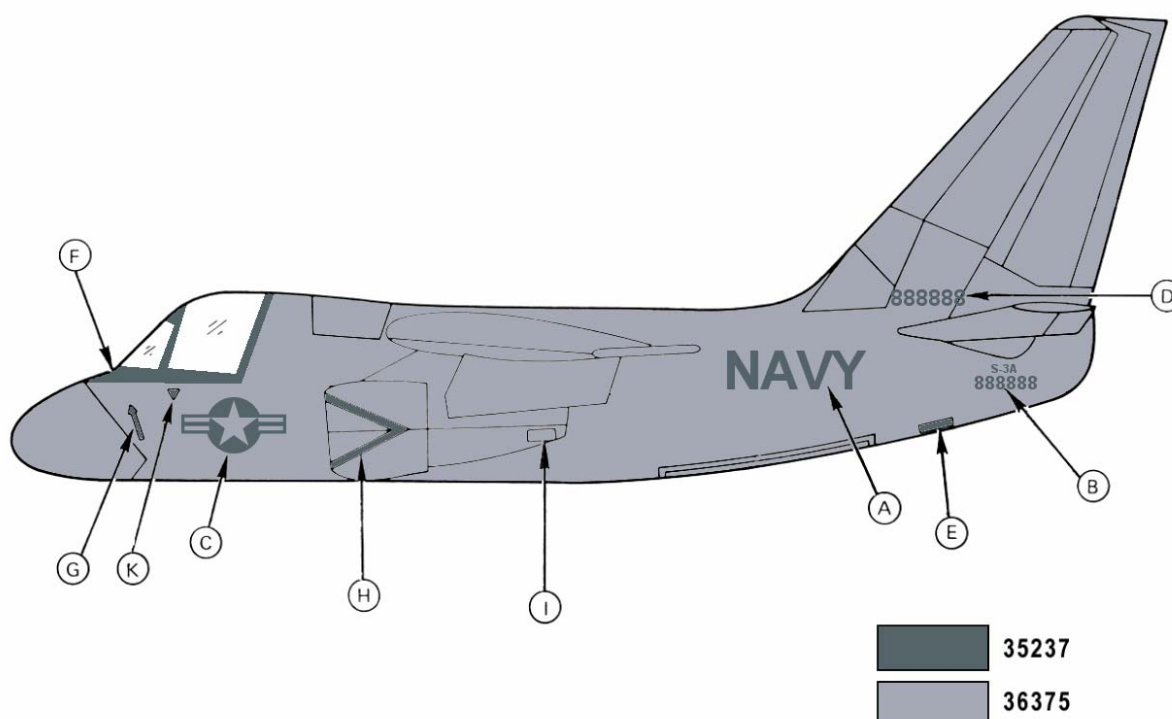


FIGURE C-20. EP-3E, UP-3, VP-3 – Continued.

MIL-STD-2161B(AS)

APPENDIX C

1. MARKING	2. LOCATION	3. SIZE	4. COLOR NO/CODE
A. NAVY	Aft Fuselage	12"	35237
B. Model Designation, Acft BUNO	Aft Fuselage	2" 4"	35237
C. National Star	Fwd. Fuselage Upper L.H. Wing Lower R.H. Wing	20" 20" 20"	35237 35237 35237
D. Call Numbers	Vertical Stabilizer Stub	9"	35237
E. Arresting Hook Warning	Aft Fuselage Sides	IAW 5.2.2.10.1.1 and 5.2.2.10.1.2	35237
F. Anti-Glare	Fwd. of Cockpit	N/A	35237
G. Rescue Arrows	Fwd. Fuselage	24"	35237
H. Intake Warning	Fwd. Engine Nacelle	IAW Figure A-15	35237
I. Beware of Blast	Aft Engine Pod	IAW Figure A-8 1" Letters	35237
J. Walkway	Center Top Fuselage Aft	N/A	36375
K. Ejection Seat Notice	Fwd. Fuselage Beneath Canopy Rail	8"	35237

FIGURE C-21. S-3B tactical.

MIL-STD-2161B(AS)

APPENDIX C

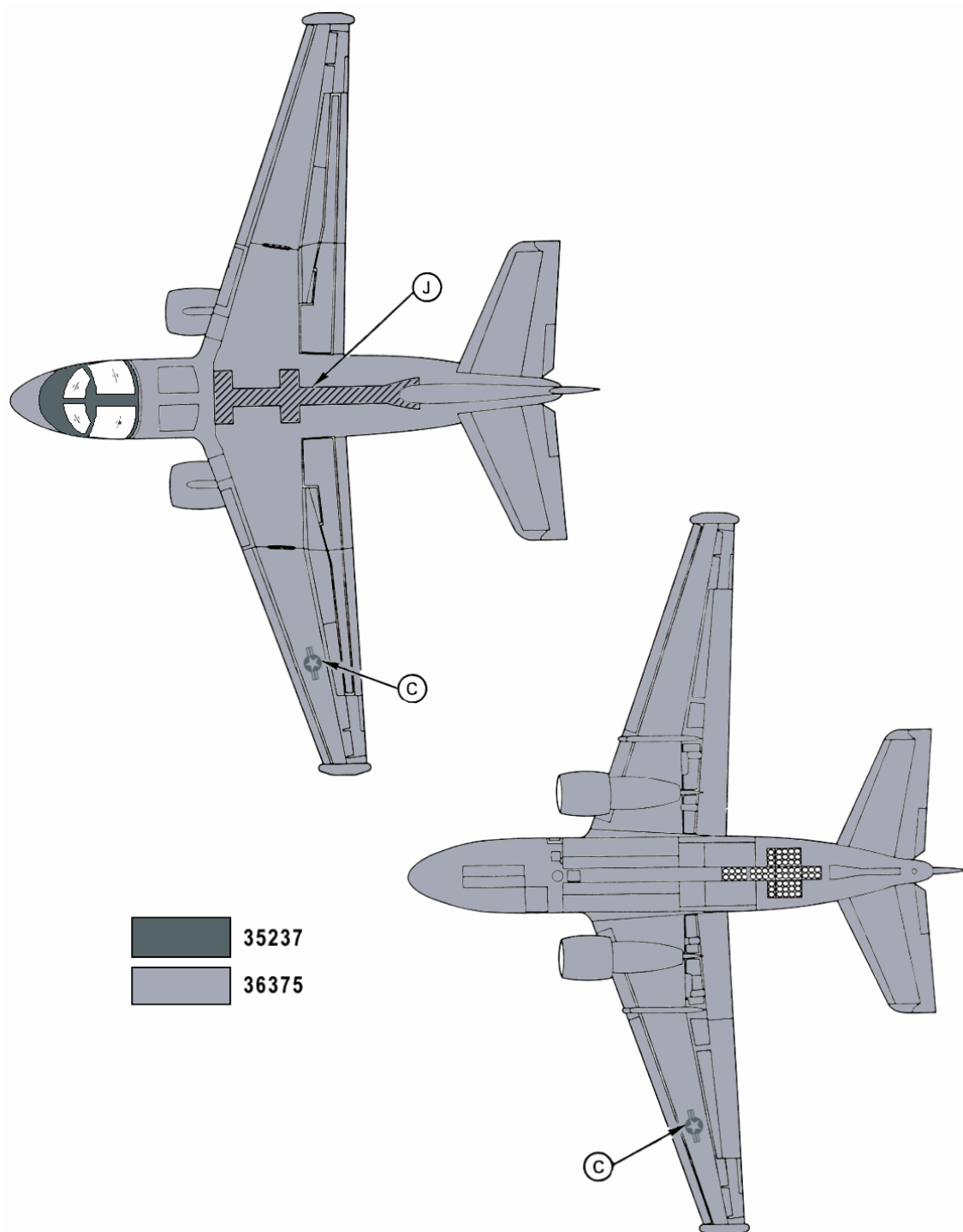


FIGURE C-21. S-3B tactical – Continued.

MIL-STD-2161B(AS)

APPENDIX C

1. MARKING	2. LOCATION	3. SIZE	4. COLOR NO/CODE
A. NAVY/MARINES	Aft Fuselage Lower L.H. Wing	12"/10" 24"/16"	17038
B. Model Designation, Acft BUNO	Aft Fuselage	2" 4"	17038
C. National Star	Fwd. Fuselage Lower R.H. Wing Upper L.H. Wing	20" 30" 30"	17925/11136/15044 17925/11136/15044 17925/11136/15044
D. Call Numbers	Vertical Stabilizer	12"	17038
E. Intake Warning	See Para 5.2.2.10.1	See Para 5.2.2.10.1	11136
F. Beware of Blast	Aft Fuselage	See Para 5.2.2.10.2	17925/11136
G. Arresting Hook Warning	N/A	4" Alternating Stripes	17038/17925
H. Ejection Seat	Below Canopy Rail	See Para 5.2.2.10.6.11	IAW Para 5.2.2.10.6.11 (11136)
I. Walkway	Wing Adjacent to Fuselage	N/A	37038
J. Conspicuity Markings	Per Drawing	See Para 5.1.1.1	12197
K. Anti-Glare	Fwd. of Cockpit	N/A	37038
L. Unit Aircraft Numbers	Fwd. Fuselage Lower L.H. Wing Upper R.H. Wing	12" 16" 16"	17038
M. Unit Identifier	Vertical Stabilizer Lower L.H. Wing Upper L.H. Wing	20" 16"	17038
N. Rescue Arrow	Fwd. Fuselage	24"	17038/13538

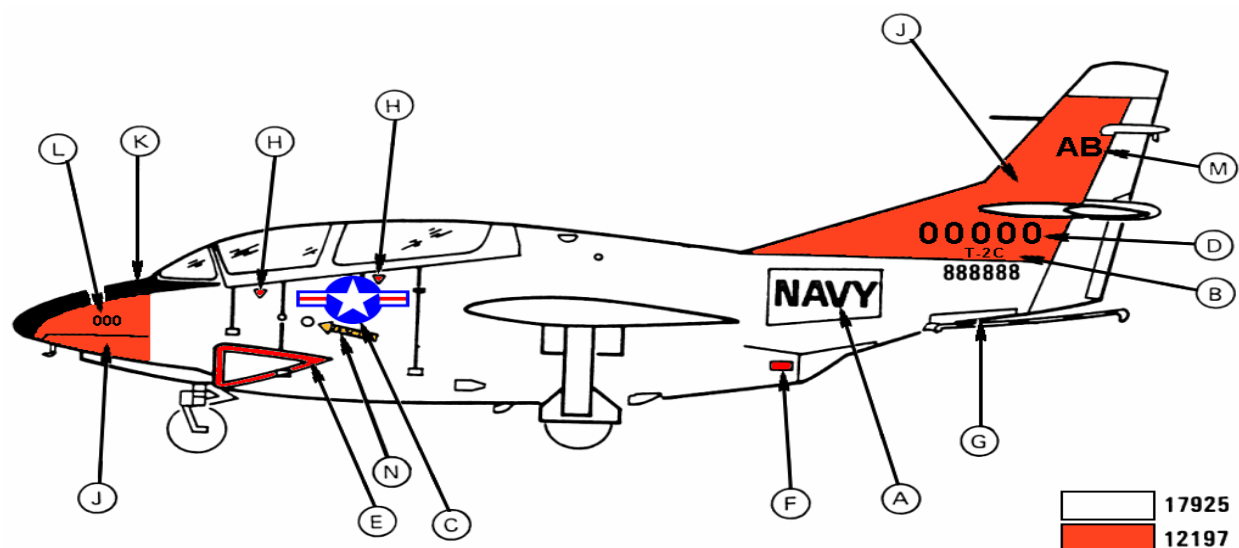


FIGURE C-22. T-2C aircraft marking (high visibility).

MIL-STD-2161B(AS)

APPENDIX C

1. MARKING ^{1,2}	2. LOCATION	3. SIZE	4. COLOR NO/CODE
A. NAVY/MARINES	Aft Fuselage	6"	17038
	Lower L.H. Wing	21"	17038
B. Model Designation, Acraft BUNO	Aft Fuselage	2"	17038
	Aft Fuselage	4"	17038
C. National Star	Aft Fuselage	18"	17925/11136/15044
	Lower R.H. Wing	24"	17925/11136/15044
	Upper L.H. Wing	24"	17925/11136/15044
D. Call Numbers	Vertical Stabilizer	5.5"	17038
E. Ejection Seat	Below Canopy Rail	8"	17038/13538 see Figure A-16
F. Walkway	Wing Adjacent to Fuselage	N/A	37038
G. Anti-Glare	Fwd. of Cockpit	N/A	37038
H. Unit Aircraft Numbers	Fwd. Fuselage	6.5"	17038
	Lower L.H. Wing	18"	17038
	Upper R.H. Wing	21"	17038
I. Unit Identifier	Vertical Stabilizer	12"	17038
	Upper R.H. Wing	21"	17038
J. Propeller	Center Body engine	N/A	37038
K. Propeller Tips	Propeller blades	N/A	17925, see Figure A-6
L. Hub	Center Body of engine	N/A	Bare polished metal
M. Wing/Unit Designator ³	Aft Ventral Fin	4" minimum	17038, See Par. 1.6.3

Note 1: Color requirement established in paragraph 5.1.11 for the speed brake interior surface of the T-6 is modified to allow use of orange color 12197, with a contrasting black border (color 17038) 3/4"-1" wide.

Note 2: Gloss white, FED-STD-595 color 17925, is the preferred color for the upper fuselage. However, gloss white, FED-STD-595 color 17865, may be used as an alternate.

Note 3: Applied by Wing or Unit; for example TAW-###, VF-###, etc.

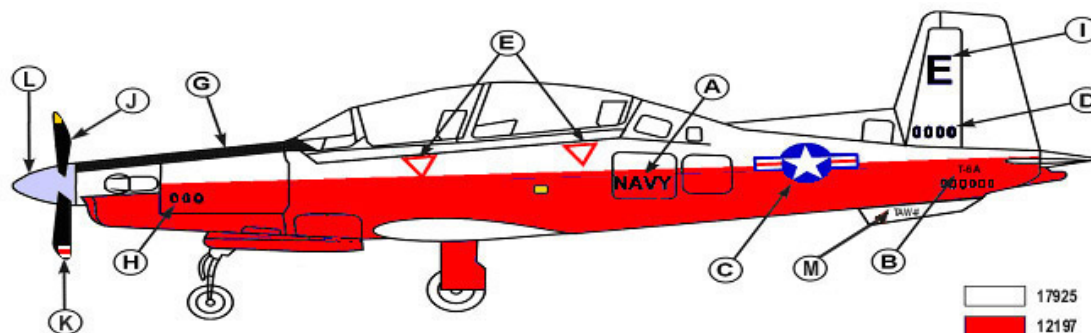


FIGURE C-23. T-6 high visibility.

MIL-STD-2161B(AS)

APPENDIX C

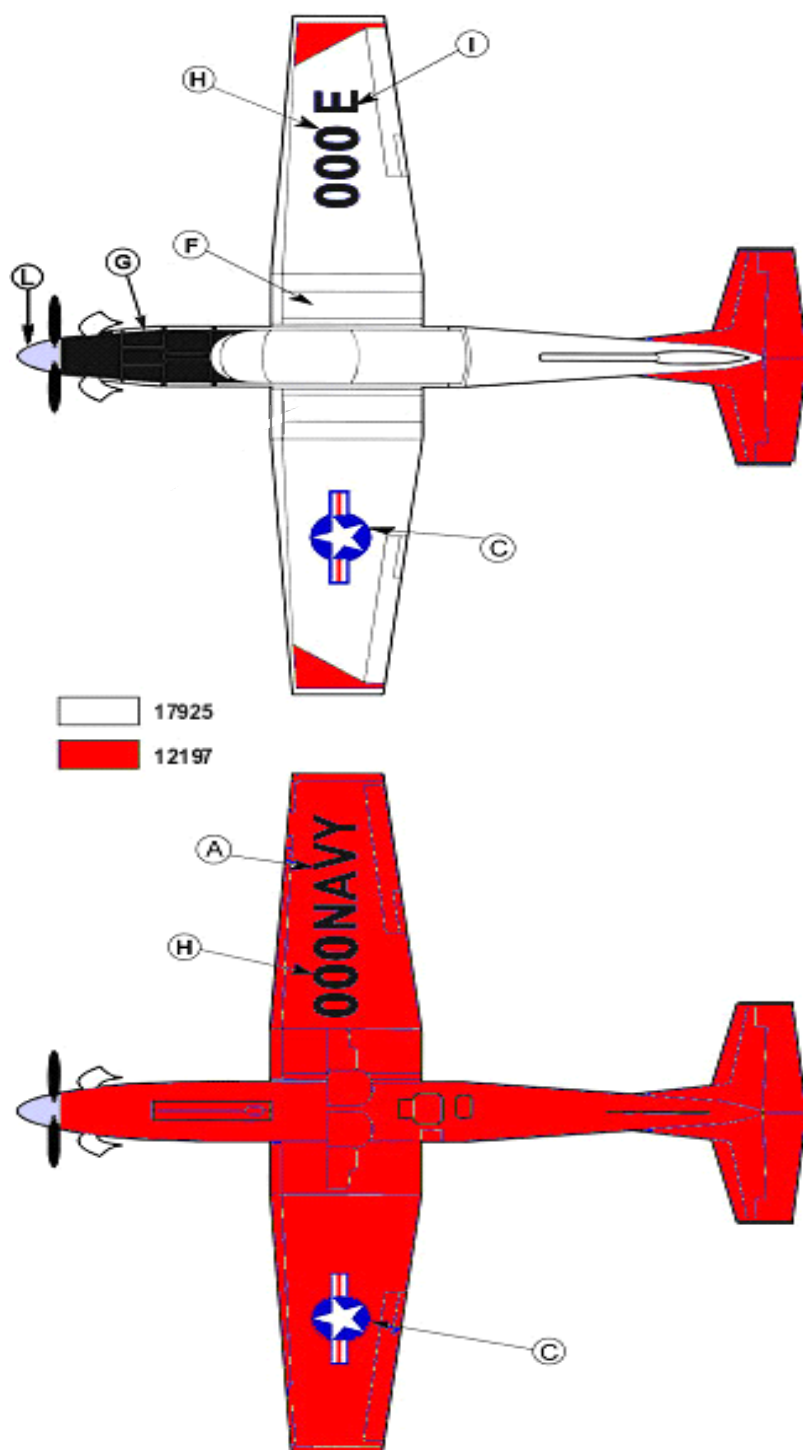


FIGURE C-23. T-6 high visibility – Continued.

MIL-STD-2161B(AS)

APPENDIX C

1. MARKING	2. LOCATION	3. SIZE	4. COLOR NO/CODE
A. NAVY	Aft Fuselage Lower R.H. Wing	12" 24"	17038
B. Model Designation, Acft BUNO	Aft Fuselage	2" 4"	17038
C. National Star	Aft Fuselage Lower L.H. Wing Upper R.H. Wing	20" 20" 20"	17925/11136/15044 17925/11136/15044 17925/11136/15044
D. Call Numbers	Lower Vertical Stabilizer	12"	17038
E. Propeller Tips	N/A	3"/6"/3"	17925/11136/17925, see Figure A-6
F. Anti-Glare	Propeller Spinner & Fwd. & Aft of Cockpit Canopy	N/A	37038
G. Walkway	Per Drawing	N/A	37038
H. Conspicuity Markings	Engine Cowling, Wing Tips, & Vertical Stabilizer	Per Drawing	12197
I. "Rescue Other Side"	L.H. Side Beneath Canopy Rail	½" Letters	17038
J. Rescue Arrow	R.H. Side Beneath Canopy Rail	24"	17038/11136
K. Propellers	Center Body of Engine	N/A	37038

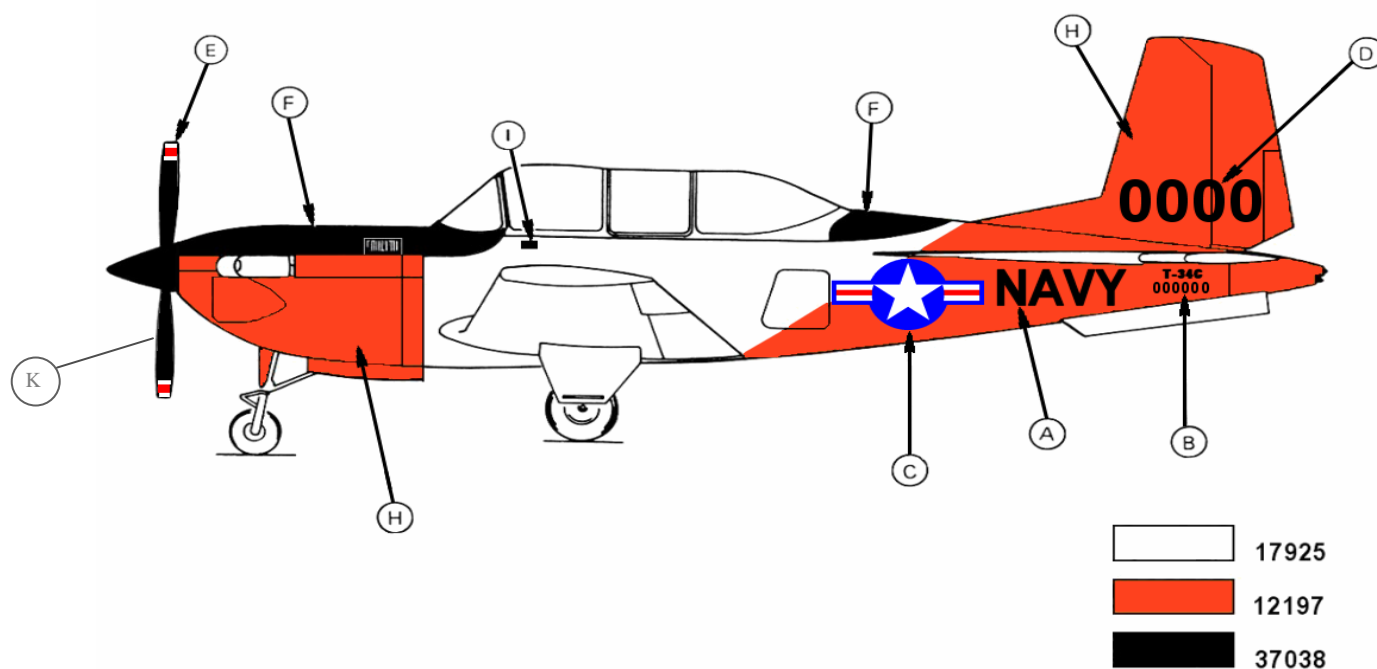


FIGURE C-24. T-34C aircraft marking (high visibility).

MIL-STD-2161B(AS)

APPENDIX C

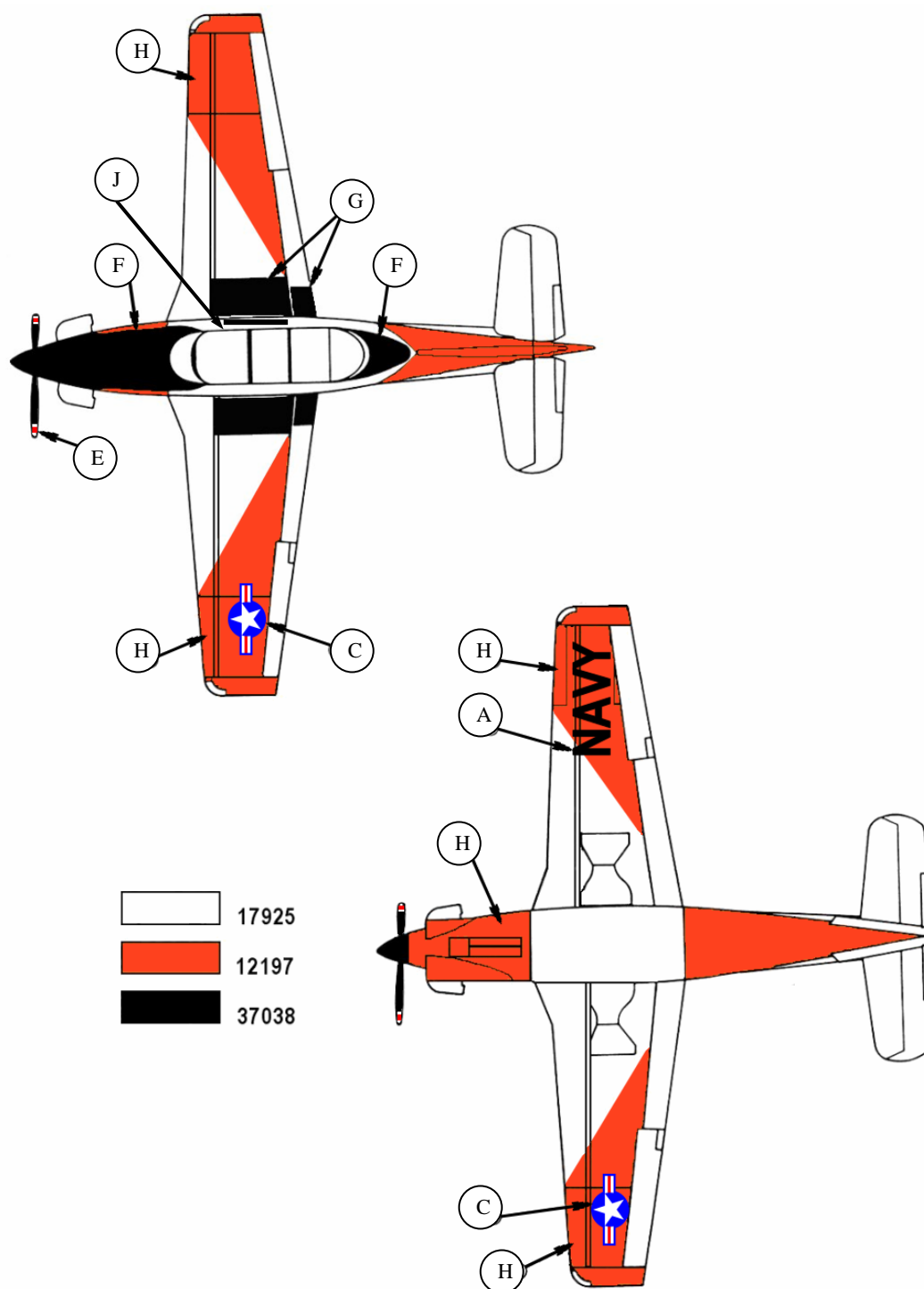


FIGURE C-24. T-34C aircraft marking (high visibility) – Continued.

MIL-STD-2161B(AS)

APPENDIX C

1. MARKING	2. LOCATION	3. SIZE	4. COLOR NO/CODE
A. NAVY	Aft Fuselage Lower L.H. Wing	16" 20"	17038
B. Model Designation, Acft BUNO	Aft Fuselage	2" 4"	17038
C. National Star	Forward Fuselage Upper L.H. Wing Lower R.H. Wing	20" 30" 30"	17925/11136/15044 17925/11136/15044 17925/11136/15044
D. Call Numbers	Vertical Stabilizer	12"	17038
E. Intake Warning	Fwd. Engine Nacelle	See Para 5.2.2.10.1	11136/17925
F. Beware of Blast	Aft Engine Nacelle	See Para 5.2.2.10.2	17038
G. Anti-Glare	Radome, Fwd. of Cockpit	N/A	37038
H. Walkway	Wings & Engine Mounts Next to Fuselage	N/A	37038
I. Conspicuity Markings	Per Drawing	See Para 5.1.1.1	12197
J. Unit Aircraft Markings	Fwd. Fuselage Lower L.H. Wing Upper R.H. Wing	16" 16" 20"	17038
K. Unit Identifier	Vertical Stabilizer Lower R.H. Wing Upper R.H. Wing	20" 16" 24"	17038
L. Rescue Arrow	Fwd. Fuselage Door	24"	17038 13538
M. Bare Metal & Polish	Engine Intake Lip Engine Exhaust Shroud	N/A	N/A, Follow manufacturer guidelines

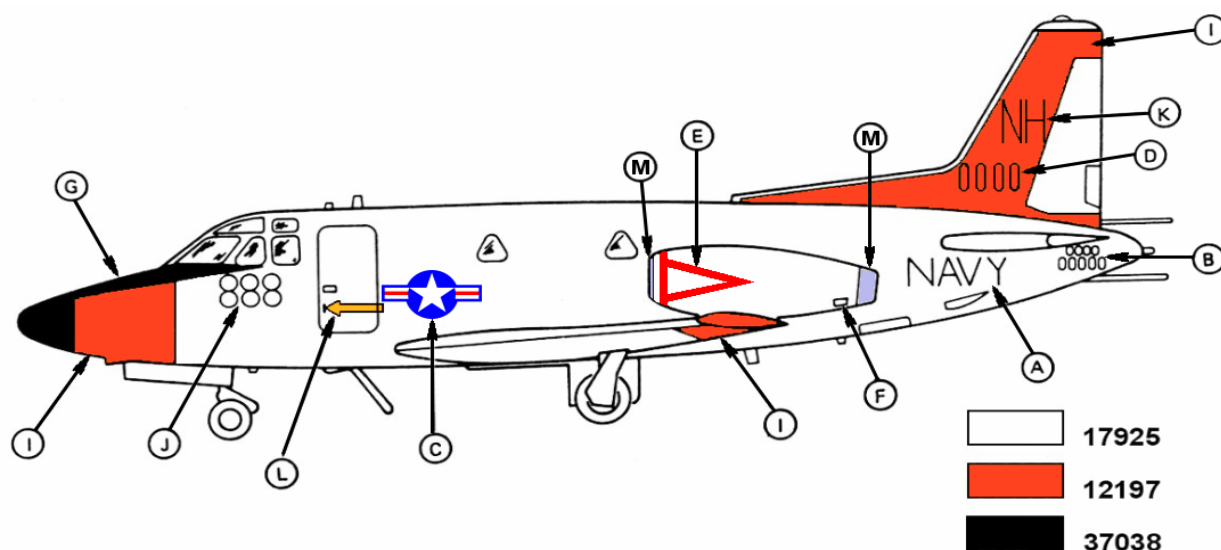


FIGURE C-25. T-39G/N high visibility.

MIL-STD-2161B(AS)

APPENDIX C

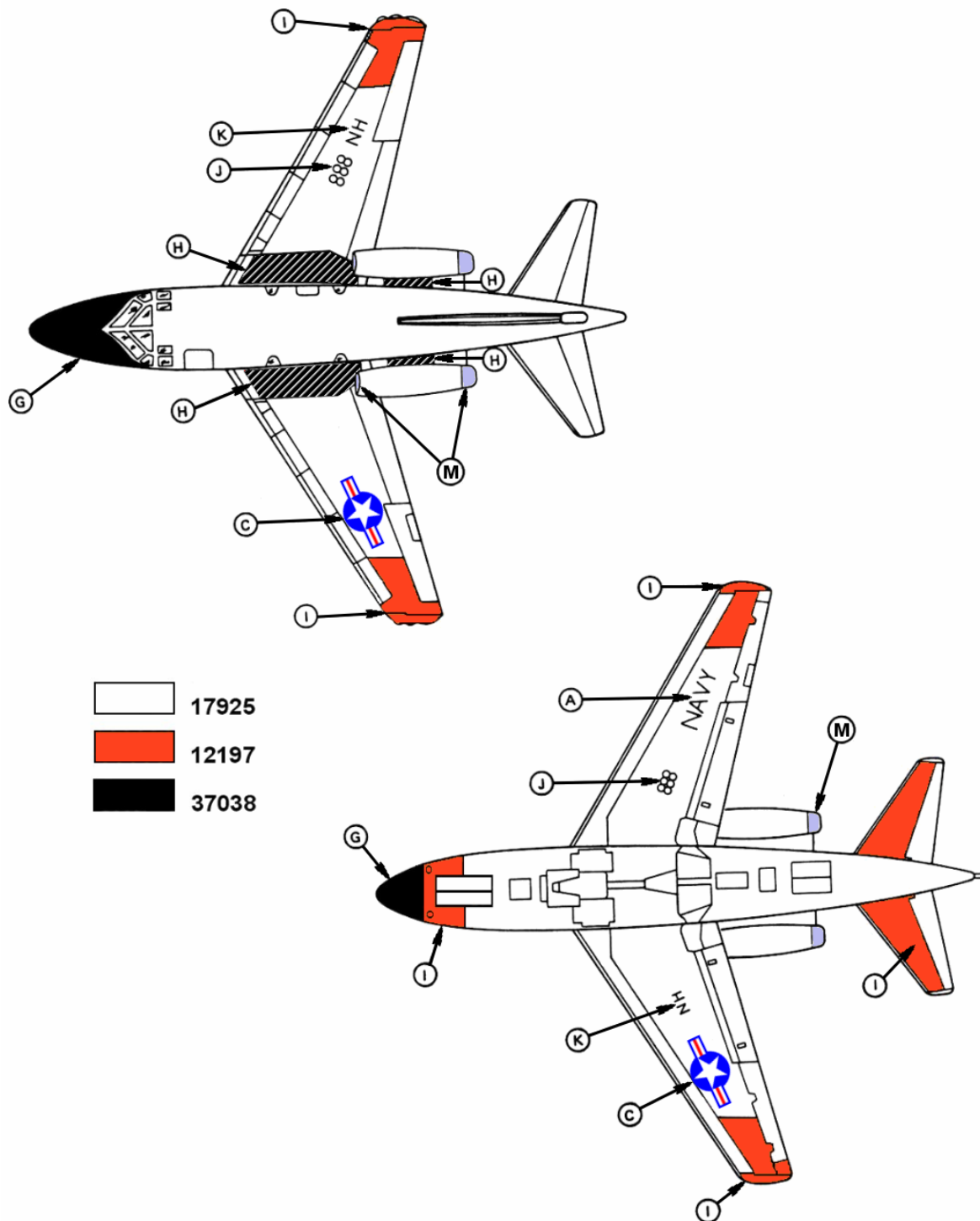


FIGURE C-25. T-39G/N high visibility – Continued.

MIL-STD-2161B(AS)

APPENDIX C

1. MARKING	2. LOCATION	3. SIZE	4. COLOR NO/CODE
A. NAVY	Aft Fuselage Lower L.H. Wing	16"	17038
B. Model Designation, Acft BUNO	Side Aft Fuselage	2" 4"	17038
C. National Star	Aft Fuselage Upper L.H. Wing Lower R.H. Wing	20" 20" 20"	17925/11136/15044 17925/11136/15044 17925/11136/15044
D. Call Numbers	Vertical Stabilizer	16"	17038
E. Unit Identifier	Top Vertical Stabilizer	24"	17038
F. Conspicuity Markings	Per Drawing	See Para 5.1.1.1	12197
G. Anti-Glare	Nose Fwd. of Windscreen Inside of L&R Nacelles	N/A	37038
H. Propeller Tips	N/A	3"/6"/3"	17925/11136/17925, see Figure A-6
I. Propeller Warning Band	Fwd. Fuselage	3" Wide	17925/11136

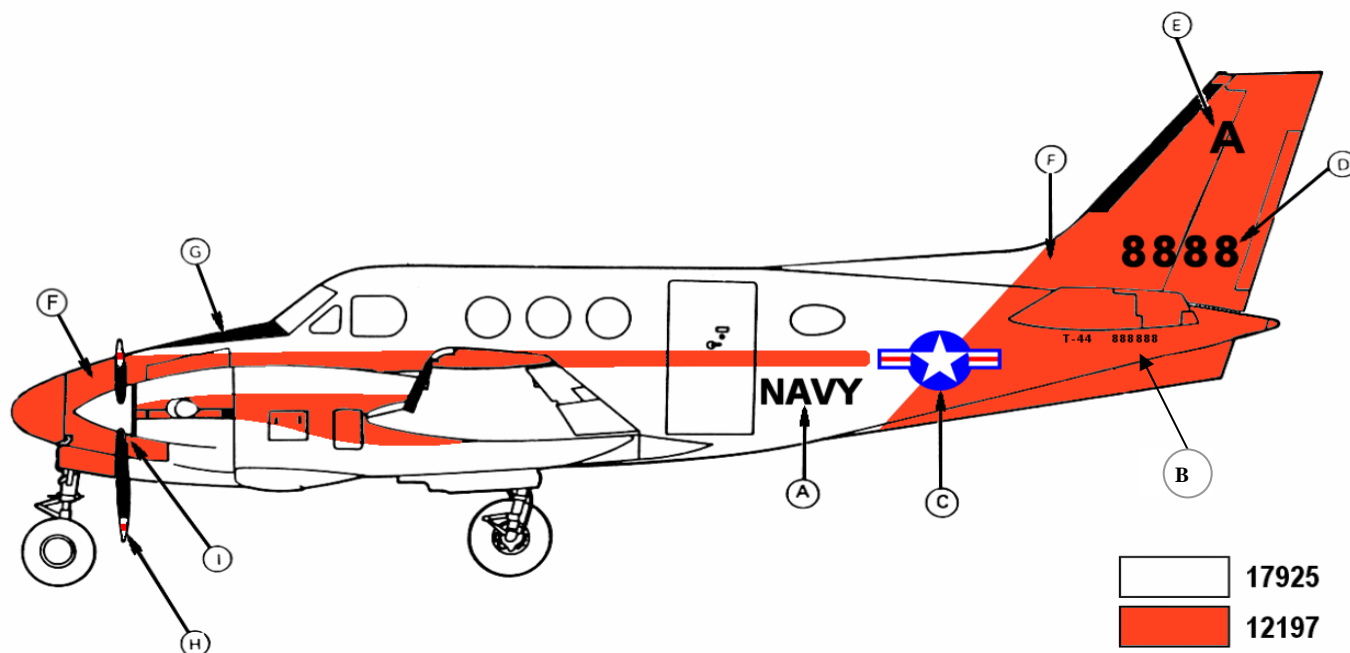


FIGURE C-26. T-44A high visibility.

MIL-STD-2161B(AS)

APPENDIX C

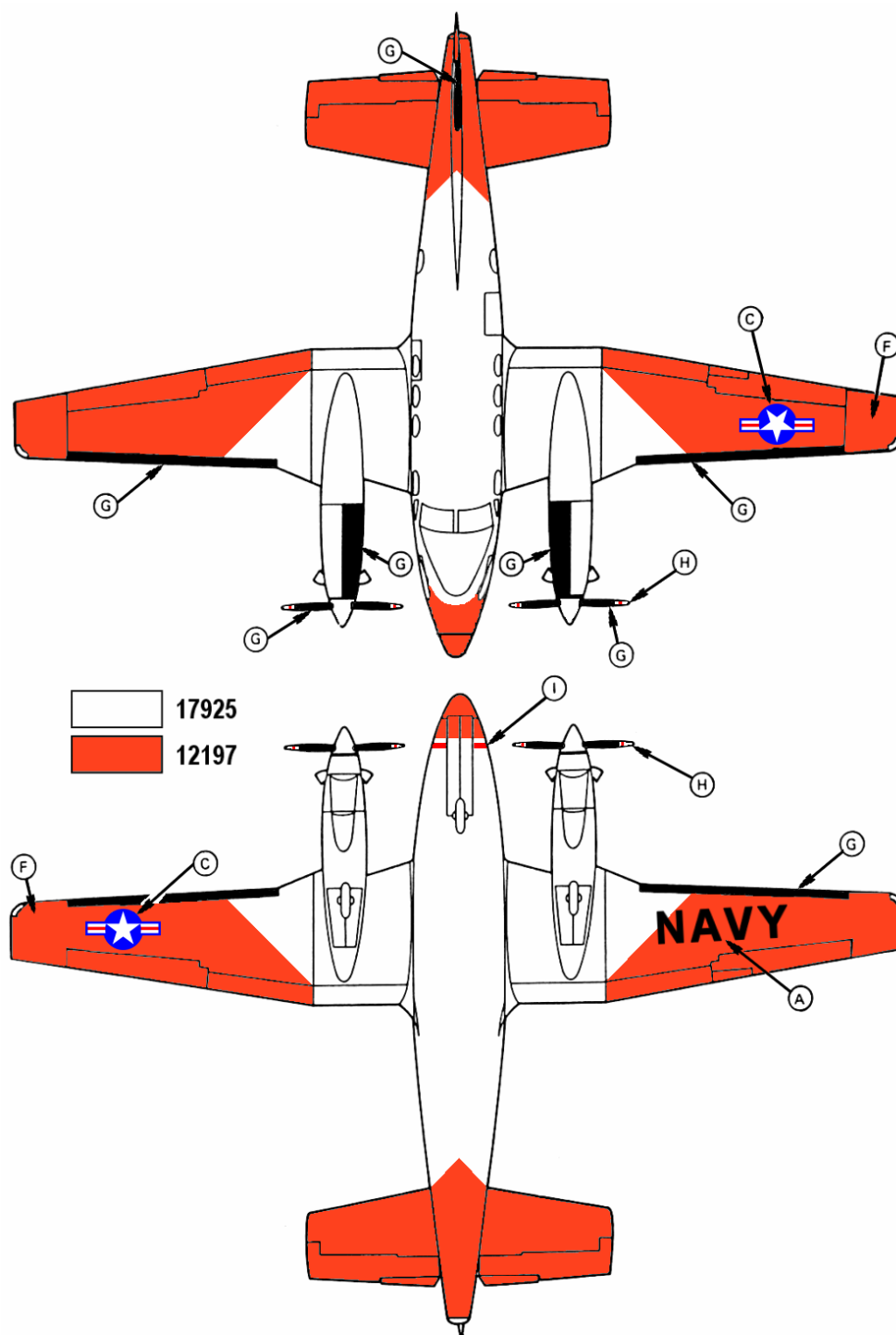


FIGURE C-26. T-44A high visibility – Continued.

MIL-STD-2161B(AS)

APPENDIX C

1. MARKING	2. LOCATION	3. SIZE	4. COLOR NO/CODE
A. NAVY	Aft Fuselage Lower L.H. Wing	12"/10" 24"/16"	17038
B. Model Designation, Acft BUNO	Aft Fuselage Aft Fuselage	2" 4"	17038
C. National Star	Fwd. Fuselage Lower R.H. Wing Upper L.H. Wing	20" 30" 30"	17925/11136/15044 17925/11136/15044 17925/11136/15044
D. Call Numbers	Vertical Stabilizer	12"	17038
E. Intake Warning	See Para. 5.2.2.10.1	See Para. 5.2.2.10.1	11136/17925
F. Beware of Blast	Aft Fuselage	See Para. 5.2.2.10.2	17925/11136
G. Arresting Hook Warning	N/A	4" Alternating Stripes	17038/17925
H. Ejection Seat	Below Canopy Rail	See Para. 5.2.2.10.6.11	11136
I. Walkway	Wing Adjacent to Fuselage	N/A	37038
J. Conspicuity Markings	Per Drawing	See Para. 5.1.1.1	12197
K. Anti-Glare	Fwd. of Cockpit	N/A	17038
L. Unit Aircraft Numbers	Fwd. Fuselage Lower L.H. Wing Upper R.H. Wing	12" 16" 16"	17038
M. Unit Identifier	Vertical Stabilizer Lower L.H. Wing Upper R.H. Wing	20" 16"	17038

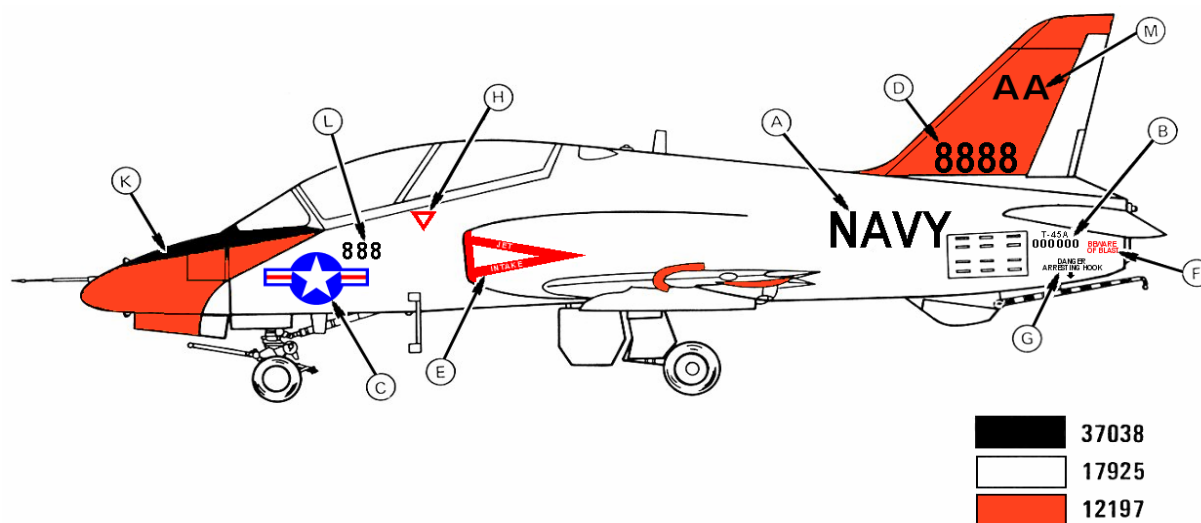


FIGURE C-27. T-45A/C aircraft marking (high visibility).

MIL-STD-2161B(AS)

APPENDIX C

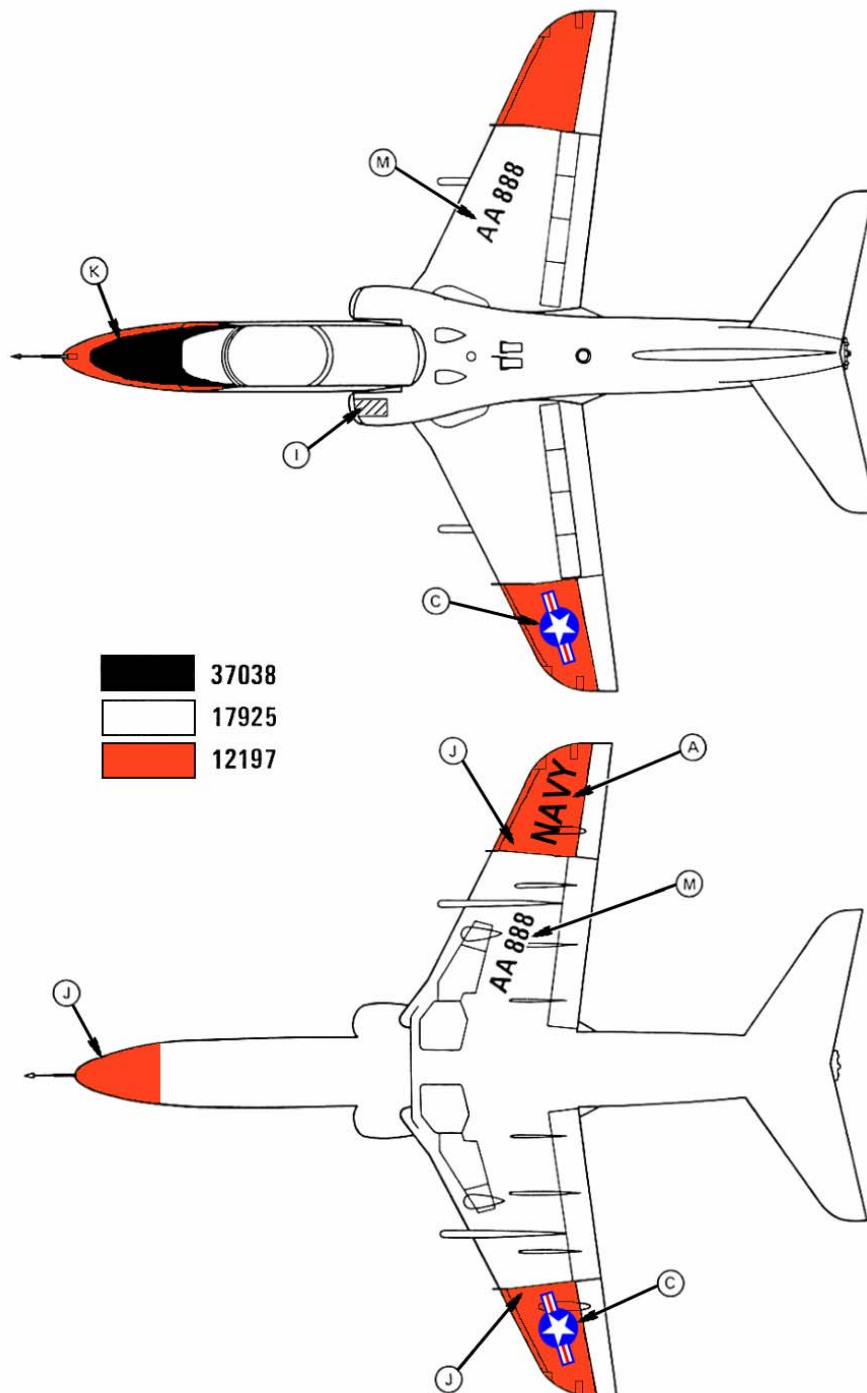
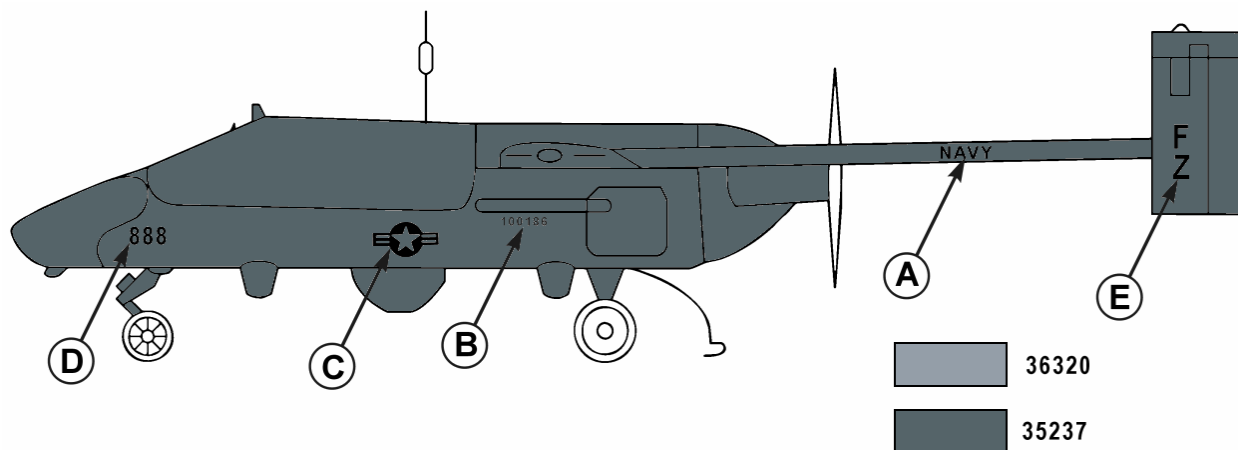


FIGURE C-27. T-45A/C aircraft marking (high visibility) – Continued.

MIL-STD-2161B(AS)

APPENDIX C

1. MARKING	2. LOCATION	3. SIZE	4. COLOR NO/CODE
A. NAVY/MARINES	Tail Boom	1"	17038
B. Model Designation, Acraft BUNO	Center Fuselage	2"	17038
	Center Fuselage	2"	17038
C. National Star	Center Fuselage	6"	17038
	Lower R.H. Wing	6"	17038
	Upper L.H. Wing	6"	17038
D. Unit Aircraft Numbers	Fwd. Fuselage	3"	17038
E. Unit Identifier	Vertical Stabilizer	4"	17038
F. Propeller Warning Band	Tail Boom	2"	11136
G. Danger Propeller Marking	Tail Boom	1"	17038

FIGURE C-28. Pioneer Unmanned Aerial Vehicle (UAV).

MIL-STD-2161B(AS)

APPENDIX C

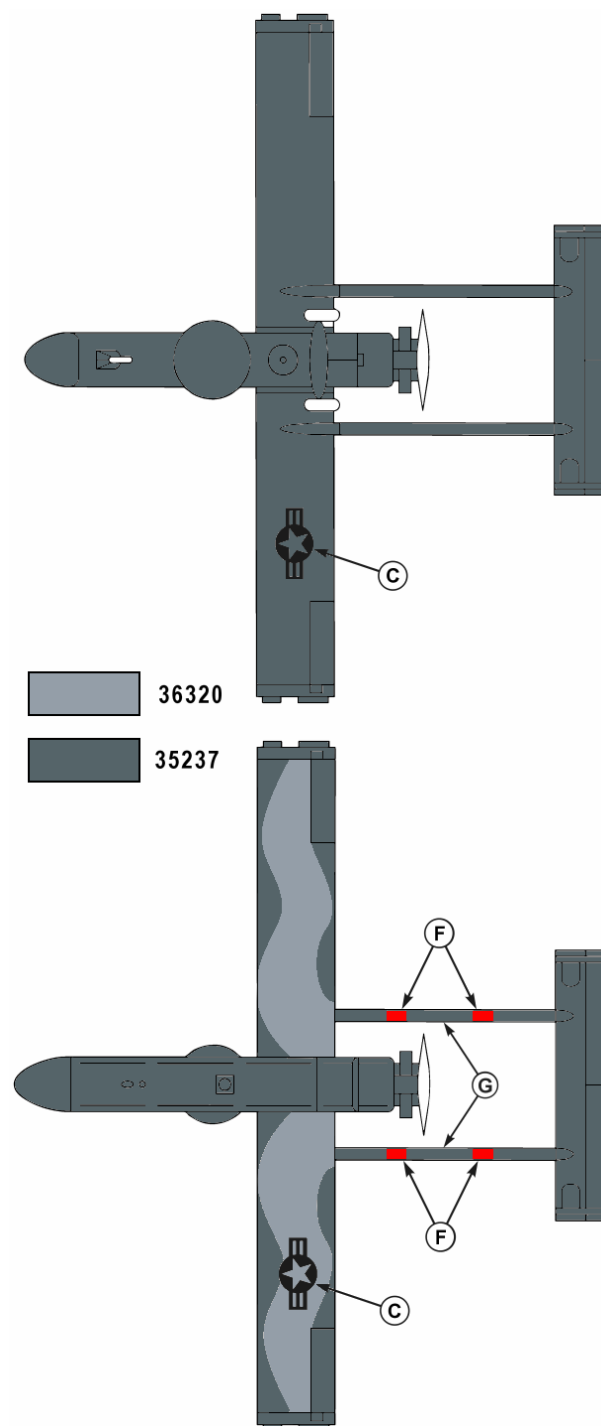
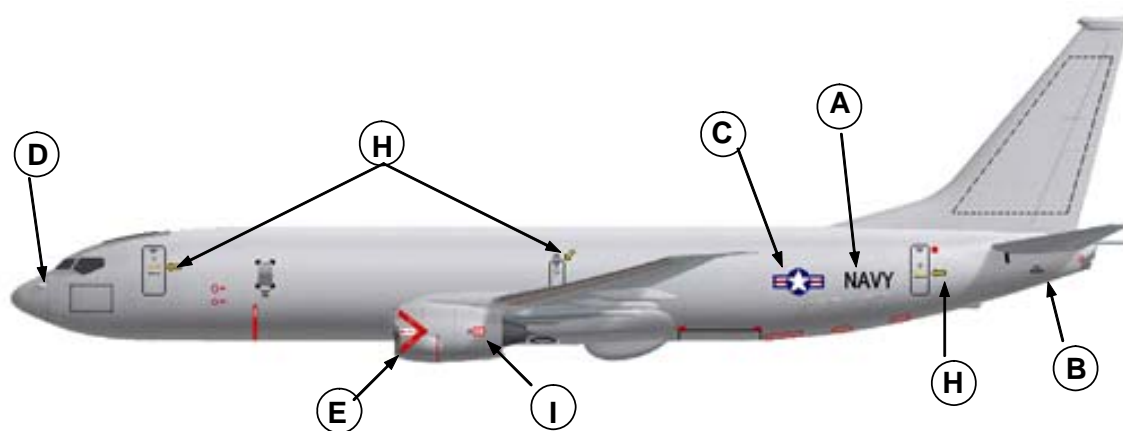


FIGURE C-28. Pioneer Unmanned Aerial Vehicle (UAV) – Continued.

MIL-STD-2161B(AS)

APPENDIX D

1. MARKING ¹	2. LOCATION	3. SIZE	4. COLOR NO/CODE
A. NAVY	L. and R. Aft Fuselage Lower Left Wing	36" 30"	17038 (See Fig. A-4)
B. Model Designation, Bureau Number	L. and R. Aft Fuselage (Under Hor. Stabilizer) Aft fuselage (Centered 2" below Model Designation)	2" Letter & Number Height 4" Height	17038 (See Fig. A-4) 17038 (See Fig. A-4)
C. National Star	L. and R. Aft Fuselage Upper Left Wing Lower Right Wing	40" Diameter Circle 40" Diameter Circle 40" Diameter Circle	11136/15044/17925 11136/15044/17925 11136/15044/17925
D. Anti-glare	Upper Aircraft Nose	N/A	36440 (BAC 707 Flat Gray) ²
E. Engine Intake Warning	L. and R. Side of Each Engine Nacelle	2" Letter Height 3" Chevron Height	17925 (See Fig. A-8) 11136
F. Walkway Coating	Fuselage @ Wing Root	N/A	37875 (BAC 5705 Type I) ²
G. No Step	Aft Edge of Aileron Fwd Edge of Flapperons	1" Letter Height	17038
H. Rescue Arrows	Emergency Exit Locations	24" Long x 2" Ltr. Ht.	13638/17038
I. Beware of Blast	Aft Engine Nacelle	2" Letter Height	11136/17925 (See Fig. A-8)
J. Unit Aircraft Numbers	TBD	TBD	TBD



Note 1 – Proposed paint scheme; Final approval pending
 Note 2 – BAC ### - Boeing Corporation's color designation

FIGURE C-29. P-8A (MultiMission Aircraft, MMA) (Proposed).

MIL-STD-2161B(AS)

APPENDIX D

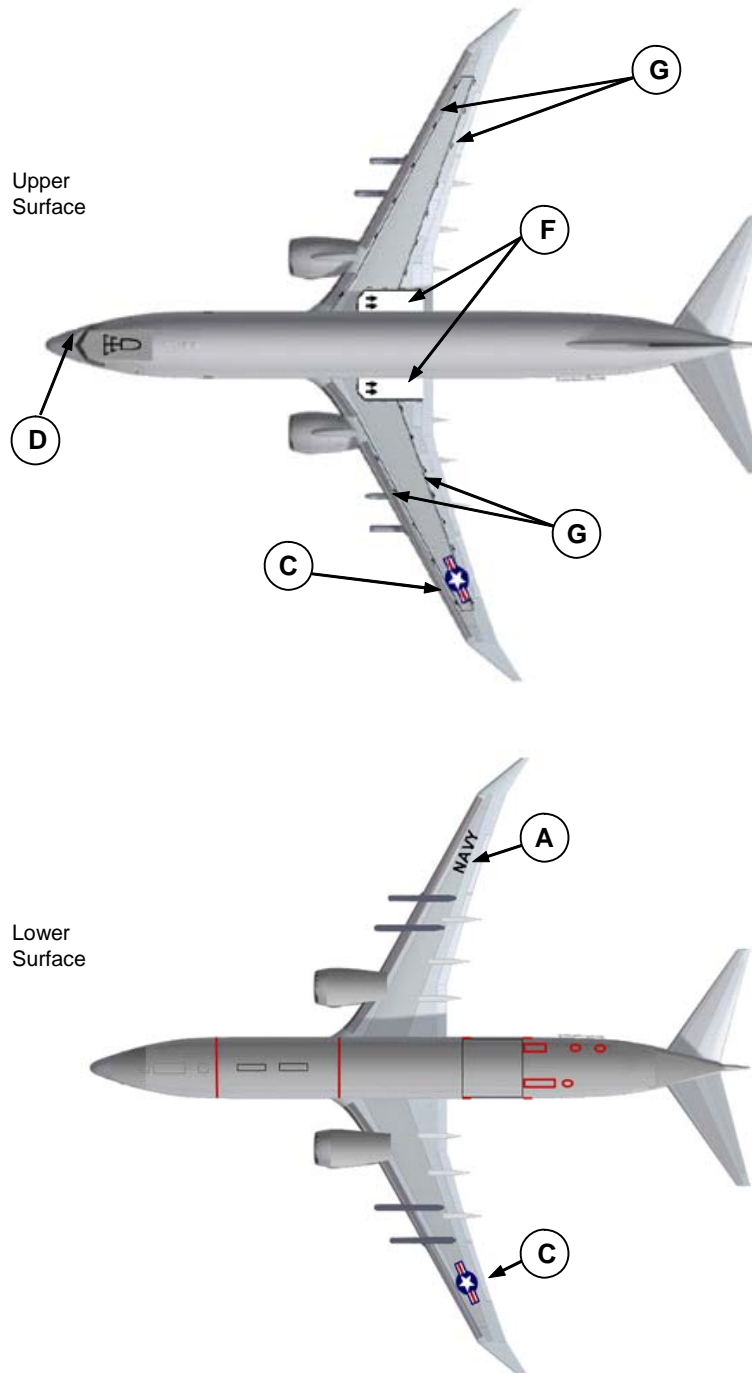


FIGURE C-29. P-8A (MultiMission Aircraft, MMA)(Proposed) - Continued.

MIL-STD-2161B(AS)

APPENDIX D

PAINT SCHEMES AND MARKINGS FOR ROTARY WING AIRCRAFT

D.1 SCOPE

D.1.1 Scope. This Appendix illustrates the different paint schemes and markings for rotary wing aircraft. This appendix is a mandatory part of this standard. The information contained herein is intended for compliance.

D.2 APPLICABLE DOCUMENTS

N/A

D.3 GENERAL REQUIREMENTS

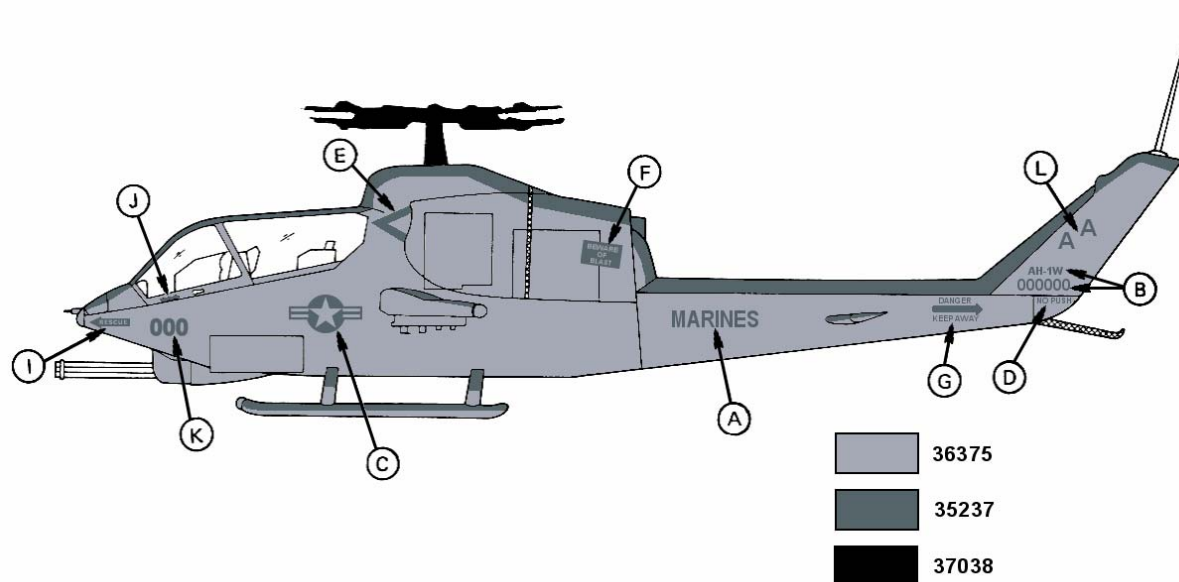
D.3.1 Aircraft paint schemes. The following figures illustrate paint schemes for rotary wing aircraft.

******* NOTE: ACTUAL COLORS SHOWN ON ALL ILLUSTRATIONS IN APPENDICES A-D ARE STRICTLY FOR ILLUSTRATIVE PURPOSE. SPECIFIC FED-STD-595 COLOR DESIGNATIONS INDICATED ON THE ILLUSTRATIONS SHALL BE USED. *******

MIL-STD-2161B(AS)

APPENDIX D

1. MARKING	2. LOCATION	3. SIZE	4. COLOR NO/CODE
A. MARINES	R.H. and L.H. of Tail Boom	10"	35237, Figure A-15
B. Model Designation, Acft BUNO	Tail Boom R.H. and L.H.	2" 4"	35237
C. National Star	R.H. and L.H. Side	15"	35237, Figure A-1
D. No Push	R.H. and L.H. Side, Aft Tail Boom Fairing, Fwd. and Aft of Elevators		35237
E. Intake Warning	Fwd. of Intakes	15"	35237, Figure A-15
F. Beware of Blast	R.H. and L.H. Sides	5"	35237
G. Tail Rotor Warning	Tail Boom	22"	35237
H. Walkway		24" X 6"	35237
I. Rescue Arrow	R.H. and L.H. Side of Nose Section	2"	35237, Figure A-14
J. Rescue Arrow	Adjacent to Pilots and Gunners Door Handles	¾"	35237
K. Unit Aircraft Numbers	R.H. and L.H. of Nose Section	10"	35237
L. Unit Identifier	R.H. and L.H. Side	10"	35237

FIGURE D-1. AH-1W tactical.

MIL-STD-2161B(AS)

APPENDIX D

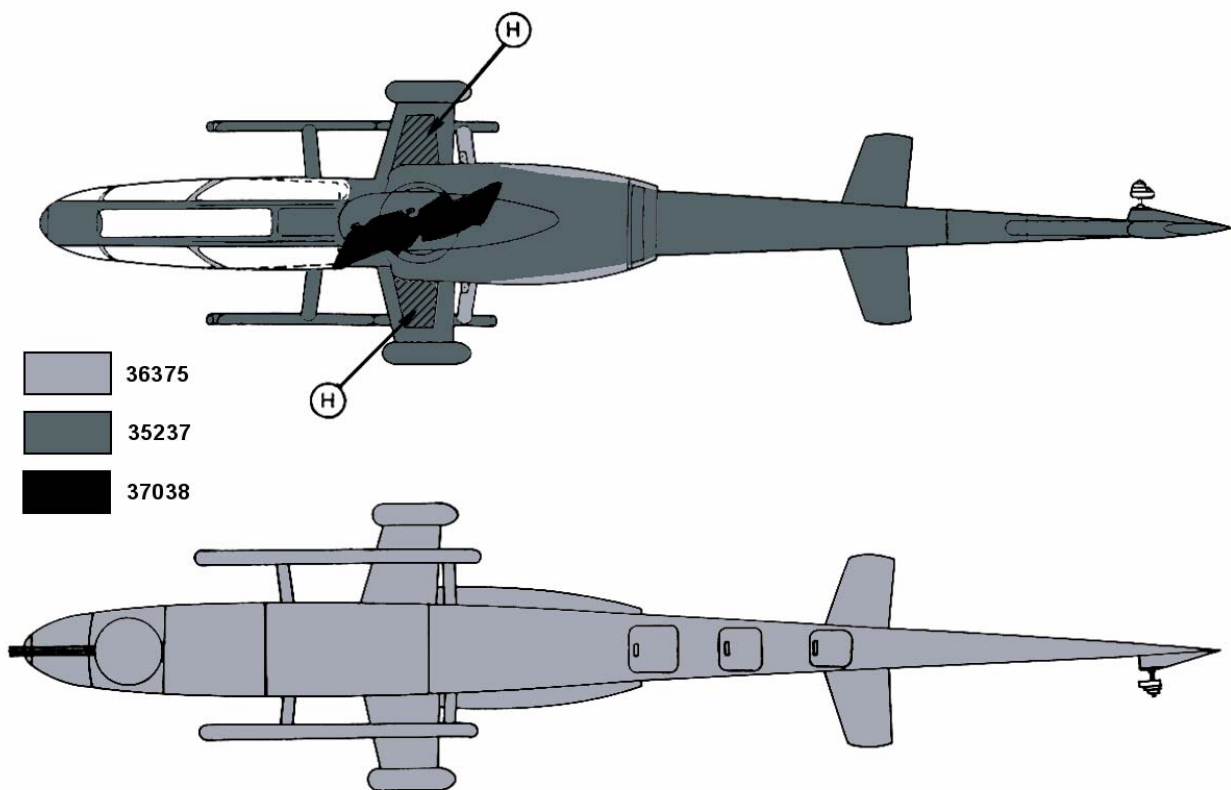
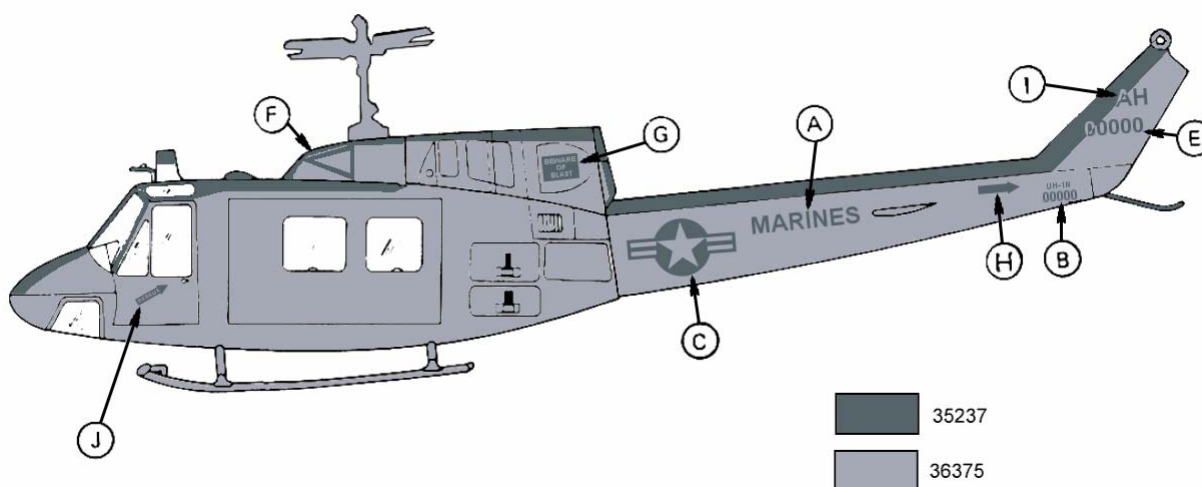


FIGURE D-1. AH-1W tactical – Continued.

MIL-STD-2161B(AS)

APPENDIX D

1. MARKING	2. LOCATION	3. SIZE	4. COLOR NO/CODE
A. MARINES	Tail Boom/ Bottom Fuselage	8"	35237 35237, Figure A-15
B. Model Designation, Acft BUNO	Side Tail Boom	2" 4"	35237
C. National Star	Aft Fuselage Bottom Fuselage	15" 15"	35237 35237, Figure A-1
D. Walkway	Top Fwd. Fuselage	N/A	35237
E. Call Numbers	Aft Tail Boom	12"	35237
F. Intake Warning	Forward Intake	15"	35237
G. Beware of Blast	Engine Exhaust Nacelle	5"	35237
H. Tail Rotor Warning	Tail Boom	22"	35237
I. Unit Identifier	Tail Boom Bottom Fuselage	10"	35237
J. Rescue Arrow	Fwd. Cockpit Door	24"	35237

FIGURE D-2. UH-1N tactical.

MIL-STD-2161B(AS)

APPENDIX D

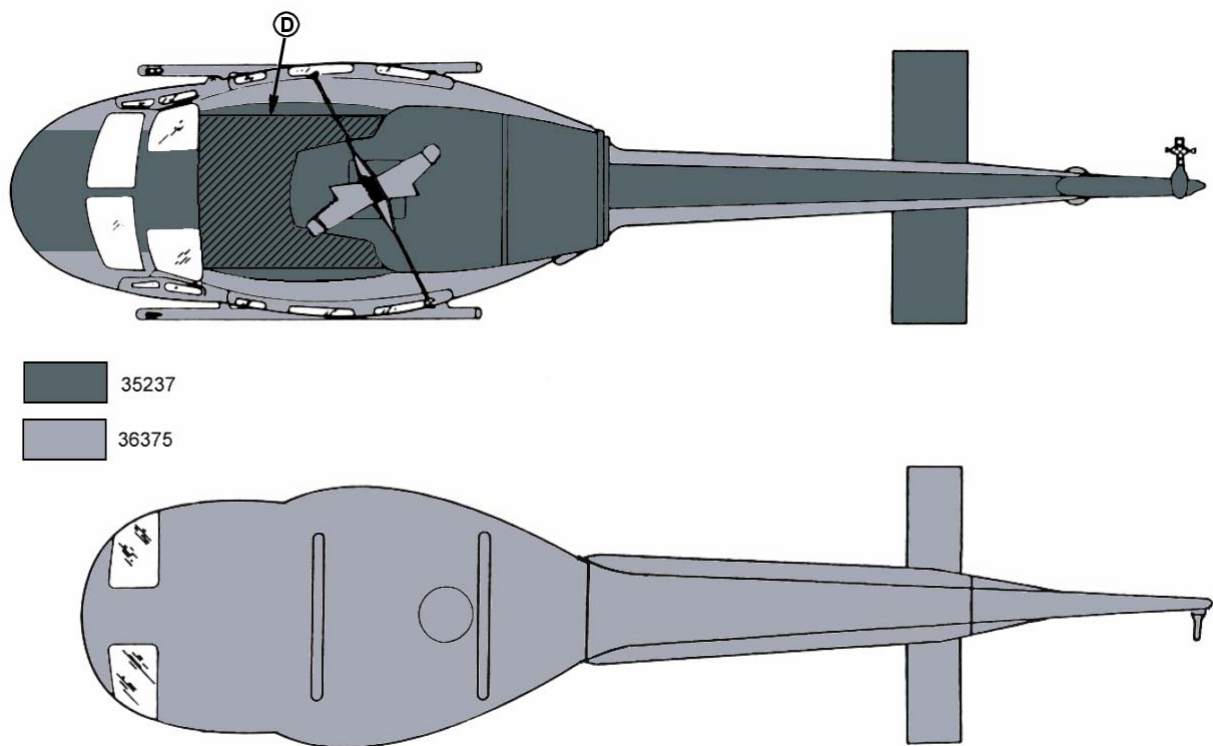


FIGURE D-2. UH-1N tactical – Continued.

MIL-STD-2161B(AS)

APPENDIX D

1. MARKING	2. LOCATION	3. SIZE	4. COLOR NO/CODE
A. NAVY/MARINES	Tail Boom/ Bottom Fuselage	10"	17038
B. Model Designation, Acft BUNO	Side Tail Boom	2" 4"	17038
C. National Star	Aft Fuselage Top Fuselage Bottom Fuselage	15" 15" 15"	17925/11136/15044 17925/11136/15044 17925/11136/15044
D. Intake Warning	Forward Intake	15"	11136/17925
E. Beware of Blast	Engine Exhaust Nacelle	5"	11136/17925
F. Tail Rotor Warning	Tail Boom	22"	13538/31136/17038
G. Anti-Glare	Fwd Fuselage	N/A	37038
H. Walkway	Top Fuselage	N/A	37038
I. Unit Aircraft Numbers	Mid Fuselage Bottom Fuselage	10"	17038
J. Unit Identifier	Tail Boom Bottom Fuselage	10"	17038
K. Rescue Arrow	Fwd. Cockpit Door	24"	13538/17925
L. Rescue	Bottom Aft Fuselage Top Fwd. Fuselage	10"	17038
M. Abandon Chute	Bottom Fuselage	10"	17038
N. Conspicuity Markings	Per Drawing	N/A	12197

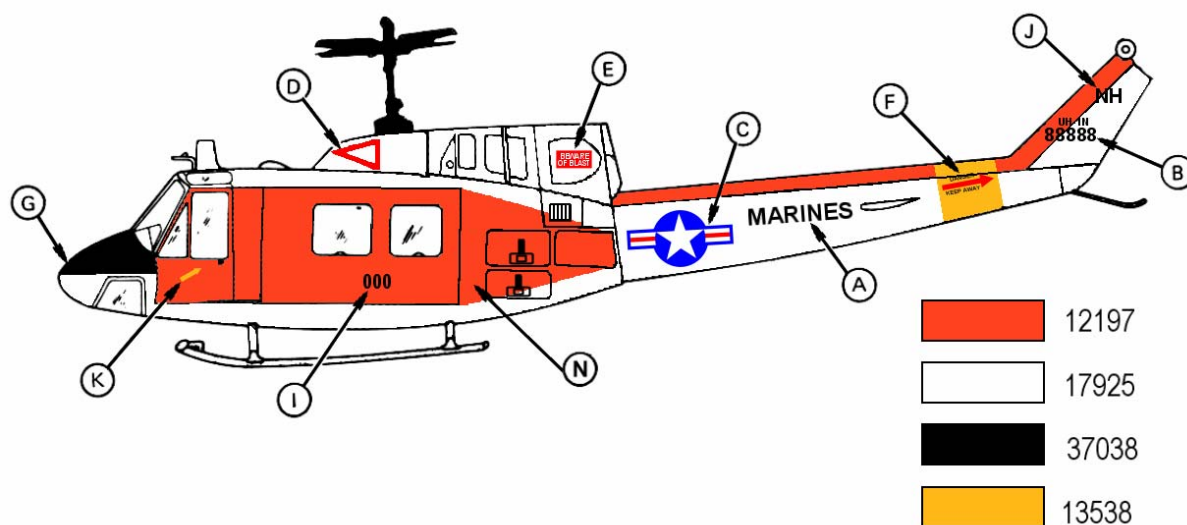


FIGURE D-3. HH/UH-1N non-combat SAR.

MIL-STD-2161B(AS)

APPENDIX D

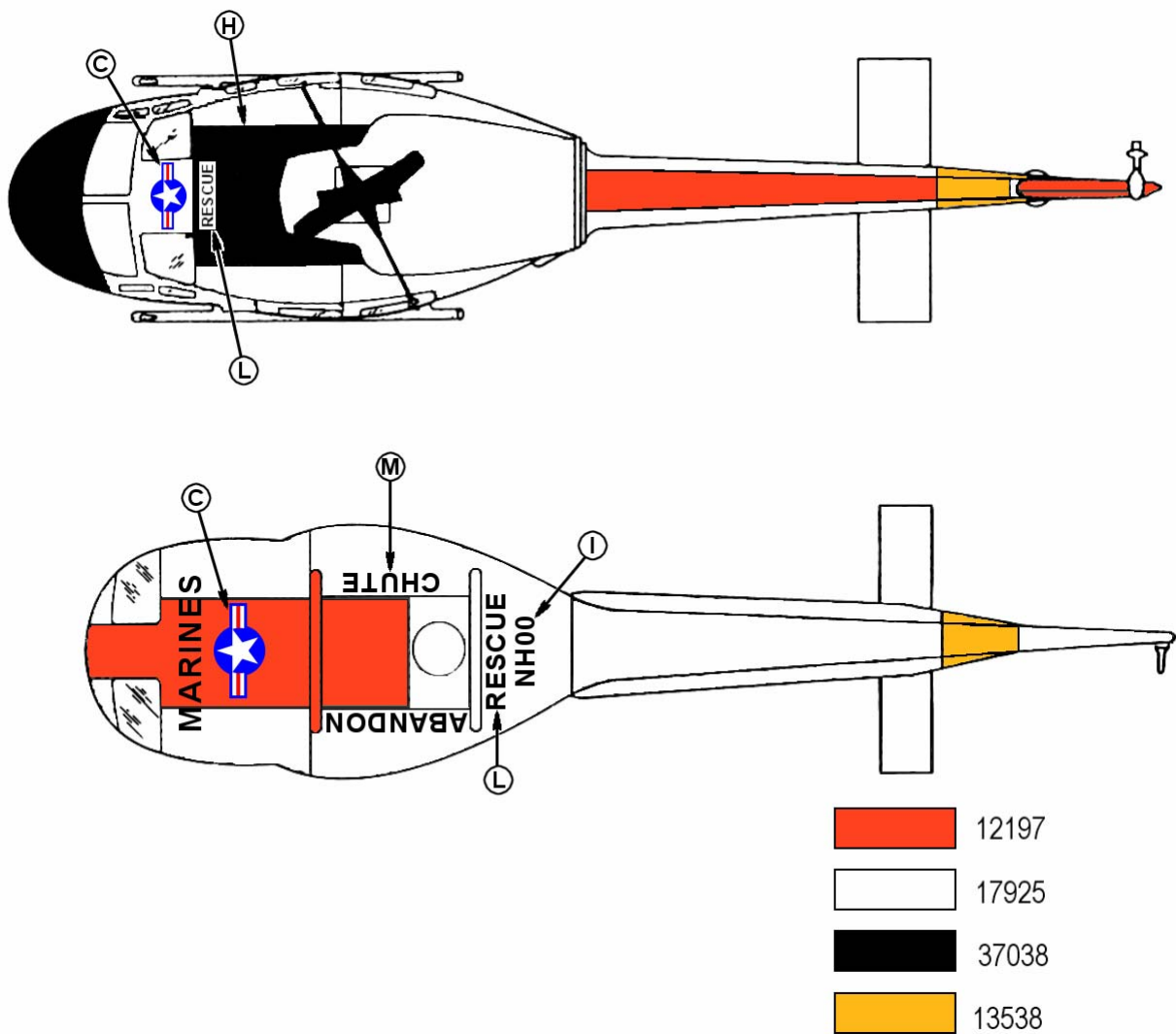
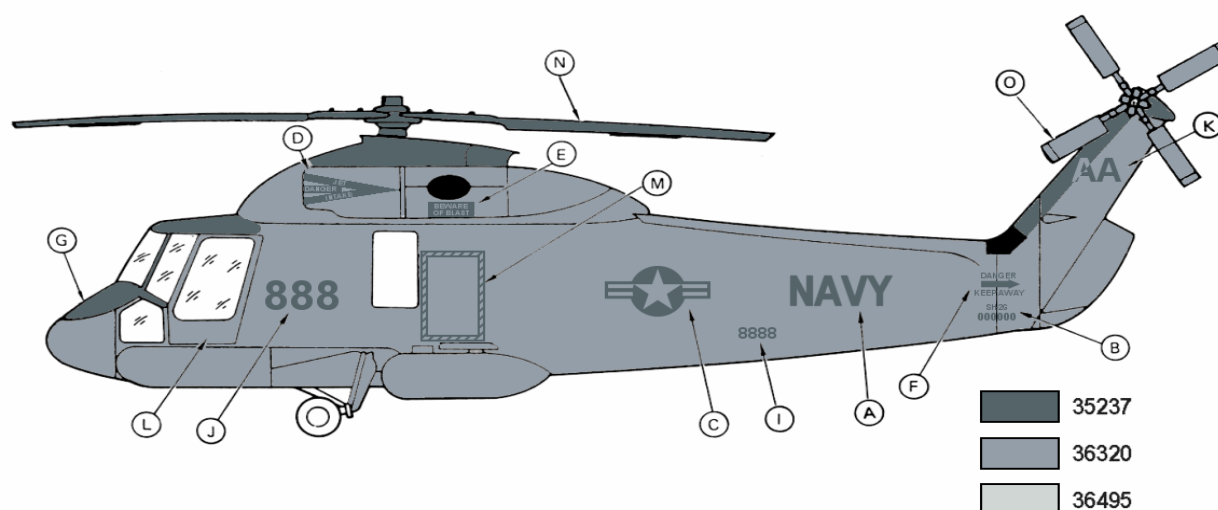


FIGURE D-3. HH/UH-1N non-combat SAR – Continued.

MIL-STD-2161B(AS)

APPENDIX D

1. MARKING	2. LOCATION	3. SIZE	4. COLOR NO/CODE
A. NAVY	Tail Boom	12"	35237
B. Model Designation, Acft BUNO	Side Tail Boom	2" 4"	35237
C. National Star	Aft Fuselage Top Fuselage Bottom Fuselage	12" 12" 12"	35237 36320 36320
D. Intake Warning	Forward Intake	15"	36320/35237
E. Beware of Blast	Below Exhaust Exit	5"	36320/35237
F. Tail Rotor Warning	Tail Boom	33"	35327
G. Anti-Glare	Nose Fwd. of Canopy	N/A	35327
H. Walkway	Top Fuselage	N/A	35237
I. Call Numbers	Aft Fuselage	12"	35237
J. Unit Aircraft Numbers	Fwd. Fuselage Tail Boom Mid	10"	35237
K. Unit Identifier	Tail Boom	10"	35237
L. Rescue Arrow	Pilot Cockpit Door Copilot Cockpit Door	24" 18"	36320/35237
M. Sonobuoy Launch Door Marking	Center Left Fuselage	2" 2" 1"	35237
N. Main Rotor Blades		N/A	35237
O. Tail Rotor Blades		N/A	36320

FIGURE D-4. SH-2G tactical.

MIL-STD-2161B(AS)

APPENDIX D

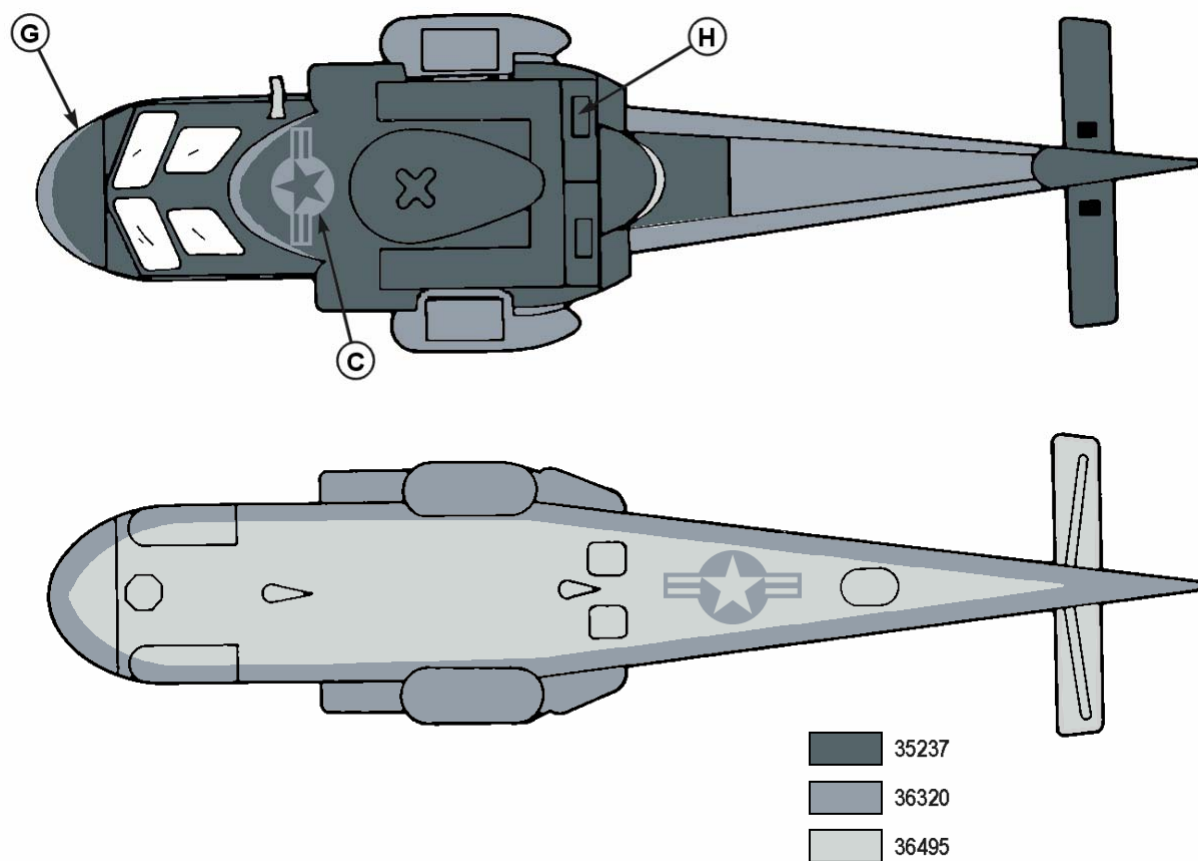


FIGURE D-4. SH-2G tactical – Continued.

MIL-STD-2161B(AS)

APPENDIX D

1. MARKING	2. LOCATION	3. SIZE	4. COLOR NO/CODE
A. NAVY	Lower Fuselage Aft Fuselage	12" 24"	17038
B. Model Designation, Acft BUNO	Aft Fuselage	2" 4"	17038
C. National Star	Upper Tail Boom Lower Fuselage Center Fuselage	25" 30" 30"	17925/11136/15044 17925/11136/15044 17925/11136/15044
D. Unit Identifier	Tail Boom	10"	17038
E. Call Numbers	Lower Aft Fuselage	12"	17038
F. Intake Warning	Fwd. Engine Nacelle	16"	17925/11136
G. Beware of Blast	Aft Engine Nacelle	22"	17925/11136
H. Tail Rotor Warning	Aft Fuselage	33"	11136/17038
I. Anti-Glare	Nose	N/A	37038
J. Walkway	Top Center Fuselage	N/A	36231
K. Abandon Chute/Rescue	Bottom of Fuselage	12"	17038
L. Conspicuity Marking	Per Drawing	(SAR Only)	12197
M. Red Tip	Horizontal Stabilizer	6"	11136
N. Unit Aircraft Numbers	Fwd. Fuselage	12"	17038
O. Rescue Arrows	Fwd. & Center Fuselage L.H. & R.H. Sides	24"	17038/13538
P. Main Rotor Blades		N/A	35237
Q. Tail Rotor Blades		N/A	36320

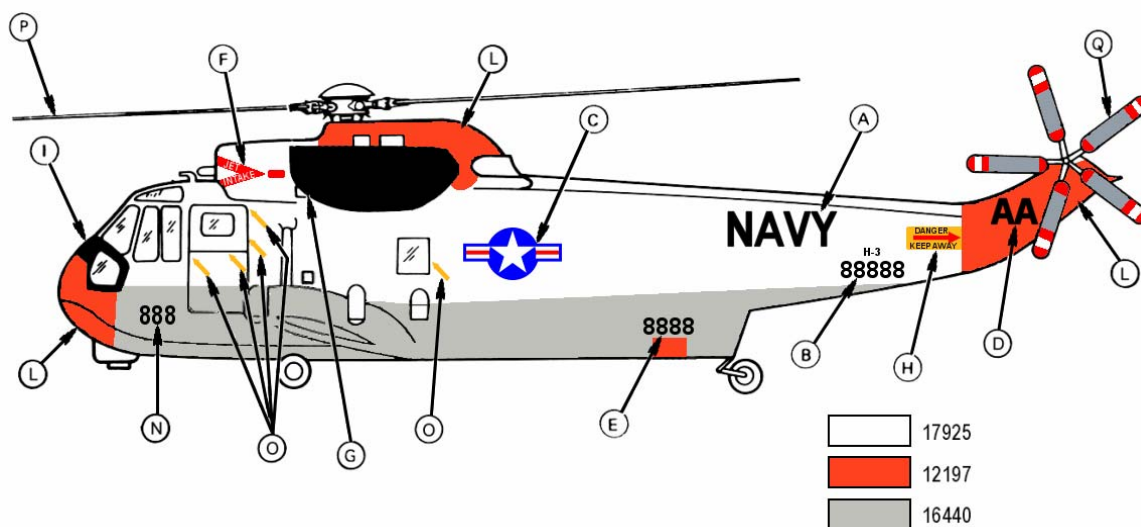


FIGURE D-5. UH-3H non-combat SAR.

MIL-STD-2161B(AS)

APPENDIX D

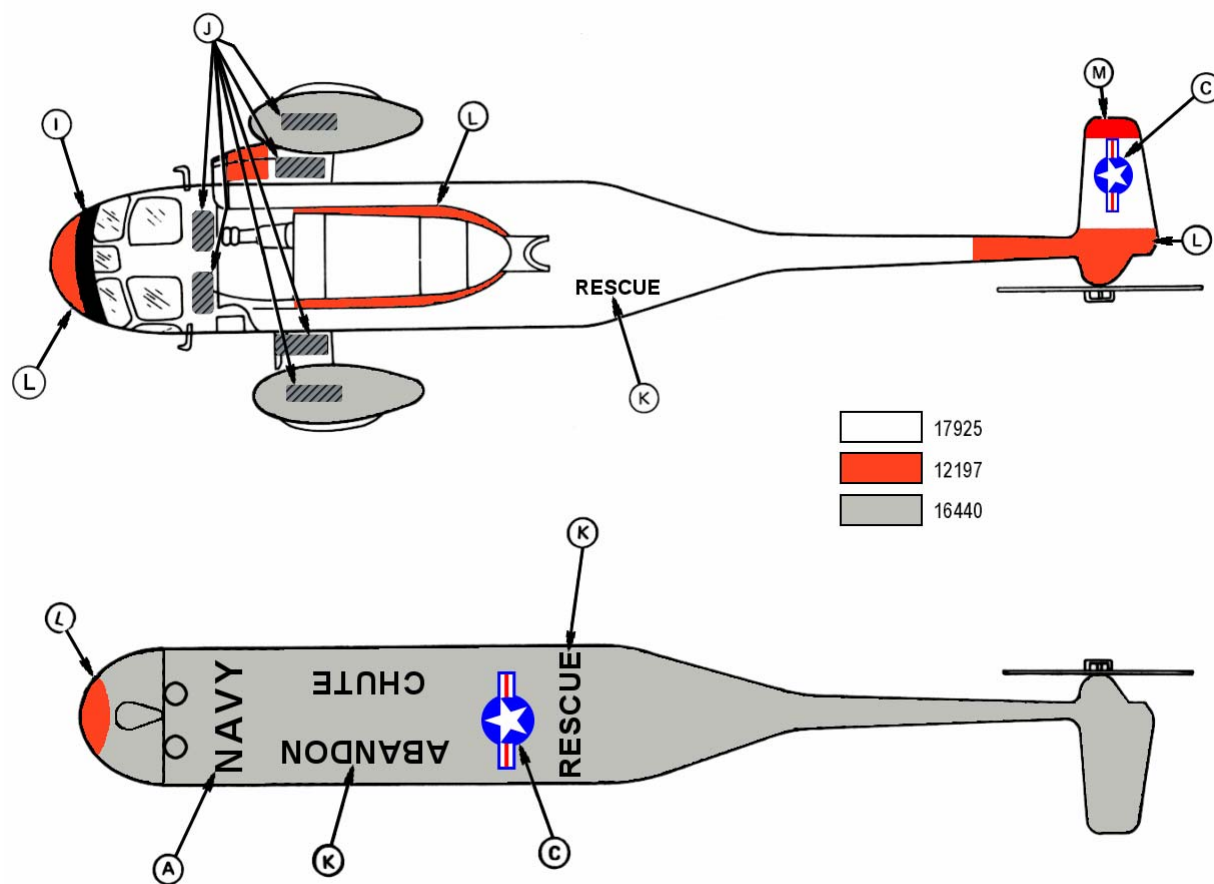
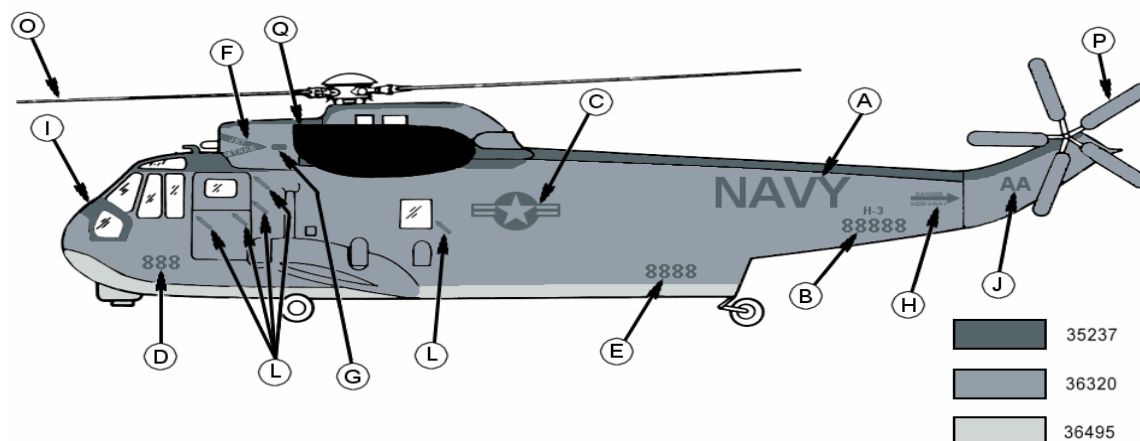


FIGURE D-5. UH-3H non-combat SAR – Continued.

MIL-STD-2161B(AS)

APPENDIX D

1. MARKING	2. LOCATION	3. SIZE	4. COLOR NO/CODE
A. NAVY	Lower Fuselage Aft Fuselage	12"	35237
B. Model Designation, Acft BUNO	Aft Fuselage	2" 4"	35237
C. National Star	Upper Tail Boom Lower Fuselage Center Fuselage	12" 12" 12"	36320 36320 35237
D. Unit Aircraft Number	Forward Fuselage	12"	IAW Para. 5.2.3
E. Call Numbers	Lower Aft Fuselage	12"	35237
F. Intake Warning	Fwd Engine Nacelle	16"	Background 35237 Letters 36320
G. Beware of Blast	Aft Engine Nacelle	22"	Background 35237 Letters 36320
H. Tail Rotor Warning	Aft Fuselage	29"	35237
I. Anti-Glare	Nose Fwd. of Cockpit	N/A	35237
J. Unit Identifier	Tail Boom	10"	IAW Para. 5.2.3
K. Tip Marking	Horizontal Stabilizer	6"	36320
L. Rescue Arrow	Fwd and Center Fuselage L.H. and R.H. Sides	24"	Background 35237 Letter 36320
M. Walkway	Top Fuselage	N/A	IAW Para. 5.2.3
N. Abandon Chute/Rescue	Bottom of Fuselage	SH-3D (SAR Only)	35237
O. Main Rotor Blades		N/A	35237
P. Tail Rotor Blades		N/A	36320
Q. Engine Exhaust Area	Aft Engine Nacelle	N/A	36081

FIGURE D-6. UH-3H tactical.

MIL-STD-2161B(AS)

APPENDIX D

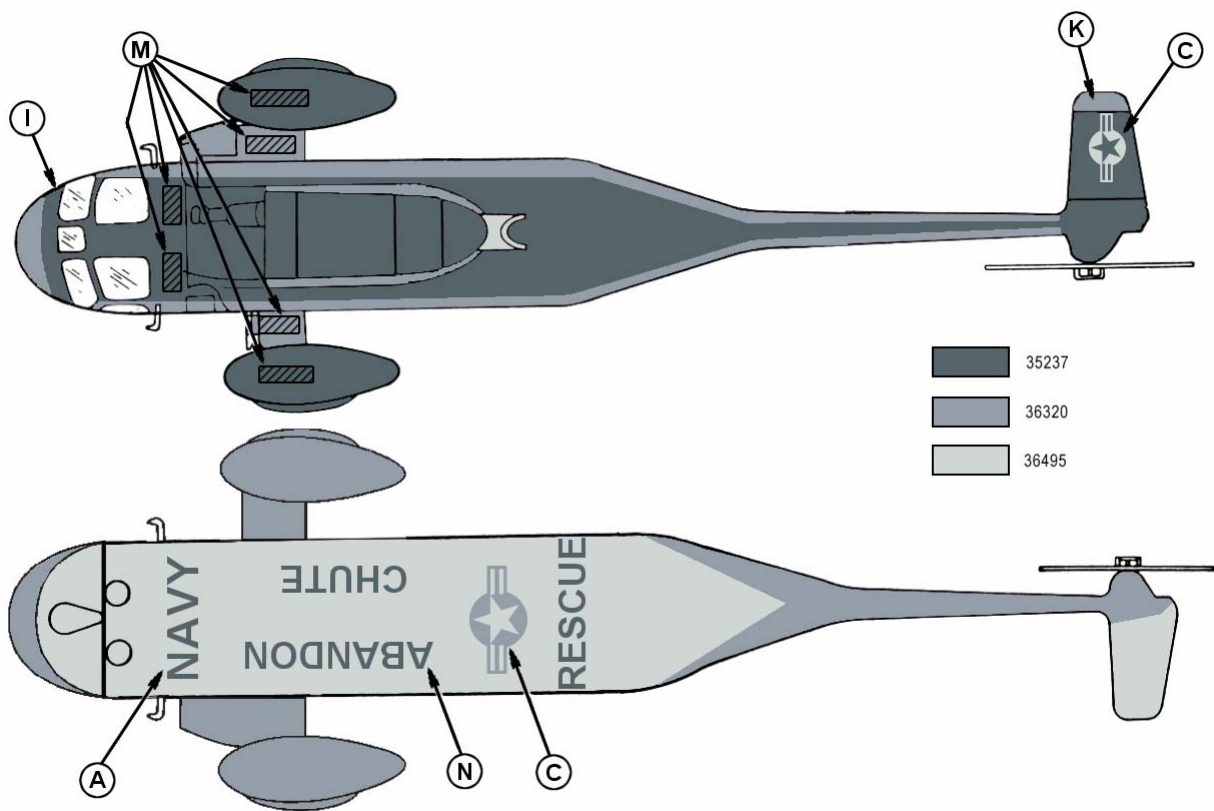


FIGURE D-6. UH-3H tactical – Continued.

MIL-STD-2161B(AS)

APPENDIX D

1. MARKING	2. LOCATION	3. SIZE	4. COLOR NO/CODE
A. UNITED STATES OF AMERICA	Fuselage Tail Boom	8"	17038
B. National Star	Lower Center Fuselage Upper Horizontal Tail	30" 25"	17925/11136/15044 17925/11136/15044
C. Wheel Wells	N/A	N/A	Alaska White
D. Tail Rotor Warning	Aft Fuselage	35"	11136/13538
E. Tail Rotor	N/A	4"/4"/4"	11136/17925 11136/17038
F. Flag	Forward Engine Nacelle	18" X 34"	11136 15044 17925
G. Accent Stripes	Per Drawing	4"	17925
H. Rescue Arrow	Fwd. Fuselage	24"	17038/13538
I. Intake Warning	Fwd. Engine Nacelle	16"	17925/11136
J. Beware of Blast	Engine Exhaust Nacelle	22"	17925/11136
K. Walkway	Top Fwd. Fuselage and Landing Gear Housing	N/A	17038

NOTE: Color numbers 9364 and 9366 are not FED-STD-595 colors. See aircraft drawings for color details.

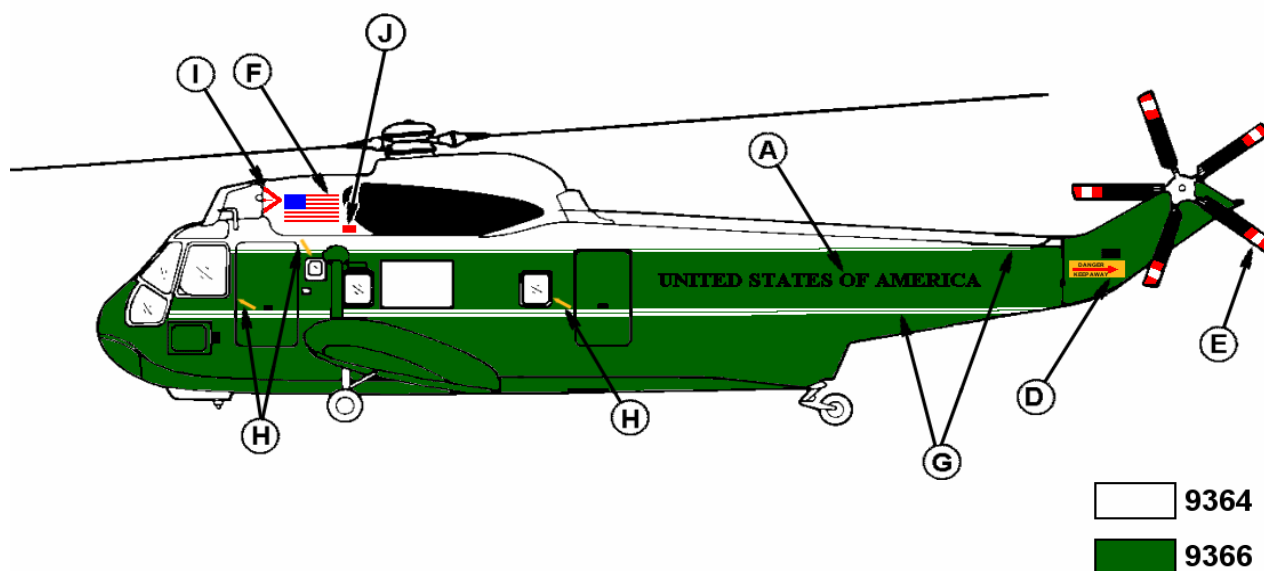


FIGURE D-7. VH-3D Presidential helicopter.

MIL-STD-2161B(AS)

APPENDIX D

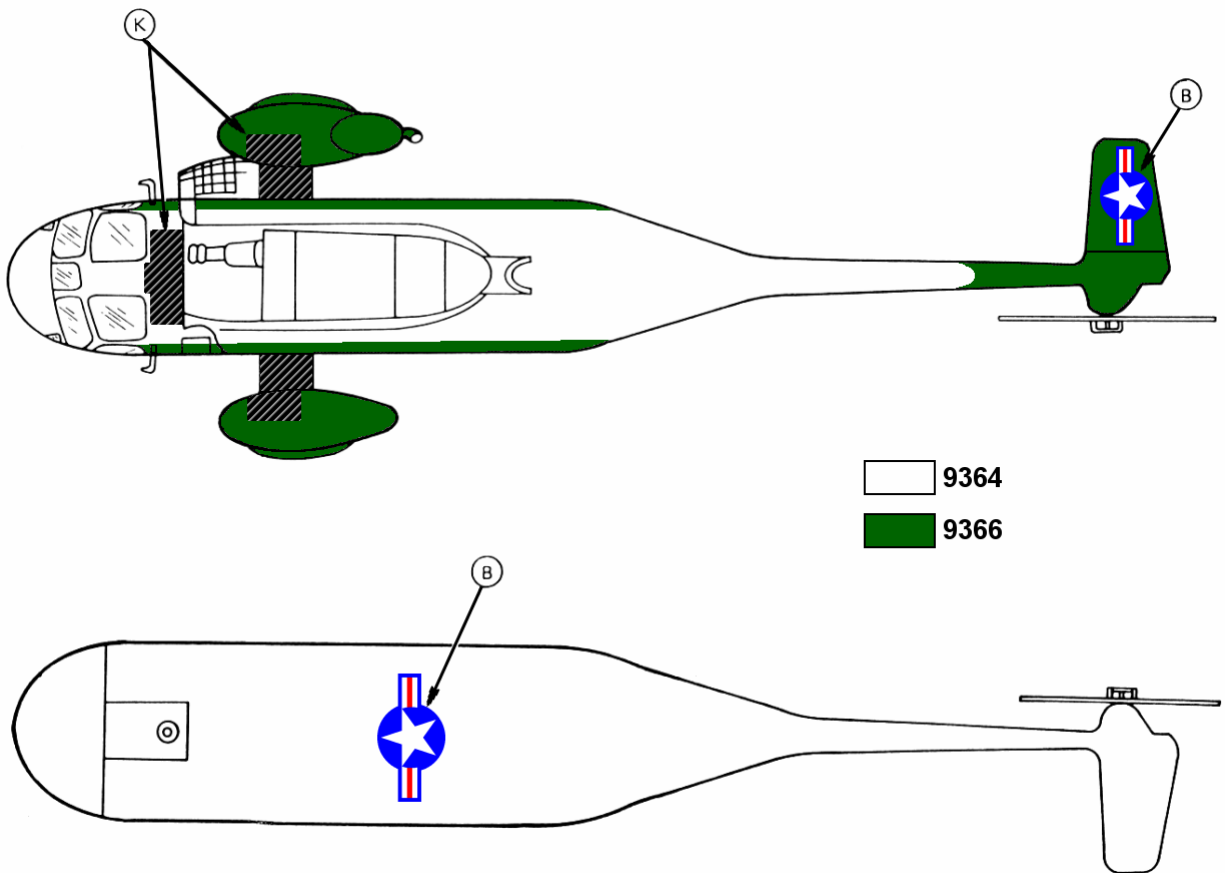


FIGURE D-7. VH-3D Presidential helicopter – Continued.

MIL-STD-2161B(AS)

APPENDIX D

1. MARKING	2. LOCATION	3. SIZE	4. COLOR NO/CODE
A. MARINES	Aft Fuselage (L. and R. Side) Bottom Fuselage R.H. Side	10" 12"	17925
B. Model Designation, Aircraft BUNO	Aft of Branch of Service Markings	2" 4"	17925
C. National Star	Forward Lower Fuselage Top Center Fuselage Bottom Lower Fwd. Fuselage	20" 20" 20"	17925/11136/15044 17925/11136/15044 17925/11136/15044
D. Call Numbers	Aft Pylon	9"	17038
E. Rescue	Upper Fuselage Lower Fuselage Stubwing	12" 12" 8"	17038 17038 17925/17038
F. Abandon Chute (2 separate lines, one word per line)	Lower Fuselage	12"	17925
G. Walkway	Top of Fuselage (both sides of tunnel and in front of engine intakes) Top of Stubwing and Torque Box	N/A	37038
H. Conspicuity Markings	Per Drawing	N/A	12197
I. Squadron Designation	Aft Fuselage Aft Pylon: Shadow Boxed	6" 4"	17925 17925/17038
J. Unit Aircraft Numbers	Upper Center Fuselage Nose Electronics Compartment Door	20"	17925
K. Unit Identifier	Top of Aft Pylon	24"	17925
L. Rescue Arrows	Fwd. and Center of Fuselage Rescue Hatch (if installed)	4"w x 18"l	17038/13538

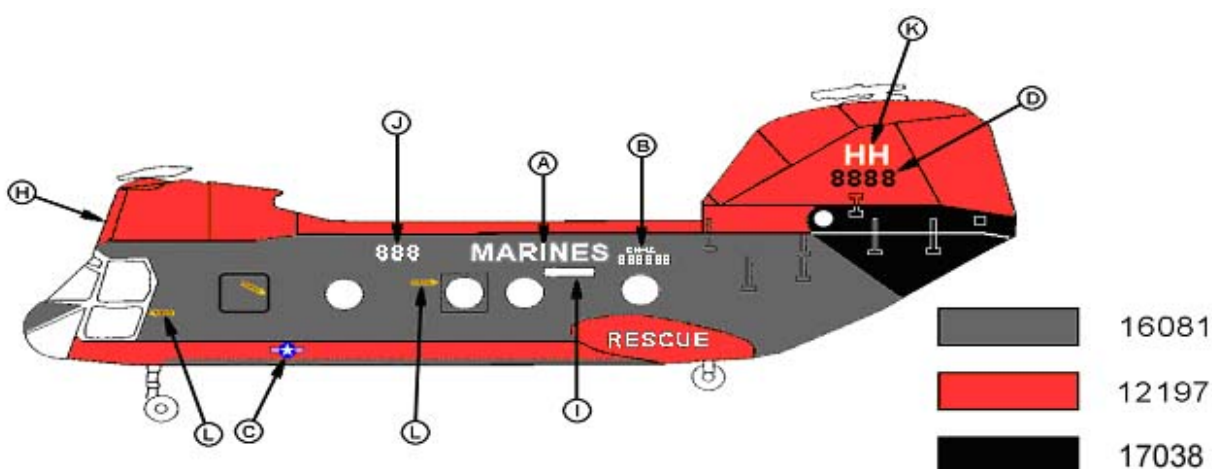


FIGURE D-8. HH-46E high visibility SAR.

MIL-STD-2161B(AS)

APPENDIX D

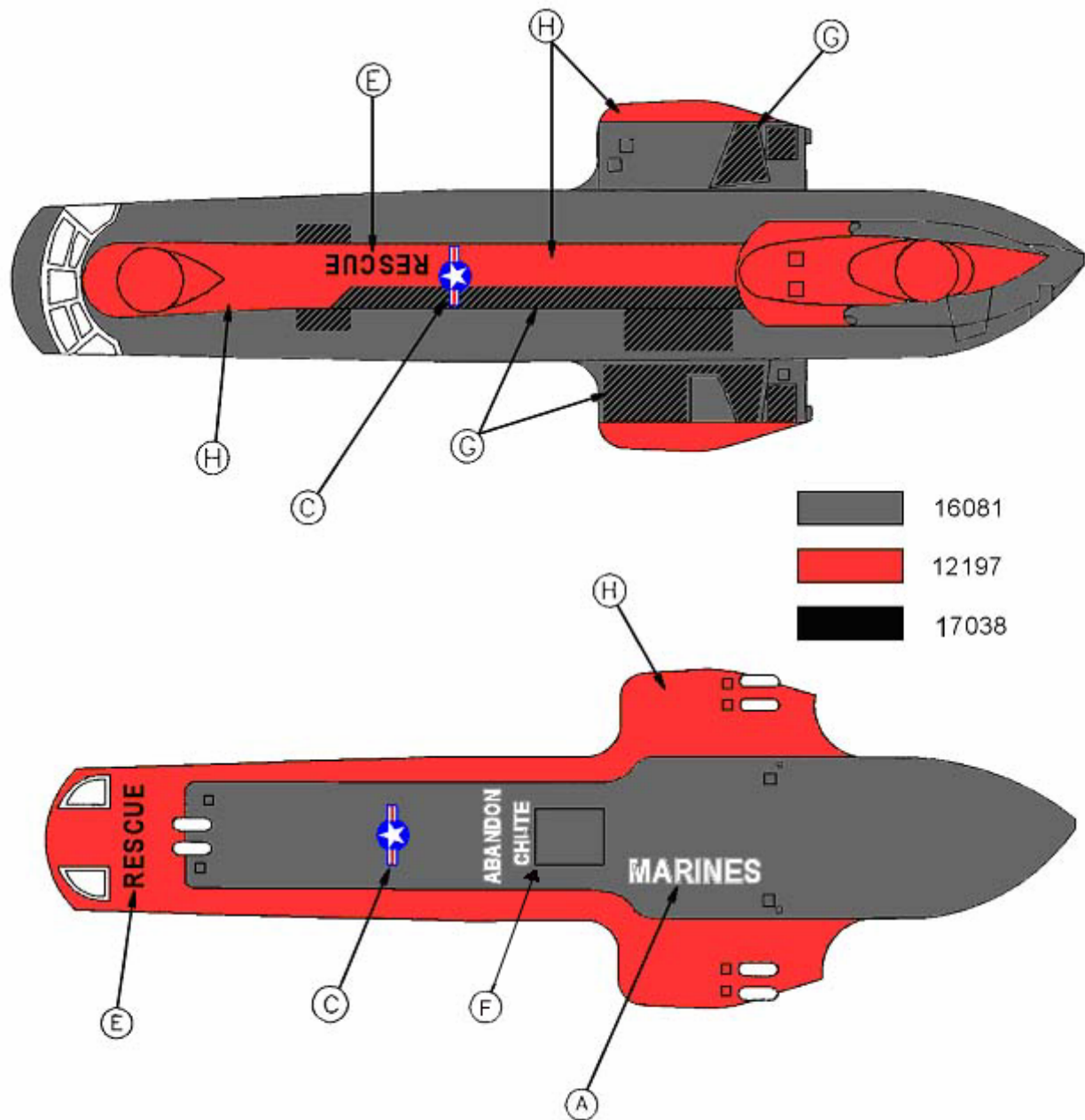


FIGURE D-8. HH-46E high visibility SAR – Continued.

MIL-STD-2161B(AS)

APPENDIX D

1. MARKING	2. LOCATION	3. SIZE	4. COLOR NO/CODE
A. MARINES	Aft Fuselage (L. and R. Side) Bottom Fuselage	10" 12"	35237 35237, Figure A-15
B. Model Designation, Acft BUNO	Aft of MARINES Markings	2" 4"	35237 35237
C. National Star	Forward Lower Fuselage Top Center Fuselage Bottom Lower Fwd Fuselage	20" 20" 20"	35237 36375 35237, Figure A-1
D. Walkway	Top of Fuselage (both sides of tunnel and in front of intakes) Top of Stubwings and Torque Box	N/A N/A	35237 35237
E. Call Numbers	Aft Pylon	9"	35237
F. Unit Aircraft Numbers	Upper Center Fuselage Nose Electronic Compartment Door	20"	36375
G. Unit Identifier	Top of Aft Pylon	24"	35237
H. Squadron Designation	Aft Fuselage	6"	35237
I. Rescue Arrow	Fwd. & Center Fuselage	4"w x 18"l	35237, Figure A-14 for other dimensions

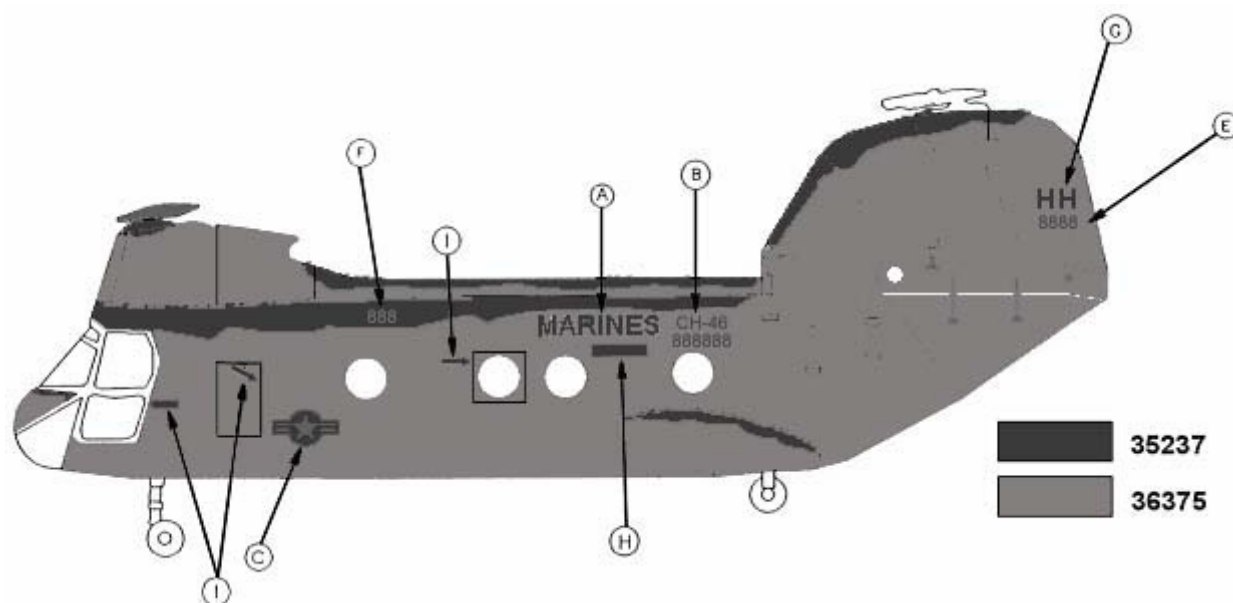


FIGURE D-9. CH-46E tactical.

MIL-STD-2161B(AS)

APPENDIX D

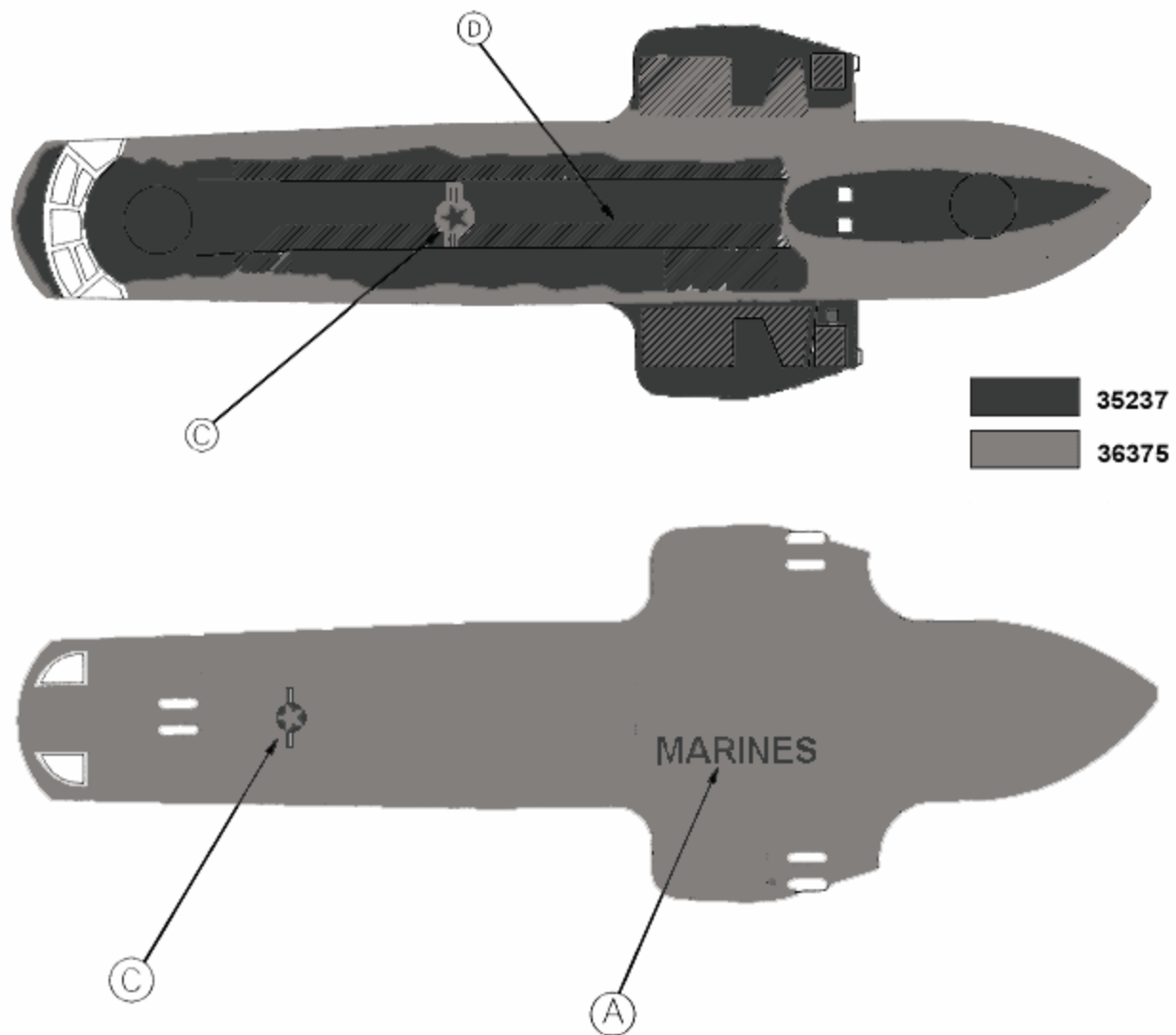


FIGURE D-9. CH-46E tactical – Continued.

MIL-STD-2161B(AS)

APPENDIX D

1. MARKING	2. LOCATION	3. SIZE	4. COLOR NO/CODE
A. NAVY	Aft Fuselage (L.H. & R.H.)	20"	35237
B. Model Designation, Acft BUNO	Aft Fuselage (L.H. & R.H.)	2" 4"	35237
C. National Star	Aft Fuselage (L.H. & R.H.) Horizontal Stabilizer Bottom Center Fuselage	20" 20" 20"	35237 35237 35237
D. Unit Aircraft Number (MODEX)	Center Fuselage (L.H. & R.H.) Nose	18" 18"	35237 35237
E. Call Numbers	Upper Tail Boom (L.H. & R.H.)	6"	35237
F. Intake Warning	Engine Intake Nacelles (L.H. & R.H.)	2" Letters 36" (Length) 4" Chevron	35237
G. Beware of Blast	Lower Aft Section of Engine Nacelles (L.H. & R.H.)	2" Letters	35237
H. Tail Rotor Warning	Aft Tail Boom (L.H. & R.H.)	24"	35237
I. Walkway	Per Drawing	N/A	IAW Para 5.1.13
J. Keep Clear Exhaust	Upper Fwd. Fuselage Between Exhaust Ducts L.H. Side	1" Letters 1-1/2" Arrows	35237
K. Rescue Arrow	Fwd Fuselage (L.H. & R.H.)	24"	35237
L. Unit Identifier	Tail Pylon (L.H. & R.H.)	22"	35237
M. Station or Unit Name (Shore-based A/C Only)	Tail Pylon (L.H. & R.H.)	6"	35237, See Par. 5.2.2.8
N. Squadron Designation	Center Fuselage (L.H. & R.H.)	6"	35237, See Par. 5.2.6.2

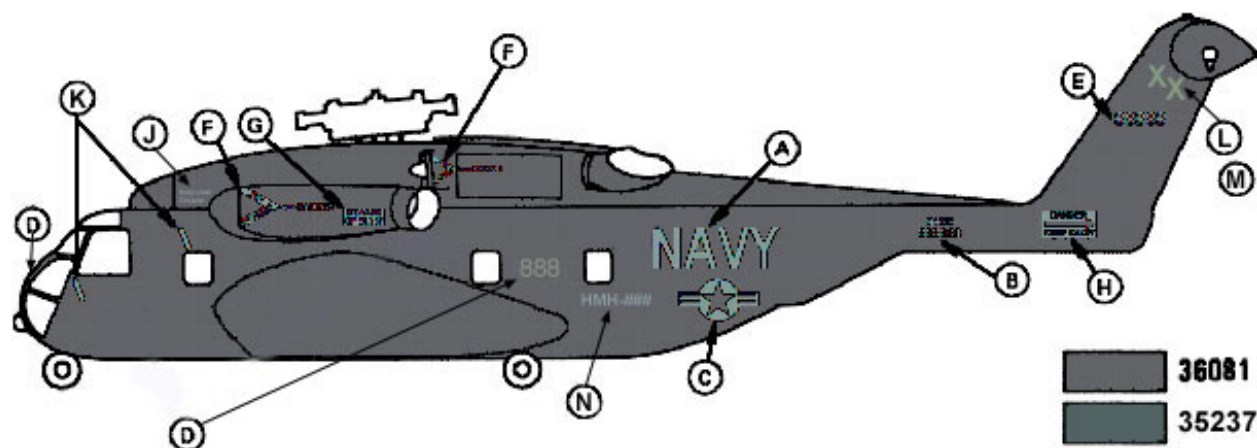


FIGURE D-10. MH-53E Navy tactical.

MIL-STD-2161B(AS)

APPENDIX D

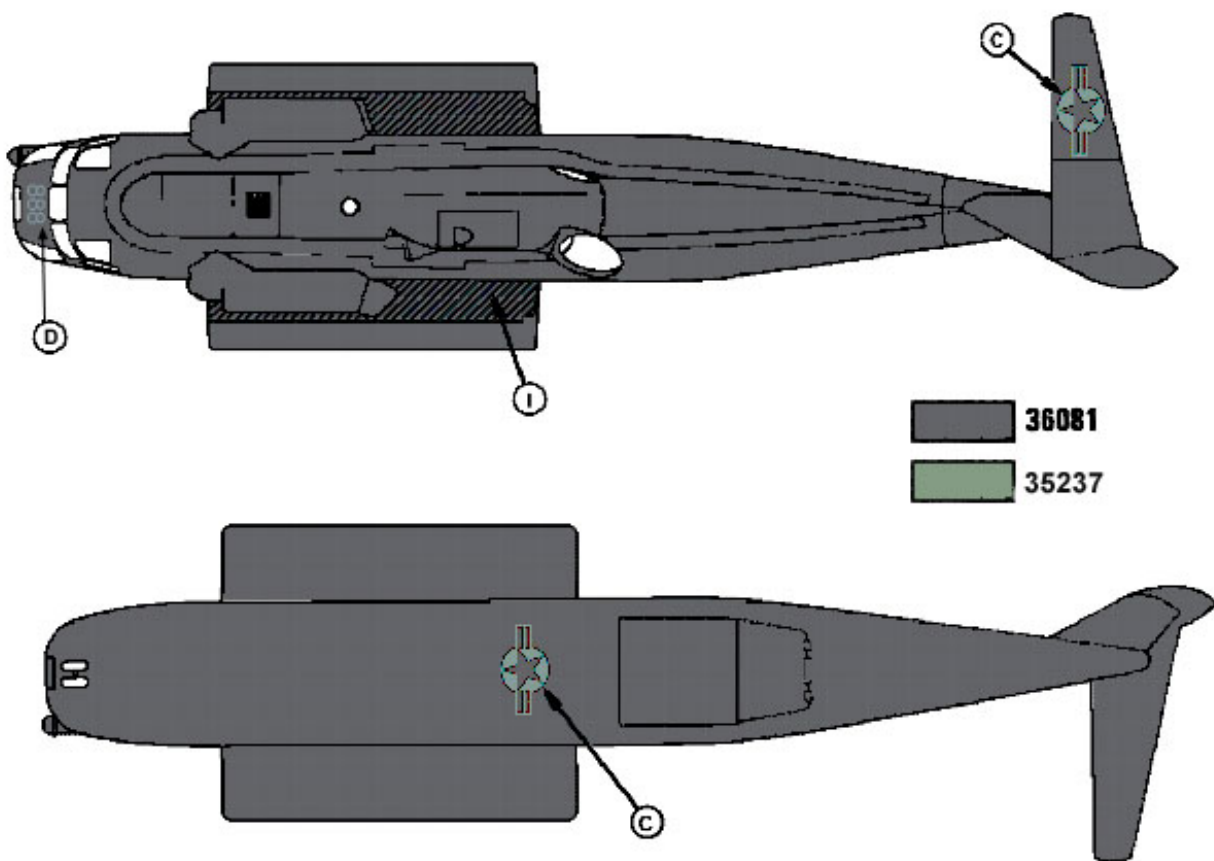


FIGURE D-10. MH-53E Navy tactical – Continued.

MIL-STD-2161B(AS)

APPENDIX D

1. MARKING	2. LOCATION	3. SIZE	4. COLOR NO/CODE
A. MARINES	Aft Fuselage (L.H. & R.H.)	20"	35237, Figure A-15
B. Model Designation, Acft BUNO	Aft Fuselage (L.H. & R.H.)	2" 4"	35237
C. National Star	Aft Fuselage (L.H. & R.H.) Horizontal Stabilizer Bottom Center Fuselage	20" 20" 20"	35237 36375 35237, Figure A-1
D. Unit Aircraft Number (MODEX)	Center Fuselage (L.H. & R.H.) Nose	18" 18"	35237 36375
E. Call Numbers	Upper Tail Boom (L.H. & R.H.)	6"	35237
F. Intake Warning	Engine Intake Nacelles (L.H. & R.H.)	2" Letters 36" (Length) 4" Chevron	35237
G. Beware of Blast	Lower Aft Section of Engine Nacelles (L.H. & R.H.)	2" Letters	35237
H. Tail Rotor Warning	Aft Tail Boom (L.H. & R.H.)	24"	35237
I. Walkway	Per Drawing	N/A	35237
J. Keep Clear Exhaust	Upper Fwd. Fuselage Between Exhaust Ducts L.H. Side	1" Letters 1-1/2" Arrows	35237
K. Rescue Arrow	Fwd Fuselage (L.H. & R.H.)	24"	35237
L. Unit Identifier	Tail Pylon (L.H. & R.H.)	22"	35237
M. Station or Unit Name (Shore-based A/C Only)	Tail Pylon (L.H. & R.H.)	6"	35237, See Par. 5.2.2.8
N. Squadron Designation	Center Fuselage (L.H. & R.H.)	6"	35237, See Par. 5.2.6.2

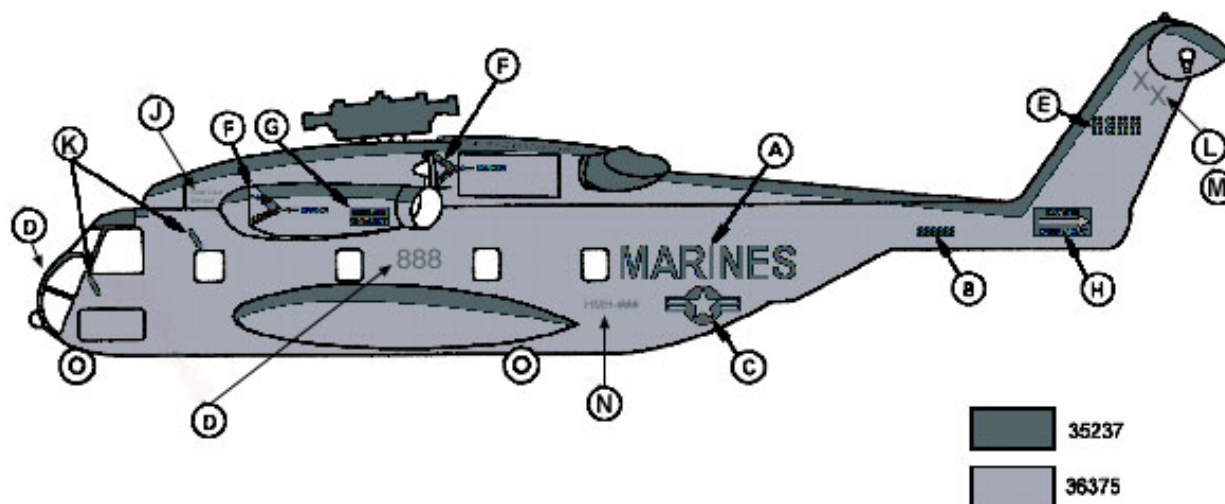


FIGURE D-11. CH-53E Marine tactical.

MIL-STD-2161B(AS)

APPENDIX D

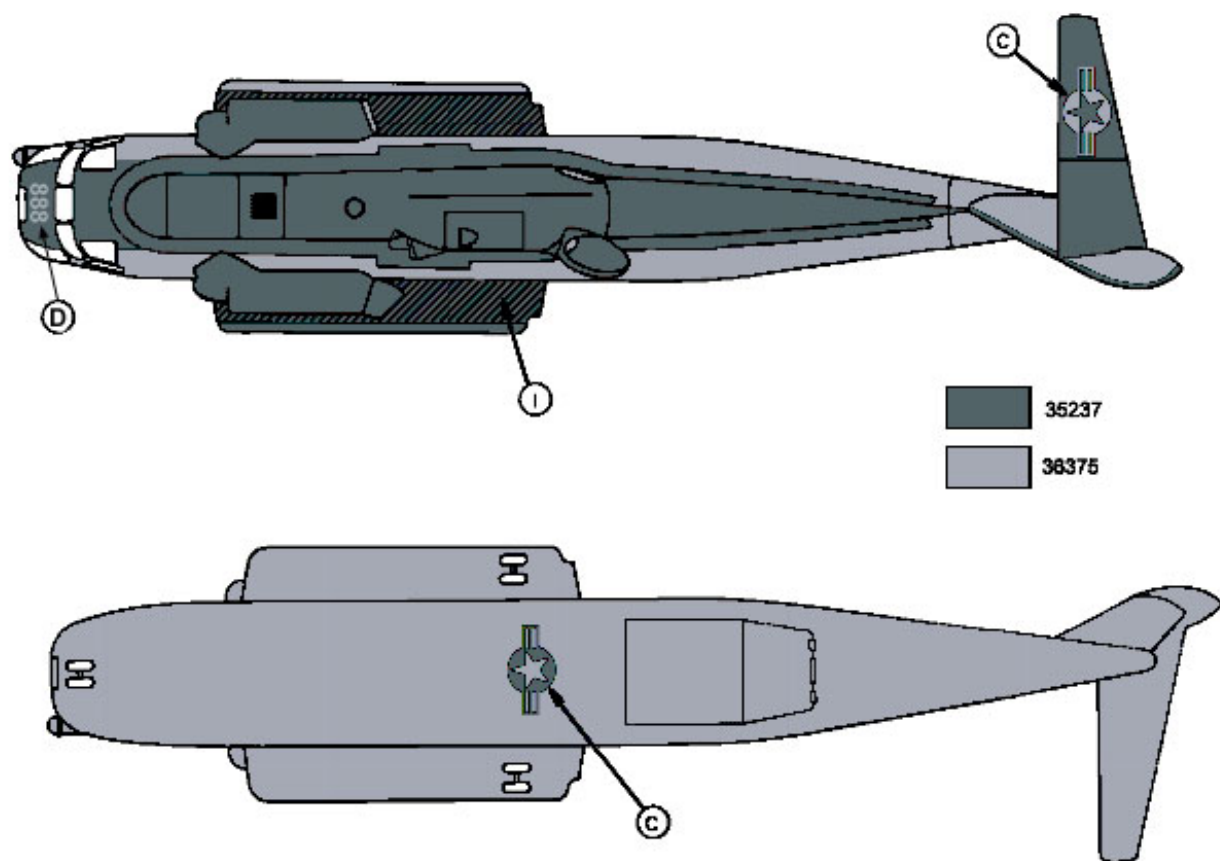


FIGURE D-11. CH-53E Marine tactical – Continued.

MIL-STD-2161B(AS)

APPENDIX D

1. MARKING	2. LOCATION	3. SIZE	4. COLOR NO/CODE
A. MARINES	Aft Fuselage (L.H. & R.H.)	20"	16187
B. Model Designation, Acft BUNO	Aft Fuselage (L.H. & R.H.)	2" 4"	16187
C. National Star	Aft Fuselage (L.H. & R.H.) Horizontal Stabilizer Bottom of Fuselage	20" 20" 20"	16187 16187 16187
D. Unit Aircraft Number (MODEX)	Center Fuselage (L.H. & R.H.) Nose	18" 18"	16187 16187
E. Call Numbers	Upper Tail Boom (L.H. & R.H.)	6"	16187
F. Intake Warning	Fwd. Engine Nacelle (L.H. & R.H.)	2" Letters 36" (Length) 4" Chevron	16187
G. Beware of Blast	Aft Engine Nacelle (L.H. & R.H.)	10"	16187
H. Tail Rotor Warning	Aft Tail Boom (L.H. & R.H.)	16" (length)	16187
I. Walkway	Per Drawing	N/A	16187
J. Keep Clear Exhaust	Upper Fwd. Fuselage Between Exhaust Ducts L.H. Side	1" Letters 1-1/2" Arrows	16187
K. Rescue Arrow	Fwd. Fuselage (L.H. & R.H.)	24"	16187, Figure A-14
L. Unit Identifier	Tail Pylon (L.H. & R.H.)	19"	16187
M. Station or Unit Name (Shore-based A/C Only)	Tail Pylon (L.H. & R.H.)	6"	16187, See Par. 5.2.2.8
N. Squadron Designation	Center Fuselage (L.H. & R.H.)	6"	16187, See Par. 5.2.6.2

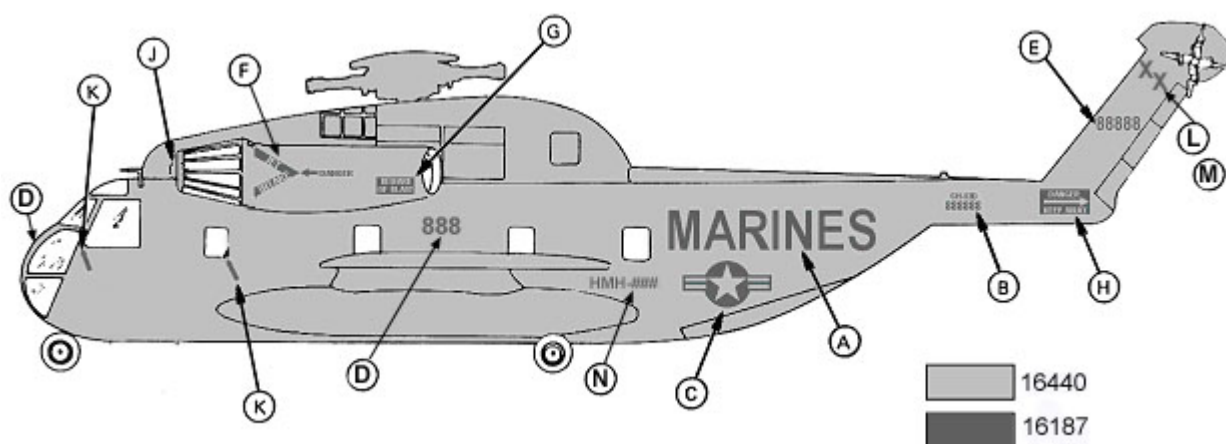


FIGURE D-12. CH-53D Marine tactical.

MIL-STD-2161B(AS)

APPENDIX D

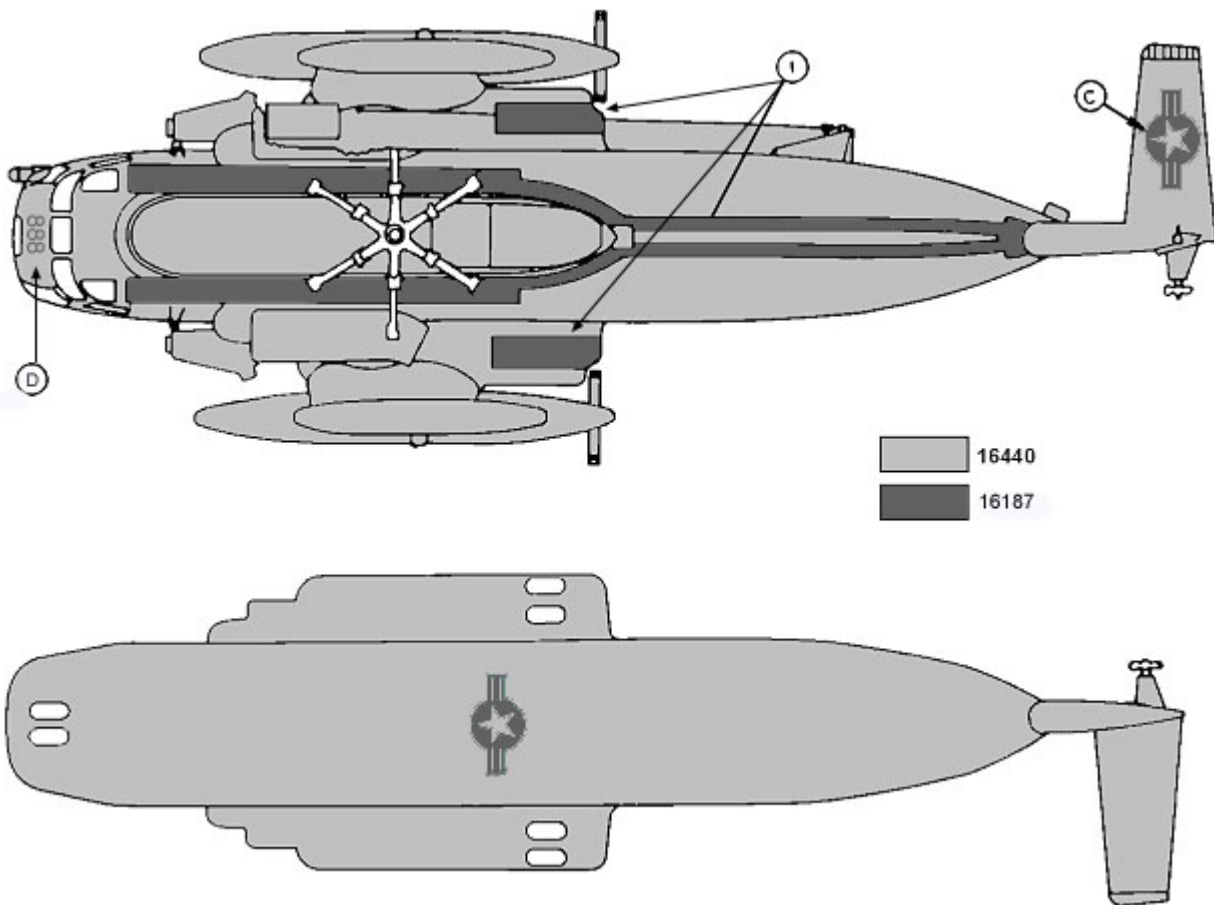


FIGURE D-12. CH-53D Marine tactical – Continued.

MIL-STD-2161B(AS)

APPENDIX D

1. MARKING	2. LOCATION	3. SIZE	4. COLOR NO/COLOR
A. NAVY	Tail Boom	6"	17038
B. Model Designation, Acraft BUNO	Both Sides of Tail Boom	2" 4"	17038
C. National Star	Aft Fuselage Bottom Fuselage	10" 10"	17925/11136/15044 17925/11136/15044
D. Tail Boom Warning	Tail Boom	22"	31136/37038
E. Anti-Glare			37038
F. Arctic Markings/Conspicuity	As per Drawing		12197
G. Unit Identifying Letters	Tail Boom (IAW Para. 5.2.3)		17038

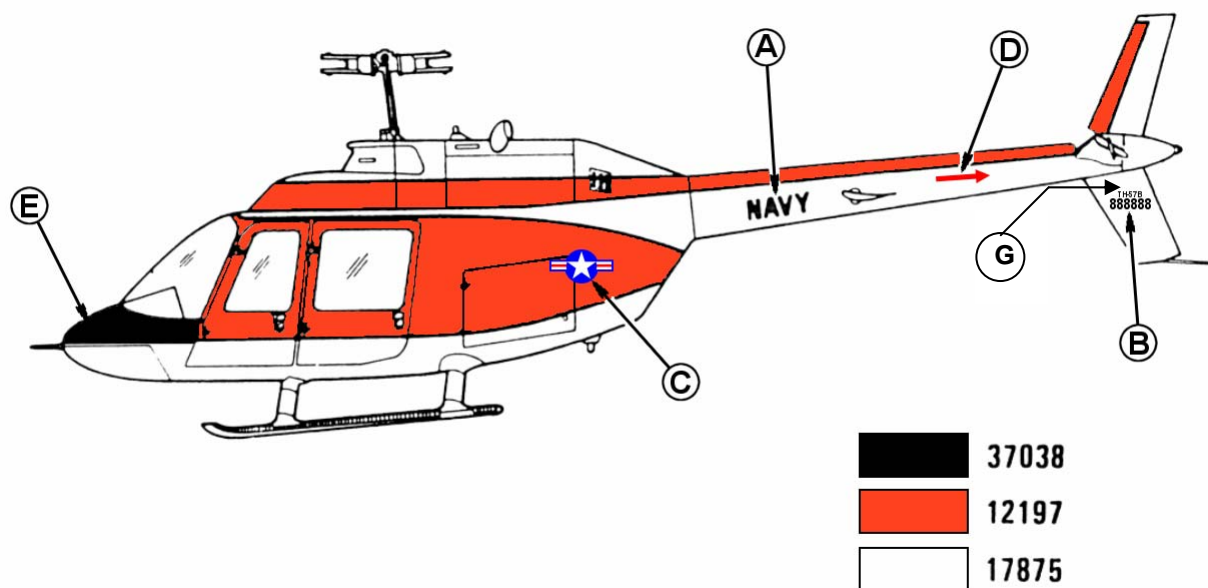


FIGURE D-13. TH-57B/C high visibility.

MIL-STD-2161B(AS)

APPENDIX D

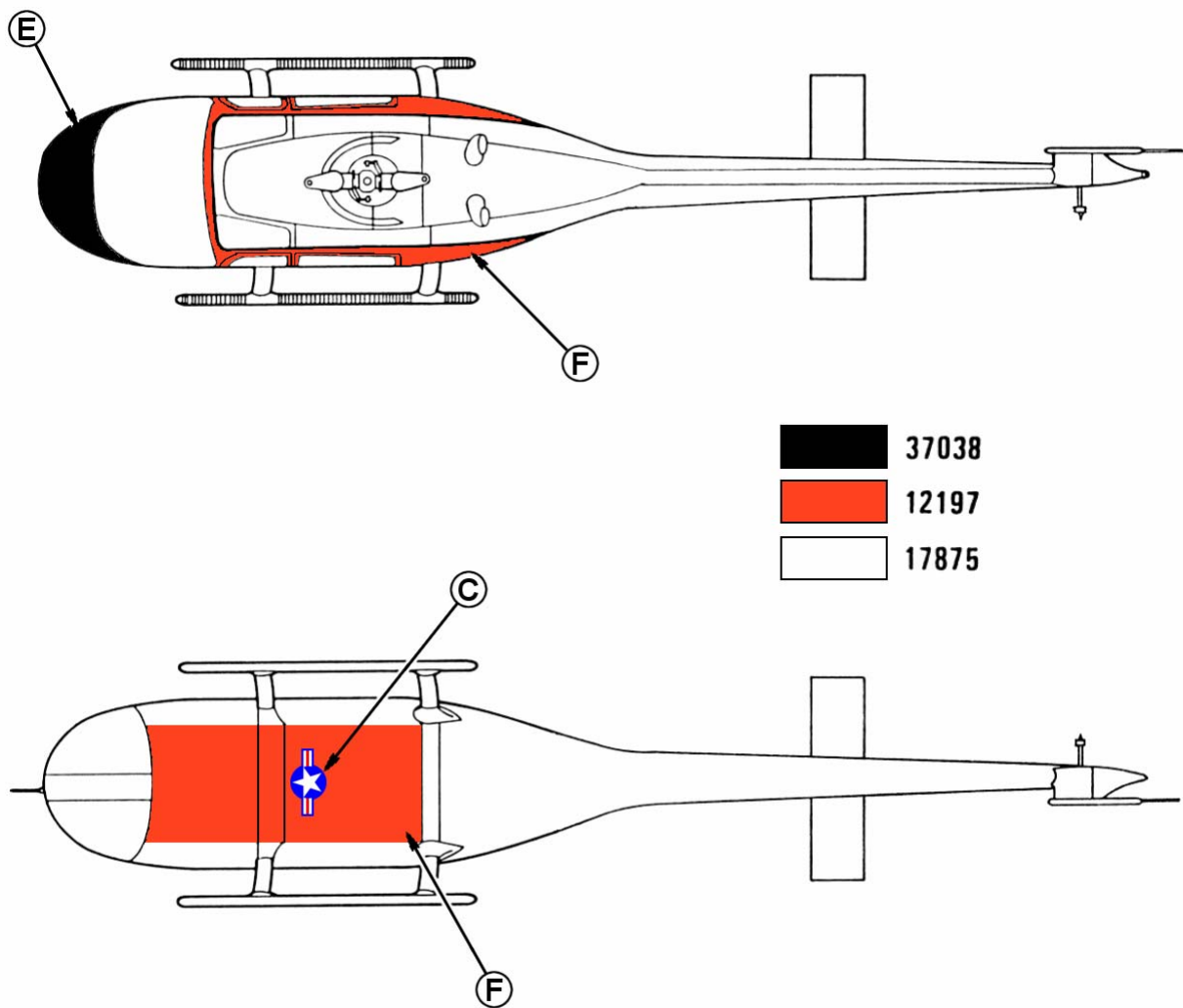


FIGURE D-13. TH-57B/C high visibility – Continued.

MIL-STD-2161B(AS)

APPENDIX D

1. MARKING	2. LOCATION	3. SIZE	4. COLOR NO/CODE
A. NAVY	Aft Fuselage	12"	35237
B. Model Designation, Acft BUNO	Side	2"	35237
	Tail Boom Aft	4"	35237
C. National Star	Mid Fuselage	12"	35237
	Fwd. Top Fuselage	12"	36320
	Aft Bottom Fuselage	12"	36320
D. Intake Warning	Forward Intake Nacelle	20"	Background
		2"	Letters
E. Beware of Blast	Engine Exhaust Nacelle	1"	Letters
F. Tail Rotor Warning	Tail Boom	33"	35237
G. Anti-Glare	Fwd. of Cockpit	N/A	
H. Walkway	Per Drawing	N/A	IAW Para 5.2.3
I. Unit Identifier	Upper Tail Boom	12"	IAW Para 5.2.3
J. Rescue Arrow	Cockpit Door and Center of Fuselage	24"	Background
			Letters

Note 1. There are minor differences between aircraft models around the engine exhaust area (marking “K”). Follow drawings for specific aircraft model for paint color configuration around this area.

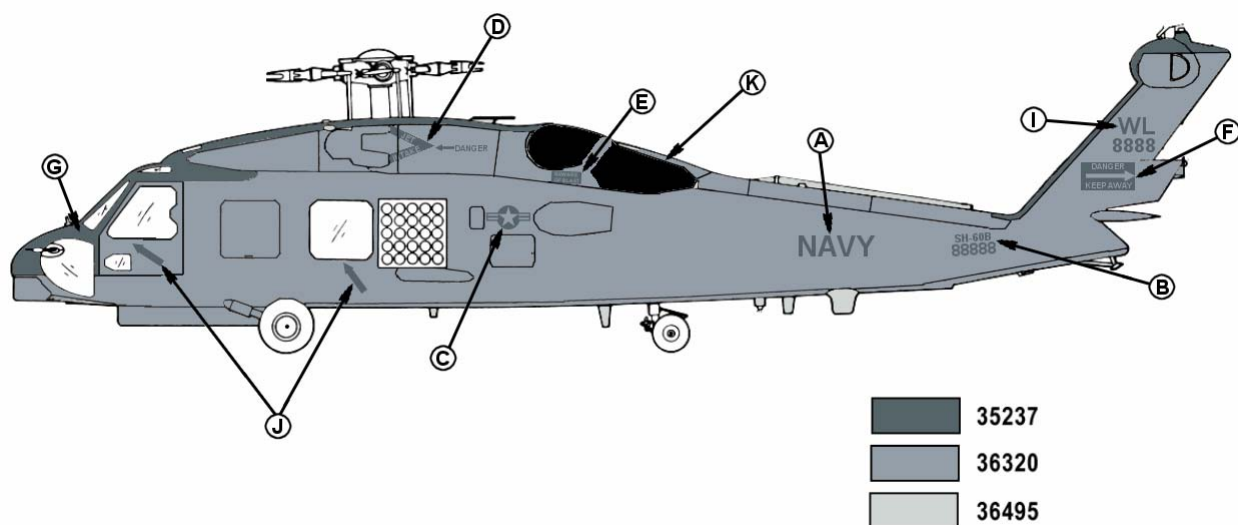


FIGURE D-14. SH-60B/F, CH-60S, MH-60 R/S and HH-60H tactical.

MIL-STD-2161B(AS)

APPENDIX D

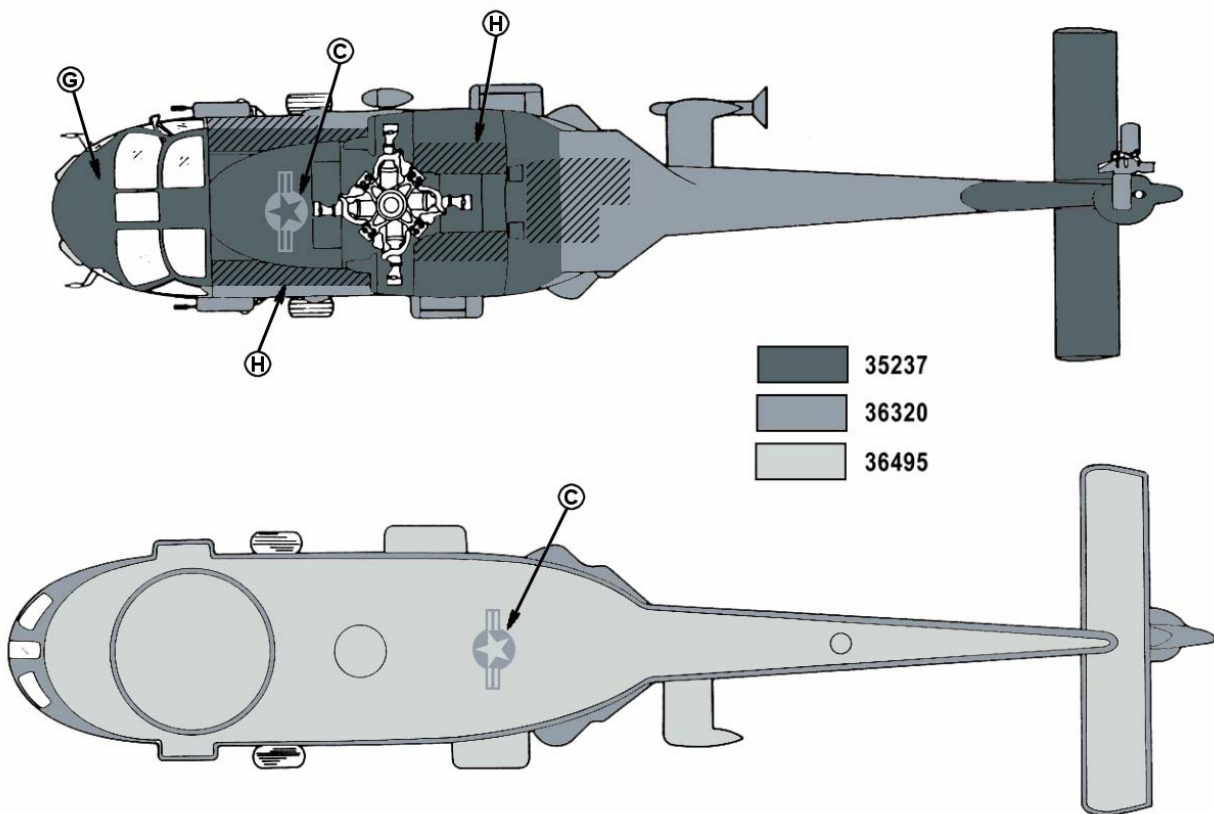
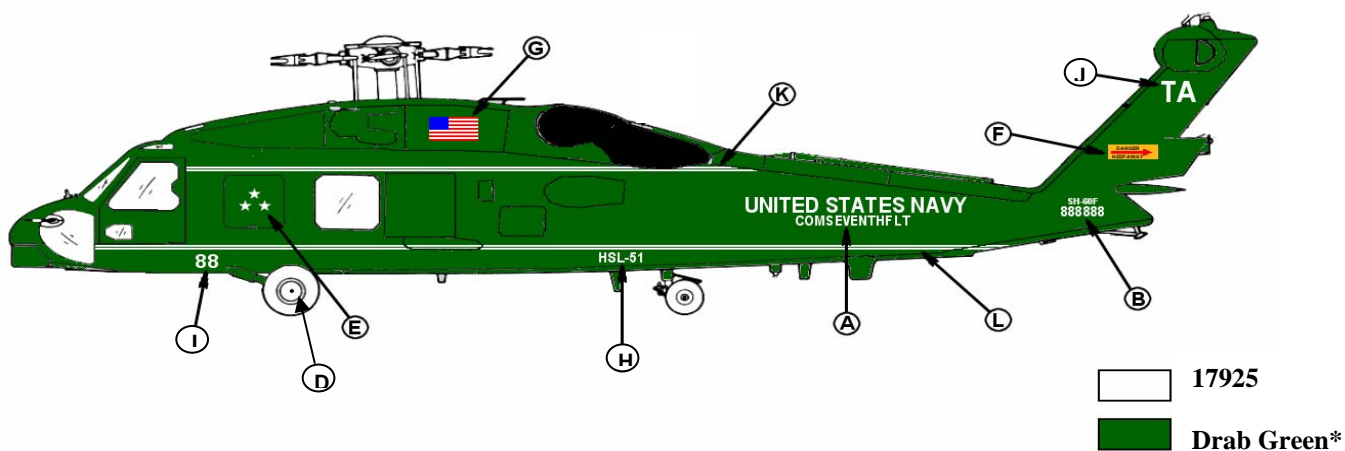


FIGURE D-14. SH-60B/F, CH-60S, MH-60 R/S and HH-60H tactical – Continued.

MIL-STD-2161B(AS)

APPENDIX D

1. MARKING	2. LOCATION	3. SIZE	4. COLOR NO/CODE
A. UNITED STATES NAVY	Fuselage Tail Boom	8"	17925
B. Model Designation	L.H. & R.H Side, Aft Lower Tail Rotor	2"	17925
Aircraft BUNO		4"	
C. National Star	Lower Center Fuselage Upper Horizontal Tail	30" 25"	17925/11136/15044 17925/11136/15044
D. Wheel Wells	N/A	N/A	17925
E. Fleet Commander Stars	L.H. & R.H. Avionics Access Panels	6" high stars	17925
F. Tail Rotor Warning	L.H. & R.H. Side, Vertical Tail	29" x 9" (Per SH-60F VIP Paint Scheme Deviation, dated 8 Nov 2005)	See Fig. A-12 for colors
G. Flag	L.H & R.H. Engine Work Platforms	18" X 34"	11136 15044 17925
H. Unit Name	L.H. & R.H. Side, Below Lower Stripe	6"	17925
I. Aircraft Side Number	L.H. & R.H. Side, Float Bag Covers Avionics Nose Door	6" 8"	17925
J. Unit Identifier	L.H. & R.H. Side, Below Tail Rotor Gear Box Access Panel	12"	17925
K. Accent Stripe -Upper	Upper – Approx. 2" Above Avionics	Stripe is made up of two ¾" lines separated by ½" (See Aircraft Drawing)	17925
L. Accent Stripe- Lower	Lower – Along Bottom Edge of Pilot Door	Stripe is made up of two ¾" lines separated by ½" (See Aircraft Drawing)	17925



*Non-FED-STD-595 color; refers to Raytheon Aircraft Services color J07902

FIGURE D-15. SH-60F VIP transport.

MIL-STD-2161B(AS)

APPENDIX D

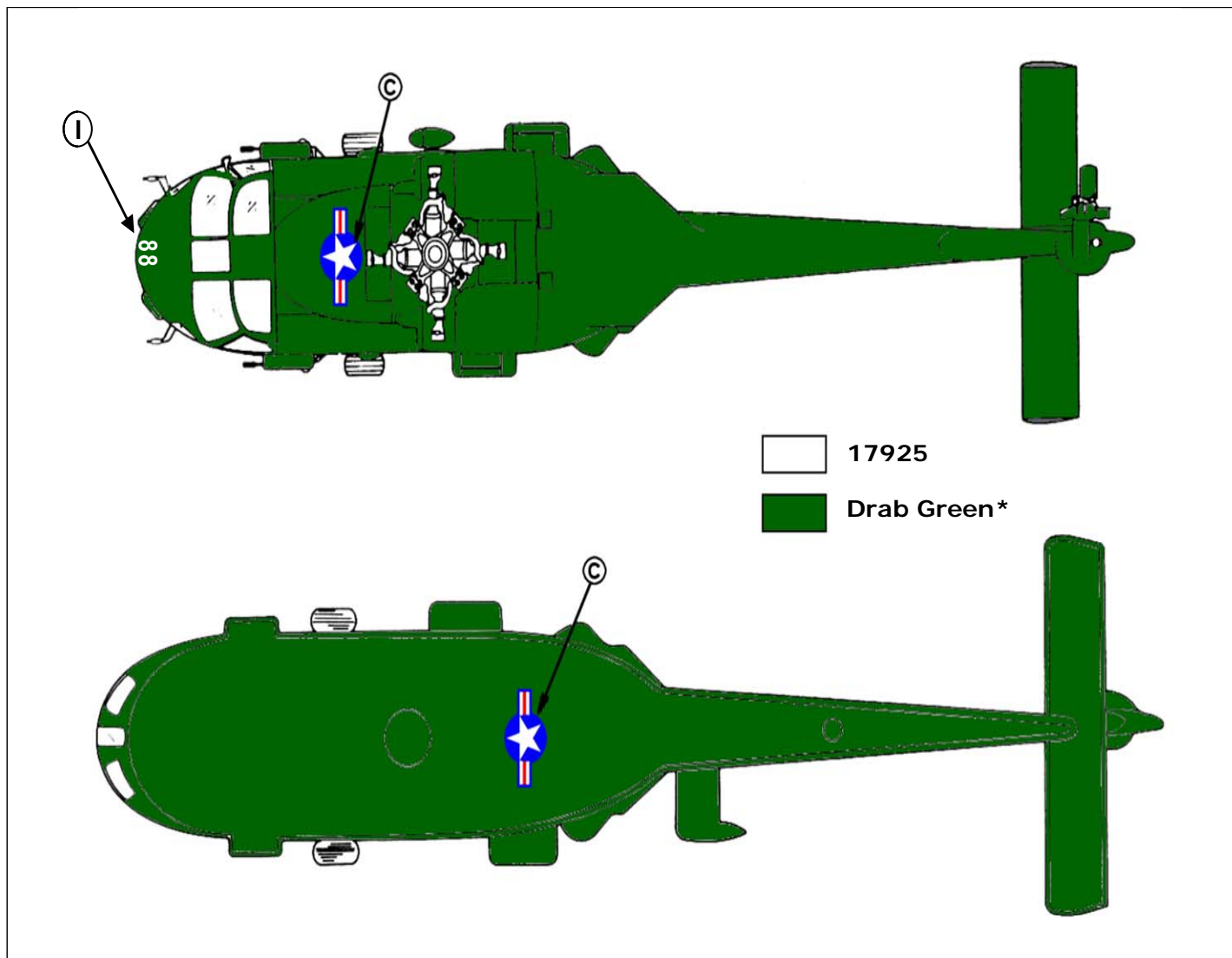


FIGURE D-15. SH-60F VIP transport – Continued.

MIL-STD-2161B(AS)

APPENDIX D

1. MARKING	2. LOCATION	3. SIZE	4. COLOR NO/CODE
A. NAVY	Bottom Fwd (optional config.)	12"	12127
B. Model Designation, Acraft BUNO	Side	2"	17038
	Tail Boom Aft	4"	17038
C. National Star	Mid Fuselage	12"	17925/11136/15044
	Fwd. Top Fuselage	12"	17925/11136/15044
	Aft Bottom Fuselage	12"	17925/11136/15044
D. Intake Warning	Forward Intake Nacelle	20"	11136 17925
		2"	
E. Beware of Blast	See Notes 1 and 2	See Notes 1 and 2	
F. Tail Rotor Warning	Tail Boom	22"	11136 (See Figure A.12)
G. Anti-Glare	See Notes 1 and 2	See Notes 1 and 2	
H. Walkway	See Notes 1 and 2	See Notes 1 and 2	
I. Unit Identifier	See Notes 1 and 2	See Notes 1 and 2	
J. Rescue Arrow	Cockpit Door	24"	13538 17038
K. RESCUE	Bottom Aft (optional config.)	10"	12197

Note 1: Follow Sikorsky drawing #96005-00117 for paint, decal, and stencil requirements not shown in the figure for the MH-60S. For this aircraft, bulkhead area aft of engine exhaust is painted flat black (as shown in schematic below).

Note 2: Follow Sikorsky drawing #7005-80201 for paint, decal, and stencil requirements not shown in the figure for the SH-60F. For this aircraft, bulkhead area aft of engine exhaust is painted white. Follow manufacturer drawing.

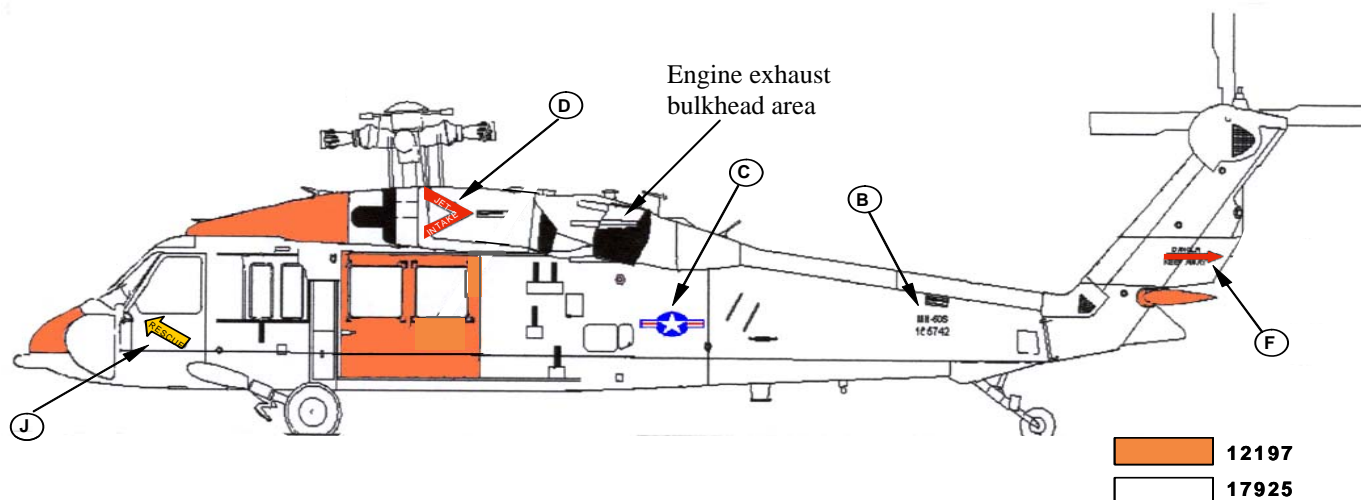


FIGURE D-16. MH-60S and SH-60F Search and Rescue (SAR).

MIL-STD-2161B(AS)

APPENDIX D

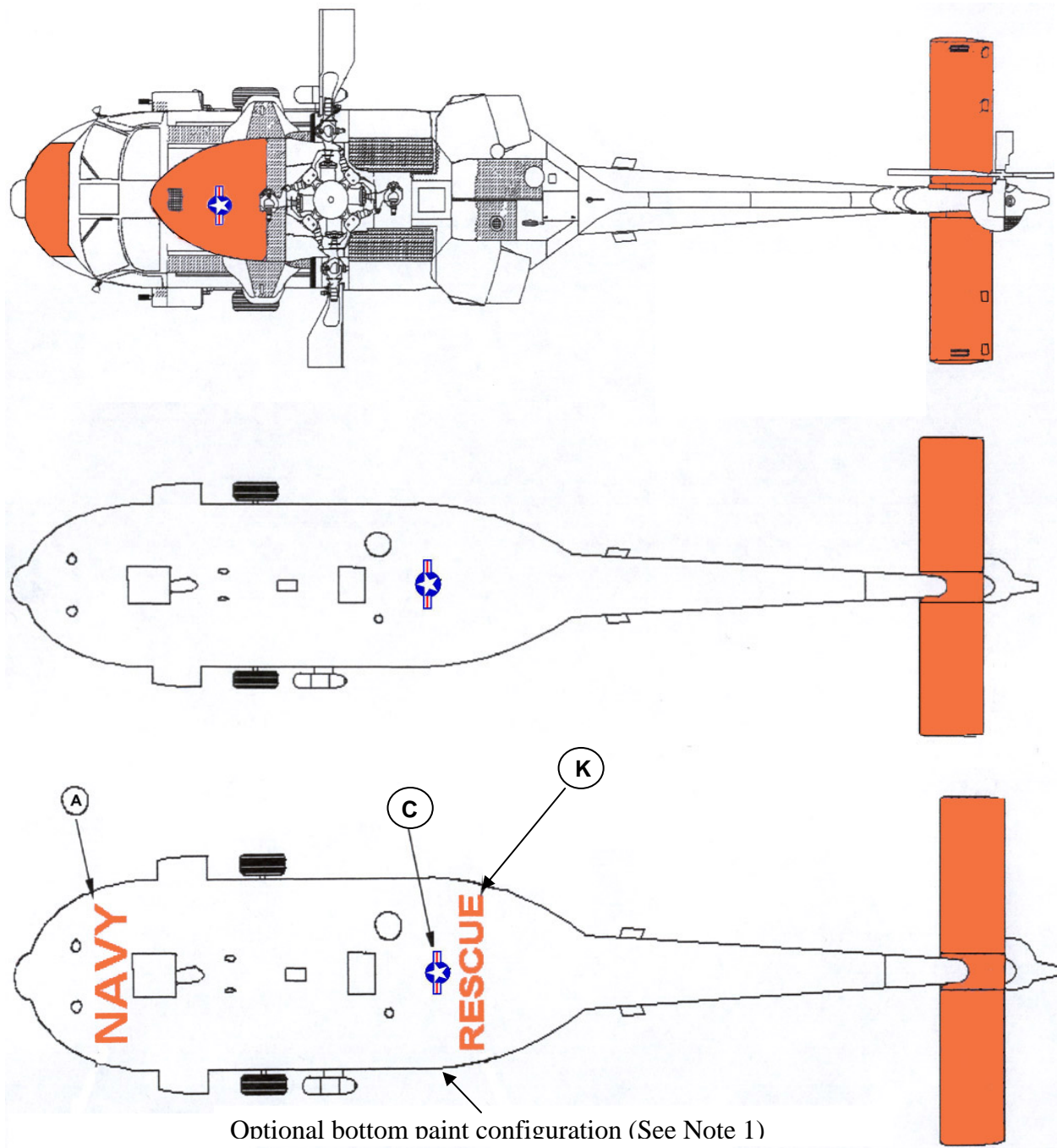
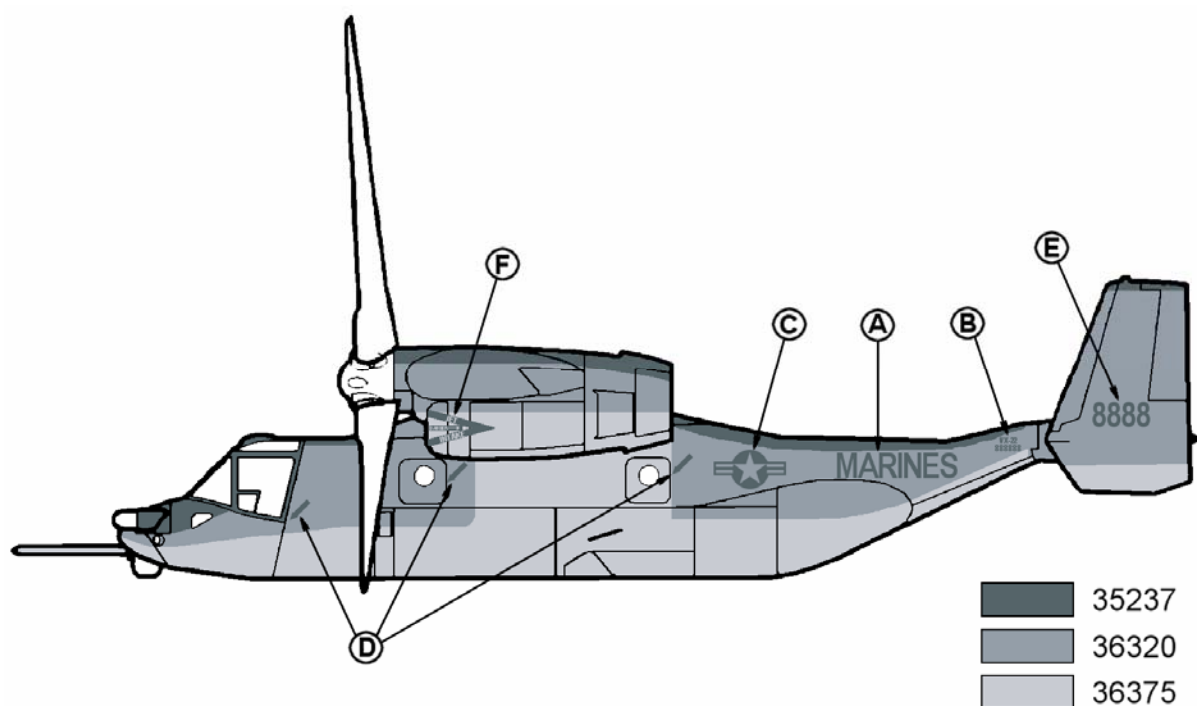


FIGURE D-16. MH-60S Search and Rescue (SAR) – Continued.

MIL-STD-2161B(AS)

APPENDIX D

1. MARKING	2. LOCATION	3. SIZE	4. COLOR NO/CODE
A. MARINES	Aft Fuselage	12"	35237
B. Model Designation, Acraft BUNO	Aft Fuselage	2" 4"	35237
C. National Star	Aft Fuselage	12"	35237
	Lower R.H. Wing	12"	35237
	Upper L.H. Wing	12"	36375
D. Rescue Arrow	Forward Fuselage	24"	35237
	Center Fuselage	24"	35237
E. Call Number	Lower Vertical Tails	12"	35237
F. Intake Warning	Engine Intake Nacelles	16"	35237

FIGURE D-17. MV-22 tactical.

MIL-STD-2161B(AS)

APPENDIX D

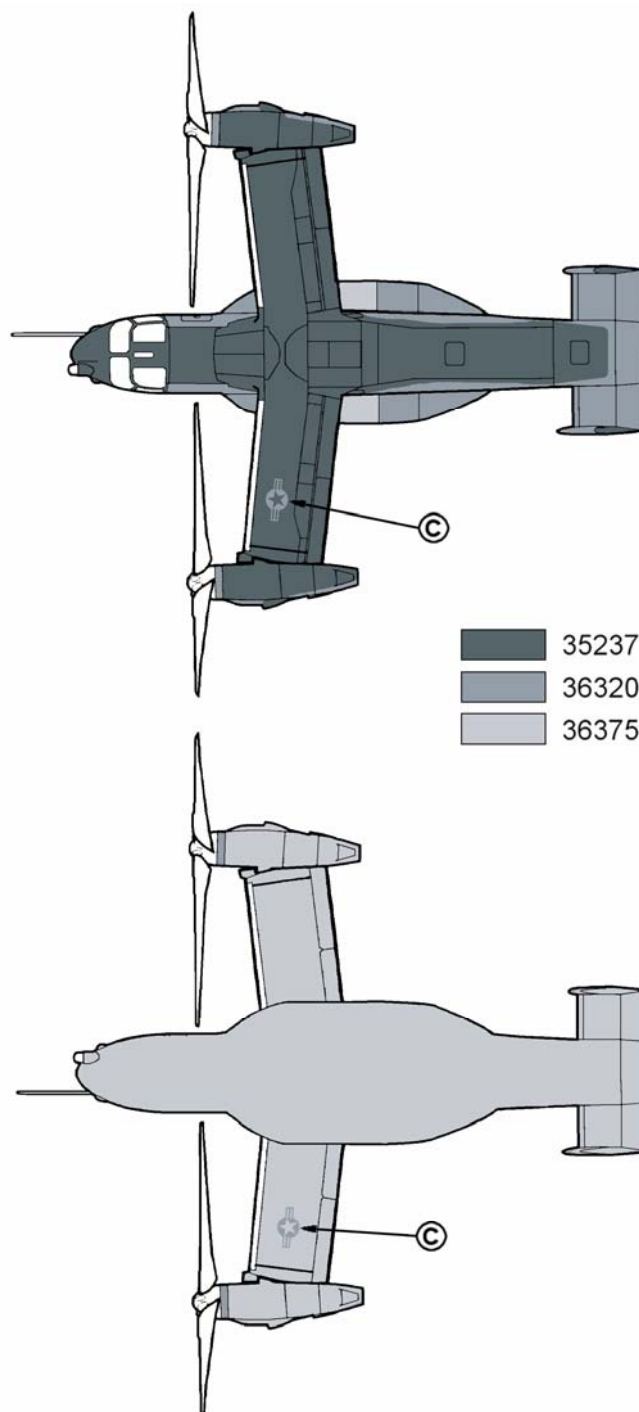


FIGURE D-17. MV-22 tactical – Continued.

MIL-STD-2161B(AS)

APPENDIX E

NATIONAL INSIGNIAS FOR FOREIGN AIRCRAFT

E.1 SCOPE

E.1.1 Scope. This Appendix illustrates insignias of foreign countries. This Appendix is a mandatory part of this standard. The information contained herein is intended for compliance.

E.2 APPLICABLE DOCUMENTS

N/A

E.3 GENERAL REQUIREMENTS

E.3.1 Foreign country national insignias. The following figures illustrate national insignias for foreign countries.

******* NOTE: FOR FOREIGN AIRCRAFT, MARKINGS SHALL BE PROVIDED TO THE U.S. NAVY PROCURING ACTIVITY BY THE FOREIGN COUNTRY PROCURING THE AIRCRAFT OF INTEREST.*******

MIL-STD-2161B(AS)

APPENDIX E

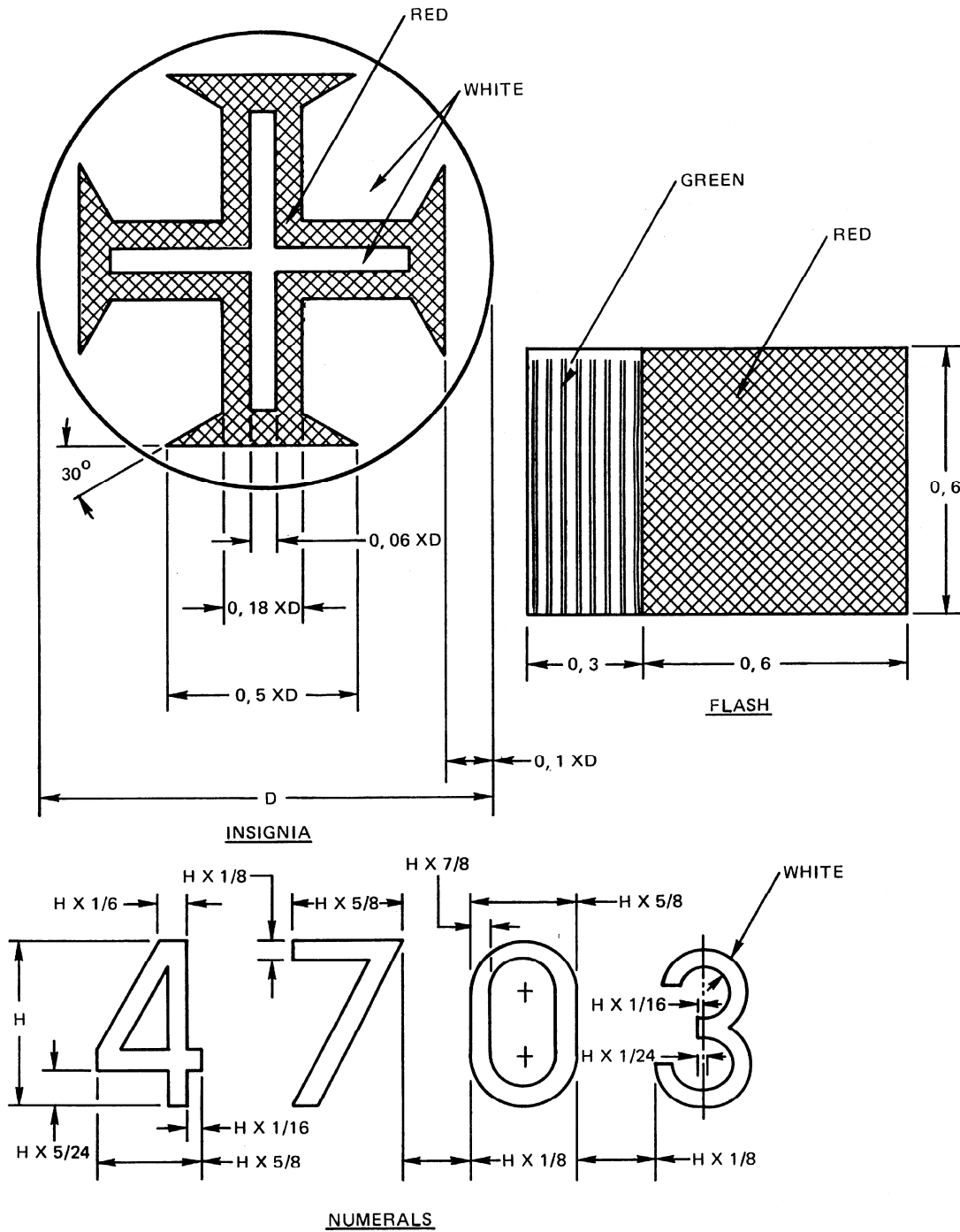


FIGURE E-1. National insignia of Portugal (flash and numerals).

MIL-STD-2161B(AS)

APPENDIX E

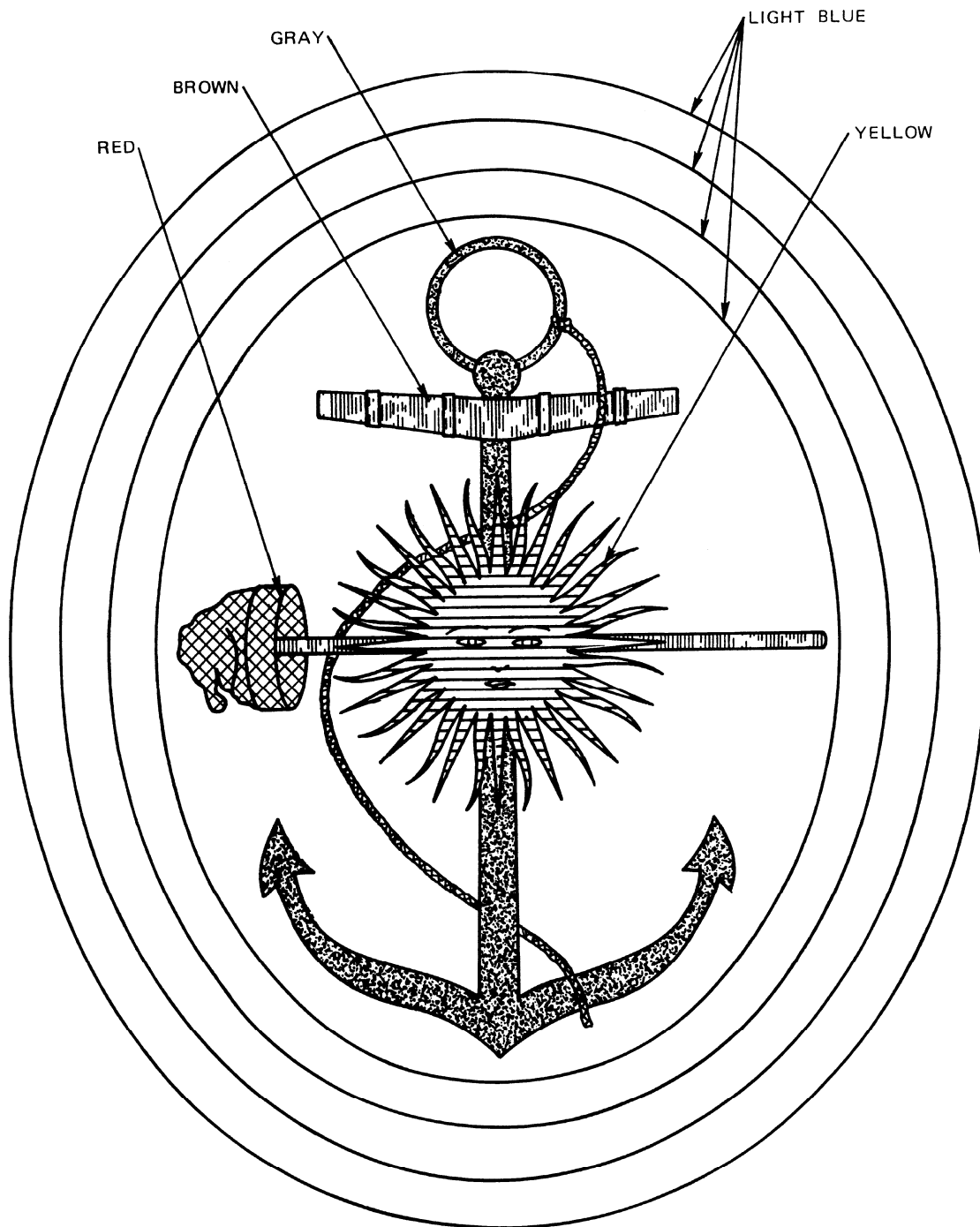


FIGURE E-2. National insignia of Argentina.

MIL-STD-2161B(AS)

APPENDIX E

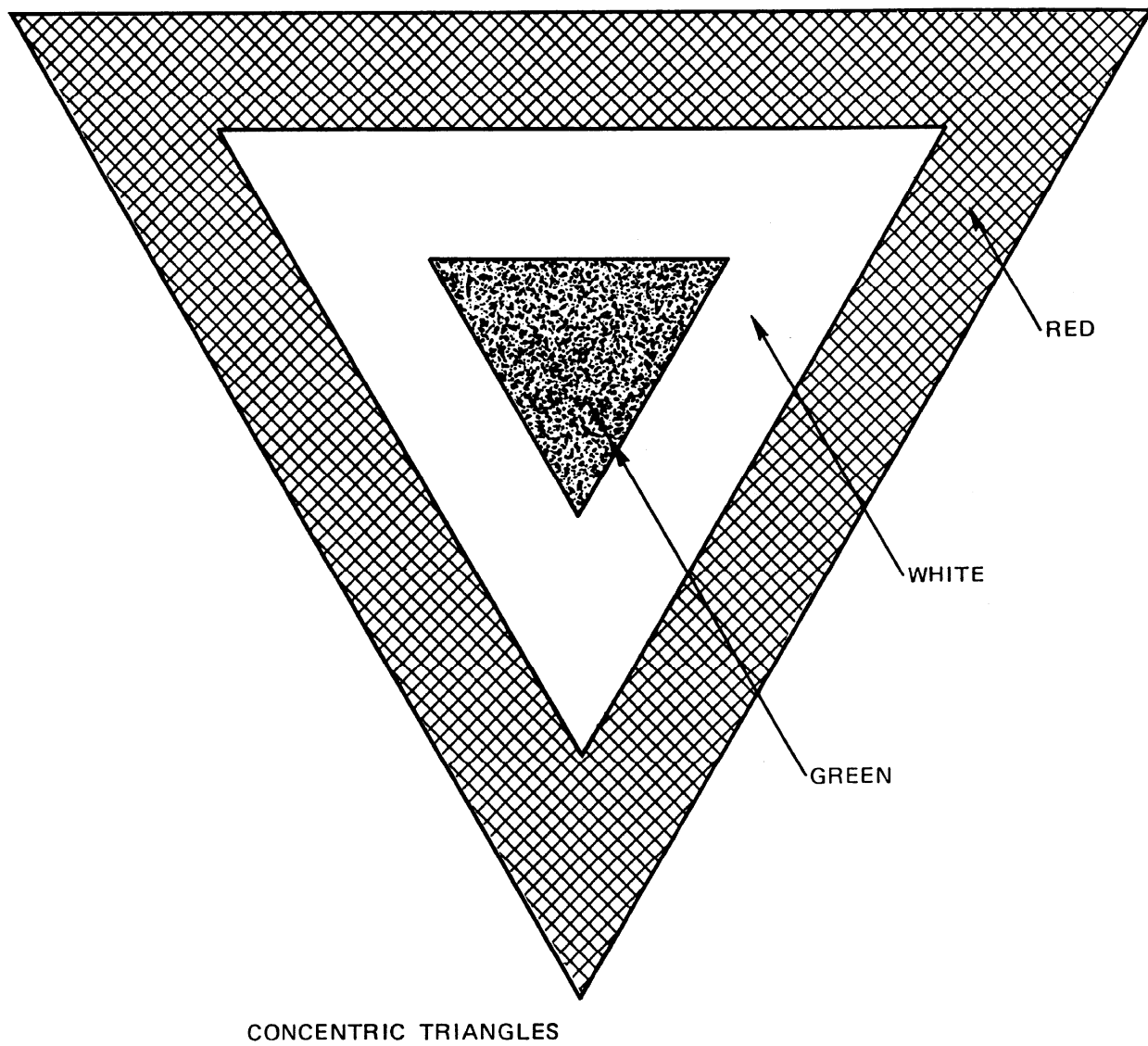
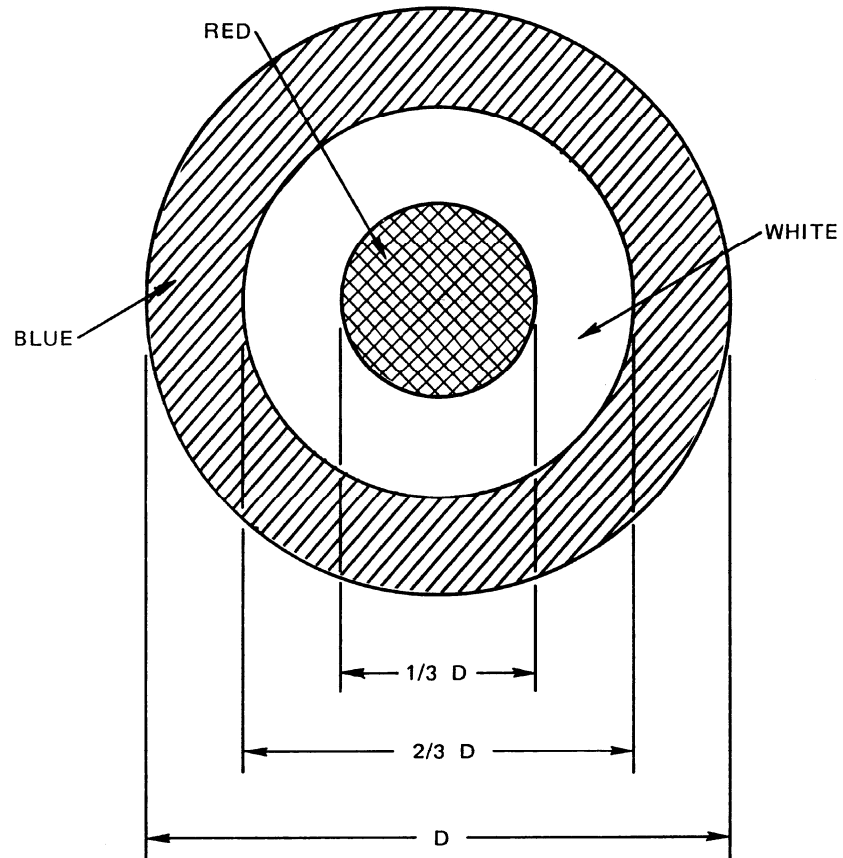


FIGURE E-3. National insignia of Mexico (flash).

MIL-STD-2161B(AS)

APPENDIX E



SIZE	D
SMALL	2 FT 6 IN.
MEDIUM	2 FT 8 IN.
LARGE	3 FT

DIMENSIONS IN INCHES:

FIGURE E-4. National insignia of Great Britain.

MIL-STD-2161B(AS)

APPENDIX E

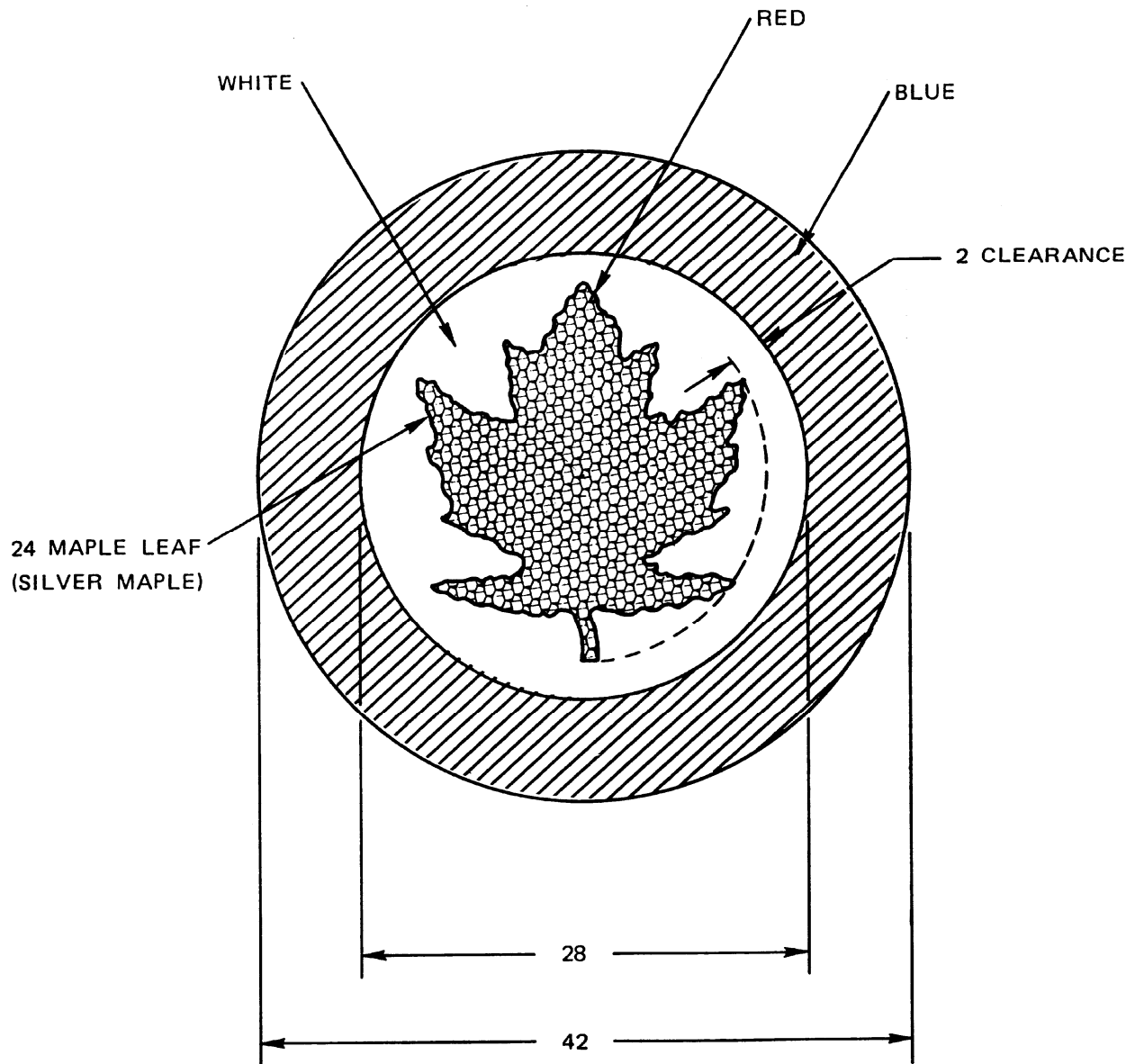
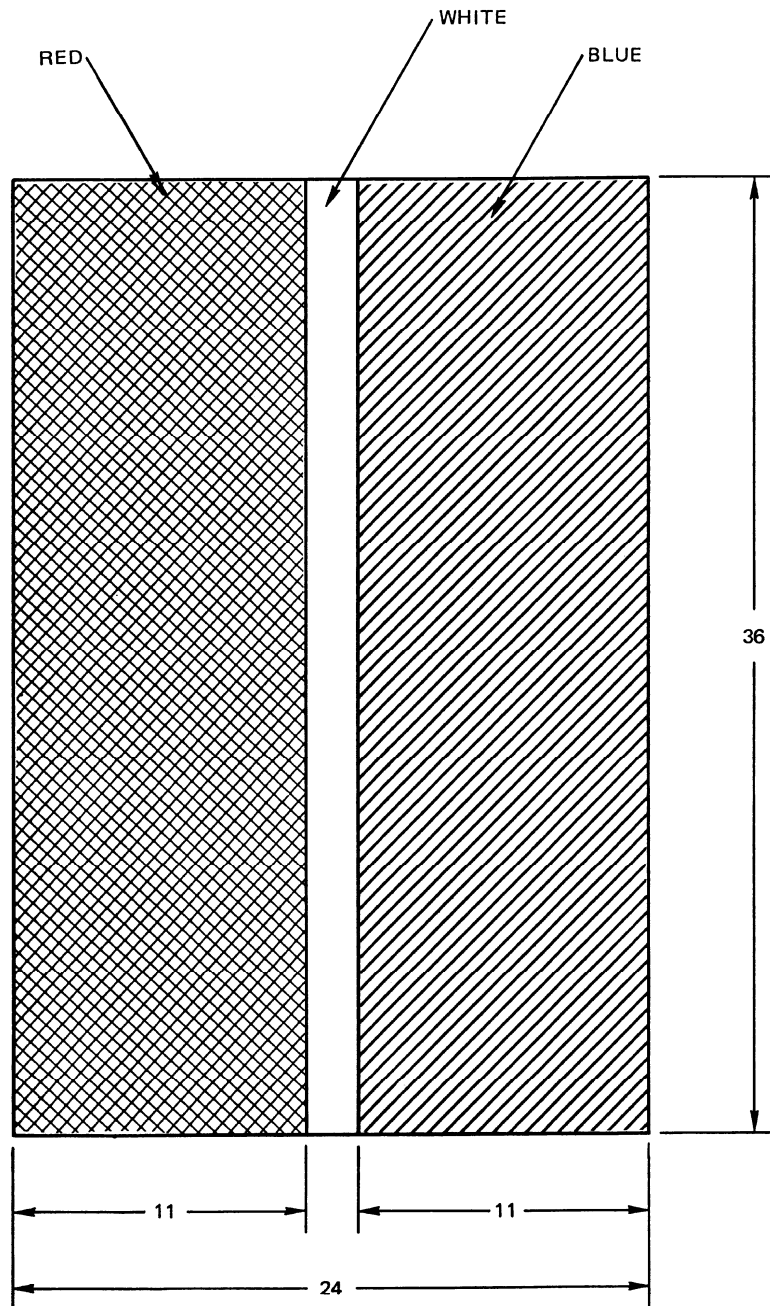


FIGURE E-5. National insignia of Canada (roundel) marking I.

MIL-STD-2161B(AS)

APPENDIX E

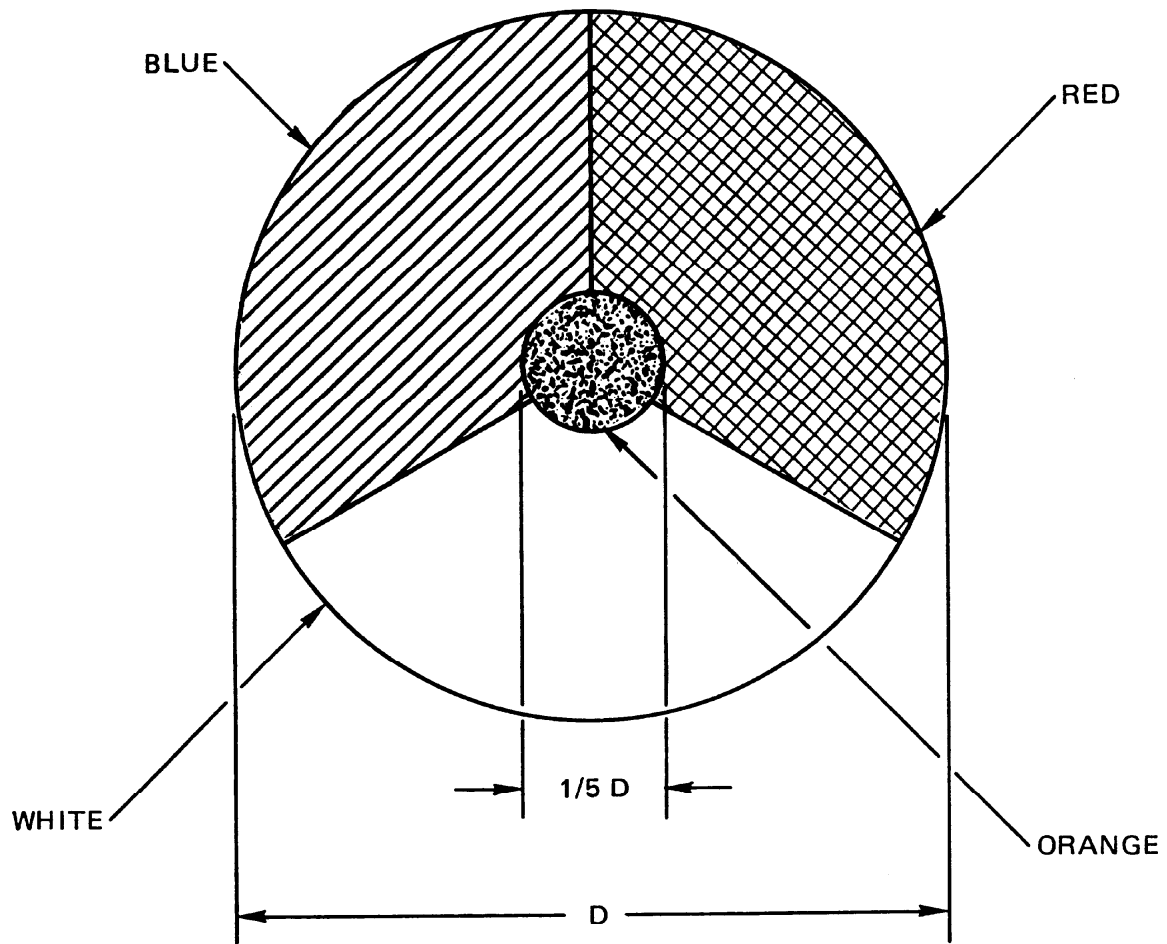


DIMENSIONS IN INCHES

FIGURE E-6. National insignia of Canada (flash) marking II.

MIL-STD-2161B(AS)

APPENDIX E

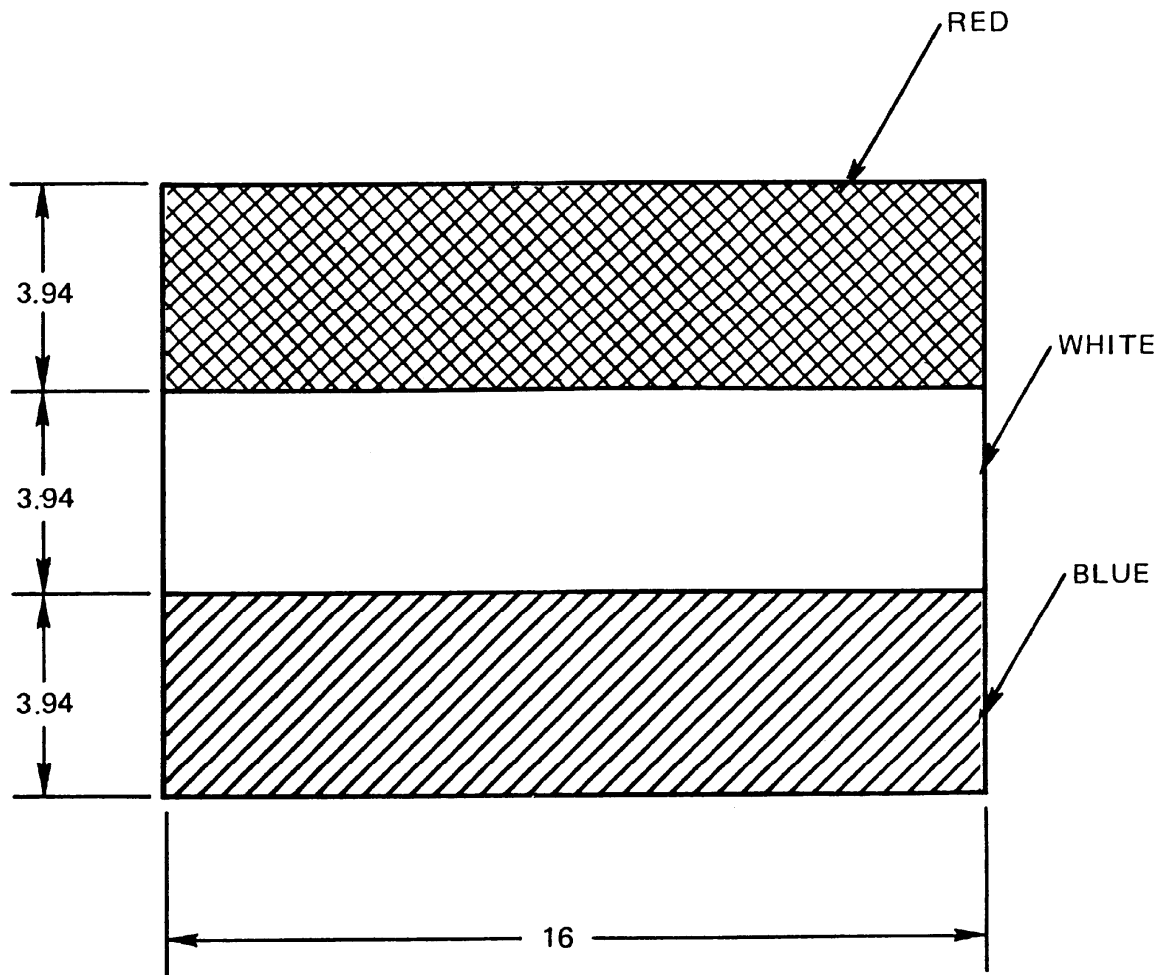


DIMENSIONS IN INCHES:

FIGURE E-7. National insignia of Netherlands (roundel) marking I.

MIL-STD-2161B(AS)

APPENDIX E

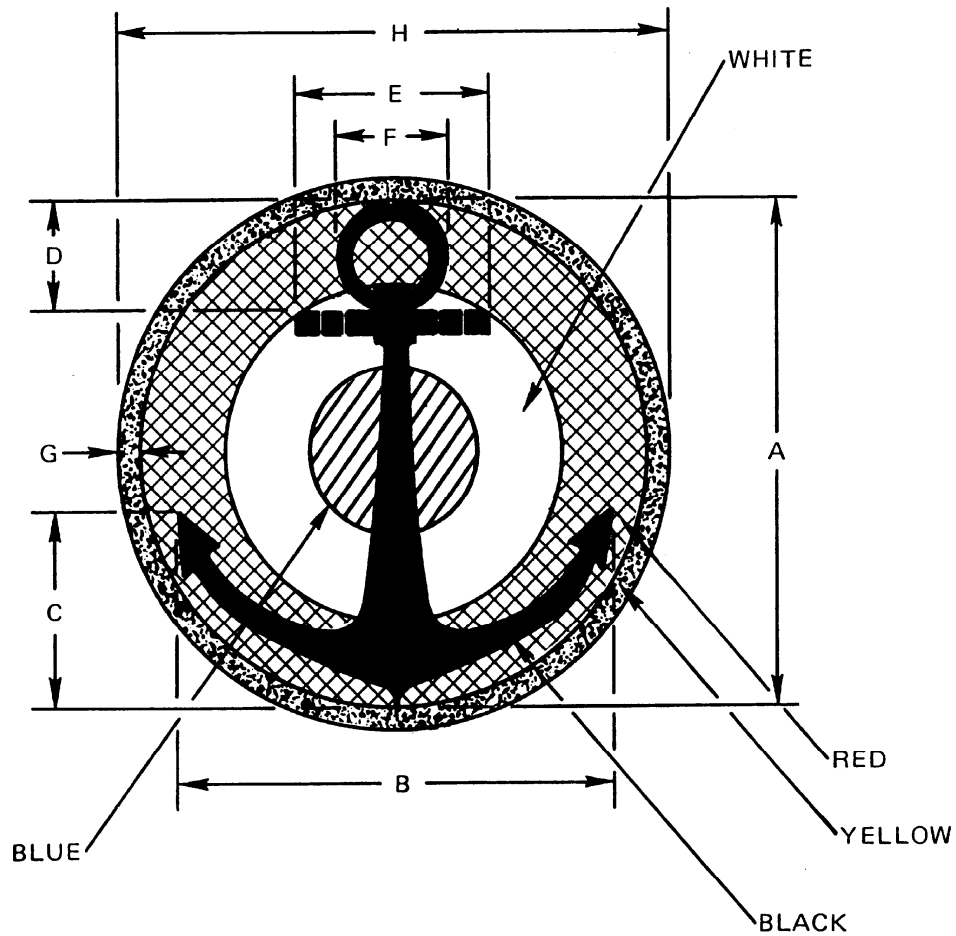


DIMENSIONS IN INCHES

FIGURE E-8. National insignia of Netherlands (flash) marking II.

MIL-STD-2161B(AS)

APPENDIX E



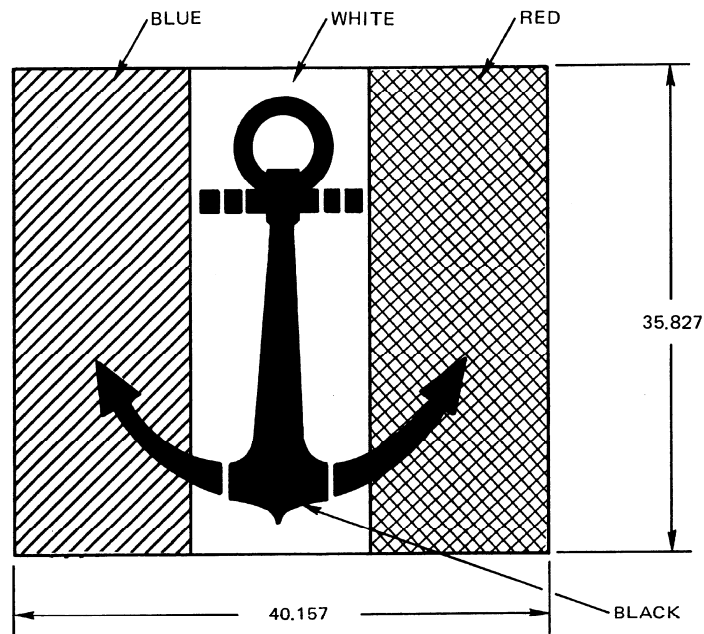
A DIA	B	C	D	E	F DIA	G	H DIA
23.622 (60 CM)	20.6692	8.8582	5.315	20.6692	4.7244	1.1811	25.9842
27.559 (70 CM)	24.0942	10.3149	6.181	24.0942	5.5118	1.1811	29.9212
31.496 (80 CM)	27.559	11.811	7.0866	11.811	6.2992	1.1811	33.8582

DIMENSIONS IN INCHES

FIGURE E-9. National insignia of France (cocarde) marking I (anchor superimposed when planes are intended for French Navy).

MIL-STD-2161B(AS)

APPENDIX E



DIMENSIONS IN INCHES

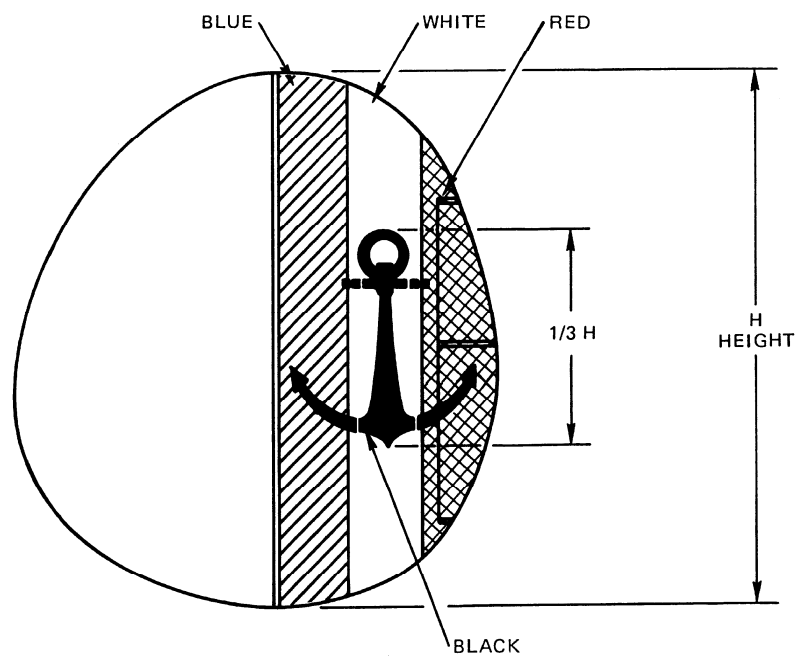
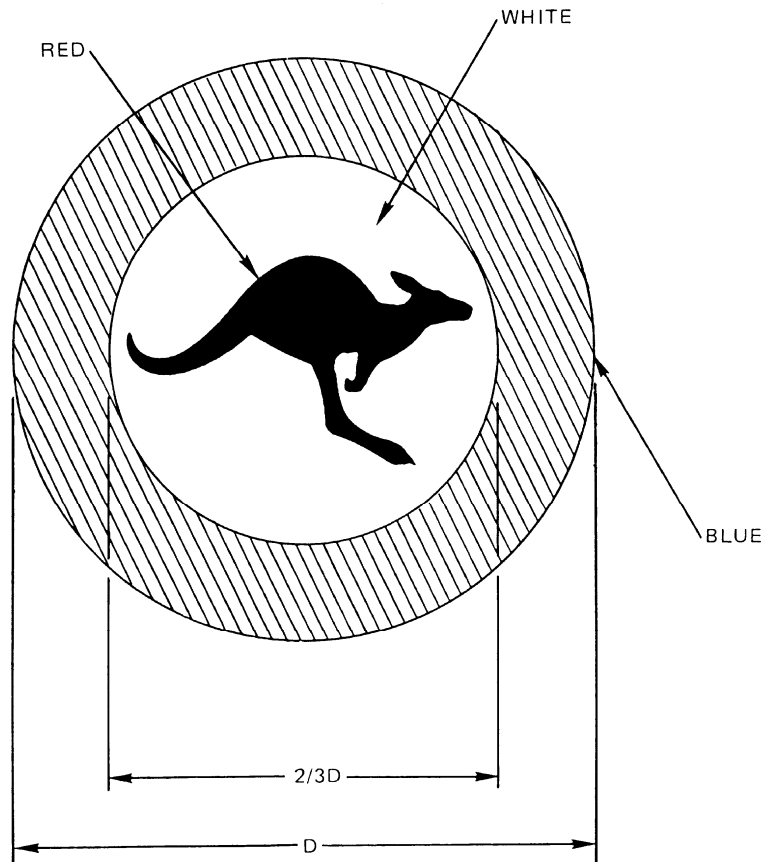


FIGURE E-10. National insignia of France (flash) marking II.

MIL-STD-2161B(AS)

APPENDIX E



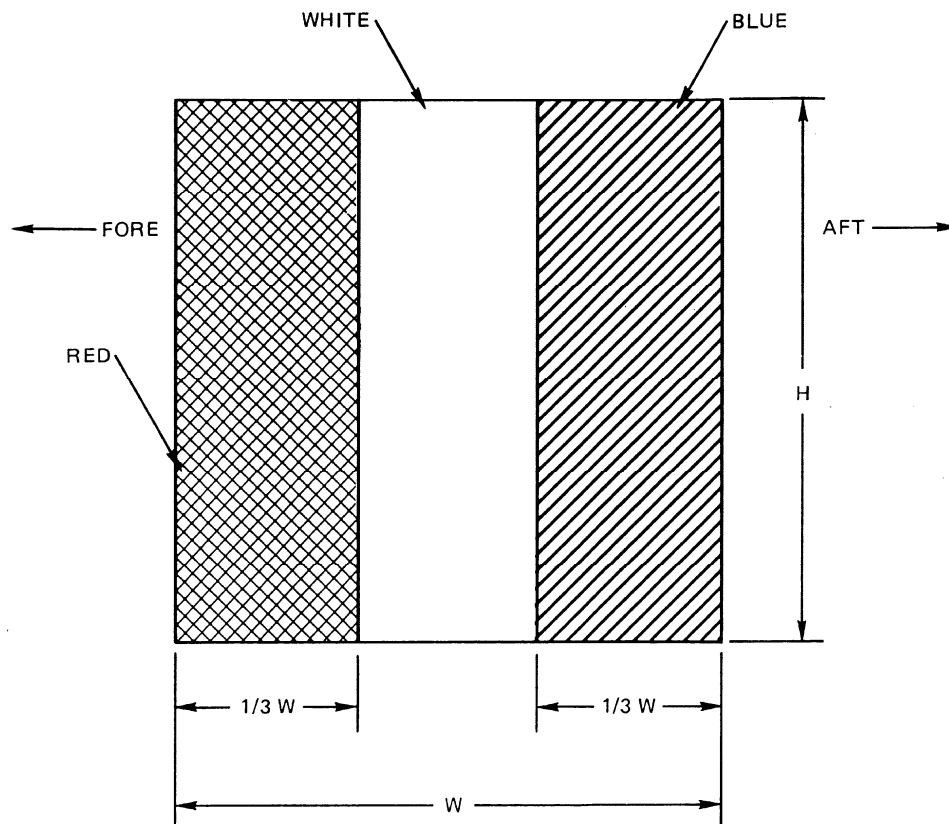
TYPE OF FUSELAGE		D
SMALL	TRAINER OR BOOM TYPE FUSELAGE	16-1/2
MEDIUM	AND FIGHTER AIRCRAFT	33
LARGE	TRANSPORT AND HEAVY BOMBERS	48

DIMENSIONS IN INCHES

FIGURE E-11. National insignia of Australia (roundel) marking I.

MIL-STD-2161B(AS)

APPENDIX E



TABLE

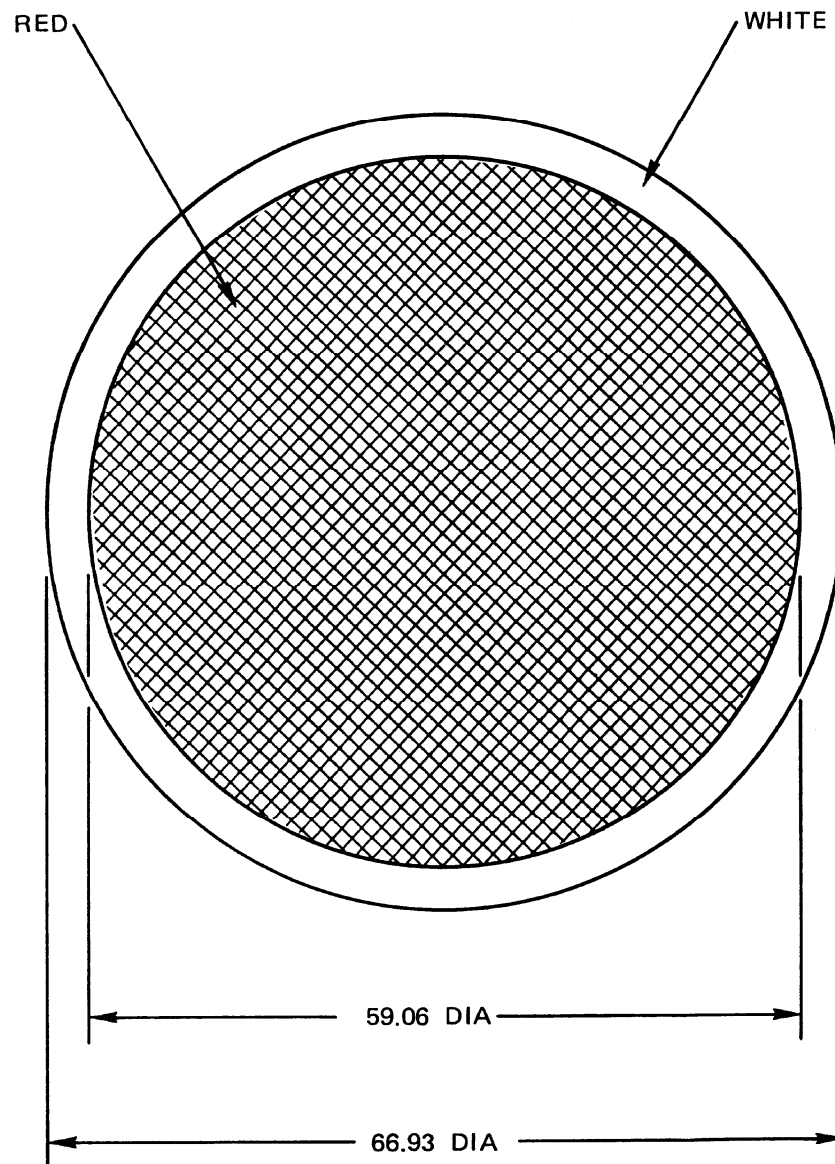
OVERALL SIZE OF TAIL FIN FLASH		H HEIGHT	W WIDTH
SMALL:	TRAINING AIRCRAFT	18	16
MEDIUM:	AND FIGHTER AIRCRAFT	24	22
LARGE:	TRANSPORT HEAVY BOMBER	24	34

DIMENSIONS IN INCHES

FIGURE E-12. National insignia of Australia (flash) marking II.

MIL-STD-2161B(AS)

APPENDIX E



DIMENSIONS IN INCHES

FOR LARGE OR SMALLER AIRCRAFT, MARKINGS SHALL BE PROPORTIONATELY
LARGER OR SMALLER AS APPLICABLE

FIGURE E-13. National insignia of Japan (roundel).

MIL-STD-2161B(AS)

APPENDIX E

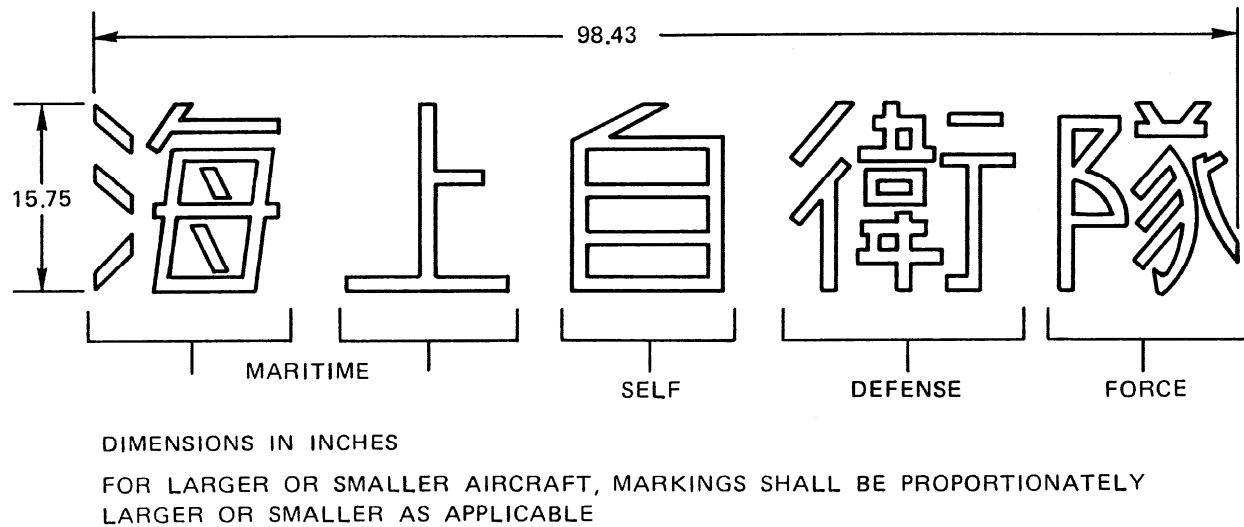
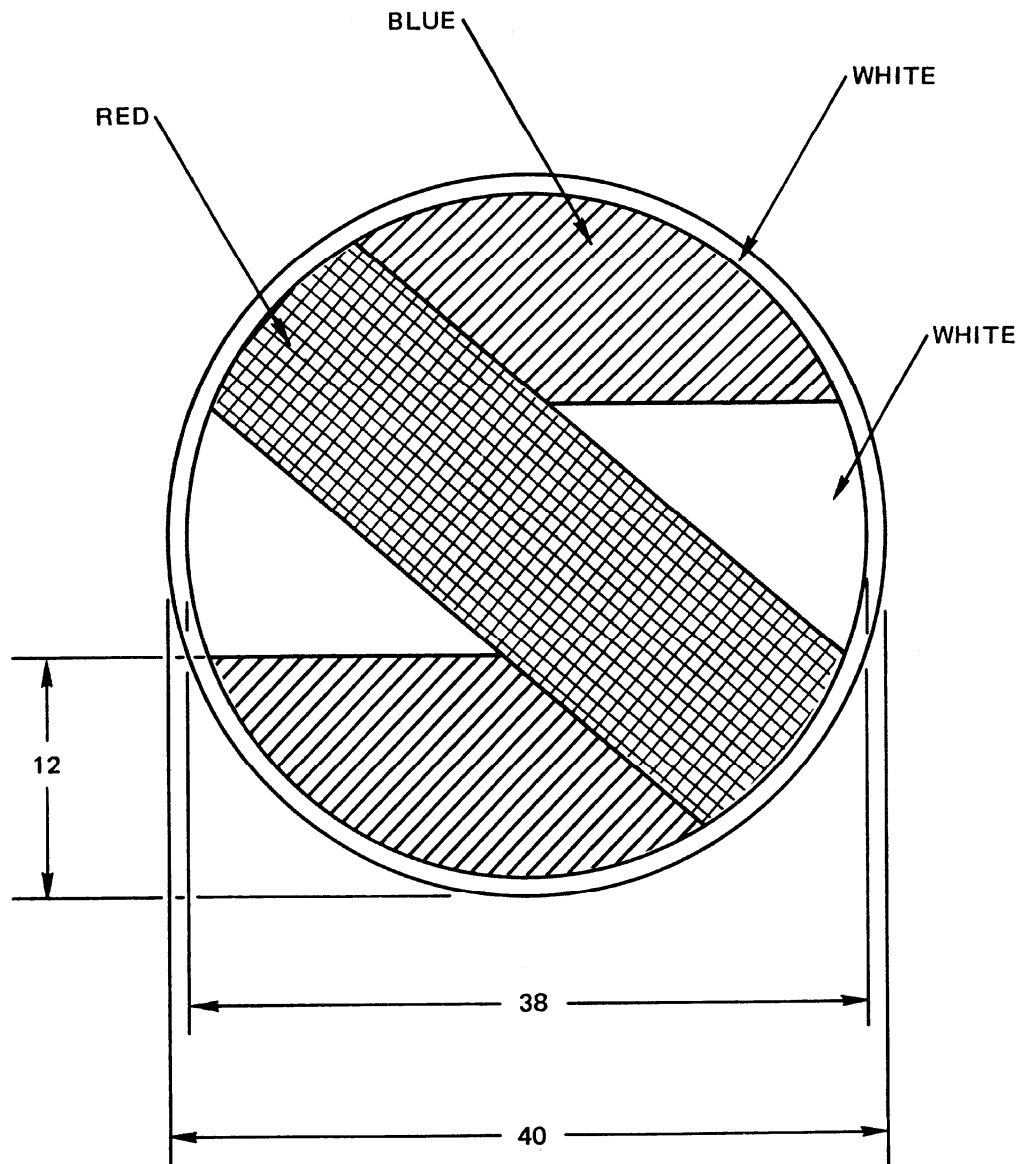


FIGURE E-14. National insignia of Japan (kanji characters).

MIL-STD-2161B(AS)

APPENDIX E



FOR LARGER
AIRCRAFT INSIGNIA
SHALL BE
PROPORTIONATELY
LARGER.

DIMENSIONS IN INCHES

FIGURE E-15. National insignia of Uruguay (roundel).

MIL-STD-2161B(AS)

APPENDIX E

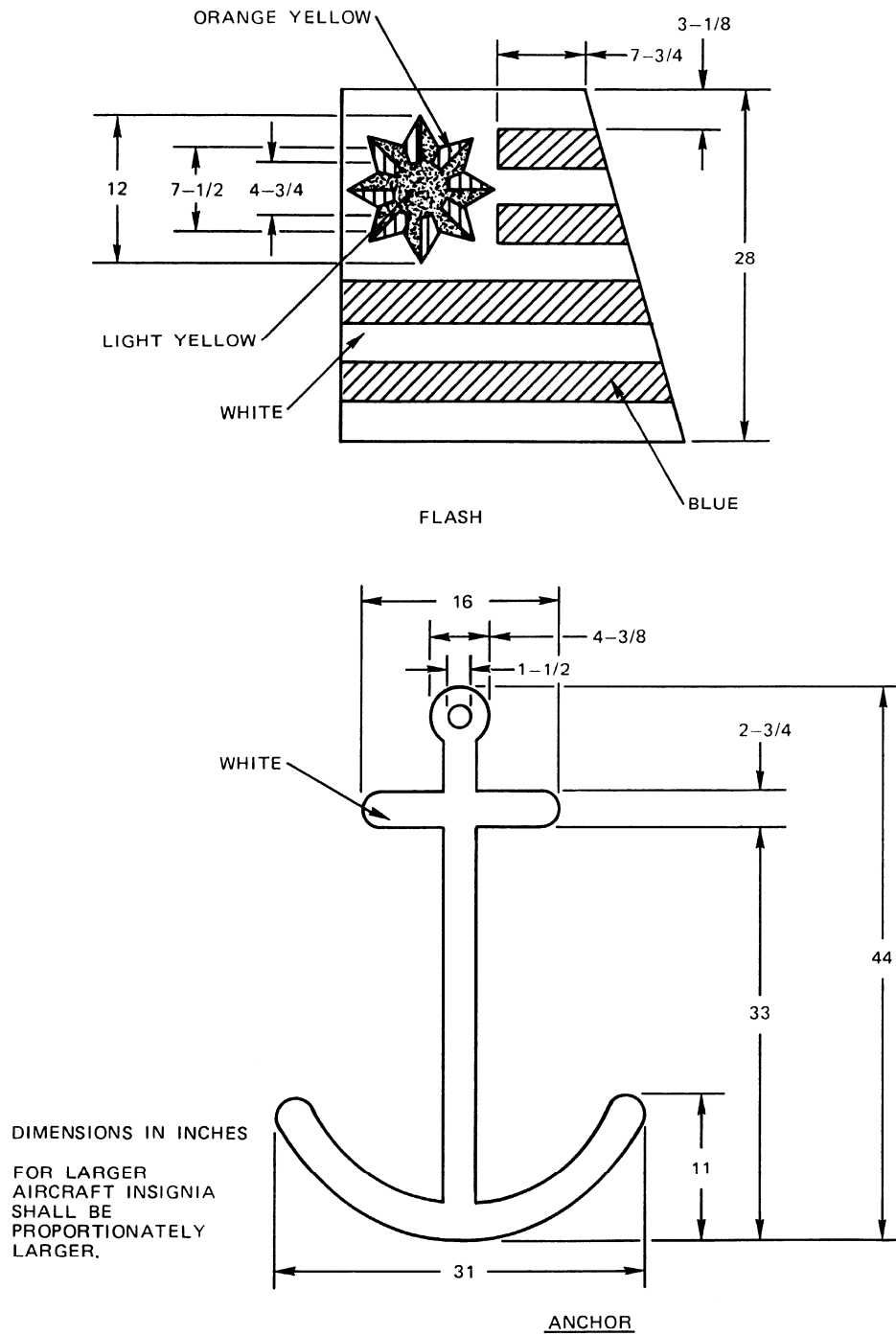


FIGURE E-16. National insignia of Uruguay.

MIL-STD-2161B(AS)

APPENDIX E

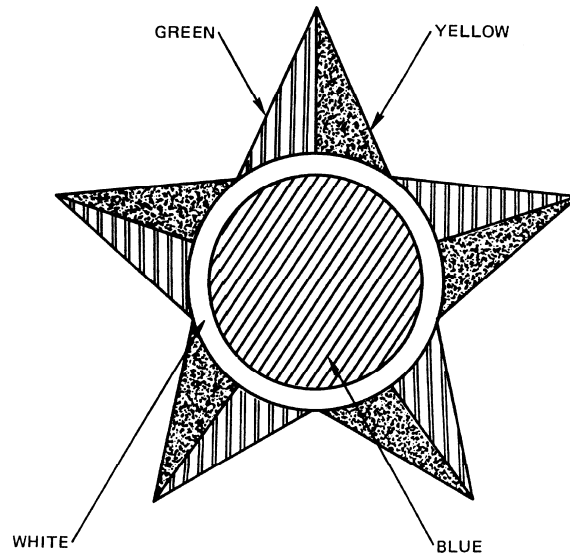


FIGURE E-17. National insignia of Brazil (star) marking I.

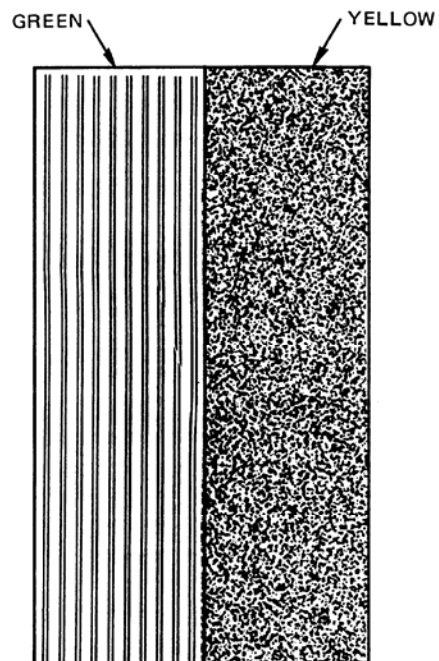


FIGURE E-18. National insignia of Brazil (flash) marking II.

MIL-STD-2161B(AS)

APPENDIX E

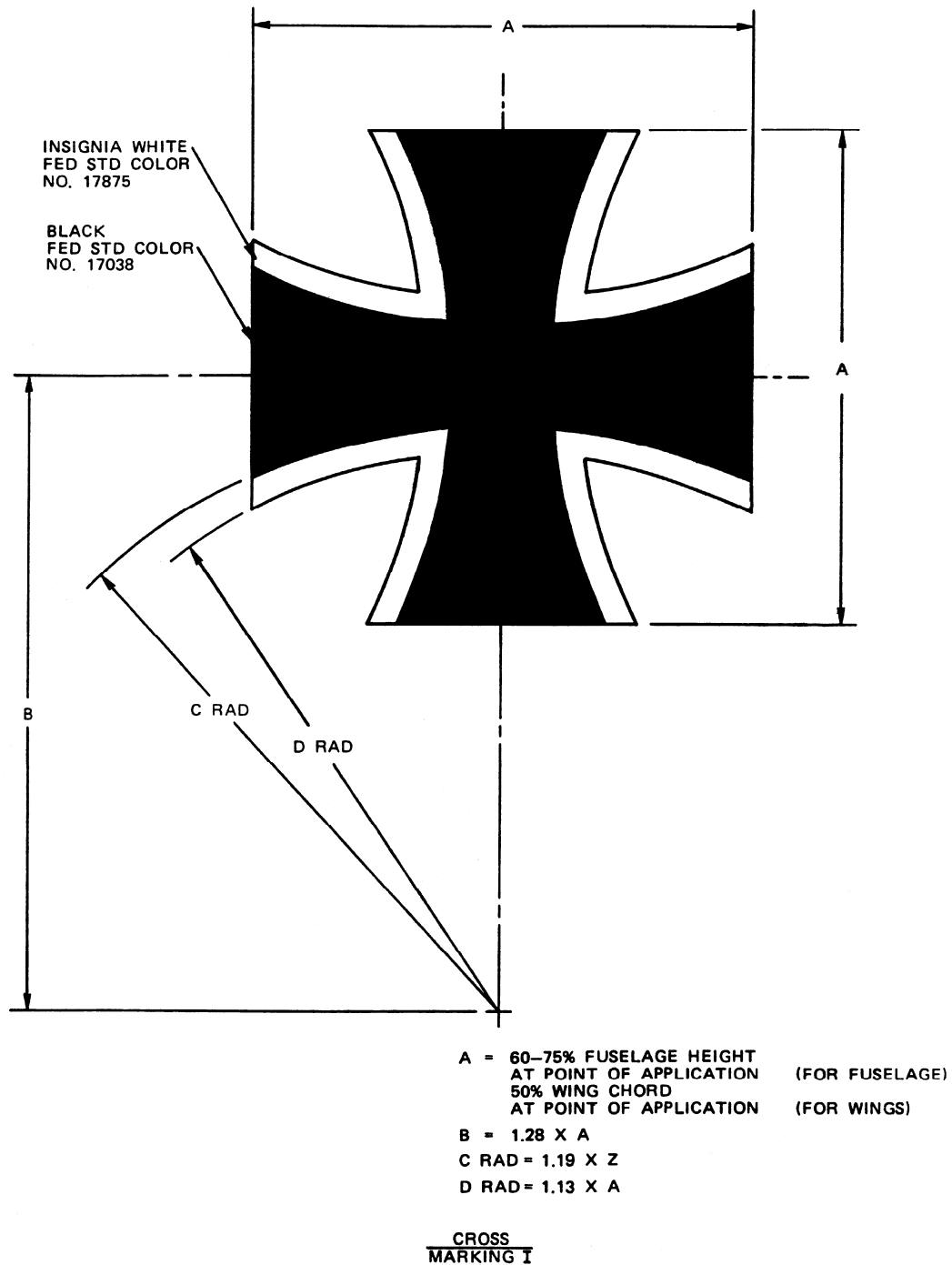
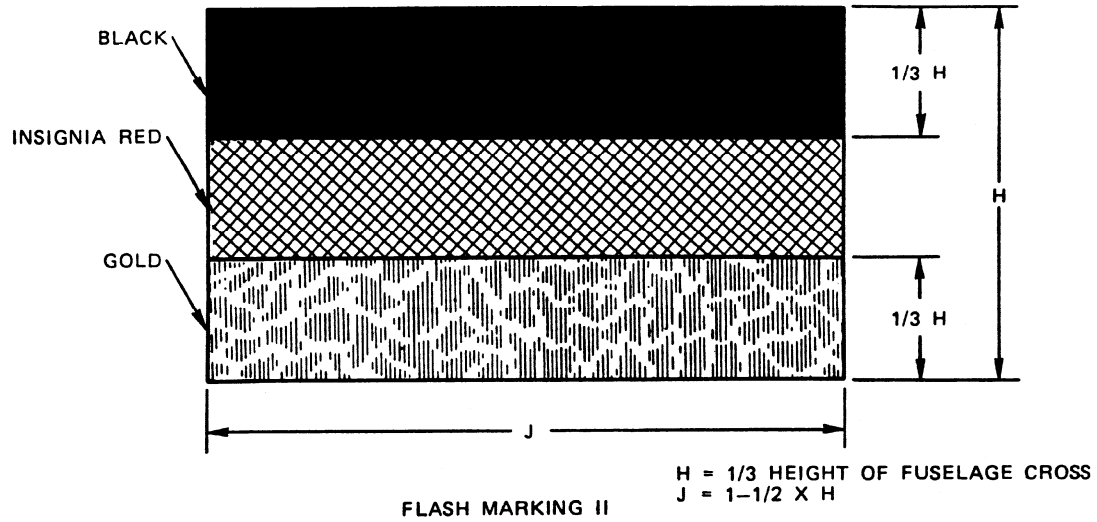


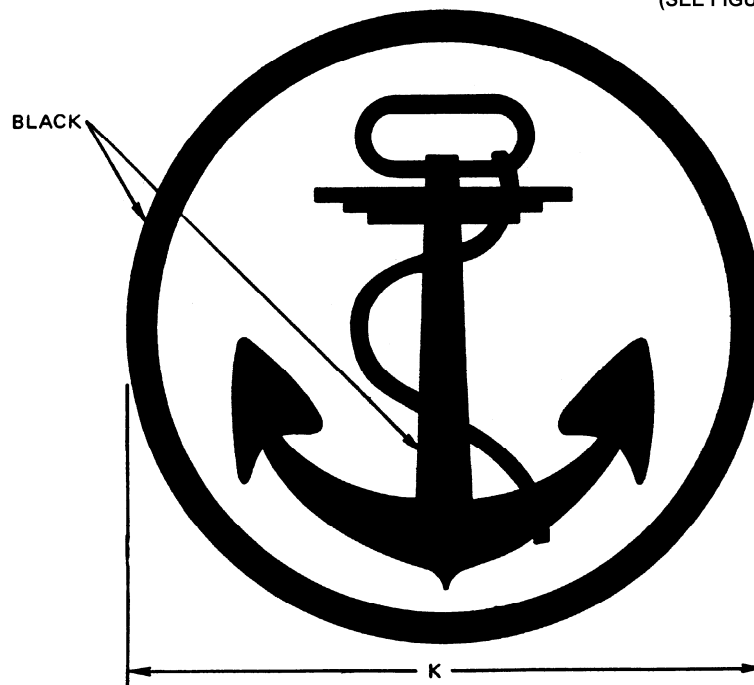
FIGURE E-19. National insignia of Federal Republic of Germany.

MIL-STD-2161B(AS)

APPENDIX E



$K = \frac{1}{2} \text{ WIDTH OF FUSELAGE CROSS}$
 (SEE FIGURE 29)



ROUNDEL MARKING III

FIGURE E-20. National insignia of Federal Republic of Germany.

MIL-STD-2161B(AS)

APPENDIX E

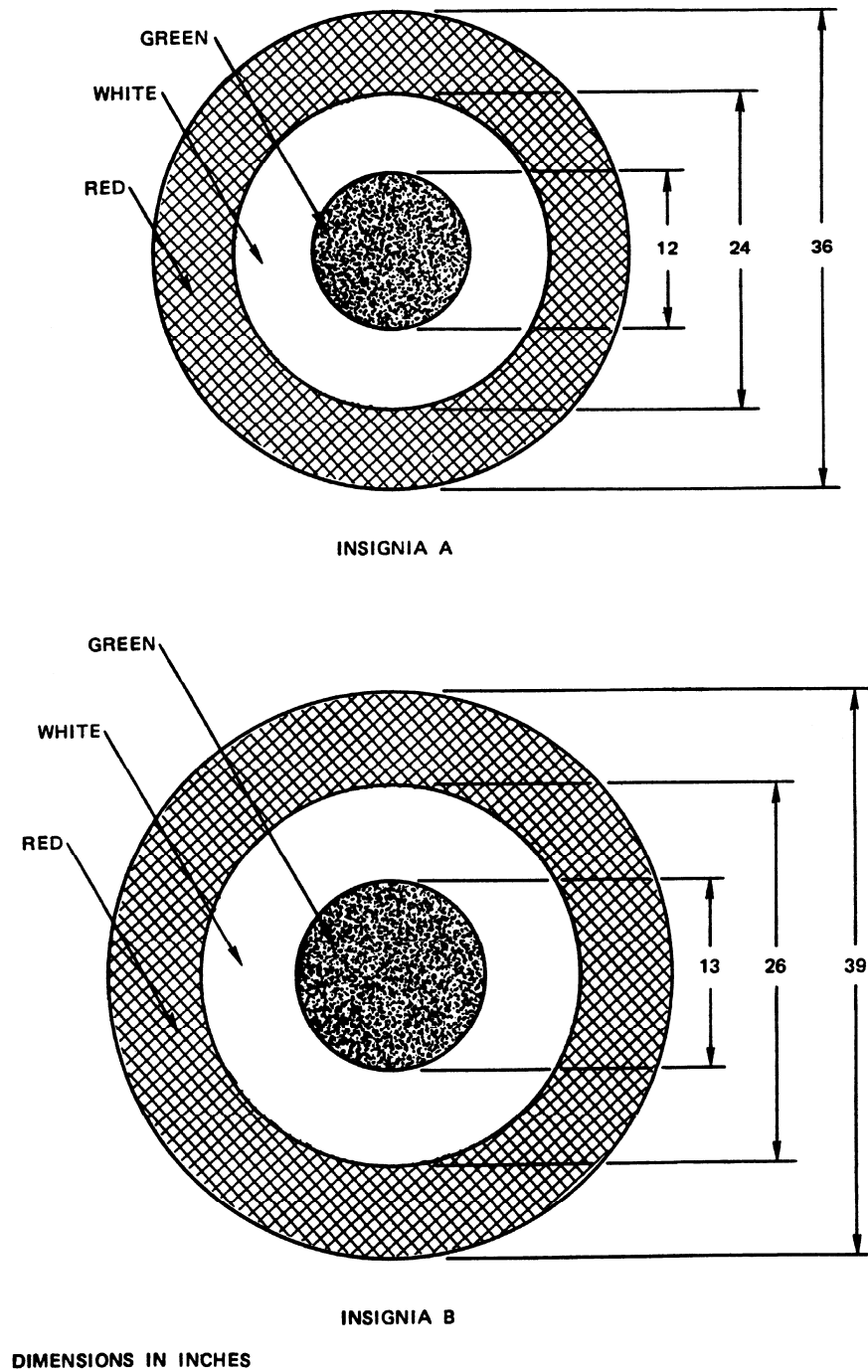
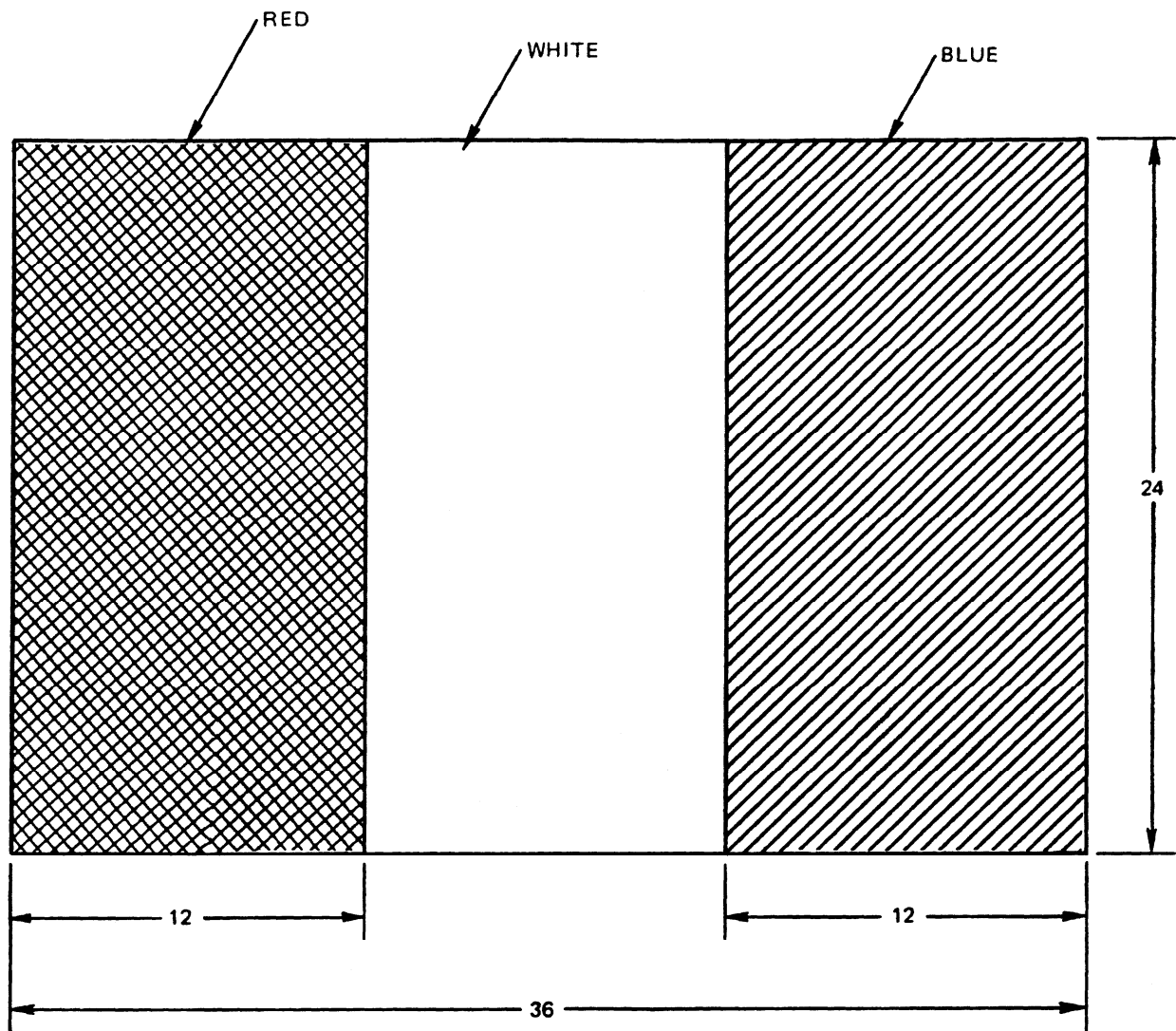


FIGURE E-21. National insignia of Italy (cocarde).

MIL-STD-2161B(AS)

APPENDIX E

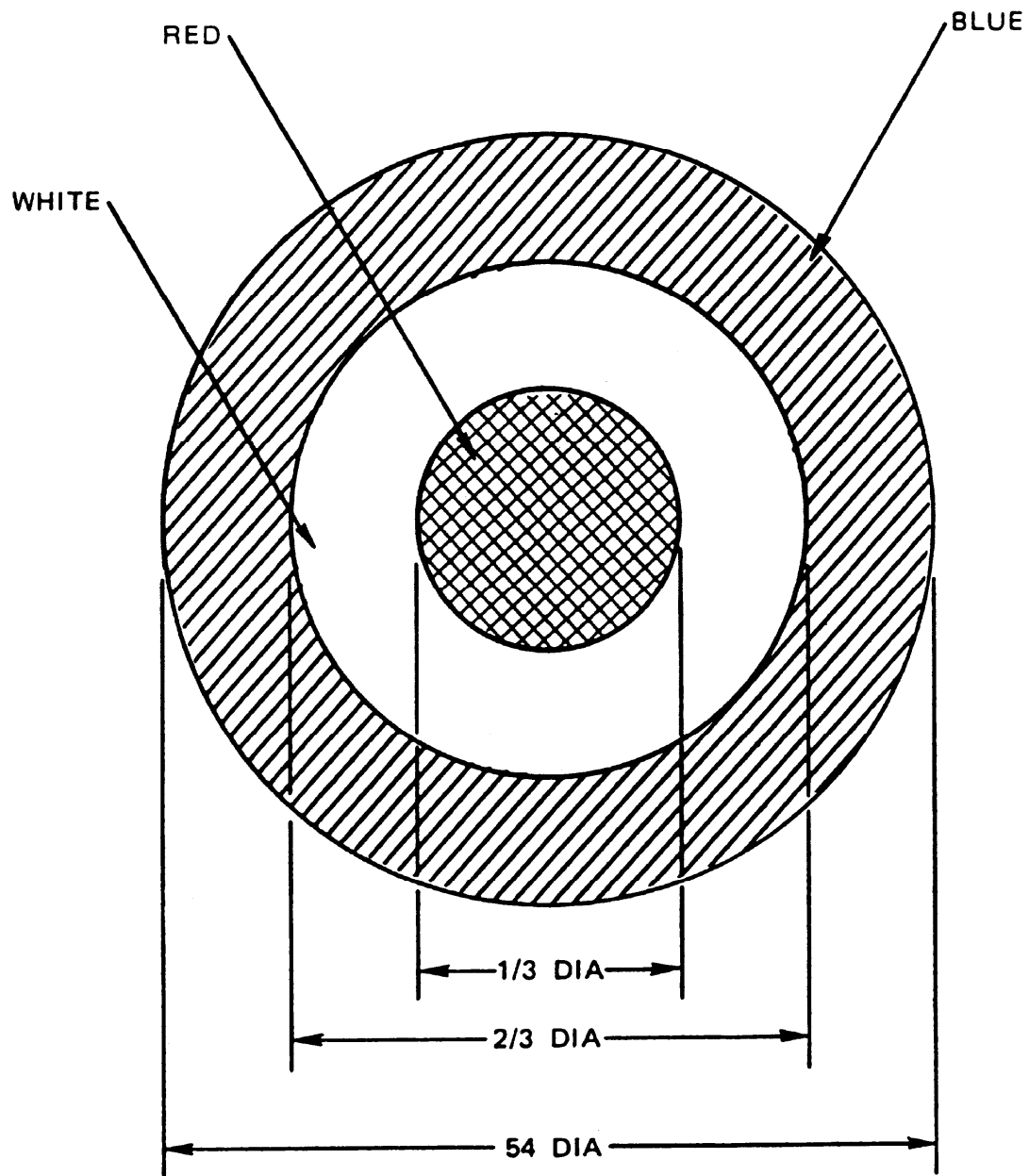


DIMENSIONS IN INCHES

FIGURE E-22. National insignia of New Zealand (roundel) marking I.

MIL-STD-2161B(AS)

APPENDIX E



DIMENSIONS IN INCHES
DIMENSIONS SHOWN ARE FOR P-3 AIRPLANE

FIGURE E-23. National insignia of New Zealand (roundel) marking II.

MIL-STD-2161B(AS)

CONCLUDING MATERIAL

Preparing activity:
Navy - AS
(Project MFFP-2006-004)

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at <http://assist.daps.dla.mil>.