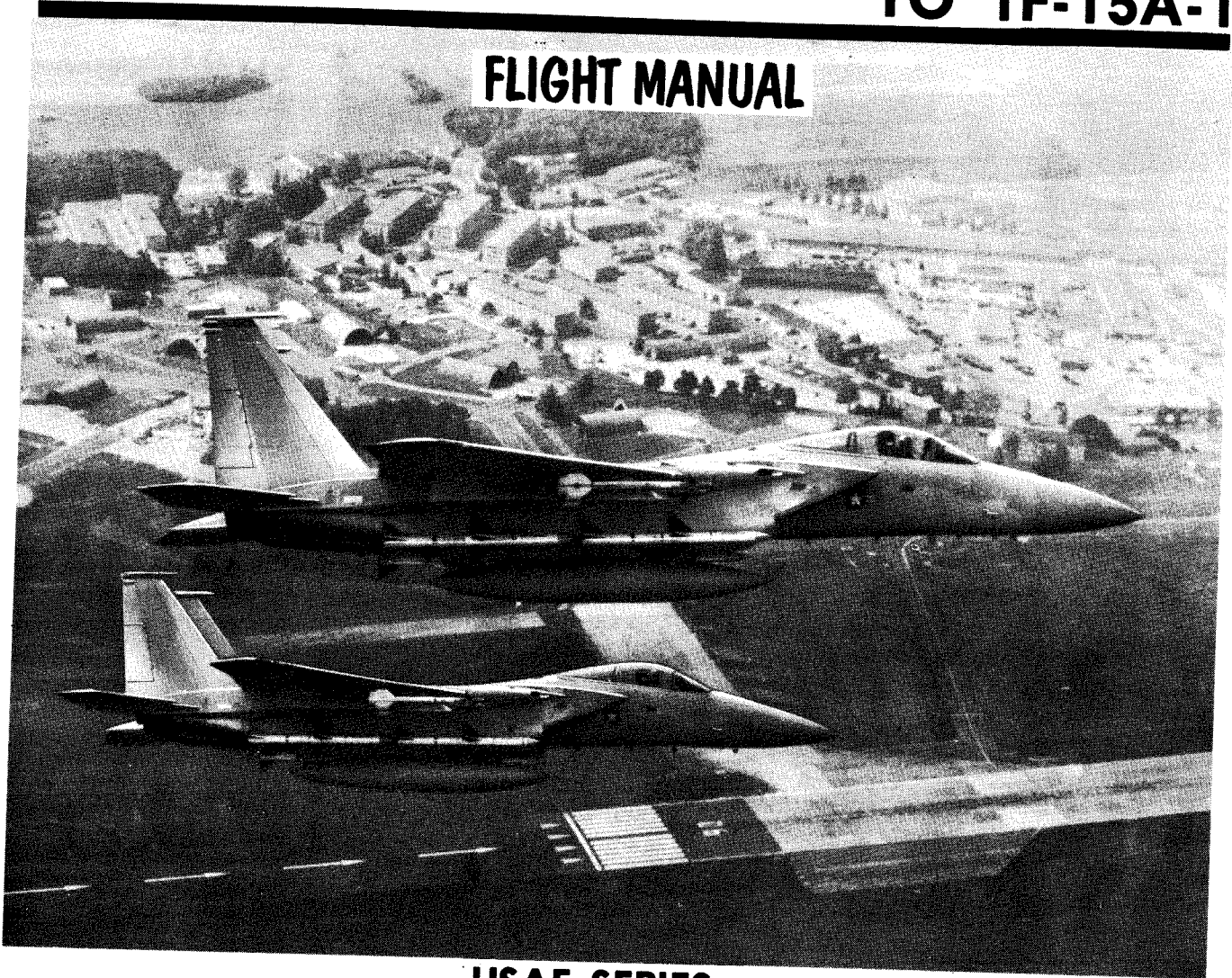


TO 1F-15A-1

FLIGHT MANUAL



**USAF SERIES
F-15A/B/C/D AIRCRAFT
BLOCK 7 AND UP**

McDonnell Aircraft

F33657-70-C-0300
F33657-87-C-2027 F09603-87-D-0554

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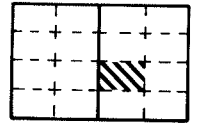
Published under authority of the Secretary of the Air Force.

AIR FORCE 20 OCT 89-4835

15A-1-(10)R

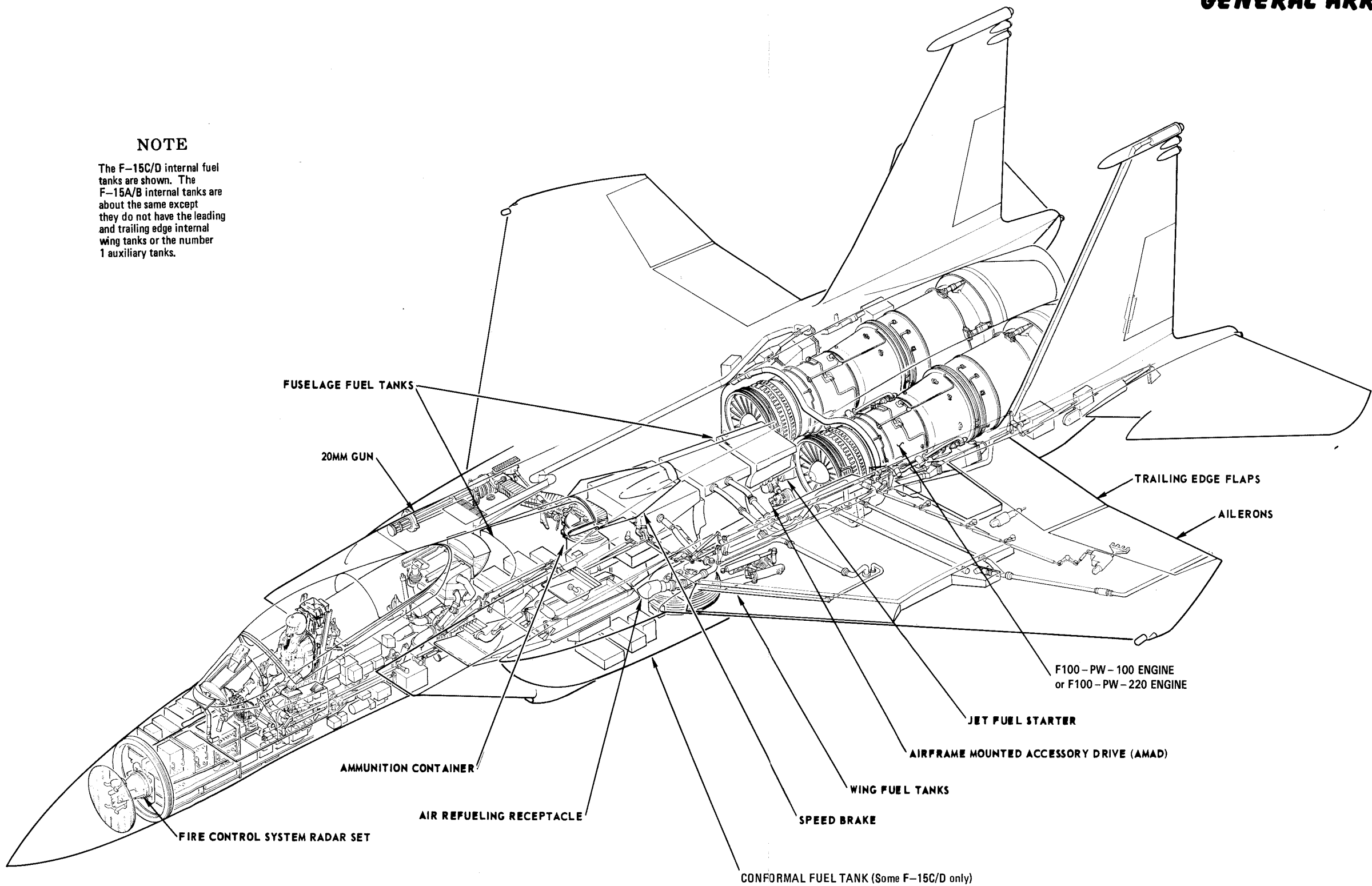
I 1 JULY 1989

GENERAL ARRANGEMENT



NOTE

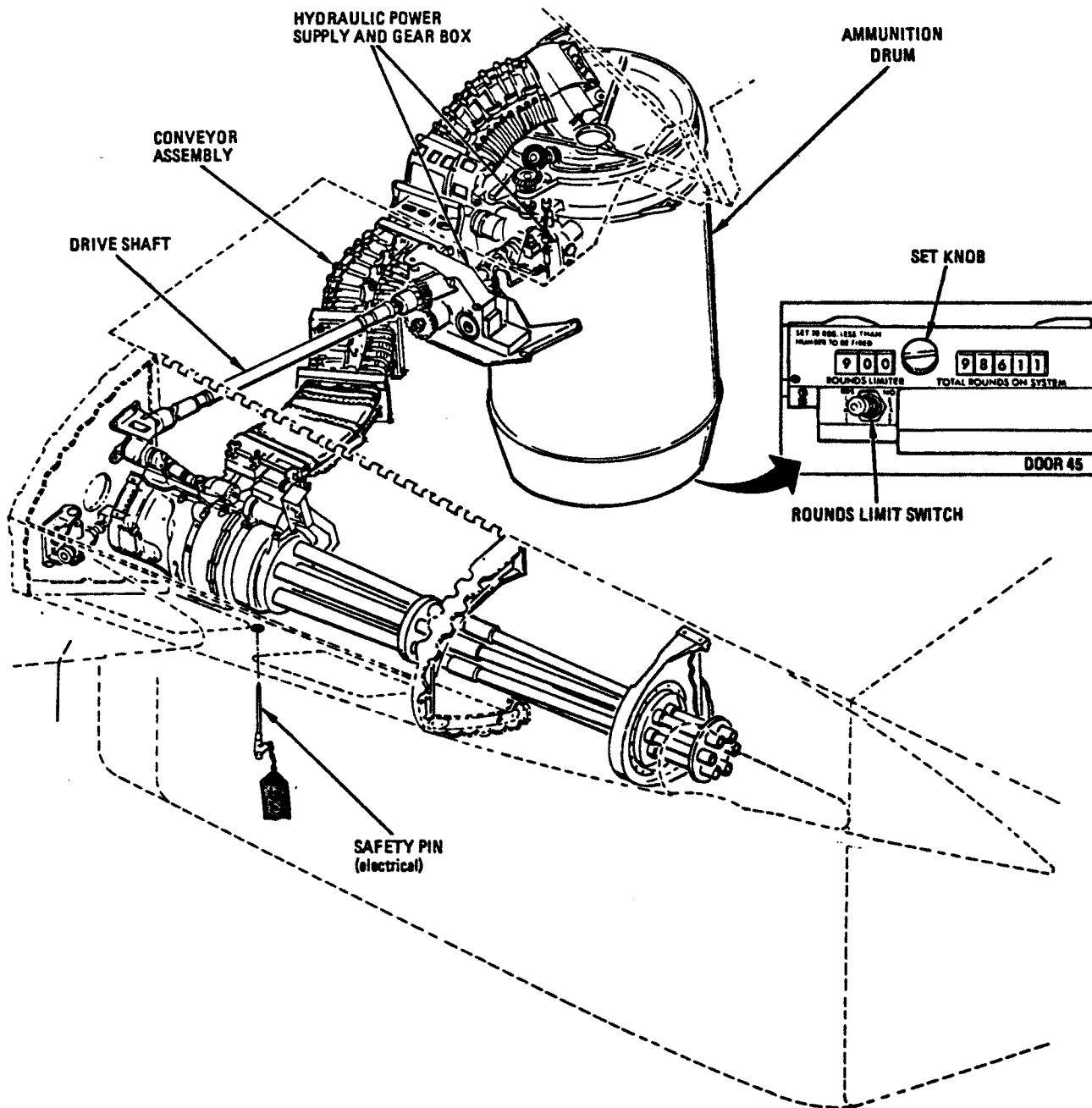
The F-15C/D internal fuel tanks are shown. The F-15A/B internal tanks are about the same except they do not have the leading and trailing edge internal wing tanks or the number 1 auxiliary tanks.



GENERAL ARRANGEMENT

Figure FO-1

M61A1 GUN SYSTEM



16C-34-1-1-111A

Figure 1-52

ENGINE LIMITATIONS

GROUND

CONDITION	FTIT °C	RPM %	OIL PSI	REMARKS
START	680	-	-	NOTE 5
IDLE	-	-	15-80	NOTE 5
MILITARY / AB	960	94	30-80	NOTES 2, 5, 6, 8, & 9
TRANSIENT	970	94	30-80	NOTES 2, 5, 8, & 10
FLUCTUATION	±10	±1	±10	NOTES 2, 3, 4, & 6

FLIGHT

CONDITION	FTIT °C	RPM %	OIL PSI	REMARKS
AIRSTART	800	-	-	
IDLE	-	-	15-80	
MILITARY / AB	970	96	30-80	NOTES 1, 2, & 7
TRANSIENT	990	96	30-80	NOTES 2, & 11
FLUCTUATION	±10	±1	±10	NOTES 2, 3, 4, & 6

NOTES

1. USE OF THE V_{max} SWITCH IS PROHIBITED.
2. LIMITATIONS INCLUDE FLUCTUATIONS.
3. IN PHASE FLUCTUATION OF MORE THAN ONE INSTRUMENT, OR SHORT TERM CYCLIC FLUCTUATIONS ACCOMPANIED BY THRUST SURGES, INDICATE ENGINE CONTROL PROBLEMS.
4. NOZZLE FLUCTUATIONS ARE LIMITED TO ±2% AT MILITARY POWER AND ABOVE. FLUCTUATIONS ARE NOT PERMITTED BELOW MILITARY POWER.
5. ANY OIL PRESSURE FROM 0 TO 100 (PEGGED) PSI IS ACCEPTABLE DURING START AND INITIAL OPERATION FOR A PERIOD NOT EXCEEDING 1 MINUTE AFTER REACHING IDLE.
6. OIL PRESSURE FLUCTUATIONS OF ±10 PSI ARE ACCEPTABLE.
7. AT LESS THAN 0 G, OIL PRESSURE MAY DROP AS LOW AS 0 PSI.
8. FOR ENGINE OPERATION AT MILITARY OR ABOVE, OIL PRESSURE MUST INCREASE 15 PSI MINIMUM ABOVE IDLE OIL PRESSURE.
9. ENGINE NOZZLE POSITION IS LIMITED TO 30% OPEN OR LESS AT MILITARY POWER.
10. MAXIMUM TEMPERATURE LIMITED TO 30 SECONDS.
11. MAXIMUM TEMPERATURE LIMITED TO 10 SECONDS.

Figure 5-2

ENGINE AIR INDUCTION SYSTEM

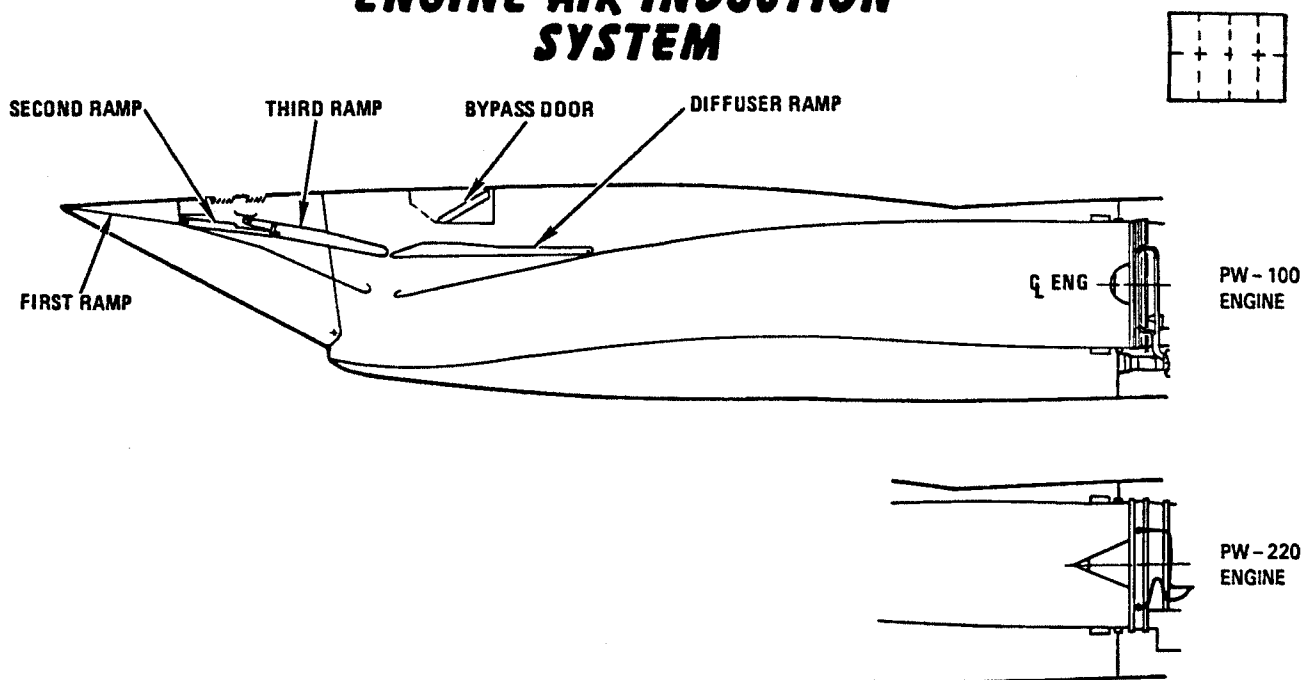


Figure 1-1

15A-1-(120)B

EMERG Removes electrical power from the ramp and bypass door actuators, causing them to move hydraulically to the emergency (ramps locked up and bypass door closed) positions. If hydraulic pressure fails, air loads will force the ramps and bypass door to the emergency position.

ENGINE OIL SYSTEM

Each engine is equipped with a completely self-contained oil system. Oil is supplied to the main pump element by gravity feed. Refer to Servicing Diagram, this section, for oil specifications.

ENGINE FUEL SYSTEM

Refer to foldout section for airplane and engine fuel system illustration.

ENGINE CONTROL SYSTEM

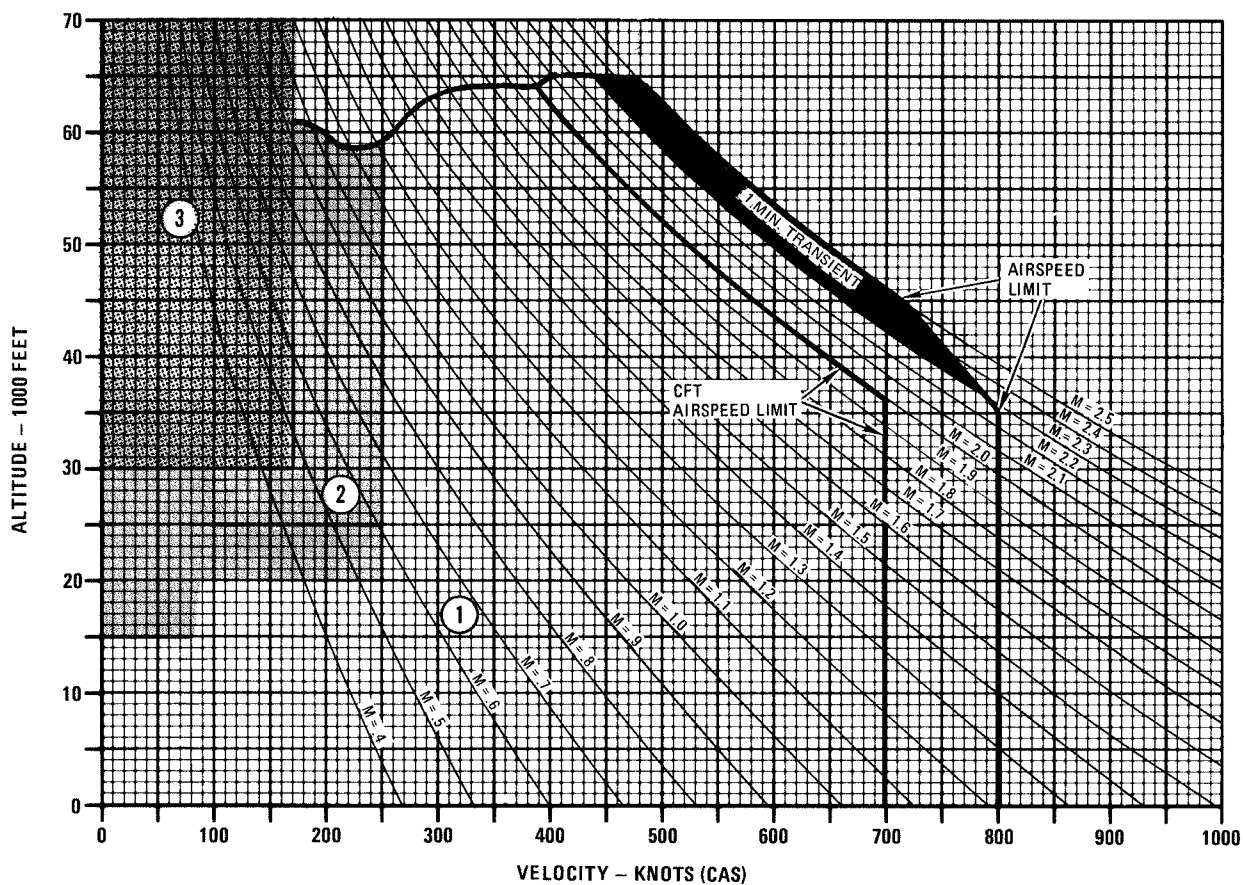
The F100-PW-100 engine control consists primarily of a hydromechanical unified control (UC) for main engine and afterburner operation with a supervisory engine electronic control (EEC). The F100-PW-220 engine control consists primarily of a hydromechanical main fuel control (MFC), afterburner fuel control (AFC) and a full authority digital electronic engine control (DEEC).

Unified Control (F100-PW-100)

The unified control (UC) performs the following functions: provides engine speed control, schedules rear compressor variable vanes, initiates engine and afterburner fuel flow, controls the exhaust nozzles, and provides a positive fuel cutoff at engine shutdown. The unified control is scheduled mechanically from IDLE to MIL but is scheduled by the engine electronic control at MIL and above.

AIRSPEED LIMITATION AND AFTERBURNER OPERATING ENVELOPE

F100-PW-100 ENGINE



NOTES

- REGION 1 - UNLIMITED AFTERBURNER OPERATION. FAILURE TO LIGHT, RUMBLE (LIGHT VIBRATIONS), AFTERBURNER INDUCED FAN STALL, AND BLOWOUTS SHOULD NOT OCCUR.
- REGION 2 - AFTERBURNER FAILURE TO LIGHT, RUMBLE (LIGHT VIBRATIONS), AFTERBURNER INDUCED FAN STALL, OR BLOWOUTS MAY OCCUR DURING RAPID TRANSIENTS FROM LOW POWER SETTINGS BUT SHOULD NOT OCCUR DURING STEADY-STATE AFTERBURNER OPERATION, TRANSIENTS FROM MILITARY OR DURING MODULATION WITHIN AFTERBURNER.
- REGION 3 - AFTERBURNER FAILURE TO LIGHT, RUMBLE (LIGHT VIBRATIONS), AFTERBURNER INDUCED FAN STALL, AND BLOWOUTS ARE PROBABLE DURING TRANSIENTS FROM ALL POWER SETTINGS AS WELL AS DURING STEADY-STATE OPERATION.

Figure 5-3 (Sheet 1 of 2)

SUSTAINED LEVEL TURNS

GROSS WEIGHT-35,000 POUNDS
MAXIMUM THRUST

AIRPLANE CONFIGURATION
F-15A/C
CLEAN

REMARKS
ENGINE(S): (2) F100-PW-100,
ENGINE TRIM 97.7%,
U.S. STANDARD DAY, 1966

DATE: 1 OCTOBER 1985
DATA BASIS: FLIGHT TEST

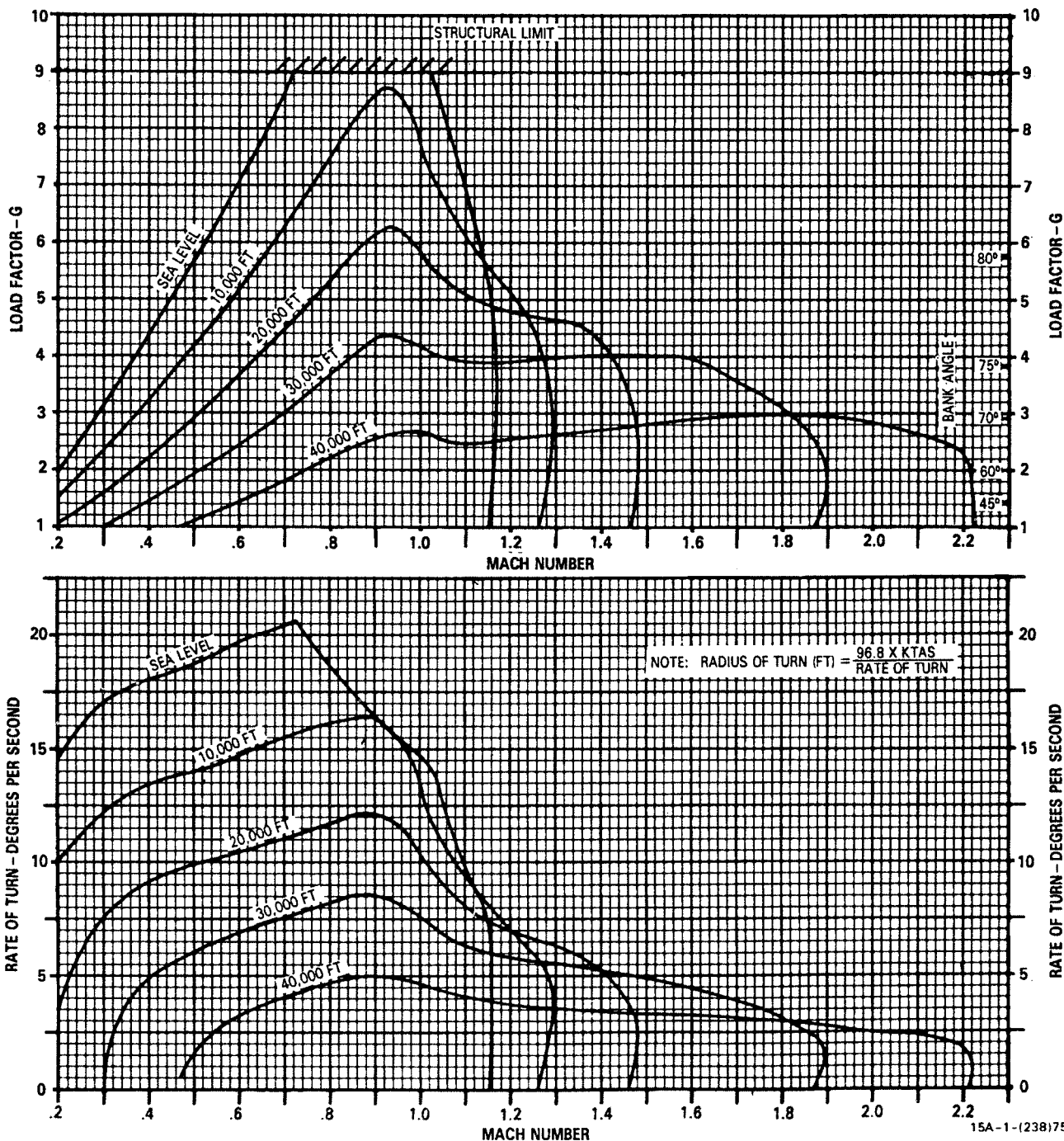
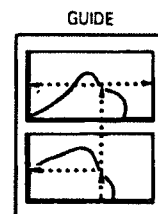


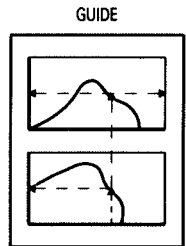
Figure A9-39

SUSTAINED LEVEL TURNS

GROSS WEIGHT - 37,000 POUNDS

AIRPLANE CONFIGURATION
F-15C CLEAN

REMARKS
ENGINE(S): (2) F100-PW-220
U.S. STANDARD DAY, 1966



DATE: 15 JUNE 1989
DATA BASIS: FLIGHT TEST

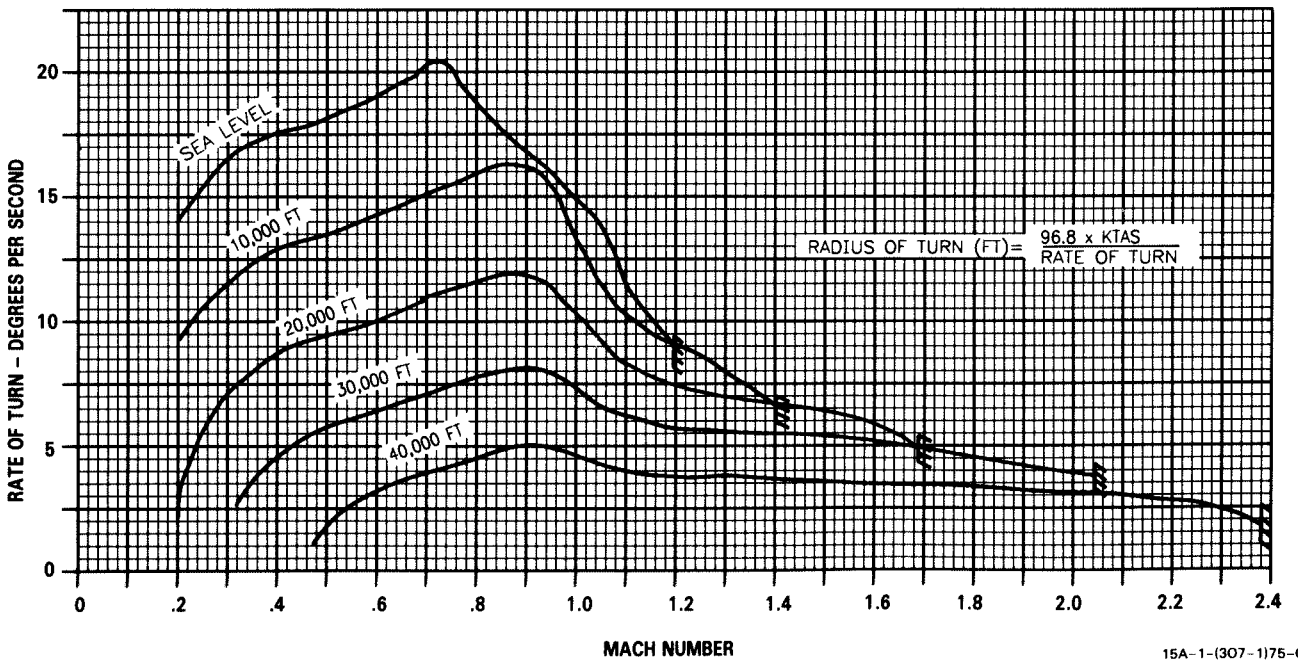
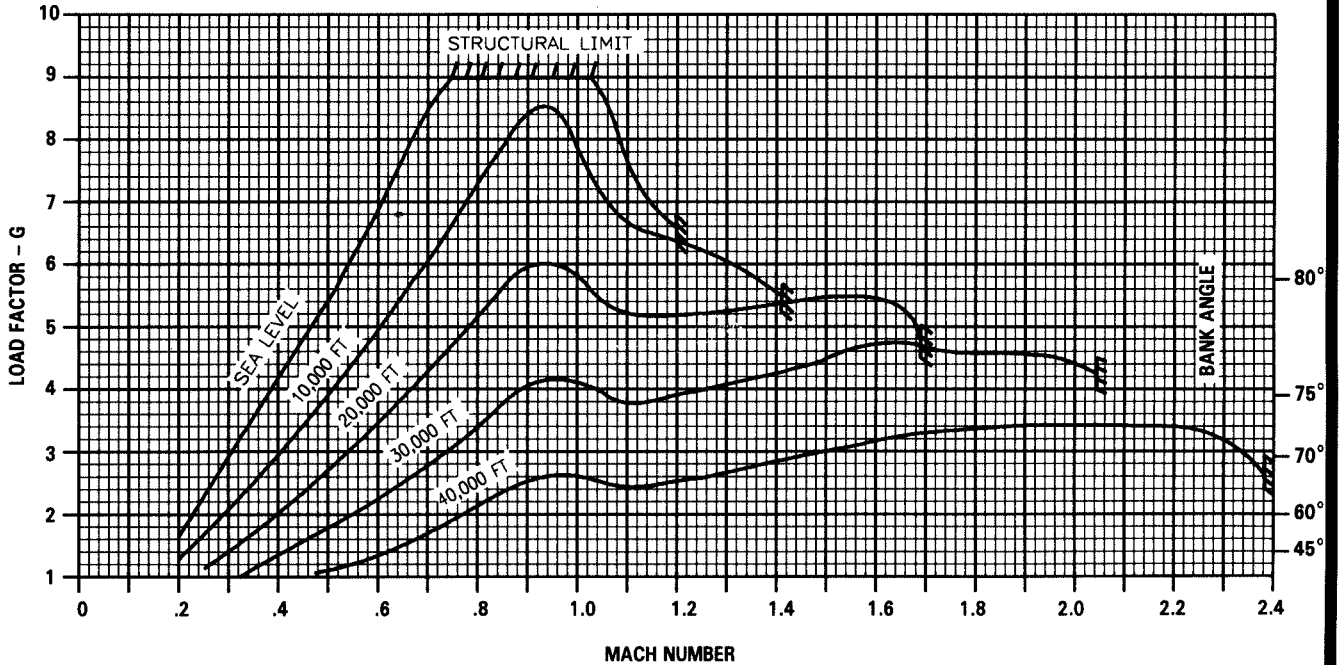


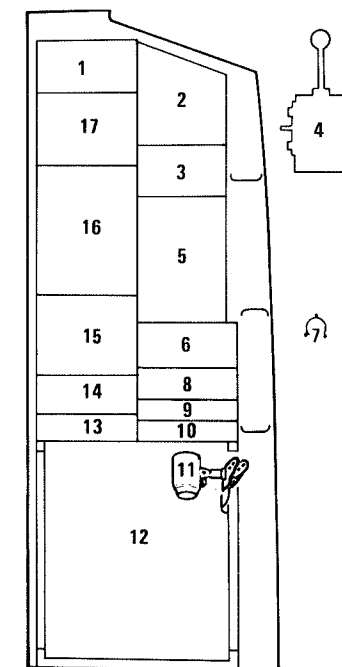
Figure B9-28

15A-1-(307-1)75-CATI

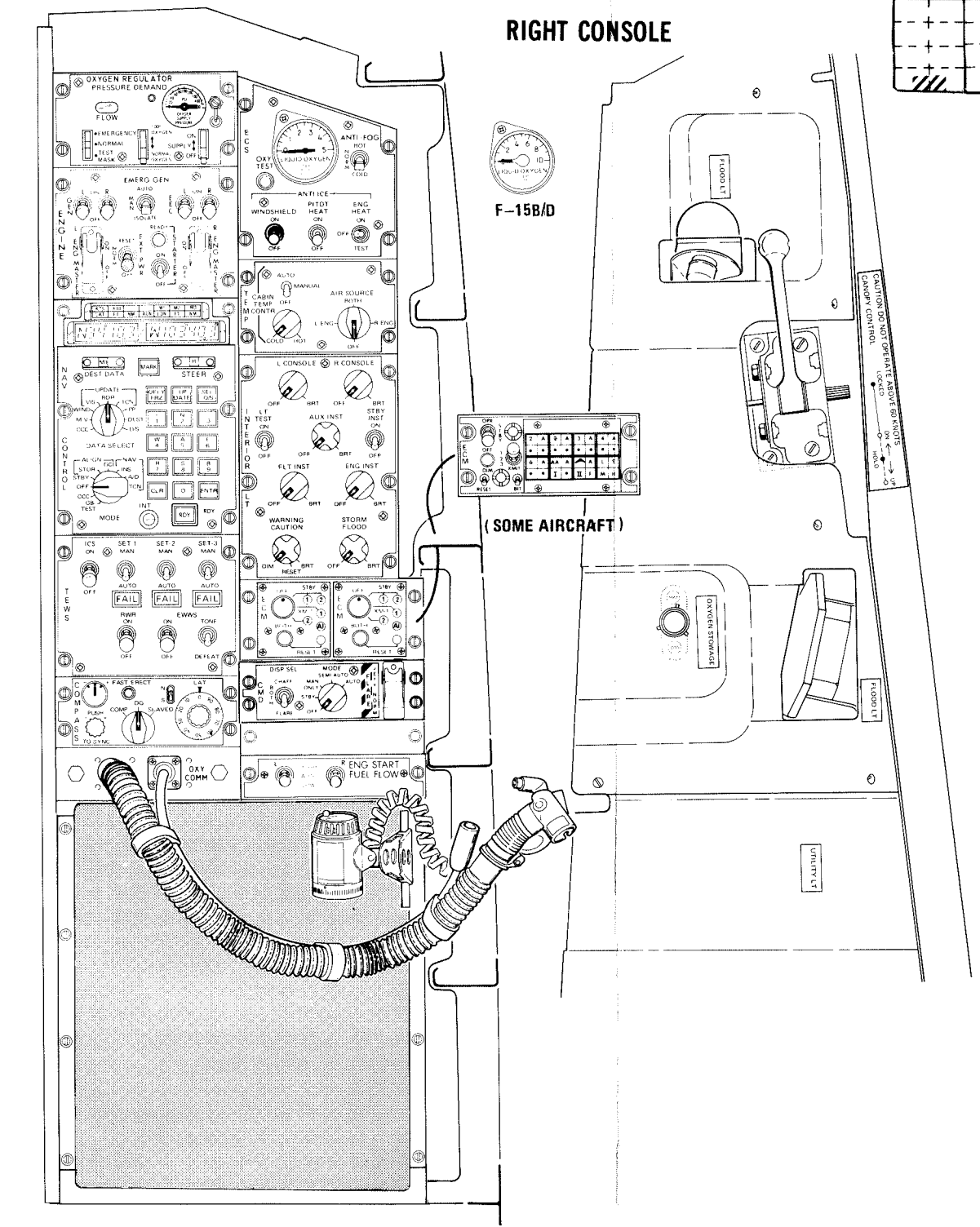
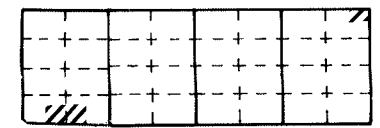
COCKPIT

TYPICAL

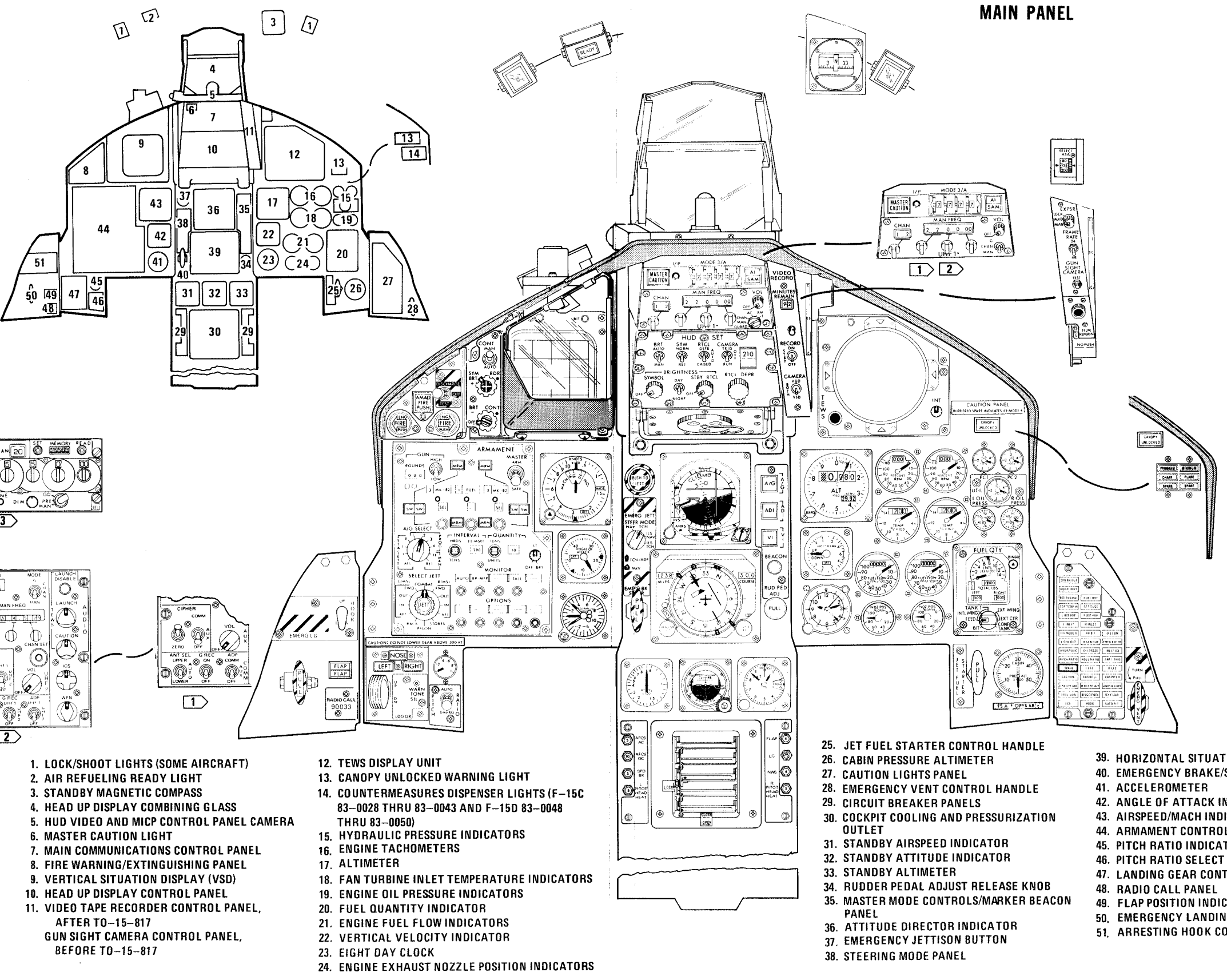
1. OXYGEN REGULATOR
2. ECS PANEL
3. TEMPERATURE PANEL
4. CANOPY CONTROL HANDLE
5. INTERIOR LIGHTS CONTROL PANEL
6. TEWS POD CONTROL PANEL
7. OXYGEN HOSE STOWAGE FITTING
8. COUNTERMEASURES DISPENSER (CMD) CONTROL PANEL (F-15C 83-0028 THRU 83-0043 AND F-15D 83-0048 THRU 83-0050)
9. BLANK
10. ENGINE START FUEL SWITCHES
11. UTILITY LIGHT
12. STOWAGE COMPARTMENT OXYGEN/COMMUNICATION
13. OUTLET PANEL
14. COMPASS CONTROL PANEL
15. TEWS POWER CONTROL PANEL
16. NAVIGATION CONTROL PANEL
- ENGINE CONTROL PANEL



COCKPIT



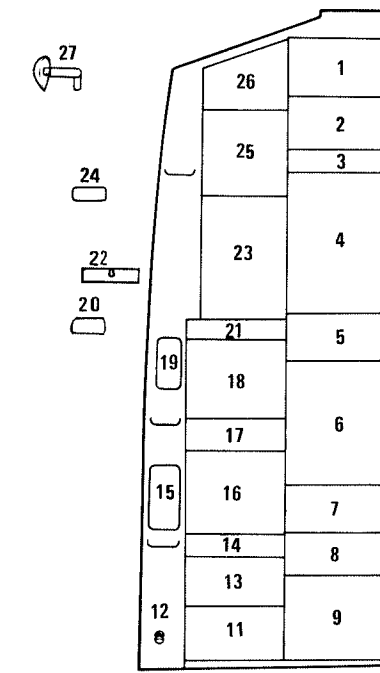
MAIN PANEL



1. LOCK/SHOOT LIGHTS (SOME AIRCRAFT)
2. AIR REFUELING READY LIGHT
3. STANDBY MAGNETIC COMPASS
4. HEAD UP DISPLAY COMBINING GLASS
5. HUD VIDEO AND MICP CONTROL PANEL CAMERA
6. MASTER CAUTION LIGHT
7. MAIN COMMUNICATIONS CONTROL PANEL
8. FIRE WARNING/EXTINGUISHING PANEL
9. VERTICAL SITUATION DISPLAY (VSD)
10. HEAD UP DISPLAY CONTROL PANEL
11. VIDEO TAPE RECORDER CONTROL PANEL, AFTER TO-15-817 GUN SIGHT CAMERA CONTROL PANEL, BEFORE TO-15-817
12. TEWS DISPLAY UNIT
13. CANOPY UNLOCKED WARNING LIGHT
14. COUNTERMEASURES DISPENSER LIGHTS (F-15C 83-0028 THRU 83-0043 AND F-15D 83-0048 THRU 83-0050)
15. HYDRAULIC PRESSURE INDICATORS
16. ENGINE TACHOMETERS
17. ALTIMETER
18. FAN TURBINE INLET TEMPERATURE INDICATORS
19. ENGINE OIL PRESSURE INDICATORS
20. FUEL QUANTITY INDICATOR
21. ENGINE FUEL FLOW INDICATORS
22. VERTICAL VELOCITY INDICATOR
23. EIGHT DAY CLOCK
24. ENGINE EXHAUST NOZZLE POSITION INDICATORS
25. JET FUEL STARTER CONTROL HANDLE
26. CABIN PRESSURE ALTIMETER
27. CAUTION LIGHTS PANEL
28. EMERGENCY VENT CONTROL HANDLE
29. CIRCUIT BREAKER PANELS
30. COCKPIT COOLING AND PRESSURIZATION OUTLET
31. STANDBY AIRSPEED INDICATOR
32. STANDBY ATTITUDE INDICATOR
33. STANDBY ALTIMETER
34. RUDDER PEDAL ADJUST RELEASE KNOB
35. MASTER MODE CONTROLS/MARKER BEACON PANEL
36. ATTITUDE DIRECTOR INDICATOR
37. EMERGENCY JETTISON BUTTON
38. STEERING MODE PANEL
39. HORIZONTAL SITUATION INDICATOR
40. EMERGENCY BRAKE/STEERING CONTROL HANDLE
41. ACCELEROMETER
42. ANGLE OF ATTACK INDICATOR
43. AIRSPEED/MACH INDICATOR
44. ARMAMENT CONTROL PANEL
45. PITCH RATIO INDICATOR
46. PITCH RATIO SELECT SWITCH
47. LANDING GEAR CONTROL HANDLE
48. RADIO CALL PANEL
49. FLAP POSITION INDICATOR
50. EMERGENCY LANDING GEAR HANDLE
51. ARRESTING HOOK CONTROL SWITCH

LEFT CONSOLE

1. ILS/TACAN CONTROL PANEL
2. CONTROL AUGMENTATION SYSTEM CONTROL PANEL
3. BLANK
4. THROTTLE QUADRANT
5. EXTERIOR LIGHTS CONTROL PANEL
6. INTEGRATED COMMUNICATIONS CONTROL PANEL
7. BLANK PANEL F-15A/C OR TAKE COMMAND/CS CONTROL PANEL F-15B AND F-15D (THRU 79-0081); KY-58 CONTROL PANEL F-15C/D (80-0002 AND UP)
8. BLANK
9. ANTI-G PANEL
10. BOARDING STEPS POSITION INDICATOR
11. BLANK
12. ARMAMENT SAFETY OVERRIDE SWITCH
13. GROUND POWER PANEL
14. BLANK (F-15A/B/C); TAKE COMMAND/CS CONTROL PANEL (F-15D 80-0054 AND UP)
15. EMERGENCY AIR REFUELING SWITCH/HANDLE
16. BIT PANEL
17. INTERROGATOR CONTROL PANEL
18. IFF CONTROL PANEL
19. IFF ANTENNA SELECT SWITCH
20. EWWS ENABLE SWITCH (SOME F-15A/B ALL F-15C/D)
21. TEWS PANEL
22. SEAT ADJUST SWITCH
23. RADAR CONTROL PANEL
24. VMAX SWITCH
25. FUEL CONTROL PANEL
26. MISCELLANEOUS CONTROL PANEL
27. CANOPY JETTISON HANDLE



NOTES

1. AIRCRAFT THRU 76-0142 BEFORE TO 1F-15-857.
2. AIRCRAFT 77-0061 THRU 79-0081 BEFORE TO 1F-15-857.
3. SELECTED AIRCRAFT WITH TO 1F-15-704. (PUTS IN INTERIM R2 HAVE QUICK RADIO WITH CONTROL PANEL AS SHOWN AFTER TO 704.)

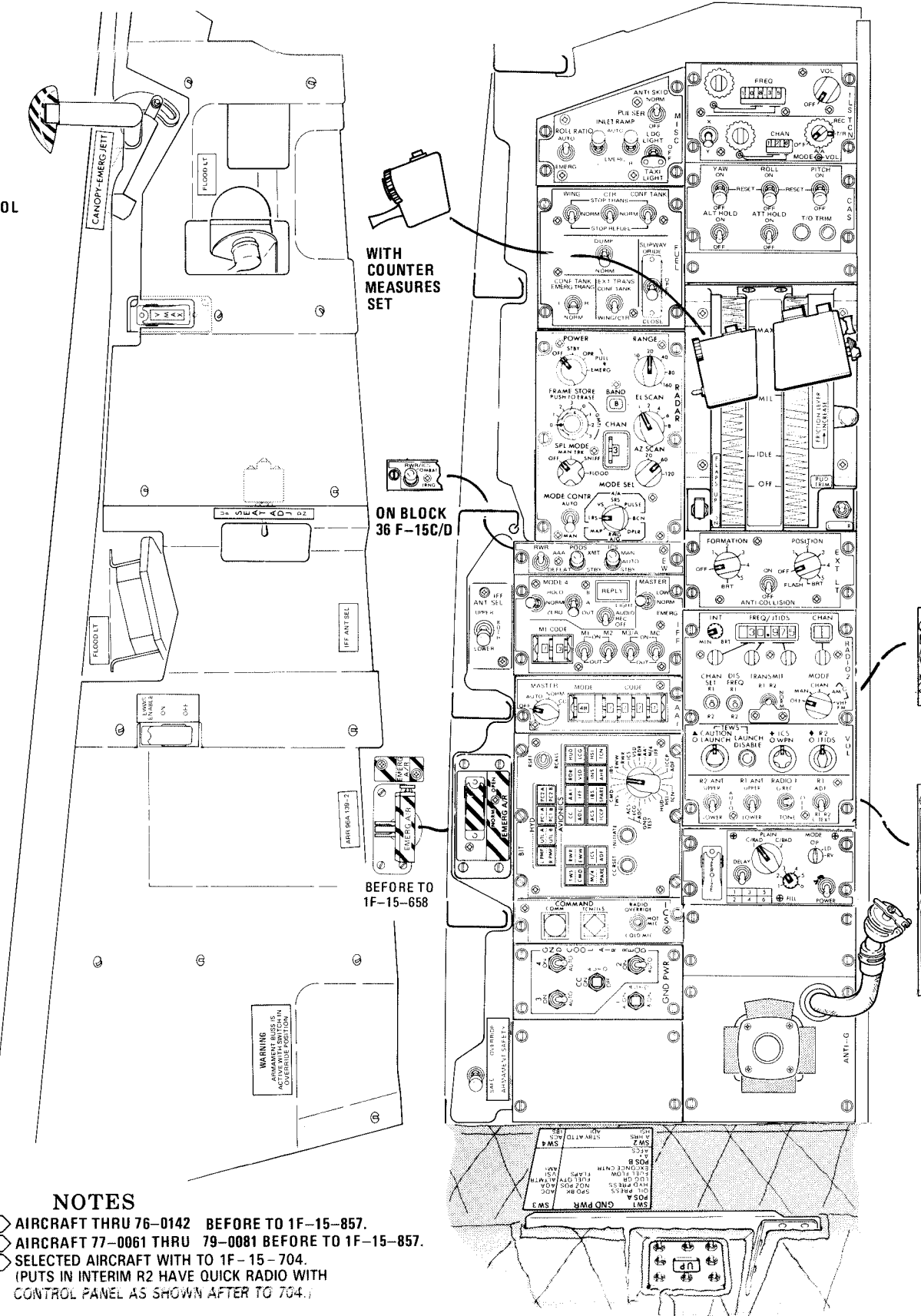
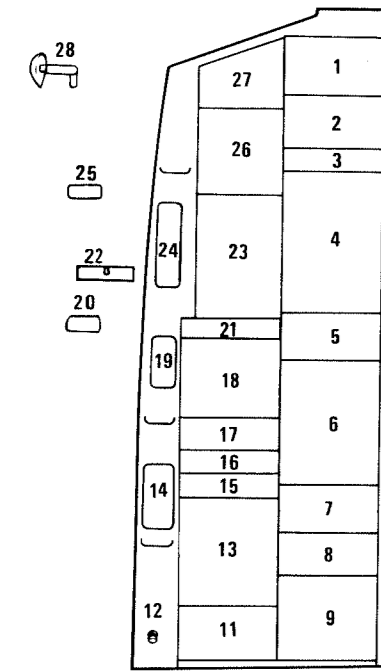
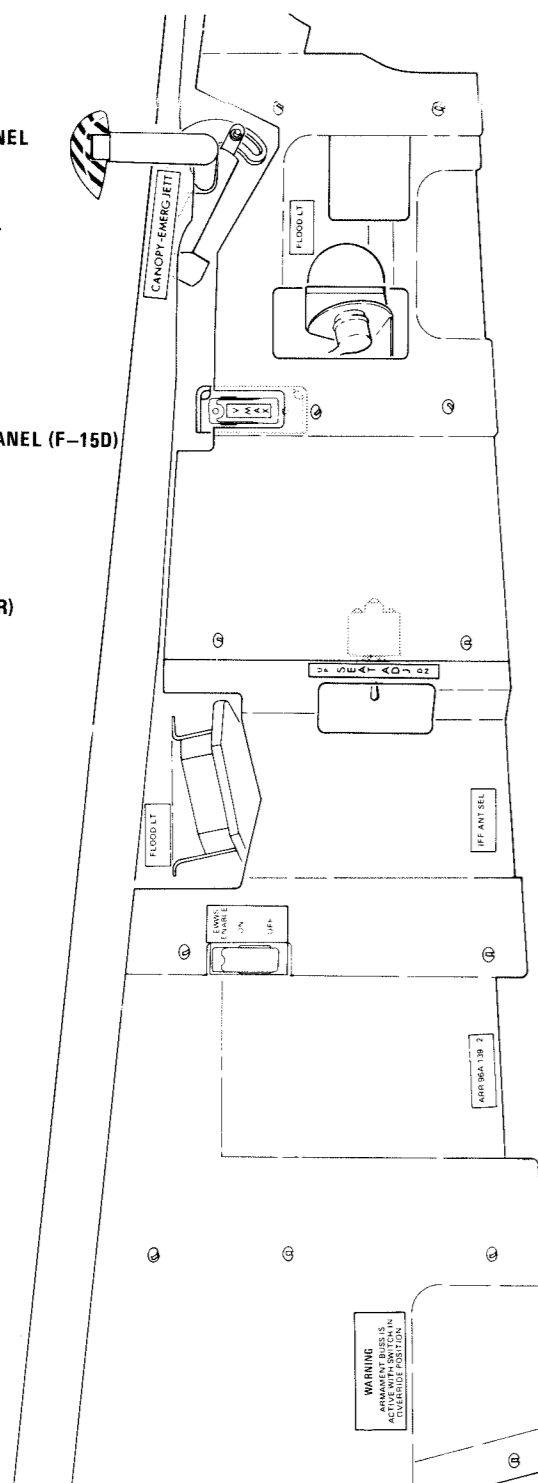


Figure FO-2

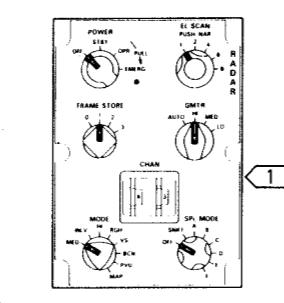
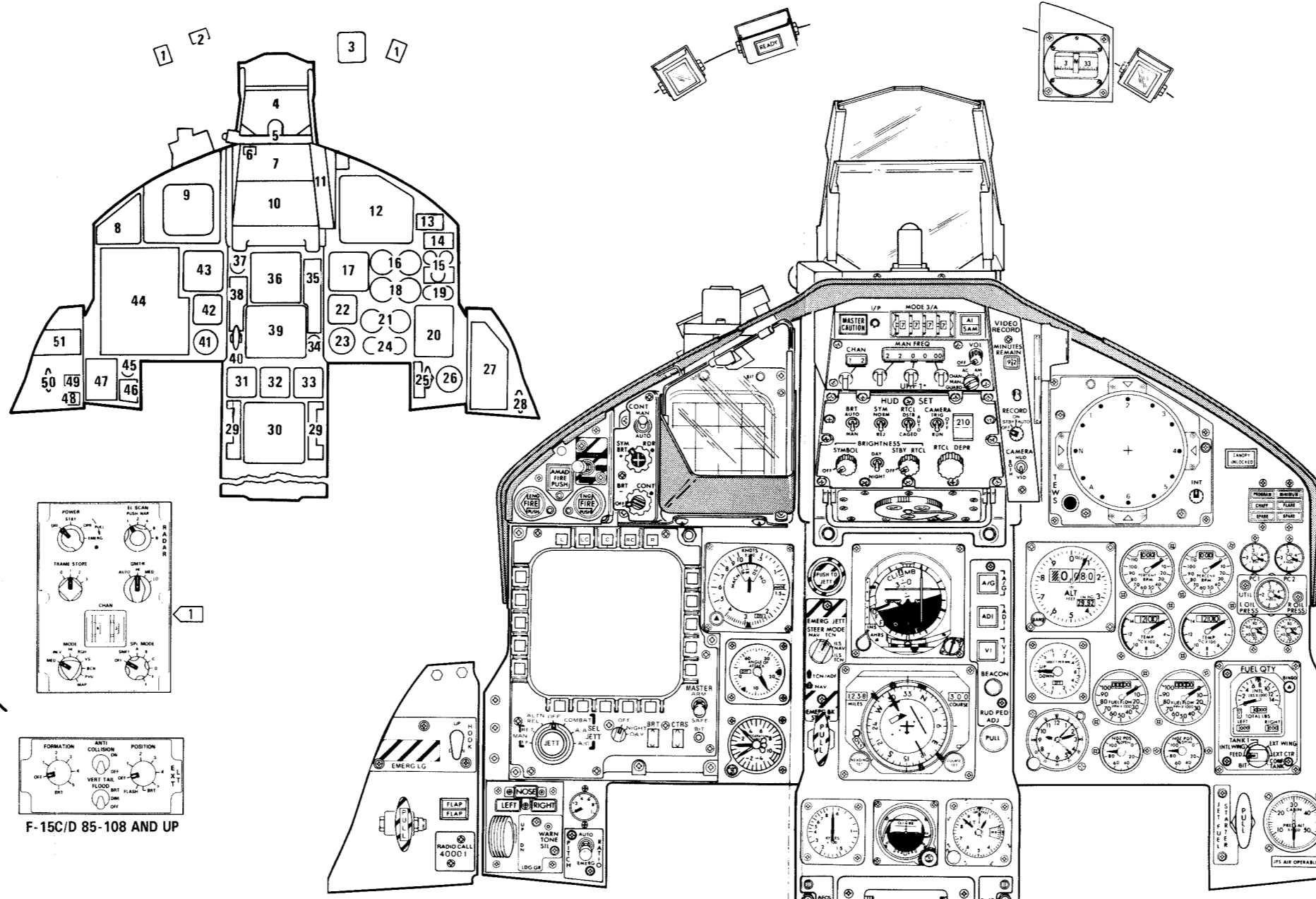
LEFT CONSOLE

1. ILS/TACAN CONTROL PANEL
2. CONTROL AUGMENTATION SYSTEM CONTROL PANEL
3. DATA TRANSFER MODULE RECEPTACLE
4. THROTTLE QUADRANT
5. EXTERIOR LIGHTS CONTROL PANEL
6. INTEGRATED COMMUNICATIONS CONTROL PANEL
7. KY-58 CONTROL PANEL
8. BLANK
9. ANTI-G PANEL
10. BOARDING STEPS POSITION INDICATOR PANEL
11. GROUND POWER PANEL
12. ARMAMENT SAFETY OVERRIDE SWITCH
13. BIT PANEL
14. EMERGENCY AIR REFUELING SWITCH
15. BLANK
16. BLANK (F-15C)-TAKE COMMAND/ICS CONTROL PANEL (F-15D)
17. INTERROGATOR CONTROL PANEL
18. IFF CONTROL PANEL
19. IFF ANTENNA SELECT SWITCH
20. EWWS ENABLE SWITCH
21. TEWS PANEL
22. SEAT ADJUST SWITCH
23. RADAR CONTROL PANEL
24. NON-COOPERATIVE TARGET RECOGNITION (NCTR) ENABLE SWITCH
25. VMAX SWITCH
26. FUEL CONTROL PANEL
27. MISCELLANEOUS CONTROL PANEL
28. CANOPY JETTISON HANDLE

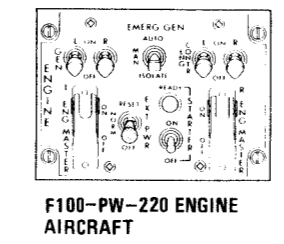


NOTE
1 F-15C 85-0126 AND UP.
F-15D 86-0181 AND UP.

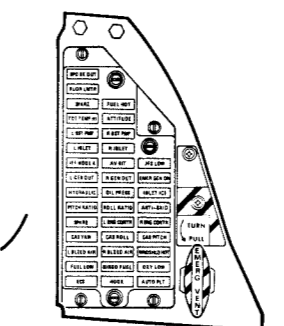
MAIN PANEL



F-15C/D 85-108 AND UP



F100-PW-220 ENGINE AIRCRAFT



F100-PW-220 ENGINE AIRCRAFT

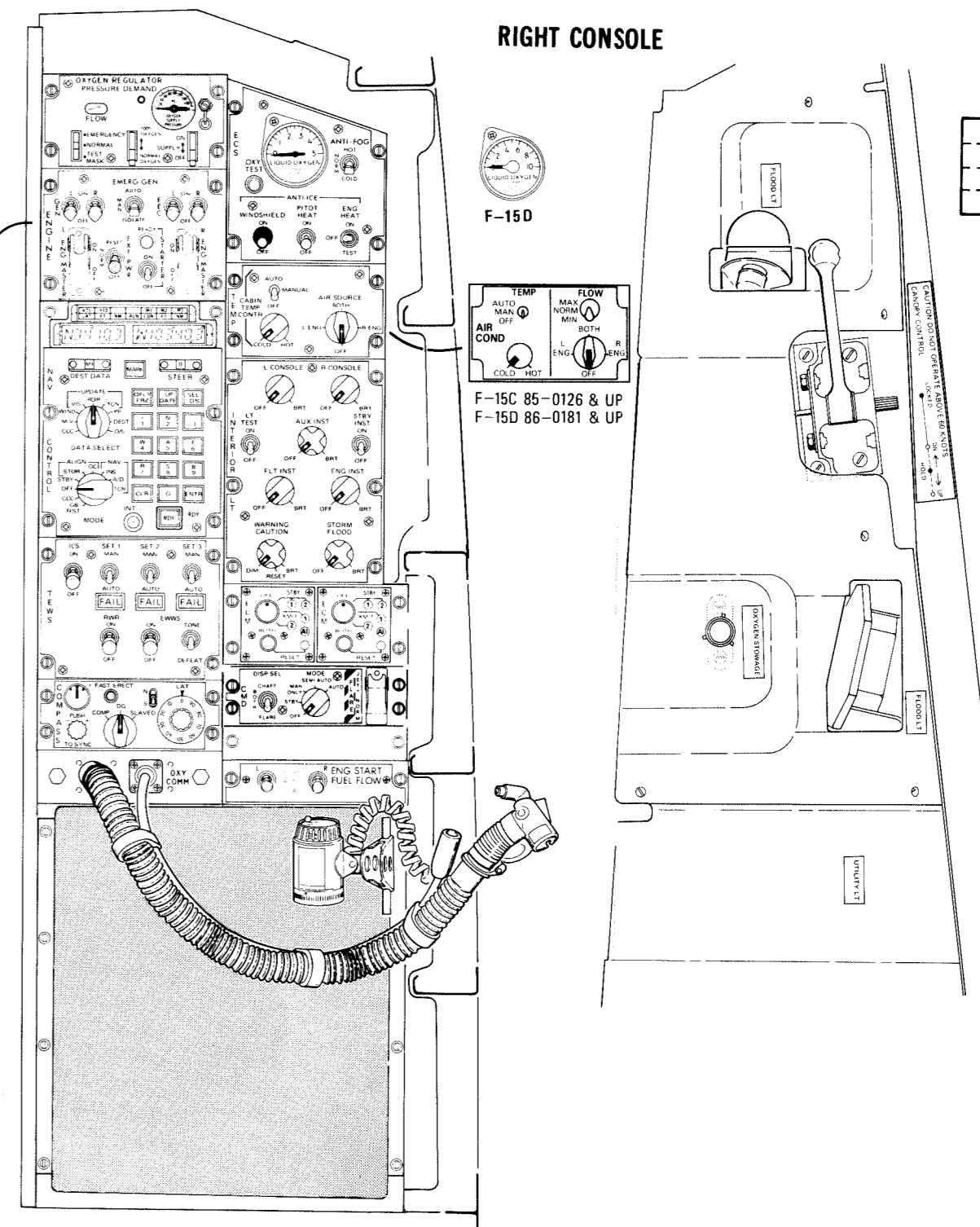
1. LOCK/SHOOT LIGHTS
2. AIR REFUELING READY LIGHT
3. STANDBY MAGNETIC COMPASS
4. HEAD UP DISPLAY COMBINING GLASS
5. HUD VIDEO AND MICP CONTROL PANEL CAMERA
6. MASTER CAUTION LIGHT
7. MAIN COMMUNICATIONS CONTROL PANEL
8. FIRE WARNING/EXTINGUISHING PANEL
9. VERTICAL SITUATION DISPLAY (VSD)
10. HEAD UP DISPLAY CONTROL PANEL
11. VIDEO TAPE RECORDER CONTROL PANEL
12. TEWS DISPLAY UNIT
13. CANOPY UNLOCKED WARNING LIGHT

14. COUNTERMEASURES DISPENSER LIGHTS
15. HYDRAULIC PRESSURE INDICATORS
16. ENGINE TACHOMETERS
17. ALTIMETER
18. FAN TURBINE INLET TEMPERATURE INDICATORS
19. ENGINE OIL PRESSURE INDICATORS
20. FUEL QUANTITY INDICATOR
21. ENGINE FUEL FLOW INDICATORS
22. VERTICAL VELOCITY INDICATOR
23. EIGHT DAY CLOCK
24. ENGINE EXHAUST NOZZLE POSITION INDICATORS
25. JET FUEL STARTER CONTROL HANDLE

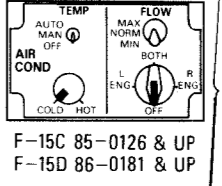
26. CABIN PRESSURE ALTIMETER
27. CAUTION LIGHTS PANEL
28. EMERGENCY VENT CONTROL HANDLE
29. CIRCUIT BREAKER PANELS
30. COCKPIT COOLING AND PRESSURIZATION OUTLET
31. STANDBY AIRSPEED INDICATOR
32. STANDBY ATTITUDE INDICATOR
33. STANDBY ALTIMETER
34. RUDDER PEDAL ADJUST RELEASE KNOB
35. MASTER MODE CONTROLS/MARKER BEACON PANEL
36. ATTITUDE DIRECTOR INDICATOR
37. EMERGENCY JETTISON BUTTON
38. STEERING MODE PANEL

39. HORIZONTAL SITUATION INDICATOR
40. EMERGENCY BRAKE/STEERING CONTROL HANDLE
41. ACCELEROMETER
42. ANGLE OF ATTACK INDICATOR
43. AIRSPEED/MACH INDICATOR
44. MULTI-PURPOSE COLOR DISPLAY (MPCD)
45. PITCH RATIO INDICATOR
46. PITCH RATIO SELECT SWITCH
47. LANDING GEAR CONTROL HANDLE
48. RADIO CALL PANEL
49. FLAP POSITION INDICATOR
50. EMERGENCY LANDING GEAR HANDLE
51. ARRESTING HOOK CONTROL SWITCH

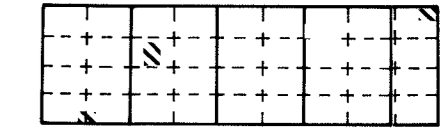
RIGHT CONSOLE



F-15D



F-15C 85-0126 & UP
F-15D 86-0181 & UP



TYPICAL

1. OXYGEN REGULATOR
2. ECS PANEL
3. TEMPERATURE/AIR CONDITIONING PANEL
4. CANOPY CONTROL HANDLE
5. INTERIOR LIGHTS CONTROL PANEL
6. TEWS POD CONTROL PANEL
7. OXYGEN HOSE STOWAGE FITTING
8. COUNTERMEASURES DISPENSER (CMD) CONTROL PANEL
9. BLANK
10. ENGINE START FUEL SWITCHES
11. UTILITY LIGHT
12. STOWAGE COMPARTMENT OXYGEN/COMMUNICATION OUTLET PANEL
13. COMPASS CONTROL PANEL
14. TEWS POWER CONTROL PANEL
15. NAVIGATION CONTROL PANEL
16. ENGINE CONTROL PANEL

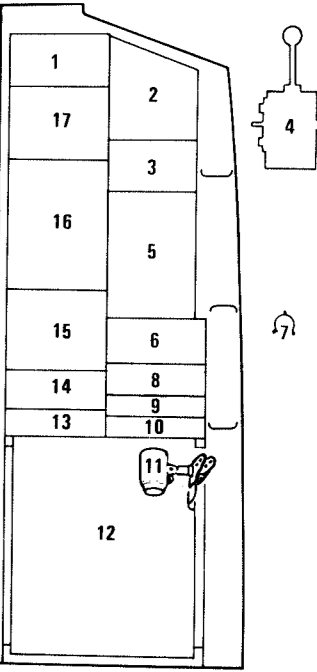
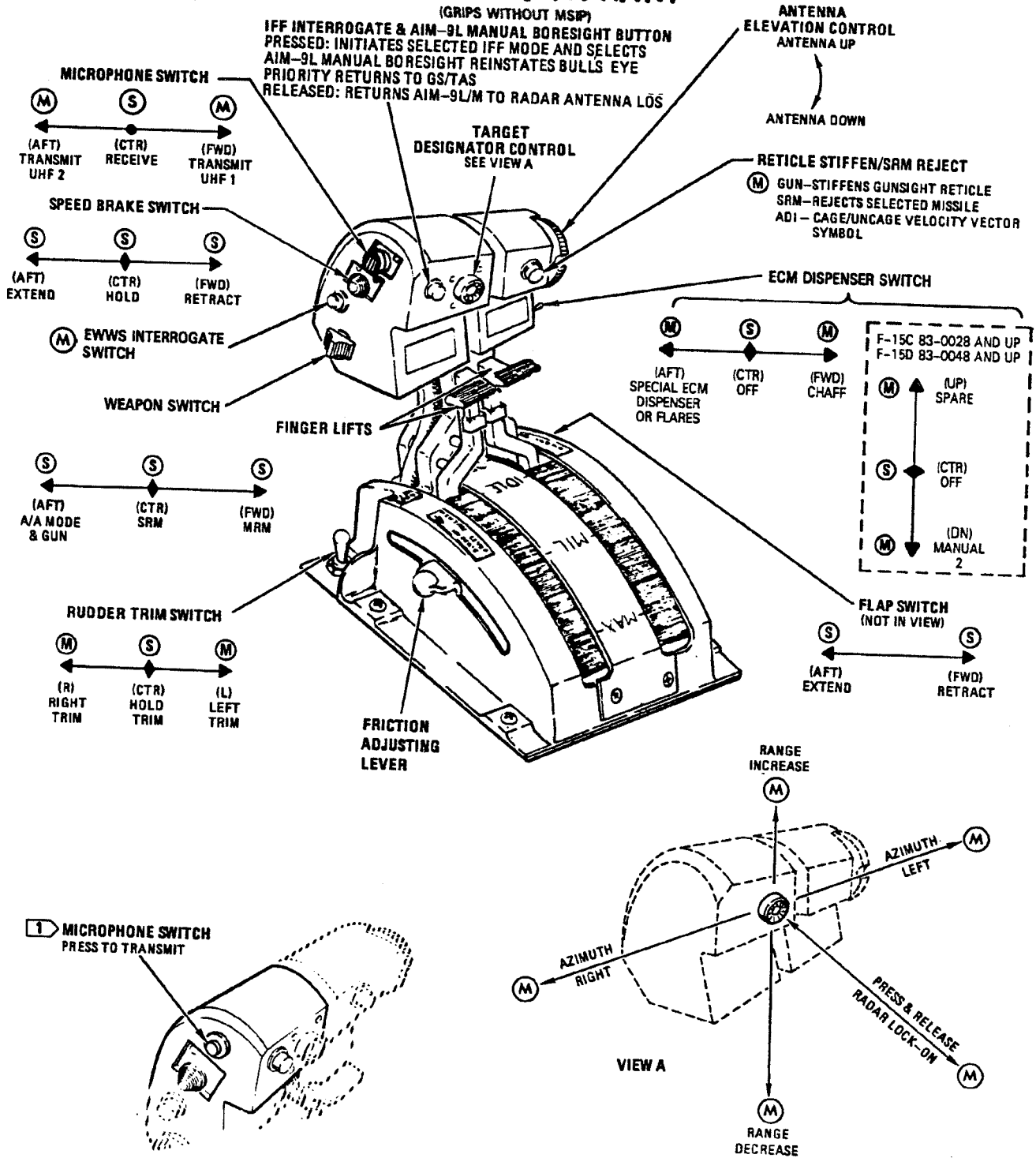


Figure FO-3

THROTTLE QUADRANT



NOTES

1 F-15A/B AIRPLANES BEFORE TO 1F-15-857

LEGEND

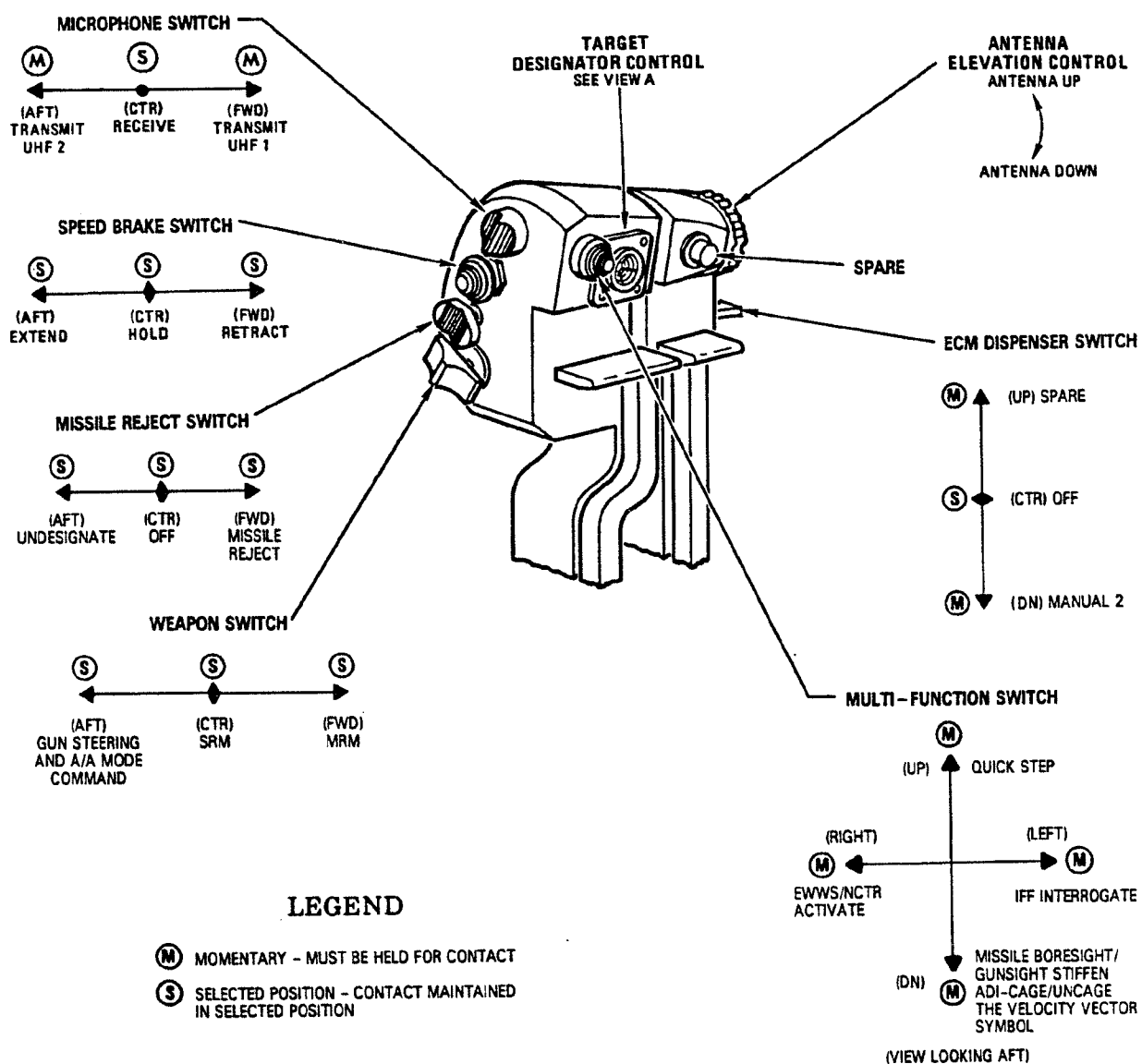
- (M) MOMENTARY-MUST BE HELD FOR CONTACT
- (S) SELECTED POSITION-CONTACT MAINTAINED IN THE SELECTED POSITION

15A-1-(108-1)L

Figure 1-2 (Sheet 1 of 2)

THROTTLE QUADRANT

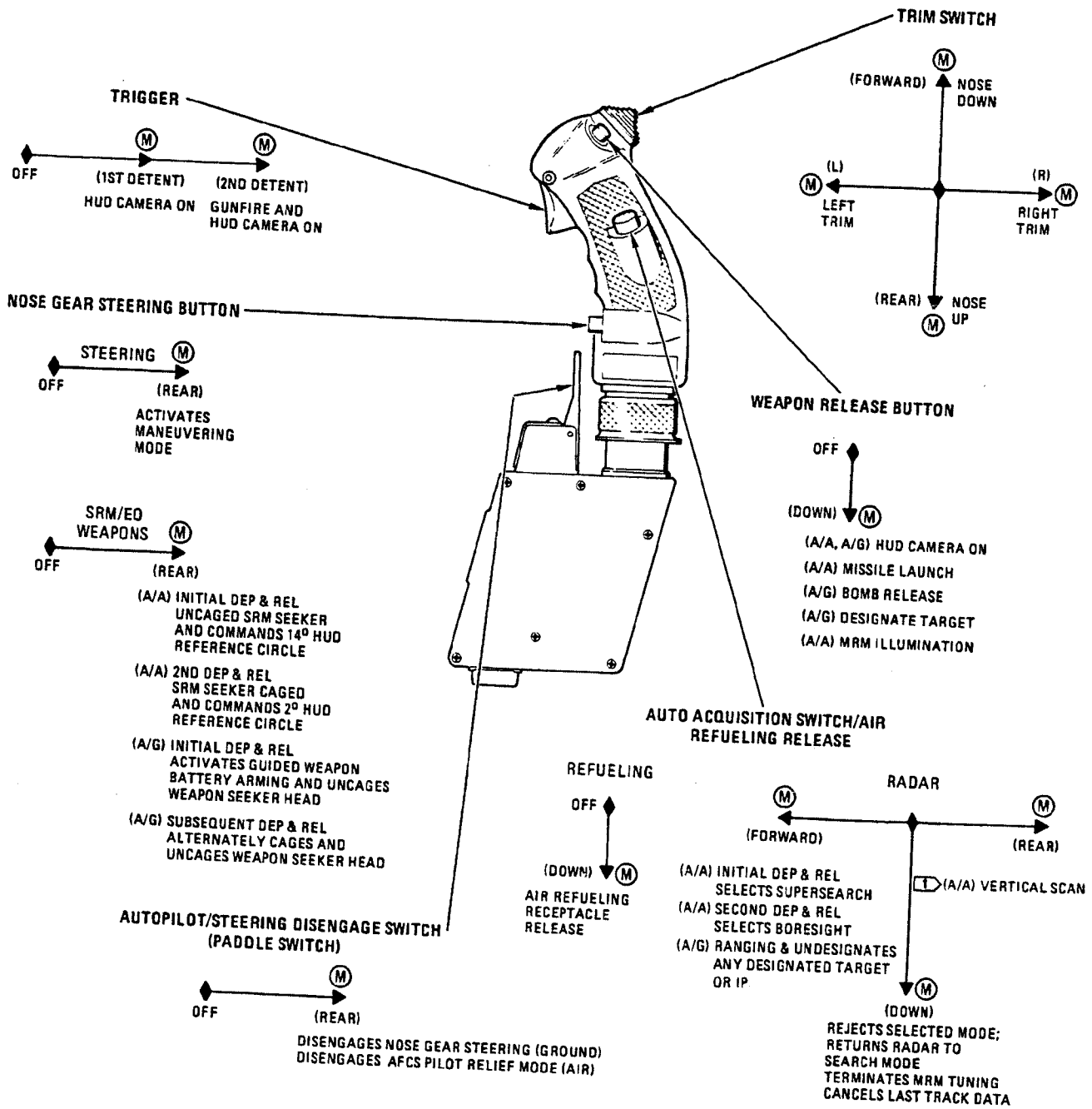
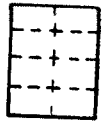
(GRIPS WITH MSIP)



15A-1-1108 2175

Figure 1-2 (Sheet 2)

CONTROL STICK

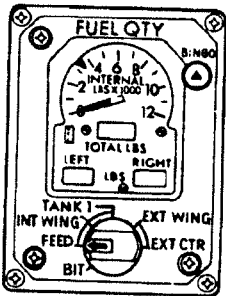


LEGEND

(M) MOMENTARY - MUST BE HELD FOR CONTACT

FUEL QUANTITIES (F-15A/B)

TANK	USABLE FUEL				
	GALLONS	JP-4		JP-8	JP-5
		POUNDS AT 6.5 LB/GAL	POUNDS AT 6.3 LB/GAL	POUNDS AT 6.7 LB/GAL	POUNDS AT 6.8 LB/GAL
TANK 1 1	508	3300 ± 100	3200 ± 100	3400 ± 100	3450 ± 100
RIGHT ENG FEED TANK	234	1500 ± 100	1500 ± 100	1550 ± 100	1590 ± 100
LEFT ENG FEED TANK	184	1200 ± 100	1150 ± 100	1250 ± 100	1250 ± 100
INTERNAL WING TANKS	L	422	2750 ± 200	2800 ± 200	2870 ± 200
	R	422	2750 ± 200	2800 ± 200	2870 ± 200
TOTAL INTERNAL FUEL	1770	11,500 ± 450	11,150 ± 450	11,850 ± 450	12,040 ± 450
EXTERNAL WING TANKS	L	610	3950 ± 250	4090 ± 250	4150 ± 250
	R	610	3950 ± 250	4090 ± 250	4150 ± 250
INTERNAL FUEL PLUS EXTERNAL WING TANKS	2990	19,400 ± 600	18,830 ± 600	20,030 ± 600	20,330 ± 600
EXTERNAL ξ TANK	610	3950 ± 250	3840 ± 250	4090 ± 250	4150 ± 250
INTERNAL FUEL PLUS EXTERNAL ξ TANK	2380	15,450 ± 500	14,990 ± 500	15,940 ± 500	16,180 ± 500
MAXIMUM FUEL LOAD TOTAL INTERNAL PLUS ALL EXTERNAL TANKS	3608	23,350 ± 650	22,670 ± 650	24,120 ± 650	24,480 ± 650

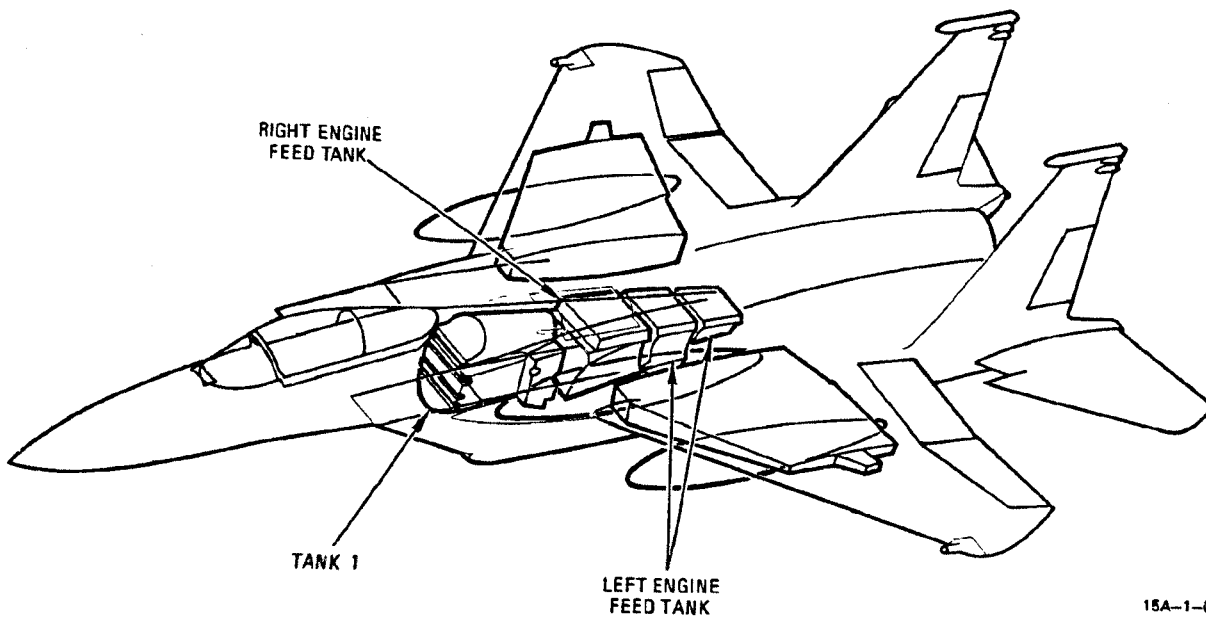


1 ON AIRCRAFT THRU 73-107
SUBTRACT APPROXIMATELY
200 POUNDS FROM THE VALUES
FOR TANK 1.

NOTES

THE FUEL QUANTITIES, IN POUNDS, ARE
ROUNDED OFF TO READABLE VALUES
OF COUNTER PORTION OF THE FUEL
QUANTITY INDICATOR; THEREFORE,
THE ACTUAL GALLONS TIME 6.5, 6.3, 6.7
OR 6.8 WILL NOT NECESSARILY AGREE
WITH THE POUNDS COLUMN.

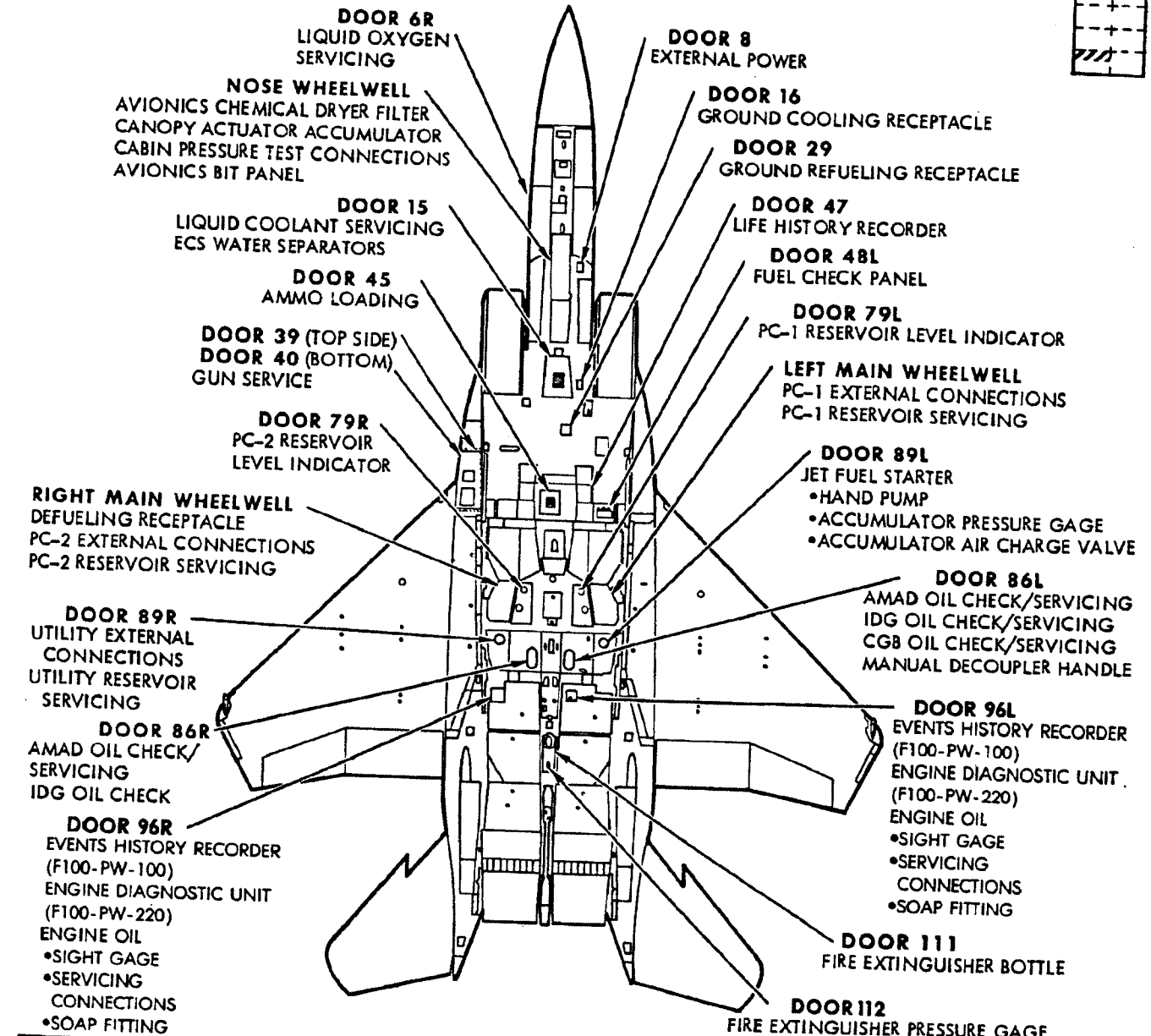
FUEL WEIGHTS ARE BASED ON JP-5 AT
6.8, JP-8 AT 6.7 AND JP-4 AT 6.5 AND
6.3 POUNDS PER GALLON (DIFFERENCES
ARE DUE TO MANUFACTURERS ALLOWABLE
TOLERANCES) AND 65 DEGREES F



15A-1-(2-1)K

Figure 1-4 (Sheet 1 of 2)

SERVICING DIAGRAM



SPECIFICATIONS		USAF	NATO
FUEL	PRIMARY	MIL-T-5624, JP-4	F-40
		MIL-T-5624, JP-5	F-43 F-44
	ALTERNATE	MIL-T-83133, JP-B	F-34
		JET A, JET A-1, JET B	F-35
EXTERNAL ELECTRICAL POWER	115 ± 15 VAC, 400 ± 30 Hz	A/M 32A-60A ONLY	
HYDRAULIC FLUID		MIL-H-5606 MIL-H-38282	H-515 H-537
OXYGEN	LIQUID	MIL-D-27210	

SPECIFICATIONS		USAF	NATO
OIL	TURBINE ENGINE		
	CENTRAL GEAR BOX		
	INTEGRATED DRIVE GENERATOR	MIL-L-7808 (NO ALTERNATE)	D-148
	AMAD		
NITROGEN	GASEOUS	BB-N-411 GRADE A, TYPE I OR II	
OIL	M61A1 GUN	MIL-L-46000	
EXTINGUISHING AGENT	FIRE EXTINGUISHER BOTTLE	HALON-1301	

Figure 1-22

FLIGHT CONTROLS

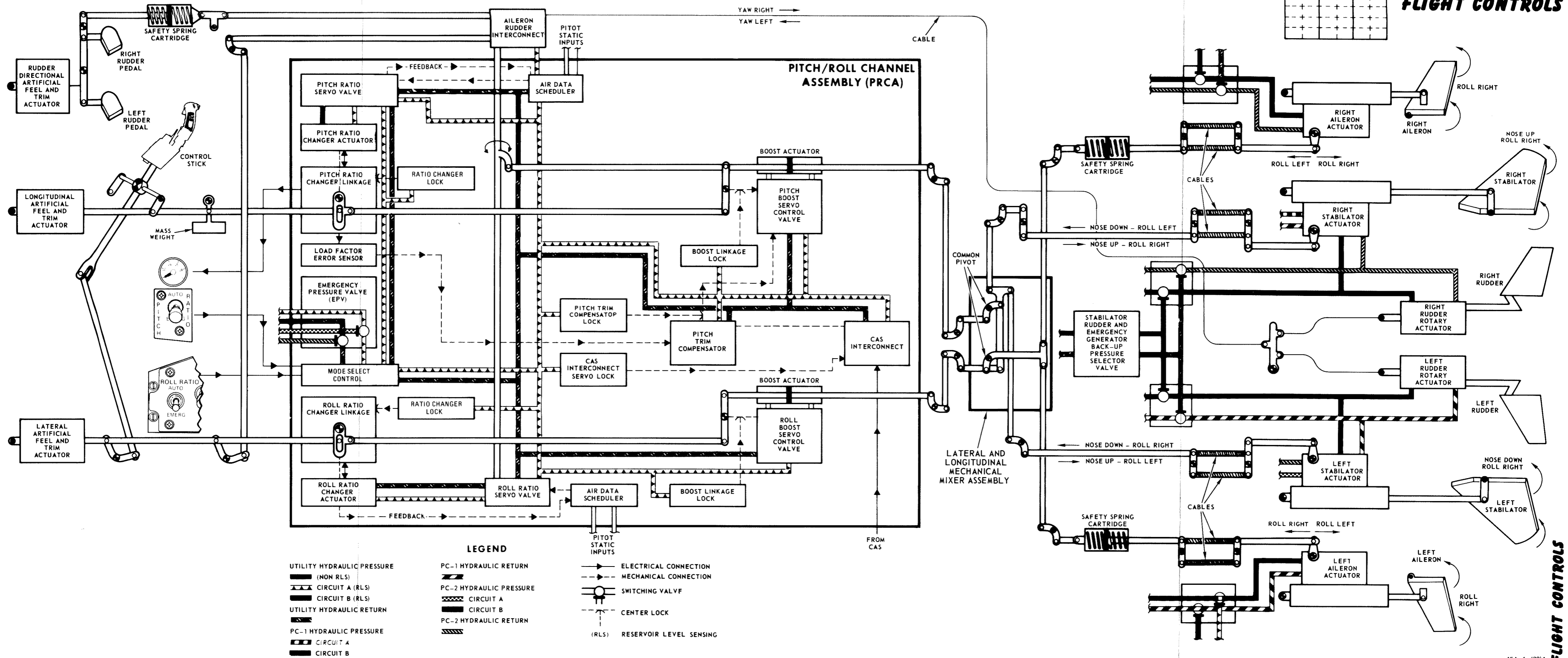
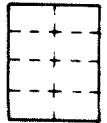
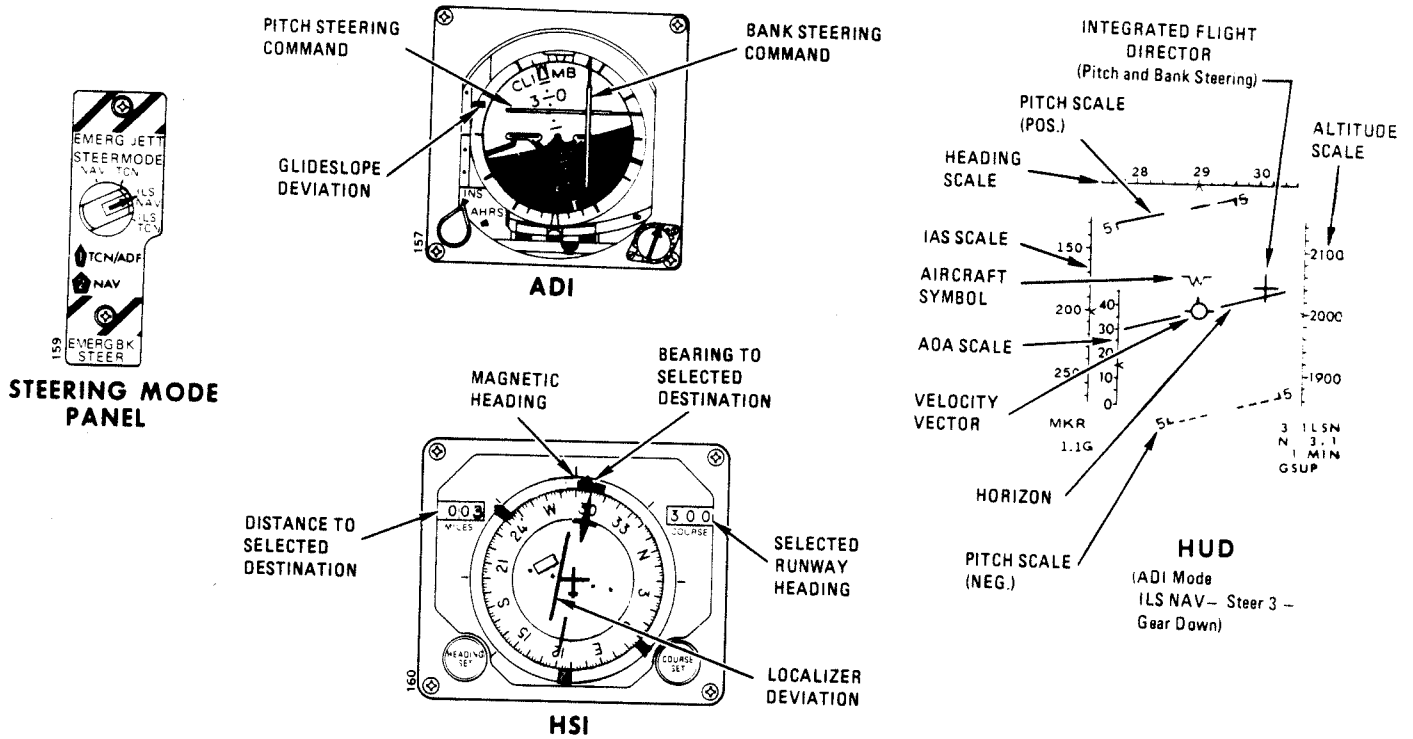


Figure FO-8

ILS/NAV AND ILS/TACAN MODE DISPLAYS



ILS/NAV



ILS/TACAN

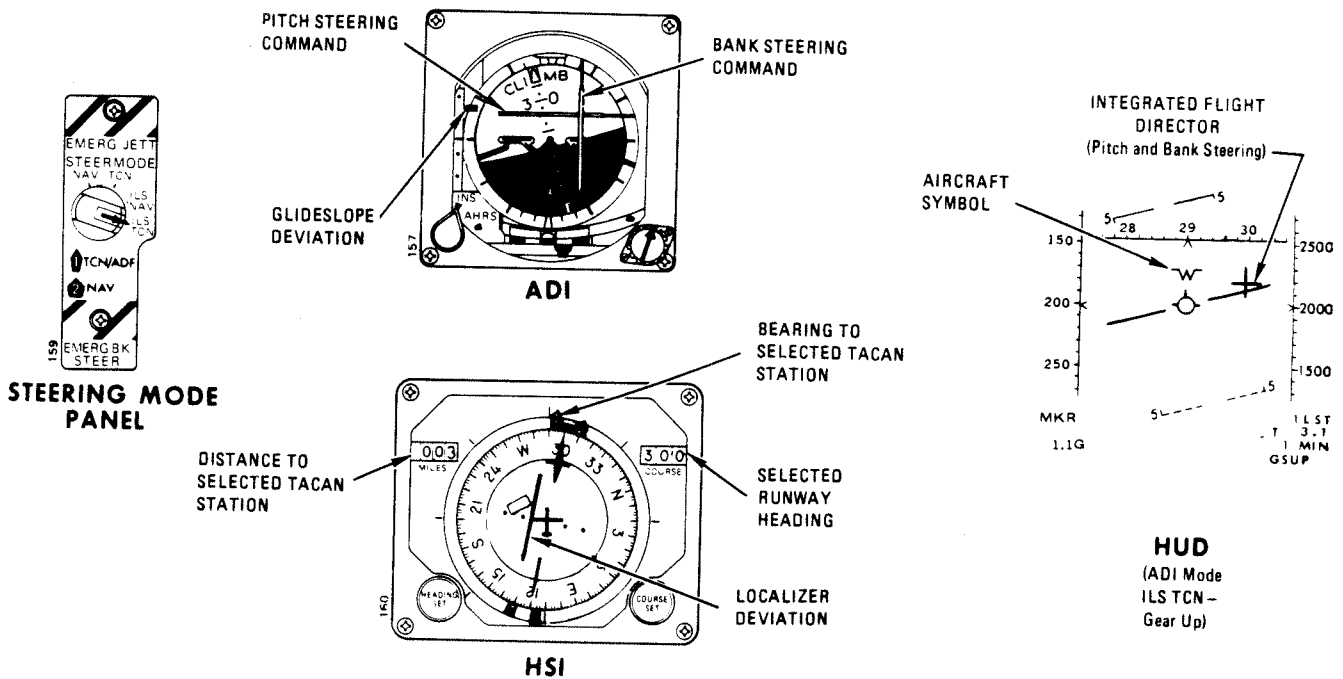


Figure 1-18

MULTI-PURPOSE COLOR DISPLAY (MPCD) CONTROL PANEL

(MENU DISPLAY SELECTED)

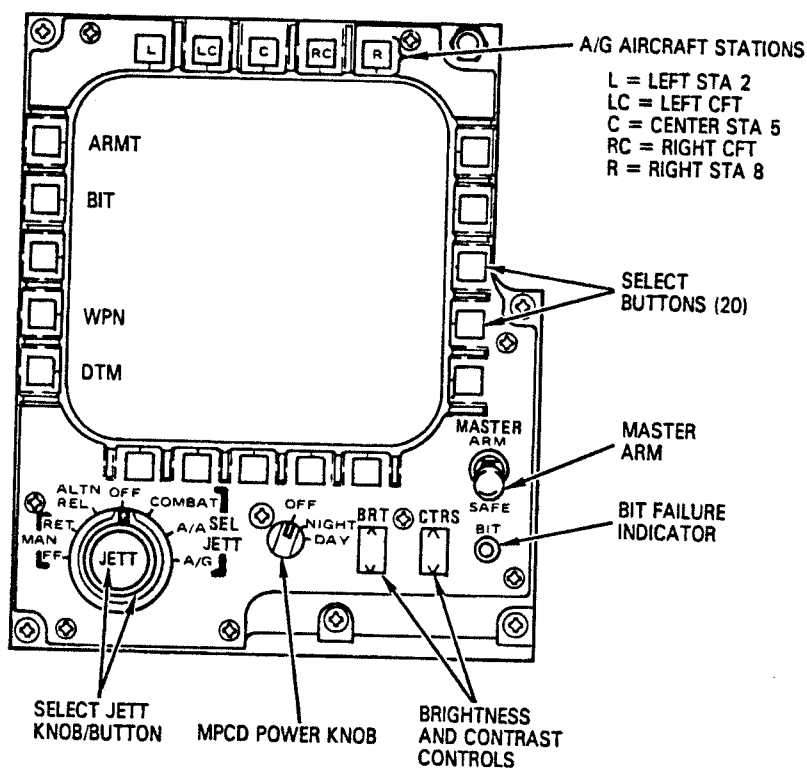


Figure 1-15

15A-1-(232)

the unit is lost, if there is a loss of synchro signal to the pitch or roll servo, if there exists an excessive servo error, or if the ADI is receiving an invalid signal.

HORIZONTAL SITUATION INDICATOR (HSI)

The HSI (figure 1-16) provides a horizontal or plan view of the aircraft with respect to the navigation situation. The aircraft symbol in the center of the HSI is the airplane superimposed on a compass rose. The compass card rotates so that the aircraft heading is always under the top of the lubber line. Index marks are provided every 45° around the perimeter of the compass card. Four modes of navigational operation are displayed on the HSI. These modes are selected by the steering mode knob (see figure 1-17).

Steering Mode Panel

The steering mode panel is on the main instrument panel, adjacent to the ADI. The panel contains a steering mode knob which selects the source of information or mode to be displayed on the HSI, ADI, and HUD (with ADI master mode selected) as shown in figures 1-17 and 1-18.

NAV	Selects navigation computer mode.
TCN	Selects tacan mode.
ILS/NAV	Selects ILS with navigation information displayed.
ILS/TCN	Selects ILS with tacan information displayed.

OVERLOAD WARNING SYSTEM SEVERITY CODE DISPLAY

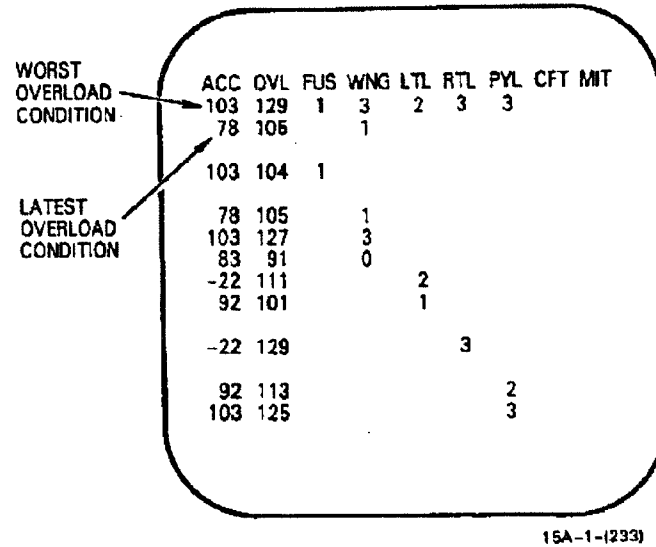


Figure 1-11

- 1. ACC- Normal acceleration load factor. This is a two or three digit number with a decimal before the last digit understood (e.g., 92 is read as 9.2g).
- 2. OVL - Percentage of overload expressed as a whole percentage. The percent overload is related to the component severity code as follows:
 - a. FUS - Fuselage
 - b. WNG - Wing
 - c. LTL - Left tail
 - d. RTL - Right tail
 - e. PYL - Pylon
 - f. CFT - Conformal fuel tanks
 - g. MIT - Mass items

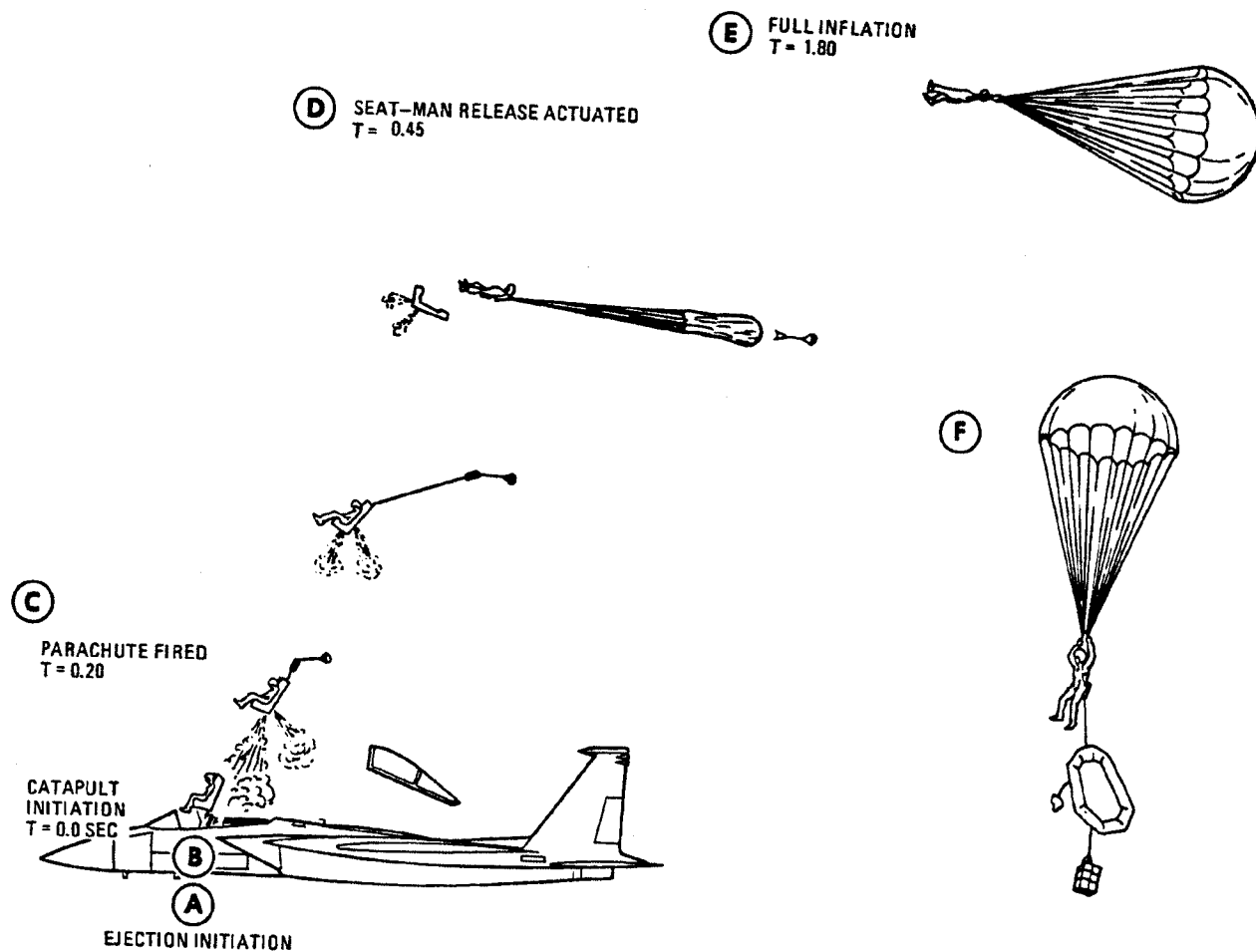
%OVL	SEVERITY CODE LEVEL
0% - 100%	0
101% - 110%	1
111% - 120%	2
121% - 130%	3
131% - 140%	4
141% and above	5

The first line of the display shows the worst (highest) overload condition recorded during the flight. The second line is the latest overload condition encountered. Subsequent lines display overload percentages and severity codes for the listed components. This information is used to determine the required maintenance action. An overload value of exactly 100 will cause a 0 to be displayed, but a value of 100 plus .01 will cause the percent overload value to increase to 101 and cause a 1 to be displayed. All applicable inspections are based on severity codes and not percent overload, which is displayed for information only.

Moving the DATA SELECT knob out of CCC or the DEST DATA out of M2 will return the normal display to the VSD. Stored entries equal to or less than 100% are automatically removed from the CC when the NCI mode switch is moved from ALIGN to NAV. Overloads over 100% latch indicator 72 on the avionics status panel (ASP) and can only be cleared

ACES II EJECTION SEQUENCES

MODE 1 OPERATION 150 KNOTS

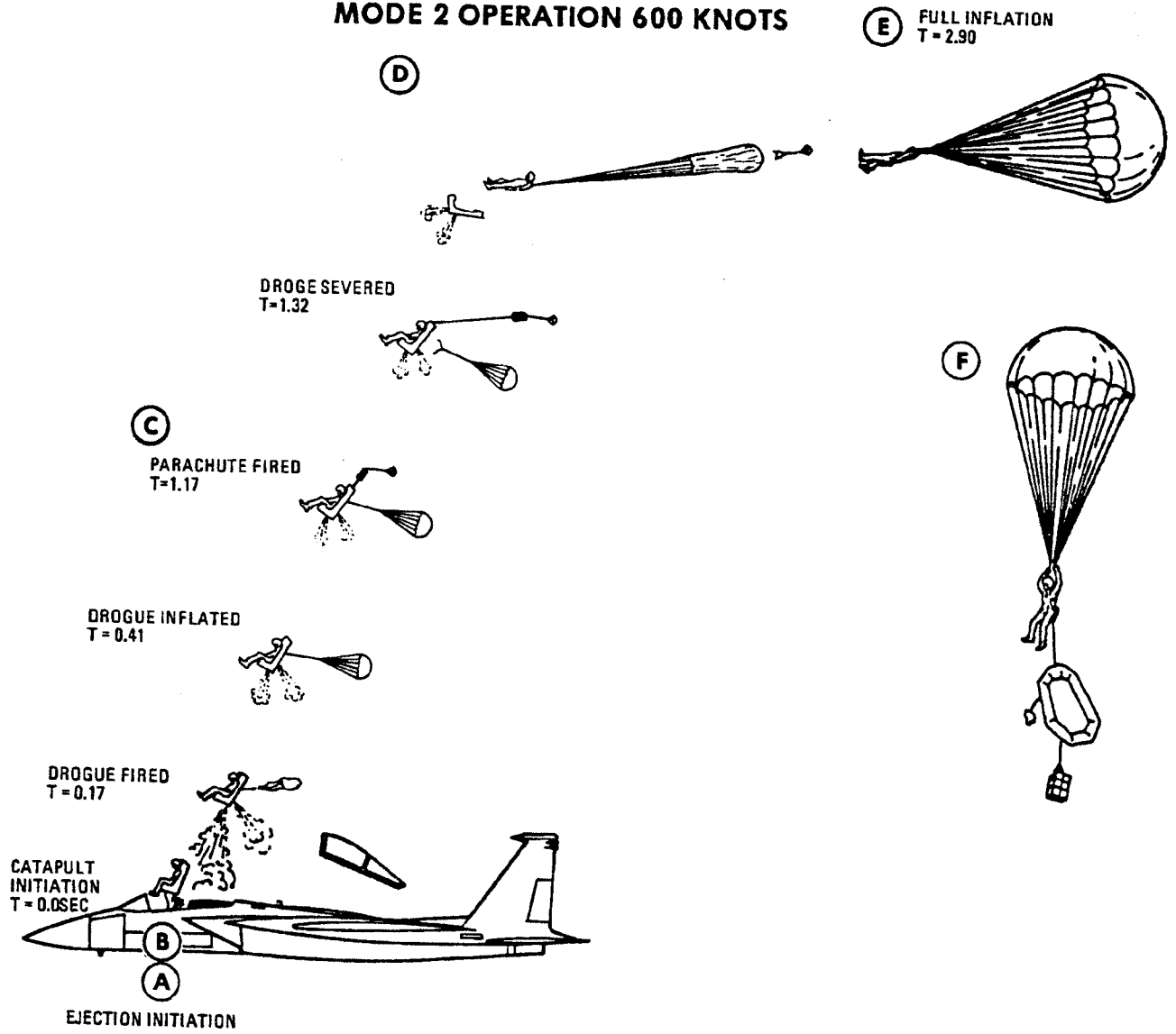


- (A)** EJECTION CONTROL HANDLE PULLED TO ACTUATE SEAT-MOUNTED GAS INITIATOR AND:
- POWERED INERTIA REEL RETRACTS SHOULDER STRAPS
 - CANOPY REMOVER FIRES.
 - CANOPY JETTISONS AND PULLS LANYARD TO FIRE CANOPY ACTUATED INITIATOR.
 - IFF SWITCH ACTUATED.
- (B)** ROCKET CATAPULT FIRES, SEAT MOVES UP RAILS AND:
- RECOVERY SEQUENCER POWER SUPPLY ENERGIZED.
 - COMMUNICATIONS AND SHIPS OXYGEN LINES DISCONNECT.
 - EMERGENCY OXYGEN IS TRIPPED.
 - RECOVERY SEQUENCER SWITCH TRIPPED BY STRIKER PLATE.
 - STAPAC PITCH CONTROL SYSTEM INITIATED.

- (C)** PARACHUTE DEPLOYMENT MORTAR FIRES AS SEAT CLEARS AIRCRAFT.
- (D)** RECOVERY SEQUENCER INITIATES HARNESS RELEASE ACTUATOR AND:
- A. LAP BELT AND SHOULDER HARNESS STRAPS RELEASE FROM SEAT STRUCTURE.
 - B. PILOT IS SEPARATED FROM SEAT.
 - C. RADIO BEACON INITIATED (IF AUTO SELECTED).
- (E)** PARACHUTE FULLY INFLATED
- (F)** SURVIVAL KIT DEPLOYED (PROVIDED AUTO SELECTED ON DEPLOYMENT SELECTOR)

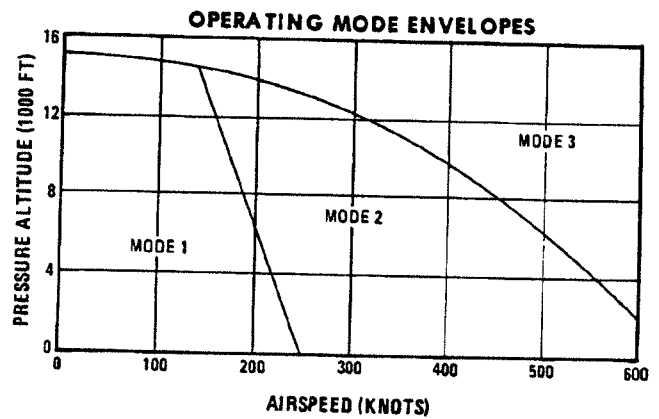
EJECTION SEQUENCES

MODE 2 OPERATION 600 KNOTS



NOTE

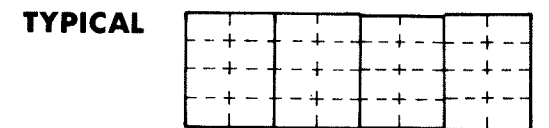
- TIMES INDICATED ARE AFTER CATAPULT FIRING. TO DETERMINE TOTAL TIME, A TIME FACTOR FOR THE PERIOD BETWEEN EJECTION HANDLE INITIATION AND CATAPULT FIRING MUST BE ADDED TO THE FIGURES SHOWN. THIS TIME INTERVAL REPRESENTS ESSENTIALLY THE TIME IT TAKES TO REMOVE THE CANOPY AFTER THE EJECTION HANDLE IS PULLED, AND IS APPROXIMATELY 0.3 SECONDS AT ZERO AIRSPEED AND BECOMES SLIGHTLY LESS AS AIRSPEED INCREASES. THERE IS AN ADDITIONAL DELAY OF 0.4 SECONDS BETWEEN REAR AND FRONT SEAT FIRING IN F-15B/D.
- IN MODE 3, WHICH IS DESIGNED FOR HIGH ALTITUDE CONDITIONS, THE DROGUE IS DEPLOYED AS IN MODE 2, BUT MAN-SEAT SEPARATION AND DEPLOYMENT OF THE PARACHUTE ARE DELAYED UNTIL THE PROPER ALTITUDE IS ENCOUNTERED.



15A-1-(1134-2)B

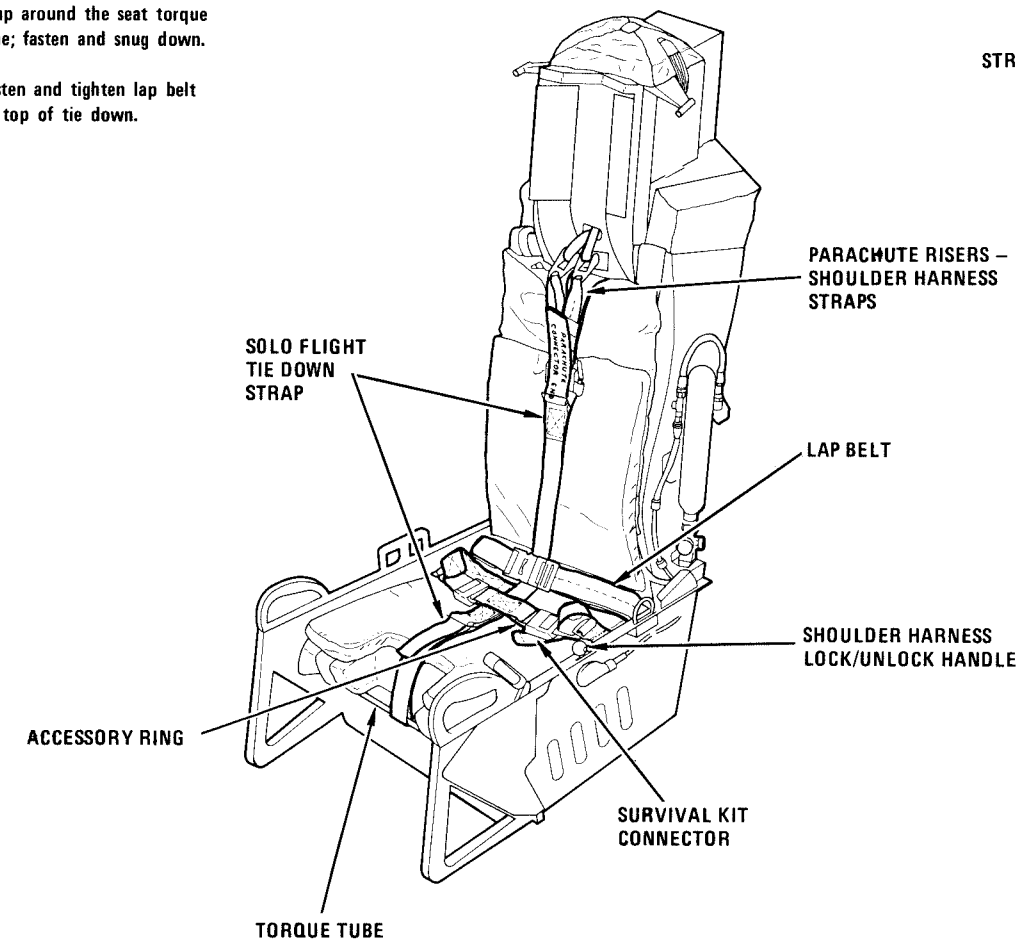
Figure 1-9 (Sheet 2)

EJECTION SEAT



TIE DOWN PROCEDURE

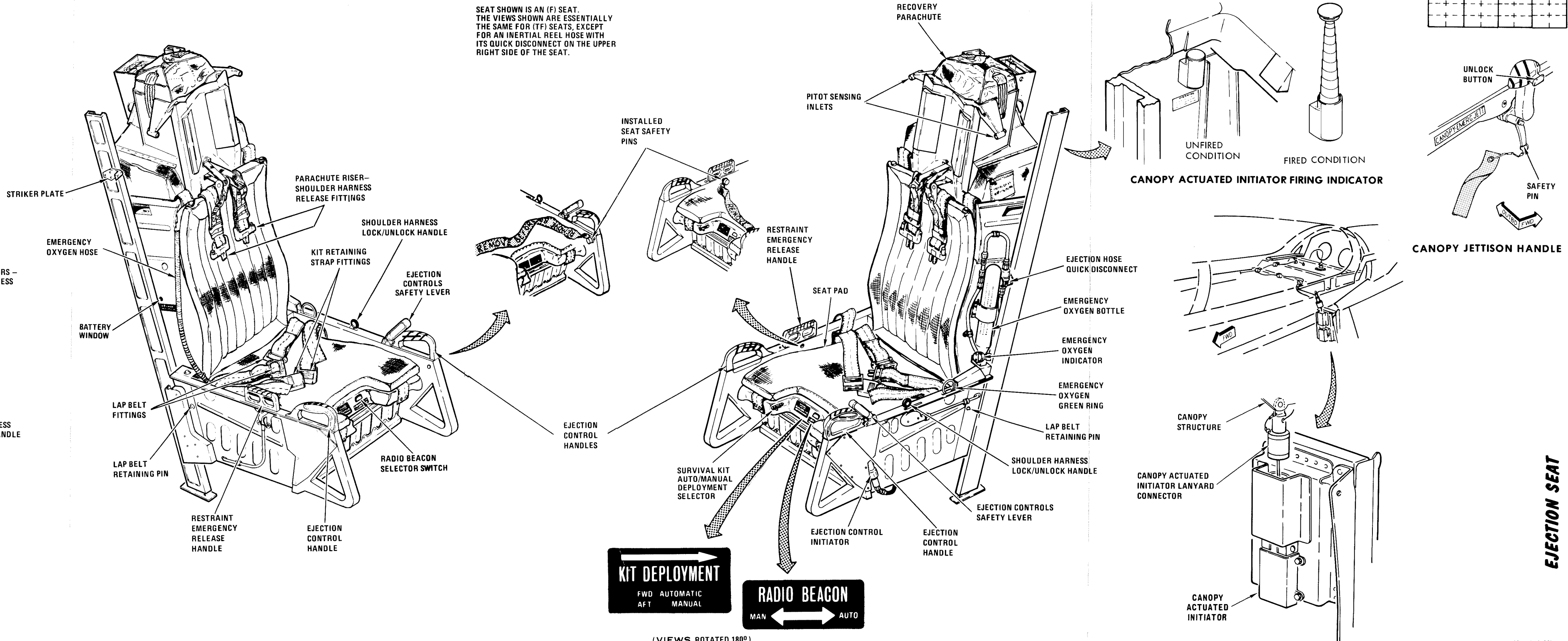
1. After orienting the strap end labeled **PARACHUTE CONNECTOR END** toward top of seat, attach accessory rings to survival kit; center and tighten straps.
2. Install strap end labeled **PARACHUTE CONNECTOR END** through both parachute/shoulder harness connectors; buckle and fully tighten strap with the shoulder harness lock/unlock handle in forward position.
3. Loop the lower end of the strap around the seat torque tube; fasten and snug down.
4. Fasten and tighten lap belt on top of tie down.



SOLO FLIGHT TIE DOWN STRAP INSTALLATION

NOTE

SEAT SHOWN IS AN (F) SEAT. THE VIEWS SHOWN ARE ESSENTIALLY THE SAME FOR (TF) SEATS, EXCEPT FOR AN INERTIAL REEL HOSE WITH ITS QUICK DISCONNECT ON THE UPPER RIGHT SIDE OF THE SEAT.



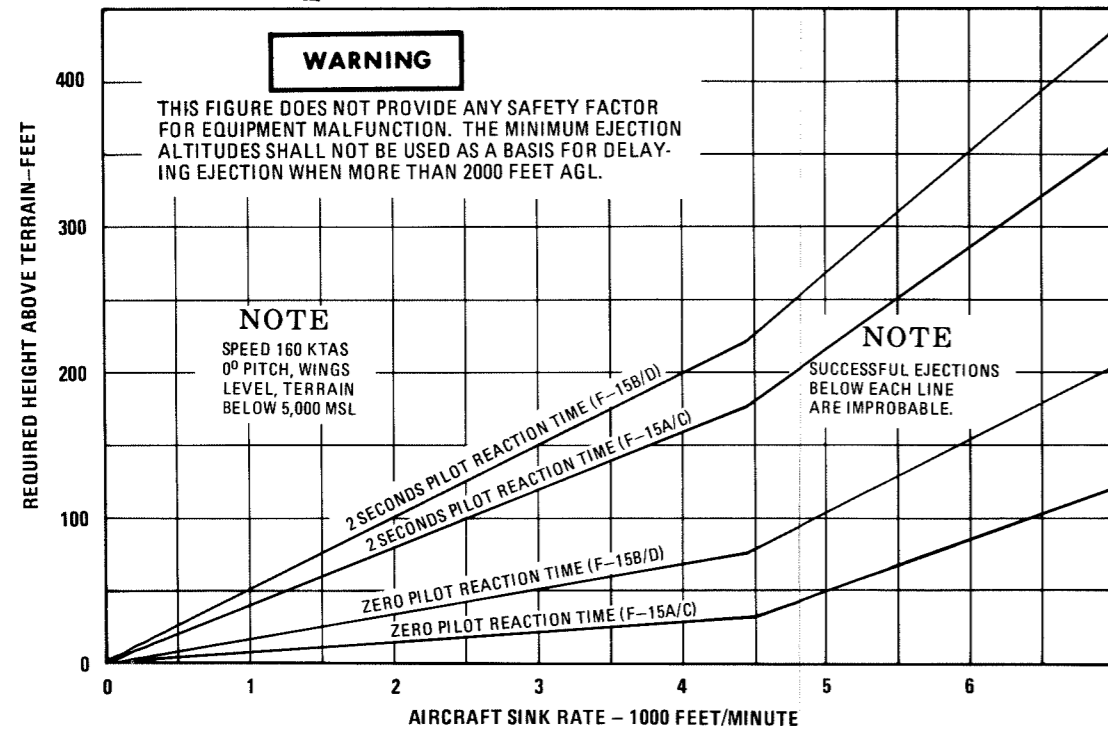
(VIEWS ROTATED 180°)

Figure FO-9

EJECTION SEAT PERFORMANCE CHARTS

MINIMUM EJECTION ALTITUDE VS. SINK RATE

F-15A/C AND F-15B/D EJECTION SEATS



MINIMUM EJECTION ALTITUDE FOR SELECTED FLIGHT CONDITIONS

FLIGHT CONDITIONS	F-15A/C MINIMUM EJECTION ALT (FEET)	F-15B/D MINIMUM EJECTION ALT (FEET)
ZERO SPEED, ZERO ALTITUDE - (CANOPY MUST BE CLOSED AND LOCKED OR COMPLETELY SEPARATED)	0	0
120 KNOTS, 0° PITCH, 60° BANK ¹	0	0 ²
600 KNOTS, 0° PITCH, 0° BANK	0	0
150 KNOTS, 0° PITCH, 180° BANK	280	280
150 KNOTS, 0° PITCH, 0° BANK, 10,000 FPM SINK RATE	240	360
200 KNOTS, -60° PITCH, 0° BANK	600	810
450 KNOTS, -30° PITCH, 0° BANK	570	880
200 KNOTS, -60° PITCH, 60° BANK	650	860 ²
250 KNOTS, -45° PITCH, 180° BANK	780	1000

¹ FOR THIS CASE, IMPACT OCCURS AT THE INSTANT OF SEAT/AIRCRAFT SEPARATION. IN ALL OTHER CASES, CONDITIONS ARE AT SYSTEM INITIATION.

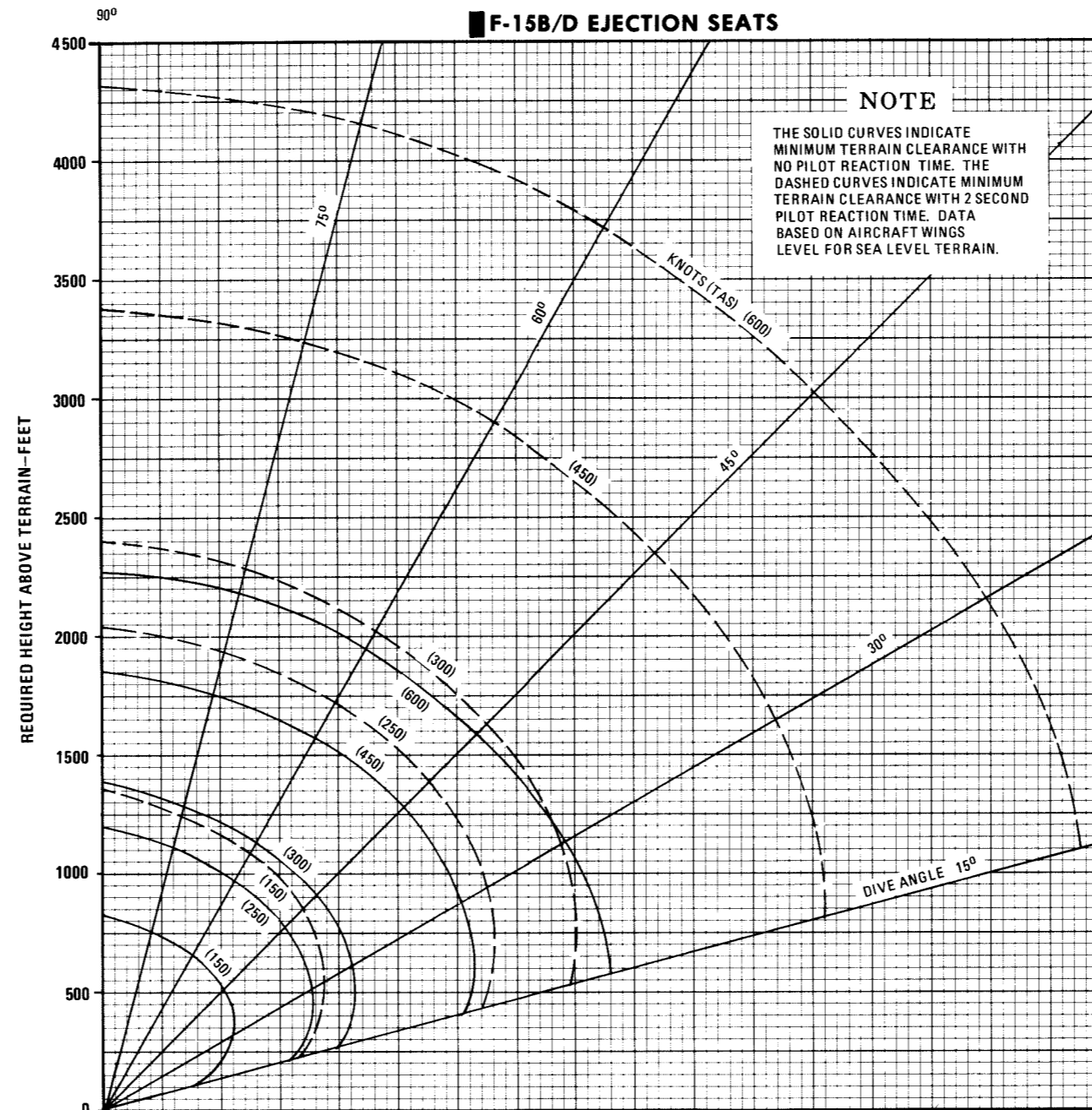
² FOR THESE CASES, RECOVERY PERFORMANCE IS BASED ON THE MOST CRITICAL (FRONT SEAT) ROLL/SEAT TRAJECTORY COMBINATION.

WARNING

THE FIGURE DOES NOT PROVIDE ANY SAFETY FACTOR FOR EQUIPMENT MALFUNCTION OR PILOT REACTION TIME. THE ABOVE MINIMUM EJECTION ALTITUDES SHALL NOT BE USED AS THE BASIS FOR DELAYING EJECTION MORE THAN 2000 FEET AGL.

MINIMUM EJECTION ALTITUDE VS. AIRSPEED AND DIVE ANGLE

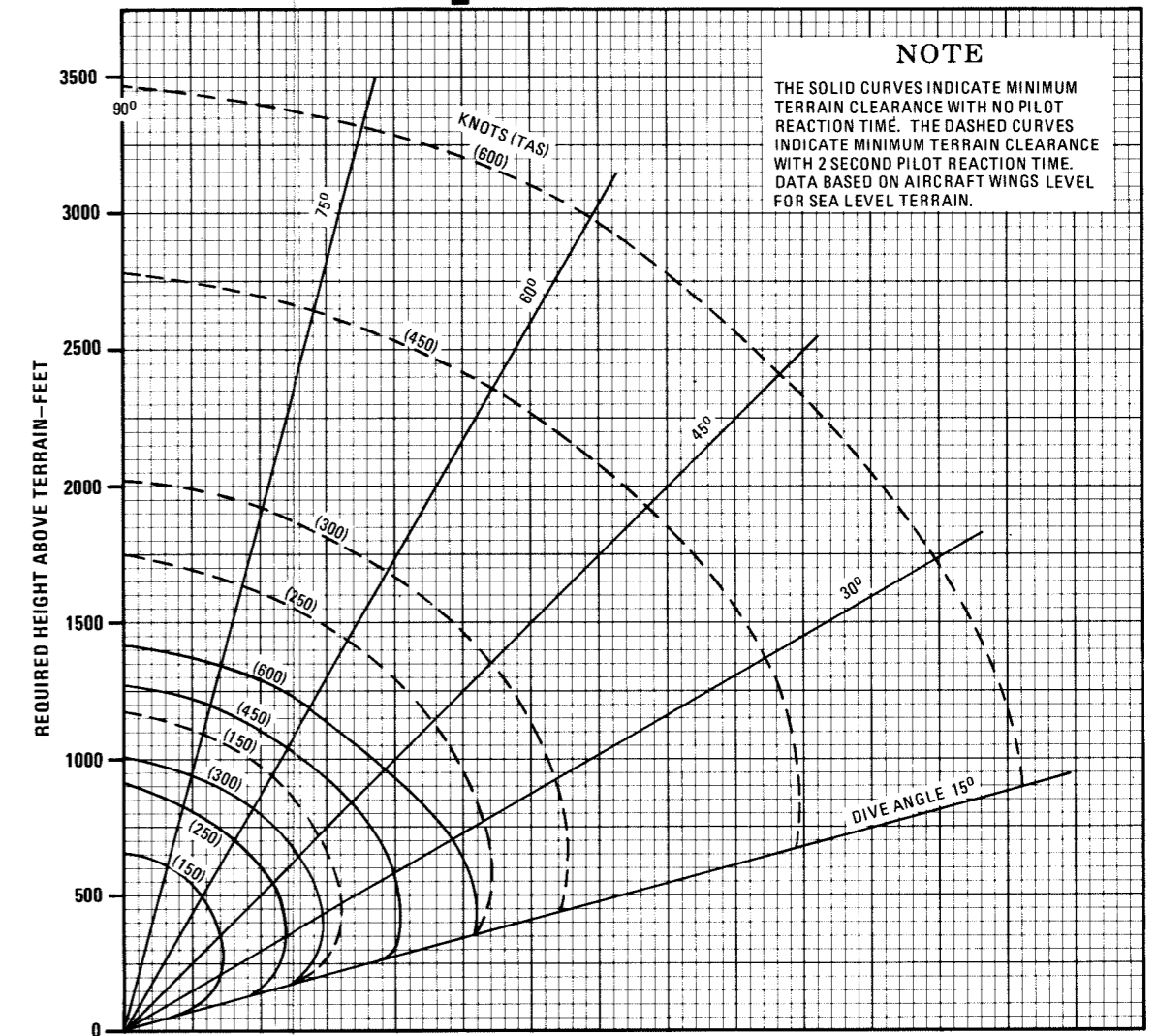
F-15B/D EJECTION SEATS



WARNING

THE FIGURE DOES NOT PROVIDE ANY SAFETY FACTOR FOR EQUIPMENT MALFUNCTION. THE ABOVE MINIMUM EJECTION ALTITUDES SHALL NOT BE USED AS THE BASIS FOR DELAYING EJECTION WHEN MORE THAN 2000 FEET AGL.

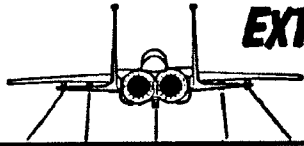
F-15A/C EJECTION SEAT



WARNING

THE FIGURE DOES NOT PROVIDE ANY SAFETY FACTOR FOR EQUIPMENT MALFUNCTION. THE ABOVE MINIMUM EJECTION ALTITUDES SHALL NOT BE USED AS THE BASIS FOR DELAYING EJECTION WHEN MORE THAN 2000 FEET AGL.

Figure FO-10



EXTERNAL STORES LIMITATIONS WITHOUT CFT

WEIGHTS INCLUDE
SUSPENSION EQUIPMENT

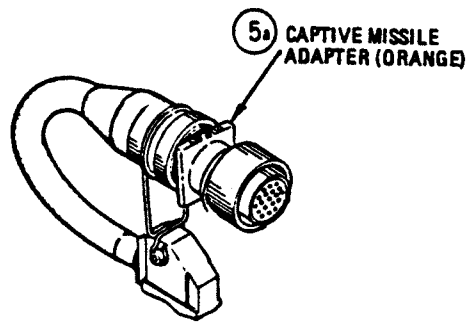
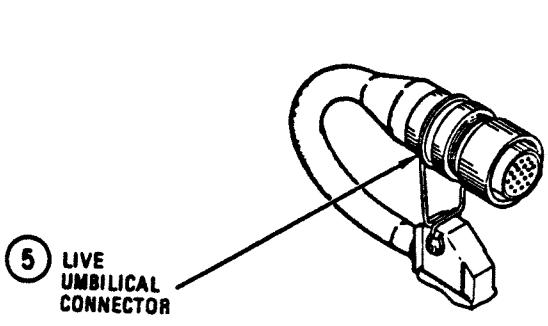
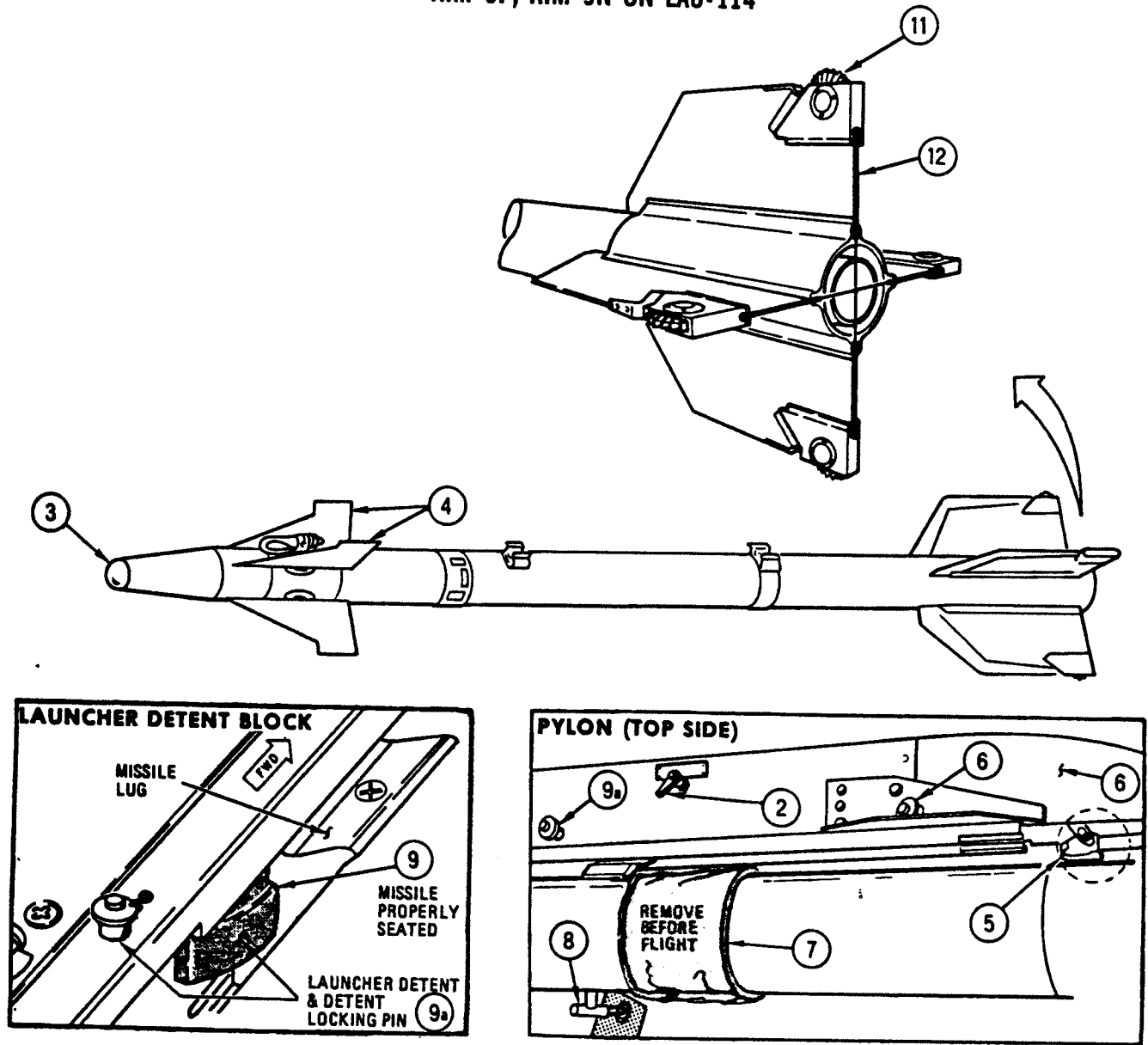
NA - NOT APPLICABLE
NE - NOT ESTABLISHED
BAL - BASIC AIRCRAFT LIMITS

STORE	LINE NUMBER	STATION LOADING AND SUSPENSION					MAXIMUM KCAS OR IMN WHICHEVER IS LESS			ACCELERATION-G				MAX DIVE FOR DEL	STORES CONFIGURATION WEIGHT LBS	REMARKS		
							CARRIAGE	EMPLOY - MENT	JETTISON	CARRIAGE		EMPLOY - MENT	JETTISON					
										SYM	UNSYM							
1	2	5	8	9														
AIM-9P AIM-9P-1 Missiles	1		✖ ① ② ③ ④		✖ ① ② ③ ④				BAL	BAL	600 2.3 ⑤	BAL	BAL	-0.5 to +7.33	+0.5 to +2.0 ⑤	NA	1686 ⑥	① Combined carriage between line numbers 1, 2, & 3 is prohibited. ② Adapters without launchers authorized if covers installed. ③ USAF approved dacron cord fix to prevent rolleron uncaging is mandatory on AIM-9P series missiles. ④ Wings without rollerons, guide vanes dampers, and cager assemblies may be used on the CATM-9L/M training missile if all four wings have these parts removed. ⑤ Jettison limit is for pylon jettison only. ⑥ Subtract 690 pounds from stores configuration weight and 6.6 from total drag index if other inboard pylon mounted stores are loaded.
AIM-9P-2 AIM-9P-4 Missiles	2															1726 ⑥		
AIM-9L CATM-9L/M-1 CATM-9L/M-2 AIM-9M Missiles	3															1786 ⑥		
		NOTE: AIM-9 series missiles may be carried with any combination loading on stations 2, 5, & 8.																
AIM-7F AIM-7M Missiles	4	MISSILE STATIONS 3 4 6 7 FWD ✖ ✖ ✖ ✖ AFT ✖ ✖ ✖ ✖					BAL ⑦	150 TO 800 2.3	1.0 ⑧	BAL	BAL	-0.5 to +7.33	+0.5 to +3.0 ⑧	NA	2040	⑦ Carriage of dummy training missile prohibited ⑧ Jettison between 250-350 knots, 1g, when tanks or AG weapons on stations 2 & 8. <div style="border: 1px solid black; padding: 5px; text-align: center; font-weight: bold;">CAUTION</div> <ul style="list-style-type: none"> ● With tanks or AG weapons on stations 2 or 8 employment of aft AIM-7 missiles is prohibited within the following parameters: <ul style="list-style-type: none"> a. At or below 1g. b. At or below 2g below 18,000 feet and above 465 knots. ● An aft missile will not be free of possible wing store interference until about 1 1/2 seconds after pressing the weapon release button. 		
NOTE: AIM-7 series missiles may be carried with any combination loading on stations 2, 5, & 8.																		
SUU-60/A C _L Pylon	5								BAL	NA	700 1.4	BAL	BAL	NA	+0.5 to +2.0	NA	296	
SUU-59/A Inboard Pylon	6								BAL	NA	1.0	BAL	BAL	NA	+0.5 to +2.0	NA	690	
SUU-60A SUU-59A	7								BAL	NA	1.0	BAL	BAL	NA	+0.5 to +2.0	NA	886	

Figure 5-7(Sheet 1 of 36)

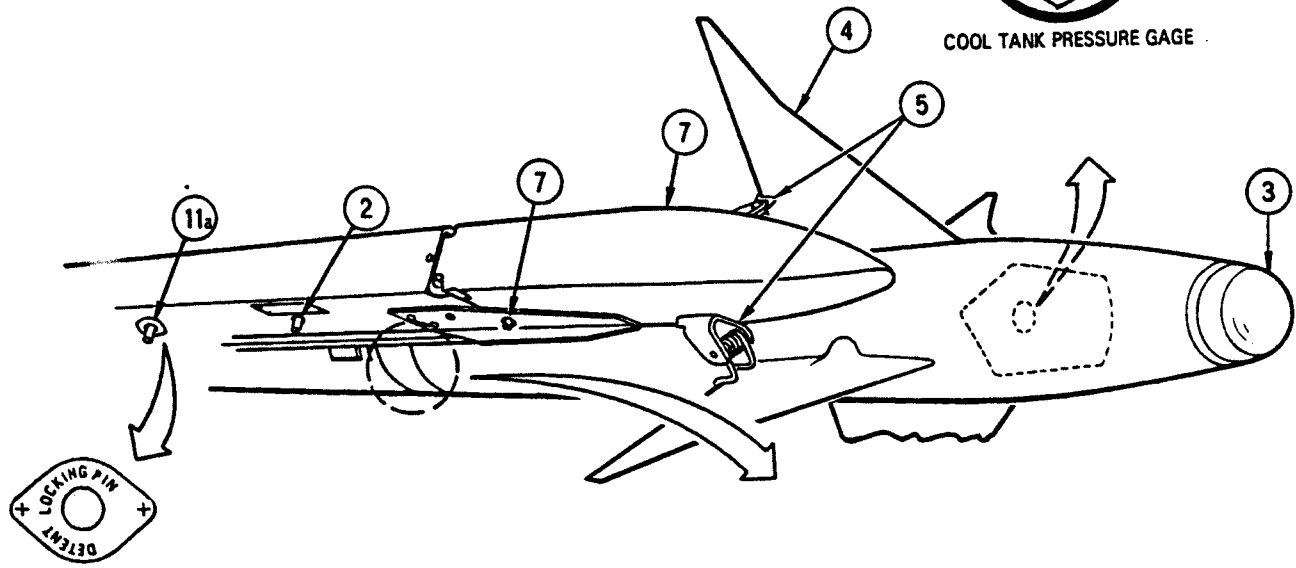
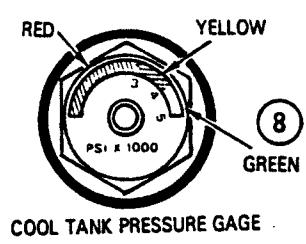
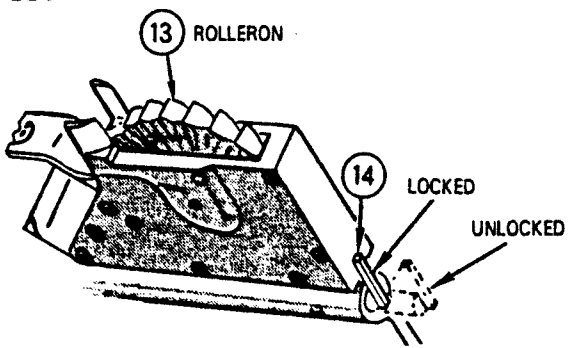
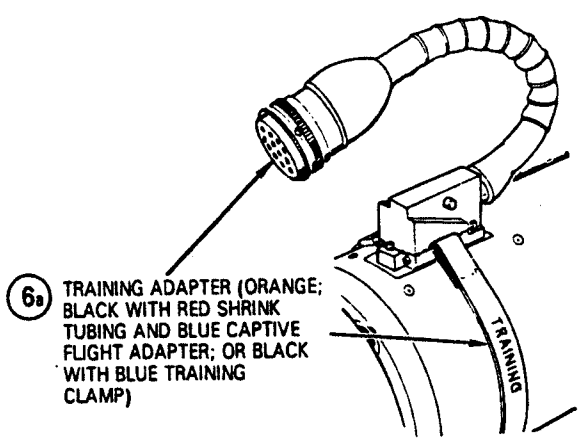
15A-1-117-1/75

EXTERIOR INSPECTION (Continued)
AIM-9P, AIM-9N ON LAU-114

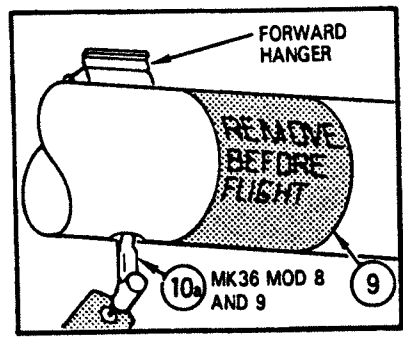
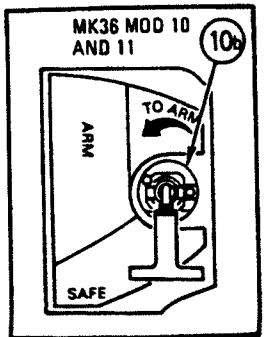
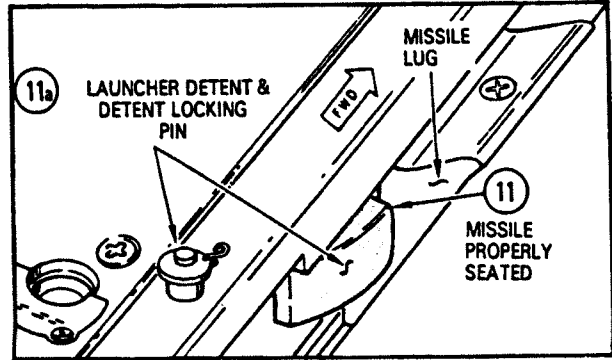


EXTERIOR INSPECTION (Continued)

AIM-9L/M ON LAU-114

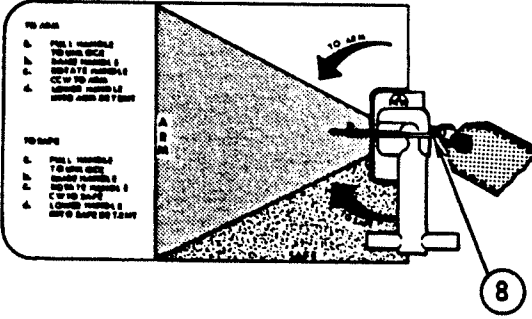
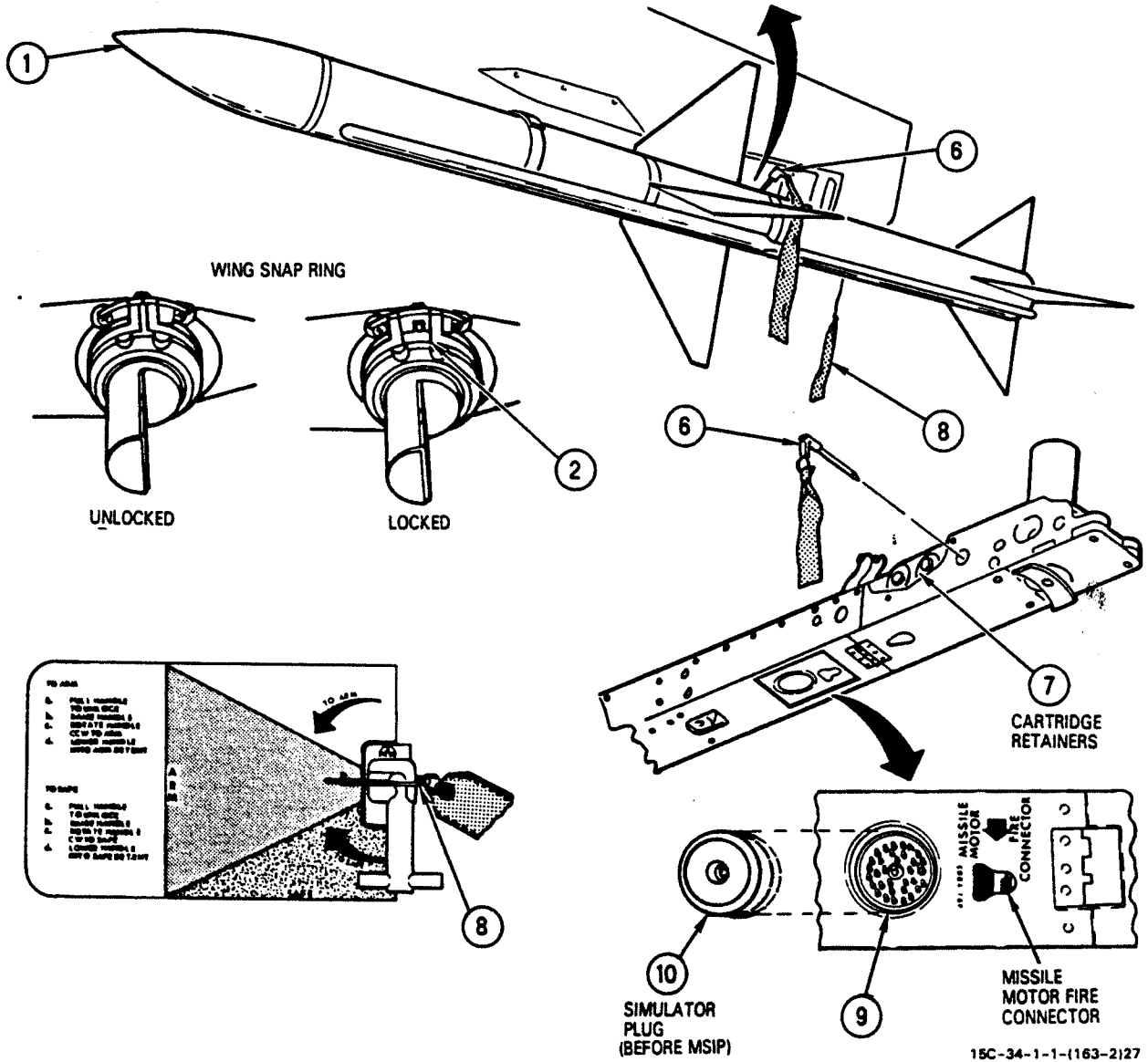
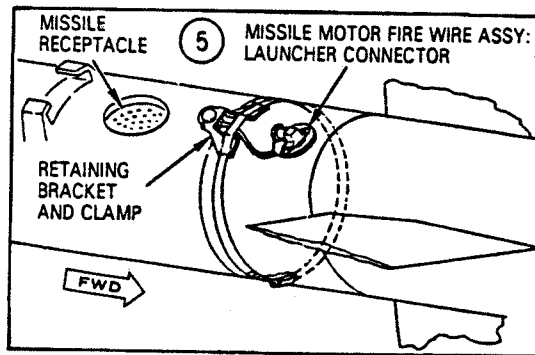


LAUNCHER DETENT BLOCK



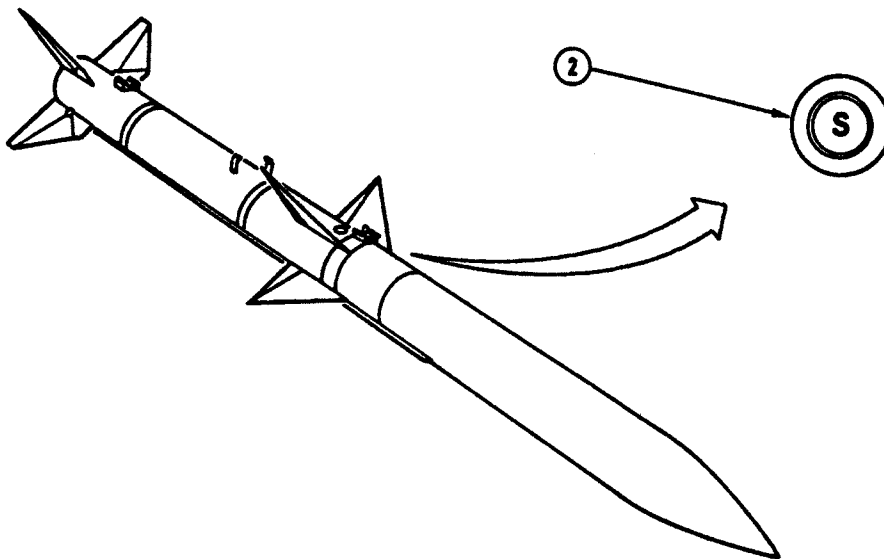
EXTERIOR INSPECTION (Continued)

AIM-7 ON LAU-106



**EXTERIOR INSPECTION
AIM-120 ON LAU-106A/A (MSIP)**

1. Radome, wings, fins - CLEAN AND UNDAMAGED
2. Propulsion arm/fire device - S (Safe)
3. Rack safety pin - INSTALLED
4. Ejector cartridges - INSTALLED
5. Ejector feet - POSITIONED
6. Forward ejector missile pad - INSTALLED
7. Umbilical (buffer) connector - INSTALLED, NO PINS SHOWING



15C-34-1-1-(210-1)31

STATION DIAGRAM

A/A WEAPONS

- AIM-120 STATIONS:
3, 4, 6, 7 OR 3C, 4C,
6C, 7C AND 2A, 2B, 8A, 8B
- AIM-7 STATIONS:
3, 4, 6, 7 OR 3C, 4C,
6C, 7C
- AIM-9 STATIONS:
2A, 2B, 8A, 8B

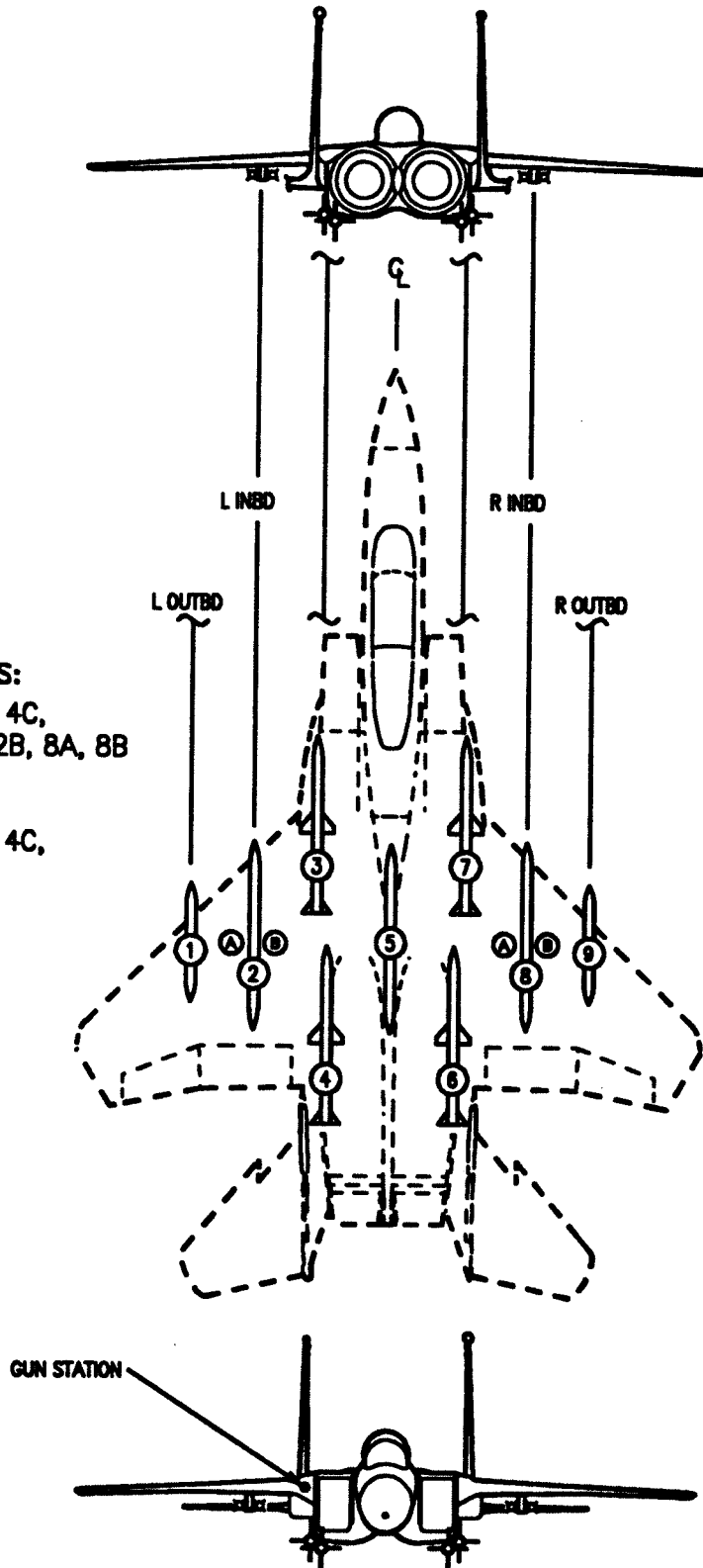
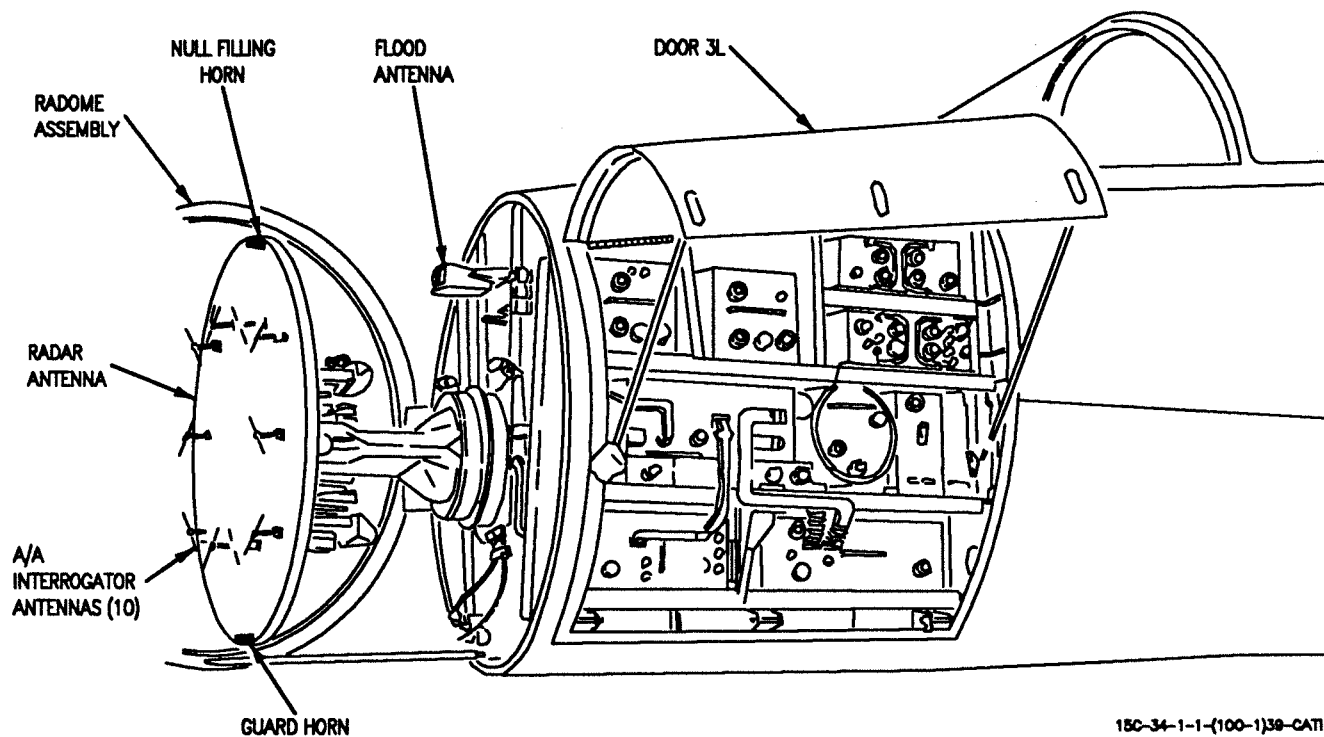


Figure 1-1

RADAR SET INSTALLATION



15C-34-1-1-(100-1)38-CAT1

Figure 1-25

FIRE CONTROL & DISPLAY SYSTEMS

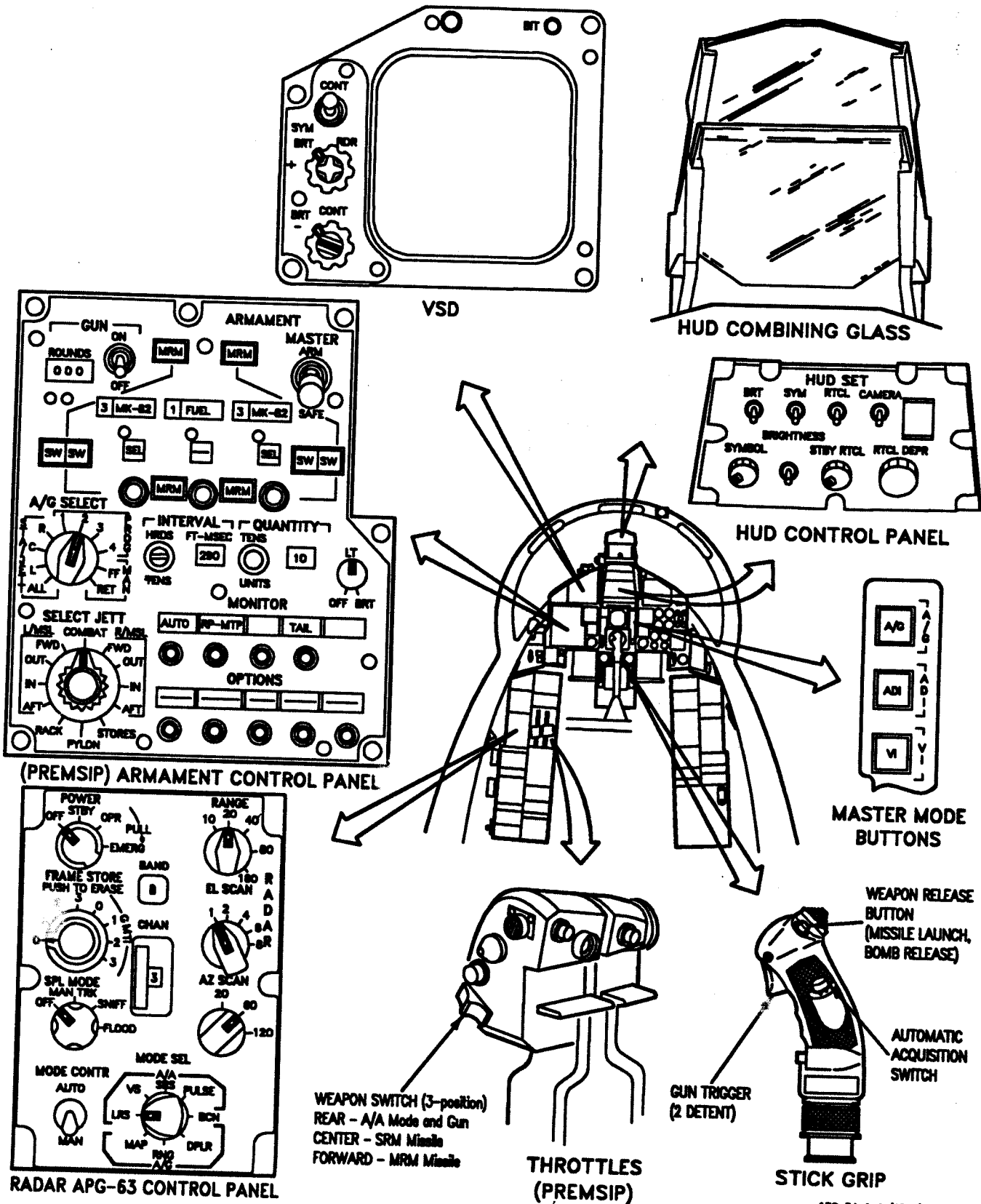


Figure 1-2 (Sheet 1 of 2)

150-34-1-1-(17-1)30-CAT1

LONG RANGE SEARCH

INTERLEAVED PRF

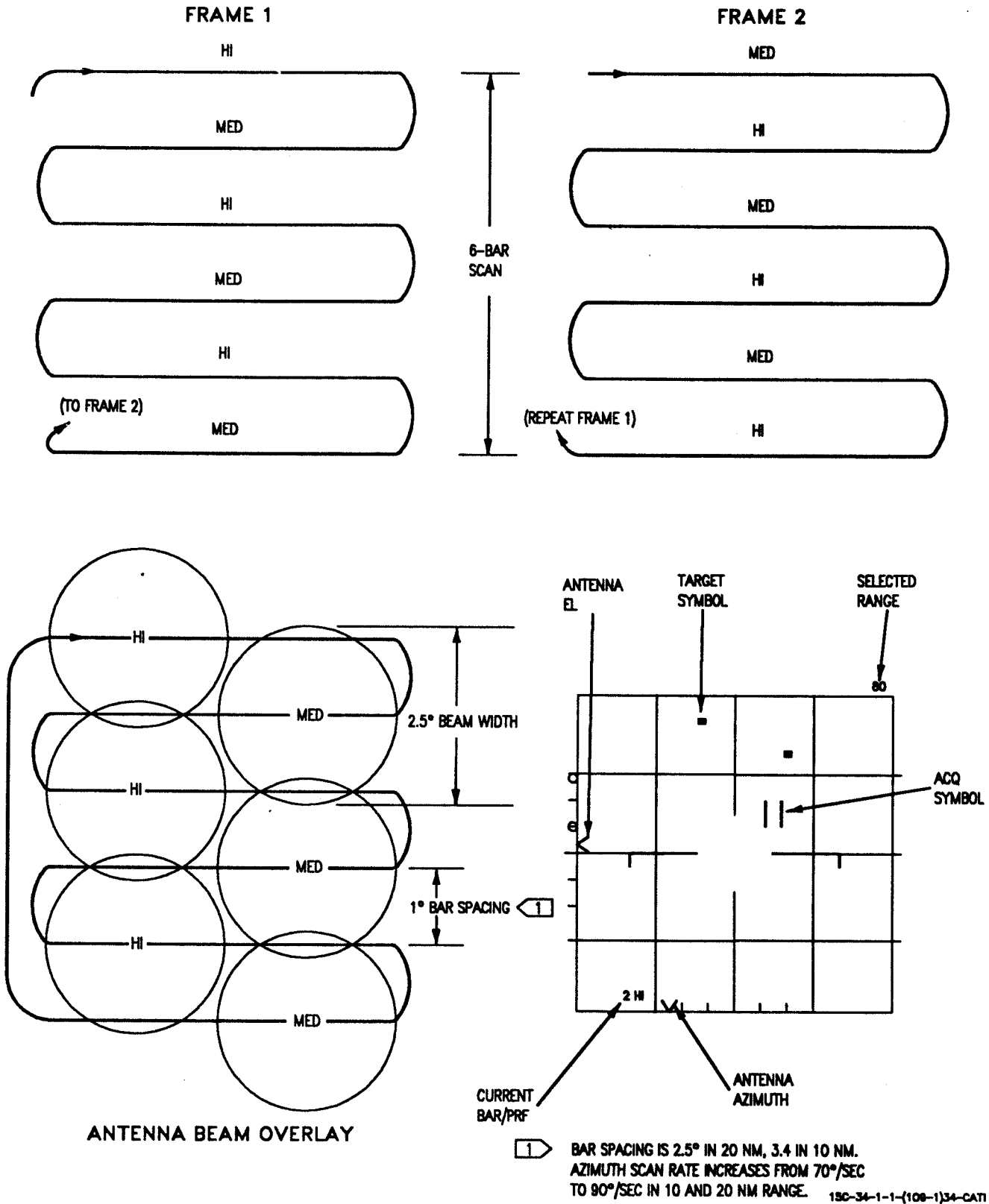
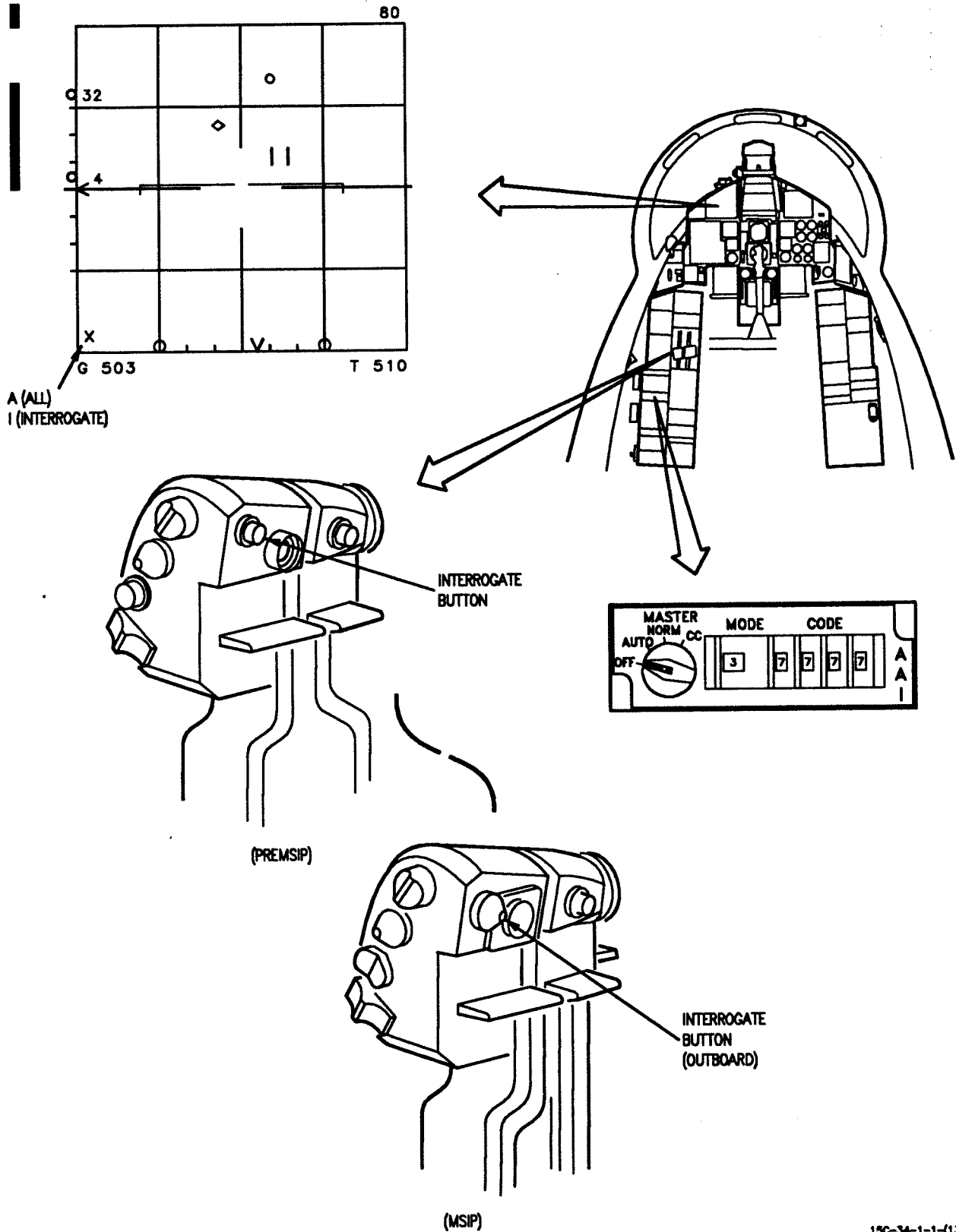


Figure 1-30

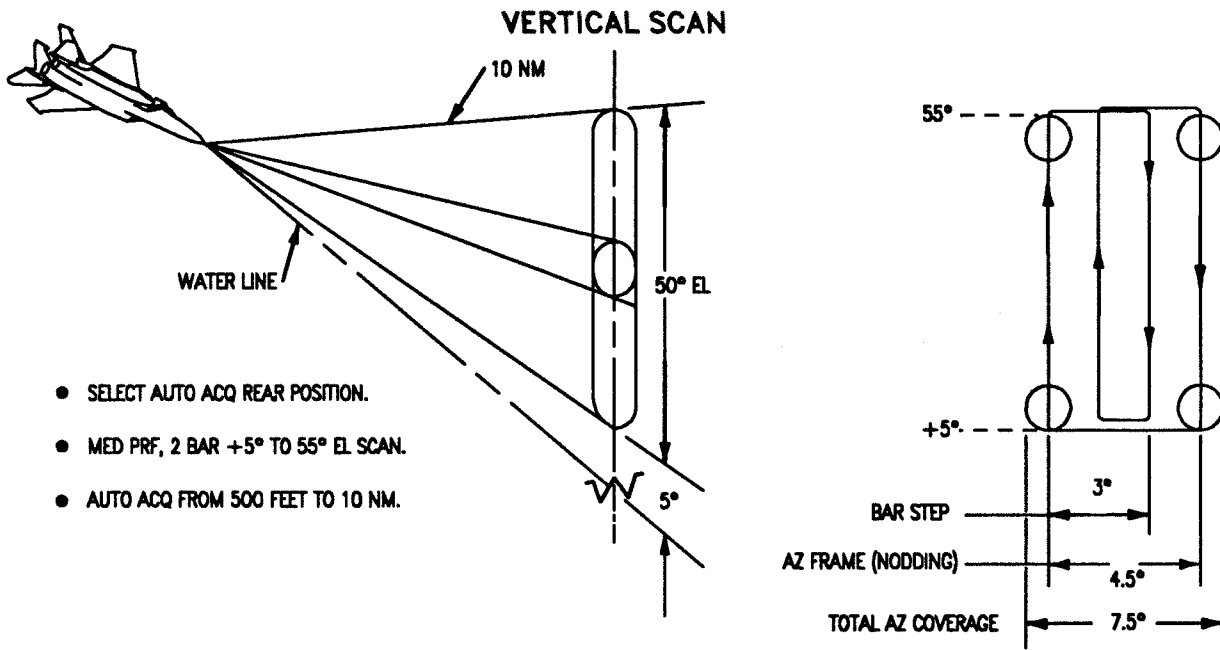
A/A INTERROGATOR CONTROLS



15C-34-1-1-(131-1)30-CAT

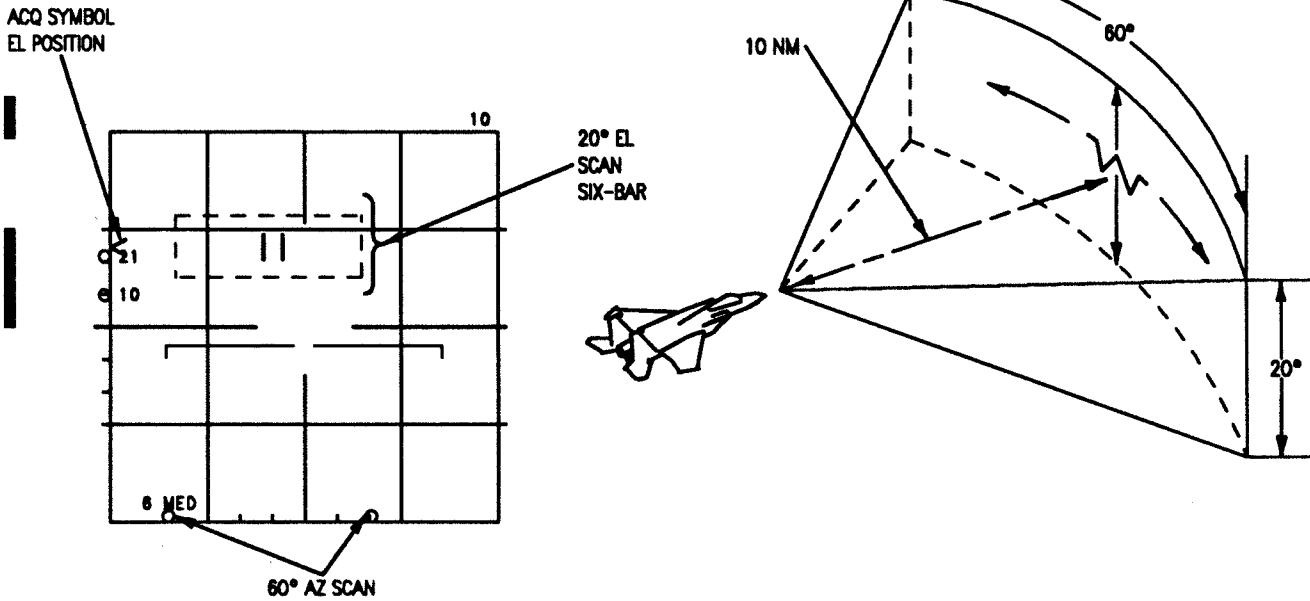
Figure 1-23

AUTO ACQ SCAN PATTERNS (Continued)



GUNS

- SELECT GUN MODE
- 6 BAR, 20° EL/60° AZ SCAN, MED PRF.
- SCAN CENTER AZ/EL CONTROLLED BY TDC.
- AUTO ACQ FROM 0.5 TO 10 NM.
- BUMP AUTO ACQ BY SELECTING REJECT.

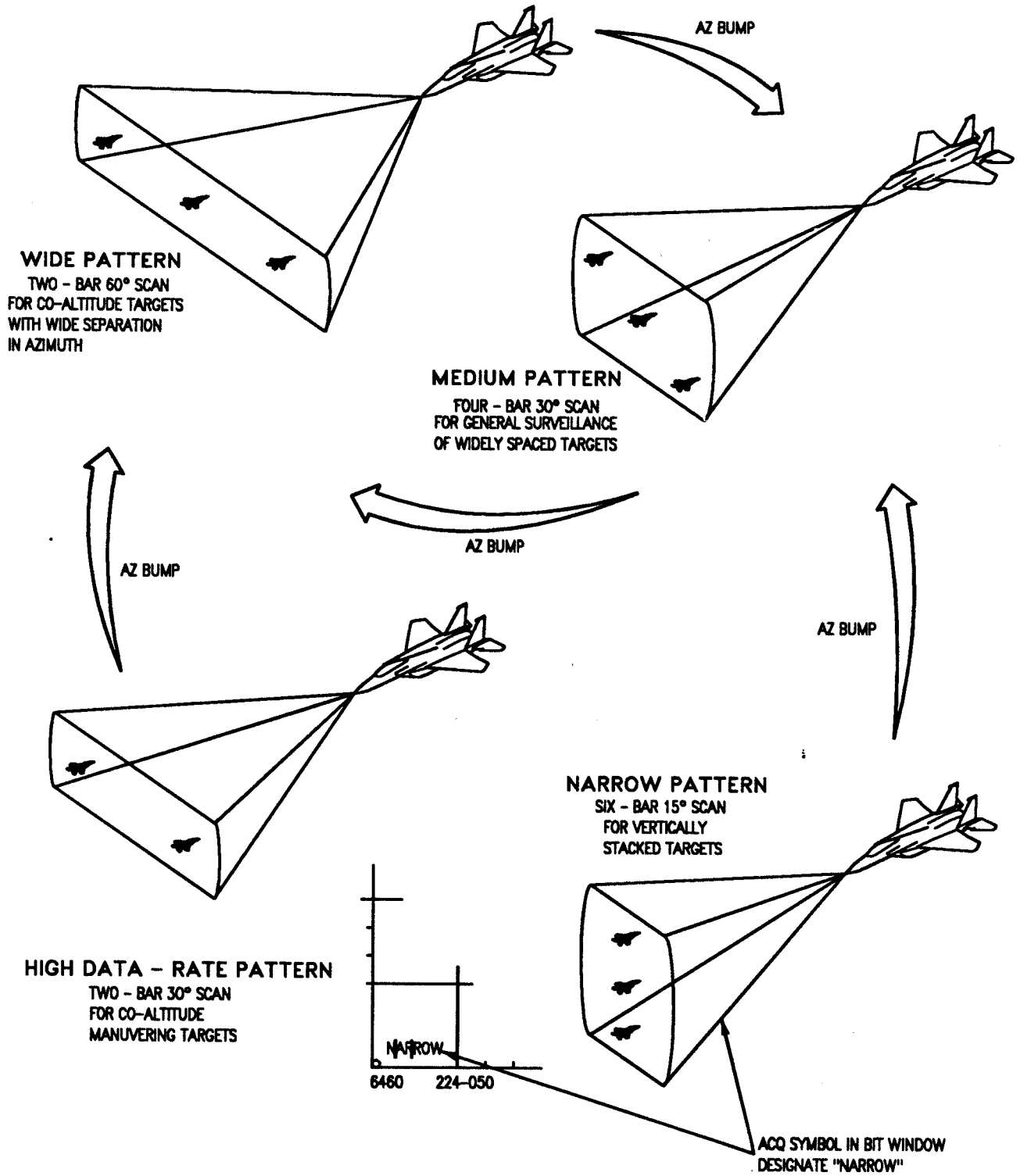


15C-34-1-1-(172-2)38-CAT1

Figure 1-33 (Sheet 2)

TWS PATTERNS

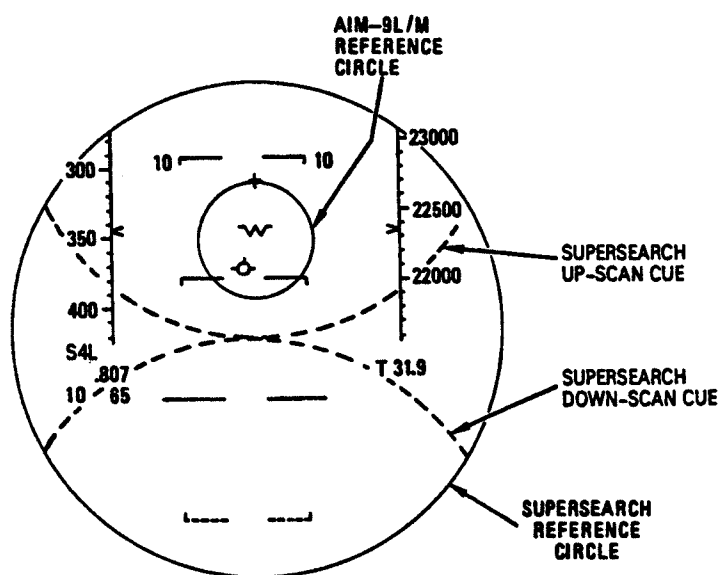
APG-70



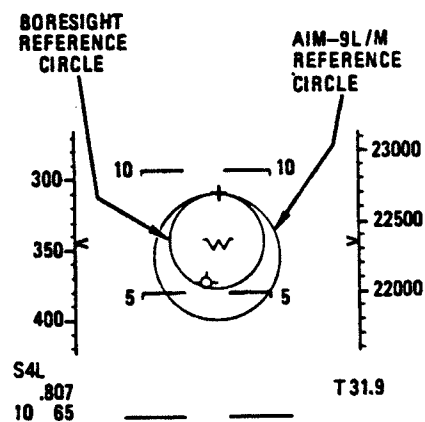
15C-34-1-1-(182-2)38-CATI

Figure 1-36 (Sheet 2)

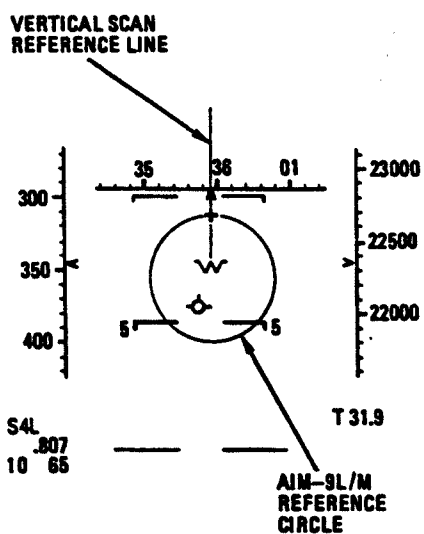
AUTO ACQ MODES, HUD DISPLAYS



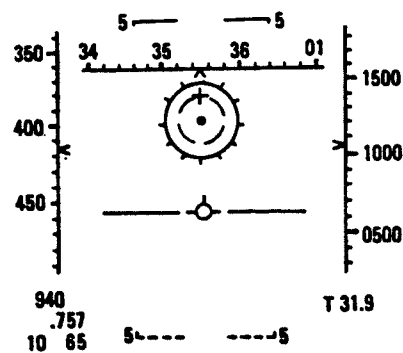
1. SUPERSEARCH (SS).
SRM SELECTED.



2. BORESIGHT (BST).
SRM SELECTED.



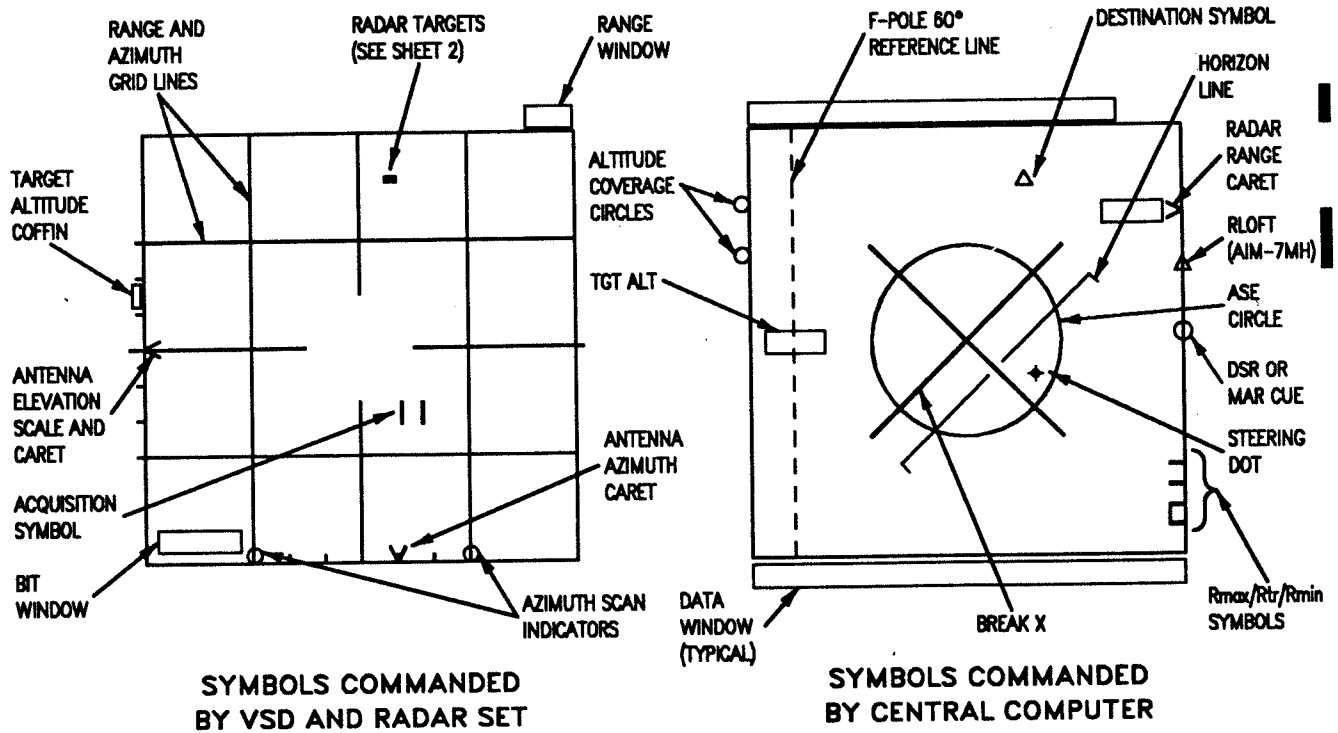
3. VERTICAL SCAN.
SRM SELECTED.



4. GUN.

Figure 1-34

VSD SYMBOLS, A/A



TYPICAL DISPLAYS

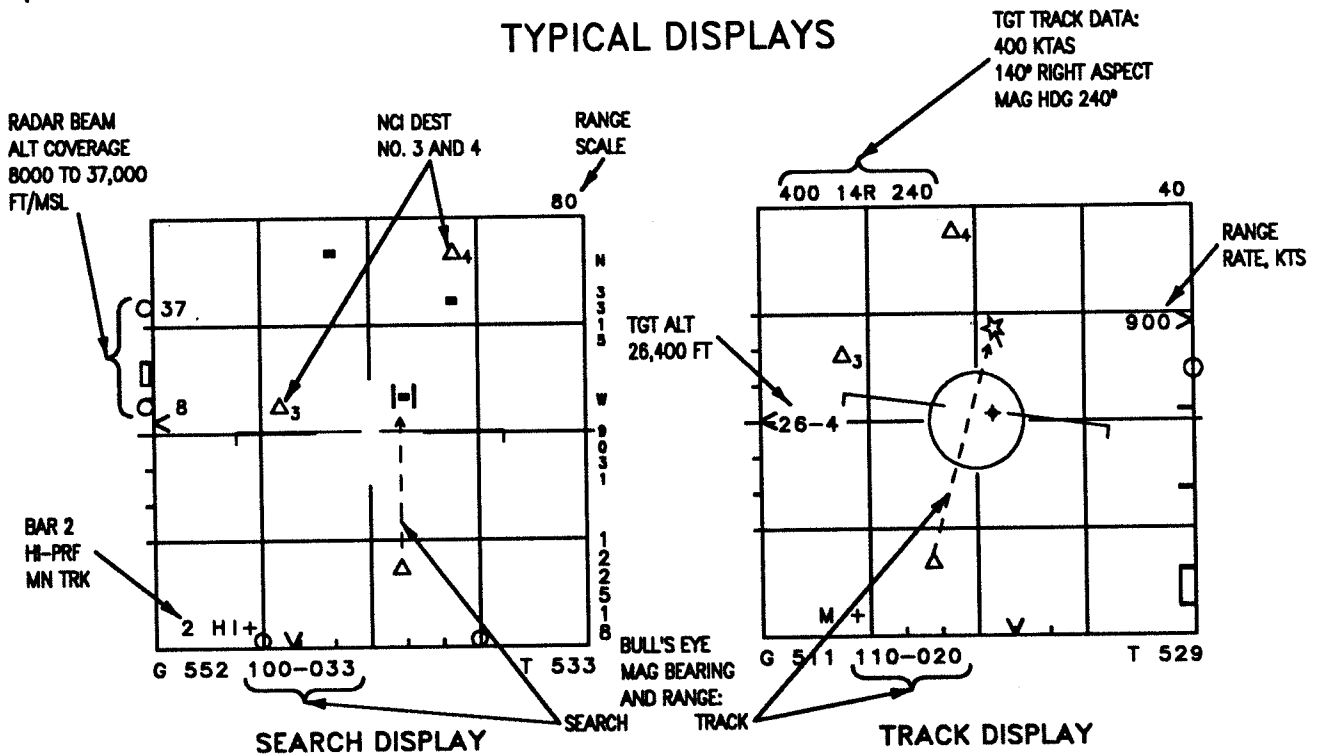
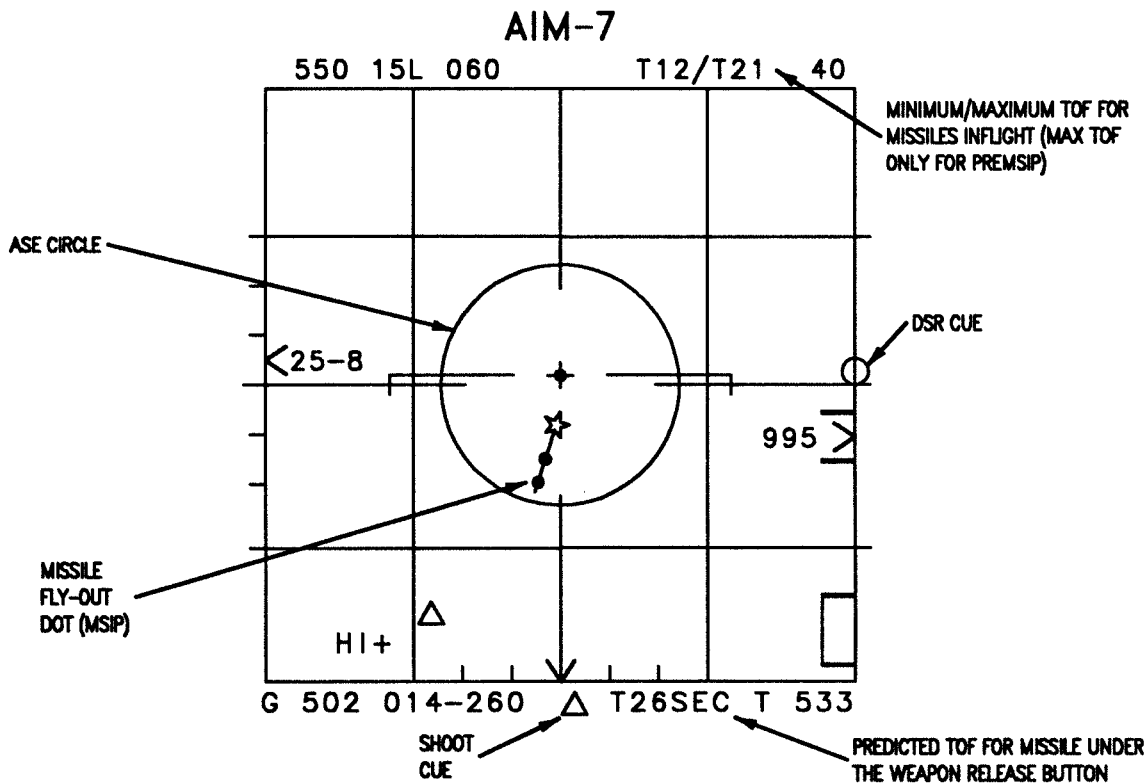
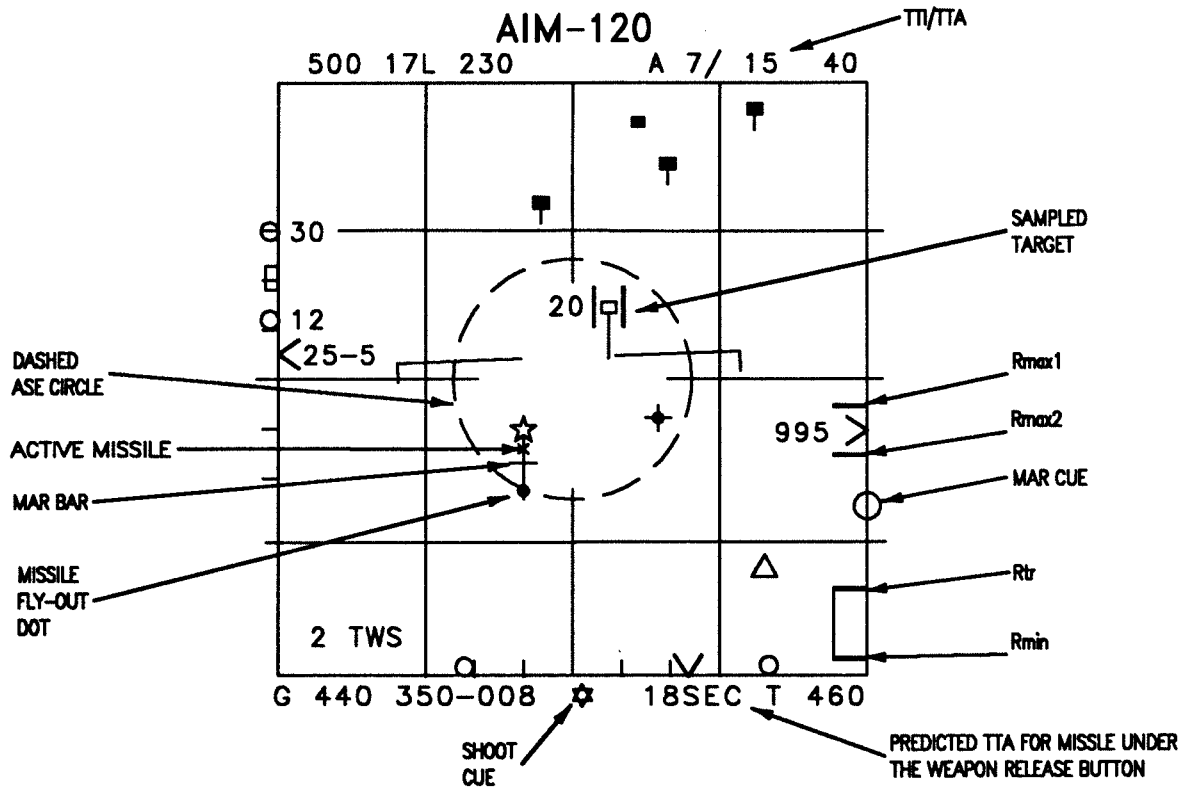


Figure 1-22 (Sheet 1 of 3)

A/A RADAR SYMBOLS (Continued)



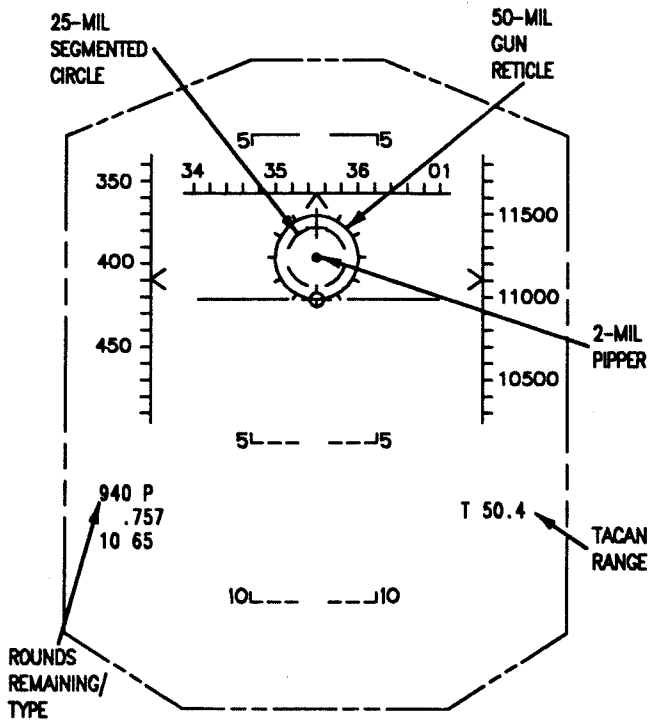
15C-34-1-1-(90-3)38-CAT1

Figure 1-22 (Sheet 3)

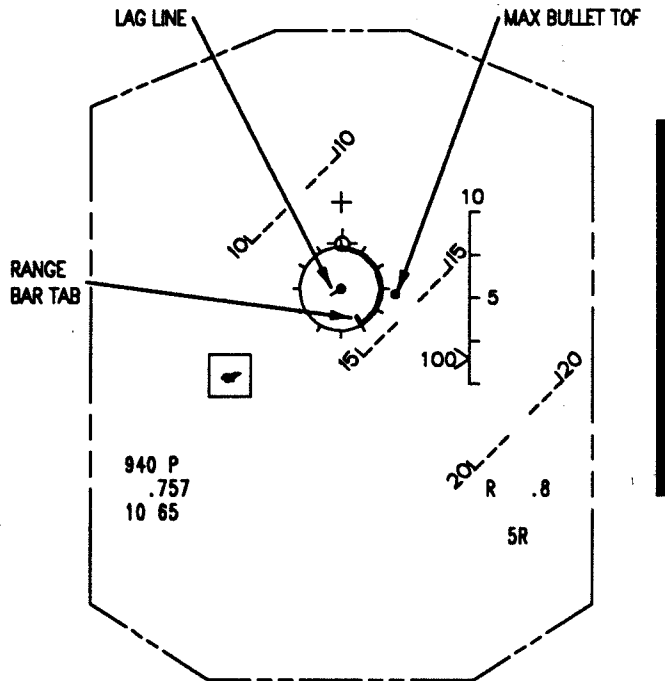
Change 3

1-64G/(1-64H blank)

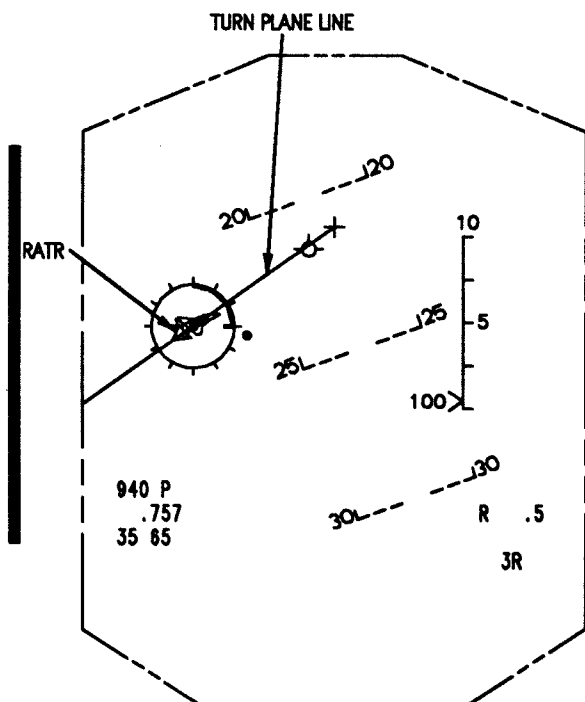
GUN STEERING



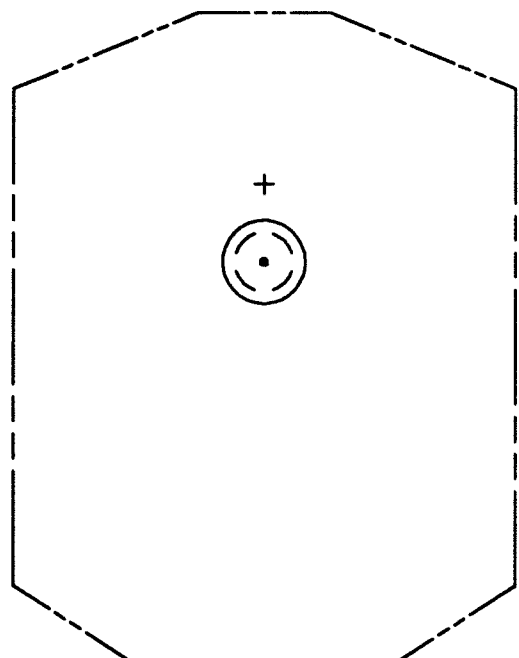
1. GUN MODE, RADAR SEARCH, SYMBOLS NORM



2. LCOS, RADAR TRACK, SYMBOLS REJ



3. GDS MODE, SYMBOLS REJ

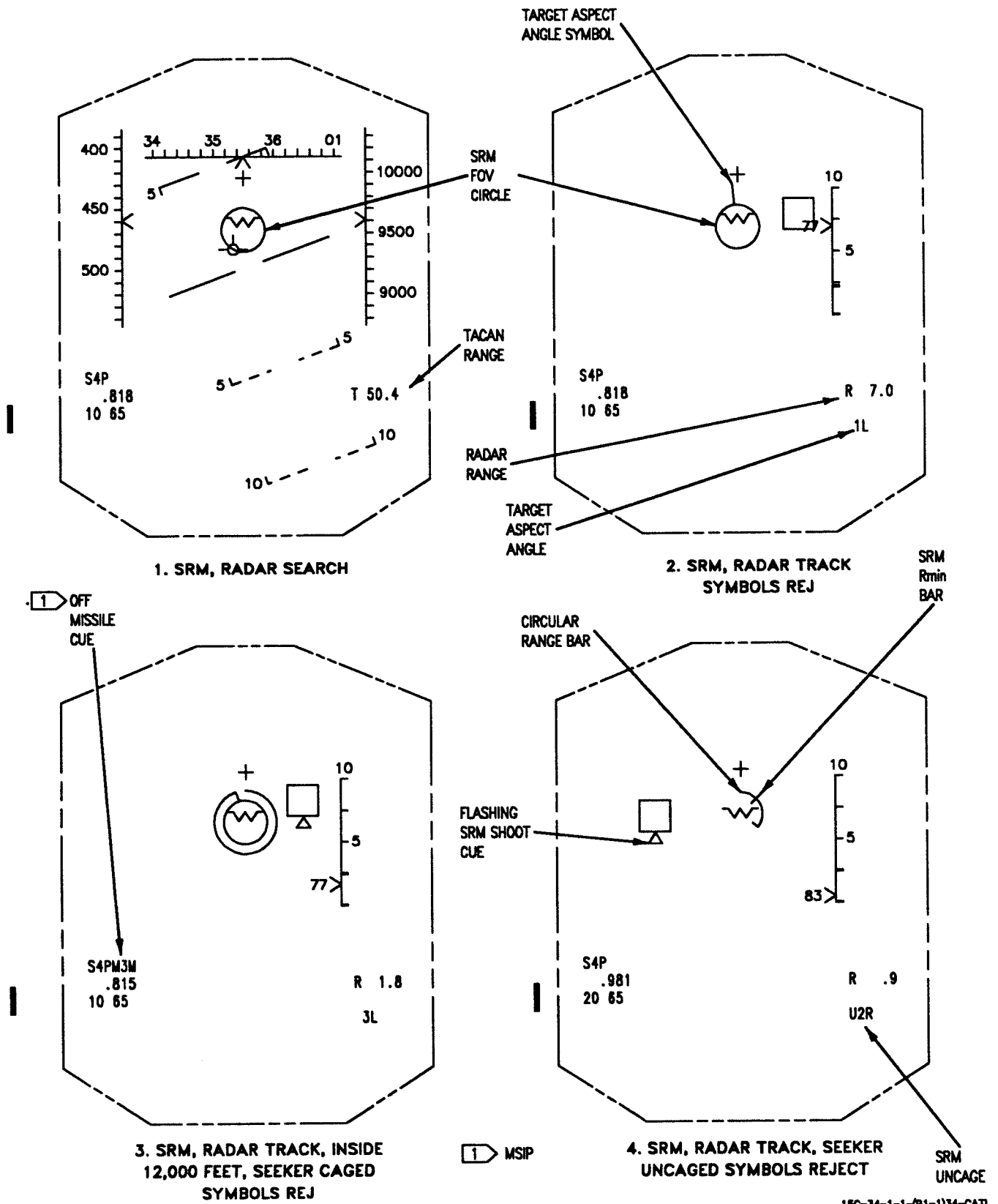


4. STANDBY RETICLE, DEPRESSED
46 MILS

Figure 1-56

15C 34 1 1 75 1130 0471

AIM-9P STEERING, HUD



15C-34-1-1-(01-1)34-CAT1

Figure 1-50

VI STEERING, HUD

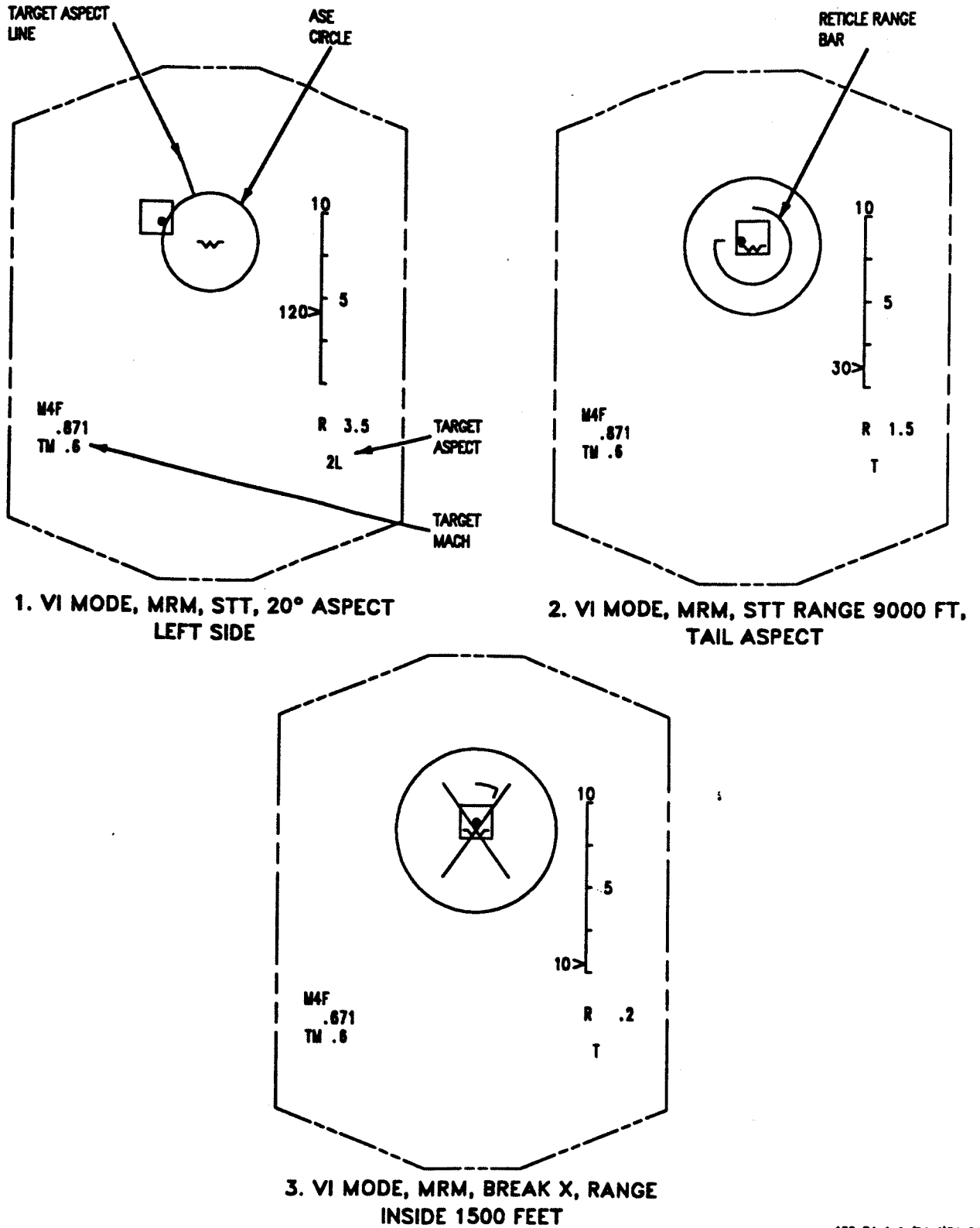
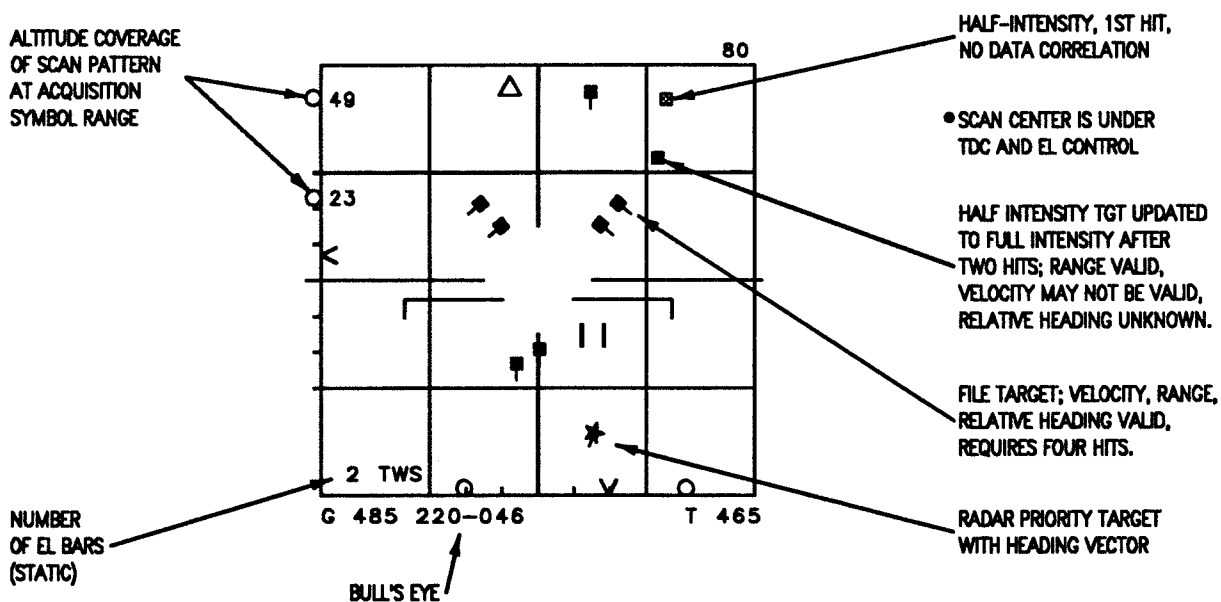


Figure 1-18

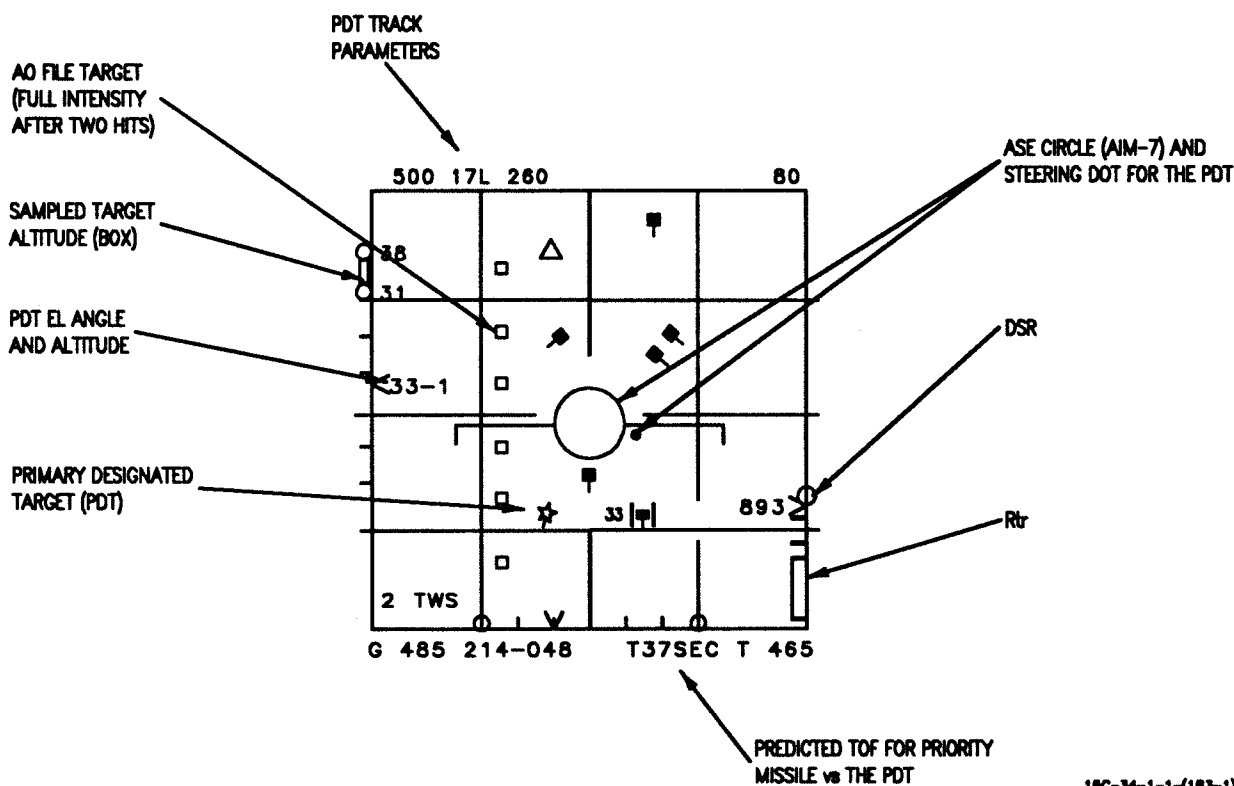
15C-34-1-1-(B4-1)34-CAT1

TWS DISPLAY

NDTWS (ALL AIRCRAFT)



DTWS (AIM-7, PREMSIP)

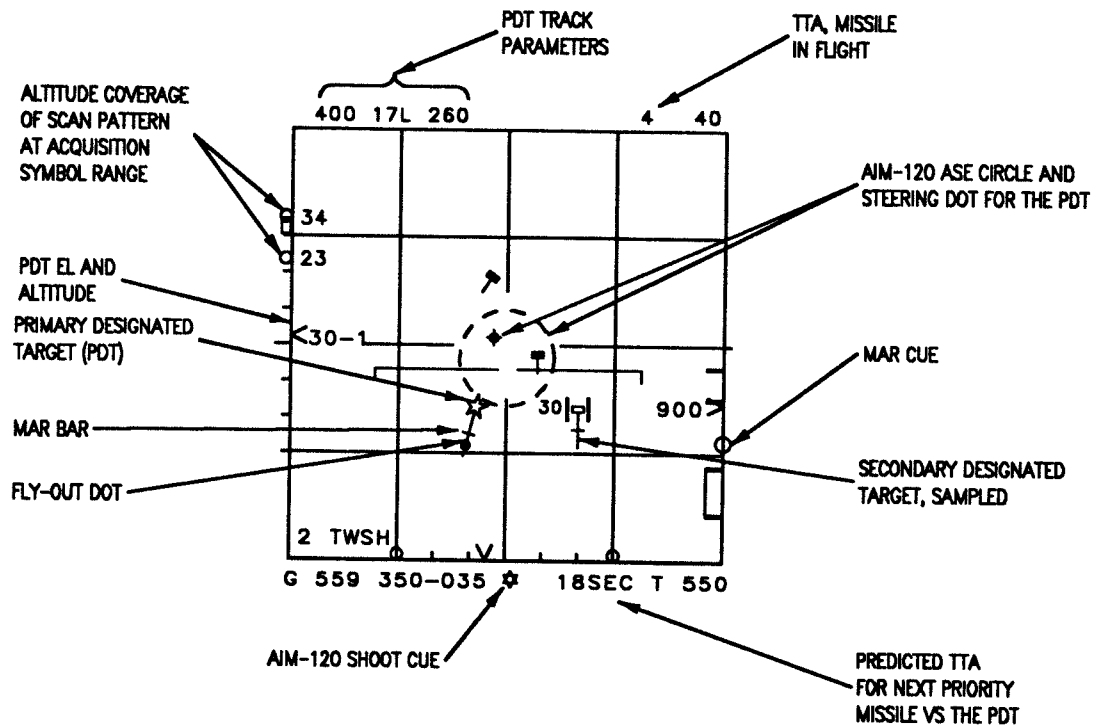


18C-34-1-1-(183-1)38-CAT1

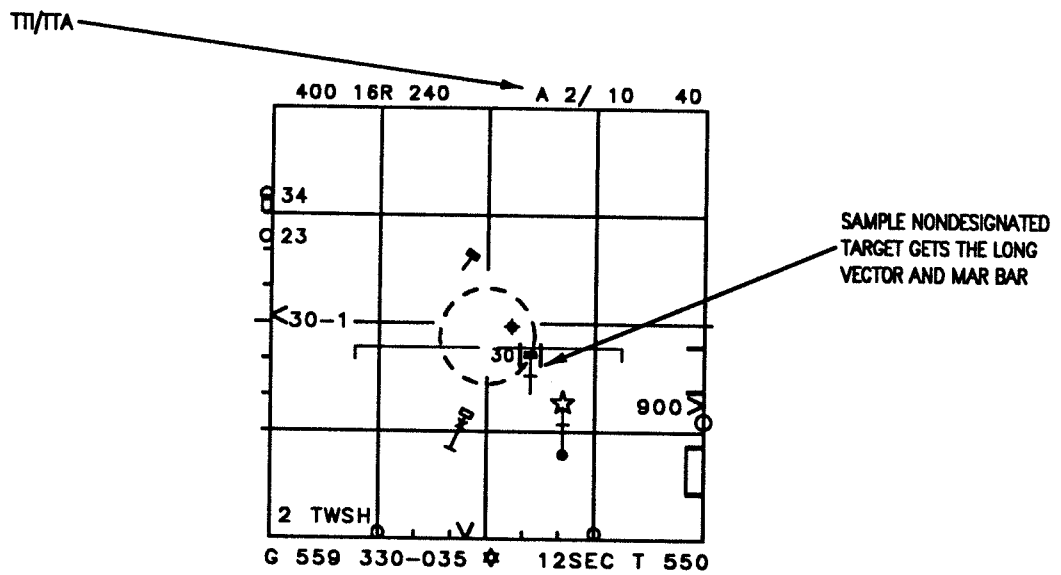
Figure 1-37 (Sheet 1 of 2)

TWS DISPLAY

DTWS (AIM-120)



AIM-120 LAUNCH ON PDT

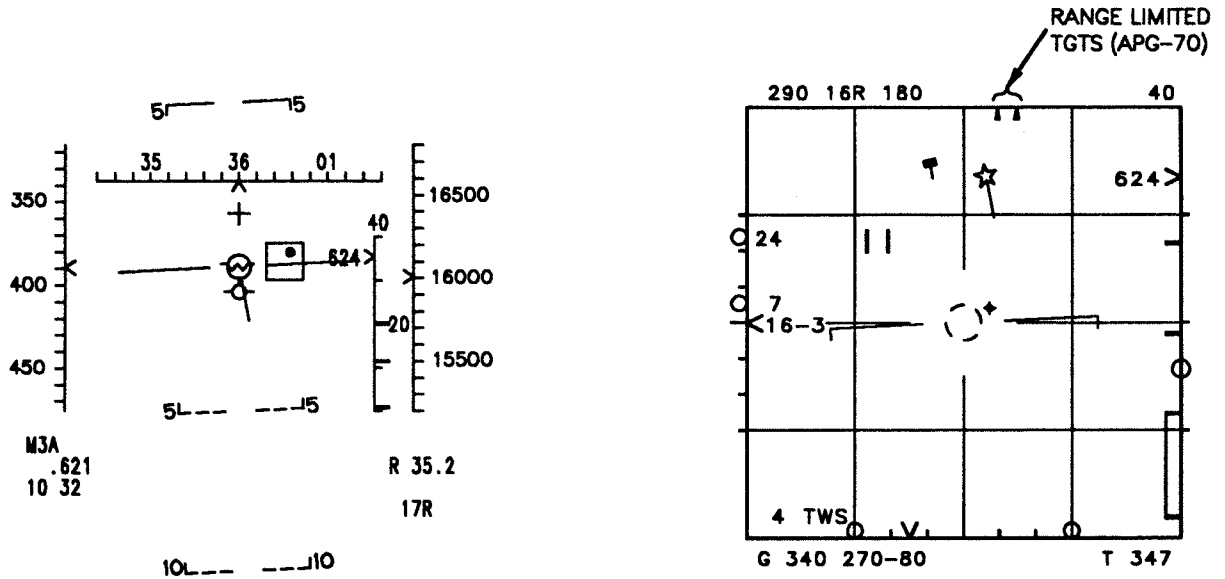


QUICK STEP PRIORITY, LAUNCH

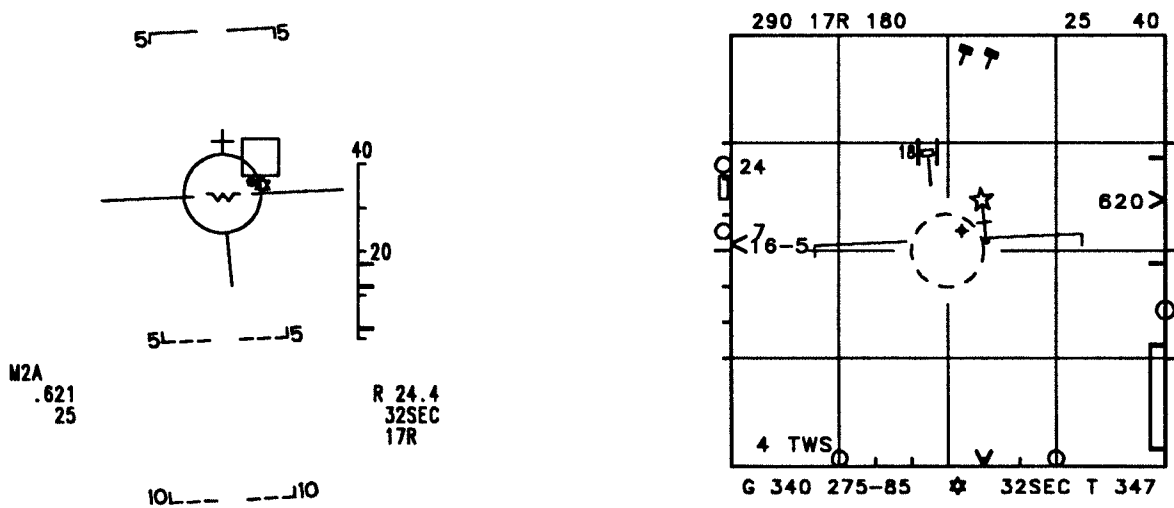
Figure 1-37 (Sheet 2)

AIM-120 STEERING, HUD AND VSD

(MSIP)



1. MRM (AIM-120), DTWS, OUTSIDE RMAX 1



2. LAUNCH 1, MAR CUE, 25-SECOND TTA, SECONDARY TGT DESIGNATED