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MILITARY STANDARD

AIRCREW STATION GEOMETRY FOR MILITARY AIRCRAFT

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DEPARTMENT OF DEFENSE
Washington, D.C. 20301

Aircrew Station Geometry for Military Aircraft

1. This military standard is approved for use by all Departments and Agencies of the Department of Defense.

2. Certain provisions of this standard are the subject of international standardization agreements.

3. Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: Naval Air Engineering Center, Systems Engineering and Standardization Department (Code 93), Lakehurst, NJ 08733-5100 by using the self-addressed Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

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MILITARY STANDARD

AIRCREW STATION GEOMETRY FOR MILITARY AIRCRAFT

1. SCOPE

1.1 Scope. The requirements defined herein apply to all piloted aircraft acquired by the Military Services.

1.2 Purpose. This standard establishes the design requirement for aircrew station geometry in military aircraft. The goal is to obtain design that is efficient, safe and comfortable for operation by aircrew personnel for the ranges of body sizes specified by the acquiring activity.

2. REFERENCED DOCUMENTS

2.1 Government documents.

2.1.1 Specifications and standards. Unless otherwise specified, the following specifications and standards of the issue listed in that issue of the Department of Defense Index of Specifications and Standards (DoDISS) specified in the solicitation form a part of this standard to the extent specified herein.

SPECIFICATIONS

MILITARY

MIL-B-8584	-	Brake Systems, Wheel, Aircraft, Design of
MIL-S-18471	-	System, Aircrew Automated Escape, Ejection Seat Type, General Specification for
MIL-A-23121	-	Aircrew Environmental Escape and Cockpit Capsule System, General Specification for
MIL-H-46855	-	Human Engineering Requirements for Military Systems, Equipment and Facilities
MIL-S-58095	-	Seat System, Crashworthy, Non-Ejection, Aircrew, General Specifications for
MIL-S-81771	-	Seat, Aircrew, Adjustable, Aircraft, General Specification for
MIL-A-81815	-	Aircrew, Automated Escape Systems, General Specification for

STANDARDS

MILITARY

MIL-STD-203	-	Aircrew Station Controls and Displays for Fixed Wing Aircraft
MIL-STD-250	-	Aircrew Station Controls and Displays for Rotary Wing Aircraft
MIL-STD-850	-	Aircrew Station Vision Requirements for Military Aircraft
MIL-STD-1472	-	Human Engineering Design Criteria for Military Systems, Equipment and Facilities

2.1.2 Other Government documents, drawings, and publications. The following other Government documents, drawings, and publications form a part of this standard to the extent specified herein.

PUBLICATIONS

ARMY

USANL TR 72-52-CE	-	Anthropometry of U.S. Army Aviators 1970
USANL TR 77-024	-	Anthropometry of Women of the U.S. Army 1977

NAVY

NAVAIR 13-1-6 Series	-	Aviation-Crew Systems Manual

(Copies of specifications, standards, drawings, and publications required by the contractors in connection with specific procurement functions should be obtained from the acquiring activity or as directed by the contracting officer.)

2.2 Order of precedence. In the event of a conflict between the text of this standard and the references cited herein, the text of this standard shall take precedence.

3. DEFINITIONS

3.1 Design eye position. The design eye position is the midpoint of the design eye line from which all crewstation dimensions are related and referenced.

3.2 Design eye line. The design eye line is a segment of the over the nose vision line connecting two points which represents the predicted eye positions of the extremes of the aircrew population specified by the acquiring activity.

3.3 Horizontal vision line. The horizontal vision line is a reference line passing through the design eye position (3.1) and parallel to the fuselage reference line as specified by the acquiring activity.

3.4 Back tangent line. The back tangent line is established by a vertically inclined plan tangent to the back of a seated crewmember at the thoracic region and buttocks.

3.5 Bottom tangent line. Shown on a typical inboard profile drawing of an aircrew station as a line depicting a lateral plane on the seat back which is tangent to the compressed seat at the points where the posterior aspects of the buttocks and thorax, with appropriate clothing, contact the cushion. The amount of compression should be that which would occur with an aircrew member having a mean weight of the population specified by the acquiring activity under 1-g flight conditions.

3.6 Seat reference point (SRP). The seat reference point is the intersection of the back tangent line and the bottom tangent line.

3.7 Neutral seat reference point (NSRP). The neutral seat reference point is the seat reference point with the seat in the nominal midposition of the seat adjustment range.

3.8 Buttock reference point. The buttock reference point is the most forward limit of the bottom tangent line and represents the body pressure points located 5.75 inches forward of the seat reference point. This represents the area of the lowest seat cushion compression under a static vertical load of 1-g.

3.9 Thigh tangent line. The thigh tangent line is the average line of the aircraft seat when occupied by a crewmember with the maximum weight as specified by the acquiring activity. The thigh tangent line originates at the buttock reference point and extends upward and forward from that point to the forward edge of the seat.

3.10 Control grip reference point. The control grip reference point is the point at which the crewmember's second finger (middle digit) is in contact with the forward or downward face of any grip-type control such as control stick, control wheel, collective stick, or throttle.

3.11 Efficient, safe, and comfortable aircrew operation. Efficient, safe, and comfortable aircrew operation is defined by the dimensions, size, and adjustments of an aircrew station that will allow the aircrew to: reach and actuate all controls, have external vision in accordance with MIL-STD-850, have unobstructed internal view of all critical controls and displays, be able to function effectively without undue fatigue or discomfort, and escape without injury.

4. GENERAL REQUIREMENTS

4.1 Selection of geometry. Aircrew station geometry shall take into consideration all aspects of control and display requirements associated with safe flight, execution of the mission, and safe emergency egress and shall conform to the requirements specified herein. Proposed geometry and accommodation limitations, if any, shall be approved by the acquiring activity.

4.1.1 Basic geometry guide. A basic geometry guide for this document is presented as Figure 1 for a particular flight staion and population member. Figure 1 also indexes definitions of this standard.

4.1.2 Seating geometry. The seating geometry shall conform to the requirements of Figure 2 for the specified population and seat back angles as shown. Other requirements for ejection seat design and seat components shall be in accordance with MIL-S-18471.

4.2 External vision. The external vision for aircrew stations shall conform to the requirements of MIL-STD-850 from all points on the design eye line. The effects of body positioning such as head rest bracing on a catapult launch and normal head level positioning under 1-g flight conditions shall be considered.

4.3 Internal vision. The internal vision of all controls and displays shall be accessible from all points on the design eye line. The effects of body positioning such as head rest bracing on a catapult launch and normal head level positioning under 1-g conditions shall be considered.

4.4 Ejection clearance dimensions. The ejection clearance dimensions for flight stations shall allow unobstructed egress by any member of the population specified by the acquiring activity. Figure 3 provides guidance for a particular flight station and population member.

4.5 Anthropometric considerations. The aircrew station geometry shall be based on the anthropometric range specified by the acquiring activity and employing the factors outlined in MIL-STD-1472 and obtained from studies conducted in accordance with the requirements of MIL-H-46855.

4.5.1 Body dimensions. The requirements for body dimensions shall conform to the following documents for U.S. Army acquisitions, as applicable. Other services shall specify body dimensions of the population to be accommodated.

Army

USANL TR 72-52-CE
USANL TR 77-0-24

4.5.1.1 Functional body data. Functional body data critical combinations as provided by the acquiring activity shall be used in the design for aircrew safety, accomodation and comfort for the specified population. Figures 4, 5, 6, 8, and 9 present arm and leg link values derived from cockpit workspace studies and are provided for guidance.

4.5.1.2 Reach zones. Applicable data of reach and grasp capability for the population defined by the acquiring activity shall be considered for reach zones illustrated in Figure 4 and defined as follows. Control locations within these zones shall be in accordance with MIL-STD-203 and MIL-STD-250 as applicable.

ZONE 1 Restraint Harness Locked - Functional Reach

This zone includes the area that can be functionally reached and actuated by any crewmember of the population defined by the acquiring activity when located at the appropriate design eye position fully restrained and equipped without stretch of arm or shoulder muscles. Controls placed in this zone shall include those frequently used during operation of the aircraft in flight phases which require full restraint. This would include such flight phases as takeoff, landing, low altitude-hi-speed flight, weapons delivery, and escape. This zone defines the maximum limit allowed for the placement of emergency (escape system) controls and establishes the forwardmost operation limit of primary flight and propulsion controls.

ZONE 2 Restraint Harness Locked - Maximum Functional Reach

This zone includes the area that can be functionally reached and actuated by any crewmember of the population defined by the acquiring activity when located at the appropriate design eye position fully restrained and equipped with maximum stretch of shoulder and arm muscles. This zone defines the maximum limit allowed for the placement of helicopter primary flight and propulsion controls and the placement of emergency controls other than escape controls.

ZONE 3 Restraint Harness Unlocked - Maximum Functional Reach

This zone includes the area that can be functionally reached and actuated by any crewmember of the population defined by the acquiring activity when located at the appropriate design eye position with the shoulder restraint fully extended and the arms stretched full length.

4.6 Effects of personal and survival equipment. All geometry requirements specified herein are based upon nude body dimensions and do not include any tolerance for clothing or equipment, except flight boots and basic headgear. Many items of personal and survival equipment significantly alter the crewmember's position in the aircrew station. All such equipment specified by the acquiring activity shall be considered at the earliest point in design. Adjustments shall be made to the geometry to accommodate required equipment for the anthropometric range specified by the acquiring activity. A check list of most frequently used items is contained in NAVAIR 13-1-6 Series Manuals and as otherwise specified by the acquiring activity. The list in Table I is representative of most frequently used items for specific mission environment and aircraft requirements and shall be considered.

TABLE I. Personal and survival equipment.

Common Equipment	Specific to Aircraft Type	Specific to Mission Needs and Environment
Flight Suit Flight Boots Flight Gloves Helmet Survival Vest and Equipment	Anti-G Garment Pressure Suit Torso Harness Oxygen Delivery System	Helmet-Mounted Systems (including, but not limited to): Night Vision Systems Integrated Helmet and Display Systems Flash Blindness Prot. Laser Protection Chemical/Biological/ Radiological Prot. Systems Ballistics Protection Flotation Systems Cold Weather Prot. Systems Individual Cooling Systems

4.7 Accessibility of controls. Crewstation controls shall be accessible and usable by the entire anthropometric range specified by the acquiring activity.

4.7.1 Selection of controls. Selection of controls for the respective crewmembers shall be based upon the analyses and data derived from the studies required by MIL-H-46855 or by other techniques specified by the acquiring activity.

4.7.2 Location and actuation of controls. The location and actuation of controls shall conform to paragraphs 4.5 and 4.6 of this document and shall be in accordance with the requirements of MIL-STD-203 or MIL-STD-250, as applicable. Specific control locations and arrangements shall be established within the specified reach zones in accordance with the designated aircraft mission requirements and shall conform to requirements specified in 4.5 and 4.6.

5. CONTROL AND DISPLAY REQUIREMENTS

5.1 Controls.

5.1.1 Pitch and roll controls.

5.1.1.1 Stick type. The vertical location of the control grip reference point shall be operable within Zone 1 for the specified population. The maximum envelope of stick throw shall be based on Zone 1 reach as defined in 4.5.1.2. A minimum clearance of 1.5 inches shall be maintained between the stick and all structures when the stick is in any extreme position. Special consideration shall be given to the effect of personal and survival equipment, examples of which are shown in Table I, when establishing stick envelope.

5.1.1.2 Control wheel type. A minimum clearance of 1.5 inches between the wheel and structure shall be maintained in addition to a minimum clearance of 0.5 inch between the crewmembers hand and body and a minimum clearance of 1.5 inches between the bottom surface of the wheel and the aircrew member's leg when operated throughout the critical anthropometric range as specified by the acquiring activity. The maximum wheel throw envelope shall be based on Zone 1 reach as defined in 4.5.1.2 while the above minimum clearances are maintained.

5.1.2 Propulsion controls.

5.1.2.1 Single throttle. The location of the forwardmost position of the throttle shall be based on Zone 1 reach as defined in 4.5.1.2. All controls on the throttle shall be operable throughout the entire range of movement and provide 1.5 inches minimum structural clearance of the maximum specified arm. Figure 5 is provided as guidance with dimensions which are for a particular flight station and population member.

5.1.2.2 Multiple throttle. Locate the same as for single throttle, except the geometry of all throttles shall be based upon the forwardmost position of the throttle furthest from the crewmember laterally.

5.1.3 Collective lever.

The collective control shall be located as shown in Figure 6.

5.1.4 Brake and yaw control pedals. The yaw control requirements herein do not apply to aircraft which have the yaw control integrated into a multi axis flight controller.The yaw control shall consist of two pedals of the configuration conforming to MIL-B-8584. Differential braking defined by MIL-B-8584 shall be provided by these pedals. The most forward adjustment position of the yaw controls shall be based upon the specified leg length seated with the seat full aft and full down, and yaw controls on, full forward throw, with the brake fully depressed, as shown in Figure 8. The most aft adjustment position of the yaw controls shall be based on the minimum specified leg length seated with seat full forward and full up and full forward yaw control throw, with the brake fully depressed as shown in Figure 9. Yaw control pedals forward and aft range requirements shall be based on functional leg throw data provided by the acquiring activity. A minimum clearance as shown in Figure 7 of 1.5 inches above and 0.75 inches on either side of the pedal shall be maintained over the maximum specified foot in a flight boot, throughout the full pedal travel including brake application with the midheel at the fulcrum position of the pedal. With normal braking procedures, a 1.5 inch clearance between maximum size footwear and all adjacent instruments and structure shall be maintained for any flight station seating geometry and population member. Throughout the range of yaw control adjustment and travel, the distance from the brake fulcrum to the nearest point on the crewstation floor shall be a minimum of 4.75 inches. Pedal length shall be the minimum required to satisfy braking requirements.

5.2 Control panels and consoles.

5.2.1 Lower surface consoles.

(a) Locate side consoles to provide physical and visual access by crewmember of minimum functional reach as defined in 4.5.1.2.

(b) Locate center console to provide physical and visual access by crewmember of minimum functional reach as defined in 4.5.1.2.

5.2.2 Overhead consoles. Locate to provide unrestricted view of the console elements with the same access as for lower surface console(s).

5.2.3 Instrument panel.

5.2.3.1 Instrument panel clearance. The instrument panel shall be located so as to provide a 1.5 inch clearance with the crewmember's legs through the full range of leg movement as shown in Figure 7. On aircraft equipped with ejection seats, clearance shall be provided as shown in Figure 3.

5.2.3.2 Instrument panel viewing angle. The panel shall provide the most normal viewing angle as practicable from the design eye position.

5.3 Seats. Aircrew seats conforming to the requirement of MIL-S-18471, MIL-A-23121, MIL-S-58095, MIL-S-81771, and MIL-A-81815 shall provide the body positioning capability in accordance with the requirements specified herein.

6. MULTI-CREW STATION REQUIREMENTS

6.1 Tandem arrangement.

6.1.1 Dual control.

(a) The single crew station geometry specified herein shall be duplicated for both crew stations unless otherwise specified by the acquiring activity.

(b) Minimum fore and aft spacing between the crew stations shall be based on the minimum space required to accomodate the largest specified crewmember in each station while maintaining full control movements in both stations.

(c) The external vision for the forward and aft crew stations shall conform to MIL-STD-850.

6.1.2 Single control.

(a) The flight control station geometry shall conform to the requirements herein while the other crew station geometry shall be configured for the specific aircraft mission.

(b) Minimum spacing between forward and aft crew stations shall be based on the minimum space required to accommodate safely the largest crewmember as specified by the acquiring activities critical combinations in each station while performing the assigned mission function.

(c) External vision for the aft crew member shall be as specified by the acquiring activity and shall depend on the aircraft type and mission.

6.2 Side-by-side arrangement

6.2.1 Dual control

(a) This configuration shall consist of two crew stations side-by-side, similar in seating, clearances, and flight controls. Propulsion control locations shall be based on the requirements for equally adequate access and operation by either crewmember under all flight conditions.

(b) Both crew positions shall be on the same level,unless otherwise specified. The lateral centerline spacing between crewmembers shall be a minimum of 26 inches and a maximum of 42 inches centerline to centerline for configurations with displays and controls common for both crewmembers. In rotary wing aircraft, the dimensions shall be a minimum of 26 inches and a maximum of 50 inches.

(c) Minimum lateral spacing shall be based upon minimum clearances between seat and structure or controls, and providing for no interference between crewmembers in performance of their flight tasks. The absolute minimum clearance between seats shall be 3 inches for non-ejection seats and 6 inches for ejection seats.

8-WAY SEAT 4-WAY SEAT

6.2.2 Single control. The flight control station geometry shall conform to the requirements herein and the other crew station geometry shall be configured for the specific aircraft mission.

7. NOTES

7.1 International interest. Certain provisions of this standard are the subject of international standardization agreements (ASCC 10/55 and STANAG 3639). When revision or cancellation of this standard is proposed, which will affect or violate the international agreement concerned, the preparing activity shall take appropriate reconciliation action through international standardization offices, if required.

7.2 Subject term (key word) listing.

geometry, aircrew station
design eye position
functional body data
reach zones
control
display
anthropometry, aviator
vision, internal
vision, external

7.3 Changes from previous issue. Asterisks or vertical lines are not used in this revision to identify changes with respect to the previous issue due to the extensiveness of the changes.

Custodians:
Army - AV
Navy - AS
Air Force - 11

Reviewer activity:
Army - MI

Preparing activity:
Navy - AS
(Project No. 15GP-0058)

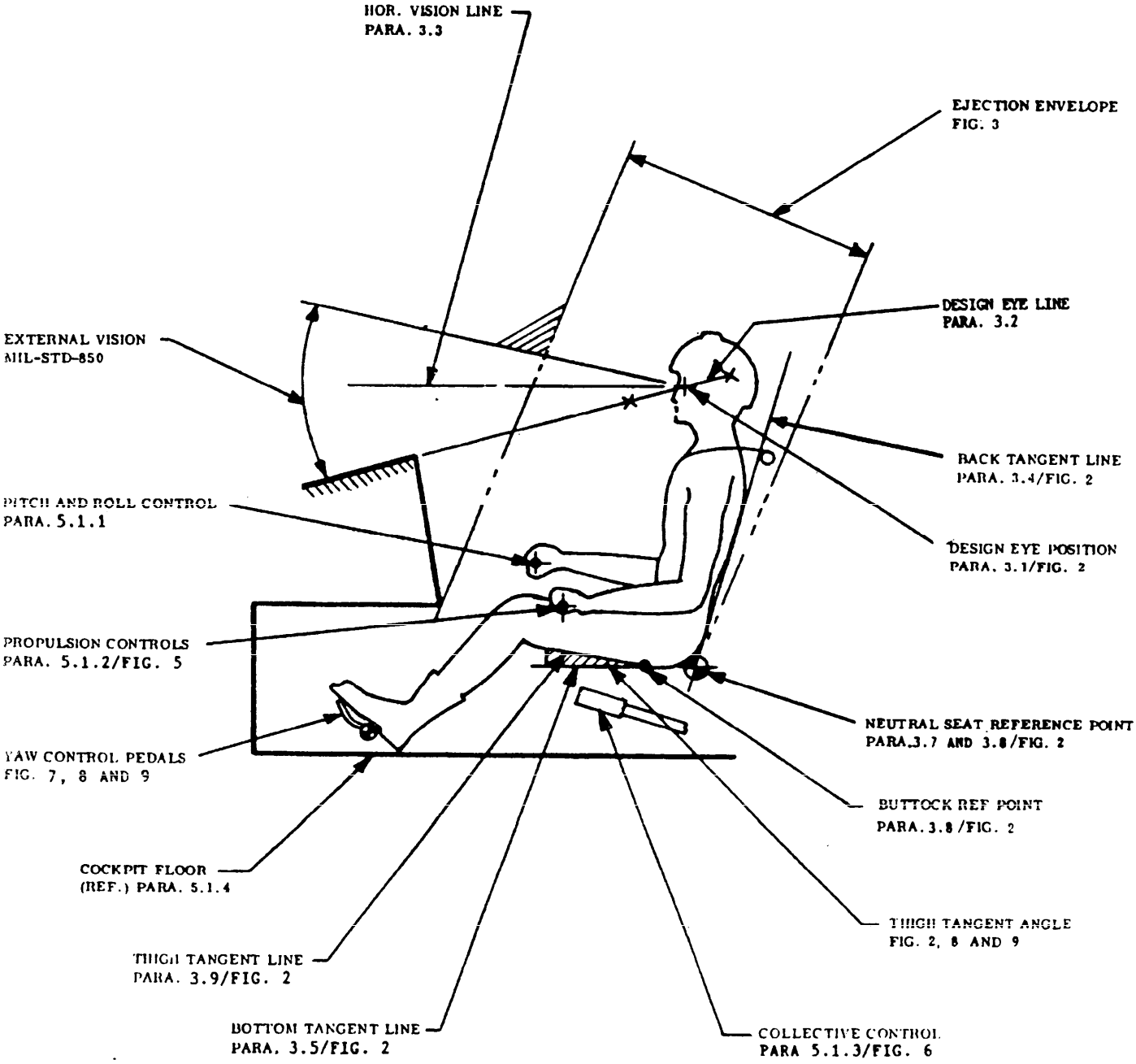
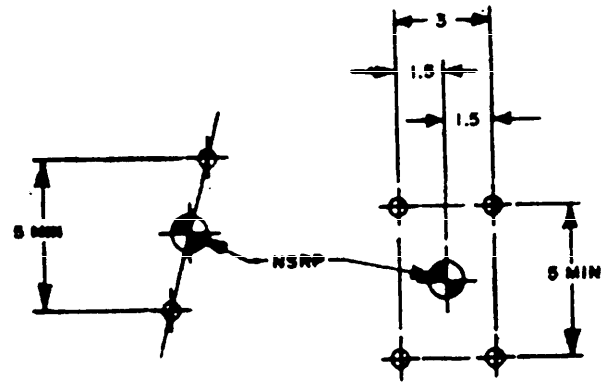


FIGURE 1. Basic geometry guide.

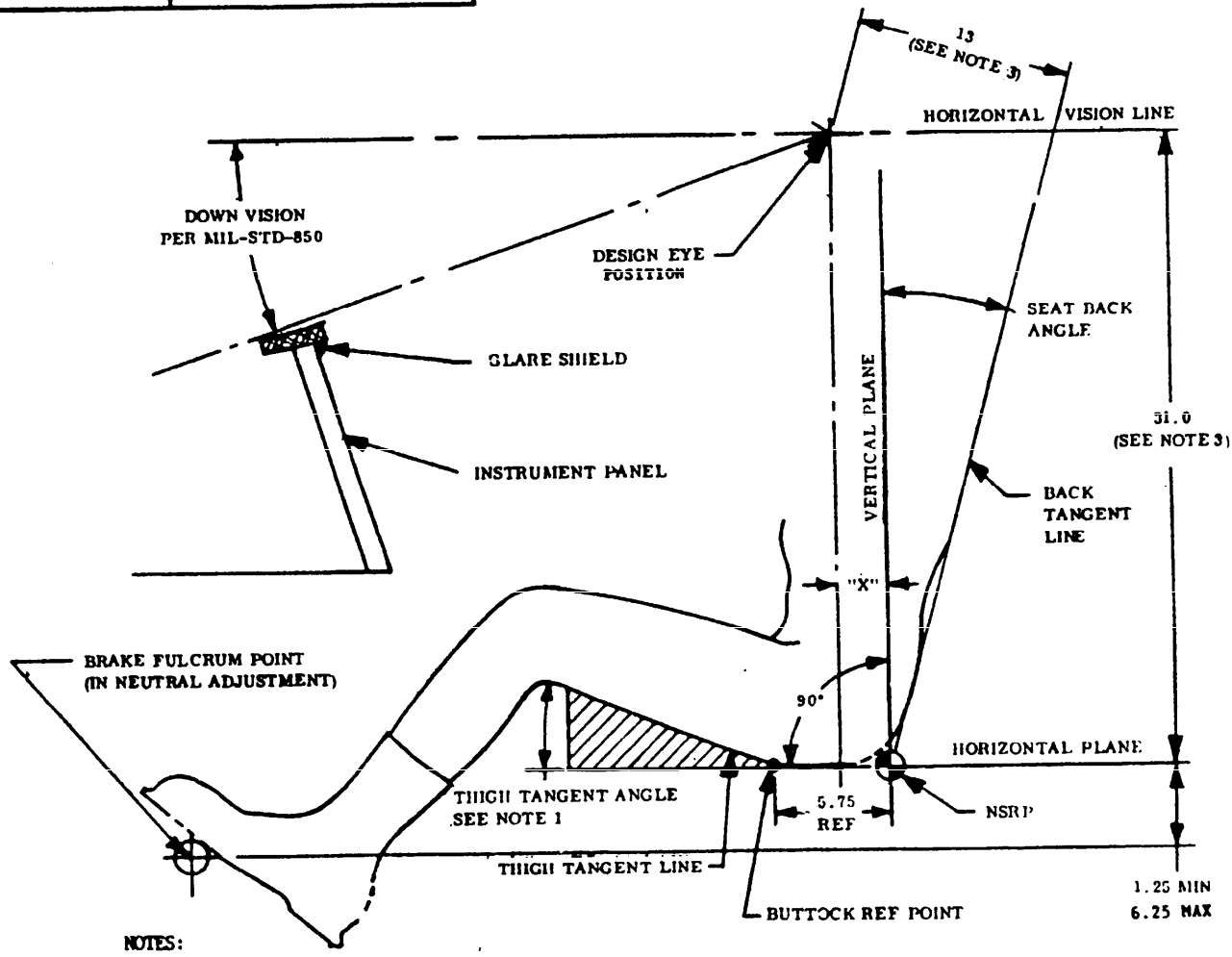
DISTANCE FROM DESIGN EYE POSITION TO VERTICAL PLANE OF NEUTRAL SEAT REFERENCE POINT FOR VARIOUS SEAT BACK ANGLES

SEAT BACK ANGLE (DEGREES)	"X" (INCHES)
10	7.7
10½	7.4
11	7.1
11½	6.9
12	6.6
12½	6.3
13	6.1
13½	5.8
14	5.5
14½	5.3
15	5.0



2-WAY SEAT ADJUSTMENT

4-WAY SEAT ADJUSTMENT



NOTES:

1. THIGH TANGENT ANGLE SHALL BE A MINIMUM OF 5° AND A MAXIMUM OF 20°. FOR HELICOPTERS, THE MINIMUM OF 10° SHALL APPLY.
2. THE DIMENSIONS SHOWN APPLY TO A PARTICULAR FLIGHT STATION AND POPULATION MEMBER.
3. DIMENSIONS BASED ON 13° SEAT BACK ANGLE. FOR FIXED WING AIRCRAFT, LESS THAN 13° SEAT BACK ANGLE IS UNDERSIRABLE.

FIGURE 2. Seating geometry.

NOTES:

1. THE 30 INCH EJECTION CLEARANCE LINE SHALL BE MEASURED PERPENDICULAR FROM THE EJECTION LINE OF THE SEAT REFERENCE POINT.
2. ALL MEASUREMENTS ARE BASED UPON THE SEAT REFERENCE POINT AT THE CENTERLINE OF THE SEAT IN THE NEUTRAL POSITION.
3. THERE SHALL BE NO PROJECTIONS, SUCH AS THROTTLES, LANDING GEAR CONTROL, INSTRUMENT PANEL, ETC. INTO THE ESCAPE OPENING THAT WOULD INTERFERE WITH EJECTION.
4. CANOPIES SHALL BE SO ARRANGED THAT WHEN THE PILOTS HEAD IS IN THE NORMAL POSITION , NORMAL OR EMERGENCY OPERATION OF THE CANOPY SHALL BE SUCH THAT NO PART OF THE CANOPY CAN STRIKE THE PILOTS HEADGEAR.
5. ADDITIONAL CLEARANCE SHALL BE AS SPECIFIED BY THE PROCURING ACTIVITY, E.G. THERMAL CLOSURE, FACE CURTAIN CONTROL, ETC.
6. THIS DIMENSIONS SHALL BE NO LESS THAN 26 INCHES FOR AIRCRAFT IN WHICH PRESSURE SUITS AND/OR SURVIVAL VESTS ARE NOT EMPLOYED.
7. DIMENSIONS IN INCHES.
8. THE DIMENSIONS SHOWN APPLY TO A PARTICULAR FLIGHT STATION AND POPULATION MEMBER.

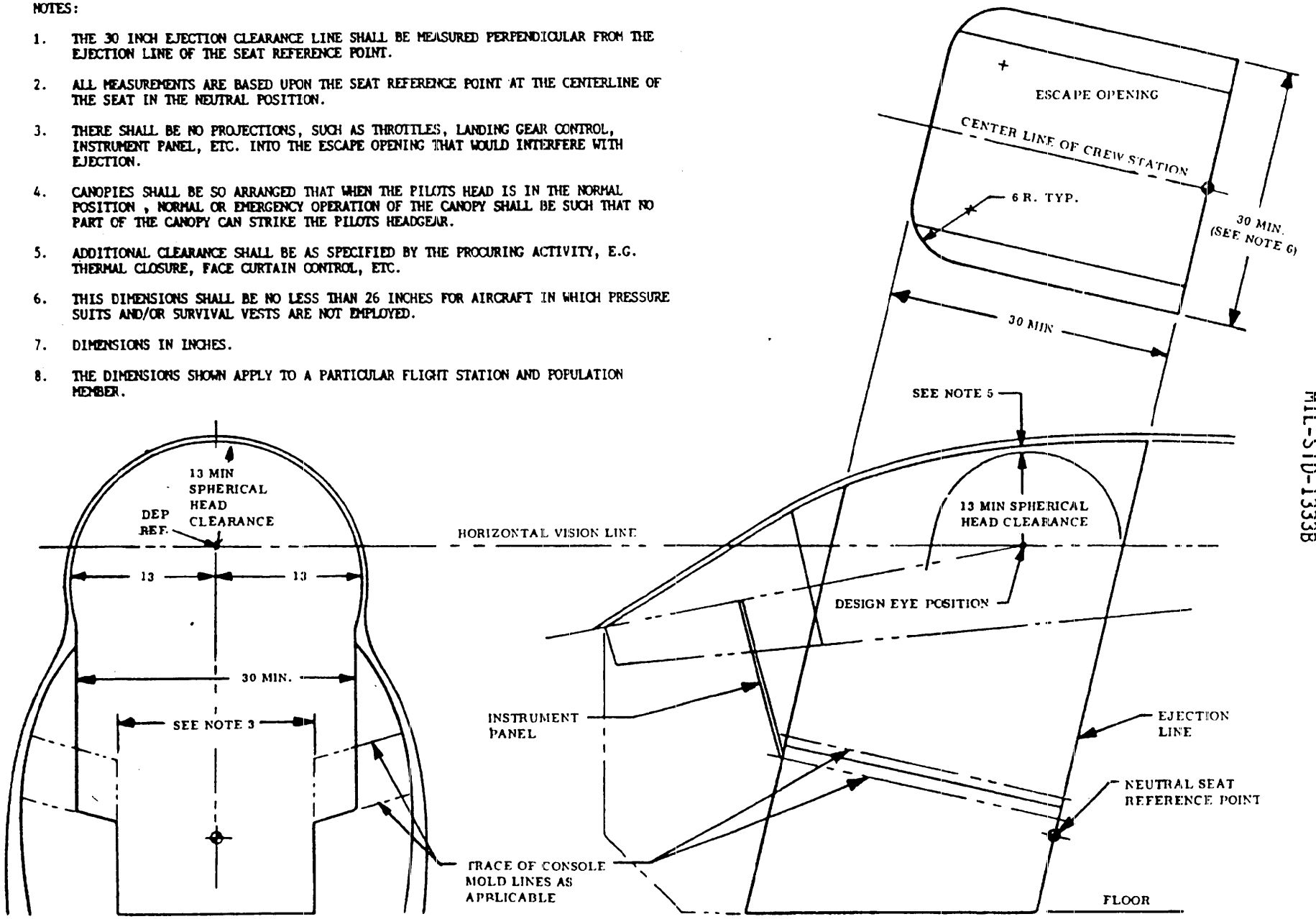
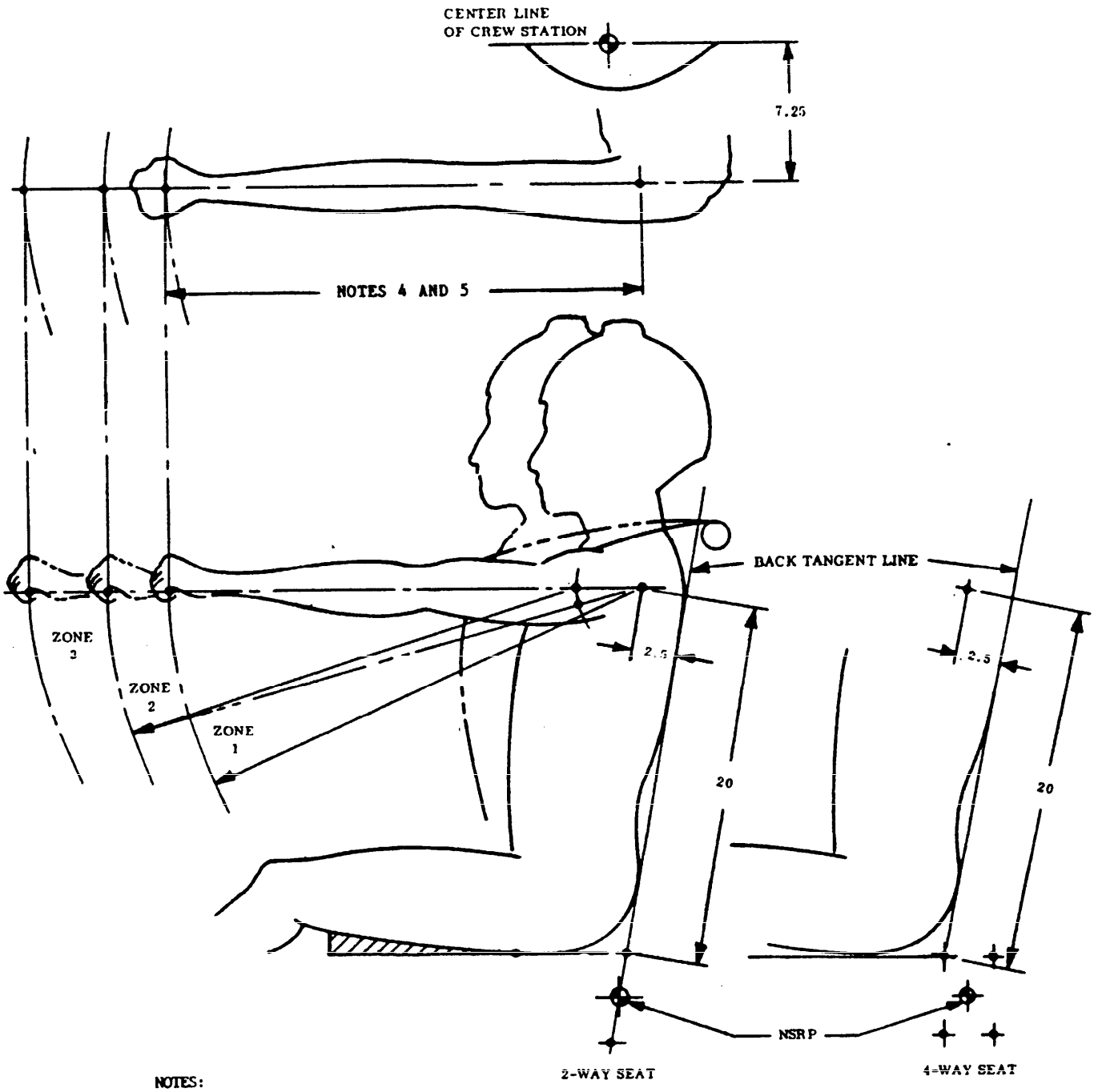


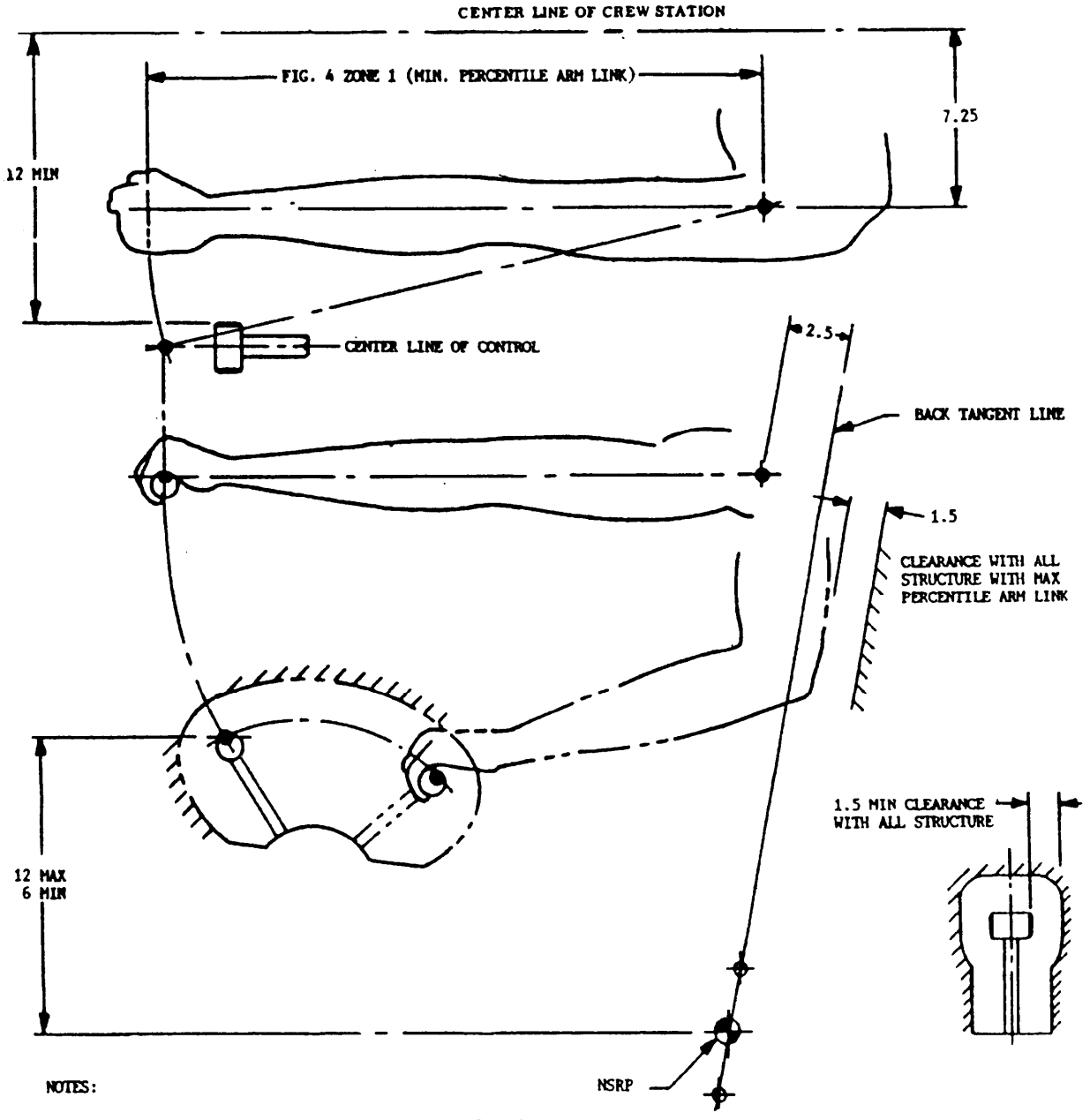
FIGURE 3. Cockpit clearance dimensions.



NOTES:

1. FOR ZONE DEFINITION SEE PARAGRAPH 4.5.1.2.
2. DIMENSIONS IN INCHES.
3. DIMENSIONS SHOWN APPLY TO A PARTICULAR FLIGHT STATION AND POPULATION MEMBER.
4. FUNCTIONAL REACH AS SPECIFIED BY THE ACQUIRING ACTIVITY. GRASP AS SPECIFIED BY THE ACQUIRING ACTIVITY.
5. CONSIDERATION SHALL BE GIVEN TO DIFFERENCES BETWEEN LINK MODEL DATA (e.g. SHOULDER PIVOT POINT AS SHOWN ABOVE) AND CLASSICAL ANTHROPOMETRIC DATA (e.g. FUNCTIONAL ARM REACH) SPECIFIED BY THE ACQUIRING ACTIVITY.

FIGURE 4. Reach zones - minimum link percentile.



NOTES:

1. FOR ZONE DEFINITION SEE PARAGRAPH 4.5.1.2.
2. DIMENSIONS IN INCHES.
3. DIMENSIONS SHOWN APPLY TO A PARTICULAR FLIGHT STATION AND POPULATION MEMBER.
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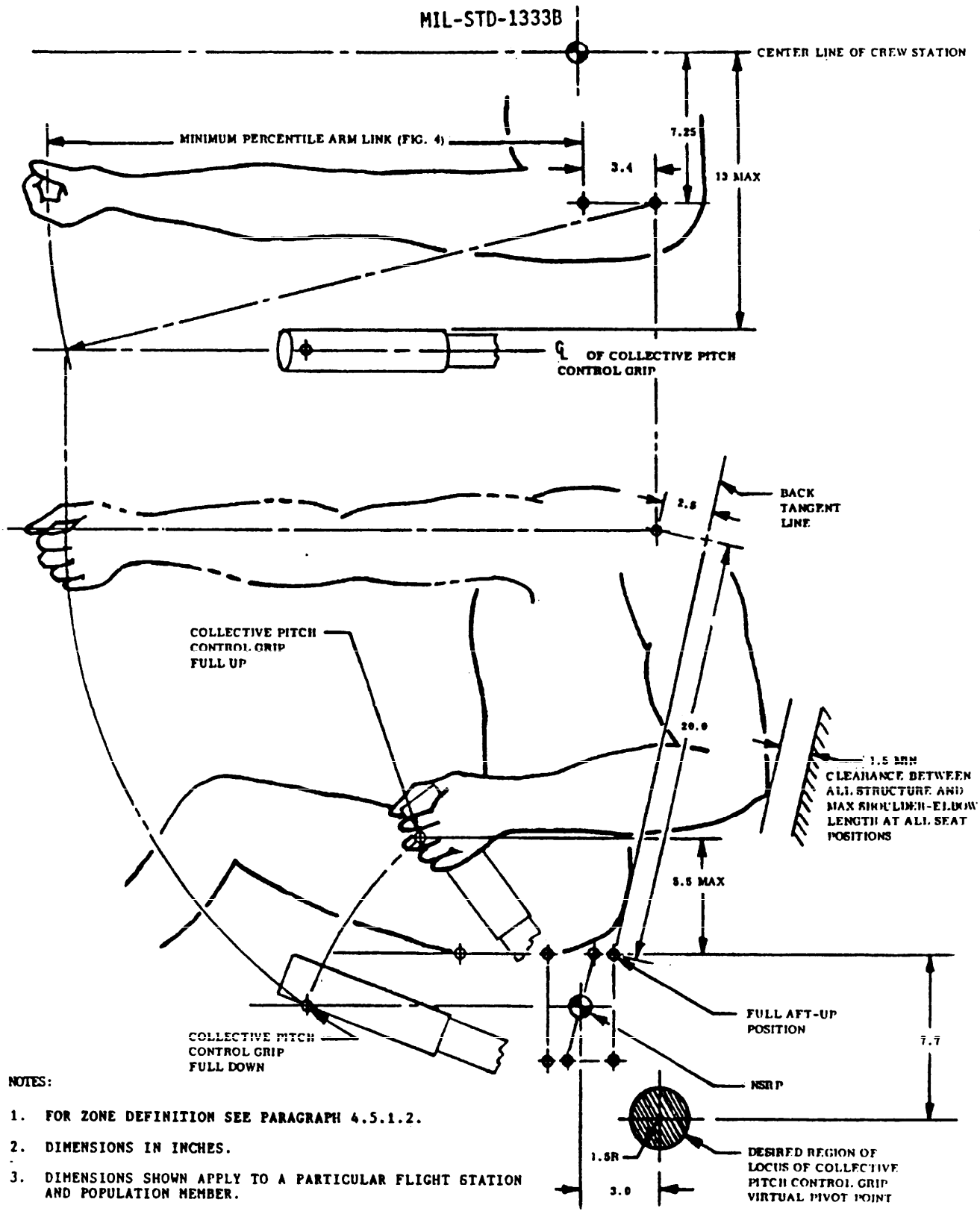
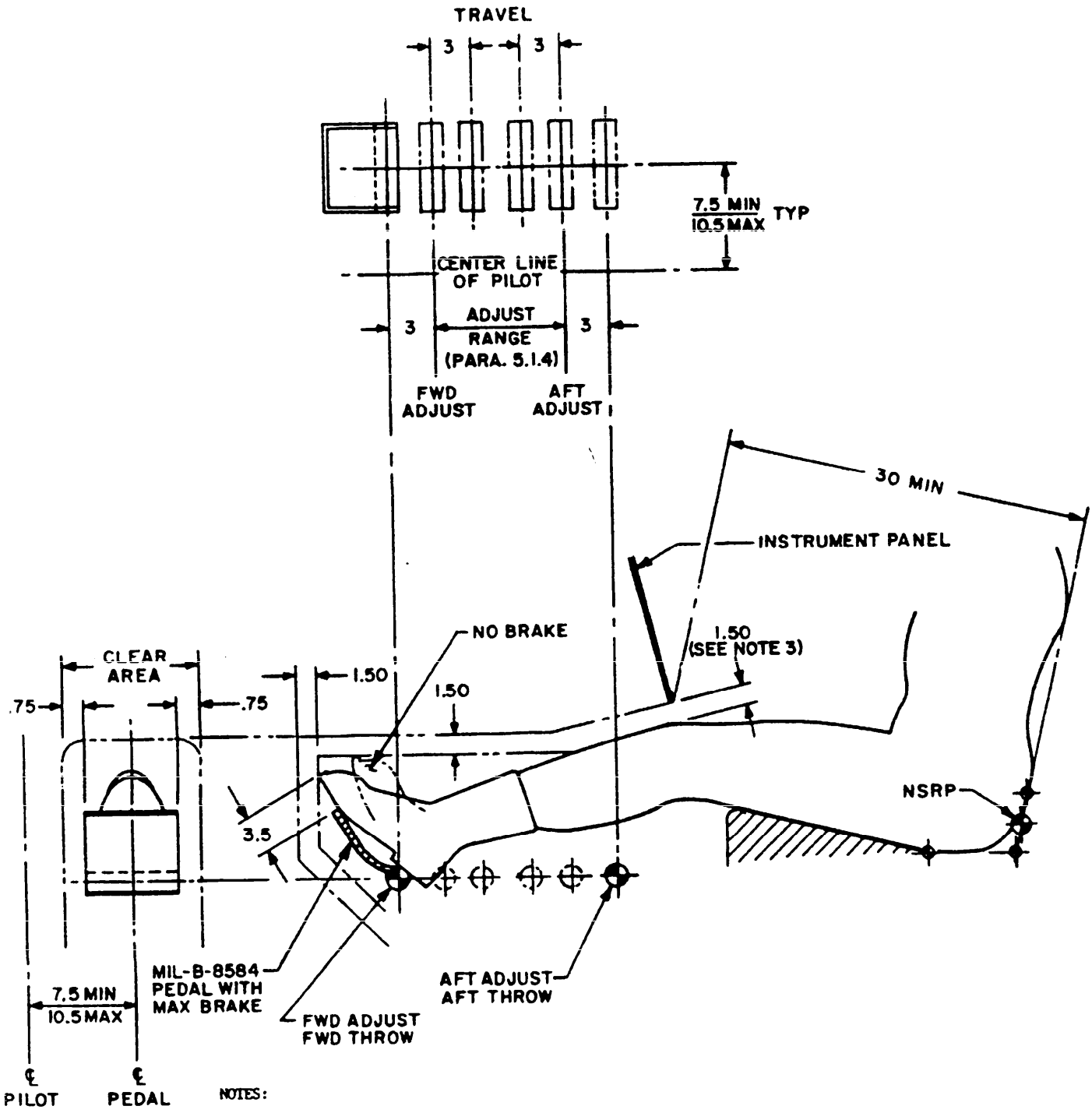
FIGURE 5. Propulsion control geometry.



NOTES:

1. FOR ZONE DEFINITION SEE PARAGRAPH 4.5.1.2.
2. DIMENSIONS IN INCHES.
3. DIMENSIONS SHOWN APPLY TO A PARTICULAR FLIGHT STATION AND POPULATION MEMBER.
4. FUNCTIONAL REACH AS SPECIFIED BY THE ACQUIRING ACTIVITY. GRASP AS SPECIFIED BY THE ACQUIRING ACTIVITY.
5. CONSIDERATION SHALL BE GIVEN TO DIFFERENCES BETWEEN LINK MODEL DATA (e.g. SHOULDER PIVOT POINT AS SHOWN ABOVE) AND CLASSICAL ANTHROPOMETRIC DATA (e.g. FUNCTIONAL ARM REACH) SPECIFIED BY THE ACQUIRING ACTIVITY.

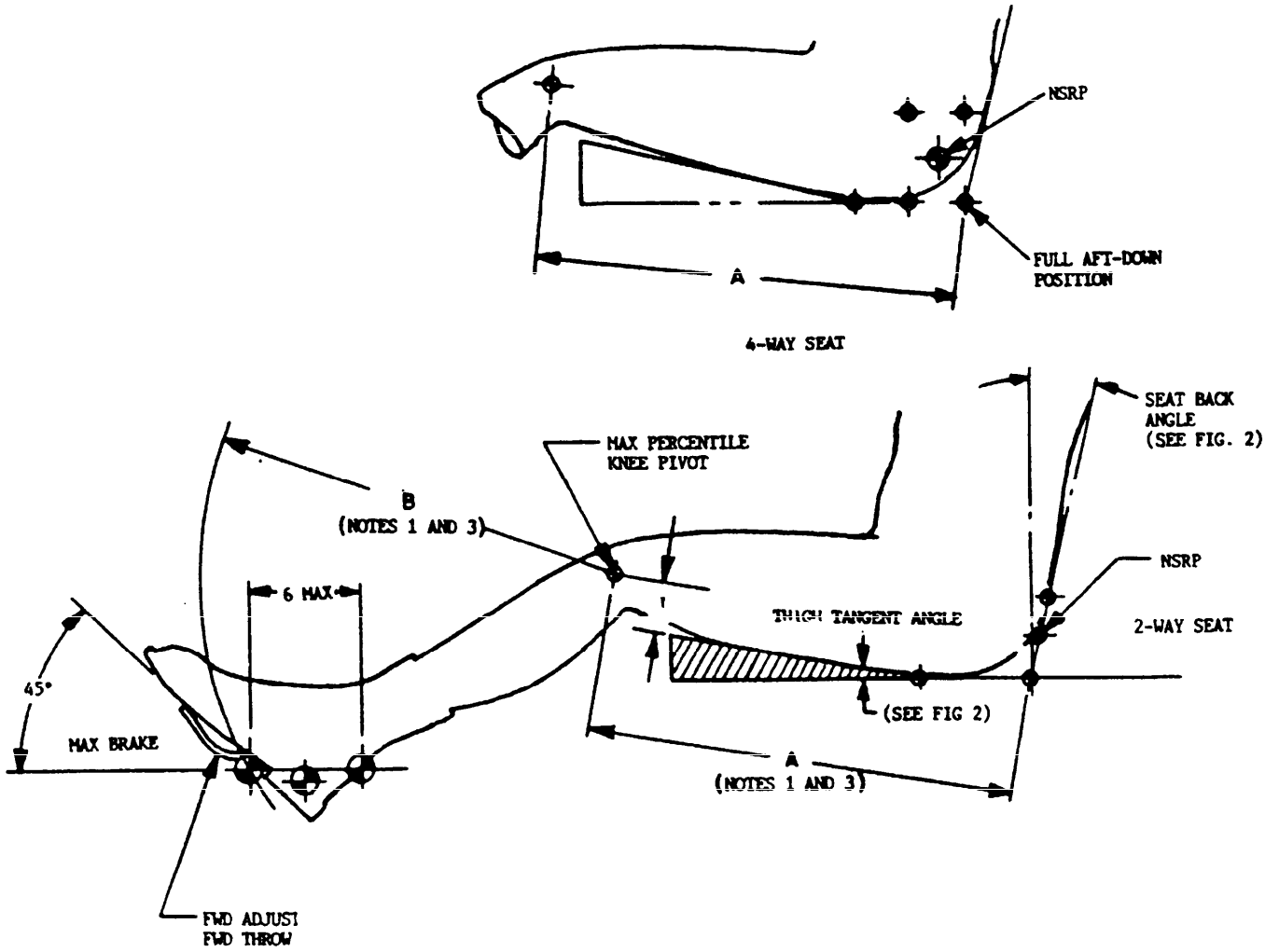
FIGURE 6. Collective control geometry.



NOTES:

1. LOCUS OF PEDAL TRAVEL NEED NOT BE A STRAIGHT LINE.
2. CLEARANCE SHOWN BASED ON MAX PERCENTILE LEG WITH LARGEST SIZE FOOTWEAR. TORSO SHOWN IN FORWARD MOST RESTRAINED POSITION WITH FULL FORWARD PEDAL ADJUST, FULL FORWARD PEDAL THROW, AND FULL BRAKE TRAVEL.
3. CLEARANCE SHALL BE MAINTAINED WITH BOTH LEGS THROUGHOUT FULL YAW CONTROL TRAVEL.
4. DIMENSIONS IN INCHES.
5. DIMENSIONS SHOWN APPLY TO A PARTICULAR FLIGHT STATION AND POPULATION MEMBER.

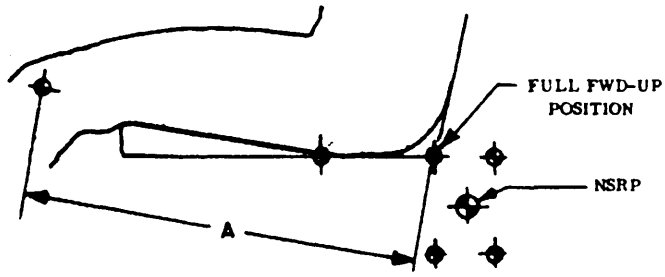
FIGURE 7. Yaw control pedals.



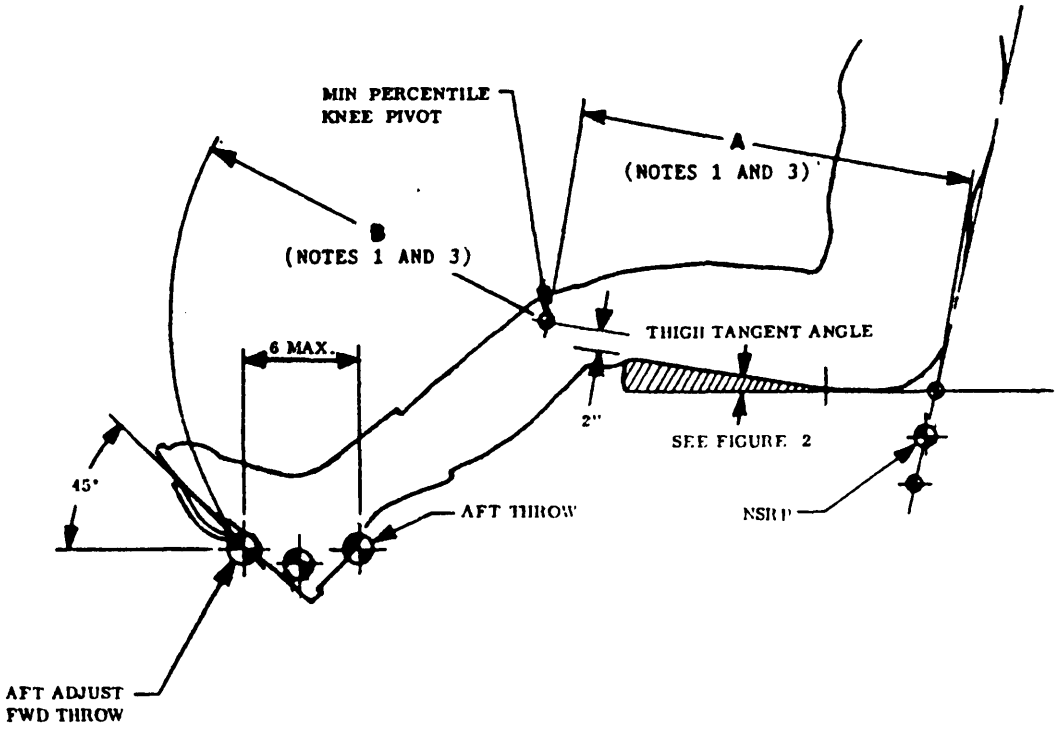
NOTES:

1. BASED ON MAXIMUM PERCENTILE LEG FULLY EXTENDED IN LARGEST SIZE FOOTWEAR.
2. DIMENSIONS IN INCHES.
3. A AND B TO BE SPECIFIED BY THE ACQUIRING ACTIVITY.
4. DIMENSIONS SHOWN APPLY TO A PARTICULAR FLIGHT STATION AND POPULATION MEMBER.
5. CONSIDERATION SHALL BE GIVEN TO DIFFERENCES IN LINK MODEL DATA SHOWN ABOVE AND CLASSICAL ANTHROPOMETRIC DATA SPECIFIED BY THE ACQUIRING ACTIVITY.

FIGURE 8. Yaw control pedals - forward range.



4-WAY SEAT



NOTES:

1. BASED ON MINIMUM PERCENTILE LEG FULLY EXTENDED IN SMALLEST SIZE FOOTWEAR.
2. DIMENSIONS IN INCHES.
3. A AND B TO BE SPECIFIED BY THE ACQUIRING ACTIVITY.
4. DIMENSIONS SHOWN APPLY TO A PARTICULAR FLIGHT STATION AND POPULATION MEMBER.
5. CONSIDERATION SHALL BE GIVEN TO DIFFERENCES BETWEEN LINK MODEL DATA SHOWN ABOVE AND CLASSICAL ANTHROPOMETRIC DATA SPECIFIED BY THE ACQUIRING ACTIVITY.

FIGURE 9. Yaw control pedals - aft range.

INSTRUCTIONS: In a continuing effort to make our standardization documents better, the DoD provides this form for use in submitting comments and suggestions for improvements. All users of military standardization documents are invited to provide suggestions. This form may be detached, folded along the lines indicated, taped along the loose edge *(DO NOT STAPLE)*, and mailed. In block 5, be as specific as possible about particular problem areas such as wording which required interpretation, was too rigid, restrictive, loose, ambiguous, or was incompatible, and give proposed wording changes which would alleviate the problems. Enter in block 6 any remarks not related to a specific paragraph of the document. If block 7 is filled out, an acknowledgement will be mailed to you within 30 days to let you know that your comments were received and are being considered.

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1. DOCUMENT NUMBER	2. DOCUMENT TITLE
MIL-STD-1333 B	AIRCREW STATION GEOMETRY FOR MILITARY AIRCRAFT

3a. NAME OF SUBMITTING ORGANIZATION	4. TYPE OF ORGANIZATION *(Mark one)*
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