

DIVE STANDS ONE METER AND THREE METER LADDER AT REAR

Installation Instructions



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**INSTALLATION INSTRUCTIONS
FOR
ONE METER AND THREE METER DIVE STANDS
LADDER AT REAR
Spectrum Stainless Steel Adjustable Fulcrum**

Read completely before starting

The dive stand will ship with several major components.
These components are listed below and shown on the following drawing:

- 1) Rear hinge-sub assembly (1)
- 2) Ladder tread supports (2) (These may be part of the hand rail assembly)
- 3) Diving Board (This may not have been shipped with the dive stand) (1)
- 4) Handrail assembly (2)
- 5) Support Pedestal Assembly (1)
- 6) Geared adjustable fulcrum assembly (1)
- 7) Cage anchor and rear ladder anchor assembly (1) (unless previously ordered)
- 8) Ladder handrails – 3 Meter Dive Stand Only

Installation:

- 1) Set the cage anchor and rear ladder anchors in concrete at the location shown on the attached drawing. The concrete surrounding the anchor should match the dimensions on the drawing. **It is very important that the anchors are level with the finished deck and square with the pool edge.**
- 2) After the cage anchor and rail anchors are set and the concrete has time to cure the Support pedestal assembly can be set and bolted into position.
- 3) Insert the ladder tread supports into the handrail assembly and install the bolts. **(Make sure the bolts are tight. Check daily for tightness and wear).**

The cage anchor and the ladder rail anchors should be grounded to the existing bonding grid when installed.

All hardware should be checked daily for tightness. Replace any worn or damaged hardware or parts immediately. Do not use the dive stand with missing, broken, or worn-out parts.

- 4) Insert the ladder support rails into their anchors and set the handrail assembly into position on top of the support pedestal. Make certain that the ladder support rails are secure in the anchors. The wedge needs to be tightened and the bolt needs to be installed through the anchor collar and the ladder rail. Some drilling may be required to get the bolt to fit through the rail. **The bolts through the ladder rail must be installed and the collar must be bolted to the anchor in the concrete. Check these anchors daily for tightness.**
- 5) SEE ADDENUM A FOR ADJUSTABLE FULCRUM INSTALLATION
PERFORM STEPS 1 TO 5.
- 6) Install the step threads on the dive stand ladder tread supports.
- 7) The rear hinge assembly comes mostly assembled. Unpack the assembly and remove the captivation plates from the end of the hinge pin. Refer to the attached drawing to determine the orientation of the rear hinge. **(This is important because it can affect the over hang of the diving board)**. Slide the hinge pin into position. This should be done from between the side rails so that the actual hinges do not need to be removed. Install the captivation plates from outside the side rails. Securely fasten the four nuts on each side. **(Check regularly for tightness)**.
- 8) Mount the diving board to the dive stand. Follow any recommendations the manufacture of the board may have and use the manufactures mounting hardware. Attach the rear of the board to the rear hinge assembly. **(Make sure to use the load distribution plate that comes with the rear hinge assembly)**. The shackle and poly block orientation are shown on an attached drawing. **(Secure all hardware and check daily for tightness)**.
- 9) SEE ADDENUM A FOR ADJUSTABLE FULCRUM INSTALLATION
PERFORM STEPS 6 TO 8.

The cage anchor and the ladder rail anchors should be grounded to the existing bonding grid when installed.

All hardware should be checked daily for tightness. Replace any worn or damaged hardware or parts immediately. Do not use the dive stand with missing, broken, or worn-out parts.

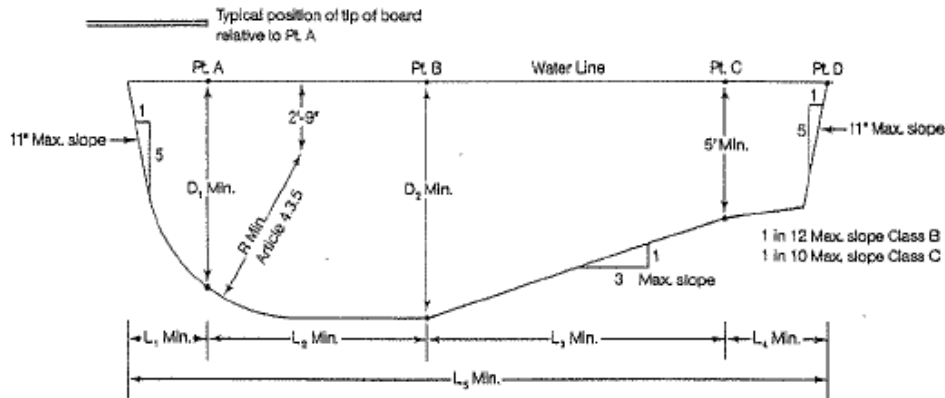
Note To Installer

This dive stand was manufactured in Accordance with the ANSI/NSPI-1 1991 standard. Some of the articles are listed below. It is important that this Dive Stand is installed in compliance with these articles and installed on the correct type of pool. If any of the criteria can't be met during installation contact the manufacture immediately.

- 4.5 **Diving:** Diving intended for class B and C pools shall conform to the minimum water depths, area, slopes, and other dimensions shown in Article 4.6.1. If a wall exists, then it shall conform with the 3:1 slope in the Point D dimension and the L₁₋₂₋₃₋₄ dimensions.
 - 4.5.1 When diving equipment is installed, it shall conform to the specifications set forth in Article 5.7 and shall be located in the diving area of the pool so as to provide the minimum dimensions are shown in Article 4.6.1. Competitive diving equipment shall not be installed on Class B and C pools.
 - 4.5.2 The tip of the diving equipment shall be located at Point A, which is the reference point of all other dimensions.
 - 4.5.3 There shall be a completely unobstructed clear vertical distance of thirteen feet (13') above any diving board measured from the center of the front end of the board. This area shall extend horizontally at least eight feet (8') behind, eight feet (8') to each side and sixteen feet (16') ahead of Point A.
- 5.6.1 Platforms and diving equipment of one (1) meter or higher shall be protected with guard rails which shall be at least thirty inches (30") above the diving board and extend to the edge of the pool wall. All platforms or diving equipment higher than one (1) meter shall have guard rails which are at least thirty-six inches (36") above the diving board and extend to the edge of the pool wall.
- 5.7 **Diving Equipment:** Diving equipment shall be designed for swimming pool use and shall be installed in accordance with the manufacture's recommendations.
 - 5.7.1 Diving equipment manufacture's shall provide installation instructions and specifications with each unit.
 - 5.7.5 Diving equipment shall be permanently anchored to the pool deck. The edge of the board at the tip end shall be level with the water surface. The tip end of the board over the pool water surface may be higher that the butt end of the board. Refer to manufacture's recommendations.
 - 5.7.6 Maximum board height over the water shall have plus three inches (+3") tolerance to allow for construction variances only on Class B and C pools.
 - 5.7.7 The maximum construction tolerance of the tip of the board from Point A shall be plus or minus three inches (+/- 3") on Class B and C pools. The diving equipment shall be in compliance with Article 4.5.2.

4.6 DRAWINGS AND DIAGRAMS

4.6.1 Minimum Dimensions for Diving Portion of Class B and C Pools. (This drawing does not show the shallow portion of the pool.)



NOTE: L_4 is a minimum dimension to allow sufficient length opposite the board. This may of course be lengthened to form the shallow portion of the pool.

POOL TYPE	RELATED DIVING EQUIPMENT		MINIMUM DIMENSIONS								MINIMUM WIDTH OF POOL AT:		
	MAX. DIVING BOARD LENGTH	MAX. BOARD HEIGHT OVER WATER	D_1	D_2	R	L_1	L_2	L_3	L_4	L_5	PTA	PTB	PTC
VI	10'	28" (2/3 meter)	7'-0"	8'-6"	5'-6"	2'-6"	8'-0"	10'-6"	7'-0"	28'-0"	16'-0"	18'-0"	18'-0"
VII	12'	30" (3/4 meter)	7'-6"	9'-0"	6'-0"	3'-0"	9'-0"	12'-0"	4'-0"	38'-0"	18'-0"	20'-0"	20'-0"
VIII	16'	1 Meter	8'-6"	10'-0"	7'-0"	4'-0"	10'-0"	15'-0"	2'-0"	31'-0"	20'-0"	22'-0"	22'-0"
IX	16'	3 Meter	11'-0"	12'-0"	8'-6"	6'-0"	10'-6"	21'-0"	0	37'-6"	22'-0"	24'-0"	24'-0"

L_1 , L_2 and L_4 combined represent the minimum distance from the tip of board to pool wall opposite diving equipment.

For board heights exceeding 3 meters see Article 4.5.2.

*NOTE: Placement of boards shall observe the following minimum dimensions. With multiple board installations minimum pool widths must be increased accordingly.

Deck Level Board to Pool Side	8'
1 Meter Board to Pool Side	10'
3 Meter Board to Pool Side	11'
1 Meter or Deck Level Board to 3 Meter Board	10'
1 Meter or Deck Level Board to another 1 Meter or Deck Level Board	8'
3 Meter to another 3 Meter Board	10'

5.7.3 Diving equipment suitable for installation on a lower pool type may be installed on any higher pool type providing no less a water envelope is provided from the tip of the board than called for in the lower type. Diving equipment of a greater type, e.g., Type VIII, shall not be installed on a pool of lesser type, e.g., Type VII. Should diving equipment be installed at any greater height than specified for the lower type pool, water surface area and geometry shall be provided for the type pool which permits board installation at that height.

5.7.4 Diving equipment shall have slip-resisting tread surfaces.

DIVE STAND ANCHOR INSTALLATION INSTRUCTIONS

- 1) DIG OUT THE REQUIRED AREA AROUND THE ANCHOR FOR THE CONCRETE TO BE POURED. THIS INFORMATION IS ON THE CUSTOM PRESENTATION DRAWING OR THE GENERAL ANCHOR PLACEMENT GUIDE.
- 2) SET THE ANCHOR IN PLACE ACCORDING TO THE DRAWING SHOWING THE PROPER ANCHOR SETBACK. ANCHOR SET BACK IS MEASURED FROM THE FURTHEST DECK PROJECTION OVER THE POOL. (THIS MAY BE THE POOL WALL.)
- 3) GROUND THE ANCHOR TO THE EXISTING BONDING GRID USING THE BONDING LUG PROVIDED WITH THE DIVE STAND ANCHOR.
- 4) MAKE SURE THE DIVE STAND ANCHOR IS SQUARE TO THE POOL.
- 5) SET THE LADDER RAIL ANCHOR ACCORDING TO THE DIMENSION PROVIDED ON THE CUSTOM PRESENTATION DRAWING. (MAKE SURE THESE ARE IN LINE WITH THE DIVE STAND ANCHOR AND ALSO SQUARE TO THE POOL.)
- 6) POUR THE CONCRETE. MAKE SURE THE ANCHORS ARE FLUSH WITH THE DECK.
- 7) LET THE CONCRETE SET FOR AT LEAST 48 HOURS AND THEN ASSEMBLE THE DIVE STAND.

IF THE ANCHOR SETBACK DISTANCE IS DIFFERENT FROM THE GENERAL ANCHOR SETBACK GUIDE THIS INFORMATION MUST BE RELAYED TO THE MANUFACTURE PRIOR TO THE DIVE STAND BEING MANUFACTURED.

ADDENUM A

ADJUSTABLE FULCRUM INSTALLATION INSTRUCTIONS

NOTE: THESE INSTRUCTIONS SUPERCEDE STEPS 5 & 9 OF THE ONE METER AND THREE METER DIVE STAND INSTALLATION INSTRUCTIONS.

The Adjustable Fulcrum Assembly comes unassembled. Unwrap the various parts and compare with the following list:

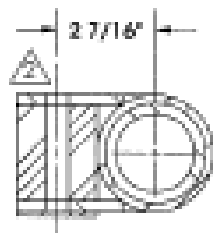
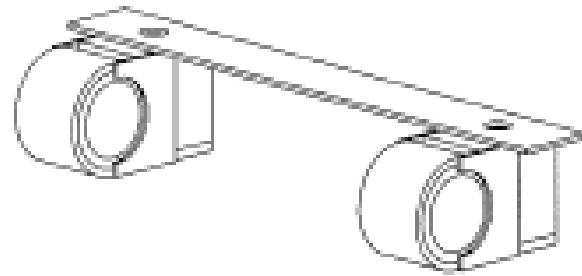
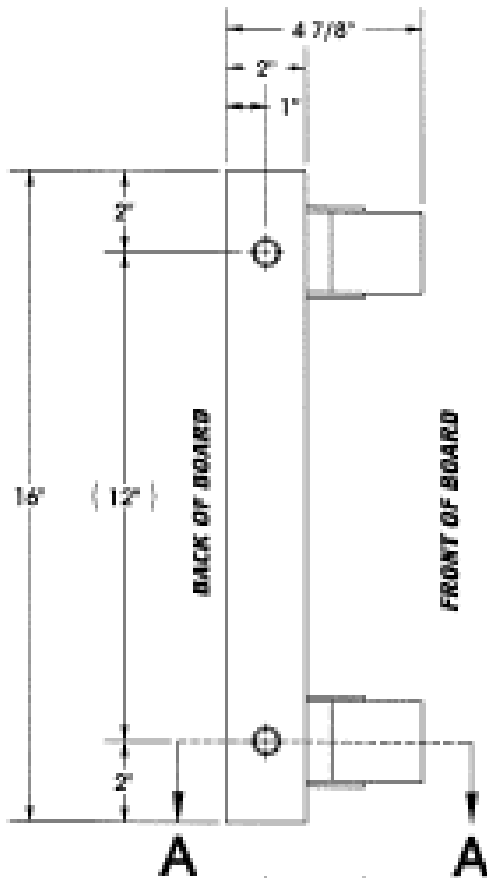
- ___ (1) Dive Pedestal
- ___ (2) Fulcrum side plates, "With Stops, and Fulcrum Spacer Installed"
- ___ (2) Gear racks
- ___ (1) Fulcrum
- ___ (1) Adjusting wheel
- ___ (2) 577130-03 – Fulcrum Adjust Warning Tab
- ___ (1) 13052 - 1/4" roll pin
- ___ (8) 20043 - 3/8"x 3" button head bolt w/machined head
- ___ (2) 20022 - 3/8"x 1" hex head bolt
- ___ (12) 20012 - 3/8" flat washer
- ___ (10) 20017 - 3/8" lock washer
- ___ (10) 20018 - 3/8" acorn nut

INSTALLATION STEPS

- 1) **INSTALL SIDE PLATE*** [Refer to figure 1, labels 1A & 1B]
Position one of the Side Plate Assembly's over the Horizontal Rail (part of Handrail Assembly) and align with the four mounting holes in the tube and the two mounting holes of the Pedestal Plate. Using one (1) 3/8" x 1" Hex Bolts, one (1) 3/8" Lock Washers and one (1) 3/8" Acorn Nuts, fasten the two L-brackets to the Pedestal Plate. Tighten the bolts (**Make sure the bolts are tight. Check regularly for tightness**).
- 2) **INSTALL GEAR RACK*** [Refer to figure 1, labels 1A & 1B]
Fasten the Side Plate Assembly and the Gear Rack to the Fulcrum Plate (through the horizontal rail) by first placing the Gear Rack on the lower in surface of the Slide Plate and aligning the four holes. Place 3/8" x 3" Button Head Cap Screw in each of the holes in the Gear Rack and drop them through the Side Plate, the Horizontal Rail and the Fulcrum Plate. Secure them with four (4) 3/8" Lock Washers and four (4) 3/8" Acorn Nuts. Tighten the bolts (**Make sure the bolts are tight. Check regularly for tightness**).

* See Table 1 for list of step figures with parts list for each step.

**DIVE STAND SERIES
MODEL - REAR HINGE**



SECTION A-A

- ▲ S.R. SMITH COMMERCIAL 14'-0" AND 16'-0" BOARDS:
REAR HINGE ASSEMBLY HOLE SIZE: 9/16"
DO NOT SEND MOUNTING BOLTS WITH REAR HINGE ASSEMBLY. S.R. SMITH SUPPLIES 1/2"-13x6 1/2" BOLTS
- DURAFIRM BOARDS: 14'-0" AND 16'-0"
DURAFLEX: 16'-0"
- MAXIFLEX BOARDS:
REAR HINGE ASSEMBLY HOLE SIZE: 11/16"
SEND 5/8"-11x6" BOLTS AND NUTS WITH REAR HINGE ASSEMBLY

▲ Dimensions vary with specific applications.
*Note: Specifications are nominal and are subject to change.
Please contact Spectrum Products for custom applications.



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ENGINEERING DATA

PRODUCT:	REAR HINGE
PRODUCT #:	N/A
REVISION:	X1+
MATERIAL:	304 S.S. (UNS 304300)

- 3) **INSTALL SIDE PLATE * (OPPOSITE) [Figure 2, 3A & 3B]**
Repeat Step 1 for the opposite side.
- 4) **INSTALL GEAR RACK * (OPPOSITE) [Figure 2, 4A to 4D]**
Repeat Step 2 for the opposite side.
- 5) **INSTALL ROLLER ASSEMBLY * [Figure 2, 5A]**
Position the Roller & Pinion Gear Assembly diagonally between the two Slide Plate Assemblies at the middle of the assembly. Rotate the Roller & Pinion Gear Assembly until it is perpendicular to the Side Plate Assemblies, and the Pinion Gears line up with the teeth of the Gear Racks.
- 6) **INSTALL ADJUSTMENT WHEEL * [Figure 2, 6A]**
Slide the Adjustment Wheel of the mating shaft of the Roller and Pinion Gear Assembly, and spin the wheel until the hole in the shaft lines up with the hole in the Adjustment Wheel. Insert the Roll Pin into the hole, and gently tap into position using a hammer (the Roll Pin is fully installed when it is flush with the outside surface of the Adjustment Wheel shaft).
- 7) **INSTALL SPACERS * [Figure 3, 7A to 7D]**
For each side, slide a Fulcrum Spacer into the gap between the pinion gear of the Roller & Pinion Gear Assembly and the top inside surface of Side Plate Assembly, and align with the two mounting holes. Fasten the Fulcrum Spacer to the Side Plate Assembly using two (2) 5/16x 1 1/2" Hex Bolts, four (4) 3/8" Flat Washers, and two (2) 3/8" Nylock Nuts. Tighten the bolts (**Make sure the bolts are tight. Check regularly for tightness**).

* See Table 1 for list of step figures with parts list for each step.

TABLE 1: LIST OF FIGURES AND CORRESPONDING ASSEMBLY/INSTALLATION STEPS

USE TABLE 1 TO LOCATE FIGURE DRAWINGS FOR THE STEP YOU ARE FOLLOWING IN THE INSTRUCTIONS. FOLLOW THE SUB-DESIGNATIONS TO THEIR CORRESPONDING LETTER FOR HARDWARE INSTALLATION (1A to 1A, ETC.).

FIGURE #	STEP NUMBER	DESCRIPTION	PARTS LIST
1,2	1A, 1B 3A, 3B	INSTALL SIDE PLATE	(2) SIDE PLATE ASSY (4) 3/8" x 1" HEX BOLT (4) 3/8" LOCK WASHER (4) 3/8" ACORN NUT
1,2	2A-2D 4A-4D	INSTALL GEAR RACK	(2) GEAR RACK (8) 3/8" x 3" BUTTON HEAD CAP SCREW (8) 3/8" LOCK WASHER (8) 3/8" ACORN NUT
2	5A	INSTALL ROLLER ASSY	(1) ROLLER/PINION GEAR ASSEMBLY
2	6A	INSTALL ADJ. WHEEL	(1) ADJUSTMENT WHEEL (1) ROLL PIN
3	7A-7D	INSTALL SPACERS	(2) FULCRUM SPACERS (4) 3/8" x 1 1/4" HEX BOLT (8) 3/8" FLAT WASHER (4) 3/8" NYLOCK NUT
3,4	8A-8D	INSTALL STOPS	(4) OUTSIDE STOP PLATE (4) INSIDE STOP PLATE (4) 5/16" x 1 1/4" HEX BOLT

TABLE 1

Steps 1 & 2

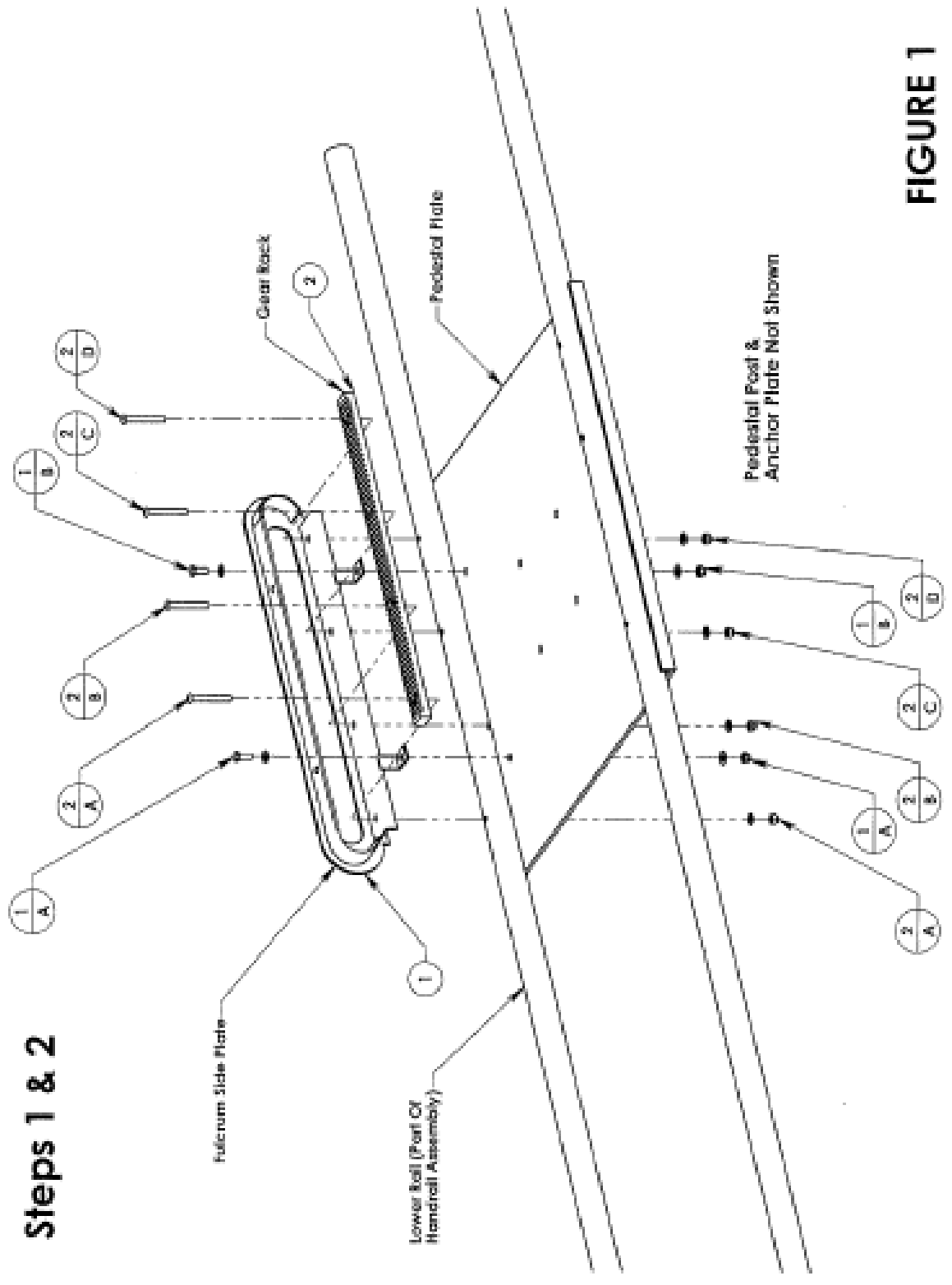


FIGURE 1

Steps 3 to 6

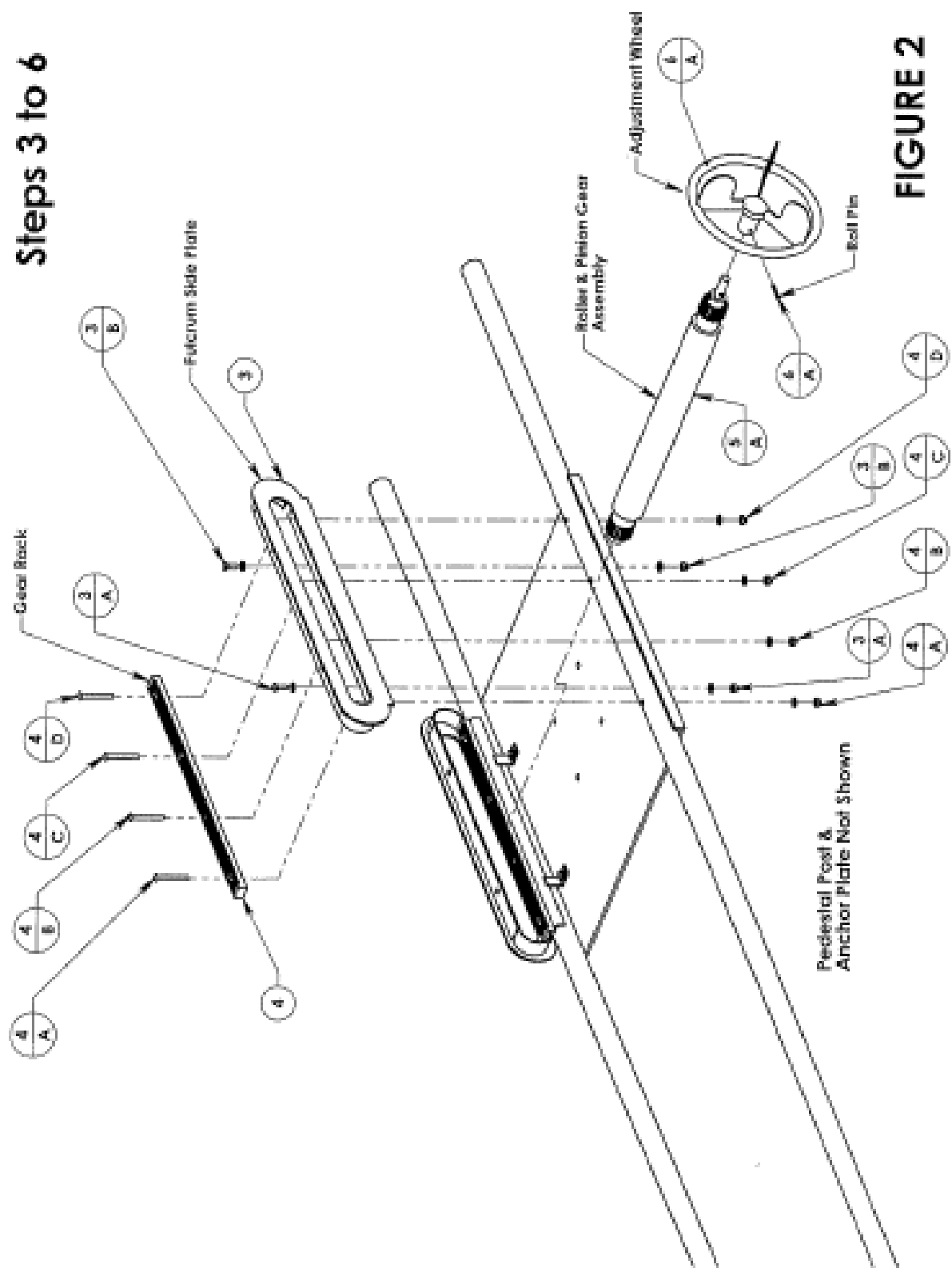


FIGURE 2

Steps 7 & 8

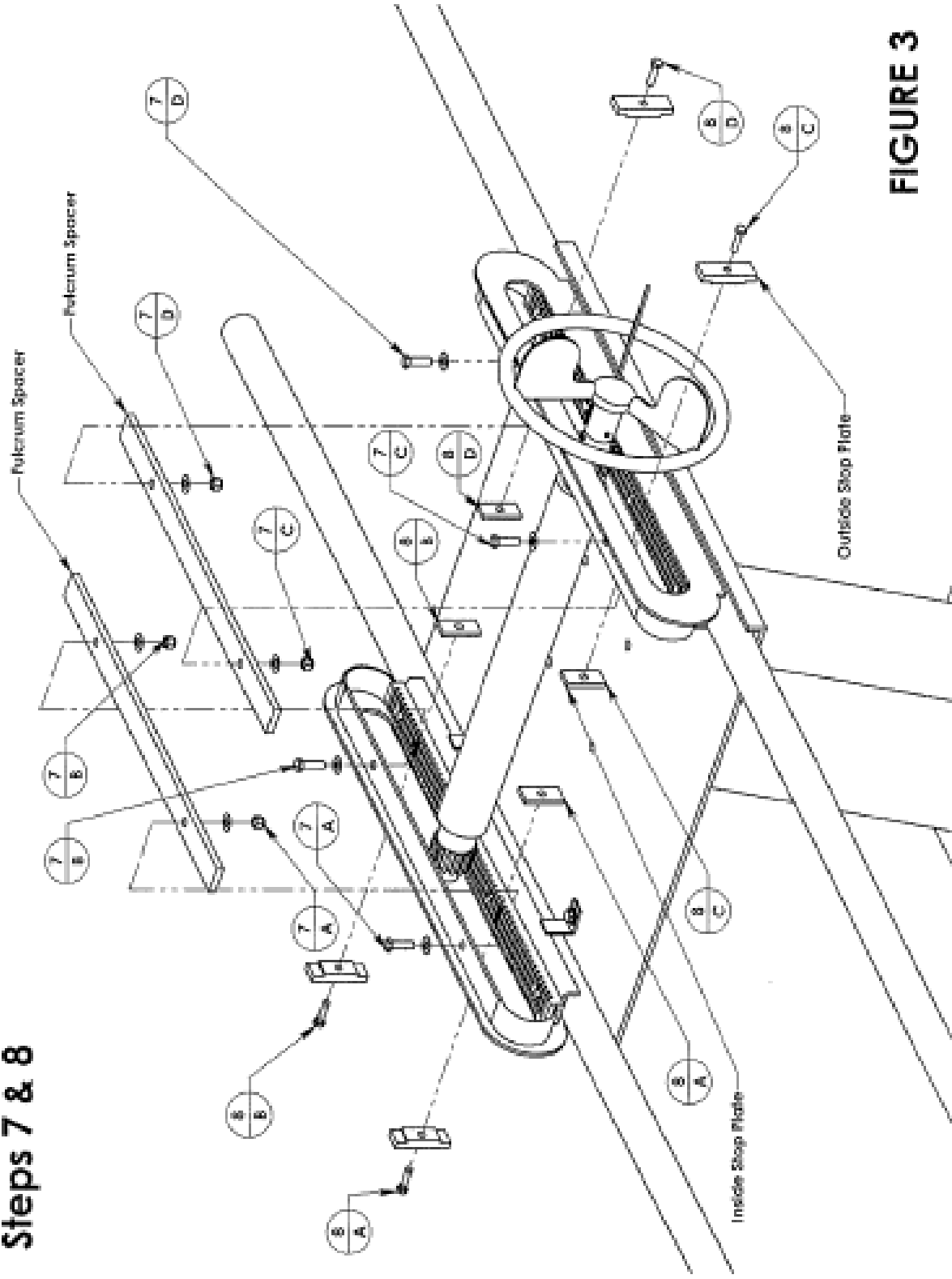


FIGURE 3

Fulcrum Stops Spacing (Step 8)

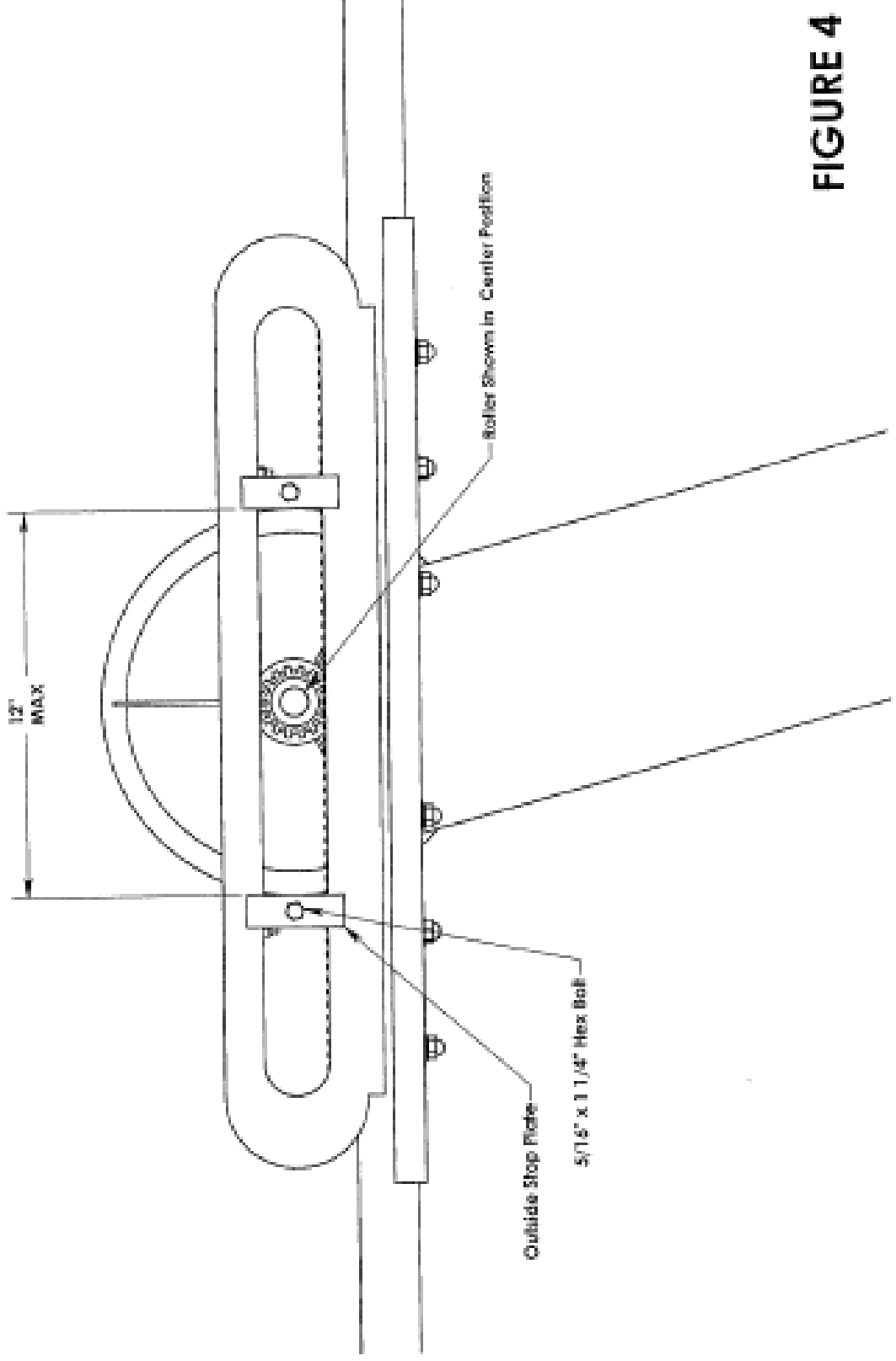


FIGURE 4

