AMSCO Maintenance Manual

ORTHOGRAPHIC 2
ORTHOPEDIC AND FRACTURE TABLE
(7/86) **P-764317-885**

SV-5047

AMSCO | AMERICAN STERILIZER COMPANY • 2425 WEST 23rd STREET • AMSCO 4072 • ERIE • PENNSYLVANIA 16514

Printed in U.S.A.

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TOPIC 1

GENERAL DATA REVIEW

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SECTION 1.1 GENERAL

NOTE: This Topic provides a general review of table particulars. You are urged to read this Topic before proceeding with the manual.

1.1.1. SUMMARY OF WARNINGS AND CAUTIONS

The following are personnel (WARNINGS) and equipment (CAUTIONS) **safety precautions** to be observed when operating or servicing this unit. This is a listing of all safety precautions appearing in the text. Carefully read them before proceeding to use or service the unit. Observance of these safety precautions will minimize the risk of personal injury or the possible use of improper maintenance methods which may damage the unit or render it unsafe. It is important to understand that these precautions are not exhaustive. AMSCO could not possibly know, evaluate and advise maintenance departments of all conceivable ways in which maintenance might be done or the possible hazardous consequences of each way.

The operation and maintenance procedures recommended by AMSCO are described in this manual. Only these recommended maintenance procedures should be followed.

WARNING: REPAIRS AND ADJUSTMENTS SHOULD BE ATTEMPTED ONLY BY EXPERIENCED PERSONS FULLY ACQUAINTED WITH THIS EQUIPMENT. USE OF INEXPERIENCED, UNQUALIFIED PERSONS TO WORK ON THE EQUIPMENT OR THE INSTALLATION OF UNAUTHORIZED PARTS COULD CAUSE INJURY OR RESULT IN COSTLY DAMAGE.

WARNING: MAKE CERTAIN TABLETOP IS PROPERLY SUPPORTED BEFORE PERFORMING MAINTENANCE REQUIRING TOP TO BE MAINTAINED IN RAISED POSITION.

WARNING: SUPPORT TABLETOP ASSEMBLY BEFORE REMOVING TRANSLATION SHAFTS.

WARNING: WHEN REMOVING TRENDELENBURG GEAR ASSEMBLY, BLOCK SUPERSTRUCTURE TO AVOID SUDDEN TABLETOP MOVEMENT.

CAUTION: Do NOT overfill sump with hydraulic oil. Do NOT mix different brands of hydraulic oil.

CAUTION: Do not "kink" copper tubing when moving pump and sump assembly.

CAUTION: During lift carriage adjustments eccentric locking nuts should be tightened only with slight wrench pressure. Excessive tightening will fracture eccentric at flange.

1.1.2. APPLICATION AND DESIGN

The following product literature (SD-313) contains technical data relating to principle description and identifying characteristics of particulars for this table. The literature is informational rather than instructional. It provides, textually and illustratively, a general concept of equipment, its purpose, capabilities, limitations, and technical specifications.

1.1.3. OPERATING INSTRUCTIONS

The following instructions (P-129354-375) are intended to guide maintenance personnel when:

- Instructing operators in proper operation of table
- Instructing operators in techniques designed to ensure optimum equipment performance.
- Verifying validity of operator complaints

Refer to Troubleshooting Section of appropriate Topic if table is not operating properly. Refer to Application And Design Section for capabilities of equipment.

AMSCO

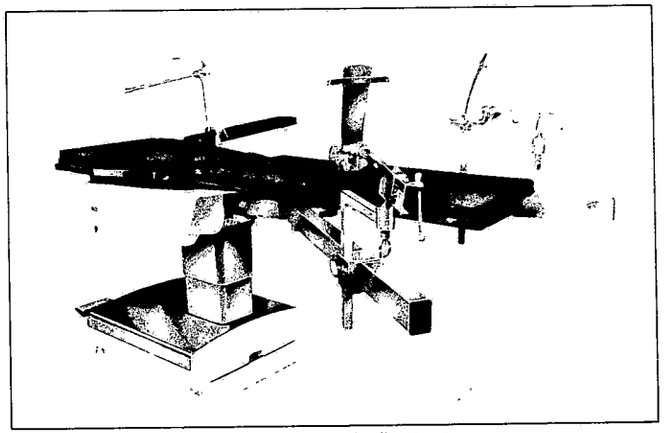
Orthopedic Table

ORTHOGRAPHIC 2
ORTHOPEDIC AND FRACTURE TABLE

TECH DATA

DESCRIPTION

ORTHOGRAPHIC is a mobile, manually operated orthopedic table. It provides flexible, easy to use, articulated posturing of patient for reconstructive and reparative orthopedic procedures. Permits conventional radiography and will interface with mobile image-amplification systems. Folds into a neat, compact package (28-1/2 x 27-1/2 x 41 inches [724x699x1041 mm]) when not in use.



Typical only — some details may vary.

Application

Designed primarily for hip and lower extremity procedures: hip pinning, ender nailing, intramedullary nailing of femur, tibia and fibula surgery. However, table (with optional accessories) also allows for upper body procedures: shoulder surgery, arm and hand surgery, non-operative myelograms.

Applicable Standards

Image-amplification accessories are designed to meet *Radiation Control for Health and Safety Act*. Suitable for use in nonflammable anesthetizing locations as defined in National Fire Protection Standard for the use of inhalation anesthesia, 56A (1978).

DESIGN FEATURES

Base affords adequate, comfortable toe space on both sides with sufficient space to receive the support blades of a Mayo-type instrument stand. Raise/Lower and Floor lock pedals are at head end. Height-adjustable floor locks, one at each corner, and casters, two swivel and two fixed, are provided. Fixed casters at foot end eliminate tendency of table to drift sideways. Top of base has an easy to clean stainless-steel cover. A NFPA-approved patient grounding receptacle is also provided at foot-end of base.

Pedestal includes tabletop lift cylinder and support column with bearing-mounted saddle frame. Saddle is steel to improve stiffness. Lift cylinder and support column are fully enclosed by stainless-steel, telescoping shrouds. Each shroud is one-piece construction to guard against foreign matter entering elevating mechanism.

THE SELECTIONS CHECKED BELOW APPLY TO THIS EQUIPMENT

Optional Accessories

- ☐ BF00-020 Accessory Clamp
- ☐ BF00-021 Legholder
- ☐ BF00-022 Popliteal
- ☐ BF00-016 AP Cassette Holder
- ☐ BF00-017 Lateral Cassette Holder
- ☐ BF00-023 Foot Traction Boot
- ☐ BF00-025 Image Amplification
- ☐ BF00-018 Drape Support
- ☐ BF08-300 Clark Sockets
- ☐ BF00-026 Arm/Hand Table
- ☐ AMSCO Standard Arm and Leg Support Accessories (SD-42)

Item No. _____
Location(s) _____
_____
_____

Printed in U.S.A.

Superstructure houses Lateral Tilt and Trendelenburg mechanisms. Bearing mounted to elevating mechanism. Covered with two-piece RIM (Reacting Injection Mold - no seams) molded, high density urethane shroud. Shroud is finished with non-conductive urethane paint. Two manual crank handles located on head-end of table control Tilt and Trendelenburg.

Tabletop contains translating support rods and locking mechanism. Tabletop can be **translated** four inches (101 mm) to either side of center to aid in patient transfer and positioning. Translation can be actuated and locked from either side of the table. Two stainless-steel rails for attaching accessories run entire length of top. Rails will also accept standard AMSCO accessories. Tabletop supplied with Velcro® (Velcro Corporation) strip to fasten pad.

Pad consists of a one inch (25 mm) thick, one-piece, foam latex sheet covered with Lectrolite Duotone® (Herculite Corporation). Sewn Velcro fasteners simplify application and removal . . . no other fastening devices required.

Abductor Bars, at foot-end of superstructure, feature two-sectional construction for lower extremity positioning flexibility. Each abductor bar has two rotating joints that provide planar rotation and can be locked at any position, from 0 to 160 degrees, by easy to use actuating handles.

Operating Controls

- **Foot pedals** are easily actuated and clearly identified. Located at head-end of table, they include:
  - LOCK/UNLOCK — to engage/disengage floor locks.
  - RAISE/LOWER — to raise or lower the tabletop.
- **Tabletop positioning** controls are mounted at the head-end of table at a convenient height on the superstructure. They are arranged for simple, foolproof actuation and include:
  - TRENDELENBURG — to lower or raise the head-end (see Figure A) of superstructure from horizontal.
  - LATERAL TILT — to tilt superstructure right or left (See Figure B) from horizontal.

TECHNICAL DATA

Performance Capabilities

This table is designed to support up to a 300 pound patient in correct anatomic position for various procedures throughout the complete range of table movements.

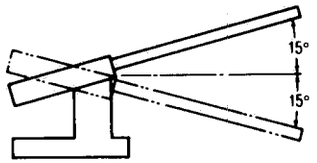


Figure A. TRENDELENBURG.

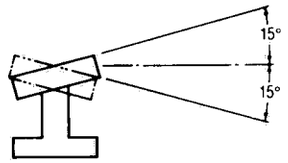


Figure B. LATERAL TILT.

Material Specifications

Materials not definitely specified herein are of the best quality and finish as required for the purpose in the industry.

- **Base** is cast aluminum, ASTM UNS-A47120 T5 or equivalent, finished with polyurethane texture paint.
- **Superstructure** side frame and inner cross member are cast aluminum; end frame is cast iron to provide ballast to assist Trendelenburg operation.
- **Tabletop** assembly is cast aluminum, texture painted. Bearing rods are case hardened stainless steel. Tabletop measures 31-1/4x20 inches (794x508 mm).
- **Abductor bars** are 2x3x10 inches (51x76x254 mm) for inner bar and 2x3x40 inches (51x76x1016 mm) for outer bar. Bars have a satin polish, chrome plated, finish to prevent corrosion.

ACCESSORIES

See opposite page.

WARRANTY

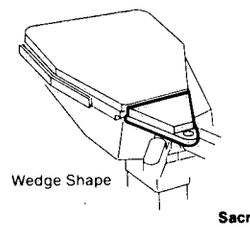
The American Sterilizer Company warrants that each table is carefully tested, inspected and leaves the factory in proper working condition, free of visible defects. Coverage includes one year on parts (except expendables) and 90 days on labor. AMSCO representatives can provide full details of the warranty program upon request.

MAINTENANCE

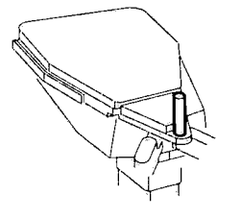
This table is designed for dependable operation if properly used and routine preventive maintenance is observed. If additional maintenance is required, a detailed maintenance manual is available. AMSCO also has a nationwide network of professional factory-trained service technicians capable of performing necessary repairs.

AMSCO also provides a low cost PMA (Preventive Maintenance Agreement) to keep your equipment operating efficiently. AMSCO service technicians thoroughly inspect, clean, adjust and perform all necessary repairs . . . all at an established low rate, plus the cost of any renewal parts.

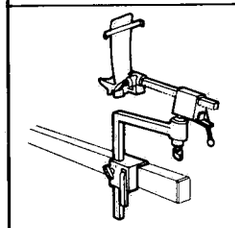
STANDARD ACCESSORIES



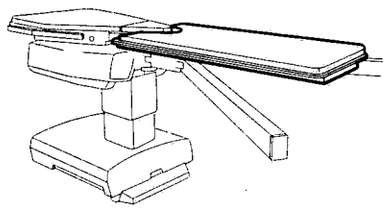
Sacral Rests *BRH compliance*



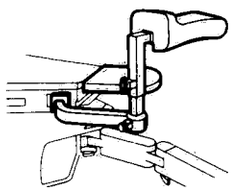
Perineal Post



Foot Traction Unit

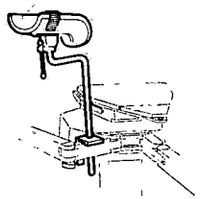


Patient Transfer Board

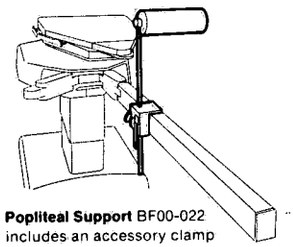


Intramedullary Counter-Traction Device and Hip Rest

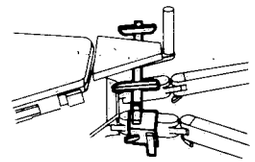
OPTIONAL ACCESSORIES



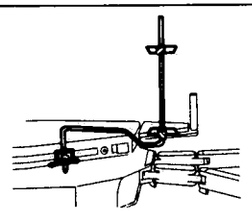
Legholder BF00-021
includes an accessory clamp



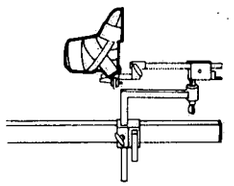
Popliteal Support BF00-022
includes an accessory clamp



AP Cassette Holder
BF00-016 includes
an accessory clamp

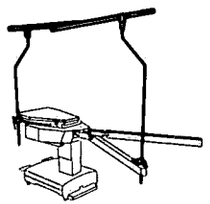


Lateral Cassette Holder
BF00-017 includes a Clark Socket

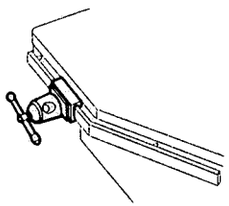


Foot Traction Boot
(Pair) BF00-023

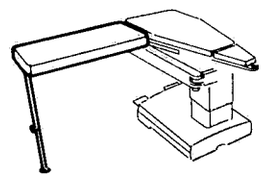
Image Amplification Board
BF00-025
BRH compliance



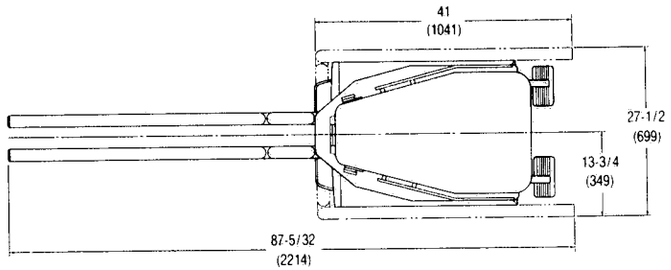
Drape Support BF00-018 includes
a Clark Socket and accessory clamp



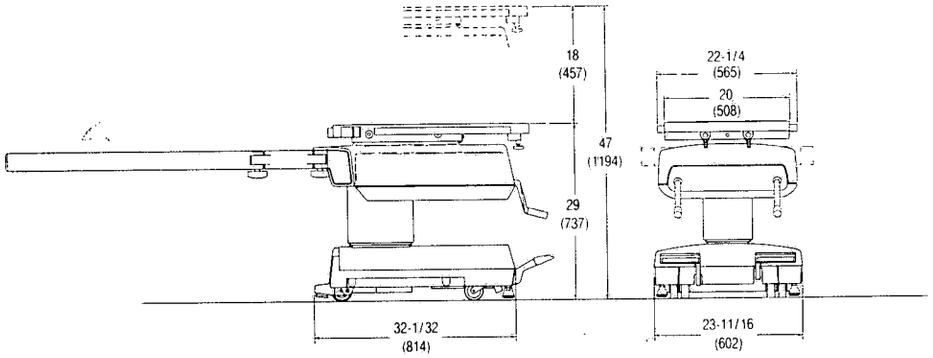
Clark Sockets (Pair)
BF08-300



Arm/Hand Table
BF00-026
BRH compliance



PLAN VIEW



SIDE VIEW

HEAD-END VIEW

DIMENSIONS ARE INCHES (MILLIMETERS) — DRAWING IS NOT TO SCALE

NOTE:

1. Approximate weight— 700 lbs (315 kg).

This print is for guidance when planning space and utility services. Actual installation prints may be obtained from any AMSCO office representative.

AMSCO

ORTHOGRAPHIC 2
ORTHOPEDIC AND FRACTURE TABLE

EQUIPMENT INSTRUCTIONS

P-129354-375
(2/24 83)

IMPORTANT

- UNCRATING INSTRUCTIONS AND EQUIPMENT DRAWING — Complete instructions for uncrating this Table as well as an equipment drawing, have been furnished. If you cannot find them . . . write, wire or telephone AMSCO giving the **serial, unit** and **model** numbers of the Table . . . replacement copies will be sent to you promptly.
- These instructions should be retained in a conveniently accessible area, for quick reference.
- AMSCO table products are designed to safely support and position a 300-pound patient with body weight appropriately distributed to attain standard surgical positions typical of those shown in AMSCO literature. This same design criteria is applied to AMSCO accessories used with tables of our manufacture.

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LIMITATION OF LIABILITY AND INDEMNITY

In no event, whether as a result of breach of contract, warranty or tort (including negligence and strict liability) shall American Sterilizer Company or its suppliers be liable for any consequential or incidental damages including, but not limited to loss of profits or revenues, loss of use of the Products or any associated equipment, loss of the Buyer's Products, damage to associated equipment, cost of capital, cost of substitute products, facilities, service or replacement power, downtime cost, caused by such Products, or claims of the users for such damages. Buyer and ultimate user hereby agree to indemnify the American Sterilizer Company and to hold the American Sterilizer Company harmless from any and all liability for such consequential or incidental damages. The responsibility of the American Sterilizer Company for damages due to injuries or death or the death of employees of the Buyer or ultimate user of the Product, caused by the Product, shall be limited to that portion of such damages as might be attributable to the negligence or strict liability or other tortious conduct of the American Sterilizer Company. The Buyer and ultimate user agree to indemnify the American Sterilizer Company and hold the American Sterilizer Company harmless from any further damages, indemnity or contribution. If Buyer transfers title to or leases the Products sold hereunder to any third party, Buyer shall obtain from such third party a provision affording American Sterilizer Company and its suppliers the protection of this article relating to Limitations of Liability and Indemnities.

The American Sterilizer Company's liability for any claim of any kind (including negligence and strict liability) for any loss or damage arising out of, or resulting from this agreement or from the performance or breach thereof, or from the Products or Services furnished hereunder, shall in no case exceed the price of the specified Product, system, component or service which gives rise to the claim. Except as to title, any such liability shall terminate one year from the date of installation of any Product or upon the expiration of the warranty period applicable to each type of Product covered hereby, whichever time period expires first.

A WORD FROM AMSCO

This manual contains important information on proper use and maintenance of this table. All operators and department heads are urged to carefully review and become familiar with the warnings, cautions and instructions contained herein. This table is specifically designed for use only as specified in the manual.

A thorough preventive maintenance program is essential to safe and proper table opration. You are encouraged to contact AMSCO concerning our Preventive Maintenance Agreement. Under terms of this agreement, preventive maintenance, adjustments, and replacement of worn parts are done on a scheduled basis to assure table performance at peak capability and to help avoid untimely or costly operation schedule interruptions. AMSCO maintains a nationwide staff of well-equipped, factory-trained technicians to provide this service, as well as expert repairs. Contact your AMSCO representative for details.

AMSCO carries a complete line of accessories for all types of surgery. An AMSCO representative will gladly review these with you.

Thank you for choosing this fine AMSCO product . . . you may be confident of our continued interest in your satisfaction with it.

SUMMARY OF SAFETY PRECAUTIONS

The following are personnel (WARNINGS) and equipment (CAUTIONS) safety precautions to be observed when operating or servicing this table.

WARNING REPAIRS AND ADJUSTMENTS SHOULD BE ATTEMPTED ONLY BY EXPERIENCED PERSONS FULLY ACQUAINTED WITH THIS EQUIPMENT. USE OF INEXPERIENCED, UNQUALIFIED PERSONS TO WORK ON THE EQUIPMENT OR INSTALLATION OF UNAUTHORIZED PARTS COULD CAUSE INJURY OR RESULT IN COSTLY DAMAGE.

WARNING MAKE CERTAIN TABLETOP IS PROPERLY SUPPORTED BEFORE PERFORMING MAINTENANCE REQUIRING TOP TO BE MAINTAINED IN RAISED POSITION.

CAUTION: When filling table with hydraulic oil, do NOT overfill. Do NOT mix different brands of hydraulic oil.

SECTION 1. INSTALLATION (SEE FIGURE 1)

1.1. Roll table to desired location.

1.2. Fully depress LOCK/UNLOCK pedal. This will lock table in position by simultaneously transfering table weight from casters to floor locks. The table will remain locked (immobile) until pedal is again fully depressed and released.

1.3. Check floor locks. Be sure each lock is snug against floor. If necessary adjust floor locks as follows.

NOTE: Floor locks are factory-adjusted for a level surface. However, as floor surfaces vary, readjustment may be required. When properly adjusted, locks should engage floor simultaneously and table base should rise evenly. Also, casters need not clear floor (i.e., they should not swing freely with table in locked position).

1.3.1. Place LOCK/UNLOCK pedal in its up (unlocked) position. Using a wrench for rear locks and a drive pin for front locks, screw floor locks counterclockwise as far as possible.

1.3.2. Place LOCK/UNLOCK pedal in its down (locked) position. Screw floor locks clockwise until they are just snug against the floor.

1.3.3. Place LOCK/UNLOCK pedal in its up position. Screw floor locks clockwise an additional 1/2 turn.

1.3.4. Operate LOCK/UNLOCK pedal through several cycles. Operation should be smooth and positive; table should rise evenly as floor locks are actuated. With locks engaged table should not rock or move when normal forces are applied. You may also find that a further 1/4 turn in either direction will "fine tune" the operation.

NOTE: Your table is furnished with electrically conductive floor locks. Accumulation of foreign materials on their surfaces, and wear over an extended period, can reduce their conductive properties. Routine testing for conductivity should be performed as needed. A patient grounding receptacle (See Figure 1) is provided. Male connector to ground patient is not furnished by AMSCO.

1.4. Unfold abductor bars and lock in desired position. Turn actuating knobs, located at joint, counterclockwise to unlock bars. After properly positioning bars for desired procedure, turn actuating knobs clockwise to lock.

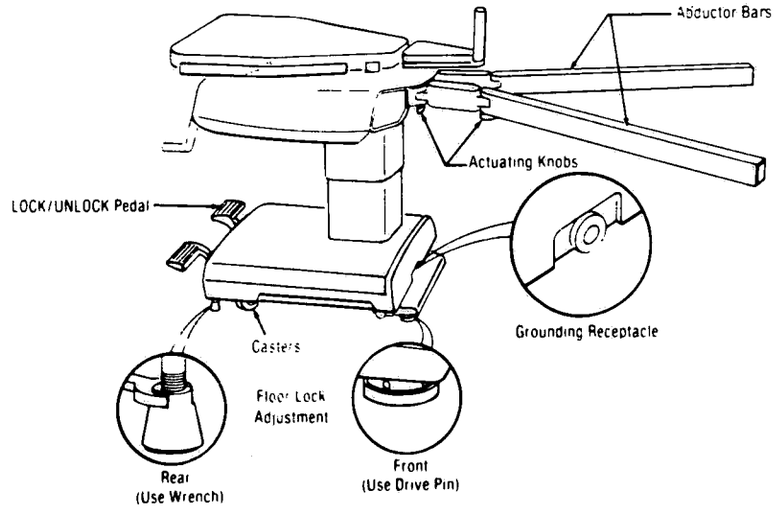


Figure 1. ORTHOGRAPHIC 2 TABLE.

1

SECTION 2. TABLETOP POSITIONING CONTROLS (SEE FIGURE 2)

2.1. TRENDELENBURG and LATERAL TILT

The controls are conveniently located at the table head end. Two easy-to-use crank handles provide complete maneuverability of the tabletop. The SIDE TILT control is on the right side . . . the TRENDELENBURG/REVERSE TRENDELENBURG control is on the left. Both handles are within easy reach and may be operated simultaneously, if desired.

2.1.1. LATERAL TILT operation:

2.1.1.1. Turn crank handle until the desired angulation (0-15 degrees from horizontal) is achieved. The direction that crank is turned governs direction of tabletop movement.

2.1.1.2. Releasing the crank handle automatically stops the tabletop and locks it in position.

2.1.2. TRENDELENBURG/REVERSE TRENDELENBURG operation:

2.1.2.1. Turn crank handle clockwise for TRENDELENBURG positioning (0-15 degrees from horizontal) . . . counterclockwise for REVERSE TRENDELENBURG

2.1.2.2. Releasing the crank handle automatically stops the tabletop and locks it in position.

2.2. RAISE/LOWER

A clearly labeled foot pedal at head end of base allows the table to be hydraulically RAISED or LOWERED throughout an 18-inch range . . . smoothly and quietly

2.2.1 RAISE/LOWER operation:

2.2.1.1. Pump pedal to elevate tabletop . . . depress fully to lower

2.2.1.2 Releasing the pedal automatically stops tabletop and locks it at this height.

2.3. Translation

Tabletop can be translated laterally and locked in three positions - center line of the table and four inches on either side of the center line. Two spring-loaded handles (not visible from outside), one on either side of tabletop approximately eight inches from head end, just inside tabletop structure, are provided for easy actuation of translation feature.

NOTE: Tabletop translation effort may be excessive if a heavier patient is being supported. To ease effort, place table into TILT (2 turns).

2.3.1. Translation operation:

2.3.1.1. Push either handle against tabletop outer wall to unlock.

2.3.1.2. Translate tabletop to desired position.

2.3.1.3. Releasing handle automatically stops tabletop and locks it in position.

2.4. Specific Operations

For the positioning of tabletop and accessories for specific operations see Set-up Chart (P-29354-372).

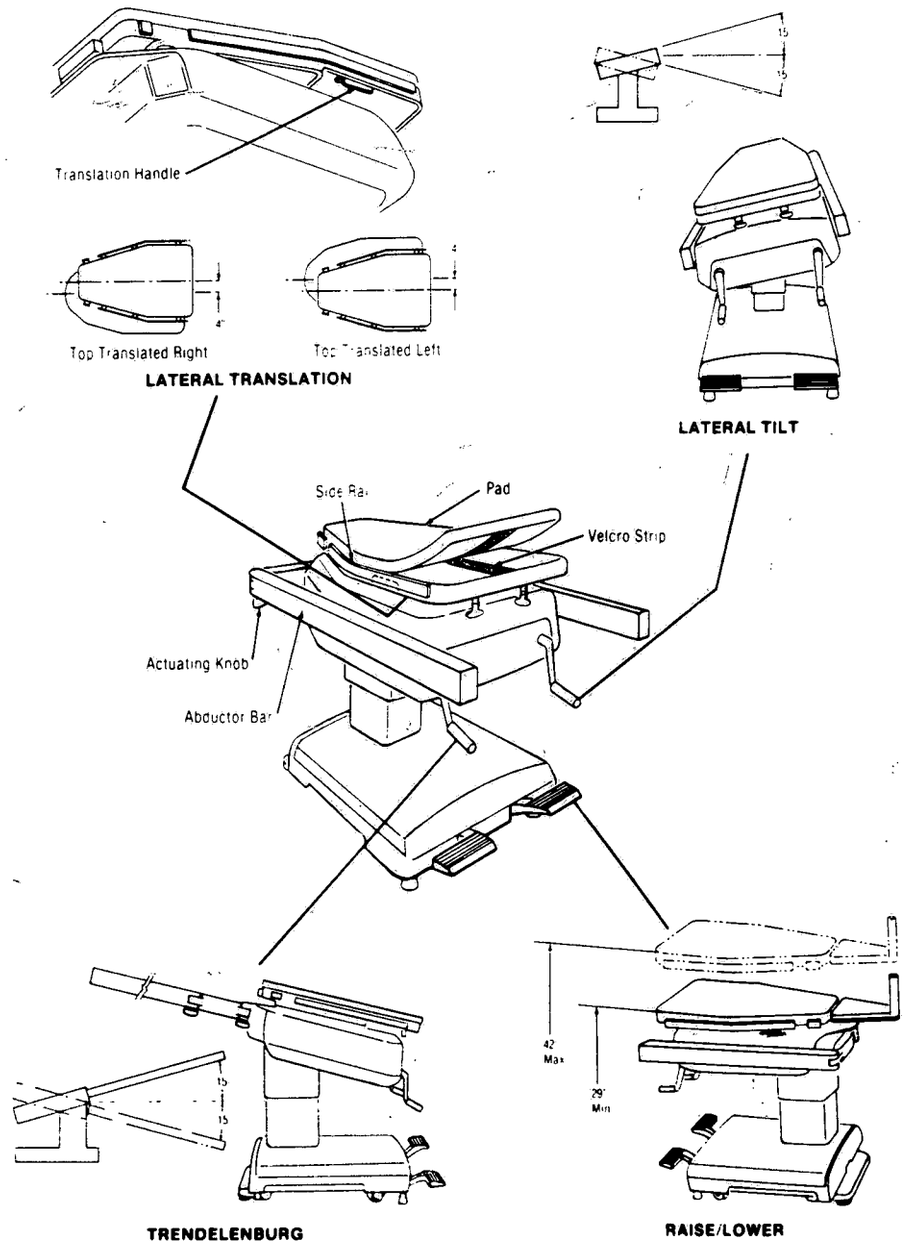


Figure 2. TABLE POSITIONING CONTROLS.

SECTION 3. INSTALLATION OF PADS AND ACCESSORIES

The one inch (25 mm) thick pad is backed with a Velcro® (Velcro Corporation) strip which fastens to an opposing strip on the tabletop. Removable accessories are positioned and secured by clamps or sockets which are applied to and slide along the side rails and abductor bars.

3.1. Pads

3.1.1. To install, place pad in position and press Velcro strips together.

3.1.2. To remove, "peel" pad away from tabletop.

3.2. Accessories (See Table 1)

3.2.1. To install accessories on side rail:

3.2.1.1. Slide clark socket onto either end of side rail.

3.2.1.2. Place accessories support into socket opening and adjust socket for proper angulation of accessory.

3.2.1.3. Tighten accessory support and socket to side rail by turning "T" handle clockwise.

NOTE: Angulation changes can be made by slightly loosening socket.

3.2.1.4. Turn "T" handle counterclockwise to remove support and to loosen socket on rail.

3.2.1.5. Remove socket by sliding off rail.

3.2.2. To install accessories on abductor bars:

3.2.2.1. Place clamp handle in horizontal (unlocked) position.

3.2.2.2. Place clamp on abductor bar.

3.2.2.3. Lock clamp on bar by swinging handle down to vertical position.

3.2.2.4. If adjustment is needed in clamp position, proceed as follows:

- Pull clamp handle to intermediate position (approximately 35 degrees from vertical).
- Clamp may now be slid along abductor bar.

NOTE: Clamp cannot be removed from abductor bar while handle is in intermediate position.

- Remove clamp by pulling handle to horizontal (unlocked) position.

3.2.3. To install the arm/hand table assembly:

3.2.3.1. Place arm hand table bracket onto side rail.

3.2.3.2. Swing support leg down from clamp.

3.2.3.3. Loosen wing nut to lower foot in place.

3.2.3.4. Tighten wing nut to lock foot in place.

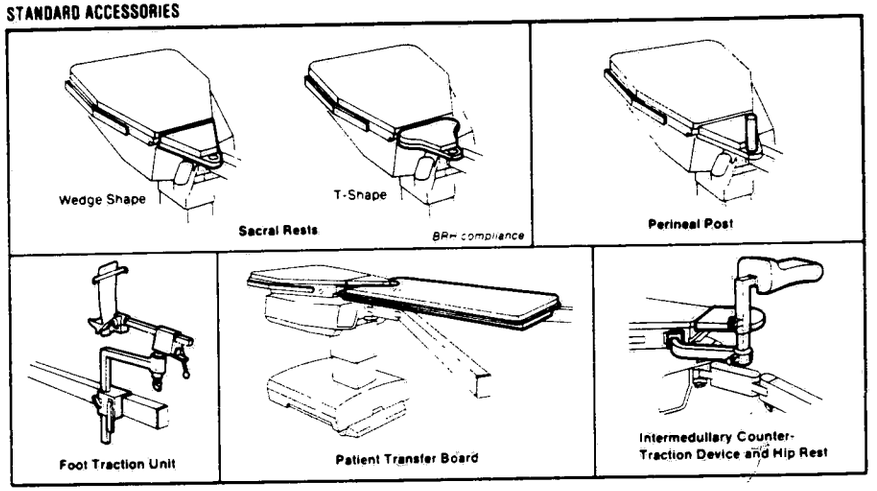
3.2.3.5. Tighten bracket knobs to lock table to side rail.

3.2.3.6. Lock support leg in position by pushing "T" handle in.

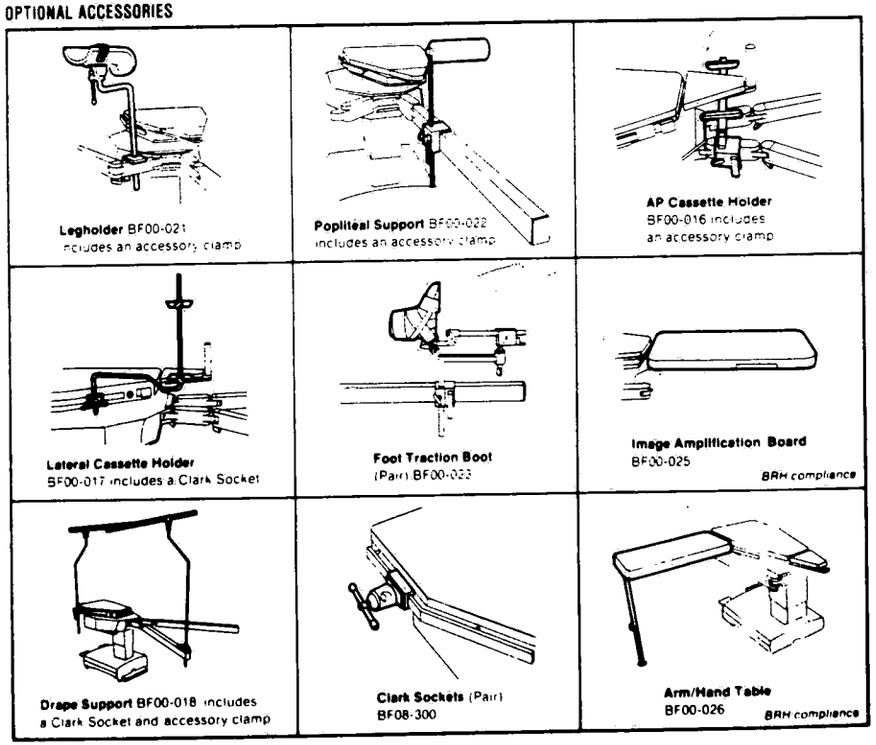
3.2.3.7. Remove arm/hand table in reverse order.

TABLE 1

STANDARD ACCESSORIES



OPTIONAL ACCESSORIES



SECTION 4. PREVENTIVE MAINTENANCE

WARNING: REPAIRS AND ADJUSTMENTS SHOULD BE ATTEMPTED ONLY BY EXPERIENCED PERSONS FULLY ACQUAINTED WITH THIS EQUIPMENT. USE OF INEXPERIENCED, UNQUALIFIED PERSONS TO WORK ON THE EQUIPMENT OR INSTALLATION OF UNAUTHORIZED PARTS COULD CAUSE INJURY OR RESULT IN COSTLY DAMAGE.

4.1. DAILY

4.1.1. After each use . . .

4.1.1.1. Remove drapes from tabletop. Using a soft cloth, wipe off pad with a solution of warm water and a phenolic germicide detergent.

4.1.1.2. Be sure pad is dry and then install a clean drape, completly covering tabletop.

4.1.2 At end of day . . .

4.1.2.1. Remove drapes and pad from table. Clean pad as follows:

- Using a soft cloth, thoroughly wash pad with a solution of warm water and a phenolic germicide detergent.
- Rinse pad with clear water.
- Allow pad to air-dry.

4.1.2.2. Clean table exterior with a mild detergent solution and disinfectant. Rinse and dry table with a lint-free cloth.

4.1.2.3. Operate each table control. Operation should be smooth and quiet; if not, refer to **GUIDE TO MINOR MAINTENANCE.**

4.2. QUARTERLY

WARNING: MAKE CERTAIN TABLETOP IS PROPERLY SUPPORTED BEFORE PERFORMING MAINTENANCE REQUIRING TOP TO BE MAINTAINED IN RAISED POSITION.

4.2.1. Service base assembly (see Fig. 3):

4.2.1.1. Raise tabletop to maximum height.

4.2.1.2. Support tabletop with sawhorses. Assure sawhorses are not damaging any table components.

4.2.1.3. Remove socket-head screws and raise base cover.

4.2.1.4. Secure base cover in raised position with blocking or by tying to table frame.

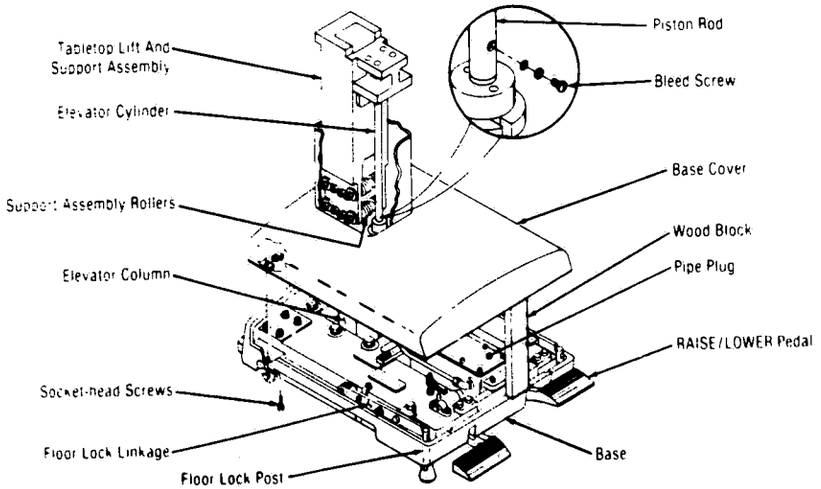


Figure 3. BASE ASSEMBLY.

4.2.1.5. Lubricate the following floor lock items with "MOLY-LUBRIPLATE" MS HD No. 2® (Fiske Brothers Refining Co., Newark, New Jersey) or equivalent

- Floor lock bar linkage interlocks.
- Floor lock posts and reamed holes in base.
- Bearings shafts and other moving parts.

4.2.1.6. Clean casters. Clean floor lock feet and check for conductivity . . . see Note page 1.

4.2.1.7. Inspect base assembly and hydraulic system for any sign of damage and loose or misaligned parts.

4.2.1.8. Lower and secure base cover.

4.2.1.9. Remove sawhorses and lower tabletop.

4.2.2. Inspect tabletop assembly for any sign of damage and loose or misaligned parts.

4.3. SEMI-ANNUALLY

WARNING: MAKE CERTAIN TABLETOP IS PROPERLY SUPPORTED BEFORE PERFORMING MAINTENANCE REQUIRING TOP TO BE MAINTAINED IN RAISED POSITION.

4.3.1. Service lift assembly (see Fig. 3):

4.3.1.1. Raise tabletop to maximum height.

4.3.1.2. Support tabletop with sawhorses. Assure sawhorses are not damaging any table components.

4.3.1.3. Remove socket-head screws and raise base cover

4.3.1.4. Secure base cover in raised position with blocking or by tying to table frame.

4.3.1.5. Coat the two sides of elevator column on which tabletop support assembly rollers **DO NOT** roll with "MOLY-LUBRIPLATE" MS HD No. 2 or equivalent.

4.3.1.6. Lubricate tabletop support assembly shafts and bearings with "MOLY-LUBRIPLATE" MS HD No. 2 or equivalent (Keep roller sides of elevator column free of lubricant.)

4.3.1.7. Lower and secure base cover.

4.3.1.8. Remove sawhorses

4.3.2. Check oil level and lubricate caster assemblies (see Fig. 3):

WARNING: MAKE CERTAIN TABLETOP IS PROPERLY SUPPORTED BEFORE PERFORMING MAINTENANCE REQUIRING TOP TO BE MAINTAINED IN RAISED POSITION.

4.3.2.1. Raise tabletop to maximum height.

4.3.2.2. Support tabletop with sawhorses. Assure sawhorses are not damaging any table components.

4.3.2.3. Remove socket-head screws and raise base cover.

4.3.2.4. Secure base cover in raised position with blocking or by tying to table frame.

4.3.2.5. Remove pipe plug from sump cover plate

4.3.2.6 Insert a clean, dry object about pencil-size through opening until bottom is reached.

4.3.2.7 Withdraw object and measure indicated height. Depth should be 1-3/4 inches (44.5 mm).

4.3.2.8. If oil level is incorrect, fill system.

CAUTION: Do NOT overfill. Do NOT mix different brands of hydraulic oil.

- Place funnel in sump opening.
- Add proper oil. This table can use Chevron AW32, Mobil DTE 24 or Shell Tellus 32 hydraulic oil. Tables are shipped from factory with a tag (see Fig. 4) indicating what oil was used when constructed.
- If changing brand of oil, call your local AMSCO Representative.

4.3.2.9 Inject "LUBRIPLATE" No. 630 AA or equivalent into fittings on sides of casters.

4.3.2.10 Lower and secure base cover

4.3.2.11 Remove sawhorses.

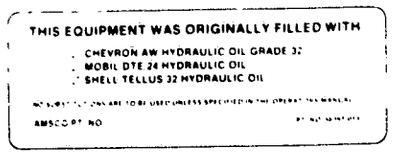


Figure 4. HYDRAULIC OIL TAG.

4.3.3. If oil was added, operate table through all positions. If operation is "spongy", bleed hydraulic system:

WARNING: MAKE CERTAIN TABLETOP IS PROPERLY SUPPORTED BEFORE PERFORMING MAINTENANCE REQUIRING TOP TO BE MAINTAINED IN RAISED POSITION.

4.3.3.1. Raise tabletop to maximum height.

4.3.3.2. Support tabletop with sawhorses. Assure sawhorses are not damaging any table components.

4.3.3.3. Remove socket-head screws and raise base cover.

4.3.3.4. Secure base cover in raised position with blocking or by tying to table frame.

4.3.3.5. Loosen bleed screw (see Fig. 3). Pump RAISE/LOWER pedal. Allow fluid to flow until all trapped air has escaped. Tighten the screw; be sure it is completely recessed in piston rod.

NOTE: While bleeding, make sure bleed port does not drift below the top of the intermediate cylinder.

4.3.3.6. Lower and secure base cover.

4.3.3.7. Remove sawhorses.

4.3.3.8. Completely lower and then raise tabletop. If any trapped air remains, table will not operate smoothly and entire procedure must be repeated.

SECTION 5. GUIDE TO MINOR MAINTENANCE

Please call your local AMSCO Representative if you encounter problems other than those mentioned in this manual. Representative will arrange promptly to have your table placed in proper working order by a factory-trained serviceman.

WARNING: REPAIRS AND ADJUSTMENTS SHOULD BE ATTEMPTED ONLY BY EXPERIENCED PERSONS FULLY ACQUAINTED WITH THIS EQUIPMENT. USE OF INEXPERIENCED, UNQUALIFIED PERSONS TO WORK ON THE EQUIPMENT OR INSTALLATION OF UNAUTHORIZED PARTS COULD CAUSE INJURY OR RESULT IN COSTLY DAMAGE.

5.1. Check oil level and add oil if necessary (see **PREVENTIVE MAINTENANCE**) when:

5.1.1. Tabletop will not elevate to maximum height.

5.2. Bleed air from hydraulic system if:

5.2.1 Tabletop raise-lower function is erratic.

SECTION 6. RECOMMENDED SPARE PARTS LIST

PART NUMBER	DESCRIPTION	QUANTITY
P-24265-091	CUP,Splash	1
P-753675-045	WRENCH (For Drive Crank Adjustment)	1
P-754811-091	LUBRIPLATE, 5 Pound Can	1
P-753975-091	MOLY-LUBRIPLATE (Type MS HD No. 2), 5 Pound Can	1
P-80117-091	SPRING, Lock Pedal	1

TOPIC 2

GENERAL MAINTENANCE GUIDE

INDEX

SECTION 2.1 GENERAL

WARNING: REPAIRS AND ADJUSTMENTS SHOULD BE ATTEMPTED ONLY BY EXPERIENCED PERSONS FULLY ACQUAINTED WITH THIS EQUIPMENT. USE OF INEXPERIENCED, UNQUALIFIED PERSONS TO WORK ON THE EQUIPMENT OR THE INSTALLATION OF UNAUTHORIZED PARTS COULD CAUSE INJURY OR RESULT IN COSTLY DAMAGE.

This Topic contains general table maintenance procedures. Should a problem occur in operation of table, refer to Section 2. TROUBLESHOOTING. Section 3, LUBRICATION, contains items which require periodic lubrication and gives sample time intervals for lubrication. Section 4 is a sample PREVENTIVE MAINTENANCE RECORD (supplements preventive maintenance procedures listed in **Operating Instructions**) that is suggested the Maintenance Department keep. Such a record will prove helpful in assuring regular maintenance.

Any maintenance should only be attempted by qualified service technicians. Following repairs, test table using applicable section of FIELD TEST PROCEDURE to verify effectiveness of repairs.

SECTION 2.2 TROUBLESHOOTING

2.2.1. TROUBLESHOOTING CHART

TROUBLE	POSSIBLE CAUSE AND/OR CORRECTION	WHERE TO FIND ITEMS IN MANUAL
1. No table Raise Lower operation	1. RAISE/LOWER pedal assembly defective.	Topic 3
	a. Does pedal strike floor?	
	1) If yes.	
	(a) Loosen set screw on side of pedal.	
	(b) Turn adjusting screw clockwise until table top lowers when pedal is approximately 1/8-inch from floor.	
	(c) After adjustment, tighten set screw.	
	2) If no - proceed.	
	b. Check pedal assembly	
	1) Is pedal connected to pump lever?	
	(a) If yes - proceed.	
	(b) If no - connect.	
	2) Is pump lever connected to actuator?	
	(a) If yes - proceed.	
	(b) If no - connect.	
	2. Hydraulic system malfunction:	Topic 3
	a. Check oil level. With table top at maximum height, the oil level in sump should be 1-3/4 inches.	
	1) If less oil - fill with recommended oil.	
	2) If more - drain to proper level.	
	3) If oil level correct - proceed.	
	b. Broken oil line or leaking fitting?	
	1) If yes - repair or replace.	
	2) If no - proceed.	
	c. Defective check valve	
	1) Replace	
	2) Still no operation - proceed.	
	d. Defective pump.	

TROUBLE	POSSIBLE CAUSE AND/OR CORRECTION	WHERE TO FIND ITEMS IN MANUAL
	1) Check oil pressure. Connect pressure gauge in pressure and return line behind pump and check valve. Pressure should be 570 psig with top at maximum height. Relief valve set at 800 psig.	
	(a) Oil pressure correct - proceed.	
	(b) Oil pressure incorrect:	
	i. Adjust relief valve.	
	ii. Replace pump.	
	e. Lift cylinder defective.	
	1) Check cylinder caps for leaking.	
	(a) If leaking - replace cylinder.	
	(b) No leaks - proceed.	
	2) Check POLY-PAC SEALS for leaking.	
	(a) If leaking - replace cylinder.	
	(b) No leaks - proceed.	
	3) Check air bleed port for leaking or clogging.	
	(a) Leaking?	
	i. If yes - replace O-ring.	
	ii. If no - proceed.	
	(b) Is screw overtightened?	
	i. If yes - replace O-ring and properly tighten.	
	ii. If no - proceed.	
	4) Replace cylinder.	
2. Slow Raise Lower Movement	1. Check air bleed port.	Topic 3
	a. Leaking?	
	1) If yes - replace O-ring.	
	2) If no - proceed.	
	b. Screw too tight?	
	1) If yes - replace O-ring and properly tighten.	
	2) If no - proceed.	
	2. Check lift carriage assembly.	Topic 3
	a. Check cam and roller assembly.	
	1) Out of adjustment - correct	

TROUBLE	POSSIBLE CAUSE AND/OR CORRECTION	WHERE TO FIND ITEMS IN MANUAL
	2) OK - proceed.	
	b. Check slide bearing assembly.	
	1) Out of adjustment - correct	
	2) OK - contact AMSCO regional office	
3. Tabletop won't retain height.	1. Faulty check valves?	Topic 3
	a. If yes - replace.	
	b. If no - replace lift cylinder.	
4. Noisy tabletop Raise/Lower operation.	1. Check lift cylinder.	Topic 3
	a Are caps and seals leaking?	
	1) If yes - replace cylinder.	
	2) If no - proceed.	
	b Ensure cylinder rods are not rubbing caps.	
	2. Check air bleed port.	Topic 3
	a. Leaking?	
	1) If yes - replace O-ring.	
	2) If no - proceed.	
	b. Screw too tight?	
	1) If yes - replace O-ring and properly tighten screw	
	2) If no - proceed.	
	3. Check lift carriage.	Topic 3
	a Check cam and roller assembly.	
	1) Out of adjustment - correct	
	2) OK - proceed.	
	b Check slide bearing assembly.	
	1) Out of adjustment - correct.	
	2) OK - call AMSCO regional office	
	4 Check pump oil pressure. Connect pressure gauge in pressure and return line behind pump and check valve Pressure should be 570 psig with top at maximum height Relief valve set at 800 psig.	Topic 3
	a. If incorrect pressure.	
	1) Adjust relief valve.	
	2) Check pump strainer for clogging.	

TROUBLE	POSSIBLE CAUSE AND/OR CORRECTION	WHERE TO FIND ITEMS IN MANUAL
	3) Check pump suction-valve spring.	
	4) Replace pump.	
	b. If correct oil pressure - proceed.	
	5. Ensure proper hydraulic oil was used.	Topic 3
5. Sudden drop of tabletop.	1. Locate hydraulic leak and repair.	Topic 3
6. Floor locks won't lock.	1. Adjust floor locks assembly.	Topic 3
	a. Is latch out of adjustment?	
	1) If yes - adjust.	
	2) If no - proceed.	
	2. Check spring.	Topic 3
	a. Is spring connected?	
	1) If yes - proceed.	
	2) If no - connect.	
	b. Is spring stretched or broken?	
	1) If yes - replace.	
	2) If no - proceed	
	3. Check for pedal linkage binding.	Topic 3
	a. Is linkage binding?	
	1) If yes - correct	
	2) If no - continue	
	4. Adjust clearance between pedal and floor.	Topic 3
7 Floor locks won't unlock.	1. Grease.	Topic 3
	2. Check floor lock spring.	Topic 3
	3. Check bearings.	Topic 3
	4 Adjust clearance between pedal and floor.	Topic 3
8. Pedal doesn't return.	1 Check spring	Topic 3
	2 Check for pedal linkage binding.	Topic 3
9 Faulty, erratic. Trendelenburg 'Reverse Trendelenburg operation.	1 Check linkage assembly for binding.	Topic 4
	2. Grease gears.	Topic 4
	3 Check gear assembly for excessive backlash.	Topic 4

TROUBLE	POSSIBLE CAUSE AND/OR CORRECTION	WHERE TO FIND ITEMS IN MANUAL
10 Excessive looseness in Trendelenburg operation.	1. Adjust worm and sector gear assemblies.	Topic 4
	2. Adjust lift carriage assembly.	Topic 3
	3. Check saddle-to-support clearance.	Topic 4
11. Faulty, erratic, tilt operation	1. Check linkage assembly for binding.	Topic 4
	2. Grease gears.	Topic 4
	3. Check gear assembly for excessive backlash.	Topic 4
12. Excessive looseness in tilt operation	1. Adjust side tilt screw assembly.	Topic 4
	2. Adjust lift carriage assembly.	Topic 3
13 Faulty, erratic, translation operation	1. Lubricate.	Topic 5
	2. Check for worn bearings	Topic 5
14 Abductor bars binding in joints.	1. Lubricate.	Topic 5
15. Casters don't swivel freely	1. Check bearings.	Topic 3
	2. Lubricate.	Topic 3

SECTION 2.3 LUBRICATION

Table 1 lists gears, worms, gear sectors, and other items which require periodic lubrication. The table provides a reference to the Topic where the part may be located and indicates the time interval at which the part must be lubricated. Refer to the note indicated in the table for applicable lubricant.

TABLE 1. LUBRICATION.

Item	Part Number	Interval (Months)	Figure	Note
TOPIC 3				
Table Support Assembly	136804-033	6	2	5
Bearing, Slide	77528-091	6	2	1
Bearing, Guiderol	46572-091	6	4	1
Shaft, Bearing	77527-091	6	4	1
Bearing, Sleeve	82633-001		6	
Wheel, 3-1/4 Dia	129354-309		6	
Bar, Weldment, Front, LH	93898-176	3	6	7
Bar, Weldment, Front, RH	93898-177	3	6	7
Pin, Clevis, Top	129354-304		6	
Pin, Clevis, Bottom	129354-305		6	
Bearing, Cam Follower	45272-091		6	
Screw, Shoulder	77722-042		6	
Bar, Weldment, Rear, LH	93898-174	3	6	7
Bar, Weldment, Rear, RH	93898-175	3	6	7
Bearing, Floor Lock	77521-091		7	
Shaft, Floor Lock	77524-045	3	7	1
Bearing	78203-091		7	
Pin, Grooved	79878-001	3	7	1
Caster, Swivel	93898-149	6	7	2
TOPIC 4				
Pin, Pivot	93898-072		2	
Washer, Thrust	16340-091		2	
Bearing, Single Row	48270-091	6	2	1
Bearing, Needle Thrust	129354-133	6	2	8
Race, Thrust Bearing	129354-134	6	2	1
Bearing, Single Row	48269-091	6	2	1
Bearing, Single Row	80112-091	6	2	1
Joint, Universal	93898-015	6	2	4
Screw, Power	93898-004	6	2	1
Bearing, Sleeve	75870-091		2	
Tilt Drive Assembly	136804-036		2	
Bearing, Sleeve	129186-174	6	3	4
Joint, Universal	93898-013	6	3	4
Gear Box Assembly	136804-035		3	

Item	Part Number	Interval (Months)	Figure	Note
TOPIC 5				
Channel, Locking	136804-087		1	
Bearing	129354-077		1	
Pin, Shoulder	129354-075		1	
Bearing, Rear	129354-033	6	1	8
Bearing, Front	129354-246	6	1	8
Shaft, Rear	93898-016	3	1	8
Shaft, Front	93898-152	3	1	8
Screw, Shoulder	129354-350		1	
Channel, Sliding	136804-086		1	

NOTES:

1. Lubricate with Moly-Lubriplate type MS HD No. 2 (Order specification P-753975-091, 5 pound can).

2. Lubricate with Lubriplate type 630 AA (order specification RM 6400-140, 5 pound can).

3. Lubricate with Shell Lithium base type EP-2

4. Apply a light coat of a good grade of medium-weight lubricating oil (i.e. 3-in-1 etc.) to the inner diameter of sleeve bearings, the faces of thrust bearings, shafts, and other moving parts when replacing a part.

5. Coat the sides of the square column on which the rollers do not roll with Moly-Lubriplate. Do not lubricate sides of the column on which the rollers roll.

6. Lubricate the reamed holes where rods 41530 come up through base casting with Moly-Lubriplate.

7. Lubricate bars 93898-174 and 93898-175 where they interlock with rods 41530 Moly-Lubriplate.

8. Lubricate bearings 129354-033 and 129354-246 with Alvania EP-2.

SECTION 2.4 PREVENTIVE MAINTENANCE GUIDE

EQUIPMENT: **Orthographic 2 Table**

This form is to be used as a preventive maintenance record and a guide to performing maintenance.

(Circle "X" In **Monthly** Column When Service Is Performed)

SERVICE PERFORMED	1	2	3	4	5	6
1.0 PREPARATION FOR PREVENTIVE MAINTENANCE						
1.1 Discuss equipment operation with department personnel.	X	X	X	X	X	X
1.2 Remove pads. Examine pad covers and velcro tape on both pads and table.	X	X	X	X	X	X
1.3 Examine clamps and other side rail hardware.	X	X	X	X	X	X
1.4 Tighten side rails.	X	X	X	X	X	X
2.0 HYDRAULIC OIL						
2.1 Check hydraulic oil level, add if necessary.	X		X		X	
3.0 HYDRAULIC SYSTEM LEAK CHECK						
3.1 Inspect floor directly beneath the table and all tubing, fittings and components of hydraulic system for oil leaks.	X	X	X	X	X	X
3.2 Inspect for proper operation of table Raise/Lower.	X	X	X	X	X	X
4.0 CASTERS						
4.1 Clean and inspect casters		X			X	
4.2 Lubricate casters	X		X		X	
5.0 LUBRICATION						
5.1 Examine all lubricated parts	X			X		
6.0 FLOOR LOCK OPERATION						
6.1 Check floor lock mechanism for proper operation.	X	X	X	X	X	X
7.0 TABLE TOP						
7.1 Check for proper operation and smooth translation		X		X		X
7.2 Check for table drift or sloppiness, adjust.	X	X	X	X	X	X
8.0 LATERAL TILT OPERATION						
8.1 Check tilt operation of table top.	X	X	X	X	X	X

SERVICE PERFORMED:	1	2	3	4	5	6
9.0 TRENDELENBURG AND REVERSE TRENDELENBURG OPERATION						
9.1 Check Trendelenburg then reverse Trendelenburg operation of table top.	X	X	X	X	X	X
10.0 RAISE AND LOWER OPERATION						
10.1 Check raise and lower operation of table top.	X	X	X	X	X	X
11.0 ABDUCTOR BAR OPERATION						
11.1 Check movement of each arm for proper locking, smoothness of operation and proper positioning.	X	X	X	X	X	X
12.0 FINAL TEST						
12.1 Secure all covers.	X	X	X	X	X	X
12.2 Install all pads.	X	X	X	X	X	X
12.3 Police work area to ensure removal of all materials used during inspection.	X	X	X	X	X	X

SECTION 2.5 FIELD TEST PROCEDURE

2.5.1. GENERAL

Every table must be tested and inspected according to this procedure whenever a part is adjusted, repaired or replaced. Items of non-compliance must be corrected and retested. Keep a record of all readings, measurements, discrepancies, corrections, retests, and reinspections. Each test must meet the standards of material, workmanship, and performance set forth in this procedure. Refer to appropriate Topic should mechanical problems arise or adjustments be required.

2.5.2. TEST INSTRUMENTATION REQUIRED

- Milliohmmeter - Fluke #8800 A multimeter or equivalent.
- 50 lb (-5%, -0) weight and hanger.
- Spring Scale - 60 lb minimum range.
- 48-inch Rule.
- Patient Transfer Board - used as a fixture.
- 300 lb Patient Load (Distributed) or helper.

2.5.3. TEST

2.5.3.1. Mobility - Move table across floor in at least two directions to ensure swivel casters operate satisfactorily, resulting in smooth and easy maneuvering of table.

2.5.3.2 Floor Locks - Position table on level floor and depress pedal to engage floor lock. The locking action should be smooth and positive. Ensure that all four feet engage floor to prevent table from rocking. Depress the pedal again to release the floor locks. Repeat locking/unlocking to make sure operation is consistent.

- With floor locks engaged, extend one abductor bar and lock it in line with table length. Apply a 50 lb horizontal pull at the end of the abductor bar, perpendicular to bar. Table should remain immobile; if not, adjust floor locks.
- Check floor clearance under each foot in unlocked position. It must be 5/16 ±1/16 inch.

2.5.3.3. D.C. Resistance - Check D.C. resistance between end of one abductor bar (not the plastic cap) and grounding jack receptacle. Resistance must not exceed 0.1 ohm. Repeat test for base cover, Raise/Lower pedal, floor lock pedal, and both table top side rails to grounding jack receptacle.

2.5.3.4. Raise/Lower - Check raise/lower operation by fully raising and lowering table several times. Operation must be smooth and quiet (a slight bump occurring at staging point of cylinder is permissible).

- With tabletop levelled, fully lower table and measure top height (adjacent to the column) from floor. It must not exceed 29 inches.
- Fully raise table and measure height (adjacent to the column) from floor. It must not be less than 45 inches.
- Time required for table (without a load on the top) to move from maximum to minimum height must not exceed 18 seconds. If excessive time, adjust flow valve.

2.5.3.5. Top Translation - Fully translate table top to ensure no binding or high spots. Allow top to lock at each of three locking positions and ensure that lock actuation is positive and without binding. Repeat using the lock release handle on one side of the table top to make sure operation is consistent. Repeat using opposite side release handle.

2.5.3.6. Abductor Bar and Lock - Rotate each joint on both abductor bars through full range of travel (ref. 180° min.). Ensure no binding and smooth rotation.

- Check for positive locking/unlocking function of each joint at six different locations through range of travel. Check to ensure no lateral (horizontal) freeplay in joints.
- Check that each locking knob locks joint tightly in a maximum of two rotations from the fully unlocked position.
- Check that both locking knob setscrews are in place and adjusted to prevent knob from backing off joint locking stem.

2.5.3.7. Rigidity Tests - Position leveled table top at maximum height, lower 4 inches and conduct the following test. (Floor locks engaged.)

- **Lateral -** Hang fifty lbs from one side rail approximately in line with side tilt drive screw. Measure total movement at the location shown in Figure 2 when the fifty lb load is moved to opposite side. Movement must not exceed approximately 1/8 inch. (Movement is total of drive mechanism backlash, column deflection, floor lock pad compression, and table top backlash and deflection.
- **Longitudinal -** Hang fifty lbs from the sacral rest slot in the table top. Measure the movement at the head-end of the table top (see Figure 2) when the 50 lb weight is moved to head end pin holes. This movement must not exceed approximately 3 16 inch.

2.5.3.8. Trendelenburg and Side Tilt - Manipulate tabletop through articulations. Operation should be smooth and without binding. Repeat to ensure operation is consistent.

2.5.3.9. Raise/Lower Operation - Check again. Raise table to maximum height, lower approximately 4 inches and allow to stand for 1 hour. It must not settle more than 1/16-inch in that time.

2.5.3.10. Patient Load Tests (Distribute patient load as shown in Figure 1) -

- Operate the floor lock mechanism to ensure satisfactory function under patient load
- Check tabletop translation and locking functions to ensure satisfactory operation under a patient load.
- **Raise/Lower -** Check raise/lower operation by fully raising and lowering table. Operation must be smooth and quiet (a slight bump occurring at staging point of cylinder is permissible)
- Remove patient load.

2.5.3.11. Accessories' Interface - Check following tabletop accessory attachment features to ensure that accessories will interface without binding.

- slot (sacral rest fixture).
- pin holes - perineal end of patient transfer board
- pin holes - head end (headrest fixture)

2.5.3.12. General Observations -

- Check for excessive backlash in control handles.
- Check entire table for proper finish of all exposed parts (general appearance for scratches, dents, loose parts and good workmanship).
- Check for sharp edges and burrs on side rails and other exposed parts.
- Check table and surrounding floor for oil leaks. Make repairs, if necessary.

2.5.3.13. Performance Requirements -

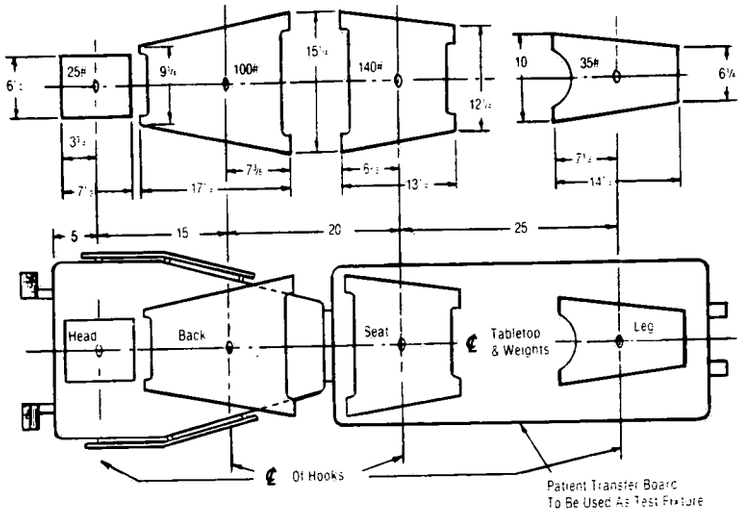
Should there be any doubt regarding performance of table, use the performance limits as guidelines to verify compliance.

Table Maneuvering Efforts (with 300 lb patient simulator)

Floor lock actuation effort	75 lb maximum
Raise/lower effort	150 lb maximum at maximum height 105 lb maximum at less than maximum height
Initiate motion on casters	60 lb maximum
Crank handle efforts with tabletop positioned at center	13 lb maximum with spring scale on the handle 72 in lbs. maximum with torque wrench
Tabletop translation effort Crank handle backlash (Trend.) Crank handle backlash (tilt)	45 lb maximum 12° maximum 5° maximum

Abductor Bars

Vertical freeplay (no deflection) measured at the end of the bar with joints locked	3/4 inches maximum
Horizontal force at the end of the bar to cause rotation	2 lb maximum



NOTES

1. Each hook is located through C.G. of weight
2. Weights to be secured in position shown, no shifting permitted

Figure 1.

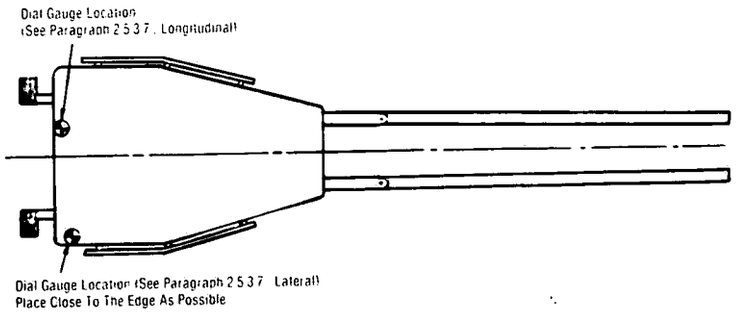


Figure 2.

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TOPIC 3

TABLE BASE

INDEX

SECTION 3.1 GENERAL

This Topic contains all table base data. Table base consists of hydraulic assembly, pedestal assembly and mobility assembly. Base can withstand patient load of 300 pounds under both reversed and normal positioning without exhibiting permanent set or failure. Base is constructed of cast aluminum and covered with polyurethane texture paints.

Any maintenance should only be attempted by qualified service technicians. Following repairs, test table using applicable section of FIELD TEST PROCEDURE to verify effectiveness of repairs.

SECTION 3.2 HYDRAULIC SYSTEM

3.2.1. GENERAL DESCRIPTION (See Figure 1)

Actuating RAISE/LOWER pedal to within 1/8-inch of floor forces oil from pump cavity to lift cylinder. Releasing pedal, oil is drawn from sump through strainer into pump cavity. Continued pump operation will elevate table.

With table in any position, depressing RAISE/LOWER pedal to floor will cause piston to unseat ball check and hold it open as long as pedal is held to floor. This allows oil to gravitate from lift cylinder to sump.

WARNING: REPAIRS AND ADJUSTMENTS SHOULD BE ATTEMPTED ONLY BY EXPERIENCED PERSONS FULLY ACQUAINTED WITH THIS EQUIPMENT. USE OF INEXPERIENCED, UNQUALIFIED PERSONS TO WORK ON THE EQUIPMENT OR THE INSTALLATION OF UNAUTHORIZED PARTS COULD CAUSE INJURY OR RESULT IN COSTLY DAMAGE.

3.2.2. SYSTEM TESTING (using 300 pound simulated weight)

Testing is required when any hydraulic line is broken or component has been replaced. Place table at maximum height and leave in this position for at least two hours and preferably eight hours (or overnight). Measure how much top has dropped during this time. Table must not drop more than 1 16-inch in one hour. A greater drop indicates hydraulic problem, probably leaking fitting, cylinder, or defective check valve.

3.2.3. PROPERLY SUPPORTING TABLETOP

WARNING: MAKE CERTAIN TABLETOP IS PROPERLY SUPPORTED BEFORE PERFORMING MAINTENANCE REQUIRING TOP TO BE MAINTAINED IN RAISED POSITION.

3.2.3.1. Raise tabletop to maximum height.

3.2.3.2. Remove screws securing base cover to casting.

3.2.3.3. Lift and support base cover and shrouds by blocking from base or tying to frame.

3.2.3.4. Support tabletop (See Figure 2) by inserting a spacer (ten-inch wrench or equivalent) between top of steel post and underside of elevator carriage end plates (roller side).

NOTE: Make certain spacer is **NOT** bending. If it is, remove and replace with a stronger item.

3.2.3.5. Depress RAISE/LOWER pedal and allow elevator carriage to settle on top of spacer. Release and again depress pedal to be sure tabletop is securely supported (cannot lower).

3.2.4. CHECKING OIL LEVEL

3.2.4.1. Raise and support tabletop (See Paragraph **3.2.3.**).

3.2.4.2. Remove pipe plug from sump cover plate.

3.2.4.3. Insert clean, dry object about pencil-size through opening until bottom is reached.

3.2.4.4. Withdraw object and measure indicated height. Depth should be 1-3/4 inches (44.5 mm)

3.2.4.5. If oil level incorrect, fill or bleed (See Paragraphs **3.2.5. and 3.2.7.**).

3.2.5. ADDING OIL

CAUTION: Do NOT overfill. Do NOT mix different brands of hydraulic oil.

3.2.5.1 Raise and support tabletop (See Paragraph **3.2.3.**).

3.2.5.2. Remove pipe plug from sump cover plate.

3.2.5.3. Place funnel in sump opening.

3.2.5.4. Add proper oil. This table can use Chevron AW32, Mobil DTE 24 or Shell Tellus 32 hydraulic oil. Tables are shipped from factory with a tag (See Figure 3) indicating what oil was used when constructed.

3.2.6. CHANGING BRAND OF HYDRAULIC OIL

3.2.6.1 Raise and support tabletop (See Paragraph **3.2.3.**).

3.2.6.2. Remove sump cover plate and gasket.

3.2.6.3. Drain and discard all oil from table sump, pump, tubing and lift cylinder.

3.2.6.4. Wipe out sump. Refill system using an approved oil.

3.2.6.5. Operate table through all positions at least once

3.2.6.6 Drain sump, pump, tubing and lift cylinders. Discard oil

3.2.6.7. Refill system again and operate table through all positions

3.2.6.8. Replace gasket and sump cover plate.

3.2.6.9 Mark tag (See Figure 3) with type of oil now being used. Reattach tag to table base.

3.2.7. SYSTEM BLEEDING

3.2.7.1. Raise and support tabletop (See Paragraph **3.2.3.**).

3.2.7.2. Back out buttonhead screw (bleed port on lift cylinder) and pump the RAISE/LOWER pedal. When oil starts to flow through setscrew, the majority of air is out of system. Tighten screw.

NOTE: While bleeding, make sure bleeding port does not drift below top of intermediate cylinder.

3.2.8. REPAIR/REPLACEMENT OF DIRTY OR PLUGGED STRAINER

3.2.8.1. Raise and support tabletop (See Paragraph **3.2.3.**).

3.2.8.2. Remove sump cover and gasket.

3.2.8.3. Reach inside sump and disconnect hydraulic line from fitting.

3.2.8.4. Remove pump assembly from sump.

3.2.8.5. Unscrew valve assembly from nipple and backflush to clean strainer.

3.2.8.6. If cleaning fails, replace valve assembly.

3.2.8.7. After cleaning strainer or replacing valve assembly, assemble in reverse order. Replace gasket on reassembly.

3.2.9. REPAIRING HYDRAULIC LEAKS

3.2.9.1. Raise and support tabletop (See Paragraph **3.2.3.**).

3.2.9.2. Check and tighten all fittings.

3.2.9.3. Check lift cylinder seals. Replace cylinder if seals are leaking.

3.2.9.4. Check lift cylinder bleeder port. Replace O-ring and properly tighten screw.

3.2.9.5. Remove pump assembly and inspect ball check valves for scratches. Replace if necessary.

NOTE: Expect small leakage past pump piston rod as pump pedal is released and returns to unactuated position.

3.2.10. REPLACING FAULTY LIFT CYLINDER

NOTE: Check all other hydraulic system components for leaks before assuming faulty lift cylinder.

3.2.10.1. Raise and support tabletop (See Paragraph **3.2.3.**)

3.2.10.2. Depress RAISE/LOWER pedal to floor and force cylinder pistons down to vacate oil from cylinder. This will prevent an oil spill when line is disconnected.

3.2.10.3. Disconnect line to fitting at base of lift cylinder and line to fitting on cylinder collector sleeve.

3.2.10.4. Remove screws securing lift cylinder to base and remove cylinder.

3.2.10.5. Replace with new cylinder and reassemble.

3.2.10.6. Bleed system (see Paragraph **3.2.7.**).

3.2.11. RAISE/LOWER PEDAL ADJUSTMENT

Pump RAISE/LOWER pedal to raise table to maximum height. Depress pedal to approximately 1/8-inch from floor and note if table descends. If not, adjust pedal as follows:

WARNING: MAKE CERTAIN TABLETOP IS PROPERLY SUPPORTED BEFORE PERFORMING MAINTENANCE REQUIRING TOP TO BE MAINTAINED IN RAISED POSITION.

3.2.11.1. Raise tabletop to maximum height.

3.2.11.2. Support tabletop using sawhorses. Assure sawhorses are not damaging any table components.

3.2.11.3. Remove screws securing base cover to casting.

3.2.11.4. Lift and support base cover and shrouds by blocking from base or tying to frame.

3.2.11.5. Loosen setscrew on side of pedal to release adjusting screw.

3.2.11.6. Remove sawhorses.

3.2.11.7. Turn adjusting screw clockwise until top descends when pedal is depressed to approximately 1/8-inch from floor. Again support tabletop using sawhorses

3.2.11.8. After completion of adjustment, retighten setscrew.

3.2.11.9. Replace cover and shroud, remove sawhorses and lower table.

3.2.12. RAISE/LOWER PEDAL REPLACEMENT

3.2.12.1. Raise and support tabletop (See Paragraph **3.2.3.**).

3.2.12.2. Remove base plate.

CAUTION: When moving pump and sump assembly, be careful not to "kink" copper tubing.

3.2.12.3. Loosen pump and sump assembly and shift slightly to provide access to pedal.

3.2.12.4. Remove and replace pedal

3.2.12.5. Reassemble pedal assembly

SECTION 3.3 COMPONENT REPAIR AND REPLACEMENT

3.3.1. GENERAL

This section contains instructions for disassembly, repair, and replacement of selected base components. See section containing Exploded Views And Assemblies as an aid in understanding and completing instructions.

WARNING: REPAIRS AND ADJUSTMENTS SHOULD BE ATTEMPTED ONLY BY EXPERIENCED PERSONS FULLY ACQUAINTED WITH THIS EQUIPMENT. USE OF INEXPERIENCED, UNQUALIFIED PERSONS TO WORK ON THE EQUIPMENT OR THE INSTALLATION OF UNAUTHORIZED PARTS COULD CAUSE INJURY OR RESULT IN COSTLY DAMAGE.

3.3.2. PROPERLY SUPPORTING TABLETOP

WARNING: MAKE CERTAIN TABLETOP IS PROPERLY SUPPORTED BEFORE PERFORMING MAINTENANCE REQUIRING TOP TO BE MAINTAINED IN RAISED POSITION.

3.3.2.1. Raise tabletop to maximum height.

3.3.2.2. Remove screws securing base cover to casting.

3.3.2.3. Lift and support base cover and shrouds by blocking from base or tying to frame

3.3.2.4. Support tabletop (See Figure 2) by inserting a spacer (ten-inch wrench or equivalent) between top of steel post and underside of elevator carriage end plates (roller side).

NOTE: Make certain spacer is **NOT** bending. If it is, remove and replace with a stronger item

3.3.2.5. Depress RAISE/LOWER pedal and allow elevator carriage to settle on top of spacer. Release and again depress pedal to be sure tabletop is securely supported (cannot lower)

3.3.3. REMOVING SUPERSTRUCTURE FROM BASE

WARNING: MAKE CERTAIN TABLETOP IS PROPERLY SUPPORTED BEFORE PERFORMING MAINTENANCE REQUIRING TOP TO BE MAINTAINED IN RAISED POSITION.

3.3.3.1. Engage floor locks.

3.3.3.2. Raise tabletop to maximum height.

3.3.3.3. Support tabletop with sawhorses or blocks. Assure sawhorses or blocks are not damaging any table components. Superstructure is counterweight biased at head end.

3.3.3.4. Remove screws securing telescoping shrouds and lower them to base.

3.3.3.5. Remove four nuts and washers that secure superstructure to elevator carriage

3.3.3.6. Depress RAISE/LOWER pedal and allow elevator carriage to settle and to clear bolts from mounting holes.

3.3.3.7. Depress RAISE/LOWER pedal and force lift cylinder to minimum height.

3.3.3.8. Release floor locks and roll base from under superstructure.

3.3.4 LIFT CARRIAGE CAM AND ROLLER ADJUSTMENT

Elevator guide assembly on table support assembly has eight bearings that regulate amount of tabletop movement. Measurement of top movement can be made at head or foot-end of table. If adjustments are required to reduce amount of play or movement, proceed as follows:

NOTE: To simplify adjustment, always adjust eccentrics on one side of square pedestal only; however, check four eccentrics on opposite side to ensure all are set in same relative position and turned in same amount. Eccentrics have a locating mark on low side. When adjusting, ensure mark is in same relative position for all eccentrics

3.3.4.1. Raise and support tabletop (See Paragraph **3.3.2.**).

3.3.4.2. Back-off hex nuts that secure setscrews.

3.3.4.3. Loosen setscrews as required to allow bearing slides to hang free. Slides will remain free until completion of procedure.

3.3.4.4. Loosen four setscrews that lock eccentrics.

3.3.4.5. Back-off four nuts that seat against eccentric faces on adjusting side.

3.3.4.6. Set bearing pressure against column by rotating eccentrics, two in line at same time, for required adjustment. This adjustment should be minimal. Adjust top two eccentrics first, then repeat for bottom two. Locating mark should be in same relative position on all four eccentrics.

3.3.4.7. Check bearing adjustment by sliding support assembly through entire column length. Make certain all eight bearings have contact, through entire length, with column. Readjust if necessary.

CAUTION: Eccentric locking nuts should be tightened only with slight wrench pressure. Excessive tightening will fracture eccentric at flange.

3.3.4.8. After adjustment is complete, tighten setscrews and lock eccentrics with nuts. Make certain eccentric setting is not disturbed.

3.3.4.9. Check slide bearing adjustment (See Paragraph **3.3.5.**).

3.3.5. LIFT CARRIAGE SLIDE BEARING ADJUSTMENT

The elevator guide assembly on table support assembly has two bronze slide bearings that regulate tabletop movement from side to side. If adjustments are required to reduce amount of play or movement, proceed as follows:

3.3.5.1. Support tabletop so that slide bearings are approximately half-way up column.

3.3.5.2. Centralize carriage assembly laterally about column by adjusting eight setscrews on sides of carriage. (**Note:** Adjust setscrews on both sides equally when bringing bearing faces against column to ensure parallel adjustment.)

3.3.5.3. Tighten setscrews against slide bearings to form a seat in bearing surface, then back-off screws slightly.

3.3.5.4. Adjust setscrews so that slide bearings are snug against square column, eliminating all possible side movements of tabletop but still allowing free movement of carriage along full length of column.

3.3.5.5. Lock setscrews in place with nuts.

3.3.5.6. To test adjustment, try to rock tabletop from side to side. If necessary, readjust.

3.3.6. ADJUSTING FLOOR LOCKS

NOTE: Improper adjustment is main reason for difficult floor lock operation. Force required to operate floor locks should not change appreciably, whether or not the table is occupied. When floor locks are properly adjusted, casters **need not be raised off floor** (i.e., they **should not** swing freely with table in locked position). Each floor lock should be *equally* engaged and, therefore adjusted individually. Some other reasons for difficult floor lock operation are: binding of pedal linkage, insufficient clearance between pedal and floor, pedal sticking in up (unlocked) position, or pedal failing to return to maximum up position.

Be sure to read and understand entire procedure before attempting to make any adjustments.

3.3.6.1. Place LOCK UNLOCK pedal in up (unlocked) position. Adjust four feet clockwise as far as possible. (**Note**: Feet should not turn freely by hand; adjustment requires a wrench for head-end locks and a drive pin for leg-end locks. Feet that turn freely will not hold adjustment, replace.)

3.3.6.2. Place LOCK UNLOCK pedal in down (locked) position. Adjust four feet counterclockwise until snug (slight resistance noticed) on floor.

3.3.6.3. Place LOCK UNLOCK pedal in up position. Adjust four feet counterclockwise 1/2-turn.

3.3.6.4. Operate pedal through several cycles. Operation should be smooth and positive; base should rise evenly (not one side before the other) as floor locks are actuated. With locks engaged, table should not rock or move when normal forces are applied. An additional 1/4-turn of feet in either direction will "fine tune" operation.

3.3.7. BINDING OF LOCK/UNLOCK PEDAL LINKAGE

If binding is evident during pedal operation, place LOCK/UNLOCK pedal in unlocked position and proceed as follows:

3.3.7.1. Raise and support tabletop (See Paragraph **3.3.2.**).

3.3.7.2. Press down on top of floor locks rods and release, allowing lever arms to spring back. If action is not free, proceed as follows:

3.3.7.2.1. Check reamed floor lock holes in base casting for proper lubrication.

3.3.7.2.2. Check pivot holes in lever arms. Excessive plating in hole could result in binding on shoulder screws.

3.3.7.2.3. Check shoulder screws. They should not be so tight that they bind locking feet.

3.3.7.2.4. Check for interference between any two parts which would require an increased effort to operate (e.g., ends of lever arms riding on base casting during operation).

3.3.7.2.5. Depress LOCK/UNLOCK pedal slightly, not enough to lock, and release. Repeat several times. Check for pedal rubbing on base casting, drip pan or other surfaces. Pedal should spring back rapidly when released; if it does not, proceed as follows:

- With top at maximum height, lean table against wall (shield wall from damage) and block base to prevent slipping.
- Remove screws in each bearing block. Take out floor lock cross shaft. If necessary, remove a caster to aid in disassembly.
- Measure free length of pedal return spring. Replace spring if it is not 2-1/4 ±1/16-inches long.
- Check pedal return spring hole in underside of base. Be sure chamfer (1/8-inch by 45 degrees) is sufficient to prevent spring from catching.
- Replace cross shaft, pedal return spring and bearing blocks. Operate cross shaft to ensure no binding. If necessary, loosen screws and reposition bearing blocks. (**Note**: The cross shaft may bind if bearing blocks are not in line.)
- Check adjustment of pedal return spring setscrew. It should be adjusted to extend approximately 7/16-inch above base casting. Turn screw clockwise to increase spring tension and aid pedal return.
- Inspect cams located at ends of cross shaft. Replace if cam surfaces are not smooth. Ensure cams are parallel and contact lever arm rollers simultaneously. The rollers can be repositioned by moving supports for locking arms.

3.3.8. INSUFFICIENT CLEARANCE BETWEEN LOCK/UNLOCK PEDAL AND FLOOR

3.3.8.1. Raise and support tabletop (See Paragraph **3.3.2.**).

3.3.8.2. Loosen four screws securing bearing blocks which support latch casting.

3.3.8.3. Place an equal number of shims under both bearing blocks at each screw.

3.3.8.4. Operate floor locks and observe latch operation. Ensure pedal arm pin engages latch during locking and that latch swings clear of pin during unlocking. If necessary, increase height of latch spring on base stud by repositioning two nuts. Distance between bottom nut and casting should be approximately 1-5/16-inches. Floor locks are designed to operate on a relatively level floor. If table is used in a room with a slope to floor drain, further adjustments may be necessary.

3.3.9. LOCK/UNLOCK PEDAL STICKS IN UP POSITION

3.3.9.1. Raise and support tabletop (See Paragraph **3.3.2.**).

3.3.9.2. Ensure pin is centered in pedal arm.

3.3.9.3. Ensure latch operates properly.

3.3.9.4. If necessary, increase height of latch spring on base stud by repositioning two nuts. Distance between bottom nut and base casting should be approximately 1-5/16-inches.

3.3.10. LOCK/UNLOCK PEDAL DOES NOT RETURN TO MAXIMUM UP POSITION

If pedal does not return to maximum up position, pedal arm pin will not properly engage latch during next lock cycle. Proceed as follows:

3.3.10.1. Raise and support tabletop (See Paragraph **3.3.2.**).

3.3.10.2. Ensure pedal leveling screws are properly adjusted and not preventing pedal from returning to maximum up position.

3.3.10.3. Operate floor locks and observe latch operation. Ensure pedal arm pin engages latch during locking and that latch swings clear of pin during unlocking. If necessary, increase height of latch spring on base stud by repositioning two nuts. Distance between bottom nut and base casting should be approximately 1-1/16-inches.

3.3.10.4. Measure free length of pedal return spring. Replace spring if it is not 2-1/4 ±1/16-inches long as follows:

- Remove setscrew from top of base.
- If possible, remove spring through hole.
- If not, lift base with hoist or tilt and support table.
- Remove bearing blocks.
- Lower shaft assembly to provide access to spring.
- Remove spring.

3.3.11. REMOVAL OF PIN AND FOOT ASSEMBLY

NOTE: With exception of replacing foot, following disassembly procedures require base cover to be raised and supported. It may be necessary to tilt table for access to parts on underside of base assembly.

3.3.11.1. Raise and support tabletop (See Paragraph **3.3.2.**).

3.3.11.2. Pin And Foot Assembly contains a foot, rubber locking slug, and rod which may be replaced. Replace foot as follows:

- Engage floor locks. Tilt table as necessary to provide access to foot.

NOTE: There is a flat on head-end foot which allows (using wrench) removal of foot from rod. Depressing LOCK pedal forces rod down and exposes the flat.

- Remove foot from rod by turning counterclockwise.

3.3.11.3. Remove Rod as follows (**Note:** The two linkages are connected to each other by a non-adjustable line.):

- Disconnect spring and remove cotter and clevis pins.
- Remove screw and pull bars free of rod.
- Tilt table and pull rod through bottom of base.

3.3.11.4. Abductor-bar-end feet screw directly into locking foot casting. Remove each foot by using a drive pin and turning counterclockwise.

3.3.11.5. Remove Pedal as follows:

- Lift base with a hoist or tilt and support table.
- Remove bearing blocks. Lower shaft assembly.
- Back out setscrew in cam. Remove cam from pedal ends of shaft.
- Pull bearing blocks from shaft assembly.
- Remove setscrew and slide pedal assembly from shaft.

3.3.11.6. Remove Cam Roller by removing attaching nuts and washers.

3.3.12. REMOVAL OF CASTER ASSEMBLIES

3.3.12.1. Remove Head-end Caster as follows:

- Tilt and support table
- Remove nut and washer.
- Remove caster by dropping out of base.

3.3.12.2. Remove Leg-end Caster as follows:

- Remove set screw from bottom of caster support bracket.
- Place small rod through caster access hole (outside edge of floor locking foot) and drive axle out of support bracket.
- Caster will fall from support bracket.

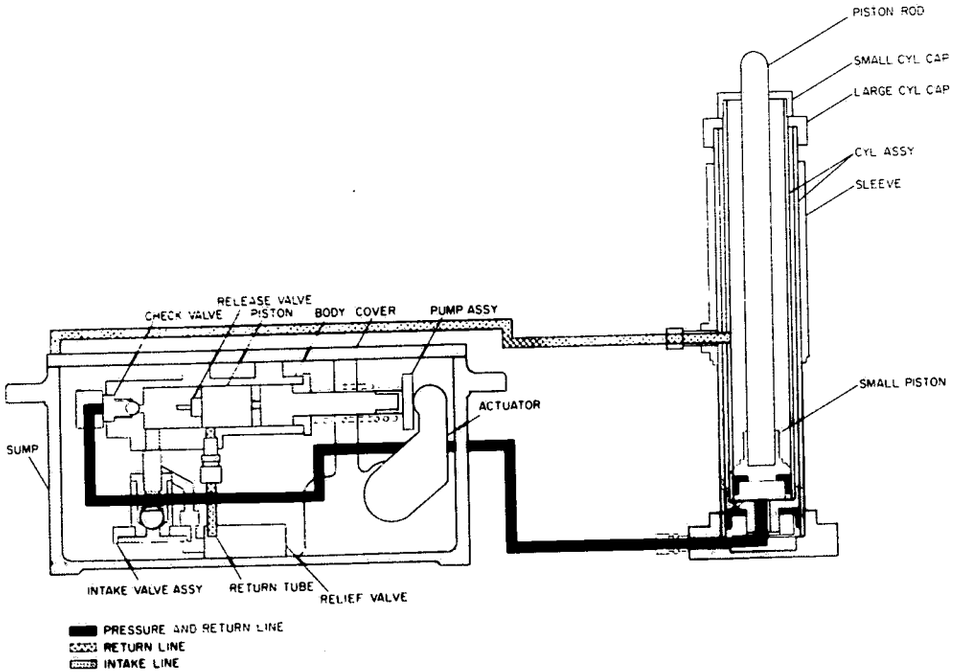


Figure 1.

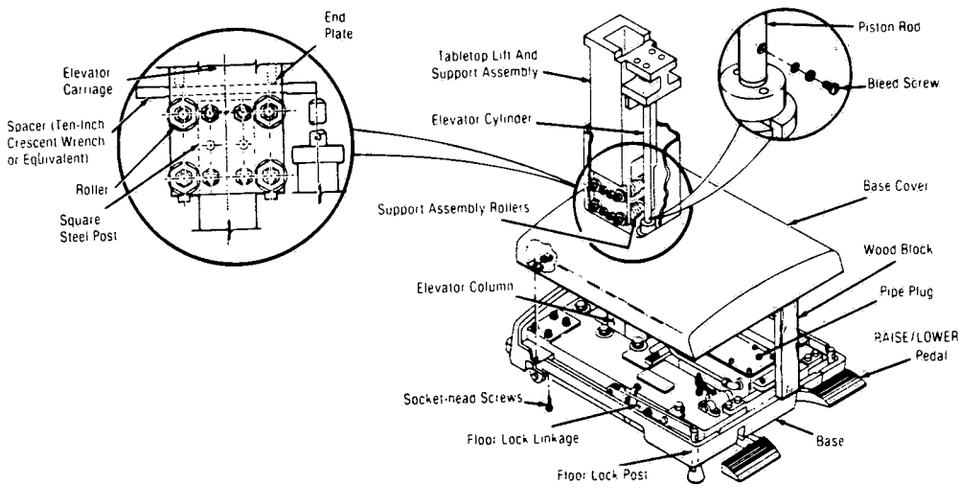


Figure 2.

THIS EQUIPMENT WAS ORIGINALLY FILLED WITH

- ☐ **CHEVRON AW HYDRAULIC OIL GRADE 32**
- ☐ **MOBIL DTE 24 HYDRAULIC OIL**
- ☐ **SHELL TELLUS 32 HYDRAULIC OIL**

NO SUBSTITUTIONS ARE TO BE USED UNLESS SPECIFIED IN THE OPERATORS MANUAL

AMSCO PT. NO. **PT. NO. 56397-013**

Figure 3.

(NOT USED)

SECTION 3.4 EXPLODED VIEWS AND PARTS LISTS

MINI INDEX

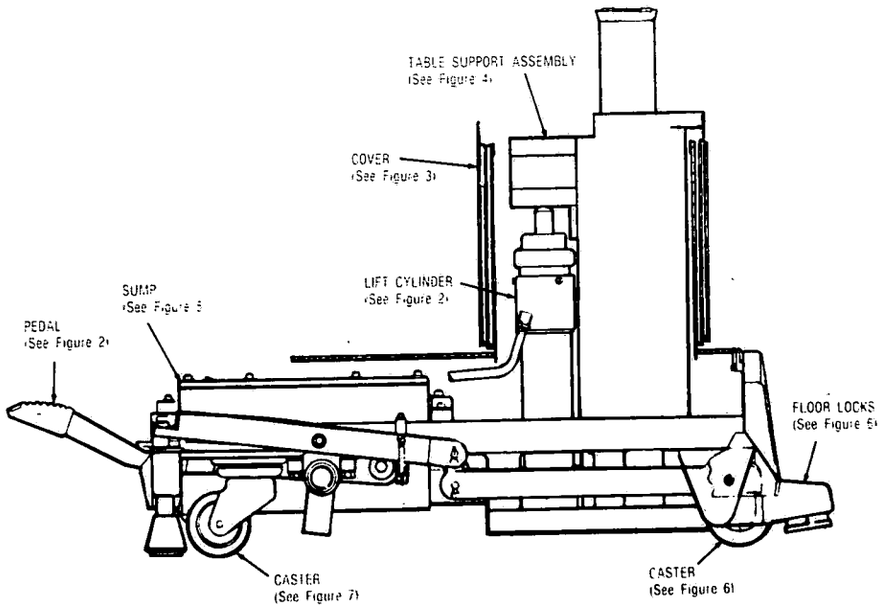


Figure 1. GENERAL COMPONENT LOCATION.

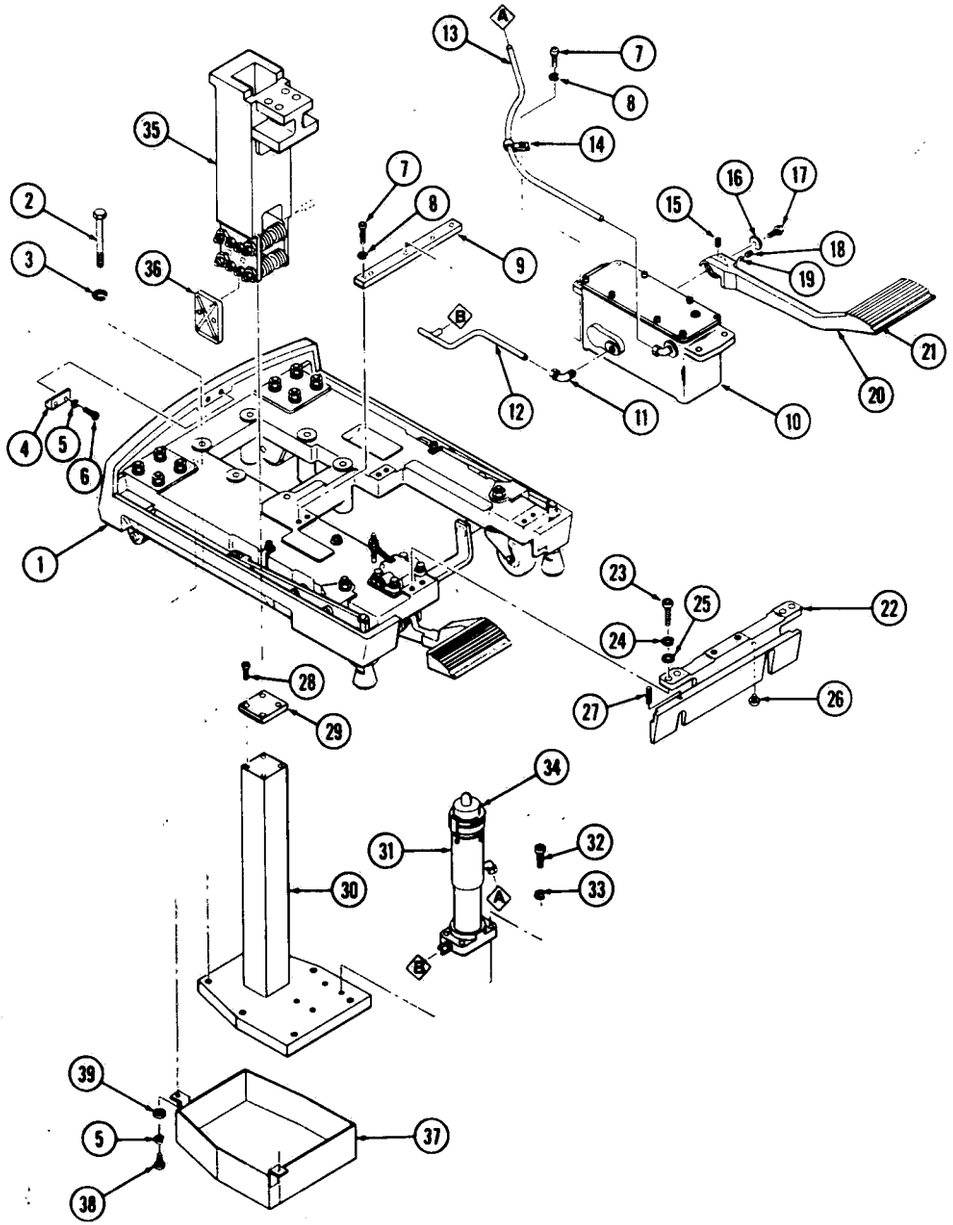
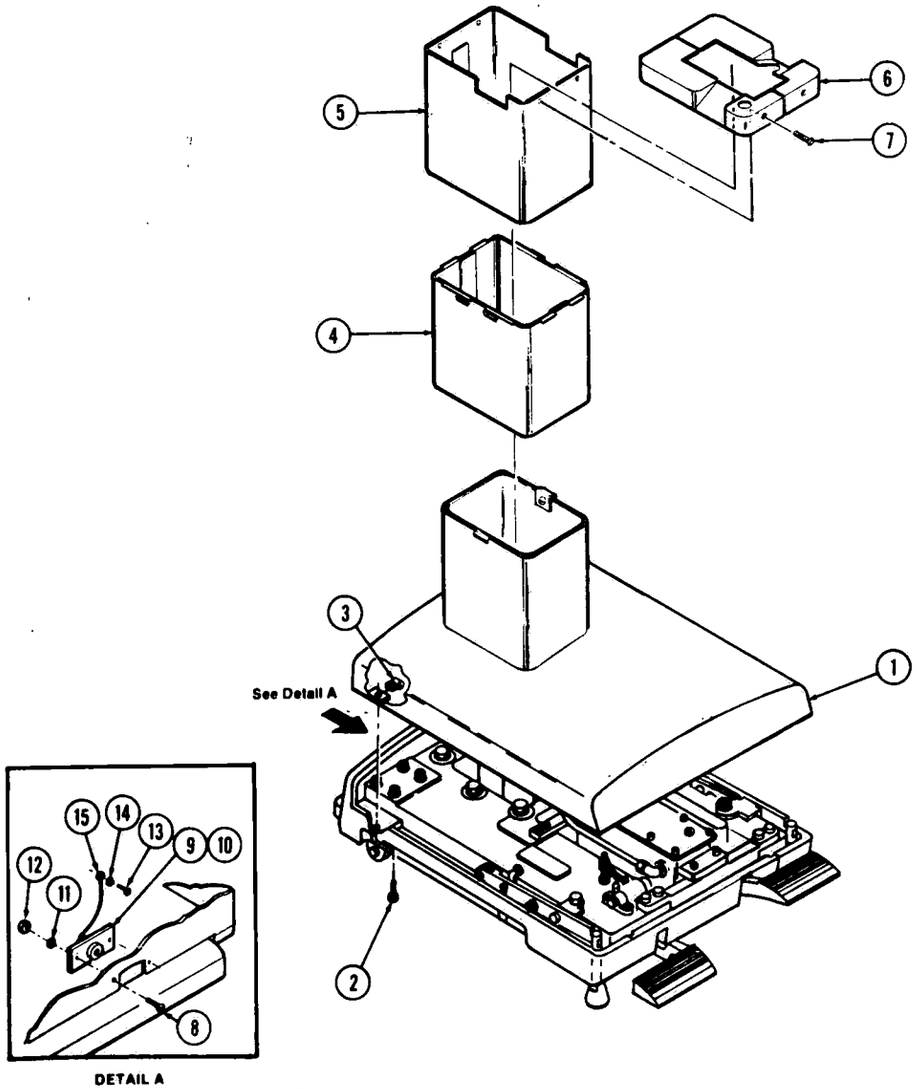


Figure 2. HYDRAULIC ASSEMBLY.

FIG. & INDEX NO.		PART NUMBER		DESCRIPTION	UNITS PER ASSEMBLY
2-				HYDRAULIC ASSEMBLY	X
1				FLOOR LOCK ASSEMBLY (See Fig. 6 or 7)	1
2	P	78216	045	SCREW, Hex Head Cap, 7/16-20 x 5	6
3	P	19688	045	LOCKWASHER, 7/16	6
4	P	52728	091	COVER, Support	1
5	P	19677	041	LOCKWASHER, #10	4
6	P	16425	041	SCREW, Socket Head Cap, 10-32 x 3/4	9
7	P	11266	045	SCREW, Socket Head Cap, 1/4-20 x 1	8
8	P	19678	045	LOCKWASHER, 1/4	8
9	P	52689	010	BRACKET, Sump Mounting	1
10	P	99313	091	PUMP & SUMP ASSEMBLY (See Fig. 5)	1
11	P	52736	091	ELBOW, Male, 5/16 ODT x 1/4 NPT	1
12	P	55094	091	TUBING	1
13	R	3500	810	TUBING, Polyethylene, 3/8 OD x 17-1/2	1
14	P	41324	091	CLIP	2
15	P	23418	063	SCREW, Set, 3/8-24	1
16	P	36628	051	WASHER, Special	1
17	P	12551	061	SCREW, Hex Hd. Cap, 5/16-18 x 5/8, Monel	1
18	P	10585	041	SCREW, Allen Cup Pt. Set, 10-32 x 1/4	1
19	P	22436	091	PLUG, Nylon	1
20	P	136804	178	PEDAL, RAISE/LOWER	1
21	P	93898	188	DECAL, RAISE/LOWER	1
22	P	99386	001	PLATE, Front Base	1
23	P	16383	045	SCREW, Socket Head Cap, 3/8-16 x 1	12
24	P	19680	041	LOCKWASHER, 3/8	4
25	P	5503	045	WASHER, Flat, 13/32 ID x 1 OD x 1/16	4
26	P	19013	091	BUMPER, Rubber	9
27	P	79593	001	SCREW, Set, 1/4-20 x 1-1/4	1
	P	136804	034	TABLE LIFT ASSEMBLY	1
28	P	43237	091	• SCREW, Button Head, 3/8-16 x 3/4	2
29	P	52682	001	• STOP, Elevator	1
30	P	55131	010	• ELEVATOR ASSEMBLY	1
31	P	136375	001	• CYLINDER, Lift	1
32	P	13796	045	• SCREW, Soc. Head Cap, 3/8-16 x 1-1/2	8
33	P	19680	041	• LOCKWASHER, 3/8	1
34	P	24265	091	• CUP, Splash	1
35	P	136804	033	• TABLE SUPPORT ASSEMBLY (See Fig. 4)	1
36	P	77528	091	• BEARING, Slide	2
37	P	133699	002	PAN, Oil Drip	1
38	P	41012	061	SCREW, Socket Head Cap, 10-32 x 1/2, SS	2
39	P	5511	041	WASHER, Flat, #10	2



DETAIL A

Figure 3. COVER ASSEMBLY.

FIG. & INDEX NO.		PART NUMBER		DESCRIPTION	UNITS PER ASSEMBLY
3-				COVER ASSEMBLY	X
1	P	99324	001	COVER, Top	1
2	P	52718	091	SCREW, Socket Head Cap, 1/4-20 x 2	4
3	P	44086	045	NUT, Speed (U-Type), 1/4-20	4
4	P	99327	001	SHROUD, Intermediate	1
5	P	99326	001	SHROUD, Upper	1
6	P	99425	003	COVER, Top	1
7	P	46123	043	SCREW, Flat Head, 10-32 x 1/2	4
8	P	41535	001	SCREW, Flat Head	2
9	P	82333	001	BAR, Mounting	1
10	P	82312	001	RECEPTACLE, Grounding	1
11	P	90991	091	LOCKWASHER, #8	2
12	P	3038	041	NUT, Hex, 8-32	2
13	P	15324	042	SCREW, Round Head, 1/4-20 x 3/8	1
14	P	76230	091	LOCKWASHER, 1/4	1
15	P	80541	091	WIRE, Ground	1

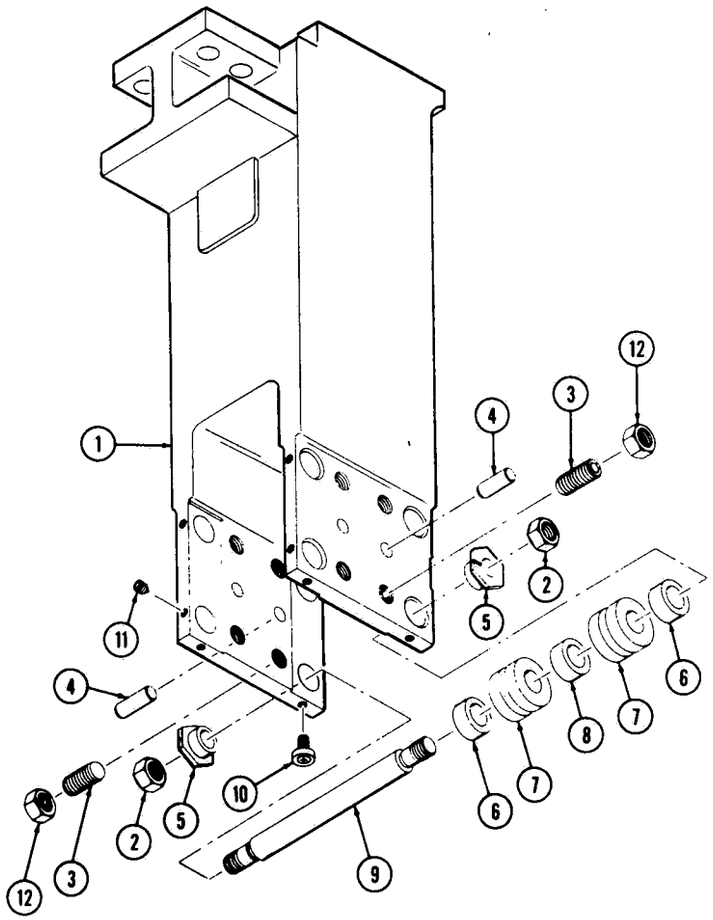


Figure 4. TABLE SUPPORT ASSEMBLY.

FIG. & INDEX NO.	PART NUMBER			DESCRIPTION	UNITS PER ASSEMBLY
4-	P	136804	033	TABLE SUPPORT ASSEMBLY	X
1	P	146647	062	CASTING, Support	1
2	P	150823	073	LOCKNUT, Nylon Insert	8
3	P	80116	042	SCREW, Oval Pt. Allen Set, 1/2-20 x 1	8
4	P	16250	091	PIN, Dowel, 3/8 x 1	4
5	P	46478	091	CAM, Loading	8
6	P	77526	045	SPACER	8
7	P	46572	091	BEARING, Guiderol	8
8	P	46485	045	SPACER	4
9	P	77527	091	SHAFT, Bearing	4
10	P	90383	091	BUMPER	4
11	P	43223	091	SCREW, Oval Pt. Socket, 10-32 x 1/4	8
12	P	150823	074	LOCKNUT, Nylon Insert	8

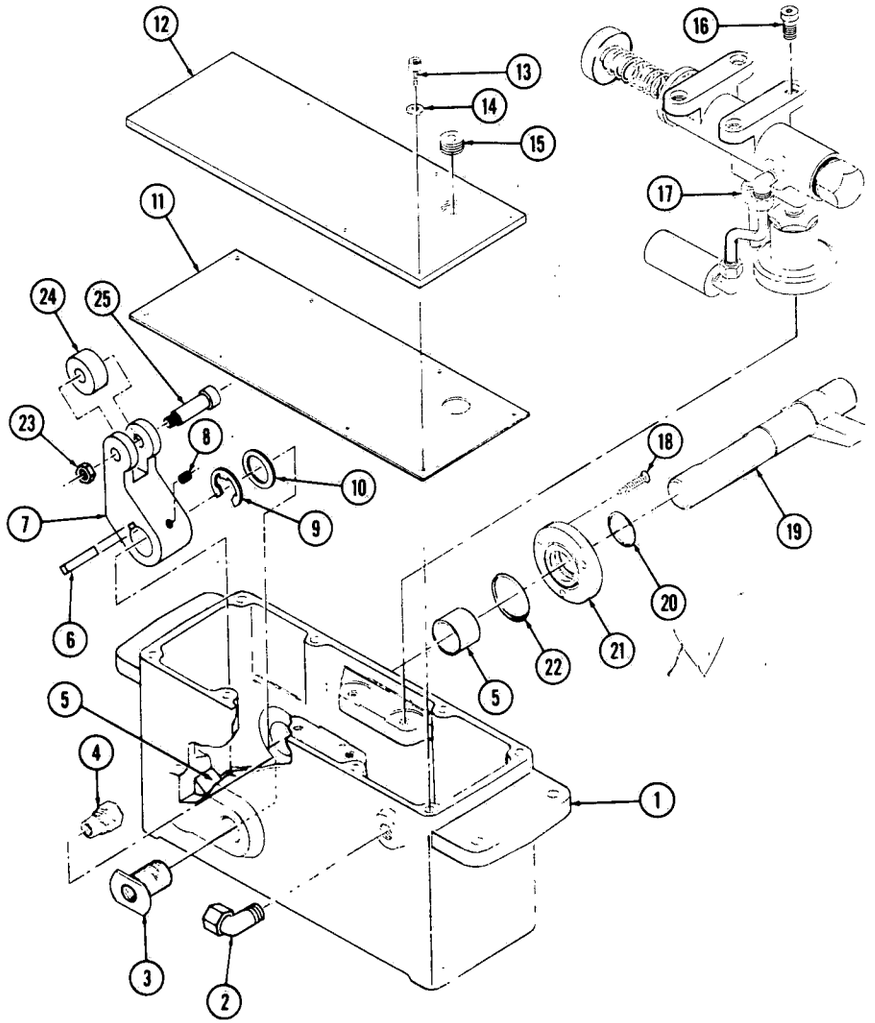


Figure 5. PUMP AND SUMP ASSEMBLY.

FIG. & INDEX NO.		PART NUMBER		DESCRIPTION	UNITS PER ASSEMBLY
5-		99313	091	PUMP AND SUMP ASSEMBLY	X
1	P	99310	091	SUMP	1
2	P	46055	091	ELBOW, Male, 1/4 IPS x 3/8 ODT	1
3	P	77624	031	FITTING, Special	1
4	P	45565	091	CONNECTOR, Male, 1/4 IPS x 1/4 ODT	1
5	P	77613	091	BEARING, Sleeve	2
6	P	36587	091	KEY, Special Square	1
7	P	56397	012	ACTUATOR	1
8	P	10585	041	SCREW, Allen Cup Pt. Set, 10-32 x 1/4	1
9	P	13324	091	RING, Retaining, Waldes Truarc, 5103-87	1
10	P	40622	061	WASHER, 1-1/4 OD x 7/8 ID x 3/16	1
11	P	77506	091	GASKET	1
12	P	77507	010	COVER, Sump	1
13	P	37891	041	SCREW, Socket Head Cap, 10-24 x 5/8	8
14	P	19685	061	LOCKWASHER, #10, SS	8
15	P	20580	042	PLUG, Pipe, 1/4 NPT	1
16	P	13411	091	SCREW, Socket Head Cap, 1/4-20 x 5/8	4
17	P	55087	001	PUMP ASSEMBLY	1
18	P	30379	041	SCREW, Flat Head, 8-32 x 5/8	3
19	P	77516	091	SHAFT, Pump	1
20	P	77533	091	O-RING, Precision, 118, Neoprene	1
21	P	77537	045	CAP, O-Ring	1
22	P	77610	091	O-RING, Precision, 026, Neoprene	1
23	P	118441	045	LOCKNUT, Hex	1
24	P	24960	091	BEARING	
25	P	129109	045	SCREW, Shoulder	

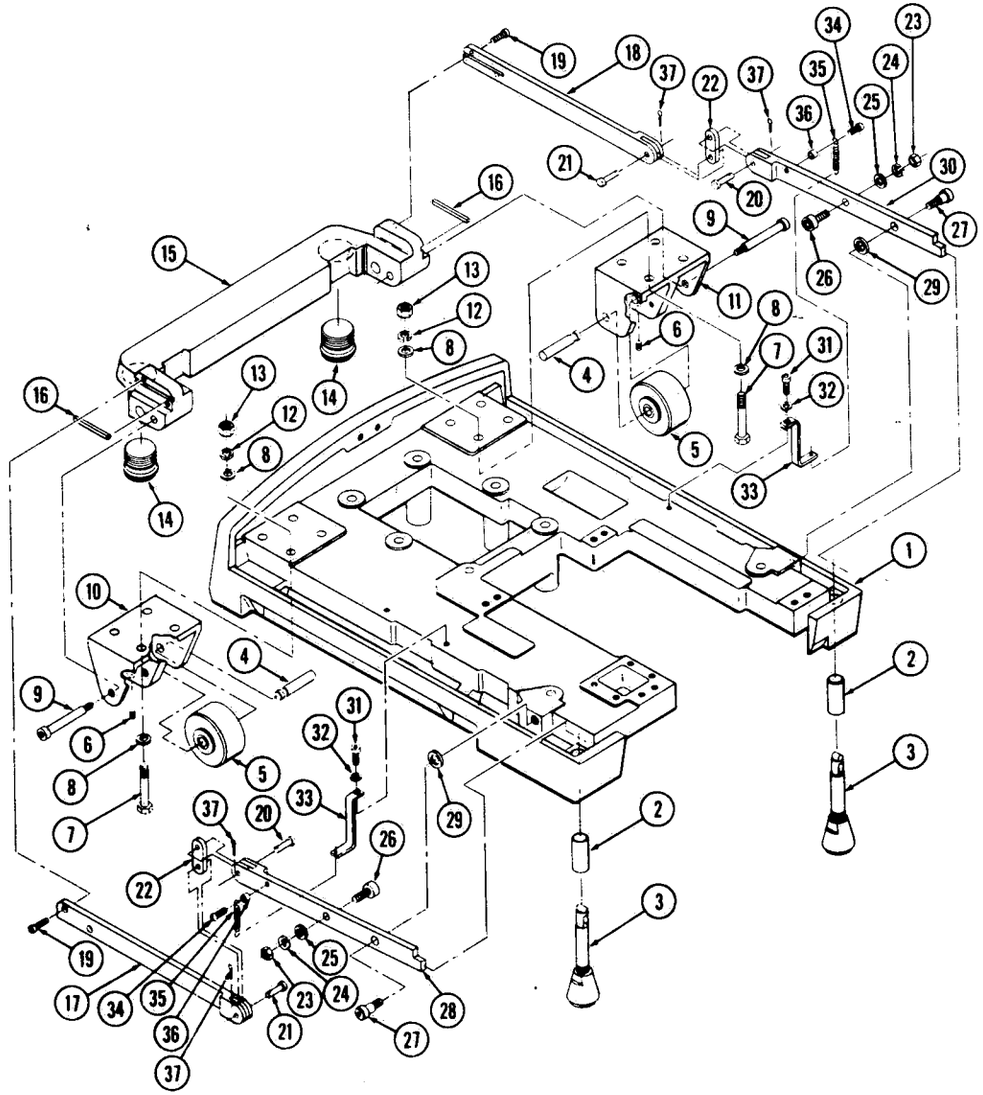


Figure 6. FLOOR LOCK AND CASTER ASSEMBLY (Part 1 of 2).

FIG. & INDEX NO.	PART NUMBER			DESCRIPTION	UNITS PER ASSEMBLY
6-				FLOOR LOCK AND CASTER ASSEMBLY (Part 1 of 2)	X
				BASE (See Fig. 2)	1
2	P	82633	001	BEARING, Sleeve	1
3	P	150202	001	PIN AND FOOT ASSEMBLY	2
4	P	129354	369	AXLE	2
5	P	129354	309	WHEEL, 3-1/4 Dia	2
6	P	36883	061	SCREW, Set, 10-32 x 3/8 w/nylok	2
7	P	3862	044	SCREW, Hex Head Cap, 3/8-16 x 2-1/2	8
8	P	10412	042	WASHER, Flat, .390 ID x .750 OD x .062	16
9	P	129354	310	SCREW, Socket Head Shoulder, 3/8 x 2-3/4	2
10	P	136804	180	BRACKET, Support, LH	1
11	P	136804	181	BRACKET, Support, RH	1
12	P	89809	061	LOCKWASHER, 3/8	8
13	P	3099	042	NUT, Hex, 3/8-16	8
14	P	93898	173	LOCK, Floor, Front	2
15	P	146647	078	FOOT, Locking	1
16	P	129354	308	KEY	2
17	P	93898	176	BAR, Weldment, Front, LH	1
18	P	93898	177	BAR, Weldment, Front, RH	1
19	P	13102	045	SCREW, Socket Head Cap, 10-32 x 1	4
20	P	129354	304	PIN, Clevis, Top	2
21	P	129354	305	PIN, Clevis, Bottom	2
22	P	129354	298	LINK, Non-Adjustable	2
23	P	2945	041	NUT, Hex, 3/8-24	2
24	P	19680	041	LOCKWASHER, 3/8	2
25	P	43754	045	WASHER, Flat, 3/8 ID x 5/8 OD	2
26	P	45272	091	BEARING, Cam Follower	2
27	P	77722	042	SCREW, Shoulder	2
28	P	93898	174	BAR, Weldment, Rear, LH	1
29	P	34510	091	WASHER, Nylon	2
30	P	93898	175	BAR, Weldment, Rear, RH	2
31	P	41012	061	SCREW, Socket Head Cap, 10-32 x 1/2	2
32	P	19677	041	LOCKWASHER, #10	2
33	P	129354	311	SUPPORT, Spring	2
34	P	42577	042	SCREW, Button Head, 10-32 x 5/8	
35	P	47777	091	SPRING	2
36	P	91540	041	SPACER, Latch, 3/8 OD x 7/32	4
37	P	8897	091	PIN, Cotter, 1/16 x 1/2	

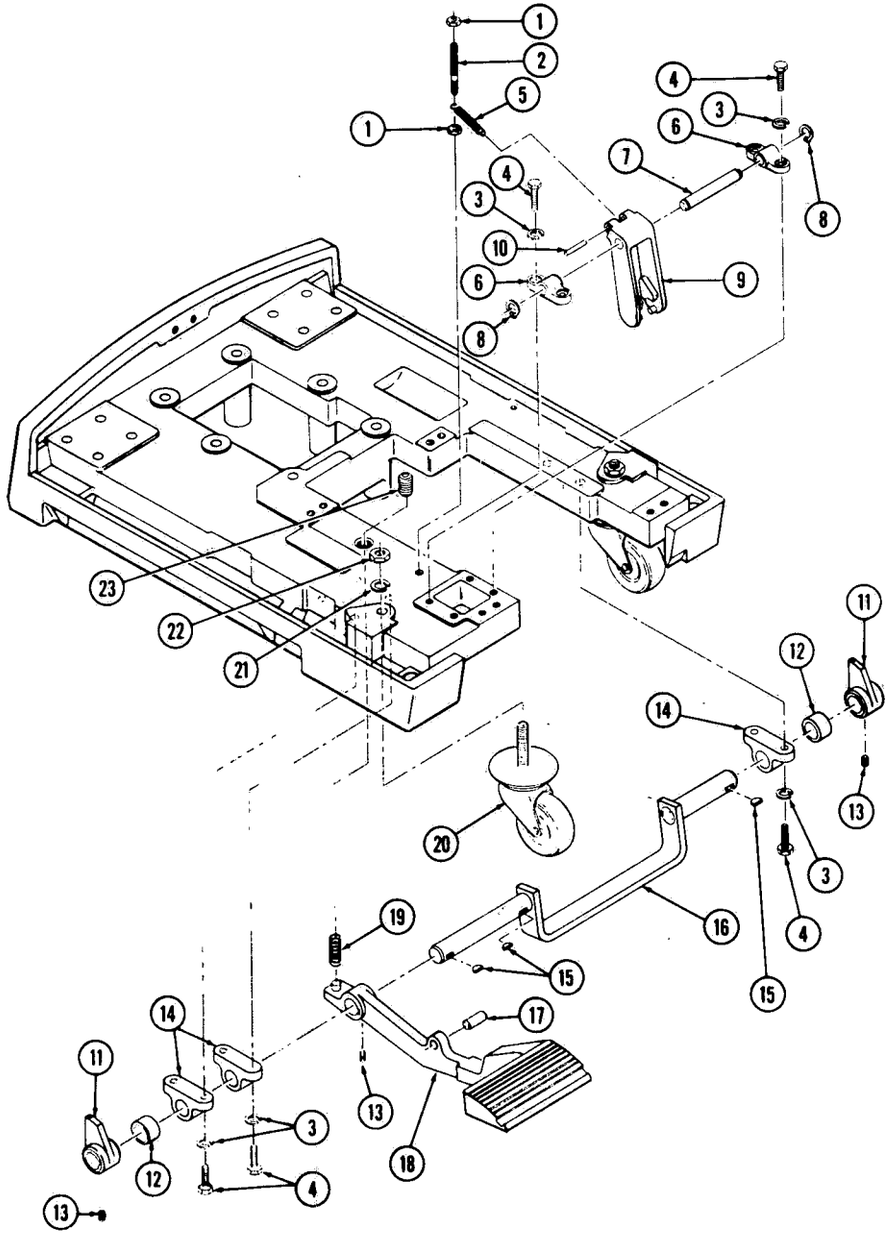


Figure 7. FLOOR LOCK AND CASTER ASSEMBLY (Part 2 of 2).

FIG. & INDEX NO.	PART NUMBER			DESCRIPTION	UNITS PER ASSEMBLY
7-				FLOOR LOCK AND CASTER ASSEMBLY (Part 2 of 2)	X
1	P	3097	041	NUT, Hex	2
2	P	47939	061	STUD, SS	1
3	P	19680	041	LOCKWASHER, 3/8	10
4	P	31838	042	SCREW, Hex Head Cap, 3/8-16 x 1	10
	P	55980	001	LATCH ASSEMBLY	1
5	P	47777	091	•SPRING, Extension	1
6	P	77521	091	•BEARING, Floor Lock	2
7	P	77524	045	•SHAFT, Floor Lock	1
8	P	31820	091	•RING, Retaining, Waldes Truarc, 5100-50	2
9	P	55088	091	•LATCH, Floor Lock	1
10	P	38968	061	•PIN, Roll, 1/4 x 1/2	1
	P	136804	032	LIFT CAM ASSEMBLY	1
11	P	77731	001	•CAM, Lift	2
12	P	77729	045	•SPACER	2
13	P	40006	061	•SCREW, Set, 1/4-20 x 5/16	3
14	P	78203	091	•BEARING	3
15	P	16261	091	•KEY, Woodruff, 90	1
16	P	55084	010	•SHAFT	1
17	P	79878	001	•PIN, Grooved	1
18	P	136804	179	•PEDAL, LOCK/UNLOCK	1
19	P	80117	091	SPRING, Compression	1
20	P	93898	149	CASTER, Swivel	2
21	P	19681	045	LOCKWASHER, 1/2	2
22	P	13397	041	NUT, Hex, 1/2-13 x 5/16	2
23	P	80196	045	SCREW, Set	1

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TOPIC 4

TABLE SUPERSTRUCTURE

INDEX

SECTION 4.1 GENERAL

This Topic contains all table superstructure data. Table superstructure consists of shroud, abductor bar, and gear assemblies. Superstructure can withstand patient load of 300 pounds under both reversed and normal positioning without exhibiting permanent set or failure. Superstructure side frame and cross members are constructed of cast aluminum and end frame is constructed of cast iron for ballast to assist Trendelenburg operation.

Any maintenance should only be attempted by qualified service technicians. Following repairs, test table using applicable section of FIELD TEST PROCEDURE to verify effectiveness of repairs.

SECTION 4.2 COMPONENT REPAIR AND REPLACEMENT

4.2.1. GENERAL

This Section contains instructions for disassembly, repair and replacement of selected superstructure components. See Section containing Exploded Views and Assemblies as an aid in understanding and completing instructions.

By correctly manipulating positioning controls it should be possible to adjust tabletop to any position within its specified limits. Action of positioning mechanisms should be positive and smooth.

WARNING: REPAIRS AND ADJUSTMENTS SHOULD BE ATTEMPTED ONLY BY EXPERIENCED PERSONS FULLY ACQUAINTED WITH THIS EQUIPMENT. USE OF INEXPERIENCED, UNQUALIFIED PERSONS TO WORK ON THIS EQUIPMENT, OR THE INSTALLATION OF UNAUTHORIZED PARTS, COULD CAUSE INJURY OR RESULT IN COSTLY DAMAGE.

4.2.2. TABLETOP REMOVAL

Before performing the following gear assembly adjustments or removal, the tabletop (see appropiate Topic) and upper shroud must be removed

4.2.2.1. Disconnect ground strap by removing screw and washer.

4.2.2.2. Remove side rails by removing nuts and washers

4.2.2.3. Remove flat-head screws and retaining washers from one side of tabletop.

WARNING: SUPPORT TABLETOP ASSEMBLY BEFORE REMOVING TRANSLATION SHAFTS.

4.2.2.4 Push front and rear translation shafts out of tabletop.

4.2.2.5 Lift tabletop from table.

4.2.2.6. Remove upper shroud by removing screws and washers.

4.2.3. TRENDELENBURG WORM AND SECTOR ADJUSTMENT

4.2.3.1. Loosen six screws holding gear box to side frame.

NOTE: Table may shift when screws are loosened. May need to support tabletop weight.

4.2.3.2. Align worm vertically into sector of saddle using setscrew to achieve minimum clearance but retain free movement.

4.2.3.3. Tighten screws.

4.2.4. TRENDELENBURG END PLAY ADJUSTMENT

4.2.4.1. Loosen setscrew in adjusting nut.

4.2.4.2. Tighten adjusting nut until worm gear cannot be rotated by hand

4.2.4.3. Back-off adjusting nut slowly until hand rotation of worm is possible.

4.2.4.4. Tighten setscrew to lock adjusting nut

4.2.5. TRENDELENBURG GEAR ASSEMBLY REMOVAL

WARNING: BLOCK SUPERSTRUCTURE TO AVOID SUDDEN TABLETOP MOVEMENT.

4.2.5.1. Remove handle assembly by removing pin.

4.2.5.2. Loosen two setscrews.

4.2.5.3. Remove six screws holding gear box to side frame.

4.2.5.4. Pull gear box from side frame.

4.2.5.5. Disassembly of shaft and bearing assembly can be accomplished by referring to appropriate figure.

4.2.6. LATERAL TILT END PLAY ADJUSTMENT

4.2.6.1. Tighten hex nut and socket-head pivot pin to remove possible excessive clearance in bearings.

4.2.6.2. Shimming of bevel gear is required if above step fails to eliminate excessive tabletop movement.

- Remove support bracket by removing four screws and two taper pins.
- Add or remove shims as required.

4.2.7. LATERAL TILT LONGITUDINAL PLAY ADJUSTMENT

4.2.7.1. Check for gap between saddle and mounting plate.

4.2.7.2. If gap exists, tighten screw as necessary. **NOTE:** Overtightening screw may result in binding of tilt function.

4.2.8. LATERAL TILT SADDLE ADJUSTMENT

4.2.8.1. Loosen nut on hex-head cap screw

4.2.8.2 Loosen hex-head cap screw.

4.2.8.3 Tighten hex nut until side tilt movement becomes difficult.

4.2.8.4 Back-off nut 1/4 turn

4.2.8.5 Tighten cap screw as tight as possible while still allowing free rotation of saddle assembly

4.2.8.6 Tighten nut

4.2.9. LATERAL TILT GEAR ASSEMBLY REMOVAL

4.2.9.1 Drive out taper pins and remove screws and washers from support bracket

4.2.9.2 Swing assembly clear of table to permit drive shaft and bearing removal

4.2.9.3 Disassembly of shaft and bearing assembly can be accomplished by referring to appropiate figure

4.2.10. ABDUCTOR BAR ADJUSTMENT

The abductor bar joints may need lubrication if binding occurs.

4.2.10.1. Remove tabletop (see Paragraph **4.2.2.**).

4.2.10.2. Remove upper shroud by removing screws and washers.

4.2.10.3. Remove indicator decal (only on C and D joints).

4.2.10.4. Back-off setscrews enough to remove knob handle.

4.2.10.5. Remove plug retainer and bearing.

4.2.10.6. Slide out thrust bearing.

4.2.10.7. Remove upper rosette, dowel pin and locking shaft.

4.2.10.8. Clean parts and apply thin film of Molylubriplate type MS HD No. 2 grease, on upper and lower rosettes, bearing and key.

4.2.10.9. Reassemble joints.

4.2.10.10. After knob is assembled, thread set screws until they stop. Then back-off approximately 1/2 turn to allow free rotation of knob.

NOTE: Each joint is custom fitted to allow least freeplay. It is important that parts from one joint not be mixed with parts from another.

(NOT USED)

SECTION 4.3 EXPLODED VIEWS AND PARTS LISTS

MINI INDEX

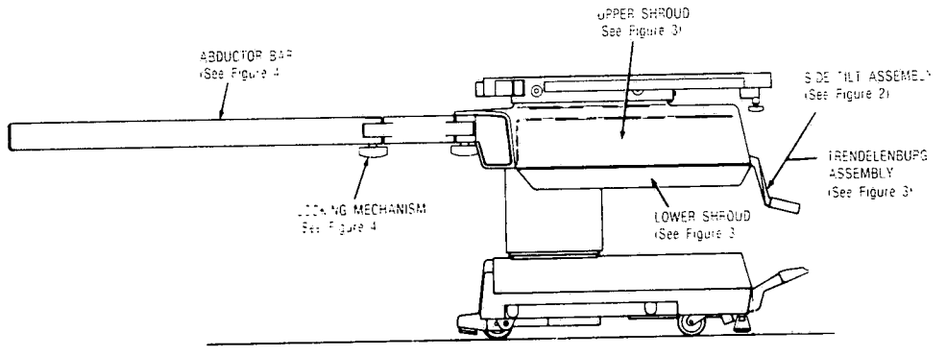


Figure 1. GENERAL COMPONENT LOCATION.

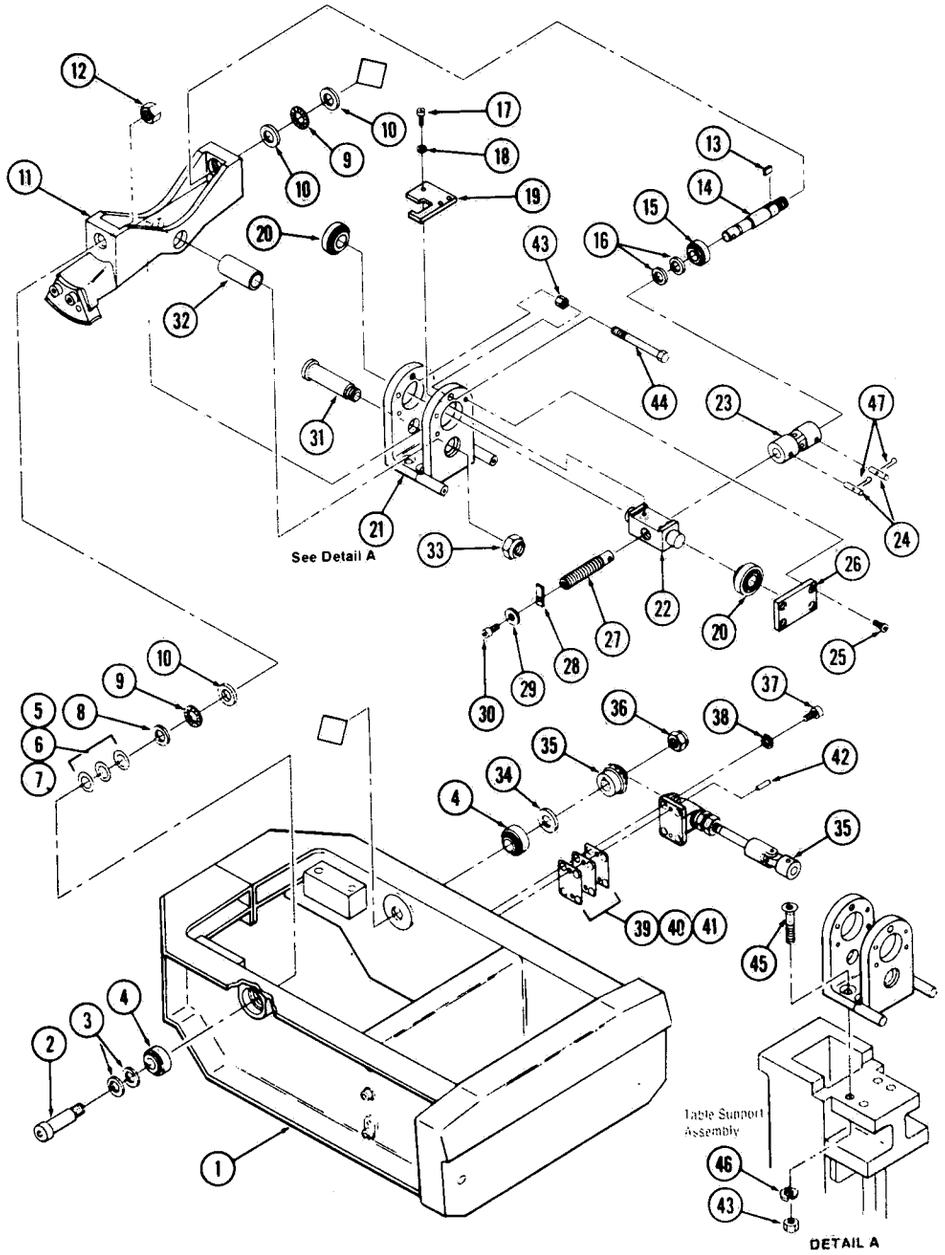


Figure 2. SUPERSTRUCTURE ASSEMBLY (Part 1 of 2).

FIG. & INDEX NO.	PART NUMBER			DESCRIPTION	UNITS PER ASSEMBLY
2-				TABLE SUPERSTRUCTURE ASSEMBLY (Part 1 of 2)	X
1	P	146647	013	SUPERSTRUCTURE ASSEMBLY	1
2	P	93898	072	PIN, Pivot	1
3	P	16340	091	WASHER, Thrust	2
4	P	48270	091	BEARING, Single Row	2
5	P	93898	241	SHIM, Pivot Pin	AR
6	P	93898	242	SHIM, Pivot Pin	AR
7	P	93898	243	SHIM, Pivot Pin	AR
8	P	150083	001	PLATE, Bearing	1
9	P	129354	133	BEARING, Needle Thrust	2
10	P	129354	134	RACE, Thrust Bearing	3
11	P	93898	206	SADDLE ASSEMBLY	1
12	P	129354	130	NUT, Finished Hex, Self-Locking, 5/8-11	1
13	P	129354	046	KEY, Woodruss, #605, 3/16 x 5/8	1
14	P	93898	075	SHAFT, Drive, 5/8-18	1
15	P	48269	091	BEARING, Single Row	1
16	P	129354	132	SPACER, Bearing	2
17	P	50527	061	SCREW, Socket Head Cap, 8-32 x 1/2	3
18	P	79588	001	LOCKWASHER, Inner Tooth, #8	3
19	P	93898	006	PLATE, Stop	1
20	P	80112	091	BEARING, Single Row	2
21	P	136804	114	PLATE, Mounting	1
22	P	93898	005	NUT, Lateral, 3/4-10 Acme	1
23	P	93898	015	JOINT, Universal	1
24	P	150823	057	PIN, Taper, #3 x 1-3/8	4
25	P	80213	045	SCREW, Button Head Socket, 1/4-20 x 1/2	8
26	P	80111	010	PLATE, End	2
27	P	93898	004	SCREW, Power, 3/4-10 Acme	1
28	P	129354	202	STOP	1
29	P	5575	045	WASHER, Plain	1
30	P	79253	045	SCREW, Socket Head Cap, 1/4-20 x 1/2	1
31	P	52734	061	PIN, Support	1
32	P	75870	091	BEARING, Sleeve	1
33	P	80115	045	NUT, Hex-Thin, 3/4-16	1
34	P	129354	131	SPACER, Gear	1
35	P	136804	036	TILT DRIVE ASSEMBLY	1
36	P	129354	031	NUT, Hex-Thin, 5/8-18	1
37	P	12176	041	SCREW, Socket Head Cap, 1/4-20 x 3/4	4
38	P	76230	091	LOCKWASHER, External Tooth, 1/4	4
39	P	93898	231	SHIM, Tilt Gear, .001 (Amber)	AR
40	P	93898	232	SHIM, Tilt Gear, .003 (Green)	AR
41	P	93898	233	SHIM, Tilt Gear, .005 (Blue)	AR
42	P	14413	042	PIN, Taper, #2 x 7/8	2
43	P	3099	042	NUT, Hex, 3/8-16	5
44	P	17168	091	SCREW, Hex Head	1
45	P	129180	171	SCREW, Flat Head Socket, 3/8-16 x 2	4
46	P	19680	041	LOCKWASHER, 3/8	2
47	P	8897	091	PIN, Cotter	4

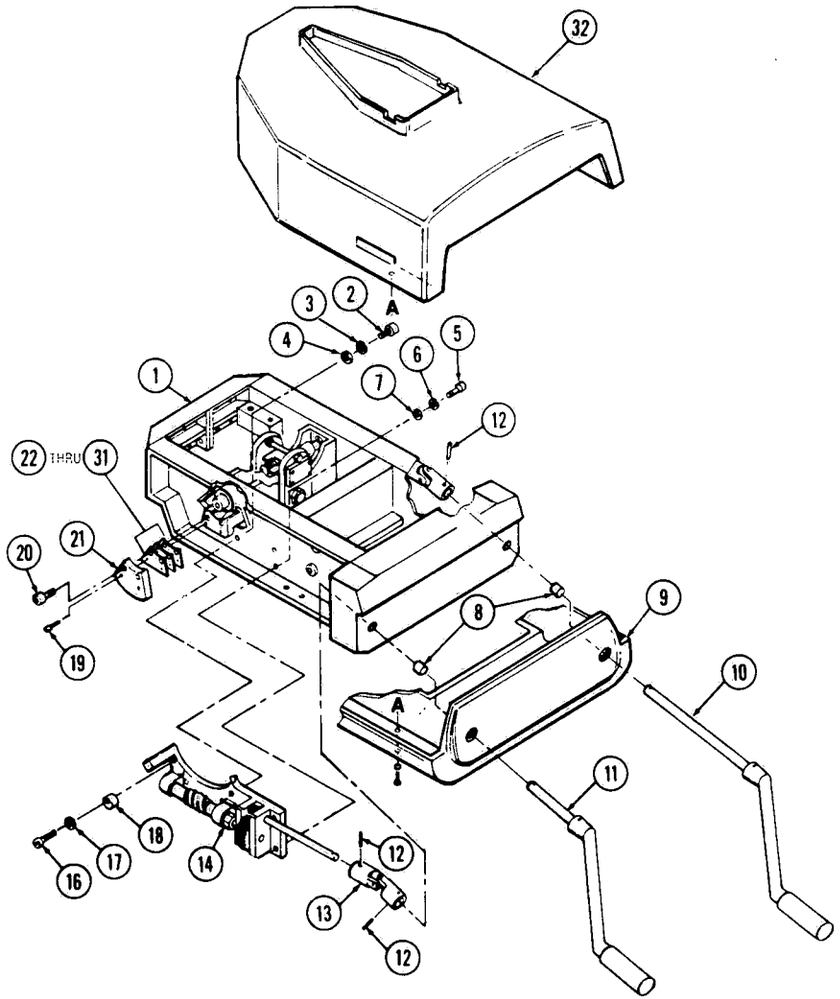


Figure 3. SUPERSTRUCTURE ASSEMBLY (Part 2 of 2).

FIG. & INDEX NO.		PART NUMBER		DESCRIPTION	UNITS PER ASSEMBLY
3-				SUPERSTRUCTURE ASSEMBLY (Part 2 of 2)....	X
1	P			SUPERTRUCTURE ASSEMBLY (See Fig. 1).....	1
2	P	15339	045	SCREW, Socket Head Cap, 3/8-16 x 1-1/4...	4
3	P	89809	061	LOCKWASHER, Internal Tooth, 3/8.....	4
4	P	10412	042	WASHER, Flat, 3/8.....	4
5	P	11266	045	SCREW, Socket Head Cap, 1/4-20 x 1.....	2
6	P	26962	061	LOCKWASHER, Internal Tooth, 1/4.....	2
7	P	31599	041	WASHER, Flat, 1/4.....	2
8	P	129186	174	BEARING, Sleeve.....	2
9	P	146647	036	SHROUD, Lower.....	1
10	P	93898	246	HANDLE ASSEMBLY, Tilt.....	1
11	P	93898	247	HANDLE ASSEMBLY,Trendelenburg.....	1
12	P	129180	173	PIN, Roll, 5/32 Dia. x 7/8.....	3
13	P	93898	013	JOINT, Universal.....	1
14	P	136804	035	GEAR BOX ASSEMBLY.....	1
15	P	38900	061	SCREW, Socket Head Set, 1/4-20 x 3/8.....	2
16	P	42598	045	SCREW, Socket Head Cap, 5/16-18 x 2-1/4..	2
17	P	19679	041	LOCKWASHER, 5/16.....	2
18	P	129354	337	STOP, Trendelenburg Gear.....	2
19	P	12786	091	PIN, Taper, #7 x 1-1/4.....	2
20	P	12695	045	SCREW, Socket Head Cap, 1/2-13 x 1-1/4...	2
21	P	93898	025	SECTOR, Worm Gear.....	1
22	P	93898	215	SHIM, Trendelenburg Gear (Amber - .001)..	AR
23	P	93898	216	SHIM, Trendelenburg Gear (Red - .002)....	AR
24	P	93898	217	SHIM, Trendelenburg Gear (Green - .003)..	AR
25	P	93898	218	SHIM, Trendelenburg Gear (Tan - .004)....	AR
26	P	93898	219	SHIM, Trendelenburg Gear (Blue - .005)...	AR
27	P	93898	220	SHIM, Trendelenburg Gear (Brown - .010)..	AR
28	P	93898	221	SHIM, Trendelenburg Gear (Pink - .015)...	AR
29	P	93898	222	SHIM, Trendelenburg Gear(Yellow - .020)..	AR
30	P	93898	223	SHIM, Trendelenburg Gear (White - .025)..	AR
31	P	93898	224	SHIM, Trendelenburg Gear (Coral - .030)..	AR
32	P	146647	037	SHROUD, Upper.....	1

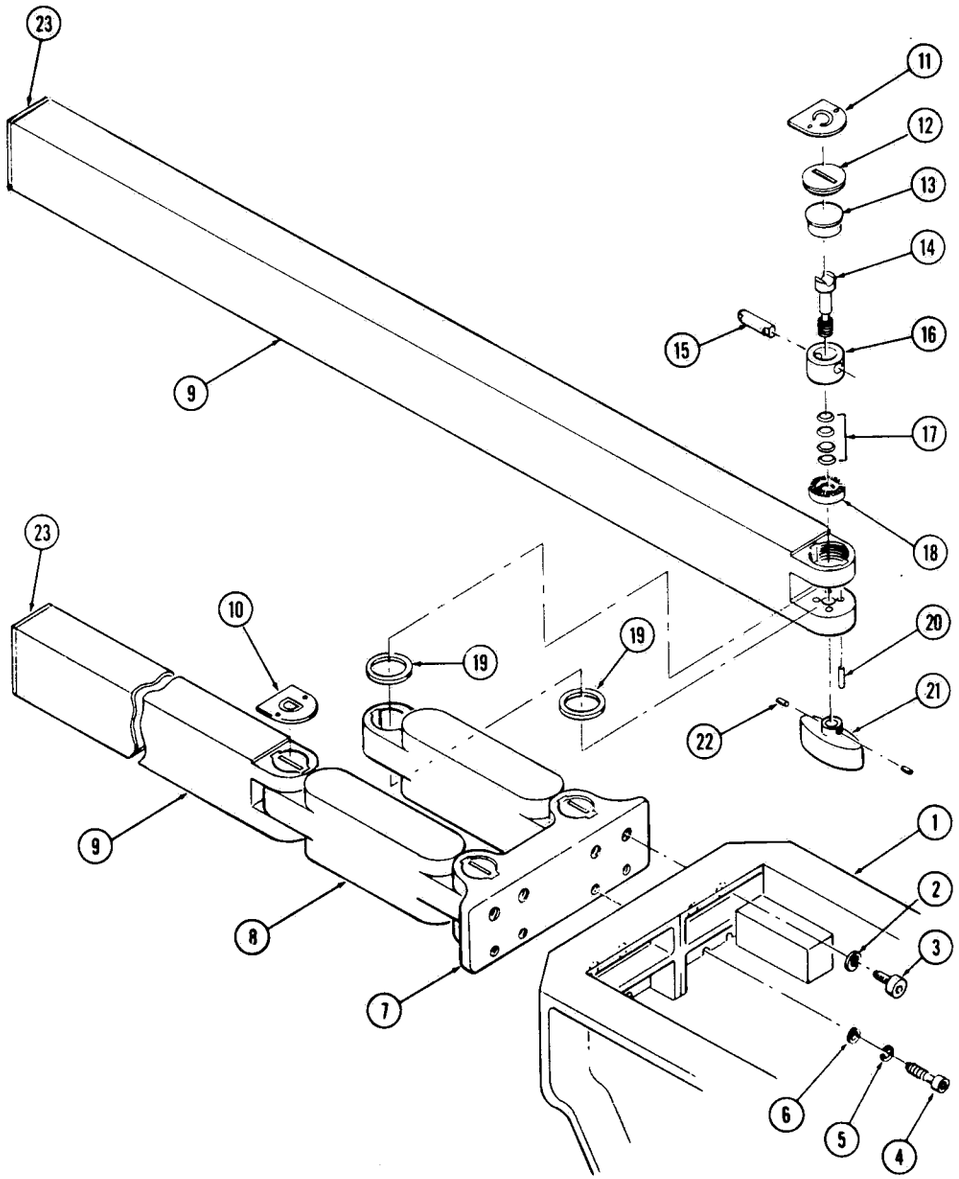


Figure 4. ABDUCTOR BAR ASSEMBLY.

FIG. & INDEX NO.	PART NUMBER			DESCRIPTION	UNITS PER ASSEMBLY
4-	P	146647	027	ABDUCTOR BAR ASSEMBLY	X
				SUPERSTRUCTURE ASSEMBLY (See Fig. 1)	1
1					4
2	P	19680	041	LOCKWASHER, 3/8	4
3	P	16868	041	SCREW, Socket Head Cap, 3/8-16 x 7/8	4
4	P	11266	045	SCREW, Socket Head Cap, 1/4-20 x 1	4
5	P	19678	045	LOCKWASHER, 1/4	4
6	P	84079	216	WASHER, Flat, 1/4	1
7	P	136804	117	SUPPORT, Abductor Bar	2
8	P	136804	115	ABDUCTOR BAR, Inner	2
9	P	136804	089	ABDUCTOR BAR, Outer	1
10	P	93898	164	INDICATOR, Abductor Bar Outer, LH	1
11	P	93898	163	INDICATOR, Abductor Bar Outer, RH	1
12	P	93898	140	PLUG, Retainer	4
13	P	129354	196	BEARING	4
14	P	93898	225	SHAFT, Locking	4
15	P	129354	361	PIN, Dowel	4
16	P	93898	120	ROSETTE, Upper	16
17	P	43362	061	WASHER, Spring, 3/8	4
18	P	93898	121	ROSETTE, Lower	8
19	P	129354	349	BEARING, Thrust	16
20	P	150823	047	PIN, Dowel, 1/4 x 3/4	4
21	P	93898	227	KNOB, Abductor Bar	8
22	P	150763	001	SCREW, Set, 8-32 x 1/4	2
23	P	93898	137	CAP, End	2

(NOT USED)

TOPIC 5

TABLETOP

INDEX

SECTION 5.1 GENERAL

This Topic contains all tabletop data. Tabletop consists of top and translation assemblies. Tabletop can withstand patient positioning without exhibiting permanent set or failure. Tabletop is constructed of cast aluminum and texture painted. Translation bearing rods are case-hardened stainless steel.

Any maintenance should only be attempted by qualified service technicians. Following repairs, test table using applicable section of FIELD TEST PROCEDURE to verify effectiveness of repairs

SECTION 5.2 COMPONENT REPAIR AND REPLACEMENT

5.2.1. GENERAL

This Section contains instructions for disassembly, repair and replacement of selected tabletop components. See Section containing Exploded Views And Assemblies as an aid in understanding and completing instructions.

WARNING: REPAIRS AND ADJUSTMENTSSHOULD BE ATTEMPTED ONLY BY EXPERIENCED PERSONS FULLY ACQUAINTED WITH THIS EQUIPMENT. USE OF INEXPERIENCED, UNQUALIFIED PERSONS TO WORK ON THIS EQUIPMENT OR THE INSTALLATION OF UNAUTHORIZED PARTS COULD CAUSE INJURY OR RESULT IN COSTLY DAMAGE.

5.2.2. TABLETOP REMOVAL

5.2.2.1. Remove side rails by removing nuts and washers.

5.2.2.2. Remove screws and retaining washers from one side of tabletop.

WARNING: SUPPORT TABLETOP ASSEMBLY BEFORE MOVING TRANSLATION SHAFTS.

5.2.2.3. Push front and rear translation shafts out of tabletop.

5.2.2.4. Lift tabletop from table.

5.2.3. LOCKING AND SLIDING CHANNEL REMOVAL

5.2.3.1. Remove tabletop (see Paragraph **5.2.2., TABLETOP REMOVAL**).

5.2.3.2. Drive out roll pins from sliding channel. Remove locking channel.

5.2.3.3. Remove shoulder screws from sliding channel. Remove sliding channel.

SECTION 5.3 EXPLODED VIEWS AND PARTS LISTS

MINI INDEX

Figure 1. TABLETOP ASSEMBLY.

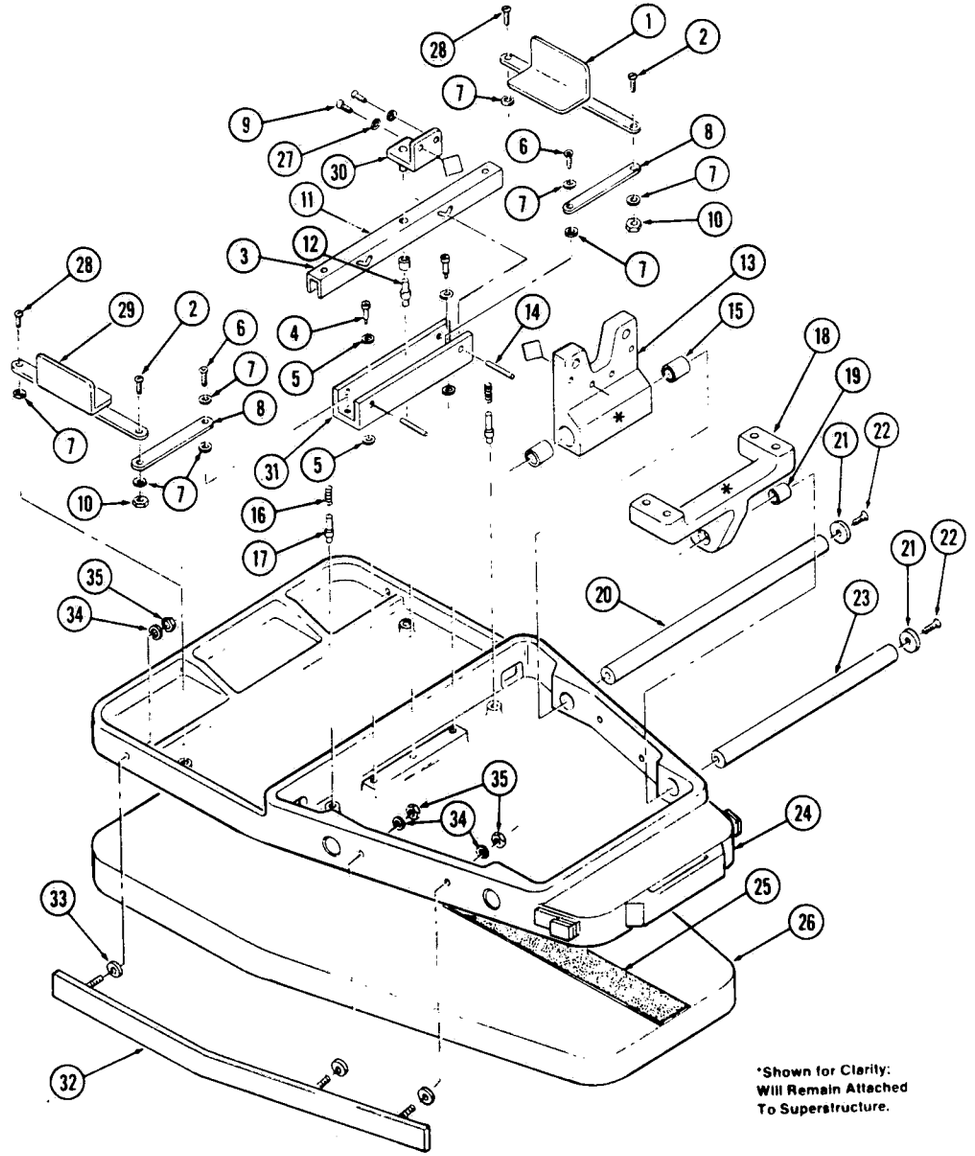
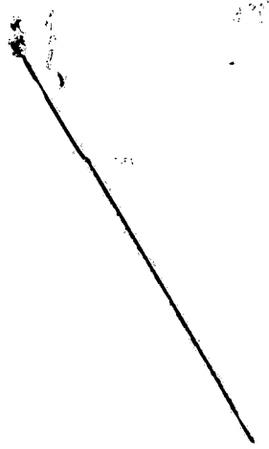


Figure 1. TABLETOP ASSEMBLY.

FIG. & INDEX NO.	PART NUMBER			DESCRIPTION	UNITS PER ASSEMBLY
					X
1-	P	146647	032	TABLETOP ASSEMBLY	1
1	P	136804	077	BRACKET, Linkage, RH	2
2	P	9961	041	SCREW, Round Head, 10-32 x 5/8	1
3	P	136804	087	CHANNEL, Locking	2
4	P	150044	001	SCREW, Socket Head Shoulder, 3/8 x 3/8	4
5	P	10412	042	WASHER, Flat, 25/64 ID x 3/4 OD x 1/16	2
6	P	37344	048	SCREW, Socket Head, 10-24 x 3/8, Nylock	10
7	P	5511	041	WASHER, Flat, 3/16 ID x 7/16 OD x .035	2
8	P	129354	059	BAR, Linkage	2
9	P	37676	061	SCREW, Socket Head, 1/4-28 x 1/2, Nylock	2
10	P	118442	045	NUT, Self-Lock, #10-32	1
11	P	129354	077	BEARING	1
12	P	129354	075	PIN, Shoulder	1
13	P	136804	079	BLOCK, Rear Bearing	2
14	P	129354	078	PIN, Roll	2
15	P	129354	033	BEARING, Rear	2
16	P	32320	061	SPRING, Compression	2
17	P	129354	076	STUD, Shoulder	1
18	P	146647	030	BLOCK, Front Bearing	1
19	P	129354	246	BEARING, Front	1
20	P	93898	016	SHAFT, Rear	4
21	P	129354	032	WASHER, Retaining	4
22	P	129354	043	SCREW, Flat Head Socket, 1/4-20 x 7/8	1
23	P	93898	152	SHAFT, Front	1
24	P	146647	077	TABLETOP, Painted	1
25				STRIP, Velcro	1
26	P	136804	103	PAD	2
27	P	19686	061	LOCKWASHER	2
28	P	129354	350	SCREW, Shoulder, 10-32 x 3/4	1
29	P	136804	078	BRACKET, Linkage, RH	1
30	P	93898	052	ANGLE, Weldment	1
31	P	136804	086	CHANNEL, Sliding	2
32	P	93898	156	SIDE RAIL ASSEMBLY	6
33	P	129354	244	SPACER, Side Rail	6
34	P	19691	061	LOCKWASHER	6
35	P	3098	045	NUT, Hex	

(NOT USED)



TOPIC 6

TABLE ACCESSORIES

INDEX

SECTION 6.1 GENERAL

This Topic contains all pertinent table accessory data. Table accessories are constructed to meet same design criteria as table which can withstand patient load of 300 pounds under both reverse and normal positioning without exhibiting permanent set or failure.

SECTION 6.2 INSTALLATION

6.2.1. ACCESSORY CLAMP

Clamp is used to attach accessories to abductor bars. Accessories include: Foot Traction Unit, Legholder, Popliteal Support, AP Cassette Holder, and Drape Support. To install clamp proceed as follows

6.2.1.1. Place clamp handle in horizontal (unlocked) position.

6.2.1.2. Place clamp on abductor bar.

6.2.1.3. Lock clamp on bar by swinging handle down to vertical position.

6.2.1.4. If adjustment is needed in clamp position, proceed as follows:

- Pull clamp to intermediate position (approximately 35 degrees from vertical).
- Clamp may now be slid along abductor bar.

NOTE: Clamp cannot be removed from abductor bar while handle is in intermediate position.

- Remove clamp by pulling handle to horizontal (unlocked) position.

6.2.2. CLARK SOCKET

Socket is used to attach accessories to side rails. Accessories include: Lateral Cassette Holder, Drape Supports, and selected AMSCO standard accessories. To install socket proceed as follows:

6.2.2.1. Slide socket onto either end of side rail.

6.2.2.2. Place accessories support into opening and adjust socket for proper angulation of accessory.

6.2.2.3. Tighten accessory support and socket to side rail by turning "T" handle clockwise.

NOTE: Angulation changes can be made by slightly loosening socket.

6.2.2.4. Turn "T" handle counterclockwise to remove accessory support and to loosen socket.

6.2.2.5. Remove socket by sliding off rail.

6.2.3. ARM/HAND TABLE ASSEMBLY

6.2.3.1. Place arm/hand table bracket onto side rail.

6.2.3.2. Swing support leg down from clamp.

6.2.3.3. Loosen wing nut to lower foot to floor.

6.2.3.4. Tighten wing nut to lock foot in place.

6.2.3.5. Tighten bracket knobs to lock table to side rail.

6.2.3.6. Lock support leg in position by pushing "T" handle in.

6.2.3.7. Remove arm/hand table in reverse order.

SECTION 6.3 DRAWING AND PARTS LIST

MINI INDEX

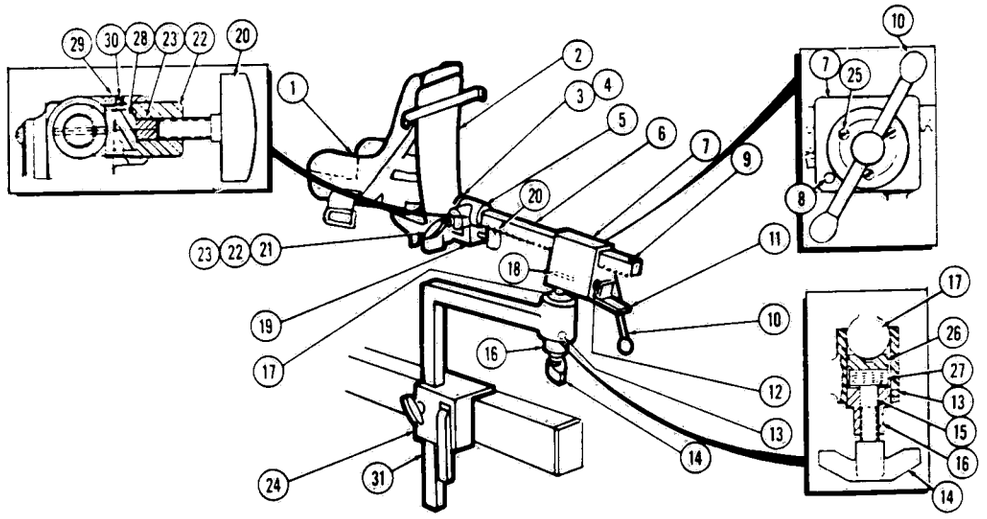


Figure 1. LEG TRACTION UNIT WITH BOOT.

FIG. & INDEX NO.	PART NUMBER			DESCRIPTION	UNITS PER ASSEMBLY
1-	P	142703	003	LEG TRACTION UNIT WITH BOOT (RH)	X
1	P	136804	149	BOOT, (Sales Item)	1
2	P	33195	056	FOOT PLATE ASSEMBLY	1
3	P	129354	211	TRACTION BUSHING ASSEMBLY	1
4	P	31967	091	PIN, Drive Lock	1
5	P	17285	045	WASHER	1
6	P	93898	145	RACK, Leg Traction	1
7	P	53229	056	BOX, Traction	1
8	P	26134	061	PIN, Drive Lock, 1/4 x 1-1/4	1
9	P	12283	041	SCREW, Round Head, #10-32 x 1/4	1
10	P	33191	056	HANDLE AND PINION ASSEMBLY	1
11	P	17269	056	DOG, Traction Box	1
12	P	11606	045	SPRING, Clutch Key	1
13	P	10583	091	SCREW, Set (Cup Point), #10-32 x 3/16	2
14	P	93898	144	KNOB ASSEMBLY, 1/2-13	1
15	P	24883	045	PLUNGER	1
16	P	24884	056	RETAINER, Piston	1
17	P	24869	061	STEM, Ball	1
18	P	25681	061	PIN, Groove, 3/16 x 1-1/4	1
19	P	136804	108	SUPPORT, Heel	1
20	P	93898	142	KNOB ASSEMBLY	1
21	P	93898	143	KNOB ASSEMBLY, 3/8-16	1
22	P	129354	212	RETAINER	1
23	P	33206	045	PLUNGER	1
24				CLAMP, Traction (See Fig. 6)	1
25	P	9374	041	SCREW	3
26	P	24881	045	PISTON	1
27	P	24882	091	SPACER	1
28	P	26548	091	PLUG	1
29	P	33383	045	SHOE	1
30	P	51176	091	SCREW	1
31	P	92312	002	ELBOW TRACTION ASSEMBLY	1

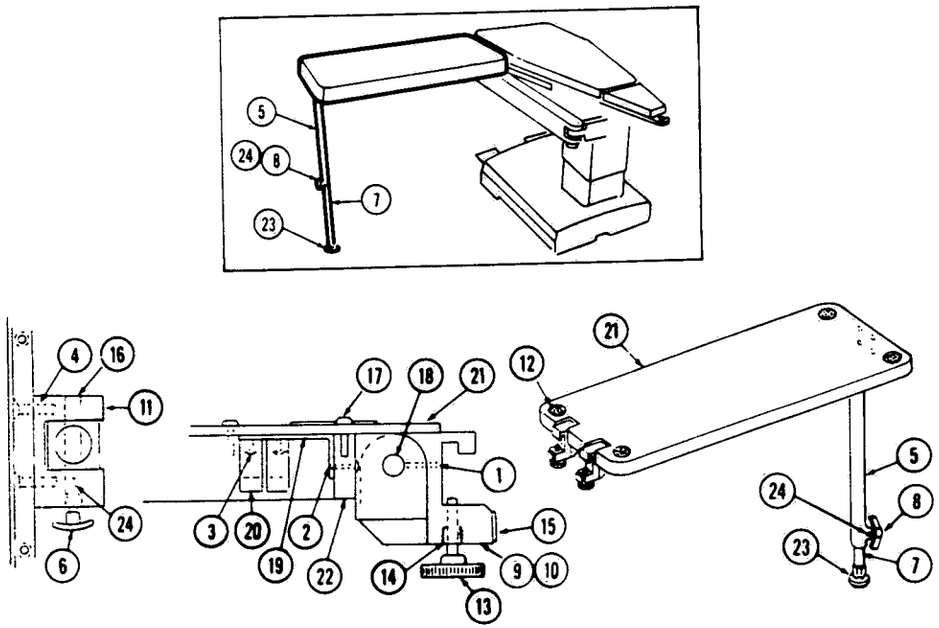
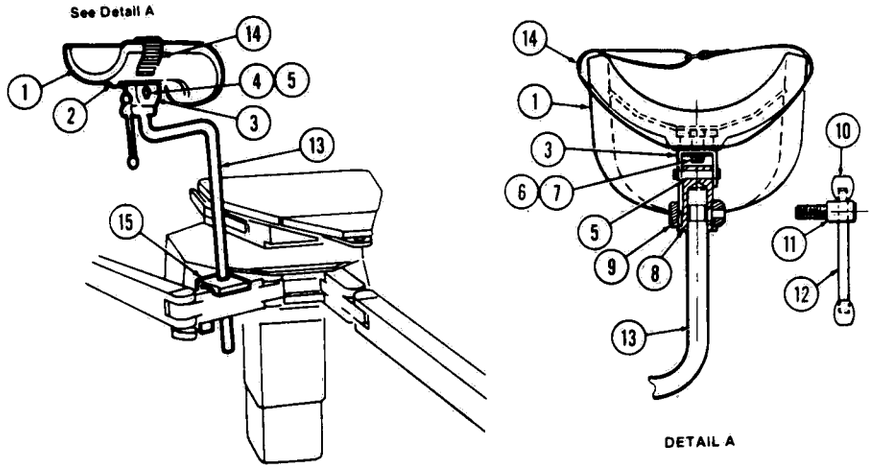


Figure 2. ARM/HAND TABLE ASSEMBLY.

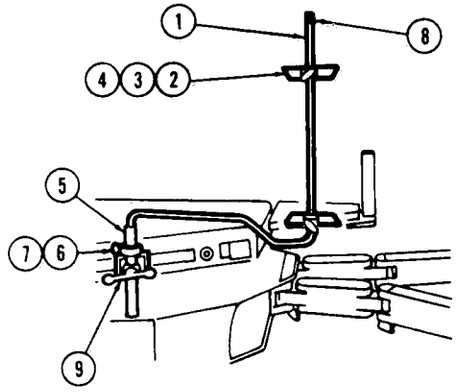
FIG. & INDEX NO.	PART NUMBER			DESCRIPTION	UNITS PER ASSEMBLY
2-	P	146647	054	ARM AND HAND TABLE ASSEMBLY	X
1	P	4433	041	SCREW, Set, 1/4-20 x 5/16 Long	2
2	P	9661	041	SCREW, #10-32 x 5/16 Long	2
3	P	27642	042	SCREW, #8-32 x 3/8 Long	2
4	P	42656	041	SCREW, 1/4-20 x 1 Long, Flat Head	4
5	P	93898	211	SLEEVE ASSEMBLY, Leg	1
6	P	93898	248	TEE HANDLE ASSEMBLY	1
7	P	93898	249	LEG, Extension	1
8	P	93898	250	NUT, Wing	1
9	P	93898	251	MOUNT, Support, R.H	1
10	P	93898	252	MOUNT, Support, L.H	1
11	P	93898	254	CLEVIS, Leg	1
12	P	129354	316	FASTENER, Hook	4
13	P	129354	319	KNOB LOCK ASSEMBLY	2
14	P	129354	326	INSERT, Keylocking, 1/4-20 x 3/8 Long	2
15	P	129354	328	PAD, Mount	2
16	P	129354	344	PIN, Driv-Lok, 3/8 x 2-1/4	1
17	P	129354	345	SCREW, *8-32 x 5/8 Long	i2
18	P	129354	346	SHAFT	1
19	P	129354	381	BRACKET	1
20	P	129354	382	CLIP, Spring	2
	P	136804	140	PAD (Not Shown)	1
21	P	146647	052	TOP	1
22	P	146647	079	FRAME, Support	1
23	P	150200	001	FOOT	1
24	P	150763	001	SCREW, Set, 8-32 x 1/4 Half Dog Point	2



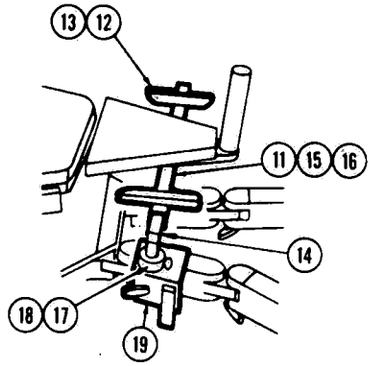
DETAIL A

Figure 3. LEG HOLDER ASSEMBLY.

FIG. & INDEX NO.	PART NUMBER			DESCRIPTION	UNITS PER ASSEMBLY
3-	P	146647	018	LEG HOLDER ASSEMBLY	X
1	P	136804	040	MOLDED PAD ASSEMBLY	1
2	P	129354	115	CLAMP, Scrap	1
3	P	129354	116	BRACKET, Swivel	1
4	P	31689	045	RING, Retaining	2
5	P	129354	122	SHAFT, Bearing	1
6	P	41992	061	SCREW, Socket Head Cap, 1/4-20 x 5/8	2
7	P	19686	061	LOCKWASHER, 1/4	2
8	P	129354	119	BUSHING, Clamp	1
9	P	129354	118	COLLAR, Clamp	1
10	P	8316	056	KNOB	2
11	P	129354	127	POST	1
12	P	129354	389	HANDLE	1
13	P	129354	117	BAR	1
14	P	129354	126	STRAP,Velcro	1
15				CLAMP, Accessory (See Fig. 6)	1



A. Lateral Cassette Holder

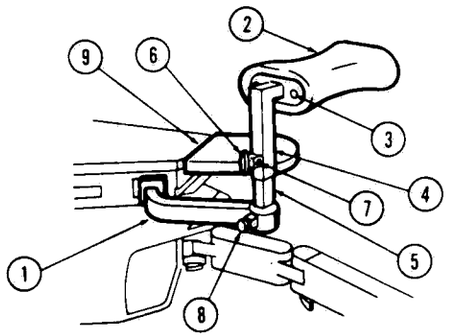


B. A.P. Cassette Holder

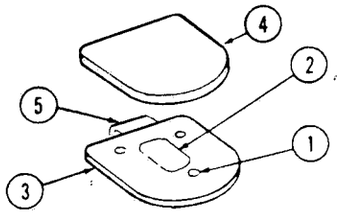
Figure 4. CASSETTE HOLDERS.

FIG. & INDEX NO.	PART NUMBER			DESCRIPTION	UNITS PER ASSEMBLY	
4-				CASSETTE HOLDERS	X	X
A	P	129354	386	LATERAL CASSETTE HOLDER ASSEMBLY*	X	
	P	136804	039	LATERAL CASSETTE HOLDER ASSEMBLY*	X	
1	P	129354	110	• ROD	1	
2	P	48941	034	• BRACKET	2	
3	P	44522	056	• KNOB	2	
4	P	150763	001	• SCREW, Set (Dog Point)	2	
5	P	129354	333	• SLEEVE	1	
6	P	129354	327	• COLLAR	1	
7	P	15419	044	• SCREW, Thumb, 1/4-20 x 1/2	1	
8	P	9276	041	• SCREW, Round Head, #8-32 x 3/16	1	
9	P	43348	091	• CLARK SOCKET*	1	
B	P	129354	385	A.P. CASSETTE HOLDER ASSEMBLY*		X
	P	146647	055	A.P. CASSETTE HOLDER ASSEMBLY		X
11	P	93898	194	• BAR, Slide		1
12	P	136804	133	• SLIDE, Weldment		2
13	P	93898	142	• KNOB ASSEMBLY		2
14	P	136804	132	• BAR, Pivot (Weldment)		1
15	P	3958	041	• SCREW, Round Head, #4-36 x 1/8		2
16	P	50527	061	• SCREW, Socket Head Cap, #8-32 x 1/2		1
17	P	129354	327	• COLLAR		1
18	P	15419	044	• SCREW, Thumb, 1/4-20 x 1/2		1
19				CLAMP, Accessory* (See Fig. 6)		1

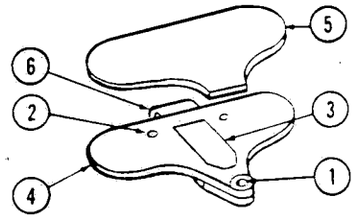
*SALES ITEM



A. I.M. NAILING REST ASSEMBLY — ORTHOGRAPHIC 2 TABLE.



B. T-SHAPE SACRAL REST ASSEMBLY — ORTHOGRAPHIC 2 TABLE.



C. WEDGE SHAPE SACRAL REST ASSEMBLY — ORTHOGRAPHIC 2 TABLE.

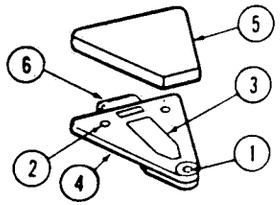


FIG. & INDEX NO.	PART NUMBER			DESCRIPTION	UNITS PER ASSEMBLY			
5-	P	146647	080	INTRAMEDULLARY COUNTER-TRACTION DEVICE ASSEMBLY (SALES ITEM)	X	X	X	
1	P	146647	075	BRACKET, Support	1			
2	P	136804	129	REST, Leg	1			
3	P	46124	056	SCREW, Flat Head Socket, 1/4-20 x 3/4	2			
4	P	136804	186	SLIDE ASSEMBLY	1			
5	P	93898	228	SUPPORT, Vertical Adjustment	1			
6	P	93898	257	KNOB ASSEMBLY	1			
7	P	150763	001	SCREW, Set, #8-32 x 1/4 (Half Dog)	1			
8	P	129354	355	PLUNGER, Spring	1			
A	P	136804	137	I.M. NAILING REST ASSEMBLY				
1	P	129354	082	• SCREW, Flat Head Socket, 3/8-16 x 3/4 Lg	3			
2	P	129354	238	• FASTENER, Hook	1			
3	P	136804	100	• REST, Sacral	1			
4	P	136804	102	• PAD, Sacral Rest	1			
5	P	136804	131	• SUPPORT, Sacral Rest	1			
B	P	136804	138	T-SHAPE SACRAL REST ASSEMBLY		1		
1	P	93898	031	• SOCKET, Perineal Post				
2	P	129354	082	• SCREW, Flat Head Socket, 3/8-16 x 3/4 Lg		2		
3	P	129354	139	• FASTENER, Hook, 2 x 6 Velcro Tape		1		
4	P	136804	041	• REST, Sacral, T-Shaped		1		
5	P	136804	048	• PAD		1		
6	P	136804	128	• SUPPORT		1		
C	P	136804	139	WEDGE SHAPE SACRAL REST ASSEMBLY			1	
1	P	93898	031	• SOCKET, Perineal Post				
2	P	129354	082	• SCREW, Flat Head Socket, 3/8-16 x 3/4 Lg			2	
3	P	129354	139	• FASTENER, Hook, 2 x 6 Velcro Tape			1	
4	P	136804	006	• SACRAL REST			1	
5	P	136804	010	• PAD			1	
6	P	136804	128	• SUPPORT			1	

Figure 5. INTRAMEDULLARY COUNTER-TRACTION DEVICE AND HIP REST.

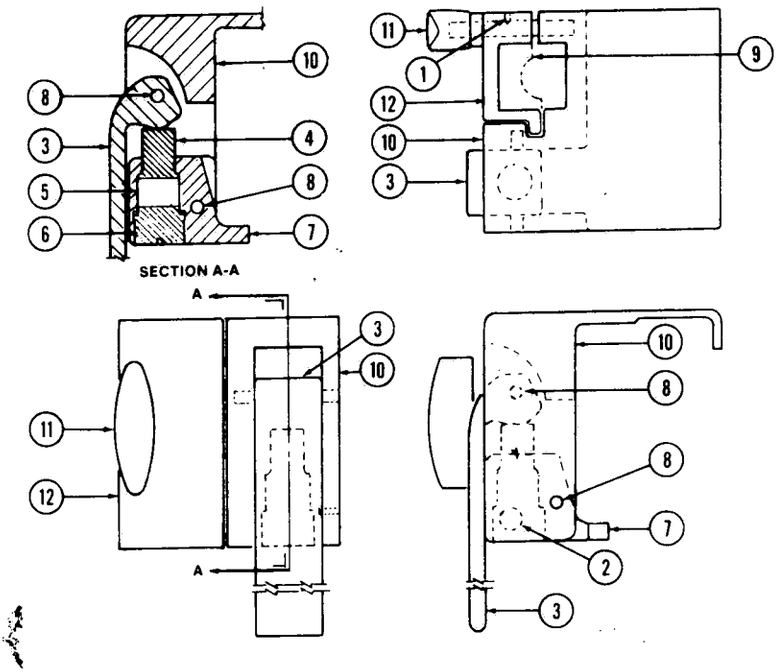


Figure 6. CLAMP ASSEMBLIES.

FIG. & INDEX NO.	PART NUMBER	DESCRIPTION	UNITS PER ASSEMBLY			
6-	P 146647 034	TRACTION CLAMP ASSEMBLY (SALES ITEM)	X			
6-	P 146647 035	ACCESSORY CLAMP ASSEMBLY (SALES ITEM)		X		
1	P 52336 061	SCREW, Set, Socket Head, #6-32 x 1/8	1	1		
2	P 129354 367	PIN, Dowel, 3/32 x 5/16	1	1		
3	P 136804 104	LEVER, Cam	1	1		
4	P 129354 286	PLUNGER, Spring	1	1		
5	P 129354 288	WASHER, Belleville	16	16		
6	P 129354 287	RETAINER, Spring	1	1		
7	P 136804 106	LOCK, Clamp	1	1		
8	P 129354 250	PIN, Grooved, 3/16 x 1-1/2	2	2		
9	P 93898 161	PLATE, Accessory Clamp		1		
10	P 136804 105	BODY, Clamp	1	1		
11	P 93898 101	KNOB ASSEMBLY	1	1		
12	P 93898 162	PLATE, Traction Clamp	1			

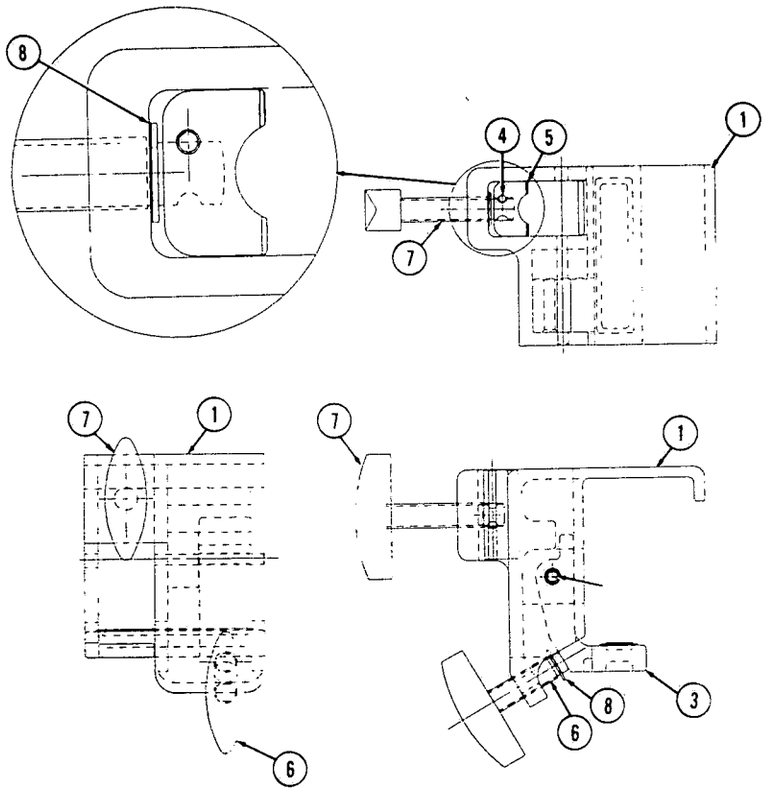


Figure 7. CLAMP ASSEMBLIES (After 5/84).

FIG. & INDEX NO.	PART NUMBER	DESCRIPTION	UNITS PER ASSEMBLY
7-	P 141210 012	CLAMP ASSEMBLY	X
1	P 141210 011	BODY, Clamp	1
2	P 129354 261	PIN, Grooved	1
3	P 56397 037	LEVER ARM, Assembly	1
4	P 81674 002	PIN, Spring	1
5	P 56397 036	PLATE, Clamp	1
6	P 56397 040	KNOB-CLAMP	1
7	P 56397 071	KNOB-PLATE CLAMP	1
8	P 36879 091	RING, Retaining	2

AMSCO SERVICE

ORTHOGRAPHIC 2
ORTHOPEDIC AND FRACTURE TABLE
P-764317-886