The Hill Anatomotor

Traction/Massage Treatment Table

Hill Laboratories
COMPANY

REFERENCE MANUAL

Specifications

Model #100:	Includes Traction, Back and Leg Rollers
Model #200:	Rollers Only
Optional Features:	Can be added only at the time of manufacture
Height:	22″ - 30″ as ordered Height cannot be altered once manufactured
Width of Table Top:	Standard 21″, optional 24″ ST2 and ST3 - Standard 24″
Length of Table Top:	6′3″
Electrical Requirements:	110 volts - 60 cycle Also available 220 volts - 50 cycle
Weight (Uncrated):	Model #100 - 265 lbs. Model #200 - 225 lbs.
Shipping Weight:	Model #100 - 320 lbs. Model #200 - 280 lbs.
Space Requirement:	Model #100 - 9′5″ Model #200 - 7′3″ Model ST2 or ST3 (Stationary) - 6′3″

Guarantee

Your Hill Anatomotor has been thoroughly tested and inspected before shipment. All parts are guaranteed against defect in materials for one full year from date of purchase. During this period, any such defect will be remedied by Hill Laboratories or by a factory authorized repair service without charge. Tables damaged by mishandling or accident will be repaired at a reasonable charge.
All correspondence should be directed to your local dealer, or when this is not possible, to Hill Laboratories directly.
We appreciate your business and confidence in our product. Our aim is to provide you with excellent service and satisfaction for many years to come.

Howard A. Hill
President of Hill Laboratories Company

Table Serial No._____
Date_____

Hill Anatomotor
General Safety Precautions

1. The Anatomotor may be plugged in to any 110 outlet. Be careful that the cord does not run across a traffic area in the office. Models that were ordered with a 220 motor (usually overseas) will require a 220 outlet.

2. The top of the Anatomotor moves therefore be sure to leave ample room on both ends of the table not only for the top, but also for any traction equipment that you plan to use. A 9 foot minimum is required for traction; (if space is a problem, a shorter counter traction unit can be supplied), 7'3" is needed without traction. Our Stationary Top Anatomotor requires 6'3."

3. Children should not be left unattended when being treated on the Anatomotor.

4. Because the Anatomotor has moving parts, children and patients not being treated on the Anatomotor should not be left in the treatment room unattended.

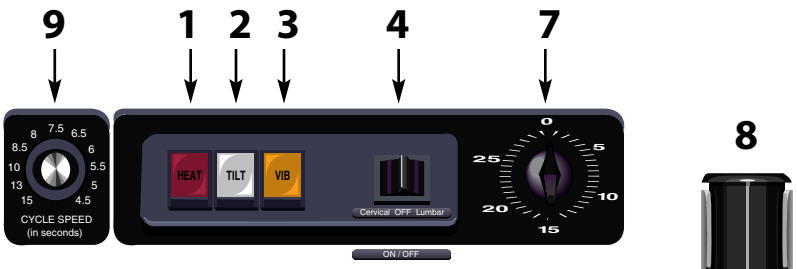
5. The Anatomotor is intended to be used by trained professional practioners. Proper use of the Anatomotor is very important to ensure the comfort and safety of your patients. There are several techniques outlined in the following pages which describe treatment methods used with the Anatomotor. Following these instructions will ensure effective and safe treatment to your patients.

Contents

CONTROLS

The operator should become thoroughly familiar with the controls before attempting the operation of the table.
Note: Not all models are equipped with all the control features listed below.

1. Heat Switch
2. Tilt Top (indicator light)
3. Vibration Switch
4. Cervical-OFF-Lumbar Switch
5. Upper Roller Adjustment
6. Lower Roller Adjustment
7. Timer
8. Patient Control Switch.
9. Variable Speed Dial



#1 Tilt Top (Indicator Light)

To raise the Tilt Top
A. Remove the filler block. Failure to do so will result in damage to the table.
B. Set the timer to the "off" position.
C. Push the cervical-lumbar switch to "lumbar" so that the table top glides to the foot end. The tilt top will not raise unless it is in this position.
D. Press the foot pedal control to the desired position. The right side will raise the top; left side will lower.
E. The indicator light will illuminate as soon as the tilt top is activated. Due to internal safety switches, the table top will not glide back and forth until the top is completely lowered and the indicator light is out.
F. The timer must be reset in order for the table top to glide back and forth.
Note: It is often more comfortable if the patient turns on his side, knees slightly bent, before activating the tilt top.

#2 Heat Control Switch

The heat control switch activates a metal strip heater located in the frame below the rollers. A mild heat is radiated up through the rollers to the top pad where it averages approximately 110°F (48° C), thus providing a soothing warmth to the spinal area. The heating unit takes approximately 5 to 10 minutes to warm up and may be left on all day, if so desired. The unit is not effective if turned on and off for each patient.

#3 Vibration

The vibrator unit administers a soothing vibration at a single speed of 3200 cycles per minute. The vibrator is located on the inside frame so that most of the vibration is felt through the rollers. Occasionally, excessive vibration noise may occur due to some types of flooring. If you experience this problem, place rubber pads or small pieces of carpeting under each foot of the table.

#4 Cervical-Lumbar Switch

This safety switch is designed to pre-select where the gliding top will stop at the end of the treatment time (either cervical or lumbar position). When properly positioned, the safety switch ensures that a patient is never left under the constant pull of traction at the end of the timed treatment. Setting the switch to the "off" position will stop the table instantly. It also allows the operator to leave the patient in constant traction when desired. When using only the rollers, the switch may be turned to either the cervical or lumbar "on" position. The table will not glide back and forth without both the timer and the safety switch placed in the "on" position. Tables with rollers only will usually have an "on/off" switch in place of the cervical-lumbar switch.

#5-#6 Upper and Lower Roller Adjustments

The back roller handles raise and lower the thoracic and lumbar rollers. The rollers are locked in place by turning the handle counter clockwise to the higher numbers. When the desired roller height is reached, move the Lock Lever to the left and while holding it there, release your hand from the roller handle. To lower the rollers, push the handle toward the higher numbers without touching the lock lever, then return the handle to the down position. (Refer to back roller section for detailed information.)

#7 Timer

The timer is designed so that the operator can pre-select the desired treatment time for the patient. The timer can be set from 1 to 30 minutes by

turning the dial clockwise to the appropriate number. The average treatment time is 7 to 10 minutes. A bell will ring at the end of treatment. The operator may stop the table before the timer rings by turning the timer to the "off" position. This action will not harm the table in any way.

#8 Patient Control Switch (Optional)

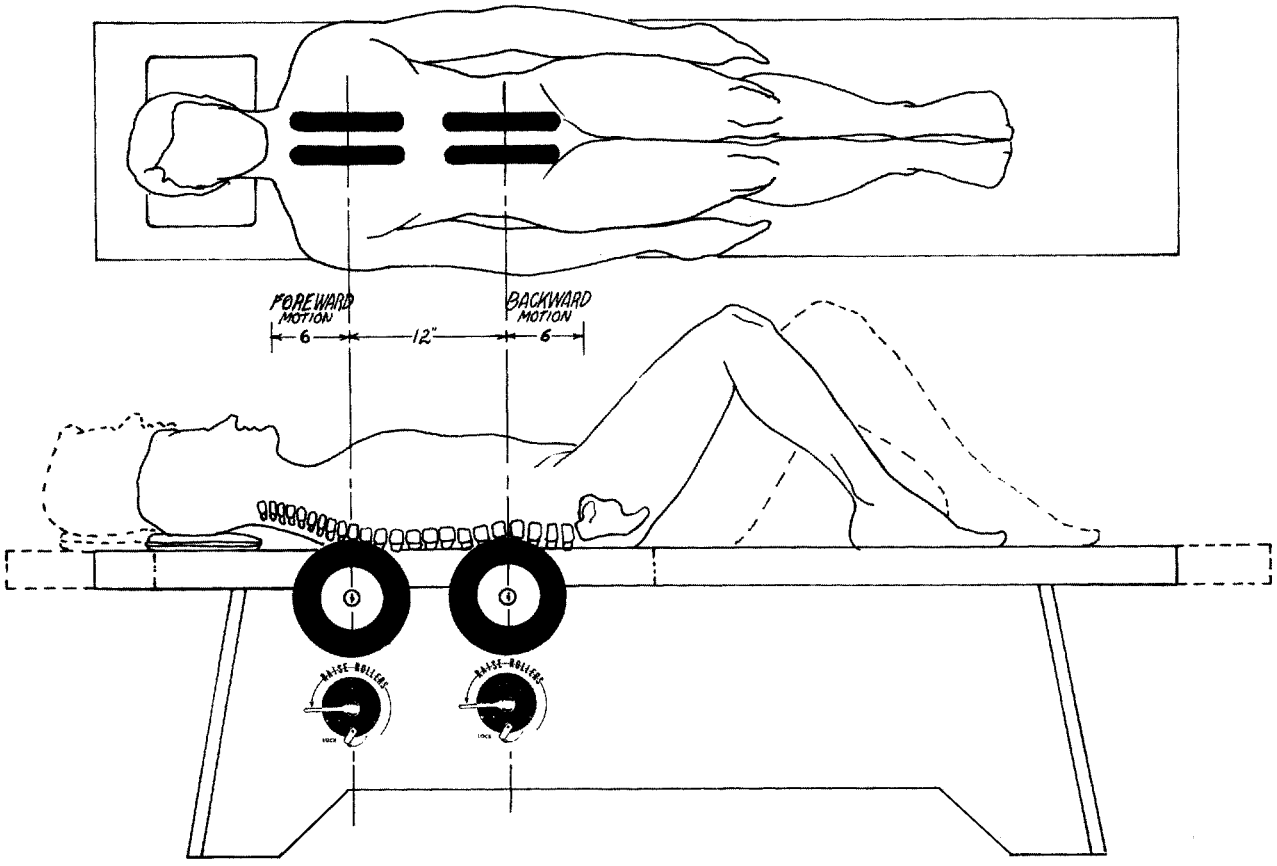
The patient has the option to use this switch to stop the table instantly. It cuts power to the table and must be reset to the "on" position to restart the table or any of its other functions.

#9 Variable Speed Control (Optional)

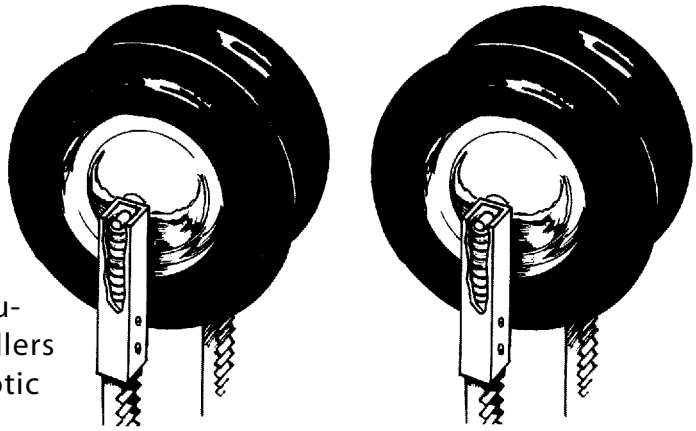
The speed control knob can be turned to slow the movement of the table top from 4.5 to 15 seconds. This allows the traction to be applied for a longer time period. For treating with rollers only, the speed control should be set on 4.5 seconds.

GLIDING TOP

The table top glides back and forth just under the normal respiration rate, moving the patient over the rollers approximately eight cycles per minute. This rate of massage induces relaxation and is of extreme importance during traction to achieve a more effective treatment in a shorter period of time. The rollers are spaced 12 in. (30.5 cm) apart. The gliding top moves 6 in. (15.25 cm) off center position in either direction covering a 24 in. (61 cm) span of the spinal area.



BACK ROLLERS



The two sets of semi-pneumatic back rollers are housed on springs and are designed to straddle the spine. They offer a controlled deep kneading massage and spinal mobilization to each articulation of the spine. The adjustable back rollers allow a controlled treatment for the kyphotic and lordoctic curvature of the spine.

Since the rollers are spring mounted, they will depress at approximately 30 lbs. (11 kg.) of pressure reducing the possibility of traumatizing the patient. However, care should be taken to make certain that the roller height is comfortable for each patient.

Procedures for Using Back Rollers

1. Position the patient so that the full spinal area is over the opening of the table top (see illustration).

2. It is generally recommended that the patient flex his legs while keeping his feet flat on the foot pad. This position flattens the normal lumbar curvature, thus providing a more equalized roller pressure in that area.

3. Set the timer and switch to the "on" position (either cervical or lumbar).

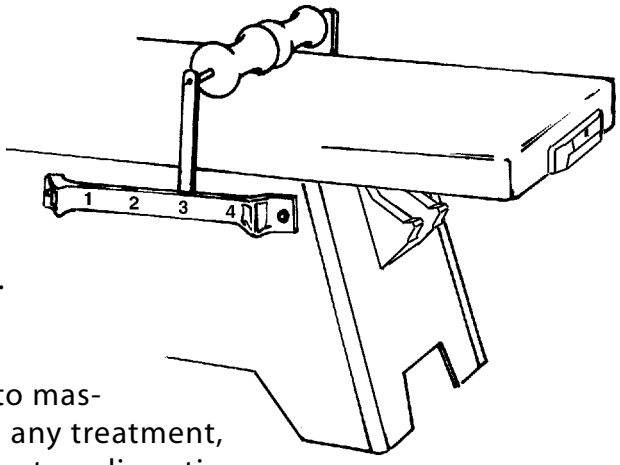
4. The roller settings can be determined by the feeling of resistance through the back roller handle. As the patient is gliding back and forth, raise the rollers until a firm resistance is felt, then lock in position as described in the Control Section #5 & #6. Roller settings will vary according to patient's tolerance and condition. It is recommended that patients be consulted concerning their comfort.

5. At any given time it is easy to determine where the back rollers are treating the patient. As the table top is gliding back and forth, locate the center axis of the roller handle and follow straight up.

6. The patient may be positioned higher or lower on the table top depending on his height and where the treatment is required. The position of the back rollers is very important when using traction (see the section on traction).

7. The numbered increments on the dial are used as reference points to aid in maintaining and recording a uniform level of treatment. Each increase in number represents 1/6 in. (0.4 cm) height adjustment.

LEG ROLLER

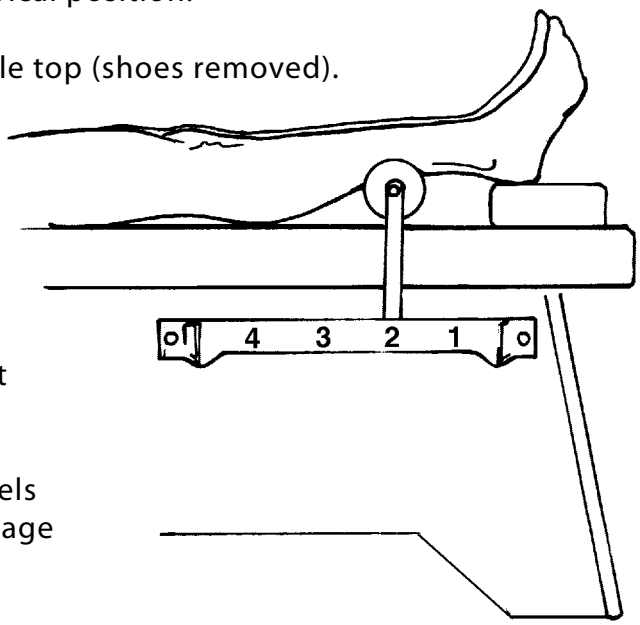


The reciprocating action of the Anatomotor top also provides motion for leg massage and passive exercise to the knees and hips. The leg rollers can be placed into any one of the four positions of the leg roller brackets. The various positions are designed to accommodate the different heights of patients as well as to massage the different areas of the legs. As with any treatment, the leg massage should be used with the doctors discretion. CAUTION SHOULD BE TAKEN AND THE LEG ROLLERS AVOIDED WITH PATIENTS WHO HAVE SEVERE VARICOSITY OF PHLEBITIS.

Procedures for Using Leg Roller Massage

1. With the timer off, set the switch to the cervical position.

2. Position the patient comfortably on the table top (shoes removed).



3. Place the leg rollers beneath the patient's legs in the desired treatment area. For the average height patient, position #2 is for the calf area; Position #4 is for the upper thigh area.

4. Center rubber leg rollers on the bar and rest the patient's legs on top of the rollers.

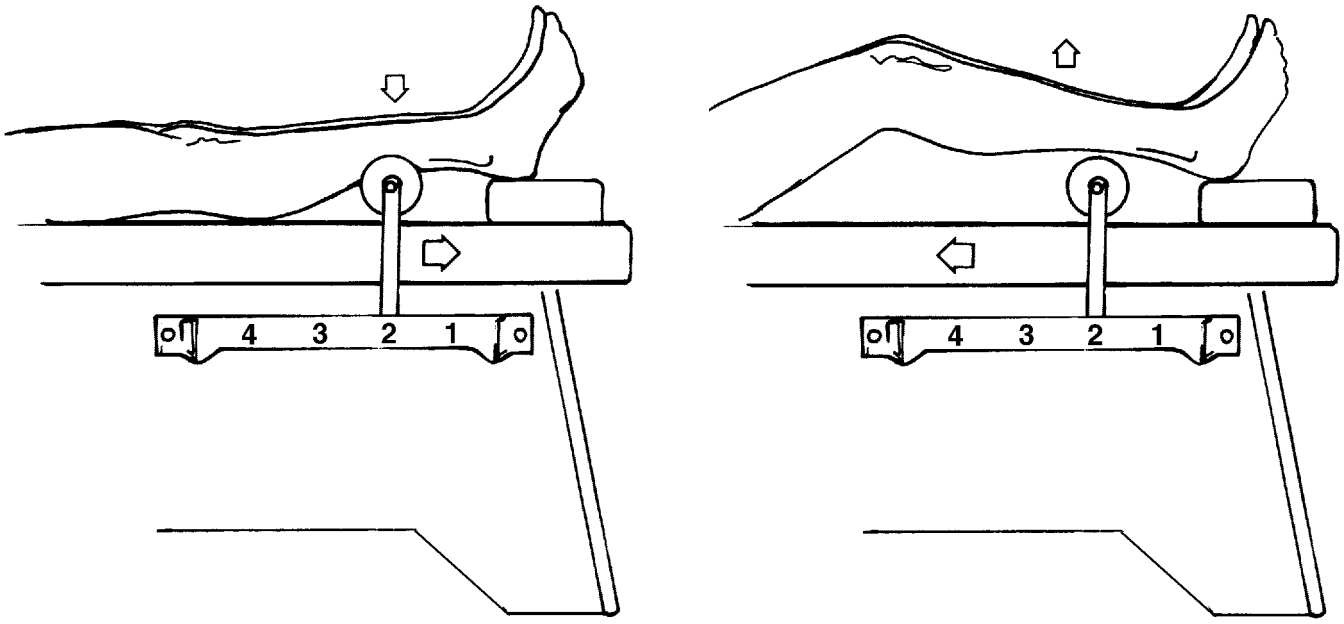
5. Place filler block, firm side up, under the heels of the patient. This will result in a milder massage to the leg area.

6. To start treatment set the timer (approx. 5 to 7 min.). The patient will instantly receive the reciprocating deep kneading massage. If less pressure on the legs is desired, a pillow may be placed on top of the filler block, raising the heels. The filler block may be removed if a more vigorous massage is desired.

7. The timer will ring at the end of the treatment.

Procedure for Venous Return Massage

A venous return can be described as a one-way milking action which is designed to push the blood and lymph towards the heart. Administering this procedure to the lower leg will help drain the ankle area of fluids. The operator should follow the same procedure as for leg roller massage. Generally, position the leg rollers in position #2



of the leg roller brackets, and set the timer to approximately 5 to 7 minutes. The patient should flex his knees slightly as the table top glides to the head end and then place his legs in contact with the leg rollers as the table top glides to the foot end.

PASSIVE EXERCISE

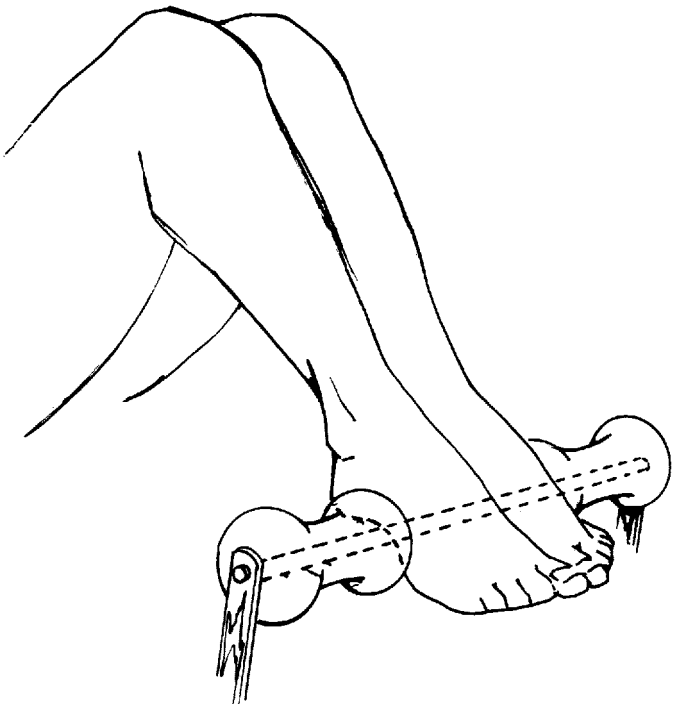
The leg rollers can also be used to create passive exercise in the knee and hip area. The degree of knee flexion the patient receives is correlated to the position of the leg rollers in the leg roller brackets. Determine how much flexion the patient can tolerate and set the leg rollers accordingly. Generally, position #2 is a good starting point. Increased flexion can be achieved during the treatment by having the patient move down toward the leg roller bar or by moving the bar to position #3 or #4.

Procedures for Passive Exercise

1. Position the patient so the full spinal area is in the opening of the table top. Spread the leg rollers apart and place the feet on the axle (preferably with shoes off).

2. Set the timer to approximately 7 to 10 minutes and the switch to the "on" (either cervical or lumbar) position.

3. Both sets of back rollers can be used, and the lower set of rollers will create a mild rocking of the sacrum.



PARTS DESCRIPTION

#102 Thoracic Harness- The patient's arms fit through the shoulder strap and the harness is buckled firmly below the floating ribs for lumbar traction. The harness is attached to the spreader bar #104 and web strap #105 which in turn is attached to the counter traction unit #113.

#103 Iliac Harness- This harness has two long straps which parallel the legs. It usually overlaps the thoracic harness #102 slightly so that the harness may be positioned just above the crest of the Ilium. The harness is attached to the spreader bar #104 and web strap #105 which in turn is attached to the traction control unit #120.

#104 Spreader Bar is attached to the web strap #105 which feeds into the "T" buckle assembly #129.

#104 & #105 Spreader Bar and Web Strap attach the harness to "T" buckle assembly #129.

#106 Head Halter is joined to the bow spring compensator #128 for the application of cervical traction.

#107 Two-Section Pillow can be used flat for most purposes or folded for kyphotic patients.

#108 Top Pad is used to cover the rollers when the filler block is removed.

#109 Ankle Harnesses (pair) clip into the "D" ring #110 for lumbar and total traction. A harness may be used singly around the arm or wrist for passive shoulder motion.

#110 "D" Ring Strap is used to attach the ankle harness #109 to the "T" buckle #129 of the traction unit.

#111 Filler Block converts the Anatomotor to a straight treatment table. The notch in the block allows the patient to breathe freely in a prone position.
Rubber Foot Pad protects the Anatomotor upholstery at the foot end of the table.

#112 Rubber Foot Pad protects the Anatomotor upholstery at the foot end of the table.

#113 Counter Traction Unit fits firmly into the counter traction bracket #125. It is used primarily at the head end of the table to counteract the pull during lumbar or total traction.

#114 Leg Rollers fit into any one of four slots on the leg roller brackets #123 of the Anatomotor. When not in use, this unit may be stored on the base plate #122.
#120 Traction Control Unit controls the amount of pull which is regulated through

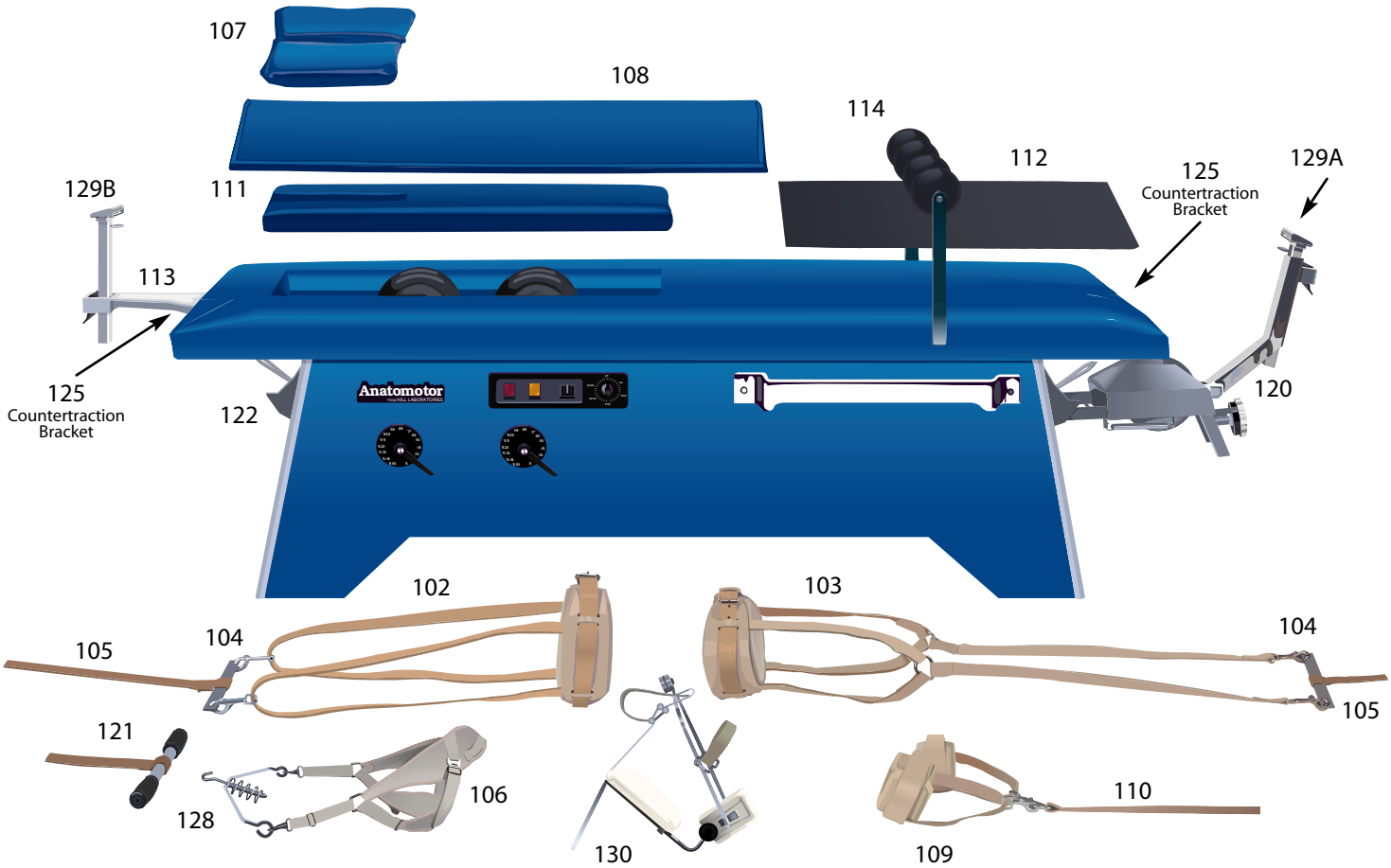
the calibrated hand dial. This unit fits into either the head or foot end base plate #122. The unit is inserted into the base plate while the base plate handle is held in the UP position and is secured by pushing the handle down once the traction unit is inserted. The angle of pull can be adjusted by raising or lowering the "T" buckle assembly #129B.

#121 Gripper Bar applies arm-shoulder traction. When not in use, the gripper bar may be stored on the base plate #122 at the head end.

#128 Compensator provides smoother cervical traction. The hook is placed through the eye bolt in the "T" buckle assembly #129A.

#129 "T" Buckle Assembly A & B- The "A" unit (which has an instruction label on the top buckle flap) fits into the traction unit #120. The "B" unit fits into the counter traction unit #113. The "T" assembly provides a means for attaching the traction harness and varying the angle of traction pull. The buckle is self-locking and will secure traction straps immediately upon release.

130 Cervical Traction Device provides cervical traction with no pressure on the chin. See section “Instructions for Hill Cervical Device”.

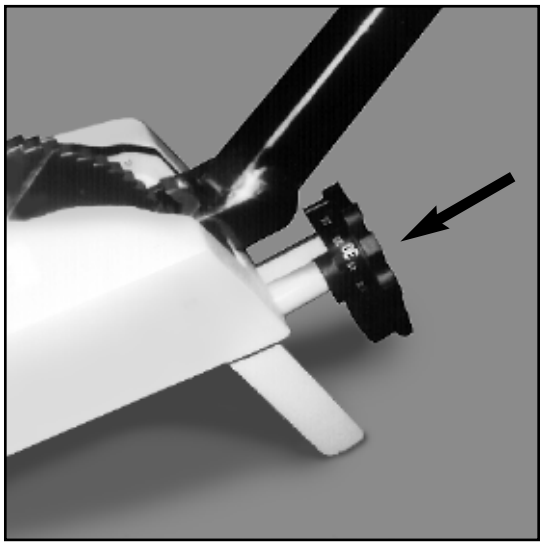


HOW THE TRACTION CONTROL UNIT WORKS

The Hill Anatomotor traction table provides both intermittent and constant traction. The traction control unit works on the principle of a friction disc brake. The harness is attached to the patient and secured to the "T" buckle assembly located in the traction control unit. Intermittent traction occurs through the reciprocating motion of the gliding top. The top moves against the controlled friction created by the traction control unit. Constant traction is administered by turning the cervical-lumbar switch off during the pull cycle of traction.

Regulating Traction Pull

To regulate tension, turn the calibrated hand dial clockwise. The top number of the dial corresponding to the pointer is the amount of traction being applied. Due to the return springs on each side of the traction unit, there is a built-in resistance factor of approximately 7 to 10 lbs. (3 to 4 kg.). Therefore, this is the minimum pull you will achieve.



The hand dial is self-locking to the position you select. As you dial to the high numbers, the hand dial will become slightly harder to turn, which also indicates increased pull is being applied.

BEFORE TREATING ANY PATIENT, IT IS MOST IMPORTANT TO TURN THE HAND DIAL ALL THE WAY COUNTER-CLOCKWISE UNTIL THE POINTER INDICATES 10 LBS. AS SHOWN IN THE DIAGRAM. THIS ASSURES THAT EACH PATIENT'S TREATMENT WILL START AT THE MINIMUM PULL.

The Effective Way to Determine Traction Pull

The most effective way to administer traction is to feel by hand the joint or spinal area to which traction is being applied. While palpating the area, the operator can easily feel joint separation or muscle structure. After determining the desired pull for each individual patient, the dialed number can be recorded and used as a reference point for subsequent treatments.

REDUCED TREATMENT TIME WITH BACK ROLLERS

To achieve good results during traction, it is important to have the patient physically and mentally relaxed. Therefore, the combination of back rollers during traction offers many benefits and advantages including the reduction of treatment time to approximately 7 to 10 minutes.

SOME VARIABLE FACTORS TO CONSIDER WHEN USING TRACTION

1. Patient weight and muscle structure will alter the amount of pull required.
2. Back rollers relax muscles and reduce the need for the traction to overcome much of the muscle tautness.
3. The back rollers will decrease the amount of friction of the body weight on the surface of the table top. Therefore, when the back rollers are used in conjunction with traction, less poundage is required.
4. Back rollers can create a pelvic tilt or lumbar flexion when using lumbar traction.
5. Various traction angles and the position of the patient (such as placing legs on t a stool for lumbar traction) will often change the amount of traction required.

INTERMITTENT TRACTION VERSUS CONSTANT TRACTION

It is important to determine when to use intermittent traction versus constant traction. Because intermittent traction increases circulation, it will often aggravate an acute condition. Therefore, if traction is desired for an acute patient, most doctors recommend that constant traction be applied. The first treatment should be of short duration and low poundage.
Additional literature regarding traction is supplied with the Anatomotor.

PREPARING THE ANATOMOTOR FOR TRACTION

Prior to administering any form of traction, the following steps must be followed.
1. Set the Timer to "OFF" and push the Cervical-Lumbar Switch in the opposite direction of the desired placement of the Traction Control Unit (i.e. if the the traction unit is being placed at the lumbar end of the table, then the Cervical-Lumbar Switch should be set on CERVICAL). The table top will then automatically stop at the opposite end to allow for the placement of the traction unit in the base plate.

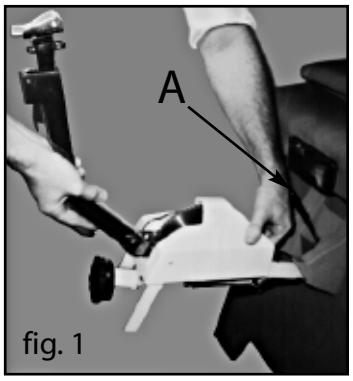


fig. 1

2. By pushing up on the lever (see "A" fig. 1) the Traction Control Unit can now be pushed squarely into the Base Plate. There is no need to push down on the lever lock because it is self-locking.
Ensure that the Hand Dial is set at a minimum weight.

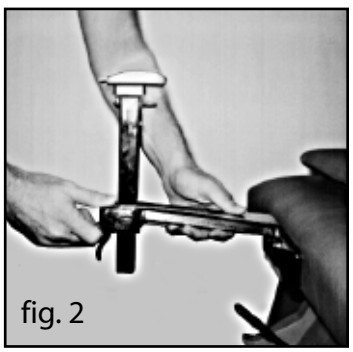


fig. 2

3. With the Timer still in the OFF position, set the Cervical-Lumbar Switch to correspond with the traction unit's present position. The top will then move and stop next to the traction unit.

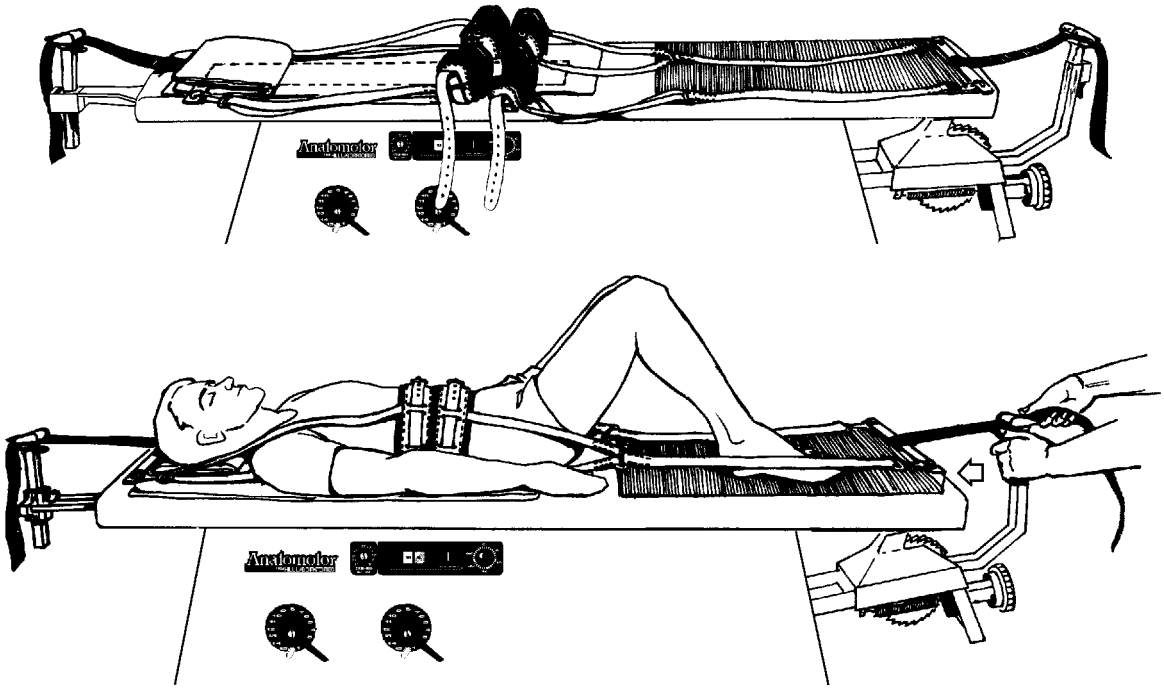
4. If countertraction is needed (consult following Traction Treatment Section) then insert the Countertraction Unit

into the Countertraction Bracket as shown in fig. 2. The Countertraction Unit and the Traction Control Unit should never be positioned at the same end of the table of the same time.
- See next section for specific instructions on how to apply the various types of traction-

TRACTION TREATMENT SECTION

LUMBAR TRACTION (applied with Thoracic and Iliac Harnesses)

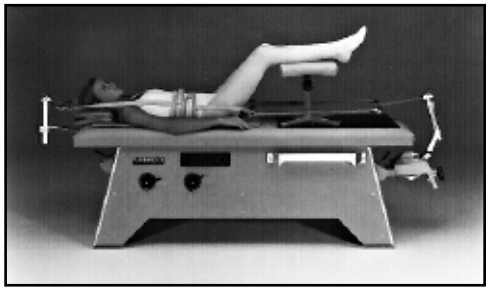
When using the thoracic and iliac harnesses, traction is being applied primarily to the 4th and 5th lumbar area. As you dial to the higher weight, you can determine the amount of pull required by checking the area to which you are applying traction. This is done by rocking the patient's knees, which are flexed, to one side so that you may feel by hand the lumbar spine. During the pull cycle, you can determine how much weight is required to create a mild separation of the lumbar spine. The average poundage used is approximately 1/2 the body weight. This will vary according to muscle structure and distribution of body weight.



Applying Harnesses

1. Follow steps 1 to 4 under section "PREPARING THE ANATOMOTOR FOR TRACTION." The “T” Buckle (#129A) should be lowered all the way down in the traction unit.

2. Place the harnesses on the table as illustrated.



3. Position the patient on the table so the base of the sacrum is approximately 5 in. (13 cm) above the lower cut-out section of the table top. Place arms through looped straps and attach the thoracic harness below the lower rib cage. The iliac harness generally overlaps the thoracic harness (up to the bottom of the belt). It is secured very firmly above the crest of the ilium.

4. Secure the web strap through the counter traction buckle assembly at the head end. Tighten the web strap at the foot end by pushing the traction control arm forward 3 to 4 in. (7 to 8 cm) and feeding the web strap through the buckle assembly. It is not necessary to push down on the flap of the buckle as it is self-locking.

5. The patient's legs should be flexed to flatten the lumbar curve. Use of a flexion stool is often more desirable for reducing the lumbar curve.

6. Make certain the traction control unit is dialed to the minimum weight. With the switch in the lumbar position, set the timer to the desired time (approximately 7 to 10 min.). The table will start instantly.

7. If not contraindicated, the rollers should now be set into position. They are very effective for relaxing muscles and creating flexion of the lumbar spine during the traction pull cycle. The rollers should not be used when constant traction is desired.

8. To set poundage, dial the poundage gauge during the rest cycle. The top returning toward the traction arm is referred to as the rest cycle. The top moving away from the traction arm is referred to as the pull cycle.

9. Traction should be applied gradually during the first several rest cycles of the reciprocating top. The amount of pull that is required on the patient can now be determined as previously described. At no time should the traction control unit be set to the full poundage desired in the first pull cycle.

10. When the timer rings, the table will stop out of the traction pull cycle.

11. When constant traction is required and after the desired amount of pull has been determined, place the switch to the "off" position when the table top has moved approximately 3/4 of the way during the pull cycle. The timer can be set for the desired constant pull time. When the timer rings, press the switch to "lumbar". The top will then return to the relaxed traction position.

12. At the end of the traction treatment, turn the traction dial to the minimum weight and lower the rollers. Release the web straps from both buckle assemblies and remove the harnesses from the patient.

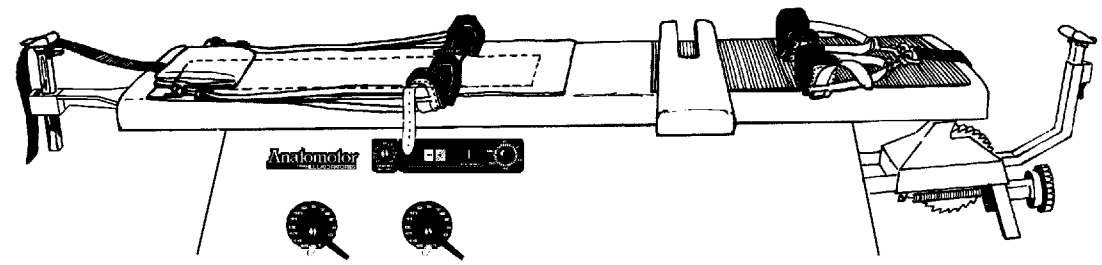
13. In order for the patients muscle structure to readjust, it is recommended that he rest on the Anatomotor for 1 to 2 minutes. Walking slowly will also help balance the muscle structure.

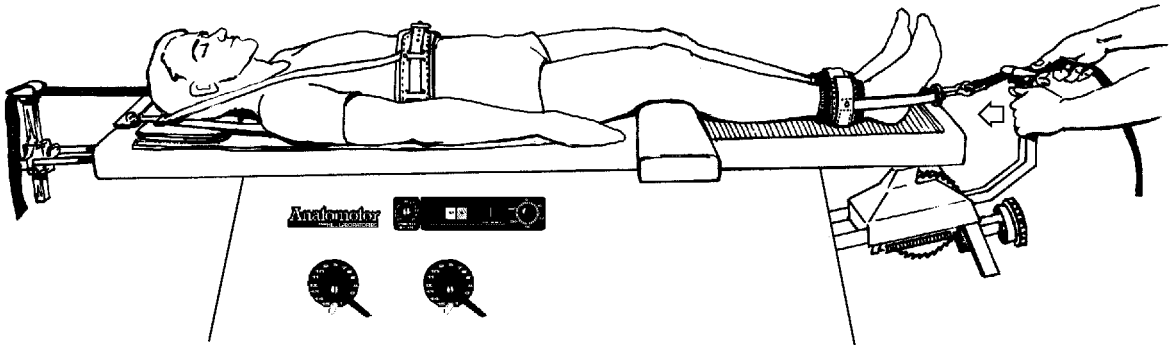
UNILATERAL LUMBAR TRACTION

To apply unilateral traction with the iliac harness, replace the iliac spreader bar with the "D" ring strap. The "D" ring strap can be attached to either side of the harness in order to create pull on just one side of the pelvic region. Start with low poundage and work up to desired level of pull.

LUMBAR TRACTION (applied with ankle harnesses)

The ankle harnesses are also used for lumbar traction. They are designed to apply traction to the lumbar spine as well as the full group of lumbar muscles. Doctors often recommend this type of traction for the patient and with sciatica when pull is desired on just one leg. Traction to the knee and hip area can also be achieved. Approximately 1/4 of the body weight is required with both legs in traction; 1/8 of the body weight with single leg traction. The recommended treatment time is 7 to 10 minutes.



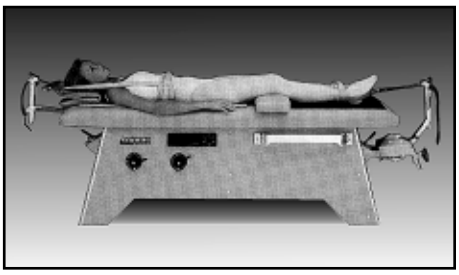


Applying Traction

1. Follow steps 1 to 4 under the section "PREPARING THE ANATOMOTOR FOR TRACTION".

2. Place the harnesses on the table as illustrated.

3.Position the patient on the table so that the base of the sacrum is 5 in. (13 cm) above the lower cut-out section of the table top. Place the arms through the looped straps and attach the thoracic harness below the rib cage. Fasten the ankle harnesses, making certain the velcro is pressed firmly together. (To increase patient comfort or, for patients with smaller ankles, insert the foam pads that came with your table into the ankle harnesses).



4.Adjust the T-Buckle to the lowest height at the head end and then secure the web strap through the buckle assembly. Tighten the web strap at the foot end by pushing the traction control arm forward 3 to 4 in. (7 to 8 cm., see arrow on last illustration) and feeding the web strap through the buckle assembly.

5. To eliminate direct pull on the knees, place the filler block under the knees as illustrated. Increasing the knee flexion with additional pillows will change the angle of pull and, thus, increase the traction pull even if the calibrated dial has not been increased.

6. Make certain the traction control unit is dialed to the minimum weight. With the switch in lumbar position, set the timer to the desired time (approximately 7 to 10 min.). The table will start instantly.

7. If not contraindicated, the back rollers should now be set into position. When constant traction is desired, the back rollers should not be used.

8. To set the poundage, dial the gauge during the rest cycle. The top returning toward the traction arm is referred to as the rest cycle. The top moving away from the traction arm is referred to as the pull cycle.

9. Traction should be applied gradually during several rest cycle s of the reciprocating top, and desired pull should be checked by palpating the area which is being tractioned.

10. When the timer rings, the table will stop out of the traction pull cycle.

11. To administer constant traction, determine the desired amount of pull and place the switch to the "off" position when the table top has moved approximately 3/4 of the way during the pull cycle. The timer can now be set for desired constant pull time. When the timer rings, press the switch to "lumbar". The top will then return to the relaxed traction position.

12. At the end of the traction treatment, turn the traction dial to the minimum weight and lower the rollers. Release the web straps from both buckle assemblies, and remove the harnesses from the patient.

13. In order for the muscle structure to readjust, it is recommended the patient rest on the Anatomotor for 1 to 2 minutes. Walking slowly will also help balance the muscle structure.

SINGLE LEG TRACTION

Single leg traction is often administered when treating sciatica. Although the pull is commonly administered to the short, painful leg, such treatment is not always the rule. Careful diagnosis of x-rays, muscle testing, etc. should be your guide.

1. Apply both ankle harnesses, as in bilateral traction, and determine the amount of pull that is required for the patient (usually 1/4 of the body weight).

2. After 1 to 2 minutes of bilateral traction, decrease the traction pull to approximately 1/8 of the body weight.

3. Switch to single leg traction by holding the traction arm while it is returning to the rest cycle. Remove the spring clip on the ankle harness from the "D" ring strap releasing traction from the one leg.

4. Prior to the end of the treatment, we usually recommend switching back to bilateral traction for approximately 1 to 2 minutes. This will help equalize the muscle structure.

DIRECT KNEE TRACTION

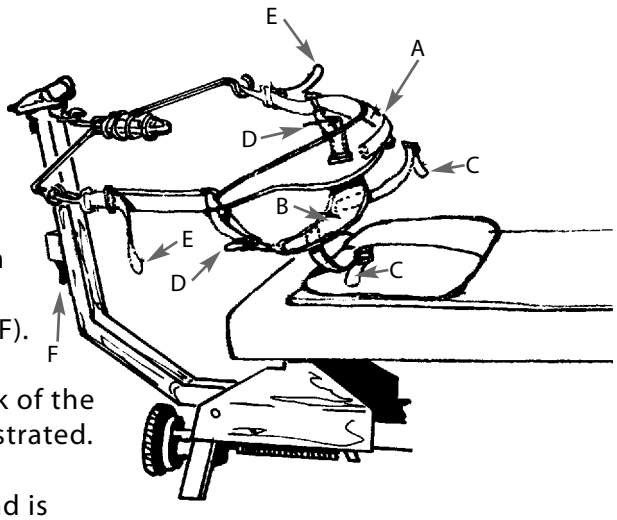
To achieve direct pull to the knee area, remove the filler block. Mobilization techniques can be performed under constant traction.

CERVICAL TRACTION

When applying cervical traction, the angle of pull can be regulated by raising and lowering the "T" buckle assembly to the highest point. (Most cervical traction is performed in this manner.) To administer hyperextension to the cervical area, the "T" buckle assembly can be lowered and a cervical pillow or small roll can be placed under the neck. (This type of traction will create more pressure on the chin area.) Recommended traction weight: 10 to 30 lbs. (4.5 to 13.6 kg.). Treatment time: 7 to 10 min.

APPLYING HEAD HALTER

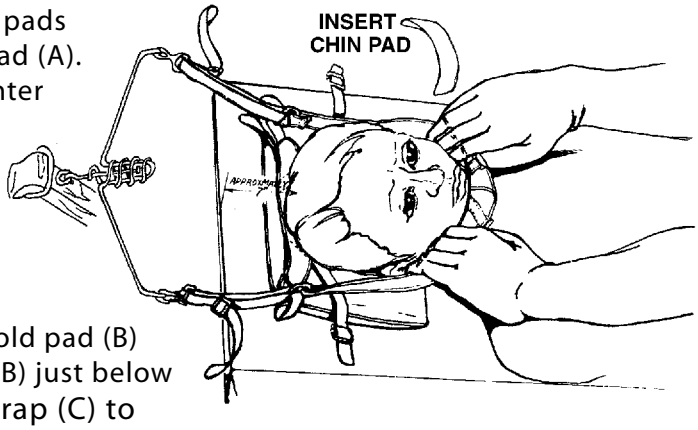
1. Follow steps 1 to 4 under "PREPARING THE ANATOMOTOR FOR TRACTION". Make certain the hand dial on the traction unit is set to the minimum amount.



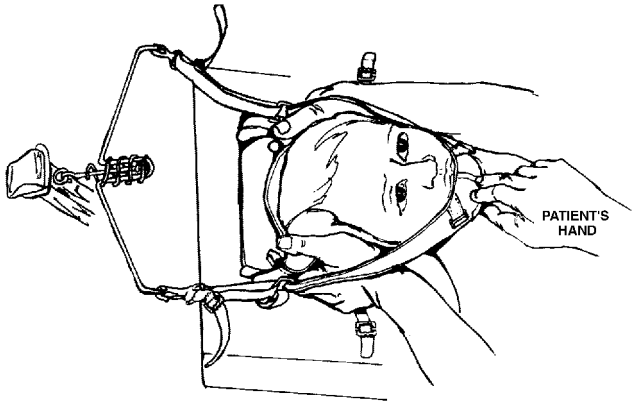
2.Pull out on the Traction Adjustment Handle (F) and raise or lower the "T" buckle assembly in the traction arm according to the desired angle of pull and then release the self-locking handle (F).

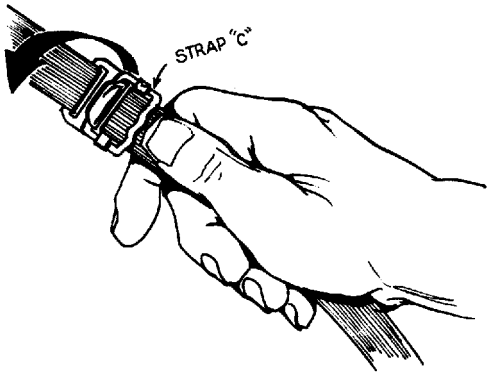
3. With the head halter attached, place the hook of the compensator down through the eye bolt as illustrated.

4. Position the patient so that the top of his head is approximately 7 in. (18 cm) down from the dead end of the table top. Cover one of the white foam pads with facial tissue and insert it in the chin pad (A). Place pad (A) on the patient's chin and center the seam of the head halter in the middle of the chin. The velcro closure can be adjusted to contour the chin. Have the patient hold pad (A) in place while proceeding to step 5.

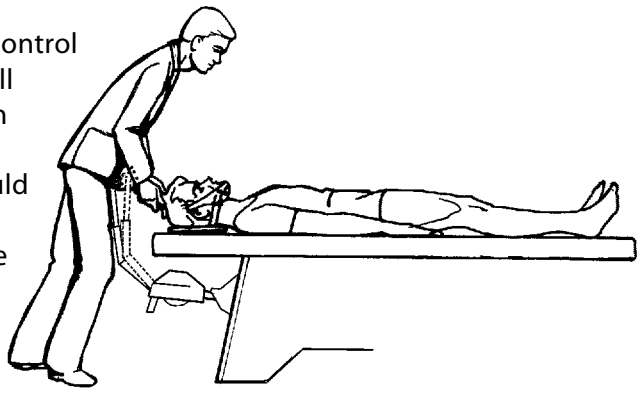


5. Place the tissue over occipital pad (B). Hold pad (B) where the two straps (C) join it. Place pad (B) just below the occiput and hook the slide buckle of strap (C) to the clip on pad (A). Tighten firmly by pulling straps (C) equally.

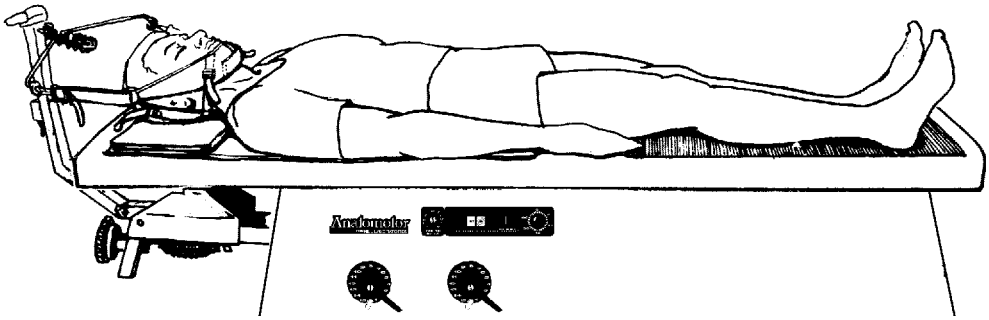




6. Stand, as illustrated, pushing up on the traction control arm about 1/2 the distance to the table top. This will place slack in the head halter straps. Equally tighten both occipital straps (D) as much as possible by pulling the straps toward you. The head halter should now have slack in the chin strap (A) and tension on the occipital strap (D). This important step takes the pressure off the chin and transfers it to the occiput.

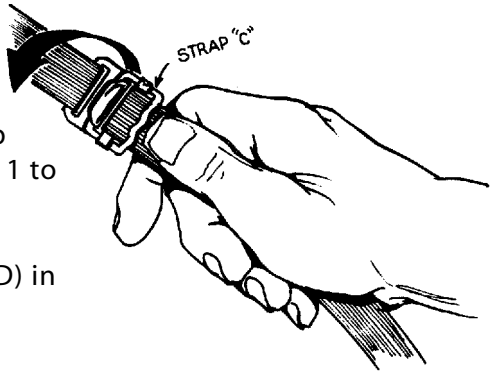


7. Allow the traction control unit arm to move back to the normal position. If the straps have been adjusted equally, the bow spring should appear parallel to the table top. The patient should feel a slight tension of the head halter. If any sagging of the bow spring occurs, tighten adjusting straps (E). Traction should now appear as illustrated.



8. Make certain the switch is in the "cervical" position and the traction control dial is set to the minimum (as far counter-clockwise as possible). The table will start when the timer is set. Note: Supporting the head with the folded pillow will avoid sudden lifting or jerking of the head during traction.

9. Increase traction pull to the desired amount. Position the upper set of back rollers to relax the muscles and provide rolling traction to the affected area.



10. When the traction time is terminated, unhook strap (C) as illustrated. Allow the patient to rest on the table 1 to 2 minutes after the treatment.

11. After the head halter is removed, lengthen straps (D) in order to prepare the halter for the next patient.

SUGGESTED TREATMENT VARIATIONS

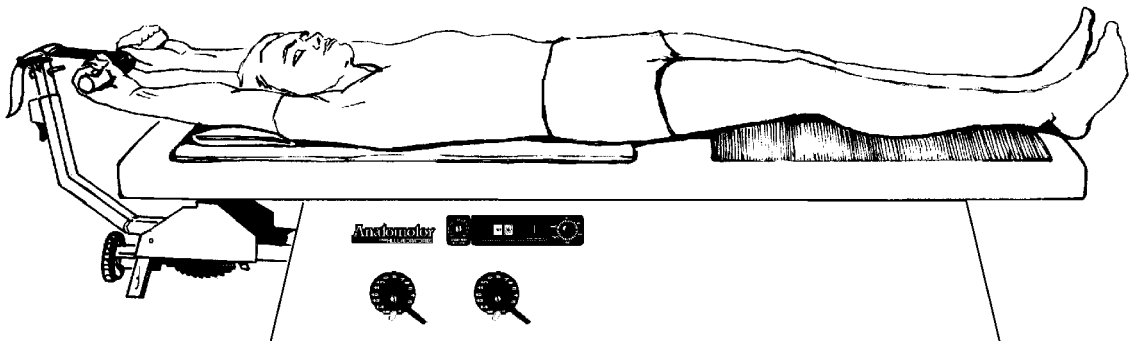
1. Constant traction may be obtained by stopping g the table top at the extreme end of the traction pull (foot end). Mobilization or manipulation techniques can also be performed.

2. If desiring an improvement of rotary motion, the patient can easily rotate his head to the right or left during the traction pull cycle.

3. When more traction pull is desired on one side of the neck (i.e. torticollis), tighten strap (D) on just one side of the head halter. The bow spring will appear slanted.

ARM-SHOULDER-THORACIC TRACTION

The gripper Bar is used to administer traction to the upper dorsal area. The one set of back rollers (usually lower set) can be used in conjunction with this type of traction to treat the area between the scapulae. The rollers will aid in the expansion of the rib cage and will help respiration. Traction weight: approximately 1/4 body weight. Treatment time: 7 to 10 minutes.



BILATERAL DORSAL PULL

1. Follow steps 1 to 4 under section "PREPARING THE ANATOMOTOR FOR TRACTION".

2. Raise and secure the "T" buckle assembly in the traction unit (middle to upper position is advisable for patient comfort). Insert the web strap of the gripper bar through the buckle assembly.

3. Position the patient so that his arms are fully extended when grasping the gripper bar (see illustration).

4. The switch should be in the "cervical" position and the traction weight set at the minimum. Set the timer to start treatment.

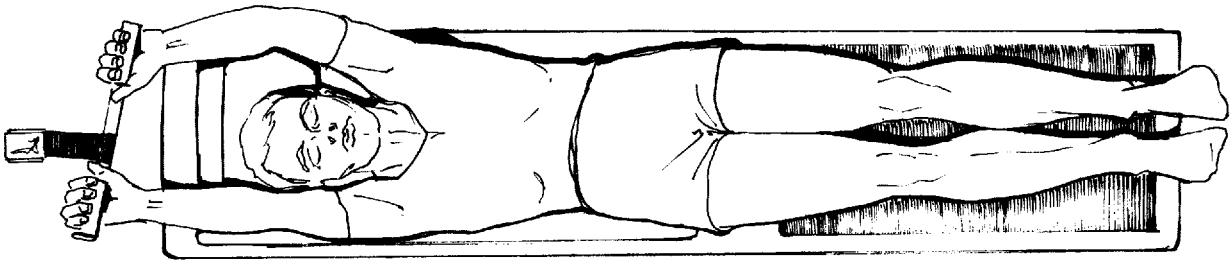
5. The lumbar rollers should now be raised to treat the thoracic area. (note: this is due to the fact that the patient is positioned further down on the table top.)

6. Gradually dial the traction weight according to the patient's needs.

7. To aid respiration, have the patient inhale during the traction pull cycle. As the rollers are moving to the dorsal area, they will help expand the chest area. Have the patient exhale during the traction rest cycle as the rollers are moving to the lumbar area.

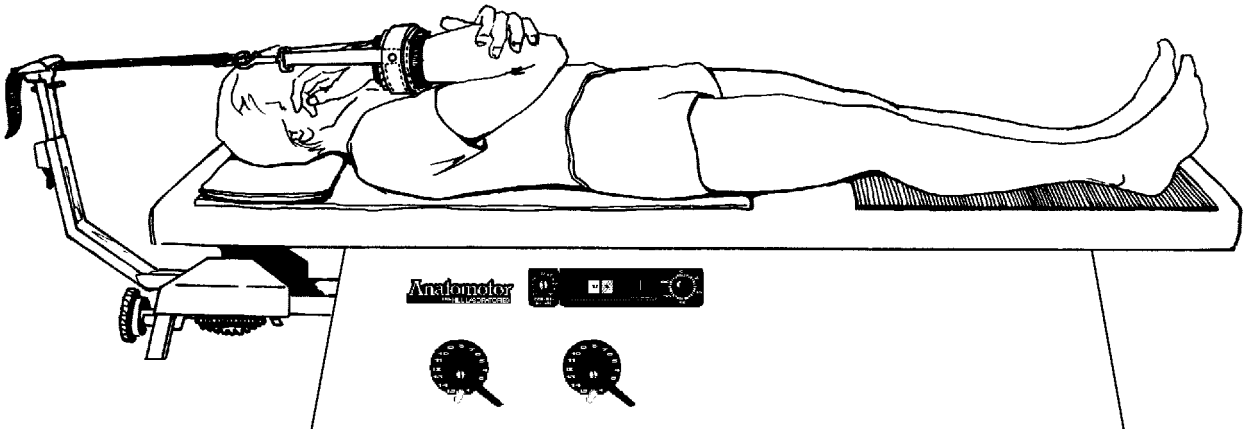
UNILATERAL DORSAL TRACTION

Unilateral dorsal traction can be very beneficial to help counteract the curve of scoliosis. Follow the same procedure as previously described. Turn the traction weight down slightly and slide the gripper bar strap to one side (the concave side).



PASSIVE SHOULDER MOTION

Passive shoulder exercise can be applied to help increase the range of motion. The ankle harness (one cuff only) is fastened around the wrist. As the table top reciprocates, The patient's arm will elevate. The amount of elevation will be determined by the length of the D-ring strap through the "T" buckle assembly. To achieve extension of the elbow-shoulder area, the traction unit can be placed at the foot end and traction applied in a downward motion.



APPLYING PASSIVE SHOULDER MOTION

1. Position the table top at the cervical end. Fasten one of the ankle cuffs to the wrist.

2. Place the D-ring strap through the "T" buckle assembly approximately 1 inch.

3. Have the patient rest the opposite hand on the bent elbow that is being exercised.

4. Set the timer to start the table. As the patient is moving back and forth, shorten the strap slowly through the "T" buckle assembly to the point of the patient's tolerance.

5. Note that the traction control unit arm should not move as the table top is reciprocating. The opposite hand in step #3 should offer enough weight to the bent elbow to push it down during the rest cycle, but not enough weight to activate the traction control unit arm. To further increase the range of motion, the D-ring strap can be shortened periodically during the treatment time. the patient will receive approximately 80 passive exercise movement in a 10 minute treatment.

Suggested Techniques for Passive Shoulder Motion

1. The velcro cuff can be fastened to the biceps to abduct the arm.

2. The patient's arm can be moved across his chest if a different direction of movement is desired.

3. Muscle stimulation can be used simultaneously to help relax and reduce pain in the shoulder area. This will usually aid in achieving an even greater range of motion.

TOTAL TRACTION

Total traction offers the combination of cervical and lumbar traction. Though it is used infrequently, it is an alternate method to the traction previously discussed. This type of traction administers an overall mild stretching action rather than a specific pull in a designated area.

Applying Traction

1. Prepare the table for ankle-lumbar traction. The traction control unit is at the foot end, and the counter traction unit is at the head end.

2. Elevate the "T" buckle assembly in the counter traction unit. In place of the thoracic harness, substitute the cervical head halter with the compensator to counteract the traction pull.

3. Fasten the ankle harnesses as previously described.

4. Gradually dial the traction control unit to the desired poundage (approximately 1/4 the body weight). The patient will experience approximately 2/3 of this pull in the lumbar area and 1/3 in the cervical region.

5. Back rollers can also be used in combination with the above traction.

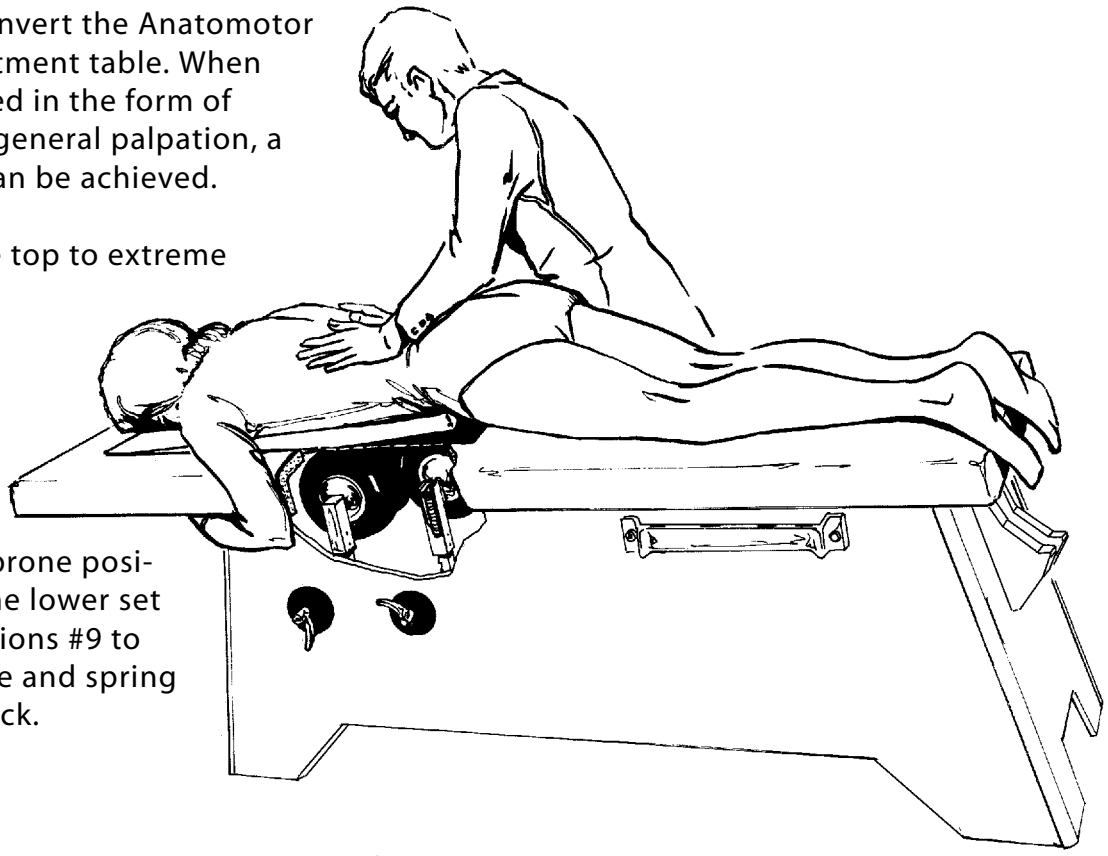
SPRING LOADED TABLE TOP

You can easily convert the Anatomotor to a straight treatment table. When pressure is exerted in the form of manipulation or general palpation, a resilient action can be achieved.

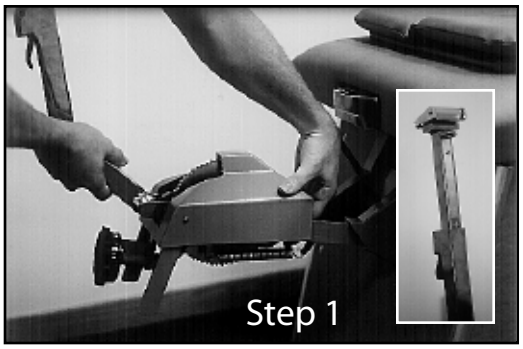
1. Move the table top to extreme left position.

2. Place the filler block into the table top.

3. Once the patient is in the prone position, raise only the lower set of rollers to positions #9 to #12. This will raise and spring load the filler block.

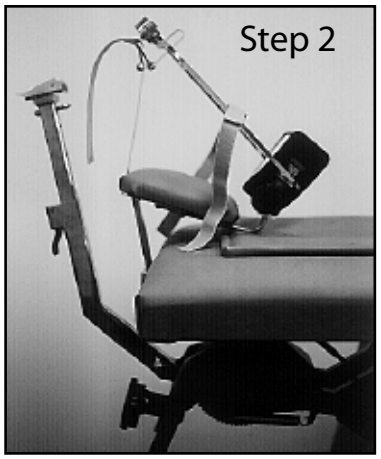


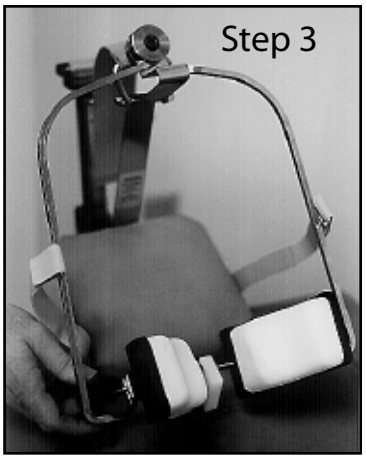
APPLYING TRACTION WITH THE HILL CERVICAL DEVICE



Step 1. Glide table top to the lumbar position. While holding the base plate handle up with the back of your hand (see photo), insert traction control unit into base plate at the head end of the table. Raise T-buckle assembly to the #4 position. (see caption).

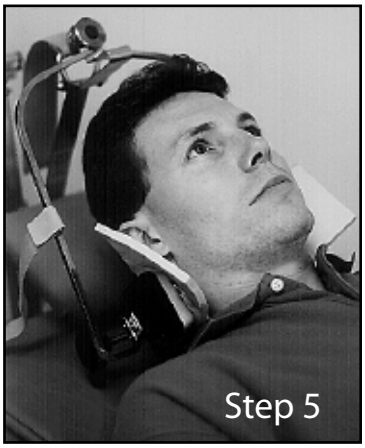
Step 2. Glide table top to cervical position and insert your Hill Cervical Device all the way into the bracket at the head end of the table. Do not attach the web strap in the buckle assembly at this time.



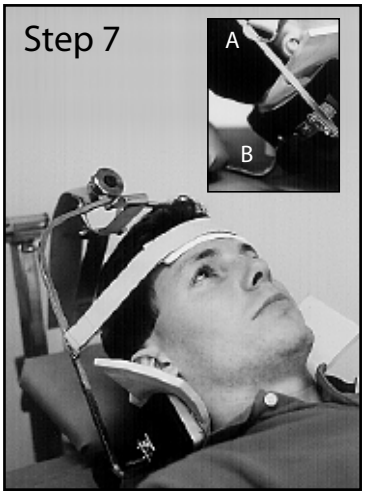


Step 3. Turn tension handle counter-clockwise to separate the two occipital cradle supports just enough to allow patient's occipital region to rest easily within the supports. (Cradle support pads separate at a ratio of 1/16 of an inch per one handle turn so several turns may be necessary.)

Step 4. Cover rectangular sponge insert with tissue and place it on upper edge of occipital cradle supports.

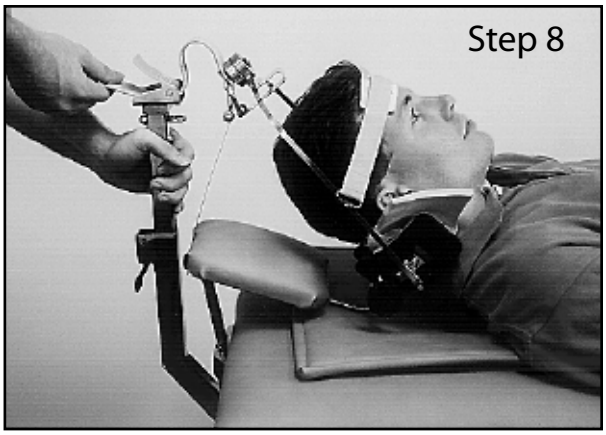


Step 5. Earrings should be removed and hair pinned up prior to positioning patient. While holding sponge insert in place, push the neck pads and 'tongs' ("A" Step 4) away from you, (towards the foot end of the table) so that the L bracket (shown as "B" in Step 7) is extended away from the head cushion. Position your patient in the Hill Cervical Device with the occipital area resting comfortably on the insert. Make certain that the pad cradles the head just under the occipital skull area and does not push on cervical area or surrounding tissue.



Step 6. Adjust tension handle clockwise in order to apply a slight inward pressure on occipital region. Pressure should be sufficient to

prevent any significant upward sliding of the occipital pads during the traction pull. Question the patient to make sure they feel a firm but comfortable inward pressure. Note: As you increase traction poundage, you may need to increase inward pressure to prevent possible slipping of the pads.



Step 7. Fold a tissue in half and place it on your patient's forehead. Secure velcro head strap over tissue so that only slight pressure is exerted. If your patient is a child or has a small head, the velcro strap may be taken out of the buckle (see A) and fastened around the rod just below the buckle to prevent the strap from slipping off the patient's forehead. Also make sure that the L-supporting bracket (see B) is an inch or two away from the head cushion. If not, have patient slide down slightly on the table until clearance is visible in bracket.

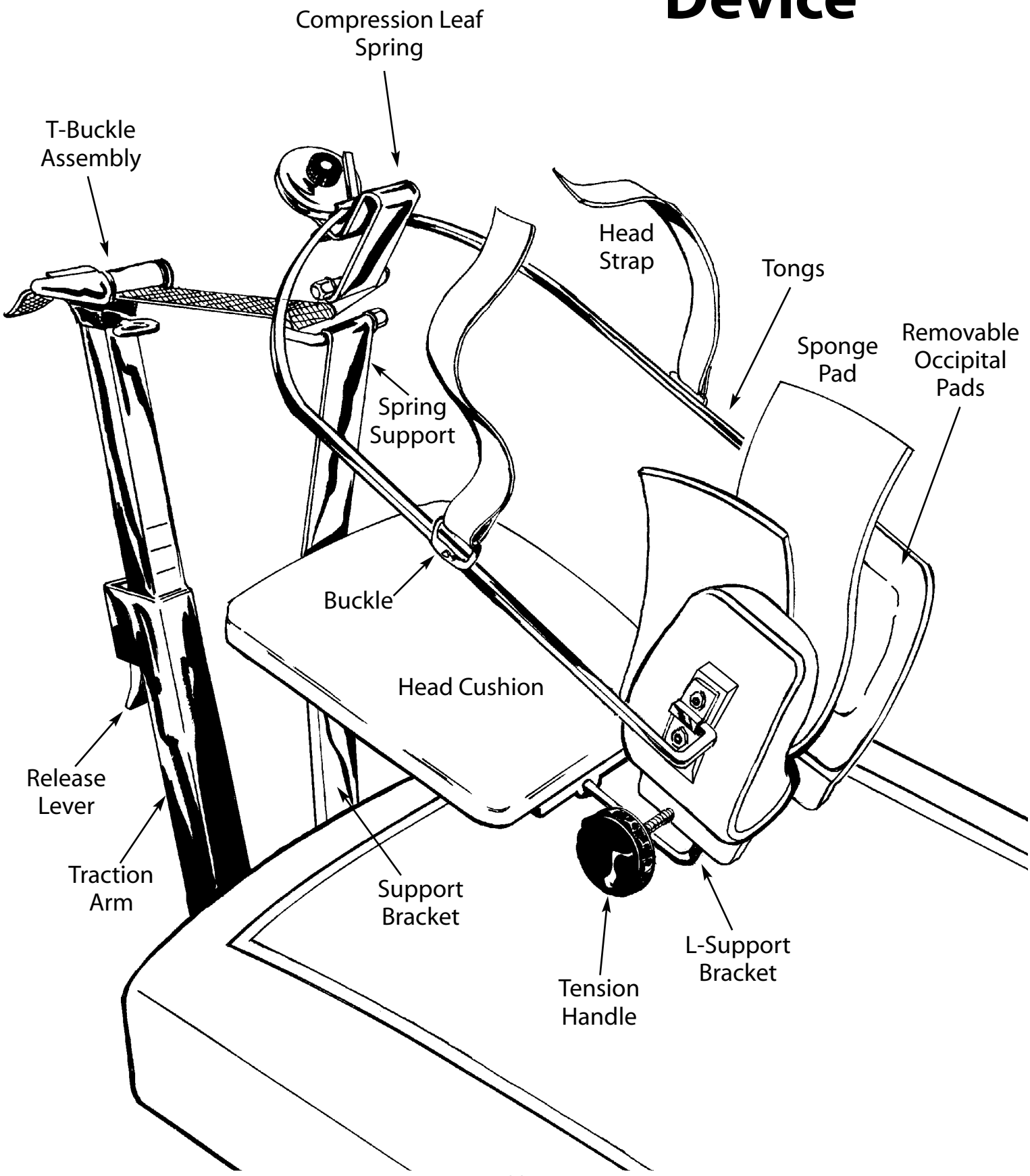
Step 8. Lift traction arm two or three inches towards the patient and attach the main strap through the T-buckle assembly. Dial traction control unit to zero poundage. Set time to start your table. Traction time is usually 7 to 10 minutes. Dial poundage to desired tension. Palpate the cervical region to determine if desired pull is being achieved. Again, to avoid slipping, tighten the occipital pads inward while dialing to a higher poundage.

Step 9. After treatment is finished, always detach the web strap from the T-buckle assembly and lower poundage dial to zero. Then release the head strap and open up the occipital cradle support to remove the patient from the Cervical Traction Device. Never run the table without a patient in the cervical traction device if the web strap is attached to the traction control unit. If you run the table without detaching the web strap after the patient is removed, you can do damage to your Cervical Device.

General Notes Concerning the Hill Cervical Device

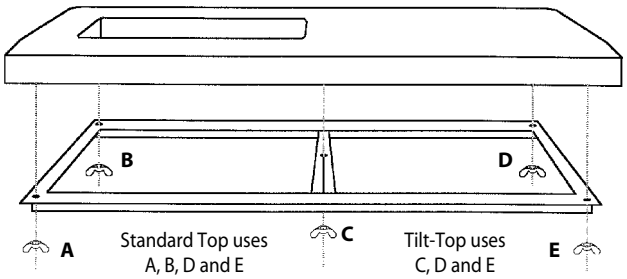
When the T-Buckle is raised to the #4 position as shown in the caption of step 1, this creates a leverage disadvantage for the traction unit. Therefore actual traction poundage should be calculated to approximately 2/3 of what the dial is set to. For example, with the traction dial set to 45 pounds, actual poundage is approximately 30 pounds. Average tension is usually between ten and thirty pounds; approximate treatment period is 7 to 10 minutes. Slowly increase poundage over future treatments; avoid applying heavy traction poundage at first. Upper back rollers can be used in conjunction with cervical traction. If the angle of pull is too severe, back rollers can be lowered and a filler block inserted. In addition, the unfolded pillow can be placed under the patient's shoulder area. This will raise the patient and flatten the angle of pull they are receiving.
This type of traction is extremely comfortable. It offers effective cervical traction without incurring the chin discomfort often caused by traditional cervical devices.
WARNING - Avoid using on patients with severe vascular insufficiencies. If lightheadedness or dizziness occurs after treatment, the occipital pads might be causing unnecessary pressure on the cervical area and surrounding tissue. In future treatments, patient should be repositioned so that pads grab just the occipital area.

Hill Cervical Device



Basic Care Instructions for the Hill Anatomotor

The Anatomotor is virtually maintenance free and should give you years of service with little or no upkeep. However, we have outlined some basic instructions to be performed once every few years in order to assure that your Anatomotor will continue to run smoothly.



1. Always unplug the table before any servicing, cleaning or maintenance.

2. Remove the top of the table. A regular top has four wing nuts directly under the ends of the each side (see drawing above "A,B,D,E). A tilt-top table has three wing nuts; two at the foot end (D and E in drawing) and one under the middle of the top, just inside the roller opening ("C").

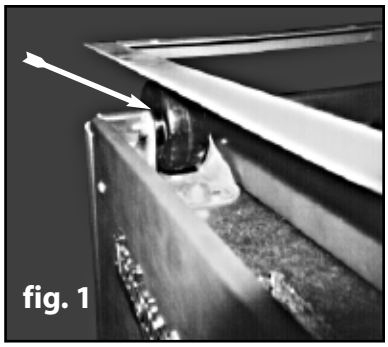


fig. 1

2. Every 2 to 3 years your Anatomotor should be oiled. With top removed, apply 2 or 3 drops of common household oil to each side of all of the six casters that the table top glides back and forth on (see fig. 1).

3. Remove the caps on either side of the motor (caps will be yellow or red, see 'A', fig. 2). Remove the caps with a screwdriver and then with your household oil, put approximately 5 drops into each side.

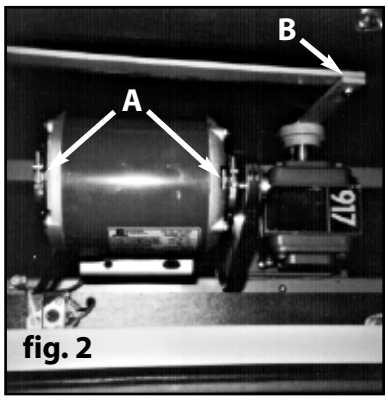


fig. 2

4. Apply 3 or 4 drops of oil to the Push-Rod Bushing (see 'B' fig. 2).

5. Also apply a few drops of oil to the axles of the Back Rollers (see fig. 3)

6. Vacuum the inside of your Anatomotor for any dirt and debris that may have accumulated.

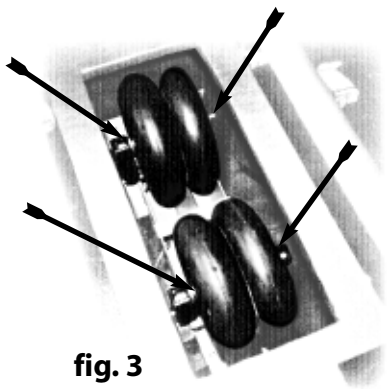
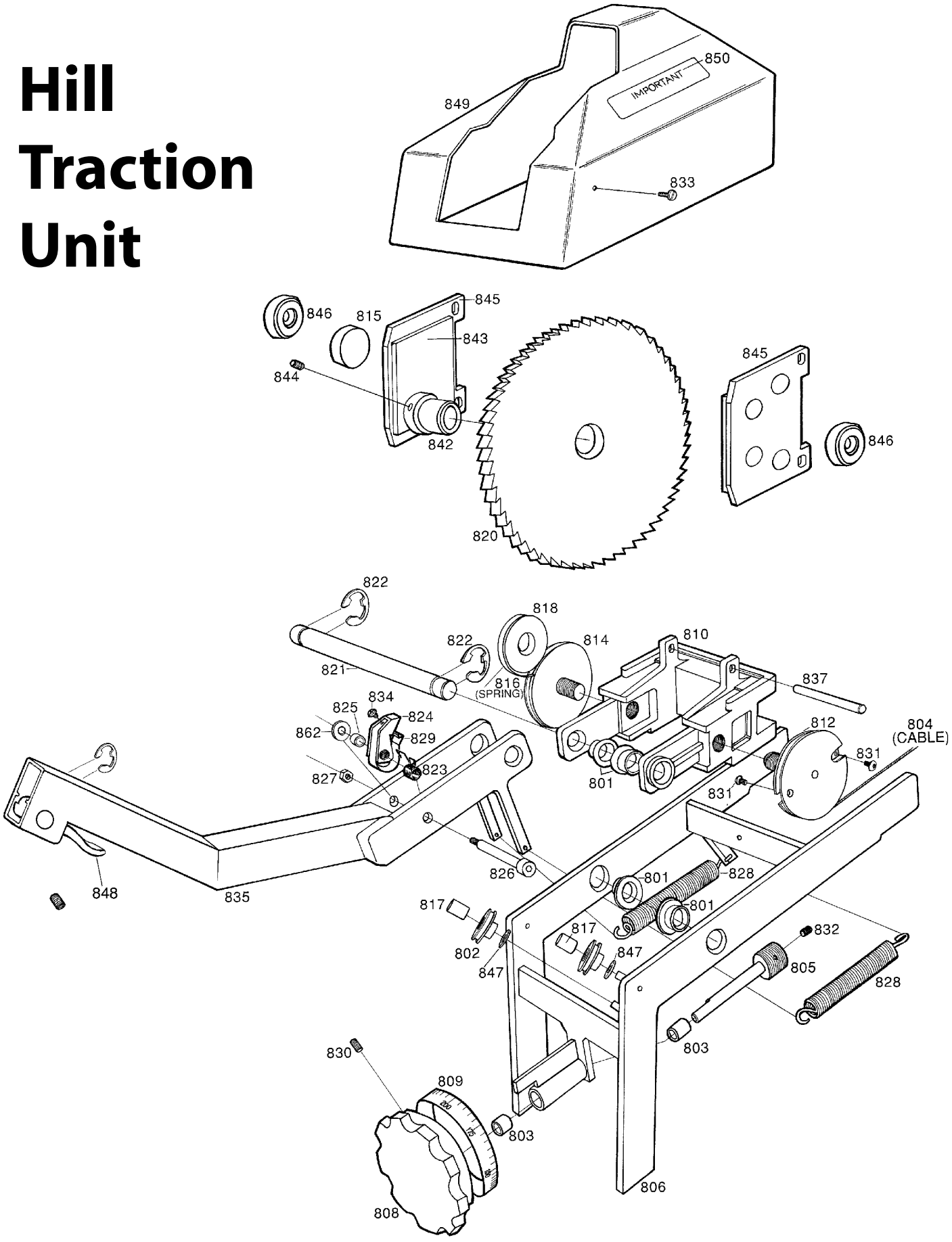


fig. 3

Warning!

Never apply oil to any part of the Hill Traction Device.

Hill Traction Unit



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