

# VECTRA<sup>®</sup>



## **VX-FT** (2 Stack) **Owner's Manual**

## Introduction

**W**e at Vectra Fitness appreciate your selection of our product for your fitness program, and invite your questions and comments. We're sure that you'll be pleased with your new Vectra Fitness gym. This owner's manual provides you with safety rules, assembly instructions and routine inspection and maintenance information to enable you to get the most from your gym. Please read through this manual carefully before you assemble and use your Vectra Fitness gym.

## Routine Inspection & Maintenance

Vectra Fitness gyms are designed to provide years of trouble-free service with minimal routine maintenance. You can be confident of continued top quality performance by carrying out the following periodic inspection.

### PERFORM THE FOLLOWING SAFETY CHECK DAILY:

**1.** Inspect cables, cable ends and nylon jacket very carefully. Refer to Warning Label for specific information on inspecting cables. This same information is repeated in this manual and on your exercise chart. **Replace any damaged or worn cables.** Annual cable replacement (semiannual in multi-user settings) is strongly recommended as an additional precaution. The rate at which cables wear depends on many factors including: repetitions, weight setting, misuse, abuse, etc. Because of this, periodic cable replacement is not a sufficient safeguard against unexpected breakage. Nothing short of a thorough, careful daily inspection constitutes an adequate safety program.

### PERFORM THE FOLLOWING CHECKS WEEKLY:

- 1.** Inspect frame and pulley bolts for tightness. Tighten if necessary.\*
- 2.** Inspect cable attachments (short and long single handles, double handles, lat or curl bars, multi-purpose bar, ankle strap, foot strap, triceps strap, sport handles such as racquet sports, golf, hockey or baseball, ab strap, functional training belt, etc.) carefully. Look for damaged mounting eyes, springs, latches, buckles, etc. Inspect the webbing for fraying and check that the stitching is intact and strong. Inspect all joints, fixed and pivoting. Make sure any bolts are tight and that all retaining rings are intact and in good condition. Inspect any bearings. Replace any damaged or worn items.
- 3.** Inspect weight selector pins for proper fit and retention in selector shafts. Replace any improperly functioning pin (or other stack components) with Vectra replacement parts only.
- 4.** Inspect pulley arm adjustment levers for proper function. Ensure that latch pins are engaging all positions fully. Replace improperly functioning parts with Vectra replacement parts only.
- 5.** Inspect pulley arm mounting screws (horizontal and vertical axes) for tightness. Tighten if necessary.\*
- 6.** Inspect all springs, including arm counter balance springs and arm latching springs to make sure they are in good condition and working properly. Replace any missing, damaged or worn springs with Vectra replacement parts only.
- 7.** Inspect bench bolts. Tighten if necessary.\* Inspect bench wheels, wheel suspension pivots, retaining rings, spring, and braking features for proper function. Replace any damaged or malfunctioning parts.
- 8.** Inspect cushion bolts for tightness. Tighten if necessary.\* Inspect cushion support structure, pivots and associated latches. Remedy any problems found using Vectra replacement parts only.
- 9.** Inspect all molded parts such as pulleys, nylon bushings and cable stops. Make sure all are intact, undamaged and secure. Replace any parts that are missing, worn or damaged.
- 10.** Inspect cable retaining plugs and spring plungers. Replace if needed using Vectra replacement parts only.
- 11.** Inspect pulley pivots, retainers, axles, bushings, attachment points, and rotation limiters. Remedy any problems found using Vectra replacement parts only.
- 12.** Inspect non-slip tread. Inspect rubber feet on frame and bench. Remedy any problems found using Vectra replacement parts only.
- 13.** Adjust cable system tension if necessary (see assembly instructions for details).

### PERFORM THE FOLLOWING CHECKS MONTHLY:

- 1.** Inspect all hand grips, pads, etc. Replace any damaged, worn, loose or missing parts.
- 2.** Inspect weight plates for cracks, damaged bushings, etc. Replace if necessary. Check bolt, tighten if necessary.\*
- 3.** Vectra's stainless steel guide rods **DO NOT REQUIRE LUBRICATION** or anti-rust treatment. Simply keep them free of grit, sticky or gummy sprays, etc.
- 4.** Apply grease to the following locations: counter balance levers at pivot and spring hole, side-to-side arm pivots.
- 5.** Clean upholstery with mild soap and water as desired.
- 6.** If unit is in a humid area, such as near a pool, hot tub or sauna, or in certain climates, use of an auto wax should delay rusting.

\* If any bolts seem to loosen periodically, use Loctite 242 for a long-term cure.

## Safety Rules



### WARNING

**Serious injury can occur if you are struck by falling weights or moving parts. The risk that you assume by using this type of equipment can be reduced by obeying a few simple rules:**

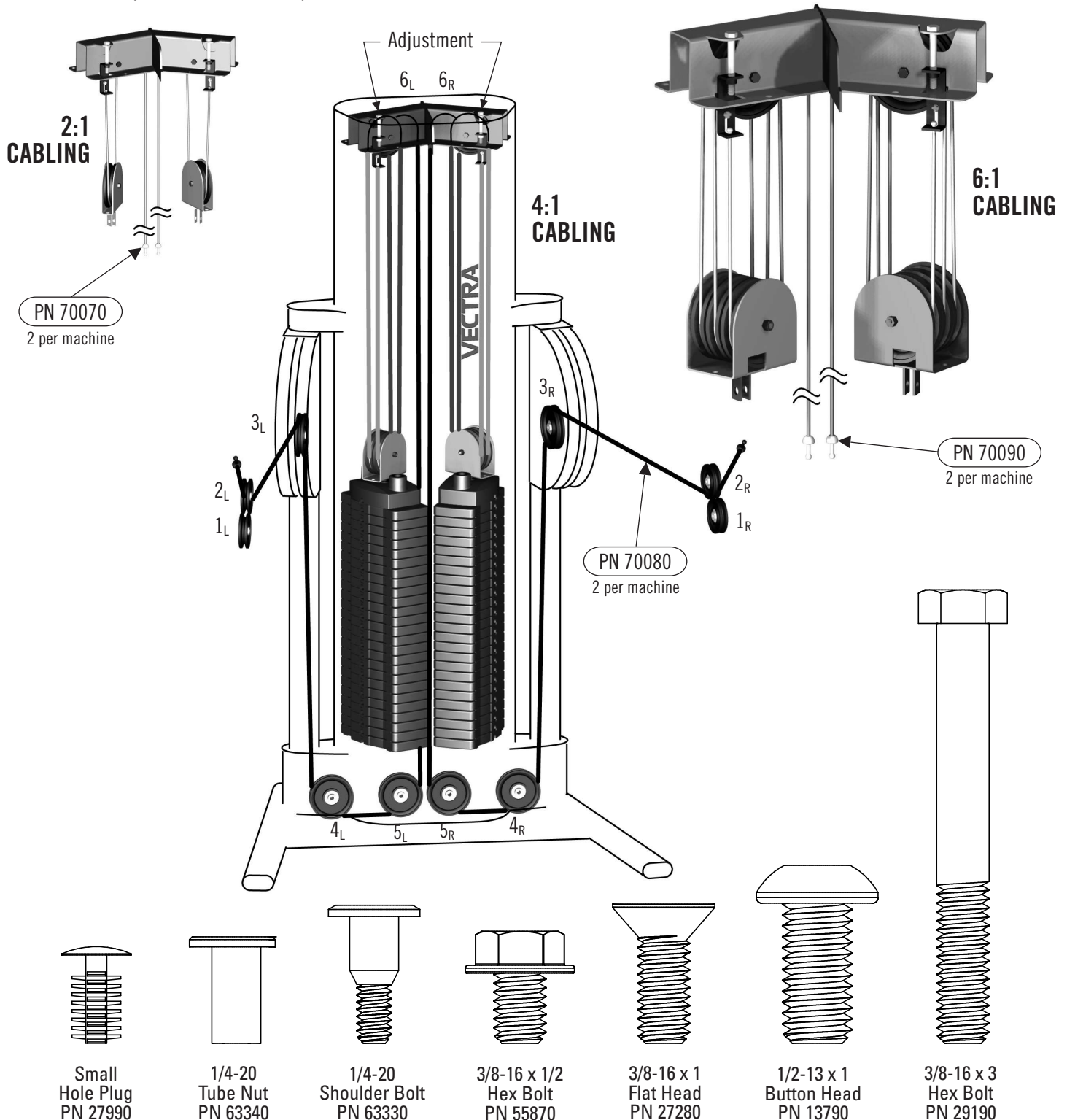
- 1. IMPORTANT:** Cables are a wear item. It is your responsibility to prevent unexpected breakage. To do this, inspect every cable daily. Pay particular attention to areas near fittings at each end of each cable. Access panels are provided, where necessary, for this purpose. Replace worn, frayed, or damaged cables immediately. The actual wire strands, the fittings, and the nylon jacket itself must all be scrutinized. Using or allowing a machine to be used with a suspect cable can result in serious injury.
- 2.** Inspect the nylon jacket of each cable carefully, again paying particular attention to the cable ends. This nylon jacket is essential for cable life and safety. Any cable should be replaced if the nylon jacket is missing, is damaged in any way, has pulled or shrunk away from the fittings at the end of the cable, or is discolored. **DISCOLORATION, DARKENING OR BULGING OF THE JACKET IS AN EARLY INDICATION OF INTERNAL PROBLEMS SUCH AS WEAR OR FRAYING.**
- 3.** Read and follow all instructions in your owner's manual, on your exercise chart, and on product warning labels. Additional copies are available from Vectra Fitness, Inc. or your dealer. Do not use this machine until you have taken the time to become completely familiar with its safe operation.
- 4.** Consult your physician before beginning your exercise program.
- 5.** Do not allow young children to use or play with or around this machine. Allow older children to use the machine only with adult supervision.
- 6.** Keep body, hair, and clothing clear of weights and moving parts at all times. Keep fingers clear of moving parts while making adjustments.
- 7.** Inspect the gym for loose or worn parts, damaged, frayed, or worn cables, broken weight plates, etc. Do not use or allow the machine to be used until any defective parts are repaired or replaced. Refer to the "Routine Inspection and Maintenance" section of your manual for specific inspection rules. Use only Vectra authorized replacement parts.
- 8.** Ensure that the weight selector pin is in good working condition and fully engaged in the selector shaft prior to lifting. Use only the Vectra supplied pin or a Vectra authorized replacement.
- 9.** Ensure that any locking mechanisms are properly engaged prior to lifting. Locking mechanisms secure the following in position during use: seat pads, accessory items such as squat attachments and lat hold downs, cable attachments, press arms, pulley arms, leg developers, etc. An improperly engaged locking mechanism could result in an injury.
- 10.** Obtain assistance to free jammed weight plates, pulleys, etc. Do not attempt to free jammed weight plates by yourself. Falling weight plates can cause serious injury. Do not pin the weight stack or top plate in an elevated position and do not use machine if found in this condition.
- 11.** Do not drop the weight plates. Lift only as much as you can control safely. Never use dumbbells or other means to incrementally increase the weight resistance. Use only those means provided by Vectra. Don't be careless, stay alert.
- 12.** Serious injury could result if equipment moves while in use. To prevent this, ensure that the floor is even, strong, and not too slippery. If equipment slides too easily on floor, place equipment on rubber matting. Errors in lifting form could also result in bench moving in use. To prevent this, lift weight vertically only and do not push horizontally with your feet while lifting.
- 13.** Prior to use, ensure machine is fully assembled in a Vectra Fitness authorized configuration per owner's manual.

Replace any warning or caution labels on product if damaged, illegible, or removed.

- 1.** Exercise in front of machine only. Pulling cables to side or rear of machine is dangerous, as machine could tip in use.
- 2.** Do not release cable attachments without first returning them to rest position. Doing so could lead to serious injury of yourself or bystanders.
- 3.** Do not make arm position adjustments without first returning all exercise stations to their rest positions. Support weight of arm while adjusting.

# Vectra® VX-FT (2 Stack) Cable Diagrams

**Note: Keep the Cable Routing Tubes for use when the cable needs replacing.** CABLE REPLACEMENT PROCEDURE: Replace the two cables one at a time. To begin, pick a side and attach a cable routing tube to the cable end where it emerges between pulley 1 and 2. Secure it with tape (see other side, FIG. 3). Remove pulley 1 and the outermost Upper Pivot Cover G (refer to Fig. 4). Reach into the top of the column and pull up on the cable on the same side above where it emerges from a large hole in the base, drawing the tube into the arm. Make sure that the other end of the cable routing tube does not get past pulley 3. Secure that end of the tube near pulley 3 (put it through a hole in the metal to hold it, see Fig. 6). Once the tube gets to the top of the column, disconnect it from the cable and secure it to the column by putting it in a slot in the metal (see Fig. 7). Undo the three bolts holding the Upper Pulley Assembly (F) into the top of the column and lift it out along with the Top Plate Pulleys (E) (See Fig. 2). Lay this cable system on the floor and pull out cable from the free end to get the pulleys close to each other. Remove the other end of the cable from the adjustment bracket by first removing the small hole plug. Insert this ball end into the second cable routing tube. Pull the cable out of the pulleys as you pull the tube in. Once the tube end comes out, remove the old cable from the tube and replace it with the same end of the new cable. Pull the new cable into position in the pulleys with the tube. Once through, secure it to the adjustment bracket as it was with the small hole plug. Reverse the steps to reinstall the cable system (see other side). Repeat for the other side of the machine.



# Vectra® VX-FT (2-Stack) Limited Warranty

**V**ectra Fitness, Inc. warrants, to the original owner only, this Vectra VX-FT (2 Stack) to be free from defects in materials and workmanship for component specific periods as outlined below. Purchaser must retain bill of sale to establish warranty rights. This Limited Warranty is valid only if machine is purchased from a Vectra authorized dealer. Defective parts will be repaired or replaced at Vectra's option, when returned to Vectra Fitness, Inc. shipping prepaid with prior authorization. No allowances for labor will be made.

**Warranty Period:** (All periods are from date of purchase by original consumer)

## Home Use:

Structural Frame . . . . .	Lifetime	Bearings . . . . .	5 years
Weight Stack . . . . .	5 years	Cables and Cable Attachments. . .	3 years
Guide Rods . . . . .	5 years	Upholstery . . . . .	3 years
Pulleys . . . . .	5 years	Other parts not listed . . . . .	3 years

Home Use is defined as use in a family's home by the members of that family. Lifetime means while owned by the original owner.

## Commercial/Institutional Use:

Structural Frame . . . . .	5 years	Bearings . . . . .	1 year
Weight Stack . . . . .	5 years	Cables and Cable Attachments. . .	1 year
Guide Rods . . . . .	5 years	Upholstery . . . . .	1 year
Pulleys . . . . .	5 years	Other parts not listed . . . . .	1 year

Commercial/Institutional Use is defined as any use other than Home Use.

**Conditions and Exceptions:** Failures due to misuse, abuse, neglect, alteration, improper assembly, repairs other than by an authorized Vectra Service Center, normal wear, damage or lack of maintenance are not covered. Use of a weight stack that is heavier than the heaviest stack that Vectra Fitness sells for use on the machine voids this Limited Warranty. This Limited Warranty does not cover damages sustained during shipment. Title passes to buyer upon delivery to carrier. If product is damaged in transit, file claim with carrier.

Repairs to the Structural Frame and Weight Stack will be made only if such repairs are necessary to make the machine functional as designed. Repairs for other reasons will not be made. Cosmetics are not covered by this Limited Warranty. This is a powder coated steel product, and as such rust-resistant in most settings. Any rusting and/or corrosion is completely outside the scope of this Limited Warranty. Owners who live in humid climates or intend to install this machine in a humid area such as outside, near a pool, hot tub, or sauna should apply an automotive wax to delay rusting. The corrosive effects of sweat, cleaners, body lotions, sunlight, etc. are also the responsibility of the owner.

It is our policy to repair or replace components rather than entire machines or assemblies. It is also our policy to repair rather than replace frame components. Repairs of structural parts will be made using appropriate technology and may be visible. Repaired items will be refinished as needed, but the new finish may not match the old.

**Replacement and Repair Expenses:** Vectra Fitness will provide only replacement parts or repair to parts under this Limited Warranty, and will pay for standard ground shipping of such parts to the consumer. The owner of the machine is responsible for all other costs. Such costs may include, but are not limited to: labor charges for service, removal, repair, and re-installation of the Vectra product or any component part; shipping, delivery, handling, and administrative charges for returning parts to Vectra; all necessary or incidental costs related to installation of the repaired or replacement part.

**Claim Procedure:** Please contact the Vectra authorized dealer from whom you purchased your machine should warranty service be required. Items returned to Vectra without prior factory authorization or freight collect will not be accepted. Vectra assigned RMA number **MUST** be prominently shown on **OUTSIDE** of carton. Copies of original bill of sale **MUST** accompany any merchandise returned for warranty service. Also each returned item must be accompanied by the following information: RMA number assigned by Vectra, product serial number, description of problem experienced, and instructions for return of repaired/replaced part. Parts should be shipped to Vectra Fitness in their original carton or equivalent packaging. Vectra Fitness will not be responsible for any loss or damage incurred in shipping.

No other express or implied warranties have been made or will be made on behalf of Vectra Fitness with respect to any Vectra product or the operation, repair or replacement of any Vectra product. Vectra Fitness shall not be responsible for injury; loss of use of the Vectra product; inconvenience; loss or damage to personal property; whether direct or indirect; or for incidental or consequential damages. This Limited Warranty is **LIMITED STRICTLY** to the terms stated herein and no other express warranties or remedies shall be binding on us. **THIS LIMITED WARRANTY AND ALL WARRANTIES WHICH MAY BE IMPLIED UNDER STATE LAW, INCLUDING, BUT NOT LIMITED TO, WARRANTIES OF MERCHANTABILITY AND WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE, EXPIRE WITH THE TRANSFER OF OWNERSHIP FROM THE ORIGINAL OWNER. ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE SHALL BE LIMITED TO ONE YEAR FROM DATE OF PURCHASE. REPAIR OF THE PRODUCT AS PROVIDED UNDER THIS LIMITED WARRANTY IS THE EXCLUSIVE REMEDY OF THE CONSUMER. IN NO EVENT SHALL WE BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES, FOR BREACH OF THIS LIMITED WARRANTY, OR ANY OTHER WARRANTY EXPRESS OR IMPLIED.** Some states do not allow limitations on how long an implied warranty lasts, or do not allow the exclusion of incidental or consequential damages, so the above limitations or exclusions may not apply to you.

**Consumers Rights:** This Limited Warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

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Protected by one or more of the following Patent Numbers: RE34,572; 4,900,018; 4,986,538; 5,336,148; 5,378,216; 5,395,295; 5,462,510; 5,605,523; 5,672,143; 5,779,601; 6,482,135; 6,508,748; 6,582,346; 6,994,660; 7,150,701; 7,255,665; 7,303,514; D320,246; D320,247; D320,248; D329,563; D454,168; D457,581; D460,508; D462,731; D576,230; D576,231; D576,232; D576,233; D576,234; CN1,309,738; CN2,023,972; J3,117,451.

Other U.S. and foreign patents pending. Vectra, On-Line and Cornerstone are registered trademarks of Vectra Fitness, Inc. Series VX, VX-FT, ARC (Automatic Ratcheting Cam), AL (Arm-Leg), Vector, and VFT are trademarks of Vectra Fitness, Inc.

# Assembly Instructions

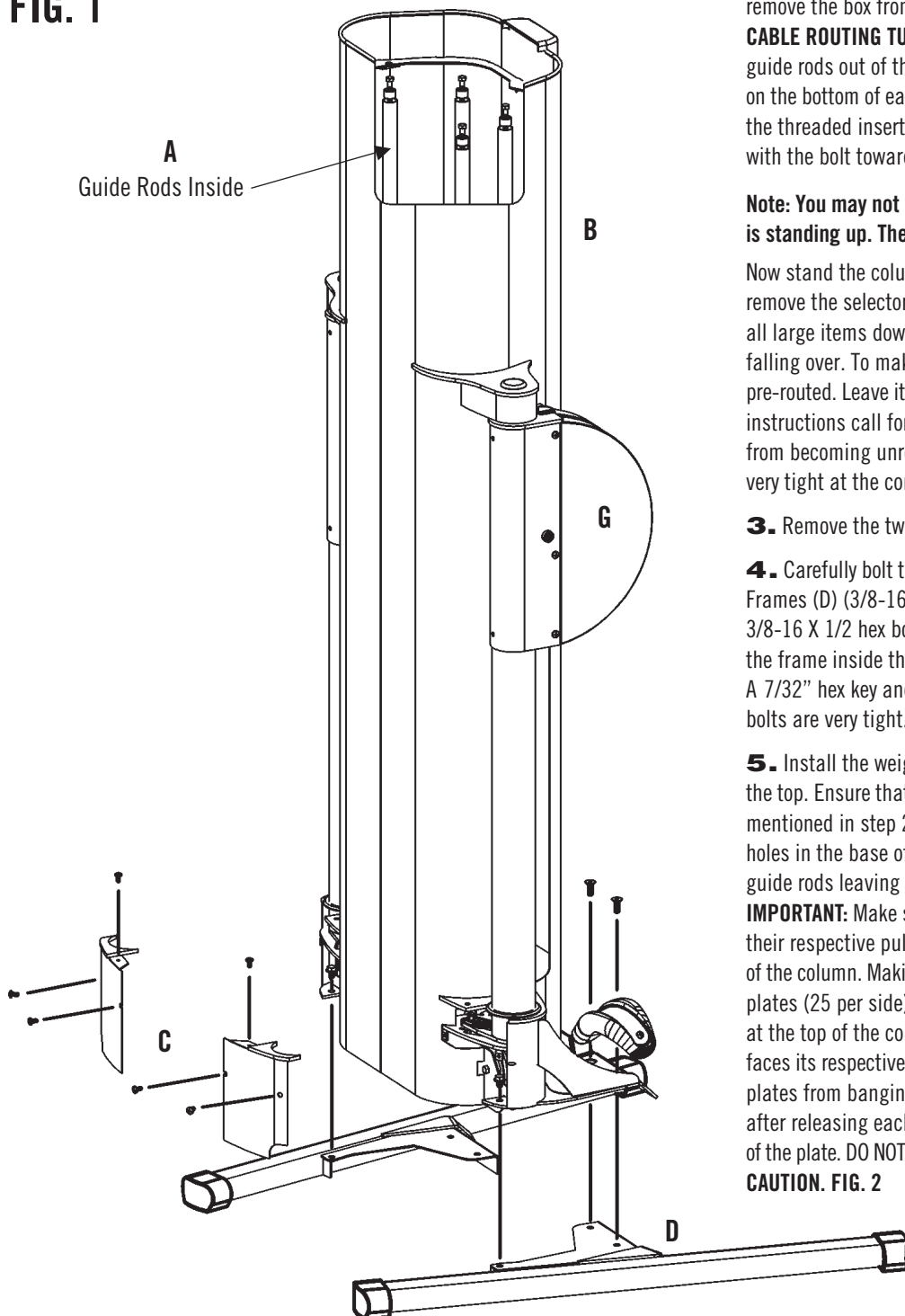
## Tools Required:

Wrenches: One each (1/2", 9/16")

Hex Keys: Two 5mm (provided), one 7/32" (provided), one 5/16"

Phillips screwdriver

FIG. 1



**1.** Set machine up in a well-lighted and well-ventilated area where you will enjoy exercising. Use rubber floor matting or carpeting to protect your floor, if desired.

**2.** Unbox entire unit. Because there is a box shipped inside the column, the following procedure for unboxing is suggested. Lay the large box down and remove the lid. Remove the Left and Right Base Frames (D). Open the box end exposing the top of the column and remove the box from inside the column. **BE CAREFUL TO LEAVE THE CABLE ROUTING TUBES INSIDE THE COLUMN IN PLACE.** Pull the four guide rods out of their foam supports. Install a rubber stack bumper on the bottom of each guide rod, which is the end which does not have the threaded insert and bolt. Place the four guide rods in the column with the bolt toward the top of the column. **FIG. 2.**

**Note:** You may not be able to install the guide rods when the column is standing up. They may hit the ceiling.

Now stand the column up. While supporting it so that it doesn't fall, remove the selector shafts and then the foam packaging from it. Lay all large items down until needed to prevent them from accidentally falling over. To make cable installation as easy as possible, tubing is pre-routed. Leave it in place and route cables with its assistance when instructions call for it. After routing any cable, secure it to prevent it from becoming unrouted before going on. In general, tighten all bolts very tight at the completion of each step.

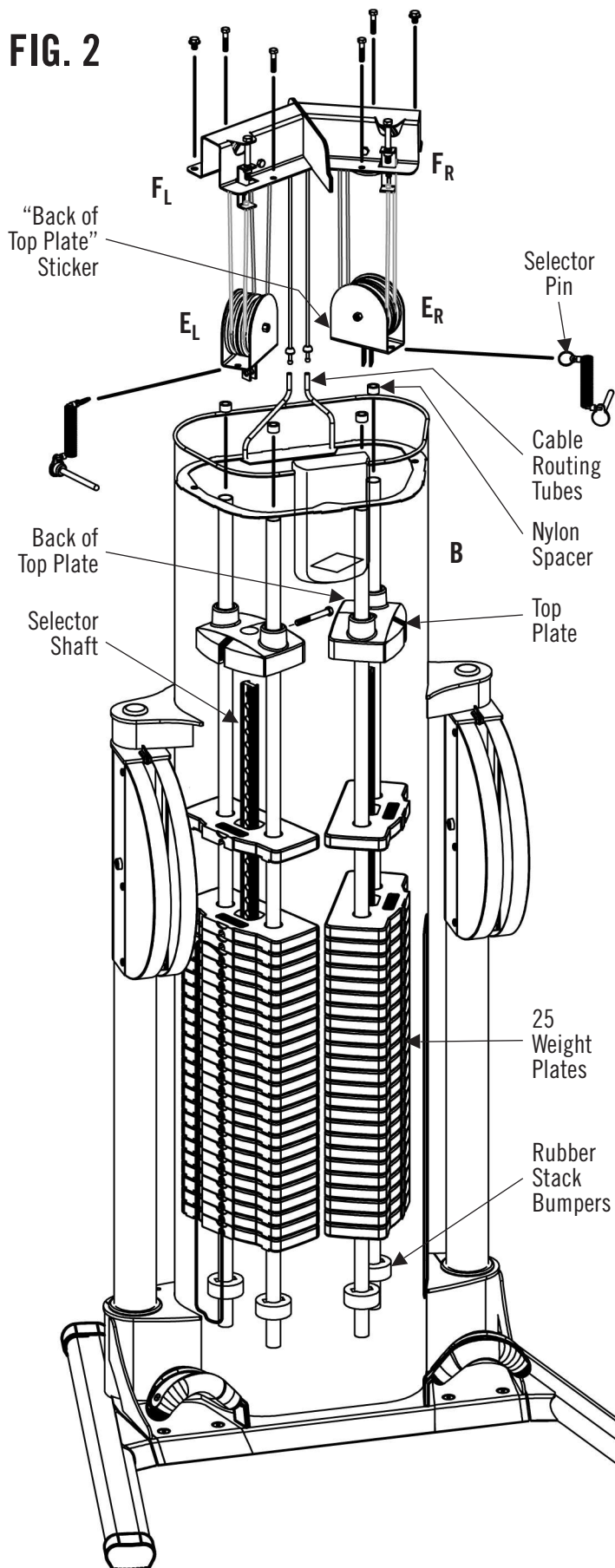
**3.** Remove the two Lower Pivot Covers (C) and set aside. **FIG. 1**

**4.** Carefully bolt the Column Assembly (B) to the Left and Right Base Frames (D) (3/8-16 X 1 flat head bolts, Qty: 4, front holes. 3/8-16 X 1/2 hex bolts, Qty: 2, back holes). The two hex bolts go into the frame inside the area hidden by the Lower Pivot Covers (C). A 7/32" hex key and a 9/16" wrench are required. Ensure that these bolts are very tight. **FIG. 1**

**5.** Install the weight stacks inside the Column Assembly (B) from the top. Ensure that the guide rods and stack bumpers are in place as mentioned in step 2 above. Make sure the four guide rods are in their holes in the base of the column. Remove the bolts from the top of the guide rods leaving the nylon spacer in the top of each guide rod.

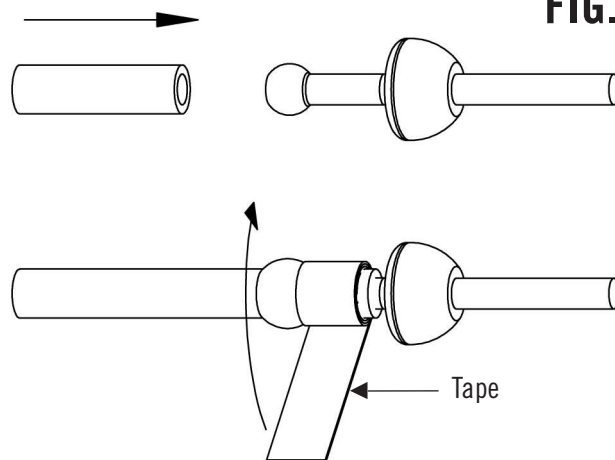
**IMPORTANT:** Make sure the cable routing tubes go directly up from their respective pulleys (5<sub>L</sub> and 5<sub>R</sub>) and are held in slots near the top of the column. Making sure not to pinch this tubing, load the 50 weight plates (25 per side) one at a time by placing them on the guide rods at the top of the column. Make sure the selector groove on the bottom faces its respective weight pin access slot. **IMPORTANT:** To safely keep plates from banging together the following procedure is suggested: after releasing each plate, pull the guide rods apart to slow the fall of the plate. **DO NOT** try to catch plates with hands or feet. **USE EXTREME CAUTION. FIG. 2**



**FIG. 2**

**6.** Assemble each top plate and selector shaft to a Top Plate Pulley (E), securing with 3/8-16 X 3 hex bolts. (Note: these top plate pulleys are shown as E<sub>R</sub> and E<sub>L</sub> on **Fig. 2**. These small R and L letters signify right and left throughout this manual. These small letters are omitted when referring to both sides. Right and Left in this manual refer to an observer's Right and Left while facing the front of the machine.) The Top Plate Pulleys (E) include one, two or three pulleys for the 2:1, 4:1, and 6:1 cable systems respectively. Each of these Top Plate Pulleys (E) has a sticker that reads, "Back of Top Plate." Make sure that the Top Plate is rotated such that its flat back edge aligns with this sticker, see **FIG.2**. To put these parts together, insert the blunt end of the selector shaft from below into the center hole of the top plate until it is approximately flush on top. Now insert the tabs down into the top plate around the selector shaft. Secure with the bolt (3/8-16 X 3 hex bolt, Qty: 2). Make sure these bolts are very tight. **FIG. 2**

**7.** Compare the Upper Pulley Assemblies (F) with **Fig. 2** to determine which side they go on. Now lower one of the Top Plate Assemblies down the guide rods with its curved front toward its respective weight pin slot. Make sure the cables that connect to the Upper Pulley Assembly do not go around the guide rods and are not twisted. Place the connected Upper Pulley Assembly (F) into the top of the column. Make sure the cables are not caught or pinched between the Column and the Upper Pulley Assembly, bolt the Upper Pulley Assembly to the column (3/8-16 X 1/2 hex bolts, Qty: 1 per side). Replace the two guide rod bolts on that side securing each guide rod to a hole in the Upper Pulley Assembly (F). Make sure that there is a nylon spacer in the top of each guide rod. Repeat these steps to install the Top Plate Pulley Assembly and Upper Pulley Assembly on the second side of the machine. Lift the top plates to the top of the column by pulling them up with the cable. Make sure the guide rod spacing is such that the top plates do not bind. If they do, loosen a guide rod bolt and adjust the guide rod spacing, then retighten the bolt. Make sure that the cables feed straight down to the Top Plate Pulley (E) and don't go around each other or a guide rod. The long cable end coming out of the Upper Pulley Assembly (F) should be uncoiled. Leave this cable draped over the back of the column for now. **FIG. 2**

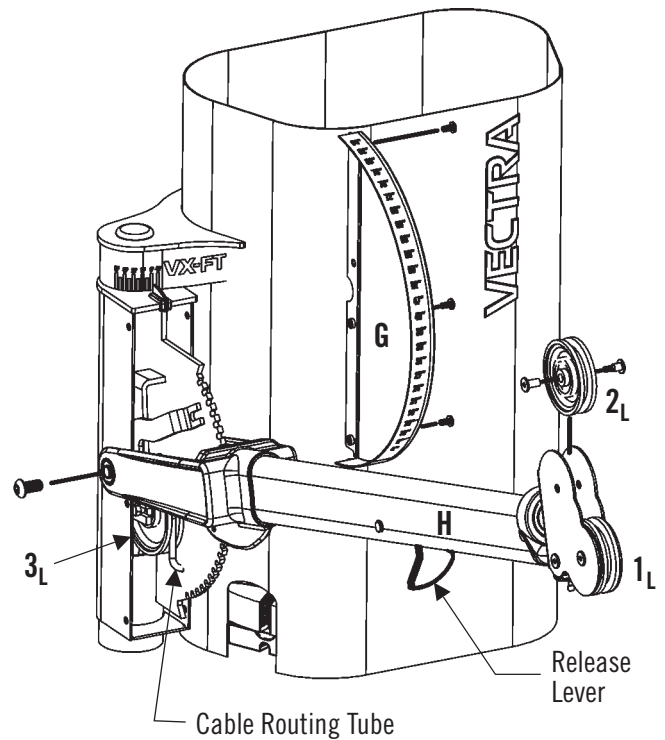
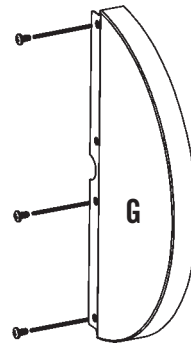
**FIG. 3**

**8.** Now insert the end of the cable coming from each Upper Pulley Assembly (F) into the cable routing tube held in a slot at the top of the Column (B) on the same side, making sure that it is not tangled with the other cable. Work the tube all the way over the small ball until it touches the large section of the cable termination. These tubes will be used to pull the cable into the arms of the machine. Done properly, this process will save a great deal of time, so take the time to work the tube on well. Once the tube is all the way on, secure it by wrapping the tube end past the small ball tightly with a small strip of tape provided for this purpose. Put both tubes back in the slots at the top of the column temporarily. **FIG. 3**

**9.** Remove the Upper Pivot Covers (G) and set them aside keeping track of which goes where. Put on the two Horizontal Pulley Arms (H) one at a time. By comparing the release levers in the middle of each arm you'll be able to figure out which arm goes on which side. Once installed, these release levers point down and are on the inside of the arms facing each other. To install an arm, locate the latch pin that is moved by the release lever. Place it into a slot in the toothed rack slightly above center. Picking a tooth above center makes this easier as gravity will help hold the part in position. Install the outer bolt in each arm through the ball bearing furthest from the column (1/2-13 X 1 buttonhead bolts, Qty: 2 per arm). Tighten this bolt with a 5/16" hex key. You will not be able to install the inside bolt yet. Be careful to not put much force on these arms until the inside bolt is installed in the next step. **FIG. 4**

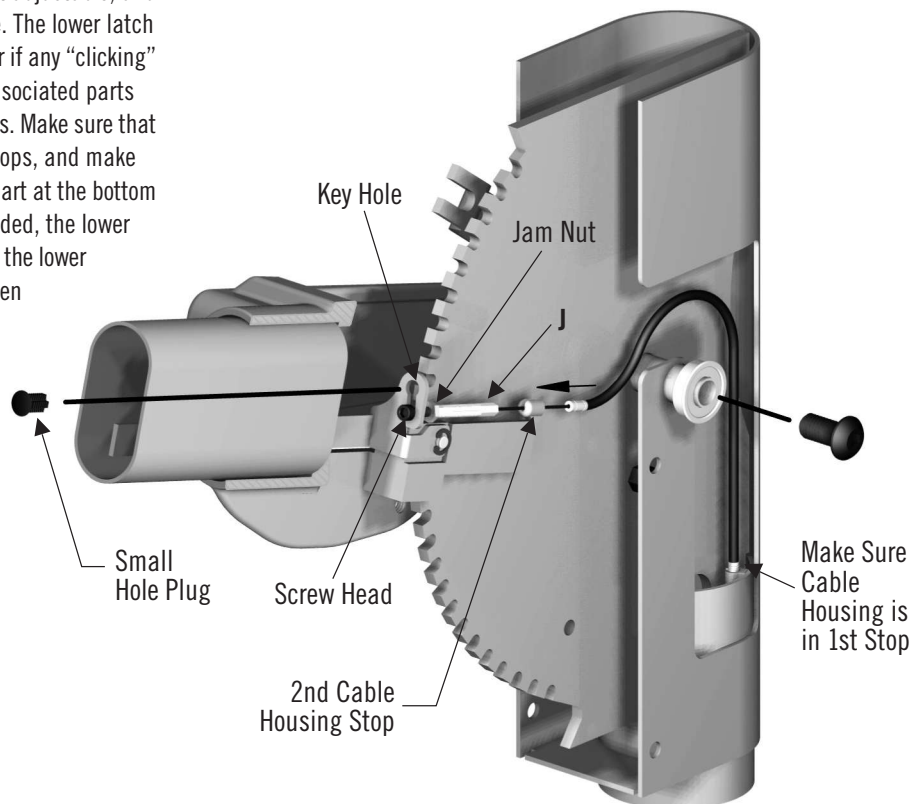
**FIG. 4**

**10.** Find the Lower Adjustment Control Cable (J) and insert its screw head in its end into the keyhole shaped hole. Insert the small hole plug as shown to hold the screw in place. Ensure that the cable housing is in position in the 1st stop in the vertical tube, as it may have come loose during shipping. Then position it in the 2nd stop in the Horizontal Pulley Arm (H). There is a cut to allow the small diameter cable to go through. Now pulling the Release Lever and supporting the weight of the Horizontal Pulley Arm (H) rotate the arm out away from the column. Now you will be able to install the second bolt through the inside ball bearing. Tighten it very tight. Repeat for the second arm. **FIG. 5**



**11.** Test the adjustability of each arm. Operating the release lever will simultaneously pull a pin in both the upper and lower pivot areas. Check that each arm is free to move both horizontally and vertically. Let go of the lever and make sure that each arm locks in both the horizontal and vertical direction. This area was fully assembled, adjusted and tested at the factory. The parts that pull the upper latch pin are not adjustable, and it is very unlikely that any problem will be encountered here. The lower latch pin is adjustable. If the pin does not disengage, latch fully, or if any "clicking" is heard when adjusting side-to-side, first verify that all associated parts were assembled per the above steps and match the diagrams. Make sure that the cable housing is fully seated in both the 1st and 2nd stops, and make sure that the control cable is in the groove of a black nylon part at the bottom of the vertical arm (about 6 inches above floor level). If needed, the lower adjustment can be adjusted. To do so, release the jam nut. If the lower pin was not fully disengaging (i.e. "clicking" was heard when moving arm side-to-side) then screw the screw into the brass fitting just enough to eliminate the sound. For symptoms related to inadequate engaging, screw the screw out. Once the correct adjustment is found, retighten the jam nut. **FIG. 5**

**FIG. 5**



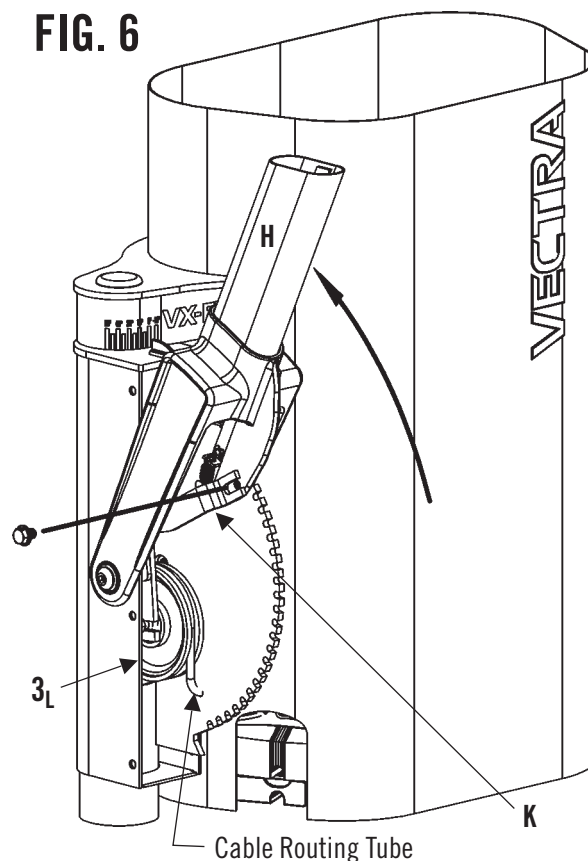
**12.** Bolt the Counter Balance Levers (K) to each horizontal pulley arm (3/8-16 X 1/2 hex bolts, Qty: 1 per arm). To do this, first adjust the arm to its highest level. Now pull the counter-balance lever down and align the slot with the hole. Insert the bolt and tighten. **FIG. 6**

**13.** Find the arm end of the cable routing tube, see **FIG. 6**. It is time to pull the cables through the frame and into the arms using these tubes. **Do this VERY carefully.** Complete step 13 and 14 for the cable on one side of the machine before working on the cable on the other side. These cable routing tubes are intended to save time. Should a cable end become detached, routing the cable will be difficult and time consuming. Make sure that the tubes are well attached to the cable ends as described in step 8 above. Begin at the top of the column by removing the cable routing tube from the slot on one side. **FIG. 7**. Point the cable down into the column behind its weight stack and then carefully start pulling it in by pulling on the other end of the tube, see **FIG. 6**. As you pull the tube with one hand, let cable slide through your other hand at the top of the stack, maintaining a little pressure. This should ensure that the cable maintains the proper path and doesn't get snagged. If you encounter resistance, try moving the cable back and forth to get past it. If that doesn't work, **DO NOT attempt to force it by pulling hard.** Instead, stop and look in the frame to locate the problem area and move the cable termination through it. Ensure that the cable travels straight from pulley 6<sub>L</sub> to pulley 5<sub>L</sub> or 6<sub>R</sub> to 5<sub>R</sub> before going on. REFER TO CABLE DIAGRAM ON OTHER SIDE.

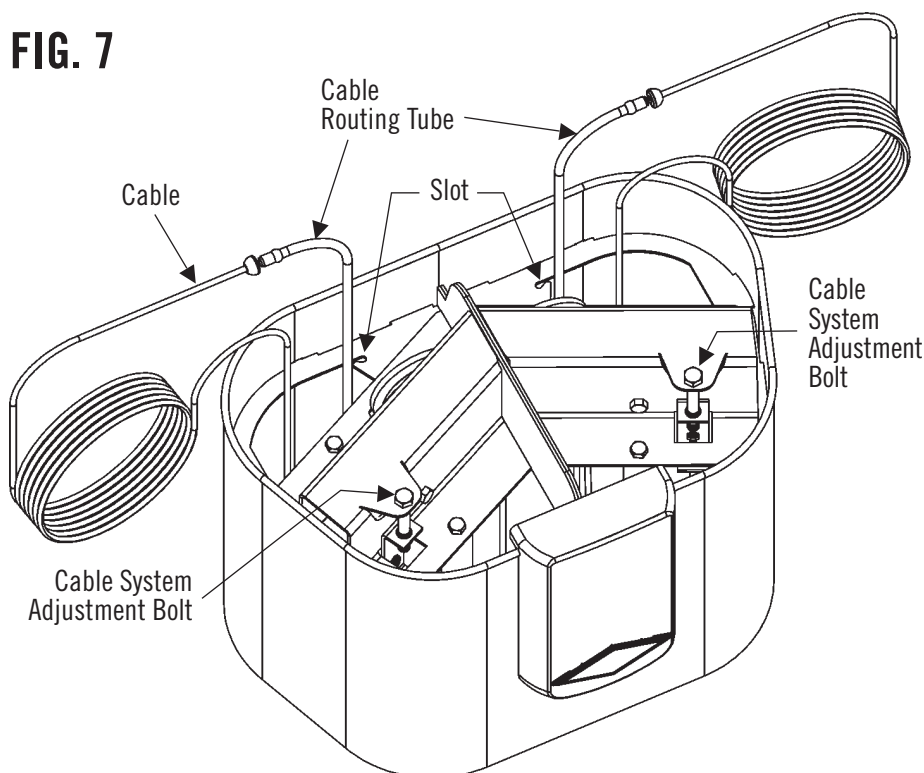
**14.** Once the cable end emerges from pulley 3, remove the tape and tube from its end. Secure the cable end temporarily by sticking it in the hole in the toothed plate that held the cable routing tube. With pulleys 2<sub>L</sub> and 2<sub>R</sub> removed but pulleys 1<sub>L</sub> and 1<sub>R</sub> installed, insert the cable routing tube into the arm through the bracket that holds pulleys 1 and 2. It should emerge near pulley 3. Make sure it is above other things in the arm and not around anything. Now stick the cable end into the cable routing tube again (the tape is not needed this time), and use the tube to pull the cable through the arm. Once the cable end emerges, install pulley 2 (1/4-20 shoulder bolt and tube nut, Qty. 1 each per arm). Make sure the bolts in both pulleys are tightened very tight using the two 5mm hex keys provided. Once one end of the cable is held in place by pulleys 1 and 2, return to step 13 and do the cable on the other side of the machine. **Retain the cable routing tubes with the Owner's Manual for future use with cable replacement. FIG. 4**

**15.** In preparation for adjusting the two cable systems, place both arms in their lowest position. Now tension the cable system by adjusting the bolt that secures each cable end at the top of the Column (B) in the Upper Pulley Assembly (F). Tighten this bolt until the top plate of the weight stack just starts to lift. If the top plate is not touching the stack, loosen the bolt until the top plate just touches the stack. Check that the weight selector pin easily goes into all weight stack holes. If a cable seems too short or too long to adjust correctly, look everywhere along the cable path for a routing error. Routing errors include a cable not

**FIG. 6**



**FIG. 7**



correctly seated in a pulley race, or a cable that is around something that it should not be around like another cable, a guide rod, or something else in the machine. **FIG. 7**

**16.** Make sure that the cables move freely when machine is operated. Immediately fix any cable rubbing problems. If a pulley is rubbing or otherwise making a noise while turning, the problem is usually cured by tightening its bolt. REFER TO CABLE DIAGRAM.

**17.** Install weight plate number labels per instructions with labels. Attach the weight pin lanyard ring to the Top Plate Pulley Assembly (E). This is done by splitting the ring and looping it through a hole in the front of the steel bracket. **FIG. 2**

**18.** Reinstall the Lower Pivot Covers (C). **FIG. 1**

**19.** Reinstall the Upper Pivot Covers (G). **FIG. 4**

**20.** If a bench is also being assembled, attach both cushions to the frame (1/4-20 x 3/4 hex screws, Qty. 10). The bench handle installs between the small cushion and the frame and is held in place by two of the screws.

**21.** Hang the exercise charts on the wall where they can be referred to easily. Read the exercise charts, all product labels, and this manual before beginning an exercise program.

**If you have any questions, PLEASE contact the full-service dealer where you purchased this machine.**