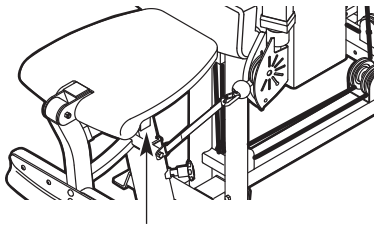
FREEMOTION

S83 POWER SYSTEM

USER'S MANUAL

Model No. FMSY14231
Serial No. _____
Write the serial number in the space above for future reference.



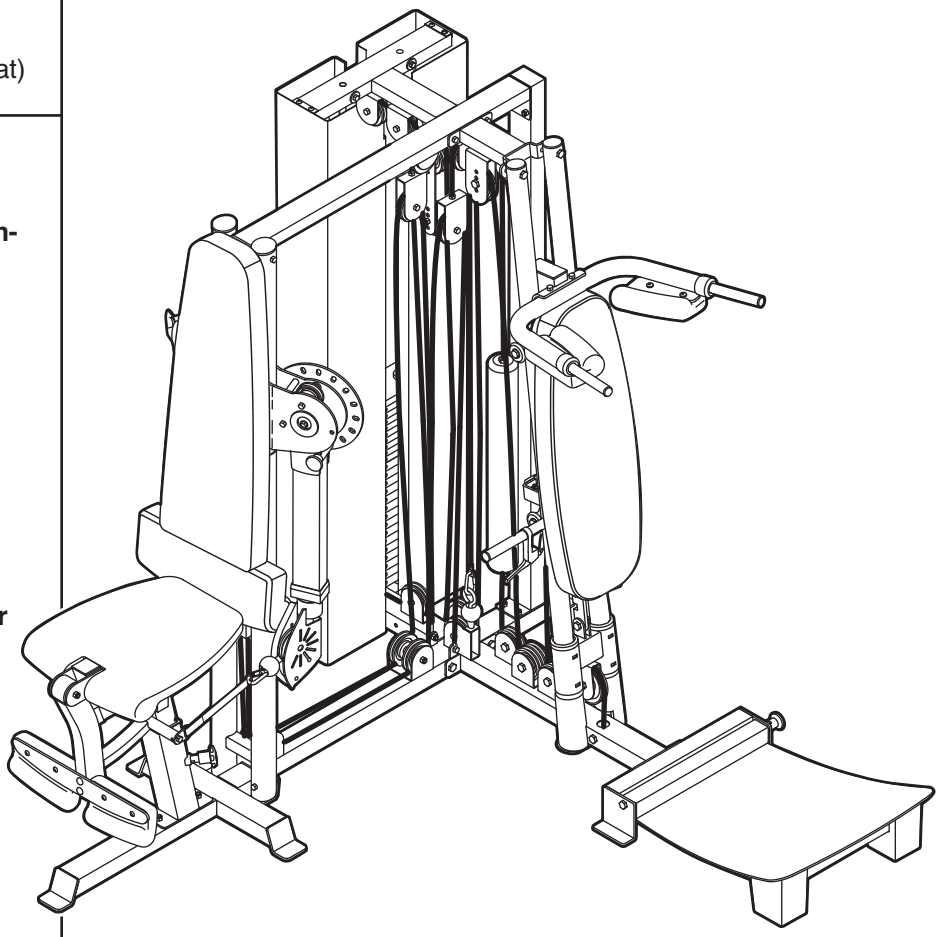
Serial Number Decal (Under Seat)

QUESTIONS?

As a manufacturer, we are committed to providing complete customer satisfaction. If you have questions, or if there are missing or damaged parts, we will guarantee complete satisfaction through direct assistance from our factory.

TO AVOID DELAYS, PLEASE CALL DIRECT TO OUR TOLL-FREE CUSTOMER HOT LINE. The trained technicians on our customer hot line will provide immediate assistance, free of charge.

CUSTOMER HOT LINE:
1-800-999-3756
Mon.–Fri., 6 a.m.–6 p.m. MST



⚠ CAUTION

Read all precautions and instructions in this manual before using this equipment. Save this manual for future reference.

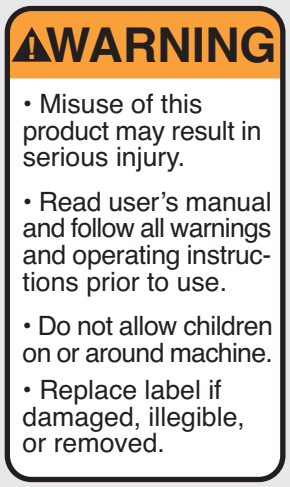
Visit our website at
www.freemotionfitness.com

TABLE OF CONTENTS

IMPORTANT PRECAUTIONS

⚠WARNING: To reduce the risk of serious injury, read the following important precautions before using the weight system.

1. **Read all instructions in this manual before using the weight system. Use the weight system only as described in this manual.**
2. **It is the responsibility of the owner to ensure that all users of the weight system are adequately informed of all precautions.**
3. **The weight system is intended for home use only. Do not use the weight system in any commercial, rental, or institutional setting.**
4. **Use the weight system only on a level surface. Cover the floor beneath the weight system to protect the floor.**
5. **Make sure all parts are properly tightened each time you use the weight system. Replace any worn parts immediately.**
6. **Keep children under 12 and pets away from the weight system at all times.**
7. **Keep hands and feet away from moving parts.**
8. **Always wear athletic shoes for foot protection while exercising.**
9. **Make sure that the cables remain on the pulleys at all times. If the cables bind as you are exercising, stop immediately and make sure that the cables are on the pulleys.**
10. **Never release the press arm, butterfly arm, leg lever, hack squat arm, lat bar, or ab strap while the weights are raised; the weights will fall with great force.**
11. **The weight system is designed to support a maximum user weight of 300 pounds.**
12. **Make sure the weight pin is fully inserted into the weight stack before you exercise.**
13. **If you feel pain or dizziness at any time while exercising, stop immediately and begin cooling down.**
14. **The decals shown here have been placed on the weight system in the locations shown on page 4. If a decal is missing or illegible, call our toll-free Customer Service Department at 1-800-999-3756 and order a free replacement decal. Apply the decal in the location shown.**



Decal 1

Decal 2

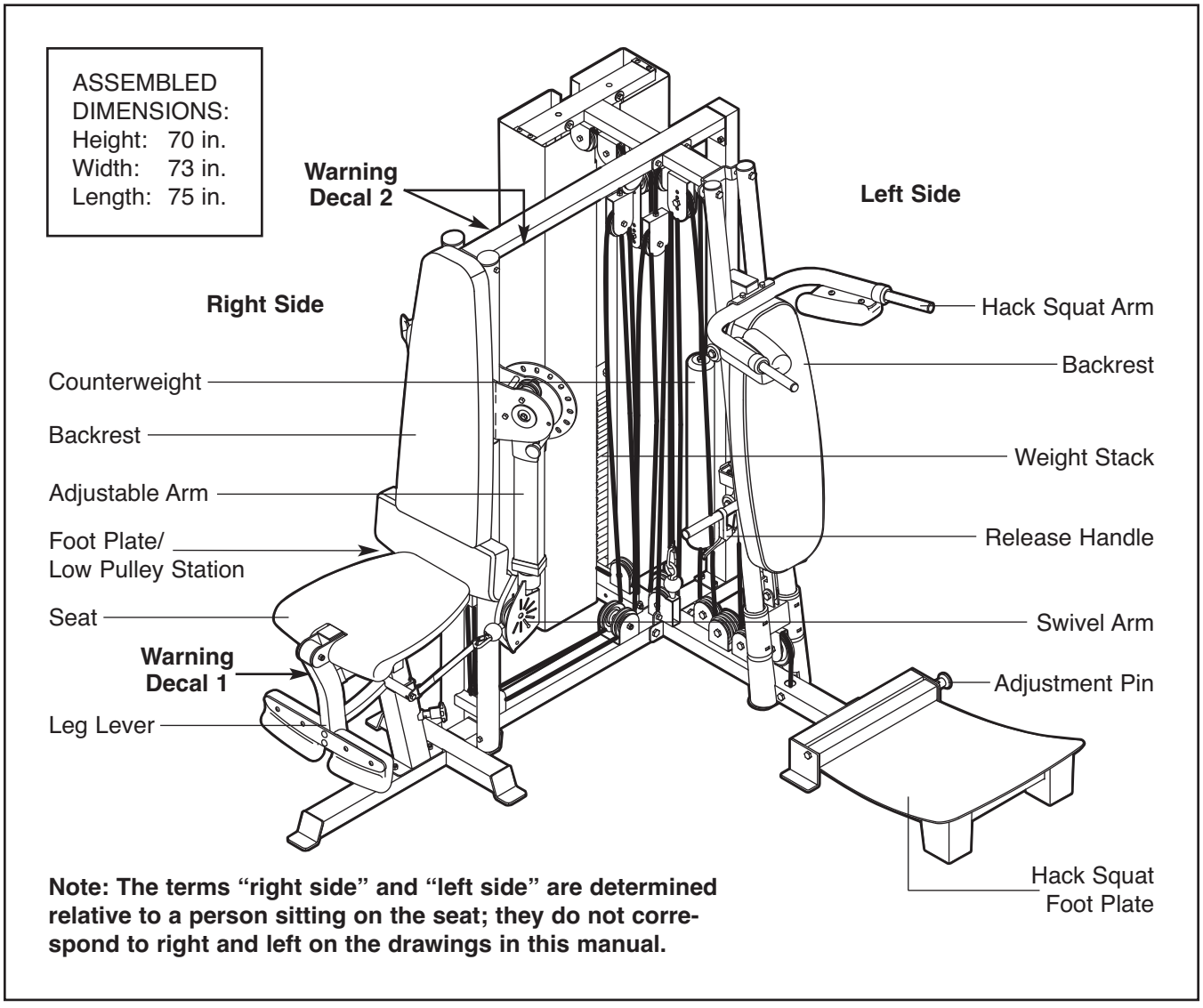
⚠WARNING: Before beginning this or any exercise program, consult your physician. This is especially important for persons over the age of 35 or persons with pre-existing health problems. Read all instructions before using. ICON assumes no responsibility for personal injury or property damage sustained by or through the use of this product.

BEFORE YOU BEGIN

Thank you for selecting the versatile FREEMOTION® S83 POWER SYSTEM weight system. The weight system offers a selection of weight stations designed to develop every major muscle group of the body. Whether your goal is to tone your body, build dramatic muscle size and strength, or improve your cardiovascular system, the weight system will help you to achieve the specific results you want.

For your benefit, read this manual carefully before using the weight system. If you have additional questions, please call our Customer Service Department toll-free at 1-800-999-3756, Monday through Friday, 6 a.m. until 6 p.m. Mountain Time (excluding holidays). To help us assist you, please note the product model number and serial number before calling. The model number is FMSY14231. The serial number can be found on a decal attached to the weight system (see the front cover of this manual).

Before reading further, please review the drawing below and familiarize yourself with the parts that are labeled.



Note: The terms "right side" and "left side" are determined relative to a person sitting on the seat; they do not correspond to right and left on the drawings in this manual.

ASSEMBLY

Make Assembly Easier for Yourself

Everything in this manual is designed to ensure that the weight system can be assembled successfully by most people. **Before beginning assembly, make sure to read the information on this page. This brief introduction will save you much more time than it takes to read it.**

Assembly Requires Two Persons

For your convenience and safety, assemble the weight system with the help of another person.

Set Aside Enough Time

Due to the many features of the weight system, the assembly process will take a few hours. By setting aside plenty of time and by deciding to make the task enjoyable, assembly will go smoothly. You may want to assemble the weight system over a couple of evenings.

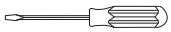
Select a Location for the Weight System

Because of its weight and size, the weight system should be assembled in the location where it will be used. Make sure that there is enough room to walk around the weight system as you assemble it.

How to Unpack the Box

To make assembly as easy as possible, we have divided the assembly process into three stages. The parts needed for each stage are found in individual bags. **Important: Wait until you begin each stage to open the parts bag for that stage.** Place all parts of the weight system in a cleared area and remove the packing materials. Do not dispose of the packing materials until assembly is completed.

Make sure you have the following tools:

- Two adjustable wrenches 
- One standard screwdriver 
- One phillips screwdriver 
- One rubber mallet 
- One pair of pliers 
- You will also need grease or petroleum jelly, a small amount of soapy water, and clear tape or masking tape.

Note: Assembly will be more convenient if you have a socket set, a set of open-end or closed-end wrenches, or a set of ratchet wrenches.

How to Identify Parts

To help you identify the small parts used in assembly, we have included a ***PART IDENTIFICATION CHART*** in the center of this manual. Place the chart on the floor and use it to easily identify parts during each assembly step. **Note: Some small parts may have been pre-attached. If a part is not in the parts bag, check to see if it has been pre-attached.**

How to Orient Parts

As you assemble the weight system, make sure that all parts are oriented exactly as shown in the drawings.

Tightening Parts

Tighten all parts as you assemble them, unless instructed to do otherwise.

Questions?

If you have questions after reading the assembly instructions, please call our Customer Service Department at **1-800-999-3756**.

The Three Stages of the Assembly Process

Frame Assembly—You will begin by assembling the base and the uprights that form the skeleton of the weight system.

Cable Assembly—During this stage you will attach the cables and pulleys that connect the arms to the weights.

Seat Assembly—During the final stage you will assemble the seats and the backrests.

Frame Assembly

1. **Before beginning, read the information on page 5. This brief introduction will save much more time than it takes to read it.**

   For help identifying the small parts used in assembly, use the PART IDENTIFICATION CHART in the center of this manual.

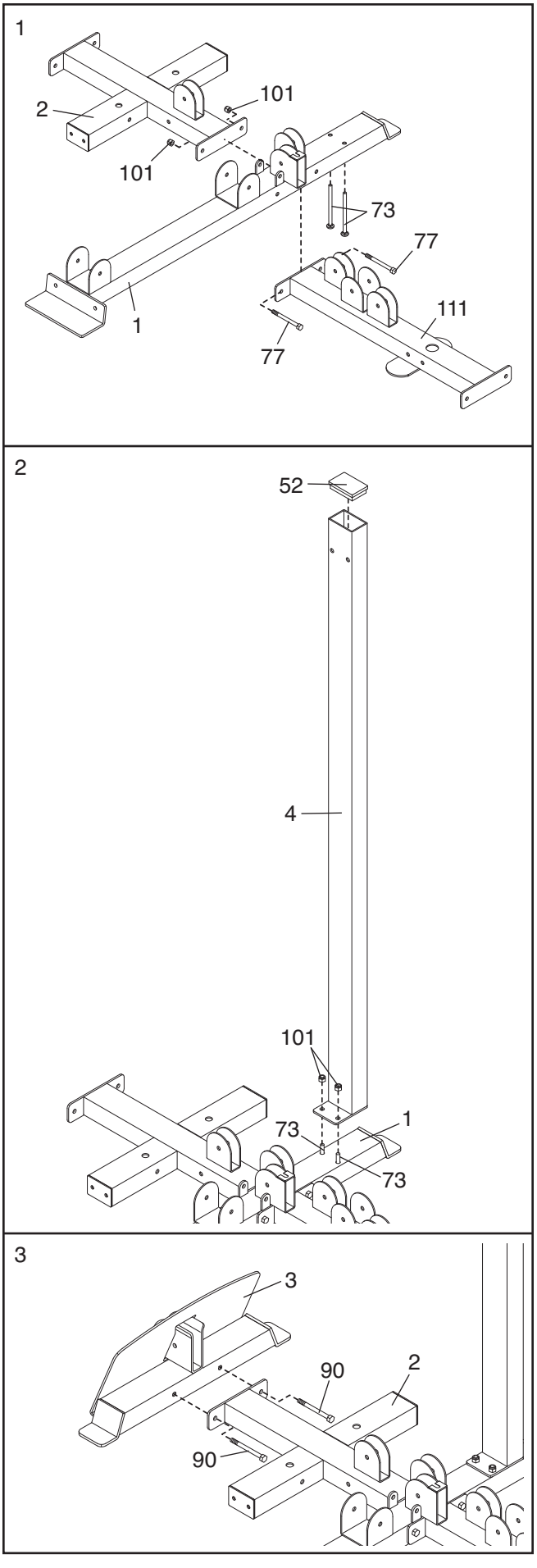
   Attach the Weight Base (2) and the Hack Squat Base (111) to the Base (1) with two M10 x 96mm Button Bolts (77) and two M10 Nylon Locknuts (101). **Do not tighten the Locknuts yet.**

   Insert two M10 x 68mm Carriage Bolts (73) up through the Base (1).

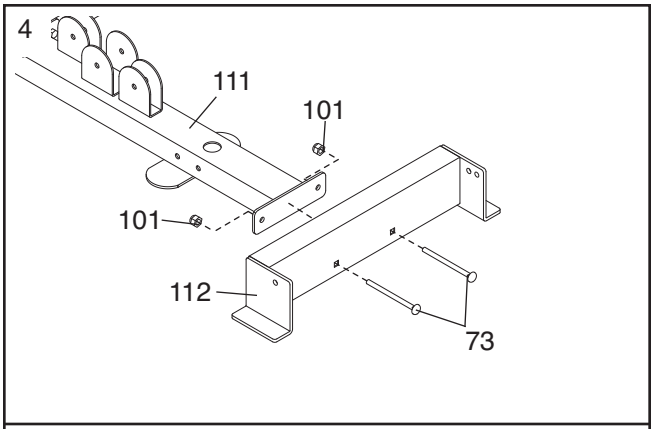
2. Press a 50mm x 76mm Inner Cap (52) into the top of the Upright (4).

   Attach the Upright (4) to the Base (1) with the two indicated M10 x 68mm Carriage Bolts (73) and two M10 Nylon Locknuts (101). **Do not tighten the Locknuts yet.**

3. Attach the Foot Plate (3) to the Weight Base (2) with two M10 x 92mm Button Bolts (90).

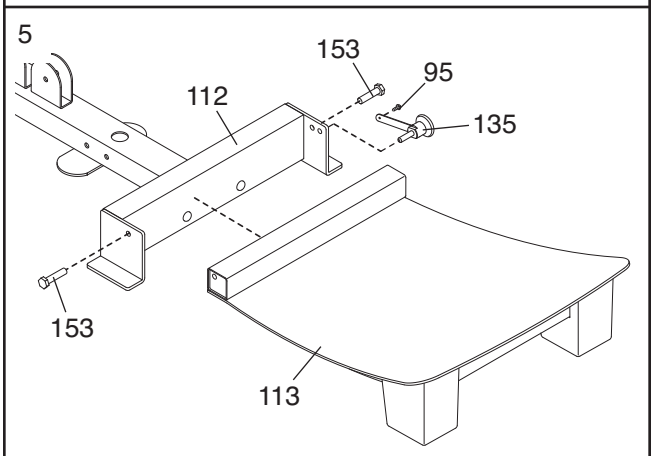


4. Attach the Hack Squat Stabilizer (112) to the Hack Squat Base (111) with two M10 x 68mm Carriage Bolts (73) and two M10 Nylon Locknuts (101).



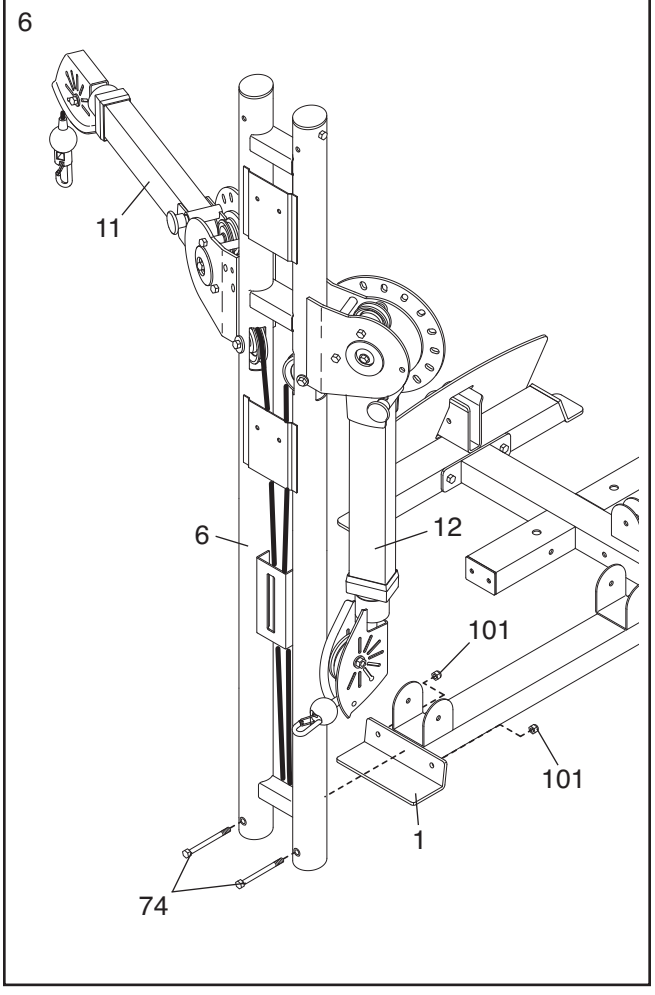
5. Attach the Hack Squat Foot Plate (113) to the Hack Squat Stabilizer (112) with two M10 x 38mm Button Screws (153).

   Attach the Adjustment Pin Assembly (135) to the Hack Squat Stabilizer (112) with an M4 x 16mm Screw (95). Insert the Adjustment Pin Assembly into the Hack Squat Stabilizer and the Hack Squat Foot Plate (113).



6. Attach the Backrest Frame (6) to the Base (1) with two M10 x 82mm Button Bolts (74) and two M10 Nylon Locknuts (101). **Do not tighten the Locknuts yet.**

   Note: The Press Arms (11, 12) are preassembled in the down position (see part 12). Although the Press Arms are shown in the raised position (see part 11) throughout this manual, it is not necessary to raise the Press Arms for assembly.



7. Attach the two Weight Guides (21) to the Weight Base (2) with two M10 x 92mm Button Bolts (90), four M10 Washers (98), and two M10 Nylon Locknuts (101).

   Slide two Weight Bumpers (66) onto the Weight Guides (21). Starting with the Large Weight (23) marked “400,” slide the fifteen Large Weights and the nine Small Weights (22) onto the Weight Guides. **Make sure the Weights are stacked so the numbers are in order and on the indicated side.**

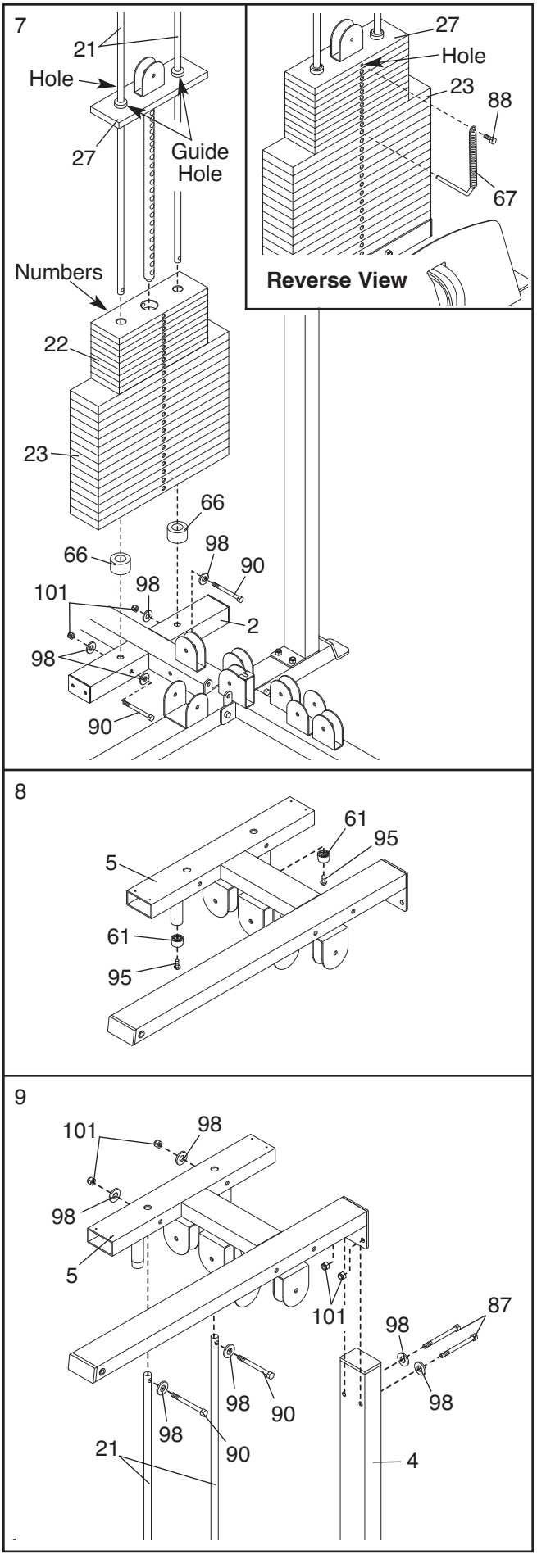
   Grease the guide holes in the Top Weight (27). Slide the Top Weight onto the Weight Guides (21). **Make sure the Top Weight is oriented with the hole on the indicated side.**

   See the inset drawing, shown from the reverse side for clarity. Attach the tether on the Weight Pin w/tether (67) to the hole in the Top Weight (27) with an M8 x 19mm Button Screw (88). Insert the Weight Pin into the stack of Weights (23).

8. Attach two Bumpers (61) to the Top Frame (5) with two M4 x 16mm Screws (95).

9. Attach the Top Frame (5) to the two Weight Guides (21) with two M10 x 92mm Button Bolts (90), four M10 Washers (98), and two M10 Nylon Locknuts (101). **Do not tighten the Locknuts yet.**

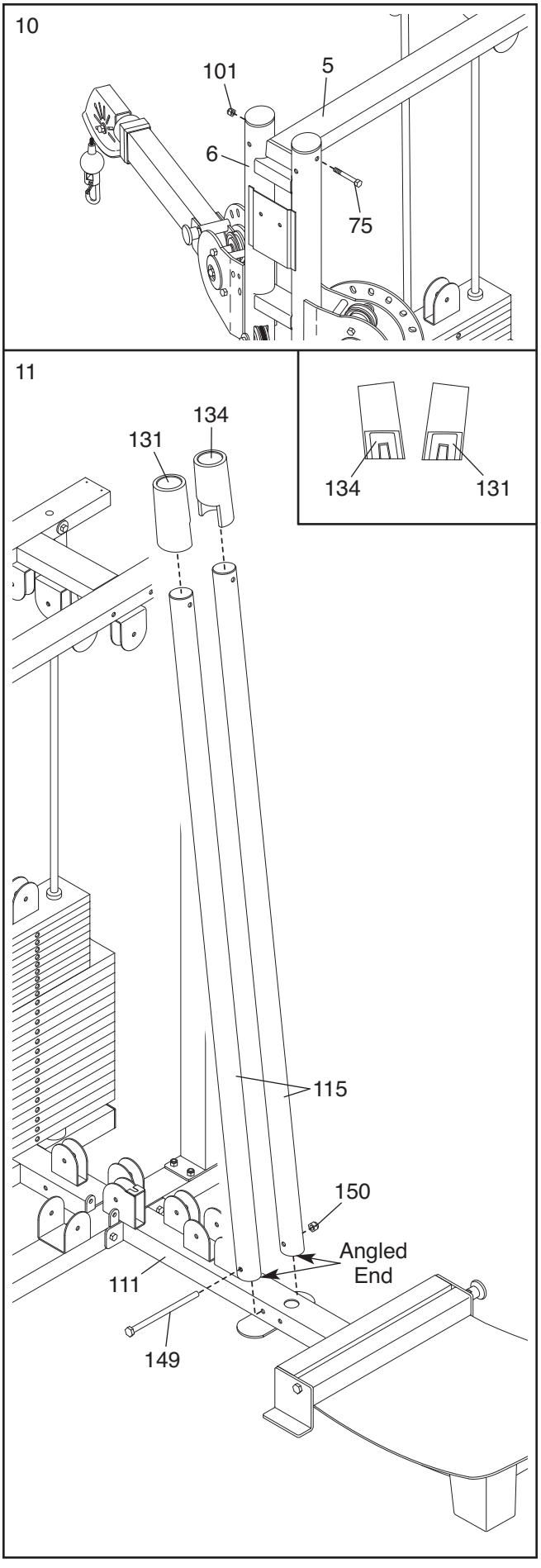
   Attach the Top Frame (5) to the Upright (4) with two M10 x 70mm Button Bolts (87), two M10 Washers (98), and two M10 Nylon Locknuts (101). **Do not tighten the Locknuts yet.**



10. Attach the Top Frame (5) to the Backrest Frame (6) with an M10 x 217mm Button Bolt (75) and an M10 Nylon Locknut (101).

11. Remove the Hack Squat Uprights (115) from the Squat Backrest Frame (not shown). Attach the Hack Squat Uprights, with the angled ends at the bottom, to the Hack Squat Base (111) with an M10 x 186mm Button Bolt (149) and an M10 Jamnut (150). **Do not tighten the Jamnuts yet.**

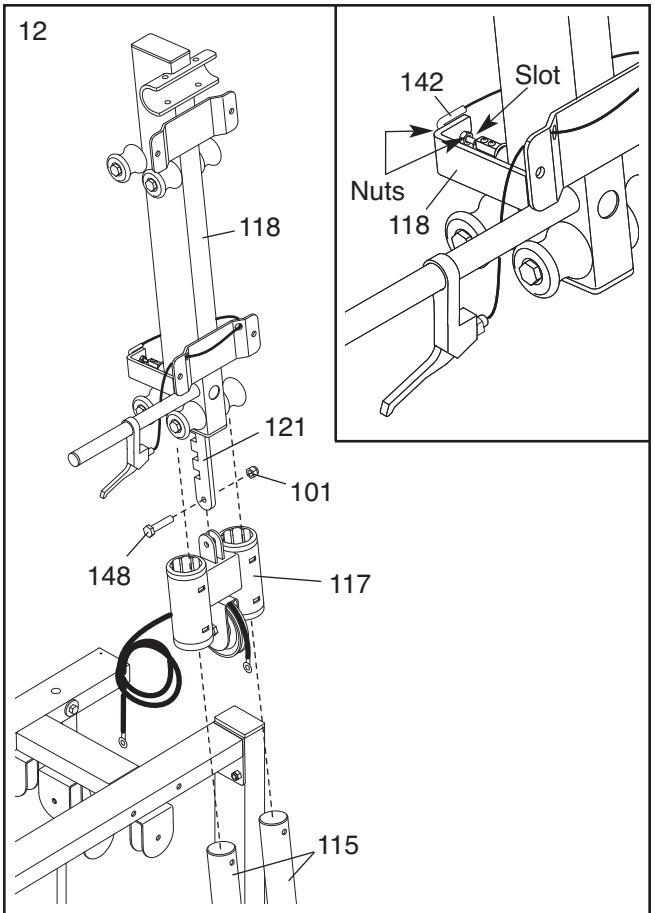
    Identify the Right and Left Plastic Covers (131, 134) (see the inset drawing). Orient the Plastic Covers as shown, and slide them onto the Hack Squat Uprights (115).



12. Attach the Adjustment Bar (121) to the Hack Squat Bracket (117) with an M10 x 32mm Button Bolt (148) and an M10 Nylon Locknut (101).

With the help of a second person, slide the Hack Squat Bracket (117) and the Hack Squat Backrest Frame (118) onto the Hack Squat Uprights (115).

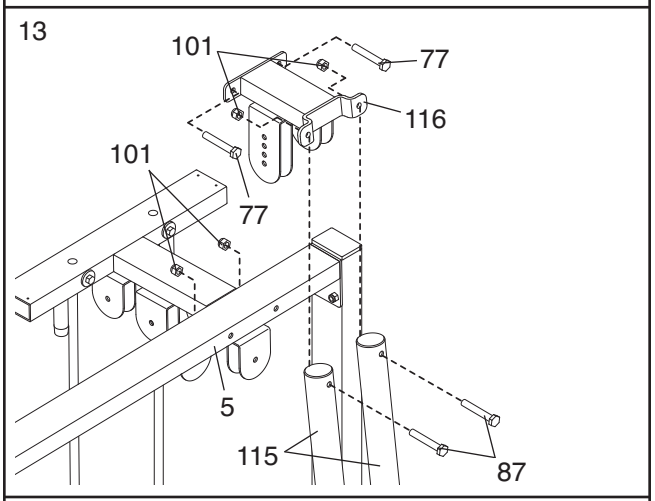
See the inset drawing. Slide the Release Cable (142) into the indicated slot in the Hack Squat Backrest Frame (118), and tighten the nuts to hold the Cable in place and to remove slack in the Cable. **Do not overtighten the Cable.**



13. Attach the Hack Squat Top Frame (116) to the Top Frame (5) with two M10 x 96mm Button Bolts (77) and two M10 Nylon Locknuts (101).

Attach the Hack Squat Top Frame (116) to the Hack Squat Uprights (115) with two M10 x 70mm Button Bolts (87) and two M10 Nylon Locknuts (101).

Tighten the M10 Nylon Locknuts (101) and M10 Jamnut (150) used in steps 1–13.

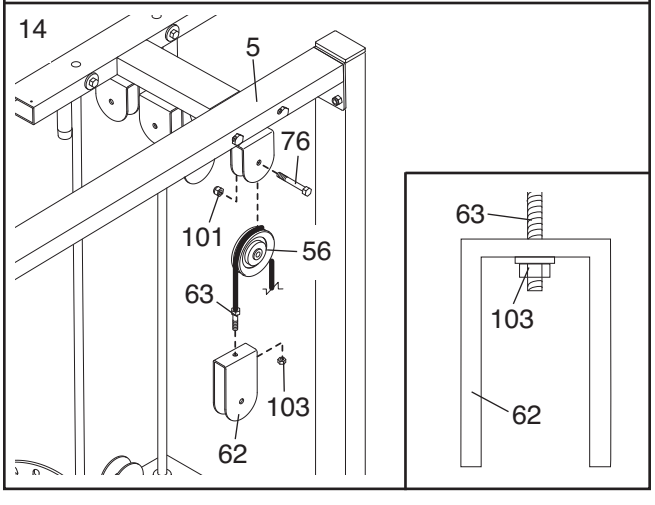


Cable Assembly

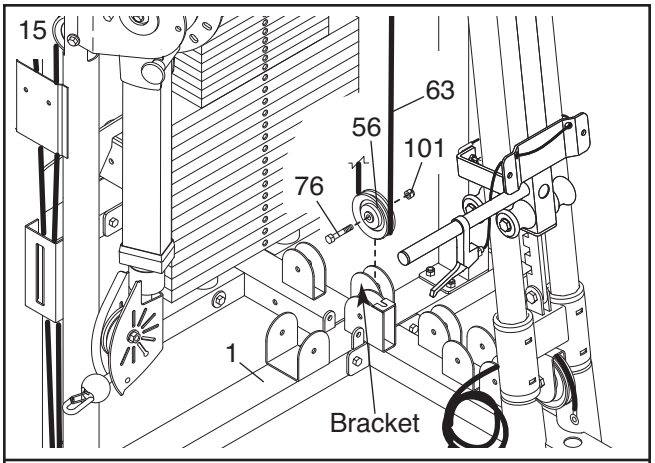
14. **During steps 14 through 46, refer to the CABLE DIAGRAMS on pages 28 and 29 of this manual to verify proper cable routing.**

Locate the High Cable (63), which has a bolt on each end. Attach one end of the Cable to a "U"-bracket (62) with an M6 Nylon Locknut (103). **Thread the Locknut onto the end of the Cable so that two threads show past the Locknut (see the inset drawing).**

Wrap the High Cable (63) over a 3 1/2" Pulley (56). Attach the Pulley to the Top Frame (5) with an M10 x 46mm Button Bolt (76) and an M10 Nylon Locknut (101).

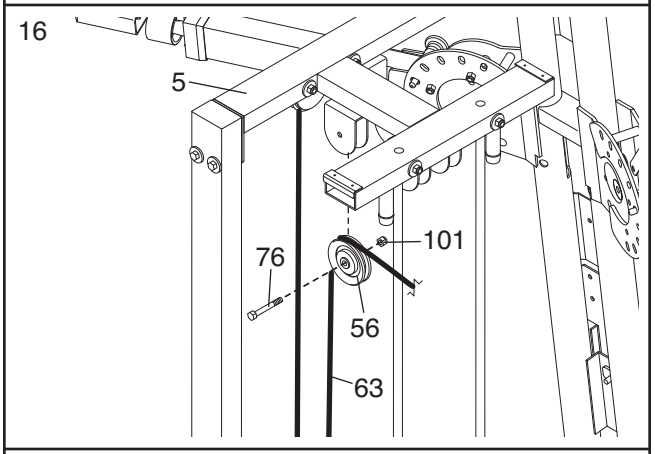


15. Wrap the High Cable (63) under a 3 1/2” Pulley (56). Attach the Pulley to the indicated bracket on the Base (1) with an M10 x 46mm Button Bolt (76) and an M10 Nylon Locknut (101).

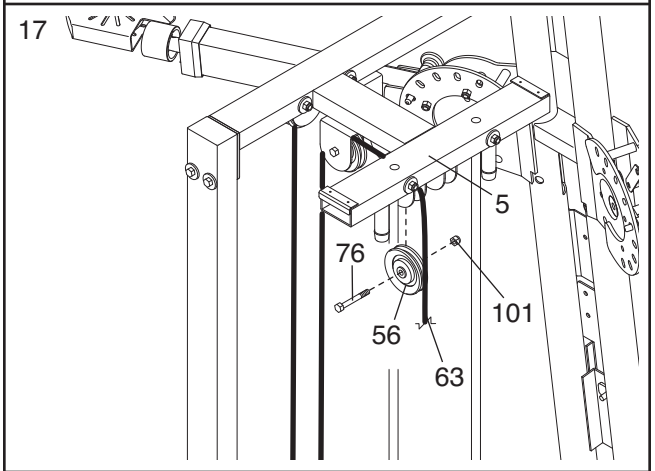


16. **Note: For clarity, the following three steps show the system from the reverse side.**

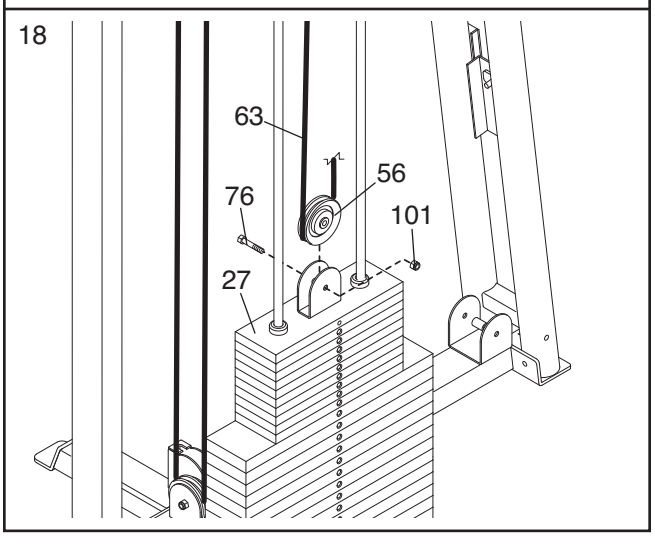
    Wrap the High Cable (63) over a 3 1/2” Pulley (56). Attach the Pulley to the indicated bracket on the Top Frame (5) with an M10 x 46mm Button Bolt (76) and an M10 Nylon Locknut (101).



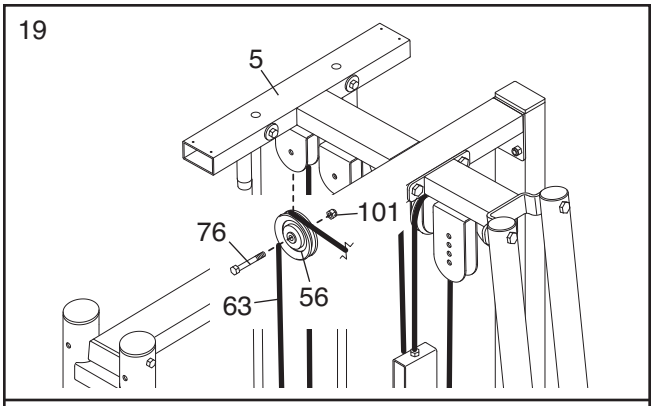
17. Wrap the High Cable (63) over a 3 1/2” Pulley (56). Attach the Pulley to the indicated bracket on the Top Frame (5) with an M10 x 46mm Button Bolt (76) and an M10 Nylon Locknut (101).



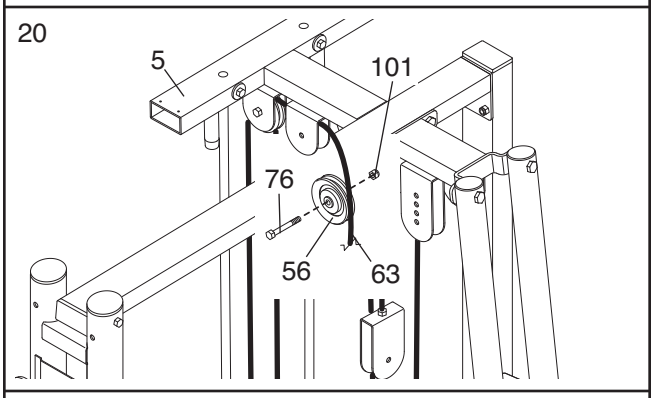
18. Wrap the High Cable (63) under a 3 1/2” Pulley (56) in the direction shown. Attach the Pulley to the bracket on the Top Weight (27) with an M10 x 46mm Button Bolt (76) and an M10 Nylon Locknut (101).



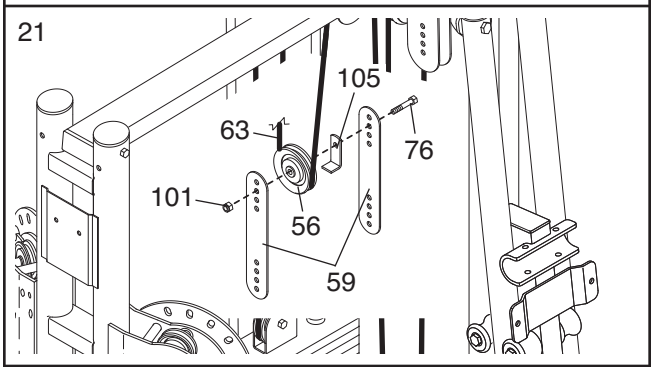
19. Wrap the High Cable (63) over a 3 1/2” Pulley (56). Attach the Pulley to the indicated bracket on the Top Frame (5) with an M10 x 46mm Button Bolt (76) and an M10 Nylon Locknut (101).



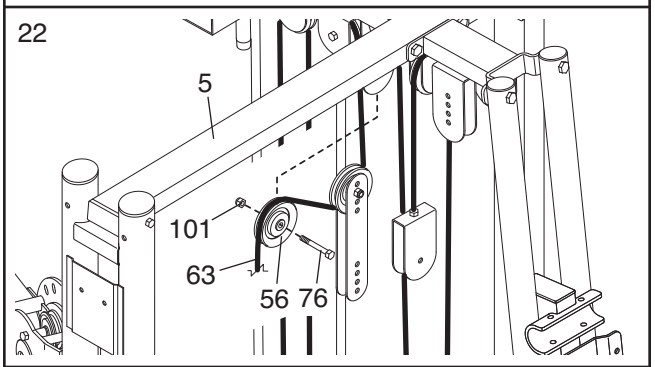
20. Wrap the High Cable (63) over a 3 1/2” Pulley (56). Attach the Pulley to the indicated bracket on the Top Frame (5) with an M10 x 46mm Button Bolt (76) and an M10 Nylon Locknut (101).



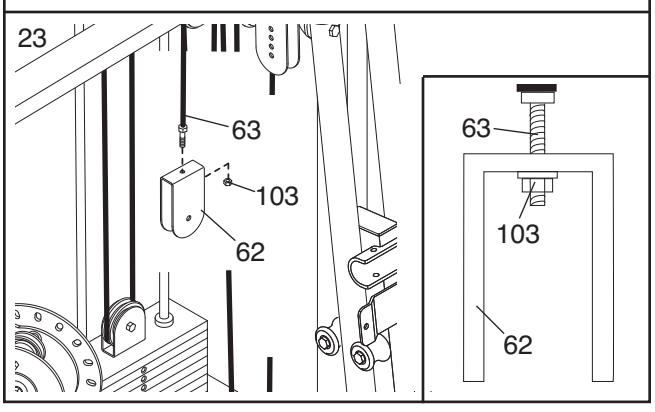
21. Wrap the High Cable (63) under a 3 1/2” Pulley (56). Attach the Pulley and a Cable Trap (105) between the second set of holes from the top of the two Long Pulley Plates (59) with an M10 x 46mm Button Bolt (76) and an M10 Nylon Locknut (101). **Make sure the Cable Trap is turned to hold the Cable in the groove of the Pulley.**



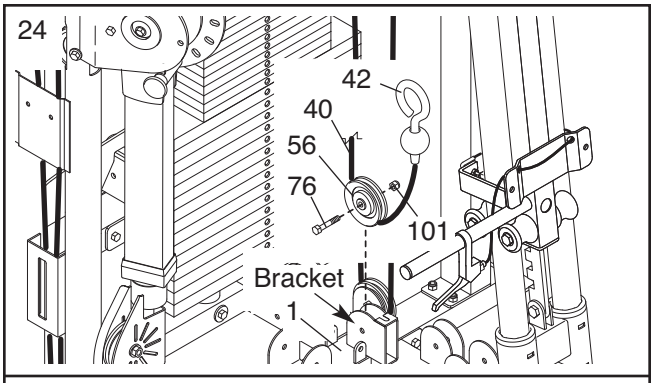
22. Wrap the High Cable (63) over a 3 1/2” Pulley (56). Attach the Pulley to the indicated bracket on the Top Frame (5) with an M10 x 46mm Button Bolt (76) and an M10 Nylon Locknut (101).



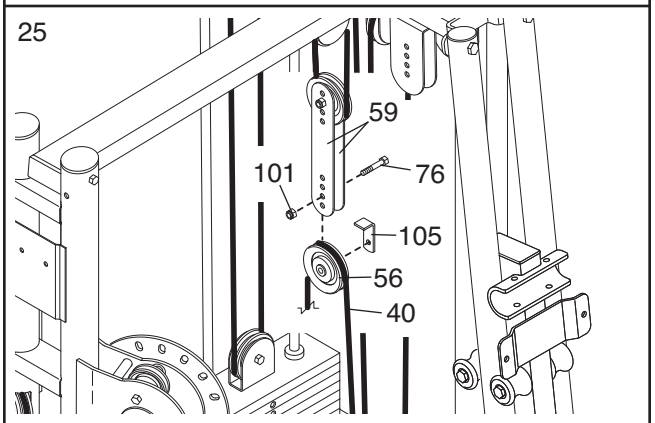
23. Attach an end of the High Cable (63) to the other “U”-bracket (62) with an M6 Nylon Locknut (103). **Thread the Locknut onto the end of the Cable so that two threads show past the Locknut (see the inset drawing).**



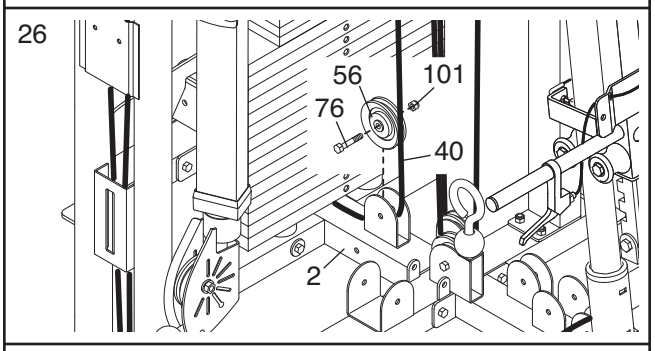
24. **Locate the Low Cable (40),** which has an Eyebolt (42) on one end. Wrap the Cable under a 3 1/2" Pulley (56). Attach the Pulley inside of the indicated bracket on the Base (1) with an M10 x 46mm Button Bolt (76) and an M10 Nylon Locknut (101).



25. Wrap the Low Cable (40) over a 3 1/2" Pulley (56). Attach the Pulley and a Cable Trap (105) between the second set of holes from the bottom of the two Long Pulley Plates (59) with an M10 x 46mm Button Bolt (76) and an M10 Nylon Locknut (101). **Make sure the Cable Trap is turned to hold the Cable in the groove of the Pulley.**



26. Wrap the Low Cable (40) under a 3 1/2" Pulley (56). Attach the Pulley to the Weight Base (2) with an M10 x 46mm Button Bolt (76) and an M10 Nylon Locknut (101).



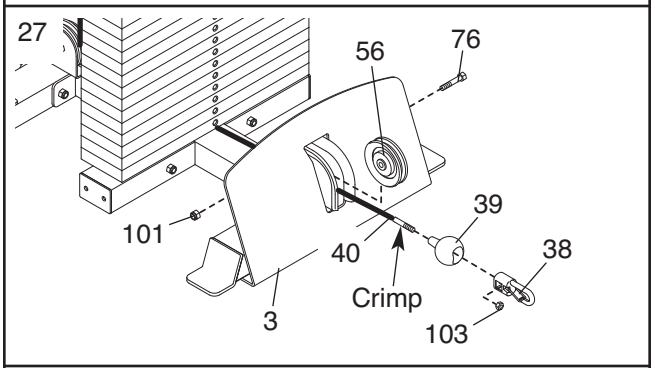
27. **Note: For clarity, this step shows the weight system from the reverse side.**

    Route the Low Cable (40) under the weight stack and through the Foot Plate (3). Attach a 3 1/2" Pulley (56) inside of the Foot Plate with an M10 x 46mm Button Bolt (76) and an M10 Nylon Locknut (101).

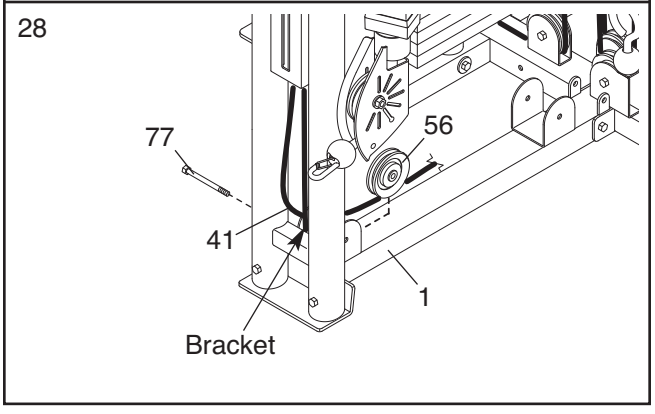
    Slide a Clip Cover (39) onto the Low Cable (40). Hold an M6 Nylon Locknut (103) inside of a Cable Clip (38) and thread the Locknut onto the Low Cable.

    Hold the metal crimp on the Low Cable (40) with a pair of pliers and insert a Phillips screwdriver between the side of the M6 Nylon Locknut (103) and the Cable Clip (38). Use the screwdriver to rotate the Cable Clip and Locknut until two threads of the crimp show past the Locknut.

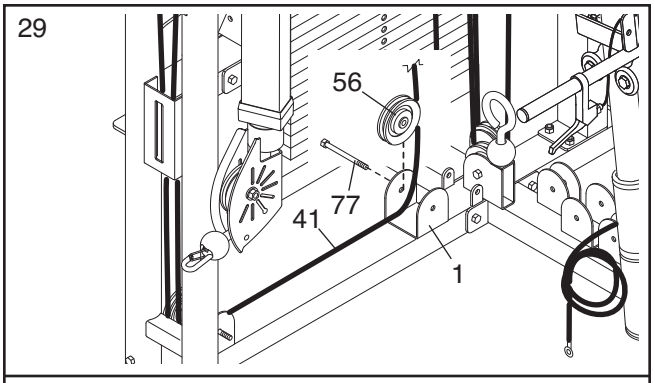
    Slide the Clip Cover (39) over the Cable Clip (38).



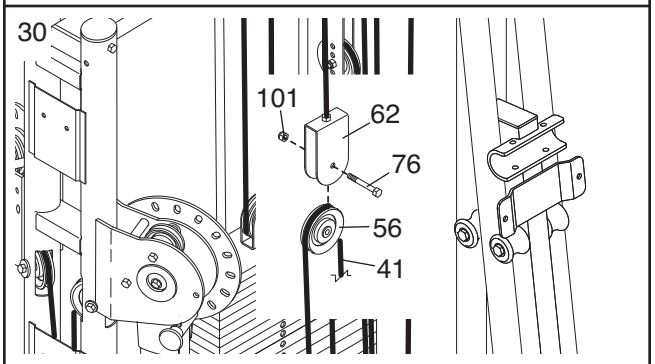
28. **Locate the right Press Cable (41).** Route the Cable under a 3 1/2" Pulley (56). Attach the Pulley to the indicated side of the bracket on the Base (1) with an M10 x 96mm Button Bolt (77). **Do not thread a locknut onto the Bolt yet.**



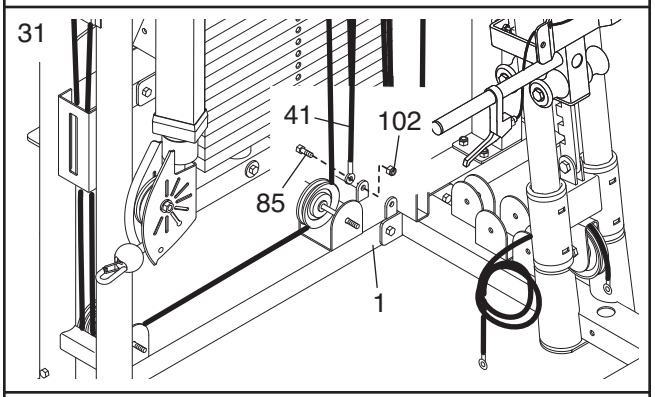
29. Route the right Press Cable (41) under a 3 1/2" Pulley (56). Attach the Pulley to the Base (1) with an M10 x 96mm Button Bolt (77). **Do not thread a locknut onto the Bolt yet.**



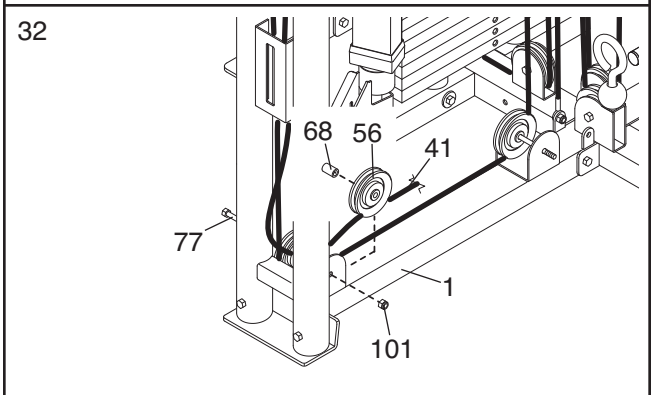
30. Wrap the Press Cable (41) over a 3 1/2" Pulley (56). Attach the Pulley to the right "U"-bracket (62) with an M10 x 46mm Button Bolt (76) and an M10 Nylon Locknut (101).



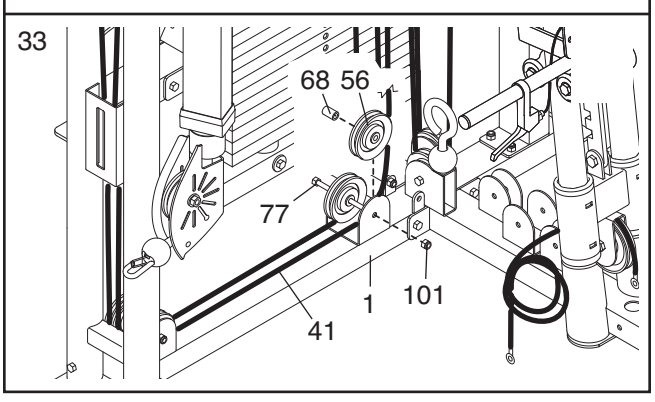
31. Attach the end of the right Press Cable (41) to the indicated bracket on the Base (1) with an M8 x 19mm Button Shoulder Bolt (85) and an M8 Nylon Locknut (102).



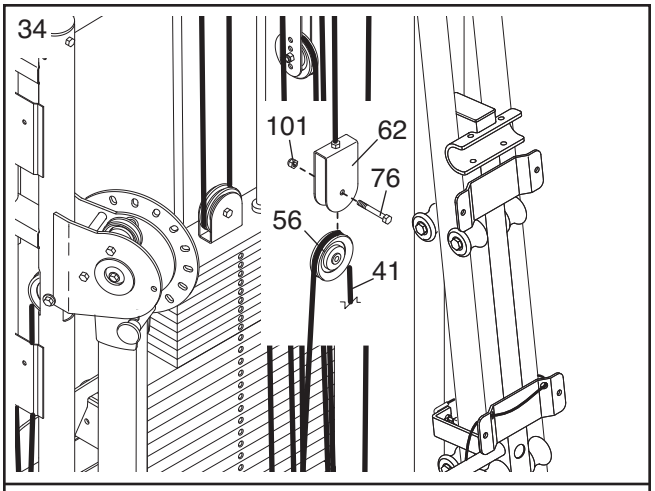
32. **Locate the left Press Cable (41).** Route the Cable under a 3 1/2" Pulley (56). Attach a 25mm Spacer (68) and the Pulley to the Base (1) with the M10 x 96mm Button Bolt (77) used in step 28, and an M10 Nylon Locknut (101).



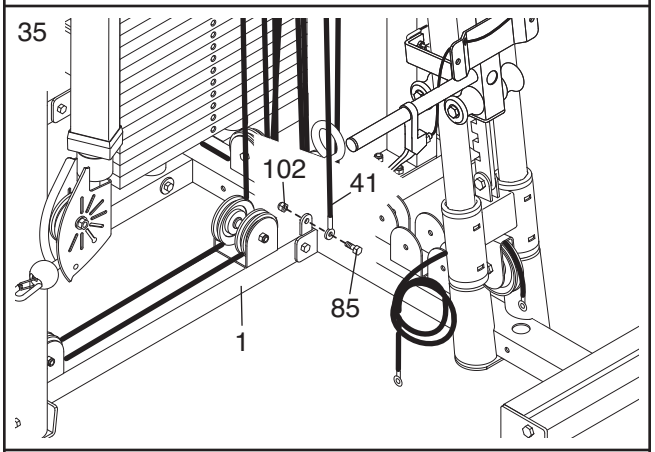
33. Route the Press Cable (41) under a 3 1/2" Pulley (56). Attach a 25mm Spacer (68) and the Pulley to the Base (1) with the M10 x 96mm Button Bolt (77) used in step 29, and an M10 Nylon Locknut (101).



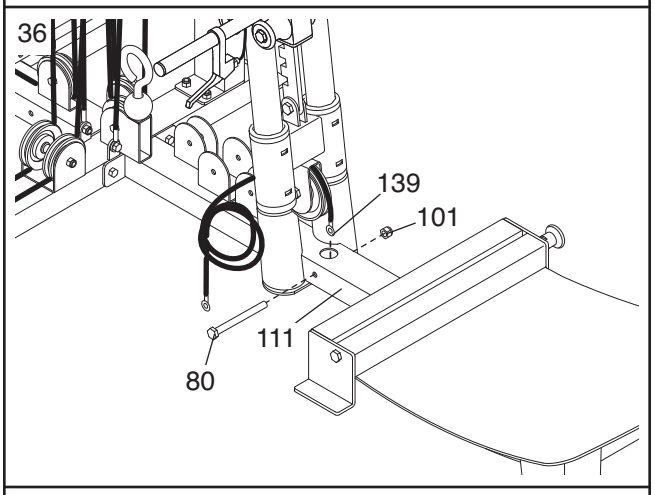
34. Wrap the Press Cable (41) over a 3 1/2" Pulley (56). Attach the Pulley to the left "U"-bracket (62) with an M10 x 46mm Button Bolt (76) and an M10 Nylon Locknut (101).



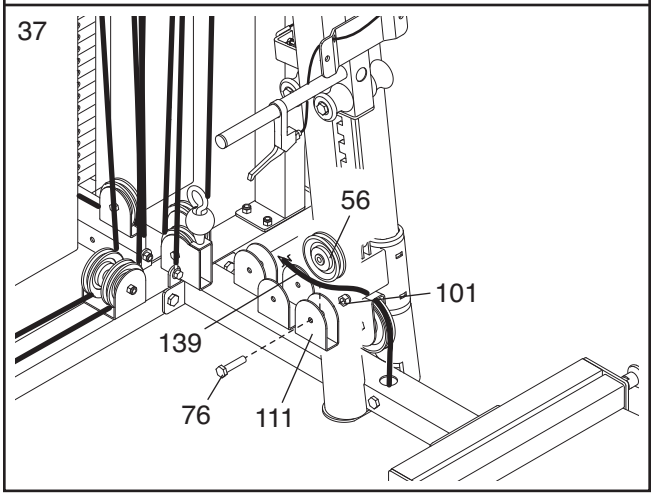
35. Attach the end of the Press Cable (41) to the indicated bracket on the Base (1) with an M8 x 19mm Button Shoulder Bolt (85) and an M8 Nylon Locknut (102).



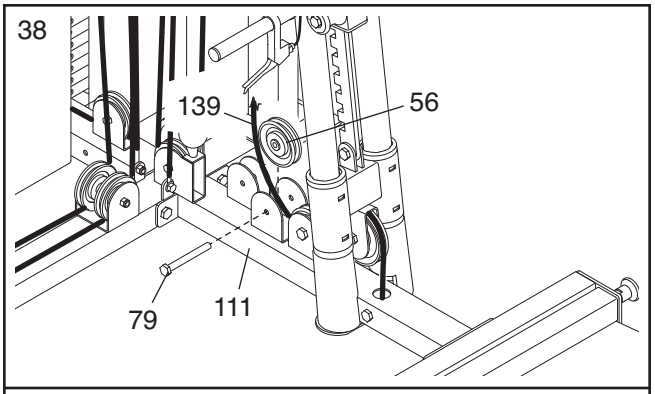
36. **Remove the ties from the Hack Squat Cable (139).** Attach the indicated end of the Cable to the Hack Squat Base (111) with an M10 x 88mm Button Bolt (80) and an M10 Nylon Locknut (101).



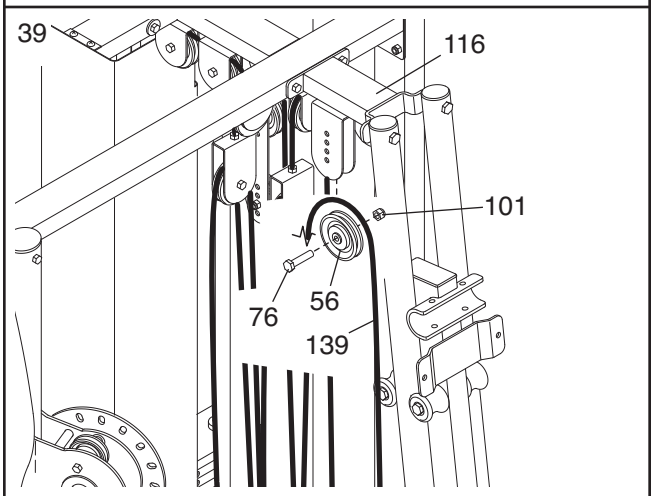
37. Wrap the Hack Squat Cable (139) under a 3 1/2" Pulley (56). Attach the Pulley to the indicated bracket on the Hack Squat Base (111) with an M10 x 46mm Button Bolt (76) and an M10 Nylon Locknut (101).



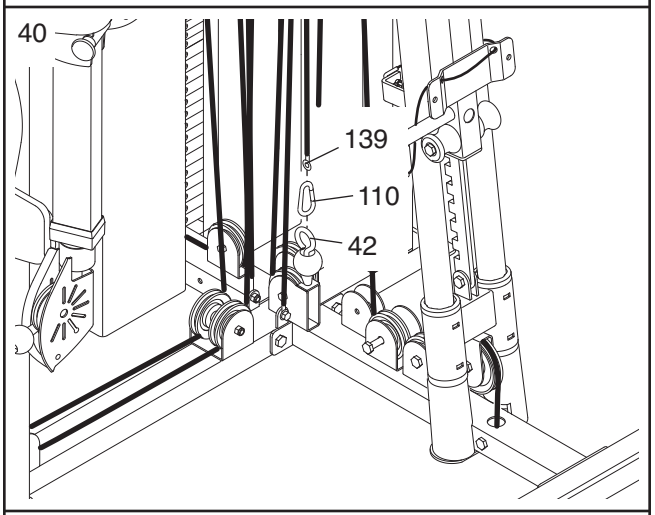
38. Wrap the Hack Squat Cable (139) under a 3 1/2" Pulley (56). Attach the Pulley to the indicated bracket on the Hack Squat Base (111) with an M10 x 78mm Button Bolt (79). **Do not attach a locknut yet.**



39. Wrap the Hack Squat Cable (139) over a 3 1/2" Pulley (56) in the direction shown. Attach the Pulley to the second set of holes from the bottom of the indicated bracket on the Hack Squat Top Frame (116) with an M10 x 46mm Button Bolt (76) and an M10 Nylon Locknut (101).

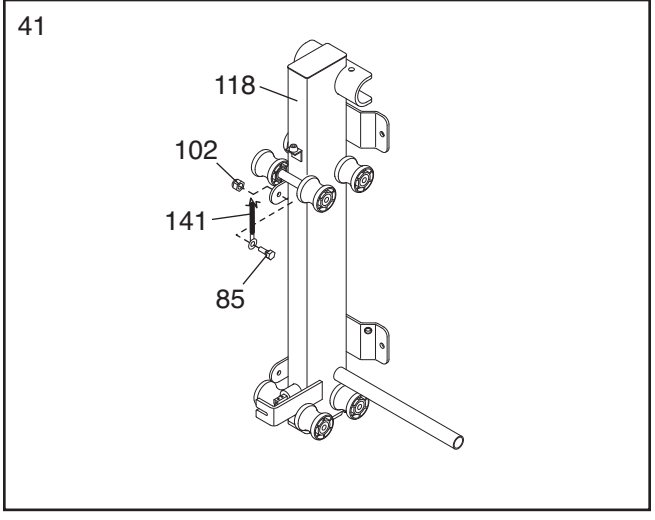


40. Attach the Hack Squat Cable (139) to the Eyebolt (42) with a Spring Clip (110).

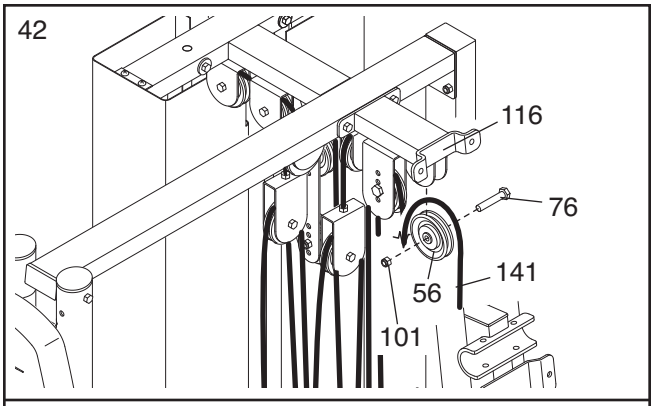


41. **Note: For clarity, the Hack Squat Backrest Frame (118) is shown from the rear and separate.**

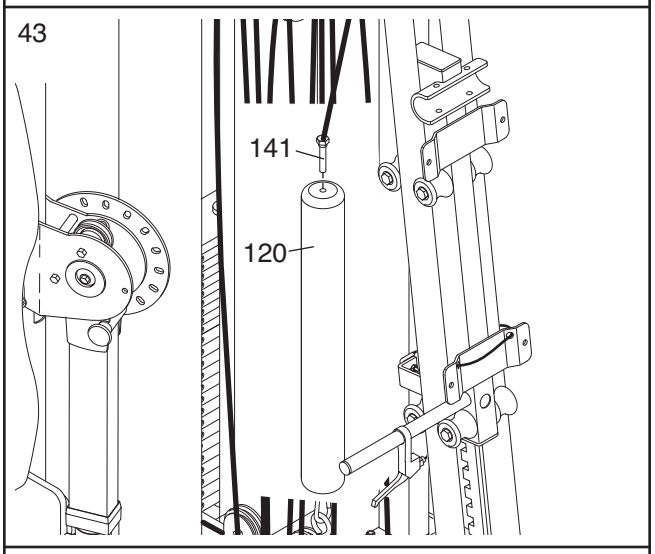
    Locate the Short Cable (141). Attach the Cable to the Hack Squat Backrest Frame (118) with an M8 x 19mm Button Shoulder Bolt (85) and an M8 Nylon Locknut (102).



42. Wrap the Short Cable (141) over a 3 1/2" Pulley (56). Attach the Pulley to the indicated bracket on the Hack Squat Top Frame (116) with an M10 x 46mm Button Bolt (76) and an M10 Nylon Locknut (101).

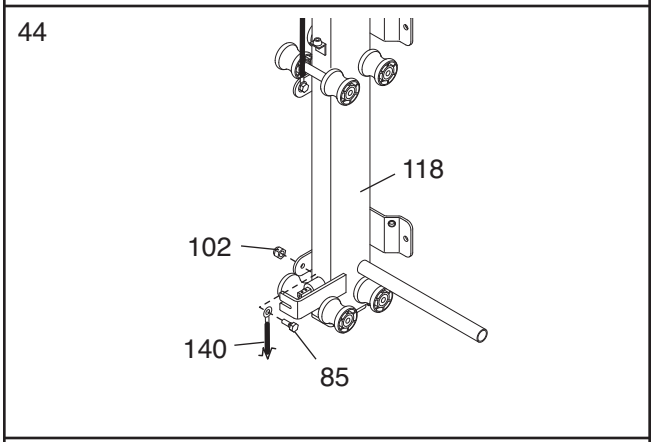


43. Have a second person hold the Counterweight (120). Thread the Short Cable (141) **halfway** into one end of the Counterweight.

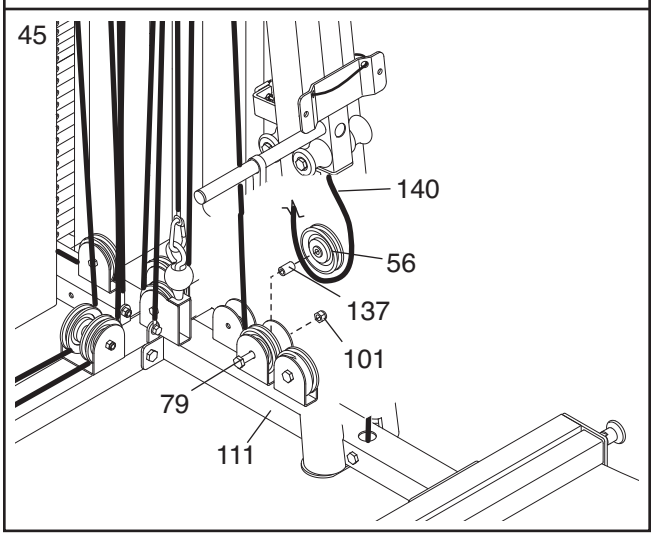


44. **Note: For clarity, the Hack Squat Backrest Frame (8) is shown from the rear and separate.**

    Locate the Medium Cable (140). Attach the Cable to the Hack Squat Backrest Frame (118) with an M8 x 19mm Button Shoulder Bolt (85) and an M8 Nylon Locknut (102).

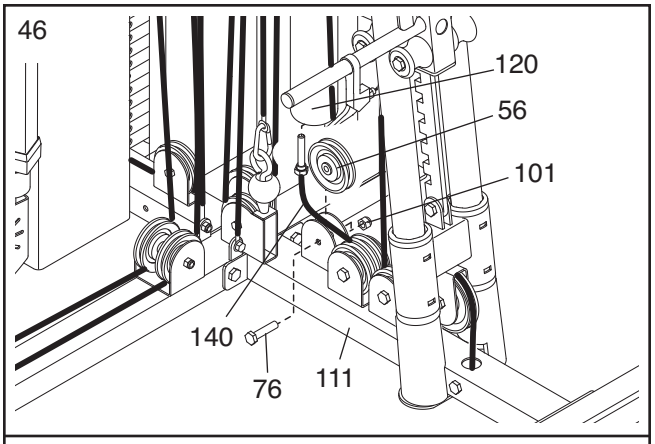


45. Wrap the Medium Cable (140) under a 3 1/2" Pulley (56). Attach a 6mm Spacer (137) and the Pulley to the Hack Squat Base (111) with the M10 x 78mm Button Bolt (79) used in step 38, and an M10 Nylon Locknut (101).



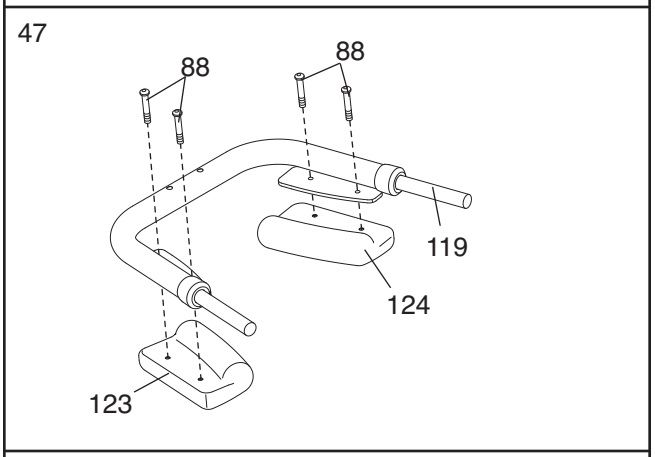
46. Wrap the Medium Cable (140) under a 3 1/2" Pulley (56). Attach the Pulley to the indicated bracket on the Hack Squat Base (111) with an M10 x 46mm Button Bolt (76) and an M10 Nylon Locknut (101).

    Attach the Medium Cable (140) to the bottom of the Counterweight (120). **Tighten the Medium Cable and Short Cable (141) into the Counterweight until all of the slack is removed.**

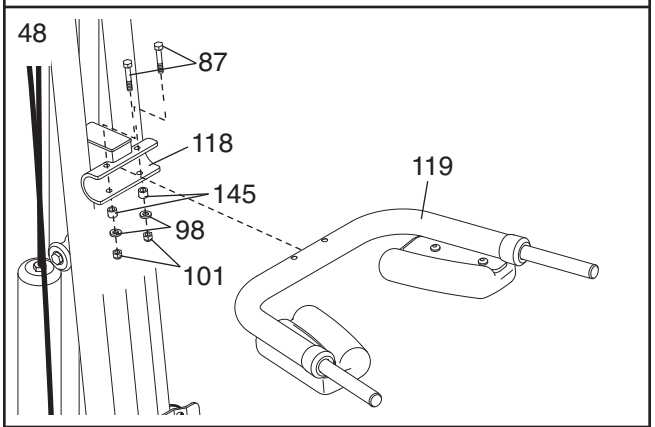


Seat Assembly

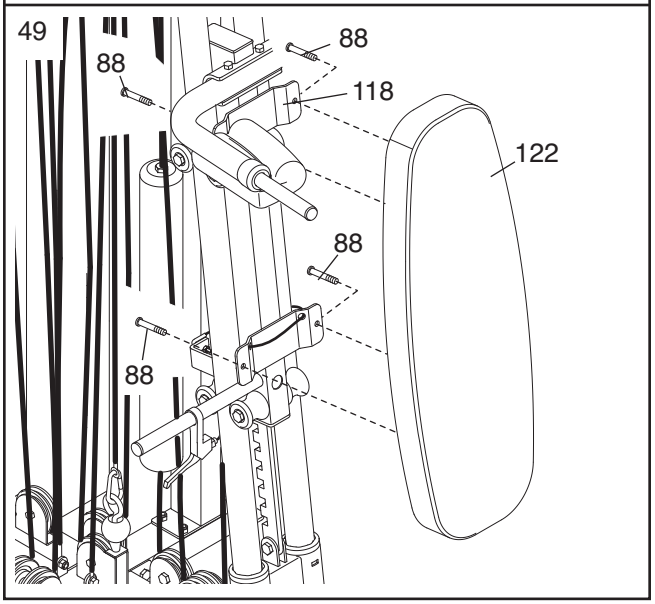
47. Attach the Right Shoulder Pad (123) to the Hack Squat Arm (119) with two M8 x 19mm Button Screws (88). Repeat with the Left Shoulder Pad (124).



48. Attach the Hack Squat Arm (119) to the Hack Squat Backrest Frame (118) with two M10 x 70mm Button Bolts (87), two 6mm Black Spacers (145), two M10 Washers (98), and two M10 Nylon Locknuts (101).

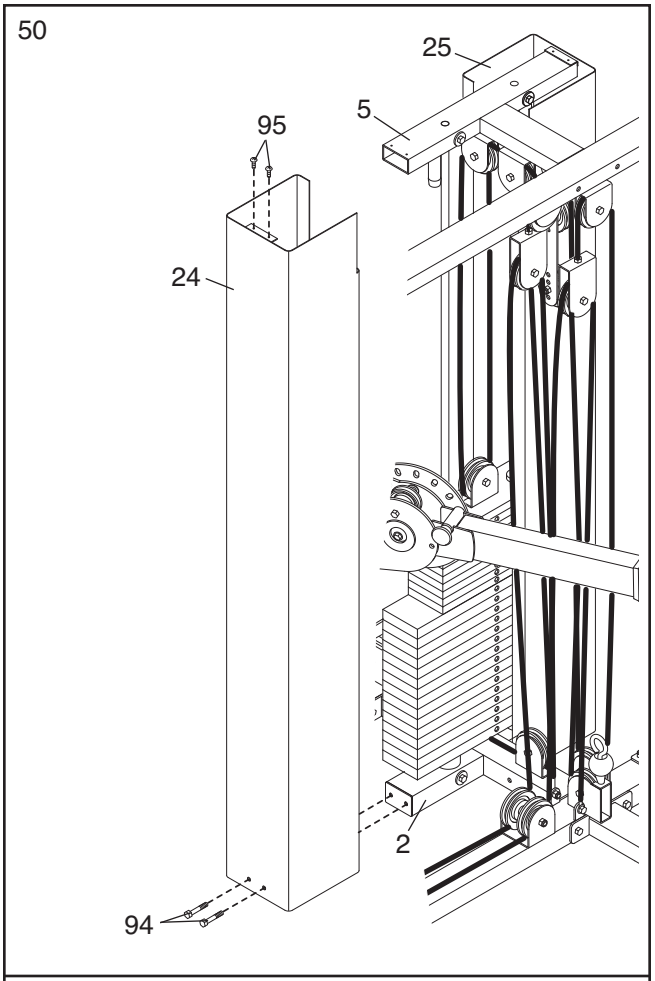


49. Attach the Hack Squat Backrest (122) to the Hack Squat Backrest Frame (118) with four M8 x 19mm Button Screws (88).



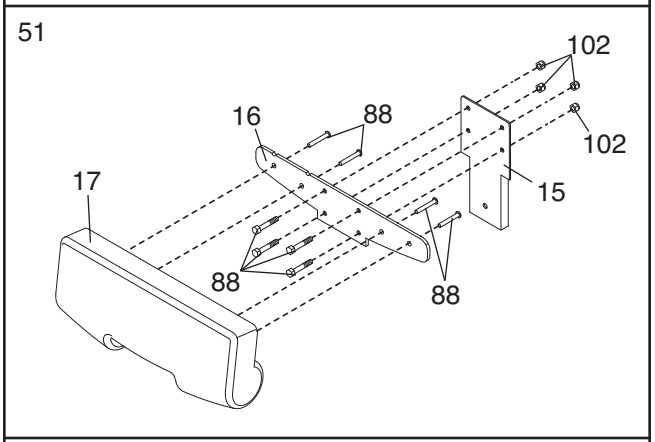
50. Attach the Front Shroud (24) to the Top Frame (5) with two M4 x 16mm Screws (95). Attach the Front Shroud to the Weight Base (2) with two M10 x 25mm Button Bolts (94).

Attach the Rear Shroud (25) in the same manner.

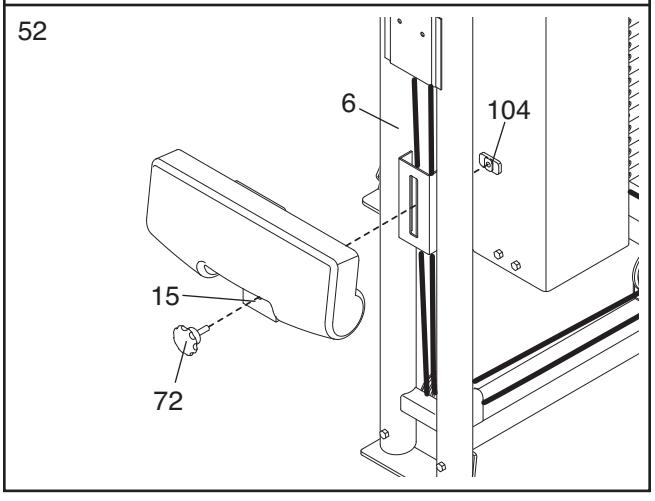


51. Attach the Pad Plate (16) to the Pad Bracket (15) with four M8 x 19mm Button Screws (88) and four M8 Nylon Locknuts (102).

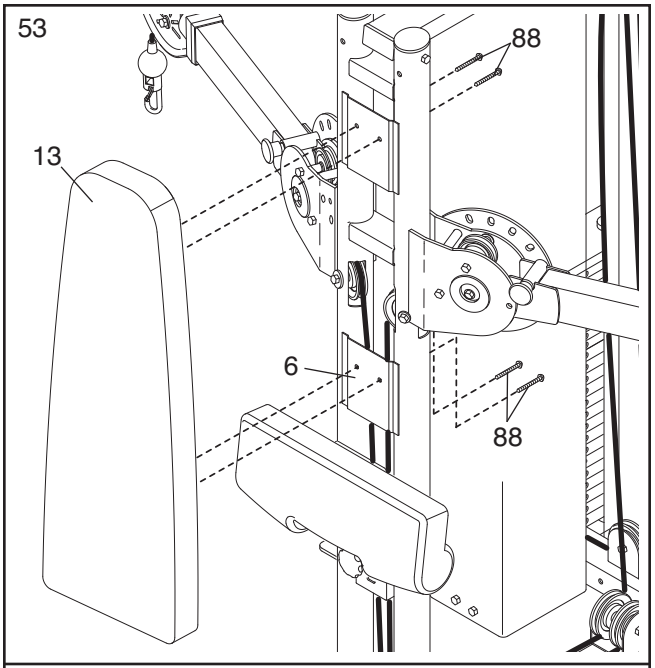
Attach the Pad (17) to the Pad Plate (16) with four M8 x 19mm Button Screws (88).



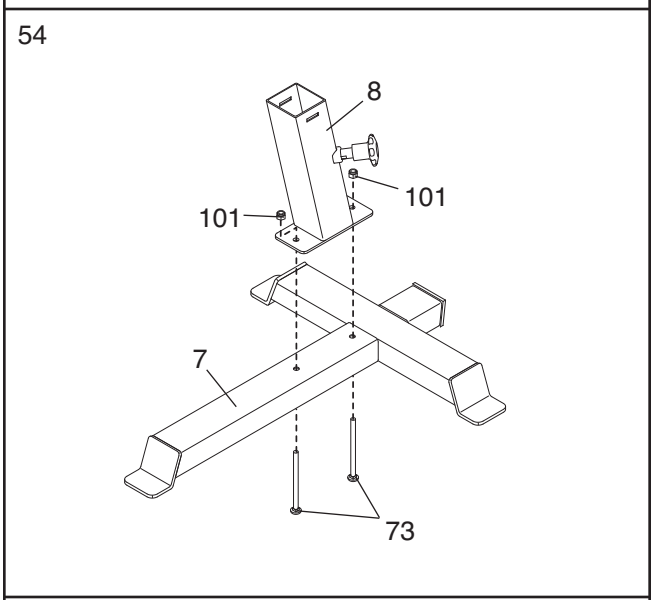
52. Attach the Pad Bracket (15) to the Backrest Frame (6) with the Knob (72) and the Nut Plate (104). **Make sure the Nut Plate is oriented as shown.**



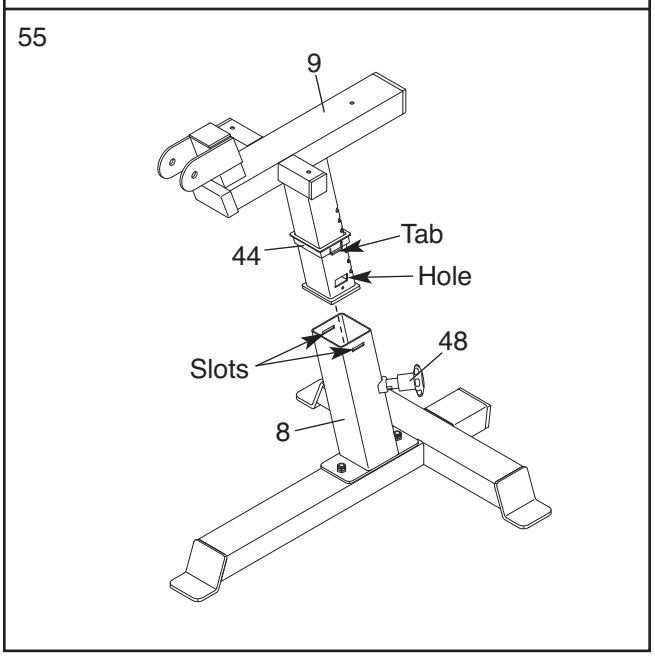
53. Attach the Backrest (13) to the Backrest Frame (6) with four M8 x 19mm Button Screws (88).



54. Attach the Seat Upright (8) to the Seat Base (7) with two M10 x 68mm Carriage Bolts (73) and two M10 Nylon Locknuts (101).

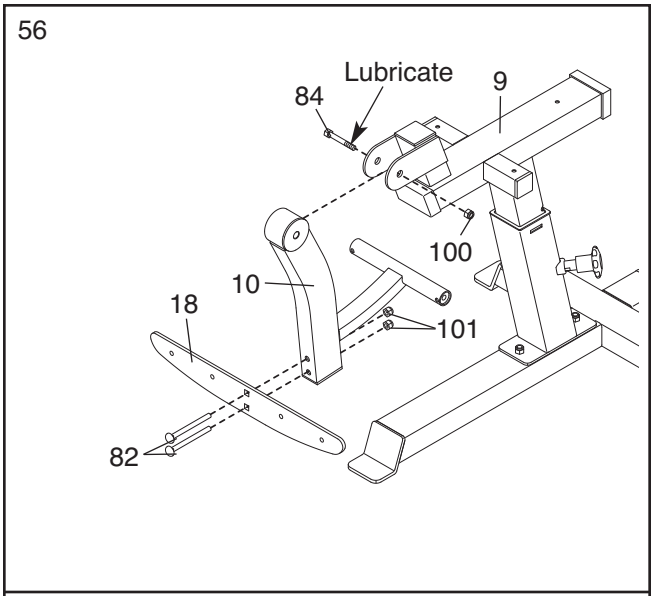


55. Have one person hold the tabs on the Seat Frame Bushing (44) inside of the holes in the Seat Frame (9). Pull the Seat Knob (48) out as far as it will go and slide the Seat Frame into the Seat Upright (8). Press the Seat Frame Bushing into the top of the Seat Upright so that the tabs snap into the slots in the Upright. Engage the Knob into the Seat Frame. **Be careful not to pinch your fingers as you complete this step.**

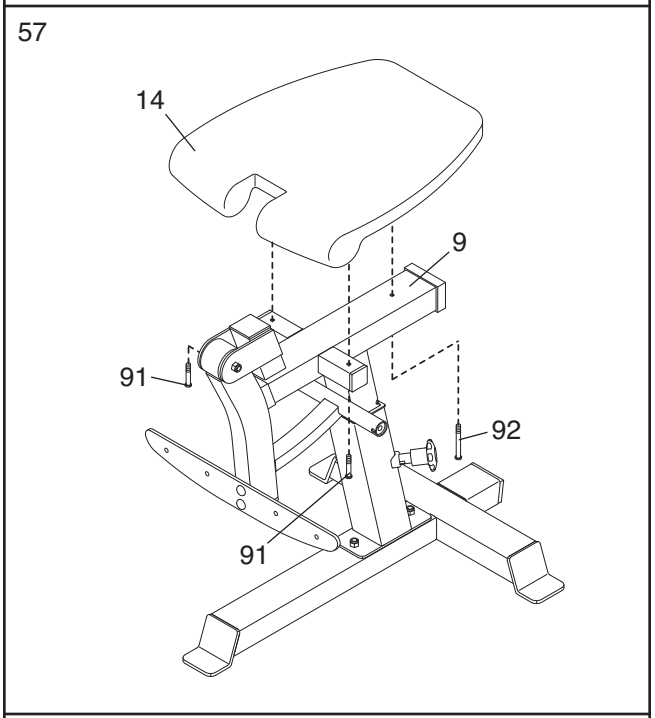


56. Attach the Leg Developer Plate (18) to the Leg Developer (10) with two M10 x 82mm Carriage Bolts (82) and two M10 Nylon Locknuts (101).

Lubricate the 1/2" x 76mm Button Bolt (84) with grease. Attach the Leg Developer (10) to the Seat Frame (9) with the Bolt and a 1/2" Nylon Locknut (100). **Do not overtighten the Locknut; the Leg Developer must be able to pivot easily.**

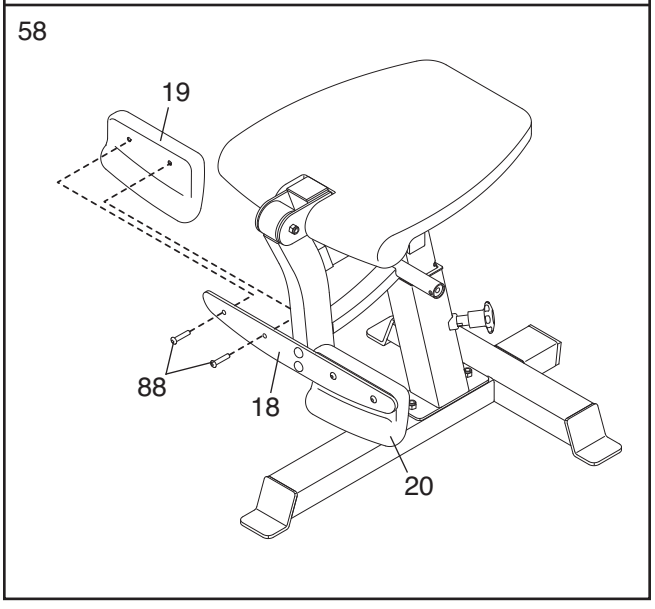


57. Attach the Seat (14) to the Seat Frame (9) with two M6 x 50mm Button Screws (91) and an M6 x 63mm Button Screw (92).



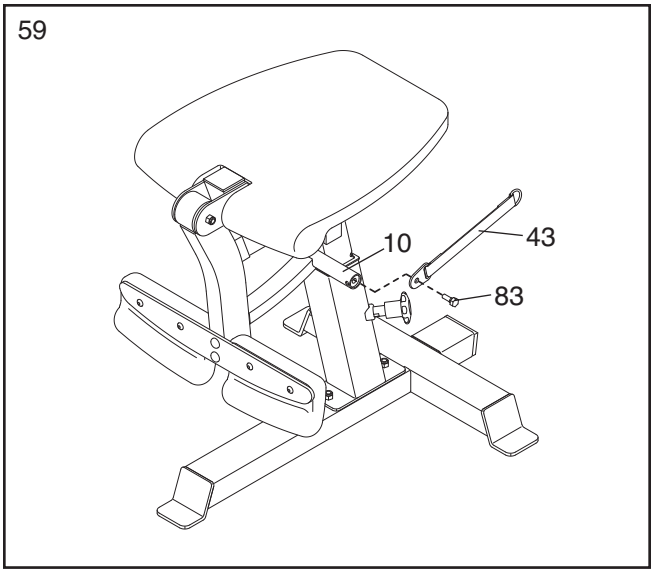
58. Attach the Right Leg Pad (19) to the Leg Developer Plate (18) with two M8 x 19mm Button Screws (88).

Attach the Left Leg Pad (20) in the same manner.



59. Attach a Leg Developer Strap (43) to the Leg Developer (10) with an M8 x 12mm Button Shoulder Screw (83).

Attach the other Leg Developer Strap (43) in the same manner.



60. Make sure that all parts have been properly tightened. The use of the remaining parts will be explained in ADJUSTMENTS, beginning on the following page.

Before using the weight system, pull each cable a few times to make sure that the cables move smoothly over the pulleys. If one of the cables does not move smoothly, find and correct the problem. **IMPORTANT: If the cables are not properly installed, they may be damaged when heavy weight is used. See the CABLE DIAGRAMS on pages 28 and 29 of this manual for proper cable routing. If there is any slack in the cables, you will need to remove the slack by tightening the cables. See TIGHTENING THE CABLES, starting on page 25 in the ADJUSTMENT section.**

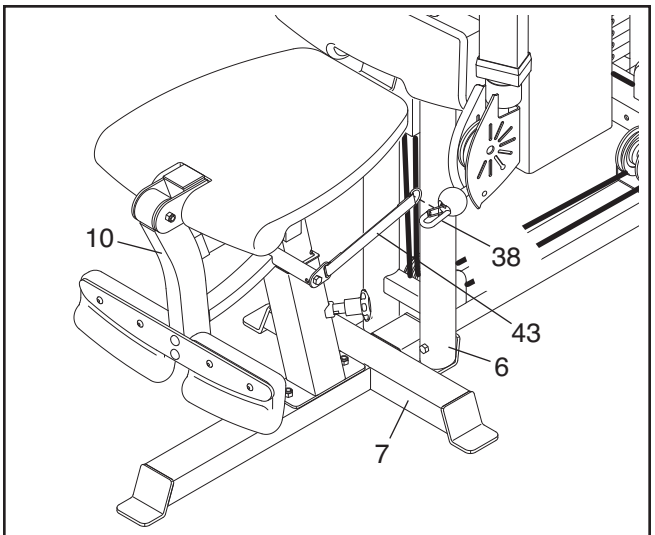
ADJUSTMENTS

This section explains how to adjust the weight system. See the EXERCISE GUIDELINES on page 30 for important information about how to get the most benefit from your exercise program. Also, refer to the accompanying exercise guide to see the correct form for each exercise.

Make sure all parts are properly tightened each time the weight system is used. Replace any worn parts immediately. The weight system can be cleaned with a damp cloth and a mild, non-abrasive detergent. Do not use solvents.

ATTACHING THE LEG DEVELOPER

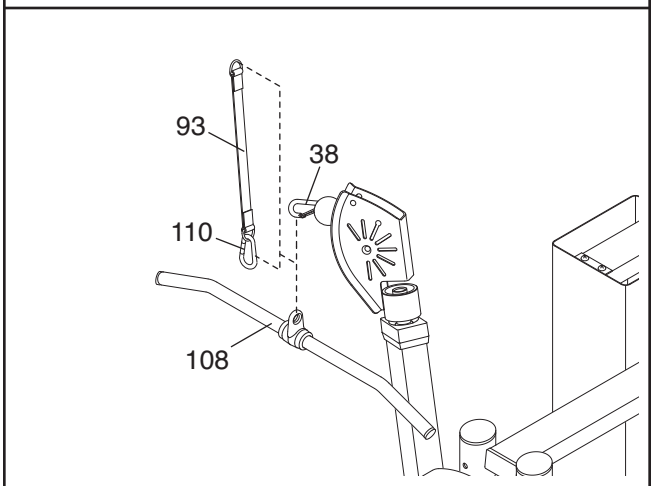
To use the Leg Developer (10), position the Seat Base (7) between the sides of the Backrest Frame (6) as shown. Attach one of the Leg Developer Straps (43) to a Cable Clip (38). **Attach the other Leg Developer Strap in the same manner.**



ATTACHING ACCESSORIES

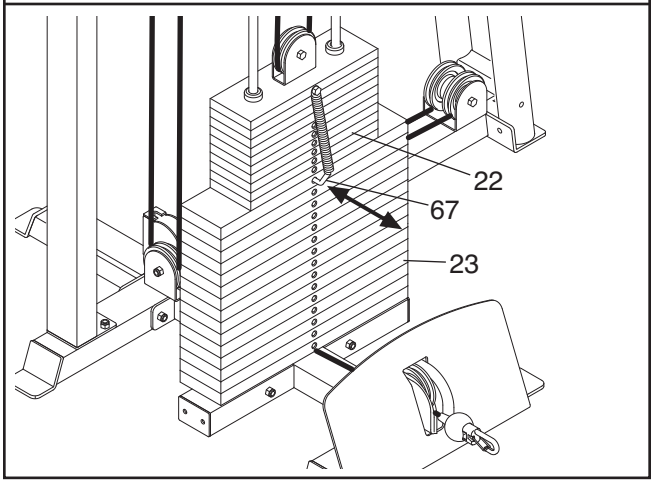
Attach the Curl Bar (108) to a Cable Clip (38). For some exercises, the Extension Strap (93) should be attached between the Curl Bar and the Cable Clip with a Spring Clip (110).

The other accessories (not shown) can be attached to a Cable Clip (38) in the same manner.



CHANGING THE WEIGHT SETTING

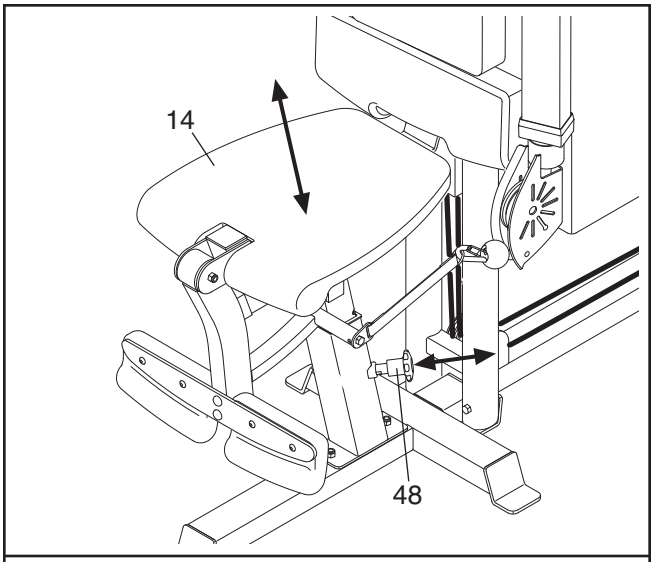
To change the weight setting of the weight stack, insert the Weight Pin w/Tether (67) under the desired Weight (22, 23). Be sure to insert the Weight Pin until the bent end of the Weight Pin is touching the Weights, and turn the bent end downward. The weight setting of the weight stack can be changed from 10 pounds to 400 pounds, in increments of 10 and 20 pounds. **Note: Due to the cables and pulleys, the actual amount of resistance at each exercise station may vary from the weight setting. Use the WEIGHT RESISTANCE CHART on page 27 to find the actual amount of resistance at each weight station.**



ADJUSTING THE SEAT

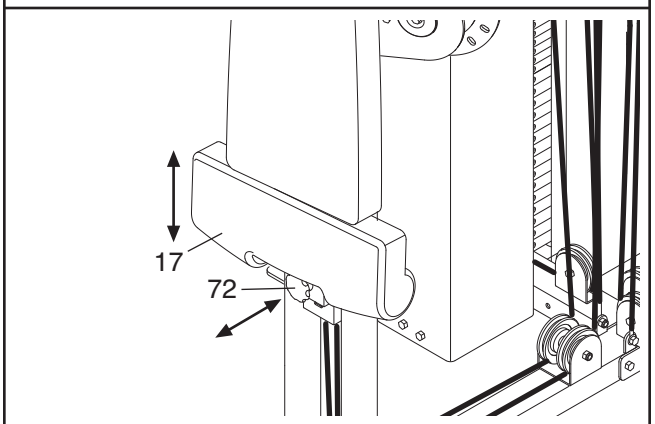
To adjust the height of the Seat (14), loosen the Seat Knob (48) and pull it out as far as it will go. Position the Seat at the desired height and engage the Seat Knob into an adjustment hole in the Seat Frame (not shown). Fully tighten the Seat Knob.

⚠WARNING: Make sure the Seat Knob (48) fully engages the Seat Frame (not shown) before using the Seat (14).



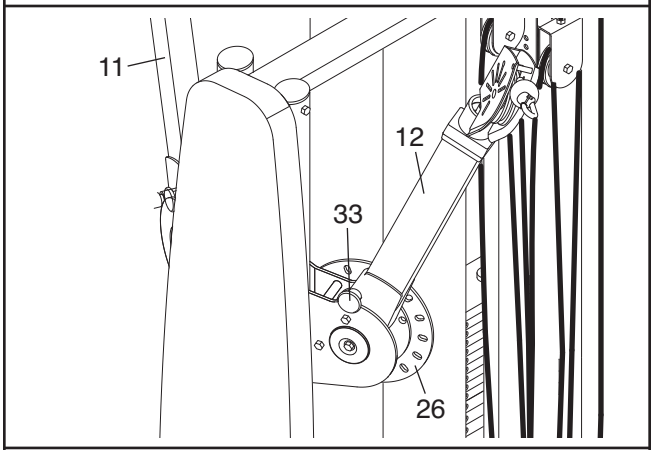
ADJUSTING THE PAD

To adjust the position of the Pad (17), loosen the Knob (72). Move the Pad to the desired position and retighten the Knob.



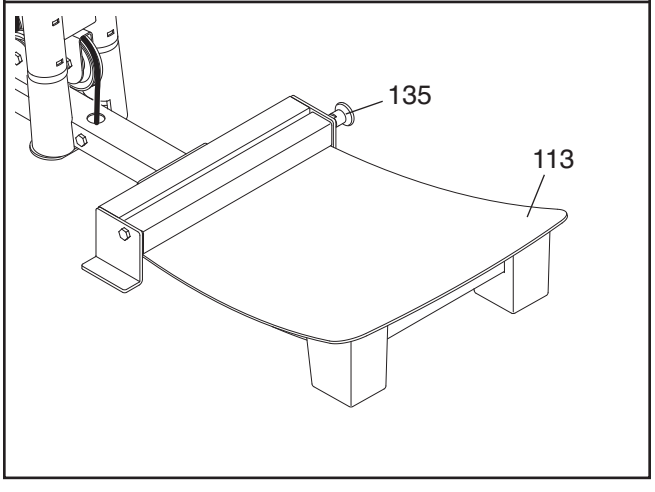
ADJUSTING THE PRESS ARMS

To adjust the position of a Press Arm (11, 12), lift on the Press Arm, pull the Press Arm Knob (33) out, and move the Press Arm to the desired position. Reengage the Press Arm Knob into the Adjustment Plates (26).



STORING THE HACK SQUAT FOOT PLATE

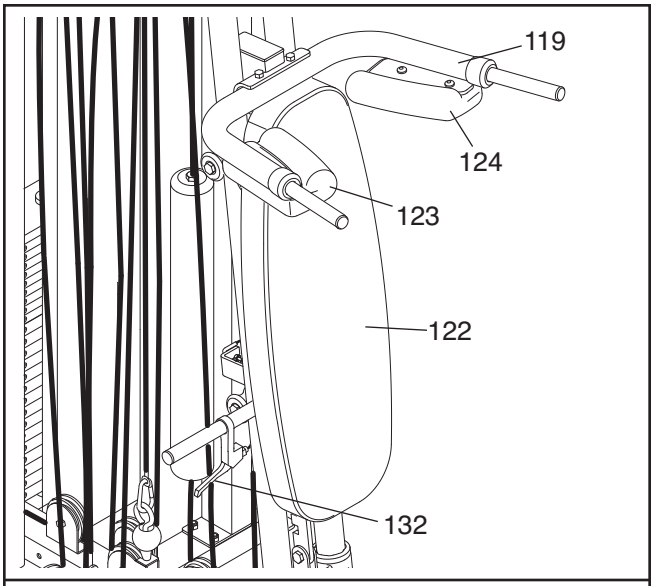
To store the Hack Squat Foot Plate (113), pull the Adjustment Pin Assembly (135) and lift on the Hack Squat Foot Plate. Reengage the Adjustment Pin Assembly into the Hack Squat Foot Plate.



ADJUSTING THE HACK SQUAT ARM

To adjust the height of the Hack Squat Arm (119), stand with your shoulders under the Shoulder Pads (123, 124). Squeeze the Release Handle (132) and move the Hack Squat Arm to the desired position. Let go of the Release Handle and allow the Backrest Adjustment Pin (not shown) to engage the Adjustment Bar (not shown).

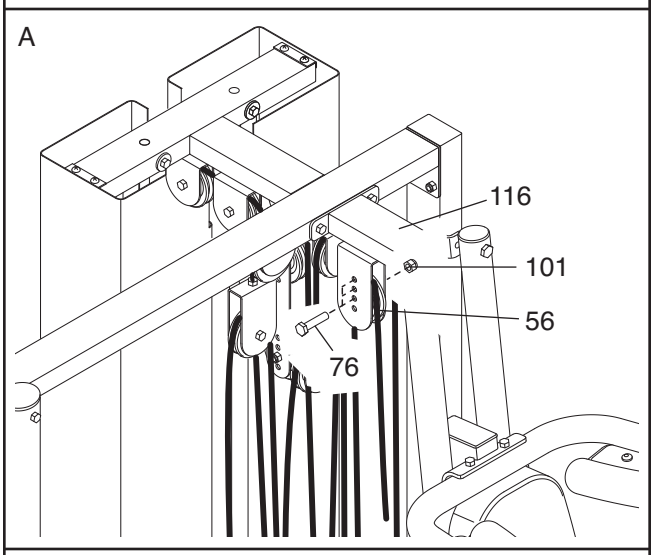
⚠WARNING: Do not lower the Hack Squat Arm (119) to a position that causes your lower back to move away from the Hack Squat Backrest (122).



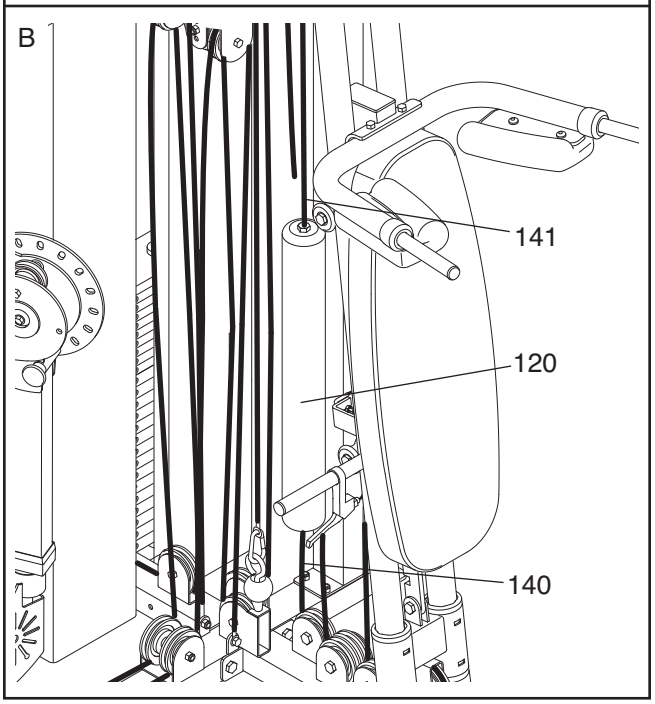
TIGHTENING THE CABLES

Woven cable, the type of cable used on the weight system, can stretch slightly when it is first used. If there is slack in the cables before resistance is felt, the cables should be tightened. Make sure that the cables are not too tight, or the Top Weight (27) will be lifted off the weight stack.

See drawing A. Slack can be removed from the cables by moving the 3 1/2" Pulley (56) to a higher set of holes in the bracket on the Hack Squat Top Frame (116). Remove the M10 Nylon Locknut (101) and the M10 x 46mm Button Bolt (76) from the Pulley and the Top Frame bracket. Reattach the Pulley with the Bolt and Locknut.

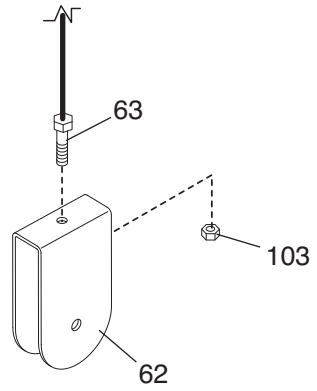


See drawing B. Additional Slack can be removed by tightening the Medium and Short Cables (140, 141) into the Counterweight (120).



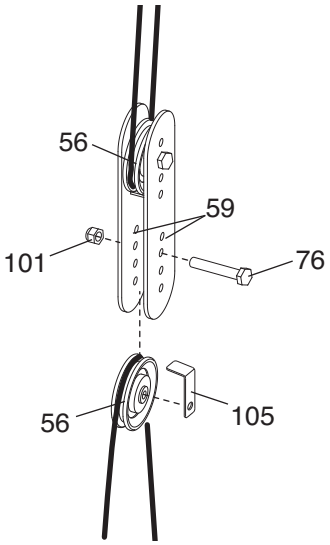
See drawing C. Slack can be removed from the cables by tightening the M6 Nylon Locknut (103) on either end of the High Cable (63) inside of a “U”-bracket (62). Note: It may be necessary to remove the 3 1/2” Pulley (not shown) from the “U”-bracket to do this.

C



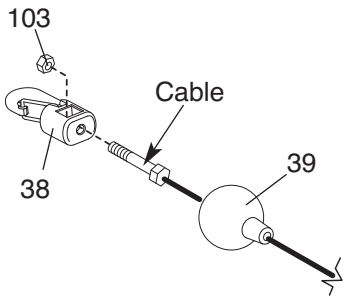
See drawing D. Additional slack can be removed by moving one of the 3 1/2” Pulleys (56) between the two Long Pulley Plates (59) to a set of holes closer to the middle of the Pulley Plates. Remove the M10 Nylon Locknut (101) and the M10 x 46mm Button Bolt (76) from the Cable Trap (105), the Pulley, and the Pulley Plates. Reattach the Pulley and the Cable Trap with the Bolt and Locknut. **Make sure that the Cable Trap is positioned to hold the cable in place and that the cable and Pulley move smoothly.**

D



See drawing E. Additional slack can be removed from the cables by tightening one of the cables into the M6 Nylon Locknut (103) inside of a Cable Clip (38). To do this, pull the Clip Cover (39) back and use a pair of pliers to tighten the Locknut. Replace the Clip Cover.

E



Note: If a cable tends to slip off the pulleys often, the cable may have become twisted. Remove the cable and re-install it.

If the cables need to be replaced, see ORDERING REPLACEMENT PARTS on the back cover of this manual.

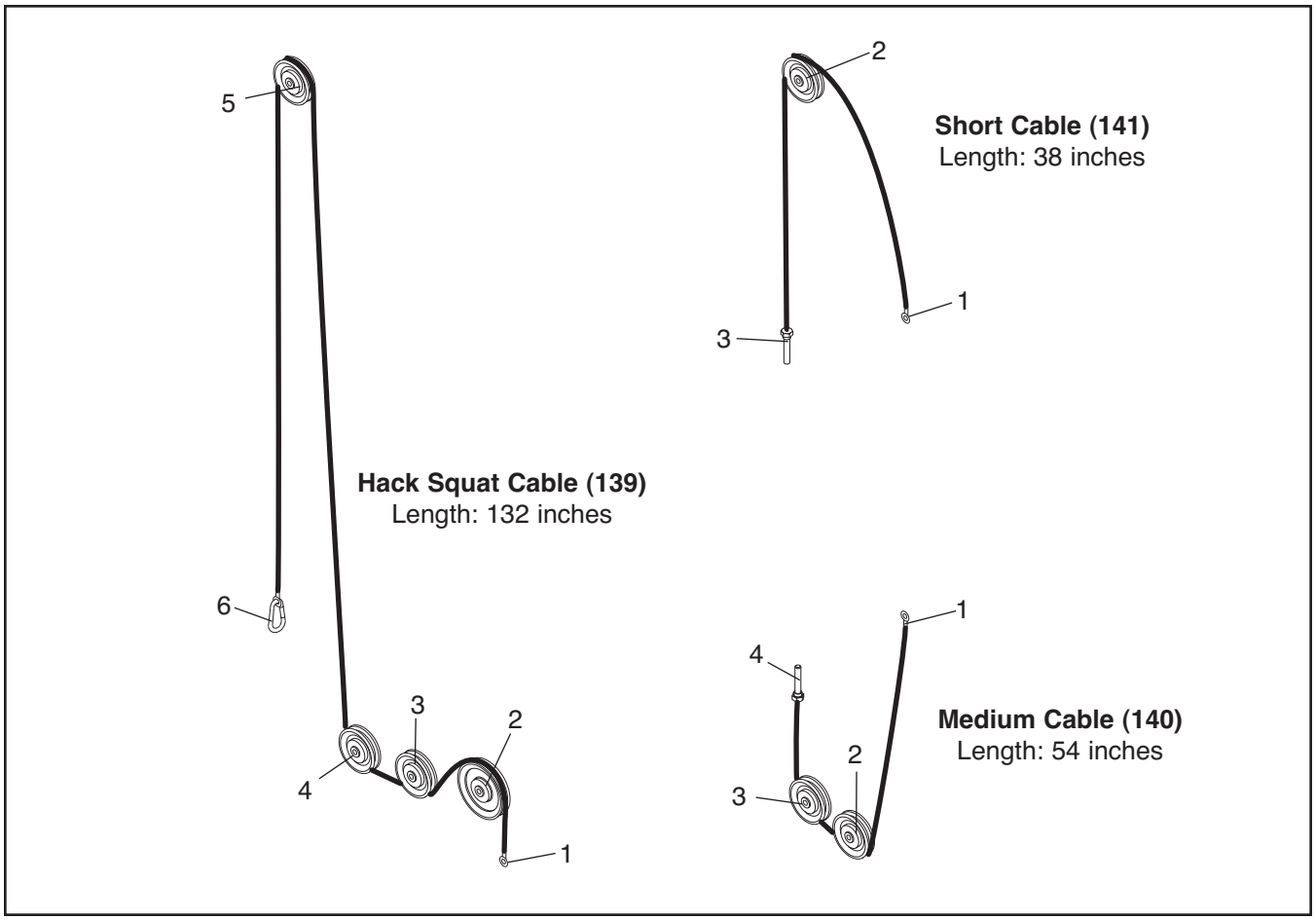
WEIGHT RESISTANCE CHART

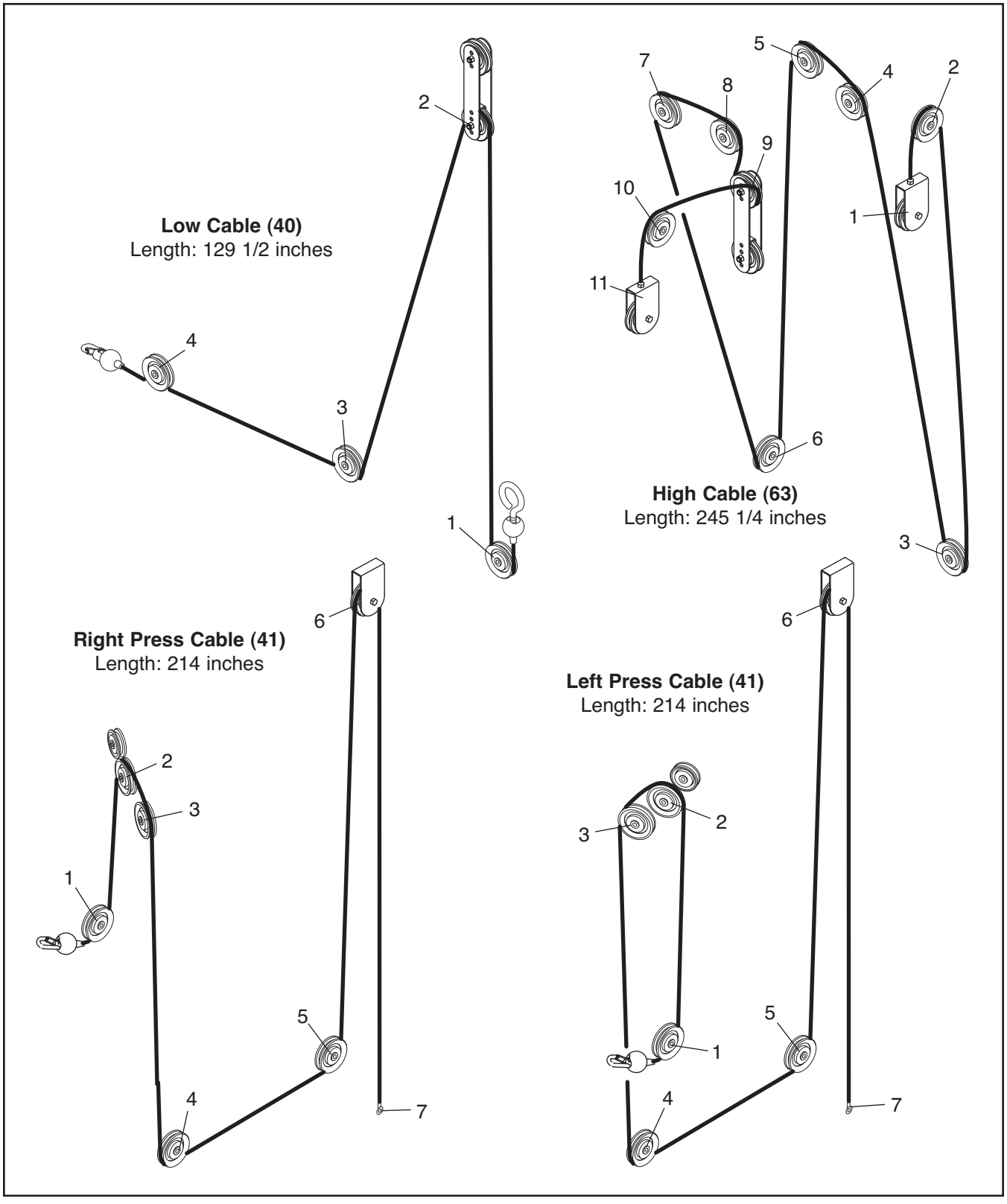
This chart shows the approximate weight resistance at each station. “Top” refers to the 10-pound top weight. The other numbers refer to the nine 10-pound weight plates and the fifteen 20-pound weight plates. **Note: The actual resistance at each weight station may vary due to differences in individual weight plates, as well as friction between the cables, pulleys, and weight guides.**

WEIGHT PLATES	ARM (lbs.)	LEG DEVELOPER (lbs.)	LOW PULLEY (lbs.)	SQUAT ARM (lbs.)
Top	10	20	13	60
1	12	24	19	64
2	16	32	24	77
3	18	36	29	89
4	21	42	34	103
5	24	48	39	112
6	26	52	44	129
7	29	58	50	135
8	32	64	55	141
9	34	68	60	155
10	41	82	71	178
11	47	94	83	193
12	52	104	94	209
13	57	114	104	228
14	63	126	115	250
15	69	136	128	276
16	74	148	134	321
17	81	162	149	332
18	86	172	156	349
19	91	182	167	378
20	97	194	178	404
21	106	212	192	414
22	111	222	200	447
23	115	230	210	457
24	124	248	221	463

CABLE DIAGRAMS

The cable diagrams below show the proper routing of the Low Cable (40), the Press Cables (41), the High Cable (63), the Hack Squat Cable (29), the Medium Cable (30), and the Short Cable (31). Use the diagrams to make sure that the cables have been assembled correctly. If the cables have not been correctly routed, the weight system will not function properly and damage may occur. The numbers show the correct route for each cable. **Make sure that the cable traps do not touch or bind the cables.**




Low Cable (40)
Length: 129 1/2 inches
2
4
3
1
High Cable (63)
Length: 245 1/4 inches
5
7
8
4
2
9
10
1
11
6
3
Right Press Cable (41)
Length: 214 inches
6
2
3
1
5
4
7
Left Press Cable (41)
Length: 214 inches
6
3
2
1
5
4
7

EXERCISE GUIDELINES

THE FOUR BASIC TYPES OF WORKOUTS

Muscle Building
To increase the size and strength of your muscles, push them close to their maximum capacity. Your muscles will continually adapt and grow as you progressively increase the intensity of your exercise. You can adjust the intensity level of an individual exercise in two ways:

- by changing the amount of weight used
- by changing the number of repetitions or sets performed. (A "repetition" is one complete cycle of an exercise, such as one sit-up. A "set" is a series of repetitions.)

The proper amount of weight for each exercise depends upon the individual user. You must gauge your limits and select the amount of weight that is right for you. Begin with 3 sets of 8 repetitions for each exercise you perform. Rest for 3 minutes after each set. When you can complete 3 sets of 12 repetitions without difficulty, increase the amount of weight.

Toning
You can tone your muscles by pushing them to a moderate percentage of their capacity. Select a moderate amount of weight and increase the number of repetitions in each set. Complete as many sets of 15 to 20 repetitions as possible without discomfort. Rest for 1 minute after each set. Work your muscles by completing more sets rather than by using high amounts of weight.

Weight Loss
To lose weight, use a low amount of weight and increase the number of repetitions in each set. Exercise for 20 to 30 minutes, resting for a maximum of 30 seconds between sets.

Cross Training
Cross training is an efficient way to get a complete and well-balanced fitness program. An example of a balanced program is:

- Plan weight training workouts on Monday, Wednesday, and Friday.
- Plan 20 to 30 minutes of aerobic exercise, such as running on a treadmill or riding on an elliptical or exercise bike, on Tuesday and Thursday..
- Rest from both weight training and aerobic exercise for at least one full day each week to give your body time to regenerate.

The combination of weight training and aerobic exercise will reshape and strengthen your body, plus develop your heart and lungs.

PERSONALIZING YOUR EXERCISE PROGRAM

Determining the exact length of time for each workout, as well as the number of repetitions or sets completed, is an individual matter. It is important to avoid overdoing it during the first few months of your exercise program. You should progress at your own pace and be sensitive to your body's signals. If you experience pain or dizziness at any time while exercising, stop immediately and begin cooling down. Find out what is wrong before continuing. Remember that adequate rest and a proper diet are important factors in any exercise program.

WARMING UP

Begin each workout with 5 to 10 minutes of stretching and light exercise to warm up. Warming up prepares your body for more strenuous exercise by increasing circulation, raising your body temperature and delivering more oxygen to your muscles.

WORKING OUT

Each workout should include 6 to 10 different exercises. Select exercises for every major muscle group, emphasizing areas that you want to develop most. To give balance and variety to your workouts, vary the exercises from session to session.

Schedule your workouts for the time of day when your energy level is the highest. Each workout should be followed by at least one day of rest. Once you find the schedule that is right for you, stick with it.

EXERCISE FORM

Maintaining proper form is an essential part of an effective exercise program. This requires moving through the full range of motion for each exercise, and moving only the appropriate parts of the body. Exercising in an uncontrolled manner will leave you feeling exhausted. On the exercise guide accompanying this manual you will find photographs showing the correct form for several exercises, and a list of the muscles affected. Refer to the muscle chart on the next page to find the names of the muscles.

The repetitions in each set should be performed smoothly and without pausing. The exertion stage of each repetition should last about half as long as the return stage. Proper breathing is important. Exhale during the exertion stage of each repetition and inhale during the return stroke. Never hold your breath.

Rest for a short period of time after each set. The ideal resting periods are:

- Rest for three minutes after each set for a muscle building workout.
- Rest for one minute after each set for a toning workout.
- Rest for 30 seconds after each set for a weight loss workout.

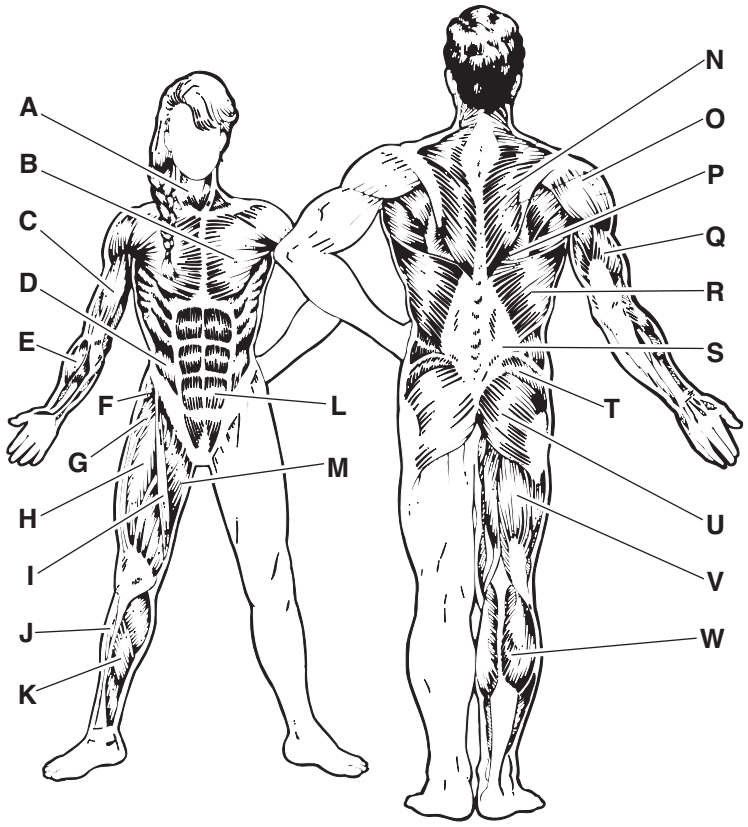
Plan to spend the first couple of weeks familiarizing yourself with the equipment and learning the proper form for each exercise.

COOLING DOWN

End each workout with 5 to 10 minutes of stretching. Include stretches for both your arms and legs. Move slowly as you stretch and do not bounce. Ease into each stretch gradually and go only as far as you can without strain. Stretching at the end of each workout is an effective way to increase flexibility.

STAYING MOTIVATED

For motivation, keep a record of each workout. List the date, the exercises performed, the weight used, and the numbers of sets and repetitions completed. Record your weight and key body measurements at the end of every month. Remember, the key to achieving the greatest results is to make exercise a regular and enjoyable part of your everyday life.



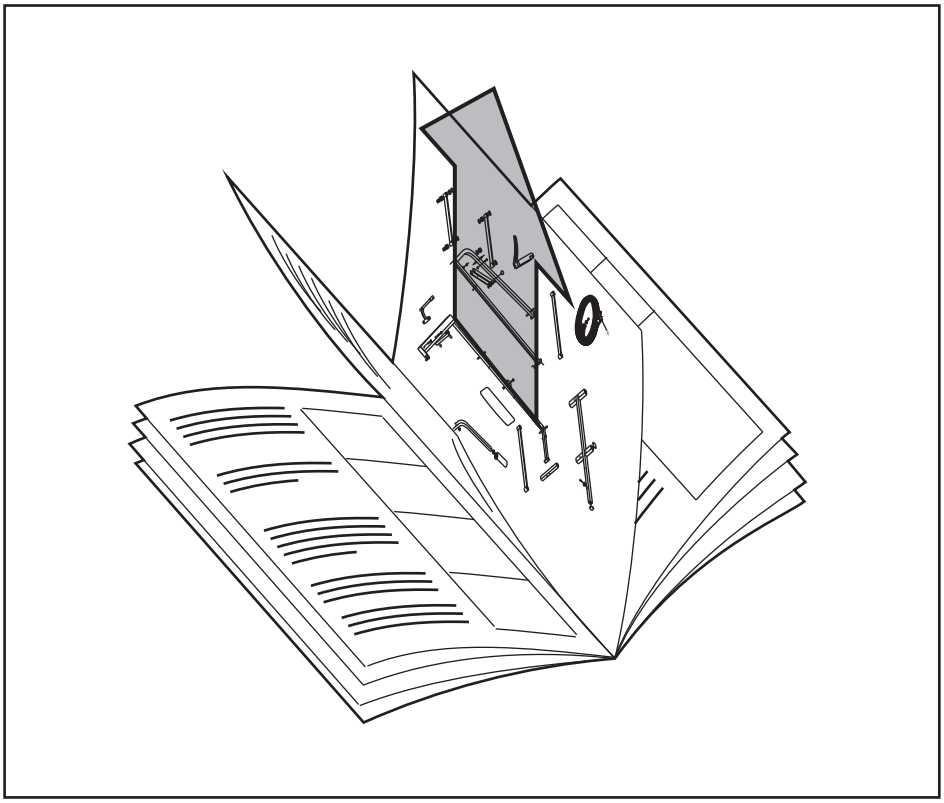
MUSCLE CHART

A. Sternomastoid (neck)
B. Pectoralis Major (chest)
C. Biceps (front of arm)
D. Obliques (waist)
E. Brachioradials (forearm)
F. Hip Flexors (upper thigh)
G. Abductor (outer thigh)
H. Quadriceps (front of thigh)
I. Sartorius (front of thigh)
J. Tibialis Anterior (front of calf)
K. Soleus (front of calf)
L. Rectus Abdominus (stomach)
M. Adductor (inner thigh)
N. Trapezius (upper back)
O. Rhomboideus (upper back)
P. Deltoid (shoulder)
Q. Triceps (back of arm)
R. Latissimus Dorsi (mid back)
S. Spinae Erectors (lower back)
T. Gluteus Medius (hip)
U. Gluteus Maximus (buttocks)
V. Hamstring (back of leg)
W. Gastrocnemius (back of calf)

REMOVE THIS PART IDENTIFICATION CHART AND PART LIST BEFORE BEGINNING ASSEMBLY

SAVE THIS PART IDENTIFICATION CHART AND PART LIST FOR FUTURE REFERENCE

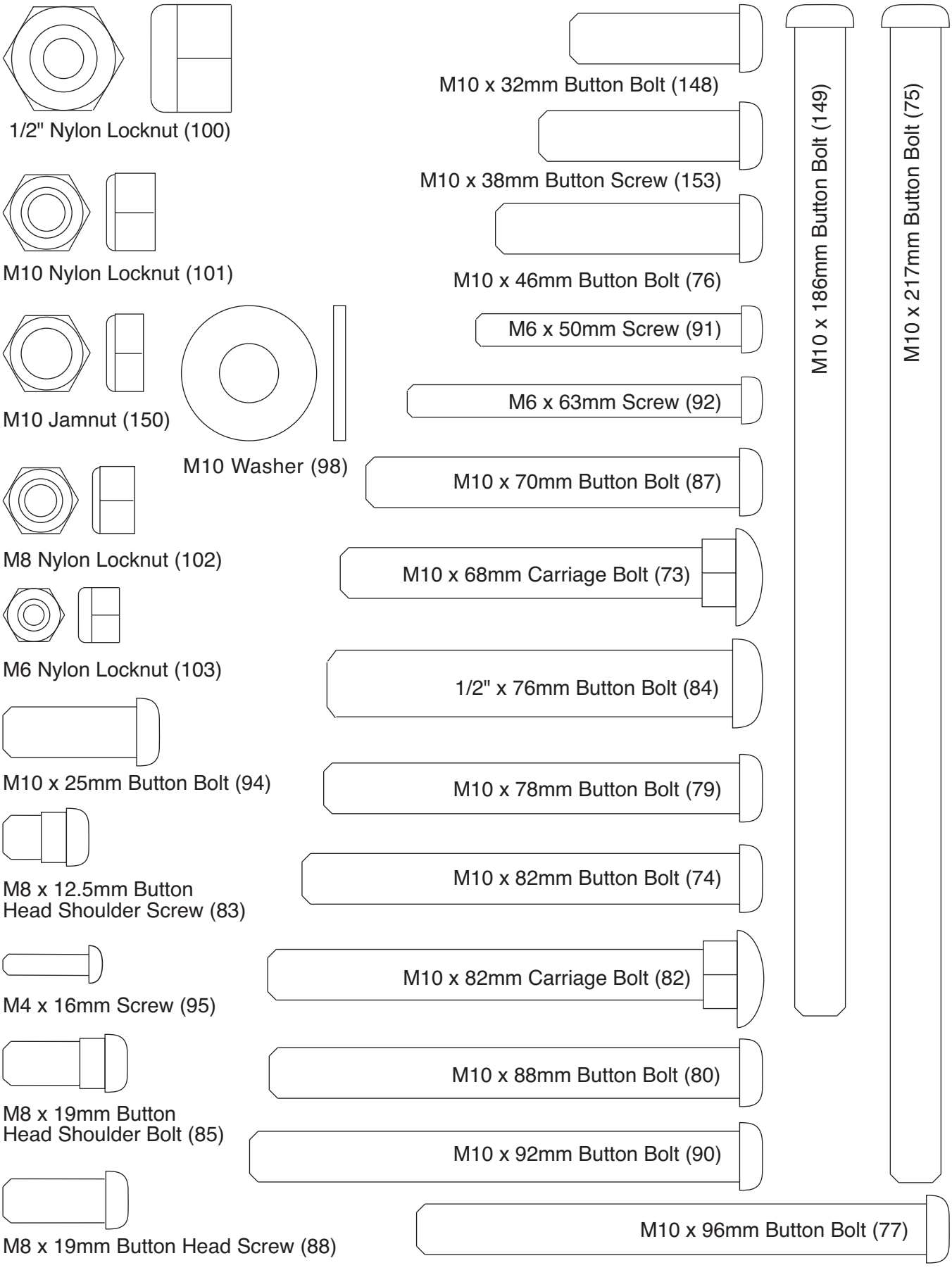
The PART IDENTIFICATION CHART is provided to help you identify the small parts used in assembly. The number in parentheses below each part is the key number of the part from the PART LIST. **Important: Some parts may have been preassembled for shipping purposes. If you cannot find a part in the parts bags, check to see if it has been preassembled.**



Note: Assembly is divided into three stages: 1) frame assembly, 2) cable assembly, and 3) seat assembly. The hardware for each stage is packaged separately. WAIT UNTIL YOU BEGIN EACH ASSEMBLY STAGE TO OPEN THE PARTS BAG LABELED FOR THAT ASSEMBLY STAGE.

PART IDENTIFICATION CHART–Model No. FMSY14231

R1103A



PART LIST—Model No. FMSY14231

R1103A

Key No.	Qty.	Description
1	1	Base
2	1	Weight Base
3	1	Foot Plate
4	1	Upright
5	1	Top Frame
6	1	Backrest Frame
7	1	Seat Base
8	1	Seat Upright
9	1	Seat Frame
10	1	Leg Developer
11	1	Right Press Arm
12	1	Left Press Arm
13	1	Backrest
14	1	Seat
15	1	Pad Bracket
16	1	Pad Plate
17	1	Pad
18	1	Leg Developer Plate
19	1	Right Leg Pad
20	1	Left Leg Pad
21	2	Weight Guide
22	9	Small Weight
23	15	Large Weight
24	1	Front Shroud
25	1	Rear Shroud
26	2	Adjustment Plate
27	1	Top Weight
28	2	Swivel Arm
29	4	Pivot Pulley Bearing
30	2	Press Arm Cap
31	2	Trunnion
32	1	Right Retainer Clip
33	2	Press Arm Knob
34	2	28mm Spacer
35	2	10mm Spacer
36	1	Left Retainer Clip
37	2	Press Arm Bushing
38	3	Cable Clip
39	3	Clip Cover
40	1	Low Cable
41	2	Press Cable
42	1	Eyebolt
43	2	Leg Developer Strap
44	1	Seat Frame Bushing
45	1	Seat Frame Cap
46	1	Eyebolt Cover
47	2	1/2” x 30mm Button Bolt
48	1	Seat Knob
49	2	38mm Square Inner Cap
50	1	50mm Square Angled Inner Cap
51	1	50mm x 76mm Angled Outer Cap
52	2	50mm x 76mm Inner Cap
53	2	Leg Developer Bushing
54	2	63mm Round Inner Cap
55	2	2 3/4” Pulley
56	29	3 1/2” Pulley
57	2	4” Pulley
58	1	51mm x 76mm Inner Cap
59	2	Long Pulley Plate
60	1	38mm x 76mm Inner Cap
61	3	Bumper
62	2	“U”-bracket
63	1	High Cable
64	2	Top Weight Bumper
65	4	Metal Bushing
66	2	Weight Bumper
67	1	Weight Pin w/tether
68	2	25mm Spacer
69	4	6.1mm Spacer
70	8	16mm Spacer
71	4	Small Pulley Plate
72	1	Knob
73	6	M10 x 68mm Carriage Bolt
74	2	M10 x 82mm Button Bolt
75	1	M10 x 217mm Button Bolt
76	19	M10 x 46mm Button Bolt
77	6	M10 x 96mm Button Bolt
78	2	1/2” x 32mm Button Bolt
79	3	M10 x 78mm Button Bolt
80	5	M10 x 88mm Button Bolt
81	6	M8 x 22mm Flat Head Bolt
82	2	M10 x 82mm Carriage Bolt
83	2	M8 x 12.5mm Button Shoulder Screw
84	1	1/2” x 76mm Button Bolt
85	4	M8 x 19mm Button Shoulder Bolt
86	2	M10 x 52mm Button Bolt
87	6	M10 x 70mm Button Bolt
88	25	M8 x 19mm Button Screw
89	1	38mm x 63mm Inner Cap
90	6	M10 x 92mm Button Bolt
91	2	M6 x 50mm Screw
92	1	M6 x 63mm Screw
93	1	Extension Strap
94	4	M10 x 25mm Button Bolt
95	14	M4 x 16mm Screw
96	2	#8 x 12mm Screw
97	2	Ab Strap
98	20	M10 Washer
99	2	Handle
100	5	1/2” Nylon Locknut
101	57	M10 Nylon Locknut
102	14	M8 Nylon Locknut
103	7	M6 Nylon Locknut
104	1	Nut Plate
105	2	Cable Trap

Key No.	Qty.	Description
106	1	Ankle Strap
107	2	Retainer “C”-ring
108	1	Curl Bar
109	2	25mm Round Inner Cap
110	1	Spring Clip
111	1	Hack Squat Base
112	1	Hack Squat Stabilizer
113	1	Hack Squat Foot Plate
114	1	Right Hack Squat Foot
115	2	Hack Squat Upright
116	1	Hack Squat Top Frame
117	1	Hack Squat Bracket
118	1	Hack Squat Backrest Frame
119	1	Hack Squat Arm
120	1	Counterweight
121	1	Adjustment Bar
122	1	Hack Squat Backrest
123	1	Right Shoulder Pad
124	1	Left Shoulder Pad
125	2	Arm Bushing
126	1	Left Hack Squat Foot
127	2	Handgrip
128	1	50mm x 100mm Inner Cap
129	8	Backrest Wheel
130	1	Backrest Bushing
131	1	Right Plastic Cover
132	1	Release Handle
133	4	Bracket Bushing
134	1	Left Plastic Cover
135	1	Adjustment Pin Assembly
136	2	50mm Round Inner Cap
137	1	6mm Spacer
138	1	4 1/2” Pulley
139	1	Hack Squat Cable
140	1	Medium Cable
141	1	Short Cable
142	1	Release Cable
143	1	Backrest Adjustment Pin
144	1	Spring
145	2	6mm Black Spacer
146	1	M10 x 40mm Button Bolt
147	1	Handle Grip
148	1	M10 x 32mm Button Bolt
149	5	M10 x 186mm Button Bolt
150	6	M10 Jamnut
151	2	Grommet
152	1	M6 x 21mm Button Bolt
153	2	M10 x 38mm Button Screw
154	2	M6 x 58mm Bolt
155	1	M6 x 18mm Button Screw
#	1	User’s Manual
#	1	Exercise Guide
#	1	Large Allen Wrench
#	1	Small Allen Wrench

Note: “#” indicates a non-illustrated part. Specifications are subject to change without notice. See the back cover of the user’s manual for information about ordering replacement parts.

EXPLODED DRAWING—Model No. FMSY14231

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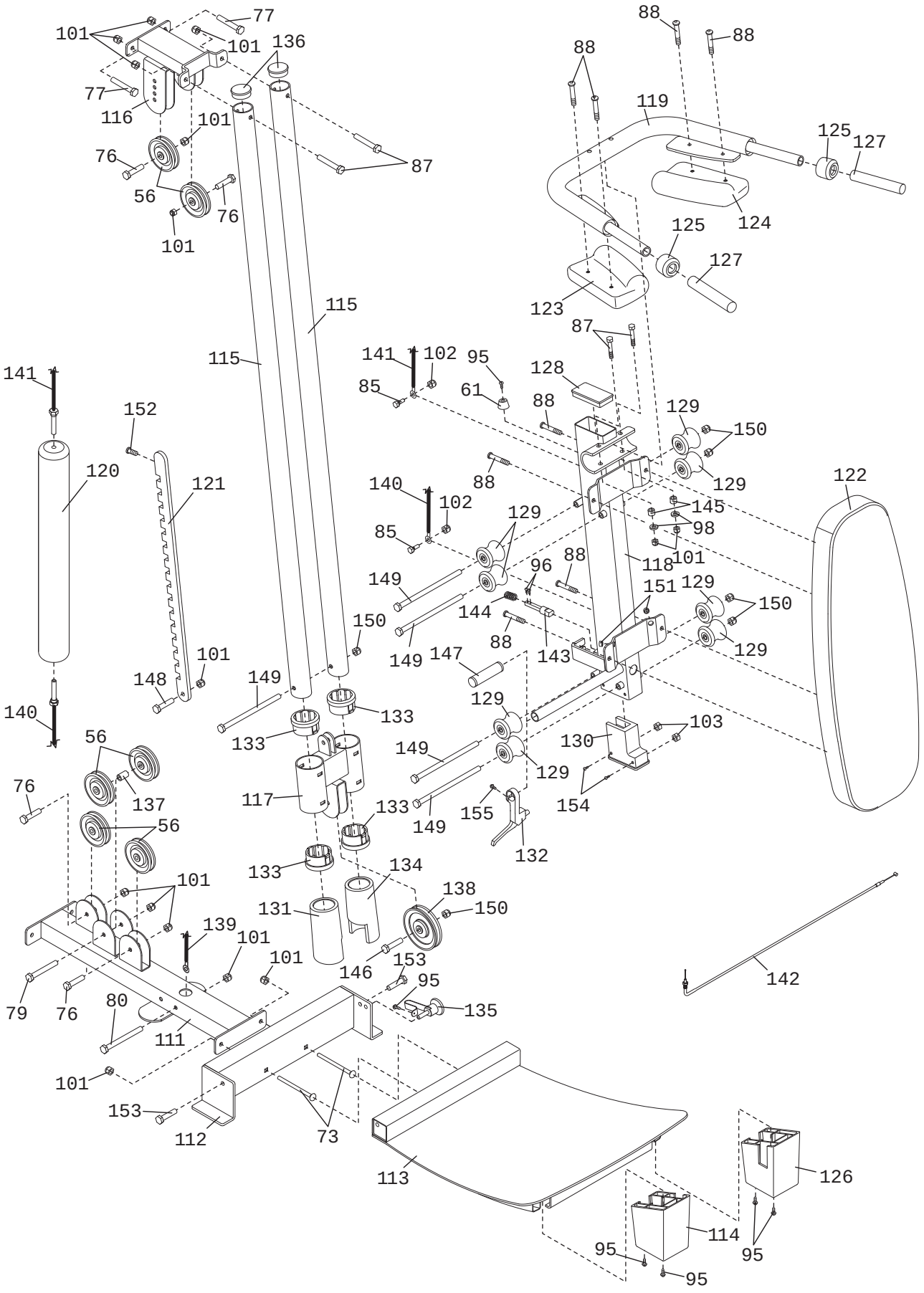

EXPLODED DRAWING—Model No. FMSY14231

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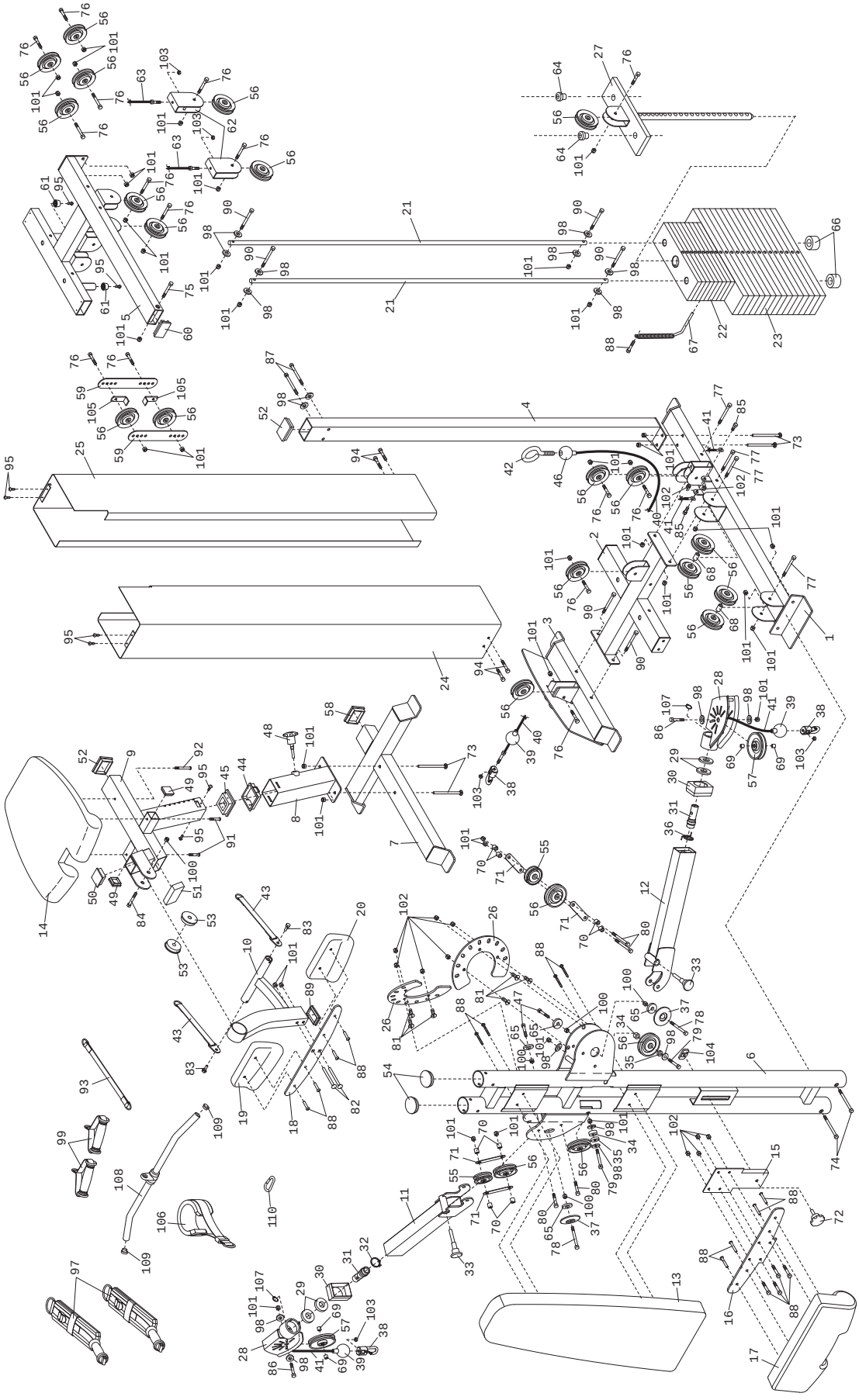

ORDERING REPLACEMENT PARTS

To order replacement parts, call our Customer Service Department toll-free at 1-800-999-3756, Monday through Friday, 6 a.m. until 6 p.m. MST (excluding holidays). Please be prepared to give the following information:

- The MODEL NUMBER of the product (FMSY14231)
- The NAME of the product (FREEMOTION® S83 POWER SYSTEM weight system)
- The SERIAL NUMBER of the product (see the front cover of this manual)
- The KEY NUMBER and DESCRIPTION of the part(s) (see the PART LIST and EXPLODED DRAWING in the center of this manual)

LIMITED WARRANTY

ICON Health & Fitness, Inc. (ICON), warrants this product to be free from defects in workmanship and material, under normal use and service conditions, for a period of ninety (90) days from the date of purchase. This warranty extends only to the original purchaser. ICON's obligation under this warranty is limited to replacing or repairing, at ICON's option, the product at one of its authorized service centers. All products for which warranty claim is made must be received by ICON at one of its authorized service centers with all freight and other transportation charges prepaid, accompanied by sufficient proof of purchase. All returns must be pre-authorized by ICON. This warranty does not extend to any product or damage to a product caused by or attributable to freight damage, abuse, misuse, improper or abnormal usage or repairs not provided by an ICON authorized service center, products used for commercial or rental purposes, or products used as store display models. No other warranty beyond that specifically set forth above is authorized by ICON.

ICON is not responsible or liable for indirect, special or consequential damages arising out of or in connection with the use or performance of the product or damages with respect to any economic loss, loss of property, loss of revenues or profits, loss of enjoyment or use, costs of removal, installation or other consequential damages of whatsoever nature. Some states do not allow the exclusion or limitation of incidental or consequential damages. Accordingly, the above limitation may not apply to you.

The warranty extended hereunder is in lieu of any and all other warranties and any implied warranties of merchantability or fitness for a particular purpose is limited in its scope and duration to the terms set forth herein. Some states do not allow limitations on how long an implied warranty lasts. Accordingly, the above limitation may not apply to you.

This warranty gives you specific legal rights. You may also have other rights which vary from state to state.

ICON HEALTH & FITNESS, INC., 1500 S. 1000 W., LOGAN, UT 84321-9813

Part No. 207032 R1103A