

**NOTE:**  
Please read all instructions  
carefully before using this  
product

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Model  
IGS 16

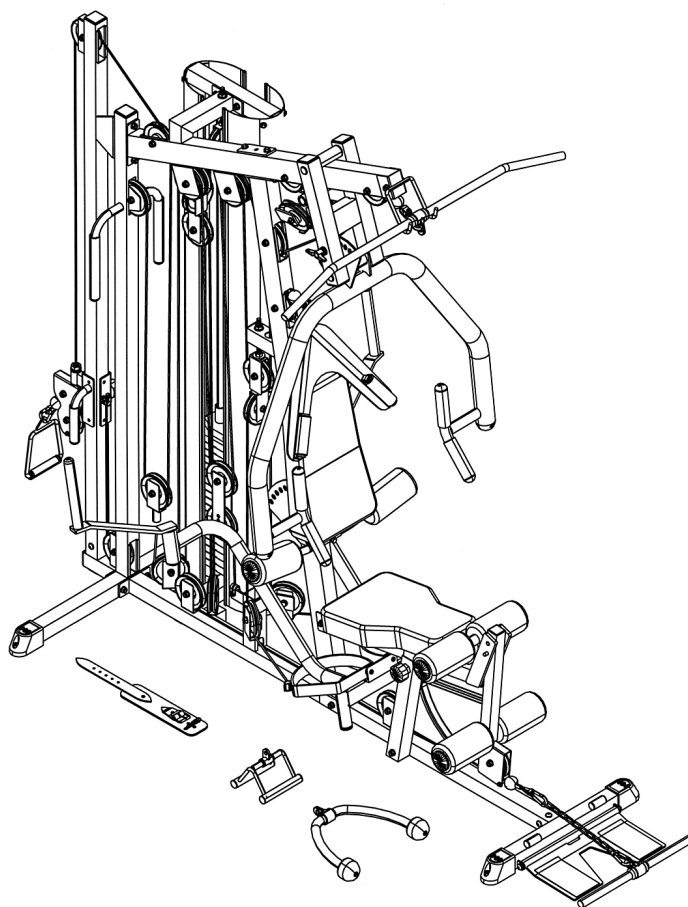
Retain This  
Manual for  
Reference

09-22-03

**OWNER'S  
MANUAL**

# IRON GRIP **SPORT™**

## IGS 16 PERSONAL TRAINER



### **IMPEX FITNESS PRODUCTS**

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## BEFORE YOU BEGIN

Thank you for selecting the IGS-16 PERSONAL TRAINER by IMPEX FITNESS PRODUCTS. For your safety and benefit, read this manual carefully before using the machine. As a manufacturer, we are committed to provide you complete customer satisfaction. If you have any questions, or find there are missing or damaged parts, we guarantee you complete satisfaction through direct assistance from our factory. To avoid unnecessary delays, *please call our TOLL-FREE customer service number.* Our Customer Service Agents will provide immediate assistance to you.

**Toll-Free Customer Service Number**

**1-800-999-8899**

**Mon. - Fri. 9 a.m. - 5 p.m. PST**

**[www.impex-fitness.com](http://www.impex-fitness.com)**

**[info@impex-fitness.com](mailto:info@impex-fitness.com)**

## **IMPORTANT SAFETY NOTICE**

### **PRECAUTIONS**

This exercise machine is built for optimum safety. However, certain precautions apply whenever you operate a piece of exercise equipment. Be sure to read the entire manual before you assemble or operate your machine. In particular, note the following safety precautions:

1. **Keep children and pets away from the machine at all times. DO NOT leave children unattended in the same room with the machine.**
2. Only one person at a time should use the machine.
3. If the user experiences dizziness, nausea, chest pain, or any other abnormal symptoms, STOP the workout at once. CONSULT A PHYSICIAN IMMEDIATELY.
4. Position the machine on a clear, leveled surface. DO NOT use the machine near water or outdoors.
5. Keep hands away from all moving parts.
6. Always wear appropriate workout clothing when exercising. DO NOT wear robes or other clothing that could become caught in the machine. Running or aerobic shoes are also required when using the machine.
7. Use the machine only for its intended use as described in this manual. DO NOT use attachments not recommended by the manufacturer.
8. Do not place any sharp object around the machine.
9. Disabled person should not use the machine without a qualified person or physician in attendance.
10. Before using the machine to exercise, always do stretching exercises to properly warm up.
11. Never operate the machine if the machine is not functioning properly.

**WARNING: BEFORE BEGINNING ANY EXERCISE PROGRAM, CONSULT YOUR PHYSICIAN. THIS IS ESPECIALLY IMPORTANT FOR INDIVIDUALS OVER THE AGE OF 35 OR PERSONS WITH PRE-EXISTING HEALTH PROBLEMS. READ ALL INSTRUCTIONS BEFORE USING ANY FITNESS EQUIPMENT. IMPEX INC. ASSUMES NO RESPONSIBILITY FOR PERSONAL INJURY OR PROPERTY DAMAGE SUSTAINED BY OR THROUGH THE USE OF THIS PRODUCT.**

**SAVE THESE INSTRUCTIONS.**

## HARDWARE PACK



#28 L-Shaped  
Pulley Bracket  
(Qty 1)



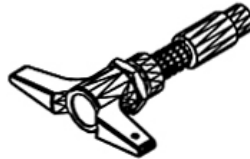
#29 Bent Bracket  
(Qty 1)



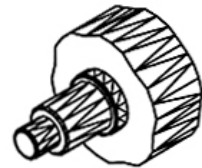
#38 Backrest  
Swivel Bracket  
(Qty 2)



#67  $\varnothing \frac{3}{4}$ " Nylon  
Washer (Qty 8)



#69 T-shaped  
Pull Pin Set  
(Qty 2)



#71 Lock Knob  
(Qty 2)



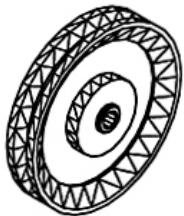
#72 Weight Plate  
Selector Pin  
(Qty 1)



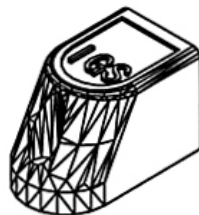
#76  $\varnothing 2 \frac{1}{2}$ " x 1"  
Rubber Bumper  
(Qty 2)



#94  $\varnothing 1$ " Clip Ring  
(Qty 2)



#84 Pulley (Qty 30)



#86 Stabilizer  
End Cap (Qty 4)



#90 Foam Roll  
End Cap (Qty 6)

# HARDWARE PACK



#41 Hook  
(Qty 5)



#42 M12 x 1" Split Bolt  
(Qty 1)



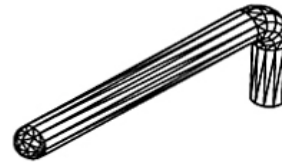
#43 2 3/4" Leg Developer  
Axle (Qty 1)



#44 8" Bench Press Axle  
(Qty 2)



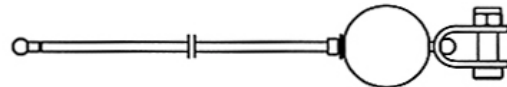
#46  $\varnothing \frac{1}{2}$ " Bushing  
(Qty 2)



#39 4" L-shaped Pin  
(Qty 1)



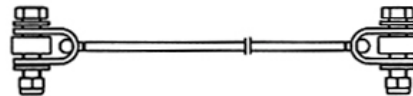
#52 161" Upper Cable  
(Qty 1)



#53 262" High Low Cable  
(Qty 1)



#54 265" Lower & AB Cable  
(Qty 1)



#55 99" Butterfly Cable  
(Qty 1)



#56 161" Tension Cable  
(Qty 1)

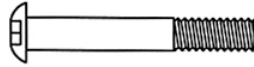


#40 Chain (Qty 1)

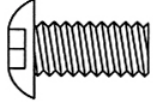
# HARDWARE PACK



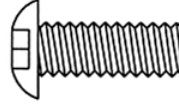
#95 M6 x  $\frac{3}{8}$ " Allen Bolt  
(Qty 8)



#96 M6 x  $1\frac{5}{8}$ " Allen Bolt  
(Qty 3)



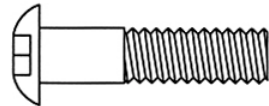
#97 M10 x  $\frac{3}{4}$ " Allen Bolt  
(Qty 7)



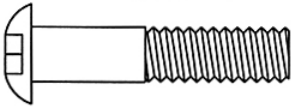
#98 M10 x 1" Allen Bolt  
(Qty 2)



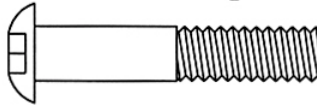
#99 M10 x  $1\frac{1}{8}$ " Allen Bolt  
(Qty 4)



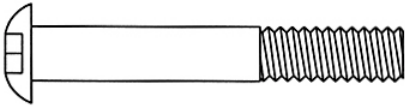
#100 M10 x  $1\frac{5}{8}$ " Allen Bolt  
(Qty 3)



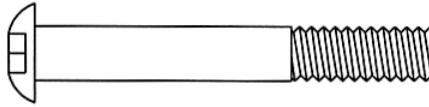
#101 M10 x  $1\frac{3}{4}$ " Allen Bolt  
(Qty 20)



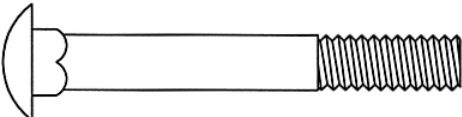
#102 M10 x 2" Allen Bolt  
(Qty 3)



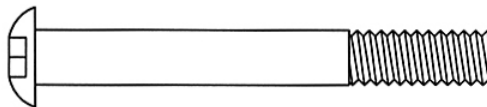
#103 M10 x  $2\frac{1}{2}$ " Allen Bolt  
(Qty 5)



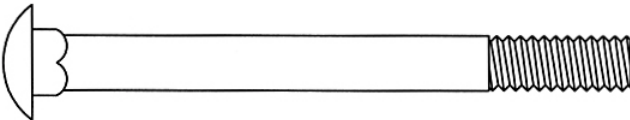
#104 M10 x  $2\frac{3}{4}$ " Allen Bolt  
(Qty 8)



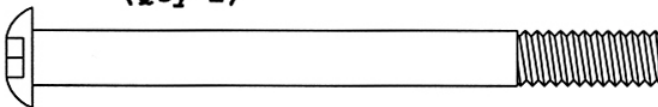
#105 M10 x 3" Carriage Bolt  
(Qty 4)



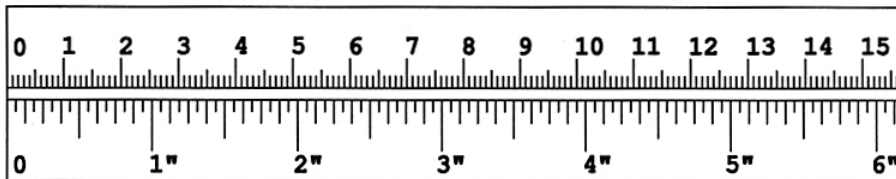
#106 M10 x  $3\frac{1}{8}$ " Allen Bolt  
(Qty 1)



#107 M10 x 4" Carriage Bolt  
(Qty 2)



#108 M10 x  $4\frac{1}{2}$ " Allen Bolt  
mm (Qty 1)



# HARDWARE PACK



#111 M6 x  $\frac{1}{4}$ "  
Socket Set Screw  
(Qty 1)



#112 M6 x  $\frac{3}{8}$ "  
Socket Set Screw  
(Qty 2)



#113 M10 x  $\frac{1}{2}$ "  
Socket Set Screw  
(Qty 4)



#115  $\varnothing \frac{3}{4}$ "  
Spring Washer  
(Qty 4)



#116  $\varnothing 1$ "  
Spring Washer  
(Qty 1)



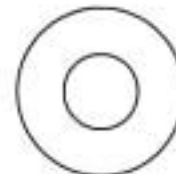
#117  $\varnothing \frac{1}{2}$ "  
Washer (Qty 6)



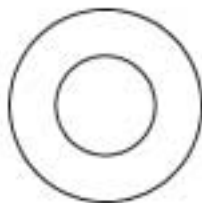
#118  $\varnothing \frac{3}{4}$ "  
Washer (Qty 93)



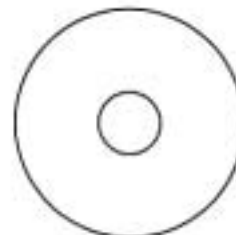
#119  $\varnothing \frac{7}{8}$ "  
Bent Washer  
(Qty 1)



#120  $\varnothing 1\frac{1}{8}$ " x  $\varnothing \frac{1}{2}$ "  
Washer (Qty 5)



#121  $\varnothing 1\frac{1}{4}$ " x  $\varnothing \frac{5}{8}$ "  
Washer (Qty 1)



#122  $\varnothing 1\frac{1}{2}$ " x  $\varnothing \frac{1}{2}$ "  
Washer (Qty 2)



#123 M6 Aircraft Nut  
(Qty 3)



#124 M8 Aircraft Nut  
(Qty 4)



#125 M10 Aircraft Nut  
(Qty 45)



#126 M12 Aircraft Nut  
(Qty 1)



#127 M12 Regular Nut  
(Qty 5)



#128 M16 Regular Nut  
(Qty 1)

## ASSEMBLY INSTRUCTION

**Tools Required Assembling the Machine: Two Adjustable Wrenches and Allen Wrenches**

**NOTE:** It is strongly recommended this machine be assembled by two or more people to avoid possible injury.

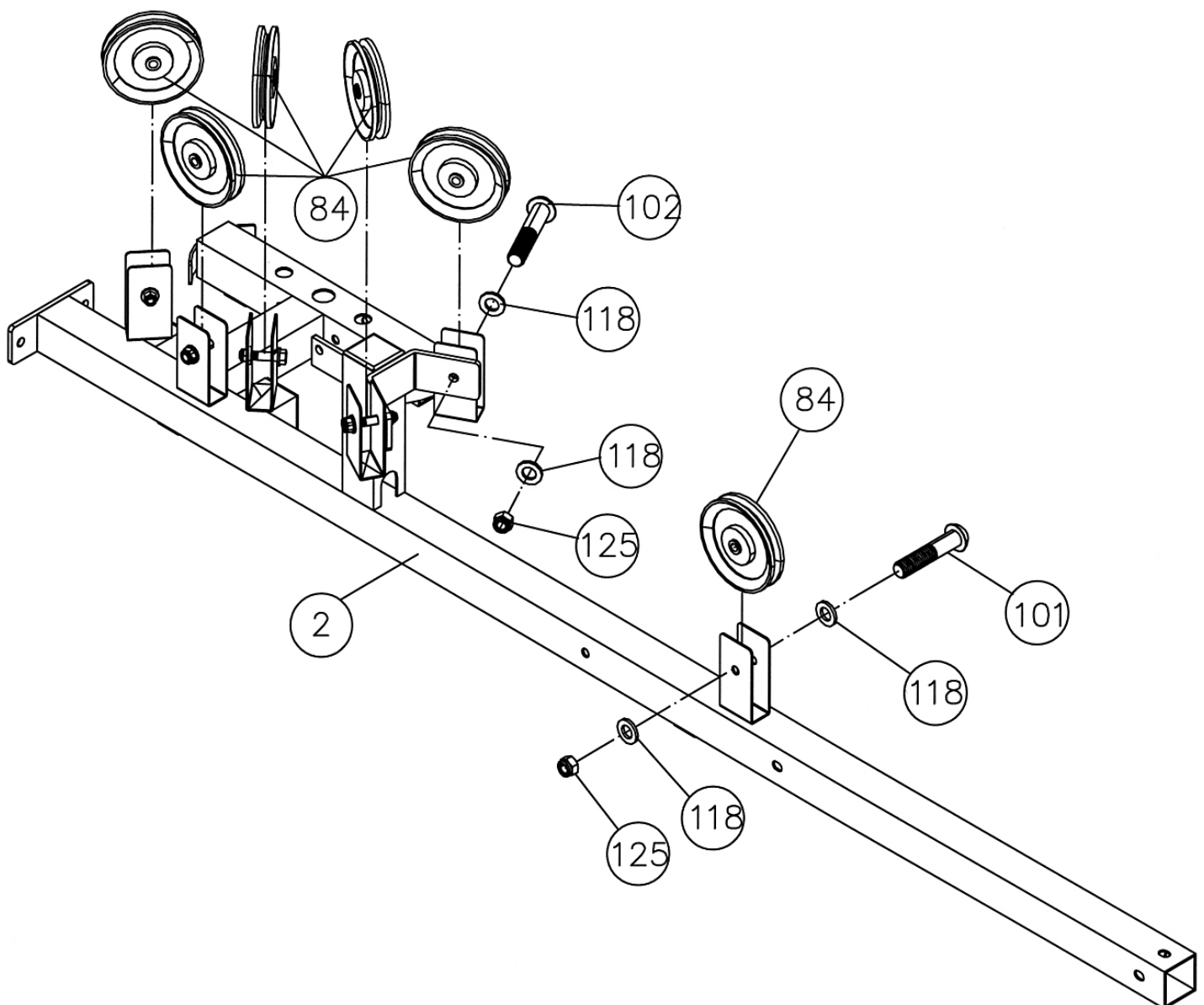
### STEP 1 (See Diagram 1)

A.) Place the Main Base Frame (#2) on a flat surface.

B.) Attach two Pulleys (#84) to the open oblique pulley brackets on the center of the Main Base Frame. Secure each Pulley with one M10 x 2" Allen Bolt (#102), two Ø 3/4" Washers (#118), and one M10 Aircraft Nut (#125).

C.) Attach four Pulleys (#84) to the other four open brackets on the Main Base Frame. Secure each Pulley with one M10 x 1 3/4" Allen Bolt (#101), two Ø 3/4" Washers (#118), and one M10 Aircraft Nut (#125).

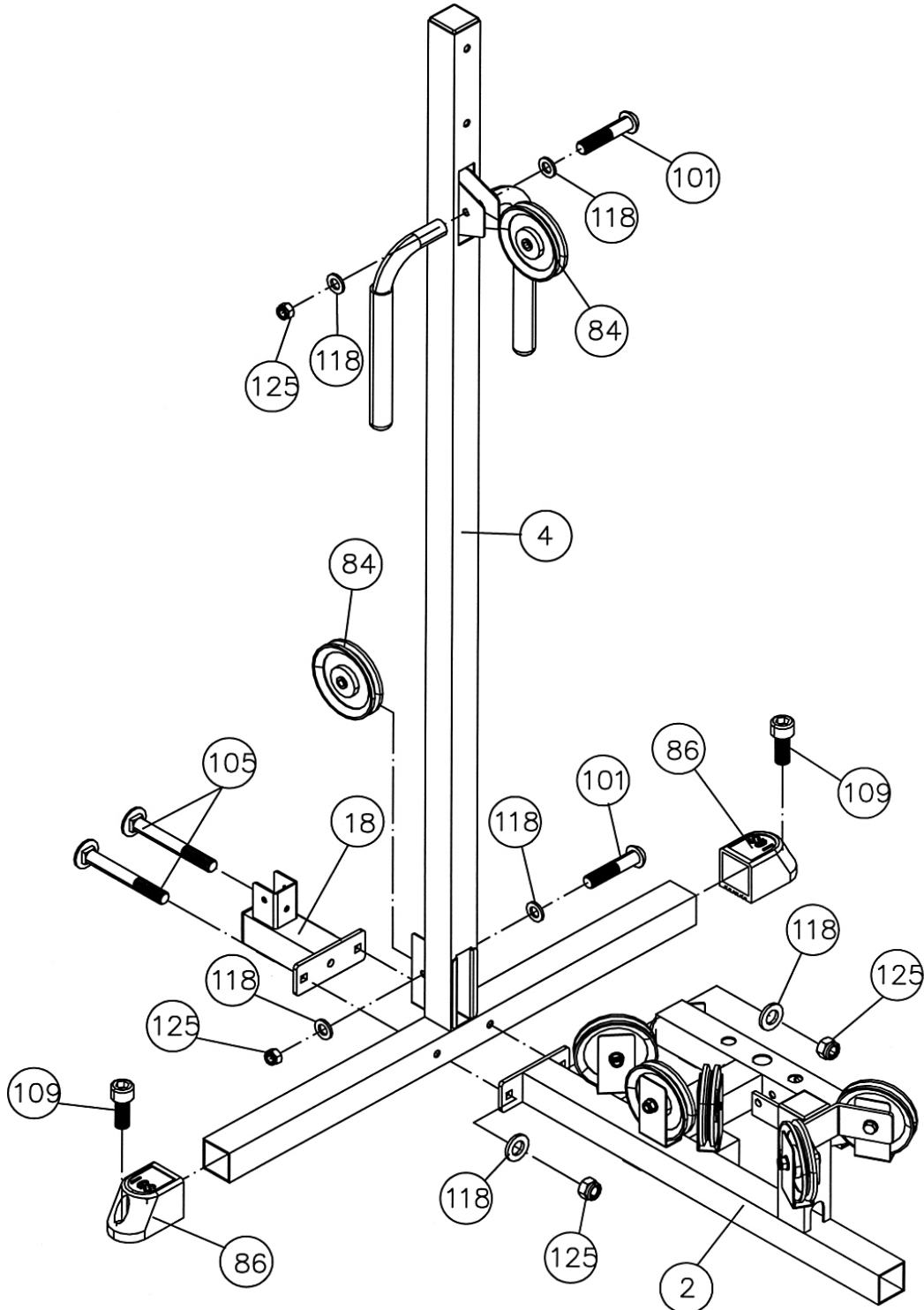
**DIAGRAM 1**





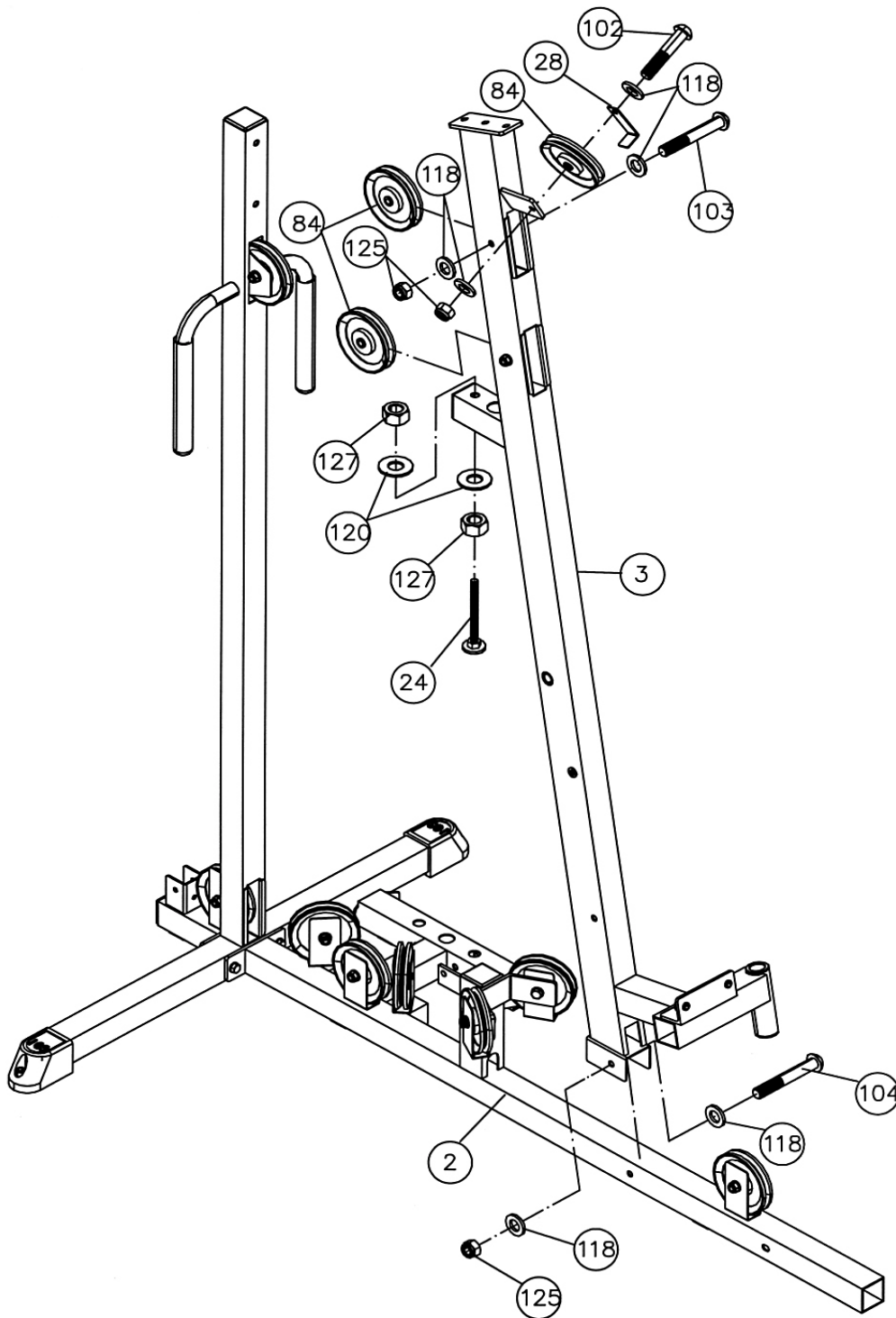
## STEP 2 (See Diagram 2)

- A.) Attach the Main Base Frame (#2) and the Rear Base (#18) to the bottom of the Rear Vertical Beam (#4). Align the holes and secure them together with two M10 x 3" Carriage Bolts (#105),  $\text{\O} \frac{3}{4}$ " Washers (#118), and M10 Aircraft Nuts (#125). Do not tighten the nuts and bolts yet.
- B.) Attach two Pulleys (#84) to the top & bottom open brackets on the Rear Vertical Beam (#4). Secure each Pulley with one M10 x 1  $\frac{3}{4}$ " Allen Bolt (#101), two  $\text{\O} \frac{3}{4}$ " Washers (#118), and one M10 Aircraft Nut (#125).
- C.) Push two Stabilizer End Caps (#86) onto each end of the base on the Rear Vertical Beam. After completing the entire assembling of the machine, check the stability. If the base was not leveled, adjust the M10 x 1" Socket Cap Screws (#109) on the Caps to level the base.



### STEP 3 (See Diagram 3)

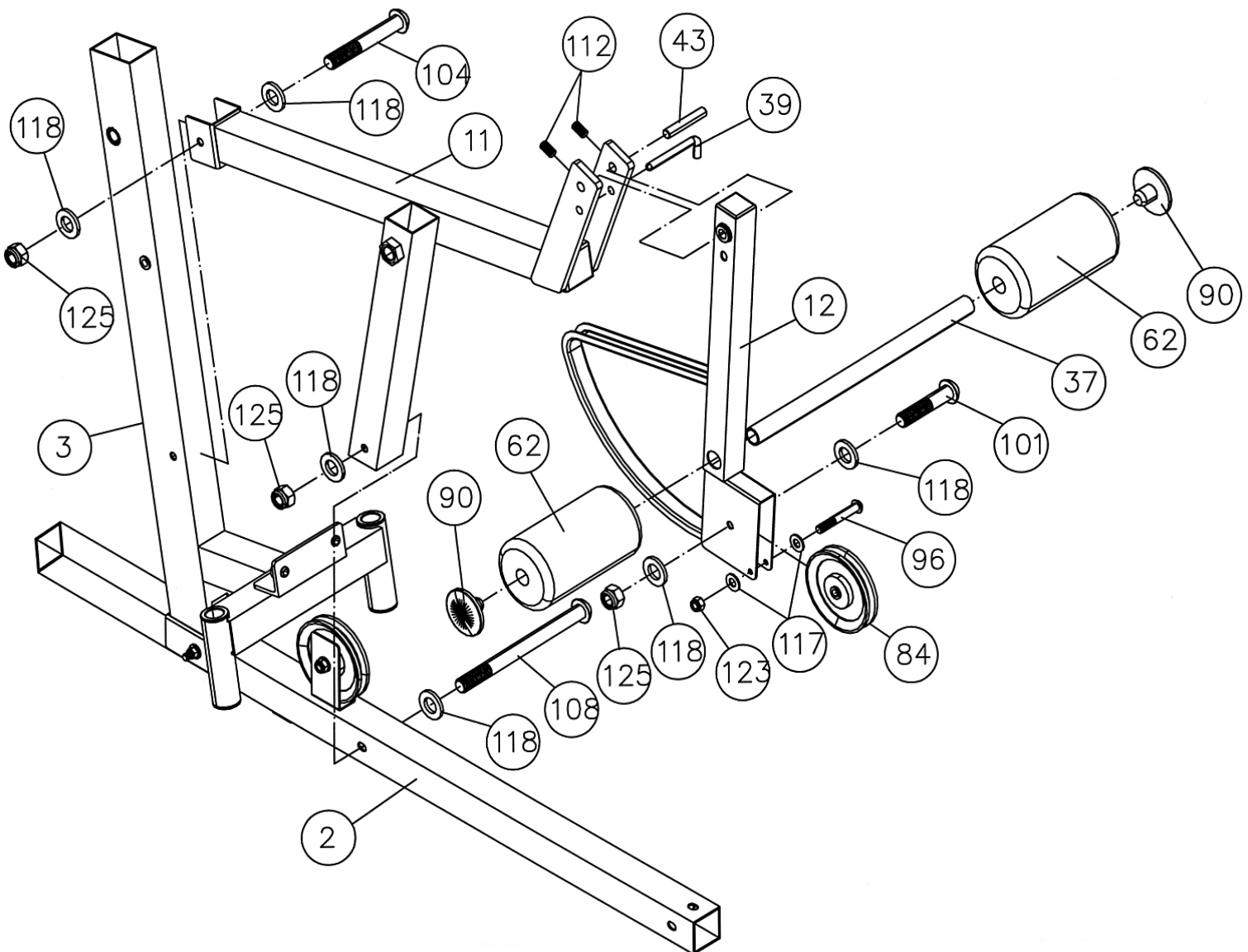
- A.) Attach the Front Vertical Beam (#3) to the Main Base Frame (#2). Secure it with one M10 x 2 3/4" Allen Bolt (#104), two Ø 3/4" Washers (#118), and one M10 Aircraft Nut (#125). Do not tighten the nut and bolt yet.
- B.) Attach a Pulley to the bracket on the upper Front Vertical Beam. Attach a L-shaped Bracket (#28) to the Pulley. Secure them with one M10 x 2" Allen Bolt (#102), two Ø 3/4" Washers (#118), and one M10 Aircraft Nut (#125).
- C.) Place two Pulleys in the two openings on the Front Vertical Beam. Secure each Pulley with one M10 x 2 1/2" Allen Bolt (#103), two Ø 3/4" Washers (#118), and one M10 Aircraft Nut (#125).
- D.) Insert a Pulley Pre-tensioner (#24) through the hole on the back of Front Vertical Beam. Secure it with two Ø 1 1/8" x Ø 1/2" Washers (#120) and M12 Regular Nuts (#127).



#### STEP 4 (See Diagram 4)

- A.) Attach the Seat Support (#11) to the Front Vertical Beam (#3) and Main Base Frame (#2). Secure it to the Front Vertical Beam with one M10 x 2 3/4" Allen Bolt (#104), two Ø 3/4" Washers (#118), and one M10 Aircraft Nut (#125). Secure it to the Main Base Frame with one M10 x 4 1/2" Allen Bolt (#108), two Ø 3/4" Washers (#118), and one M10 Aircraft Nut (#125).
- B.) Attach the Leg Developer (#12) to the Seat Support. Align the holes and insert a 2 3/4" Leg Developer Axle (#43). Secure the Axle with two M6 x 3/8" Socket Set Screws (#112). Insert a 4" L-shaped Pin (#39) to lock the Leg Developer in place. Remove the Pin when doing Leg Developer exercises.
- C.) Insert a Foam Tube (#37) halfway through the hole on the Leg Developer. Push two Foam Rolls (#62) onto the Tube from both ends. Push two Foam Roll End Caps (#90) into the ends.
- D.) Attach a Pulley to the open bracket on the Leg Developer. Secure it with one M10 x 1 3/4" Allen Bolt (#101), two Ø 3/4" Washers (#118), and one M10 Aircraft Nut (#125). Insert a M6 x 1 5/8" Allen Bolt (#96) through the holes on the bracket and secure it with two Ø 1/2" Washers (#117) and one M6 Aircraft Nut (#123).

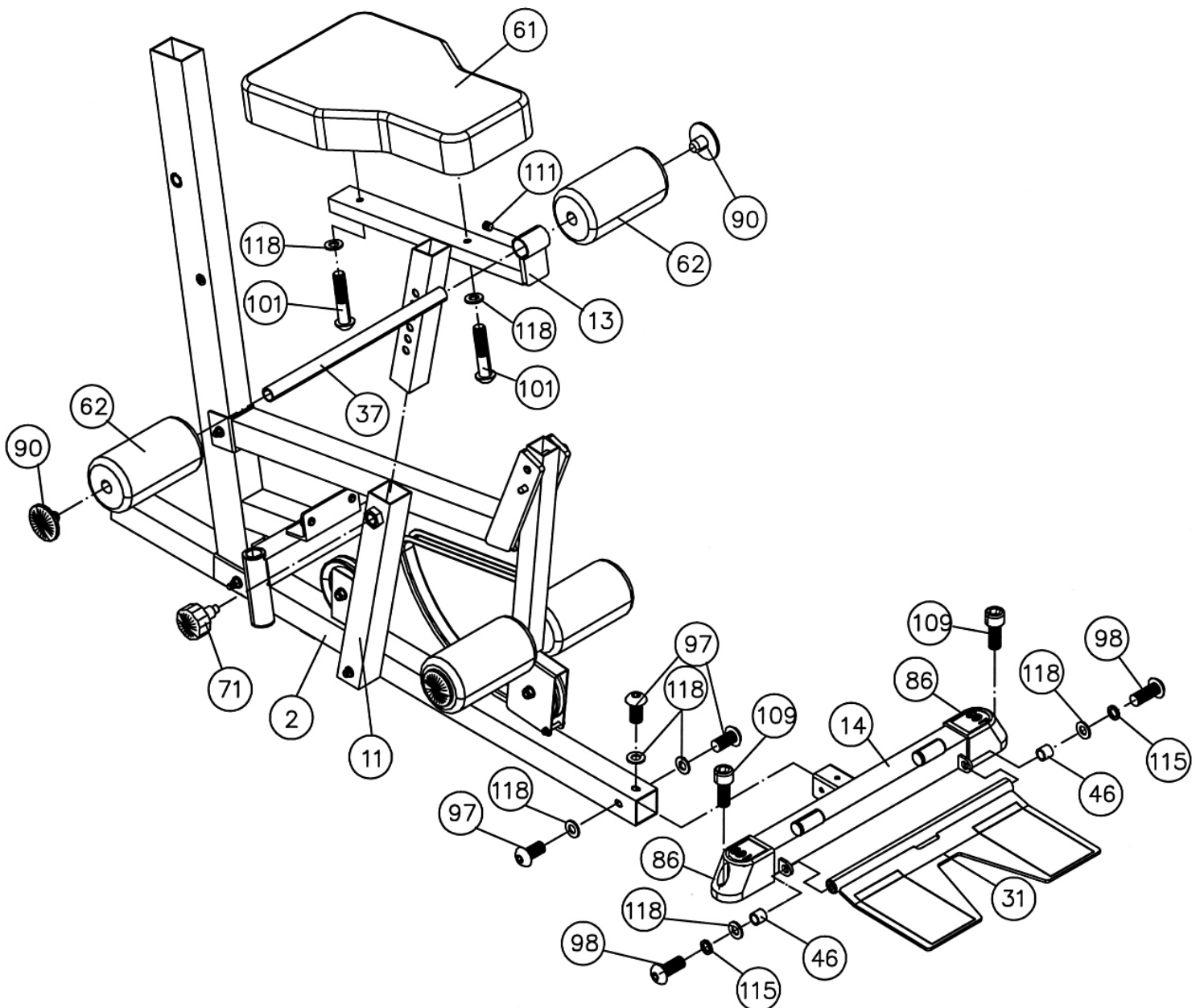
### DIAGRAM 4



## STEP 5 (See Diagram 5)

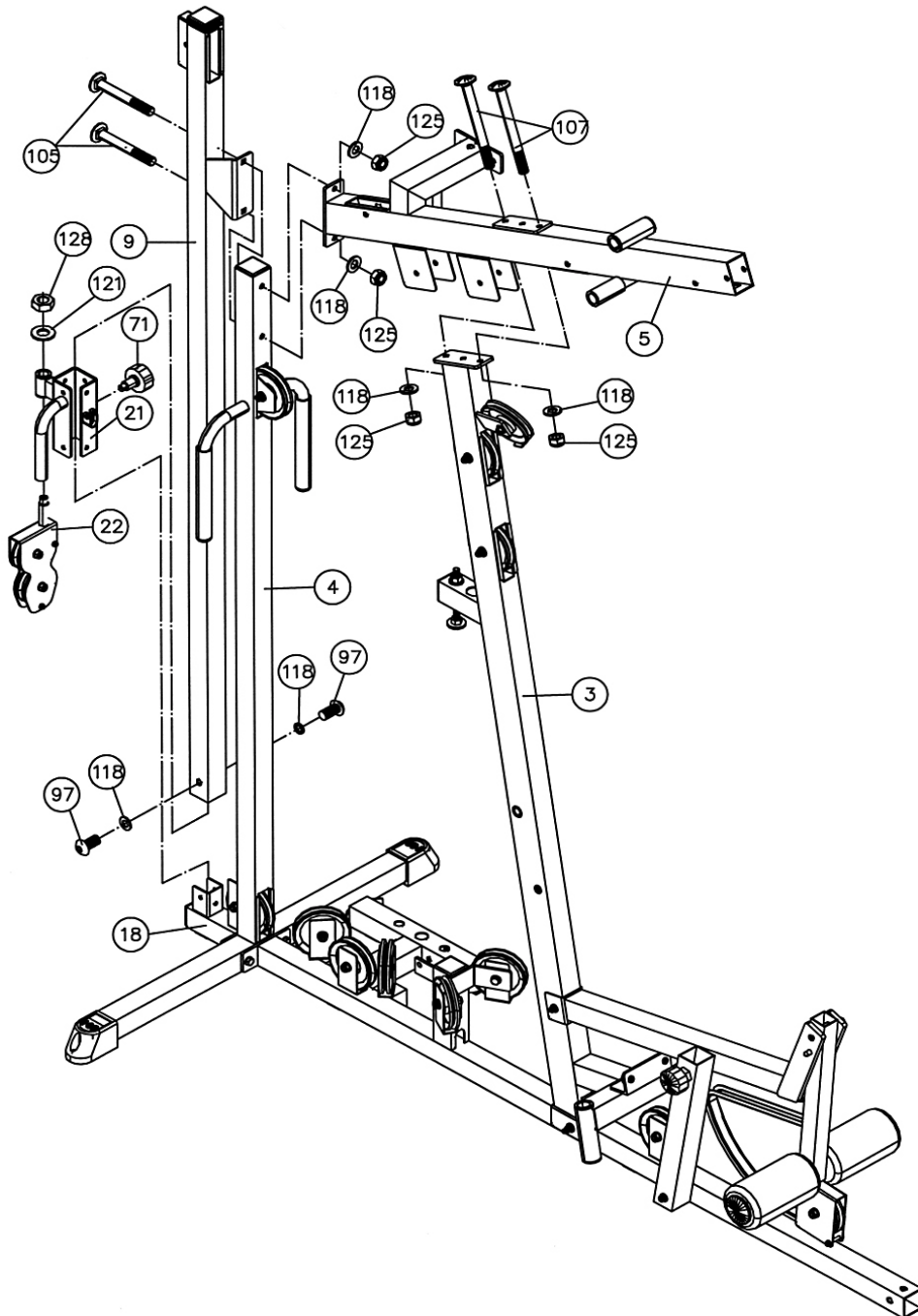
- A.) Place the Seat (#61) onto the Seat Incline Adjustment (#13). Secure it with two M10 x 1 3/4" Allen Bolts (#101) and Ø 3/4" Washers (#118).
- B.) Insert the Seat Incline Adjustment into the opening on the Seat Support (#11). Use a Lock Knob (#71) to secure the Seat at desired height.
- C.) Insert a Foam Tube (#37) halfway through the hole on the Seat Incline Adjustment (#13). Push two Foam Rolls (#62) onto the Tube from both ends. Push two Foam Roll End Caps (#90) into the ends.
- D.) Secure the Tube with one M6 x 1/4" Socket Set Screw (#111).
- E.) Attach the Front Stabilizer (#14) to the front opening on the Main Base Frame (#2). Secure it with three M10 x 3/4" Allen Bolts (#97) and Ø 3/4" Washers (#118).
- F.) Attach the Foot Plate (#31) to the Front Stabilizer. Secure it with two M10 x 1" Allen Bolts (#98), Ø 3/4" Spring Washers (#115), Ø 3/4" Washers (#118), and Ø 1/2" Bushings (#46).
- G.) Push two Stabilizer End Caps (#86) onto the Front Stabilizer (#14).

### DIAGRAM 5



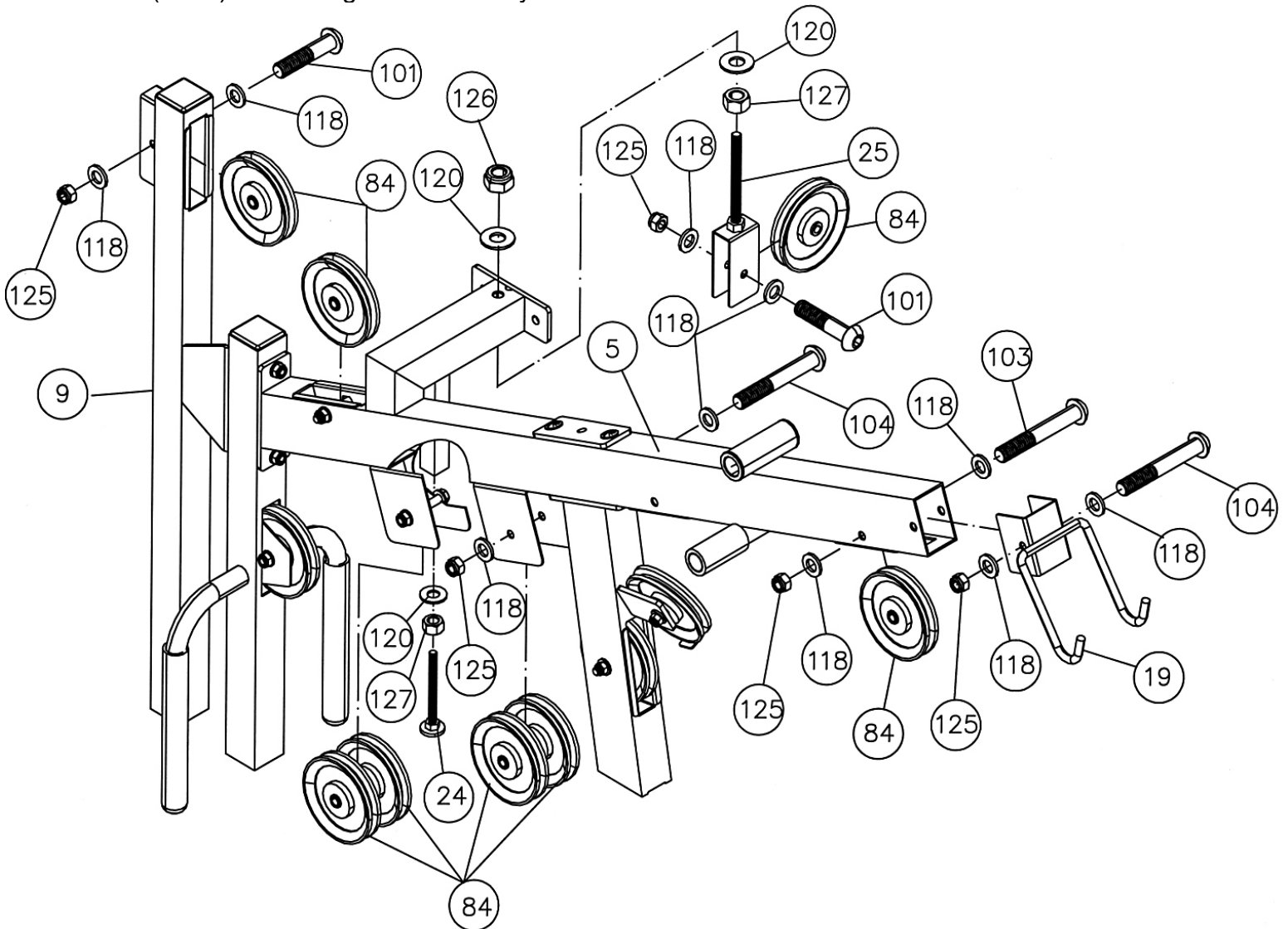
## STEP6 (See Diagram 6)

- A.) Slide the Sliding Pulley Frame (#21) onto the Sliding Pulley Vertical Beam (#9) from the bottom. Use a Lock Knob (#71) to secure the Frame at desired position.
- B.) Attach the Sliding Pulley Vertical Beam (#9) onto the Rear Base (#18). Secure it with two M10 x  $\frac{3}{4}$ " Allen Bolts (#97) and  $\varnothing \frac{3}{4}$ " Washers (#118). Do not tighten the bolts yet.
- C.) Place the Upper Frame (#5) onto the Front Vertical Beam (#3). Secure it with two M10 x 4" Carriage Bolts (#107),  $\varnothing \frac{3}{4}$ " Washers (#118), and M10 Aircraft Nuts (#125). Do not tighten the nuts and bolts yet.
- D.) Attach the Upper Frame (#5) to the Rear Vertical Frame (#4). Align them to the Sliding Pulley Vertical Beam (#9). Secure them together with two M10 x 3" Carriage Bolts (#105),  $\varnothing \frac{3}{4}$ " Washers (#118), and M10 Aircraft Nuts (#125). Do not tighten the nuts and bolts yet.
- E.) Insert the axle on the Sliding Pulley Bracket (#22) into the pivot on the Sliding Pulley Frame (#21). Secure it with one  $\varnothing 1 \frac{1}{4}$ " x  $\varnothing \frac{5}{8}$ " Washer (#121) and M16 Regular Nut (#128). Make sure the Bracket is able to swivel.



## STEP 7 (See Diagram 7)

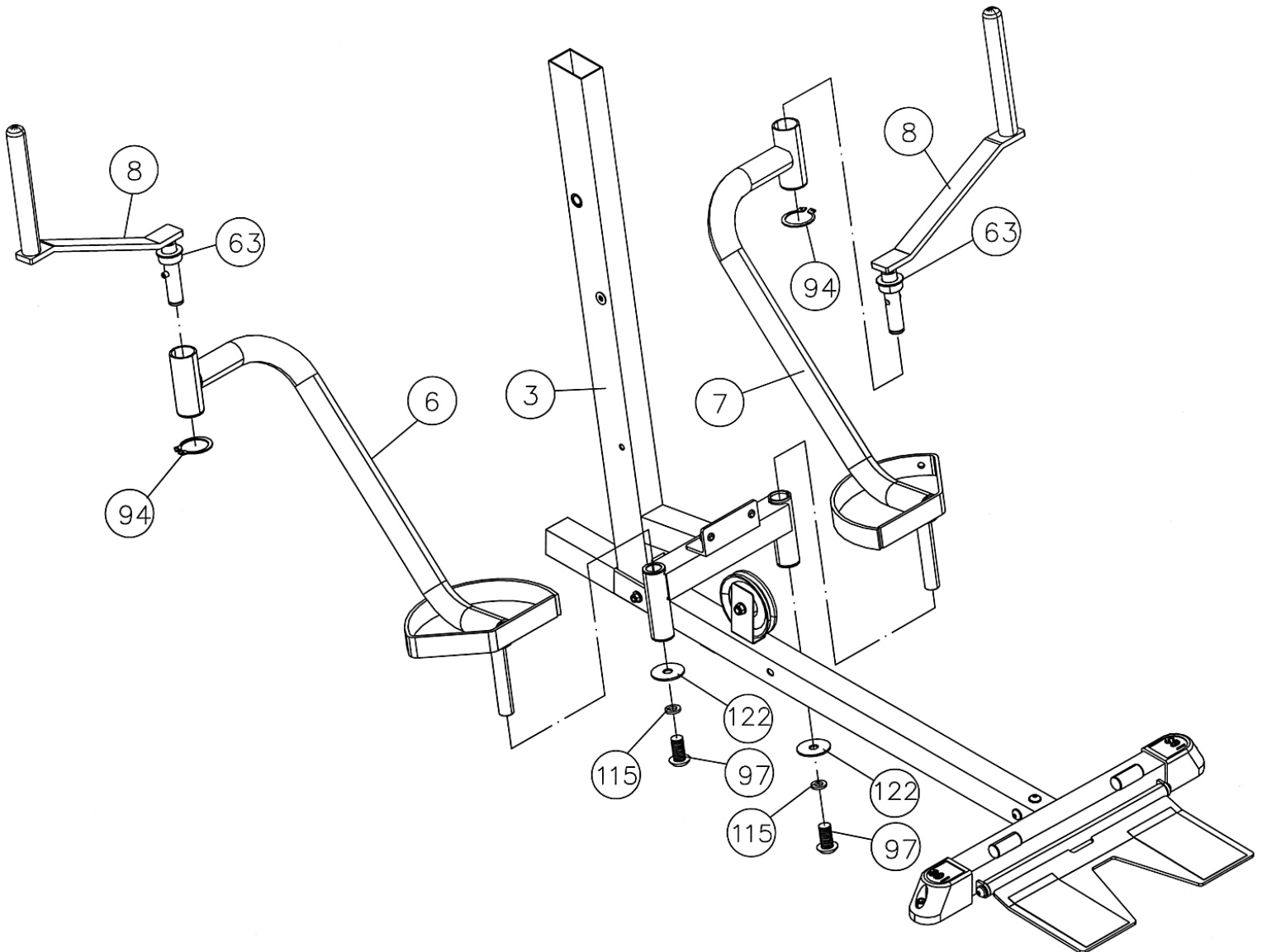
- A.) Attach a Pulley to the front opening on the Upper Frame (#5). Secure it with one M10 x 2 1/2" Allen Bolt (#103), two Ø 3/4" Washers (#118), and one M10 Aircraft Nut (#125). Do not tighten the nut and bolt yet. The Pulley needs to be removed to install the cable later.
- B.) Attach the Lat Bar Holder (#19) to the Upper Frame. Secure it with one M10 x 2 3/4" Allen Bolt (#104), two Ø 3/4" Washers (#118), and one M10 Aircraft Nut (#125).
- C.) Attach two Pulleys to the open bracket underneath the Upper Frame. Secure them with one M10 x 2 3/4" Allen Bolt (#104), two Ø 3/4" Washers (#118), and one M10 Aircraft Nut (#125). Repeat the same step to install the other two Pulleys to the other open bracket underneath the Upper Frame.
- D.) Attach a Pulley to the opening on the Upper Frame and top of Sliding Pulley Vertical Beam (#9). Secure each Pulley with one M10 x 1 3/4" Allen Bolt (#101), two Ø 3/4" Washers (#118), and one M10 Aircraft Nut (#125).
- E.) Thread a Pulley Pre-tensioner (#24) into the hole underneath the Upper Frame and secure it with one M12 Regular Nut (#127) and Ø1 1/8"xØ 1/2" Washer (#120). Do not tighten the nut yet.
- F.) Attach a Pulley to the Adjustable Single Pulley Bracket (#25). Secure it with one M10 x 1 3/4" Allen Bolt (#101), two Ø 3/4" Washers (#118), and one M10 Aircraft Nut (#125).
- G.) Insert the Adjustable Single Pulley Bracket (#25) through the hole on the Upper Frame. Secure it with two Ø 1 1/8" x Ø 1/2" Washers (#120), one M12 Regular Nut (#127) and one M12 Aircraft Nut (#126). Do not tighten the nuts yet.



## STEP 8 (See Diagram 8)

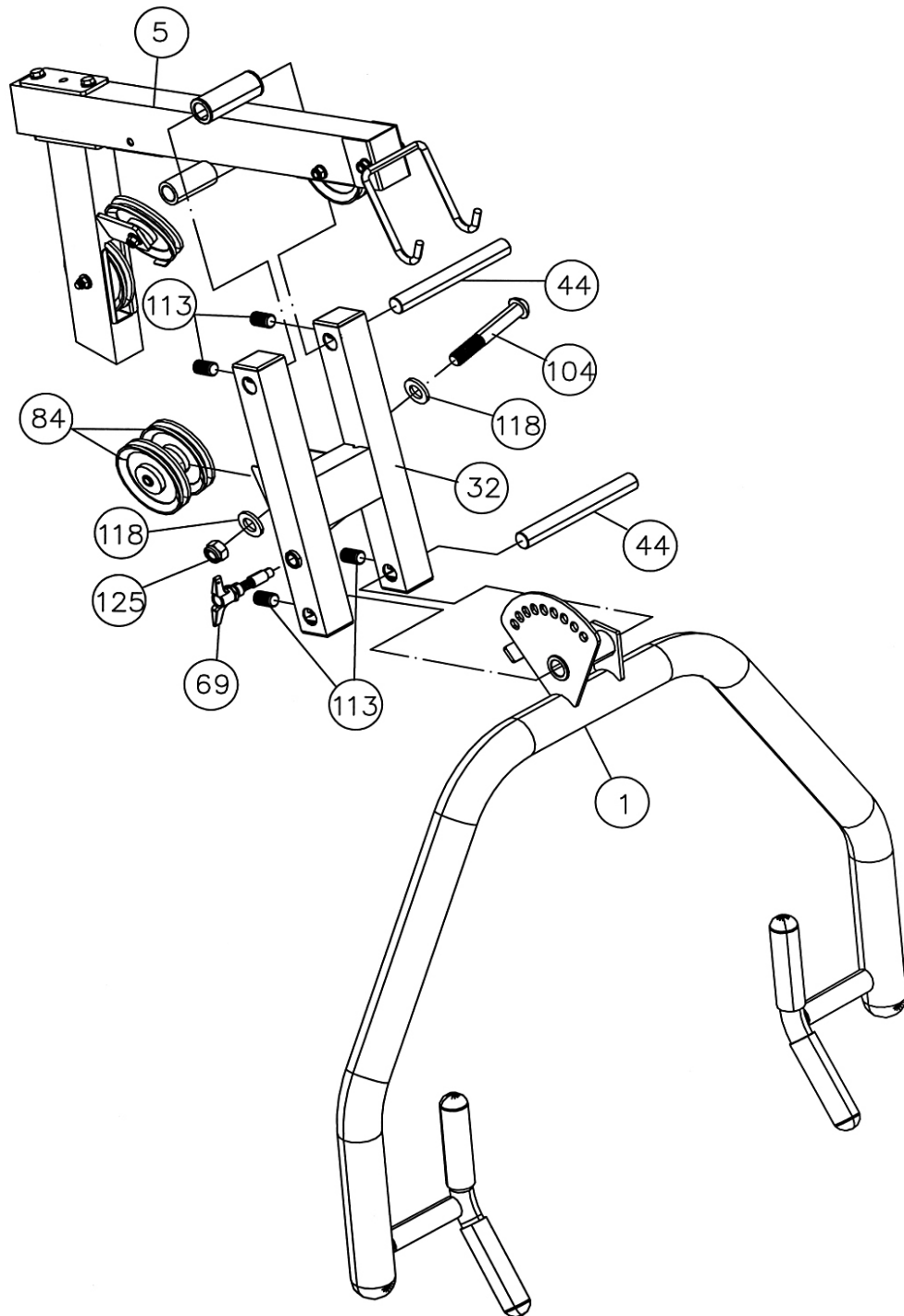
- A.) Insert the Right Butterfly Arm (#6) into the pivot on the Front Vertical Beam (#3). Secure it with one M10 x ¾" Allen Bolt (#97), Ø ¾" Spring Washer (#115), and Ø 1 ½" x Ø ½" Washer (#122).
- B.) Insert the Butterfly Swivel Handle (#8) into the pivot tube on the Right Butterfly Arm (#6). Secure the bottom with a Ø 1" Clip Ring (#94).
- C.) Repeat the above steps to install the other side.

### DIAGRAM 8



## STEP 9 (See Diagram 9)

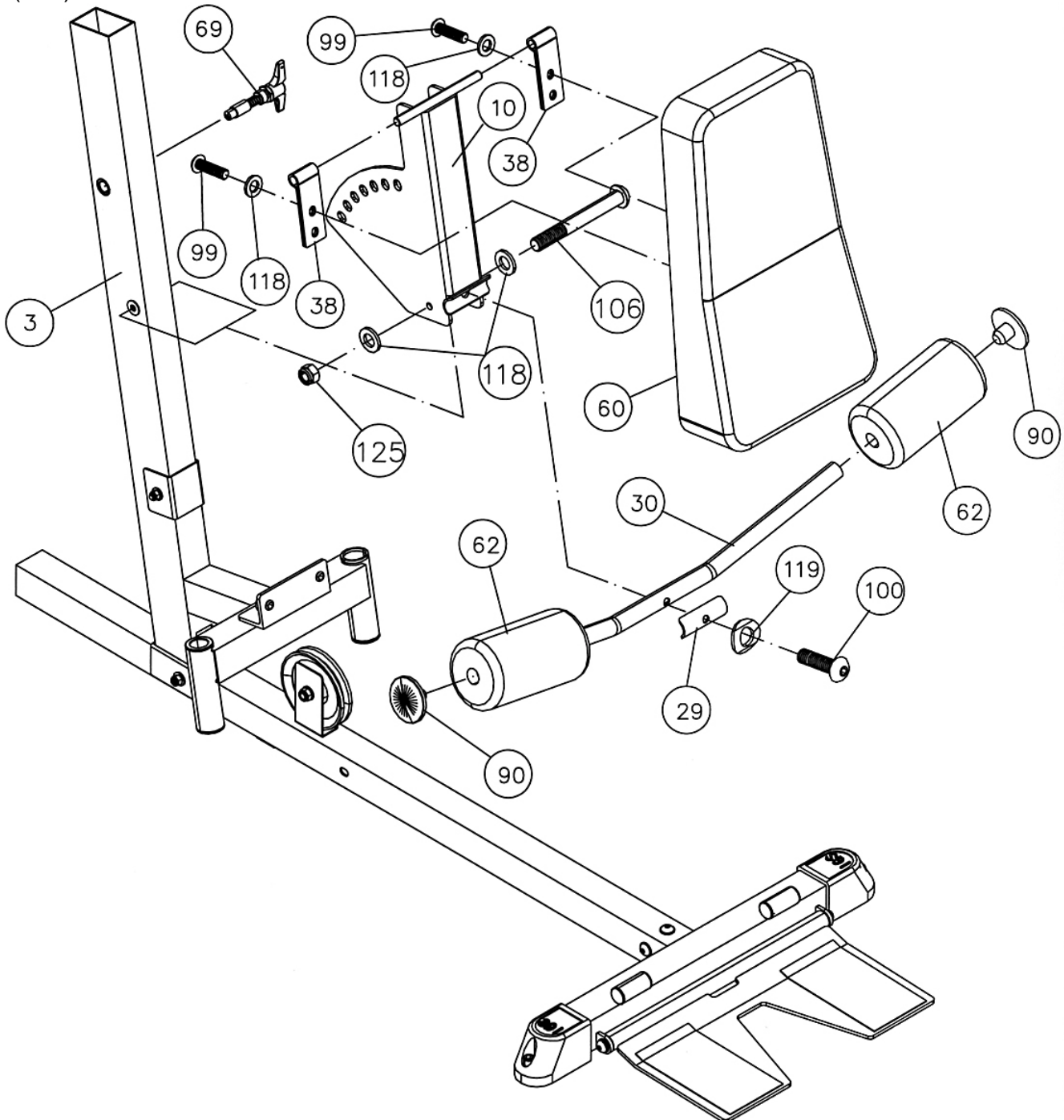
- A.) Attach the Bench Press Base (#32) to the pivot on the Upper Frame (#5). Align the holes and insert a 8" Bench Press Axle (#44) through the holes. Secure the Axle with two M10 x 1/2" Socket Set Screws (#113).
- B.) Attach the Bench Press Arm (#1) to the Bench Press Base (#32). Align the holes and insert a 8" Bench Press Axle (#44) through the holes. Secure the Axle with two M10 x 1/2" Socket Set Screws (#113).
- C.) Thread a T-shaped Pull Pin Set (#69) through the hole on the Bench Press Base (#32) to obtain the desired Bench Press position.
- D.) Attach two Pulleys (#84) to the open bracket on the back of Bench Press Base (#32). Secure them with one M10 x 2 3/4" Allen Bolt (#104), two Ø 3/4" Washers (#118), and one M10 Aircraft Nut (#125).





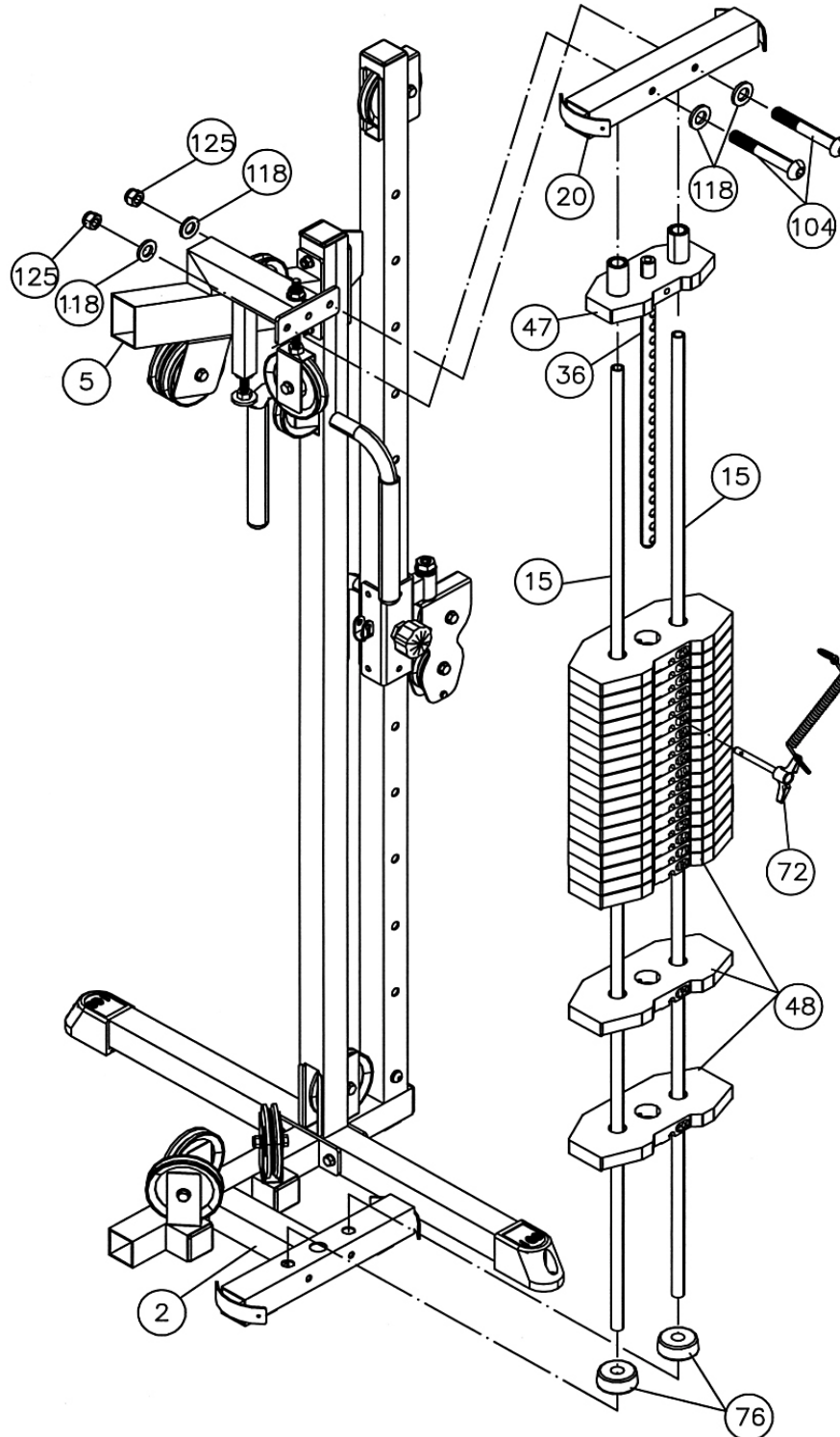
## STEP 10 (See Diagram 10)

- A.) Attach the Backrest Adjustment Frame (#10) to the Front Vertical Beam (#3). Secure the bottom of the Frame to the Front Vertical Beam with one M10 x 3 1/8" Allen Bolt (#106), two Ø 3/4" Washers (#118), and one M10 Aircraft Nut (#125).
- B.) Attach two Backrest Swivel Brackets (#38) to the pivot on the Frame. Attach the Backrest Board (#60) to the Brackets. Secure the Board with two M10 x 1 1/8" Allen Bolts (#99) and Ø 3/4" Washers (#118).
- C.) Thread a T-shaped Pull Pin Set (#69) through the hole on the Front Vertical Beam (#3) to obtain the desired Backrest position.
- D.) Attach the Angled Foam Tube (#30) to the Backrest Adjustment Frame (#10). Secure it with one Bent Bracket (#29), M10 x 1 5/8" Allen Bolt (#100) and Ø 7/8" Bent Washer (#119).
- E.) Push two Foam Rolls (#62) onto the Tube from both ends. Push two Foam Roll End Caps (#90) into the ends.



### STEP 11 (See Diagram 11)

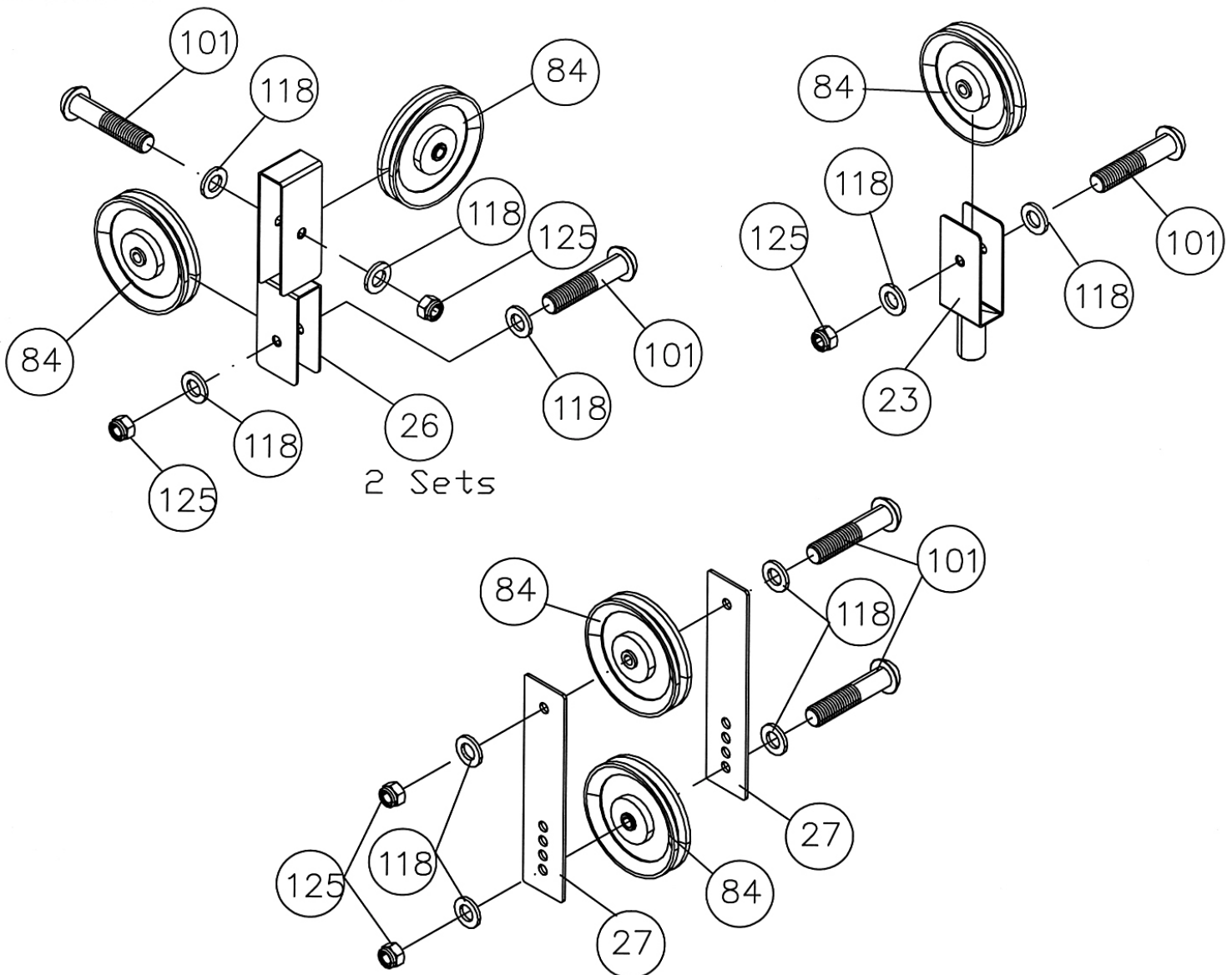
- A.) Align two  $\text{Ø } 2 \frac{1}{2}$ " x 1" Rubber Bumpers (#76) onto the holes on the Main Base Frame (#2). Insert two Guide Rods (#15) through the Bumpers and into the Base Frame. Slide 19 Weight Plates (#48) onto the Guide Rods.
- B.) Slide the Selector Stem (#47) with the Selector Rod (#36) onto the Guide Rods. Insert the Selector Rod (#36) through the center hole.
- C.) Insert a Weight Plate Selector Pin (#72) through the selected hole on the Weight Plates.
- D.) Place the Top Socket Assembly (#20) onto the Guide Rods. Secure it to the Upper Frame (#5) with two M10 x 2  $\frac{3}{4}$ " Allen Bolts (#104), four  $\text{Ø } \frac{3}{4}$ " Washers (#118), and two M10 Aircraft Nuts (#125).



## STEP 12 (See Diagram 12)

- A.) Attach two Pulleys to each Angled Double Floating Pulley Bracket (#26). Secure each Pulley with one M10 x 1 3/4" Allen Bolt (#101), two Ø3/4" Washers (#118), and one M10 Aircraft Nut (#125). Do not tighten the nuts and bolts yet. The Pulleys may need to be removed when installing the Cables.
- B.) Attach one Pulley to a Single Pulley Bracket (#23).
- C.) Attach two Pulleys to the Double Floating Pulley Brackets (#27).

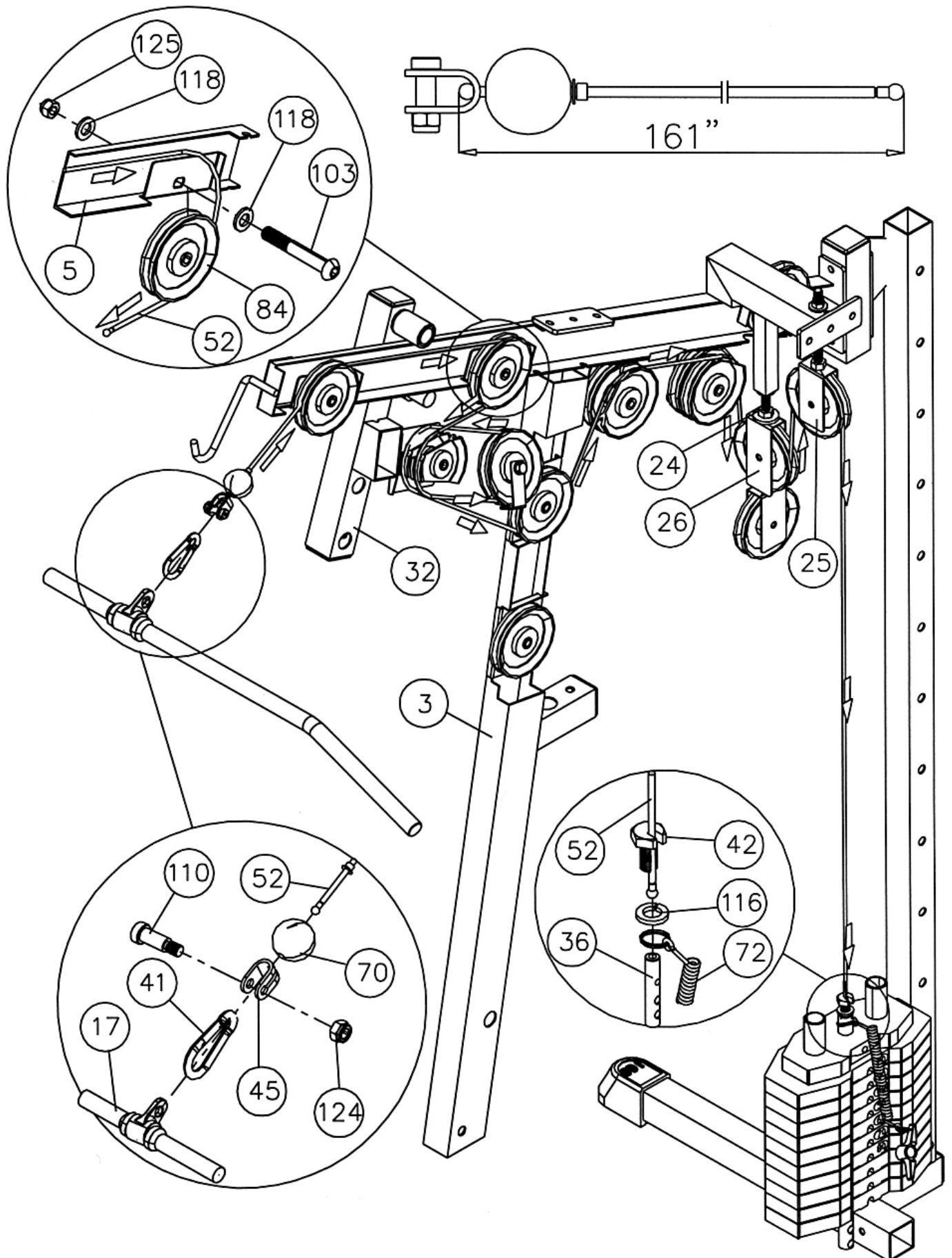
### DIAGRAM 12



### **STEP 13 Upper Cable Looping (See Diagram 13)**

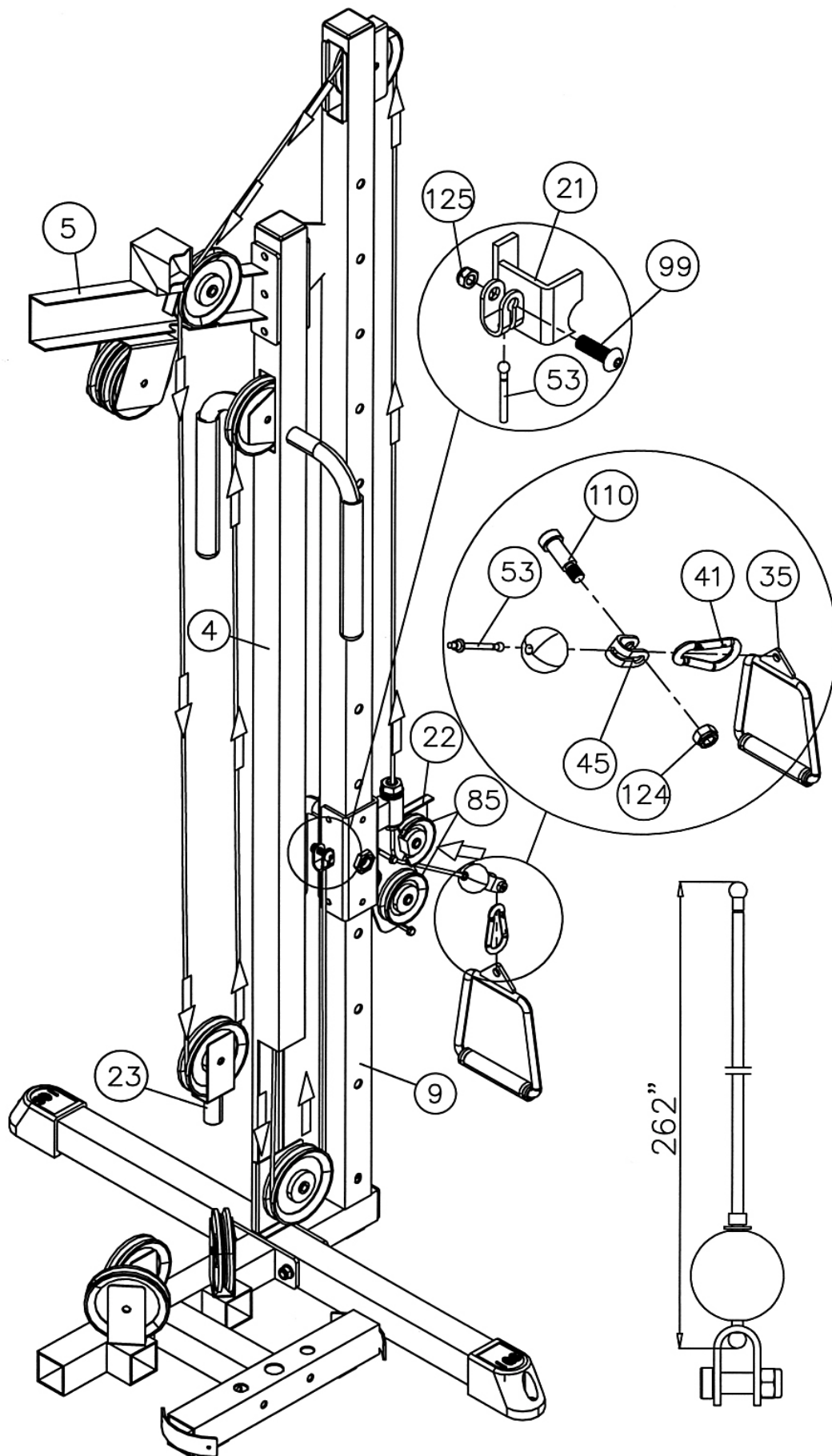
- A.) Slide a Ball Stopper (#70) onto the 161" Upper Cable (#52). Slide and Pull the Cable Strap Bracket (#45) onto the Cable. Secure the Bracket with a M8 x 1 ¼" Allen Bolt (#110) and M8 Aircraft Nut (#124).
- B.) Attach the tip of the Upper Cable to the Pulley on the front of the Upper Frame (#5). Insert the Cable into the Frame through the tube to the second opening. Remove the Pulley to get the Cable out then reinstall the Pulley.
- C.) Draw the Cable around the Pulley then down to the right Pulley on the back of the Bench Press Base (#32). Draw the Cable around the right Pulley then to the Pulley on the front of the Front Vertical Beam (#3).
- D.) Draw the Cable around the Pulley then back to the left Pulley on the back of the Bench Press Base (#32).
- E.) Draw the Cable around the left Pulley then to the Pulley in the upper open slot on the Front Vertical Beam (#3).
- F.) Draw the Cable underneath the Pulley then pull upward to the first right Pulley underneath the Upper Frame. Draw the Cable over the Pulley to the second right Pulley underneath the Upper Frame.
- G.) Draw the Cable over the Pulley then pull downward. Attach the Cable to the upper Pulley on an Angled Double Floating Pulley Bracket (#26) installed in Step12. Attach the Bracket underneath the Pulley Pre-tensioner (#24).
- H.) Draw the Cable underneath the Pulley then pull upward to the Pulley on the Adjustable Single Pulley Bracket installed in Step-7G. Let the Double Floating Pulley Bracket (#26) hanging for now.
- I.) Draw the Cable around the Pulley then pull downward to the Selector Rod (#36).
- J.) Attach the end of the Cable to a M12 x 1" Split Bolt (#42). Thread the Split Bolt through a Ø 1" Spring Washer (#116) and the ring on the Weight Plate Selector Pin (#72) into the Selector Rod (#36).
- K.) Connect the Lat Bar (#17) to the Cable Strap Bracket with a Hook (#41).
- L.) Place the Lat Bar onto the Lat Bar Holder.

# DIAGRAM 13



## **STEP 14 High-Low Station Cable Looping (See Diagram 14)**

- A.) Slide a Ball Stopper (#70) onto the 262" High-Low Cable (#53). Slide and Pull the Cable Strap Bracket (#45) onto the Cable. Secure the Bracket with a M8 x 1 ¼" Allen Bolt (#110) and M8 Aircraft Nut (#124).
- B.) Attach the Cable in between the pre-assembled two Small Pulleys (#85) on the Sliding Pulley Frame (#22). Note: The Ball Stopper should be in front of the Sliding Pulley Frame.
- C.) Draw the Cable through the Sliding Pulley Frame then pull upward to the Pulley on the top opening of the Sliding Pulley Vertical Beam (#9).
- D.) Draw the Cable over the Pulley then pull forward to the Pulley on the rear opening on the Upper Frame (#5).
- E.) Draw the Cable over the Pulley then pull downward. Attach the Cable to the Pulley on the Single Floating Pulley Bracket (#23) installed in Step12.
- F.) Draw the Cable underneath the Pulley then pull upward to the Pulley on the upper Rear Vertical Frame (#4). Let the Single Floating Pulley Bracket hanging for now.
- G.) Draw the Cable around the Pulley then drop the Cable inside the tube downward through the Rear Vertical Frame to the Pulley on the bottom opening. Remove the Pulley to get the Cable out then reinstall the Pulley. Draw the Cable underneath the Pulley then pull upward to the bracket on the Sliding Pulley Frame (#21).
- H.) Attach the Cable head to the bracket. Secure the Cable head in place with one M10 x 1 1/8" Allen Bolt (#99) and M10 Aircraft Nut (#125).
- I.) Connect the Single Handle (#35) to the Cable Strap Bracket (#45) with a Hook (#41).

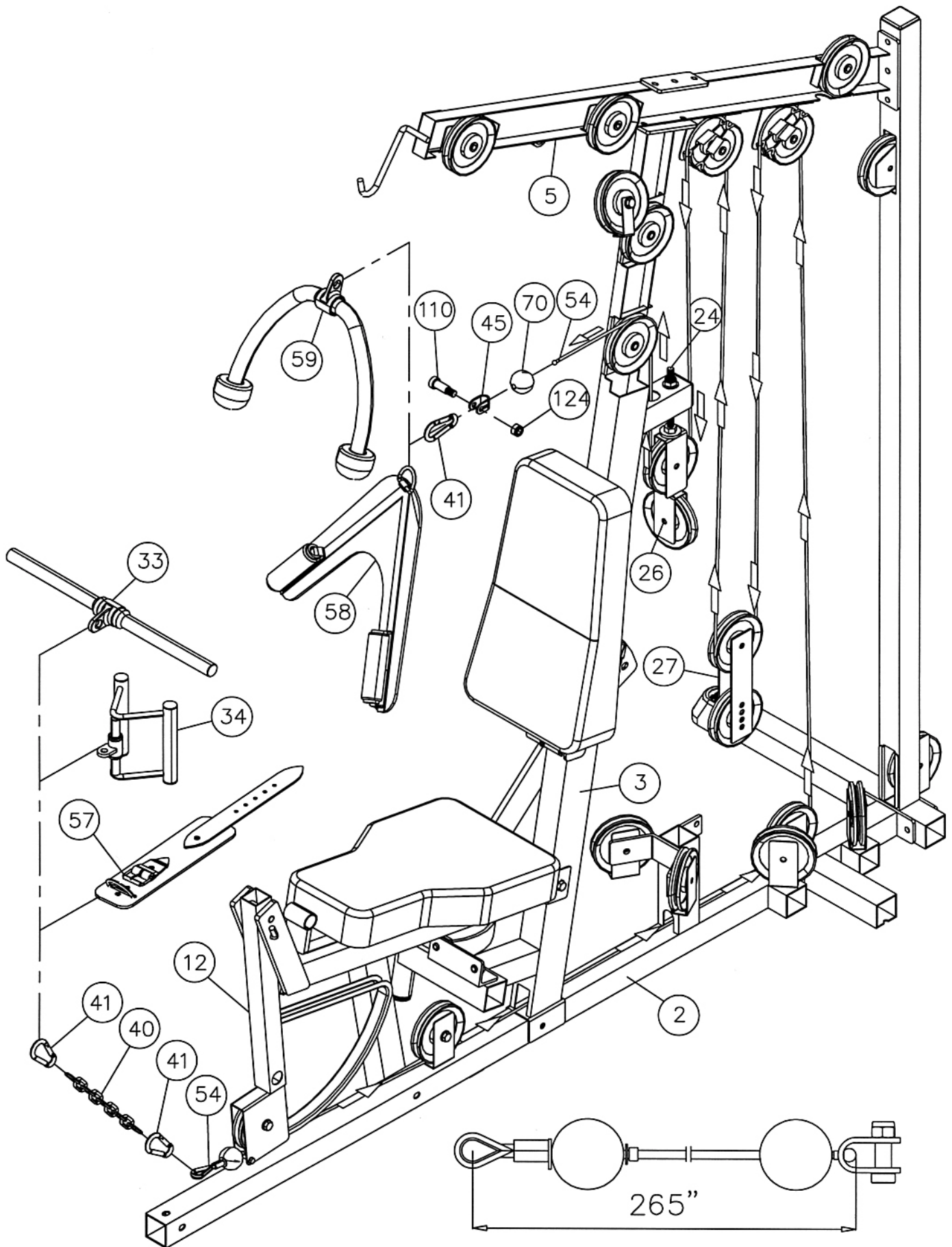


## **STEP 15 Lower & AB Cable Looping (See Diagram 15)**

- A.) Insert the 265" Lower Cable underneath the Pulley on the Leg Developer (#12).
- B.) Draw the Cable underneath the Pulley along the Main Base Frame to the Pulley under the Seat. Continue drawing the Cable along the Base Frame through the opening on the bottom of the Front Vertical Beam to the Pulley on the rear of Main Base Frame.
- C.) Draw the Cable underneath the Pulley then pull upward to the left Pulley underneath the Upper Frame (#5). Draw the Cable around the Pulley then pull downward. Attach the Cable to the upper Pulley on the Double Floating Pulley Brackets (#27) previously installed in Step-12.
- D.) Draw the Cable around the Pulley then upward to the left Pulley under the Upper Frame. Let the Bracket hanging for now.
- E.) Draw the Cable around the Pulley then downward. Attach the Cable to the upper Pulley on an Angled Double Floating Pulley Bracket (#26) previously installed in Step-12.
- F.) Draw the Cable underneath the Pulley then upward to the Pulley in the middle opening on the Front Vertical Beam. Draw the Cable over the Pulley and through the opening.
- G.) Install the Ball Stopper (#70) and the Cable Strap Bracket (#45) to the Cable. Connect a Hook (#41) to the Cable Strap Bracket and secure with the M8 x 1 ¼" Allen Bolt (#110) and M8 Aircraft Nut (#124) on the Bracket.
- H.) Connect the AB Strap (#58) or Triceps Rope (#59) to the Hook for various exercises.
- I.) Use a Hook (#41) to connect a Chain (#40) to the clip on the end of the Cable in front of the Leg Developer (#12).
- J.) Use a Hook (#41) to connect the Ankle Strap (#57), Double Handle (#34), or Shiver Bar (#33) to the Chain for various exercises.
- K.) Note: After completing the entire Cable installations, adjust the tightness of the Cable Loop System by adjusting the height of the Pulley Pre-tensioner (#24). Lower the Pre-tensioner so it touches the top of the Pulley Bracket.

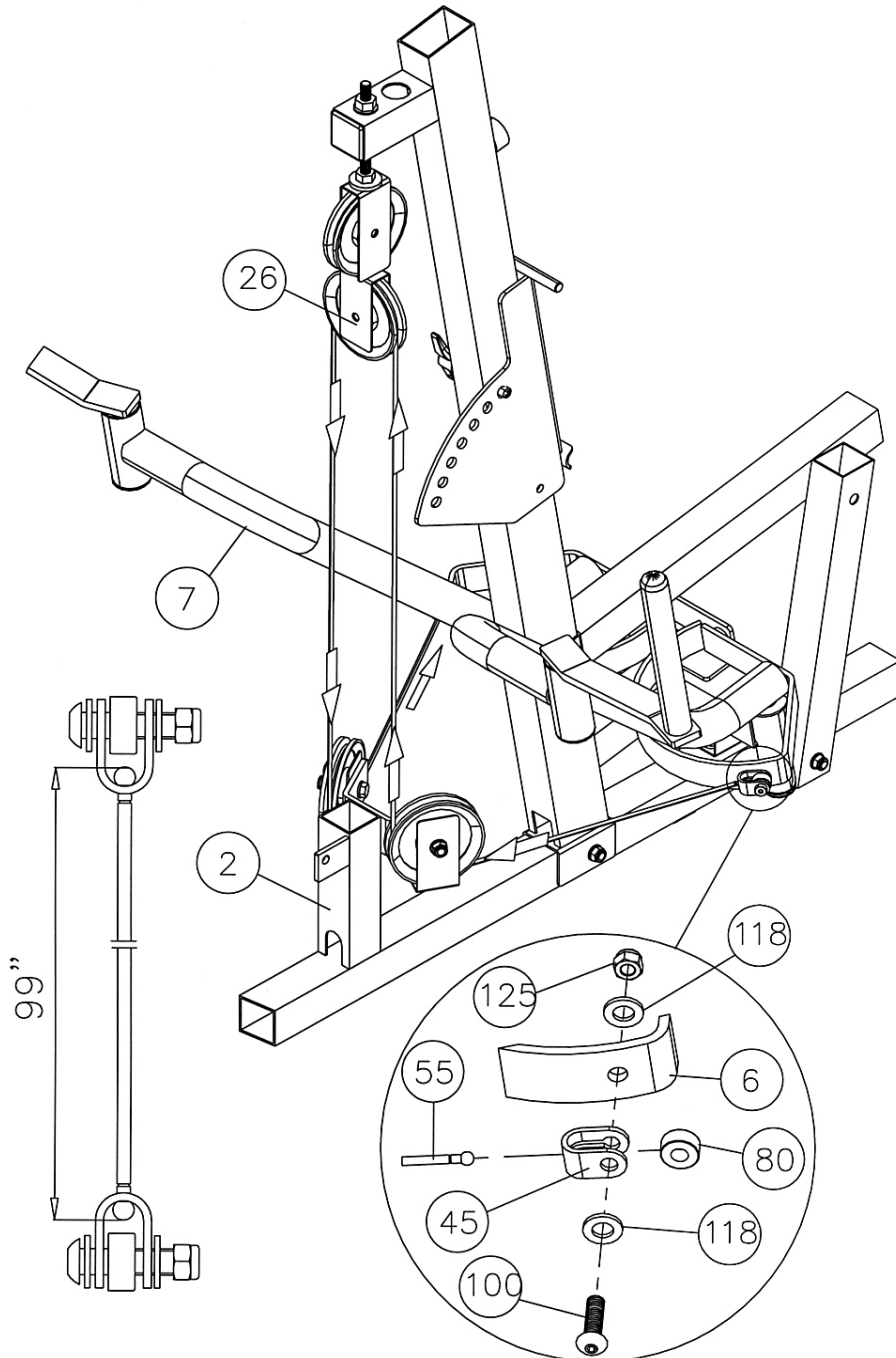


# DIAGRAM 15



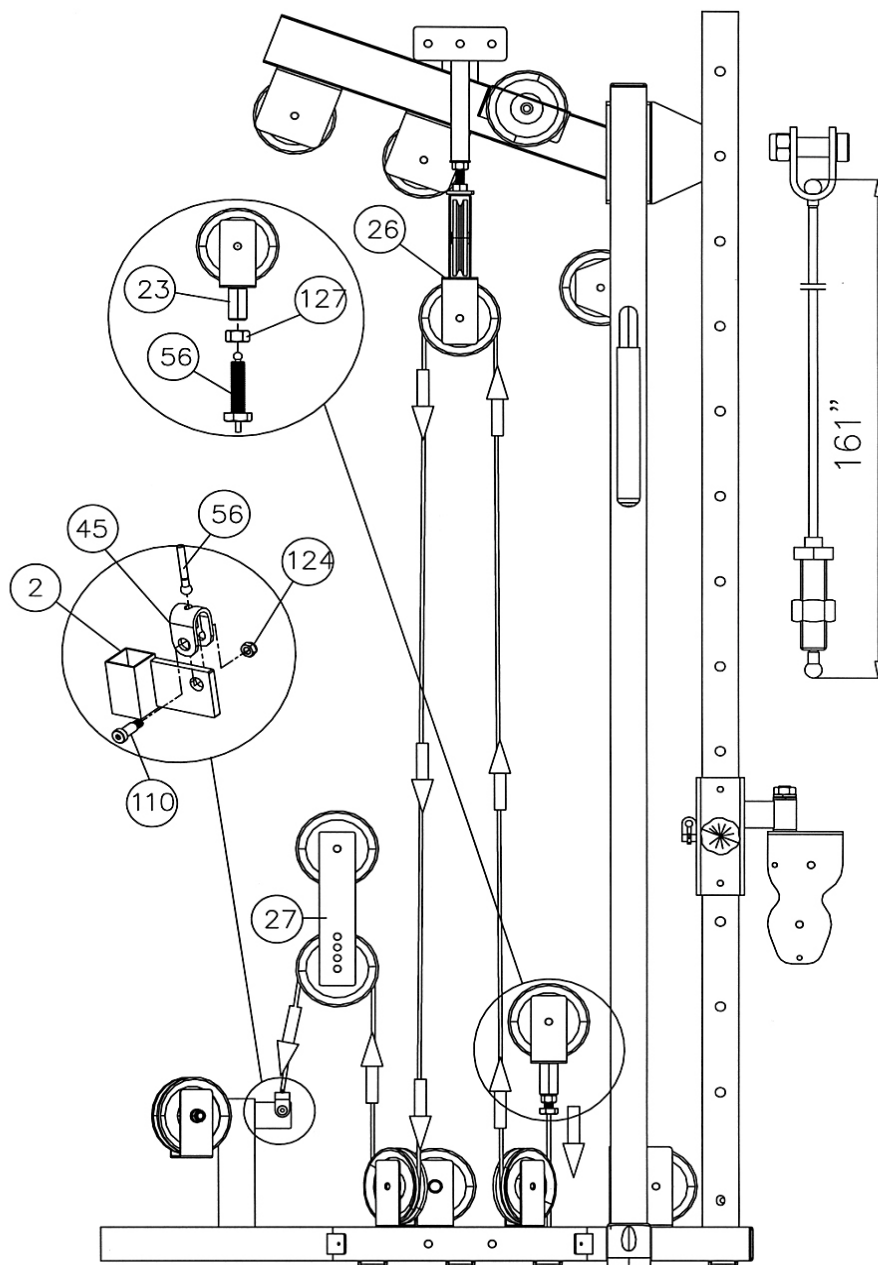
## STEP 16 Butterfly Cable Looping (See Diagram 16)

- A.) Attach one end of the 99" Butterfly Cable (#55) to the bottom of the Right Butterfly (#6). Secure it with the M10 x 1 5/8" Allen Bolt (#100), Ø 7/8" x 1/2" Spacer (#80), two Ø 3/4" Washers (#118), and one M10 Aircraft Nut (#125) on the Bracket.
- B.) Remove the Cable Strap Bracket from the other end of the Cable.
- C.) Pull the Cable towards the back of the machine to the right oblique Pulley on the Main Base Frame behind the Front Vertical Beam.
- D.) Draw the Cable underneath the Pulley then pull upward to the lower Pulley on the Angled Double Floating Pulley Bracket (#26). Draw the Cable around the Pulley then downward to the left oblique Pulley on the Main Base Frame.
- E.) Draw the Cable underneath the Pulley then pull to the Left Butterfly (#7).
- F.) Repeat the Step A above to secure the end Cable to the Left Butterfly.



### STEP 17 Tension Cable looping (See Diagram 17)

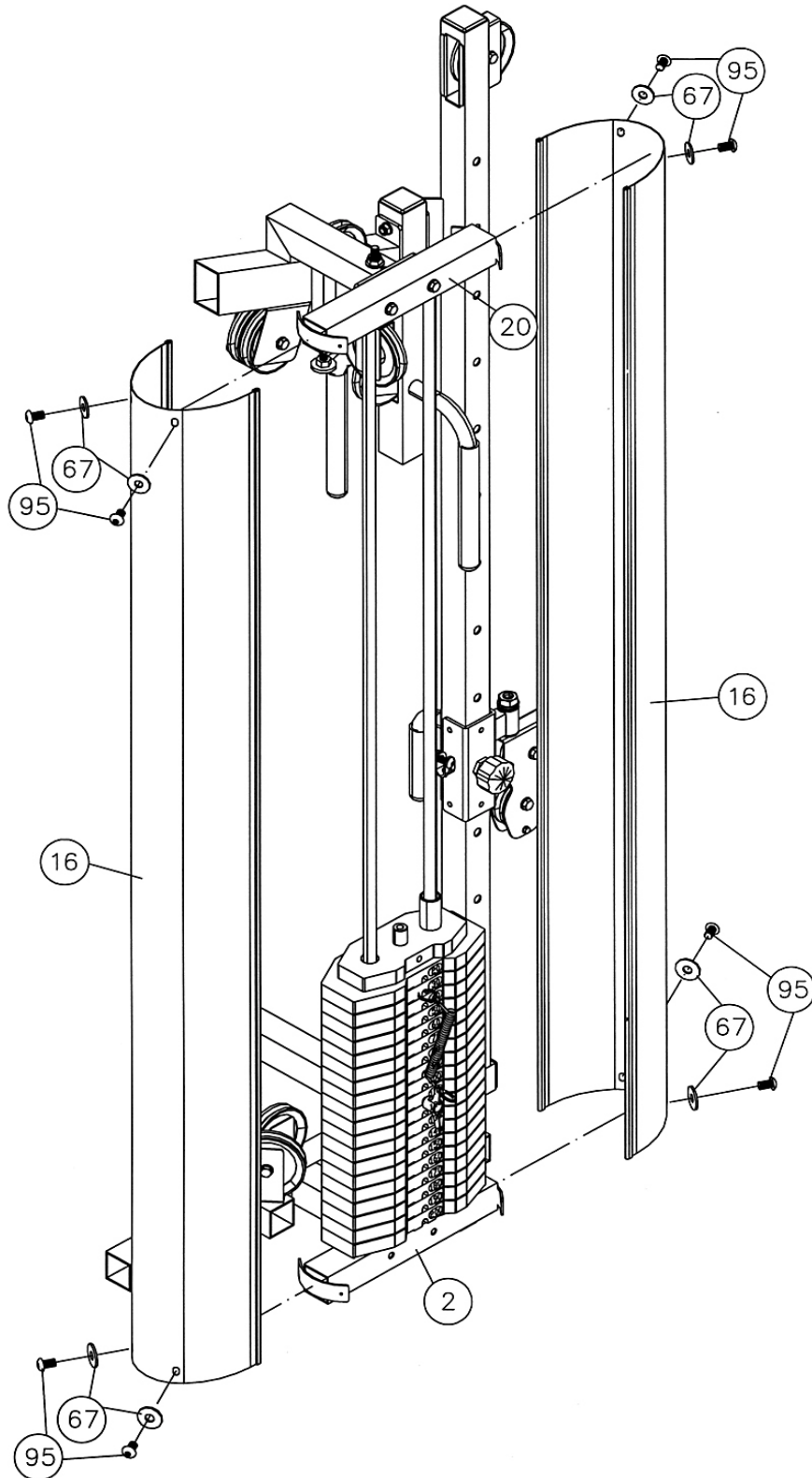
- A.) Thread the bolt on the 161" Tension Cable (#56) into the Single Floating Pulley Bracket (#23) previously installed.
- B.) Remove the Cable Strap Bracket from the other end of the Cable.
- C.) Draw the Cable down to the oblique Pulley on the Main Base Frame. Draw the Cable underneath the Pulley then pull upward to the lower Pulley on the Angled Double Floating Pulley Bracket (#26) previously installed.
- D.) Draw the Cable around the Pulley then pull downward to the other oblique Pulley on the Main Base Frame.
- E.) Draw the Cable underneath the Pulley then pull upward to the lower Pulley on the Double Floating Pulley Bracket (#27) previously installed.
- F.) Draw the Cable over the Pulley then pull downward to the post on the Main Base Frame. Attach the end of the Cable to the Cable Strap Bracket (#45). Secure the Strap to the post with one M8 x 1 ¼" Allen Bolt (#110) and M8 Aircraft Nut (#124).
- G.) Securely tighten all Nuts and Bolts previously installed.
- H.) Check the tightness of the Cable Loop System.



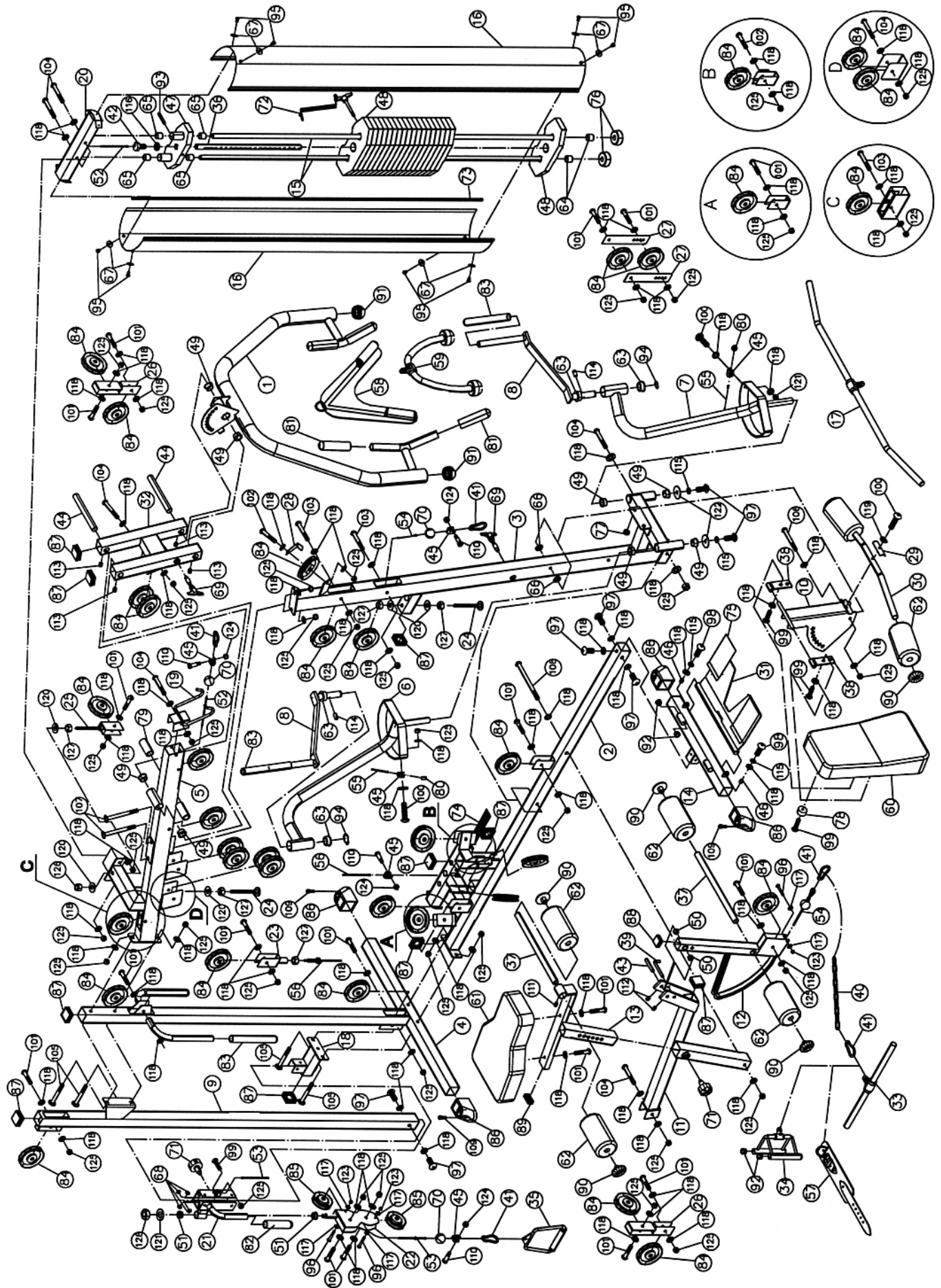
**STEP 18 (See Diagram 18)**

A.) Attach two Weight Plate Covers (#16) to the Top Socket Assembly (#20) and Main Base Frame (#2). Secure each Weight Plate Cover with four M6 x 3/8" Allen Bolts (#95) and  $\text{\O} \frac{3}{4}$ " Nylon Washers (# 67).

**DIAGRAM 18**



# EXPLODED DIAGRAM



## PARTS LIST

| KEY NO. | DESCRIPTION                           | Q'ty |     |                              |    |
|---------|---------------------------------------|------|-----|------------------------------|----|
| 1       | Bench Press Arm                       | 1    | 56  | 161" Tension Cable           | 1  |
| 2       | Main Base Frame                       | 1    | 57  | Ankle Strap                  | 1  |
| 3       | Front Vertical Beam                   | 1    | 58  | AB Strap                     | 1  |
| 4       | Rear Vertical Beam                    | 1    | 59  | Tricep Rope                  | 1  |
| 5       | Upper Frame                           | 1    | 60  | Backrest Board               | 1  |
| 6       | Right Butterfly                       | 1    | 61  | Seat                         | 1  |
| 7       | Left Butterfly                        | 1    | 62  | Foam Roll                    | 6  |
| 8       | Butterfly Swivel Handle               | 2    | 63  | Butterfly Handle Bushing     | 4  |
| 9       | Sliding Pulley Vertical Beam          | 1    | 64  | Weight Plate Bushing         | 38 |
| 10      | Backrest Adjustment Frame             | 1    | 65  | Selector Stem Bushing        | 4  |
| 11      | Seat Support                          | 1    | 66  | Ø 5/8" Bushing               | 2  |
| 12      | Leg Developer                         | 1    | 67  | Ø ¾" Nylon Washer            | 8  |
| 13      | Seat Incline Adjustment               | 1    | 68  | Sliding Frame Plastic Cap    | 8  |
| 14      | Front Stabilizer                      | 1    | 69  | T-shaped Pull Pin Set        | 2  |
| 15      | Guide Rod                             | 2    | 70  | Ball Stopper                 | 3  |
| 16      | Weight Stack Cover                    | 2    | 71  | Lock Knob                    | 2  |
| 17      | Lat Bar                               | 1    | 72  | Weight Plate Selector Pin    | 1  |
| 18      | Rear Base                             | 1    | 73  | Weight Cover Rubber Edge     | 4  |
| 19      | Lat Bar Holder                        | 1    | 74  | Rubber Pad                   | 1  |
| 20      | Top Socket Assembly                   | 1    | 75  | Foot Plate Anti-slipping Pad | 2  |
| 21      | Sliding Pulley Frame                  | 1    | 76  | Ø 2 ½" x 1" Rubber Bumper    | 2  |
| 22      | Sliding Pulley Bracket                | 1    | 77  | Ø 1" x 5/8" Rubber Bumper    | 2  |
| 23      | Single Floating Pulley Bracket        | 1    | 78  | Backrest Board Rubber Bumper | 1  |
| 24      | Pulley Pre-tensioner                  | 2    | 79  | Ø 1" x 3" Rubber Bumper      | 2  |
| 25      | Adjustable Single Pulley Bracket      | 1    | 80  | Ø 7/8" x ½" Spacer           | 2  |
| 26      | Angled Double Floating Pulley Bracket | 2    | 81  | Bench Press Handle Grip      | 4  |
| 27      | Double Floating Pulley Bracket        | 2    | 82  | Sliding Frame Handle Grip    | 1  |
| 28      | L-shaped Pulley Bracket               | 1    | 83  | Butterfly Grip               | 4  |
| 29      | Bent Bracket                          | 1    | 84  | Pulley                       | 30 |
| 30      | Angled Foam Tube                      | 1    | 85  | Small Pulley                 | 2  |
| 31      | Foot Plate                            | 1    | 86  | Stabilizer End Cap           | 4  |
| 32      | Bench Press Base                      | 1    | 87  | 2" Square End Cap            | 11 |
| 33      | Shiver Bar                            | 1    | 88  | 1 ½" Square End Cap          | 1  |
| 34      | Double Handle                         | 1    | 89  | 2" x 1" End Cap              | 1  |
| 35      | Single Handle                         | 1    | 90  | Foam Roll End Cap            | 6  |
| 36      | Selector Rod                          | 1    | 91  | Ø 2 3/8" End Cap             | 2  |
| 37      | Foam Tube                             | 2    | 92  | Ø 1" End Cap                 | 8  |
| 38      | Backrest Swivel Bracket               | 2    | 93  | 2 3/8" Pin                   | 1  |
| 39      | 4" L-shaped Pin                       | 1    | 94  | Ø 1" Clip Ring               | 2  |
| 40      | Chain                                 | 1    | 95  | M6 x 3/8" Allen Bolt         | 8  |
| 41      | Hook                                  | 5    | 96  | M6 x 1 5/8" Allen Bolt       | 3  |
| 42      | M12 x 1" Split Bolt                   | 1    | 97  | M10 x ¾" Allen Bolt          | 7  |
| 43      | 2 ¾" Leg Developer Axle               | 1    | 98  | M10 x 1" Allen Bolt          | 2  |
| 44      | 8" Bench Press Axle                   | 2    | 99  | M10 x 1 1/8" Allen Bolt      | 4  |
| 45      | Cable Strap Bracket                   | 6    | 100 | M10 x 1 5/8" Allen Bolt      | 3  |
| 46      | Ø ½" Bushing                          | 2    | 101 | M10 x 1 ¾" Allen Bolt        | 20 |
| 47      | Selector Stem                         | 1    | 102 | M10 x 2" Allen Bolt          | 3  |
| 48      | Weight Plate                          | 19   | 103 | M10 x 2 ½" Allen Bolt        | 5  |
| 49      | Ø 1 ¼" Bushing                        | 8    | 104 | M10 x 2 ¾" Allen Bolt        | 8  |
| 50      | Ø ¾" Bushing                          | 2    | 105 | M10 x 3" Carriage Bolt       | 4  |
| 51      | Ø 1" Bushing                          | 2    | 106 | M10 x 3 1/8" Allen Bolt      | 1  |
| 52      | 161" Upper Cable                      | 1    | 107 | M10 x 4" Carriage Bolt       | 2  |
| 53      | 262" High Low Cable                   | 1    | 108 | M10 x 4 ½" Allen Bolt        | 1  |
| 54      | 265" Lower & AB Cable                 | 1    | 109 | M10 x 1" Socket Cap Screw    | 4  |
| 55      | 99" Butterfly Cable                   | 1    | 110 | M8 x 1 ¼" Allen Bolt         | 4  |

|     |                             |    |
|-----|-----------------------------|----|
| 111 | M6 x 1/4" Socket Set Screw  | 1  |
| 112 | M6 x 3/8" Socket Set Screw  | 2  |
| 113 | M10 x 1/2" Socket Set Screw | 4  |
| 114 | M10 x 3/4" Socket Set Screw | 2  |
| 115 | Ø 3/4" Spring Washer        | 4  |
| 116 | Ø 1" Spring Washer          | 1  |
| 117 | Ø 1/2" Washer               | 6  |
| 118 | Ø 3/4" Washer               | 93 |
| 119 | Ø 7/8" Bent Washer          | 1  |
| 120 | Ø 1 1/8" x Ø 1/2" Washer    | 5  |
| 121 | Ø 1 1/4" x Ø 5/8" Washer    | 1  |
| 122 | Ø 1 1/2" x Ø 1/2" Washer    | 2  |
| 123 | M6 Aircraft Nut             | 3  |
| 124 | M8 Aircraft Nut             | 4  |
| 125 | M10 Aircraft Nut            | 45 |
| 126 | M12 Aircraft Nut            | 1  |
| 127 | M12 Regular Nut             | 5  |
| 128 | M16 Regular Nut             | 1  |
|     | Allen Wrench #8 (Tool)      | 1  |
|     | Allen Wrench #6 (Tool)      | 1  |
|     | Allen Wrench #5 (Tool)      | 1  |
|     | Allen Wrench #4 (Tool)      | 1  |
|     | Allen Wrench #3 (Tool)      | 1  |

# IGS-16 WEIGHT RESISTANCE CHART

|                | WEIGHT PLATE |    |    |    |    |     |     |     |     |
|----------------|--------------|----|----|----|----|-----|-----|-----|-----|
| Station        | 1            | 2  | 3  | 4  | 5  | 6   | 7   | 8   | 9   |
| Arm Curl       | 18           | 29 | 40 | 51 | 62 | 73  | 84  | 95  | 106 |
| Lat Pull       | 18           | 29 | 40 | 51 | 62 | 73  | 84  | 95  | 106 |
| AB Station     | 15           | 26 | 37 | 48 | 59 | 70  | 81  | 92  | 103 |
| Leg Developer  | 25           | 40 | 55 | 70 | 85 | 100 | 115 | 130 | 145 |
| Bench Press    | 22           | 33 | 44 | 55 | 66 | 77  | 88  | 99  | 110 |
| Butterfly      | 6            | 11 | 16 | 21 | 26 | 31  | 36  | 41  | 46  |
| High Low Cable | 8            | 14 | 20 | 26 | 32 | 38  | 44  | 50  | 56  |

|                | WEIGHT PLATE |     |     |     |     |     |     |     |     |     |
|----------------|--------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Station        | 10           | 11  | 12  | 13  | 14  | 15  | 16  | 17  | 18  | 19  |
| Arm Curl       | 117          | 128 | 139 | 150 | 161 | 172 | 183 | 194 | 205 | 216 |
| Lat Pull       | 117          | 128 | 139 | 150 | 161 | 172 | 183 | 194 | 205 | 216 |
| AB Station     | 114          | 125 | 136 | 147 | 158 | 169 | 180 | 191 | 202 | 213 |
| Leg Developer  | 160          | 175 | 190 | 205 | 220 | 235 | 250 | 265 | 280 | 295 |
| Bench Press    | 121          | 132 | 143 | 154 | 165 | 176 | 187 | 198 | 209 | 220 |
| Butterfly      | 51           | 56  | 61  | 66  | 71  | 76  | 81  | 86  | 91  | 96  |
| High Low Cable | 62           | 68  | 74  | 80  | 86  | 92  | 98  | 104 | 110 | 116 |

\* Numbers are approximate. Actual weights may vary.

\* Values for Butterfly are for each arm.



# ***IRON GRIP SPORT***

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