

NOTE:  
Please read all instructions  
carefully before using this  
product

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Model  
MD-2109

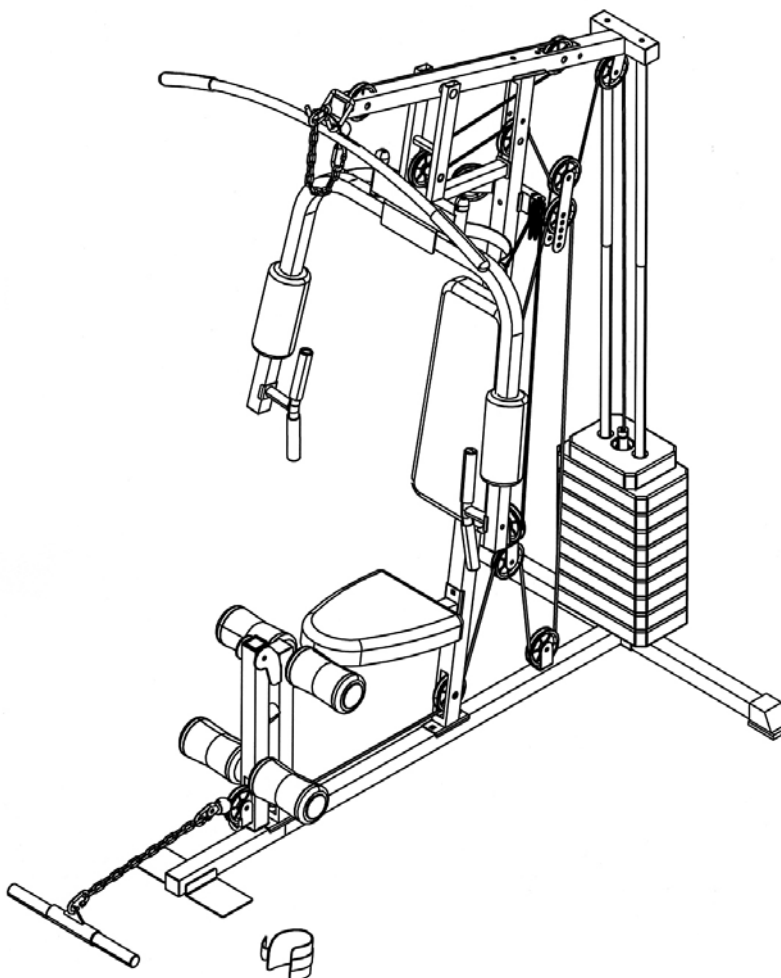
Retain This  
Manual for  
Reference

06-30-08

OWNER'S  
MANUAL

**IMPEX**  
F I T N E S S P R O D U C T S

## Marcy Diamond Home Gym MD-2109



**IMPEX<sup>®</sup> INC.**

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## BEFORE YOU BEGIN

Thank you for selecting the Marcy Diamond MD-2109 HOME GYM 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 and feet 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.
12. A spotter is recommended during exercise.

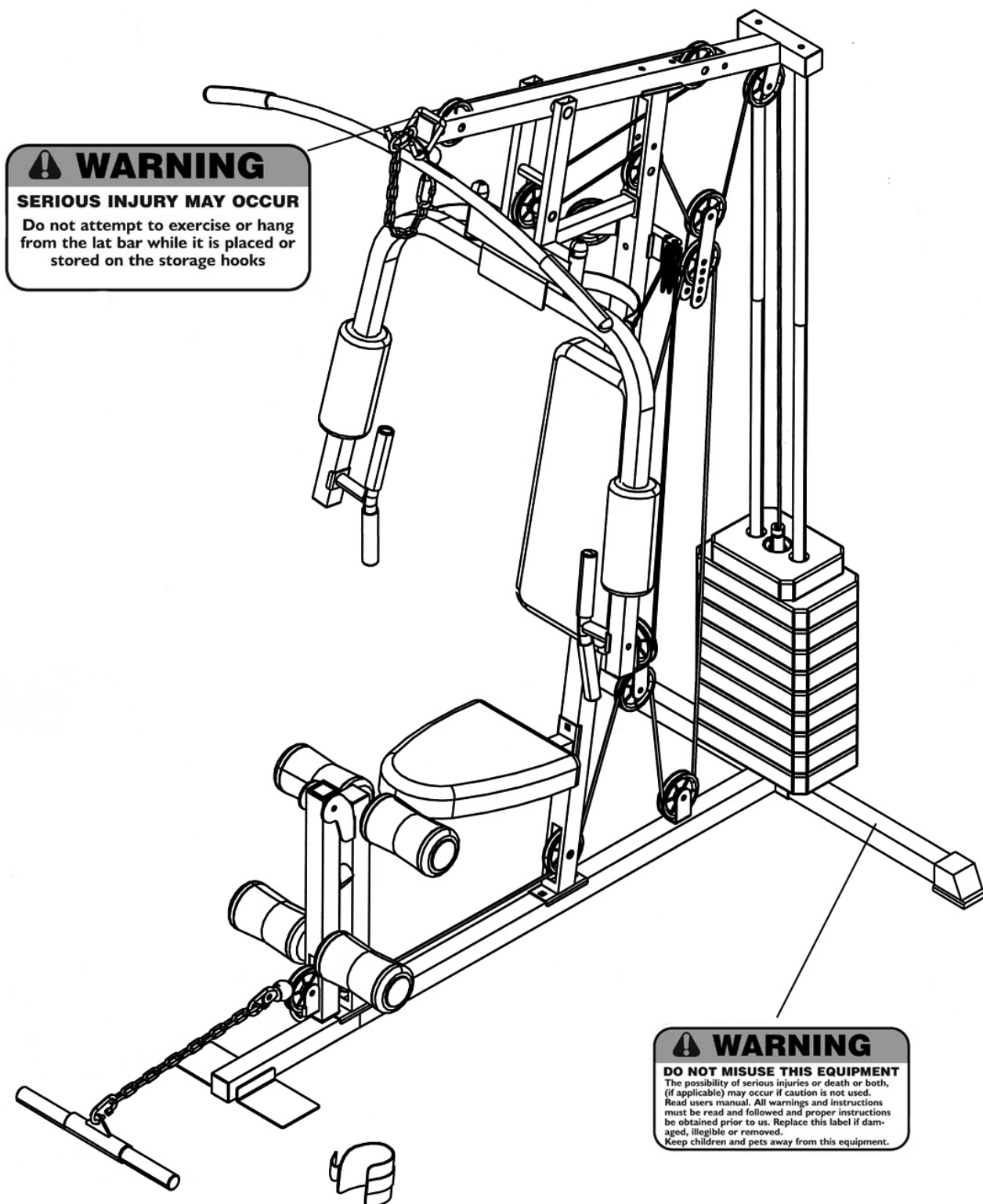
### **CARE AND MAINTENANCE**

1. Lubricate moving parts with WD-40 or light oil periodically.
2. Inspect and tighten all parts before using the machine.
3. The machine can be cleaned using a damp cloth and mild non-abrasive detergent. DO NOT use solvents.
4. Maximum user's weight: 300 lbs.

**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.**

## WARNING LABEL REPLACEMENT

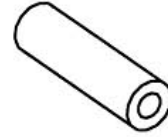


The warning labels shown here have been placed on the Rear Base and Upper Frame. If the labels are missing or illegible, please call customer service at 1-800-888-8899 for replacements. Apply the labels in the location shown.

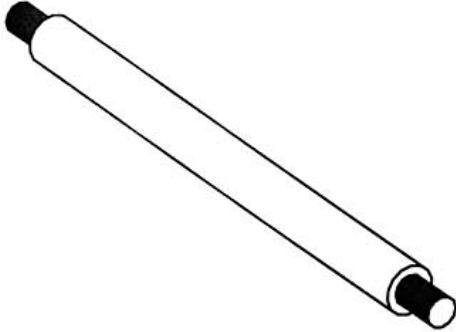
## HARDWARE PACK



#50 Pulley Bushing (Qty 10)



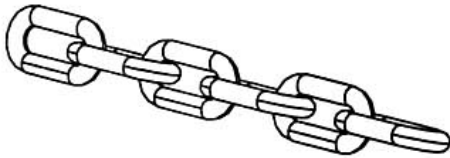
#47 Leg Developer Axle (Qty 1)



#46 Long Axle (Qty 1)



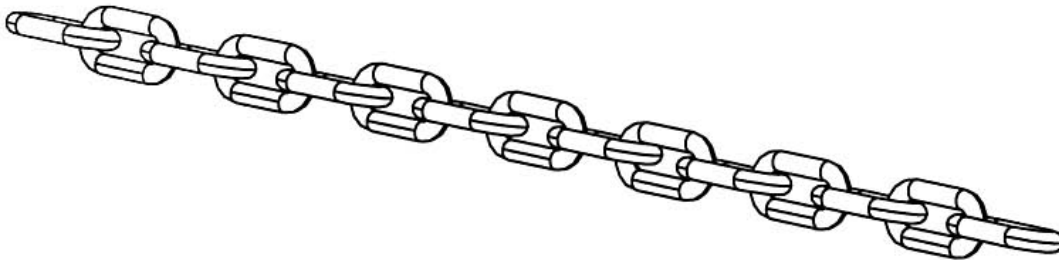
#41 Lock Ring (Qty 2)



#49 Short Chain (Qty 1)

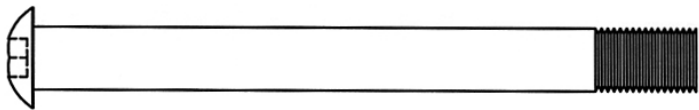


#53 C-clip (Qty 4)

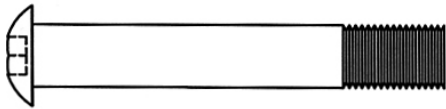


#48 Long Chain (Qty 1)

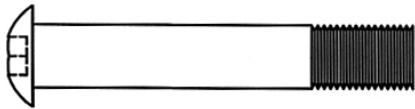
# HARDWARE PACK



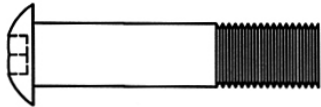
#68 M10 x 5 1/8" Allen Bolt (Qty 1)



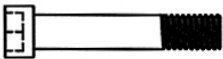
#70 M10 x 2 1/2" Allen Bolt (Qty 2)



#71 M10 x 2 3/8" Allen Bolt (Qty 8)



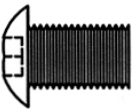
#72 M10 x 1 3/4" Allen Bolt (Qty 9)



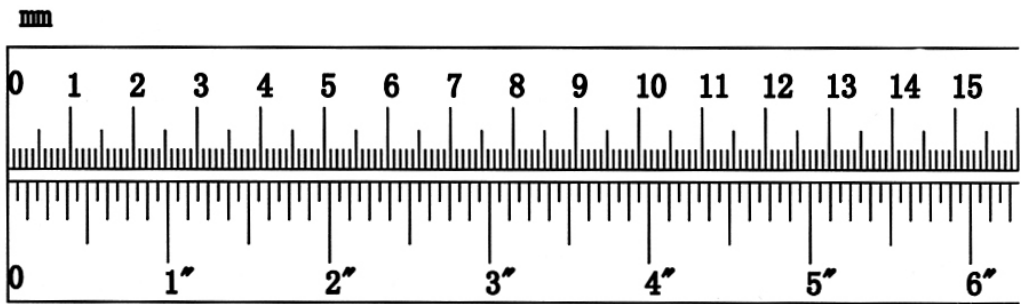
#78 M6 x 1 1/4" Allen Bolt (Qty 2)



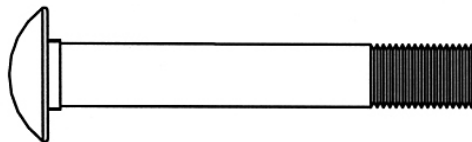
#73 M10 x 1" Allen Bolt (Qty 7)



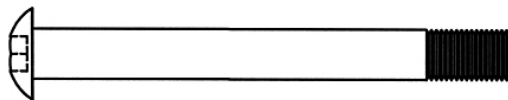
#74 M10 x 5/8" Allen Bolt (Qty 2)



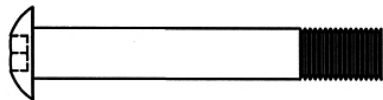
**HARDWARE PACK**



#79 M10 x 2 1/2" Carriage Bolt (Qty 14)



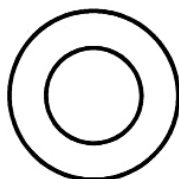
#75 M8 x 3" Allen Bolt (Qty 2)



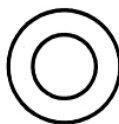
#76 M8 x 2 1/8" Allen Bolt (Qty 2)



#80 Stud Bolt (Qty 2)



#82 Ø 1 1/2" Washer  
(Qty 2)



#83 Ø 3/4" Washer  
(Qty 53)



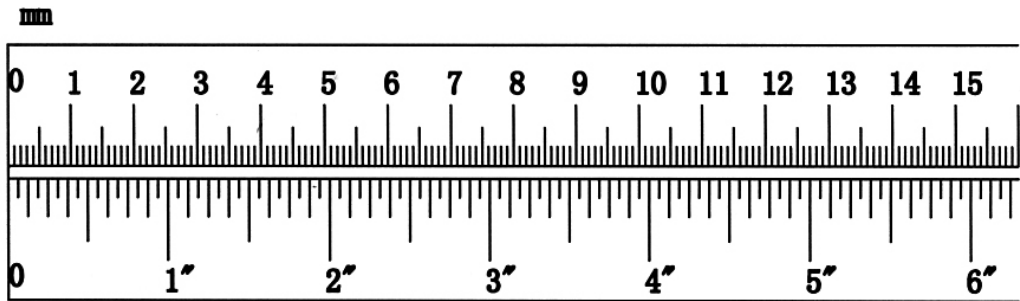
#84 Ø 5/8" Washer  
(Qty 4)



#85 M10 Aircraft Nut  
(Qty 36)



#86 M6 Aircraft Nut  
(Qty 2)



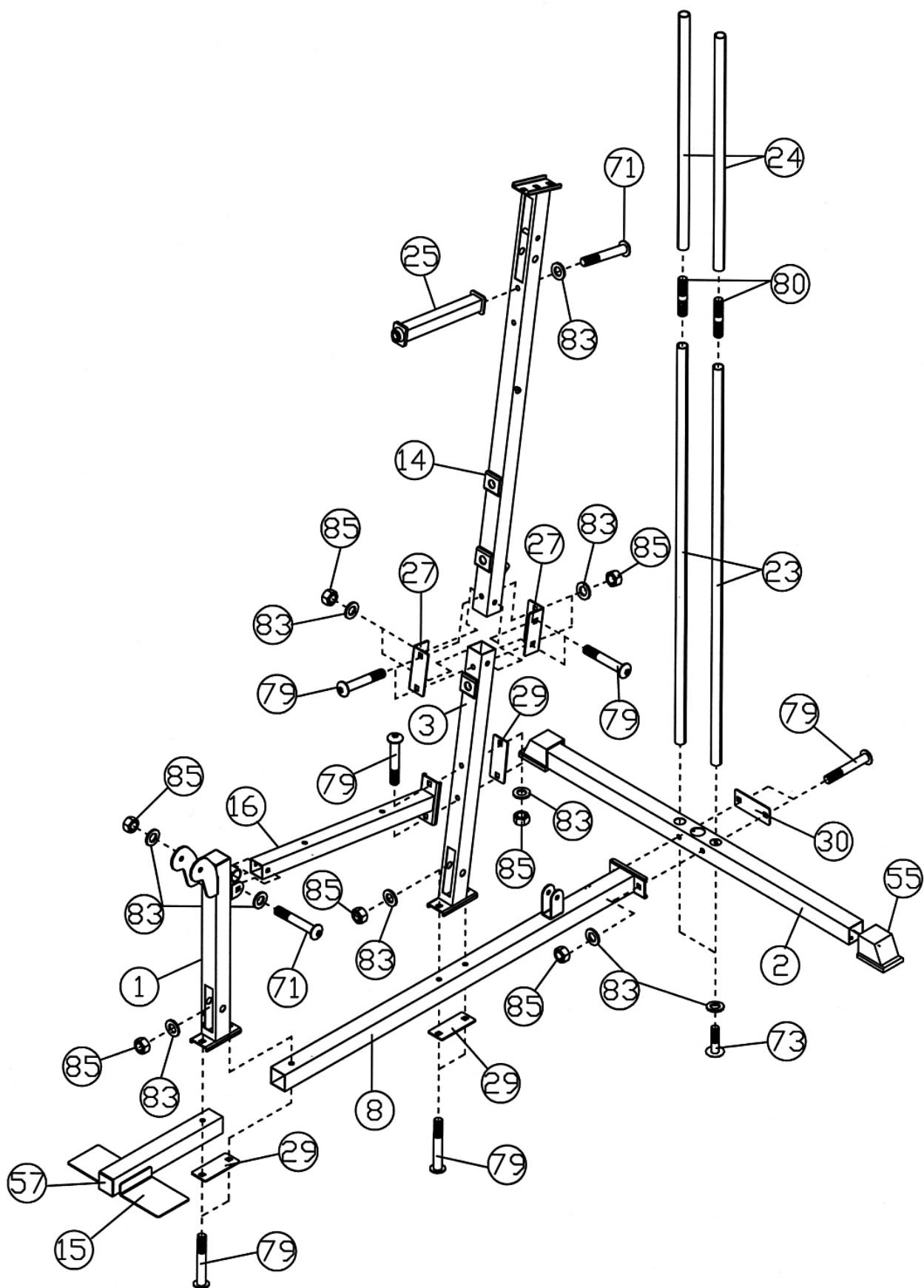
# ASSEMBLY INSTRUCTION

**Tools Required for Assembling the Machine: Two Adjustable Wrenches, two Allen Wrenches, and one Philips Screwdriver. NOTE: It is strongly recommended this machine to be assembled by two or more people to avoid possible injury.**

## **STEP 1 (See Diagram 1)**

- A.) **NOTE:** Do not tighten all the Nuts and Bolts until instructed to do so.
- B.) Connect two Lower Guide Rods (#23) and two Upper Guide Rods (#24) with two M10 Stud Bolts (#80). Firmly thread the Rods together.
- C.) Insert the Lower Guide Rods (#23) into the holes on the Rear Base Frame (#2). Secure it with two M10 x 1" Allen Bolts (#73) and Ø ¾" Washers (#83) from the bottom.
- D.) Attach the Main Base Frame (#8) to the Rear Base Frame (#2). Secure it with two M10 x 2 ½" Carriage Bolts (#79), one 4" Bracket (#30), two Ø ¾" Washers (#83), and two M10 Aircraft Nuts (#85).
- E.) Attach the Lower Vertical Frame (#3) onto the Main Base Frame (#8). Secure it with two M10 x 2 ½" Carriage Bolts (#79), one 4 ¾" Bracket (#29), two Ø ¾" Washers (#83), and two M10 Aircraft Nuts (#85).
- F.) Attach the Leg Developer Holder (#1) to the Main Base Frame (#8) and Front Base Plate (#15). Secure them together with two M10 x 2 ½" Carriage Bolts (#79), one 4 ¾" Bracket (#29), two Ø ¾" Washers (#83), and two M10 Aircraft Nuts (#85).
- G.) Attach the Seat Support (#16) to the Leg Developer Holder (#1). Secure it with one M10 x 2 3/8" Allen Bolt (#71), two Ø ¾" Washers (#83), and one M10 Aircraft Nut (#85).
- H.) Attach the Seat Support (#16) to the Lower Vertical Frame (#3). Secure it with two M10 x 2 ½" Carriage Bolts (#79), one 4 ¾" Bracket (#29), two Ø ¾" Washers (#83), and two M10 Aircraft Nuts (#85).
- I.) Attach the Upper Vertical Frame (#14) to the Lower Vertical Frame (#3). Secure them with four M10 x 2 ½" Carriage Bolts (#79), two V-shaped Brackets (#27), four Ø ¾" Washers (#83), and four M10 Aircraft Nuts (#85).
- J.) Attach the Stopper Frame (#25) to the Upper Vertical Frame (#14). Secure it with one M10 x 2 3/8" Allen Bolt (#71) and Ø ¾" Washer (#83).

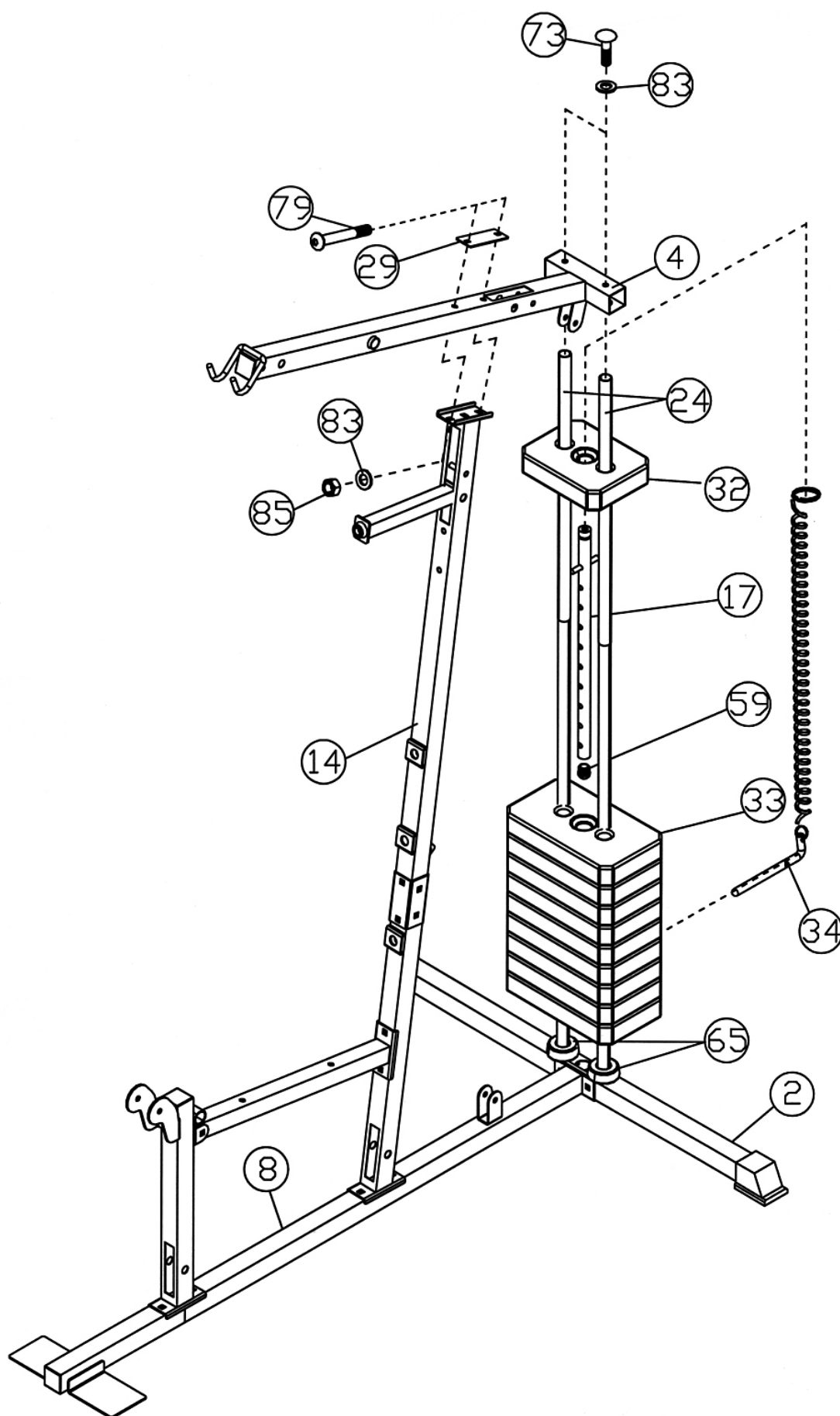




## **STEP 2 (See Diagram 2)**

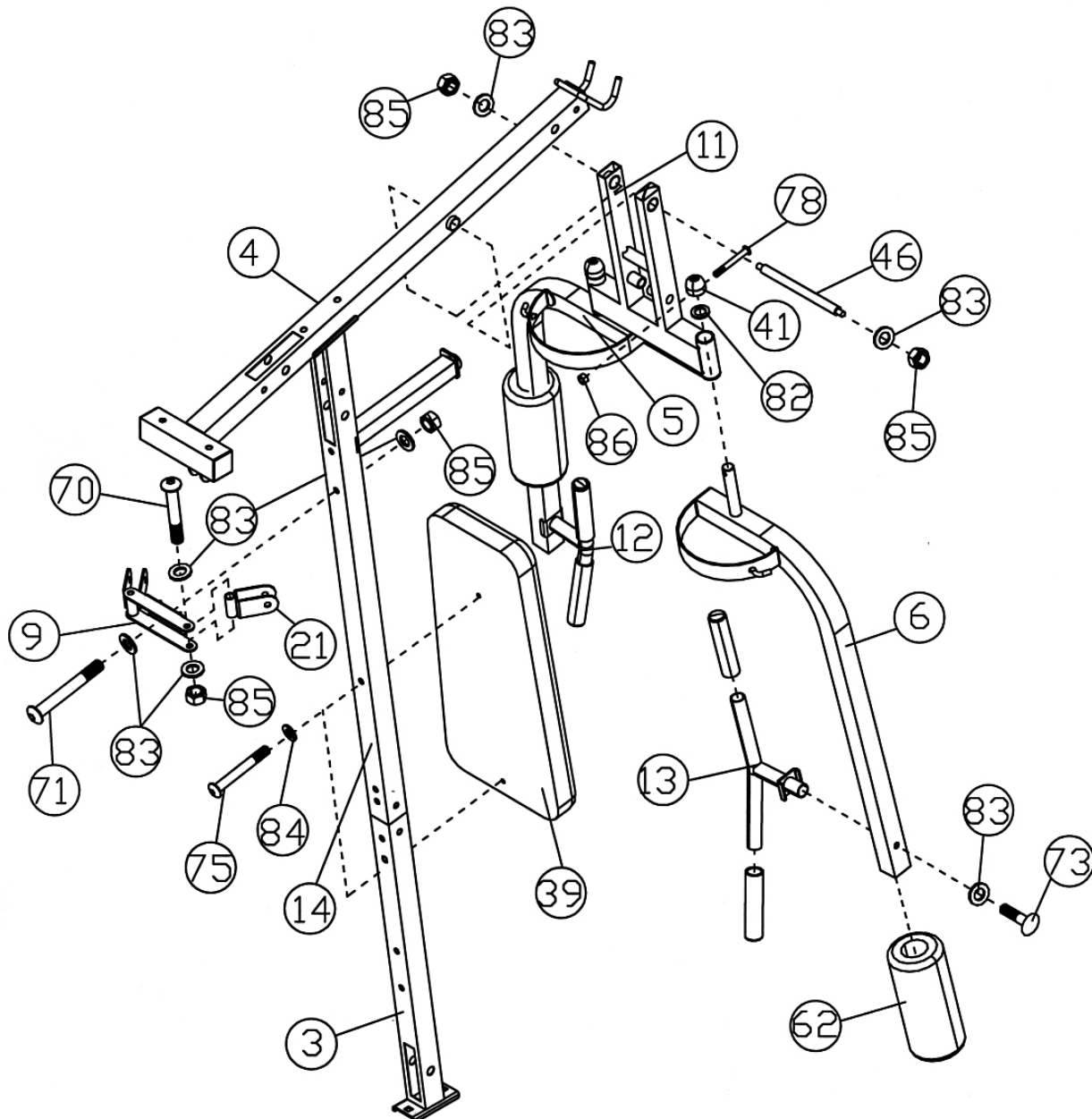
- A.) Slide two Ø2 ½" x 1" Rubber Bumpers (#65) onto the Guide Rods.
- B.) Slide 9 Weight Plates (#33) onto the Guide Rods. Make sure the deep grooves on the Weight Plates are all facing the back of the machine and downward. Insert the Selector Rod (#17) through the center hole on the Weight Plates.
- C.) Slide the Selector Stem (#32) onto the Guide Rods.
- D.) Slide the Ring on the String onto the Selector Rod (#17).
- E.) Attach the Upper Frame (#4) onto the two Guide Rods. Secure it with two M10 x 1" Allen Bolts (#73) and Ø ¾" Washers (#83).
- F.) Place the Upper Frame (#4) onto the Upper Vertical Frame (#14). Secure them with two M10 x 2 ½" Carriage Bolts (#79), one 4 ¾" Bracket (#29), two Ø ¾" Washers (#83), and two M10 Aircraft Nuts (#85).
- G.) **Securely tighten all Nuts and Bolts previously installed.**

DIAGRAM 2



### STEP 3 (See Diagram 3)

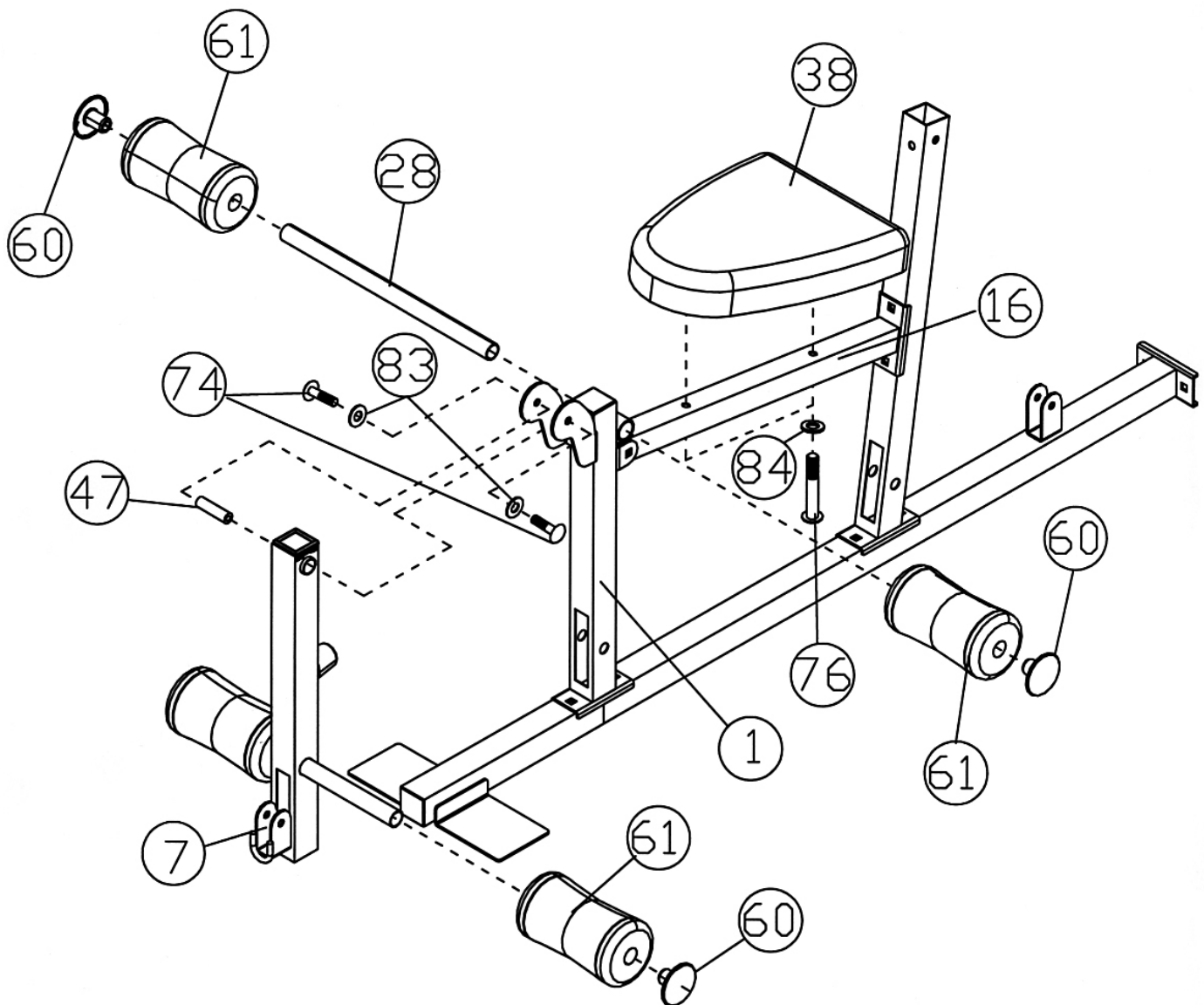
- A.) Attach the Front Press Base (#11) to the Upper Frame (#4). Secure it with one Long Axle (#46), two  $\text{Ø } \frac{3}{4}$ " Washers (#83), and two M10 Aircraft Nuts (#85).
- B.) Attach the Right Butterfly (#6) to the Front Press Base (#11). Secure it with one  $\text{Ø } 1 \frac{1}{2}$ " Washer (#82), one M6 x  $1 \frac{1}{4}$ " Allen Bolt (#78), Lock Ring (#41), and M6 Aircraft Nut (#86).
- C.) Slide a Butterfly Foam Roll (#62) onto the Right Butterfly arm. Attach the Right Front Press Handle (#13) to the Right Butterfly. Secure it with a M10 x 1" Allen Bolt (#73) and  $\text{Ø } \frac{3}{4}$ " Washer (#83).
- D.) Repeat the Steps B&C above to install the Left Butterfly (#5).
- E.) Attach a Butterfly Pulley Bracket (#9) to the Upper Vertical Frame (#14). Secure it with one M10 x  $2 \frac{3}{8}$ " Allen Bolt (#71), two  $\text{Ø } \frac{3}{4}$ " Washers (#83), and one M10 Aircraft Nut (#85).
- F.) Attach Swivel Pulley Brackets (#21) to each end of the Butterfly Pulley Bracket. Secure each Bracket with one M10 x  $2 \frac{1}{2}$ " Allen Bolt (#70), two  $\text{Ø } \frac{3}{4}$ " Washers (#83), and one M10 Aircraft Nut (#85). **Do Not over tighten!** Make sure the Brackets are able to swivel freely.
- G.) Attach the Backrest Board (#39) to the Vertical Frame. Secure it with two M8 x 3" Allen Bolts (#75) and  $\text{Ø } 5/8$ " Washers (#84).



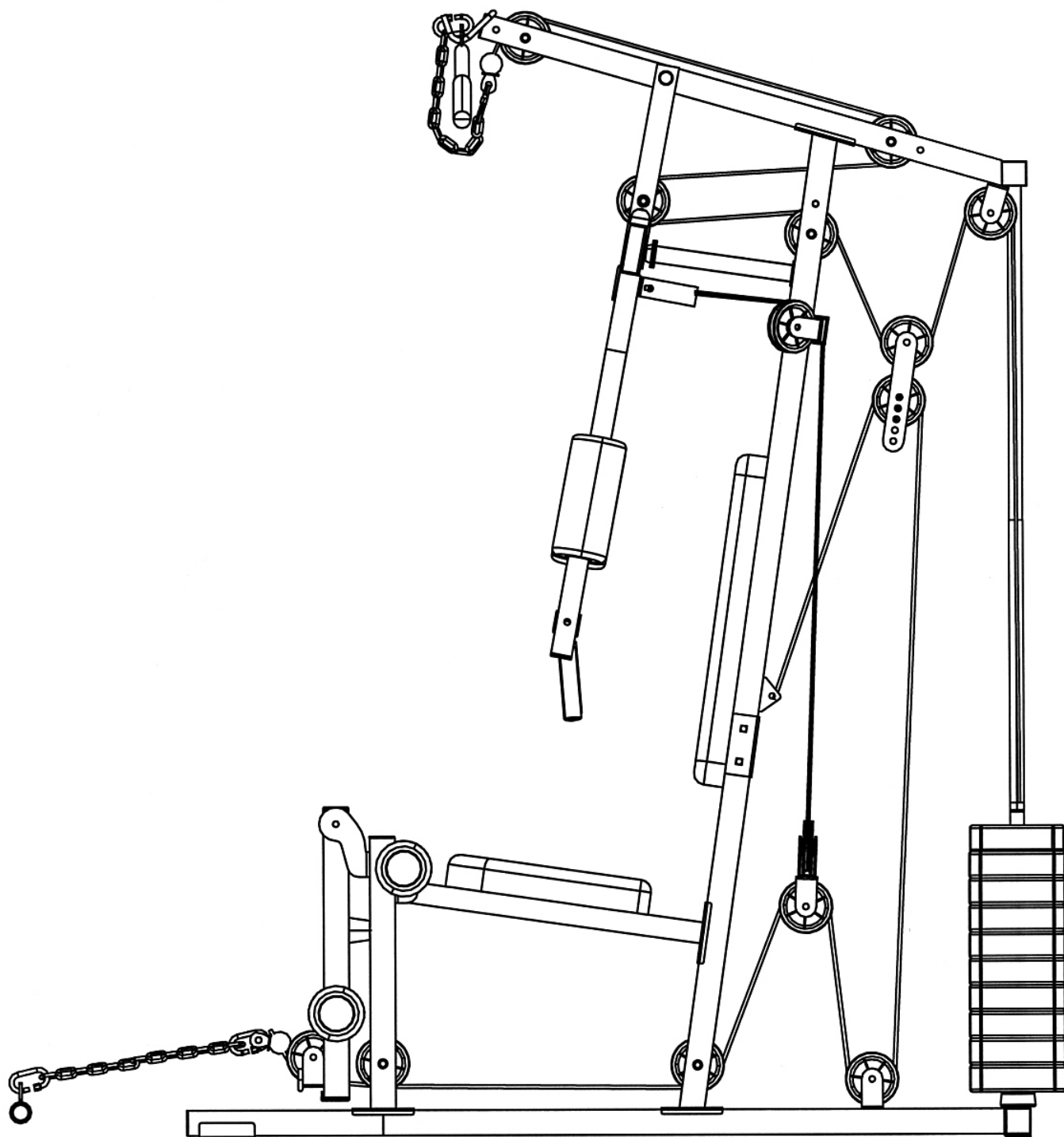
#### STEP 4 (See Diagram 4)

- A.) Attach the Leg Developer (#7) to the bracket on the Leg Developer Holder (#1). Secure it with a Leg Developer Axle (#47), two M10 x 5/8" Allen Bolts (#74), and two Ø 3/4" Washers (#83).
- B.) Insert two Foam Roll Tubes (#28) halfway through the holes on the Leg Developer and Leg Developer Holder. Push four Foam Rolls (#61) onto the Tubes from both ends. Plug four Foam Roll End Caps (#60) into the ends.
- C.) Place the Seat (#38) onto the Seat Support (#16). Secure it with two M8 x 2 1/8" Allen Bolts (#76) and Ø 5/8" Washers (#84).

**DIAGRAM 4**



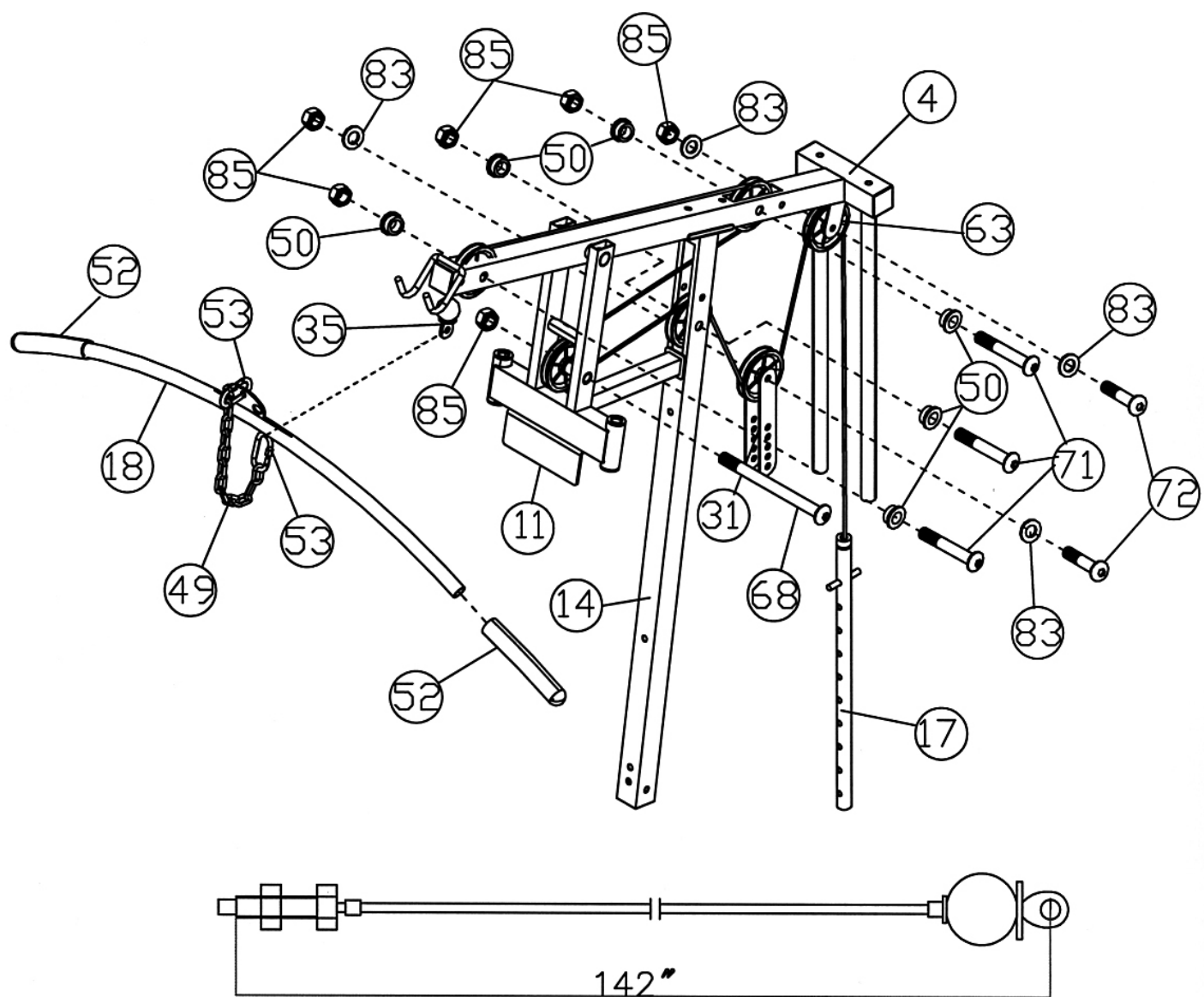
# CABLE LOOP DIAGRAM



## **STEP 5 (See Diagram 5 & Cable Loop Diagram)**

- A.) Attach the 142" Upper Cable (#35) to the opening at the front of the Upper Frame (#4). Note: The Ball Stopper on the cable should be underneath the Frame.
- B.) Attach a Pulley (#63) to the opening. Secure it with one M10 x 2 3/8" Allen Bolt (#71), two Pulley Bushings (#50), and one M10 Aircraft Nut (#85).
- C.) Draw the Cable towards the back of the machine to the opening on the Upper Frame. Repeat the Procedure B above to install another Pulley.
- D.) Draw the Cable around the Pulley then pull back towards the opening on the Front Press Base (#11).
- E.) Attach a Pulley to the opening on the Front Press Base (#11). Secure the Pulley with one M10 x 5 1/8" Allen Bolt (#68) and M10 Aircraft Nut (#85).
- F.) Draw the Cable around the Pulley then to the opening on the Upper Vertical Frame (#14). Repeat Procedure B above to install another Pulley.
- G.) Draw the Cable around the Pulley then downward. Attach the Cable to a Double Floating Pulley Bracket (#31). Install another Pulley. Leave the bracket hanging for now.
- H.) Pull the Cable upward to the open bracket underneath the Upper Frame. Install a Pulley to the bracket.
- I.) Pull the Cable downward between the two Guide Rods to the Selector Rod (#17). Fully thread the bolt at the end of the Cable into the top opening on the Selector Rod.
- J.) Connect the Lat Bar (#18) to a Short Chain (#49) with a C-clip (#53). Then connect the Short Chain to the Upper Cable with another C-clip.

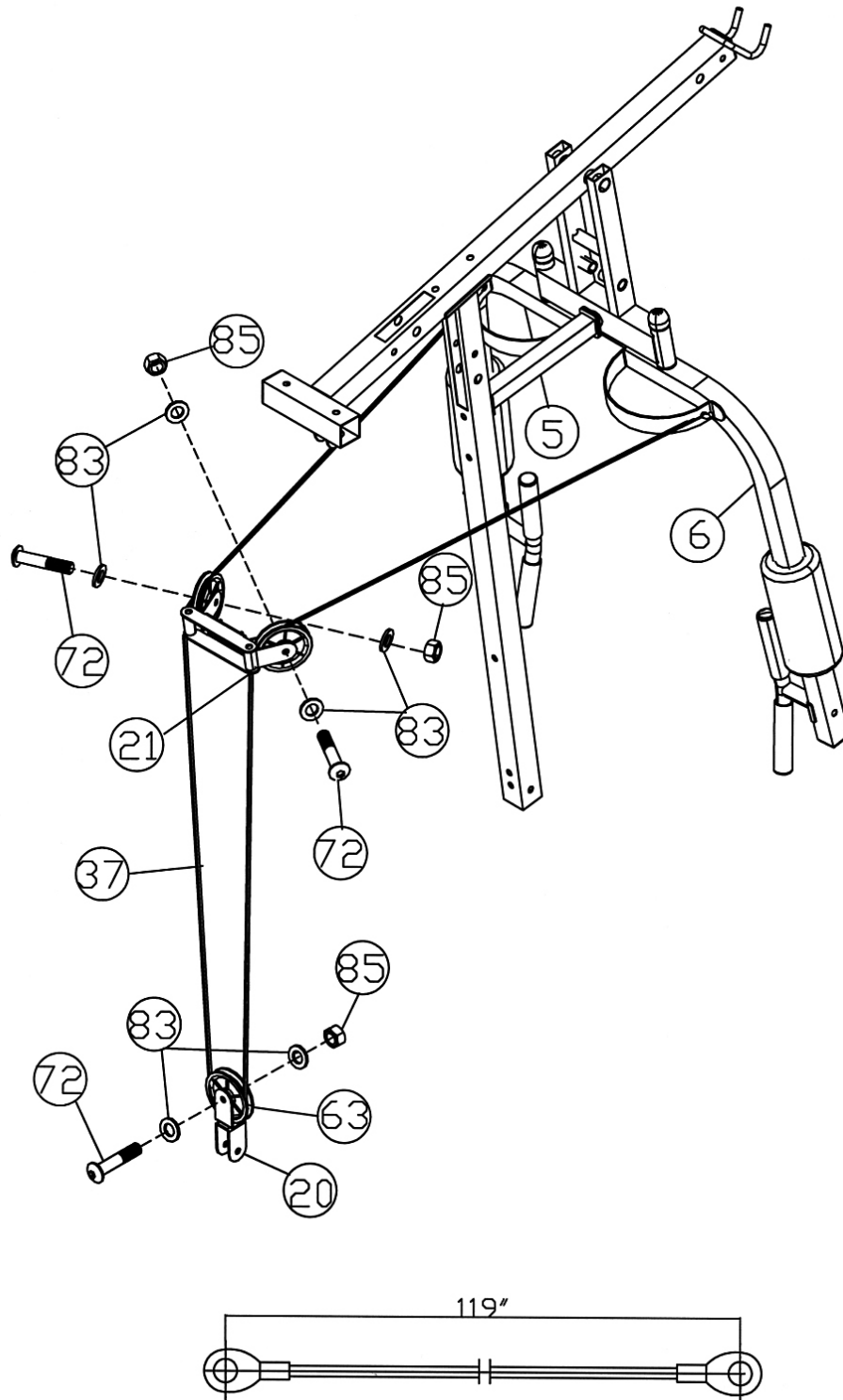
DIAGRAM 5





**STEP 6 (See Diagram 6 & Cable Loop Diagram)**

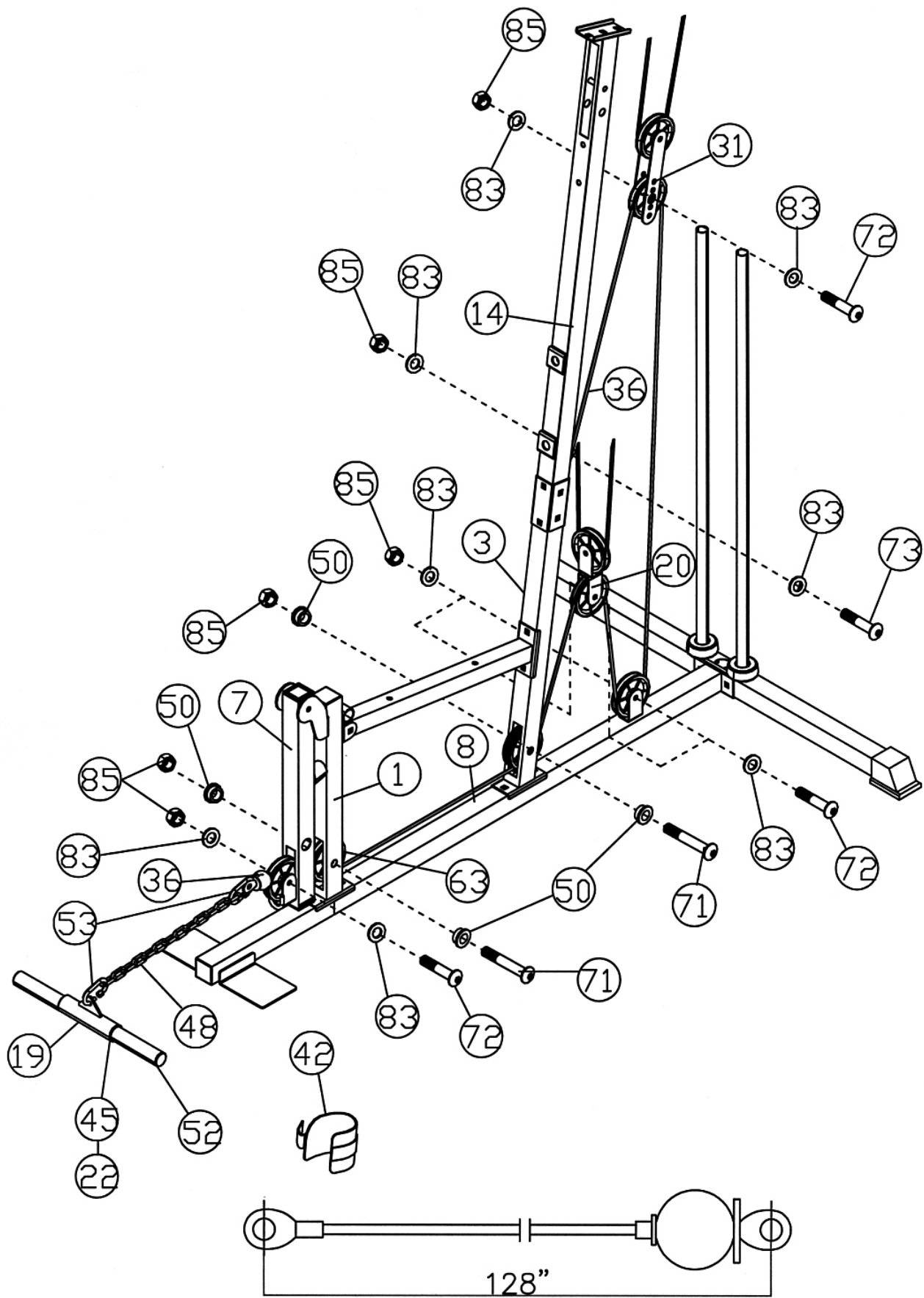
- A.) Attach one end of the 119" Butterfly Cable (#37) to the hook on the Right Butterfly (#6).
- B.) Draw the Cable to the right Swivel Pulley Bracket (#21).
- C.) Attach a Pulley to the bracket. Secure it with one M10 x 1  $\frac{3}{4}$ " Allen Bolt (#72), two  $\varnothing \frac{3}{4}$ " Washers (#83), and one M10 Aircraft Nut (#85).
- D.) Draw the Cable around the Pulley then downward. Attach the Cable to a Crossed Double Floating Pulley Bracket (#20). Install another Pulley. Leave the Bracket hanging for now.
- E.) Pull the Cable around the Pulley then upward to the left Swivel Pulley Bracket. Repeat Procedure C above to install a Pulley.
- F.) Draw the Cable to the left Butterfly. Attach the end to the hook on the Left Butterfly.



## STEP 7 (See Diagram 7 & Cable Loop Diagram)

- A.) Attach the 128" Lower Cable (#36) to the open bracket on the bottom of the Leg Developer (#7).
- B.) Attach a Pulley to the bracket. Secure it with one M10 x 1 3/4" Allen Bolt (#72), two Ø 3/4" Washers (#83), and one M10 Aircraft Nut (#85).
- C.) Draw the Cable underneath the Pulley to the opening on the Leg Developer Holder (#1). Attach a Pulley to the opening. Secure it with one M10 x 2 3/8" Allen Bolt (#71), two Pulley Bushings (#50), and one M10 Aircraft Nut (#85).
- D.) Draw the Cable underneath the Pulley along the Main Base Frame to the opening on the bottom of the Lower Vertical Frame (#3). Repeat Procedure C above to install another Pulley.
- E.) Pull the Cable upward to the Crossed Double Floating Pulley Bracket (#20) previously installed in Step-6. Install another Pulley.
- F.) Draw the Cable around the Pulley then downward to the open bracket on the Main Base Frame. Install another Pulley.
- G.) Pull the Cable around the Pulley then upward to the Double Floating Pulley Bracket (#31) previously installed in Step-5. Install another Pulley.
- H.) Draw the Cable around the Pulley then pull downward to the bracket on the back of the Upper Vertical Frame (#14). Secure the Cable to the bracket with one M10 x 1" Allen Bolt (#73), two Ø 3/4" Washers (#83), and one M10 Aircraft Nut (#85).
- I.) Adjust the tension of the Cable by adjusting the Pulley position on the Double Floating Pulley Bracket (#31). If the cables are too loose, move up the Pulley. If the cables are too tight, move down the Pulley.
- J.) For best performance of the machine, adjust the Cables so the Selector Stem (Top Plate) on the weight stack is 1/4" above the first plate. While pinning the weight stack, push down on the Selector Stem to close up the gap then pin the plates. This will remove the slag in the cable system so the range of motion is smooth and tight.**
- K.) Connect the Shiver Bar (#19) to a Long Chain (#48) with a C-clip (#53). Connect the Long Chain to the Lower Cable with another C-clip.

DIAGRAM 7



## PARTS LIST

### KEY NO. DESCRIPTION

### Q'ty

1	Leg Developer Holder	1			
2	Rear Base Frame	1			
3	Lower Vertical Frame	1	51	Bottom Label	1
4	Upper Frame	1	52	Handle Grip	8
5	Left Butterfly	1	53	C-clip	4
6	Right Butterfly	1	54	Manual	1
7	Leg Developer	1	55	1 ¾" Square End Cap	2
8	Main Base Frame	1	56	1 5/8" x ¾" End Cap	2
9	Butterfly Pulley Bracket	1	57	1 ¾" Square End Cap	7
10	Lat Bar Warning Label	1	58	1 ½" Square End Cap	2
11	Front Press Base	1	59	Ø 1" End Cap	1
12	Left Front Press Handle	1	60	Foam Roll End Cap	4
13	Right Front Press Handle	1	61	Foam Roll	4
14	Upper Vertical Frame	1	62	Butterfly Foam Roll	2
15	Front Base Plate	1	63	Pulley	15
16	Seat Support	1	64	Ø 1 ½" x 5/8" Rubber Bumper	1
17	Selector Rod	1	65	Ø 2 ½" x 1" Rubber Bumper	2
18	Lat Bar	1	66	Ø 1 ¾" x 1 5/8" Rubber Bumper	1
19	Shiver Bar	1	67	Ø 1" Bushing	8
20	Crossed Double Floating Pulley Bracket		68	1 M10 x 5 1/8" Allen Bolt	1
21	Swivel Pulley Bracket	2	69	1 ¾" x ¼" Spacer	3
22	Shiver Bar Handle	1	70	M10 x 2 ½" Allen Bolt	2
23	Lower Guide Rod	2	71	M10 x 2 3/8" Allen Bolt	8
24	Upper Guide Rod	2	72	M10 x 1 ¾" Allen Bolt	9
25	Stopper Frame	1	73	M10 x 1" Allen Bolt	7
26	Warning Label	1	74	M10 x 5/8" Allen Bolt	2
27	V-shaped Bracket	2	75	M8 x 3" Allen Bolt	2
28	Foam Roll Tube	2	76	M8 x 2 1/8" Allen Bolt	2
29	4 ¾" Bracket	4	77	Guide Rod Label	4
30	4" Bracket	1	78	M6 x 1 ¼" Allen Bolt	2
31	Double Floating Pulley Bracket	2	79	M10 x 2 ½" Carriage Bolt	14
32	Selector Stem	1	80	M10 Stud Bolt	2
33	Weight Plate	9	81	M6 x 5/8" Philips Screw	2
34	Selector Pin	1	82	Ø 1 ½" Washer	2
35	142" Upper Cable	1	83	Ø ¾" Washer	53
36	128" Lower Cable	1	84	Ø 5/8" Washer	4
37	119" Butterfly Cable	1	85	M10 Aircraft Nut	36
38	Seat	1	86	M6 Aircraft Nut	2
39	Backrest Board	1		#6 Allen Wrench (Tool)	2
40	Customer Service Label	1		#5 Allen Wrench (Tool)	1
41	Lock Ring	2			
42	Ankle Strap	1			
43	Top Label	1			
44	Butterfly Bushing	2			
45	Ø 1 ½" x 1" Bushing	2			
46	Long Axle	1			
47	Leg Developer Axle	1			
48	Long Chain	1			
49	Short Chain	1			
50	Pulley Bushing	10			

<b>MD-2109 WEIGHT RESISTANT CHART</b>				
<b>Weight Plate</b>	<b>Front Press</b>	<b>Butterfly</b>	<b>Lat Pull</b>	<b>Leg Developer/Low Pulley</b>
1	30	15	30	30
2	42	20	40	40
3	54	25	50	50
4	66	30	60	60
5	78	35	70	70
6	90	40	80	80
7	102	45	90	90
8	114	50	100	100
9	126	55	110	110
<b>Note: Each plate weights 10 lbs.</b>				
<b>Numbers are approximate. Actual weights may vary.</b>				
<b>Values for Butterfly are for each arm.</b>				

# **IMPEX<sup>®</sup> INC.**

## **LIMITED WARRANTY**

IMPEX Inc. ("IMPEX<sup>®</sup>") warrants this product to be free from defects in workmanship and material, under normal use and service conditions, for a period of two years on the Frame from the date of purchase. This warranty extends only to the original purchaser. IMPEX's obligation under this Warranty is limited to replacing or repairing, at IMPEX's option.

All returns must be pre-authorized by IMPEX. Pre-authorization may be obtained by calling IMPEX Customer Service Department at 1-800-999-8899. All freights on products returned to IMPEX must be prepaid by the customer. 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 IMPEX authorized service center or for products used for commercial or rental purposes. No other warranty beyond that specifically set forth above is authorized by IMPEX.

IMPEX 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 other damages with respect to any economic loss, loss of property, loss of revenues or profits, loss of enjoyments or use, costs of removal, installation or other consequential damages or whatsoever natures. 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 right. You may also have other rights which vary from state to state. **Register on-line at [www.impex-fitness.com](http://www.impex-fitness.com)**

**IMPEX<sup>®</sup> INC.  
2801 S. Towne Ave.  
Pomona, CA 91766**

### **ORDERING REPLACEMENT PARTS**

Replacement parts can be ordered by calling our Customer Service Department toll-free at **1-800-999-8899** during our regular business hours: Monday through Friday, 9 am until 5 pm Pacific standard time.

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

When ordering replacement parts, always give the following information.

1. Model
2. Description of Parts
3. Part Number
4. Date of Purchase