

Cable Motion

CMDAP, CMDAS, OP-DAP , LCM-CC

OWNER'S MANUAL/ASSEMBLY INSTRUCTIONS



Corporate Headquarters

Columbia Centre III, 9525 Bryn Mawr Avenue, Rosemont, IL 60018 • U.S.A.
847.288.3300 • FAX: 847.288.3703
Service phone number: 800.351.3737 (toll-free within U.S.A., Canada)
Global Website: www.lifefitness.com

International Offices

AMERICAS

North America

Life Fitness, LLC

Columbia Centre III
9525 Bryn Mawr Avenue
Rosemont, IL 60018 U.S.A.
Telephone: (847) 288 3300
Service Email:
customersupport@lifefitness.com
Sales/Marketing Email:
commercialsales@lifefitness.com

Brazil

Life Fitness Brasil

Av. Rebouças, 2315
Pinheiros
São Paulo, SP 05401-300
BRAZIL
SAC: 0800 773 8282 option 2
Telephone: +55 (11) 3095 5200 option 2
Service Email: suportebr@lifefitness.com
Sales/Marketing Email:
vendasbr@lifefitness.com

Latin America and Caribbean*

Life Fitness, LLC

Columbia Centre III
9525 Bryn Mawr Avenue
Rosemont, IL 60018 U.S.A.
Telephone: (847) 288 3300
Service Email:
customersupport@lifefitness.com
Sales/Marketing Email:
commercialsales@lifefitness.com

EUROPE, MIDDLE EAST, and AFRICA (EMEA)

Belgium, Netherlands, and Luxemburg

Life Fitness Atlantic BV

Bijdorpplein 25-31
2992 LB Barendrecht
THE NETHERLANDS
+3118064666
Service Email:
service.benelux@lifefitness.com
Sales/Marketing Email:
marketing.benelux@lifefitness.com

United Kingdom

Life Fitness UK LTD

Unit 109^a
Lancaster Way Business Park
Ely, Cambs, CB6 3NX
Telephone: General Office (+44)
1353.666017
Customer Support (+44) 1353.665507
Service Email: uk.support@lifefitness.com
Sales/Marketing Email: life@lifefitness.com

Germany, Austria, and Switzerland

Life Fitness Europe GMBH

Neuhofweg 9
85716 Unterschleißheim
GERMANY
Telephone:
+49 (0) 89 / 31775166 Germany
+43 (0) 1 / 6157198 Austria
+41 (0) 848 / 000901 Switzerland
Service Email:
kundendienst@lifefitness.com
Sales/Marketing Email:
vertrieb@lifefitness.com

Spain

Life Fitness IBERIA

C/Frederic Mompou 5,1^a
08960 Sant Just Desvern Barcelona
SPAIN
Telephone: (+34) 93.672.4660
Service Email:
servicio.tecnico@lifefitness.com
Sales/Marketing Email:
info.iberia@lifefitness.com

All Other EMEA Countries and Distributor Business EMEA*

Life Fitness Atlantic BV

Bijdorpplein 25-31
2992 LB Barendrecht
THE NETHERLANDS
+3118064666
Service Email:
emeaservicesupport@lifefitness.com

ASIA PACIFIC (AP)

Japan

Life Fitness Japan, Ltd

4-17-33 Minami Aoyama 1F/B1F
Minato-ku - Tokyo 107-0062
Japan
Telephone: (+81) 0120.114.482
Fax: (+81) 03-5770-5059
Service Email: service.lfj@lifefitness.com
Sales/Marketing Email:
sales@lifefitnessjapan.com

Hong Kong

Life Fitness Asia Pacific LTD

26/F, Global Trade Square
21 Wong Chuk Hang Road
Wong Chuk Hang
Hong Kong
Telephone: (+852) 25756262
Fax: (+852) 25756894
Service Email: service.hk@lifefitness.com
Sales/Marketing Email:
marketing.hk.asia@lifefitness.com

All Other Asia Pacific countries and distributor business Asia Pacific*

Life Fitness Asia Pacific LTD

26/F, Global Trade Square
21 Wong Chuk Hang Road
Wong Chuk Hang
Hong Kong
Telephone: (+852) 25756262
Fax: (+852) 25756894
Service Email: service.ap@lifefitness.com
Sales/Marketing Email:
marketing.hk.asia@lifefitness.com

*Also check www.lifefitness.com for local representation or distributor/dealer

User and Service Documents Link

<https://fn.fit/KnowledgeBase>

<https://fn.fit/SupportDocuments>

Additional information is available online using the links above.

تتوفر معلومات إضافية على الإنترنت باستخدام الرابط أعلاه.

点击上面的链接可在线获取更多信息。

Flere oplysninger er tilgængelige online gennem linket ovenfor.

Bijkomende informatie is online beschikbaar via bovenstaande link.

Vous trouverez plus d'informations en ligne à l'aide du lien ci-dessus.

Zusätzliche Informationen finden Sie online über den oben angegebenen Link.

Ulteriori informazioni sono disponibili online utilizzando il link sopra riportato.

追加情報は上記リンクを使用してオンラインで利用可能です。

상기 링크를 통해 온라인에서 추가 정보를 볼 수 있습니다.

Informações adicionais estão disponíveis on-line, através do link acima.

Дополнительная информация доступна в интернете по ссылке, указанной выше.

Mediante el enlace anterior podrá acceder a información adicional en línea.

Ytterligare information finns online genom att använda länken ovan.

İnternet üzerinden daha fazla bilgi edinmek için yukarıdaki bağlantıyı kullanabilirsiniz.

هناك معلومات إضافية متاحة على الإنترنت باستخدام الرابط أعلاه.

Informazio osagarria eskuragarri dago goiko estekaren bidez.

Допълнителна информация можете да намерите онлайн, като използвате връзката по-горе.

Mitjançant l'enllaç anterior podreu accedir a informació addicional en línia.

使用上面的連結線上提供額外資訊。

Dodatne informacije možete pronaći na internetu sljedeći vezu iznad.

ከላይ የተመጠውን አገናኝ(ሊንክ) በመጠቀም መረጃዎች አንላይን ያገኛሉ።

Lisätietoja on saatavissa verkosta käyttämällä yllä olevaa linkkiä.

Wubetumi anya nsem afoforo aka ho wa websait so denam asem a ewo atifi ho a wubemia so so.

Πρόσθετες πληροφορίες είναι διαθέσιμες online χρησιμοποιώντας το σύνδεσμο παραπάνω.

מידע נוסף אפשר לקבל באינטרנט באמצעות הקישור לעיל.

További információ elérhető online, a fenti hivatkozás segítségével.

Viðbótarupplýsingar eru fáanlegar á netinu með því að smella á tengilinn hér fyrir ofan.

Plus indicium per superum situm potes invenire.

മുകളിലുള്ള ലിങ്ക് ഉപയോഗിച്ച് ഓൺലൈനിൽ കൂടുതൽ വിവരങ്ങൾ ലഭ്യമാണ്.

Ytterligere informasjon er tilgjengelig på nettet via linken ovenfor.

Dodatkowe informacje są dostępne online pod powyższym odnośnikiem.

Informações adicionais estão disponíveis online a usar o link acima.

Informații suplimentare sunt disponibile online, utilizând link-ul de mai sus.

Dodatne informacije dostupne su na mreži putem gornjeg linka.

Ďalšie informácie sú dostupné online na vyššie uvedenom odkaze.

Table of Contents

Safety

Safety Information.....	4
Product Labels.....	6

Specifications

Dual Adjustable Pulley 4:1 (CMDAP).....	10
Dual Adjustable Pulley 4:1 with Stabilization (CMDAS).....	11
Dual Adjustable Pulley 2:1 (OP-DAP).....	12
Adjustable Cable Crossover (LCM-CC).....	13

Maintenance Procedures

Maintenance Schedule.....	14
---------------------------	----

Warranty

What is Covered.....	17
Who is Covered.....	17
Who Pays Transportation and Insurance For Service.....	17
What We Will Do To Correct Covered Defects.....	17
What is Not Covered.....	17
Owner's Manual.....	17
Exclusive Warranty.....	17
Changes in Warranty Not Authorized.....	17
Effects of State Laws.....	17
Terms of Warranty Coverage.....	17

Assembly

Tools Required.....	19
Assembly List.....	19
Weight Stacks.....	19
CMDAP/CMDAS Components and Hardware.....	20
CMDAP/CMDAS Assembly.....	21
LCM-CC Components and Hardware.....	25
LCM-CC Assembly.....	26
Check Adjustable Carriage Tension.....	26
Adjustable Carriage Adjustment Instructions.....	27
Pull Pin Engagement.....	29
OP-DAP Assembly.....	29
Cable Routing.....	49

Cable Handling Guide

Cable Terminations, Tensioning and Wear Guide..	50
Cable Terminations.....	50
Tensioning Cable.....	51
Strength Cable Wear Guide.....	52
Insert Inspection.....	53

Bolt to Floor Guide

Introduction.....	54
Delivery and Installation Tips.....	54

Anchor Type - Static.....	54
Anchor Specifications.....	55
Pullout Force.....	55
Tools Required.....	55
Static Anchor Procedure.....	56
Foot Dimensions.....	57

1. Safety

Safety Information

It is the sole responsibility of the purchaser of Life Fitness products to read the owner's manual and warning labels and instruct all individuals, whether they are the end user or supervising personnel, on proper usage of the equipment.

UNDERSTANDING EACH AND EVERY WARNING TO THE FULLEST IS IMPORTANT. IF ANY OF THESE WARNINGS ARE UNCLEAR, CONTACT Life Fitness CUSTOMER SERVICE IMMEDIATELY AT 1-800-351-3737.

This equipment is categorized as class S per EN ISO 20957-1. As such this equipment is only intended for commercial, institutional and/or studio facilities. It is not intended for home use. Contact Life Fitness with any questions regarding this classification.

It is recommended that all users of Life Fitness exercise equipment be informed of the following information prior to use.

Operating Warnings



WARNING: This product can expose you to chemicals including Methyl Isobutyl Ketone, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to <http://www.P65Warnings.ca.gov>

- Life Fitness does not warrant nor guarantee that component parts used in the manufacture of products offered under the Life Fitness are latex-free. Users of these products must take all necessary precautions to prevent accidental contact that could lead to an adverse latex reaction.
- It is the purchaser's sole responsibility to properly instruct its end users and supervising personnel as to the proper operating procedures of all equipment.
- This equipment is not intended for use by children. Keep children under the age of 14 away from the machine.
- Do not allow users to wear loose fitting clothing or jewelry while using equipment. It is also recommended to have users secure long hair back and up to avoid contact with moving parts.
- All bystanders must stay clear of all users, moving parts and attached accessories and components while machine is in operation.

Access Control

- Life Fitness recommends that all commercial fitness equipment be used in a supervised area. It is recommended that the equipment be located in an access controlled area. Control is the responsibility of the facility owner.

Installation

- Life Fitness recommends that all equipment be secured to a solid, level surface to stabilize it and eliminate rocking or tipping over. This must be performed by a licensed contractor. See [Bolt to Floor Guide](#) for installation procedure.

Proper Usage

- Do not use any equipment in any way other than as designed or intended by the manufacturer. It is imperative that Life Fitness equipment is used properly to avoid injury.
- Injuries may result if exercising improperly or excessively. It is recommended that all individuals consult a physician prior to commencing an exercise program. If at any time during exercise you feel faint, dizzy or experience pain, STOP EXERCISING and consult your physician.
- Keep body parts (hands, feet, hair, etc.), clothing and jewelry away from moving parts to avoid injury.
- When adjusting any seat, knee hold down pad, range of motion limiter, foothold pad, pulley or any other type of adjuster, make certain that the adjusting pin is fully engaged in the hole to avoid injury.

Inspection

- DO NOT attempt to use or repair any accessory approved for use with the equipment which appears to be damaged or worn.
- DO NOT use or permit use of any equipment that is damaged and/or has worn or broken parts. For all Life Fitness equipment, use only replacement parts supplied by Life Fitness.
- Cables and belts pose an extreme liability if used when damaged. Always replace any cable at first sign of wear (consult Life Fitness if uncertain).
- Maintain labels, name plates and instructional placards. Do not remove labels or instructional placards for any reason. They contain important information. Contact Customer Support to replace any worn, damaged, or unreadable labels or instructional placards and to ensure that you are always using the latest version of labels and instructional placards.

- Equipment Maintenance - Preventative maintenance is the key to smooth operating equipment as well as to keep your liability to a minimum. Equipment needs to be inspected at regular intervals.
- Ensure that any person(s) making adjustments or performing maintenance or repair of any kind is qualified to do so. Life Fitness will provide service and maintenance training at our corporate facility upon request or in the field if proper arrangements are made.
- Before use, examine all accessories approved for use with the Life Fitness equipment for damage or wear.

Selectorized

- Use only weight selector pins supplied by seller on weight stacks. Substitutes are forbidden.
- Fully insert weight selector pins. Partial insertion can cause weights to fall unexpectedly.
- Never pin the weight stack in an elevated position.
- Never remove selector pin if any weights are suspended.
- Never attempt to release jammed weights or parts.
- Never use dumbbells, weight plates or any means, beyond the product itself, to incrementally increase the weight resistance.

Warnings and Cautions

- Warning labels indicate a potentially hazardous situation that could result in serious injury or death if the precautions are not observed.
- Caution labels indicate a potentially hazardous situation that could result in serious injury or damage to machine if the precautions are not observed.
- Contact [Customer Support Services](#) to replace any worn, damaged, or unreadable labels and to ensure that you are always using the latest version of labels.

Product Labels

General Warning Label

⚠️ WARNING

SERIOUS INJURY CAN OCCUR ON THIS EQUIPMENT. YOU MUST FOLLOW THESE PRECAUTIONS TO AVOID INJURY!

1. Before using, read all the warnings and obtain instruction on the use of this machine. Use only for intended exercise. **DO NOT** modify the machine.
2. Obtain a medical exam before beginning any exercise program.
3. Keep body, hair and clothing free of all moving objects.
4. Inspect the machines before use. **DO NOT** use if it appears damaged. **DO NOT** attempt to fix a broken or jammed machine. Notify staff immediately.
5. Be certain that weight pin is completely inserted. Use only the pin provided by the manufacturer. If unsure, seek assistance.
6. Never pin the weights or prop plate into an elevated position. **DO NOT** use the machine if found in this condition. **DO NOT** attempt to fix. Seek assistance.
7. Inspect cables and their connections before using machine. **DO NOT** attempt to fix. Seek assistance.
8. Use only the incremental weights supplied by the manufacturer. **DO NOT** use dumbbells or other means to add resistance to the machine.
9. Children must not be allowed near this machine. Supervise teenagers.
10. Manufacturer recommends that all equipment be secured to the floor to stabilize and eliminate rocking or tipping over. Use a licensed contractor.
11. **DO NOT REMOVE THIS LABEL. REPLACE IF DAMAGED.**

Serial Number Label

Life Fitness

9525 Bryn Mawr Ave
Rosemont, IL 60018
USA 1-847-288-3300
www.lifefitness.com

Ejdosplan 25-31
2692 LB Barendrecht
The Netherlands
+31 0 180 846 666

CAGE
SCMYS
Class: S

Model:
XXX

Max User Wt: XXlbs XXkgs
Max Training Wt: XXlbs XXkgs
Max Storage Wt: XXlbs XXkgs
SN: XXXXXXXXXXXX

Manufactured in the USA with US and Foreign parts

Weight at Handle

Weight stack label indicates resistance for each handle

Pinch Hazard Label



Adjustable Carriage Warning



Strap Training Warning

⚠️ WARNING

SERIOUS INJURY CAN OCCUR ON THIS EQUIPMENT. YOU MUST FOLLOW THIS PRECAUTION TO AVOID INJURY!

DO NOT USE for support during stretching, or allow resistance straps, ropes or other means to be attached to it unless the equipment is secured to floor. This can result in injury.

Contact manufacturer with questions.

FCC Compliant Cable

Patent:
www.lifefitness.com/patents

EN ISO 20957
TSCA Title VI Compliant

CE UK CA

THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES. OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS: (1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE, AND (2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRABLE OPERATION.

Carriage Fall Warning

⚠️ WARNING

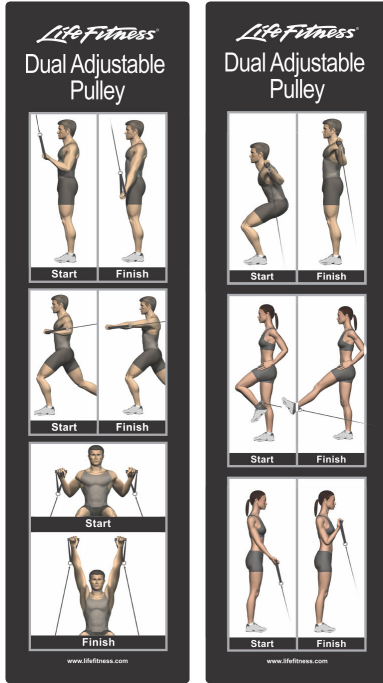
Carriage Will Fall If Pull-pin Is Not Fully Engaged.

Ensure Full Engagement As Illustrated Here To Avoid Injury.

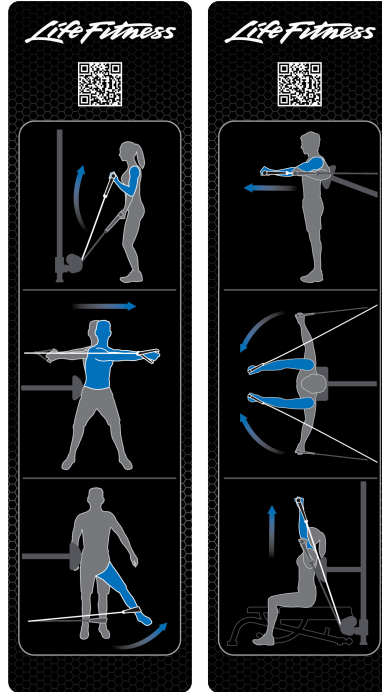
Placards

Instructive placard labels per Cable Motion machine.

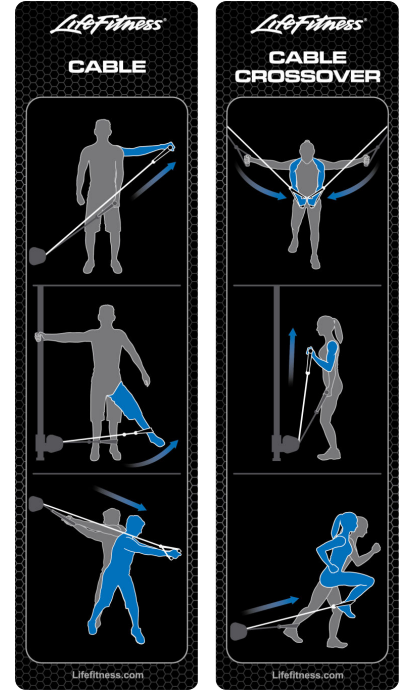
CMDAP



CMDAS



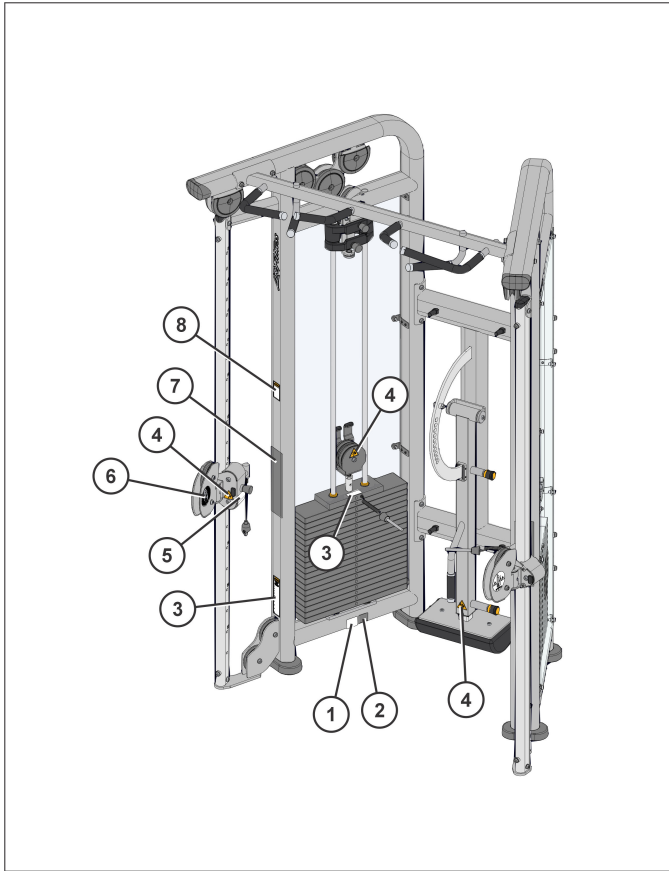
LCM-CC



NOTE: OP-DAP uses no placard

Label Locations

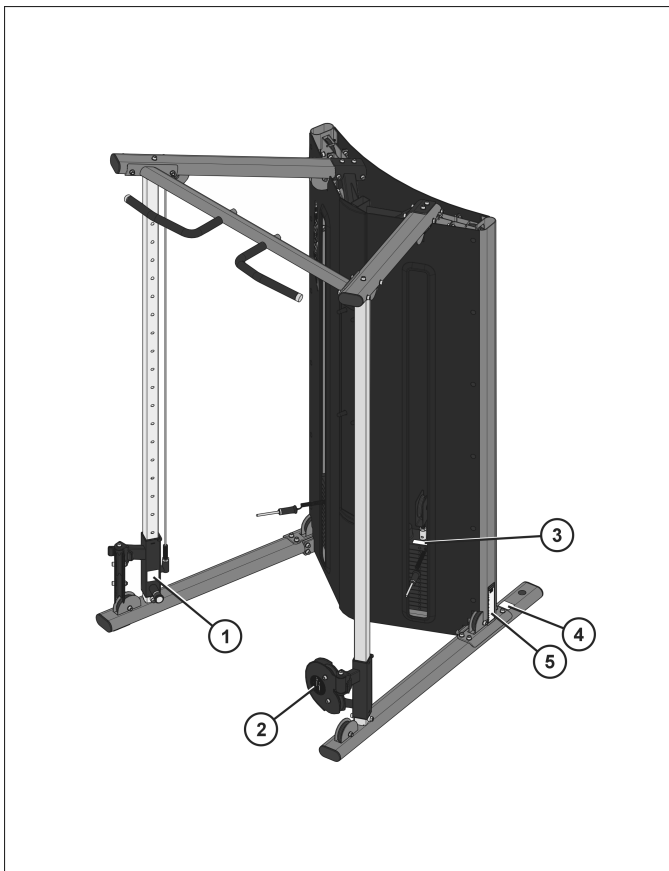
Dual Adjustable Pulley 4:1 (CMDAP and CMDAS)



Item	Description	CMDAP Qty.	CMDAS Qty.
1	Serial Number	1	1
2	FCC Compliant	1	1
3	General Warning	1	1
4	Pinch Hazard	4	5
5	Carriage Fall Warning	2	2
6	Adjustable Carriage Warning	4	4
7	Placard	2	2
8	Strap Training Warning	2	2

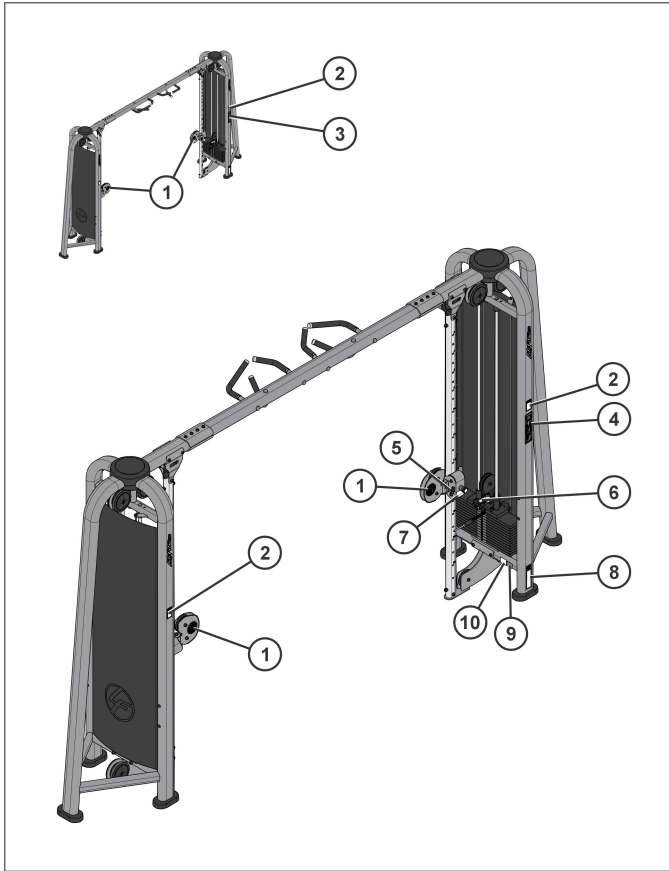
NOTE: CMDAS receives one extra pinch hazard label on its workarm.

Dual Adjustable Pulley 2:1 (OP-DAP)



Item	Description	Qty.
1	Carriage Fall Warning	2
2	Adjustable Carriage Warning	4
3	Weight at Handle	2
4	Serial Number	1
5	General Warning	1

Adjustable Cable Crossover (LCM-CC)

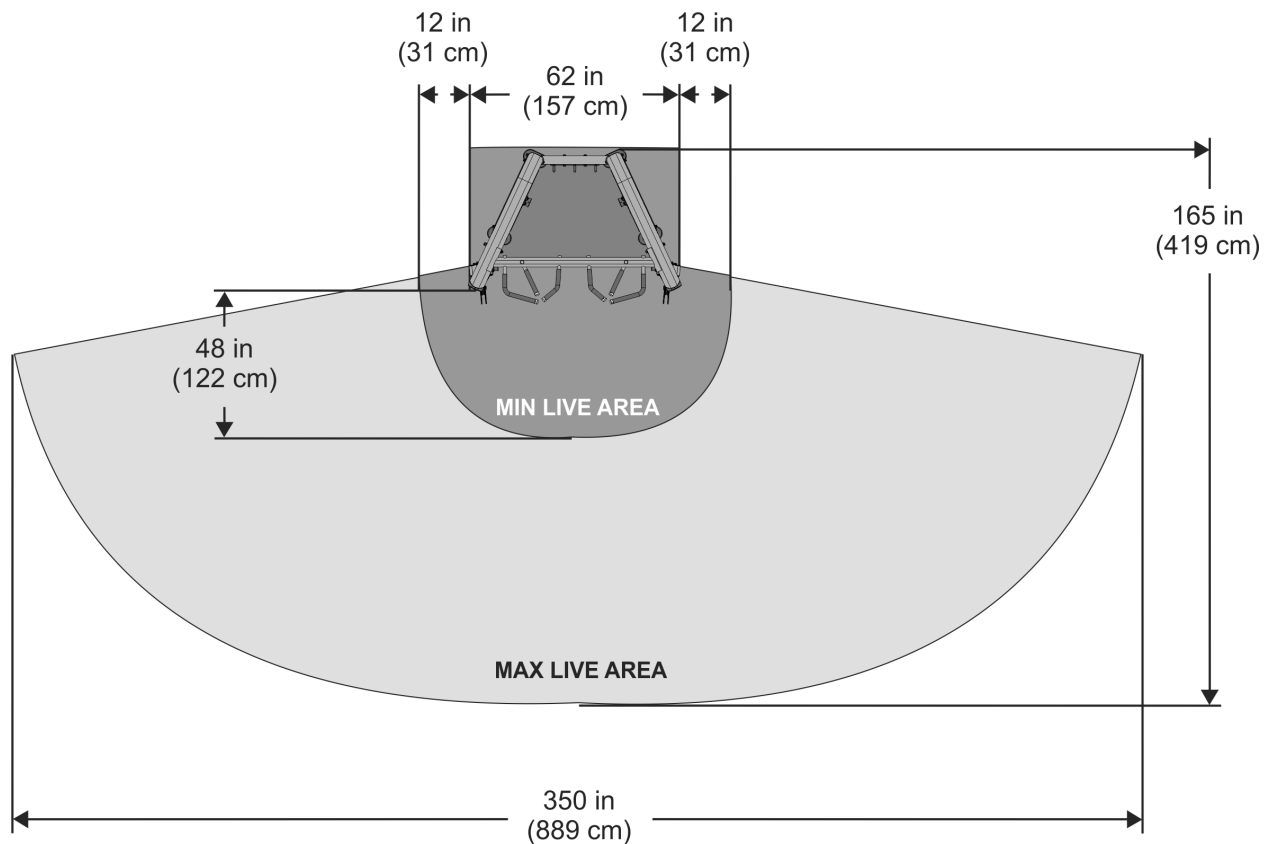


Item	Description	Qty.
1	Adjustable Carriage Warning	4
2	Strap Training Warning	4
3	Placard (Cable)	1
4	Placard (Cable Crossover)	1
5	Pinch Hazard	2
6	Weight at Handle	2
7	Carriage Fall Warning	2
8	General Warning	2
9	FCC Compliant Cable	1
10	Serial Number	1

2. Specifications

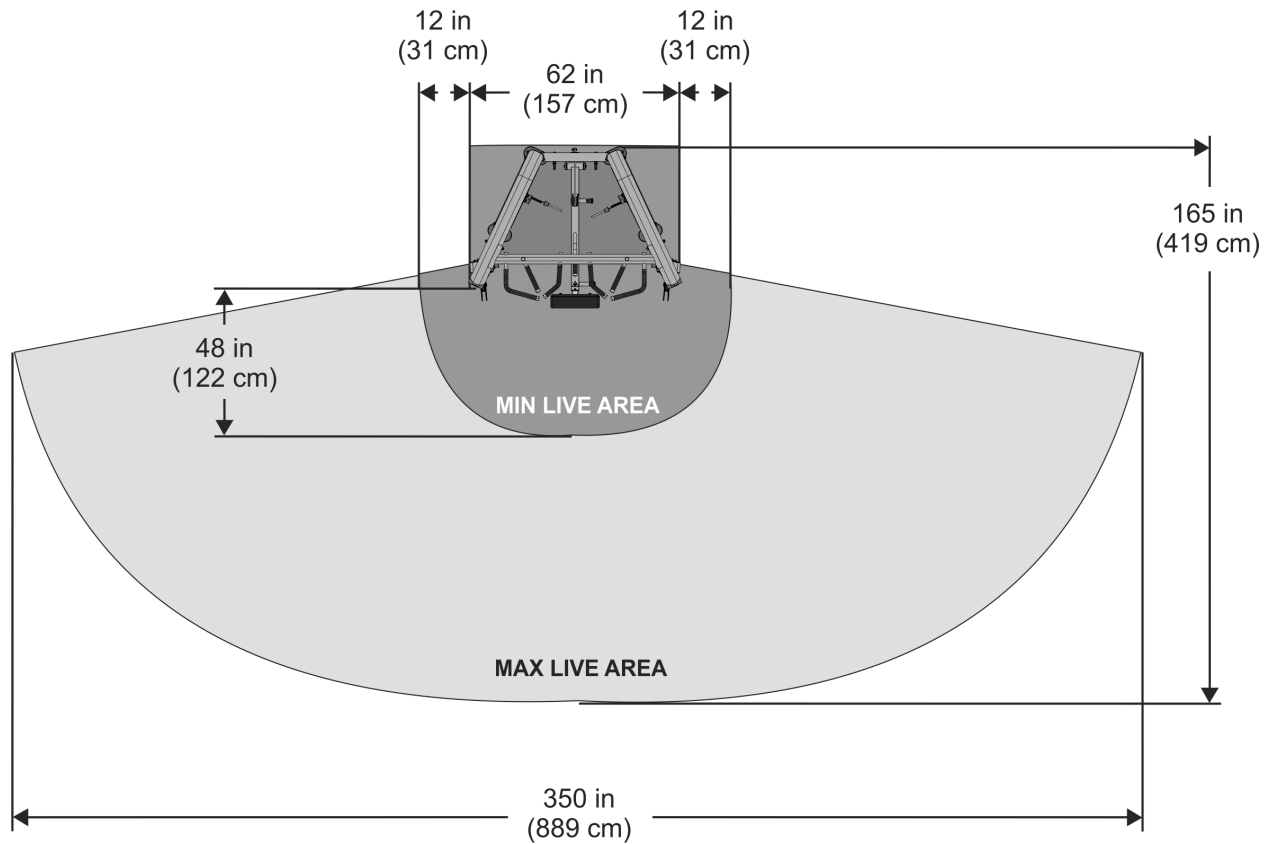
Dual Adjustable Pulley 4:1 (CMDAP)

Machine Weight w/ boom crossmember:	1274 lbs.	578 kg.
Size w/ boom crossmember (L x W x H):	in. = 45 x 62 x 93	cm = 115 x 158 x 237
Live Area w/ boom crossover (L x W x H):	in. = 165 x 350 x 93	cm = 419 x 889 x 237
Machine Weight w/ chin up:	1301 lbs.	590 kg.
Size w/ chin up (L x W x H):	in. = 45 x 62 x 94	cm = 115 x 158 x 239
Live Area w/ chin up (L x W x H):	in. = 165 x 350 x 112	cm = 419 x 889 x 285
Max User Weight:	300 lbs.	136 kg.
Weight Stack Weight:	390 lbs. (x2)	177 kg. (x2)
Effective User Resistance:	97.5 lbs. (x2)	47.5 kg. (x2)
Resistance Ratio:	4:1	



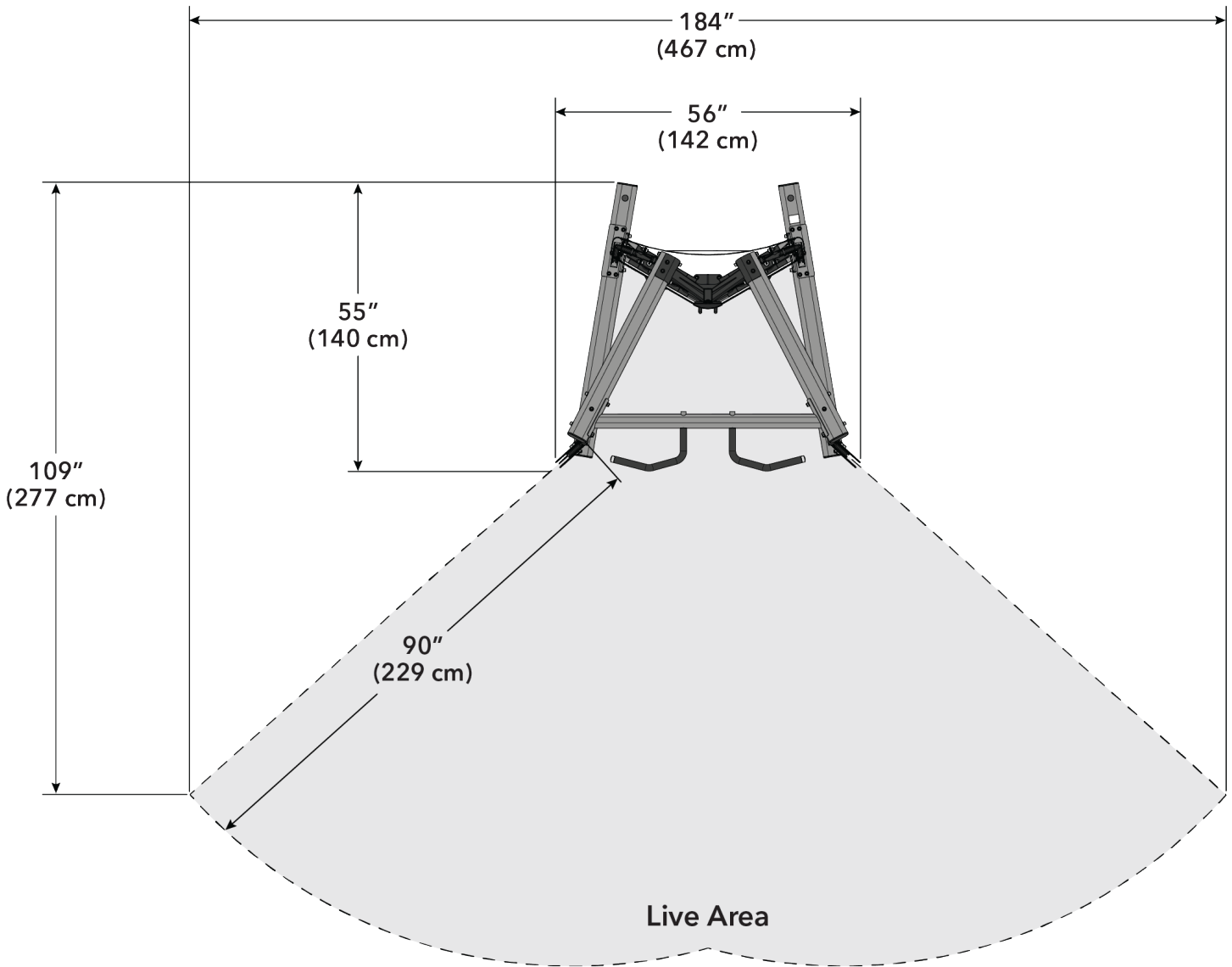
Dual Adjustable Pulley 4:1 with Stabilization (CMDAS)

Machine Weight w/ boom crossmember:	1379 lbs.	625 kg.
Size w/ boom crossmember (L x W x H):	in. = 45 x 62 x 93	cm = 115 x 158 x 237
Live Area w/ boom crossover (L x W x H):	in. = 165 x 350 x 93	cm = 419 x 889 x 237
Machine Weight w/ chin up:	1380 lbs.	626 kg.
Size w/ chin up (L x W x H):	in. = 45 x 62 x 94	cm = 115 x 158 x 239
Live Area w/ chin up (L x W x H):	in. = 165 x 350 x 112	cm = 419 x 889 x 285
Max User Weight:	300 lbs.	136 kg.
Weight Stack Weight:	390 lbs. (x2)	177 kg. (x2)
Effective User Resistance:	97.5 lbs. (x2)	47.5 kg. (x2)
Resistance Ratio:	4:1	



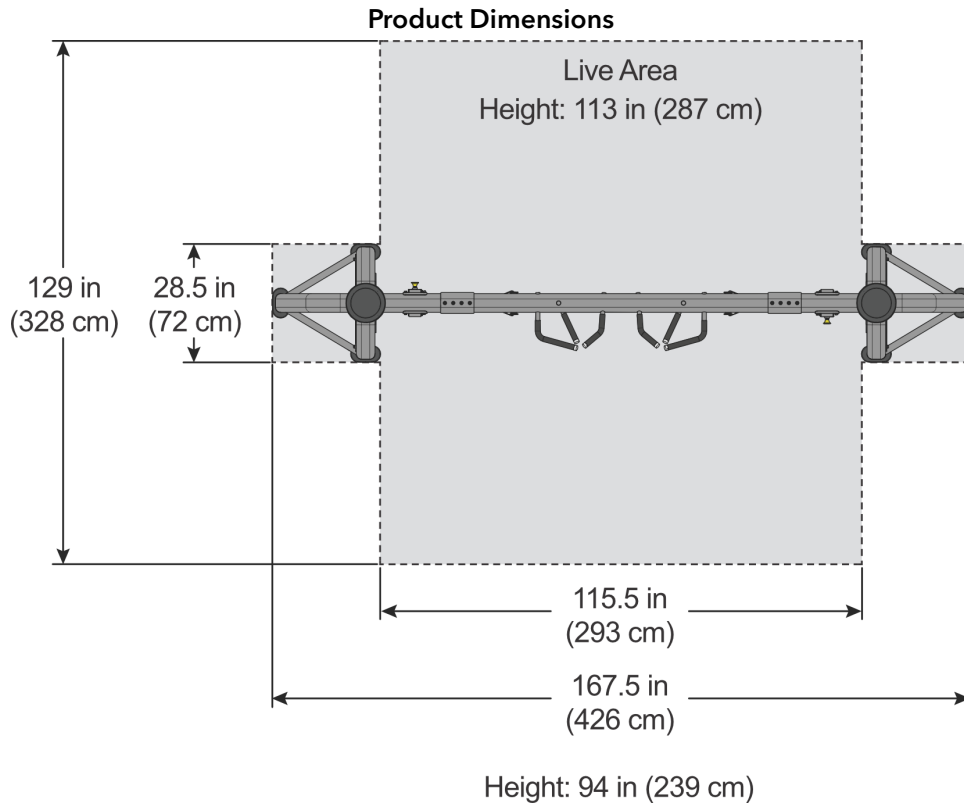
Dual Adjustable Pulley 2:1 (OP-DAP)

Machine Weight:	719 lbs.	326 kg.
Size (L x W x H):	in. = 56 x 55 x 87	cm = 142 x 140 x 220
Live Area (L x W):	in. = 184 x 109 x 90	cm = 467 x 277 x 229
Max User Weight:	300 lbs.	136 kg.
Resistance Ratio:	2:1	
Weight Stack:	2 x 165 lbs.	2 x 75 kg.
Effective User Resistance:	2 x 80 lbs.	2 x 40 kg.



Adjustable Cable Crossover (LCM-CC)

Machine Weight:	980 lbs.	444.5 kg.
Size (L x W x H):	in. = 28.5 x 167.5 x 94	cm = 72 x 426 x 239
Live Area (L x W x H):	in. = 129 x 115.5 x 113	cm = 328 x 293 x 287
Max User Weight:	300 lbs.	136 kg.
Weight Stack Weight:	190 lbs. (x2)	130 kg. (x2)
Effective User Resistance:	95 lbs.	47.5 kg.
Resistance Ratio:	2:1	



3. Maintenance Procedures

Maintenance Schedule

ACTION	DAILY	WEEKLY	MONTHLY	AS NEEDED
CLEAN				
Guide Rods			•	
Hand Grips				•
Shrouds			•	
Upholstery	•			
WAX				
Frames				•
INSPECT				
Belt	•			
Cable	•			
Frame		•		
Hand Grips		•		
Hardware		•		
Labels			•	
Paint			•	
Shrouds	•			
LUBRICATE				
Guide Rods				•

Clean

- Upholstery with an approved or compatible cleaner.
- Guide rods with a cotton cloth.
- Hand grips with an approved or compatible cleaner.

Wax

- Frames with a standard, non-abrasive, wax finish.

Inspect

- Cables. Look for wear or damage and proper tension. Pay close attention at bends and attachment points.
- Belts. Look for wear or damage and proper tension. Pay close attention at bends and attachment points.
- Hardware. Check for loosening. Tighten as required.
- Frames. Inspect for wear and damage.
- Hand grips. Check for wear and damage.
- For paint chips. Fill in immediately with manufacturers touch-up paint.
- Jam nut at top of weight stack for tightness.

Lubricate

- Lubricate guide rods with Break-Free® brand lubricant (part number SK50-P0005-0000). Apply the lubricant to a cotton cloth, and then run the cotton cloth up and down the guide rods as needed.

NOTE: Only a few drops of lubricant are required for each guide rod.

Once a Day

- Wipe down upholstery with a mild soap and water or comparable all purpose cleaner.

- Visually inspect cables for wear at and around connections and along the entire length of the cable. Always replace at first sign of wear.

Once a Week

- Visually inspect all hardware for loosening, tampering or wear.
- Check jam nut at top of weight stack for tightness.
- Check condition of hand grips.
- Check cables for stretch and adjust as necessary by loosening the large Jam Nut on top of the weight stack and by screwing in the Threaded Plug until cable is tight and the weight stack pin goes in all holes easily. Securely tighten the large Jam Nut when finished.
- Inspect shrouds for damage and clean as necessary.

Once a Month

- Clean guide rods with Break-Free® brand lubricant (part number SK50-P0005-0000). Clean tops of bearings at stack and inspect for heavy buildup on rods below the head plate. Lift half of stack and do a visual inspection, then clean as necessary.
- Inspect hardware on all machines and tighten any bolts or nuts that may have loosened over the life of the product.
- Contact [Customer Support Services](#) to replace any worn, damaged, or unreadable labels or instructional placards and to ensure that you are always using the latest version of labels and instructional placards.

Notes

- Use polishing compound (such as car wax) and remove shoe scuffs from powder coated surfaces as necessary.

Cleaning the Shrouds

- Adherence to regular and proper cleaning procedures is recommended to preserve the appearance.

NOTE: Spray the approved cleaner on a towel, and then wipe down the shrouds to avoid saturation of shroud inlays.

Minimize Scratches

- Wash the shrouds with an approved or compatible cleaner. Do not scrub brushes on the shrouds. Fresh paint splashes, grease and smeared glazing compounds can be removed easily before drying by rubbing lightly with isopropyl alcohol. Afterward, a warm final wash should be made.

Approved and Compatible Cleaners

Two preferred cleaners have been approved by reliability experts: PureGreen 24 and Gym Wipes. Both cleaners will safely and effectively remove dirt, grime and sweat from equipment. PureGreen 24 and the Antibacterial Force formula of Gym Wipes are both disinfectants that are effective against MRSA and H1N1.

PureGreen 24 is available in a spray which is convenient to use. Apply the spray to a microfiber cloth and wipe down the equipment. Use PureGreen 24 on the equipment for at least 2 minutes for general disinfection purposes and at least 10 minutes for fungus and viral control.

Gym Wipes are large, durable pre-moistened wipes to use on the equipment before and after workouts. Use Gym Wipes on the equipment for at least 2 minutes for general disinfection purposes.

Contact Customer Support Services to order these cleaners (1-800-351-3737 or email: customersupport@lifefitness.com).

Mild soap and water or a mild non-abrasive household cleaner can also be used to clean the display and all exterior surfaces. Use a soft microfiber cloth only. Apply the cleaner to the microfiber cloth before cleaning. DO NOT use ammonia or acid based cleaners. DO NOT use abrasive cleaners. DO NOT use paper towels. DO NOT apply cleaners directly to the equipment surfaces.

Removal of Paint, Marking Pens, or Labels

- Butyl cellosolve works well for removal of paints, marking pen inks, lipstick, etc.
- Labels, stickers, etc. may be removed using kerosene. When the solvent will not penetrate sticker material, apply heat (hair dryer) to soften the adhesive and promote removal. GASOLINE SHOULD NOT BE USED.

Important Hazards

- DO NOT use abrasive or highly alkaline cleaners on the shrouds.
- NEVER scrape shrouds with squeegees, razor blades or other sharp instruments.

- DO NOT clean shrouds in hot sun or at elevated temperatures.
- NEVER use benzene, gasoline, acetone or carbon tetrachloride on the shrouds.
- Manufacturer recommends that cables be inspected daily after installation and replaced annually.

4. Warranty

What is Covered

This Life Fitness commercial exercise equipment product is warranted to be free of all defects in material and workmanship.

Who is Covered

The original purchaser or any person receiving the product as a gift from the original purchaser.

Who Pays Transportation and Insurance For Service

If the Product or any covered part must be returned to a service facility for repairs, We, Life Fitness, will pay all transportation and insurance charges for the first year. You are responsible for transportation and insurance charge after the first year.

What We Will Do To Correct Covered Defects

We will ship to you any new or rebuilt replacement part or component, or at our option, replace the Product. Such replacement parts are warranted for the remaining portion of the original warranty period.

What is Not Covered

Any failures or damage caused by unauthorized service, misuse, accident, negligence, improper assembly or installation, debris resulting from any construction activities in the Product's environment, rust or corrosion as a result of the Product's location, alterations or modifications without our written authorization, or by failure on your part to use, operate and maintain the Product as set out in your Operation Manual.

All terms of this warranty are void if this product is moved beyond the continental borders of the United States of America (excluding Alaska, Hawaii and Canada) and are then subject to the terms provided by that country's local authorized Life Fitness representative.

Owner's Manual

It is VERY IMPORTANT THAT YOU READ THIS MANUAL before operating the Product. Remember to perform the periodic maintenance requirements specified in the Manual to assure proper operation and your continued satisfaction.

Exclusive Warranty

THIS LIMITED WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES OF ANY KIND EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, AND ALL OTHER OBLIGATIONS OR LIABILITIES ON OUR PART. We neither assume nor authorize any person to assure for us any other obligation or liability concerning the sale of this Product. Under no circumstances shall we be liable under this warranty, or otherwise, of any damage to any person or property, including any lost profits or lost savings, for any special, indirect, secondary, incidental or consequential damages of any nature arising out of the use of or inability to use this Product. Some states do not allow the exclusion or limitation of implied warranties or of liability for incidental or consequential damages, so the above limitations or exclusions may not apply to you. Warranty coverages and terms may differ outside the United States. Please contact the Life Fitness office servicing your country (contact information found at the front of this manual) or visit the applicable local Life Fitness website to receive the specific warranty information for your country.

Changes in Warranty Not Authorized

No one is authorized to change, modify or extend the terms of this limited warranty.

Effects of State Laws

This warranty gives you specific legal rights, and you may have other rights which vary from state to state and country by country.

Terms of Warranty Coverage

Please use the link below to access component warranty terms:

<http://lifefitness.com/warranties>



5. Assembly

Tools Required

- 4 mm Allen wrench
- 7 mm Allen wrench (x2)
- 8 mm Allen wrench
- 17 mm wrench
- External retaining ring pliers
- Phillips screwdriver
- Rubber mallet
- Safety glasses
- Tape measure
- Torque wrench

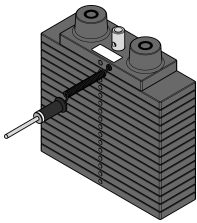
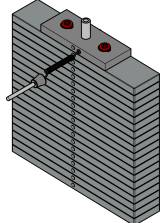
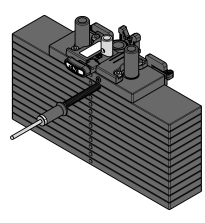
Assembly List

Once assembly is complete, refer to the [Adjust Roller Carriage](#) and [Pull Pin Engagement](#) for further instruction.

Unit	Description	Link
CMDAP	Dual Assisted Pulley 4:1	CMDAP/CMDAS
CMDAS	Dual Assisted Pulley 4:1 with Stabilization	CMDAP/CMDAS
OP-DAP	Dual Assisted Pulley 2:1	OP-DAP
LCM-CC	Adjustable Cable Crossover	LCM-CC

Weight Stacks

Weight stack configurations:

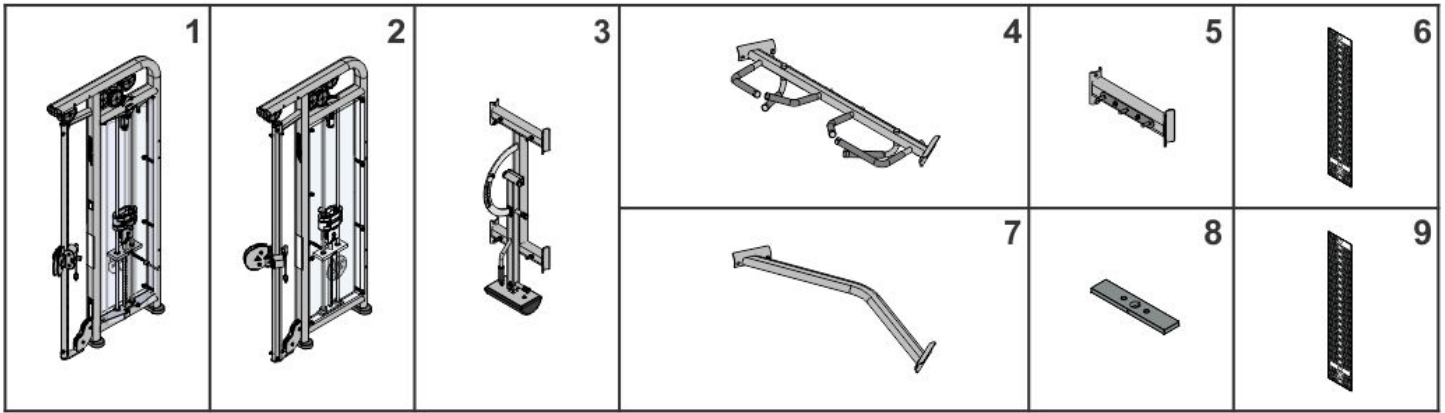
165lb/75kg	390lb/177kg	190lb/86kg
		

Unit	Stack Weight	Weight Plates			
		10lb/4.5kg	15lb/6.8kg	20lb/9.1kg	Thickness
CMDAP	390lb/177kg	0	0	19 (x2)	1in/2.5cm
CMDAS	390lb/177kg	0	0	19 (x2)	1in/2.5cm
OP-DAP	165lb/75kg	15 (x2)	0	0	0.75in/1.9
LCM-CC	190lb/86kg	0	12 (x2)	0	0.75in/1.9

NOTE: Head plate assemblies each weight 10lb/4.5kg.

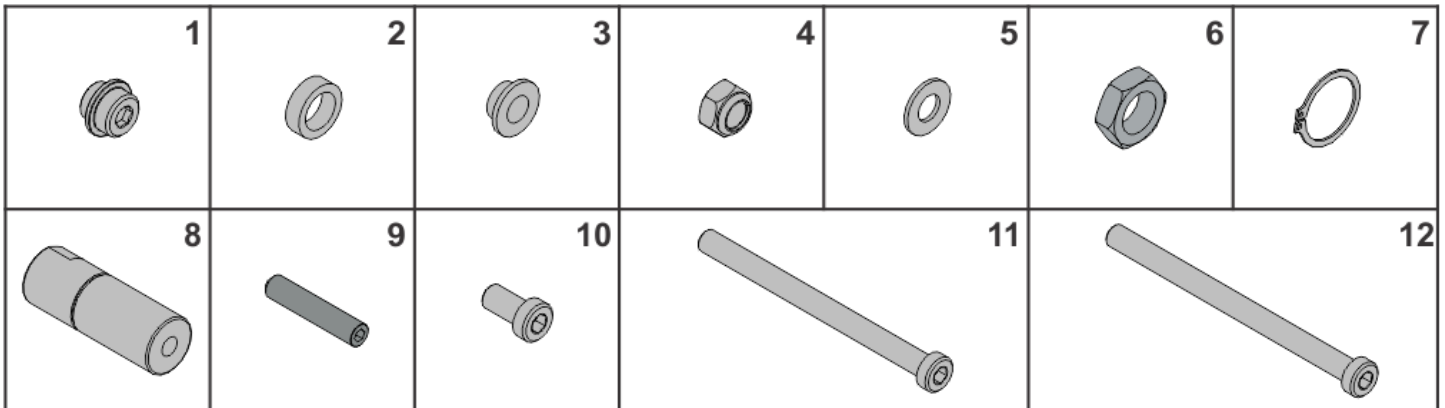
CMDAP/CMDAS Components and Hardware

Components



Item	Description	Qty.
1	Right Hand Tower	1
2	Left Hand Tower	1
3	CMDAS Option	1
4	Chin Up Upper Support	1
5	CMDAP Rear Supports	2
6	Weight Stack Label (LB)	1
7	No Handle Upper Support	1
8	20lb (9.1kg) Weight Plates	38
9	Weight Stack Label (KG)	1

Hardware

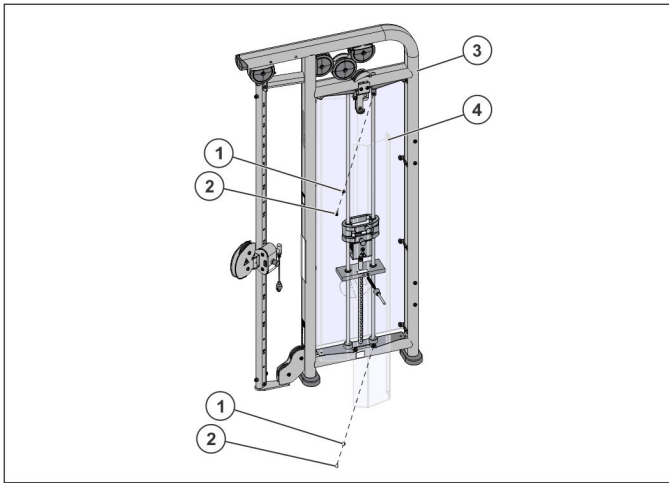


Item	Description	Qty.
1	Socket Head Nut	8
2	CM/MJ Spacer	8
3	Pulley Retainer	8
4	Nylock Hex Nut	2
5	3/8 Washer	8
6	Jam Nut	2
7	Retainer Ring	4

Item	Description	Qty.
8	Guide Rod Retainer	4
9	Retainer Screw	4
10	M10 x 20mm Screw	8
11	M10 x 130mm Screw	10
12	M10 x 140mm Screw	2

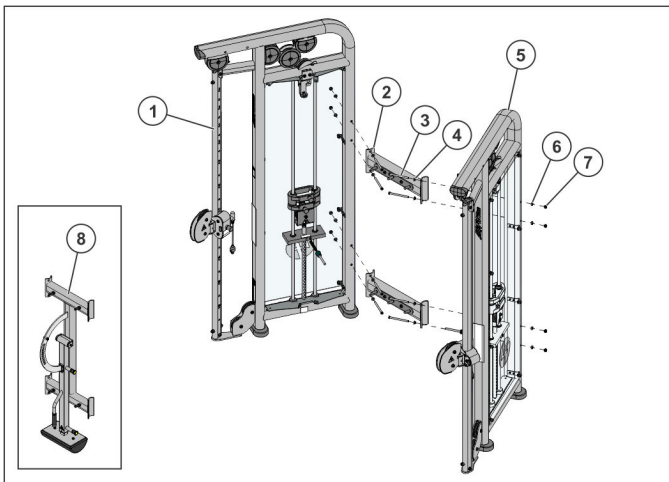
CMDAP/CMDAS Assembly

1. If equipped, remove hardware and front shrouds.



Item	Description	Qty.
1	3/8 Washer	2
2	M10 x 20mm Screw	2
3	Right Hand Tower	1
4	Front Shroud	2

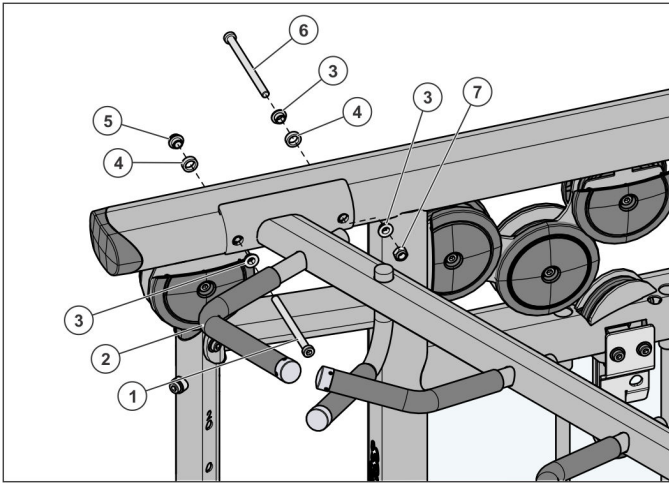
2. Unite the left and right hand towers with either the rear supports or CMDAS option and tighten hardware to **20-25 ft-lbs (27-34 Nm)**.



Item	Description	Qty.
1	Right Hand Tower	1
2	Rear Support	2
3	M10 x 130mm Screw	8
4	Pulley Retainer	8
5	Left Hand Tower	1
6	CM/MJ Spacer	8
7	Socket Head Nut	8
8	Optional CMDAS	1

NOTE: If equipped, CMDAS replaces rear supports

3. Install the upper support onto the towers and **hand-tighten hardware**.



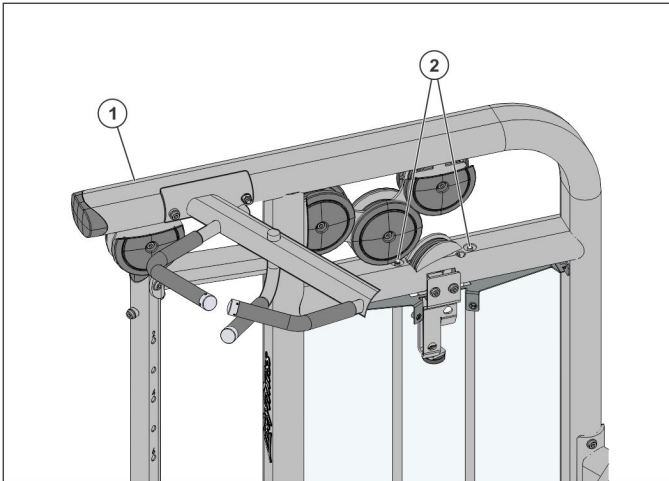
Item	Description	Qty.
1	M10 x 130mm Screw	2
2	Upper Support	1
3	Pulley Retainer	6
4	CM-MJ Spacer	4
5	Socket Head Nut	2
6	M10 x 140mm Screw	2
7	Nylock Hex Nut	2

NOTE: Chin up upper support shown

4. Starting at the base, tighten hardware from Steps 2 and 3 to **20-25 ft-lbs (27-34 Nm)**.

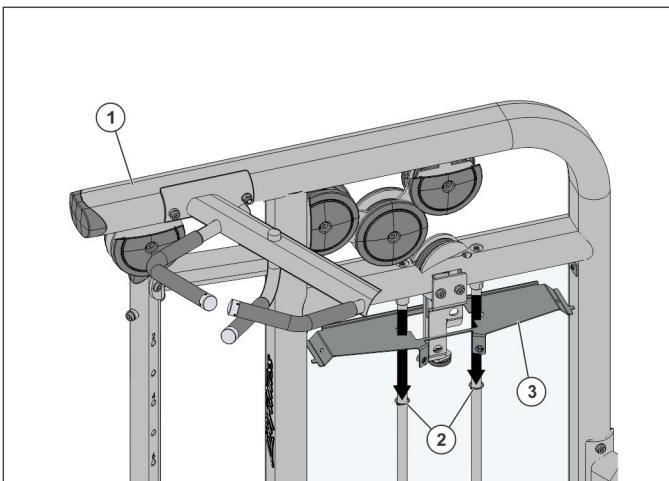


5. Loosen retainer screws.



Item	Description	Qty.
1	Right Hand Tower	1
2	Retainer Screw	2

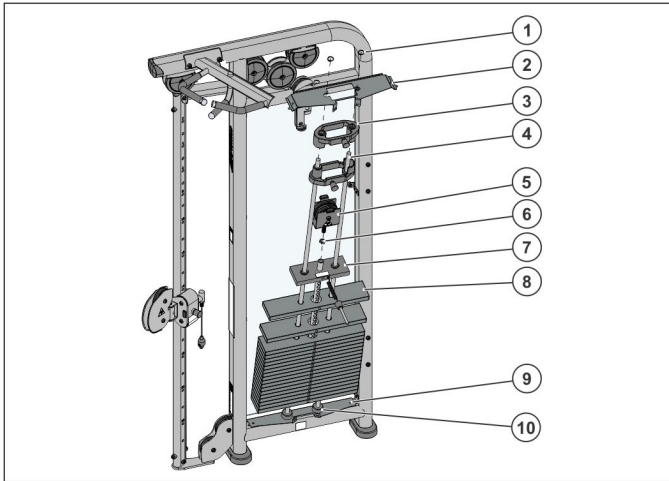
6. Remove retainer rings and top shroud bracket, if equipped.



Item	Description	Qty.
1	Right Hand Tower	1
2	Retainer Rings	2
3	Top Shroud Bracket	1

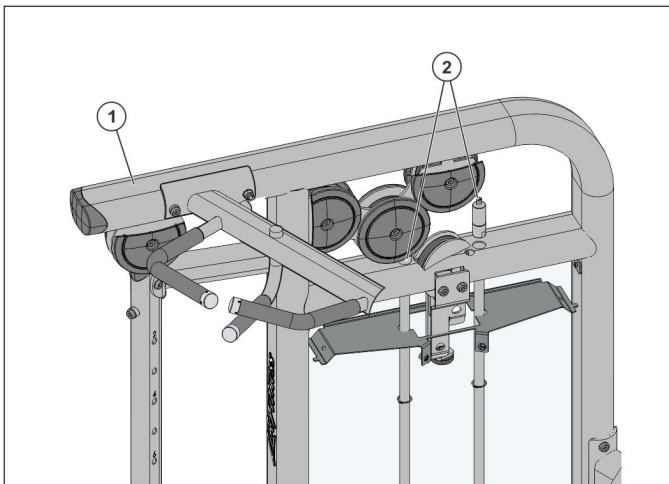
NOTE: Top shroud bracket will no longer be supported when retainer rings are removed.

7. Assemble weight stack.



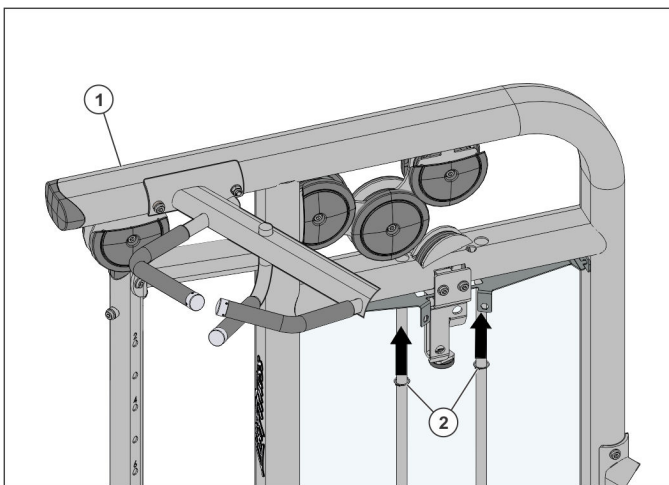
Item	Description	Qty.
1	Retainer Ring	2
2	Top Shroud Bracket	1
3	Increment Weight Assembly	2
4	Guide Rod	2
5	Stack Pulley Assembly	1
6	Jam Nut	1
7	Head Plate Assembly	1
8	20lb (9.1kg) Weight Plate	19
9	Bottom Shroud Bracket	1
10	Weight Stack Cushion	2

8. Replace guide rod retainers.



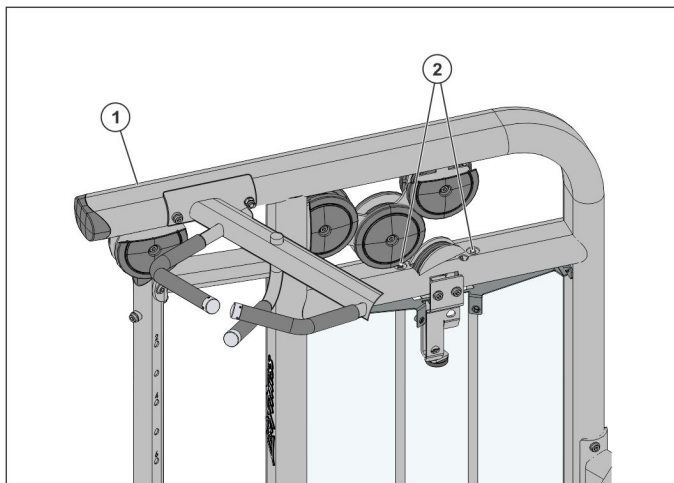
Item	Description	Qty.
1	Right Hand Tower	1
2	Guide Rod Retainer	2

9. Replace the retainer rings.



Item	Description	Qty.
1	Right Hand Tower	1
2	Retainer Ring	2

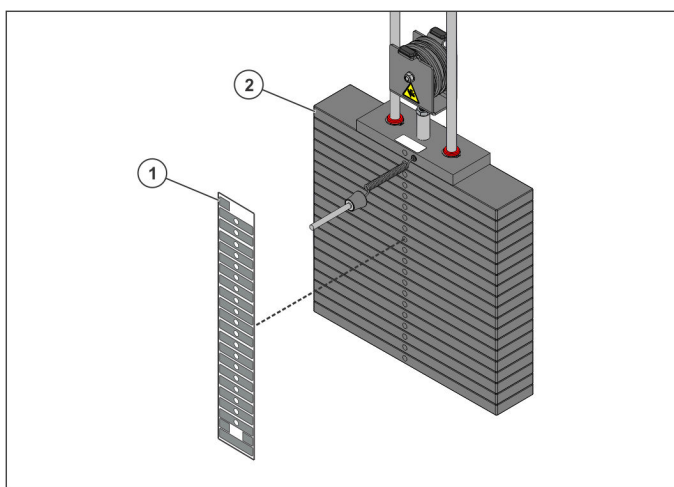
10. Tighten both retainer screws to **40-50 in-lbs (4.5-5.6 Nm)**.



Item	Description	Qty.
1	Right Hand Tower	1
2	Retainer Screw	2

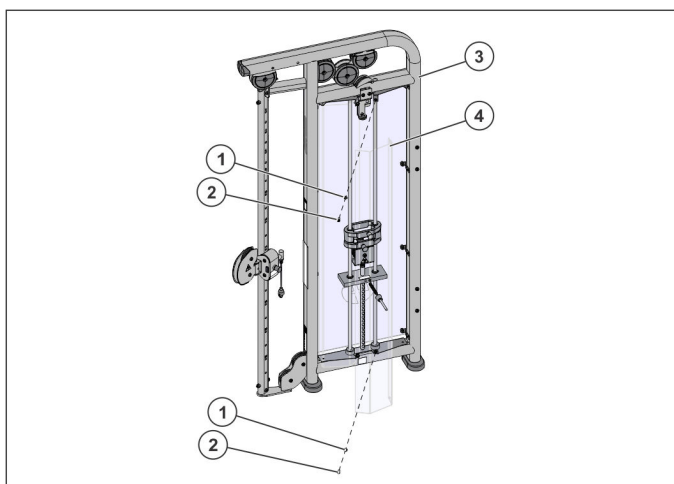
NOTE: Overtightening will force retainer ring off guide rod retainer

11. Apply the desired weight stack label, pounds or kilograms, onto each weight stack.



Item	Description	Qty.
1	Weight Stack Label (lb or kg)	1
2	Weight Stack	1

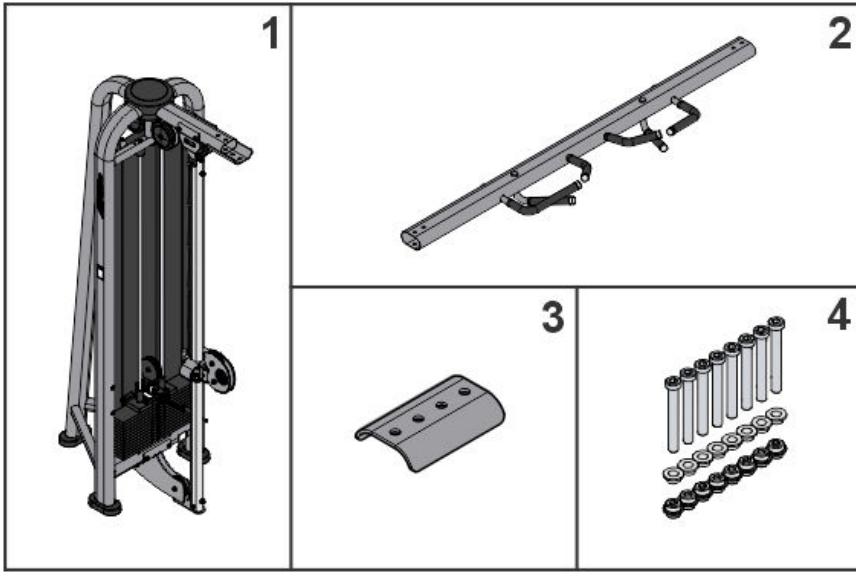
12. If equipped, replace hardware, front shrouds and tighten to **40-50 in-lbs (4.5-5.6 Nm)**..



Item	Description	Qty.
1	3/8 Washer	2
2	M10 x 20mm Screw	2
3	Right Hand Tower	1
4	Front Shroud	2

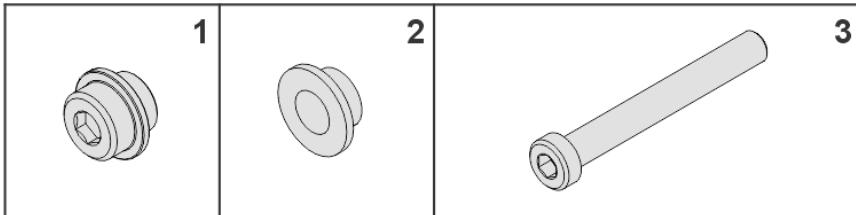
LCM-CC Components and Hardware

Components



Item	Description	Qty.
1	Tower Assembly	2
2	Crossbar	1
3	Oval Bracket	2
4	Hardware Kit	1

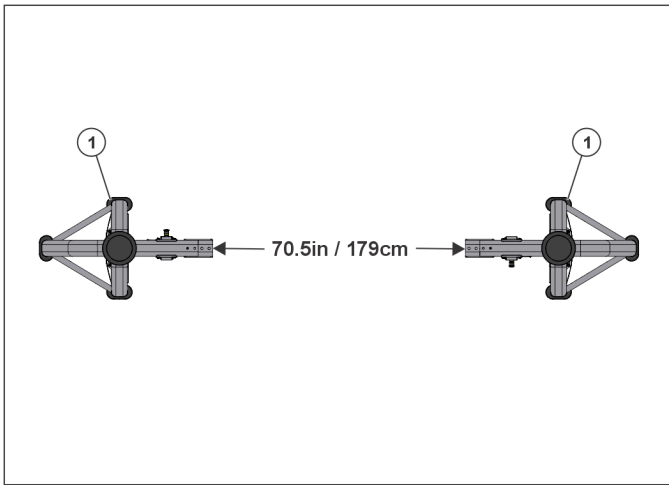
Crossbar Hardware



Item	Description	Qty.
1	Socket Head Nut	8
2	Pulley Retainer	8
3	M10 x 80mm Screw	8

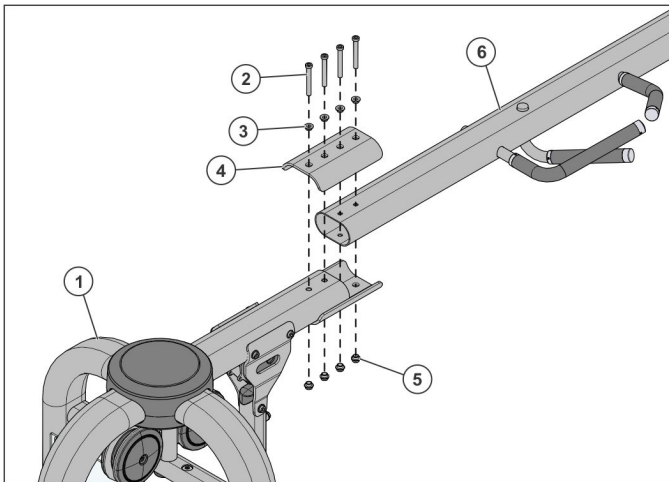
LCM-CC Assembly

1. Space the towers apart 70.5 in/179cm.



Item	Description	Qty.
1	LCM-CC Tower Assembly	2

2. Attach the crossbar to both towers using the oval brackets and tighten hardware to 20-25 ft-lbs/27-34 Nm.

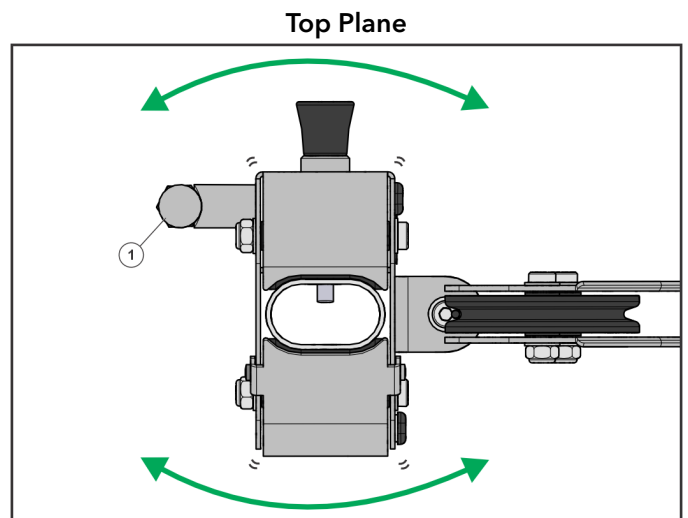
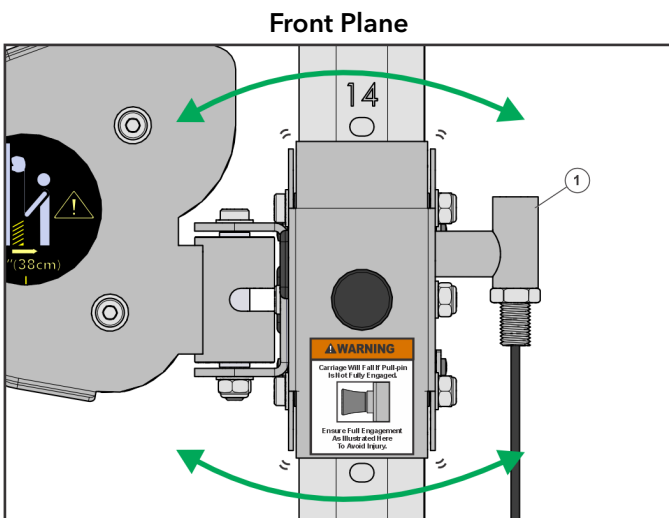


Item	Description	Qty.
1	Tower Assembly	2
2	M10 x 80mm Screw	8
3	Pulley Retainer	8
4	Oval Bracket	2
5	Socket Head Nut	8
6	X-Beam	1

NOTE: Crossbar grips face upward

Check Adjustable Carriage Tension

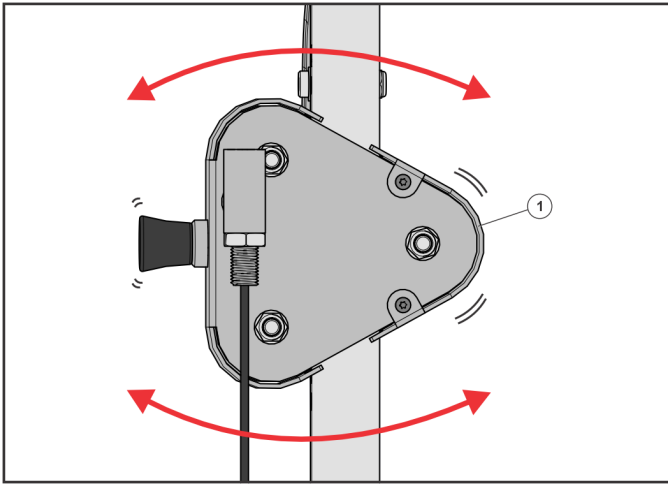
1. Minimal movement, not to exceed 3 degrees, is acceptable on the carriage's front and top planes. Check the angle with the smart phone angle indicator app and adjust carriage if over 3 degrees.



Item	Description	Qty.
1	Carriage Assembly	1

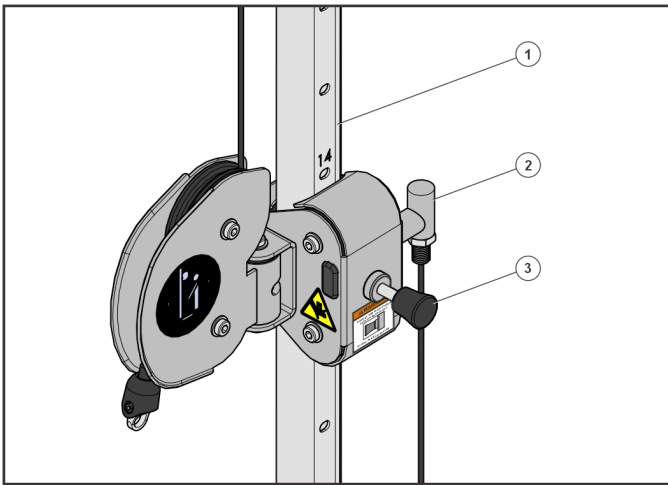
- No movement is acceptable on the carriage's side plane. Adjust carriage if movement is detected.

Side Plane



Item	Description	Qty.
1	Carriage Assembly	1

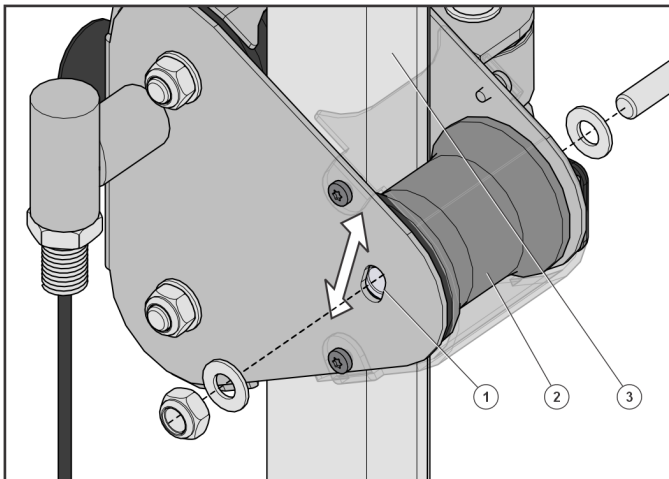
- Pull knob to unpin the carriage from the column. The carriage assembly should be able to move freely under its own weight on the column without binding. If there are any points along the column that require assistance to move the carriage assembly downward (when unpinned), that indicates it is too tight and needs adjustment.



Item	Description	Qty.
1	Column	1
2	Carriage Assembly	1
3	Knob	1

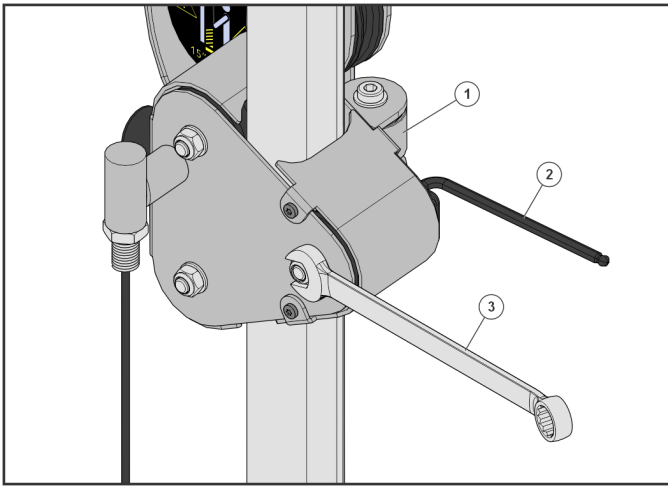
Adjustable Carriage Adjustment Instructions

The position of the rear roller relative to the column regulates carriage tension. Adjust the rear roller during installation, or if the carriage becomes too tight or too loose, by utilizing the 15-degree slotted holes at the rear of the carriage.



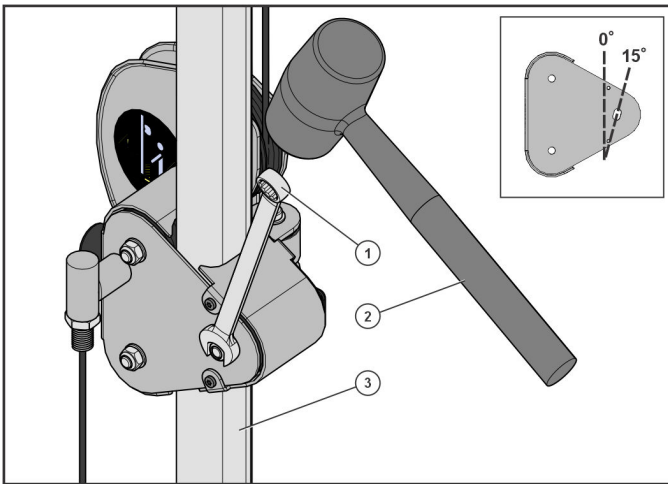
Item	Description	Qty.
1	Slotted Hole	2
2	Rear Roller	1
3	Column	1

- Carefully loosen the rear roller hardware, just before the nut and bolt stop turning in unison but are still unable to turn by hand.



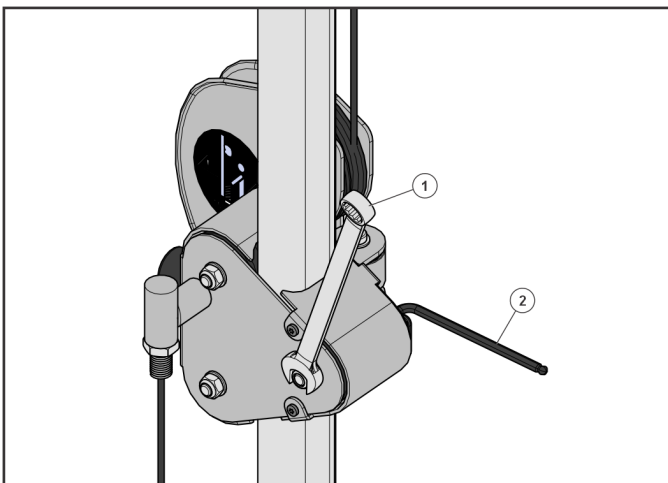
Item	Description	Qty.
1	Carriage Assembly	1
2	7mm Allen Wrench	1
3	17mm Wrench	1

- With the 17mm wrench inline with the 15-degree slot, carefully tap the top of the wrench to drive the roller towards the column.



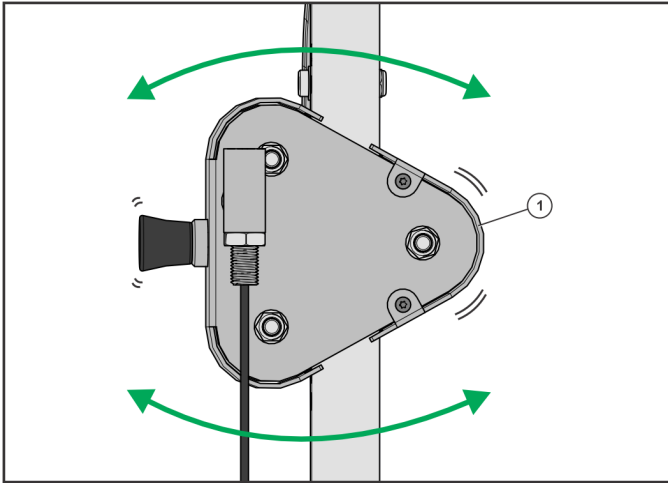
Item	Description	Qty.
1	17mm Wrench	1
2	Rubber Mallet/Dead Blow Hammer	1
3	Column	1

- Keeping the 17mm wrench stationary, use only the 7mm Allen wrench to tighten the hardware to **20-25 ft-lbs (27-34 Nm)**.



Item	Description	Qty.
1	17mm Wrench	1
2	7mm Allen Wrench	1

4. Check carriage movement before use; repeat adjustment process if needed.

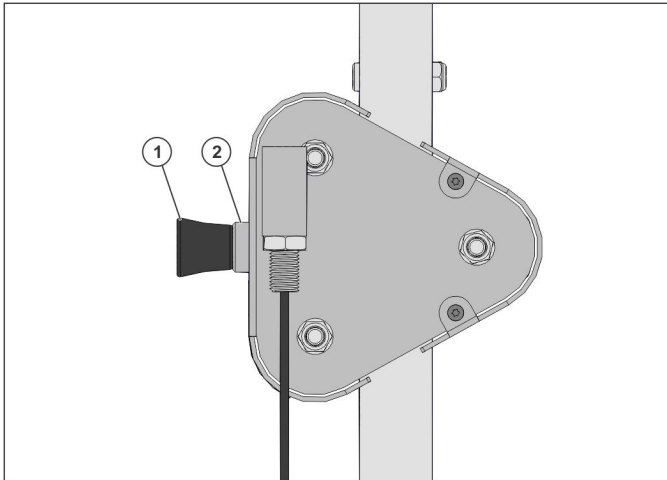


Item	Description	Qty.
1	Carriage Assembly	1

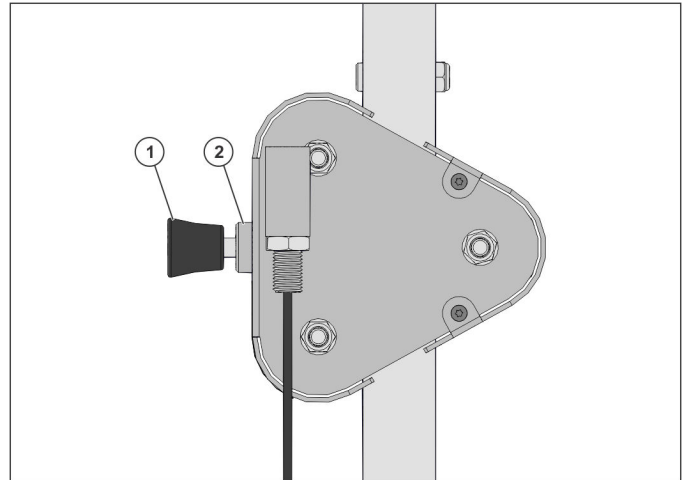
Pull Pin Engagement

Ensure the pull pin on adjustment points, especially carriages, is fully engaged. There should be no gap between the two.

Pull Pin Engaged



Pull Pin Falsely Engaged



Item	Description	Qty.
1	Pull Pin	1
2	Carriage Assembly	1

OP-DAP Assembly

Component and Hardware List

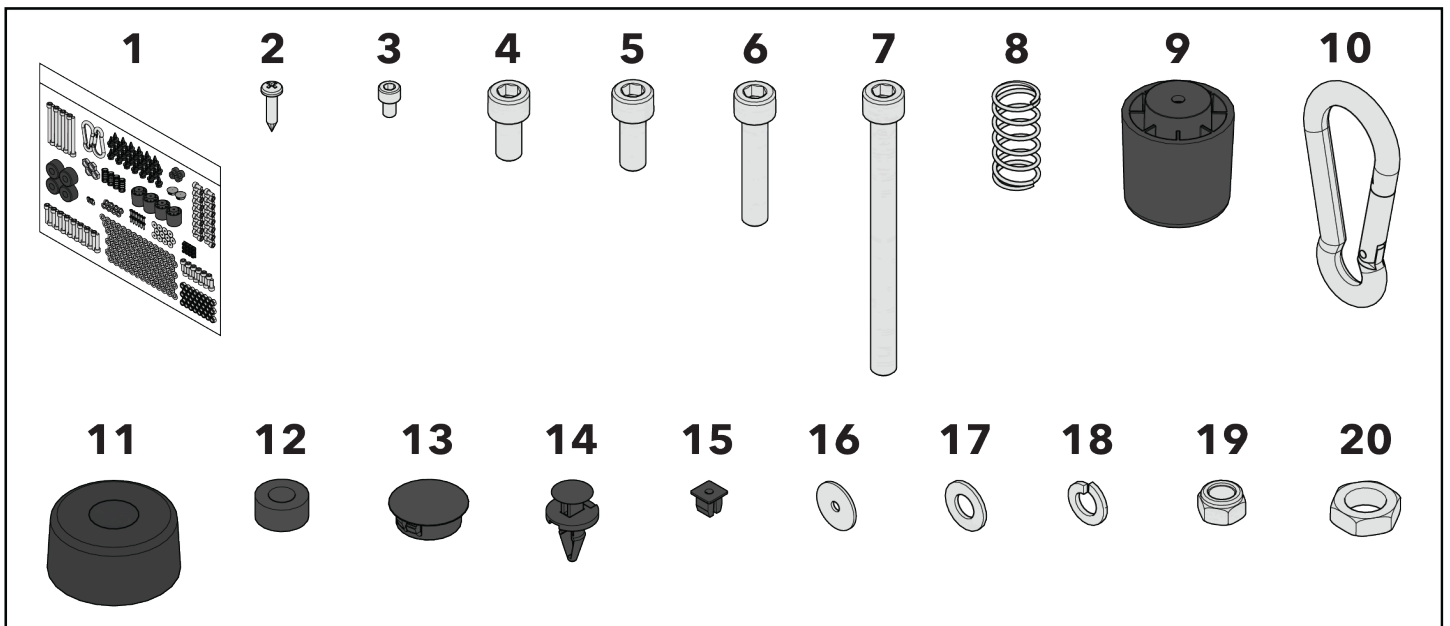
Components

Item	Description	Qty.
1	Base	1
2	Left Leg	1
3	Right Leg	1
4	Left Upright	1
5	Right Upright	1
6	Left Upper Support Assembly	1

Item	Description	Qty.
7	Right Upper Support Assembly	1
8	Center Column	1
9	Left Arm	1
10	Right Arm	1
11	Pull-Up Bar	1
12	Left Guide Rail Assembly	1
13	Right Guide Rail Assembly	1
14	Guide Rod	4
15	Head Plate Pulley Weldment	2
16	Head Plate Assembly	2
17	Weight Stack Label, LBS	1
18	Weight Stack Label, KG	1
19	Cable	2
20	4-Way Ankle Strap	1
21	Handle, Triceps Rope	1
22	Handle, Adjustable Strap	2
23	Rear Shroud	1
24	Left Shroud	1
25	Right Shroud	1
26	Front Shroud Contour	2
27	Front Shroud Detail	1
28	Weight Stack	6

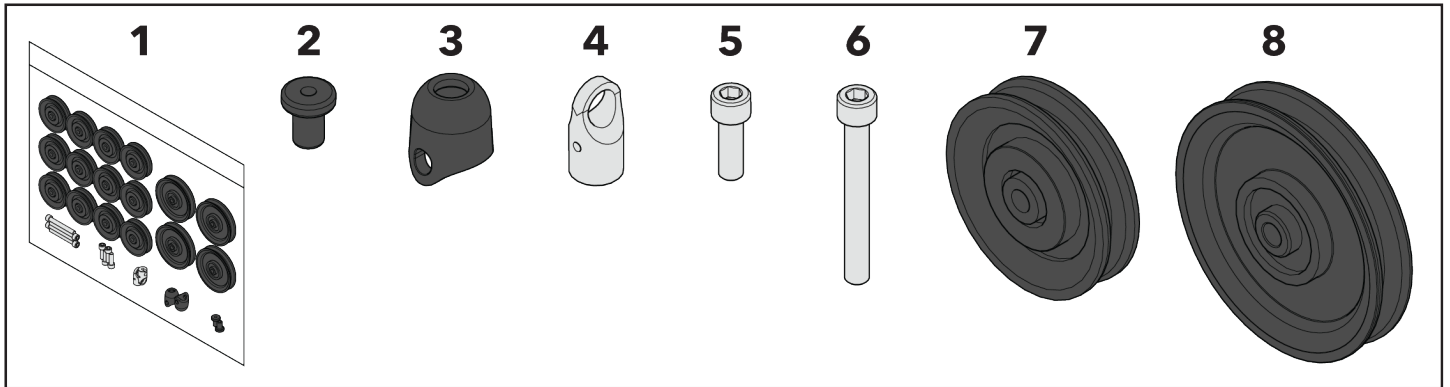
Hardware Kit 1

Item	Description	Qty.
1	Hardware Kit 1, OP-DAP	1
2	Screw, 8 x 3/4, Phillips	12
3	Screw, M5 x 0.8 HXS, 8mm	4
4	Screw, M10 x 1.5, 20mm	28
5	Screw, M10 x 1.5, 25mm	12
6	Screw, M10 x 1.5, 50mm	16
7	Screw, M10 x 1.5, 120mm	8
8	Spring	4
9	Guide Rod Housing	4
10	Snap Link	2
11	Weight Stack Cushion	4
12	Nylon Spacer	4
13	1" Hole Plug	2
14	Rivet, Push Type	26
15	Grommet	12
16	Fender Washer	12
17	3/8" Flat Washer	106
18	Lock Washer	8
19	M10 Hex Nylock Nut	38
20	M16 Hex Jam Nut	4



Hardware Kit 2

Item	Description	Qty.
1	Hardware Kit 2, OP-DAP	1
2	Cable End Insert	2
3	Cable End Housing	2
4	Cable End Link	2
5	Screw, M10 x 1.5, 30mm	4
6	Screw, M10 x 1.5, 80mm	4
7	Pulley, 3.5" OD	12
8	Pulley, 4.5" OD	4



Assembly Procedure

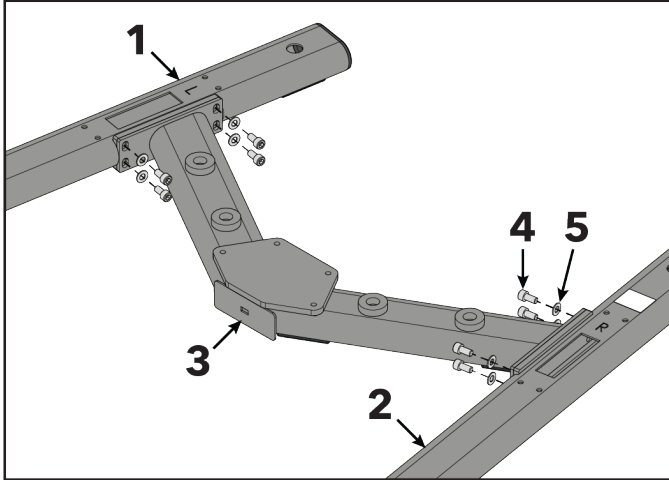
Two people will be required for this procedure.

TIP: Read and understand all instructions thoroughly before assembling this unit. Check all items carefully. If there is damage, see the Customer Service section of this manual for proper procedure to return, replace, or reorder parts.

Assemble Frame

1. Install screws and washers securing legs to base using an 8mm Allen wrench.

NOTE: Ensure legs and base are level and contacting the floor before tightening the hardware.

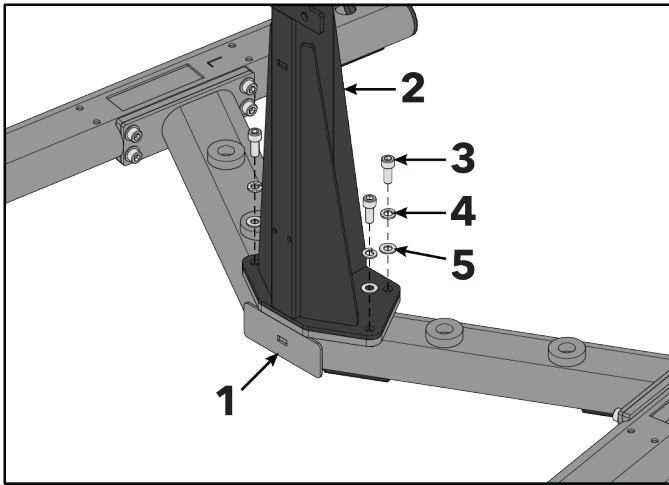


Item	Description	Qty.
1	Left Leg	1
2	Right Leg	1
3	Base	1
4	Screw, M10 x 1.5, 20mm	8
5	3/8" Flat Washer	8



Tighten hardware to 25-30 ft-lb (33-40 Nm).

2. Loosely install screws, washers, and lock washers securing center column to base using an 8mm Allen wrench.

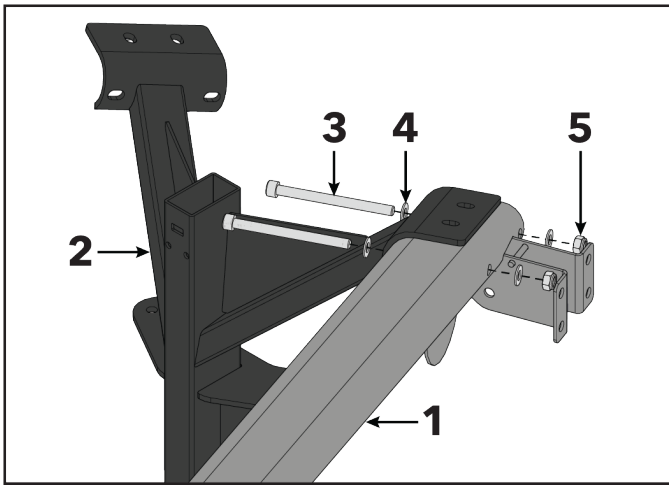


Item	Description	Qty.
1	Base	1
2	Center Column	1
3	Screw, M10 x 1.5, 25mm	4
4	Lock Washer	4
5	3/8" Flat Washer	4



Hand tighten hardware.

3. Loosely install screws, washers, and locknuts securing right arm to center column using an 8mm Allen wrench and 17mm wrench.

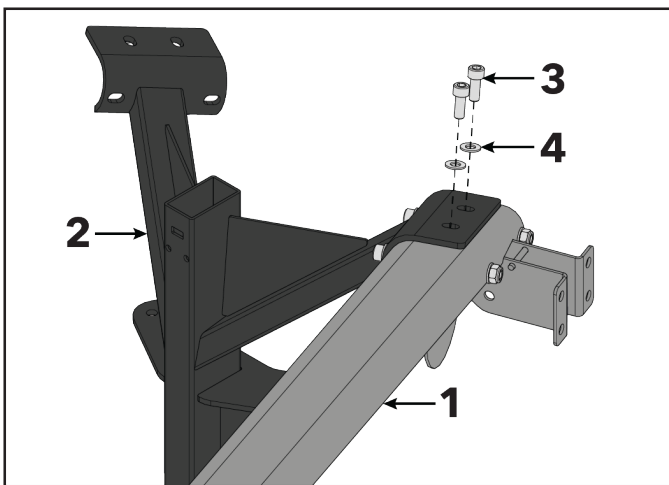


Item	Description	Qty.
1	Right Arm	1
2	Center Column	1
3	Screw, M10 x 1.5, 120mm	2
4	3/8" Flat Washer	4
5	M10 Hex Nylock Nut	2



Hand tighten hardware.

4. Loosely install screws and washers securing right arm to center column using an 8mm Allen wrench.

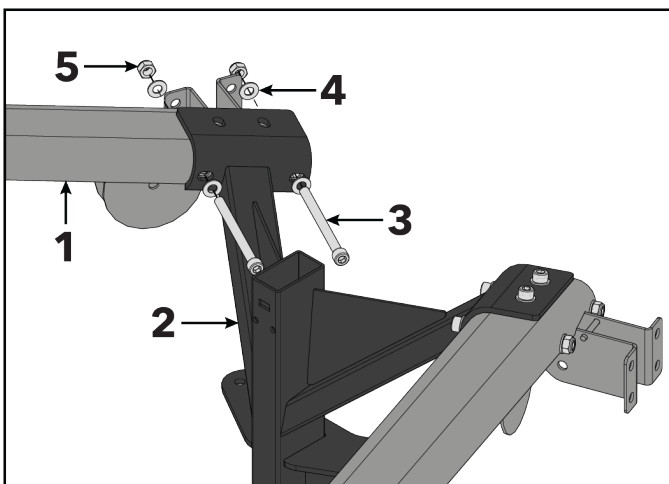


Item	Description	Qty.
1	Right Arm	1
2	Center Column	1
3	Screw, M10 x 1.5, 20mm	2
4	3/8" Flat Washer	2



Hand tighten hardware.

5. Loosely install screws, washers, and locknuts securing left arm to center column using an 8mm Allen wrench and 17mm wrench.

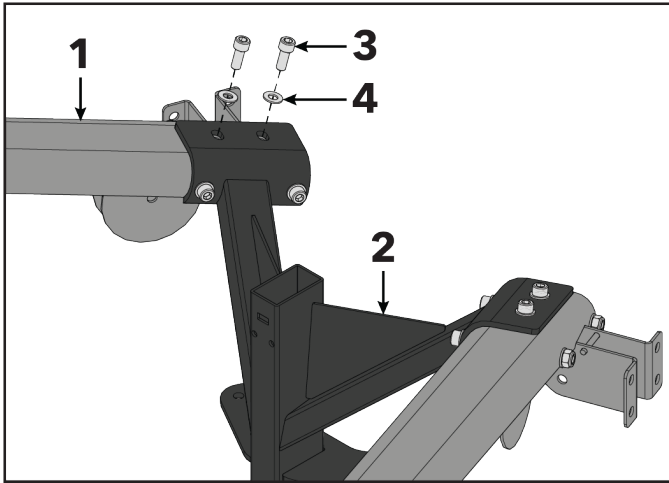


Item	Description	Qty.
1	Left Arm	1
2	Center Column	1
3	Screw, M10 x 1.5, 120mm	2
4	3/8" Flat Washer	4
5	M10 Hex Nylock Nut	2



Hand tighten hardware.

6. Loosely install screws and washers securing left arm to center column using an 8mm Allen wrench.



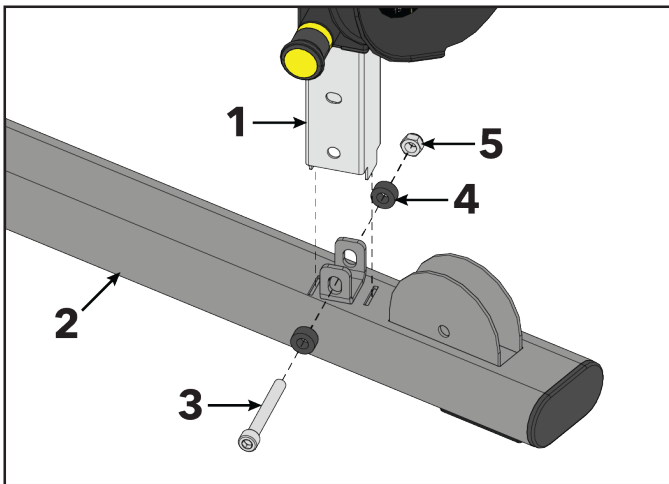
Item	Description	Qty.
1	Left Arm	1
2	Center Column	1
3	Screw, M10 x 1.5, 20mm	2
4	3/8" Flat Washer	2



Hand tighten hardware.

7. Place right guide rail assembly onto right leg. Loosely install screw, spacer, and locknut securing right guide rail assembly to right leg using an 8mm Allen wrench and 17mm wrench.

NOTE: Ensure guide rails tabs fit into the leg slots.

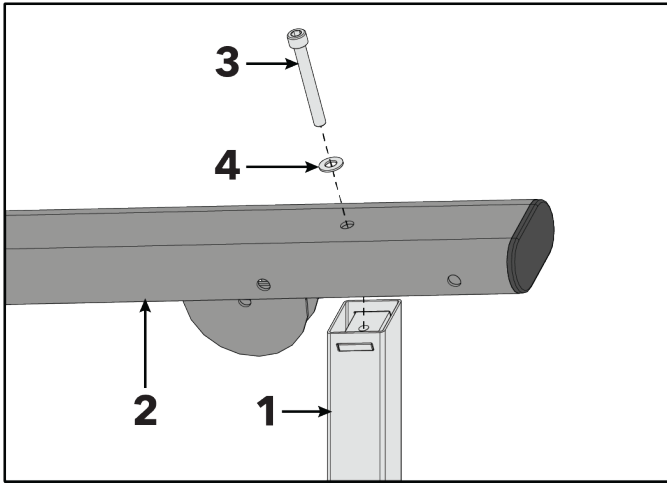


Item	Description	Qty.
1	Right Guide Rail Assembly	1
2	Right Leg	1
3	Screw, M10 x 1.5, 80mm	1
4	Nylon Spacer	2
5	M10 Hex Nylock Nut	1



Hand tighten hardware.

8. Install screws and washers securing right guide rail assembly to right arm using an 8mm Allen wrench.

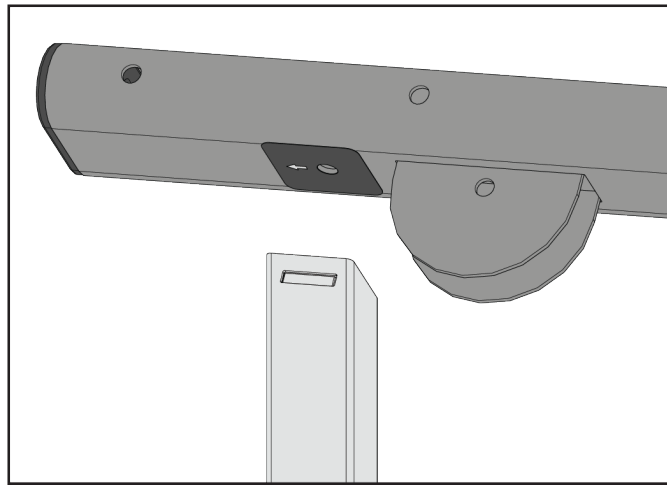


Item	Description	Qty.
1	Right Guide Rail Assembly	1
2	Right Arm	1
3	Screw, M10 x 1.5, 80mm	1
4	3/8" Flat Washer	1

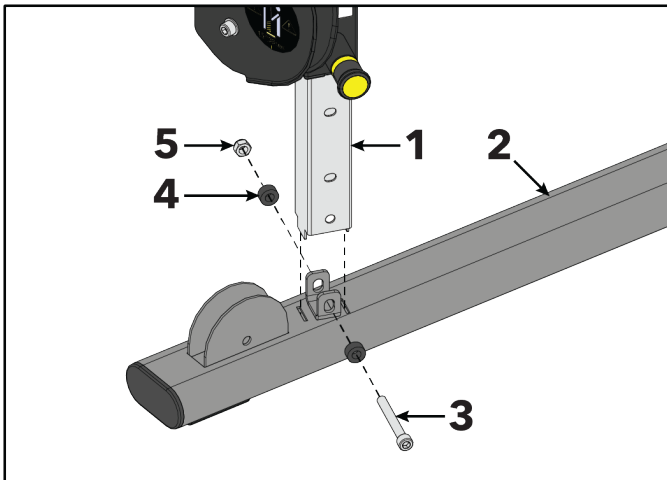


Tighten hardware to 14-16 ft-lb (19-22 Nm).

NOTE: Align guide rails with decals on the underside of the arms before installing to help locate thread holes.



9. Place left guide rail assembly onto left leg. Loosely install screw, spacer, and locknut securing left guide rail assembly to left leg using an 8mm Allen wrench and 17mm wrench.

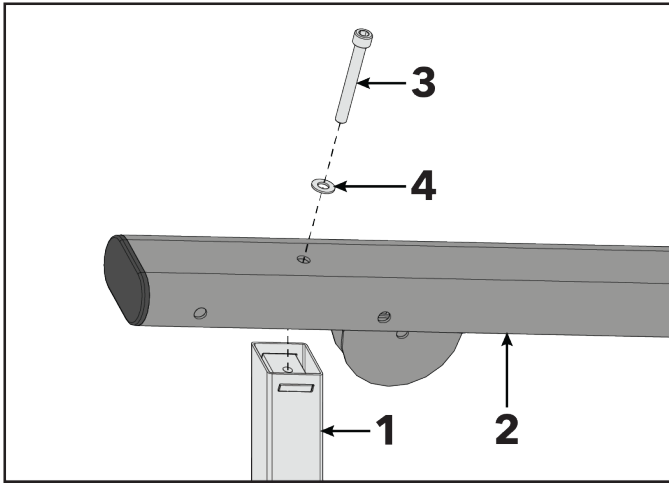


Item	Description	Qty.
1	Left Guide Rail Assembly	1
2	Left Leg	1
3	Screw, M10 x 1.5, 80mm	1
4	Nylon Spacer	2
5	M10 Hex Nylock Nut	1



Hand tighten hardware.

10. Install screws and washers securing left guide rail assembly to left arm using an 8mm Allen wrench.

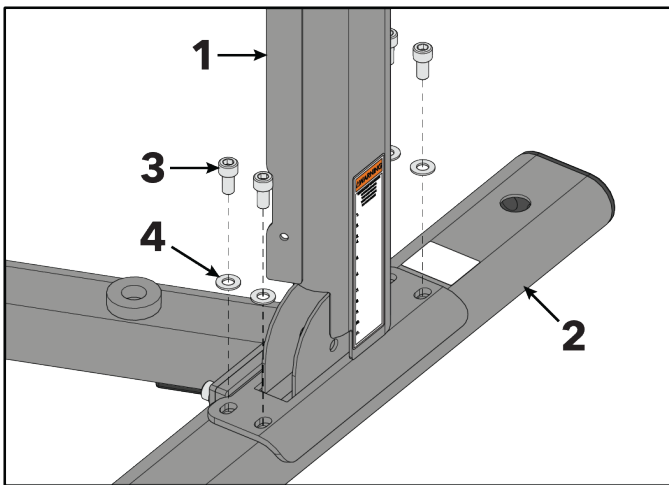


Item	Description	Qty.
1	Left Guide Rail Assembly	1
2	Left Arm	1
3	Screw, M10 x 1.5, 80mm	1
4	3/8" Flat Washer	1



Tighten hardware to 14-16 ft-lb (19-22 Nm).

11. Loosely install screws and washers securing right upright to right leg using an 8mm Allen wrench.

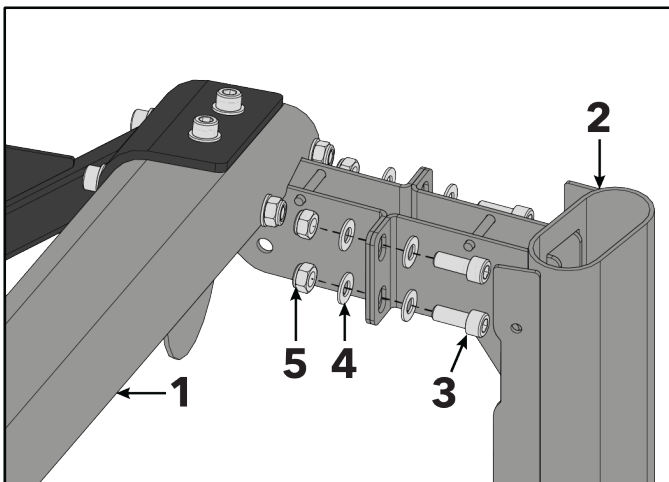


Item	Description	Qty.
1	Right Upright	1
2	Right Leg	1
3	Screw, M10 x 1.5, 20mm	4
4	3/8" Flat Washer	4



Hand tighten hardware.

12. Loosely install screws, washers, and locknuts securing right upright to right arm using an 8mm Allen wrench and 17mm wrench.

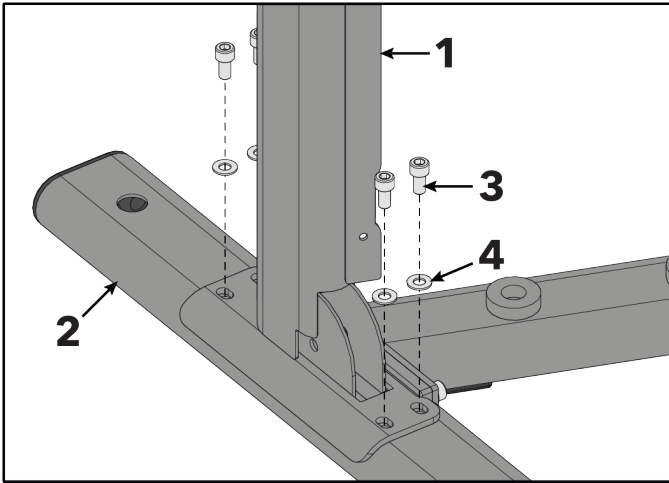


Item	Description	Qty.
1	Right Arm	1
2	Right Upright	1
3	Screw, M10 x 1.5, 25mm	4
4	3/8" Flat Washer	8
5	M10 Hex Nylock Nut	4



Hand tighten hardware.

13. Loosely install screws and washers securing left upright to left leg using an 8mm Allen wrench.

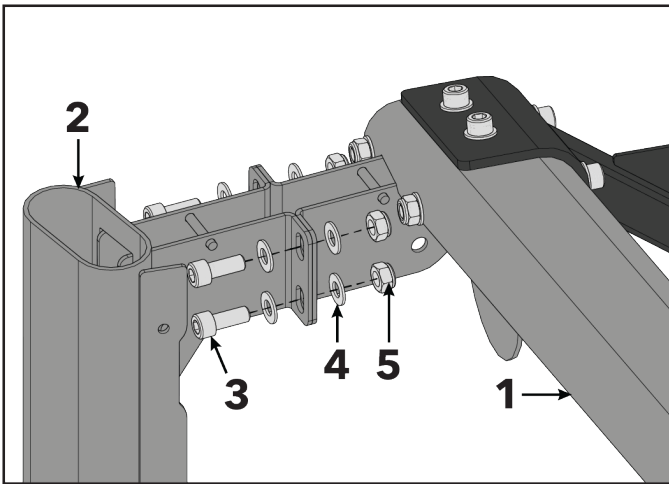


Item	Description	Qty.
1	Left Upright	1
2	Left Leg	1
3	Screw, M10 x 1.5, 20mm	4
4	3/8" Flat Washer	4



Hand tighten hardware.

14. Loosely install screws, washers, and locknuts securing left upright to left arm using an 8mm Allen wrench and 17mm wrench.

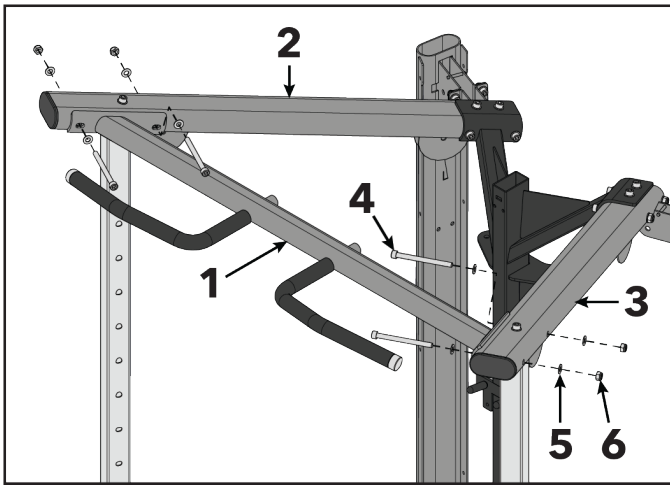


Item	Description	Qty.
1	Left Arm	1
2	Left Upright	1
3	Screw, M10 x 1.5, 25mm	4
4	3/8" Flat Washer	8
5	M10 Hex Nylock Nut	4



Hand tighten hardware.

15. Loosely install screws, washers, and locknuts securing the pull-up bar to arms using an 8mm Allen wrench and 17mm wrench.

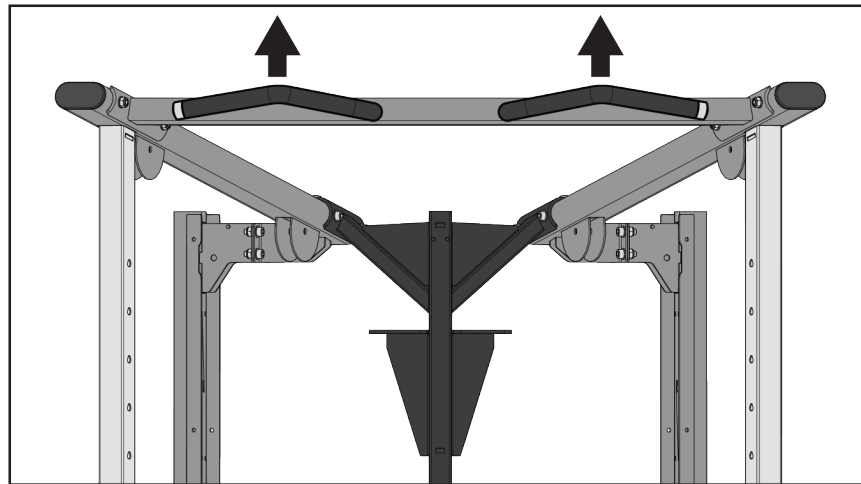


Item	Description	Qty.
1	Pull-Up Bar	1
2	Left Arm	1
3	Right Arm	1
4	Screw, M10 x 1.5, 120mm	4
5	3/8" Flat Washer	8
6	M10 Hex Nylock Nut	4

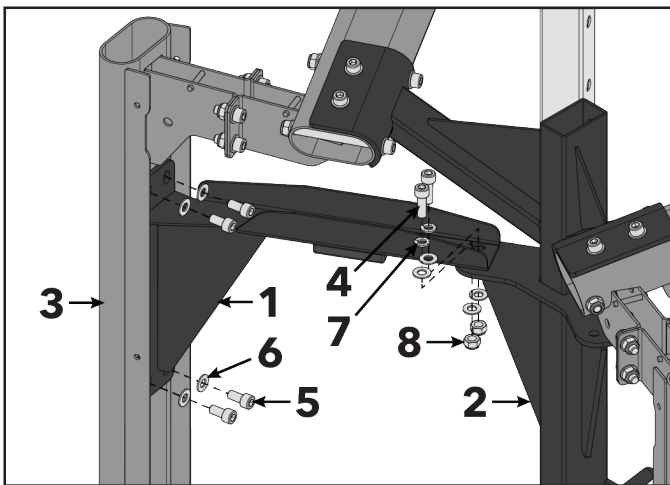


Hand tighten hardware.

NOTE: Ensure pull-up bar is aligned as shown, with the handles bent upwards in their centers.



16. Loosely install screws, washers, lock washers, and locknuts securing the right upper support assembly to right upright and center column using an 8mm Allen wrench and 17mm wrench. Tighten 30mm screws to 50% of their recommended torque specs. See Step 18 for torque specs.



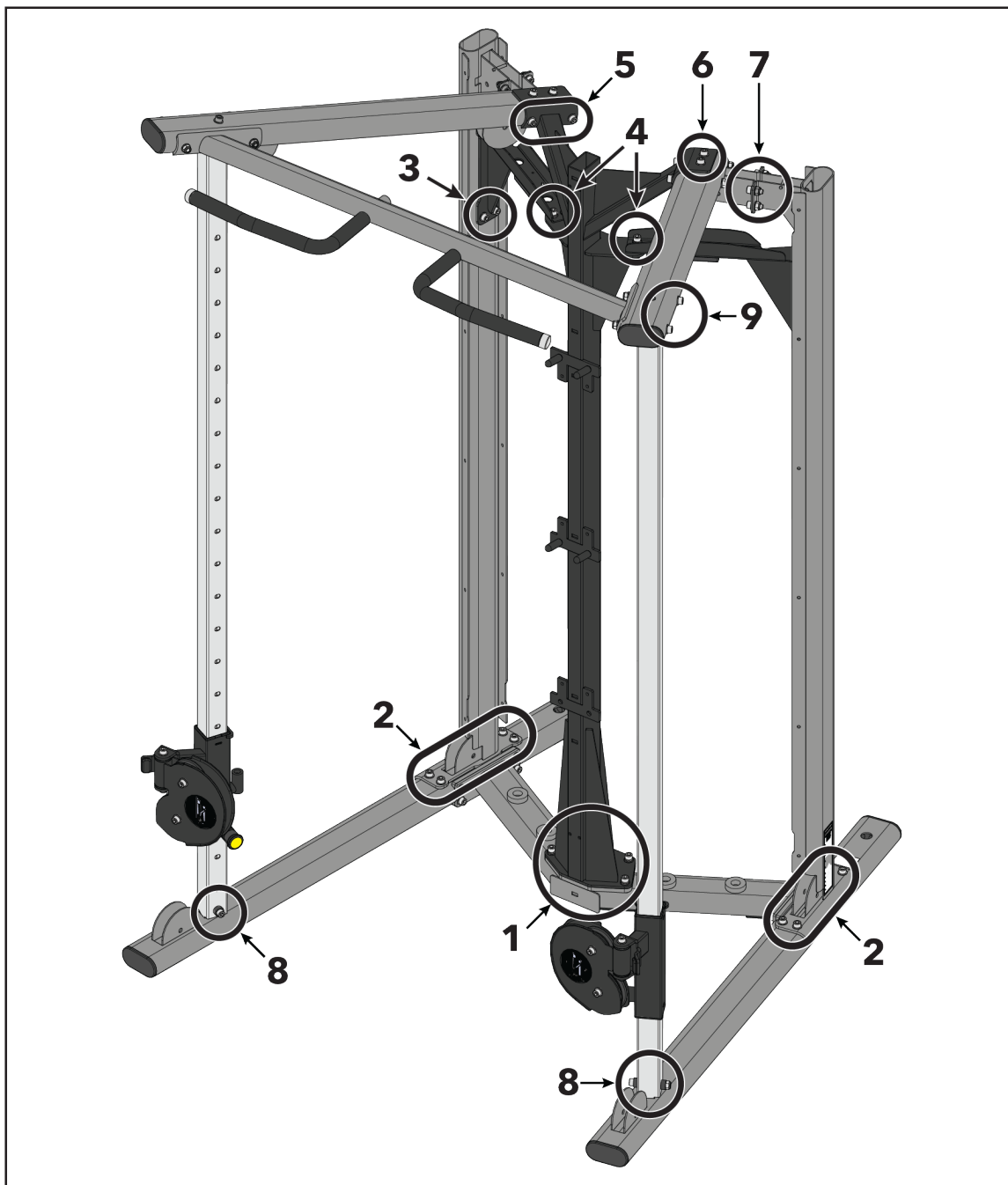
Item	Description	Qty.
1	Right Upper Support Assembly	1
2	Center Column	1
3	Right Upright	1
4	Screw, M10 x 1.5, 30mm	2
5	Screw, M10 x 1.5, 20mm	4
6	3/8" Flat Washer	8
7	Lock Washer	2
8	M10 Hex Nylock Nut	2



Hand tighten hardware.

17. Repeat step 16 to install left upper support assembly.

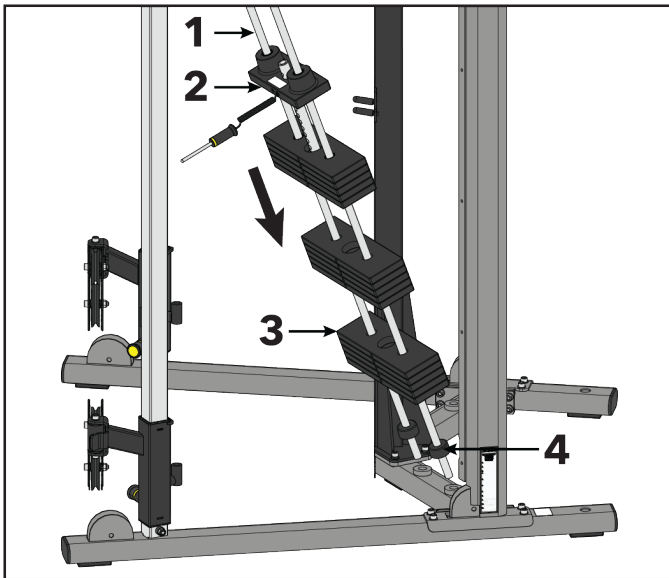
18. Tighten all hardware, starting at the bottom of the frame and working towards the top, using a torque wrench.



Item	Description	Qty.
1	30-35 ft-lbs (41-47 Nm)	4
2	25-30 ft-lbs (33-40 Nm)	8
3	20-25 ft-lbs (27-33 Nm)	8
4	25-30 ft-lbs (33-40 Nm)	4
5	14-16 ft-lbs (19-22 Nm)	4
6	20-25 ft-lbs (27-33 Nm)	4
7	20-25 ft-lbs (27-33 Nm)	8
8	10-12 ft-lbs (13-16 Nm)	2
9	14-16 ft-lbs (19-22 Nm)	4

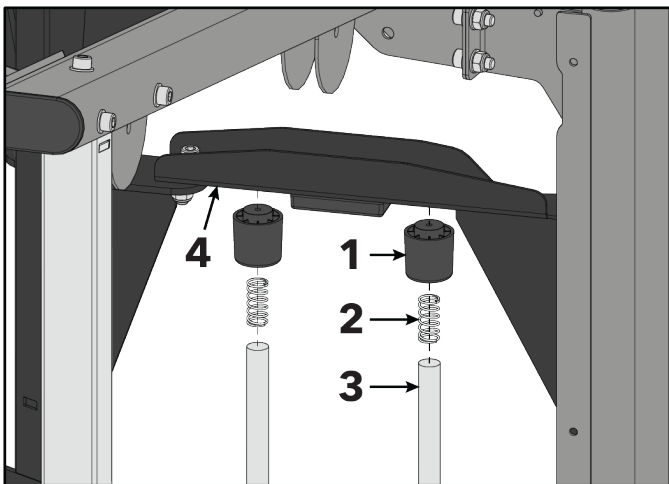
Install Weight Stacks

1. Slide weight stack cushions onto the guide rods.
2. Place guide rods and weight stack cushions onto base.
3. Lean guide rods outwards and slide weight stacks down guide rods onto weight stack cushions. Slide head plate assembly down guide rods and onto weight stacks.



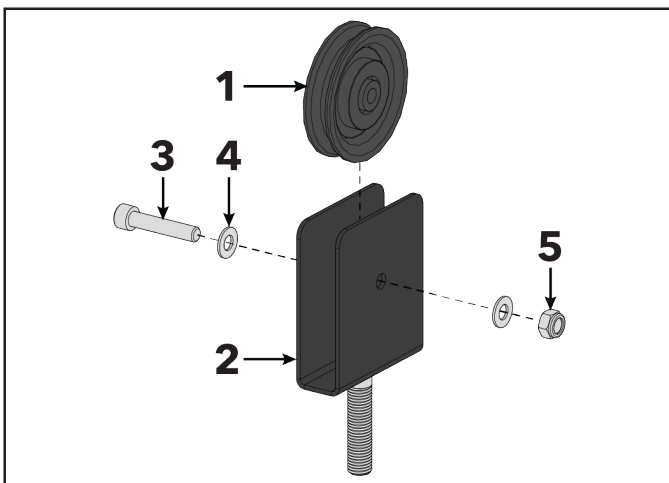
Item	Description	Qty.
1	Guide Rod	2
2	Head Plate Assembly	1
3	Weight Stack	3
4	Weight Stack Cushion	2

4. Install springs and guide rod housings onto guide rods and fit up into upper support assembly.



Item	Description	Qty.
1	Guide Rod Housing	2
2	Spring	2
3	Guide Rod	2
4	Upper Support Assembly	1

5. Install screw, washer, and locknut securing the pulley to the head plate pulley weldment using an 8mm Allen wrench and 17mm wrench.

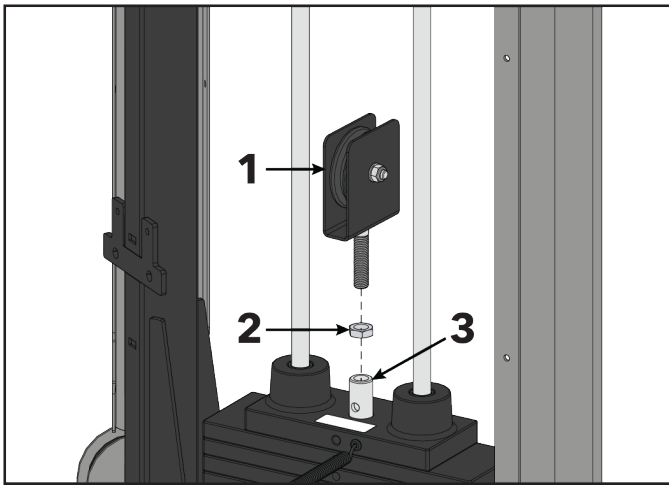


Item	Description	Qty.
1	Pulley, 3.5" OD	1
2	Head Plate Pulley Weldment	1
3	Screw, M10 x 1.5 50mm	1
4	3/8" Flat Washer	2
5	M10 Hex Nylock Nut	1



Tighten hardware to 14-16 ft-lb (19-22 Nm).

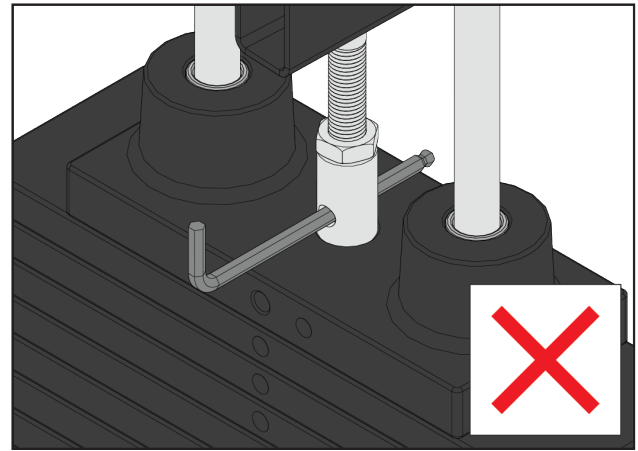
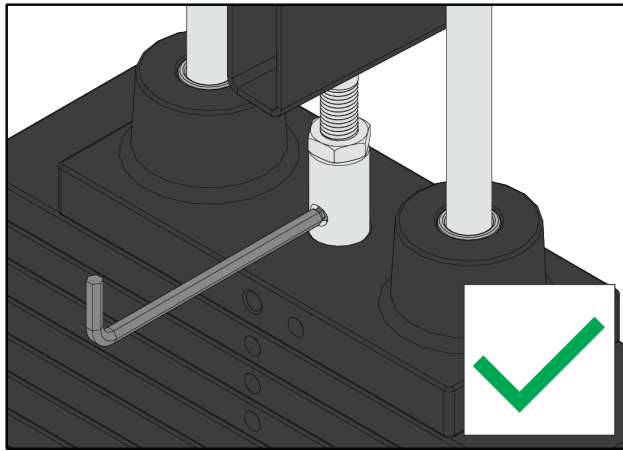
6. Install head plate pulley assembly to head plate bayonet. Do not tighten jam nut until after the cable is installed and final cable tension is set. See [Cable Handling Guide](#) for details.



Item	Description	Qty.
1	Head Plate Pulley Assembly	1
2	M16 Hex Jam Nut	1
3	Head Plate Bayonet	1

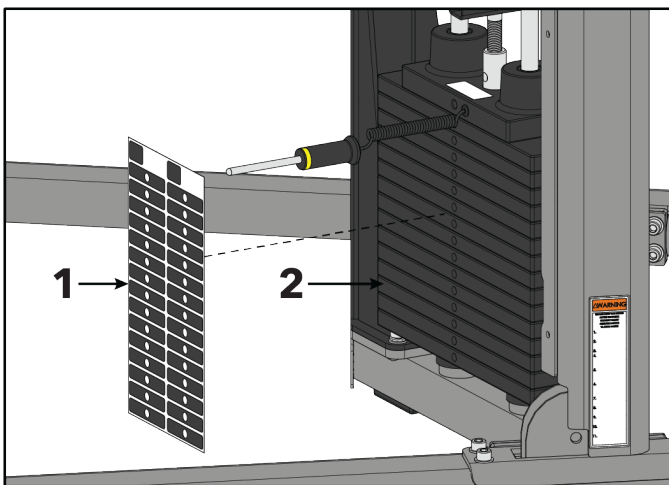
Correct Depth: Thread engagement exceeds minimum depth.

Incorrect Depth: Thread engagement not deep enough.



7. Select either the LBS or KG weight stack label. Remove backing from label and apply to weight stack.

NOTE: One weight stack label sheet, LBS or KG, is used for both weight stack.



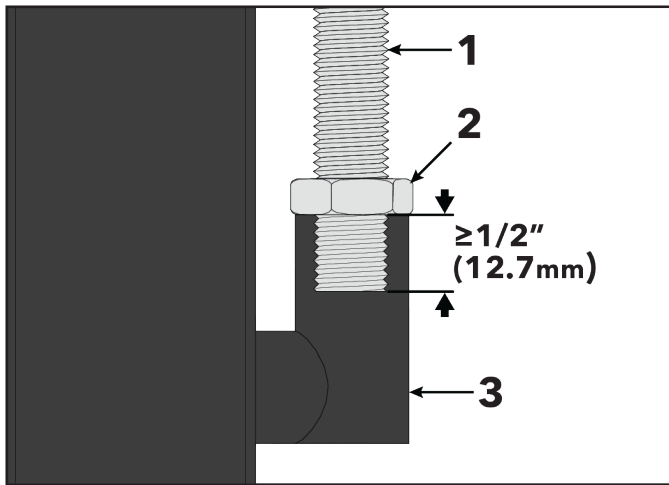
Item	Description	Qty.
1	Weight Stack Label	1
2	Weight Stack	1

8. Repeat steps to install other weight stack.

Install Cable

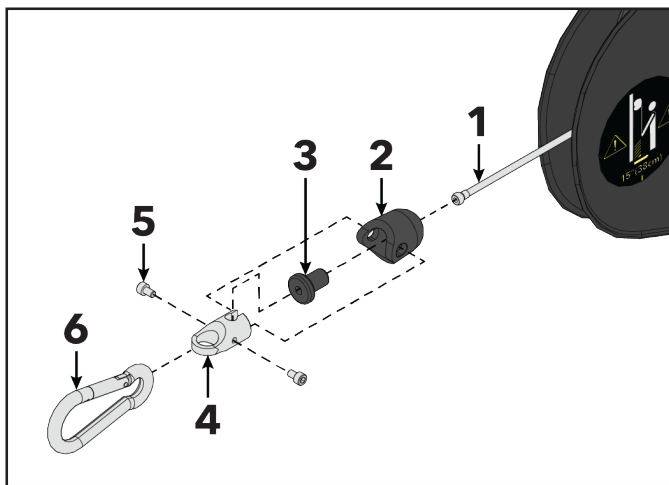
1. Install threaded cable end onto carriage assembly with a hex jam nut using a 24mm wrench. Do not tighten jam nut until after the cable is installed and final cable tension is set. See [Cable Handling Guide](#) for details.

NOTE: Minimum ½" (12.7 mm) of threaded cable end must be in carriage assembly.



Item	Description	Qty.
1	Threaded Cable End	1
2	M16 Hex Jam Nut	1
3	Carriage Assembly	1

2. Route cable through frame as shown in the [Cable Routing](#) section.
3. Slide cable through cable end housing and cable end insert. Place cable into cable end link.



Item	Description	Qty.
1	Cable	1
2	Cable End Housing	1
3	Cable End Insert	1
4	Cable End Link	1
5	Screw, M5 x 0.8 HXS, 8mm	2
6	Snap Link	1

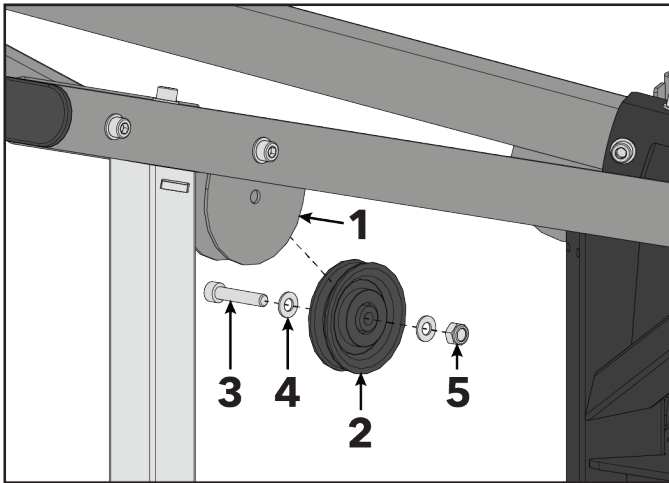


Tighten hardware to 40-50 in. lbs. (4.5-5.6 Nm)

4. Install screws securing cable end link to cable end housing using a 4mm Allen wrench.
5. Connect snap link to the cable end link.
6. Repeat steps 1-5 to install the other cable and cable hardware.

Install Pulleys

1. Install screw, washers, and locknut securing pulley to right arm using an 8mm Allen wrench and 17mm wrench.

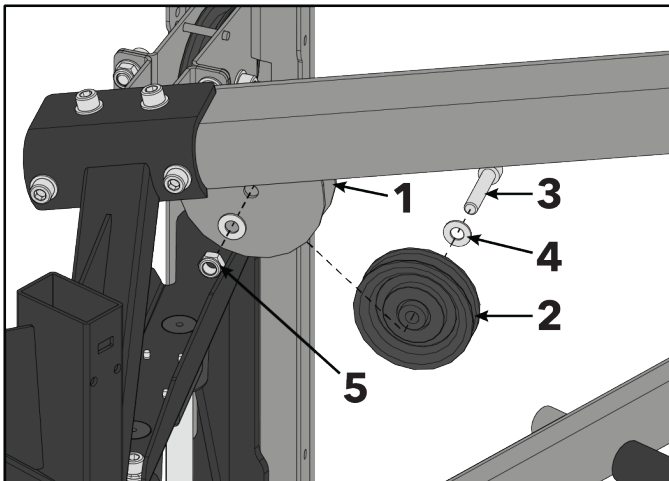


Item	Description	Qty.
1	Right Arm	1
2	Pulley, 3.5" OD	1
3	Screw, M10 x 1.5, 50mm	1
4	3/8" Flat Washer	2
5	M10 Hex Nylock Nut	1



Tighten hardware to 14-16 ft-lb (19-22 Nm).

2. Install screw, washers, and locknut securing pulley to right arm using an 8mm Allen wrench and 17mm wrench.

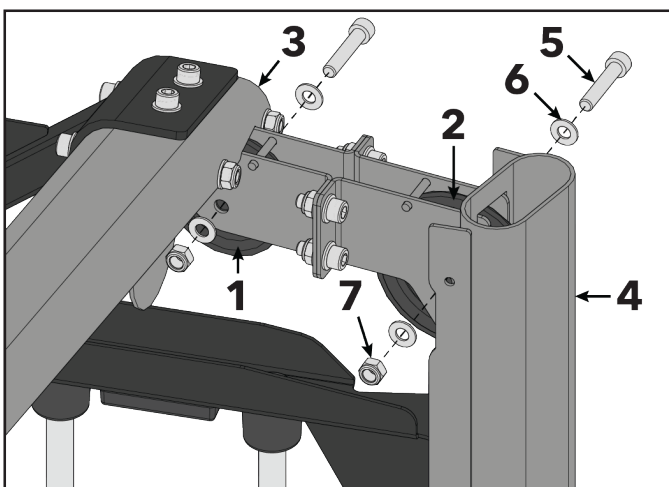


Item	Description	Qty.
1	Right Arm	1
2	Pulley, 3.5" OD	1
3	Screw, M10 x 1.5, 50mm	1
4	3/8" Flat Washer	2
5	M10 Hex Nylock Nut	1



Tighten hardware to 14-16 ft-lb (19-22 Nm).

3. Install screws, washers, and locknuts securing pulleys to right arm and right upright using an 8mm Allen wrench and 17mm wrench.

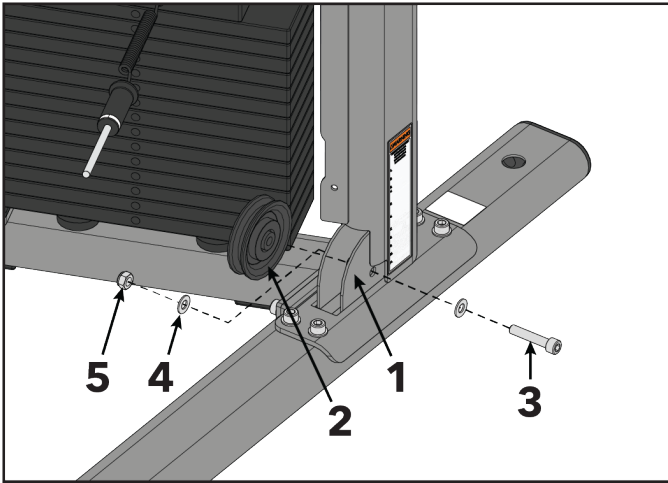


Item	Description	Qty.
1	Pulley, 3.5" OD	1
2	Pulley, 4.5" OD	1
3	Right Arm	1
4	Right Upright	1
5	Screw, M10 x 1.5, 50mm	2
6	3/8" Flat Washer	4
7	M10 Hex Nylock Nut	2



Tighten hardware to 14-16 ft-lb (19-22 Nm)

4. Install screw, washers, and locknut securing pulley to right leg using an 8mm Allen wrench and 17mm wrench.

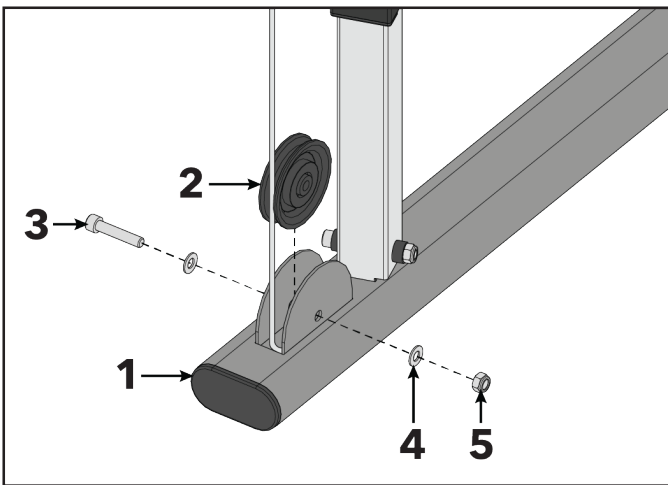


Item	Description	Qty.
1	Right Leg	1
2	Pulley, 3.5" OD	1
3	Screw, M10 x 1.5, 50mm	1
4	3/8" Flat Washer	2
5	M10 Hex Nylock Nut	1



Tighten hardware to 14-16 ft-lb (19-22 Nm).

5. Install screw, washers, and locknut securing pulley to right leg using an 8mm Allen wrench and 17mm wrench.

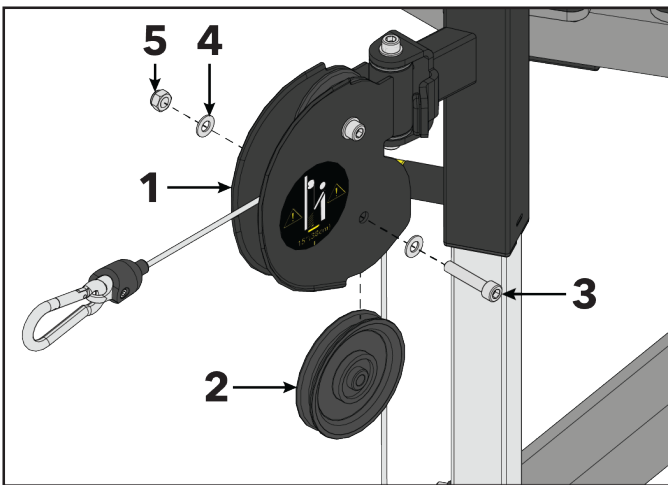


Item	Description	Qty.
1	Right Leg	1
2	Pulley, 3.5" OD	1
3	Screw, M10 x 1.5, 50mm	1
4	3/8" Flat Washer	2
5	M10 Hex Nylock Nut	1



Tighten hardware to 14-16 ft-lb (19-22 Nm).

6. Install screw, washers, and locknut securing pulley to right carriage using an 8mm Allen wrench and 17mm wrench.



Item	Description	Qty.
1	Right Carriage	1
2	Pulley, 4.5" OD	1
3	Screw, M10 x 1.5, 50mm	1
4	3/8" Flat Washer	2
5	M10 Hex Nylock Nut	1

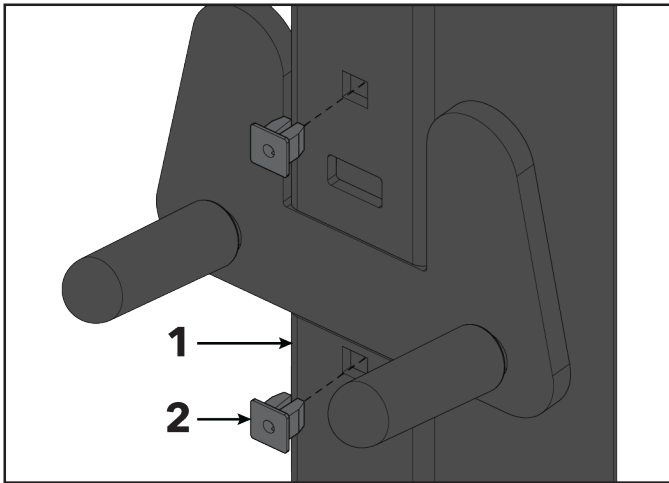


Tighten hardware to 14-16 ft-lb (19-22 Nm).

7. Repeat steps to install pulleys to left arm and leg.

Install Shrouds

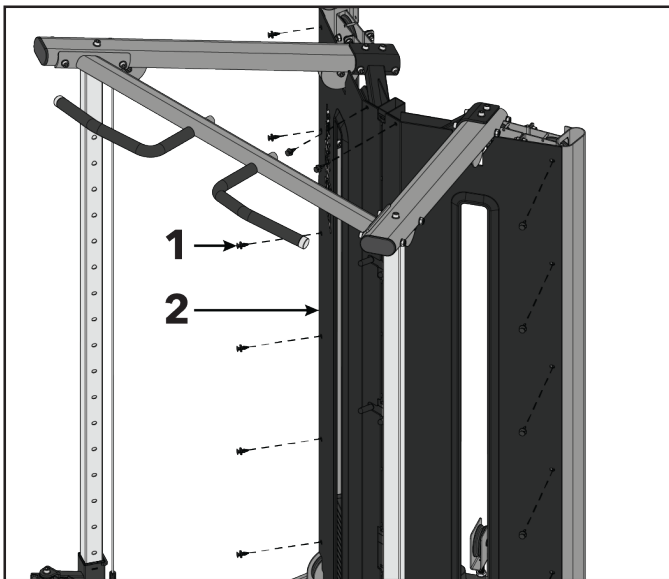
1. Press grommets into the square holes in the center column.



Item	Description	Qty.
1	Center Column	1
2	Grommet	12

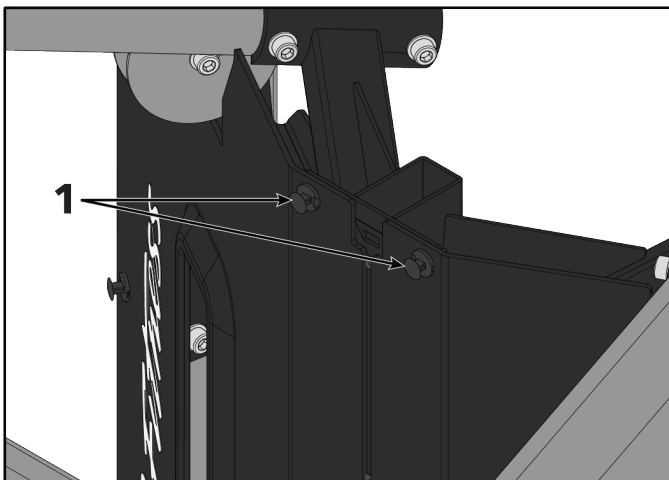
2. Starting at the top, press rivets into the front shrouds securing them to the uprights and center column.

NOTE: Do not lock the rivets along the outer edges until after Step 4 is complete.



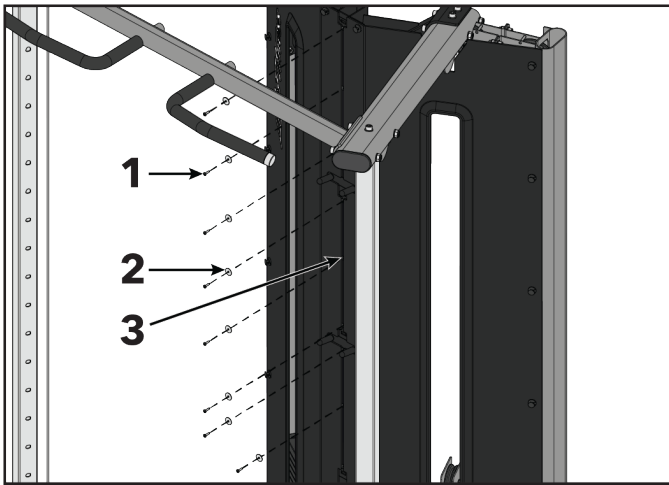
Item	Description	Qty.
1	Rivet, Push Type	14
2	Front Shroud	2

3. Lock in the two rivets securing the front shrouds to the center column by pressing the pin through the main body.



Item	Description	Qty.
1	Rivet, Push Type	2

4. Install screws and fender washers securing the front shrouds to the grommets in the center column using a Phillips screwdriver.

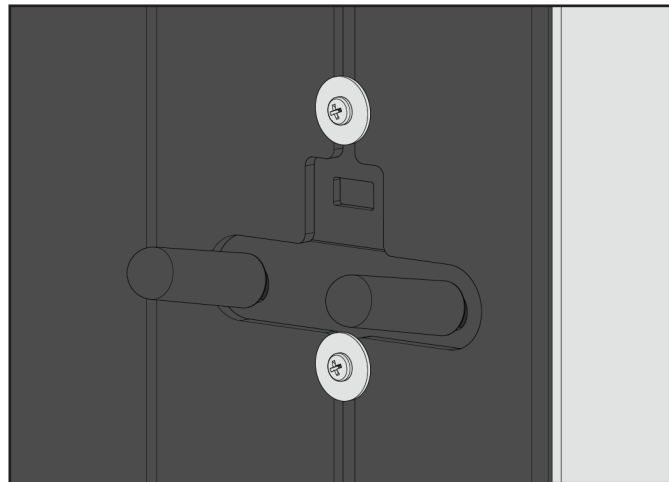


Item	Description	Qty.
1	Screw, 8 x 3/4, Phillips	12
2	Fender Washer	12
3	Grommet	12

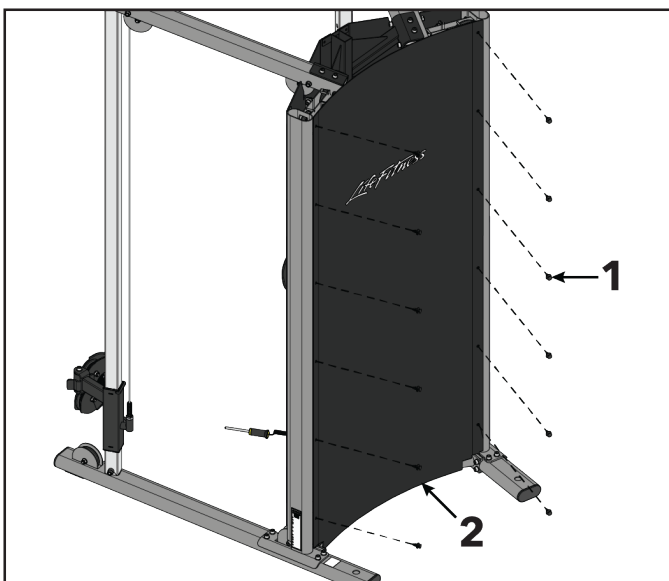


Tighten hardware to 30-39 in-lb (3-4 Nm).

NOTE: Screws should fit between the front shrouds and the fender washers should clamp the shrouds to the center column.

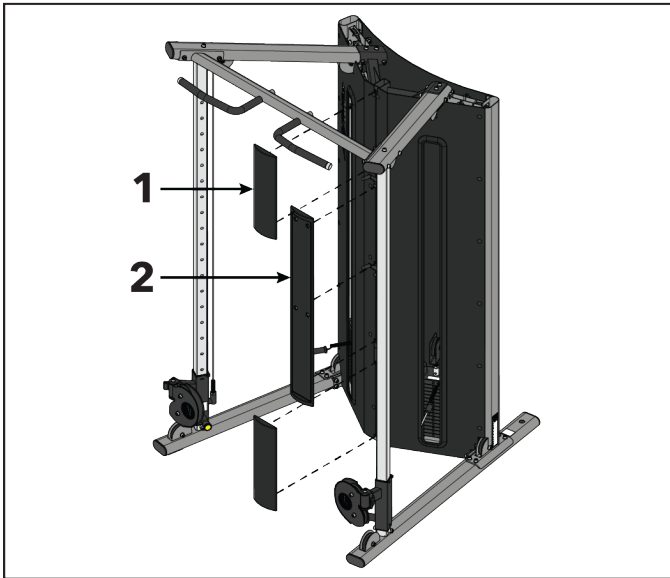


5. Lock in the remaining rivets in the front shrouds.
6. Flex the flat rear shroud into position against the uprights.
7. Starting at the top, press rivets into the rear shroud securing it to the uprights. Lock the rivets in place.



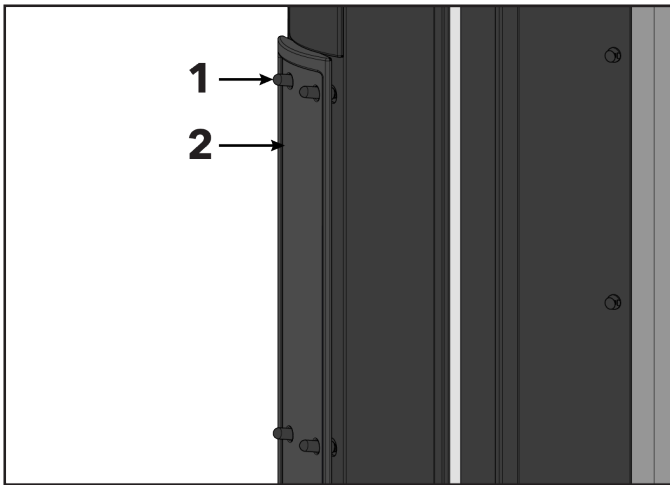
Item	Description	Qty.
1	Rivet, Push Type	12
2	Rear Shroud	1

8. Starting at the bottom, press front shroud caps and front shroud detail onto front shrouds.



Item	Description	Qty.
1	Front Shroud Caps	2
2	Front Shroud Detail	1

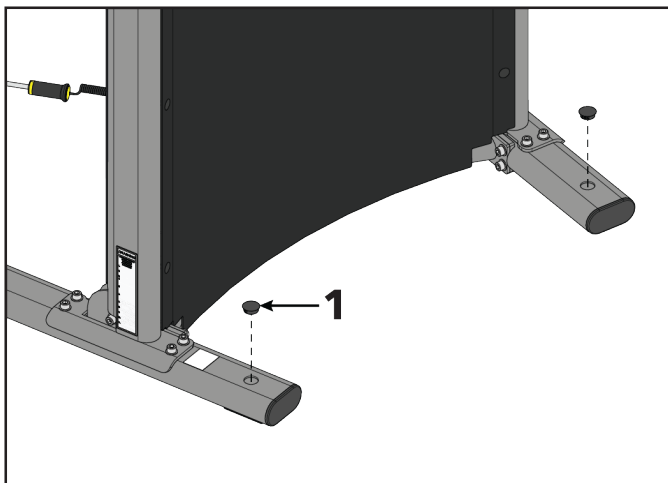
NOTE: The front shroud detail needs to be fitted over the accessory hooks that are located on the center column.



Item	Description	Qty.
1	Accessory Hooks	4
2	Front Shroud Detail	1

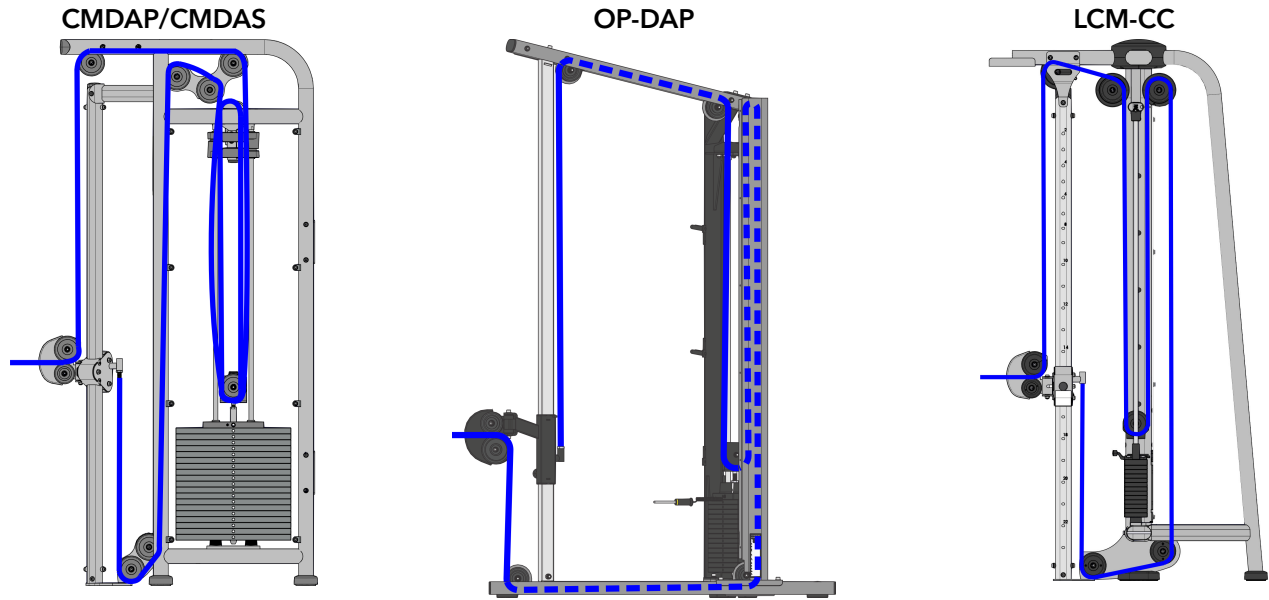
Install Hole Plugs

Install hole plugs to legs using a rubber mallet.

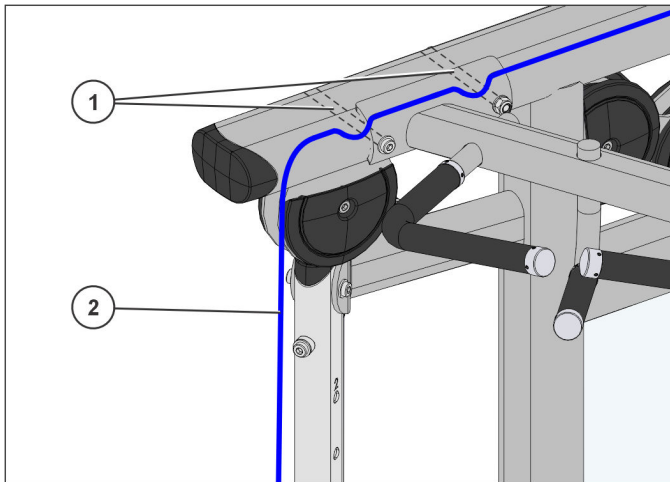


Item	Description	Qty.
1	1" Hole Plug	2

Cable Routing



Make sure cable is underneath the connecting hardware on the CMDAP, CMDAS and LCM-CC.



Item	Description	Qty.
1	Connecting Hardware	2
2	Cable	1

6. Cable Handling Guide

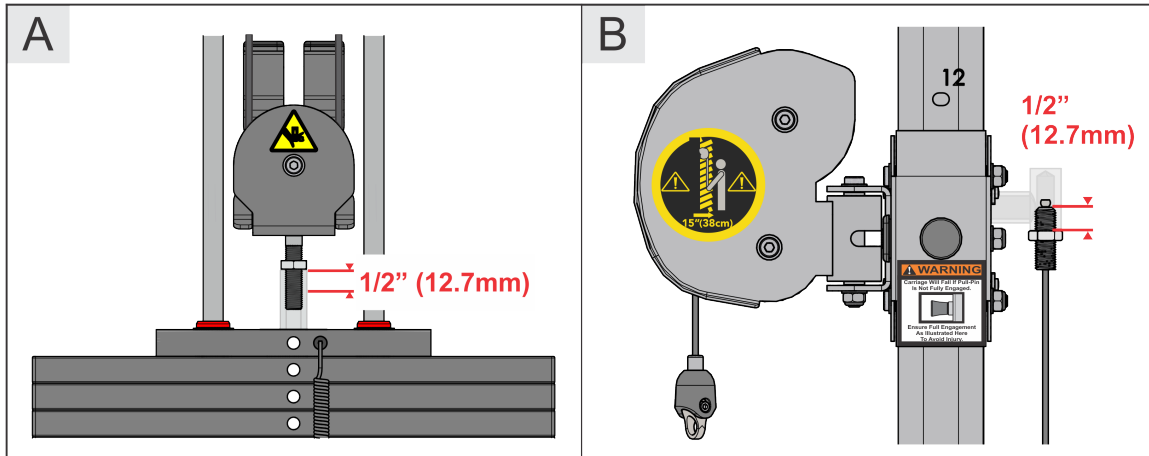
Cable Terminations, Tensioning and Wear Guide

Cable Connections with threaded cable ends are required to be installed and maintained following the specifications identified below. Failure to follow these specifications can lead to the dislocation of the threaded cable during use and can cause serious injury. Along with securing the threaded cable end and jam nut, it is important to check the entire unit and ensure that all hardware is securely fastened and not left loose upon completion of cable installation.

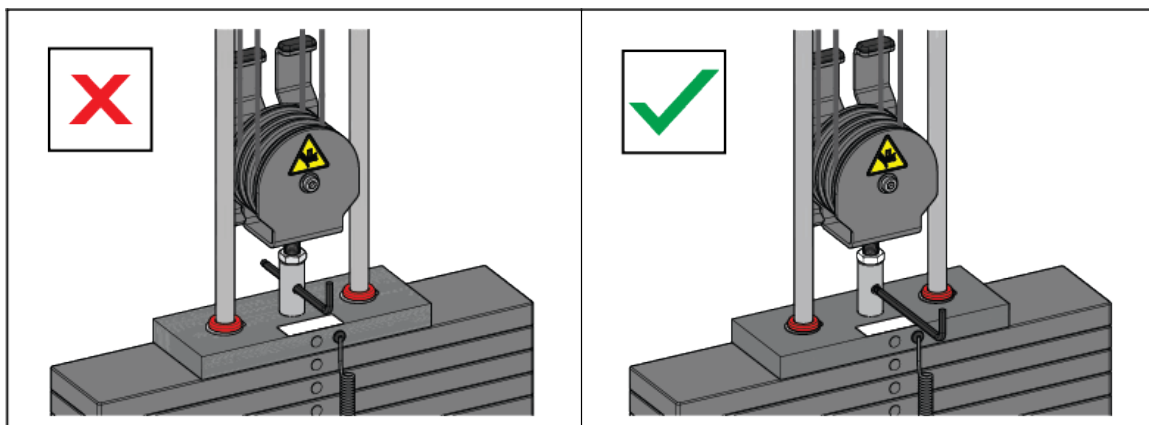
WARNING: Use of non certified "techs" note: Service warranties may be void if a non-Life Fitness-certified technician performs service work. Replacement of any strength cables should be performed by a Life Fitness certified technician.

Cable Terminations

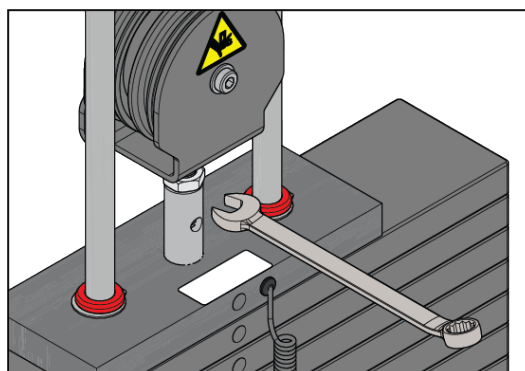
1. Cable must be threaded at least 1/2 inch (12.7mm) into termination points; at headplate (A) and frame/carriage (B).



2. Certain models are now equipped with a bayonet portal to assist checking proper thread engagement. To do so, attempt to pass a 7mm Allen wrench through the portal, if it goes through, more threads are needed to meet the minimum requirement.



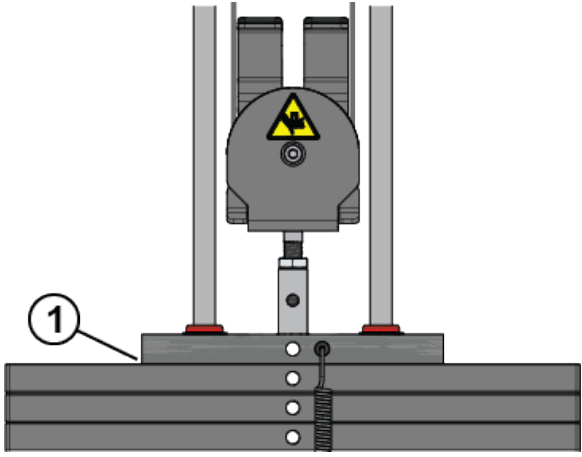
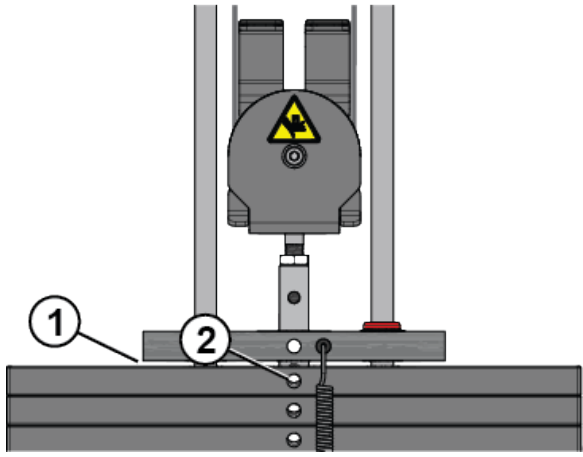
3. When proper thread engagement is reached, tighten jam nut to 20-25 FT-LBS (27.2 - 34.0 Nm) using a 24mm wrench.



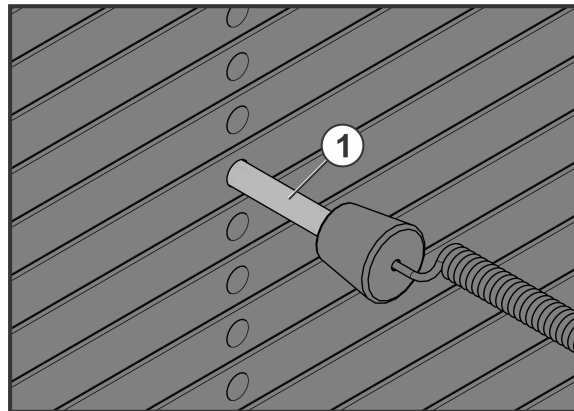
Tensioning Cable

Cable should have enough tension so it stays seated into the pulley but not so tight that it pulls the head plate off the weight plate below it.

1. If the head plate has lifted, loosen the jam nuts at the terminations and loosen the threaded plugs a half turn until the head plate comes to rest on the weight plate below. Check that the cable's threaded plugs are engaged at least 1/2" (12.7mm) at each termination point.

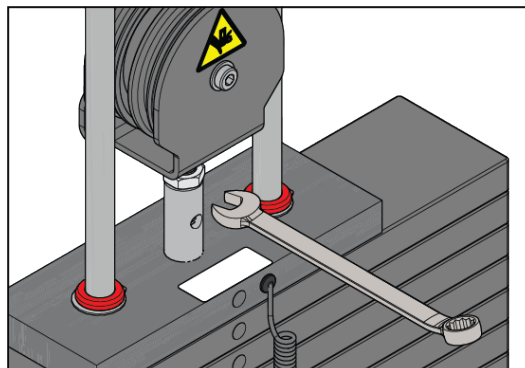
SEATED HEAD PLATE	SUSPENDED HEAD PLATE
	
<p>1. No gap</p>	<p>1. Gap 2. Bayonet obstructing weight stack pin</p>

2. Ensure that the weight stack selector pin can fully engage into each weight plate.



Item	Description	Qty.
1	Weight Stack Selector Pin	1

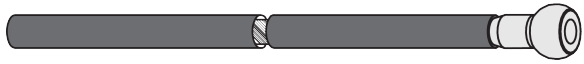
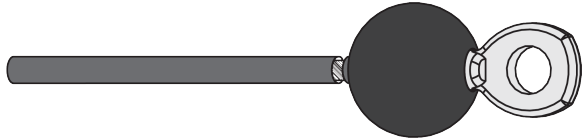
3. When proper thread engagement is reached, tighten jam nut to 20-25 FT-LBS (27.2 - 34.0 Nm) using a 24mm wrench.




Strength Cable Wear Guide

Replace cable at first sign of any of the following:

FRACTURES:

<p>Casing can crack or fracture under strains during use. Any crack in the casing merits cable replacement even if no wire rope is exposed.</p>	
<p>Be especially observant for fractures near the components on the cable assembly - IE. Nylon Ball, Nico Loop, Threaded Plug, etc.</p>	


TWISTING/BINDING:

<p>Inspect casing to ensure wire rope is not twisting within its casing. Any sign of the cable twisting should be replaced immediately.</p>	
---	--

BULGING:

<p>Internal wire rope strands can break within and coil causing a bulge to appear. Cable should retain same outside diameter throughout.</p>	
--	--


FRAYED/EXPOSED WIRE ROPE:

<p>Any exposed wire rope protruding through the casing or at either end.</p>	
--	--

FLATTENED:

<p>Section of cable is compressed and will not retain its shape (outside diameter).</p>	
---	--

PERMANENTLY BENT:

<p>Cable has 'kink' and prohibits cable from laying straight. Wire rope may be unraveling beneath casing and is compromised warranting replacement.</p>	
---	--

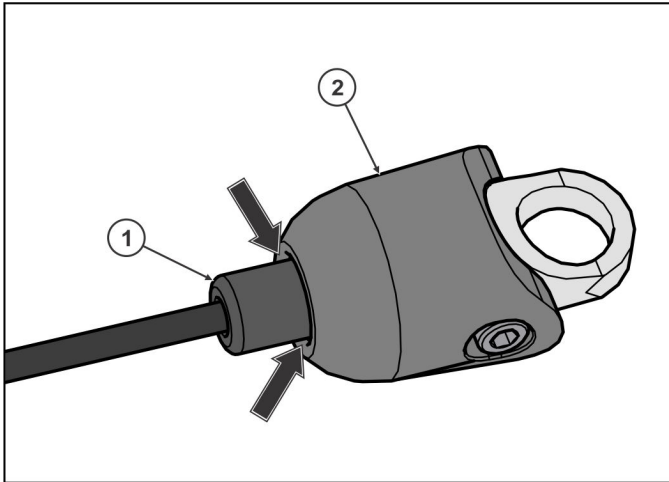
ENDS SEPARATING:

<p>Watch for component end of cable to pull away from cable assembly - look for exposed wire rope.</p>	
--	--

Insert Inspection

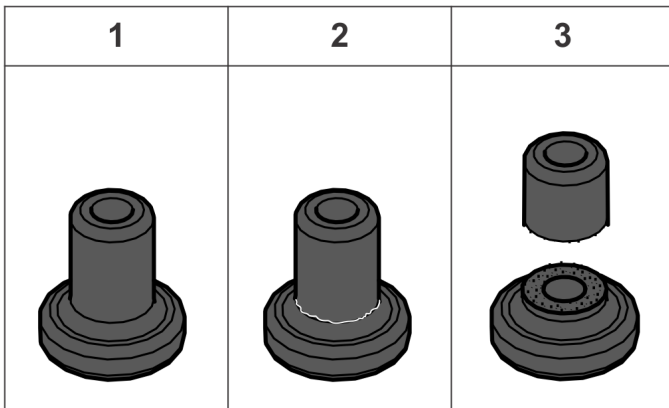
Inspect insert within the strain-relief cable end assembly and replace if any sign of damage.

1. Check around plastic insert and the plastic housing for any excessive wear or damage.



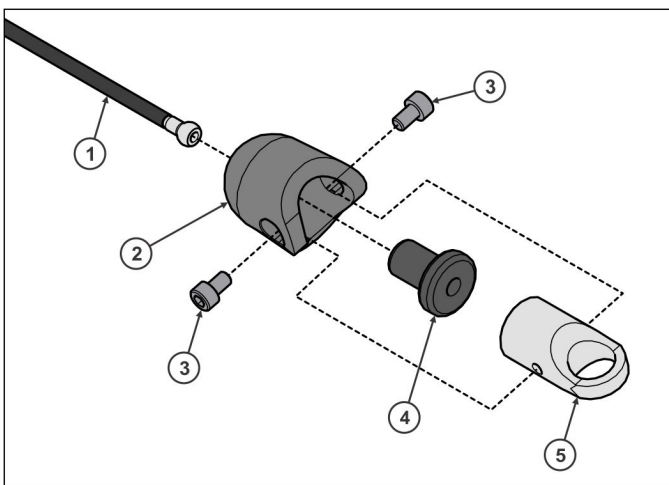
Item	Description	Qty.
1	Plastic Insert	1
2	Plastic Housing	1

2. Replace plastic insert if cracked, torn, separated, overly worn or damaged in any way.



Item	Description	Status
1	Insert - No damage	Use
2	Insert - Cracked	Replace
3	Insert - Separated	Replace

3. Using a 4mm hex wrench, remove screws from the housing/link and the damaged insert from cable assembly. Replace damaged insert, reassemble components and **tighten to 8-10 in-lbs (0.9-1.1 Nm)**.



Item	Description	Qty.
1	Cable Assembly	1
2	Housing	1
3	Screw; M5 X 0.8 HXS SOC	2
4	Insert	1
5	Link	1

7. Bolt to Floor Guide

Introduction

Life Fitness designs its products to be stable when used as designed. Because strength training is dynamic, we cannot predict how users will ultimately use the products in all circumstances. Therefore, Life Fitness **recommends** that strength training equipment be secured to a solid, level surface to stabilize and eliminate rocking or tipping over.

Each new unit shipped comes with a multi-language hangtag stating the importance of bolting the unit down as a safety precaution.

It is the facility's responsibility to adhere to local and regional building codes.

Delivery and Installation Tips

All Anchors

- Fasteners must have minimum embedment in concrete floor, not including screed, regardless of wood/tile/rubber over sub-floor. (See *Anchor Types* for maximum sub-floor thickness between unit and concrete to equipment foot must be made of flooring or other material (i.e. no air gaps)).
- DO NOT reuse fasteners. Static and Dynamic anchors are designed for one-time use only.
- Factor in equipment's feet height when selecting fastener length.
- Factor in flooring thickness when selecting fastener length.
- It is also recommended to drill an additional 1/2" (12.7 mm) of depth beyond the length of the fastener being used to ensure that debris does not block the entry of the anchor.
- Minimum concrete compressive strength: 3000 psi (20 N/mm²).

Anchoring

- All anchors must have a minimum embedment into concrete, regardless of wood/tile/rubber/screed over sub-floor.
- Dynamic anchors must have a minimum embedment depth in concrete to ensure maximum security and pull out force. See *Anchor Types* for embedment depth minimums.

Building Codes

It is the facility's responsibility to adhere to local and regional building codes. Please verify with the customer to ensure that they are aware of this.

Carpeting

If bolted down to carpet flooring, be sure to use a box cutter knife to cut the carpet threads around each foot. This will help avoid the carpet threads from being wrapped around and pulled by the drill bit.

Competitor Product

The bolt down guidelines and procedures for Life Fitness products were determined by the company's Engineering and Installation Development groups. These guidelines include which anchors to use and positioning of the anchors are required for Life Fitness product.

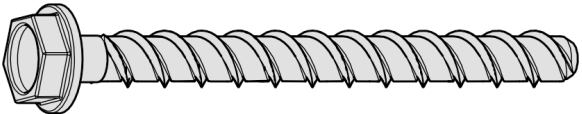
- Life Fitness does not have that level of specification or engineering input for competitive product.
- Life Fitness installation teams are not permitted to anchor competitor equipment.

Drilling

It is also recommended to drill an additional 1/2" (12.7 mm) of depth beyond the length of the fastener being used to ensure that debris does not block the entry of the anchor.

- This can be done by marking your drill bit with a piece of tape.
- While it is recommended that a vacuum be used to clean up debris, this will not account for all the debris that will settle at the bottom of the drilled hole.

Anchor Type - Static

Static Anchor	Standard Sizes	Drill Bit Size
	Imperial: KH-EZ 3/8" x 5"	3/8in
	Metric: HUS-H 10mm x 130mm	10mm

Anchor Specifications

Static Anchor	Minimum Concrete Thickness	Minimum Drill Depth in Concrete	Minimum Concrete Embedment	Minimum concrete compressive strength
KH-EZ 1/4"	4-1/8" (105mm)	1/2" (12.7mm) beyond anchor length	2-1/2" (63.5mm)	3000psi (20 N/mm ²)
HUS-H 6mm	3-3/32" (100mm)	25/64" (10mm) beyond anchor length	2-1/64" (55mm)	3000psi (20 N/mm ²)

Pullout Force

Life Fitness specifies Hilti™ static and dynamic anchors. According to the anchor manufacturer, the recommended design pullout force (in tension) for the specified anchors, when properly installed in cracked concrete, is provided in the side table. This table should be used for reference only; for additional and up-to-date information on the anchor capabilities or the design pullout force in other substrates, please consult Hilti directly at <https://www.us.hilti.com>.

Selected Anchor	Design Resistance in Tension *
KH-EZ 1/4" x 4"	830 lb
HUS-H 6MM x 120MM	3.3 kN
KH-EZ 3/8" x 4"	1535 lb
KH-EZ 3/8" x 5"	1535 lb
HUS-H 8MM x 120MM	3.3 kN
HUS-H 8MM x 150MM	3.3 kN
HSL-3 and HSL4 M 8/40	2000 lb
HST M12 x 115/20	8 kN
HST M12 x 195/200	8 kN
KB-TZ 3/8" x 3-3/4"	1615 lb

* Design strength extracted from the Hilti Anchor Fastening Technology Manual.

Tools Required



WARNING: Adhere to manufacturer's equipment warnings and guidelines. Follow manufacturer's instructions for proper usage.

- 1" L-shape SDS rotary hammer
- (Imperial anchors) 3/8" diameter carbide drill bit
- (Metric anchors) 10mm diameter carbide drill bit
- Extension cord
- Floor scanner / rebar detector (optional)
- Hammer (Dynamic anchors only)
- Rotary tool
- Safety glasses
- Tape measure
- Torque wrench
- Vacuum (for debris)

Static Anchor

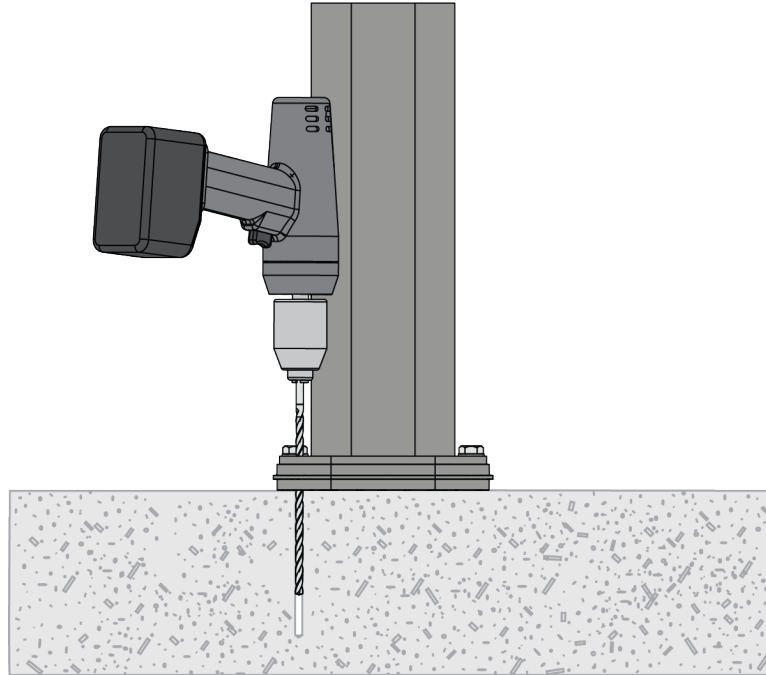
- Floor scanner / rebar detector (optional)
- 1" L-shape SDS rotary hammer
- 1/4" x 12" / 6 mm x 305 mm carbide drill bit (for 1/4" (6mm) anchors)
- 3/8" x 12" / 8 mm x 305 mm carbide drill bit (for 3/8" (8mm) anchors)
- Safety glasses

- Extension cord
- Impact wrench
- Vacuum (for debris)

Static Anchor Procedure

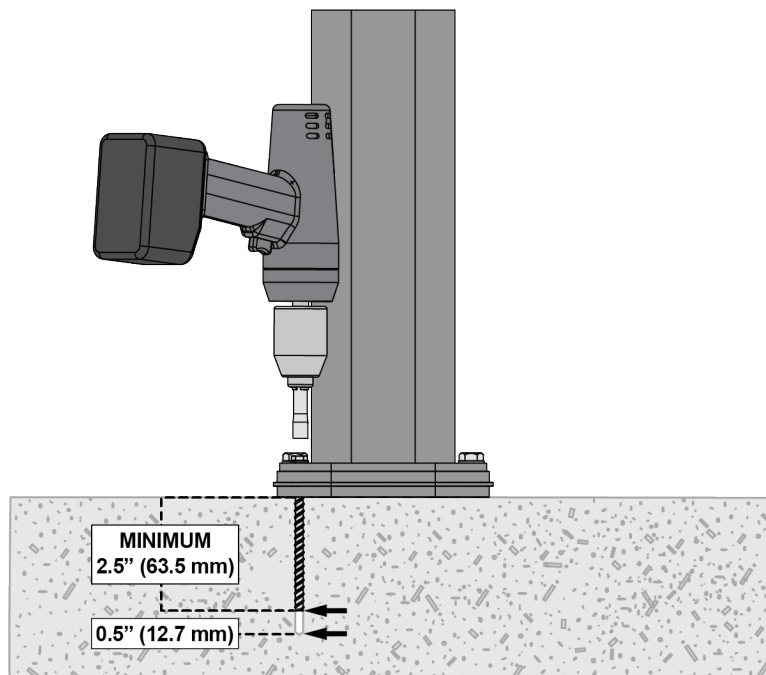
CAUTION: If it is possible that the length of your bolt will not provide the minimum requirement of 2.5" (63.5mm) of engagement, a longer anchor should be used.

1. Place unit into position to be mounted and cycle unit to set stance.
2. Each foot **must** get at least one static fastener.
3. Wearing protective glasses, drill down into the flooring to the required depth as perpendicular as possible, ensuring that the foot thickness is being accounted for; refer to *Anchor Selection* and *Foot Dimensions*.



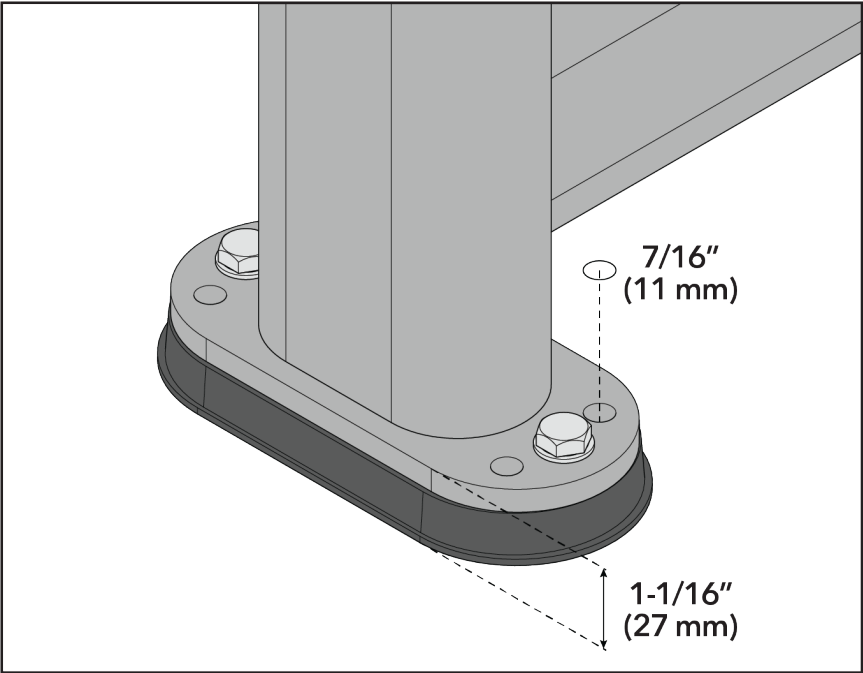
4. Insert fastener and tighten to 18 Foot-Pounds (24Nm) for 1/4" (6mm) anchor or 40 Foot-Pounds (54Nm) for 3/8" (8mm) anchor.

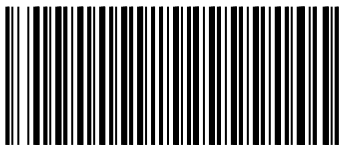
NOTE: If the legs/frame do not contact the mounting surface **DO NOT** pull down with the fastener or anchor. Loosen frame hardware and re-tighten to allow machine to align.



Foot Dimensions

Use below image to determine foot specifications.





1011084-0001