



RUGBY TRAINING MACHINE

RUGBY



**DROP ATTACK™ RUGBY MACHINE
(AC MODEL)**
PATENTS APPLIED FOR



**DROP ATTACK™ RUGBY MACHINE
(DC MODEL)**
PATENTS APPLIED FOR

INSTRUCTION MANUAL

OPERATION · SETUP · USE & CARE · SERVICE



SPORTS ATTACK LLC. | 800.717.4251 | www.sportsattack.com

WARRANTY STATEMENT

What is most important to Sports Attack is that your machine meets your expectations and represents our high standards of quality and performance. No matter the circumstances, if this is not the case, we encourage you to call our customer service department at 800.717.4251.

Warranty:

Residential & Institutional

We stand behind the material and workmanship of our machines as well as all wear components (i.e., throwing wheels, controllers, and motors) for a period of two (2) years from the date of original purchase based on the serial number and date codes on the unit.

Commercial

We stand behind the material and workmanship of our machines as well as all wear components (i.e., throwing wheels, controllers, and motors) for a period of one (1) year from the date of original purchase based on the serial number and date codes on the unit.

Requirements of the Warranty

- Warranty wear components such as motors, controllers and wheels may now require a picture or live video when submitting your request.
- The serial number that represents the date of original shipment must be legible on the Product, it cannot be removed or altered in any way.
- All date codes on unit components must be legible, not removed or altered in any way.
- If warranty components have previously been provided by Sports Attack for the unit, video evidence of their use on the machine must be provided when submitting your request.

Not Included in this Warranty:

- Normal wear and tear;
- Cosmetic damage (i.e., minor scratches, surface deformations, or discolorations) including natural fading of colors;
- Damage caused by misuse, abuse, accident or negligence including prolonged exposure to inclement weather;
- Damage caused by fire, flood or any other Act of God;
- Unauthorized modification or alteration of a machine including the use of non-authorized, after market components; and
- Any damage or failure arising after the warranty period.

The Warranty Process

If you encounter any issues during the warranty period, Sports Attack will quickly get your machine back in working order. To submit a warranty request, you must call our customer service department at 800.717.4251. If the warranty repair involves a replacement part, we will make sure you get both the part and easy instructions for replacement at no cost to you.

Returns

Sports Attack manufactures the highest quality sports training equipment in the world. If for any reason you are not satisfied, a machine can be returned within 30 days of receipt, for any reason, for a full refund less a 15% restocking fee. Cost of shipping the unit back to Sports Attack will also be the responsibility of the purchaser. Please note that the refund amount may be reduced by any non-cosmetic damage to the machine.

Please call customer service department at 800.717.4251 for returns.

SHIPPING DAMAGE CLAIMS PROCEDURE

NOTE: For your protection, please note that equipment in this shipment was carefully inspected and packaged by skilled personnel before leaving the factory.

Upon acceptance of this shipment, the transportation company assumes full responsibility for its safe delivery.

(cont. on page 1)

To register the Warranty, please go to

sportsattack.com/warranty

For repairs and service after the warranty period, please call:

Sports Attack
Customer Service Dept.
Ph 800.717.4251 or
775.345.2882
Fx 775.345.2883

RETURNS

To return an item, please contact our Customer Service Department at 800.717.4251 or 775.345.2882.

A 15% restocking fee will be charged for any items accepted for return. It is the customer's responsibility to handle the repacking and shipment (as well as all associated fees) back to Sports Attack.

No returns will be accepted after 30 days of receiving this product.

IF SHIPMENT ARRIVES DAMAGED:

1. **VISIBLE LOSS OR DAMAGE:** Be certain that any visible loss or damage is noted on the freight bill or express receipt, and that the note of loss or damage is signed by the delivery person.
2. **FILE CLAIM FOR DAMAGE IMMEDIATELY:** Regardless of the extent of the damage.
3. **CONCEALED LOSS OR DAMAGE:** If damage is unnoticed until the merchandise is unpacked, notify the transportation company or carrier immediately, and file "CONCEALED DAMAGE" claim with them. This must be done within fifteen (15) days from the date the delivery was made to you. Be sure to retain the container for inspection.

Sports Attack, LLC. cannot assume liability for damage or loss incurred in transit. We will, however, at your request, supply you with the necessary documents to support your claim.

INTRODUCTION

Thank you for purchasing this Sports Attack, LLC. equipment. Your Drop Attack will be shipped in the right-hand spin position.

Proper assembly, careful operation and consistent maintenance of this equipment will ensure that it gives you the very best performance and a long, economical service life.

This manual contains the information needed to properly set up the Drop Attack Rugby Machine, and to use, care for and maintain the Drop Attack in a manner which will ensure its optimum performance.

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SAFETY INSTRUCTIONS

AC Model - ELECTRICAL SAFETY

Use a 115 volt single phase 3-wire grounded power source.

Up to 200 ft. from power source, use a minimum #14/3 grounded 3-wire extension cord.

Over 200 ft. from power source, consult a licensed electrician for required power cord size.

DC Model - BATTERY SAFETY

Keep away from open flame

Electrical Hazard

Unplug charger before removing cables

OPERATING SAFETY

CAUTION: Never reach down near moving throwing wheels for any reason! If it is necessary to reach into the throwing wheels, **ALWAYS:**

1. Turn speed dial to "0".
2. Turn the power switch "OFF".
3. Unplug Drop Attack from power source.
4. Wait until the throwing wheels have come to a complete stop before reaching hands or fingers anywhere near the throwing wheels.

CAUTION: Carefully check Drop Attack for completeness and condition before connecting to electrical power.

Carefully check the throwing wheels frequently for cleanliness, chips and cracks. Do not use the machine if the throwing wheels are damaged, or if chips or cracks appear in the wheels. (For damage within warranty period, see Warranty Statement, page xi.)

ALWAYS set the speed control to "0" before connecting the machine to power. Check that the speed control is at "0" before turning the throwing wheels "ON".

Do not allow anyone to walk in front of the Drop Attack Rugby Machine if it is connected to electrical power.

CAUTION: DO NOT plug in or energize this equipment until all assembly instructions and operation instructions are read and followed.

BALL SELECTION

Balls must be official size and consistent in type to produce repeatability.

Never use wet or damp balls! Ball air pressure must be between 9.5-10.0 lbs.

WARNING PERSONAL INJURY HAZARD

Carefully read all instructions in this manual, and all labels and warnings on Drop Attack before using this machine.

Use machine only under adult supervision. Failure to operate Drop Attack as described in this manual can result in severe personal injury or death.

ELECTRICAL SHOCK HAZARD

The Drop Attack must be connected to a properly grounded electrical receptacle.

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Do not operate on wet ground.

CAUTION PERSONAL INJURY HAZARD

Keep hands away from throwing wheels anytime the machine is connected to a power source.

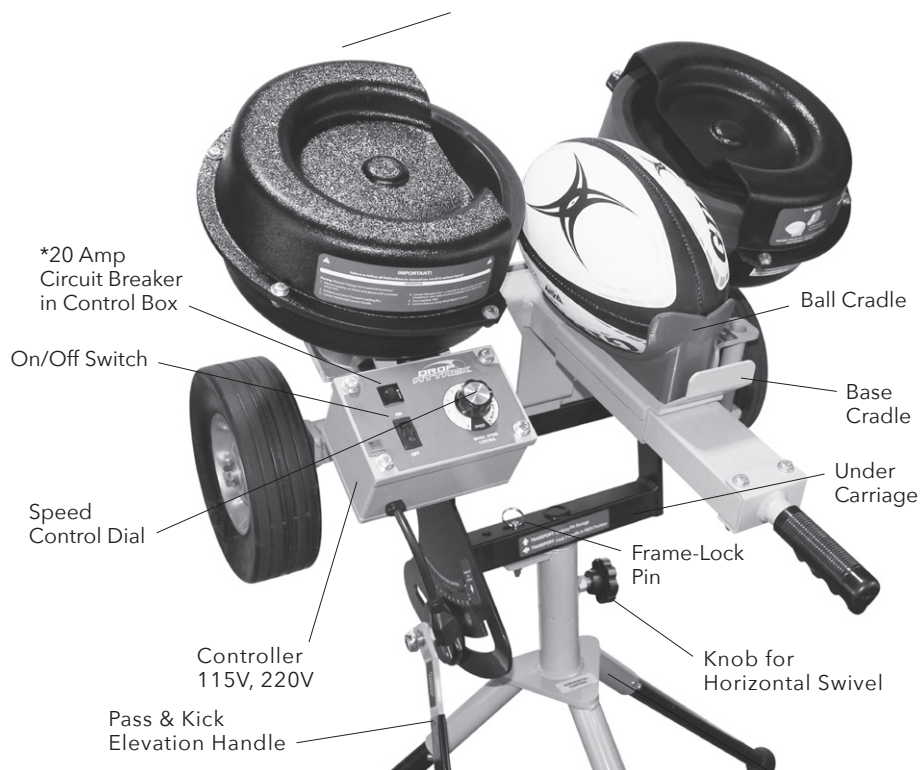
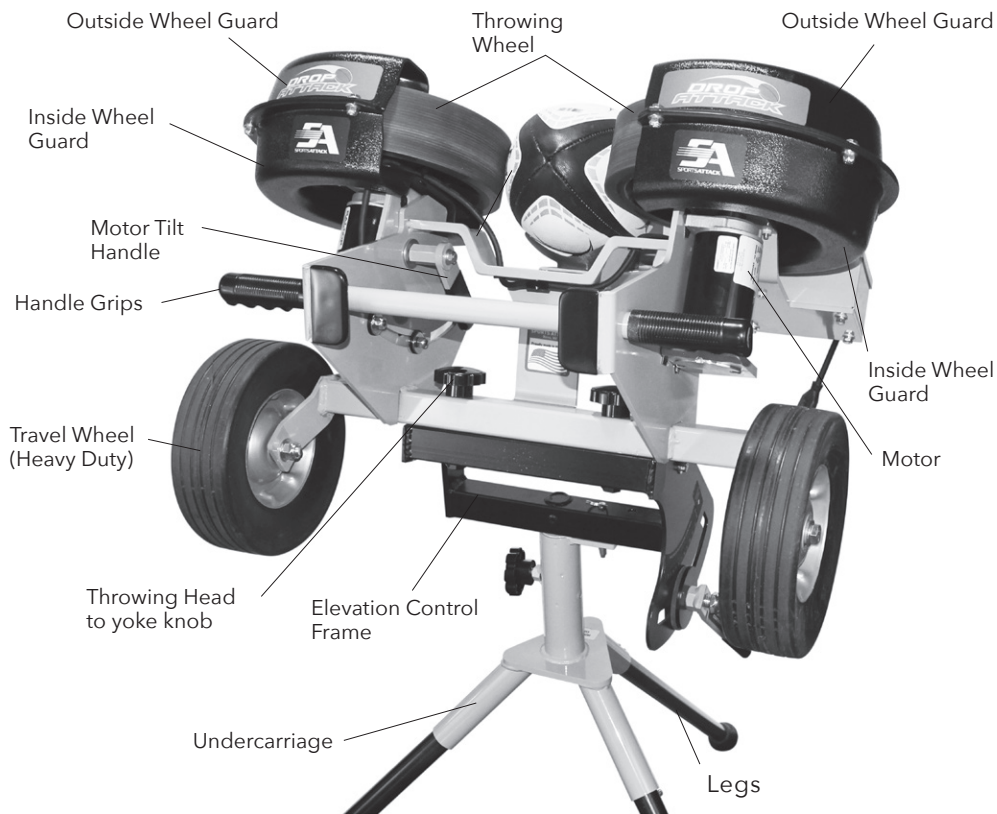
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Carefully check the Drop Attack for completeness and condition before connecting to electrical power.

EQUIPMENT ELECTRICAL DAMAGE

Keep hands away from throwing wheels anytime the machine is connected to a power source.

COMPONENT VIEW



ADDITIONAL INFORMATION

If you have any questions regarding the safe operation of the Drop Attack, please call:

Sports Attack Customer Service Department

Ph 800.717.4251 or

775.345.2882

Fx 775.345.2883

GENERATOR INFORMATION

1. Drop Attack requires a generator capable of providing clean electricity (inverter technology) of a minimum 1200 watts at 120 volts 60hz.
2. Be sure the power switch is "OFF" before plugging Drop Attack into the generator.
3. Start the generator and allow it to reach full speed before turning the power switch "ON".

IMPORTANT: Generator speed fluctuations can damage the electronic speed control. Maintain adequate fuel in the generator at all times.

4. Turn the Drop Attack power switch "OFF" before shutting off the generator and before unplugging the Drop Attack.

SET-UP & PREPARATION

SETTING UP THE DROP ATTACK (AC and DC models)

IMPORTANT: Lock pin must be removed (See Figure 5) and stored in adjacent hole to left. This will allow machine to pivot horizontally.

IMPORTANT: For maximum distance, balls must be properly inflated.

A. Setting machine up

1. Tilt machine up onto wheel guards.
2. Using knobs which are stored on bolts, attach throwing head to undercarriage, tighten knobs securely to elevation control frame (See Figure 6).
3. Insert 3 legs into sockets.
4. Using handle grips tilt machine up onto all three undercarriage sockets.
5. Remove lock pin and store in adjacent hole to left (See Figure 5).
6. Loosen horizontal control knob (See Figure 5).
7. Loosen stand elevation handle (See Figure 7).
8. If AC Model, plug machine into power source. (110v or 220v)
9. Turn power switch "ON."
10. Dial wheel speed to approximate speeds on speed label.
11. Continue throwing test balls and adjusting speeds until desired distance and speed is achieved.
12. The motor tilt handles tilt throwing wheel to throw either end over and drop kick or spiral passes loosen wheel tilt lever and pivot motor.

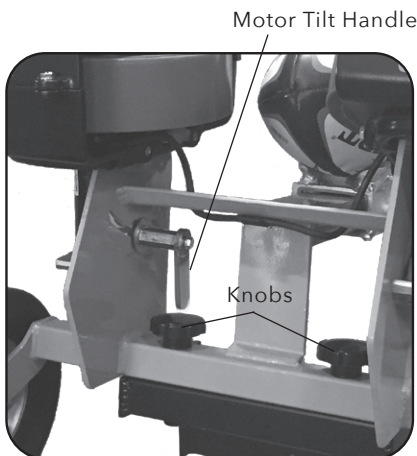


Figure 2 Remove throwing head knobs.

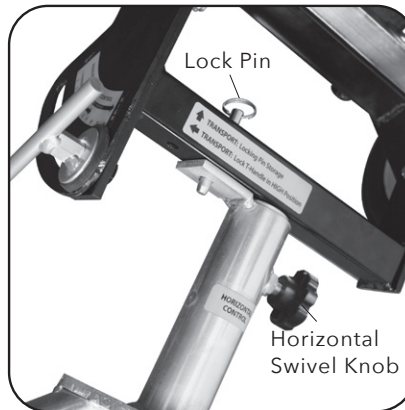


Figure 5 Lock pin inserted to lock throwing head into position for transporting.



Figure 6 Attaching throwing head to undercarriage.



Figure 7 Loosen stand elevation handle.

SAFETY HINT

When lowering or lifting, Drop Attack keep your back straight and lift with your legs. Be ready to grab the wheel guard and guide Drop Attack into the upright position.

WARNING HAZARD FROM HIGH-SPEED PROJECTILES

Being struck by a thrown ball can cause serious injury or death. Make sure that no one steps in front of Drop Attack while it is connected to electric power. Clear everyone away from machine before connecting Drop Attack to electric power.



Figure 1 Use handles to lift or lower the Drop Attack.

SHUTTING DOWN & TRANSPORTING

TURNING Drop ATTACK "OFF"

1. Set each speed control dial to "0".
2. Turn the power switch "OFF".
3. If AC Model, unplug Drop Attack from the power source.

TRANSPORTING

1. Be sure machine is turned "OFF" and wheels are not turning.
2. If AC Model, unplug cord from extension cord, standard outlet or generator.
3. Transport lock pin must be inserted in hole to right, locking head into position for transporting (See Figure A).
4. Using the elevation control, tilt the throwing head up (to high position) and lock into place (See Figure B). This will help facilitate transportation.
5. Using handle grips (See Figure C) tip machine up and over onto the wheel guards.
6. Lift rear leg and roll machine (See Figure D).

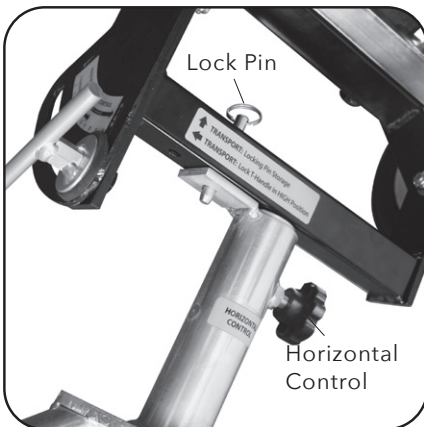


Figure A Lock pin inserted to lock throwing head into position for transporting.

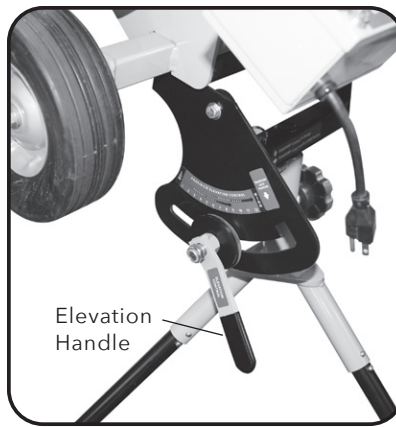


Figure B Loosen stand elevation handle.



Figure C Use handles to lift or lower the Drop Attack.



Figure D Lift rear leg and roll.

WARNING PERSONAL INJURY HAZARD

Never reach down near throwing wheels for any reason! Always turn all three speed control dials "0", turn the power switch "OFF", unplug Drop Attack from the power source and wait until the throwing wheels have come to a complete stop before reaching hands or fingers anywhere near throwing wheels.

CARE, CLEANING & MAINTENANCE

LUBRICATION (once per season, or as required):

1. Elevation Control Handle
Apply fresh grease to threads.
2. Horizontal Swivel Knob
 - a. Completely remove the horizontal swivel knob. Clean all old grease, dirt, etc. from the threads.
 - b. Wipe the threads with a very small amount of fresh grease.
 - c. Reinstall.

THROWING WHEEL MOTORS

Motors are sealed and require no lubrication.

Check bolts for tightness once a season. Tighten bolts securely, but do not over-tighten. See page 11.

CLEANING THE THROWING WHEELS

The throwing wheels must be kept clean to maintain accuracy. Clean the wheels periodically to control the build-up of grass and dirt.

1. If AC Model, turn the power switch "OFF" and allow the wheels to come to a complete stop. Unplug Drop Attack from electric power.
2. Dampen a rag with soap and water. Turn the throwing wheel by hand and scrub the wheel until the build-up is removed. For very heavy build-up, a synthetic scouring pad, such as a Scotch-Brite® scouring pad, may be used sparingly.

BATTERY INFORMATION (DC Model)

CHARGING

The Drop Attack DC model comes with a non-spilling Lithium Iron Phosphate 24AH, 12VDC battery.

Upon receiving your Drop Attack and battery, you should charge the battery using the charger that comes with your unit. The charger has a 20AMP charge rate. Do not charge the battery when wet.

When replacing battery, you must use the same battery as originally equipped. When un-installing the battery, you must first disconnect the negative cable, then the positive. When installing battery, you must first connect the positive, then the negative.

The battery has LED light indicators showing percentage of charge:

Simply push solid white circle to view read out.

The charger on the Drop Attack does not damage fully charged batteries left connected to it. You may also charge the battery using any manufactured automotive battery charger.

IMPORTANT: Terminals must be protected from short circuit. Any object that is placed touching either battery terminal could cause a short circuit.

- 20 AMPS, charge time of 2:45 minutes.
- Fully charged run time is approx. 4 hrs.

NOTE: It doesn't matter which battery you hook the charger to, both batteries will charge at same time.

SAFETY: Each battery is equipped with a 25 AMP inline ATC fuse



CAUTION PERSONAL INJURY HAZARD

Never attempt to clean the throwing wheels while they are turning. Rags or implements caught in spinning wheels can cause serious injury.

Unplug the machine before cleaning the wheels or performing any service.

EXAMINE THE MACHINE

Examine Drop Attack for condition and completeness before every use:

1. Throwing wheels must be tight on the motor shafts. Check that the four bolts holding the motor to the throwing head assembly are tight.
2. Wheel guards and ball cradle must be securely fastened.

COMPONENT REPLACEMENT

THROWING WHEEL REPLACEMENT

1. Turn the throwing wheels "OFF" and unplug the power cord. Remove 4 bolts holding the outside wheel guard to the inside wheel guard.
2. Hold the wheel so that it cannot move. Turn the keyway retaining bolt counter-clockwise using a box end wrench (See Figure 10).
SUGGESTION: If the bolt is too tight, give the opposite end of the wrench a series of light taps with a hammer making sure the wrench remains on the bolt.
3. Remove the bolt and washers.
4. Work the wheel off of the motor shaft. Be sure to catch the key as it is freed from the keyway.
5. Ball throwing wheels are machine balanced. Small holes in the side of the wheel are applied at the factory and are normal.

Reassemble in reverse order.

- a. Install wheel to motor shaft with key slots aligned.

NOTE: Check bolts for tightness once a season. Tighten bolts securely, but be sure not to over-tighten.

MOTOR REPLACEMENT

1. If AC Model, turn the power switch "OFF" and unplug the power cord.
2. Remove outside wheel guard.
3. Remove the throwing wheel (See page 11).
4. Remove inside wheel guard.
5. Remove four screws holding the controller into the control box casting. Note the position of the motor wires on the controller, then disconnect the wire for the motor to be replaced (See Figure 14 on page 13).
6. Note the routing of the motor wires. Loosen wire clamps and pull wire away from machine.
7. To remove motor, remove the 1 - $\frac{1}{4}$ " nylon nut using a $\frac{7}{12}$ " socket. Then remove the 2 - nylon nuts using a $\frac{1}{2}$ " socket.
9. Reassemble in reverse order.

NOTE: Check bolts for tightness once a season. Tighten bolts securely, but be sure not to over-tighten.

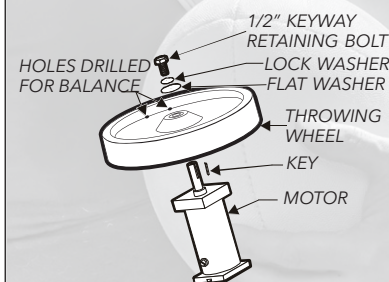
REPLACING A BATTERY

Battery may be removed while rear handle assembly is attached or detached from throwing head. Please see corresponding photo below.

1. Turn off controller. Unplug charger from power source.
2. Turn both speed control knobs to "0." Make sure throwing wheels are stopped.
3. Unplug battery connector from throwing head.



Figure 10 Hold wheel in place while loosening bolts.



MOTOR REPLACEMENT TOOLS

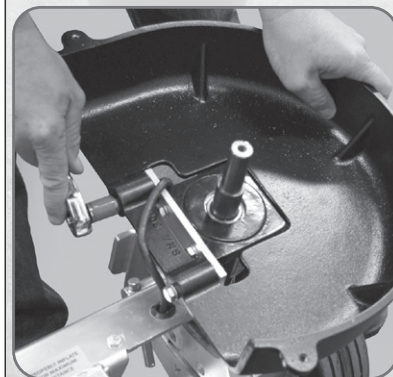
When replacing the motor, you will see two sets of bolts:

2 - $\frac{1}{4}$ " x $\frac{3}{4}$ " coarse Allen flat socket cap screw

2 - $\frac{5}{16}$ " x 1" coarse thread bolts

The Allen wrench needed for the $\frac{1}{4}$ " Allen screw is a $\frac{5}{32}$ ".

The wrench or socket size needed for the $\frac{5}{16}$ " bolt is a $\frac{1}{2}$ ".



Removing bottom wheel guard, shown using a $\frac{1}{2}$ " socket.

- Loosen and remove two wing nuts on battery terminal connectors. Remove the two wires on each terminal (1 wire from charger and 1 wire from battery harness). See A1 and A2
- Loosen and remove battery hold down. See B
- Remove battery from left side, making sure the rubber pad under battery stays in place.

Reassemble in reverse order.

IMPORTANT: Replace battery with exact model and part number. Equivalent batteries may not fit into the padded battery box or may not have the same capacity.

COMPONENT REPLACEMENT (cont'd)

CONTROLLER REPLACEMENT

- Turn the **power switch** "OFF" and unplug the power cord.
- Remove knob from the controller.
- Remove four screws holding controller faceplate into main casting. Note the position of the main power and motor wires on the controller, then disconnect

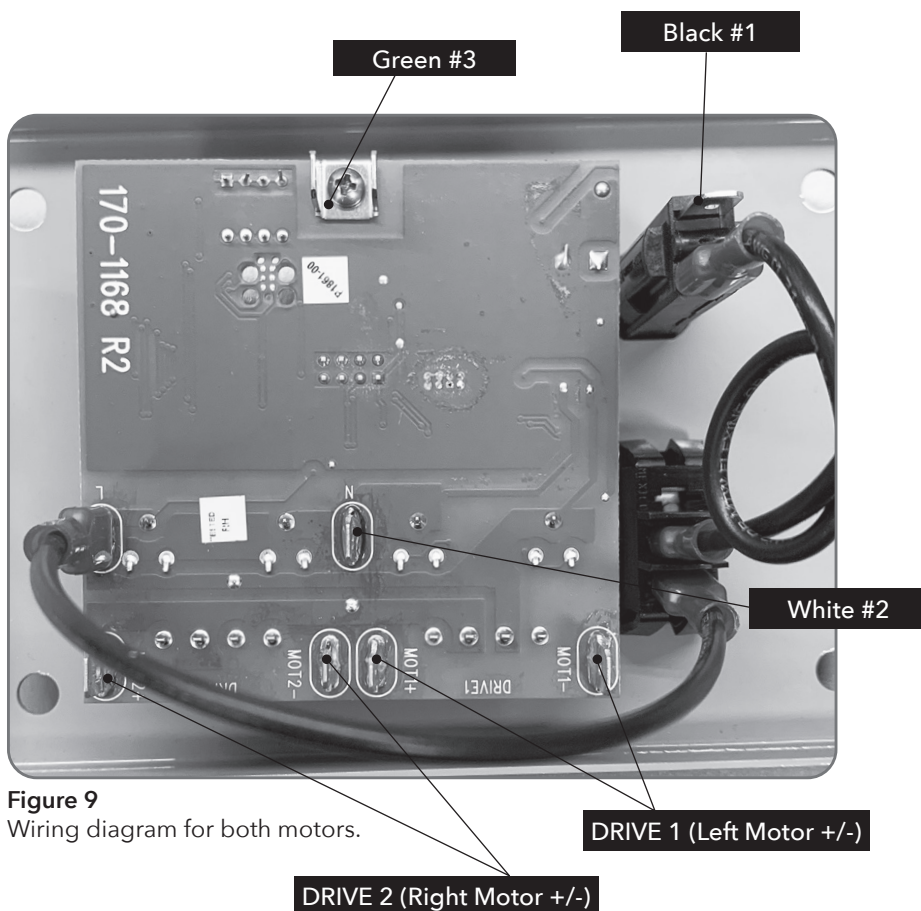


Figure 9
Wiring diagram for both motors.

POWER CORD WIRE

Black (#1)

On/Off switch

White (#2)

N on green control board

Green (#3)

Grounds to machine

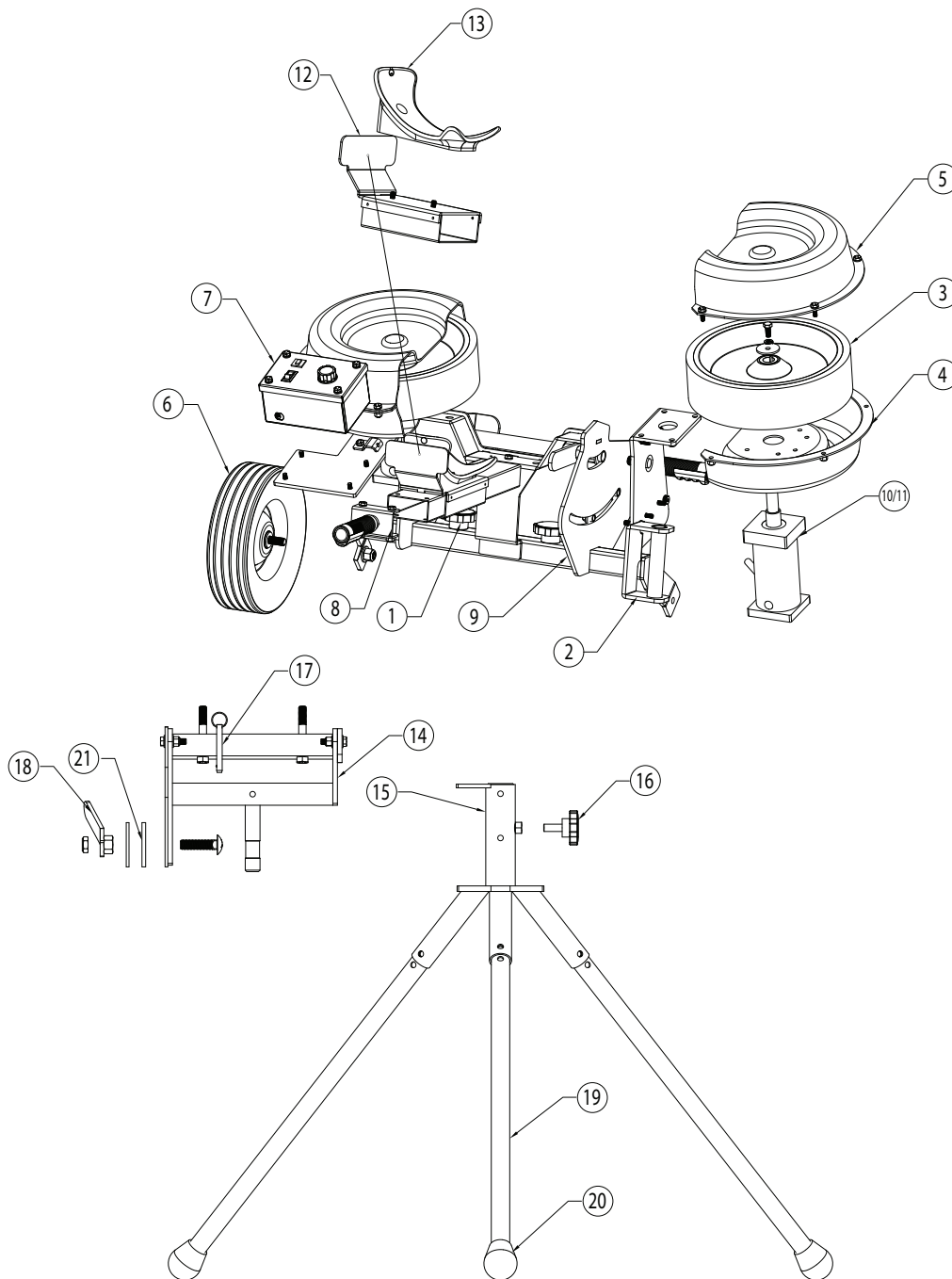
CONNECTING WIRES

Motor	Black Wire	White Wire
Right	MOT2-	MOT2+
Left	MOT1+	MOT1-

Left is the side with the Control Plate as you stand behind machine.

Black motor wires are $\frac{3}{16}$ " female disconnect and white wires are $\frac{1}{4}$ " female disconnect.

EXPLODED VIEW - DROP ATTACK™ (AC Model)



- 1 Throwing Head Mount Knob
- 2 Elevation Control Handle
- 3 Throwing Wheel
- 4 Wheel Guard, Inside
- 5 Wheel Guard, Outside
- 6 Travel Wheel
- 7 Controller (110V/220V)
- 8 Wheel Tilt Locking Handle
- 9 Frame Assy
- 10 Motor 110V
- 11 Motor 220V
- 12 Ball Feed Slide
- 13 Ball Cradle
- 14 Yoke Assy
- 15 Undercarriage
- 16 Horizontal Swivel Lock Knob
- 17 Quick Release Pin
- 18 Elevation Control Handle
- 19 Leg
- 20 Cane Tip
- 21 Elevation Control Clutch

Exploded View

PARTS LIST (AC Model)

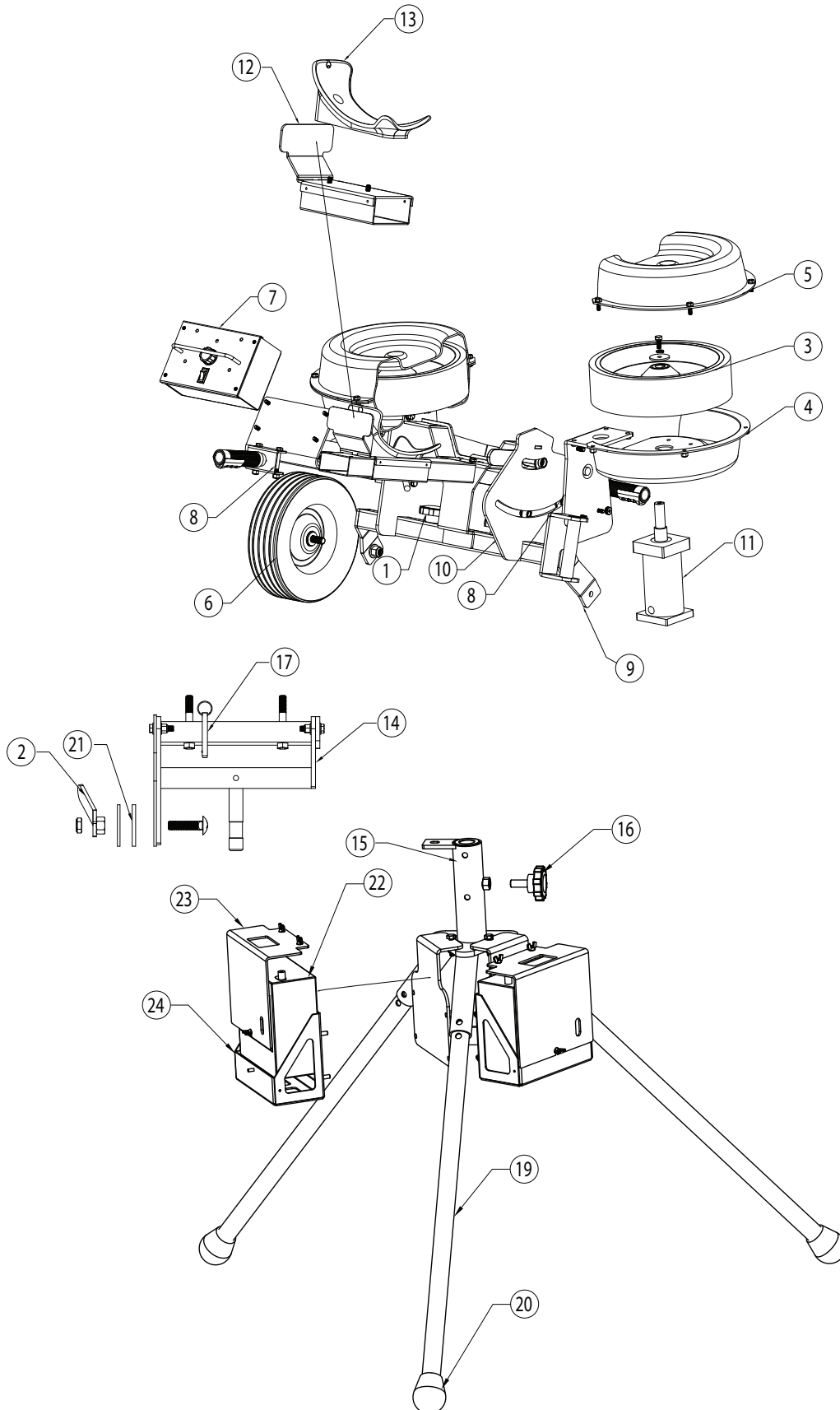
PART NO.	DESCRIPTION	QTY PER
1023-2249-1	Leg Endcap, Heavy-duty	3
4013-3827-1	Football & Rugby Leg	3
4012-9422-1	Undercarriage	1
4012-5414-1	Frame, Elevation Control Assy	1
4012-9626-1	Yoke Assy	1
4013-8866-1	Throwing Head Mount Knob	1
4013-7811-1	Elevation Control Handle	1
4013-7367-1	Elevation Control Clutch	1
4013-2229-1	Elevation Control Washer	1
3012-2153-1	Wheel Guard, Outside	1
3012-7462-1	Wheel Guard, Inside	1
4042-9094-1	Throwing Wheel	2
1133-9500-1	Motor 110V	2
1133-2423-1	Motor 220V	2
4513-8018-1	Throwing Head Frame	1
1023-2373-1	Travel Wheel	2
4012-1781-1	Motor Mount, Right	1
4013-7811-1	Wheel Tilt Locking Handle	1
4023-6476-1	Handle Grip	2
4052-9138-1	Control Box	1
4562-9725-1	Contoller 90V	1
4562-9629-1	Controller 220V	1
9153-5778-1	Power Cord	1
1213-6877-1	Speed Control Knob	1
4513-7124-1	Ball Cradle	1
4013-2269-1	Ball Feed Slide	1
4013-5538-1	Position Pointer	1

To order additional parts,
please contact:

Sports Attack
Customer Service Dept.
Ph 800.717.4251
Fx 775.345.2883



EXPLODED VIEW - DROP ATTACK™ (DC Model)



- 1 Throwing Head Mount Knob
- 2 Elevation Control Handle
- 3 Throwing Wheel
- 4 Wheel Guard, Inside
- 5 Wheel Guard, Outside
- 6 Travel Wheel
- 7 Controller (110V/220V)
- 8 Wheel Tilt Locking Handle
- 9 Frame Assy
- 10 Motor 110V
- 11 Motor 220V
- 12 Ball Feed Slide
- 13 Ball Cradle
- 14 Yoke Assy
- 15 Undercarriage
- 16 Horizontal Swivel Lock Knob
- 17 Quick Release Pin
- 18 Elevation Control Handle
- 19 Leg
- 20 Cane Tip
- 21 Elevation Control Clutch
- 22 Battery, LifePO4 12VDC 24AH
- 23 Battery Cover
- 24 Battery Tray

Exploded View

PARTS LIST (DC Model)

PART NO.	DESCRIPTION	QTY PER
1023-2249-1	Leg Endcap, Heavy-duty	3
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4042-9094-1	Throwing Wheel	2
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1213-6877-1	Speed Control Knob	1
4513-7124-1	Ball Cradle	1
4013-2269-1	Ball Feed Slide	1
4013-5538-1	Position Pointer	1
6053-1289-1	Battery, LifePO4, 12VDC, 24AH	1
6023-1268-1	Battery Cover	1
6012-1268-1	Battery Tray	1

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