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CERTIFICATE & DECLARATION OF CONFORMITY FOR CE MARKING

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Promatic International Ltd. declares that their:

Clay Target Launchers listed as the following models
Elite, Hawk, Superhawk, Harrier, Harrier ABT/Wobble, Eagle, Eagle Battue, Falcon, Hobby / Merlin,
Ranger 8, Osprey/All American Ranger, Ranger Battue, Ranger ABT/Wobble,
Sporter 400TT, Sporter 400TT ABT/Wobble, Super Sporter Battue, Super Sporter,
Super Sporter Downhill Thrower, Super Sporter ABT/Wobble, Rabbit, Squirrel,
Ranger Chondell, Chondell, Hunter Wobble, Huntsman, Huntsman XP,
Fieldsman, Club Skeet, Pro Skeet, Int Skeet, Olympic Trap, Club 275 DTL/ATA,
International DTL/ATA, Pro ABT/Wobble, Auto Trap DTL/ATA/ABT/Wobble,
International Doubles DTL/ATA/Wobble and Sporter Doubles DTL/ATA/Wobble

are classified within the following EU Directives:

Machinery Directive 2006/42/EC
Electromagnetic Compatibility Directive 2004/108/EC

and further conform with the following EU Harmonized Standards:

EN 12100-1:2003+A1:2009 EN 12100-2:2003+A1:2009
EN 61000-6-3:2007 EN 61000-6-1:2007

Dated: 19 April 2011

Position of signatory: Group Technical Director

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Signed below:

p.p. Promatic International Ltd.

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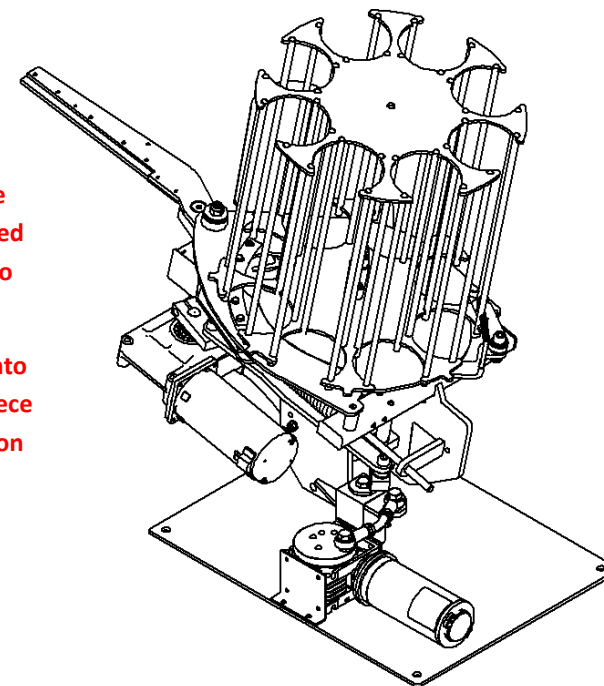


Operating Instructions Pro ATA / DTL Clay target launcher

WARNING

**Clay target launchers can be
dangerous and must be treated
with great care at all times to
avoid accidents.**

**Never place any bodily part into
the path of any mechanical piece
whilst the machine is in motion
or likely to be so.**



**You must treat a clay target launcher with the same caution
that you would treat a loaded gun.**

**Assume at all times that a clay target launcher is armed
and loaded and treat it accordingly**



This document must be read in full before attempting to operate the machine

Preface:

Every effort has been made to ensure that the information contained within this manual is complete, accurate and up-to-date. Promatic International assumes no responsibility for errors beyond its control.

Conventions used within this manual:

Trap: Your Pro ATA / DTL - Clay target launcher - commonly known as a clay trap and may be referred to in this manual as "The trap" or "The machine"

Warnings & Cautions:



Warning: This section contains instructions which, if ignored or carried out incorrectly, may result in risk of personal injury.



Caution: This section contains instructions which, if ignored or carried out incorrectly, may result in malfunction or damage to the equipment or consumables.



Note: This section contains additional information which the user may find useful, but is not essential to the operation of the product.



12v DC Power Source:

This Trap is designed to be powered from a 12v DC battery.

IT MUST NEVER BE DIRECTLY CONNECTED TO ANY AC POWER SOURCE

Battery: Where a trap is connected to any other suitable power source i.e. a Transformer - the relevant sections of instructions should still be observed, i.e. "Disconnect the battery" and applied to this or any other power source.



EYE PROTECTION MUST BE WORN WHEN WORKING ON OR AROUND A CLAY TARGET LAUNCHER AS SMALL SHARP PIECES OF CLAY MAY BE EJECTED.



Electrical Schematics

Use this section to help identify any faults during any electrical troubleshooting, or to assist with the wiring of components if replacing parts.



Note: The layout of the schematics do not resemble the general arrangement of the components. This layout is to make the drawings as clear as possible.

Key:

Q = Circuit Breaker

K = Relay

SW = Switch

PB = Push Button

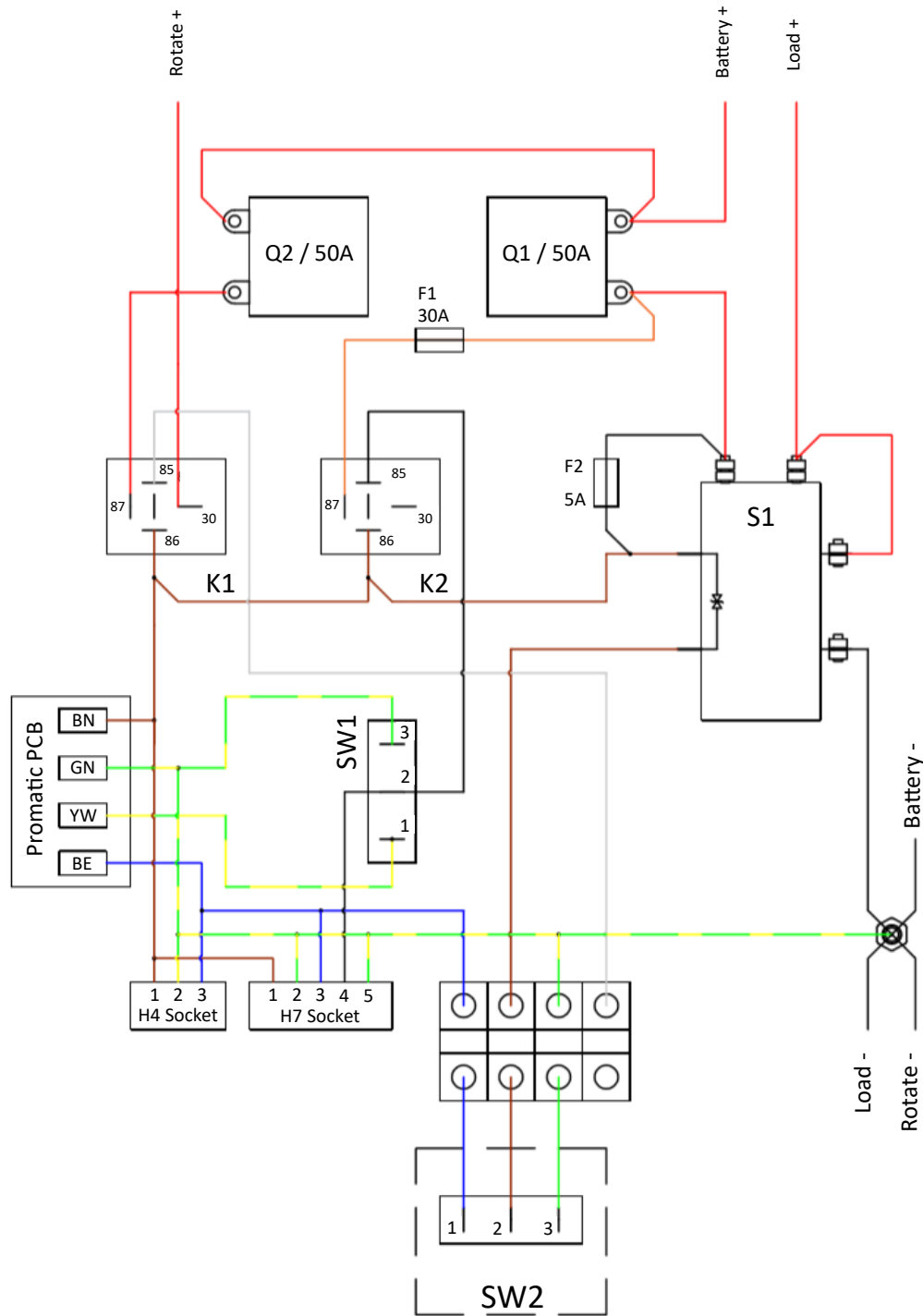
F = Fuse

S = Solenoid



ALWAYS disarm the machine before carrying out loading, adjustment or maintenance. Ensure that the machine has been isolated from the power source before proceeding with any maintenance on the control box.

Notes:

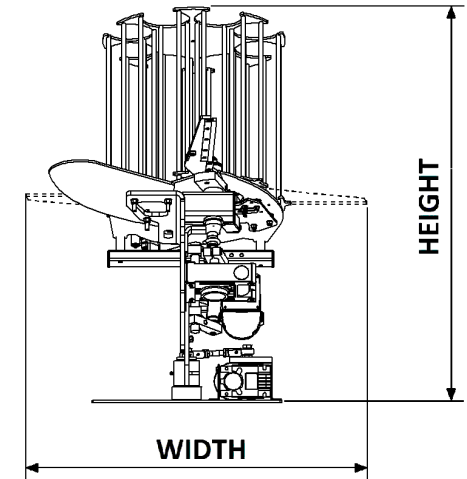
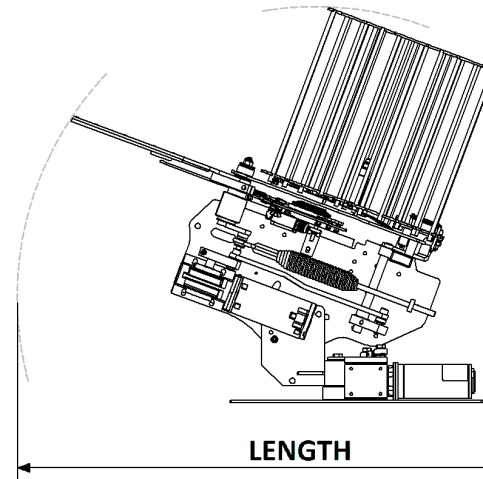
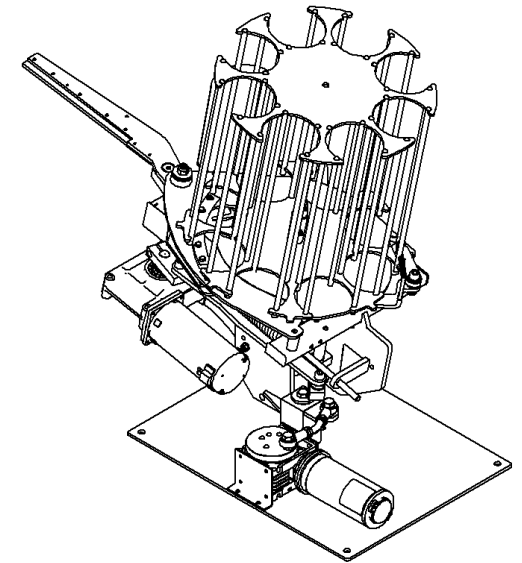


Specifications:

Pro ATA / DTL

Dimensions show maximum sweep of arm.

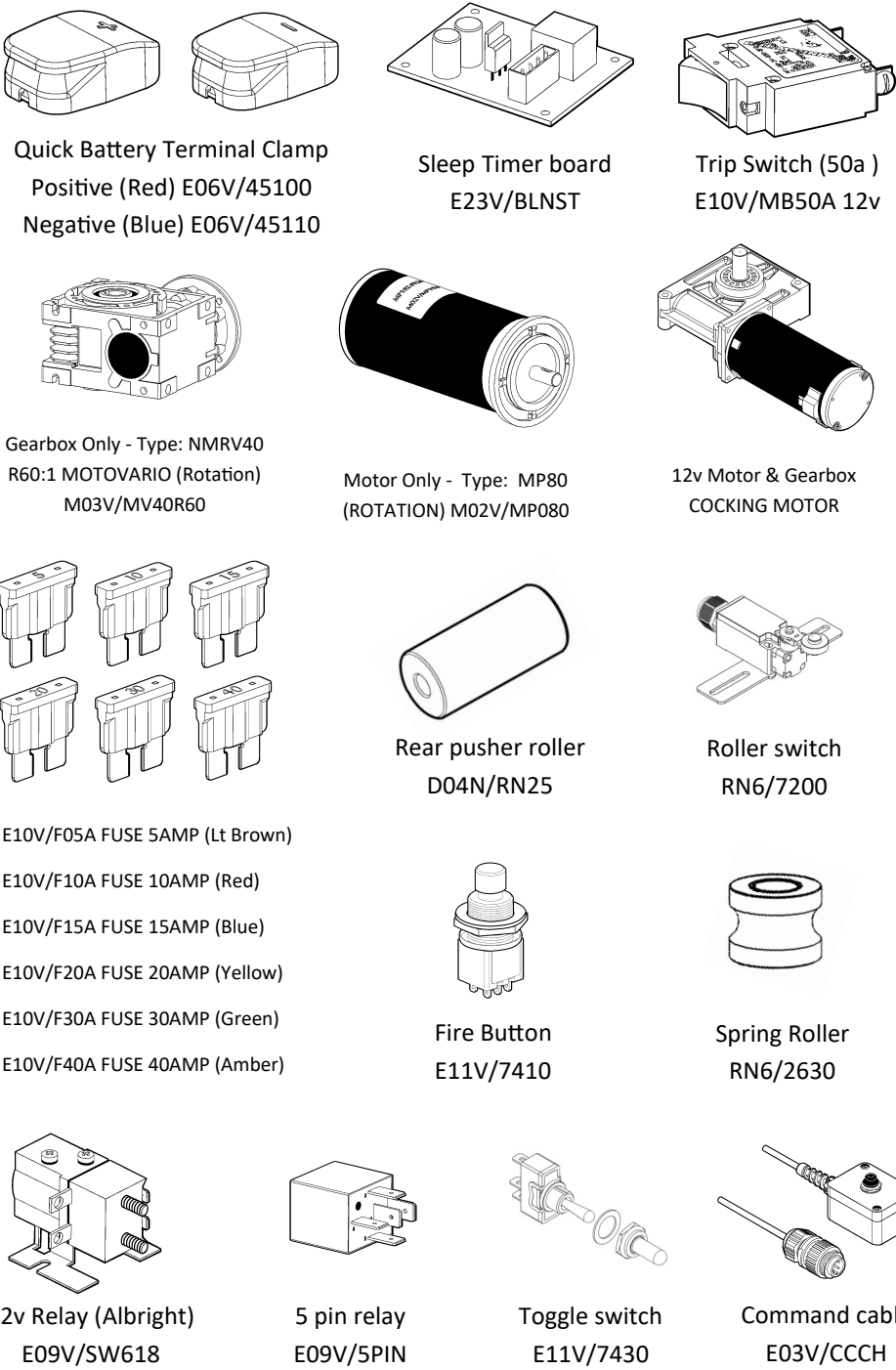
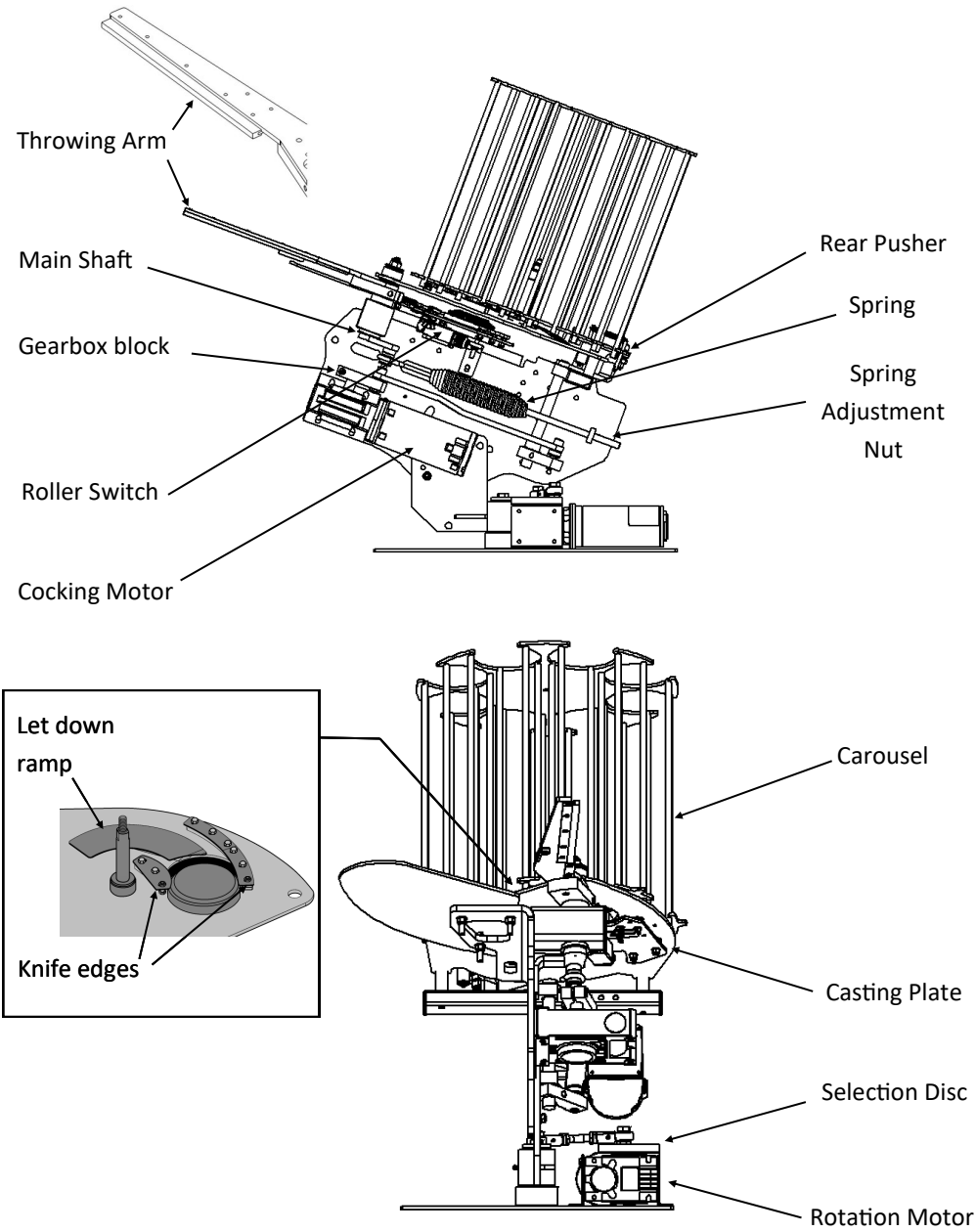
Carousel:	8 Stack 300 Bird
Length:	980 mm 38 1/2"
Width:	870mm 34 1/4"
Height:	950 mm 37 1/2"
Weight:	75Kg 165lbs



Pro ATA / DTL

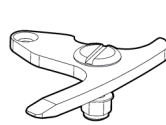
Understanding your new trap:

ATA & DTL versions

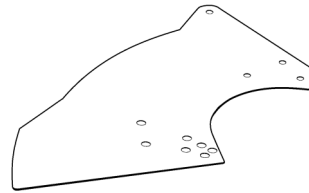


Spare Parts

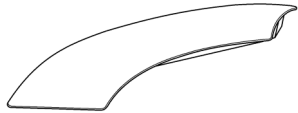
For parts not listed please call Promatic or your local dealer / service agent or visit www.promatic.co.uk



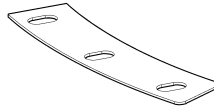
Front Rail
SP/3430



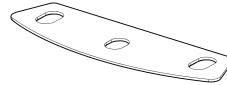
Soft Fall Plate A28F/PAJJ



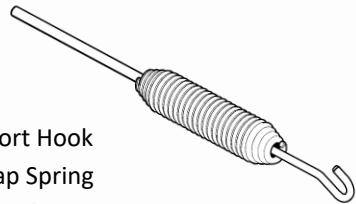
Let Down Ramp
FN6/3400



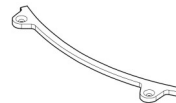
Outer Knife-edge
A28S/AKIU



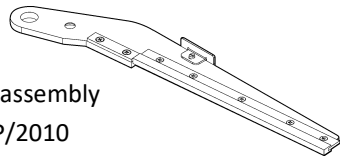
Inner Knife-edge
A28S/ANRY



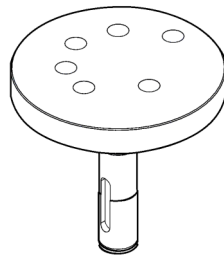
Short Hook
Trap Spring
S01Z/SHTR



Back Rail
SP/3440



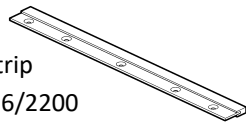
Arm assembly
SP/2010



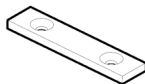
Rotation Shaft &
Disc RN6CA/4100



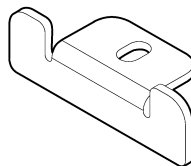
Rear Pusher
Spring
S02Z/037D6



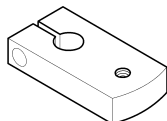
Friction Strip
(Standard) RN6/2200



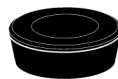
Arm spacer
A28A/BGTU



Clay Sweeper A28A/PAJH



Arm Clamp Block
SP/2500



Rubber Buffer
(Clay Stop)
D06L/1566

Positioning the machine

1. Clay Target Launchers must be situated on firm level ground in a position that will allow unrestricted access to rear of machine.
2. There must be no obstructions to the path of the throwing arm.
3. Ensure that the power supply can be easily disconnected and cables cannot become tangled in any part of the mechanism.



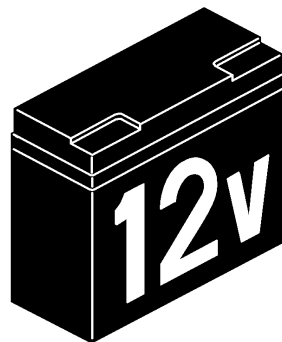
Ensure the machine is stable on firm level ground before use.
This machine should be bolted to a solid base or the optional H Frame (which itself should be securely pegged) before use.

GENERAL WARNINGS - BEFORE OPERATING ANY TRAP

ALWAYS disarm the machine before any loading, adjustment or maintenance.
ALWAYS load clays from rear and **ONLY** if the machine is disarmed and safe.
NEVER approach the machine from the front or sides. **ALWAYS** from the rear.
NEVER allow children or untrained persons to approach or touch the machine.
NEVER move an armed/loaded machine. **ALWAYS** disarm and disconnect battery.
REMOVE the main throwing spring before transport in a vehicle.
BE AWARE of the fall zone of both broken and unbroken clays and that a change in wind direction will affect this.

Connecting the battery:

Ensure you are behind the machine, that the **ARM/DISARM** switch is in the **OFF** position and the trap in a safe condition (either disarmed or in safe mode). Connect the red cable to the Red (+) terminal and the black cable to the Black (-) Terminal. Ensure the terminal fasteners are tight, the battery is safely positioned and the charger has been removed.



Never approach the machine from the front or sides, Do not assume the trap is safe, even without electrical power it may still be armed and can fire without power being applied.

Battery Troubleshooting :

Trap fails to re-arm - If after a period of prolonged use the trap fails to re-arm itself and is found to be stalled (may also be making a humming sound) then this is an indication that the battery is depleted, and the voltage has fallen too low to operate the trap. Disconnect the battery immediately and re-charge (or fit a replacement fully-charged battery).

Although the battery may appear to have recovered, the trap should not be used any further than necessary to make it safe as continued operation at low voltage may cause damage to the motor, Battery or other electrical components.

Circuit breaker has operated - The battery may have been incorrectly fitted (terminals reversed) or an excessive amount of current was drawn either due to a fault or obstruction within the trap.



If the circuit breaker has tripped due to an obstruction DO NOT ASSUME THE TRAP IS SAFE it may still be armed with the obstruction holding back the energy from the spring - carefully clear the obstruction whilst remaining in the safe area behind the trap BE AWARE of the path of the throwing arm AND the debris that may be ejected.

4. Machine arms, but will not fire on command cable button.

- (a) Either the connections, cable or command push button are faulty. Disconnect the Hirschmann connector from the control box socket and using a short piece of wire connect pins 2 & 3 in the socket (do not put anything into the other pin holes as one of these carries continuous +12v for radio use.)



If the trap does not fire then there is a broken wire in the cable or a bad connection within the Hirschmann connector or control box.

- (b) If the trap does fire then reconnect the command cable, remove the cover on the push button box and short across the two spade connectors. If the trap fires - then the push button is faulty. If the trap does not fire - then there is a broken wire in the command cable or a bad connection in the connector.

5. Trap fires by itself!

- (a) Disconnect the command cable or external device (ie. Radio receiver) and switch the trap back on. If the trap re-arms normally - then the command cable or external device is damaged or shorted out. Alternatively, the fire push button switch is stuck in or faulty.
- (b) If the trap continues to fire - then check the arm to crank timing relationship as described on page 11 of this manual. If this relationship is correct then, after having put the trap into the disarmed/safe position, move the roller limit switch out along the slotted bracket to its maximum. If the machine now re-arms normally - then move the limit switch back to within 5mm of its original position. If the trap now fires by itself again then move the switch to 10mm of its original

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ALWAYS disarm the machine before carrying out loading, adjustment or maintenance.

Troubleshooting:

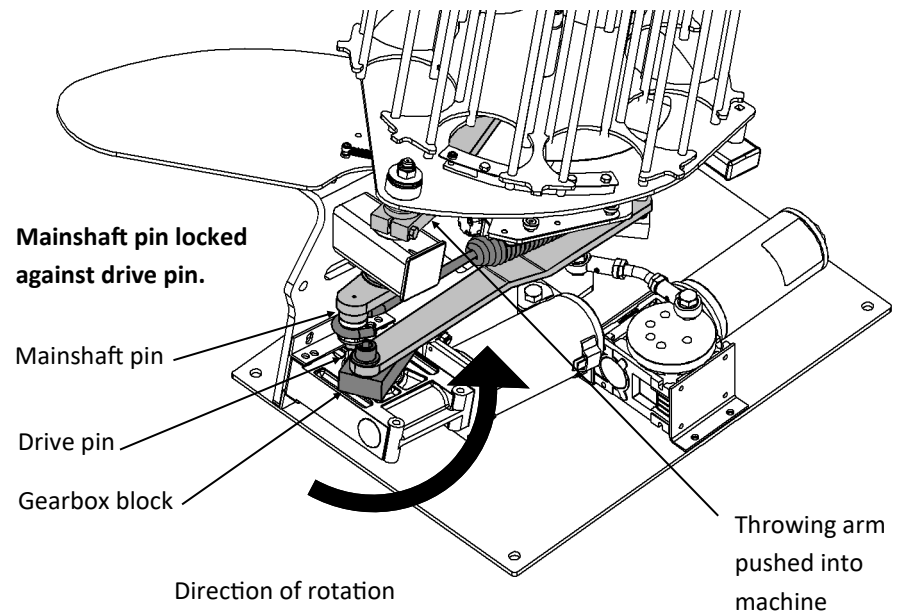
1. **Machine does not arm** (i.e. come to the loaded position).
 - (a) Check the battery is charged and that connections are tight.
 - (b) Check the toggle switch is in the down (ON) position.
 - (c) Check the Throwing arm is clear of the Roller switch under the Casting plate. If not, then press toggle up to nudge the Arm around until it is clear, then switch it back down to the ON position.
2. **Machine still does not arm.**
 - (a) Check all connections are tight including those inside the electrical box. Check for broken wires and damaged connections.
 - (b) If there are no broken connections (battery connected, all switches on) press toggle up to "NUDGE", listen and watch for the 12v relay operation in the control box.
 - (c) If the relay operates but the motor does not turn - momentarily short across the 2 large contacts on the relay with a screw driver or piece of wire. (These are the two terminals with red wires connected to them). If the motor does not turn - then the motor is suspect. If the motor does turn - then the relay is faulty. Contacts may be dirty or worn out.
 - (d) If the relay does not operate – check the fuse has not blown. Replace fuse if it has blown and try again.
 - (e) If the motor does not turn - then short the brown wire to the yellow/green wire on the back of the toggle switch with the switch in the "NUDGE" position. If the relay operates and the motor turns then the toggle switch is faulty. If the relay still does not operate, then it's the relay that is faulty.
3. **Machine runs in "NUDGE" position, but not in "ON" position.**

If the arm is clear of the Roller Switch then the Roller Switch may be faulty. Check that the roller arm is not seized. If so, strip, clean and re-assemble. Otherwise replace the Roller Switch.

Transit Mode Procedure - This is recommended for machine transportation.

Warning: Stand at rear of machine only

1. Disarm the machine by flicking the **ARM/DISARM** switch momentarily towards the **DISARM** position and immediately releasing (long enough for the trap to fire, but not giving the machine a chance to rearm). The throwing arm should be pointing towards the front of the machine. The Gearbox block (A rectangular block attached to the gearbox shaft) should be in a position pointing towards the front of the machine. Push the **ARM/DISARM** switch momentarily in direction of **DISARM/NUDGE** just enough to allow the block to move slightly past the straight ahead position as seen in the diagram below. If the block has gone too far, follow this procedure again until the desired position is achieved.
2. Disconnect the power source from the machine.
3. Adjust the spring to reduce the tension.
4. The throwing arm can be pushed slowly, **USING THE PALM OF THE HAND ONLY**, around Anti-clockwise (Into the machine).



5. As the throwing arm gets to the firing position (pointing directly to the back of the machine) the spring will take over, moving the arm onto the drive bolt on the Gearbox block. This will stop the arm and prevent it from firing.
6. This is **TRANSIT MODE**. The arm is now locked between the drive bolt and the one-way bearing within the trap, it cannot move or release again until power is applied and the **ARM/DISARM** switch operated.

Disarming the machine (Safe mode).

1. To disarm the machine push the **ARM/DISARM** switch momentarily to the **DIS-ARM** position and immediately release (long enough for the trap to fire, but not giving the machine a chance to rearm). The throwing arm should be pointing towards the front of the machine.
2. Turn the **ON/OFF** or **I** switch (if fitted) to the OFF or **O** position and disconnect the battery.

Firing the machine (Ensure the range is clear at the front of the trap.)

1. Turn the **ON/OFF** or **I** switch (if fitted) to the ON or **I** position and set the **ARM/DISARM** switch to the **ARM/LOAD** position. The machine will move automatically and arm itself ready to launch a loaded clay.
2. Press the **FIRE** button to throw a clay.
3. The machine will fire every time the **FIRE** button is pressed and will automatically rearm itself, until disarmed and switched off. When switched off, disconnect the power source.



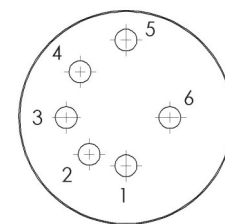
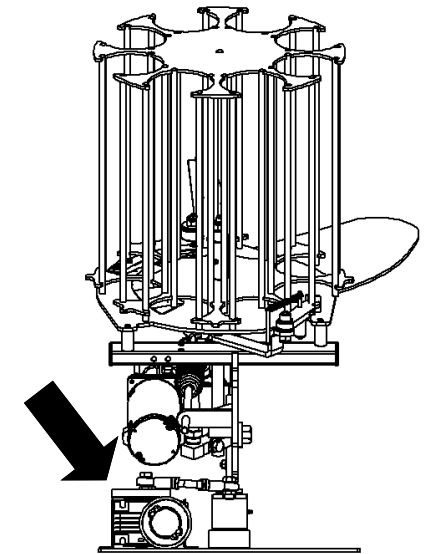
Never approach the machine from the front or sides, Do not assume the trap is safe even without electrical power it may still be armed and can fire without power being applied.

Adjustment: Oscillation

The width of the field in DTL mode can be adjusted by placing the rear bolt on the oscillation linkage in one of the alternative holes.

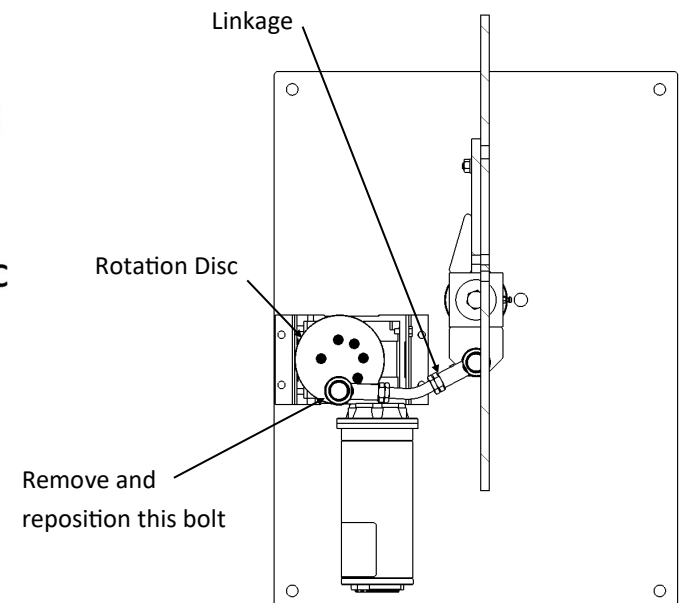
Disarm the trap and ensure it is safe to proceed, then using a 24mm spanner/wrench undo the bolt holding the rear of the Linkage into the Rotation disc, move to the desired hole and re-tighten.

Using a hole positioned further from the centre will give a greater spread of targets (wider field) The centre hole gives a fixed zero position to allow a 'straight away bird' to assist when setting up the course.



ROTATION DISC

Hole 6 for 17°
ATA angles





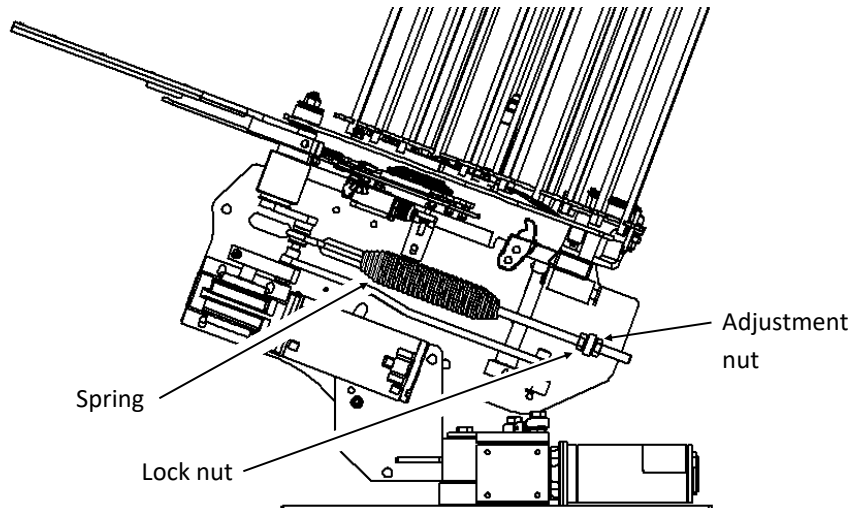
ALWAYS disarm the machine before carrying out loading, adjustment or maintenance.

Adjustment: Spring Tension

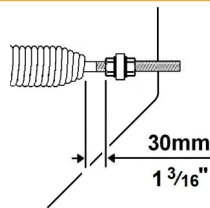
Spring adjustment is always easier if the spring roller on the main shaft is at its rear-most position, this relieves the spring of a large proportion of it's tension making adjustment much easier as well as reducing wear on the spring adjustment mechanism. To achieve this, first perform the Transit Mode Procedure (see pages 7-8) to put the machine into transit mode and then nudge forward until the throwing arm projects directly forward from the front of the machine. At this point stop nudging and disconnect the battery. Loosen the spring adjustment nut.

To increase the spring tension, move the Lock nut towards the coil spring and then tighten the Adjustment nut behind it.

To reduce the spring tension, move the Adjustment nut away from the spring coil and tighten the lock nut behind it.



Important: leave 30mm (1 3/16") thread length between inside nut and spring coil. Increasing spring tension up to full length of thread will seriously detriment the performance of the machine and will cause spring damage or failure.



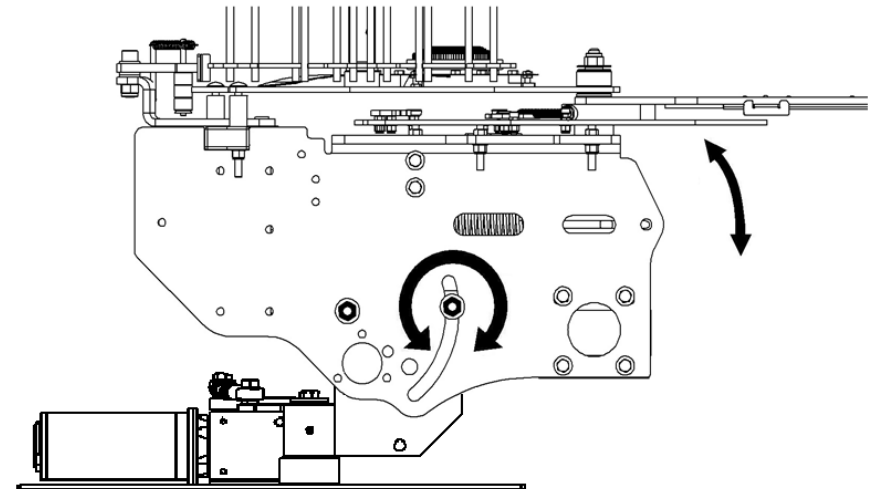
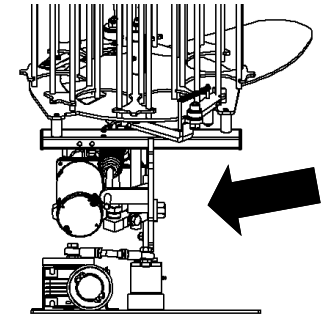
Never approach the machine from the front or sides, Do not assume the trap is safe even without electrical power it may still be armed and can fire without power being applied.



ALWAYS disarm the machine before carrying out loading, adjustment or maintenance.

Adjustment: Elevation

Loosen the locking nut as shown, tilt to desired angle, then re-tighten the nut.

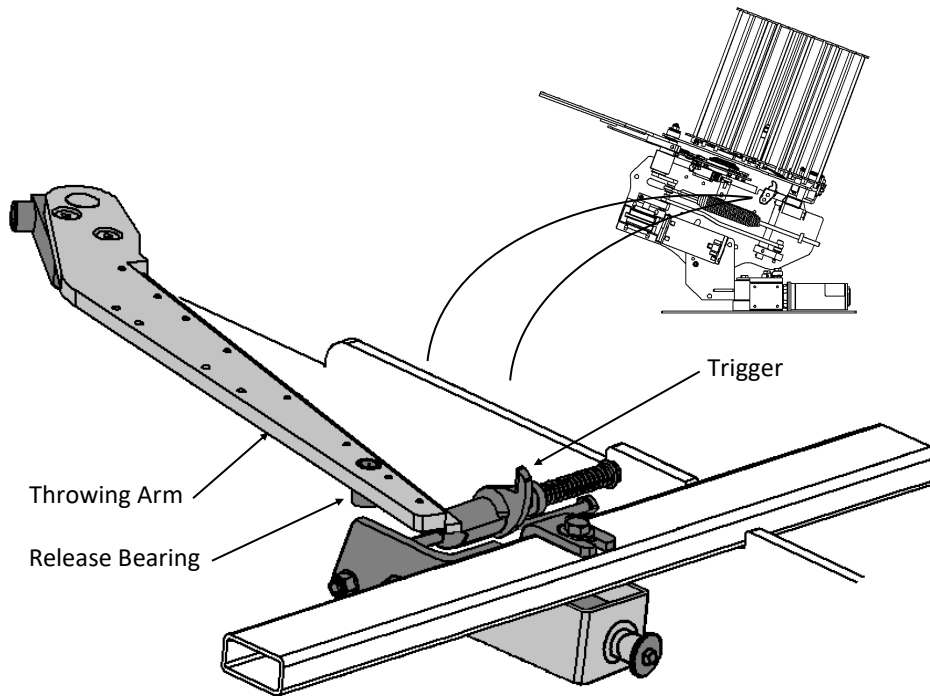


Be aware that if machine is already tilted upwards, when the locking nut is subsequently undone the machine will jolt forward. Support the weight of the machine from the top of the carousel (or have an assistant do this) when adjusting the elevation angle.

Solenoid release Mechanism

Solenoid release mechanisms are used on machines where an instantaneous release of the target is required. The solenoid release mechanism consists of a release bearing fitted to the throwing arm, a trigger assembly which pivots on a bar mounted on a bracket and a solenoid to activate the trigger to allow the release bearing to move past it and allow the trap to fire.

When the machine is turned on and arms itself, the motor drives the arm in a counter clockwise direction up to the solenoid trigger. The arm reaches **Top Dead Centre (TDC)** when the bearing is about 30mm (1-1/4") away from the trigger.



As the arm reaches TDC, the spring is at its maximum. As the arm then passes over TDC the spring takes over and pulls the arm around until it comes to rest with a clunk against the trigger and can go no further. The trigger holds the arm in the cocked position waiting to be fired.

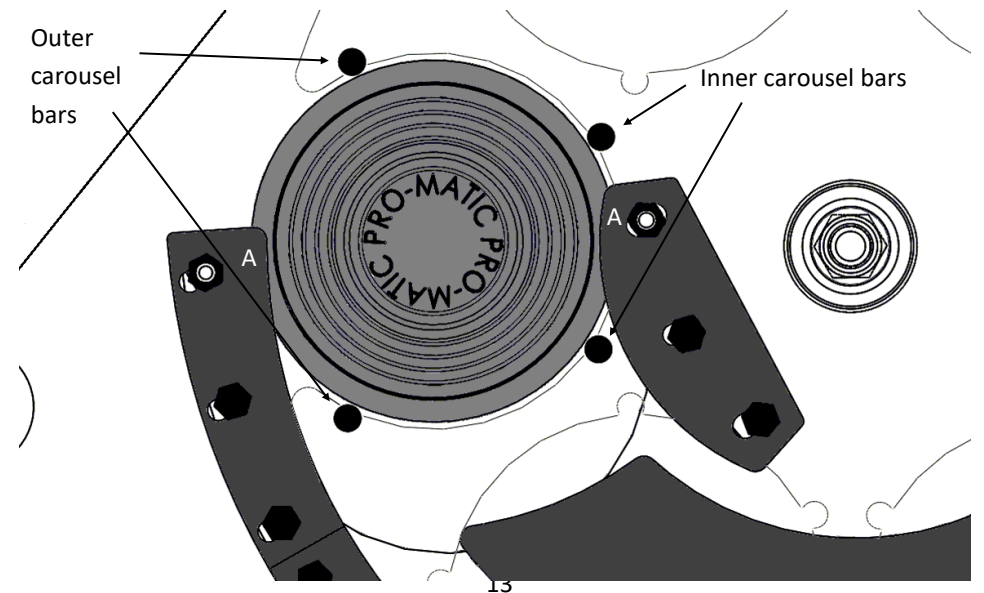
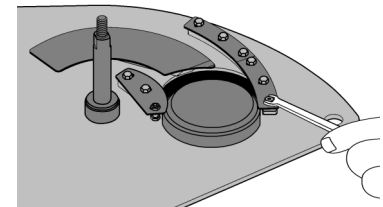
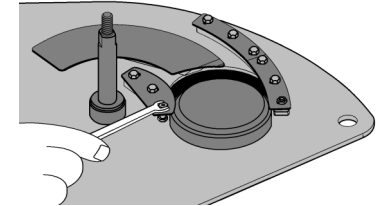
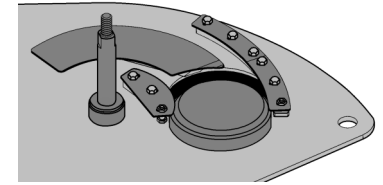
The roller switch is set to stop the motor just as the arm gets to TDC so that there is no chance of the motor driving the arm into the trigger.

Adjustment: Setting up knife edges

Place a clay target on the top plate and slide it half way under the two knife edges.

Using a 10mm spanner/wrench, adjust the height of the inner and outer leading edge of each blade (Position A in bottom diagram). It is desirable to have no less than 0.5mm clearance between the underside of the knife blades and the horizontal shoulder of the clay.

It is also important that the knife edges have the correct clearance around the diameter of the clay and that they support the skirt of the clay resting on the knife edges for its entire travel along the knife edge. To set this, hold the clay against the inner two carousel bars and gently tap the inner knife edge until there is approximately 1mm clearance between the dome of the clay and the knife edge. Tighten fixing bolts. Now hold the clay against the two outer carousel bars. Again gently tap the outer knife edge until there is approx. 1mm clearance between the dome of the clay and the knife edge. Tighten fixing bolts.



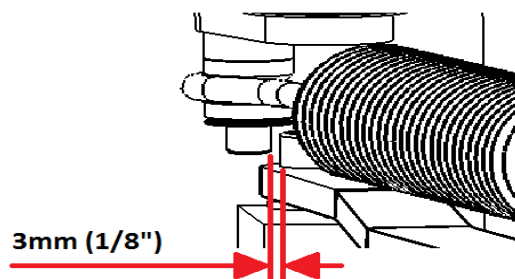
shaft. Be careful not to move the arm while undoing the bolt.

If the arm goes over TDC too early i.e. 40mm before it gets to the trigger, move the arm counter clockwise about 10mm (1/2") at the tip and retighten the arm clamp block bolt. If the arm passes TDC too late and the gap is smaller than 30mm (1-1/4"), move the arm clockwise and retighten the arm clamp bolt. Repeat this process until the 30mm gap is achieved. If you now push the arm over TDC, it should only need a gentle push before the spring takes over and pulls the arm onto the trigger when a firm clunk will be heard.

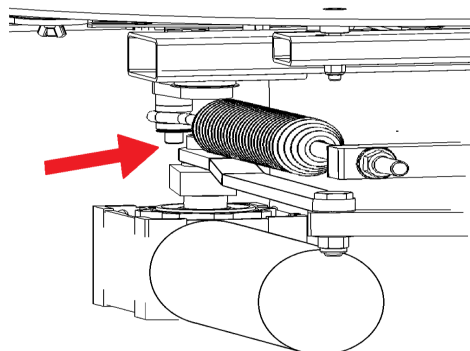
With the arm timing set correctly, the roller switch needs to be adjusted back in to the correct position. This is to create a gap between the main shaft pin and the motor drive pin to avoid the motor driving the arm through the trigger mechanism upon firing.

Before making any adjustment ensure the machine is in the **DIS-ARMED/SAFE** position.

It is best to move the roller switch back in towards the trap about 2-3mm (1/8") at a time. The motor needs to be stopping just as the arm goes over centre, so that when the arm and motor have both stopped there is a gap of about 3mm (1/8") between the main shaft drive pin (under the nylon spring roller that the spring hooks to) and the 10mm Allen key bolt (that drives the base of the main shaft). See diagrams below. Repeat the roller switch adjustment until the required gap is achieved. The timing procedure is now complete.



Gap between the base of the main shaft pin and the drive pin

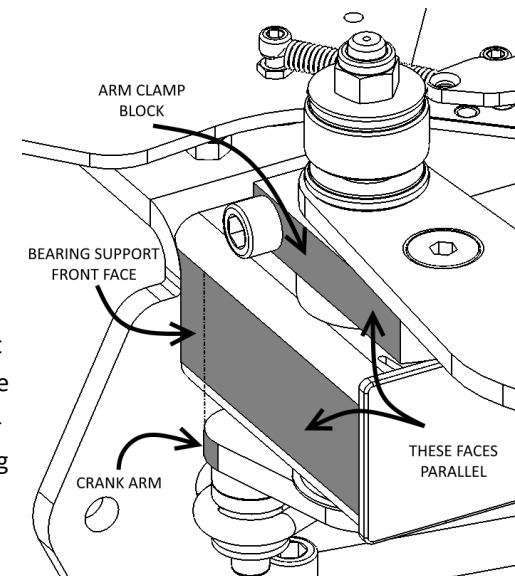


Setting the Solenoid / Arm Timing

This is a potentially hazardous operation. Only attempt this procedure if you have read and understand these instructions thoroughly.

To check the arm timing, press the toggle switch to "ON". The machine will load a clay and come to the cocked position and should be in a position to fire. You should notice that the bearing on the underside of the throwing arm is against the trigger and that there is a gap of about 3mm (1/8") between the main shaft drive pin and the crank bolt. This is the normal position and no further action is necessary. If this is not the case, proceed with the following.

Dis-arm the trap. Rotate the arm counter-clockwise using the nudge button until the arm approaches the 9 o'clock (12 o'clock is straight ahead). Keep rotating the arm until the curve of the crank arm beneath the bearing support is just level (tangential) with the front face. (See diagram). In this position, the Arm clamp block should be parallel to the front face of the bearing support. If this is not the case, loosen the arm clamp bolt and move the arm until these two faces are parallel. Retighten the arm clamp bolt. This is the starting point.



Adjust the roller switch out to the left side of the machine as far as it will go.

Press the toggle switch to "ON". The machine will load a clay and come to the cocked position and is now ready to fire. Note that the throwing arm has stopped short of the trigger.

Press the toggle switch to "OFF" but do not disarm. The machine should still be armed and treated with **EXTREME CAUTION**.

From behind the machine slowly and carefully push the tip of the arm towards the trigger assembly on the side of the machine. If the arm timing is correctly set, when the arm is about 30mm (1-1/4") from the trigger it will go over TDC with the spring pulling the arm on to the trigger. If the arm goes over TDC more than 30mm away from the trigger or it does not go over TDC before touching the trigger, then the arm timing will need to be adjusted.

To adjust the arm timing, **the machine must be in the DIS-ARMED/SAFE position**.

Undo the socket head bolt on the arm clamp block so that the arm can be moved on the