



Installation and Operating Guide

Including Part List

GMV LWT

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GMV Super Star Clay Target Throwers Limited Warranty

For TWO YEARS from the original date of purchase, GMV Super Star will repair any defects in material or workmanship on PARTS ONLY. These defects must be determined to be defective by our examination.

The owner shall, at his own expense and risk, return the machine or defective parts to the GMV Super Star factory outlet or to a GMV Super Star authorized dealer, with all transportation charges to be prepaid.

All replacement parts will be FOB our factory outlet or our GMV Super Star dealer. We shall not be liable for any drayage or labor costs.

This limited warranty is in addition to any statutory warranty.

We do not authorize any person or representative to make any other warranty, or assume for us liability, other than those contained herein. Any agreement outside of, or contradictory to the foregoing shall be void and of no effect.

The following are not considered defects and are not included in the warranty:

1. Damage resulting from an improper line of voltage.
2. Service required as a result of damage due to misuse.
3. Service required as a result of accidents, alteration, fire flood or acts of God.
4. Service required to regular wear parts such as service cords, throwing arms, microswitches, target retainer O-rings and brushes.

The warranty registration card must be returned to GMV Super Star dealer within 30 days of purchase or warranty is null and void.

This limited warranty ends and our responsibility ceases if any changes are made to the machine, if the serial number is mutilated, altered or removed or if any parts or devices not manufactured by GMV Super Star are added to the working mechanism of the machine.

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GMV LWT

Model	LWT
No. of machines	1
Capacity	264 (USA), 300 (EUR)
Weight	88lb. (40/kg)
Height	32"
Width	34"
Depth	32"
Power	12 V DC
No. of motors	1
Interrupter	None
Throwing angles	0-32°
Throwing heights	Adjustable

Safety Precautions	5
Personal Security	5
Equipment Security	5
General Illustration	6
Front	6
Rear	7
Before Installation	8
Unpacking	8
Power Supply	8
Installation	9
Operating Features	9
Loading the Machine	9
Spring Tension Adjustment	9
Height Adjustment	9
Battery Attachment	9
Target Separator	9
How the Machine Operates	10
Release System and Power Supply	10
Wiring	10
Preventative Maintenance	10
General	10
Greasing	11
The Throwing Arm	11
Throwing Arm Replacement	11
The Break	12
Troubleshooting	13
Part List	15
Magazine	18
Throwing Table	19
Main Frame	20
Base	21
Throwing Arm	22
Motor	23
Spring	24
Miscellaneous	25
Electric Box	26

DANGER

Read this Installation and Operating Guide before operating your unit.

Personal Security

To assure the finest performance, please read this manual carefully and let personnel with experience of similar equipment, assemble, disassemble and transport the equipment.

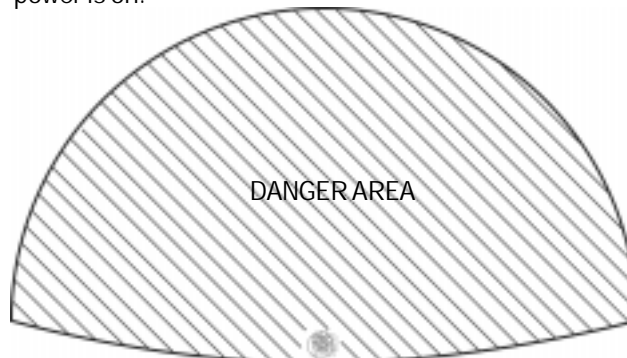
Every person involved with the set up, service, maintenance and daily operation of this equipment must read and follow the safety precautions contained in this manual.

When performing service and maintenance:

- Turn the power off, before entering the danger area.
- Always turn the power off by using the release and then immediately turn the ON/OFF key to OFF position.
- Make sure the machine is uncocked.

No persons or objects should be kept within the danger area. There is a risk of personal injury from moving objects and clay targets.

No one should be in the house of the thrower or in the danger area when the main power is on.



The size of the danger area, depends on the settings of the thrower at the local site.

The radius should at least be the maximum distance of thrown clay targets.

Equipment Security

The equipment should be bolted down on a secure base when in use.

The release shall be positioned in an appropriate location outside of the danger area.

Check safety equipment functions often.

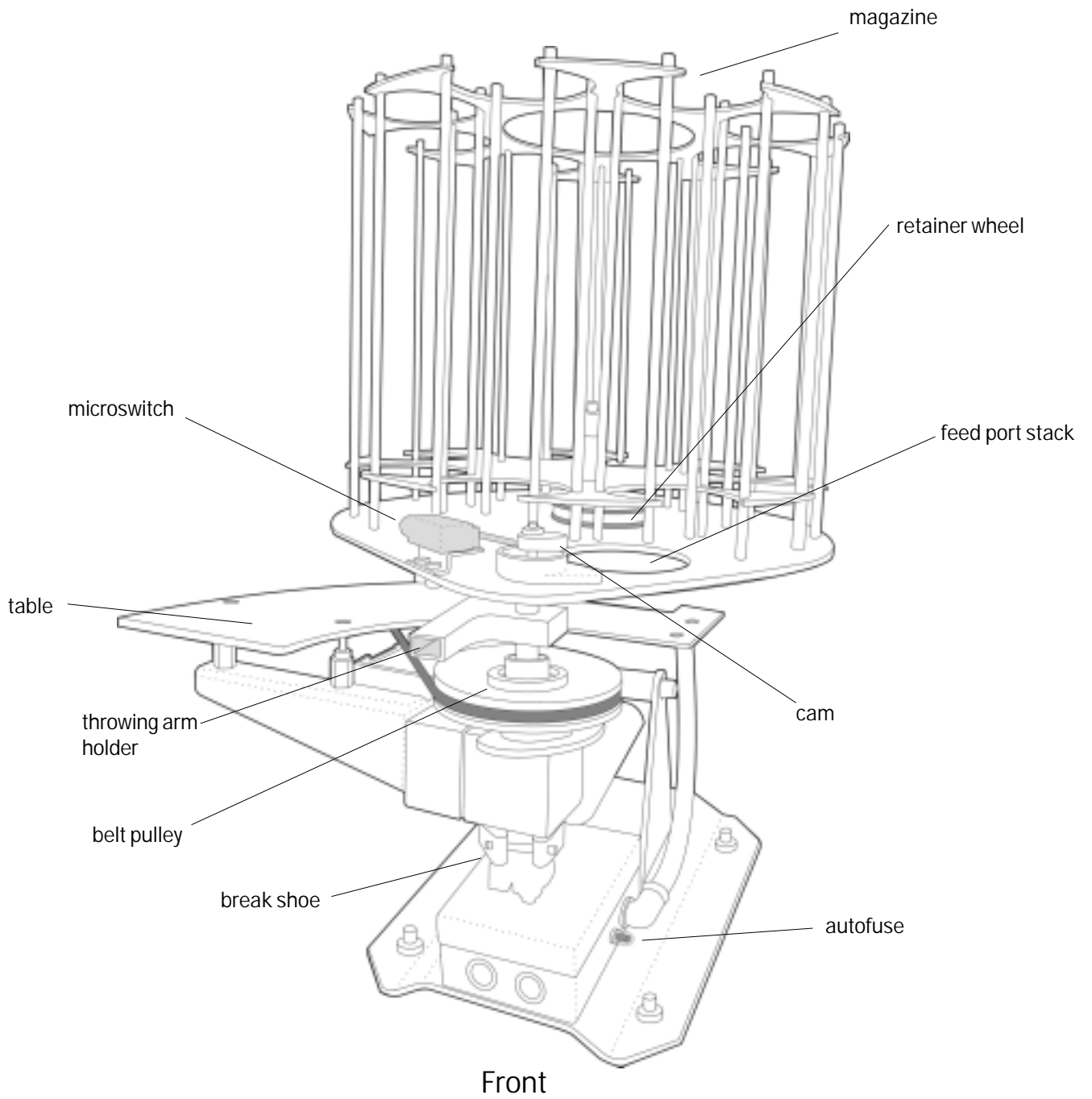
- Check that the release is working properly.
- The safety guards must always be mounted on the machine, when the machine is in use.

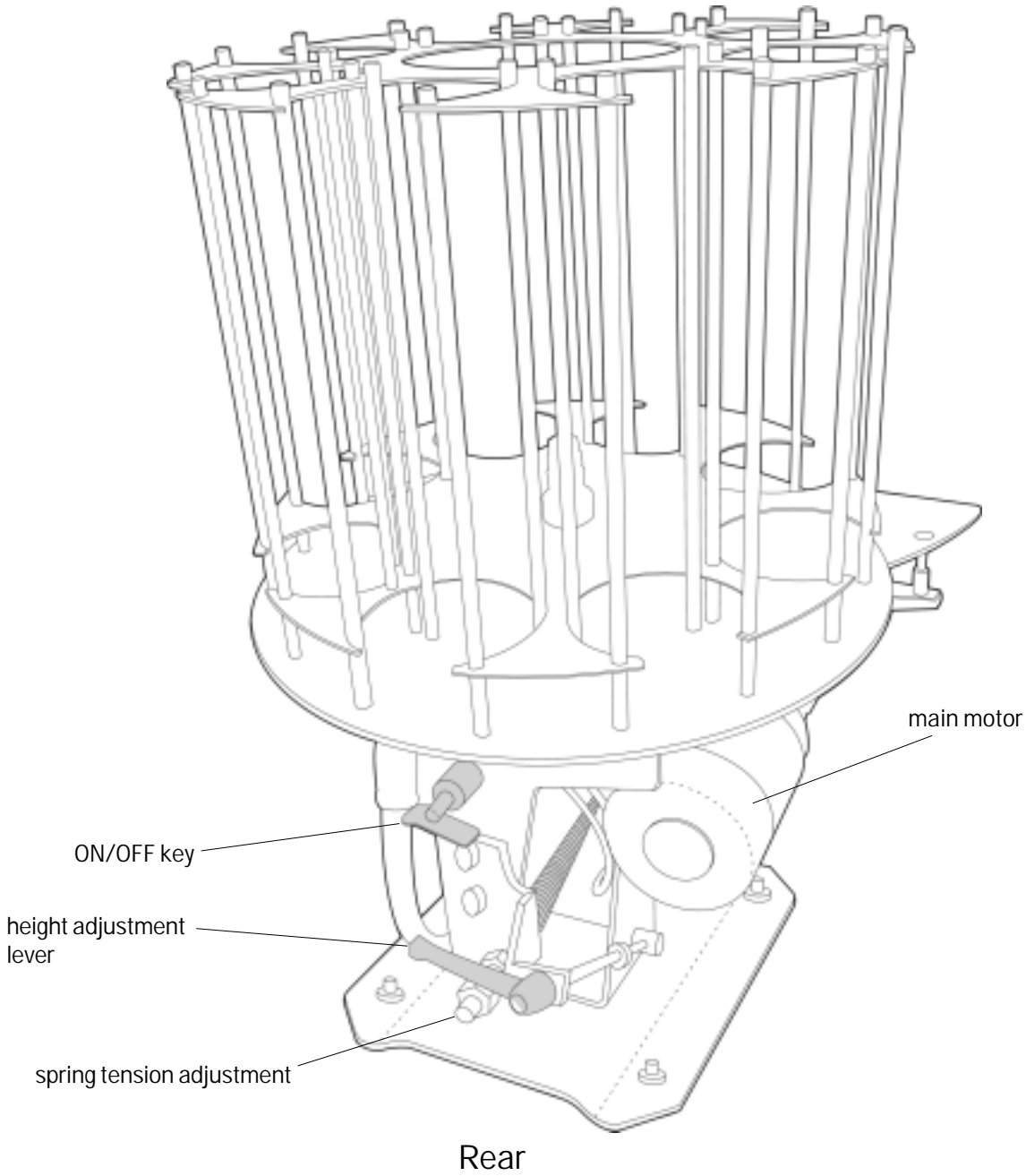
After every use, shut off the power to the machine using the release to uncock the machine and then immediately turn the ON/OFF key.

Observe all electrical equipment as being current carrying.

GMV will not be held responsible for any damage resulting from use of this equipment with voltage other than specified.

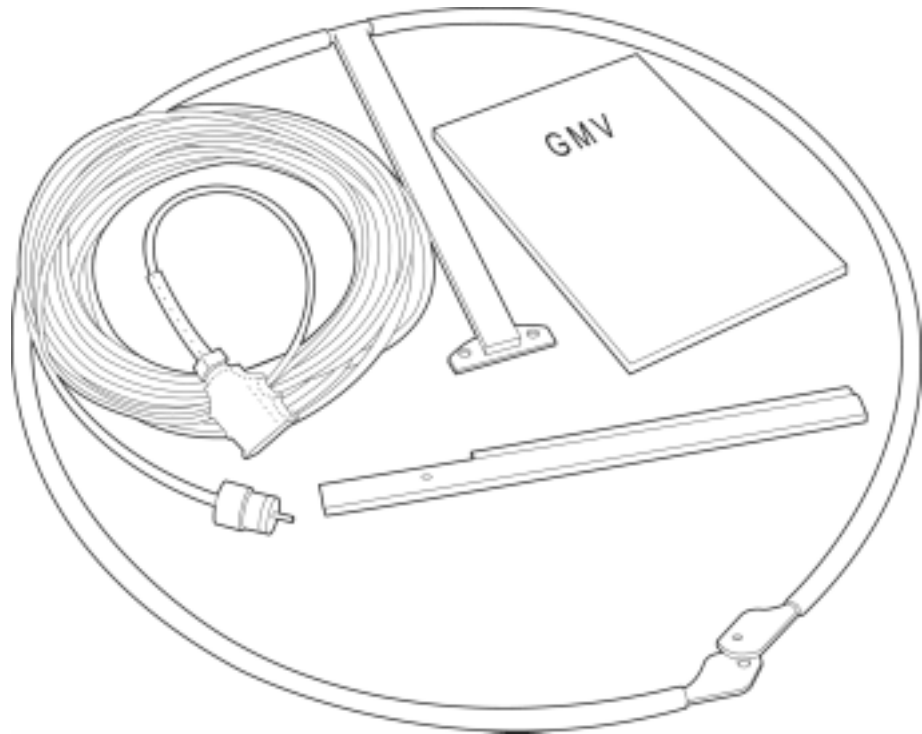
General illustration of the Super Star Clay Target Thrower model GMV LWT.





Unpacking

1. Remove all packing materials from the equipment.
2. Check for any visual damage to the equipment.
 - If any damage has occurred to the equipment during shipping, please contact the transport company as well as your GMV Super Star dealer.
3. Please make sure that the following parts are included with the machine:
 - Safety guard
 - Throwing arm
 - Release cord
 - Installation and Operating Guide with a Warranty Registration Card



Power Supply

Make sure that it is enough power for the motor to produce full effect not to cause disturbances or damage to the motor. When in operation, the motor requires approximately 30 Amps to start up and 12 Amps to operate.

DANGER

Before entering the danger area:

- Turn the power off.
- Always turn the power off using the release and then immediately turn the ON/OFF key to OFF position.
- Make sure the machine is uncocked.

Do not load the machine with broken targets.

Clear the table of any fragments of broken targets.

Beware of the throwing arm's speed when it releases.

1. Put the machine in place on a wood base.
2. Secure to base. Adjust throwing angles (see section of Operating Features).
3. Attach the throwing arm (see section of The Throwing Arm).
4. Fasten the safety guards.

Loading the Machine

Fill the magazine with clay targets, except for the feed port stack.

1. Turn on the power.
2. Release a target to rotate the magazine.
3. Immediately shut off the power using the ON/OFF key.
4. Fill the empty stack.

Spring Tension Adjustment

The factory trajectory setting, with a standard spring is 45 yards (42 m). The spring is continuously adjustable. Loosen the outer lock nut. Then loosen the inner nut to decrease the tension, or tighten it to increase the tension. Tighten the lock nut.

Height Adjustment

Use the black lever to make height adjustments.

Battery Attachment

Connect the blue clamp to negative and the red clamp to positive.

Target Separator

If the targets are damp turn the target separator in as much as possible. The target separator is adjusted to fit standard targets, but the height can be adjusted.

How the Machine Operates

- When the release button is pushed, the motor starts, making the throwing arm to release.
- When the arm is released, the cam turns simultaneously. This causes the axle of the machine to rotate and the machine to re-cock.
- The target magazine rotates an eighths of a turn and is then mechanically locked, when the machine is cocking.
- As the magazine rotates, the target falls onto the table. The rest of the targets in the feed port stack is held in place by the retainer wheel.
- When the cam hits the microswitch the motor stops.
- The machine is ready to throw a new target.

Release System and Power Supply

The main power is switched ON and OFF with the red key.

The release system consists of a release cord with a push button assembly connected to an outlet on the machine.

The machine can also be connected to a Radio Release System or a Voice Release System. The power supply for the release system is prepared for 24 volt D.C.

Wiring

Please follow the instructions concerning wiring of your machine found as an appendix in this manual. All GMV Super Star models has its own field wiring chart.

General

Keep the machine and the area around clean and remove any target fragments and other dirt daily.

If the machine has not been properly shut of using the release and the key, hand release the throwing arm by standing behind the machine and carefully push the arm counter-clockwise.

DANGER

Before entering the danger area:

- Turn the power off.
- Always turn the power off using the release and then immediately turn the ON/OFF key to OFF position.
- Make sure the machine is uncocked.

Do not load the machine with broken targets.

Clear the table of any fragments of broken targets.

Beware of the throwing arm's speed when it releases.

Greasing

A low temperature grease is recommended for general greasing.



- Grease the magazine index wheel (G-LWT-25) frequently. If the surface is dry, grease the eight fingers on the wheel.

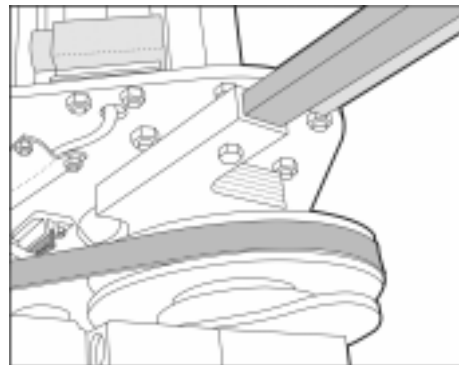
The Throwing Arm

Avoid using the machine without targets as this will result in greater stress on the throwing arm.

After extended usage, the throwing arm may become fatigued and the rubber molding worn. Check it often and replace when necessary.

Throwing Arm Replacement

1. Loosen the screw that holds the arm in the throwing arm holder.



2. Pull the throwing arm free.
3. Replace the throwing arm.
4. Securely tighten the screw.
5. Adjust the height of the arm by loosening the Allen bolt on the throwing arm holder. (Do not adjust the height with the screws for table adjustment)
6. Move the arm up or down as required. The distance between the rubber on the throwing arm and the first rim of the clay target should be 1/32" (1 mm).



DANGER

The Break

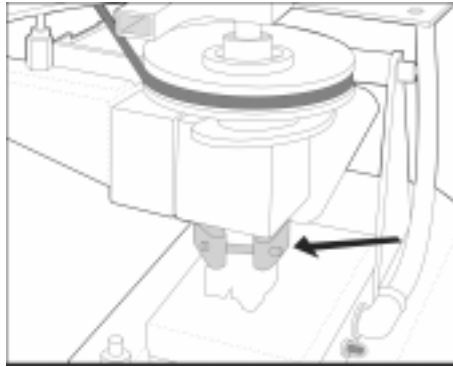
Before entering the house of the thrower or the danger area:

- Turn the power off.
- Always turn the power off using the release and then immediatly turn the ON/OFF key to OFF position.
- Make sure the machine is uncocked.

Bevare of the throwing arm's speed when it releases.

The break is situated on the throwing arm shaft. When the throwing arm is released it should not stop with a swivel. This will put a great strain on the throwing arm.

- To adjust the break, use an Allen key. Adjust the Allen bolt on the break, until the arm stops softly.



DANGER

Read the safety instructions before tampering with the machine.

If problems arise, the following may be of some help. If you need further assistance, please do not hesitate to contact your GMV Super Star dealer.

Problem	Cause	Solution
The machine does not start	No power	Check the power supply. If you have power, check the autofuse situated on the side of the electric box. If there is no power, call an electrician.
No target releases	Faulty release cord	Check the release cord with an Ohm meter. If there is no resistance in one or more wires, cut approximately two feet of the cord on the push button end, then reconnect the push button.
	Faulty relay	Open the junction box on the machine and check the relay with the help of the release button on the relay. If no target is released replace the relay.
Two targets are released at the same time	The target retainer wheel O-rings are damaged	Check if the O-rings on the target retainer wheel are damaged. Replace them if they are damaged.
	The retainer wheel is not turning	Remove the target magazine and the retainer wheel. Then grease the shaft. Reassemble the machine again.
	Different target sizes are used, or the targets may be wet	Remove the targets and make sure all the stacks are loaded with the same size targets.
Broken targets	Fragments of broken targets	Clear the throwing table of any broken target fragments.
	The throwing arm is situated wrong	Adjust the throwing arm. (See section of the Throwing Arm)
	The throwing arm is bent	Replace the throwing arm.
	The target retainer wheels O-rings are damaged	Check if the O-rings on the target retainer wheel are damaged. Replace them if they are damaged.

TROUBLESHOOTING

Problem	Cause	Solution
Broken targets	The target retainer wheel is turning	Remove the target magazine and the retainer wheel. Clean the retainer wheel hole as well as the shaft, then grease with a light oil. Reassemble.
	Different target sizes and makes are used, or the targets may be wet	Remove the targets and make sure to use only dry targets and the same make of targets.
	The throwing arm may be situated too low	Adjust the throwing arm. See section The Throwing Arm.
The machine is throwing targets non-stop	Faulty push button	Disconnect the release cord. If the machine stops throwing targets, replace the push button switch.
	Faulty microswitch	Pull the metal finger on the microswitch with e.g. a rubber band. If the machine does not stop throwing the targets, replace the microswitch.



Part List	15
Magazine	18
Throwing Table	19
Main Frame	20
Base	21
Throwing Arm	22
Motor	23
Spring	24
Miscellaneous	25
Electric Box	26

PARTS MAGAZINE



G-LWT-66



G-LWT-33



G-LWT-46



G-LWT-45



G-LWT-211



G-LWT-52



GMV 25



GMV 733



G-LWT-53



G-LWT-67



G-LWT-210



G-LWT-60



G-LWT-27



G-LWT-28



G-LWT-31



G-LWT-19



G-LWT-29

PART #	PART NAME	DESCRIPTION
G-LWT-19	Eccentric	
G-LWT-27	Bearing housing magazine	
G-LWT-28	Magazine pulley	
G-LWT-29	Magazine spacer	
G-LWT-31	Microswitch bracket	
G-LWT-33	Magazine plate	
G-LWT-45	Safety bow holder, large	
G-LWT-46	Safety bow holder, small	
G-LWT-211	Safety bow complete	
GMV 733	O-ring target retainer wheel	70x5
G-LWT-52	Pivot arm target retainer wheel	
G-LWT-53	Target retainer wheel	
G-LWT-60	Magazine shaft	
G-LWT-66	Magazine	
G-LWT-67	Target separator	
G-LWT-210	Conical bearing	32004
GMV 25	Spring	2.5x16x100



G-LWT-16



G-LWT-70



G-LWT-3



GMV 37



GMV 36



G-LWT-41

PART #	PART NAME	DESCRIPTION
G-LWT-3	Table bracket	
G-LWT-16	Table	
G-LWT-41	Table spacer	
G-LWT-70	Sliding plate	
GMV 36	Target guard rail	150
GMV 37	Target guard rail bracket	

PARTS MAIN FRAME



G-LWT-1



G-LWT-39



P-LWT-39



GMV 75



G-LWT-12



G-LWT-2



G-LWT-7



G-LWT-18



G-LWT-4



G-LWT-6

PART #	PART NAME	DESCRIPTION
G-LWT-1	Main frame stand	
G-LWT-2	Angle main frame	
G-LWT-4	Rocker shaft	
G-LWT-6	Rear spring holder	
G-LWT-7	Joint bolt	
G-LWT-12	Main frame attachment	
G-LWT-18	Bolt	
G-LWT-39	Bearing housing	
P-LWT-39	Bearing housing complete	
GMV 75	Bearing	6005-2RS



G-LWT-13



G-LWT-14-1



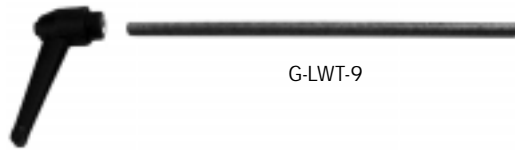
G-LWT-14-2



G-LWT-14-3



G-LWT-8



G-LWT-9

G-LWT-200

PART #	PART NAME	DESCRIPTION
G-LWT-8	Joint bolt	
G-LWT-9	Threaded rod height adjustment	
G-LWT-13	Base plate	
G-LWT-14-1	Base plate cradle	
G-LWT-14-2	Base plate spacer	55
G-LWT-14-3	Base plate spacer	25
G-LWT-200	Lever height adjustment	WN500

PARTS THROWING ARM



GMV 68



G-LWT-34



G-LWT-34-3



G-LWT-32



G-LWT-35

G-LWT-202



G-LWT-62



GMV 75



P-LWT-62



G-LWT-201



G-LWT-24



P-LWT-24

PART #	PART NAME	DESCRIPTION
GMV 68	Throwing arm	
GMV 75	Bearing	6005-2RS
G-LWT-24	Bearing housing	
P-LWT-24	Bearing housing complete	
G-LWT-32	Cam	
G-LWT-34	Throwing arm holder	
G-LWT-34-3	Throwing arm holder shaft	
G-LWT-35	Curve complete	
G-LWT-62	Belt pulley	A1/SPA 132
P-LWT-62	Belt pulley complete	
G-LWT-201	Bearing	6204-2RS
G-LWT-202	Screw Nut	M10x30 M10



G-LWT 17



G-LWT-40



G-LWT-207



G-LWT-61



G-LWT-208



G-LWT-209

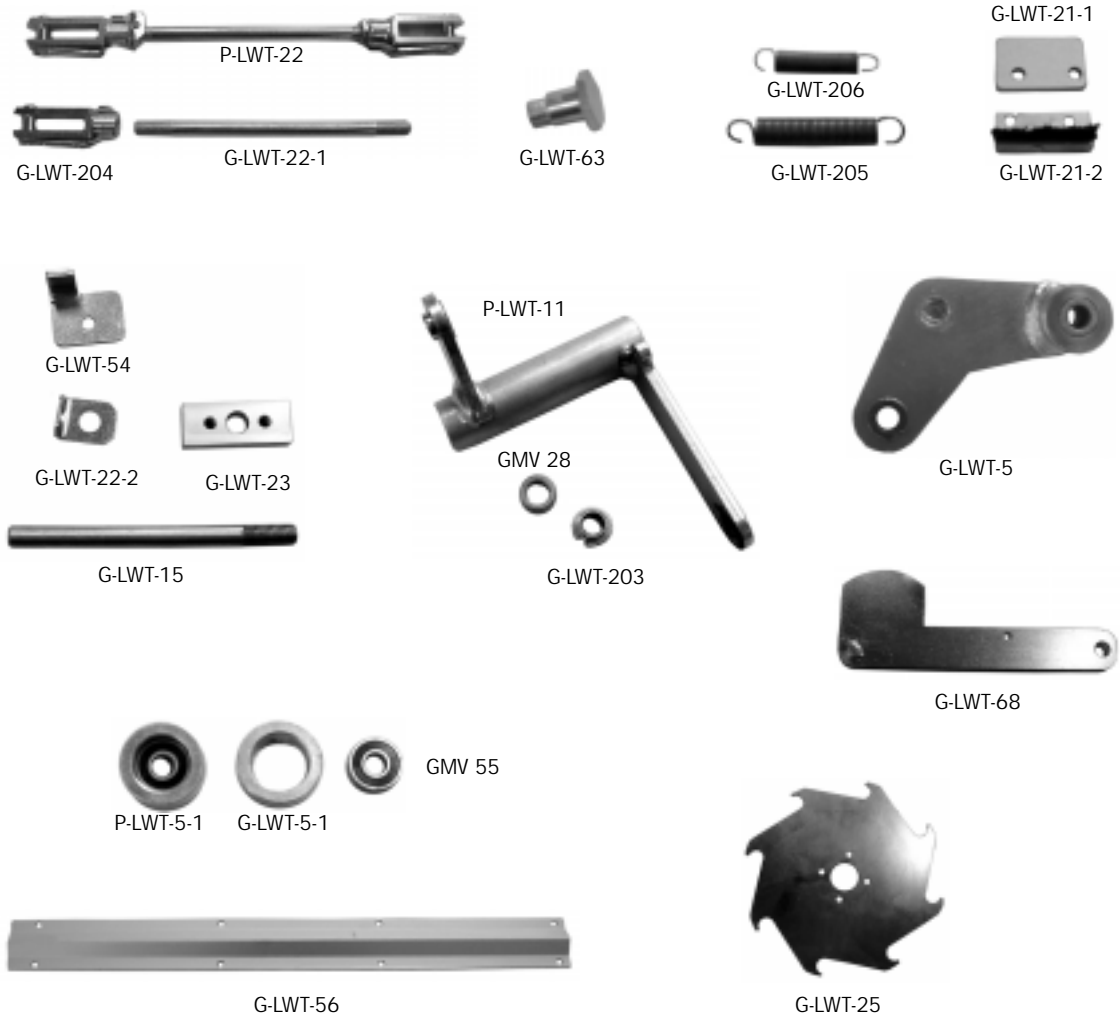
PART #	PART NAME	DESCRIPTION
G-LWT-17	Gearbox mounting plate	
G-LWT-40	Tension screw	
G-LWT-61	Belt pulley	A1/SPA 95
G-LWT-207	Belt	SPA 757 MC
G-LWT-208	Motor and gearbox	12 V
G-LWT-209	Shaft	

PARTS SPRING



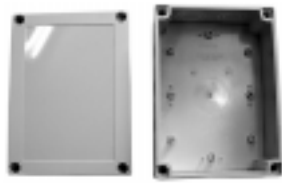
PART #	PART NAME	DESCRIPTION
GMV 61	Woodruff key	7x8x14
GMV 70	One way bearing	AS 425
GMV 70A	One way bearing dust cover	
GMV 71	Break shoe	
GMV 76	Eccentric	
GMV 76 Assembly	Eccentric complete	
GMV 77	Tap eccentric	
GMV 79	Main spring end	
GMV 80	Bearing	6002-2RS
GMV 81	Spring	Yellow
GMV 82	Spring	Green
GMV 83	Spring	Black
G-LWT-20	Spring washer	
G-LWT-36	Main shaft	
G-LWT-37-1	Spacer	7 mm
G-LWT-37-2	Spacer	10 mm
G-LWT-37-3	Spacer	12 mm
G-LWT-38	Break shoe shaft	
G-LWT-65	Main spring connection	

MISCELLANEOUS PARTS



PART #	PART NAME	DESCRIPTION
P-LWT-11	Pivot arm complete	
GMV 28	Bushing	16x10
G-LWT-5	Rocker complete	
G-LWT-5-1	Wheel	
P-LWT-5-1	Wheel complete	
GMV 55	Bearing	6000-2RS
G-LWT-15	Pivot arm shaft	
G-LWT-21-1	Brush spacer	
G-LWT-21-2	Brush	
G-LWT-22-1	Shaft	
G-LWT-22-2	Spring holder	
P-LWT-22	Shaft complete	
G-LWT-23	Shaft holder	
G-LWT-25	Cam	
G-LWT-54	Angle target descent	
G-LWT-56	Cable protection	
G-LWT-63	Screw	
G-LWT-68	Arm complete	
G-LWT-203	Bushing, plain bearing	10/12/18x9
G-LWT-204	Fork	M10x40
G-LWT-205	Spring	1.5x70
G-LWT-206	Spring	1.0x50

PARTS ELECTRIC BOX



G-LWT-212 G-LWT-213



G-LWT-220



P-LWT-213



G-LWT-214 G-LWT-215



GMV 161 GMV 162



GMV 47A

GMV 47



GMV 114A

GMV 45A



GMV 155A

G-LWT-216



G-LWT-217 P-LWT-217



GMV 216



GMV 206



GMV 205



GMV 157

G-LWT-218



G-LWT-219



GMV 217

PART #	PART NAME	DESCRIPTION
G-LWT-212	Main electric box cover	
G-LWT-213	Main connector box	
P-LWT-213	Complete electric box	
G-LWT-214	Battery clamp	Positive
G-LWT-215	Battery clamp	Negative
G-LWT-216	Autofuse button protection	
G-LWT-217	Autofuse	
P-LWT-217	Autofuse complete	
G-LWT-218	Connecting rod	K6
G-LWT-219	Connecting rod	K2.5
G-LWT-220	Plastic screw, main electric box	
GMV 45A	Threaded bracket	
GMV 47	Microswitch	
GMV 47A	Microswitch housing	
GMV 114A	Assembly plate	
GMV 155A	Skin top	
GMV 157	Push button assembly	
GMV 161	Pull cord end	
GMV 162	Pull cord outlet	
GMV 205	Key	
GMV 206	Main ON/OFF switch battery	
GMV 216	Relay	
GMV 217	Connecting rod	K6

GMV Super Star Limited Warranty Registration Card

Use this card in case of production defects within two years from purchase.

Owner

Name _____
Street _____
City _____
Phone No. _____
State/Province _____
Zip (Postal) Code _____

Fold and put together with a piece of adhesive tape.

Product

Model No. _____
Serial No. _____
Date of Purchase _____
Purchased from _____
Date _____ Signed _____
Title _____

Adhesive Tape

Sender _____

Postage

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