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# Operator's Manual

[www.ecolawnapplicator.com](http://www.ecolawnapplicator.com)

Model Eco 600T

3-point hitch

Broadcast Top Dresser





**THANK YOU** for purchasing an Ecolawn Top Dresser. Your new machine has been carefully designed and manufactured to provide years of reliable and productive service. This manual will provide you with safety instructions and general maintenance tips that will help to keep your machine in top running order. Please read this manual and assembly part/list carefully before assembling, operating, or servicing your equipment.

### **Here are 5 Ecolawn Basic Rules of Operations:**

1. Use quality screened material or compost;
2. Use appropriate load size and weight;
3. Load hopper gently to prevent loading compaction;
4. Plan the application before spreading it;
5. Test the spreader by first running it empty. A good application means preparing ahead of time. Make small adjustments in the field and eliminate major repairs.

**Please visit our website or call with any questions.**

Website: [www.ecolawnapplicator.com](http://www.ecolawnapplicator.com)

Tel: 1-866-326-5296

**A good application means preparing ahead of time!**



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## Power Take Off (PTO)

The Ecolawn Applicator's PTO is a Comer Industries Driveshaft. Specific instructions from Comer Industries are provided with the machine. Make sure to read the PTO manual before using the applicator.

## Ecolawn Applicator® One Year Limited Warranty

Terms: Ecolawn Applicators are guaranteed to be free of defects in materials or workmanship for one year from the registered purchase date. **To qualify, the applicator must be registered online at [www.ecolawnapplicator.com](http://www.ecolawnapplicator.com) (under the product tab).** This one-year warranty is extended only to the original, registered purchaser of the Ecolawn Applicator.

Starting from the registered purchase date, Ecolawn will replace, free of charge, any part(s) on the machine that Ecolawn or its approved agent deems to be defective in material and/or workmanship upon examination.

The warranty is limited to the Ecolawn Applicator itself. Ecolawn Applicator® is not responsible for any other equipment used with the Applicator.



## Machine Description

Intended use - The applicator ECO 600T three-point hitch device to perform top dressing or land restoration of various residential, institutional and commercial lawns. Substrates to spread are of various compositions including seeds, calcite clay, crumb rubber, lime, compost, sand or a mix of materials. The user attaches the applicator at the back of the tractor using the three-point hitch, connects the PTO and the hydraulics, fills the hopper with substrates and drives over the land. When operating with the device, the user may or may not engage the ejection system to spread the substrates by activating the PTO.

NOTE: Do not use the machine for any other purpose.

The applicator has a dead mass of 800 lbs (360 kg) and as much as 1000 lbs (454 kg) of substrates can be loaded at one time in the hopper, for a maximum total mass of 1800 lbs (814 kg).

The device is composed of five sub-systems:

1. The main frame that supports all components.
2. The substrate is contained within a plastic hopper standing on a conveyer belt that brings the substrate to the spreading system.
3. The hydraulics (connected to the tractor) can be used to control the opening of the spreader gate.
4. The conveyor can be activated through the PTO of the tractor.
5. The spreading system composed of two spinning disks.



## Safety Instructions

This manual describes the operation of the ECO 600T Ecolawn Applicator spreader only.

### General

- Never allow children to operate power equipment.
- Do not modify the Ecolawn Applicator. Any alterations to the machine will void the warranty.
- Use the Ecolawn Applicator ONLY for its intended purpose.
- Keep hands and objects out of the hopper and away from the agitator/mixer while the motor is running.
- Use only original Ecolawn parts to repair the Ecolawn Applicator.
- Make sure to use suitably sized tractor and balance accordingly (note that the applicator maximum mass is 1800 lbs (814 kg) when fully loaded)

### PTO

Make sure to read the PTO driveshaft manual provided with the machine for specific instructions regarding the PTO.

### Guards

Do not operate the machine when any of the guards have been removed. This may result in severe injury and/or damage to the unit.

### Hopper

The hopper's maximum load is 1000 lbs (454 kg). Never exceed the maximum load capacity; this may damage the spreader.

### Loading, securing and lifting the Unit

Lifting - Attach to the four tiedown/lift points identified on the machine. Alternatively, the applicator can be lifted from under the frame using a fork-lift (it is recommended to secure the applicator on a pallet).

Loading – Once lifted, transport the unit into the trailer, make sure to secure at the four tiedown/lift points identified on the machine.

### Warning decals

Each warning decal meaning is explained on the next page. Replacement warning decals are available at no cost from Ecolawn.

Warning pictograms	Meaning
	Read the instructions
	Wear eye protection
	Wear ear protection (follow tractor operating instructions)
	Bystanders stay clear – thrown objects / rotating spreader blade
	Do not operate with guards removed



## Specific Safety Caution

### Regarding guards

Each guard that cover moving parts has indications printed on it that state: "Do not modify this equipment" and "Do not operate with guard removed".

### Regarding the hopper

A maximum load of 454 kg (1000 lbs) of substrates is allowed in the hopper. This is printed on the hopper wall facing the operator. In addition, the operator is warned to read and understand the operator's manual before using the machine.

## Residual risks

Although significant efforts have been made to ensure maximum safety of the machine, several potential risks remain.

### Access to mixer shaft

By the nature of the machine operation, the mixer shaft remains accessible from the top of the hopper. The drive-shaft never spins unless the PTO is activated, and therefore, the shaft is not accessible by the operator in normal operation. Indeed, the operator must operate the PTO to power the mixer shaft. Never modify the equipment to operate the mixer shaft independently from the PTO.

### Transporting the machine

Machine transport is often performed by lifting and moving the applicator on a trailer platform. Make sure to secure the machine safely during transportation.



## Operating Instructions

### Proper Topdressing

When topdressing, follow the same pattern you would use when mowing. Start with the sections of lawn that are farthest away from the supply source to avoid repeated traffic over the areas that have been top-dressed.

Types of Spreading Materials:

- Screened compost
- Granular and pelletized products
- Sand
- Soil
- Crumb rubber
- Soil amendments
- Custom blends

### Optimal Operation

Never exceed the maximum load capacity of the hopper (1000lbs/454 kg). Some substrates (such as sand or soil) are much denser than others, so it is not possible to judge load size visually. The same volume of sand or soil can weigh significantly more than compost. Overloading the hopper may damage the spreader.

Comparative: Materials and Weights		
Material	Volume (Cubic feet)	Weight (lbs)
Compost: (60% humidity)	20	600
Mix Blend: 50% compost, 50% sand	20	1,100
Sand:	20	1,600

### Main Uses

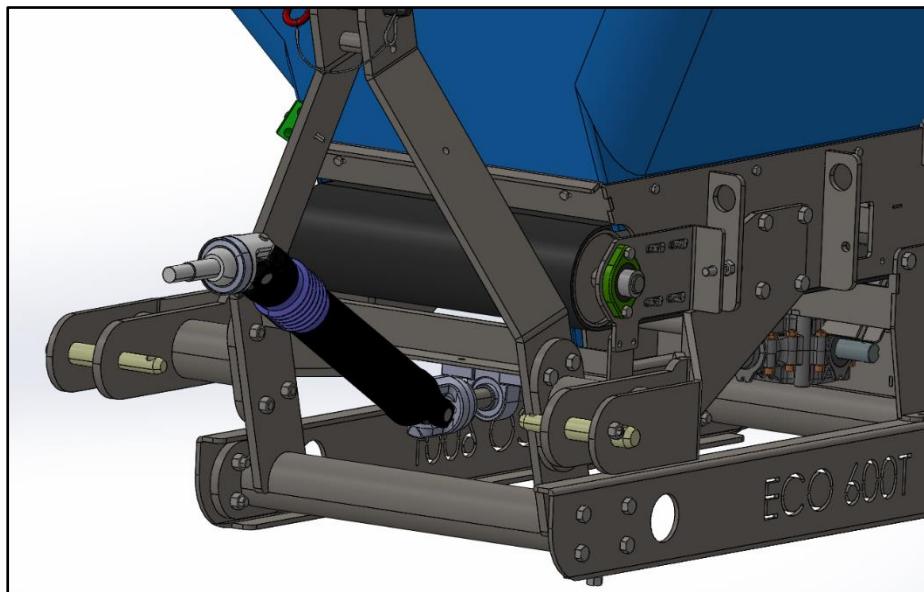
The Eco 600T Top Dresser is designed for compost topdressing, sand topdressing, lawn restoration and renovation, soil amending, and over seeding. To learn more about topdressing, please visit our website at [www.ecolawnapplicator.com](http://www.ecolawnapplicator.com). Do not use the machine for any other purpose.

## Using the Ecolawn Applicator for the First Time

Before using the spreader for the first time, make sure to follow the procedure:

1. Line up 3-point attachment
2. Install 3 pins
3. Plug hydraulic hoses into tractor
4. Measure and cut PTO drive-shaft to proper length (read note below)
5. Install machine key on driveshaft, slide on PTO and tighten set screw
6. Attach the other end of the PTO to the tractor

Note: The procedure to measure and cut the PTO drive-shaft is explained in the PTO drive-shaft manual, do read and follow the instructions in the PTO drive-shaft manual for this operation.



**Step 1.** The spreader's belts are new, so they may not adhere perfectly to the pulleys; they may slip a little when the machine is used for the first time. Before loading the spreader with substrate, run it around empty for about 10 minutes to allow the belts to become seated properly on the pulleys.

**Step 2.** Fill the hopper to 1/3 capacity (see next page, Step 1), then run the spreader until empty and refill to this level for the first 3 or 4 loads.

**Step 3.** Fill the hopper to its maximum capacity (1000lbs/454 kg) and begin using the spreader normally.

**Step 4.** After one hour of use, visually inspect the spreader. Vibrations combined with a heavy load may occasionally cause nuts and bolts to loosen. Tighten these when necessary.

**Step 5.** After 8 hours of use, inspect the nuts and bolts again and tighten if necessary.

If some pulleys do not run correctly after these trials, please refer to Ecolawn Application: Troubleshooting and Adjustments.

## Operating the Ecolawn Applicator

### Step 1. Filling the Hopper

Before filling the hopper, first ensure that the hydraulic gate (Figure 1) is properly closed. The hydraulic gate is controlled through the hydraulic system of the tractor. Check the white gauge at the top of the hopper (back side) to verify the position of the gate.

Fill the hopper with the substrate to spread.

Note: Never exceed the hopper's maximum load capacity (1000 lbs/454 kg); this can damage the machine.

Figure 1 – Hydraulic gate system



Gate position gauge

Safety guard removed  
(The guard must be installed during operation)





### **Step 2.** Starting to spread

Before using the Eco 600T, make sure the conveyor system is not engaged. The conveyor is controlled by the PTO on the tractor. Also make sure that the gate is properly closed. The gate is controlled through the hydraulic system of the tractor.

Note: It is important to engage the PTO gradually, up to 540rpm.

### **Step 3.** Topdressing with a Substrate

After loading the machine, transport to the desired location to start spreading. Before moving forward, open the gate and activate conveyor with the PTO.

Note: The PTO / tractor speed determines the width of spread.

### **Step 4.** Stopping the Spreader

When the hopper is empty, stop the conveyor by disengaging the PTO and close the gate. If filling the hopper again, drive the unit to the substrate source and then refill the hopper.

Note: It is important to disengage the PTO gradually.



## Choosing an Appropriate Substrate

### Quality and Characteristics

It is very important to choose a high-quality topdressing substrate. For greatest cost efficiency, Ecolawn recommends using a bulk substrate which is friable, has a moisture content lower than 65%, and contains no inorganic matter (plastic, glass, or concrete, etc.) or raw organic matter (such as pieces of wood, raw manure).

### Friability

A friable material is one that crumbles easily into small fragments. A substrate that is not very friable appears to be composed of numerous, compact pieces which do not readily break down. Screening a substrate makes it much more friable. Additionally, a substrate containing 10% sand is more friable and will flow more smoothly and efficiently through the applicator.

### Moisture Content

A substrate with a moisture content greater than 65% will tend to stick to the inside walls of the hopper and other parts of the spreader. When working with a substrate with a high moisture content, coat the insides of the hopper, as well as the spreading disk, with a lubricant.

To help the substrate flow freely from the hopper, stop the machine and loosen with shovel. This will loosen the substrate so that it can flow freely from the hopper.

## Troubleshooting and Adjustments

Important: Most adjustments are remedied in the field with just a few procedures

The most frequent problems encountered involve the conveyor, but these can easily be resolved with a few simple solutions. Check the following issues for your particular problem and make the corresponding adjustments as needed.

**Issue: The hopper is full, the spraying disks are spinning but nothing comes out of the spraying system.**

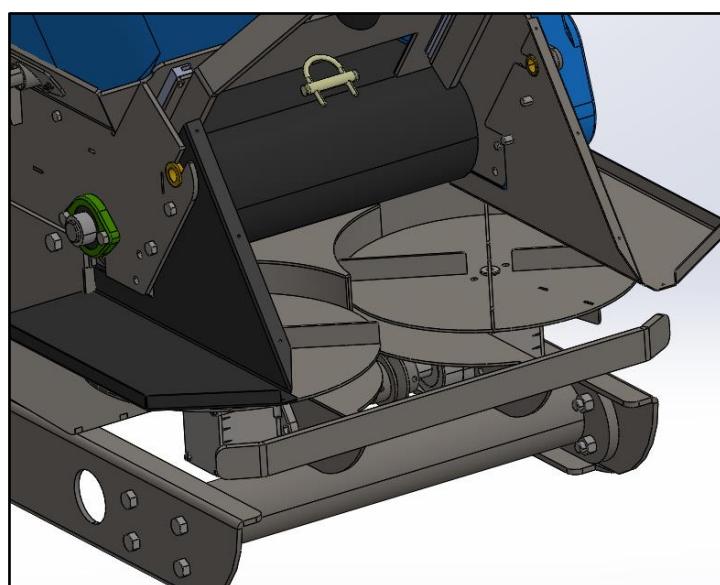
Solution: The substrate may be compacted or a foreign object (ex: stone or roots) may obstruct the system

1. Move the applicator up and down using the three-point hitch system controlled from the tractor;
2. If this is not enough to unblock the system, shut down the PTO and the tractor, remove the black safety guard and check for any foreign object blocking the system (do not forget to put the guard back on after this operation and before using the machine again).

Notes:

- Do not let the conveyor run for more than a couple of minutes if nothing comes out of the spraying system as this may damage the slip-clutch (a spare slip-clutch is provided with the machine).
- The deflector located under the guard may be adjusted depending on the type of substrate used (see General Maintenance section).
- It is recommended to use a dry substrate to avoid jamming.

Safety guard removed  
(The guard must be installed during operation)





**Issue: The spreader's hopper is full. The conveyor has been activated but the conveyor belt is not turning.**

Solution: Adjust the tension of the conveyor belt rollers on each side, 1/2 a turn at a time, to increase the tension on the conveyor belt (see Conveyor belt – specific maintenance). Do this on both sides of the unit equally.

**Issue: The guillotine door does not move when activating the hydraulics**

Solution: The hydraulics may not be connected properly, check the connections.

Notes:

- Always use a pure hydraulic fluid. Check the oil for impurities and change the oil if required.
- Do not force the hydraulic system if jammed as this may damage the system.

## General Maintenance

### Shaft Bearings

Grease the bearings after every 50 hours of operation.

### V-belts

The proper belt tension is tight enough that the belts will not slip during operation. Occasionally, belt tension must be readjusted. Do not over-adjust the tension, as this may damage other parts.

The drive belt for the spreader can be adjusted as follows:

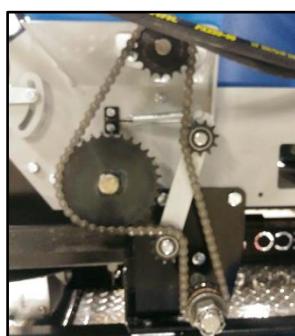
- Loosen the nut on both sides of the adjustment rod;
- Adjust to desired tension;
- Tighten the nut on both sides of the adjustment rod.



### Slip-clutch

The slip-clutch can be adjusted as follows:

- Remove the plastic cover;
- Remove cotter pin;
- Tighten crown nut with a quarter turn or until the sprocket stops slipping (factory setting 30 psi);
- Reinstall cotter pin;
- Reinstall plastic cover.



## Guillotine door

How to access and adjust guillotine door:

- Remove the 4 bolts holding the guard over the disks;
- Loosen the 4 nuts holding the hydraulic cylinder brackets;
- Adjust door;
- Tighten the 4 nuts holding the hydraulic cylinder brackets.

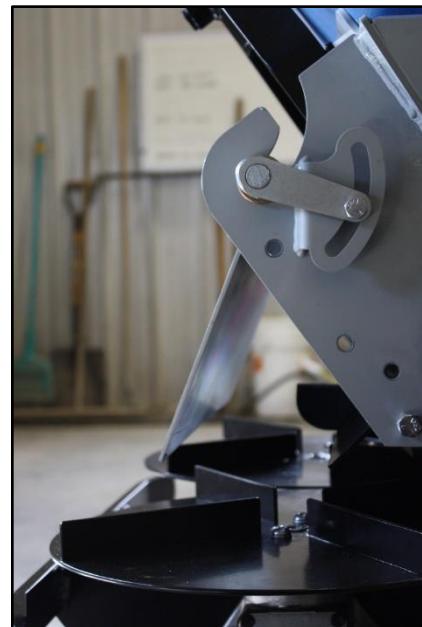
Safety guard removed  
(The guard must be installed during operation)



## Adjustable flap

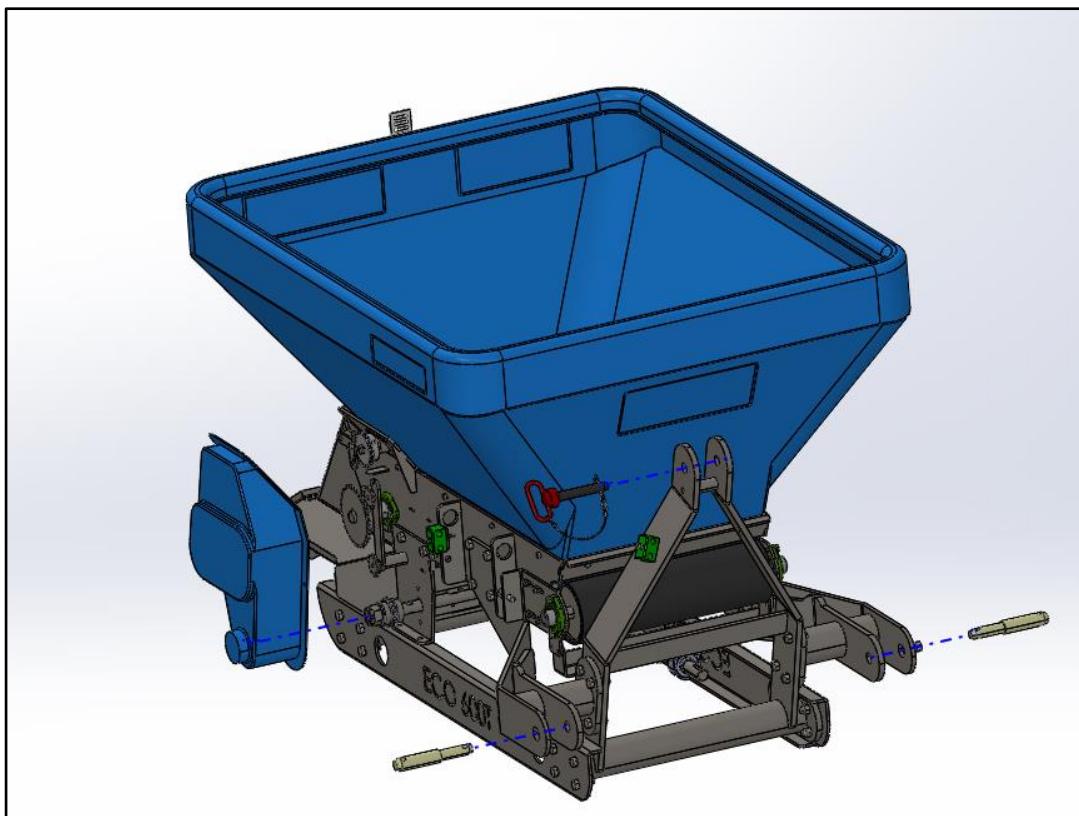
A flap directs the substrate onto the rotating disks to ensure an optimal spray. The flap can be adjusted depending on the type of substrate. A dryer substrate will tend to be ejected faster and will require to be directed downwards by adjusting down the flap.

- Remove the 4 bolts holding the guard over the disks
- Loosen the 2 nuts in the slotted holes
- Adjust the flap to the desired position
- Tighten the 2 nuts in the slotted holes
- Reinstall the guard over the disks





## Assembly Steps



## Conveyor belt – specific maintenance

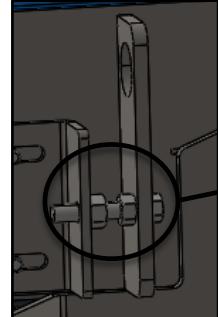
How to adjust the conveyor belt:

1. Loosen the 4 nuts (Q-0041) on each side;
2. Turn the nut (Q-0041) on the adjustment bolt;
3. Once the belt is aligned tighten the 4 nuts (Q-0041).

4 nuts (Q-0041)



1 nuts (Q-0041)



How to change the conveyor belt:

1. Place joint over a roller;
2. Remove flaps;
3. Remove wire in joint;
4. Remove conveyor belt;
5. Install new conveyor belt;
6. Install new wire;
7. Install flaps;
8. Adjust conveyor belt.





## Spare Parts

All spare parts from the list below can be ordered separately from Ecolawn.

Part Number	Description	Part Number	Description
C-0008	SPRING	S-0034	DISK FLANGE
C-0040	RIGHT ANGLE GEARBOX	S-0041	FRAME 600T
C-0041	SINGLE GROOVE V-BELT PULLEY MA25 - 7/8	S-0042	PTO SHAFT SUPPORT
C-0045	V-BELT-ECO 250 -A81	S-0043	DISK SUPPORT
C-0047	1" PILLOW BLOCK	S-0044	TOP POINT ATTACHMENT
C-0049	COMER GEARBOX	S-0045	RIGHT ARM
C-0058	PULLEY MA 43 3/4 - ID 1 3/8"	S-0046	LEFT ARM
C-0060	IDLER SPROCKET	S-0047	CROSSMEMBER TUBE
C-0072	CHAIN	S-0048	RIGHT SKI
C-0073	CONVEYOR SPROCKET	S-0049	LEFT SKI
C-0074	AUGER SPROCKET	S-0050	FLAP DOOR
C-0075	FLANGE BEARING	S-0052	GUILLATINE DOOR
C-0076	PTO DRIVESHAFT	S-0053	DRIVE ROLLER
C-0077	SLIP CLUTCH SPROCKET	S-0054	FRONT ROLLER
C-0078	HYDRAULIQUE CYLINDER (15MAL04-10 HYS)	S-0158	AGITATOR SHAFT SUPPORT
C-0086	CAT1-2 7/8 & 1-1/8 PIN	S-0278	LEVER OPENING ARM
C-0087	HITCH PIN 3/4 X 4 1/2	S-0280	AGITATOR 600T
C-0090	FITTINGS FOR HOSE	S-0281	DISK DEFLECTOR
C-0091	HYDRAULIC HOSE (9 Feet)	U-0018	SPINNER SHAFT JOINT
C-0092	HYDRAULIC HOSE CLAMP	U-0019	SPINNER SHAFT
C-0093	A-31 BELT	U-0026	RIGHT ROLLER ADJUSTMENT PLATE
C-0094	MALE COUPLING	U-0027	LEFT ROLLER ADJUSTMENT PLATE
C-0095	FEMALE COUPLING	U-0028	CHAIN TENSIONER SHAFT
C-0151	HOPPER 600T	U-0029	CHAIN TENSIONER
C-0156	PULLEYS AND BELTS GUARD	U-0030	PTO DRIVESHAFT
C-0224	CONVEYOR BELT	U-0031	BELT TENSIONER SHAFT
C-0225	LONG FLAP 32" X 3,25"	U-0067	SLIP CLUTCH SHAFT
C-0226	SHORT FLAP 18" X 3,25"	U-0068	GEARBOX/SLIP CLUTCH SHAFT JOINT
D-0110	UHMW ANTI-FRICTION PLATE	U-0069	PRESSURE DISK
D-0130	WEIGHT DEFLECTOR	U-0070	PRESSURE DISK PIN
D-0131	LONG FLAP	U-0071	FRICTION DISK
D-0132	SHORT FLAP	U-0096	NON-SLOTTED AGITATOR SHAFT
D-0133	DOOR HEIGHT INDICATOR SLEEVE	U-0097	RIGHT ARM CYLINDER SUPPORT
D-0134	DOOR HEIGHT INDICATOR	U-0098	LEFT ARM CYLINDER SUPPORT
D-0135	CENTER SHIELD	U-0099	CYLINDER SHAFT UPPER
D-0136	RIGHT SHIELD	U-0100	SPRING SUPPORT
D-0137	LEFT SHIELD	U-0101	GUILLATINE DOOR SHAFT
D-0194	AGITATOR SHAFT SUPPORT PLATE	U-0102	CYLINDER SHAFT LOWER
Q-0066	COTTER PIN	U-0103	V-GROOVE BOLTS
Q-0102	MACHINE KEY 1/4 X 1/4"	U-0104	U-BOLT BRACKET
S-0014	DISK	U-0155	SLOTTED AGITATOR SHAFT