

# FORMAX<sup>®</sup>

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Shredder  
FD 8906CC Cross-Cut

Machine Specs	
Model: FD 8906CC	Serial #: _____
Motor	7.5KW (10HP)
Power	Three-phase, 220V, 50/60 Hz, 50 Amp dedicated line required, CS8365 plug included, CS8369 receptacle required
Sheet Capacity	Up to 650 Sheets
Throat Width	21"
Weight	1,984 lbs.

The machine number is specified on the nameplate on the shredder, shown above. Guarantee claims and inquiries cannot be processed if you do not quote the machine number.

Enter this number and the other data into the relevant fields of the nameplate shown here immediately after receipt of the shredder.

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# Safety Precautions

## “Work safety” symbol



This symbol marks all work safety notes in this manual which can endanger the health or life of operators. Please pay attention to this symbol and exercise particular care in such cases. Please also forward all work safety notes to other users. Apart from the instructions in this manual, you should also follow generally applicable safety and accident prevention guidelines.

## “Attention” notes



This icon marks information in this manual which requires particular attention including guidelines, regulations, instructions and correct working procedures intended to prevent damage to the machine and/or other equipment.

## Notes on work safety

The FD 8906CC shredder has been inspected for safety. However, improper operation and misuse risk the following:

- the health or life of the operator
- the machine and other valuable equipment
- the efficient operation of the shredder.

The FD 8906CC employs state-of-the-art technology and is safe to operate. However, this machine can become hazardous if used incorrectly, by untrained staff or for purposes other than those for which it is designed.

- Material with a tendency to curl, e.g. tapes, cords, etc. should not be processed.
- Keep long hair, loose clothes, ties, scarves, etc. away from paper feed opening.
- Only one person should operate the shredder at a time.
- Always follow local safety and accident prevention regulations when operating the shredder.
- No pedestals or other raised surfaces may be placed in the vicinity of the machine if they alter the safety clearances.
- All connecting cables must be laid in such a way that they cannot be tripped over.
- Mechanical wearing parts must be inspected once a year.

The FD 8906CC shredder is intended for shredding paper, cardboard, archive files, tapes, ribbons, CDs and magnetic disks. The hardened, solid-steel cutting rollers are unaffected by loose-leaf binders, paper clips and staples contained in these materials.

Any other use beyond the scope described here is regarded as **not being in accordance with the instructions**. The manufacturer will not be held liable for damage resulting from incorrect use; the user alone is responsible.

Users must also follow the assembly, dismantling, re-assembly, operation and maintenance procedures specified by the manufacturer. The operation, maintenance and repair of the machine must be performed only by trained personnel who are aware of the potential dangers.

The relevant accident prevention regulations as well as other generally recognized rules concerning safety engineering and occupational safety must be observed.

- Each person responsible for assembling, dismantling and reassembling and maintenance (inspection, servicing, repair) of the shredder must have read and fully understood the entire operating manual, in particular the "Safety" section.
- The shredder may only be operated, serviced and repaired by authorized, trained personnel.
- The shut-down procedures specified in this manual must be followed during all assembly, dismantling and re-assembling, cleaning, and maintenance work. This type of work must be performed only when the machine is idle.
- The drive of the FD 8906CC must be secured against unintentional switching-on before performing work on the machine. Set the main switch to "Off" and unplug machine from wall outlet.
- After repair, check all protective devices to be sure they have been re-installed before operation.
- Do not perform any work which may impair your safety while operating the machine.
- Immediately report any changes which impair your safety to the person responsible. Shut the machine down until such damage has been resolved.
- Before operating the shredder, ensure that it is in perfect working condition.
- Ensure that the workplace around the FD 8906CC is always clean and safe.
- The user must not make any conversions or changes on his own initiative which impair the safety of the FD 8906CC. Protective devices must not be removed or rendered inoperative.
- All work which is not directly connected to the normal operation of the machine must always be performed when the machine is idle.
- Doors and flaps must not be opened until the machine is motionless. Observe safety labels!
- Test the safety features after installing or repairing electrical components.

## Checking the safety devices

Check the safety devices:

- at the start of each work shift (when operation is sporadic)
- at least once a week in continuous operation
- after each maintenance or repair

Check the safety devices for:

- specified condition
- specified location
- safe attachment
- specified function

Correct defects before you operate the shredder.

1. Immediately shut down the shredder if defects occur during operation and make sure the defects are corrected.
2. Do not modify or remove protective devices. Do not switch off protective devices. For safety reasons, modifications of the machine are not allowed.



**Danger:** Defective safety devices can cause serious accidents. If safety devices are not working properly, the shredder should immediately be put out of operation.

**Never** reach into the cutting system while it is operating; you risk serious injury!

Only when all safety devices are operating correctly can the shredder be used again.

**Operate the shredder only when these devices have been checked and are in order.**

1. Check the **Safety Bar** push switch (A) in front of the feeding table:

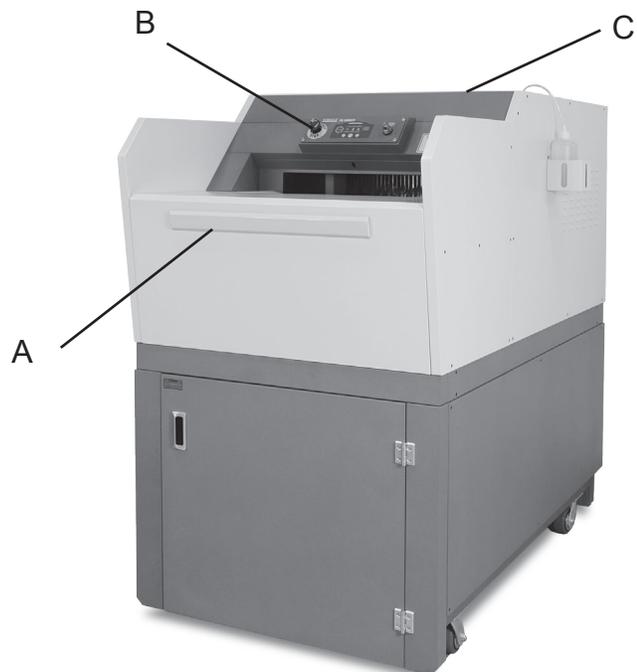
The shredder must switch off immediately when you press the **Safety Bar** and the Emergency Stop Light (B) must go on.

2. Check the **Emergency Stop Button** (B) on the left of the control panel:

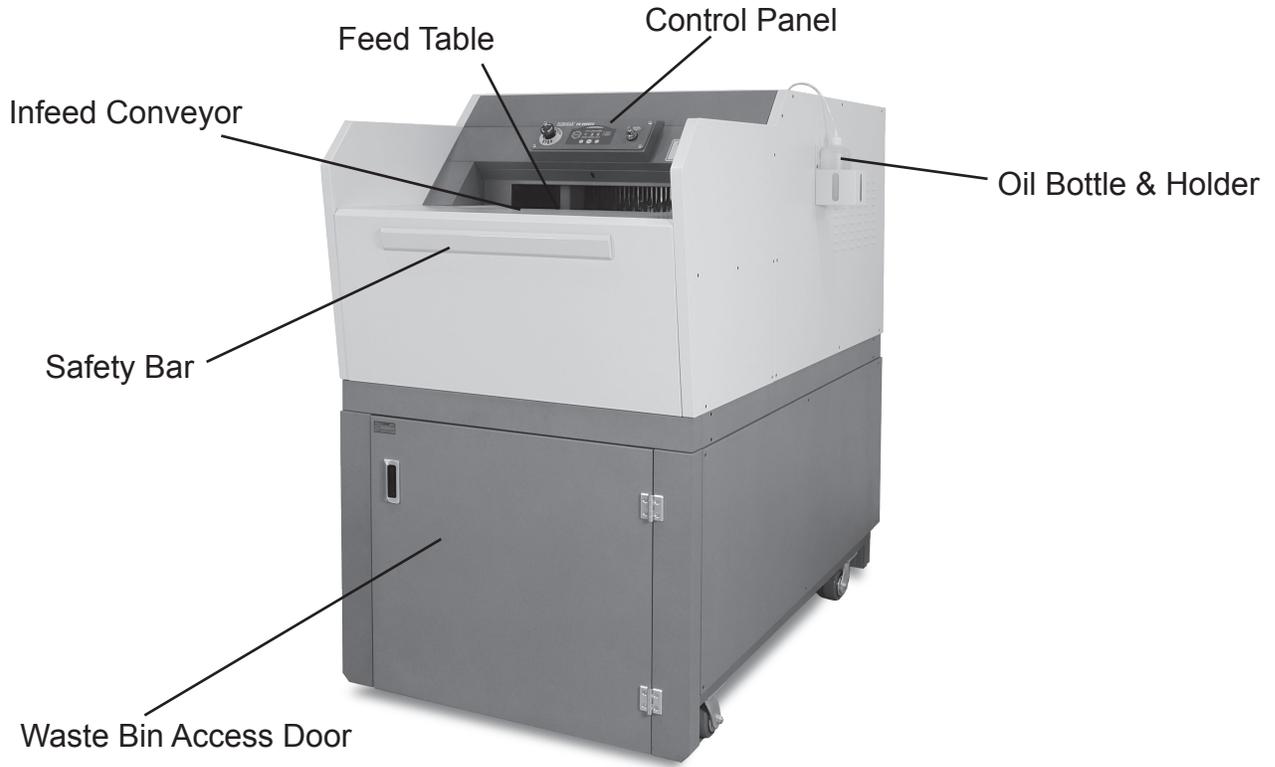
The shredder must switch off immediately when the button is pushed, and the Emergency Stop Light must go on.

3. Check the **Safety Switch** inside the Cutting Block Access Door at the top of the shredder (C). Press the door handle release. Handle will rotate up. Pull up on handle.

The shredder must switch off immediately when the door is opened, and the Emergency Stop Light must go on.



# Overview



Front View



Control Panel



# **Specifications**

## **Cutting Data, Speed, Dimensions, Weight**

Cutting Style:	Cross Cut
Shred Size:	5/16" x 1-1/2" - 3"
Sheet Capacity:	Up to 650
Speed:	Up to 35 feet per minute
Feed Opening:	21"
Dimensions:	47" W x 81" L x 63" H
Dimensions w/optional Conveyor:	47" W x 125.5" L x 63" H
Feed Table Dimensions:	47" W x 23.5" D x 49.5" H
Space Requirements, including space to remove waste bin:	79" W x 110" L x 80" H
Bin Capacity:	102 gal.
Weight:	1,984 lbs.

## **Motor Specifications, Power Requirements**

Motor Type	Horizontal Geared
Rated Power	7.5KW (10HP)
Operating Voltage	220V 50 Amp dedicated line required
Phase	3-Phase
Frequency	50/60Hz
Plug/Receptacle	CS8365 plug included CS8369 receptacle required
Rated Current	25.5A/14.7A
Output RPM	25 RPM/35 RPM
Number of Poles	4
Total Rated Power Pn	7.5KW
Total Rated Current In	26A
Total Fuse Protection	35A



Power Plug

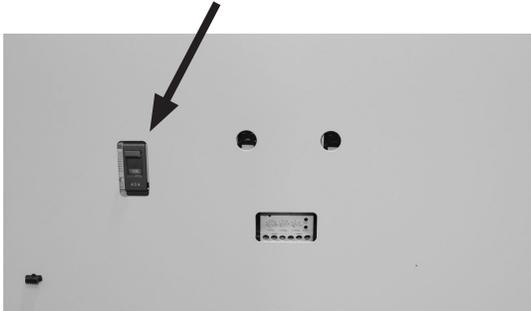
# **Installation**

1. Appropriate power receptacle must be available at installation site.
2. The FD 8906CC is delivered completely assembled (although it can be delivered in parts, if necessary.) During transport, be aware of the shredder's high center of gravity.
3. The shredder can be moved on its casters. If a fork-lift is used to transport the machine, be sure to use the designated pick-up points.
4. Install the shredder on a flat and even floor without carpeting.
5. Once the shredder is in place, lock the caster brakes, and plug in power cable to appropriate power source.

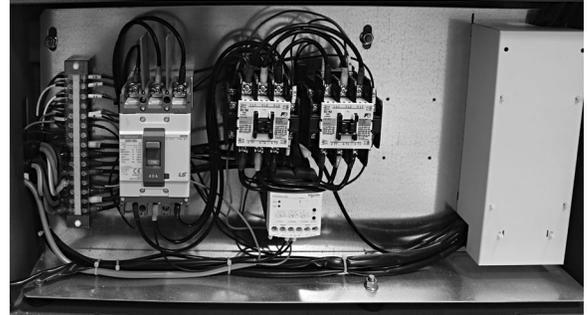
# Start-up and Operation

## Main Switch

Main Power Switch



Breaker Panel



Breaker Panel Interior

## Control Panel

### LOAD INDICATOR

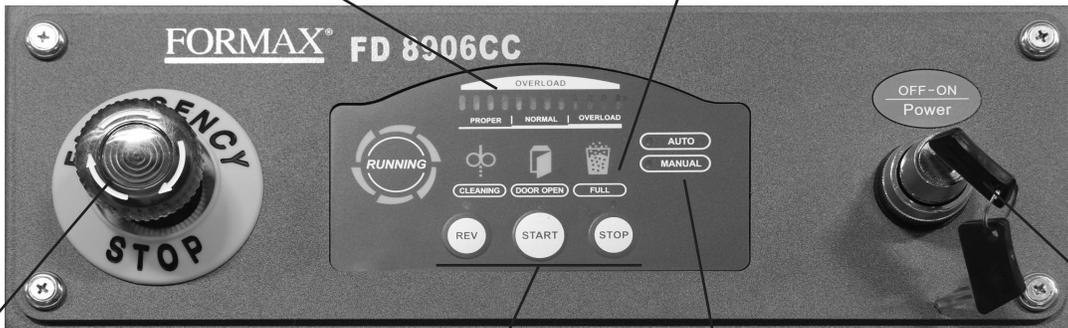
*LED Display*

Displays load to provide maximum capacity and avoid paper jams.

### MODE/FULL/OPEN INDICATORS

*LED Displays*

Lights signify mode (Auto/Manual/Stop/Reverse) and indicate when bin is full or door is open.



### EMERGENCY STOP

*Red Push Button*

Push button to stop cutting system. Shredder remains in standby mode until Start button is pressed. (Shredder can also be stopped by pressing Stop touch pad or the large yellow Safety Bar on front of shredder.)

### REVERSE / START / STOP

### AUTO / MANUAL MODE SELECTOR BUTTONS

### OFF/ON

*Key-Operated Toggle Switch*  
Turn key to right to turn on cutting system.

# **Operation**

1. Set main switch to ON (page 7). Turn the Key OFF/ON toggle switch on the control panel to the ON position.
2. Press the START button. The conveyor will begin to move in the forward direction.
3. Place the material to be shredded on the feed table, then slide it onto the infeed conveyor belt, in appropriate stacks. (Up to 650 sheets.)

NOTE: If material is accidentally placed onto the conveyor belt, DO NOT REACH FOR IT. Instead, press the yellow Safety Stop Bar (front of feed table) or the red STOP button (left side of control panel). When the shredder stops, press and hold the REVERSE button. The conveyor will operate in reverse, allowing safer access to the materials. The shredder will stop when the REVERSE button is released. To resume shredding, press STOP button, then the START button.

## **Turning off the shredder**

1. To shut down the shredder, press the STOP button on the control panel.
2. Turn Key OFF/ON toggle switch on the control panel to the OFF position (to the left).
3. Open the electrical control panel door, and flip the main power switch DOWN to the off position.

## **Overloading the motor**

If the shred capacity of the machine is exceeded (too large a stack of paper, etc), the shredder will stop automatically. To resume shredding:

1. Push and hold the REVERSE button until the paper or other material backs completely out of the shredder.
2. Press the red STOP button or the SAFETY BAR on the front of the machine, then divide the materials into smaller stacks.
3. Press the START button. The conveyor and cutting blades will begin to move.
4. Continue shredding, feeding less paper or fewer materials at a time.

## **Oiling Cutting Blades with automatic EvenFlow Oiling System**

The EvenFlow Oiler helps keep the cutting blades in peak operating condition by periodically applying oil to the blades.

1. To replace the oil bottle, unscrew and remove the cap from a new bottle of oil. Insert the hose and threaded screw cap. Tighten cap and place bottle in holding bracket on the right side of the shredder.

## **Frequent Overloading**

If the shredder is repeatedly overloaded, the motor can overheat, which will cause the shredder to switch off automatically. To resume shredding:

1. Allow the motor to cool down for approximately 20 - 30 minutes before using.
2. Once the motor has cooled sufficiently, resume shredding by following standard operating procedure.



### **NOTE:**

To maintain optimum performance and allow constant operation, avoid repeatedly overloading the shredder. This will prevent time-consuming reversing cycles, and will provide the highest possible throughput.

## Emptying the Waste Bin

Shredded paper and particles accumulate in the shredder waste bin during normal operation. When the “Waste Bin Full” lamp lights, empty the waste bin.

1. Switch the shredder off by pressing the STOP button on the control panel, turn the Key OFF/ON toggle switch to the OFF position and flip the main power switch to the OFF position.
2. Open the waste bin door. Grasp handle on waste bin and pull straight out. Gather sides of shredder bag(s) using drawstring and slide bag up and out. Empty and replace bag.
3. Push the waste bin in, close the door, turn power switches back on and resume shredding.

## Maintenance and Inspection



**NOTE: The maintenance procedures which follow should be performed only by authorized and trained technicians.**

### Removing & Reinstalling Side Covers

Side covers are attached by Phillips head screws.

1. To remove covers, insert screwdriver through access holes (Fig. 1), and remove screws. Lift covers off frame hooks.
2. To reinstall, rest panels on hooks, replace screws.



Figure 1

### Conveyor Belt Maintenance

- **Checking Belt Tension**  
When loaded with material, the conveyor belt must not slip, i.e. stand still when material is loaded. If the belt slips, it must be tightened. Contact the Formax Service Department for assistance.
- **Checking Belt for Wear**  
The upper surface of the conveyor belt can become worn over time. The belt must be replaced when the woven fabric inlay becomes visible. Contact the Formax Service Department for assistance.
- **Cleaning the Conveyor Belt area**  
The conveyor belt area must be cleaned once a month, or as needed to maintain optimal performance.
  1. Switch off the shredder and unplug from wall outlet.
  2. Remove the covers on both sides, revealing the cleaning openings in the conveyor belt area.
  3. Use compressed air to blow out particles, or a vacuum to remove dirt and dust.
  4. Re-install side covers.

NOTE: Paper clips in the shredded materials may increase the frequency of cleaning necessary, and may become caught in the sides of the belt.

- Cleaning the Conveyor Belt Tensioning Station

The tensioning station must be cleaned once a month, or as needed to maintain optimal performance.

1. Switch off the shredder and unplug from wall outlet.
2. Remove the feed table and front panel of tensioning station (Fig. 2).
3. Remove particles and dirt.
4. Re-install the feed table and front panel of tensioning station.

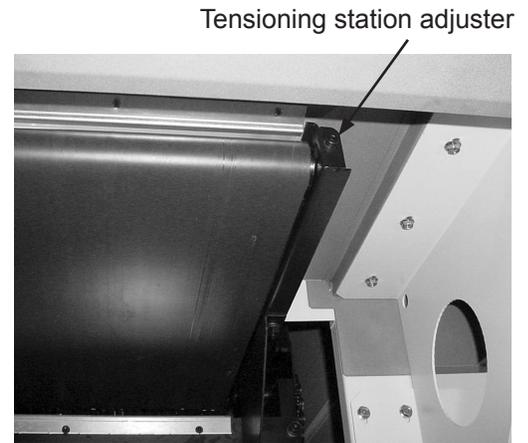


Fig. 2 Underside View of Feed Table and Infeed Conveyor

- Checking the Cutting Head Chain Tension

Check the chain tension once every week in the first month, then once a month thereafter.

1. Switch off the shredder and unplug from wall outlet.
2. Remove the top right side cover.
3. The sagging of the chain (see Fig. 3) should be 9 - 14 mm, measured from the top inside of the frame to the cutting head chain.

If it is not within this range, loosen the tension screws until the sagging reaches the correct level. Retighten the tension nuts.

4. Replace the side cover, plug in the shredder.



**NOTE:**

Excessive tensioning of the chain can cause premature wear of the chain and bearings. The smallest allowed chain sagging in the first month of operation is 5 mm. After that, 9 mm.

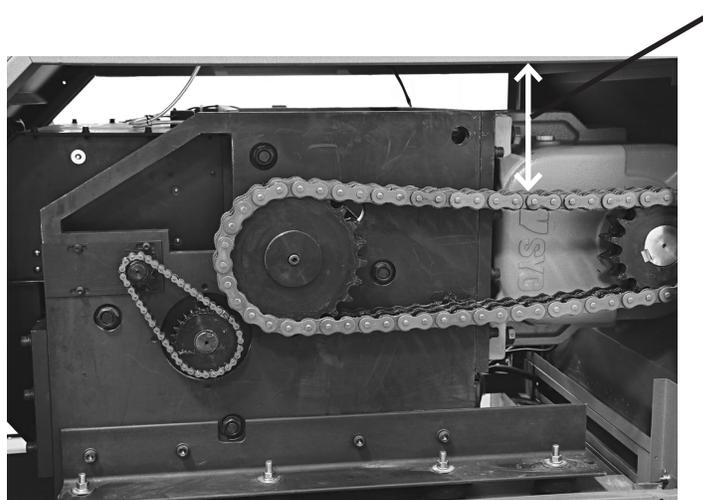
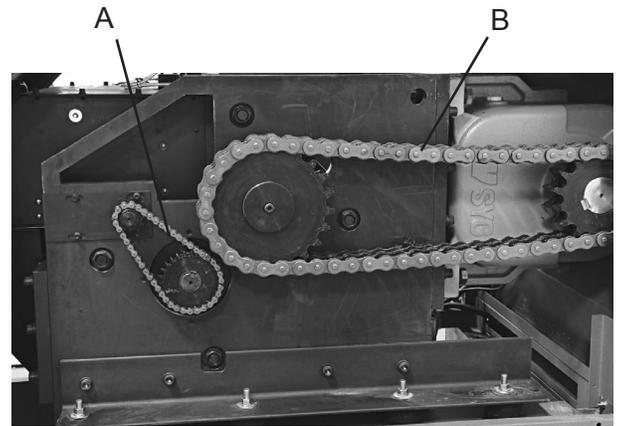


Fig. 3

## Lubricating Shredder Mechanisms

- Drive Chains: The drive chains should be checked during PMs, and greased as needed.

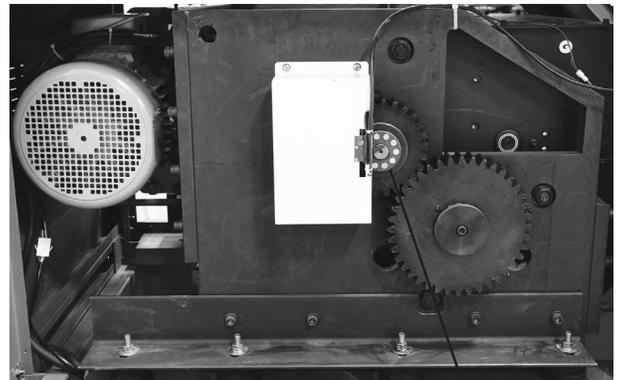
1. Switch off the shredder and unplug from wall outlet.
2. Remove both top side covers.
3. Grease the cutting system conveyor belt drive chain (A) and the motor cutting system drive chain (B).
4. Replace side covers and plug in shredder.



Right Side

- Synchronizing Wheels:

1. Switch off the shredder and unplug from wall outlet.
2. Remove left top side cover.
3. Remove the gear cover.
4. Grease the synchronizing toothed wheel (C).
5. Replace covers and plug in shredder.



Left Side

C

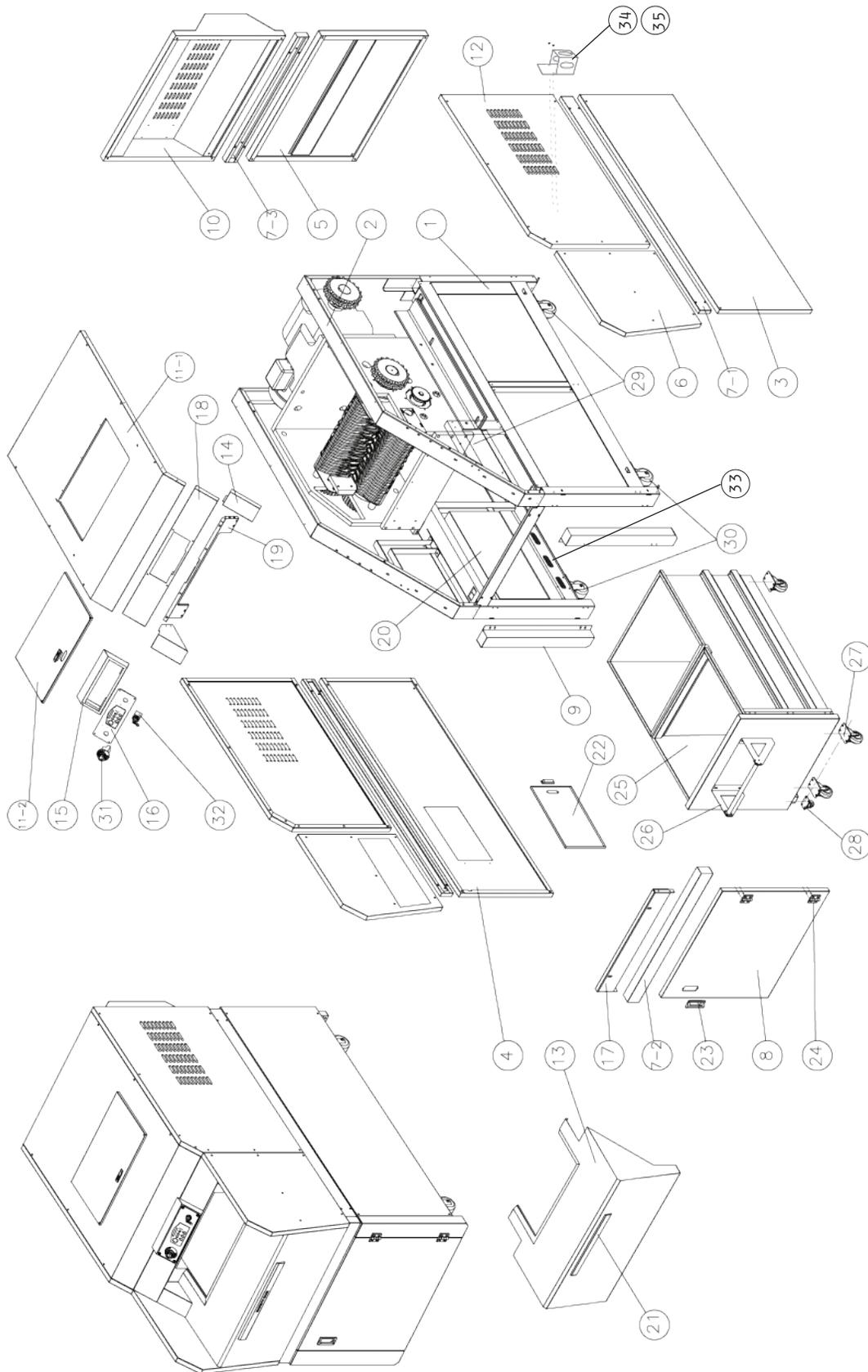
## Exterior cleaning

- Turn shredder off and unplug from wall outlet.
- Wipe the exterior surfaces with a soft cloth. If the surfaces are very dirty, use a neutral detergent, then wipe again with a soft cloth.

### CAUTION:

- Never put water directly on the surface of the shredder.
- Never clean the case with benzene or thinner, since it will cause discoloration.

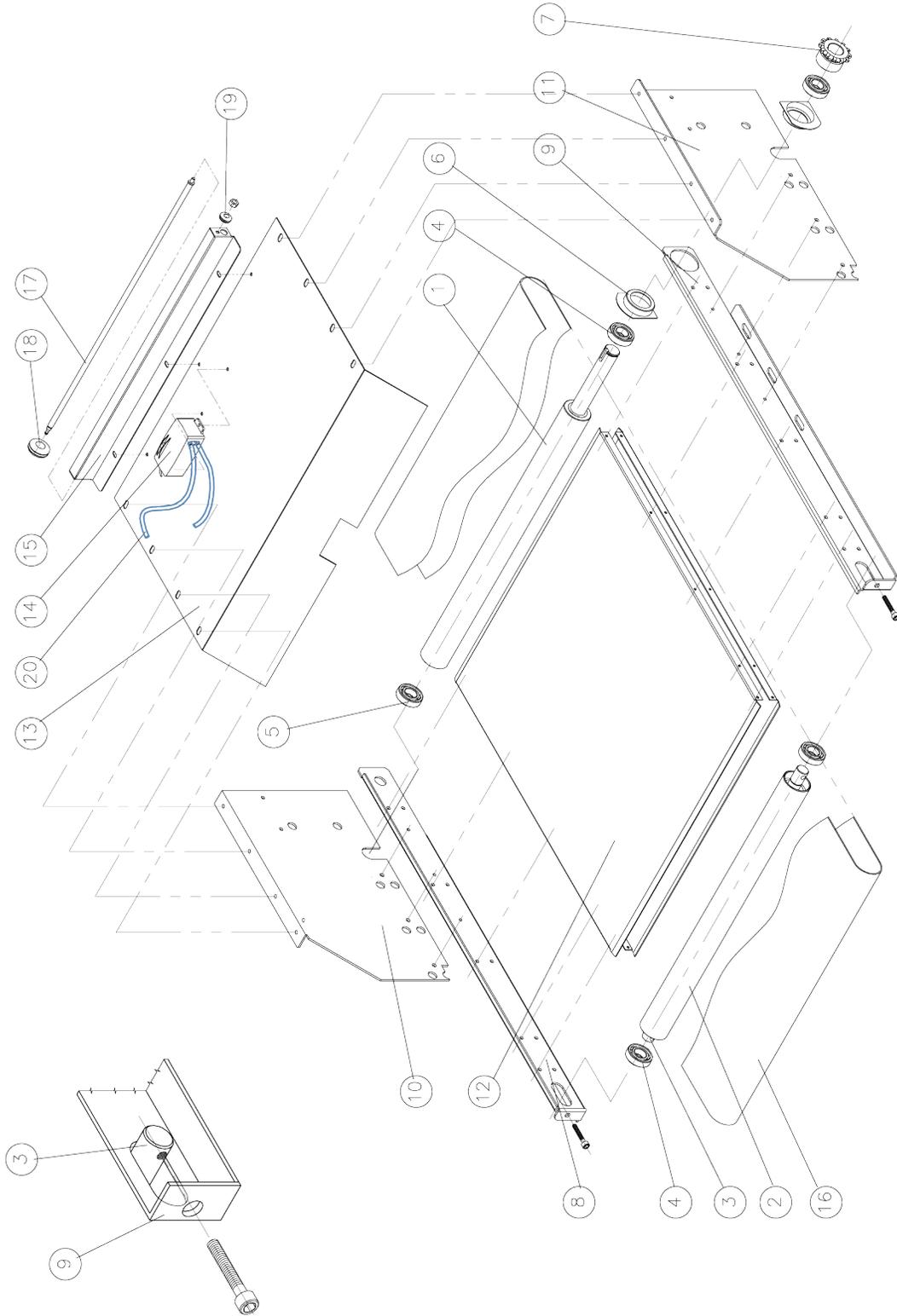
# PARTS - EXTERIOR



## PARTS - EXTERIOR

No.	Part No.	Description
1	FD8906CC A 001	BOTTOM CASE
2	FD8906CC A 002	UPPER CASE
3	FD8906CC A 003	SIDE COVER RIGHT (BOTTOM)
4	FD8906CC A 004	SIDE COVER LEFT (BOTTOM)
5	FD8906CC A 005	BACK COVER (BOTTOM)
6	FD8906CC A 006	FEED TABLE SIDE COVER
7	FD8906CC A 007	SIDE DECO
8	FD8906CC A 008	DOOR
9	FD8906CC A 009	DOOR FRAME
10	FD8906CC A 010	BACK COVER (UPPER)
11-1	FD8906CC A 011-1	TOP COVER
11-2	FD8906CC A 011-2	TOP COVER DOOR
12	FD8906CC A 012	SIDE COVER (UPPER)
13	FD8906CC A 013	INFEED TABLE
14	FD8906CC A 014	TOP CASE SUPPORTER
15	FD8906CC A 015	CONTROL PANEL FRAME
16	FD8906CC A 016	CONTROL PANEL
17	FD8906CC A 017	INFEED TABLE SUPPORTER
18	FD8906CC A 018	FEED OPENING COVER
19	FD8906CC A 019	FEED OPENING
20	FD8906CC A 020	BREAKERS/MAIN PCB CASE
21	FD8906CC A 021	SAFETY BAR
22	FD8906CC A 022	BREAKERS/MAIN PCB DOOR
23	FD8906CC A 023	DOOR HANDLE
24	FD8906CC A 024	DOOR HINGE
25	FD8906CC A 025	WASTE BIN
26	FD8906CC A 026	WASTE BIN HANDLE
27	FD8906CC A 027	CASTER
28	FD8906CC A 028	CASTER
29	FD8906CC A 029	CASTER(W/STOPPER)
30	FD8906CC A 030	CASTER(WO/STOPPER)
31	FD8906CC A 031	EMERGENCY STOP BUTTON
32	FD8906CC A 032	KEY SWITCH
-	KEY-8902	SET OF TWO KEYS
33	FD8906CC A 033	WASTE BIN GUIDE ROLLERS
34	8906-OIL-25	OIL BOTTLE BRACKET
35	8906-OIL-26	OIL BOTTLE BRACKET SCREWS

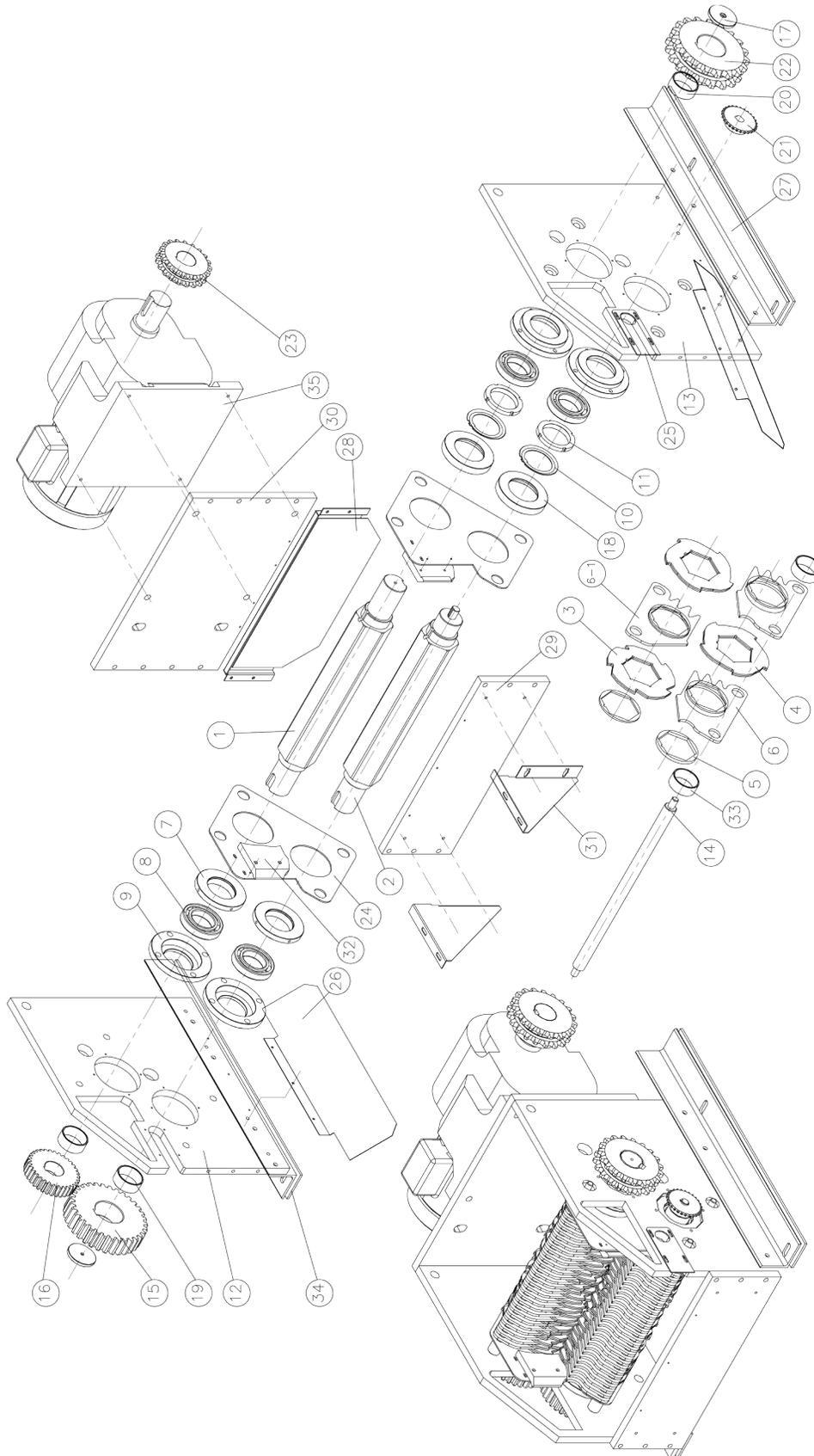
# PARTS - INFEED TABLE



## **PARTS - INFEED TABLE**

<b>No.</b>	<b>Part No.</b>	<b>Description</b>
1	FD8906CC B 001	CONVEYOR ROLLER A
2	FD8906CC B 002	CONVEYOR ROLLER B
3	FD8906CC B 003	CONVEYOR POST
4	FD8906CC B 004	BEARING
5	FD8906CC B 005	BEARING
6	FD8906CC B 006	BEARING HOUSING
7	FD8906CC B 007	SPROCKET
8	FD8906CC B 008	CONVEYOR SIDE (LEFT)
9	FD8906CC B 009	CONVEYOR SIDE (RIGHT)
10	FD8906CC B 010	CONVEYOR SIDE COVER (LEFT)
11	FD8906CC B 011	CONVEYOR SIDE COVER (RIGHT)
12	FD8906CC B 012	CONVEYOR PAD
13	FD8906CC B 013	CONVEYOR TOP COVER
14	FD8906CC B 014	OIL PUMP
15	FD8906CC B 015	OIL BRACKET
16	FD8906CC B 016	CONVEYOR BELT
17	FD8906CC B 017	NOZZLE
18	FD8906CC B 018	LARGE RUBBER BUSHING
19	FD8906CC B 019	SMALL RUBBER BUSHING
20	FD8906CC B 020	OIL TUBE

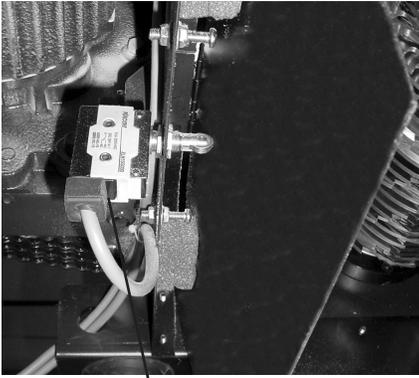
# PARTS - INTERIOR



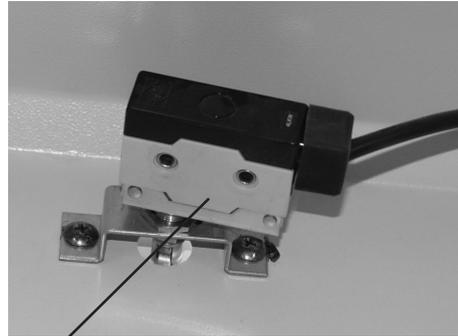
## PARTS - INTERIOR

#	Part Number	Description
1	FD8906CC C 001	SHAFT (SHORT)
2	FD8906CC C 002	SHAFT (LONG)
3	FD8906CC C 003	CUTTER (A)
4	FD8906CC C 004	CUTTER (B)
5	FD8906CC C 005	RING
6	FD8906CC C 006	GUIDE
7	FD8906CC C 007	CUTTER NUT
8	FD8906CC C 008	BEARING
9	FD8906CC C 009	BEARING HOUSING
10	FD8906CC C 010	BEARING WASHER
11	FD8906CC C 011	BEARING NUT
12	FD8906CC C 012	SIDE PLATE (LEFT)
13	FD8906CC C 013	SIDE PLATE (RIGHT)
14	FD8906CC C 014	POST
15	FD8906CC C 015	SPUR GEAR (A)
16	FD8906CC C 016	SPUR GEAR (B)
17	FD8906CC C 017	SNAP WASHER
18	FD8906CC C 018	CUTTER WASHER
19	FD8906CC C 019	RING (A)
20	FD8906CC C 020	RING (B)
21	FD8906CC C 021	SPROCKET (A)
22	FD8906CC C 022	SPROCKET (B)
23	FD8906CC C 023	SPROCKET (MOTOR POST)
24	FD8906CC C 024	GUIDE PLATE
25	FD8906CC C 025	COVER
26	FD8906CC C 026	WASTE BIN GUIDE
27	FD8906CC C 027	VIBRATION-PROOF RUBBER PLATE
28	FD8906CC C 028	FULL PLATE
29	FD8906CC C 029	FRONT COVER
30	FD8906CC C 030	MIDDLE COVER
31	FD8906CC C 031	BELT BRACKET
32	FD8906CC C 032	PAPER GUIDE
33	FD8906CC C 033	GUIDEPOST RING
34	FD8906CC C 034	VIBRATION-PROOF PAD
35	FD8906CC C 035	MOTOR
36	FD8906CC C 036	CHAIN

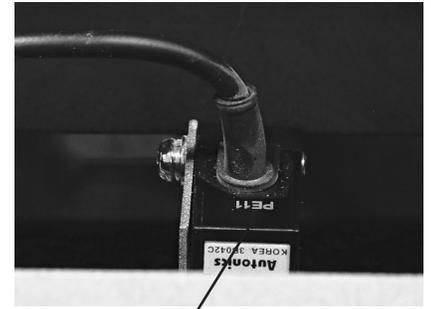
# ELECTRICAL PARTS



1



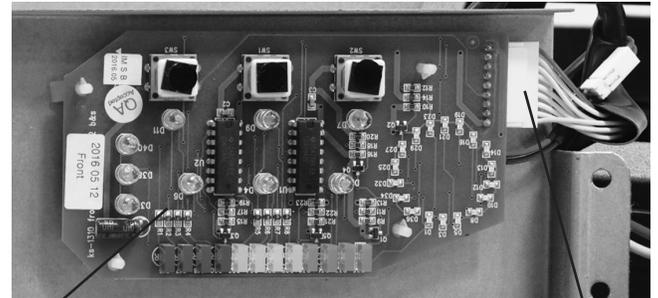
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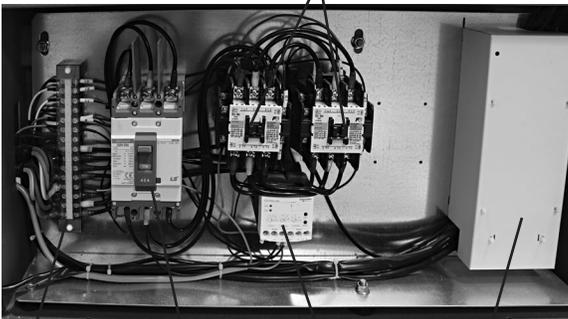


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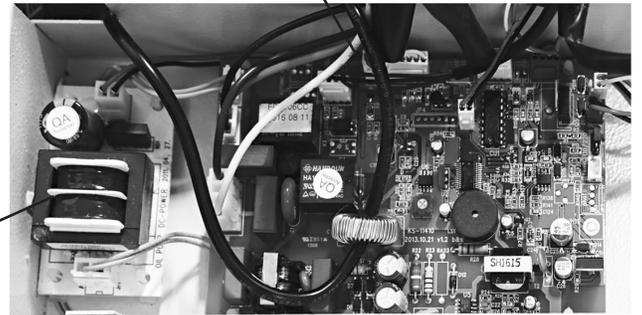


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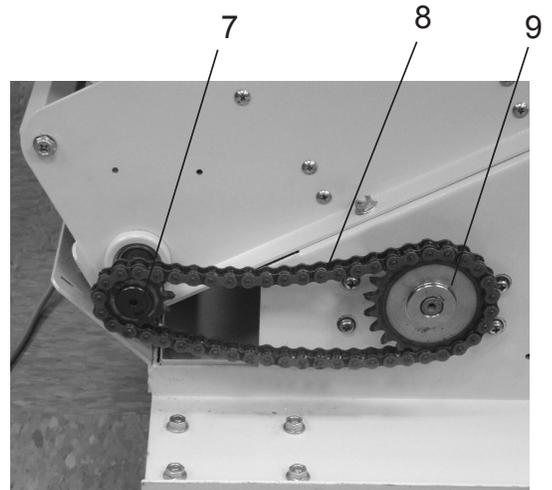
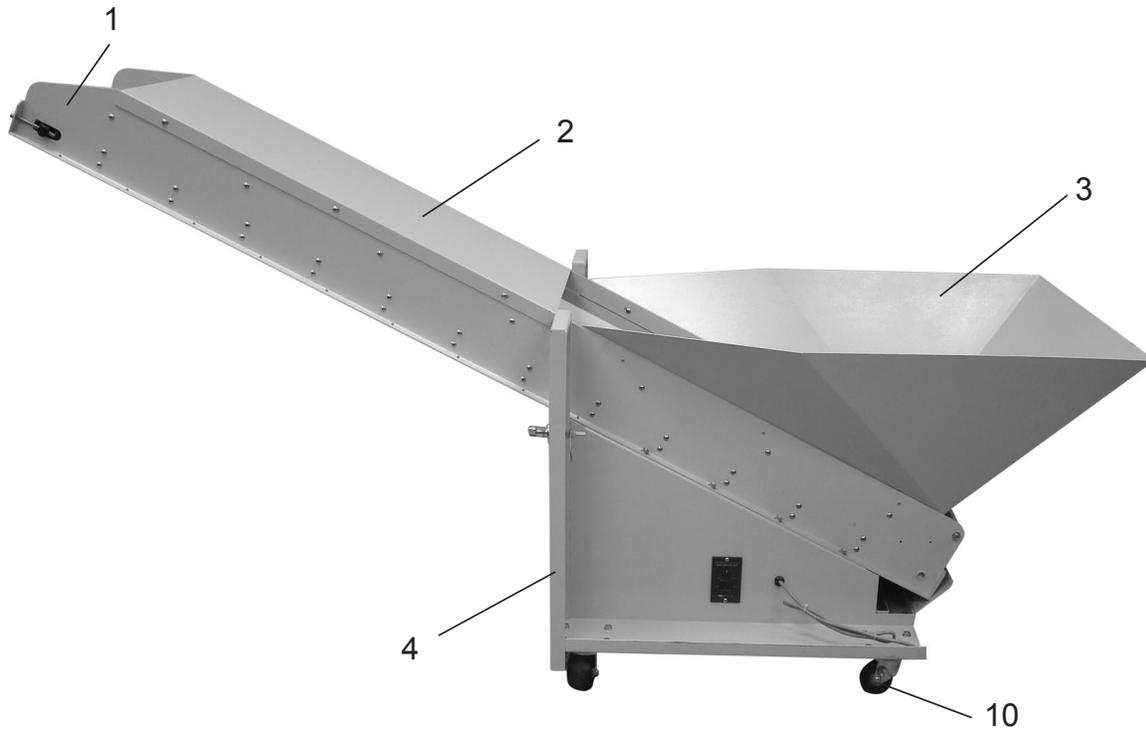


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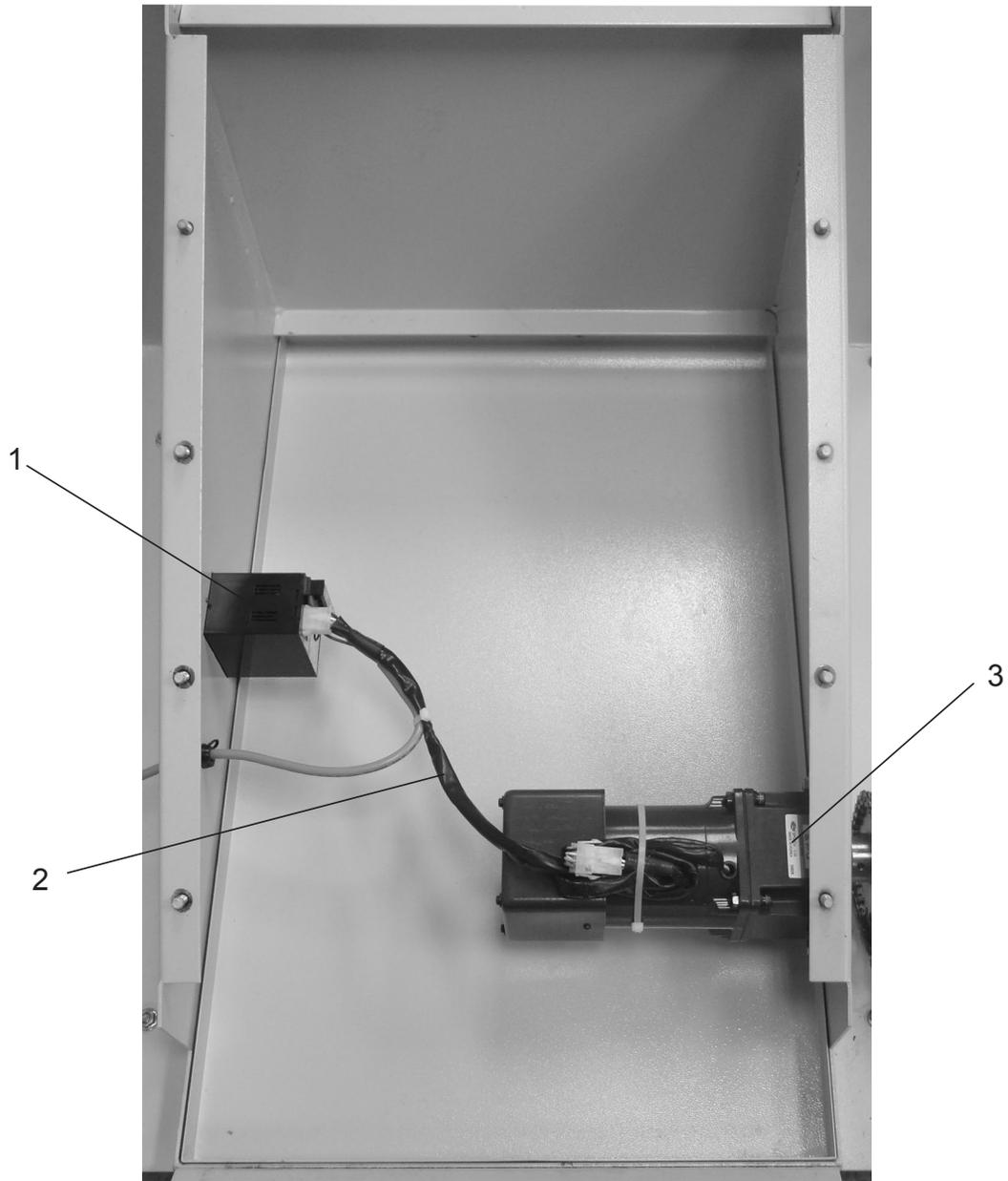
12

No.	Part No.	Description
1	8906-PCB-08	MICRO SWITCH, WASTE BIN FULL
2	8906-PCB-20	MICRO SWITCH, SAFETY STOP BAR
3	8906-PCB-24	PHOTO EYE, INFEEED
4	8906-PCB-23	MICRO SWITCH, DOOR
5	8906-PCB-12	CONTROL PANEL PCB
6	8906-PCB-16	BODY CABLE
7	8906-PCB-05	WIRE TERMINAL PLATE
8	8906-PCB-09	BREAKER
9	8906-PCB-06	MAGNETIC CORE
10	8906-PCB-04	EOCR
11	8906-PCB-11	MAIN PCB CASE
12	8906-PCB-12	MAIN PCB
13	8806-PCB-07	TRANSFORMER

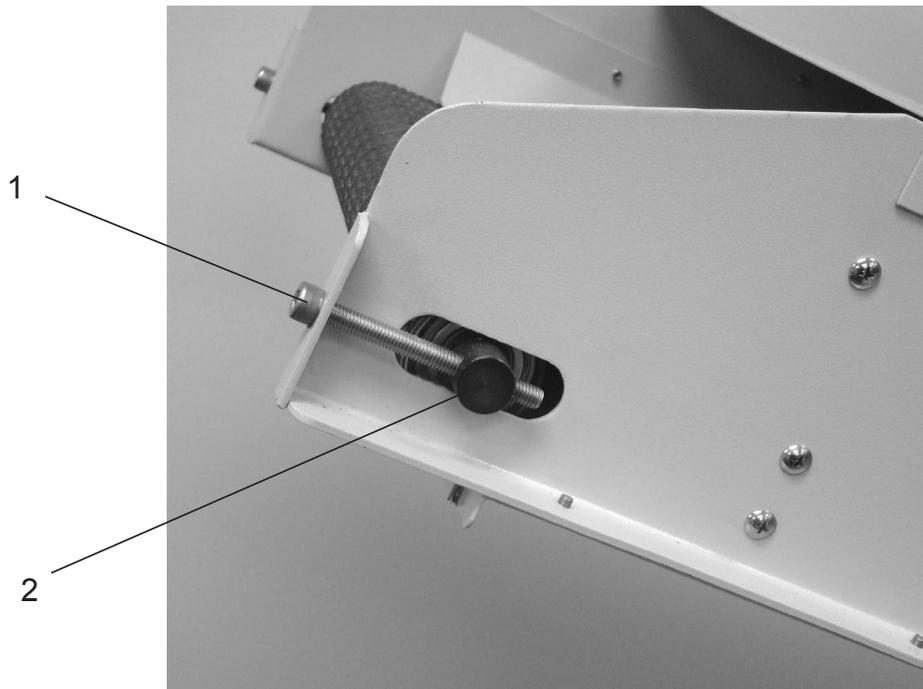
# OPTIONAL 8900-10 CONVEYOR



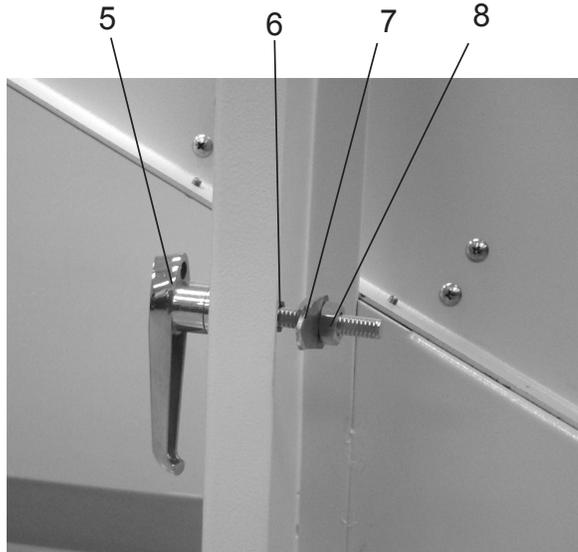
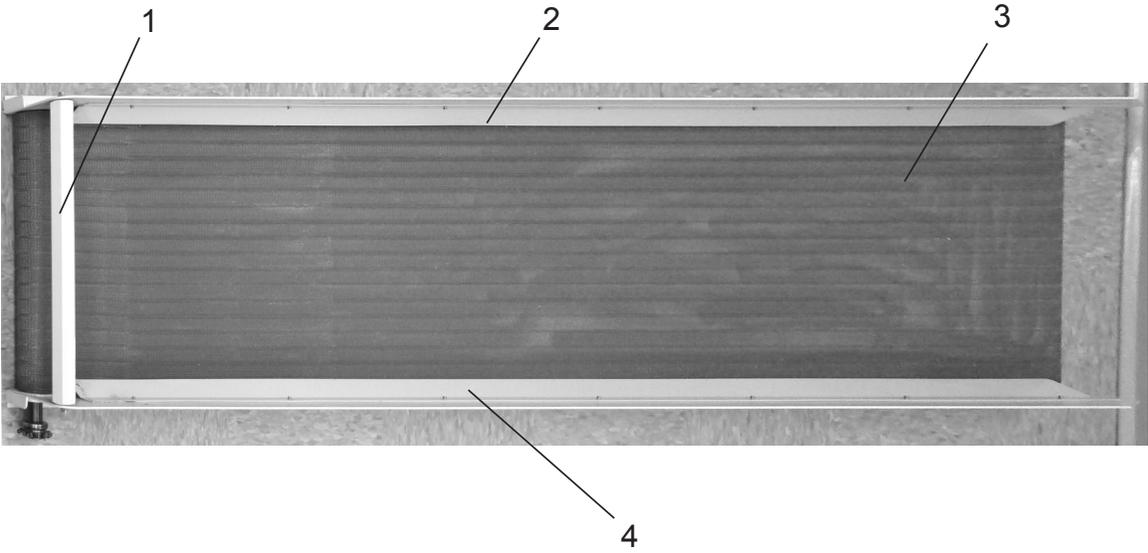
ITEM	PART #	DESCRIPTION	QTY
1	8900-CB-01	CONVEYOR SIDE, LEFT	1
2	8900-CB-02	COVER	1
3	8900-CB-03	HOPPER	1
4	8900-CB-04	BODY CASE	1
5	8900-CB-05	CHAIN COVER	1
6	8900-CB-06	CONVEYOR SIDE, RIGHT	1
7	8900-CB-07	CHAIN SPROCKET (A)	1
8	8900-CB-08	CHAIN	1
9	8900-CB-09	CHAIN SPROCKET (B)	1
10	8900-CB-10	CASTER	4



ITEM	PART #	DESCRIPTION	QTY
1	8900-CB-11	CONTROLLER	1
2	8900-CB-12	HARNESS CABLE	1
3	8900-CB-13	MOTOR	1



ITEM	PART #	DESCRIPTION	QTY
1	8900-CB-14	CONVEYOR TENSION BOLT	2
2	8900-CB-15	CONVEYOR POST	1
3	8900-CB-16	WASTE PLATE	1
4	8900-CB-17	WASTE PLATE HANDLE	1



ITEM	PART #	DESCRIPTION	QTY
1	8900-CB-18	STOPPER	1
2	8900-CB-19	GUIDE, RIGHT	1
3	8900-CB-20	CONVEYOR BELT	1
4	8900-CB-21	GUIDE, LEFT	1
5	8900-CB-22-1	DOOR HANDLE	2
6	8900-CB-22-2	DOOR BOLT	2
7	8900-CB-22-3	DOOR LATCH	2
8	8900-CB-22-4	LATCH NUT	2
-	8900-CB-22	DOOR HANDLE ASSEMBLY	-