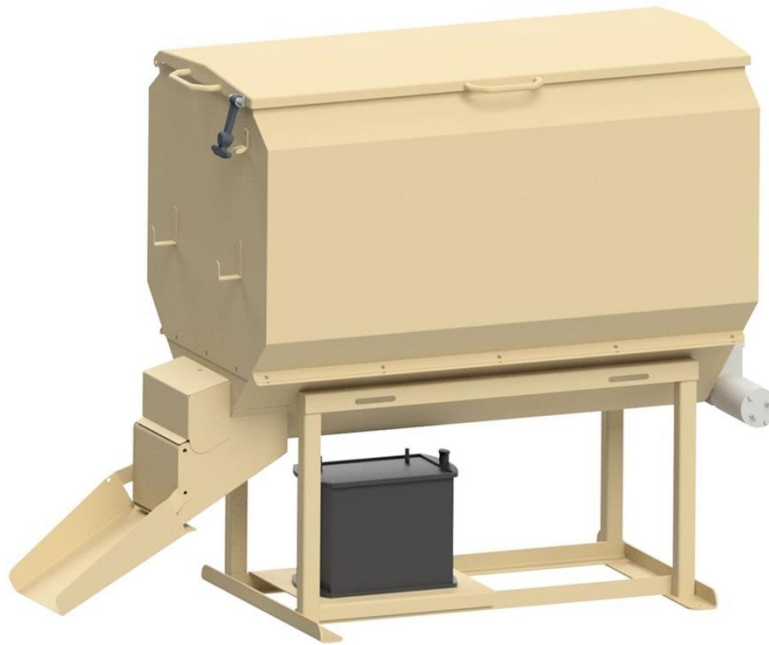


OWNER'S MANUAL

Cake Feeder



Minden Machine Shop, Inc.
1302 K Rd
Minden, NE 68959
308-832-0220
www.patriotequip.com

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INTRODUCTION

Thank you for purchasing the Patriot Equipment Cake Feeder! The cake feeder unit has been designed and tested to give you numerous years of productive service. This Cake Feeder is designed to be placed on a flatbed truck or a utility vehicle of proper size. The purpose of this cake feeder is to provide a means to feed supplements to livestock. All product users must read and understand this manual prior to equipment operation. This manual is considered part of your machine and should remain with the machine at all times. Do not allow anyone to operate or maintain this equipment who has not fully read and understood this manual. Failure to follow the recommended procedures may result in personal injury, death or equipment damage.

Information in this manual is designed to help owners and operators to obtain the best results and safe operation from their investment. The life of any machine depends largely on the care it is given and we suggest that the manual should be read and understood and referred to frequently. If for any reason you do not understand the instructions and safety requirements, please contact your authorized dealer. The intent of this manual is to provide guidelines to cover general use and to assist in avoiding accidents and injuries.

There may be times when circumstances occur that are not covered in the manual. At those times, it is best to use common sense and contact your authorized dealer or our factory.

The requirements of safety cannot be emphasized enough in this publication. We urge you to make safety your top priority when using and maintaining the equipment. We strongly advise that anyone allowed to operate this equipment be thoroughly trained and tested to prove they understand the fundamentals of safe operation.

Some photographs, diagrams, or illustrations in this manual may show doors, guards, and shields opened or removed to aid in clarity and understanding of a particular procedure.

All guards, shields, and safety devices must be in their proper position prior to operation.

Safety

Read and understand this manual and all safety signs before operating and maintaining this piece of equipment. Review the safety instructions and precautions annually.

THIS SAFETY ALERT SYMBOL IS FOUND THROUGHOUT THIS MANUAL AND IS USED TO CALL YOUR ATTENTION TO INSTRUCTIONS INVOLVING YOUR PERSONAL SAFETY AND THE SAFETY OF OTHERS. FAILURE TO FOLLOW THESE INSTRUCTIONS CAN RESULT IN INJURY OR DEATH.



THIS SYMBOL MEANS

- **ATTENTION!**
- **BECOME ALERT!**
- **YOUR SAFETY IS INVOLVED!**



SAFETY SIGNAL WORDS

Note the use of the signal words DANGER, WARNING, and CAUTION with the safety messages. The appropriate signal word for each has been selected using the following guidelines:



DANGER: Indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury. This signal word is to be limited to the most extreme situations typically for machine components which, for functional purposes, cannot be guarded.



WARNING: Indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury, and includes hazards that are exposed when guards are removed. It may also be used to alert against unsafe practices.



CAUTION: Indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.



GENERAL SAFETY GUIDELINES

Safety of the operator and any bystanders is one of the main concerns in designing and developing a new piece of equipment. Designers and manufacturers build in as many safety features as possible. However, every year many accidents occur which could have been avoided by a few seconds of thought and a more careful approach to handling equipment. You, the operator, can avoid many accidents by observing the following precautions in this section. To avoid personal injury, study the following precautions and insist those working with you, or for you, follow them.

Replace any **CAUTION, WARNING, DANGER**, or instruction safety decal that is not readable or is missing immediately. Location of such decals is indicated in this booklet.

Do not attempt to operate this equipment under the influence of drugs or alcohol. Do not use the equipment if alertness or coordination is impaired.

Review the safety instructions with all users annually.

This equipment is dangerous to children and persons unfamiliar with its operation. The operator should be a responsible adult familiar with farm machinery and trained in this equipment's operations. **Do not allow persons to operate or assemble this unit until they have read this manual and have developed a thorough understanding of the safety precautions and how the piece of equipment works.**

Do not read, eat, drink, talk, or text or use a mobile phone while using this equipment.

Do not paint over, remove, or deface any safety signs or warning decals on your equipment. Observe all safety signs and practice the instructions on them.

Never exceed the limits of a piece of equipment. If its ability to do a job or to do so safely is in question - **DON'T TRY IT.**

Stay clear of any moving parts, such as shafts, couplings, and universal joints.

If adjustments need to be made, make them in small steps, shutting down all motions for each adjustment.

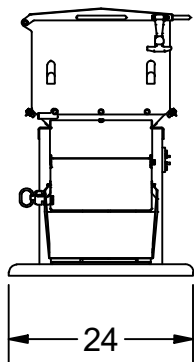
Do not allow anyone to ride on any part of the equipment for any reason.

Assure that all bystanders are at a safe distance before operating or maintaining this equipment.

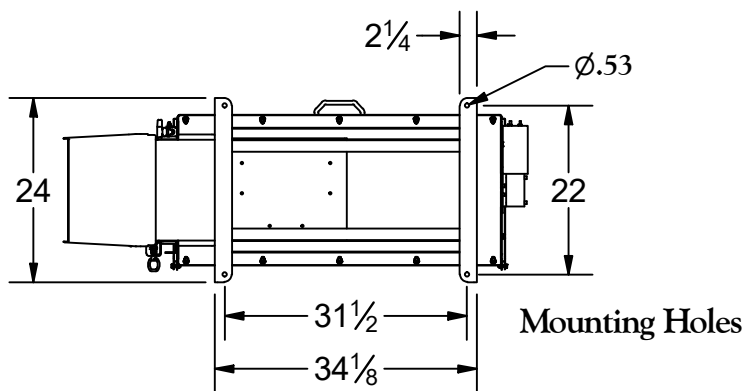
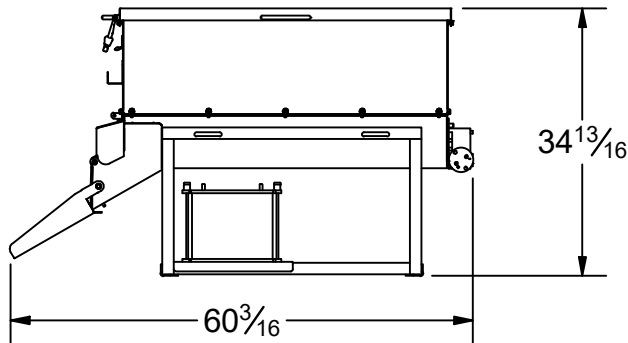
Specifications

Power: 1.2 HP, 12VDC, 900W Electric Motor

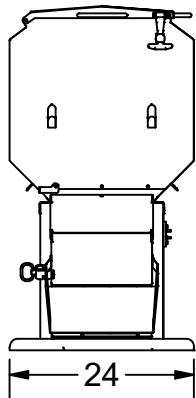
KF-250



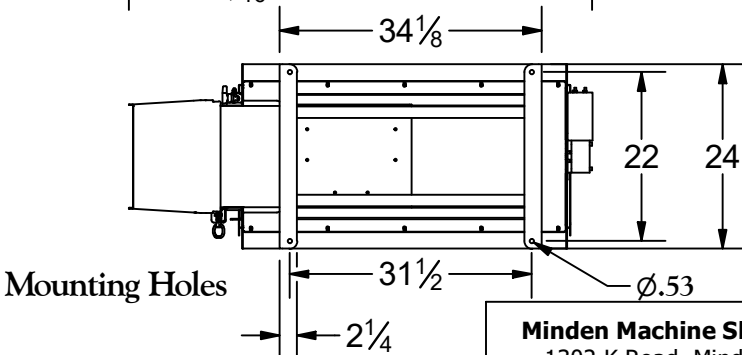
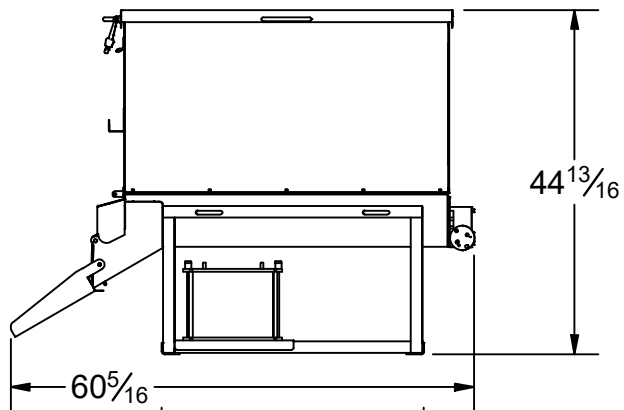
Capacity: 250 lbs. Cracked Corn



KF-500

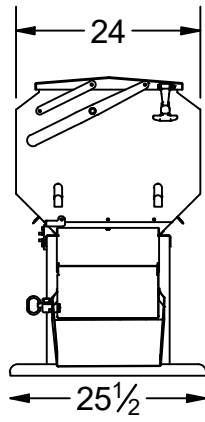


Capacity: 500 lbs Cracked Corn

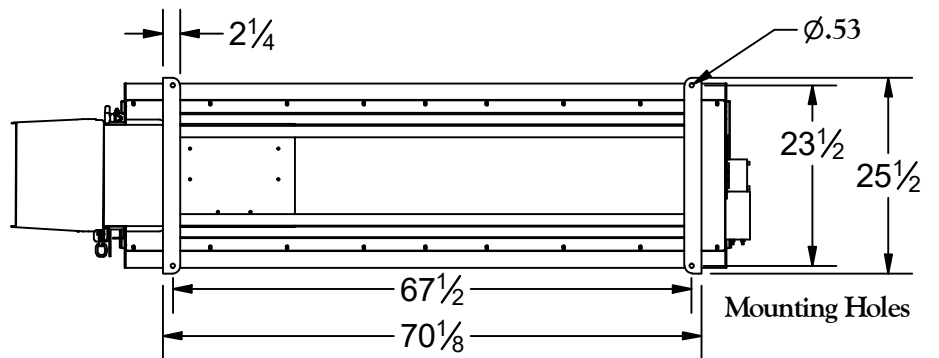
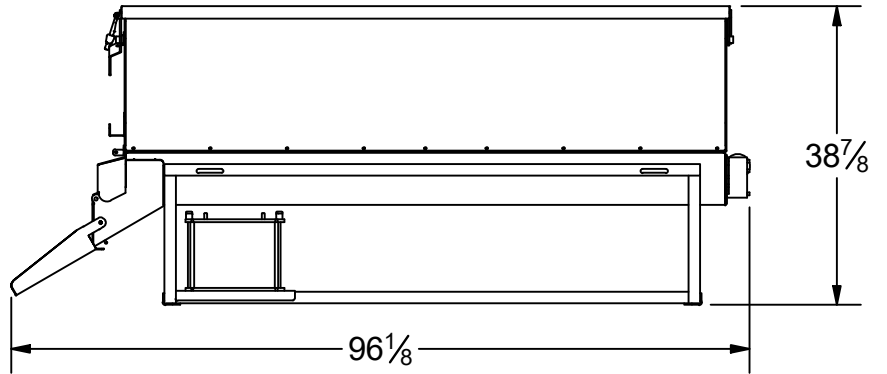


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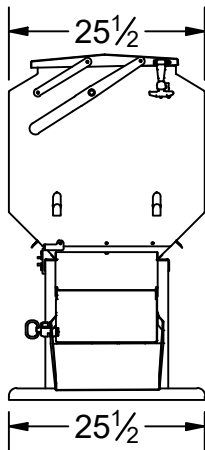
KF-750



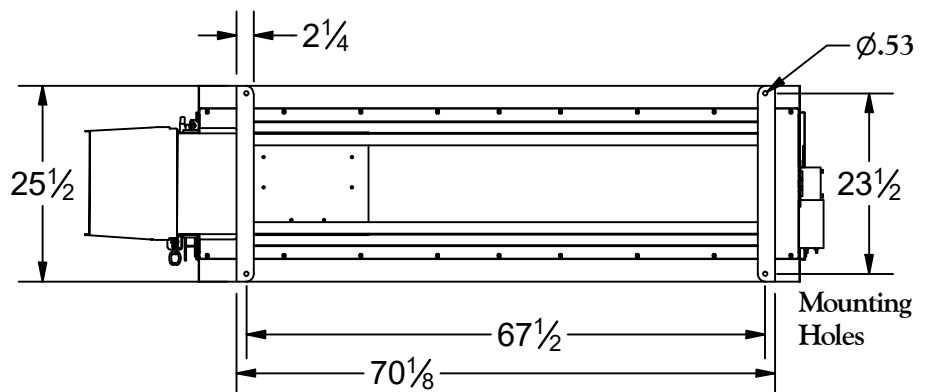
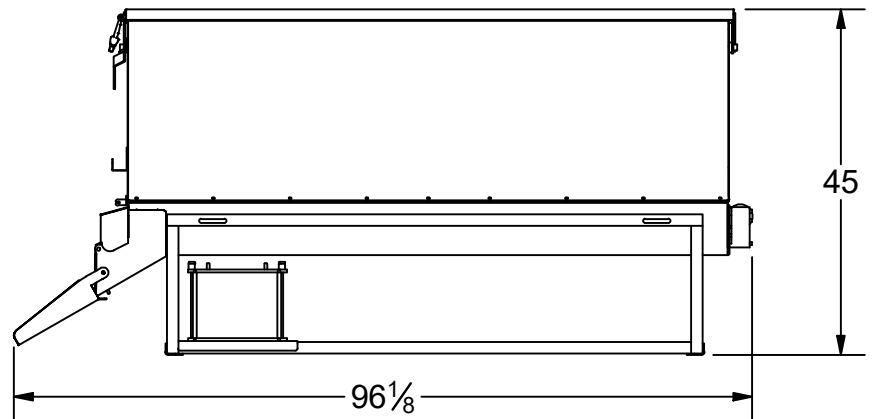
Capacity: 750 lbs Cracked Corn



KF-1000

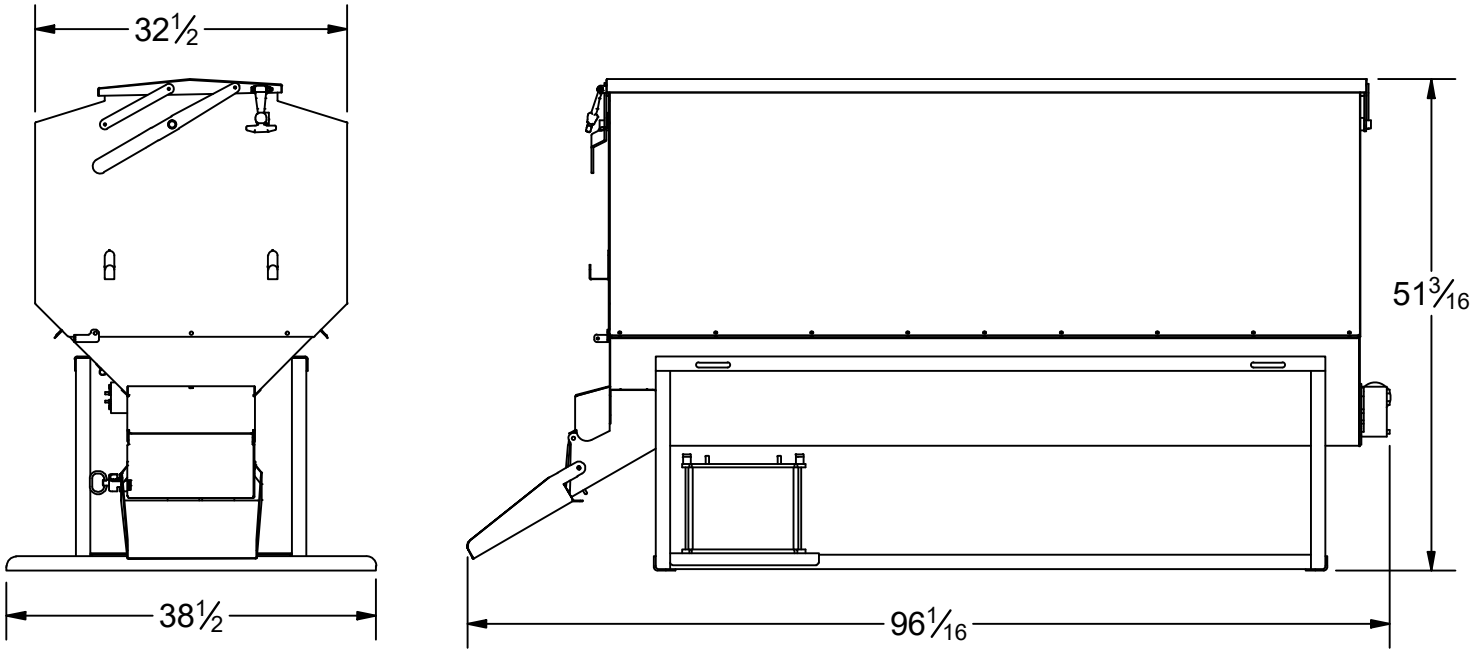


Capacity: 1000 lbs Cracked Corn

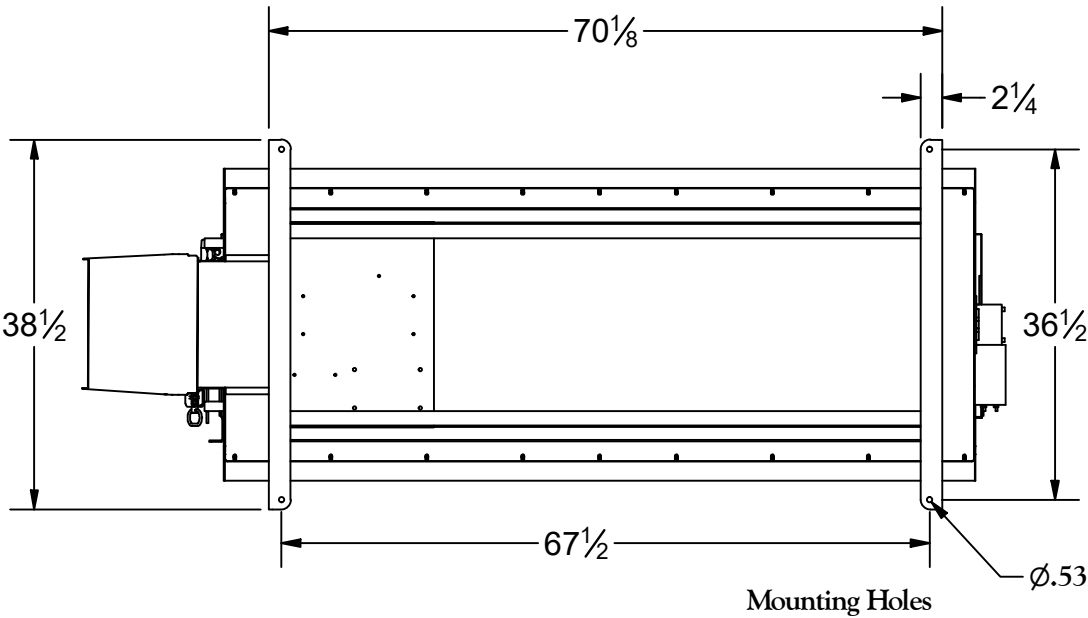


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KF-1500

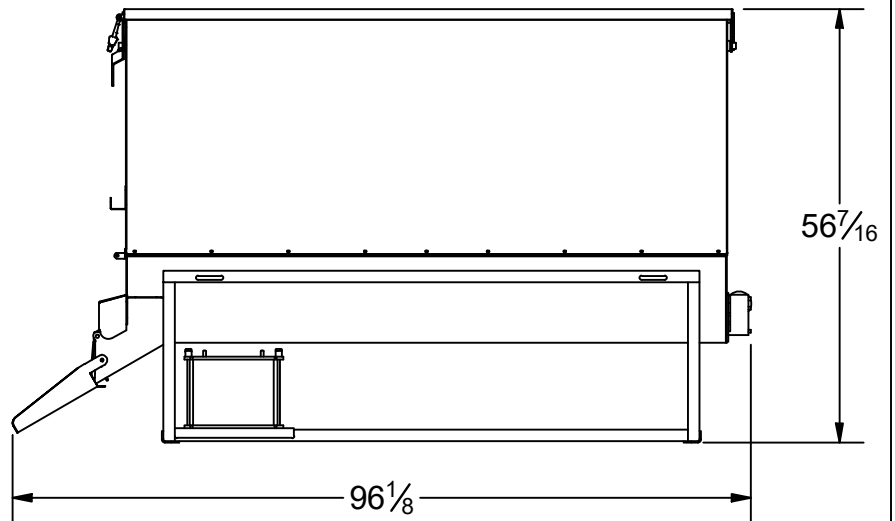
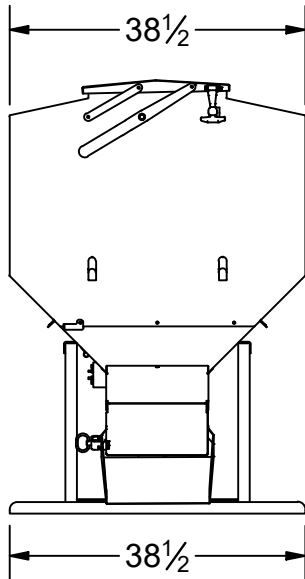


Capacity: 1500 lbs Cracked Corn

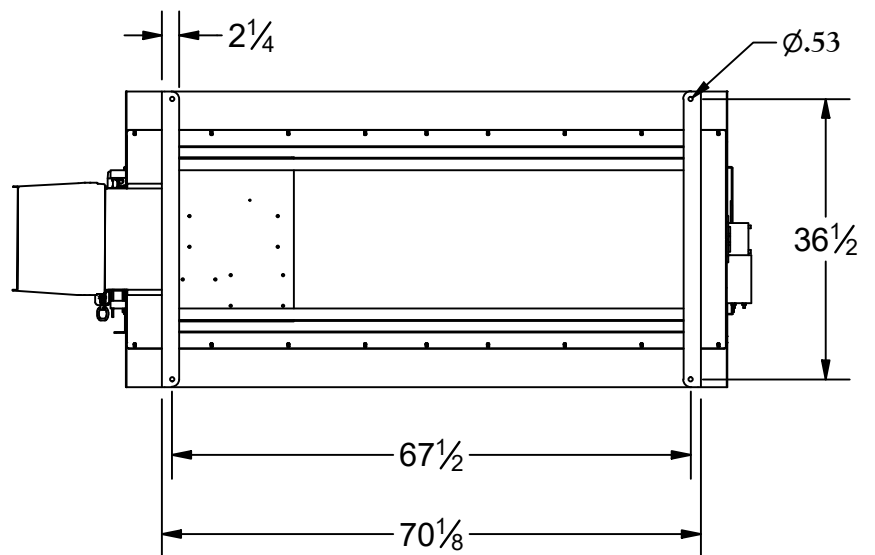


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KF-2000



Capacity: 2000 lbs Cracked Corn



Mounting Holes

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SAFETY SIGN LOCATIONS

Safety Sign locations are shown below.

REMEMBER: If Safety Signs have been damaged, removed, become illegible, or parts replaced without decals, new decals must be applied. New decals are available from your authorized distributor or factory.



SAFETY DECAL CARE

- Keep safety signs clean and legible at all times.
- Replace safety signs immediately that are missing or have become illegible.
- Replaced parts that displayed a safety sign should also display the current sign.
- Safety signs are available from your Distributor or Dealer Parts Department or the factory.

How to Install Safety Signs:

- Be sure that the installation area is clean and dry.
- Decide on the exact position before you remove the backing paper.
- Remove the smallest portion of the split backing paper.
- Align the decal over the specified area and carefully press the small portion with the exposed sticky backing in place.
- Slowly peel back the remaining paper and carefully smooth the remaining portion of the decal in place.
- Small air pockets can be pierced with a pin and smoothed out using the piece of decal backing paper.

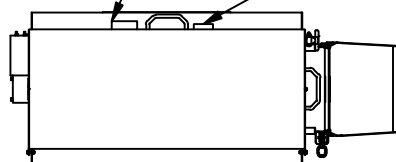
Cake Feeder Decals



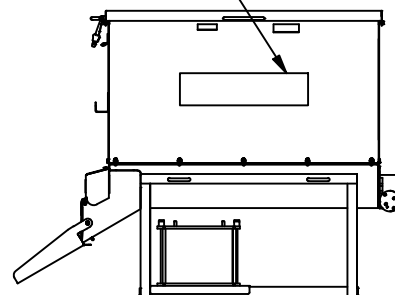
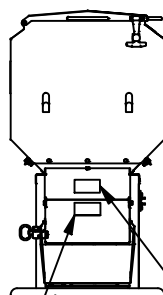
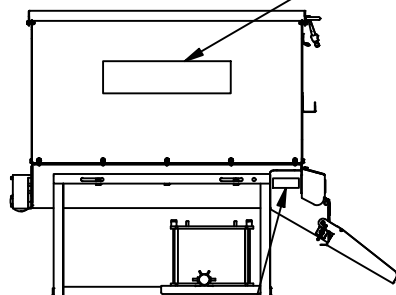
TS4011



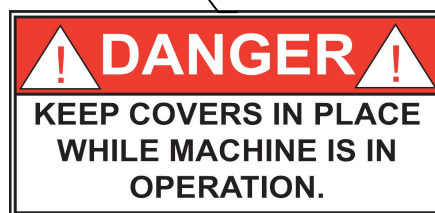
TS2017



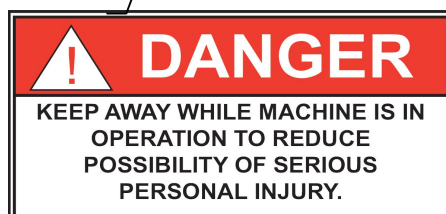
TS2000



TS2003



TS4013



TS4012

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PERSONAL PROTECTIVE EQUIPMENT

- Wear protective clothing and equipment appropriate for the job, such as safety shoes, safety glasses, hard hat, appropriate gloves and ear plugs.
- Clothing should fit snug without fringes or pull strings to avoid entanglement with moving parts.
- Prolonged exposure to loud noise can cause hearing impairment or hearing loss. Wear suitable hearing protection such as ear muffs or earplugs.
- Operating equipment requires the operator's full attention. Avoid wearing radio headphones or earbuds while operating equipment.



BEFORE OPERATION

- Carefully study and understand this manual.
- Do not wear loose-fitting clothing which may catch in moving parts.
- Always wear protective clothing and appropriate shoes.
- Give the unit a visual inspection for any loose bolts, worn parts or cracked welds, and make necessary repairs. Follow the maintenance safety instructions included in this manual.
- Be sure that there are no tools lying on or in the equipment.
- Do not use the unit until you are sure that the area is clear, especially children and animals.
- Don't hurry the learning process or take the unit for granted. Ease into it and become familiar with your new equipment.
- Practice operation of your equipment and its attachments. Completely familiarize yourself and other operators with its operation before using.



DURING OPERATION

- Children should never be allowed on the equipment.
- Never carry riders or allow children to operate equipment.
- Clear the area of small children and bystanders before moving the equipment.
- Beware of bystanders, **particularly children!** Always look around to make sure that it is safe to start the engine of the carrying vehicle or move the unit. This is particularly important with higher noise levels and quiet cabs, as you may not hear people shouting.
- **NO PASSENGERS ALLOWED** - Do not carry passengers anywhere on, or in, except as required for operation.
- Keep hands and clothing clear of moving parts.
- Always keep all shields and guards in place and securely fastened.
- Do not clean, lubricate, or adjust your equipment while it is moving.
- When halting operation, even periodically, set the carrying vehicle brakes, shut off the engine, and **remove the ignition key**.
- Be especially observant of the operating area and terrain - watch for holes, rocks, or other hidden hazards. Always inspect the area prior to operation.
 - **DO NOT** operate near the edge of drop-offs or banks.
 - **DO NOT** operate on steep slopes as overturn may result.

- Operate up and down (not across) intermediate slopes. Avoid sudden starts and stops.



HIGHWAY AND TRANSPORT OPERATIONS

- Adopt safe driving practices:
 - Always drive at a safe speed relative to local conditions and ensure that your speed is low enough for an emergency stop to be safe and secure. Keep speed to a minimum.
 - Reduce speed prior to turns to avoid the risk of overturning.
 - Avoid sudden uphill turns on steep slopes.
 - Always keep the vehicle in gear to provide engine braking when going downhill. Do not coast.
 - Do not drink and drive!
- Use approved accessory lighting flags and necessary warning devices to protect operators of other vehicles on the highway during daylight and nighttime transport. Various safety lights and devices are available from your dealer.
- The use of flashing amber lights is acceptable in most localities. However, some localities prohibit their use. Local laws should be checked for all highway lighting and marking requirements.
- Plan your route to avoid heavy traffic.
- Be a safe and courteous driver. Always yield to oncoming traffic in all situations, including narrow bridges, intersections, etc.
- Be observant of bridge loading ratings. Do not cross bridges rated lower than the gross weight at which you are operating.
- Watch for obstructions overhead and to the side while transporting.
- Always operate equipment in a position to provide maximum visibility at all times. Make allowances for increased length and weight of the equipment when making turns, stopping the unit, etc.
- Pick the most level possible route when transporting across fields. Avoid the edges of ditches or gullies and steep hillsides.
- Be extra careful when working on inclines.
- Maneuver the tractor or towing vehicle at safe speeds.
- Avoid overhead wires or other obstacles. Contact with overhead lines could cause serious injury or death.
- Avoid loose fill, rocks, and holes; they can be dangerous for equipment operation or movement.
- Allow for unit length when making turns.
- Never leave running equipment attachments unattended.
- As a precaution, always recheck the hardware on equipment following every 100 hours of operation. Correct all problems. Follow the maintenance safety procedures.



FOLLOWING OPERATION

- Following operation, or when unloading, stop the vehicle, set the brakes, disengage all power drives, shut off the engine, and **remove the ignition keys**.
- Store the unit in an area away from human activity.
- Do not permit children to play on or around the stored unit.
- Make sure all parked machines are on a hard, level surface and engage all safety devices.



PERFORMING MAINTENANCE

- Good maintenance is your responsibility. Poor maintenance is an invitation to trouble. Proper servicing and adjustments are key to the long life of any implement. With careful inspection and routine maintenance, costly downtime and repairs can be avoided.
- Some parts and assemblies can be quite heavy. Before attempting to unfasten any part or assembly, arrange to support it by means of a hoist, by blocking or by use of an adequate arrangement to keep it from falling, tipping, swinging, or moving in any manner which may hurt somebody or damage the equipment.
- Always use lifting equipment that is adequately rated to do the job. Never lift equipment over people.
- Make sure there is plenty of ventilation. Never operate the engine of the towing vehicle in a closed building. The exhaust fumes may cause asphyxiation.
- Before working on the equipment, stop the towing vehicle, set the brakes, disengage the PTO and all power drives, shut off the engine, and **remove the ignition keys**.
- Be certain all moving parts on attachments have come to a complete stop before attempting to perform maintenance.
- Always use the proper tools or equipment for the job at hand.
- Use extreme caution when making adjustments.
- Never replace hex bolts with less than grade five bolts unless otherwise specified.
- After servicing, be sure all tools, parts and service equipment are removed.
- Where replacement parts are necessary for periodic maintenance and servicing, genuine factory replacement parts must be used to restore your equipment to original specifications. The manufacturer will not claim responsibility for use of unapproved parts and/or accessories and other damages as a result of their use.
- If equipment has been altered in any way from original design, the manufacturer does not accept any liability for injury or warranty.
- If repairs require the use of a torch or electric welder, be sure that all flammable and combustible materials are removed.
- Do not weld or cut on any tank containing oil, fuel or their fumes or other flammable material, or any container whose previous contents are unknown.
- Cleaning solvents should be used with care. Petroleum based solvents are flammable and present a fire hazard. Don't use gasoline. All solvents must be used with adequate ventilation and their vapors should not be inhaled.



LOCKOUT / TAGOUT

Think, Plan, and Check.

Think through the entire procedure and identify all the steps that are required.

Plan what personnel will be involved, what needs to be shut down, what guards need to be removed, and how (and under what conditions) the power will be restarted.

Check the machine over to verify all power sources and stored energy have been identified including engines, hydraulic and pneumatic systems, springs and accumulators, and suspended loads. Shut off and lockout power before adjusting, servicing, maintaining, or clearing an obstruction from this machine. Failure to heed may result in serious injury or death. Communicate with everyone involved in a repair or maintenance operation, including bystanders, that work is being done which involves keeping this machine safety at a ZERO ENERGY STATE.

OSHA's requirements for lockout/tagout are covered in Section 1910.147 of the OSHA standards. The LOTO standard establishes the employer's responsibility to protect workers from hazardous energy. Employers are required to train each worker to ensure that they know, understand, and are able to follow the applicable provisions of the hazardous energy control procedures:

- Proper lockout/tagout (LOTO) practices and procedures safeguard workers from the release of hazardous energy. The OSHA standard for The Control of Hazardous Energy (Lockout/Tagout) for general industry, outlines specific action and procedures for addressing and controlling hazardous energy during servicing and maintenance of machines and equipment. Employers are also required to train each worker to ensure that they know, understand, and are able to follow the applicable provisions of the hazardous energy control procedures. Workers must be trained in the purpose and function of the energy control program and have the knowledge and skills required for the safe application, usage, and removal of the energy control devices.
- All employees who work in the area where the energy control procedure(s) are utilized need to be instructed in the purpose and use of the energy control procedure(s) and about the prohibition against attempting to restart or reenergize machines or equipment that is locked or tagged out.
- All employees who are authorized to lockout machines or equipment and perform the service and maintenance operations need to be trained in recognition of applicable hazardous energy sources in the workplace, the type and magnitude of energy found in the workplace, and the means and methods of isolating and/or controlling the energy.
- Specific procedures and limitations relating to tagout systems where they are allowed.
- Retraining of all employees to maintain proficiency or introduce new or changed control methods.

OSHA outlines a six-step procedure for controlling hazardous energy:

Step 1: Prepare for shutdown. It must be determined what type of power system is going to be deactivated including electrical, hydraulic, pneumatic, or other energy sources. Knowledge of shut down methods is necessary.

Step 2: Shutdown the equipment. This should be completed consistent with the manufacturer's instructions for the shutdown procedure and could be as simple as placing a switch in the "off" position or pressing a button.

Step 3: Isolate the equipment. This step involves closing of valves, throwing the main disconnects or circuit breakers and disconnecting or capping any auxiliary power sources or secondary electrical systems.

Step 4: Apply the lockout/tagout device. This is done to prevent restoration of the flow of energy and is done at all disconnect switches, valves, or other energy isolating devices. Locks are the preferred method of controlling energy and should be supplemented with tags. Various lockout devices are available including group lockout hasps. Locks should be individually assigned and have only one key.

Step 5: Control the stored energy. This step includes the release, disconnect or restraint of any residual hazardous energy which may be present and a check that all moving parts have stopped moving. It may also include the installation of "pancakes" or blanking of pipe flanges, the installation of ground wires to discharge electrical capacitors and the blocking or supporting of elevated equipment.

Step 6: Verify isolation of equipment. Double-check the steps and verify that the equipment indeed has been shut down and that the lock and tag do control the stored energy. Employees should be warned and the system tested, including pressing of all start buttons to assure that the equipment will not start.

OPERATION

Before Operating

- Inspect inside the hopper and around the outside of the Cake Feeder for foreign objects. If any are found, remove them from the Cake Feeder.
- Be sure that all shields are in place, the battery is fully charged, and that all bolts or fasteners are tightened.
- Route the Remote Switch to the operator control area.
- Test the system for correct operation by running the system while the Cake Feeder is empty. The auger should turn easily and the door to the chute should open with the mechanism.

Transporting

- When transporting the Cake Feeder, check to make sure the locking strap is in place to prevent the lid from opening during transport due to the wind.



Locking Strap for
the cake feeder lid.



Caution! Do not put hands into a plugged auger when there is pressure on the system. Serious injury could result.

Operating

- Fill the Cake Feeder with the desired amount of feed or grain product.
- Place the chute in the operating position.
- Turn on the main power switch.
- Activate the electric motor with the remote switch.



Cake Feeder chute in the operating position.



The Remote Switch to activate the Cake Feeder motor.



Main Power Switch

MAINTENANCE

The Cake Feeder is simple to maintain and care for.

- Clean the Cake Feeder out when finished with use. Never use the Cake Feeder as a long term storage area for feed. It could create a corrosive environment and lead to premature wear on the machine.
- Failure to clean the Cake Feeder routinely may cause a buildup of spoiled feed, which may become compacted or frozen and may cause damage to the Cake Feeder.
- Maintain the battery with the correct acid level and the correct charge.
- Clean the outside of the Cake Feeder and repaint areas that are chipped or worn.
- Keeping the Cake Feeder cleaned and painted will help to prolong the usefulness of this product.
- Replace decals as they wear or become unreadable.
- Lubricate bearings every 50 hours of use.

TROUBLESHOOTING

Auger will not turn	<ol style="list-style-type: none">1. Check for obstruction in auger – clean if necessary2. Check fuses – replace if bad3. Is battery completely charged – charge battery4. Is battery hooked up correctly5. Is main power switch in the “On” position6. Has the switch for the remote been depressed
---------------------	---

ASSISTANCE

If you have questions not answered in this manual, or require additional copies, or the manual is damaged, please contact your dealer or:

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Minden, NE 68959
800-264-6587**

Optional Equipment

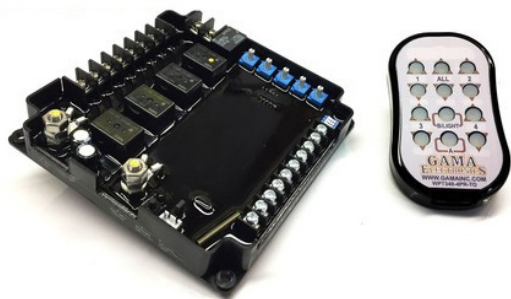
RF340-4PR-ASL

Instruction Manual

Included in this Kit:

(1) RF340-4PR-ASL Receiver

(1) 12-Button Transmitter *Image shown with standard transmitter*



Available accessories:

- Additional Transmitter RFT340-4PR-T0
- Rechargeable Transmitter GKF-WPTX-12
- Waterproof Enclosure GWE-663-812
- Long Range Antenna LRA340 **SEE PAGE 3 FOR SETUP**
- Hand-held Pendant HP4PR-ASL
- Package of 6 A23 12V Alkaline Batteries A23-6
- Clear Protective Transmitter Pouch ZLB-67

RF340-4PR-ASL is an RF Transmitter and Receiver operating at a fixed frequency of 340 MHz. The receiver operates from 12VDC and provides four polarity reversing outputs. Up to 30 transmitters can be programmed to activate the receiver. The receiver has terminal blocks for connecting the input power and output to the 4-polarity reversing relay outputs. Each transmitter has a unique address that is transmitted when a button is pressed. A "program" button is provided on the receiver to program the transmitter(s) address into the receiver's memory. An LED on the receiver indicates the receiver's programming status and illuminates when the receiver is energized. The operating range is at least 100 feet.

The transmitter has two buttons assigned to each of the four outputs. The up(^) button runs the motor in one direction and the down (v) button runs the motor in the opposite direction. The outputs are energized for as long as the buttons are depressed.

Manual Switch Input Control: The receiver contains a 10-position terminal block for connection to manual switch inputs to control the 4 polarity reversing outputs. The manual switch inputs are logic level inputs and only require small gauge wire between the switches and the terminal block.

Current Detection/Over-Current System Shutdown: The RF340-4PR-ASL incorporates output current detection that will disconnect an output when the output exceeds the current setting of the DIP switch for that output. When multiple outputs are activated, the total current of all active outputs are monitored. The sum of the current for all outputs are shutdown for 5 seconds. After the 5 second reset time the output can be activated by pressing the corresponding switch on the transmitter.

The system will monitor the current trip circuit and will allow the output to be activated 3-separate times when a current trip threshold occurs. After the third consecutive current trip occurs within one-minute time period, the receiver will turn off all outputs and the program LED will start to flash. The input power to the receiver must be turned off and then back on to re-activate the system. This is a safety feature to protect the receiver and connected loads, and alerts the user there is an over-current condition that should be resolved.

Latching Light Output: There is a 2-position terminal block on the receiver that provides an output to a 12VDC light. The transmitter "LIGHT" switch is used to control the light output. The output is rated at 10 Amps.

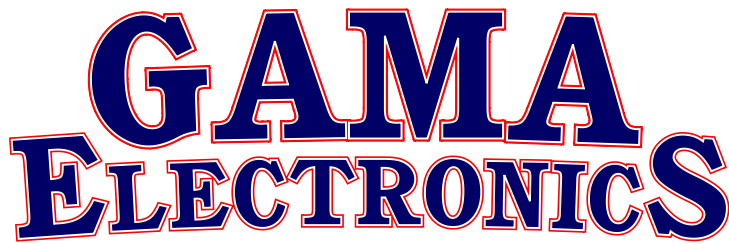
Maximum Ratings: Power for the receiver can be in the range of 10VDC to 15VDC. The receiver is reversing polarity protected. The relay contacts are rated at 30 Amps @ 13.8VDC.

Power Consumption: 10mA when the relays are de-energized, 45mA when one relay is energized.

Dimensions: Receiver dimensions are approximately 5"L x 5"W x 2"H

Operating Temperature Range: 0°F to 160°F

Automated Time Out Adjustment: The automatic time out of the Receiver after last switch activation is adjustable from no time-out, up to 1-hour time-out. The switch used to adjust the time-out set point is located on the Receiver and can be set for the time shown in the table on page 2.



WWW.GAMAINC.COM

RF340-4PR-ASL

Instruction Manual

Programming Instructions

Each Transmitter has its own unique internal address that is transmitted whenever a switch is pressed. The Receiver needs to be programmed to respond only to Transmitters it is intended to operate with. The following steps configure the Receiver to operate with a particular Transmitter(s). Up to thirty Transmitters can be programmed to one Receiver. Please read the entire programming procedure before starting. Prior to programming the Receiver, verify that the Receiver is connected to the input power. When the Receiver enters program mode, all previous transmitter addresses that were programmed will be erased from the Receiver's memory.

1. Locate the pushbutton labeled "PROGRAM" on the Receiver. Press and hold this button until the red LED next to the program button illuminates (approximately 2 seconds). The Receiver is now in the transmitter program mode. Release the pushbutton. At this point all previously programmed transmitter addresses are erased from the Receiver's memory.
2. Press and release any button on the Transmitter and verify that the red LED on the Receiver extinguishes and then illuminates (blinks once). Release the button.
3. Repeat previous step for additional Transmitters that will operate with this particular Receiver. The red LED on the Receiver will extinguish and illuminate one time for the first Transmitter being programmed, twice for the second, three times for the third, four times for the fourth etc. The Receiver will not respond to Transmitters that have already been programmed.
4. After 5-seconds of no switch being pressed on the transmitter(s) the Receiver will return to normal operation. The red LED on the Receiver will blink rapidly, then extinguish. The Receiver is now in the normal mode of operation. This completes the programming instructions. The Receiver will retain all of its programming even when power is removed.

Automated Time Out Adjustments

The automatic time out of the Receiver after last switch activation is adjustable from no time-out, up to 1-hour time-out. To turn the Receiver on, first press and release the "A" button on the Transmitter. Within two seconds, press and release the "B" button on the Transmitter. The LED on the Receiver will illuminate and the Receiver will now respond to transmitter commands and will automatically turn off after the time set by the switch. The switch used to adjust the time-out set point is located on the Receiver and can be set for the time shown in the tables below. When the Receiver is configured for no time-out, the transmitter is always active and does not require the 2-button turn-on sequence.

Switch for Time-Out Set Point

DIP Switch Position 0: No Time Out, Always Active
DIP Switch Position 1: 1 Minutes
DIP Switch Position 2: 2 Minutes
DIP Switch Position 3: 3 Minutes
DIP Switch Position 4: 4 Minutes
DIP Switch Position 5: 5 Minutes
DIP Switch Position 6: 10 Minutes
DIP Switch Position 7: 15 Minutes
DIP Switch Position 8: 20 Minutes
DIP Switch Position 9: 25 Minutes
DIP Switch Position A: 30 Minutes
DIP Switch Position B: 35 Minutes
DIP Switch Position C: 40-Minutes
DIP Switch Position D: 45-Minutes
DIP Switch Position E: 50-Minutes
DIP Switch Position F: 55-Minutes

Switch for Current Trip Set Point

DIP Switch Position 0: 1.0-Amperes
DIP Switch Position 1: 2.0-Amperes
DIP Switch Position 2: 4.0-Amperes
DIP Switch Position 3: 6.0-Amperes
DIP Switch Position 4: 8.0-Amperes
DIP Switch Position 5: 10.0-Amperes
DIP Switch Position 6: 12.0-Amperes
DIP Switch Position 7: 14.0-Amperes
DIP Switch Position 8: 16.0-Amperes
DIP Switch Position 9: 18.0-Amperes
DIP Switch Position A: 20.0-Amperes
DIP Switch Position B: 22.0-Amperes
DIP Switch Position C: 24.0-Amperes
DIP Switch Position D: 26.0-Amperes
DIP Switch Position E: 28.0-Amperes
DIP Switch Position F: 30.0-Amperes

To Add Long Range Functionality

The remote control system is equipped with an internal antenna. The expected range in normal conditions is approximately 100 feet. When additional range is needed, or if the control is placed locations adverse to RF signal reception, a long range antenna can be added to the system. GAMA Electronics long range antenna, part number LRA-340, replaces the internal antenna on the system. In normal operating conditions expected range is greater than 500 feet. If the long range option is purchased with the system, this modification will be made prior to shipment.

NOTE: ONCE THE LONG RANGE MODIFICATIONS HAVE BEEN MADE TO THE SYSTEM THEY CANNOT BE REVERSED.

To add long range functionality:

1. Plug long range antenna (Part number LRA-340) into the long range antenna jack.
2. Clip the Long Range Antenna Bypass Wire (This will deactivate the internal antenna)

NOTE: It is recommended that you cover the exposed wires with RTV silicone sealant.

Momentary/Latching Operation

Each of the 4-polarity reversing outputs can be configured for momentary or latching. For momentary operation the output will be present for as long as the transmitter switch is pushed, releasing the switch will stop the output. For latching operation the output will turn on once the transmitter switch is pushed and released; pushing and releasing the same switch will turn off the output. Switch SW7 on the Receiver is a 4-position DIP switch and is used to select the mode of the 4-outputs. Placing each switch in the "UP" position sets the output for latching; the "DOWN" position configures the output for momentary operation. Each output can be configured independently

Troubleshooting

All remote-control systems shipped by GAMA Electronics are 100% functionally tested just prior to shipment.

If your RF remote control system does not work out of the box, stops working or functions intermittently please take the following steps to resolve common issues. Please note that you must be 2-3 feet away from the receiver when operating the remote control. Operating within 2-3 feet may result in no operation or intermittent operation.

1. Replace the A23 12V Battery in the transmitter

- The remote control can activate during shipping and drain the battery that is installed in the control. We send a replacement battery with the system if this occurs.

2. Check the voltage supply at the receiver

- The receiver is designed to function at 10-15VDC. Voltage on the (+) and (-) terminals on the control should be within this range.

3. Reprogram the remote control

- If the system is non-functional try to reprogram the remote control. The program may not have taken during the programming process or the program button may have been pressed. If the program button is pressed the memory of the remote controls programed to the receiver are erased.

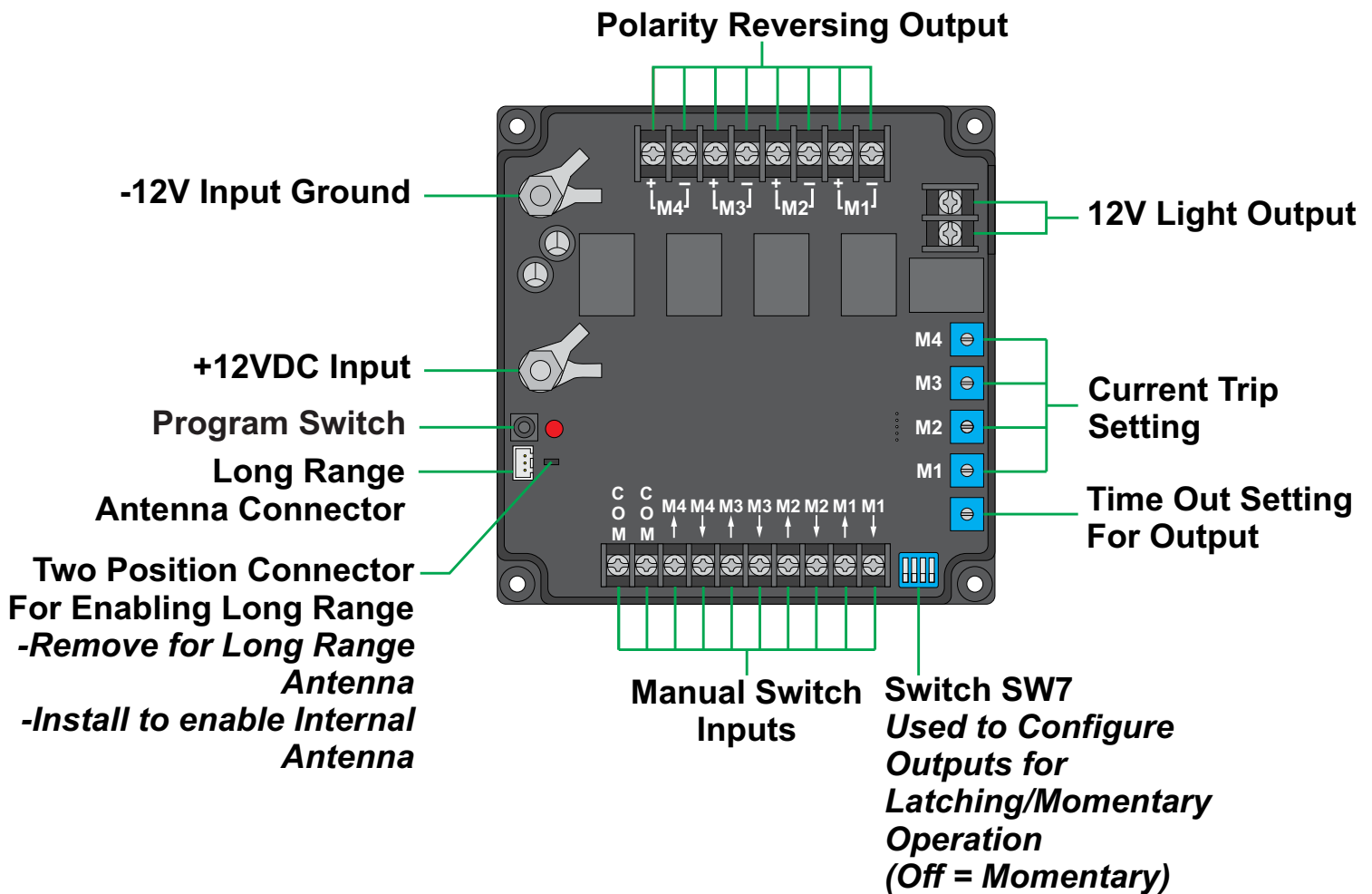
4. Listen and look for functionality on the receiver.

- The LED that is used for programming the system will illuminate when the receiver is activated. You will also hear a “click” when the internal relays engage. If you can see the LED illuminate and you hear the relay “click” the issue is most likely in the wiring or device being controlled.

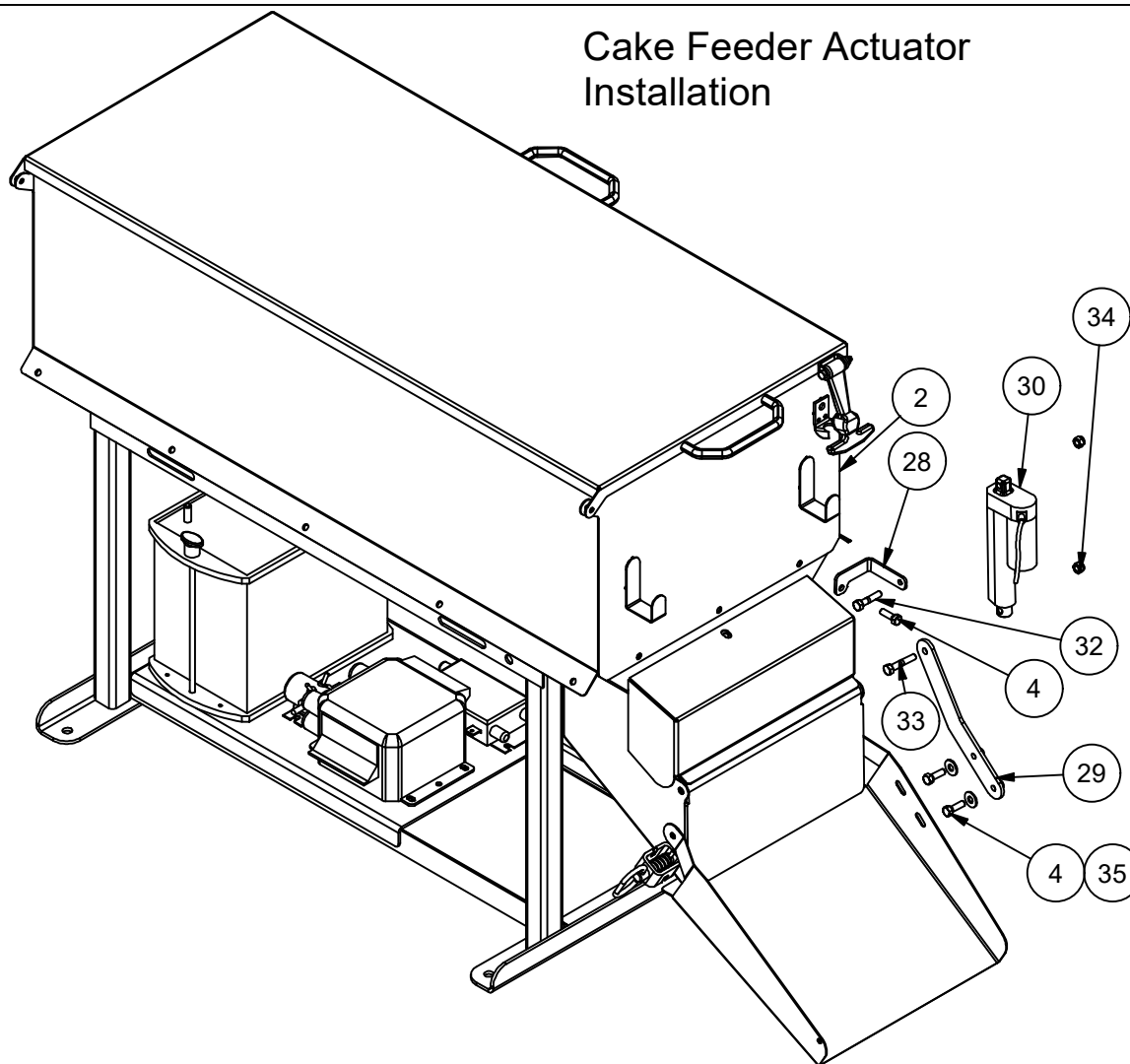
5. Add a long-range antenna

- If the receiver is in an area that is averse to the reception of an RF signal, such as near a motor or in a metal casing, a long-range antenna may solve the issue. Connect the antenna per the instructions on page 3 and mount the antenna in an exposed area away from any motor.

Wiring Diagram



Cake Feeder Actuator Installation



To Install Actuator:

1. Locate bracket #28 and attach to #2 using the 5/16" x 1" hex bolt (#4) (if adding on, bolt will be in place)
2. Locate bracket #29 and attach to the chute using the 5/16" x 1" bolts, flat washers, and nylock nuts. The chute holes are slotted, leave the attaching bolts loose enough to adjust when attaching the actuator.
3. Attach the actuator (#30) using the 5/16" x 1.5" bolt and nylock nut. Attach the top of the actuator first. Be sure the actuator is completely retracted. Leave the bolt and nut loose enough so the actuator can pivot freely.
4. Attach the ram end of the actuator (#30) to the chute bracket (#29) using the 5/16" x 1.75" bolt and nylock nut. Adjust the bracket on the slotted chute holes to attach it to the actuator.
5. The chute should be all the way down when the actuator is completely retracted.
6. Tighten all the fasteners on the chute attachment site and the actuator bracket. Remember to leave the fasteners attaching the actuator a little tolerance to allow the actuator to pivot as it extends and retracts to raise and lower the chute.
7. Test the actuator for correct operation. (See programming section to program the remote control if using the wireless system)

Parts List

ITEM	QTY	PART NUMBER	DESCRIPTION
2	1	KF-250-A009	250 Hopper Assembly
4	21	B5/16X1.0	Hex Bolt
28	1	KF-CP-P060	Cake Feeder Actuator Bracker
29	1	KF-CP-P102	Cake Feeder Chute Bracket
30	1	CAF5135 (LIN-ACT1BR-04)	Windynation Actuator 4" Stroke
32	1	B5/16X1.5	Hex Bolt
33	1	B5/16X1.75	Hex Bolt
34	4	N5/16NYL	Nylock Nut
35	2	W5/16F	Plain Washer

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Torque Data for Standard Nuts, Bolts, and Capscrews

Tighten all bolts to torques specified in chart unless otherwise noted. Check tightness of bolts periodically, using bolt chart as guide. Replace hardware with same grade bolt.

Note: Unless otherwise specified, high-strength Grade 5 hex bolts are used throughout assembly of equipment.

Bolt Torque for Standard Bolts

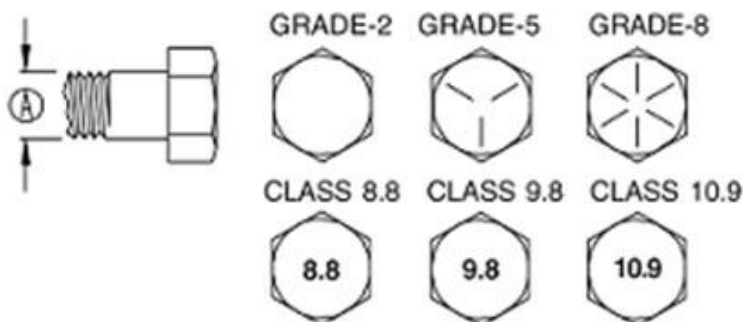
Bolt Size A	Grade 2		Grade 5		Grade 8	
	lb-ft	(N.m)	lb-ft	(N.m)	lb-ft	(N.m)
1/4"	6	8	9	12	12	16
5/16"	10	13	18	25	25	35
3/8"	20	27	30	40	45	60
7/16"	30	40	50	70	80	110
1/2"	45	60	75	100	115	155
9/16"	70	95	115	155	165	220
5/8"	95	130	150	200	225	300
3/4"	165	225	290	390	400	540
7/8"	170	230	420	570	650	880
1"	225	300	630	850	970	1310

Torque figures indicated are valid for non-greased or non-oiled threads and heads unless otherwise specified. Therefore, do not grease or oil bolts or capscrews unless otherwise specified in this manual. When using locking elements, increase torque values by 5%.

Bolt Torque for Metric Bolts

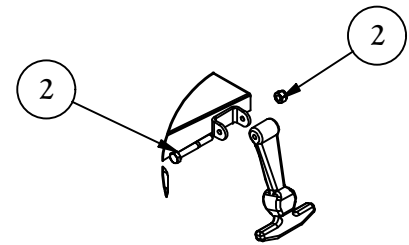
Bolt Size A	Class 8.8		Class 9.8		Class 10.9	
	lb-ft	(N.m)	lb-ft	(N.m)	lb-ft	(N.m)
6	9	13	10	14	13	17
7	15	21	18	24	21	29
8	23	31	25	34	31	42
10	45	61	50	68	61	83
12	78	106	88	118	106	144
14	125	169	140	189	170	230
16	194	263	216	293	263	357
18	268	363	..	..	364	493
20	378	513	..	..	515	689
22	516	699	..	..	702	952
24	654	886	..	..	890	1206

Grade or Class value for bolts and capscrews are identified by their head markings.

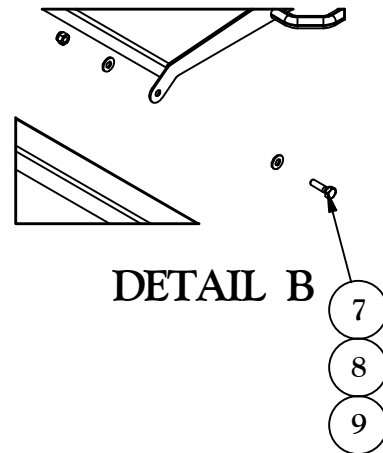


Parts Diagrams

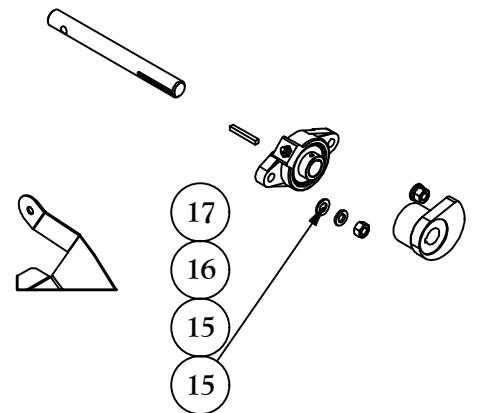
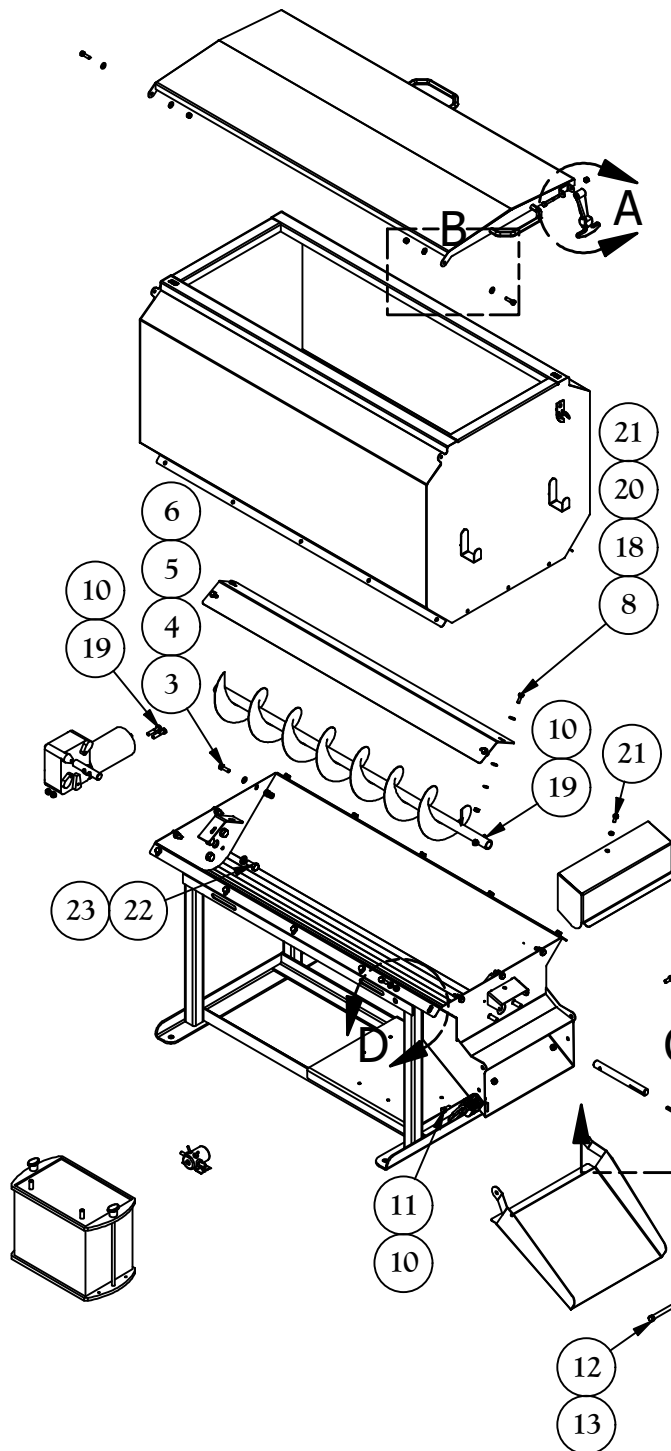
Fastener Locations



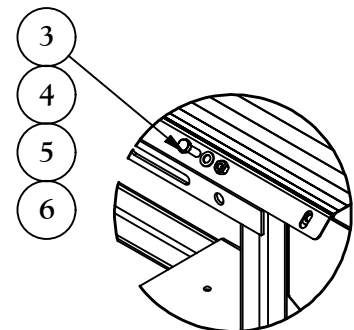
DETAIL A



DETAIL B



DETAIL C



DETAIL D

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Cake Feeder Fasteners

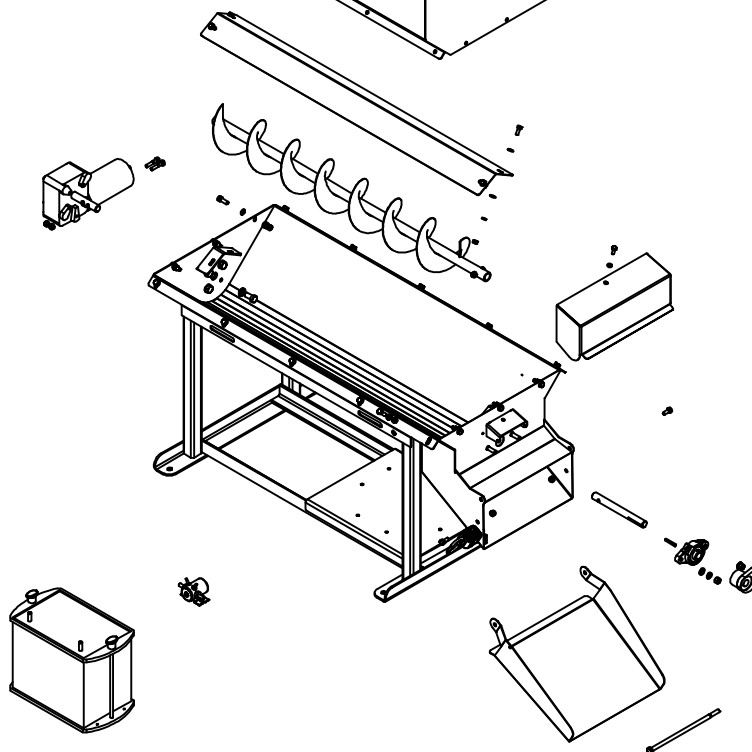
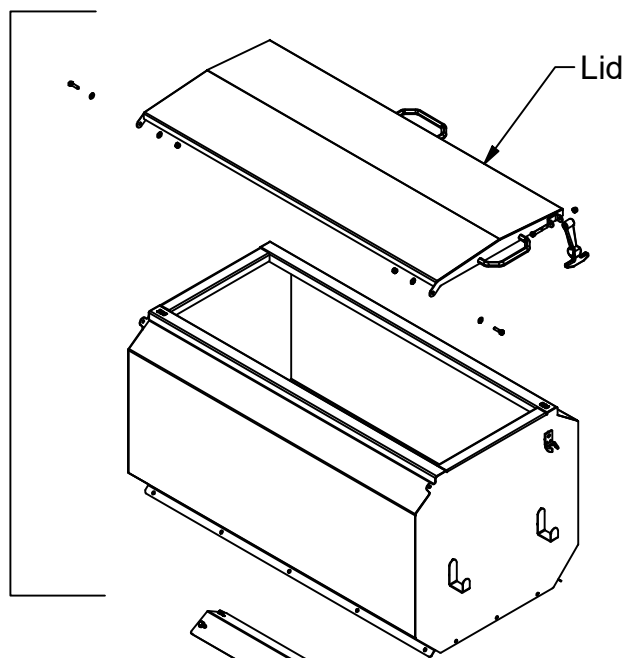
Fastener List			
ITEM	QTY	PART NUMBER	DESCRIPTION
3	16	B5/16x1	Hex Bolt
4	32	W5/16F	Plain Washer
5	16	W5/16L	Lock Washer
6	16	N5/16N	Hex Nut
7	2	B1/4X1	Hex Bolt
8	12	W1/4F	Plain Washer
9	2	N1/4NYL	1/4 Std NC Nylock Nut
10	5	N5/16NYL	5/16 Std NC Nylock Nut
11	2	B5/16X3/4	Hex Bolt
12	1	B3/8X10	Hex Bolt
13	1	N3/8NYL	3/8 Std NC Nylock Nut
14	2	B3/8X1.25	Hex Bolt
15	4	W3/8F	Plain Washer
16	2	W3/8L	Lock Washer
17	2	N3/8N	Hex Nut
18	5	N1/4N	Hex Nut
19	3	B5/16X1.5	Hex Bolt
20	5	W1/4L	Lock Washer
21	5	B1/4X0.75	Hex Bolt
22	4	BM12X1.75X25	Hex Bolt
23	4	W1/2L	Lock Washer

*Quantities will vary with model of Cake Feeder
Quantities shown are for the Model 500

CAKE FEEDER

Assembly	250 Cake Feeder	500 Cake Feeder	750 Cake Feeder	1000 Cake Feeder	1500 Cake Feeder	2000 Cake Feeder
Hopper	KF-250-A009	KF-500-A008	KF-750-A002	KF-1000-A002	KF-1500-A002	KF-2000-A002
Trough	KF-CP-A005	KF-CP-A005	KF-CP-A009	KF-CP-A009	KF-CP-A013	KF-CP-A013
Lid	KF-CP-A002	KF-CP-A002	KF-CP-A006	KF-CP-A006	KF-CP-A006	KF-CP-A006

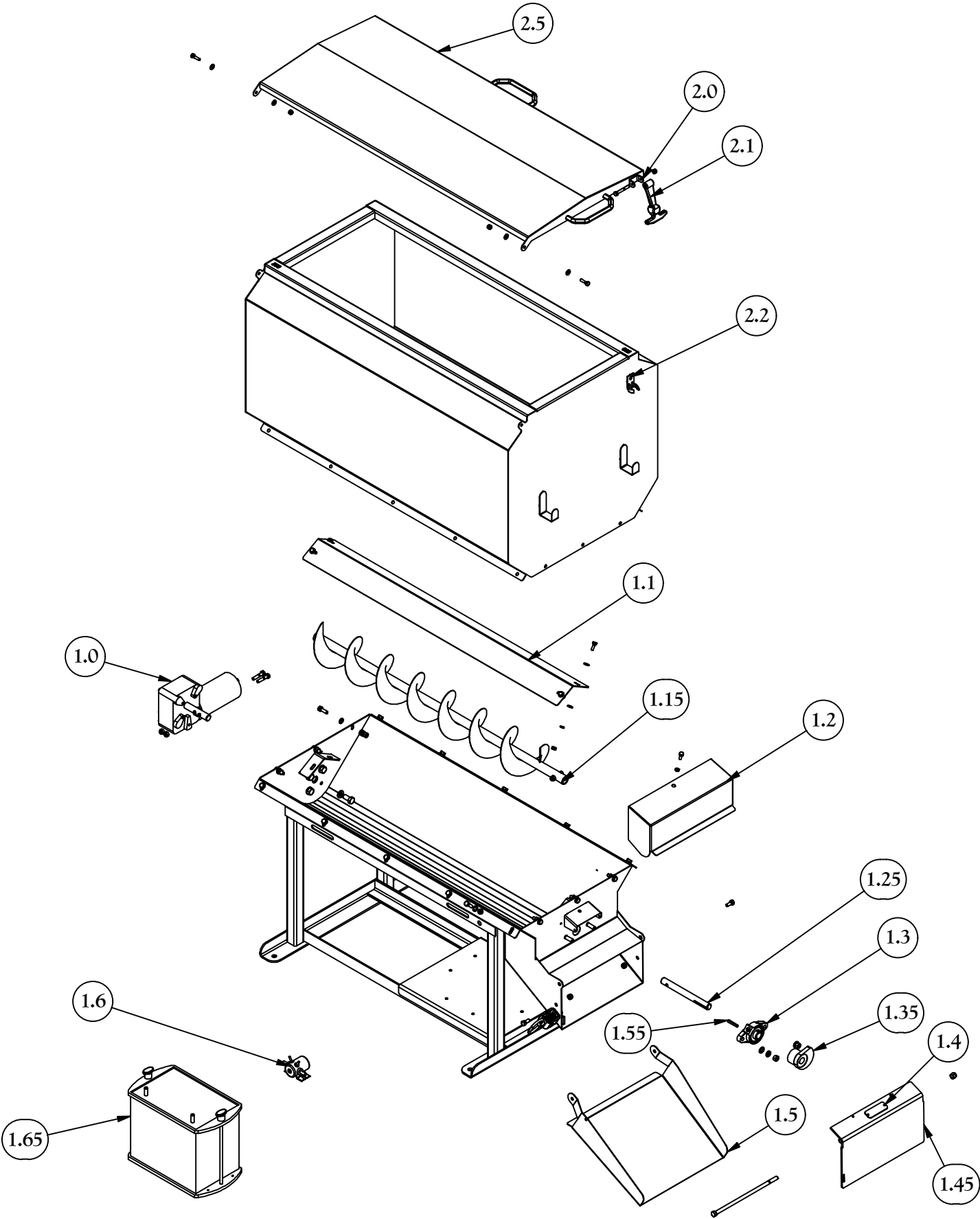
Hopper



Trough

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Cake Feeder Parts Diagram



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Cake Feeder Parts List

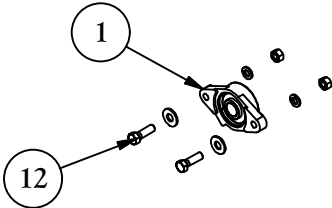
Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
1.0	1	CAF5000	Motor
1.1	1	KF-CP-P007	Auger Cover (Model 500 and below)
1.1	1	KF-CP-P045	Auger Cover (Model 750 and above)
1.15	1	KF-CP-A004	Auger (Model 500 and below)
1.15	1	KF-CP-A007	Auger (Model 750 and above)
1.2	1	KF-CP-P021	Cover
1.25	1	KF-DP-P012	Adapter Shaft
1.3	1	BR1155	Bearing
1.35	1	KF-CP-A001	Eccentric Bushing
1.4	1	KF-CP-P023	Wear Plate
1.45	1	KF-CP-A003	Door
1.5	1	KF-CP-P014	Chute
1.55	1	KF-CP-P093	Key
1.6	1	CF505-1	Relay (Replaces CF505)
1.65	1	S4000	Battery
2.0	1	S4809	Anchor
2.1	1	S4805	Rubber Latch
2.2	1	S4808	Bent Catch
2.3	15	TR2115	Wire Harness
2.4	1	CAF5210	Waterproof Switch

Cake Feeder

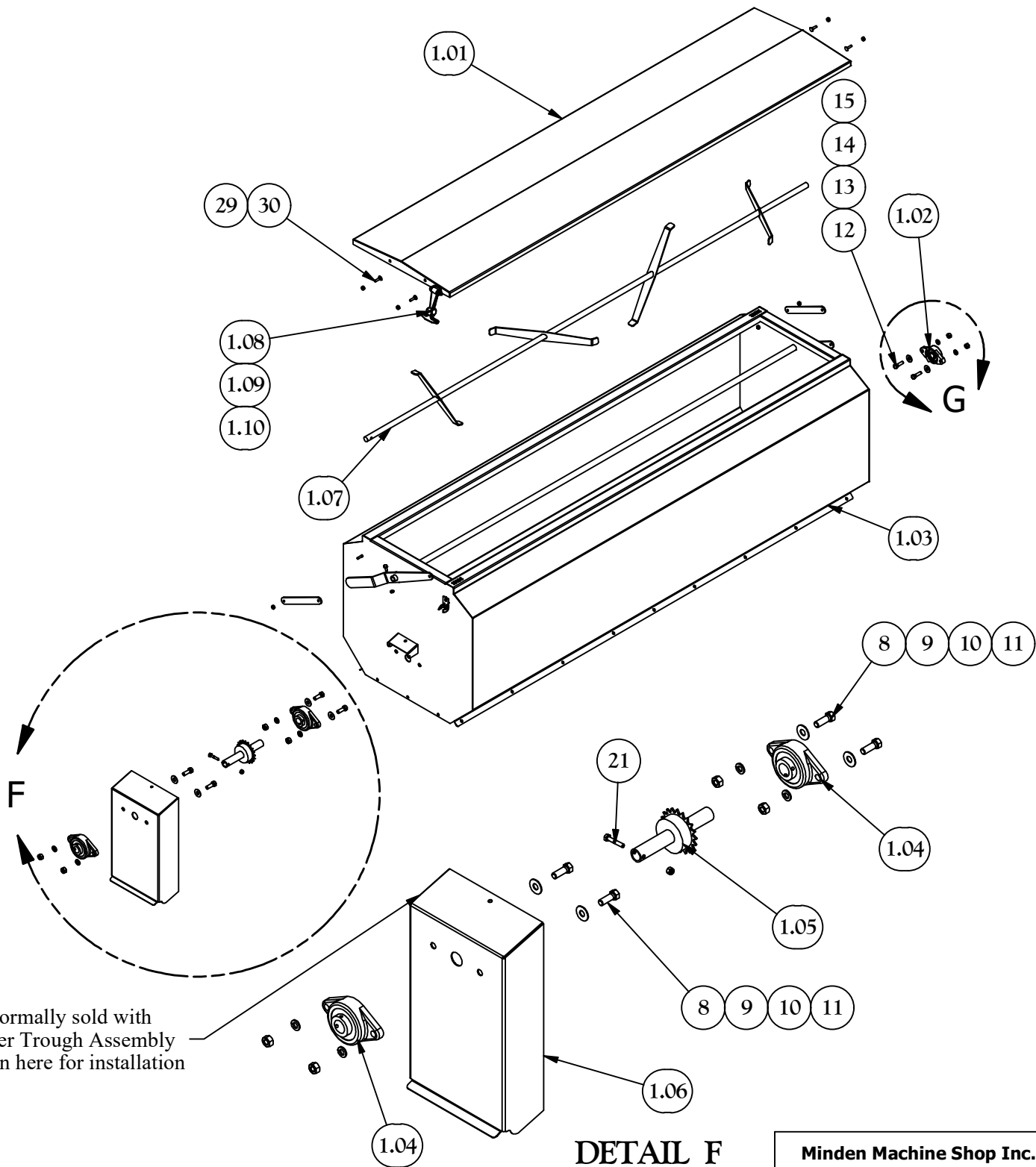
Cotton Seed Model

Cake Feeder - Cotton Option

1000C Hopper Assembly
KF-1000-A005



DETAIL G

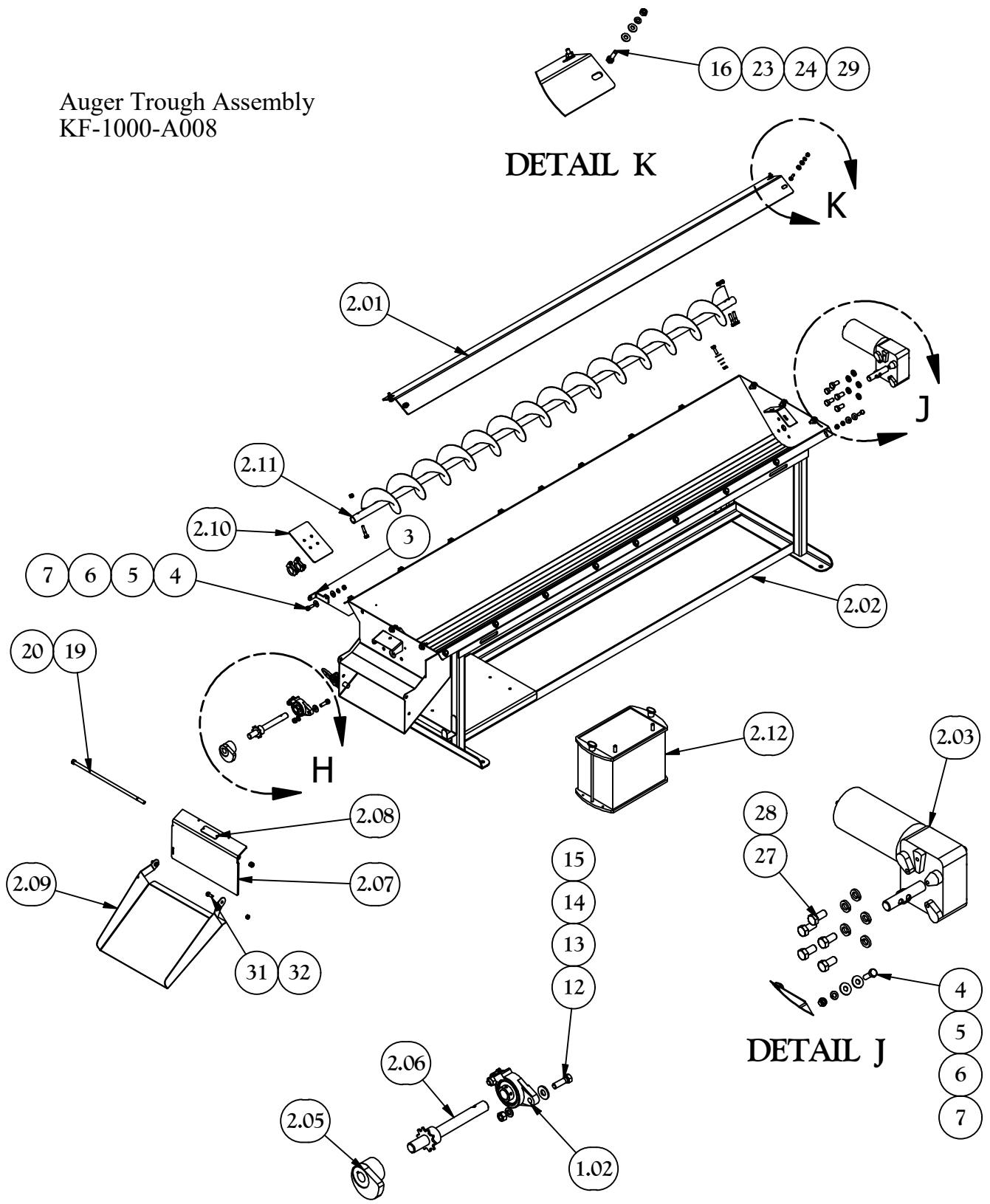


Normally sold with
Auger Trough Assembly
Shown here for installation

DETAIL F

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Auger Trough Assembly
KF-1000-A008



DETAIL H

DETAIL J

DETAIL K

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Cake Feeder - Cotton Model Parts List

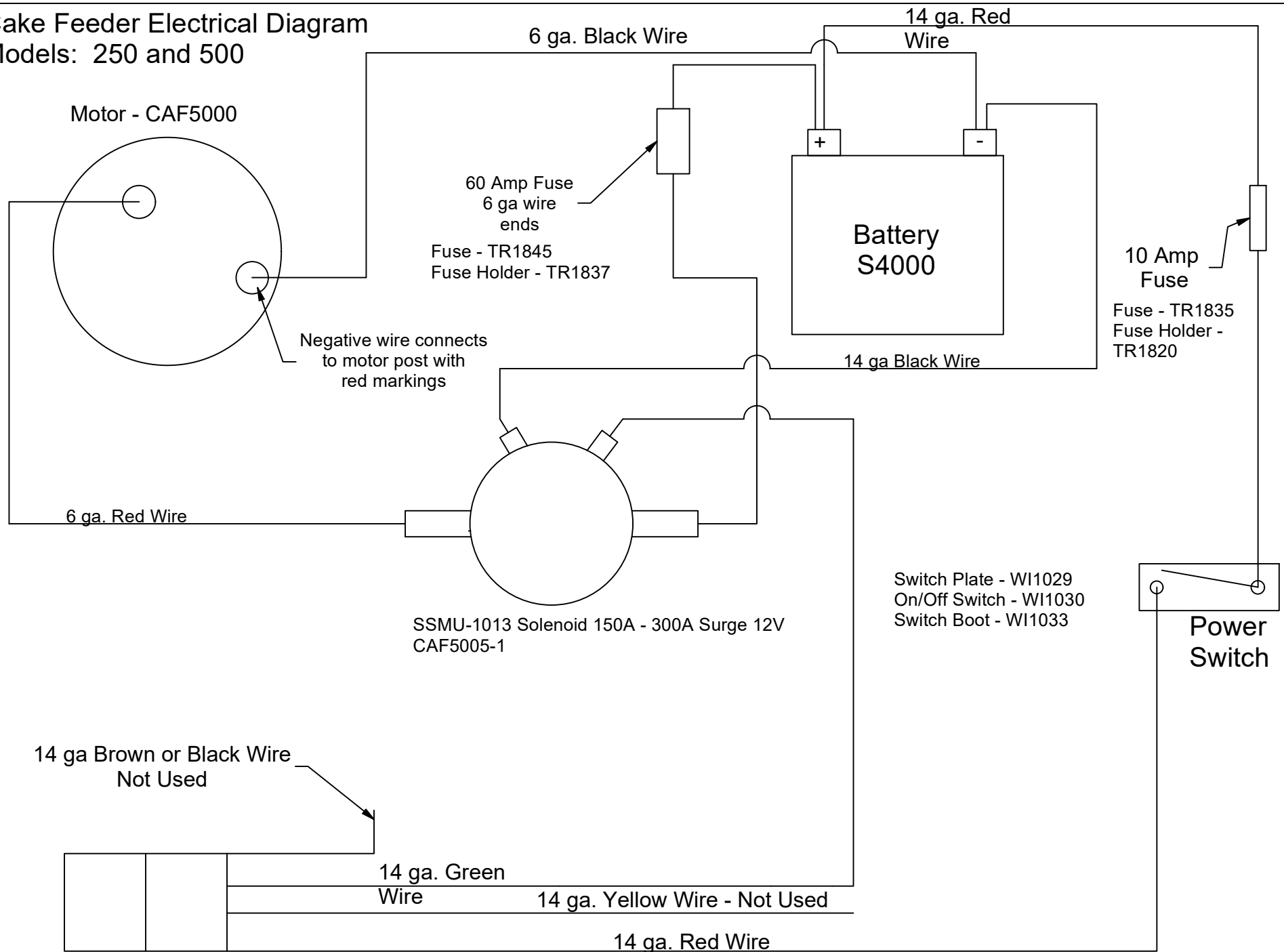
Parts List				Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION	ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	KF-1000-A005	1000C Hopper Assembly	11	4	N7/16N	Hex Nut
1.01	1	KF-CP-A006	Lid	12	4	B3/8x1.25	Hex Bolt
1.02	2	BR1155	3/4" Diameter Bearing Assembly	13	4	W3/8F	Plain Washer
				14	4	W3/8L	Lock Washer
1.03	1	KF-1000-A006	Hopper	15	4	N3/8N	Hex Nut
1.04	2	BR907	1" Diameter Bearing Assembly	16	5	N1/4N	Hex Nut
1.05	1	KF-CP-A017	Adapter Shaft with Sprocket	17	5	W1/4L	Lock Washer
1.06	1	KF-1000-A008	Cover	18	1	B1/4x0.75	Hex Bolt
1.07	1	KF-CP-A015	Agitator Assembly	19	1	B3/8x14	Hex Bolt
1.08	1	S4809	Anchor	20	1	N3/8NY	3/8 Std NC Nylock Nut
1.09	1	S4805	Rubber Latch	21	1	B1/4x1.5	Hex Bolt
1.10	1	S4808	Bent Catch	22	1	N1/4NY	1/4 Std NC Nylock Nut
2	1	KF-1000-A008	Auger Trough Assembly	23	6	B1/4X1	Hex Bolt
2.01	1	KF-CP-P045	Auger Cover	24	8	W1/4F	Plain Washer
2.02	1	KF-1000-A007	Trough Assembly	25	3	B5/16x1.5	Hex Bolt
2.03	1	CAF5000	Electric Motor/Gear Box	26	3	N5/16NY	5/16 Std NC Nylock Nut
2.04	1	4010 Sprocket	Sprocket	27	5	BM12X1.75X25	Hex Bolt
2.05	1	KF-CP-A001	Eccentric Bushing	28	5	W12M	Lock Washer
2.06	1	KF-CP-P012	Adapter Shaft	29	6	N1/4L	Lock Nut
2.07	1	KF-CP-A003	Door	30	4	B1/4x1CB	Round Head Square Neck Bolt
2.08	1	KF-CP-P023	Wear Plate				
2.09	1	KF-CP-P014	Chute	31	2	N5/16L	Lock Nut
2.10	1	KF-CP-P085	Paddle (Cotton Model Only)	32	2	B5/16x0.75	Hex Bolt
2.11	1	KF-CP-A007	Auger				
2.12	1	S4000	Battery				
3	1	KF-CP-P060	Mounting Bracket				
4	24	B5/16x1	Hex Bolt				
5	48	W5/16F	Plain Washer				
6	24	W5/16L	Lock Washer				
7	24	N5/16N	Hex Nut				
8	4	B7/16x1.25	Hex Bolt				
9	4	W7/16F	Plain Washer				
10	4	W7/16L	Lock Washer				

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ELECTRONICS

Cake Feeder Electrical Diagram

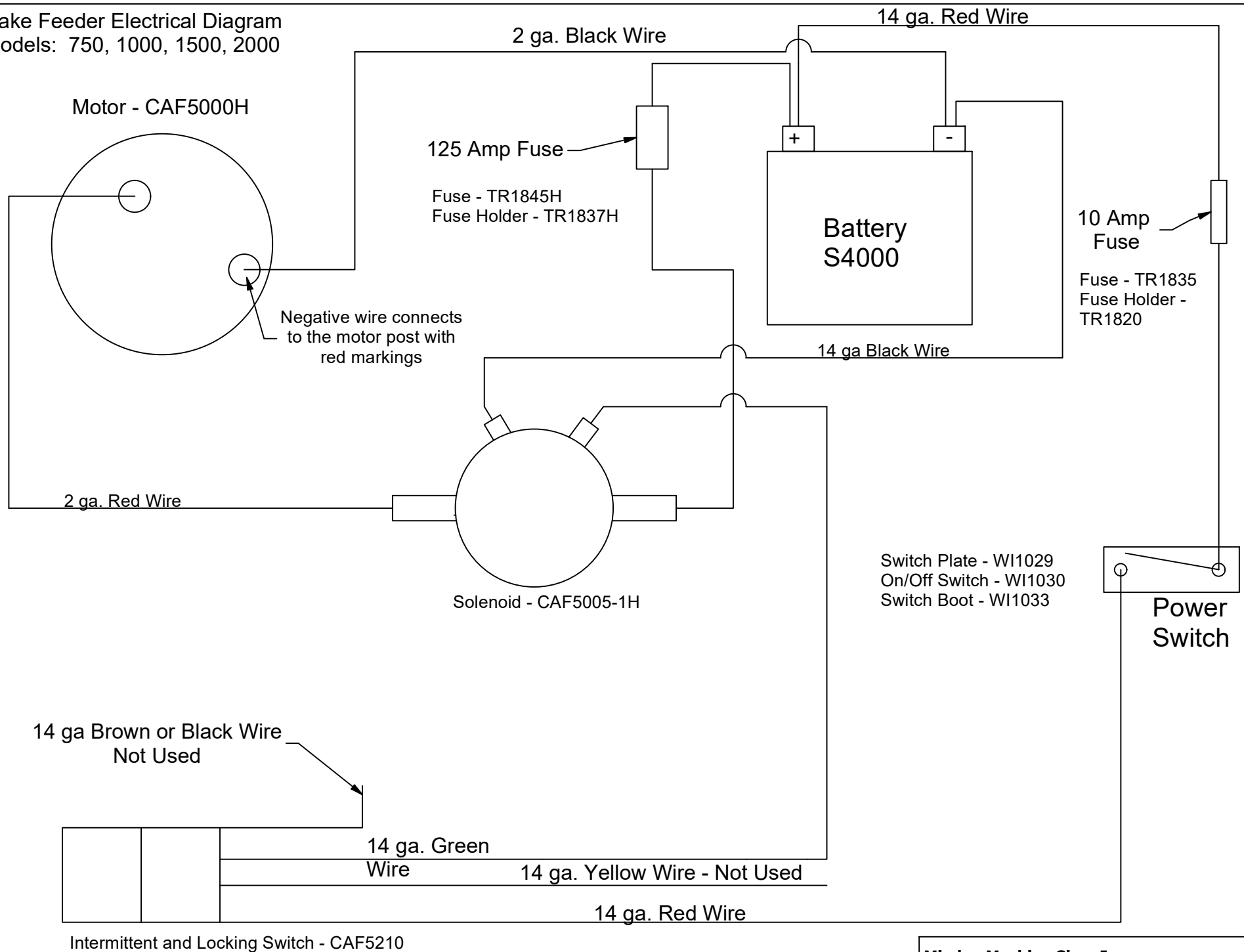
Models: 250 and 500



Intermittent and Locking Switch - CAF5210

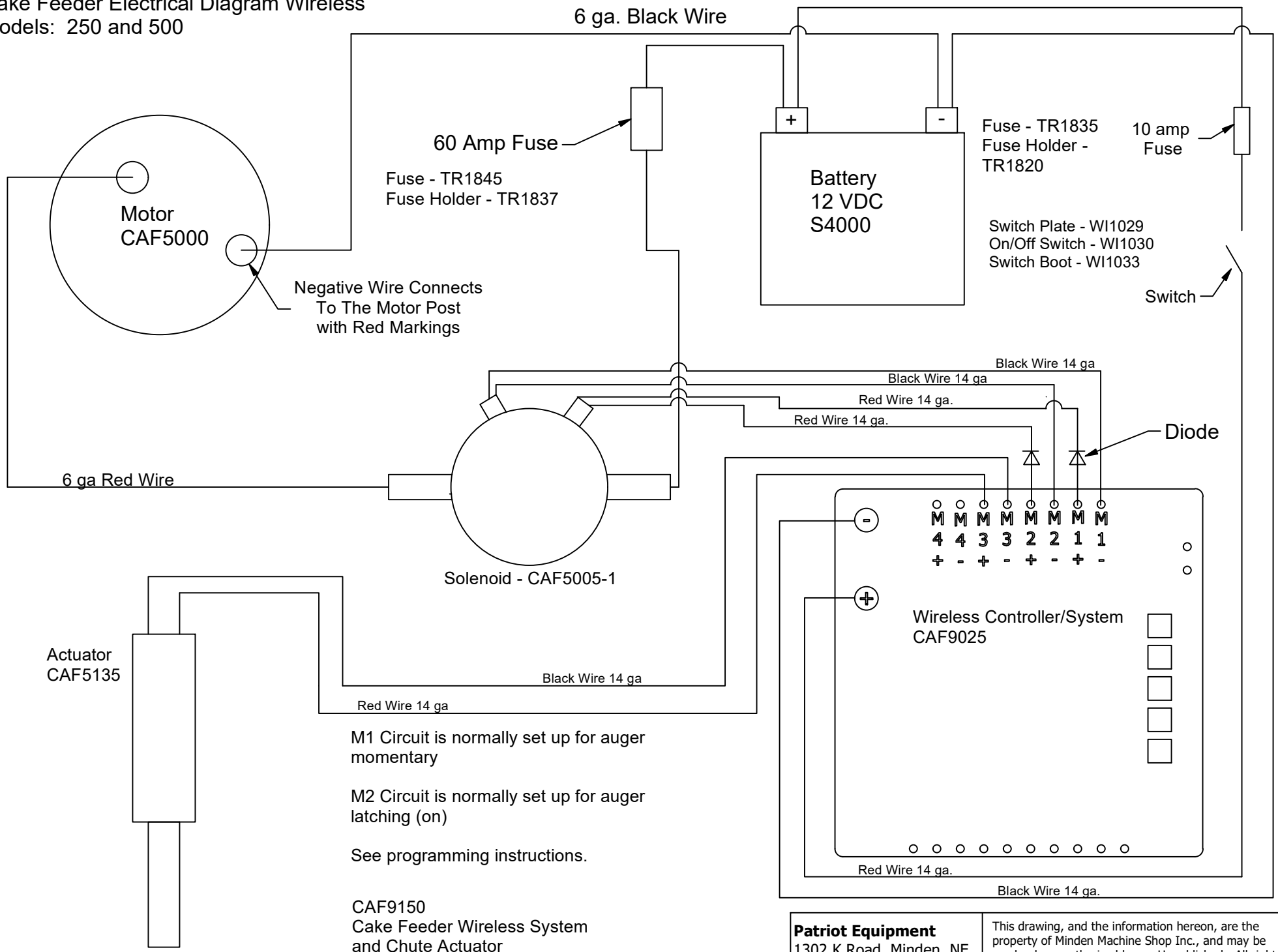
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Cake Feeder Electrical Diagram
Models: 750, 1000, 1500, 2000



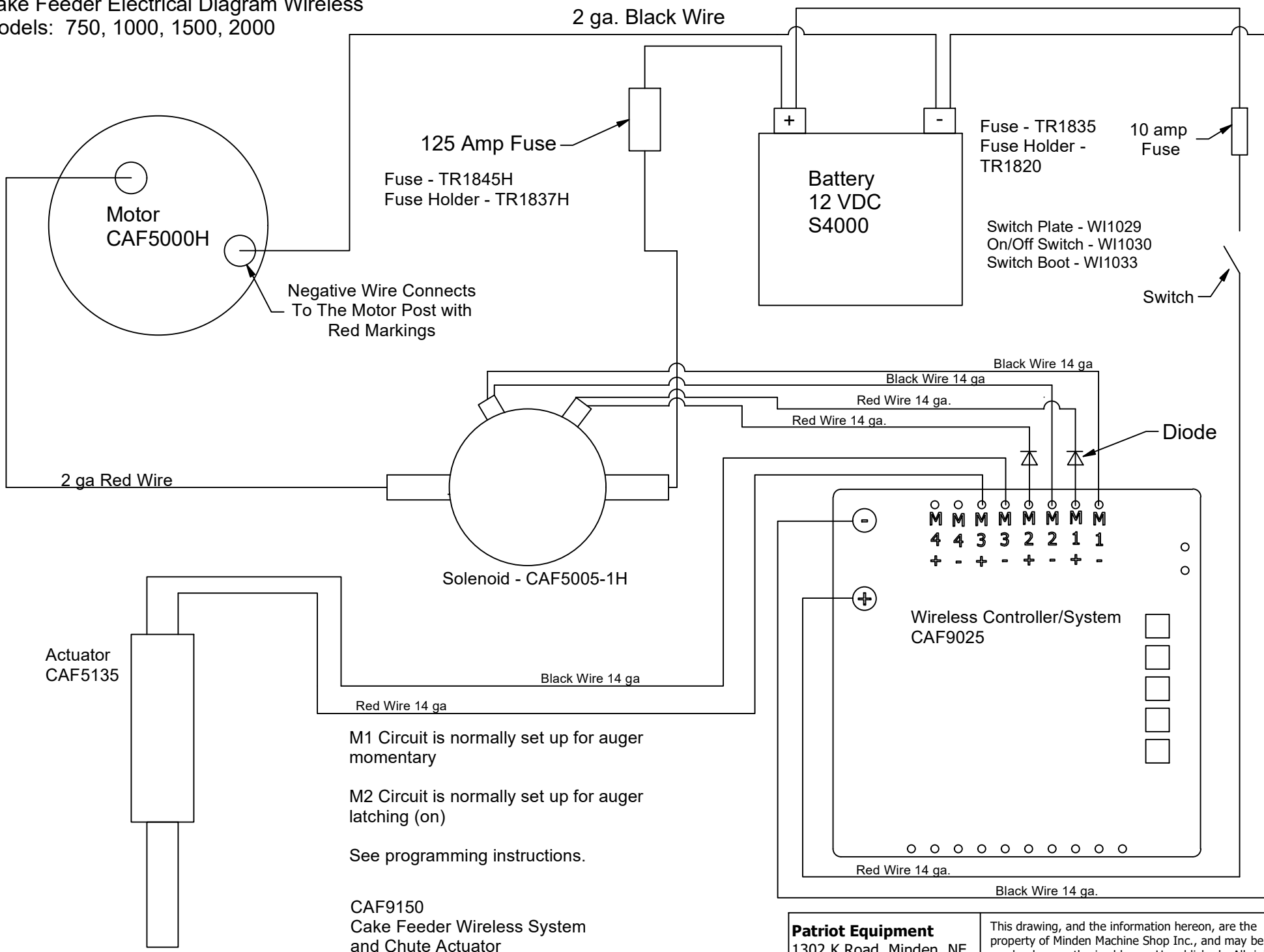
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Cake Feeder Electrical Diagram Wireless Models: 250 and 500



Cake Feeder Electrical Diagram Wireless

Models: 750, 1000, 1500, 2000



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Minden Machine Shop Inc

LIMITED WARRANTY

Minden Machine Shop Inc warrants all products manufactured by it to be free of defect in material and workmanship for a period of one (1) year from the date of purchase.

This Minden Machine Shop Inc. warranty does not cover:

1. Parts and accessories supplied by Minden Machine Shop Inc. but manufactured by others. Minden Machine Shop Inc. will facilitate the other manufacturer warranty for the benefit of the purchaser but will not be bound thereby (example: augers, motors, trailers, tanks, etc.).
2. Products that have been altered by anyone other than a Minden Machine Shop Inc. employee or are used by the purchaser, for purposes other than what was intended at time of manufacture or used in excess of the "built specifications".
3. Products that are custom manufactured by Minden Machine Shop Inc. utilizing the purchaser's design which deviates from Minden Machine Shop Inc. normal production line manufactured or customized features of the products.
4. Malfunctions or damages to the product from misuse, negligence, customer alteration, accidents or product abuse due to incoming material or poor material flow ability or lack of required performance or required maintenance (e.g., poor material flow ability caused by incoming wet fertilizer or hot soybean meal, etc).
5. Loss of time, inconvenience, loss of material, down time or any other consequential damage.
6. Product use for a function that is different than designed intent (e.g., storing soybean meal in grain bin, unacceptable material in the bin such as hot bean meal when product originally designed for other application, etc).
7. Minden Machine Shop Inc is not responsible for any equipment that this product is attached to or mounted on.

To activate this warranty, the purchaser must make contact in writing with Minden Machine Shop Inc. within one (1) year of date of purchase. After contact, Minden Machine Shop Inc. has the right to determine the cause and qualify the legitimacy of the claim. Minden Machine Shop Inc., upon acceptance of a warranty claim, shall have a reasonable time to plan any repair or replacement and may affect repair or replacement out of its factory or through contract with a local repair service. If a purchaser after warranty notice is made, chooses to make the repair itself, Minden Machine Shop Inc. must approve any expenses before they are incurred to be responsible for customer reimbursement. Minden Machine Shop Inc. shall be liable on a warranty claim for repair or replacement of any defective products and this is the purchaser's sole and exclusive remedy. Minden Machine Shop Inc. will not be liable for any other or further remedy including claims for personal injury, property damage or consequential damage. The law of the State of Nebraska shall govern and any such claim and any issues with regard to the same shall be resolved in the Nebraska District Court for the county of Kearney.

RETURN OF MERCHANDISE

Merchandise may not be returned without written approval from the factory. All returns must have a return authorization number. Obtain this number before the return and show it on all return items. A 15% restocking charge is made on merchandise returned. Returned merchandise must be shipped pre-paid.

RECEIVING MERCHANDISE AND FILING CLAIMS

When receiving merchandise it is important to check both the number of parts and their description with packing slip. The consignee must make all claims for freight damage or shortage within 10 days from the date of delivery.

When the material leaves the factory it becomes the property of the consignee. It is the responsibility of the consignee to file a claim on any possible damage or loss. Please list your preferred routing on purchase orders.

MODIFICATIONS

It is the policy of Minden Machine Shop Inc. to improve its products whenever possible and practical to do so. We reserve the right to make changes, improvements and modifications at any time without incurring the obligation to make such changes, improvements and modifications on any equipment sold previously.

WARRANTY REGISTRATION

To register equipment, or file a claim, copy and paste the words on this page into an email or word document, fill out the appropriate information completely, and email it to larry@mindenmachine.com with the subject as EQUIPMENT WARRANTY, or fill it out and fax it to 308-832-1340.

Dealer Information: Not Applicable, check here: []

Dealer Name:

Address:

City:

State:

Zip Code:

Phone #:

Email:

End User Information:

Purchaser:

Address:

City:

State:

Zip Code:

Phone #:

Email:

Equipment:

Serial #:

Date Of Purchase: / /