
Maintenance Manual

for

Manually & Motor Operated
Grilles



Job No. _____

Job Name _____

This troubleshooting manual has been specifically written to provide a concise source of information to all customers of Amazing Roller Shutters. This information will provide solutions to the most common problems and establish a systematic sequence required to repair a rolling door.

PURPOSE

When a problem is encountered that is not covered in this manual, please consult us. The customer service department stands ready to assist you always. Our customer service department is available Monday through Friday.

CUSTOMER SERVICE

Phone — 1-888-779-7731

When requesting information or ordering replacement parts, you must provide the following information to Amazing Roller Shutters.

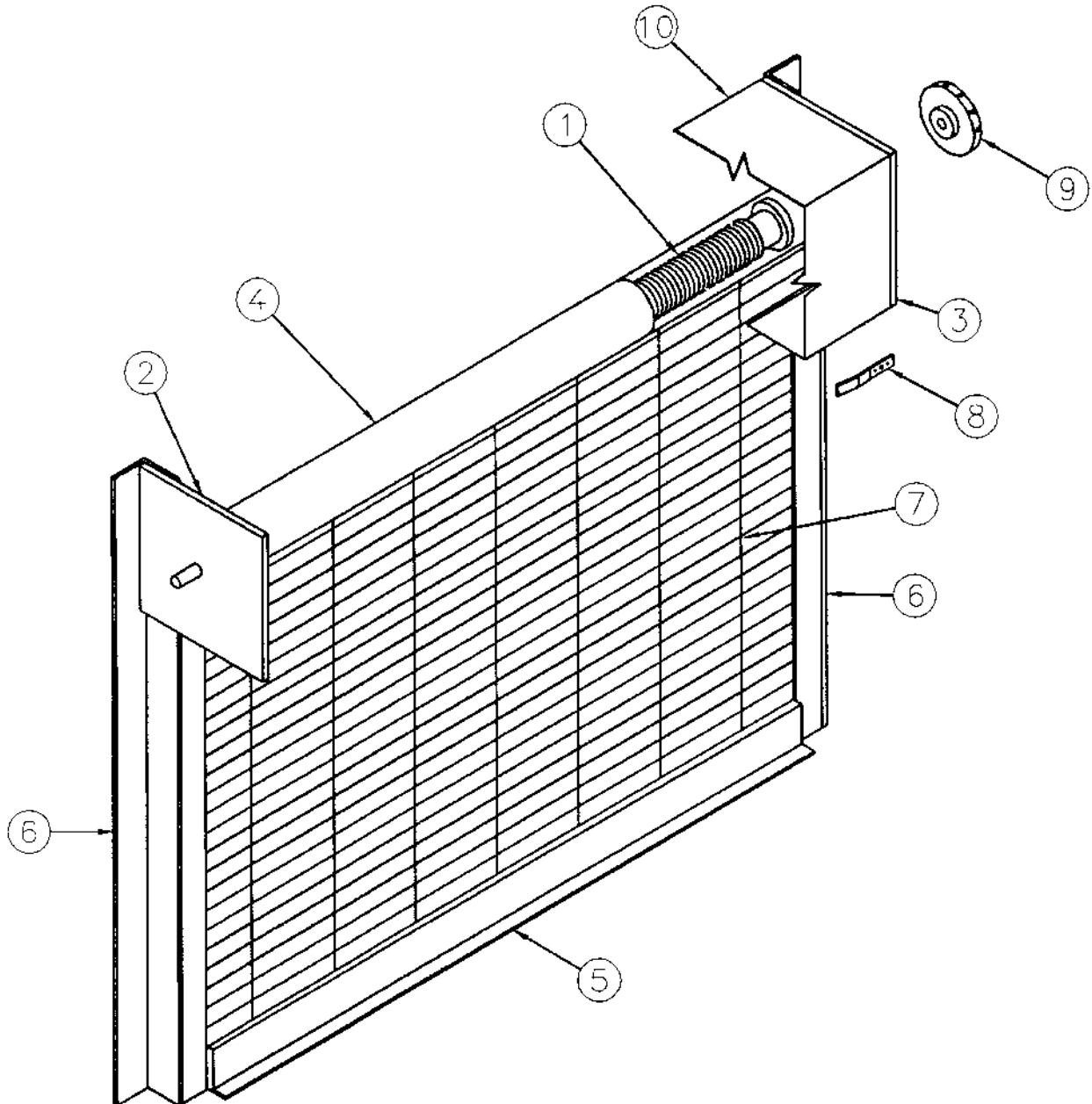
ITEM

1. Job Number
2. Door Mark
3. Operator Voltage & Phase
4. Operator Model Number
5. Job Location

| |
|--------------------------------------------------------------------------------------------------------------------|
| <p>NOTE: For maintenance or repair of this door, please consult your local authorized Cookson Distributor.</p> |
|--------------------------------------------------------------------------------------------------------------------|

PARTS LIST:
FACE MOUNTED,
PUSH-UP OPERATED
GRILLE

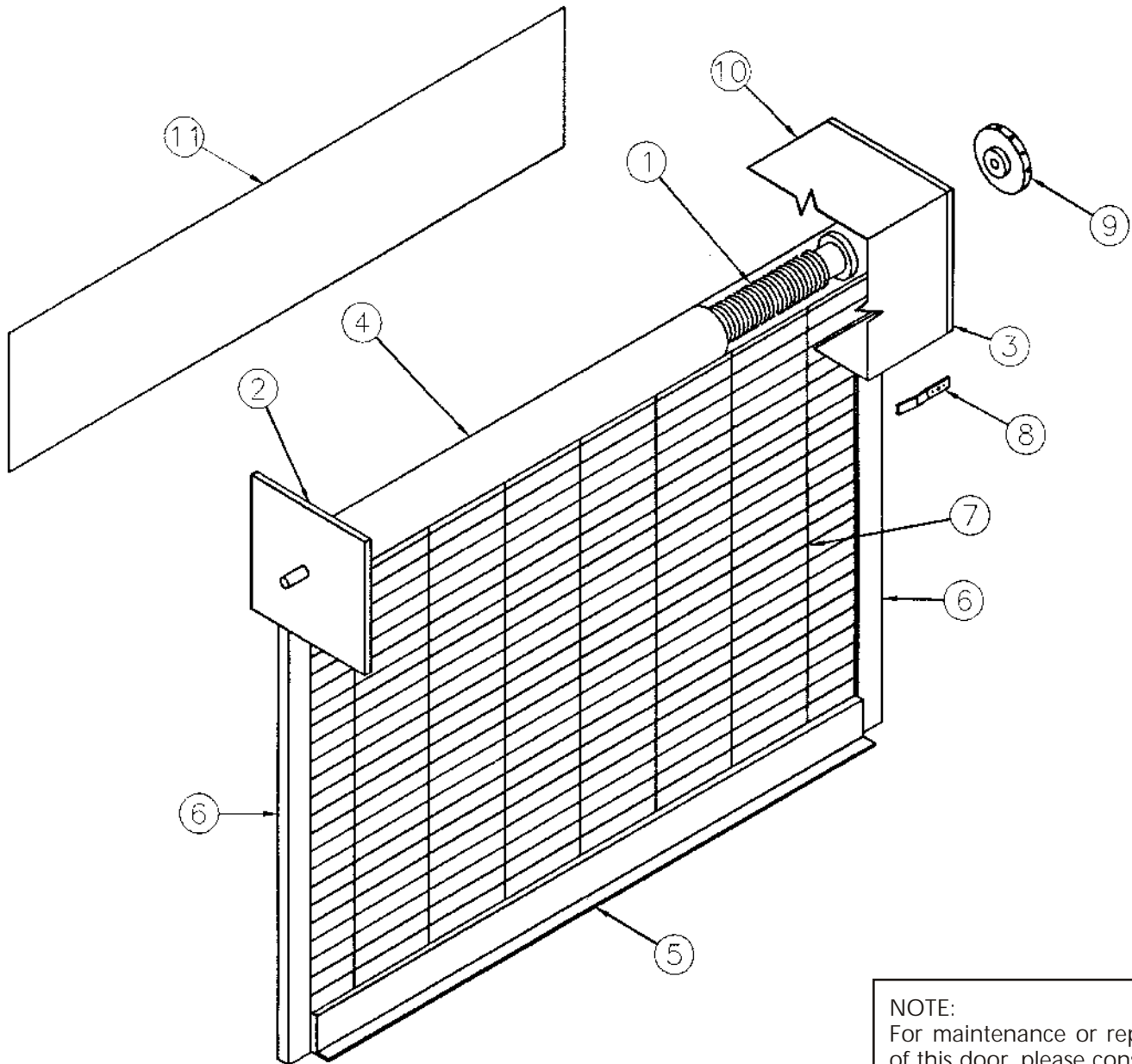
| NO. | ITEM |
|-----|---------------------|
| 1 | Tension Spring |
| 2 | Drive Bracket |
| 3 | Tension Bracket |
| 4 | Barrel |
| 5 | Bottom Bar |
| 6 | Guides |
| 7 | Curtain |
| 8 | Stops |
| 9 | Tension Wheel |
| 10 | Hood* (if required) |



* Grilles mounted above the ceiling do not require hoods.

| NO. | ITEM |
|-----|-----------------------|
| 1 | Tension Spring |
| 2 | Drive Bracket |
| 3 | Tension Bracket |
| 4 | Barrel |
| 5 | Bottom Bar |
| 6 | Guides |
| 7 | Curtain |
| 8 | Stops |
| 9 | Tension Wheel |
| 10 | Hood* (if required) |
| 11 | Fascia* (if required) |

PARTS LIST:
JAMB MOUNTED,
PUSH-UP OPERATED
GRILLE



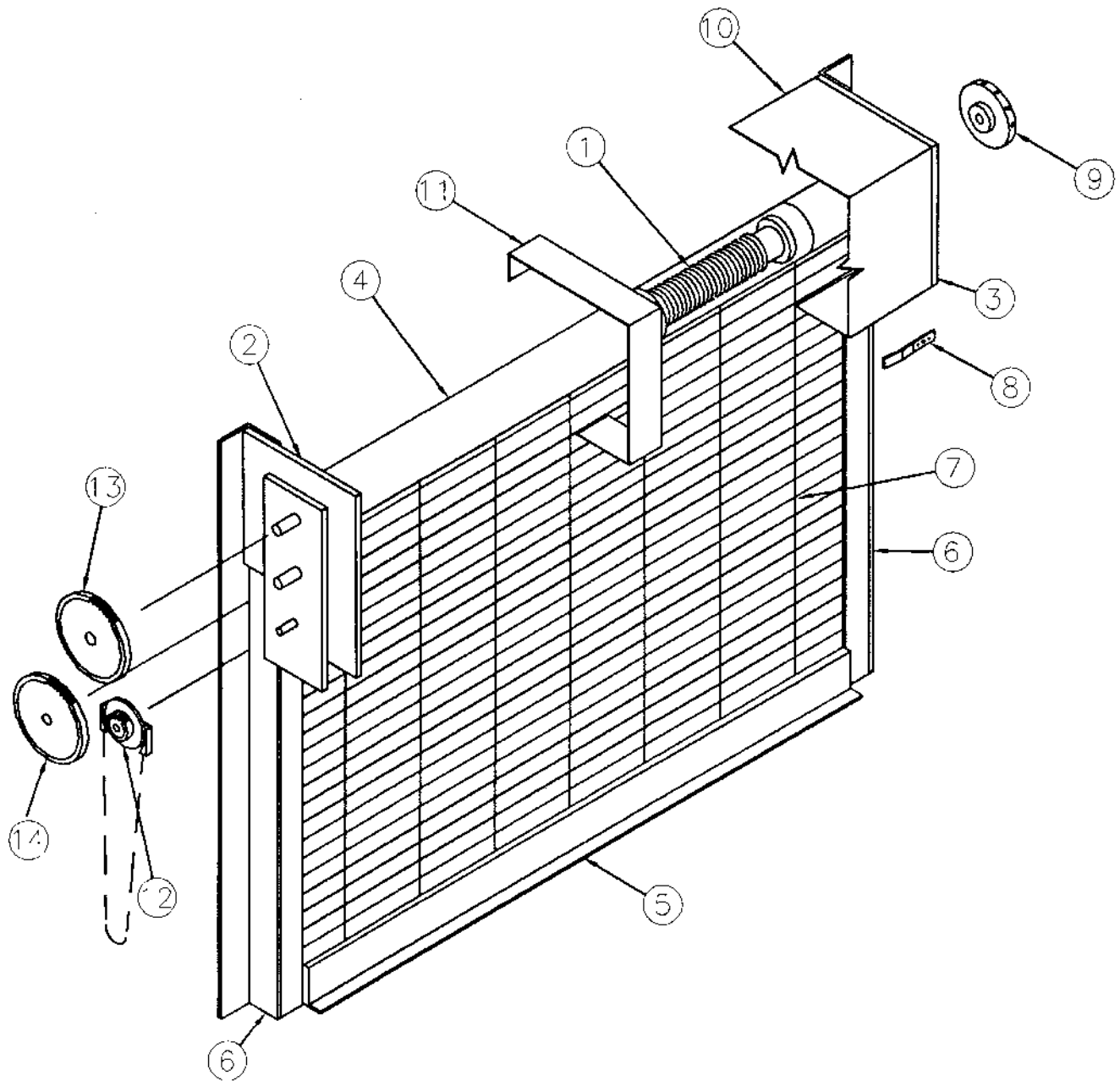
NOTE:
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PARTS LIST:
FACE MOUNTED,
CHAIN OPERATED
GRILLE

| NO. | ITEM |
|-----|-----------------|
| 1 | Tension Spring |
| 2 | Drive Bracket |
| 3 | Tension Bracket |
| 4 | Barrel |
| 5 | Bottom Bar |
| 6 | Guides |
| 7 | Curtain |

| NO. | ITEM |
|-----|-------------------------------------|
| 8 | Stops |
| 9 | Tension Wheel |
| 10 | Hood* (if required) |
| 11 | Hood Support (where required) |
| 12 | Chain Operator |
| 13 | Main Gear |
| 14 | Intermediate Gears (where required) |

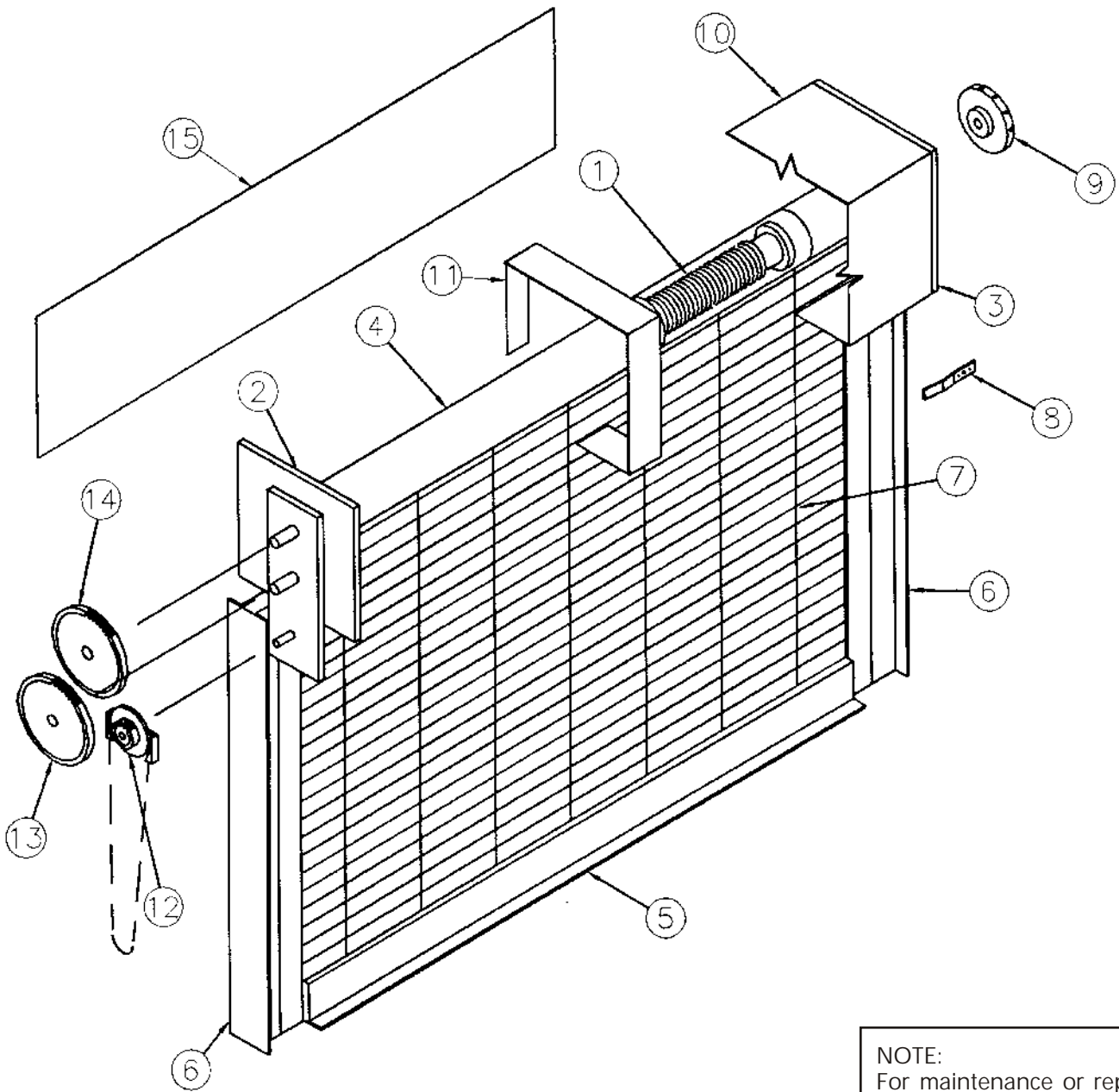


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| 7 | Curtain |
| 8 | Stops |

| NO. | ITEM |
|-----|-------------------------------------|
| 9 | Tension Wheel |
| 10 | Hood* (if required) |
| 11 | Hood Support (where required) |
| 12 | Chain Operator |
| 13 | Intermediate Gears (where required) |
| 14 | Main Gear |
| 15 | Fascia* (if required) |

PARTS LIST:
JAMB MOUNTED,
CHAIN OPERATED
GRILLE



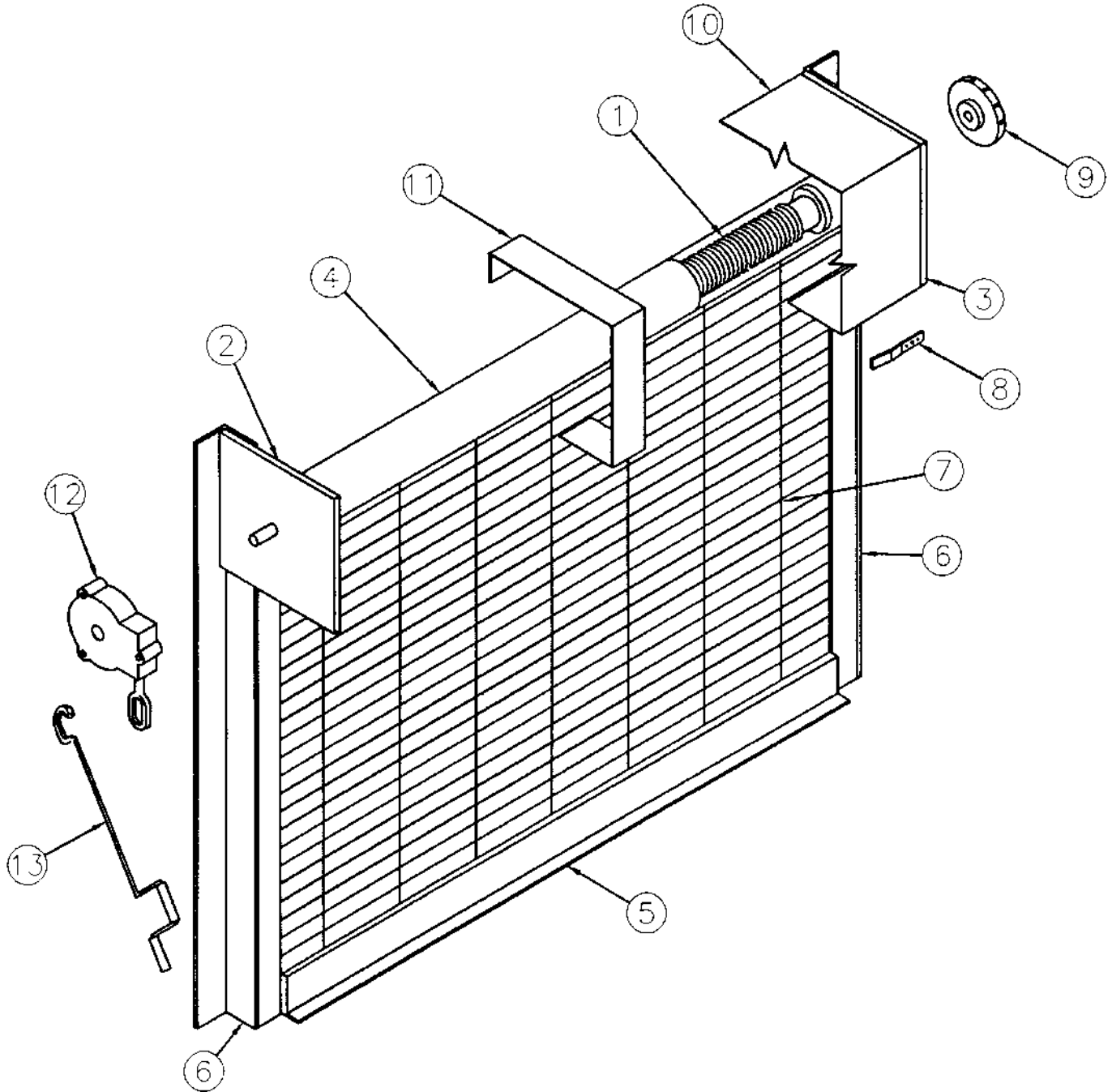
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PARTS LIST:
FACE MOUNTED,
CRANK OPERATED
GRILLE

| NO. | ITEM |
|-----|-----------------|
| 1 | Tension Spring |
| 2 | Drive Bracket |
| 3 | Tension Bracket |
| 4 | Barrel |
| 5 | Bottom Bar |
| 6 | Guides |
| 7 | Curtain |

| NO. | ITEM |
|-----|-------------------------------|
| 8 | Stops |
| 9 | Tension Wheel |
| 10 | Hood* (if required) |
| 11 | Hood Support (where required) |
| 12 | Gear Box |
| 13 | Winding Shaft |

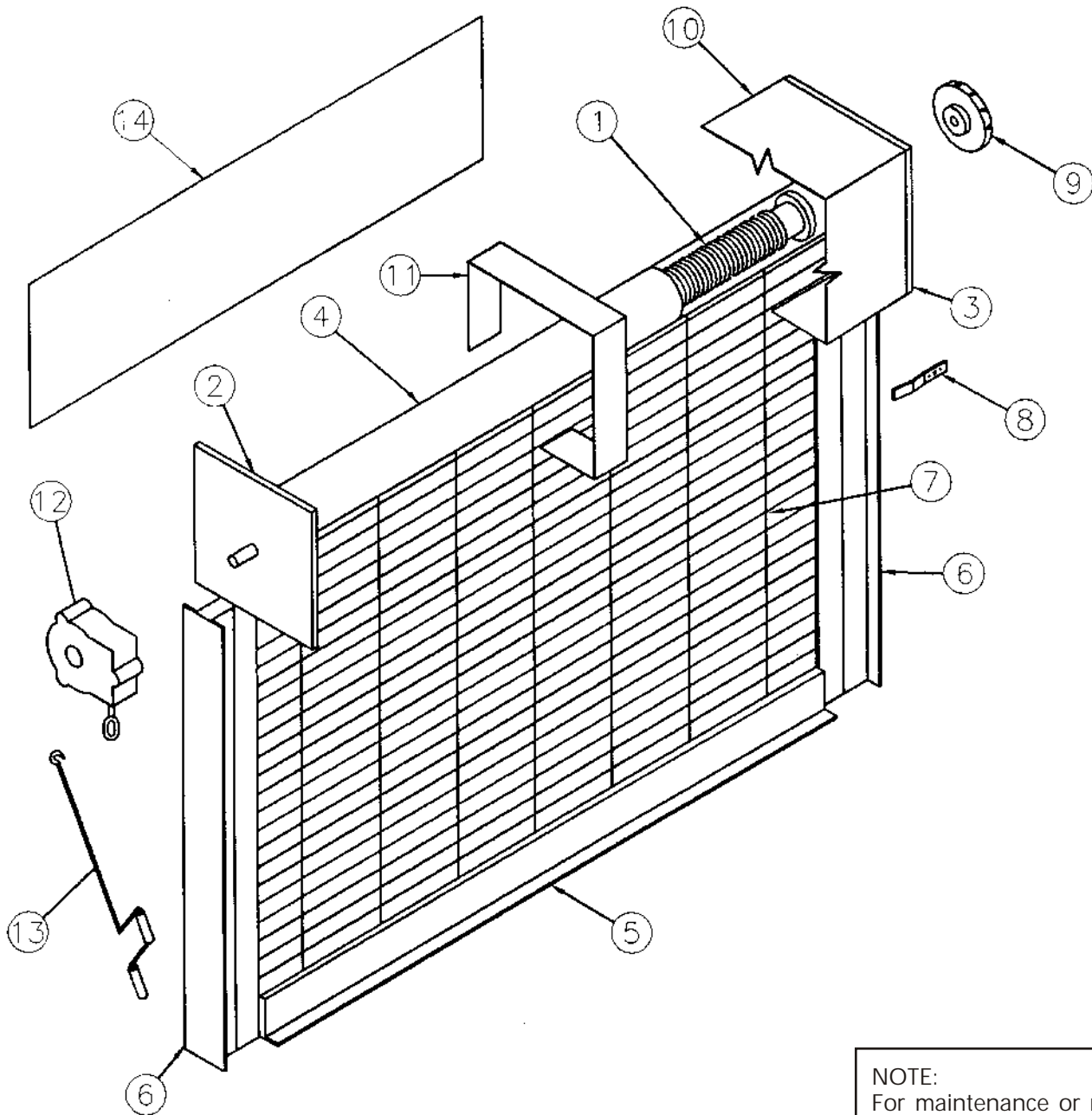


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PARTS LIST:
JAMB MOUNTED,
CRANK OPERATED
GRILLE



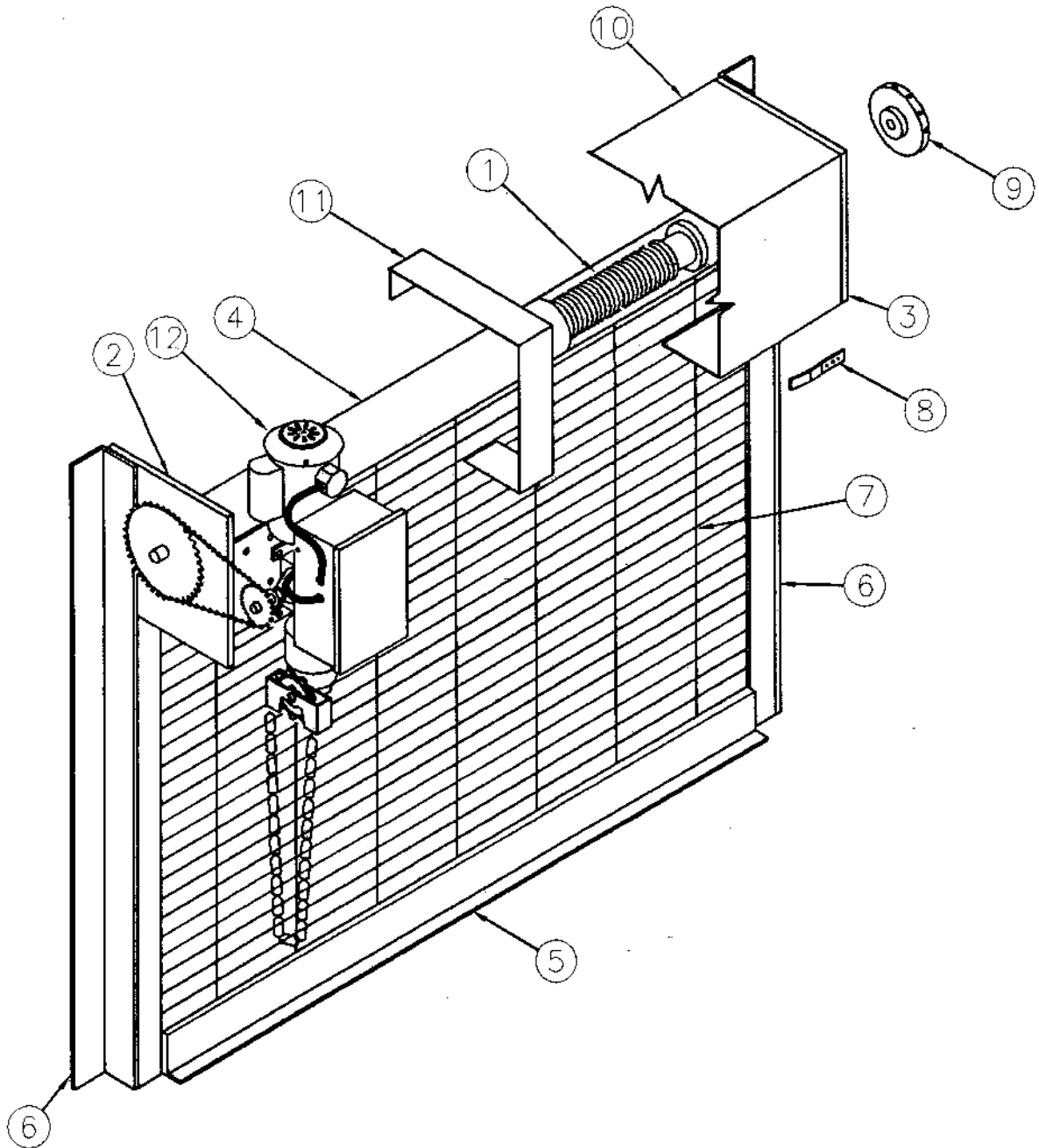
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PARTS LIST:
FACE MOUNTED,
MOTOR OPERATED
GRILLE

| NO. | ITEM |
|-----|-----------------|
| 1 | Tension Spring |
| 2 | Drive Bracket |
| 3 | Tension Bracket |
| 4 | Barrel |
| 5 | Bottom Bar |
| 6 | Guides |

| NO. | ITEM |
|-----|-------------------------------|
| 7 | Curtain |
| 8 | Stops |
| 9 | Tension Wheel |
| 10 | Hood* (if required) |
| 11 | Hood Support (where required) |
| 12 | Motor |

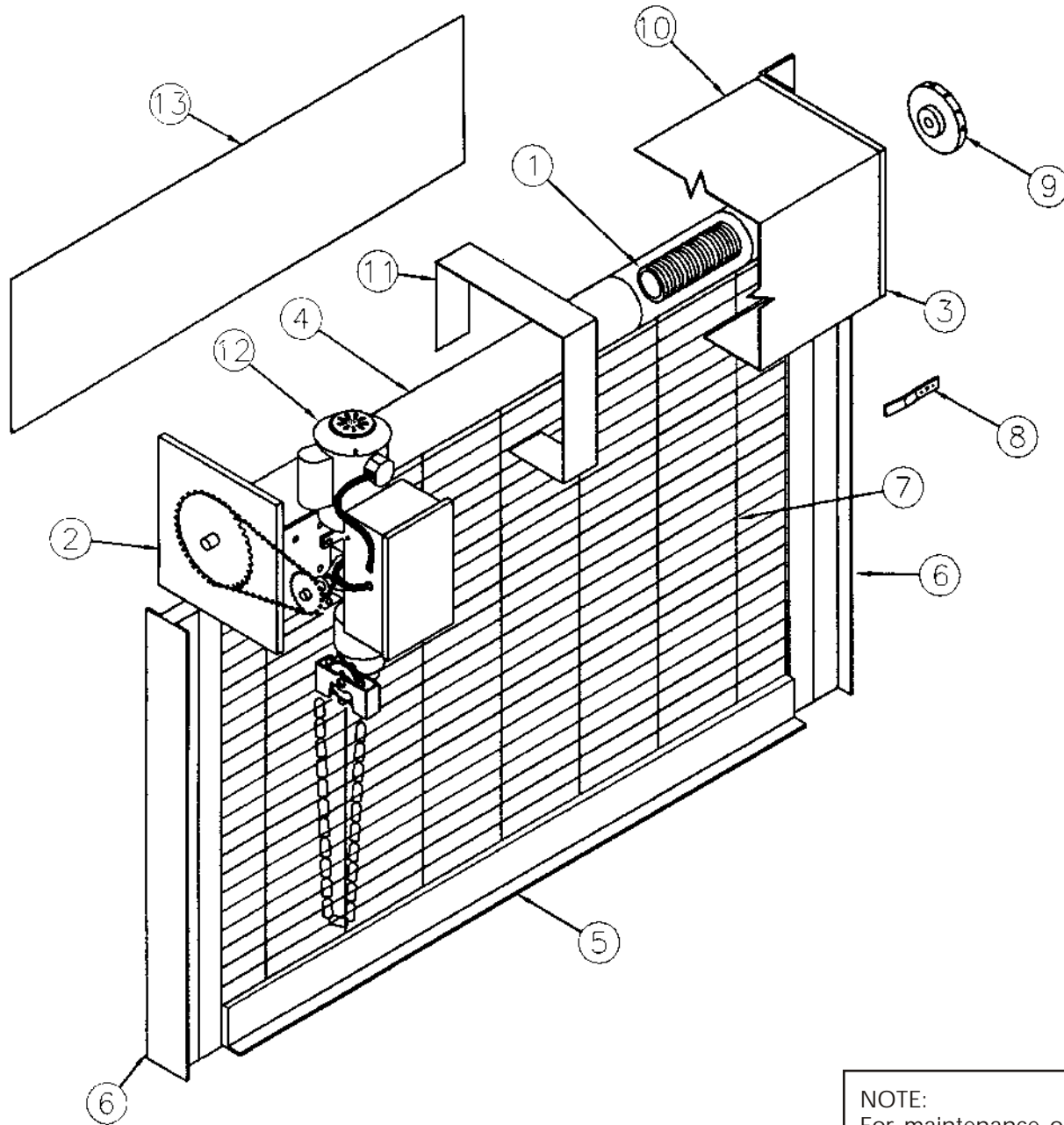


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|-----|-----------------|
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| 3 | Tension Bracket |
| 4 | Barrel |
| 5 | Bottom Bar |
| 6 | Guides |
| 7 | Curtain |

| NO. | ITEM |
|-----|-------------------------------|
| 8 | Stops |
| 9 | Tension Wheel |
| 10 | Hood* (if required) |
| 11 | Hood Support (where required) |
| 12 | Motor |
| 13 | Fascia* (if required) |

PARTS LIST:
JAMB MOUNTED,
MOTOR OPERATED
GRILLE



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GRILLE INSTALLATION

- A. Many problems encountered with rolling grilles are a result of improper installation of the grille. Each grille is provided with a set of installation instructions that must be followed to insure proper operation. Installation problems can remain undetected on grilles that are seldom operated, therefore it is important to consider incorrect installation as a common cause of problems.
- B. A grille must be inspected prior to installation to insure that none of the components have been damaged in shipment. Damaged components should not be used to install a grille.
- C. The guides of the grille must be plumb and mounted the correct distance apart along their entire length. Mounting hardware must not project into the guide because the curtain must be free to move in the guide. The tops of guides must be level to insure that the barrel of the door is level. The use of a Hydro-Level is an accurate method of leveling the guides.
- D. The barrel of the grille must be free to turn when supported by the brackets. The curtain is attached to the barrel with machine screws that pass through slots in the top slat.
- E. The curtain of the grille must pass freely through the guides without binding. The guides must be plumb and mounted to the correct guide opening dimension.
- F. The torsion spring must be tensioned to the number of initial turns shown in the installation instructions. Grilles with internal tension wheels are tensioned with grille closed. On large motor operated grilles, it may not be possible to raise the grille by hand if the initial tension is not applied. When this occurs, the weight of the grille must be lifted while the hand operator is used to coil the curtain on the barrel.
- G. The grille operator must be free to turn and securely mounted to the bracket. Bracket plates must be perpendicular to the barrel to insure that chains, sprockets, and gears engage properly.
- H. All grille components are labeled, stamped, or tagged with corresponding Cookson Door Mark. Parts must not be interchanged for different grilles.

| TROUBLESHOOTING GUIDE | | |
|---------------------------------------|----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| PROBLEM | CAUSE | CORRECTION |
| A. Grille starts down then binds. | 1. Curtain binds in guides. | 1. Increase guide groove opening. Curtain must be loose in guides. |
| | 2. Screws connecting curtain to barrel too long and interfering with torsion spring. | 2. Replace machine screws with shorter length. They must not protrude past barrel wall. |
| | 3. Incorrect barrel for opening. | 3. Check door mark. Locate correct barrel. |
| | 4. Internal interference inside barrel. | 4. Consult Distributor. |
| B. Tension wheel turns freely. | 1. Spring broken. | 1. Consult Distributor. |
| | 2. Broken shaft tie. | 2. Consult Distributor. |
| | 3. Broken barrel tie. | 3. Consult Distributor. |
| C. Tension shaft slipped into barrel. | 1. Drive pin failure - shipping damage. | 1. Consult Distributor. |
| | 2. Bearing failure - shipping damage. | 2. Consult Distributor. |
| D. Grille loses tension. | 1. Pawl slipping on internal tension wheel because pawl is binding on attaching rivet. | 1. Loosen pawl pivot point. |
| | 2. Grille damaged causing increased drag. | 2. Consult Distributor. |
| E. Drive shaft crooked. | 1. Broken weld or shipping damage. | 1. Consult Distributor for determination if field repair is possible. |

NOTE:
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CURTAIN

| TROUBLESHOOTING GUIDE | | |
|--------------------------------------|---------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|
| PROBLEM | CAUSE | CORRECTION |
| A. Curtain rolls up unevenly. | 1. Top slat not in line. | 1. Loosen top screws and straighten curtain. |
| | 2. Barrel not level. | 2. Use Hydro-level to level barrel. |
| B. Grille curtain separates. | 1. Freight damage. | 1. Consult Distributor. |
| C. Curtain separates from barrel. | 1. Machine screws pulled through top slat. | 1. Install washer under head of screws. |
| | 2. Interlocks not installed on motor operated grille. | 2. Install interlocks to prevent motor operation when grille is locked. |
| D. Finish problems. | 1. Grille corrodes due to environmental conditions. | 1. Clean grille periodically. |
| E. Curtain appears to sag at center. | 1. Center of curtain is against barrel and edge of curtain is pulled toward lintel as it enters guides. | 1. Curvature of curtain makes it appear to be sagging while it is actually level. Check with carpenters level. |
| | 2. Barrel deflection of wide grille. Should not exceed .03 inches per foot of opening width. | 2. Consult Distributor. |

TROUBLESHOOTING GUIDE

| PROBLEM | CAUSE | CORRECTION |
|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| A. Safety Edge not working. | <ol style="list-style-type: none"> <li data-bbox="423 233 740 537">1. Open circuit in bottom bar. Confirm this by disconnecting plug at bottom bar and inserting continuity checker. If pressing up on safety edge does not close circuit, problem is open circuit in bottom bar. <li data-bbox="423 569 740 747">2. Open circuit in coil cord or cord reel. Confirm this by inserting volt-meter into plug. Reading should be 24V AC. <li data-bbox="423 779 740 873">3. Grille located in extremely wet or flood environment. | <ol style="list-style-type: none"> <li data-bbox="756 233 1076 443">1. Defective switch or connection at switch to plug. Check to make sure all wires are securely fastened. Replace switch if necessary. <li data-bbox="756 569 1076 621">2. Replace coil cord or cord reel. <li data-bbox="756 779 1076 873">3. Eliminate water. Replace safety edge or safety edge switch. |
| B. Locks inoperative. | <ol style="list-style-type: none"> <li data-bbox="423 909 740 961">1. Cam of cylinder not in correct position. <li data-bbox="423 1056 740 1108">2. Damage to internal components. | <ol style="list-style-type: none"> <li data-bbox="756 909 1076 1024">1. Reposition cylinder and firmly secure with small cylinder screw located below cylinder. <li data-bbox="756 1056 1076 1150">2. Remove bottom bar from guide. Replace lock mechanism. |
| C. Electrical interlocks inoperative. | <ol style="list-style-type: none"> <li data-bbox="423 1178 740 1272">1. Lock bolt does not line up with switch on guide. <li data-bbox="423 1304 740 1398">2. Interlock does not prevent motor from operating. | <ol style="list-style-type: none"> <li data-bbox="756 1178 1076 1272">1. Adjust switch location where it is mounted on guides. <li data-bbox="756 1304 1076 1398">2. Defective switch, check electrical connection and replace if necessary. |

NOTE:
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BRACKET

| TROUBLESHOOTING GUIDE | | |
|------------------------------------------|-----------------------------------------|-----------------------------------------------------------------|
| PROBLEM | CAUSE | CORRECTION |
| A. Brackets not perpendicular to barrel. | 1. Wall angle flange not square. | 1. Brace bracket into position. |
| B. Drive chain tension. | 1. Sprocket position out of adjustment. | 1. Tighten chain by sliding operator or remove link from chain. |
| C. Binding in bevel gear box. | 1. Lack of lubrication. | 1. Lubricate gear box. |

GUIDE

| TROUBLESHOOTING GUIDE | | |
|-----------------------------------|----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PROBLEM | CAUSE | CORRECTION |
| A. Curtain binds in guide groove. | 1. Incorrect guide groove opening. 2. Incorrect tip to tip dimension of guides. | 1. Refer to installation instructions and adjust guide groove opening. 2. Refer to installation instructions for tip to tip dimension and adjust guide spacing. |

HOOD

| TROUBLESHOOTING GUIDE | | |
|---------------------------------------------------|---------------------------------|---------------------------------------------------------------------|
| PROBLEM | CAUSE | CORRECTION |
| A. Incorrect dimensions, material, or end covers. | 1. Ordering processing problem. | 1. Get all dimensions of material supplied and consult distributor. |

TROUBLESHOOTING GUIDE

| PROBLEM | CAUSE | CORRECTION |
|-------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| A. Emergency hand chain or crank fails or is difficult to operate grille. | 1. Grille may be jammed or obstructed. | 1. Remove Obstruction. |
| | 2. Incorrect tension in spring. | 2. Make sure that spring has correct tension. |
| | 3. Grille may be locked. | 3. Check to see if lock is disengaged. |
| | 4. Problem in gear box housing. | 4. Consult Distributor. |
| B. Emergency hand chain or crank turns but does not turn the output shaft of gear box. | 1. Keys fixing gears to shafts are sheared. | 1. Check keys and keyways. |
| C. Motor fails to run or control circuit fails to energize. | 1. Fuses blown or circuit breaker "tripped". | 1. Check fuse or circuit breaker box. |
| | 2. Operators are protected from running in overload condition by thermal overload devices of the automatic reset type. | 2. Consult Distributor. |
| | 3. If contacts for motor controller energize but motor still fails to operate. | 3. Consult Distributor. |
| | 4. Pushbuttons energize on only one side of the control contacts. | 4. Check all electrical connections for broken or loose wires, etc. Check electrical connections for any optional equipment: Card Key, Cylinder Key Switch, Photo Cell, Reversing Bottom Bar or Special Interlocks. |
| D. Movement of the grille is in agreement with pushbutton station, but the limit switch does not stop the grille. | 1. Electrical connections are switched. | 1. Check electrical connections and jumper wire lead between the micro switches. Consult Distributor. |
| E. Limit Switch does not hold its setting. | 1. Sprocket shaft end play too large. | 1. End play should not exceed $\frac{1}{32}$ ". |
| | 2. Drive chain loose. | 2. Check drive chain. |
| | 3. Limit switch detent plate loose. | 3. The plate must engage both traveling cams. |

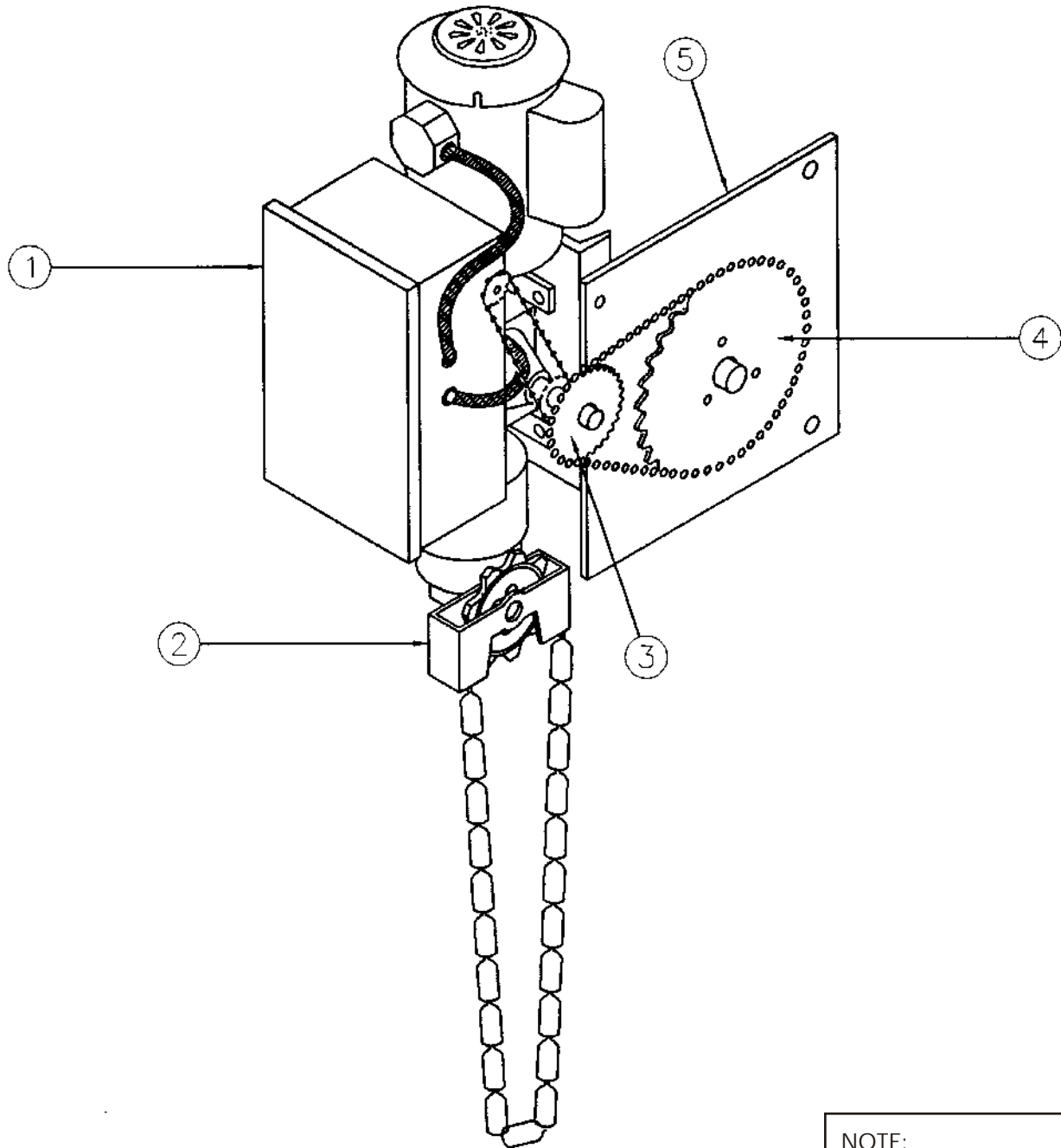
NOTE:
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MOTOR OPERATOR
(continued)

| TROUBLESHOOTING GUIDE | | |
|---------------------------------------------------------------------------------------------|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PROBLEM | CAUSE | CORRECTION |
| F. Electrical Control Circuit energizes but the motor does not run or motor overloads trip. | 1. Incorrect wiring. | 1. Consult Distributor. |
| G. Low voltage to motor. | 1. Incorrect electrical power to motor. | 1. Check voltage against the correct voltage stamped on the motor. If the voltage is 10% below the rating, there is not sufficient voltage to run the motor. |
| H. Motor is burned out. | 1. Incorrect wiring. | 1. Consult Distributor. |

| NO. | ITEM |
|-----|-----------------------|
| 1 | Motor and Controller |
| 2 | Manual Chain Operator |
| 3 | Drive Sprocket |
| 4 | Main Sprocket |
| 5 | Bracket Plate |

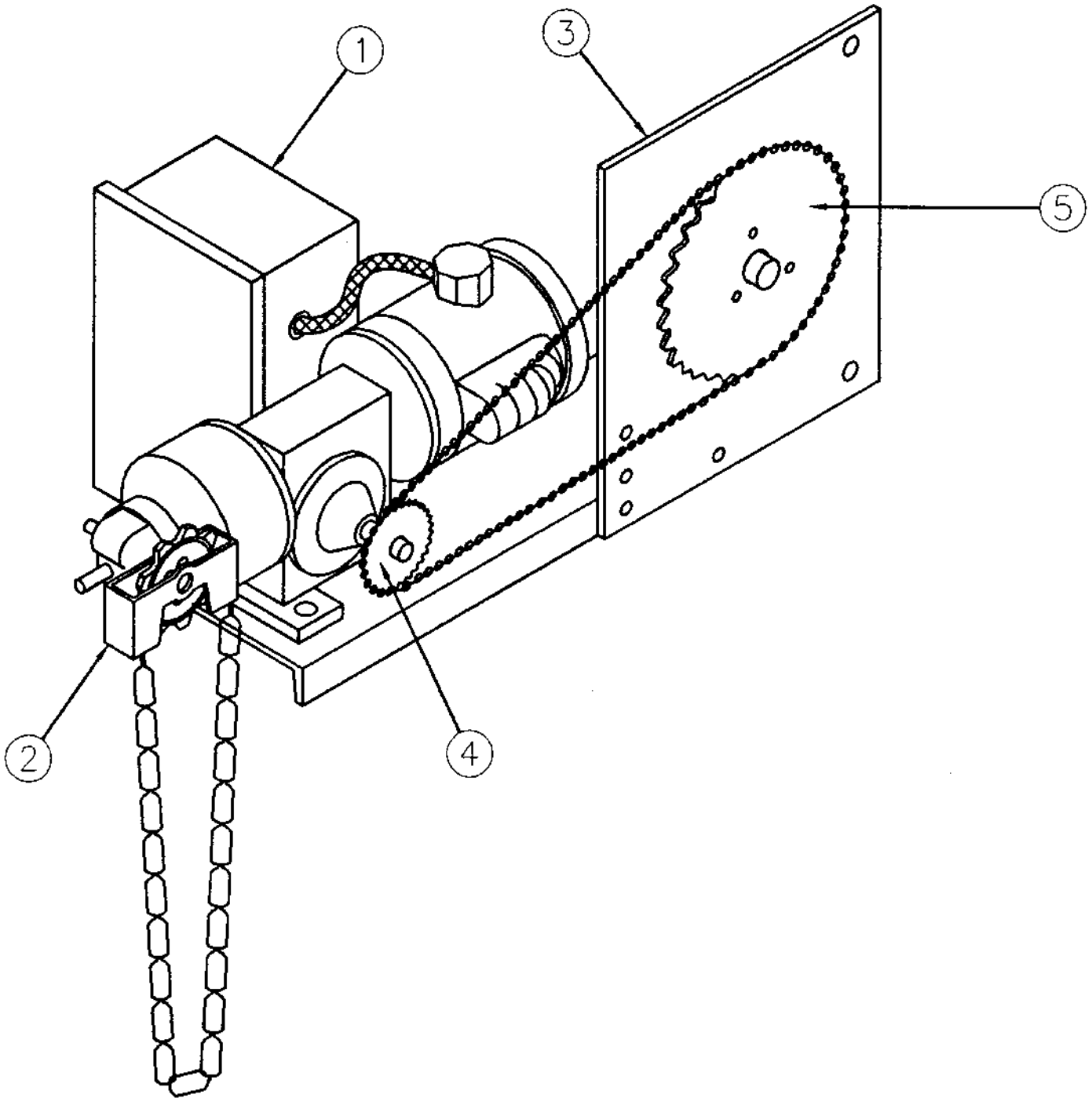
PARTS LIST:
VERTICAL MOUNTED
MOTOR



NOTE:
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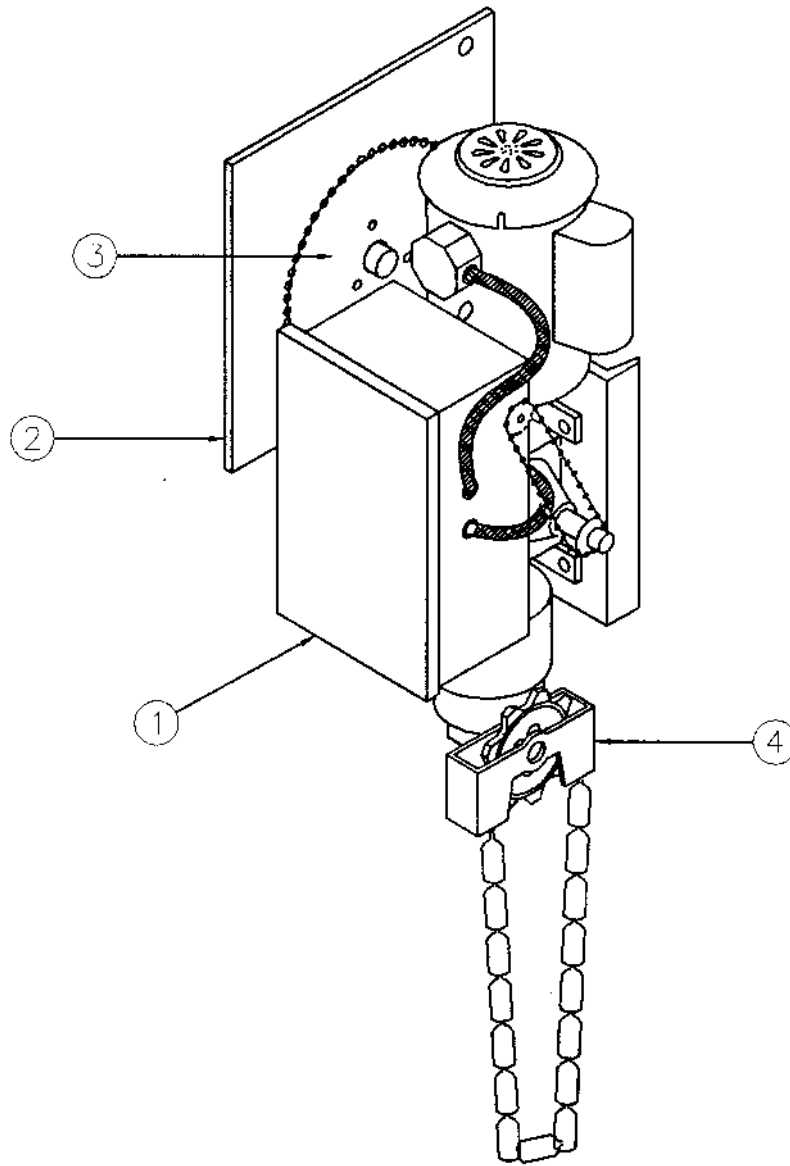
PARTS LIST:
HORIZONTAL
MOUNTED MOTOR

| NO. | ITEM |
|-----|----------------------|
| 1 | Motor and Controller |
| 2 | Manual Operator |
| 3 | Bracket Plate |
| 4 | Drive Sprocket |
| 5 | Main Sprocket |



| NO. | ITEM |
|-----|-----------------|
| 1 | Motor Operator |
| 2 | Bracket Plate |
| 3 | Main Sprocket |
| 4 | Manual Operator |

PARTS LIST:
SIDE MOUNTED
MOTOR

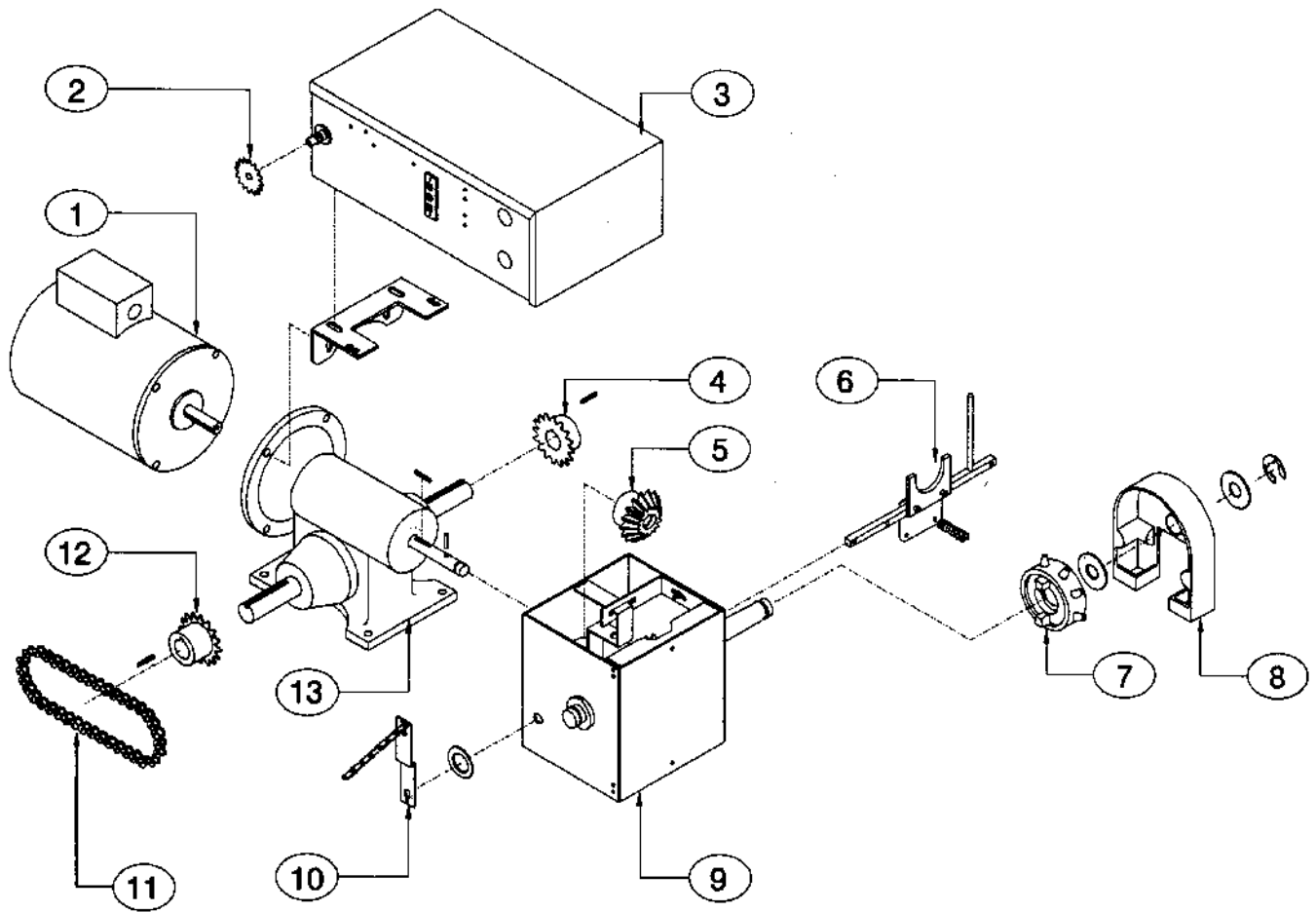


NOTE:
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PARTS LIST:
MODEL GH MOTOR

| NO. | ITEM |
|-----|----------------------------|
| 1 | Motor |
| 2 | Limit Switch Main Sprocket |
| 3 | Control Panel |
| 4 | Drive Sprocket |
| 5 | Miter Gear |
| 6 | Release Linkage |
| 7 | Chain Sprocket |

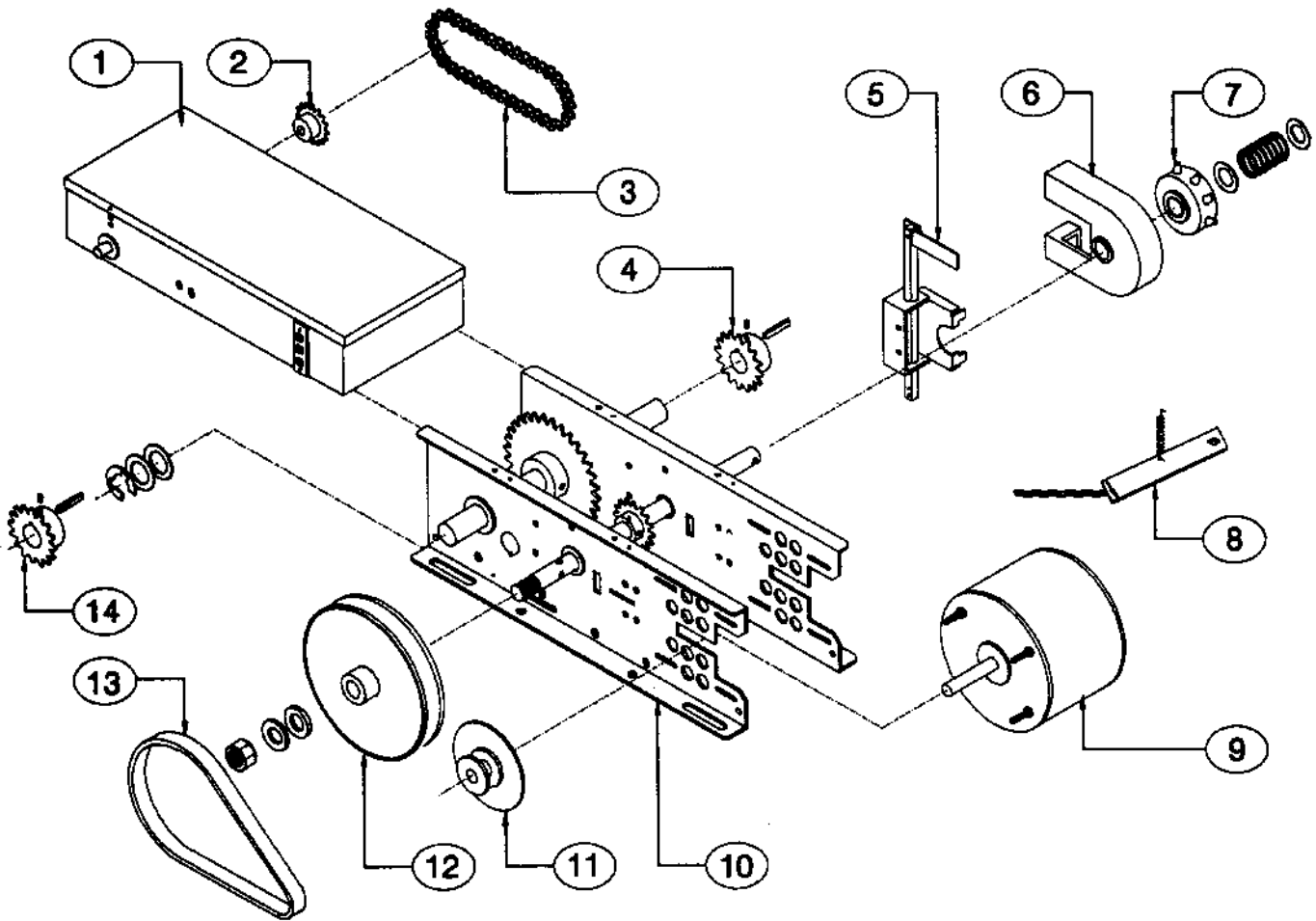
| NO. | ITEM |
|-----|-----------------------------|
| 8 | Chain Guard |
| 9 | Gear Box |
| 10 | Manual Operator Lever |
| 11 | Roller Chain |
| 12 | Limit Switch Drive Sprocket |
| 13 | Reducer |



| NO. | ITEM |
|-----|-----------------------------|
| 1 | Control Panel |
| 2 | Limit Switch Main Sprocket |
| 3 | Roller Chain |
| 4 | Limit Switch Drive Sprocket |
| 5 | Release Linkage |
| 6 | Chain Guard |
| 7 | Chain Sprocket |

| NO. | ITEM |
|-----|-----------------------|
| 8 | Manual Operator Lever |
| 9 | Motor |
| 10 | Gear Box Enclosure |
| 11 | Drive Pulley |
| 12 | Main Pulley |
| 13 | Drive Belt |
| 14 | Drive Spocket |

PARTS LIST:
MODEL MH MOTOR

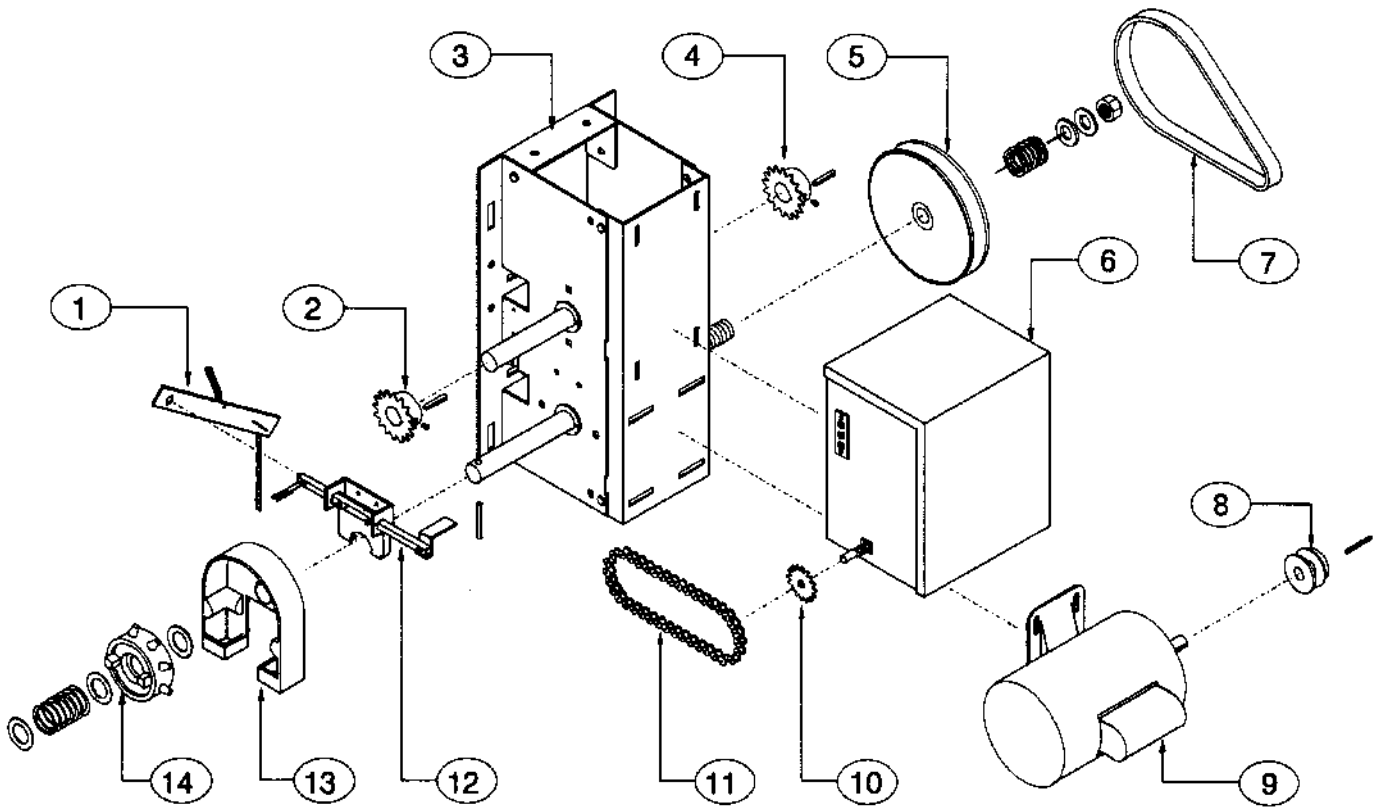


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PARTS LIST:
MODEL H MOTOR

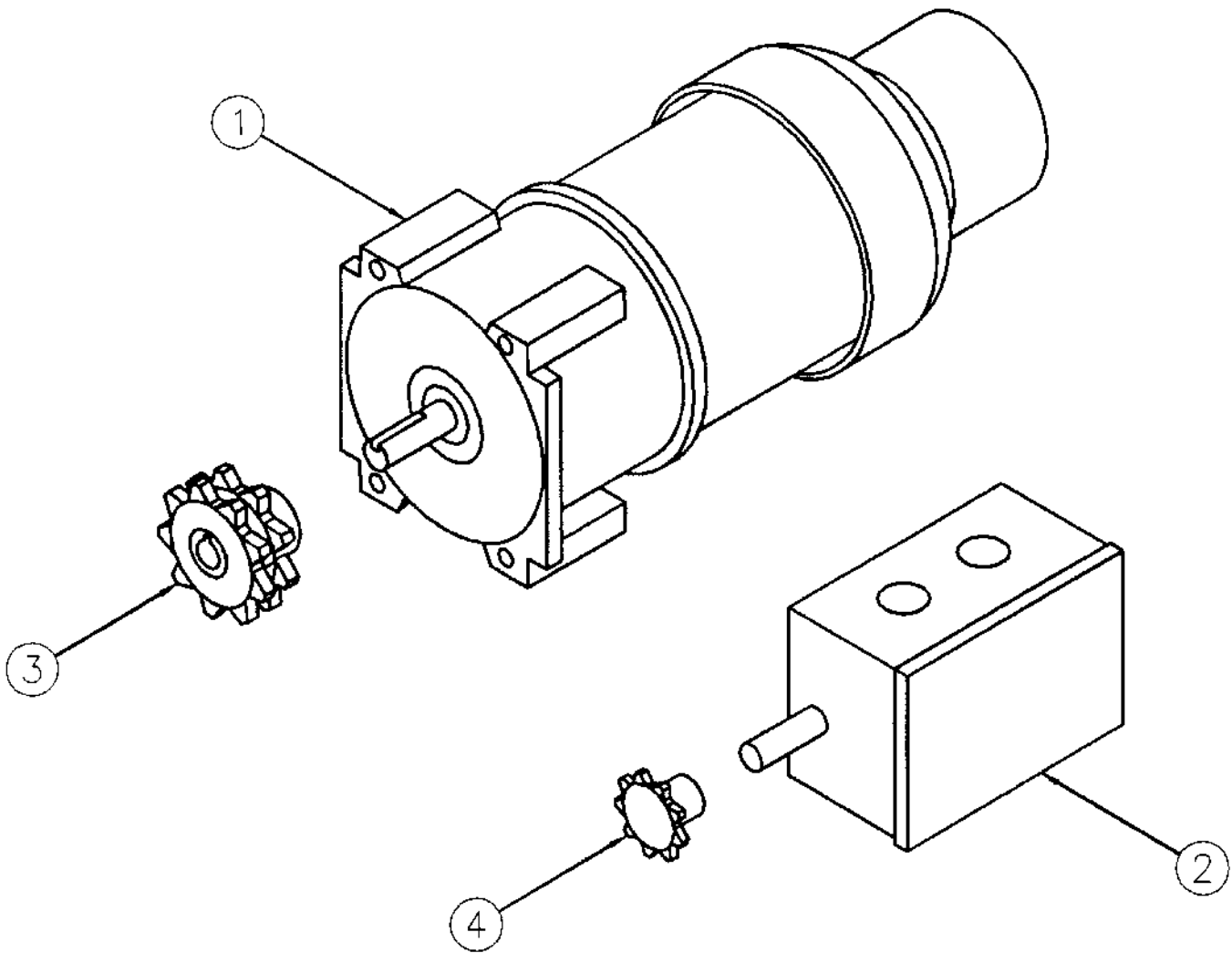
| NO. | ITEM |
|-----|-----------------------------|
| 1 | Manual Operator Lever |
| 2 | Limit Switch Drive Sprocket |
| 3 | Gear Box Enclosure |
| 4 | Drive Sprocket |
| 5 | Main Pulley |
| 6 | Control Panel |
| 7 | Drive Belt |

| NO. | ITEM |
|-----|----------------------------|
| 8 | Drive Pulley |
| 9 | Motor |
| 10 | Limit Switch Main Sprocket |
| 11 | Roller Chain |
| 12 | Release Linkage |
| 13 | Chain Guard |
| 14 | Chain Sprocket |



| NO. | ITEM |
|-----|-----------------------|
| 1 | Motor |
| 2 | Limit Switch |
| 3 | Drive Sprocket |
| 4 | Limit Switch Sprocket |

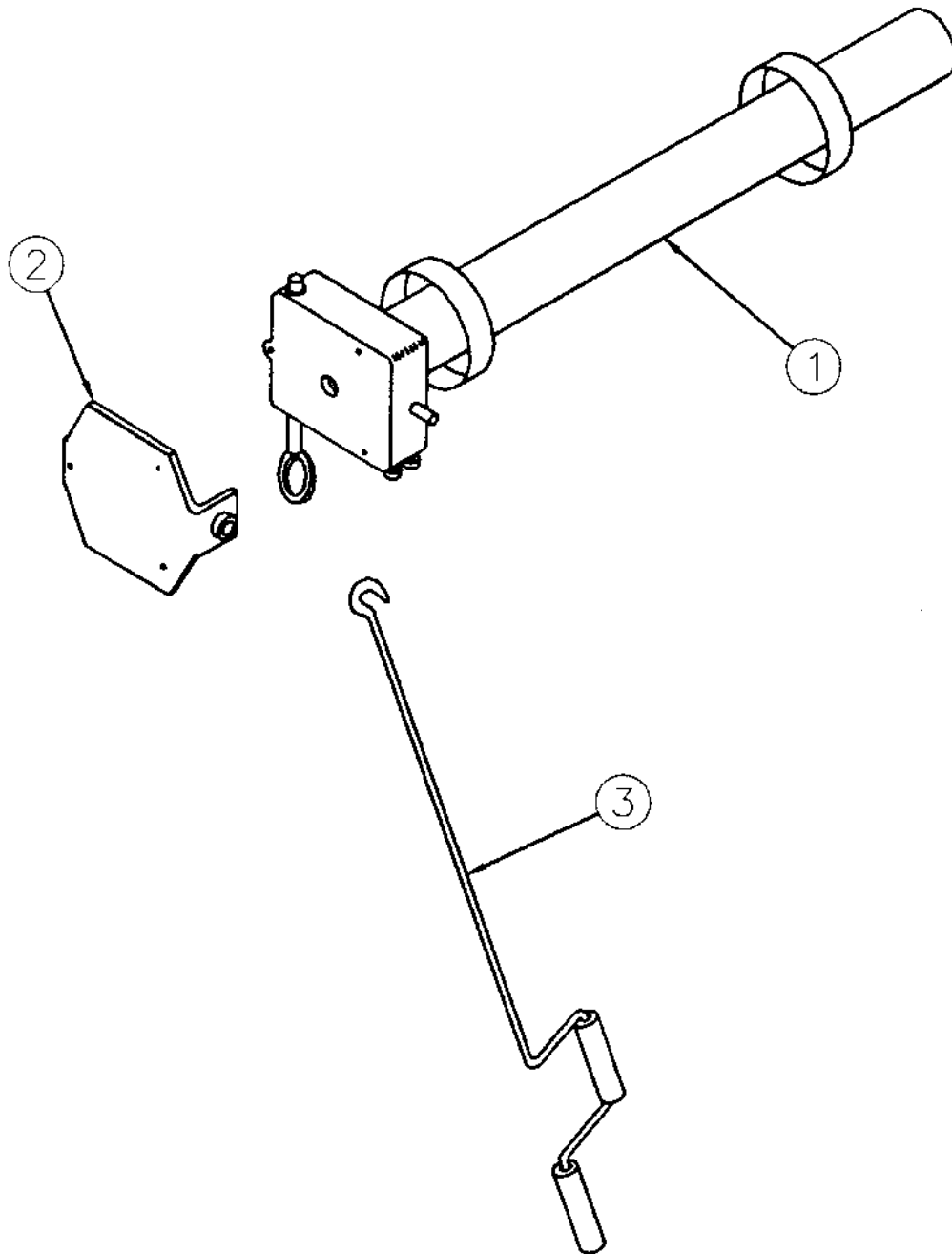
PARTS LIST:
MODEL 11 MOTOR



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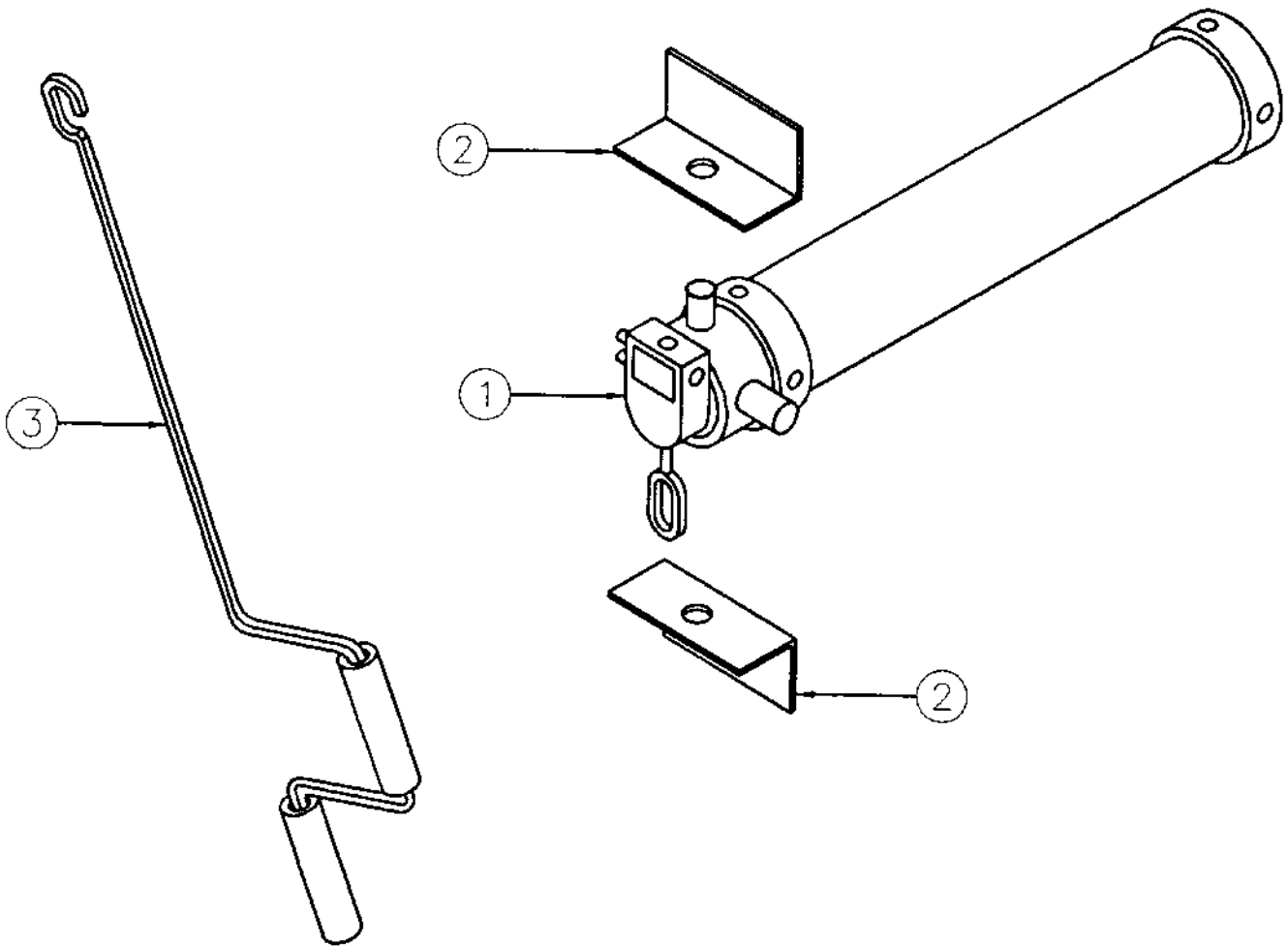
PARTS LIST:
MODEL 680
TUBULAR MOTOR

| NO. | ITEM |
|-----|-----------------------|
| 1 | Tubular Motor |
| 2 | Mounting Plate |
| 3 | Manual Crank Operator |



| NO. | ITEM |
|-----|-----------------------|
| 1 | Tubular Motor |
| 2 | Mounting Angles |
| 3 | Manual Crank Operator |

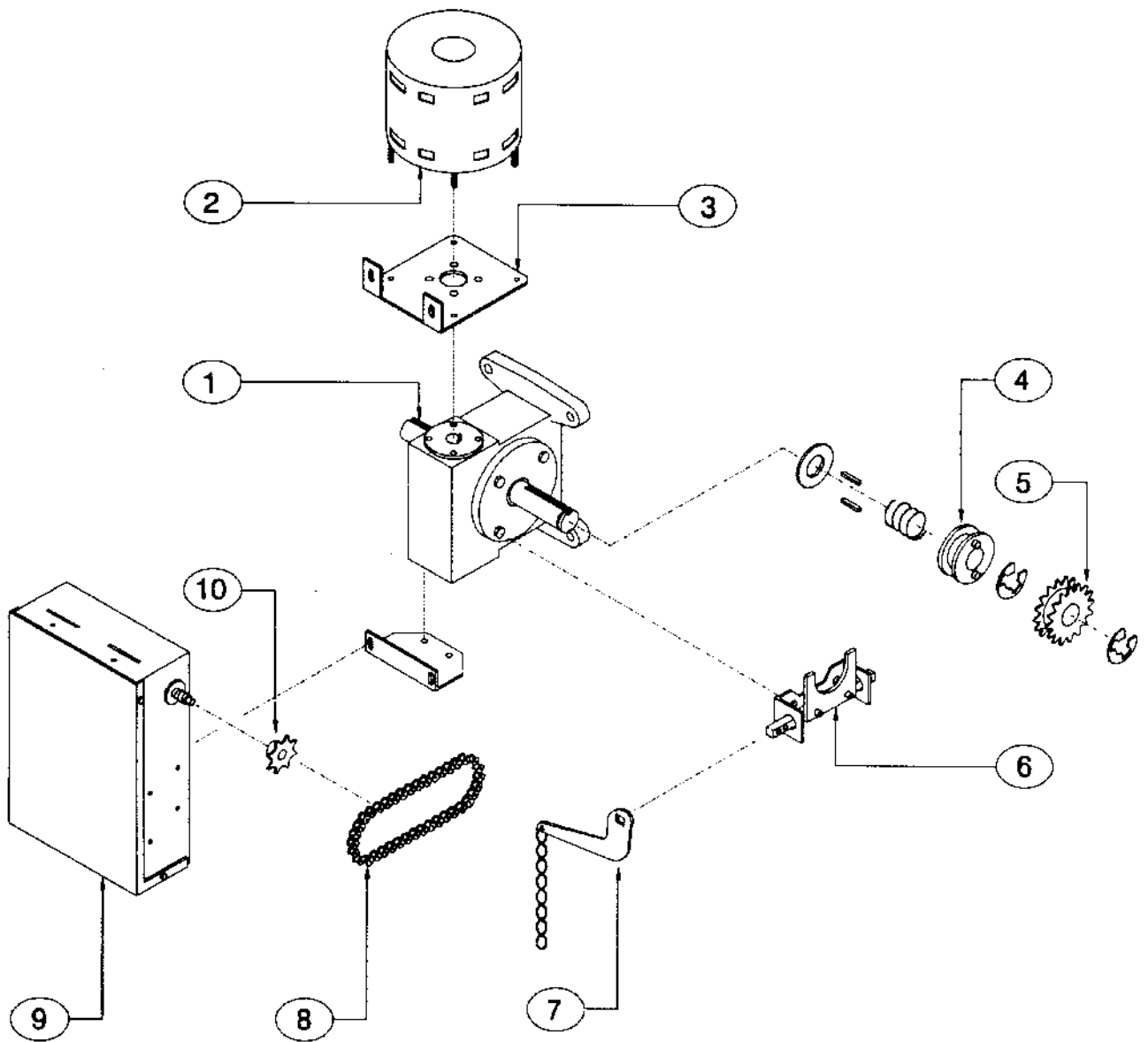
PARTS LIST:
MODEL 820
TUBULAR MOTOR



NOTE:
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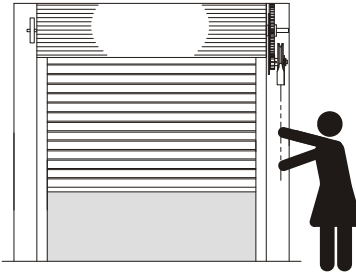
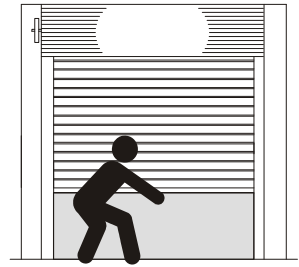
PARTS LIST:
MODEL GJ MOTOR

| NO. | ITEM |
|-----|-----------------------------|
| 1 | Reducer |
| 2 | Motor |
| 3 | Motor Mounting Bracket |
| 4 | Release Cam |
| 5 | Drive Spocket |
| 6 | Release Linkage |
| 7 | Manual Operator Lever |
| 8 | Roller Chain |
| 9 | Control Panel |
| 10 | Limit Switch Drive Sprocket |



Push-Up

Be sure the rolling door is unlocked, grip the center of the bottom bar and smoothly lift in an upward motion. To close, gently pull the bottom bar down taking caution not to let the door fall.

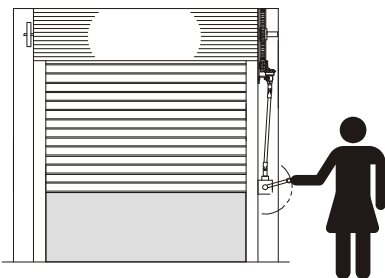
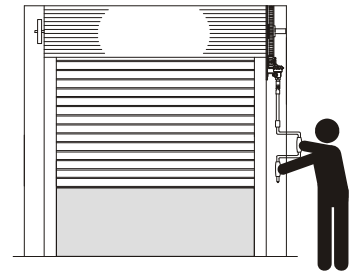


Chain

Pull the outermost part of the chain loop (farthest away from the door) vertically downward to open. To close, pull the innermost part of the chain loop (closest to the door) vertically downward. Do not let the door fall; always chain it down, maintaining control of the chain. Use both hands to govern the descent of the door.

Crank

Insert tip of winding shaft into the hook located on the drive bracket. Holding the lower piece of the crank rod secure with one hand, crank the middle piece clockwise with the other hand. Reverse this action to close the door.

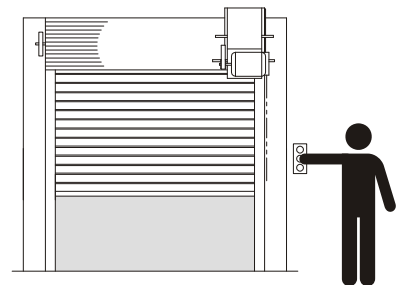


Crank Box

With a secure grip on the handle, crank the handle in a clockwise direction to open the door. Crank counterclockwise to close the door.

Motor

Press the open button to open the door, press the stop button to stop the movement of the door, and press the close button to close the door.



WARNING: When operating a rolling door always make sure there are no obstructions blocking the path of movement. Keep feet and other limbs away from the door while it is in motion. When opening a pushup operated door, use caution to lift with your legs and not your back. The Cookson Company and affiliates shall not be held responsible for injury or damage due to failure to follow operating instructions.

MAINTENANCE
INSTRUCTIONS
Caution: Only trained
personnel should
perform maintenance

Annual Inspection of Door

All rolling grilles should be inspected annually by us.

Regular Scheduled Maintenance

All rolling grilles should be inspected on a regular basis to ensure proper and safe operation. The frequency of the inspection is dependent on the usage of the grille but all grilles should be inspected at least once a month. The inspection should consist of the following:

- A. Visual Inspection
 - 1. Bent Bottom Bars
 - 2. Damaged curtain
 - 3. Pinched guides
 - 4. Dented or missing hood
- B. Check All Fasteners
 - 1. Wall attachment bolts
 - 2. Guide assembly bolts
 - 3. Bracket attachment bolts
 - 4. Set screws on gears and sprockets
 - 5. Tension wheel secure
 - 6. Keys secure
- C. Check Operating Assemblies
 - 1. Operating Assembly
 - 2. Barrel Assembly
- D. Lubricate
 - 1. All Pivot Joints
 - 2. Shafts
 - 3. Roller Chain
- E. Check Normal Operation
 - 1. Operation
 - 2. Spring Tension
 - 3. Balance

If any parts of the rolling grille are damaged they should be replaced immediately. All Amazing Roller Shutters Rolling Grilles should be repaired with us with original parts. The use of other parts will void all warranties and may result in unsafe operation.

