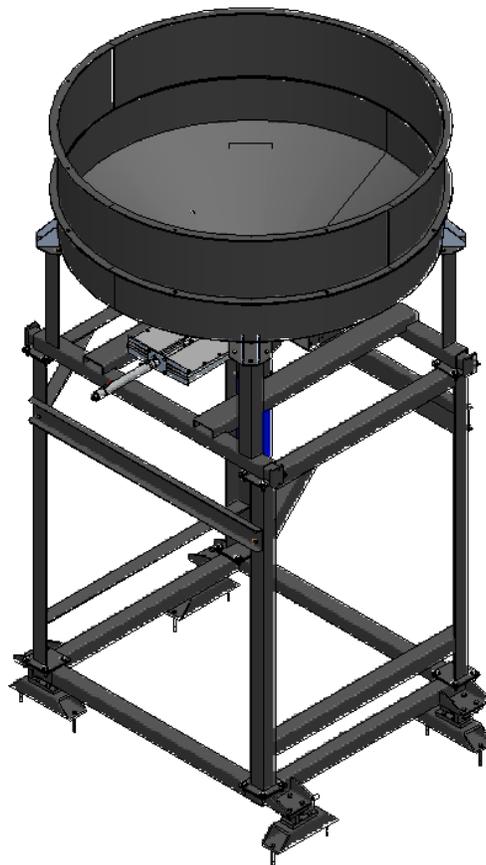


# WEIGH HOPPERS

## EQUIPMENT REVISION: 02A

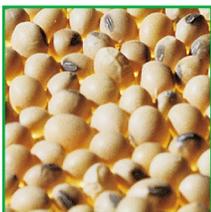


# PARTS MANUAL

Document: MD-09-06-5017

Revision: A

Effective Date: 03-2020



## INTRODUCTION

Thank you for choosing USC LLC for your equipment needs. We appreciate your business and will work diligently to ensure that you are satisfied with your choice.

### OVERVIEW

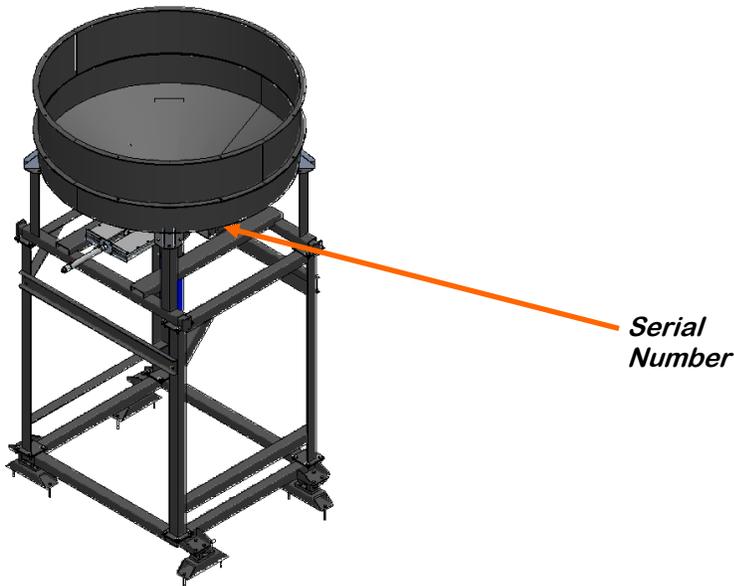
The purpose of this manual is to provide you with the basic information needed to operate and maintain the Weigh Hopper. It does not hold USC LLC liable for any accidents or injuries that may occur.

The technical information provided in this document is based on extensive testing under controlled conditions at the USC research and development facility. This information is given without guarantee as the conditions of operation and storage of the equipment are beyond our control.

### RECEIVING YOUR EQUIPMENT

As soon as the equipment is received, it should be carefully inspected to make certain that it has sustained no damage during shipment and that all items listed on the packing list are accounted for. If there is any damage or shortages, the purchaser must immediately notify USC LLC. Ownership passes to purchaser when the unit leaves the USC LLC premises. The purchaser is responsible for unloading and mounting all components of the equipment.

Document the serial number of the machine for future reference. The serialization label is located on the angle bracket welded to the hopper cone



**SERIAL NUMBER:** \_\_\_\_\_

# TABLE OF CONTENTS

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## SECTION A SAFETY INSTRUCTIONS

Every year accidents in the work place maim, kill and injure people. Although it may be impossible to prevent all accidents, with the right combination of training, operating practices, safety devices, and operator vigilance, the number of accidents can be significantly reduced. The purpose of this section is to educate equipment users about hazards, unsafe practices, and recommended hazard avoidance techniques.

### SAFETY WORDS AND SYMBOLS

It is very important that operators and maintenance personnel understand the words and symbols that are used to communicate safety information. Safety words, their meaning and format, have been standardized for U.S. manufacturers and published by the American National Standards Institute (ANSI). The European Community (E.C.) has adopted a different format based on the International Standards Organization (I.S.O.) and applicable machinery directives. Both formats are presented below. Graphic symbols are not standardized, but most manufacturers will use some variation of the ones seen in this manual.



Indicates an imminently hazardous situation which, if not avoided, **will** result in death or serious injury.



Indicates a potentially hazardous situation which, if not avoided, **could** result in death or serious injury.



Indicates a potentially hazardous situation which, if not avoided, **may** result in minor or moderate injury and/or property damage.



Provides additional information that the operator needs to be aware of to avoid a potentially hazardous situation.



**Mandatory Lockout Power Symbol.** Disconnect, lockout and tag-out electrical and other energy sources before inspecting, cleaning or performing maintenance on this panel.



**International Safety Alert Symbol.** The exclamation point (!) surrounded by a yellow triangle indicates that an injury hazard exists. However, it does not indicate the seriousness of potential injury. The exclamation point (!) is also used with the DANGER, WARNING and CAUTION symbols so the potential injury is indicated.



**Electrocution Hazard Symbol.** This symbol indicates that an electrocution hazard exists. Serious injury or death could result from contacting high voltage.



**International Electrocution Hazard.** This symbol indicates that an electrocution hazard exists. Serious injury or death could result from contacting high voltage.



**Mandatory Read Manual Action Symbol.** (I.S.O. format) This symbol instructs personnel to read the Operators Manual before servicing or operating the equipment.



**Mandatory Read Manual Action Symbol.** This symbol instructs personnel to read the Operators Manual before servicing or operating the equipment.

**NOTICE**

Notice is used to notify people of important installation, operation or maintenance information which is not hazard related.

## **LOCKOUT / TAGOUT PROCEDURES**

Lockout/Tagout is the placement of a lock/tag on an energy isolating device in accordance with an established procedure. When taking equipment out of service to perform maintenance or repair work, always follow the lockout/tagout procedures as outlined in OSHA Standard 1910.147. This standard “requires employers to establish a program and utilize procedures for affixing appropriate lockout devices or tagout devices to energy isolating devices and to otherwise disable machines or equipment to prevent unexpected energizing, start-up, or release of stored energy in order to prevent injury to employees.”

### **HAZARD REVIEW**

#### **Electrocution Hazard**



Electrocution accidents are most likely to occur during maintenance of the electrical system or when working on or near exposed high voltage wiring. This hazard does not exist when the electrical power has been disconnected, properly locked, and tagged out.



## WEIGH HOPPERS

**YOU** are responsible for the **SAFE** operation and maintenance of your USC LLC equipment . **YOU** must ensure that you and anyone else who is going to operate, maintain or work around the equipment be familiar with the operating and maintenance procedures and related **SAFETY** information contained in this manual. This manual will take you step-by-step through your working day and alert you to good safety practices that should be adhered to while operating the equipment

Remember, **YOU** are the key to safety. Good safety practices not only protect you, but also the people around you. Make these practices a working part of your safety program. Be certain that **EVERYONE** operating this equipment is familiar with the recommended operating and maintenance procedures and follows all the safety precautions. Most accidents can be prevented. Do not risk injury or death by ignoring good safety practices.

- Equipment owners must give operating instructions to operators or employees before allowing them to operate the machine, and at least annually thereafter per OSHA (Occupational Safety and Health Administration) regulation 1928.57.
- The most important safety device on this equipment is a **SAFE** operator. It is the operator's responsibility to read and understand **ALL** Safety and Operating instructions in the manual and to follow them. All accidents can be avoided.
- A person who has not read and understood all operating and safety instructions is not qualified to operate the machine. An untrained operator exposes himself and bystanders to possible serious injury or death.
- Do not modify the equipment in any way. Unauthorized modification may impair the function and/or safety and could affect the life of the equipment.
- Think SAFETY! Work SAFELY!

### GENERAL SAFETY

1. Read and understand the operator's manual and all safety labels before operating, maintaining, adjusting or unplugging the equipment .
2. Only trained persons shall operate the equipment . An untrained operator is not qualified to operate the machine.
3. Have a first-aid kit available for use should the need arise, and know how to use it.



## WEIGH HOPPERS

4. Provide a fire extinguisher for use in case of an accident. Store in a highly visible place.
5. Do not allow children, spectators or bystanders within hazard area of machine.
6. Wear appropriate protective gear. This includes but is not limited to:
  - A hard hat
  - Protective shoes with slip resistant soles
  - Protective goggles
  - Heavy gloves
  - Hearing protection
  - Respirator or filter mask
7. Place all controls in neutral or off, stop motor, and wait for all moving parts to stop. Then disable power source before servicing, adjusting, repairing, or unplugging.
8. Review safety related items annually with all personnel who will be operating or maintaining the equipment.



### **OPERATING SAFETY:**

1. Read and understand the operator's manual and all safety labels before using.
2. Disconnect and disable electrical supply completely and wait for all moving parts to stop before servicing, adjusting, repairing or unplugging.
3. Clear the area of bystanders, especially children, before starting.
4. Be familiar with the machine hazard area. If anyone enters hazard area, shut down machine immediately. Clear the area before restarting.
5. Keep hands, feet, hair and clothing away from all moving and/or rotating parts.
6. Stay away from overhead obstructions and power lines during operation and transporting. Electrocutation can occur without direct contact.
7. Do not operate machine when any guards are removed.
8. Inspect welds and repair if needed.

## WEIGH HOPPERS

### **PLACEMENT SAFETY**

1. Move only with the appropriate equipment.
2. Stay away from overhead power lines when moving equipment. Electrocutation can occur without direct contact.
3. Be familiar with machine hazard area. If anyone enters hazard areas, shut down machine immediately. Clear the area before restarting.
4. Operate the equipment on level ground free of debris. Anchor the equipment to prevent tipping or upending.



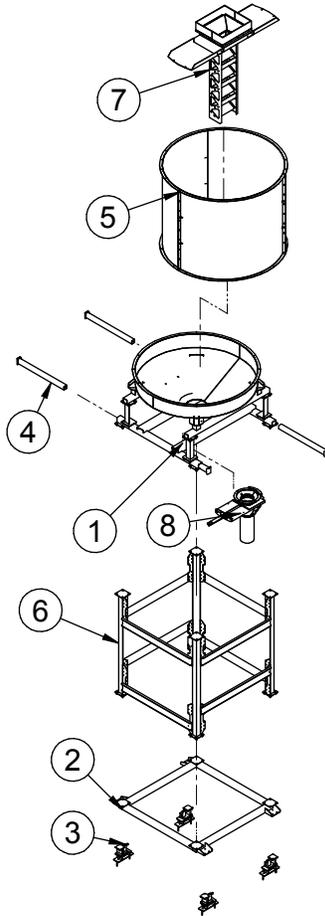
Before placement of the equipment, be sure that ground is reasonably level. The equipment may topple or work improperly if the ground is too uneven, damaging the equipment and/or causing personal injury.

### **MAINTENANCE SAFETY**

1. Review the operator's manual and all safety items before working with, maintaining or operating the equipment .
2. Place all controls in neutral or off, stop motors, disable power source, and wait for all moving parts to stop before servicing, adjusting, repairing or unplugging.
3. Follow good shop practices:  
Keep service area clean and dry.  
Be sure electrical outlets and tools are properly grounded.  
Use adequate light for the job at hand.
4. Keep hands, feet, hair and clothing away from all moving and/or rotating parts.
5. Clear the area of bystanders, especially children, when carrying out any maintenance and repairs or making any adjustments.
6. Before resuming work, install and secure all guards when maintenance work is completed.
7. Keep safety labels clean. Replace any sign that is damaged or not clearly visible.



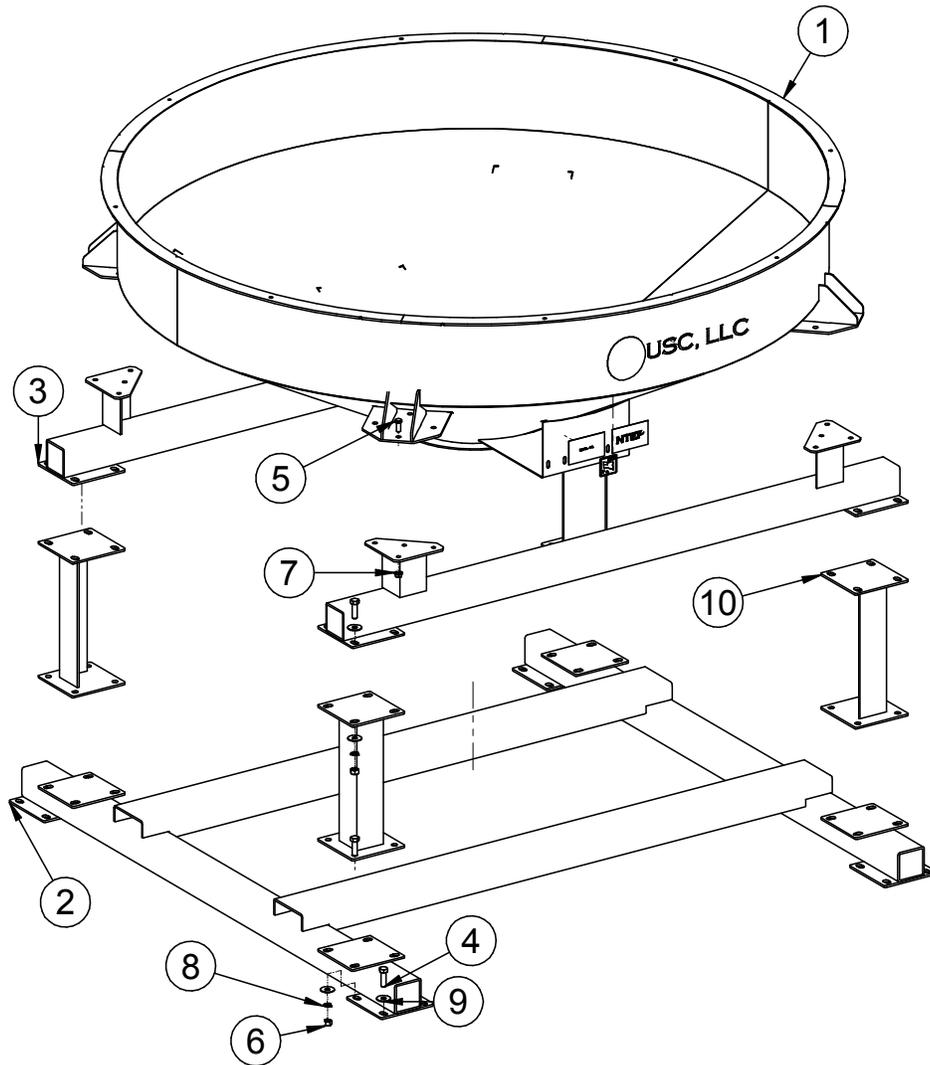
The following pages show the parts of the Weigh Hopper. Please have the serial number and part number ready when ordering parts.

**STANDARD ASSEMBLY**

| Item # | PART #     | Description                | See Page |
|--------|------------|----------------------------|----------|
| 1      |            | WEIGH HOPPER HEAD ASSEMBLY | 11       |
| 2      | 05-03-0870 | BASE WELDMENT              |          |
| 3      |            | LOAD CELL KIT              | 12       |
| 4      | 05-03-1080 | WEIGHT HANGERS WELDMENT    |          |
| 5      |            | EXTENSION RINGS            | 13       |
| 6      |            | LEGS                       | 14       |
| 7      |            | SEED LADDERS               | 15-16    |
| 8      |            | GATES                      | 17-30    |
| 9      |            | MISC                       | 31       |

WEIGH HOPPERS

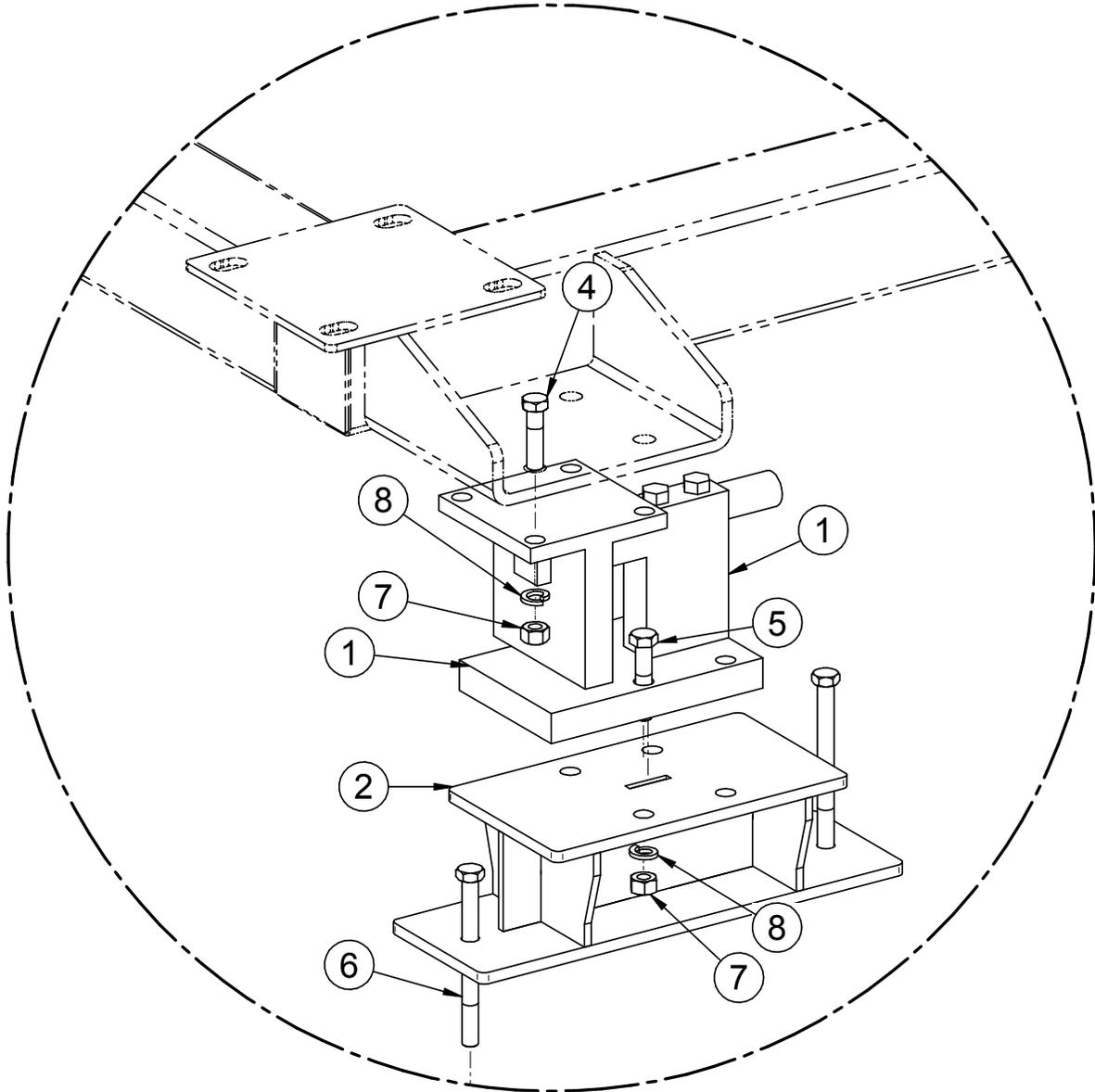
**ASSEMBLY WEIGH HOPPER 80 UNIT WITH FRAME (05-07-1061 REV A0)**



| PART # |            | 05-07-1061 REV A0                 |     |
|--------|------------|-----------------------------------|-----|
| Item # | Part #     | Description                       | Qty |
| 1      | 05-03-0081 | WDMT HOPP CONE 80 UNIT            | 1   |
| 2      | 05-03-1950 | WDMT BASE FR WEIGH HPR 80 76 CTR  | 1   |
| 3      | 05-03-1951 | WDMT SUPP FR WH80 76CTR           | 2   |
| 4      | 06-01-0032 | BOLT .625-11 X 2.00 ZP GR5        | 48  |
| 5      | 06-01-0193 | BOLT .500-13 X 1.25 HH ZP GR8     | 12  |
| 6      | 06-02-0005 | NUT FULL .625-11 ZP GR5           | 48  |
| 7      | 06-03-0015 | NUT LOCK FLG .500-13 ZP GR5       | 12  |
| 8      | 06-04-0005 | WSHR LOCK SPLT .625 ZP            | 48  |
| 9      | 06-05-0006 | WSHR FLAT .625 ZP                 | 80  |
| 10     | 105D28     | WDMT WEIGH HOPP FR 18.5 OAH ANGLE | 4   |

WEIGH HOPPERS

**KIT LOAD CELL RICE LAKE WEIGH HOPPER 80 (05-07-1044 REV A1)**



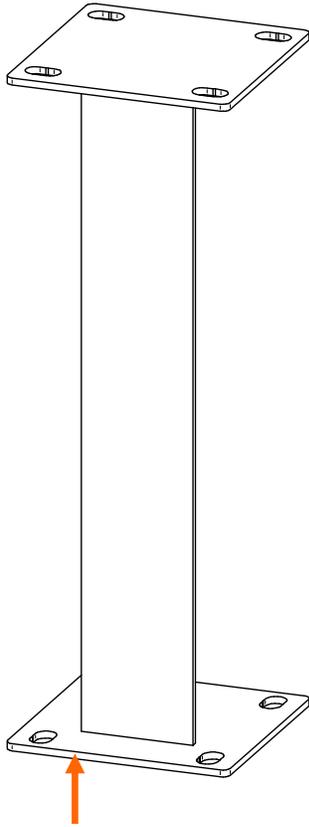
| PART # |            | 05-07-1044 REV A1                 |     |
|--------|------------|-----------------------------------|-----|
| Item # | Part #     | Description                       | Qty |
| 1      | 03-19-0107 | LDCL 5000LB X4 KIT                | 1   |
| 2      | 05-03-1954 | WDMT LDCL SUPP RL                 | 4   |
| 3      | 05-08-0865 | SHIM KIT WEIGH HOPPER LDCL RL     | 1   |
| 4      | 06-01-0027 | BOLT .500-13 X 2.00 ZP GR5        | 16  |
| 5      | 06-01-0028 | BOLT .500-13 X 2.50 ZP GR5        | 16  |
| 6      | 06-01-0179 | BOLT .500-13 CONC ANCHOR ZP 5.500 | 8   |
| 7      | 06-02-0004 | NUT FULL .500-13 ZP GR5           | 32  |
| 8      | 06-04-0004 | WSHR LOCK SPLT .500 ZP            | 32  |

WEIGH HOPPERS  
**EXTENSION RINGS**

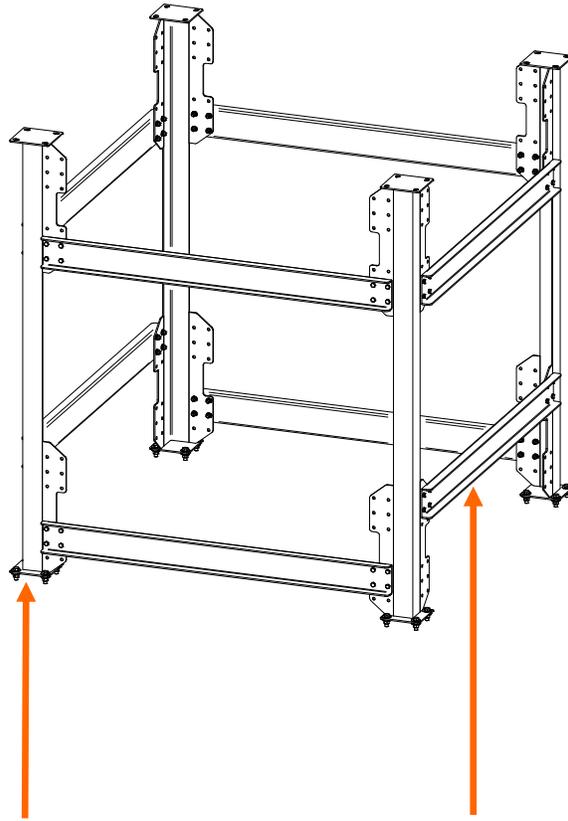
| EXTENSION RINGS (COMPLETE) |          |                                     |
|----------------------------|----------|-------------------------------------|
| PART #                     | CAPACITY | DESCRIPTION                         |
| 05-03-0630                 | 60       | ASSY HOPP 18IN EXT FOR 80 UNIT      |
| 05-03-1402                 | 150      | ASSY HOPP 44IN EXT .33 SECT 80 UNIT |
| 05-03-1390                 | 220      | ASSY HOPP 71IN EXT .33 SECT 80 UNIT |

WEIGH HOPPERS

**LEG KITS**



**LEG WELDMENT  
48 INCH OR  
LESS**

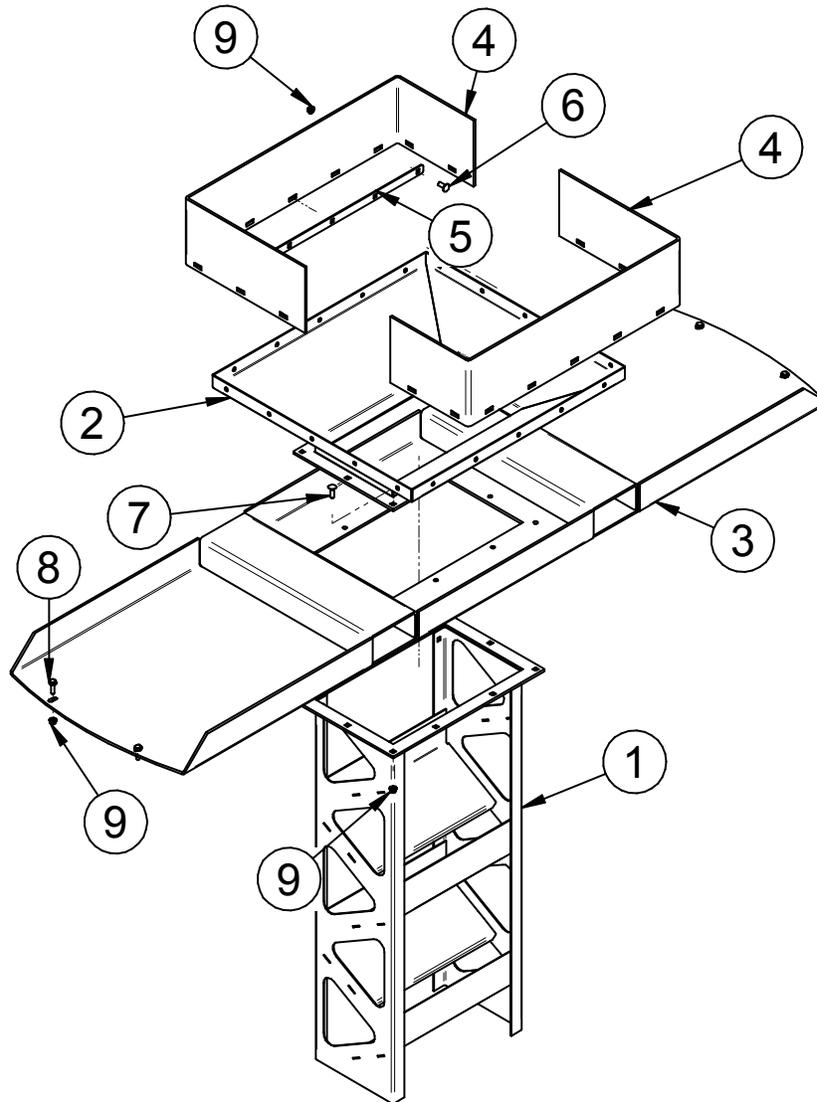


**LEG WELDMENT  
88 INCH OR  
GREATER**

**BRACE FOR LEGS  
88 INCH OR  
GREATER**

| LEG HEIGHTS |                        |           |            |
|-------------|------------------------|-----------|------------|
| LEG PART #  | DESCRIPTION            | DISCHARGE | LEG LENGTH |
| 13-05-1896  | WDMT COLUMN WH 24 OAH  | 36.5      | 24.0       |
| 05-03-1897  | WDMT COLUMN WH 40 OAH  | 52.5      | 40.0       |
| 05-03-1898  | WDMT COLUMN WH 44 OAH  | 56.5      | 44.0       |
| 05-03-1899  | WDMT COLUMN WH 48 OAH  | 60.5      | 48.0       |
| 05-03-1900  | WDMT COLUMN WH 88 OAH  | 100.5     | 88.0       |
| 05-03-1967  | WDMT COLUMN WH 101 OAH | 113.5     | 101.0      |
| 05-03-1902  | WDMT COLUMN WH 110 OAH | 122.5     | 110.0      |
| 05-03-1903  | WDMT COLUMN WH 116 OAH | 128.5     | 116.0      |
| 05-03-1905  | WDMT COLUMN WH 127 OAH | 139.5     | 127.0      |
| 05-03-1968  | WDMT COLUMN WH 130 OAH | 142.5     | 130.0      |
| 05-10-4804  | BRACE WH80 76 CTRS     | N/A       | N/A        |

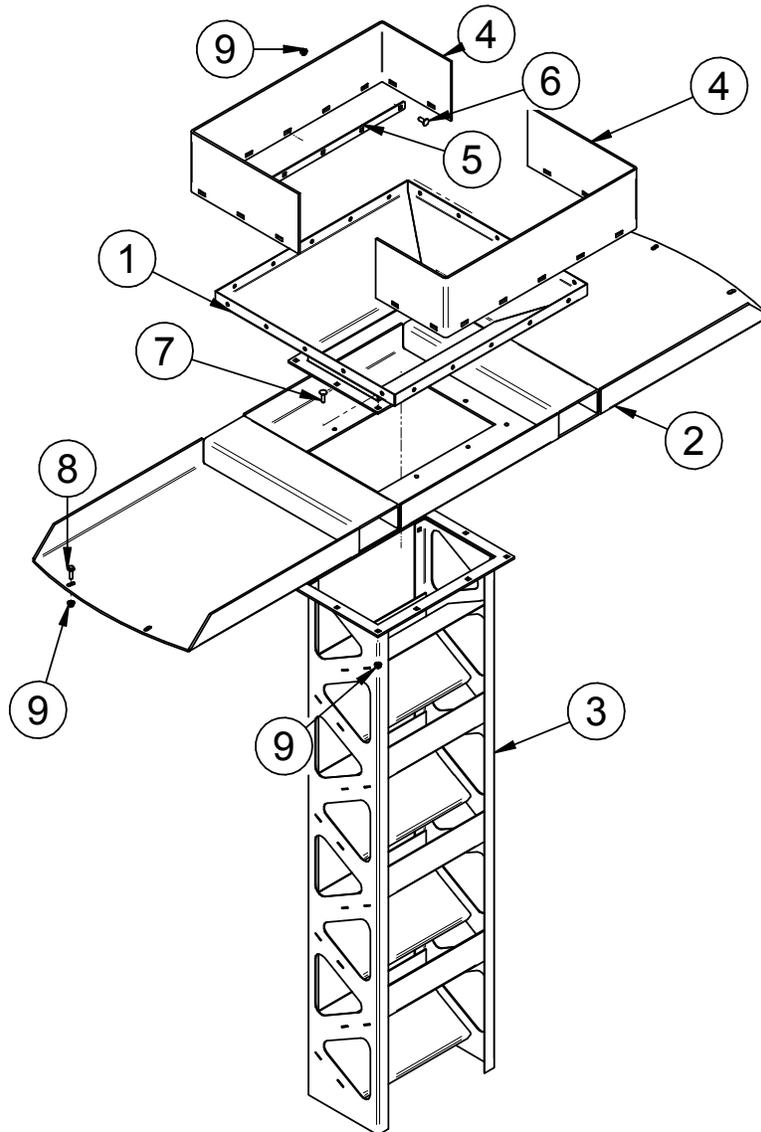
WEIGH HOPPERS  
**ASSEMBLY SEED LADDER 44 INCH (05-03-1396 REV A1)**



| PART # |            | 05-03-1396 REV A1                   |     |
|--------|------------|-------------------------------------|-----|
| Item # | Part #     | Description                         | Qty |
| 1      | 05-03-0662 | WDMT SEED LADDER 59 TALL            | 1   |
| 2      | 05-03-0668 | WDMT REMV SEED LADDER HOPP          | 1   |
| 3      | 05-03-1382 | WDMT MNT PLT REMV SEED LADDER 89 DI | 1   |
| 4      | 05-10-3296 | PLT REMV SEED LADDER HOPP EXT RBBR  | 2   |
| 5      | 05-10-3308 | PLT REMV SEED LADDER HOPP EXT HLDR  | 4   |
| 6      | 06-01-0115 | BOLT CRG .375-16 X 1.00 ZP GR5      | 20  |
| 7      | 06-01-0127 | BOLT CRG .375-16 X 1.25 ZP GR5      | 10  |
| 8      | 06-01-0284 | BOLT FLG .375-16 X 1.25 GR8         | 4   |
| 9      | 06-03-0014 | NUT LOCK FLG .375-16 ZP GR5         | 34  |

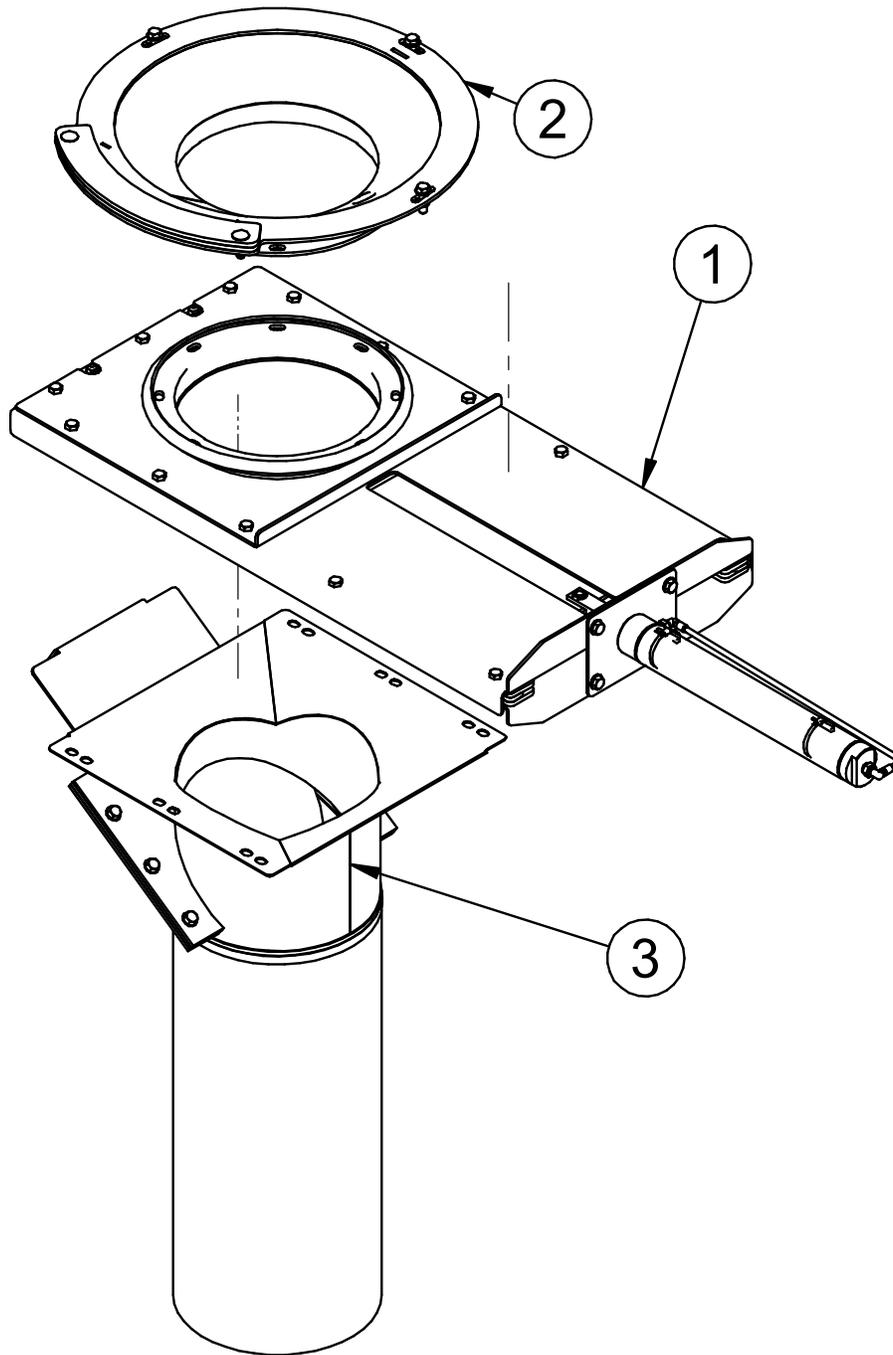
WEIGH HOPPERS

**ASSEMBLY SEED LADDER 71 INCH (05-03-1394 REV A1)**



| PART # |            | 05-03-1394 REV A1                   |     |
|--------|------------|-------------------------------------|-----|
| Item # | Part #     | Description                         | Qty |
| 1      | 05-03-0668 | WDMT REMV SEED LADDER HOPP          | 1   |
| 2      | 05-03-1382 | WDMT MNT PLT REMV SEED LADDER 89 DI | 1   |
| 3      | 05-03-1395 | WDMT SEED LADDER 89 DIA 71 EXT      | 1   |
| 4      | 05-10-3296 | PLT REMV SEED LADDER HOPP EXT RBBR  | 2   |
| 5      | 05-10-3308 | PLT REMV SEED LADDER HOPP EXT HLDR  | 4   |
| 6      | 06-01-0115 | BOLT CRG .375-16 X 1.00 ZP GR5      | 20  |
| 7      | 06-01-0127 | BOLT CRG .375-16 X 1.25 ZP GR5      | 10  |
| 8      | 06-01-0284 | BOLT FLG .375-16 X 1.25 GR8         | 4   |
| 9      | 06-03-0014 | NUT LOCK FLG .375-16 ZP GR5         | 34  |

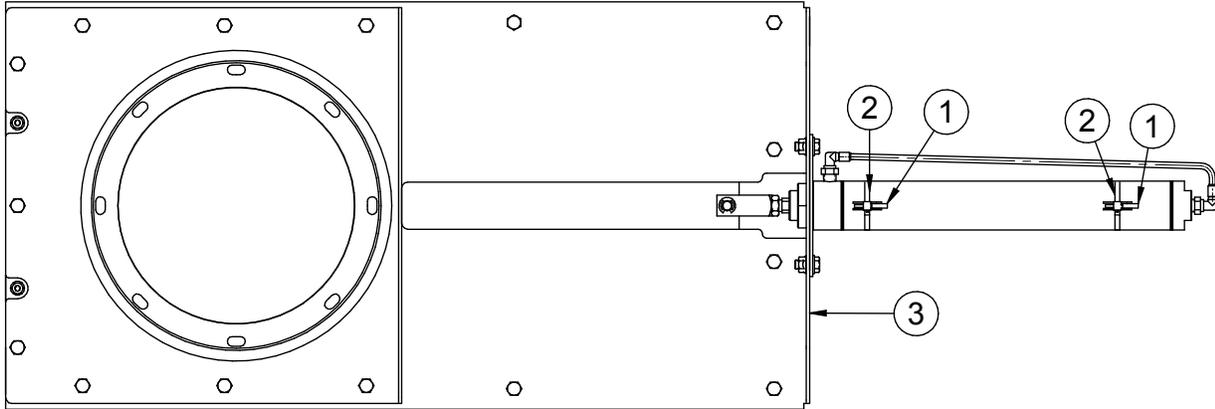
WEIGH HOPPERS  
**ASSEMBLY AIR GATE (GATEA13 REV A0)**



| PART # |            | GATEA13 REV A0                   |     |          |
|--------|------------|----------------------------------|-----|----------|
| Item # | Part #     | Description                      | Qty | See Page |
| 1      | 12-04-0050 | SLGT UNVRSL 10 IN GATE W REED SW | 1   | 18       |
| 2      | 12-04-0053 | ADAPTER SLGT UNVRSL TO 80 U      | 1   | 21       |
| 3      | 12-04-0057 | FLOW CONTROL OUTLET              | 1   | 22       |

WEIGH HOPPERS

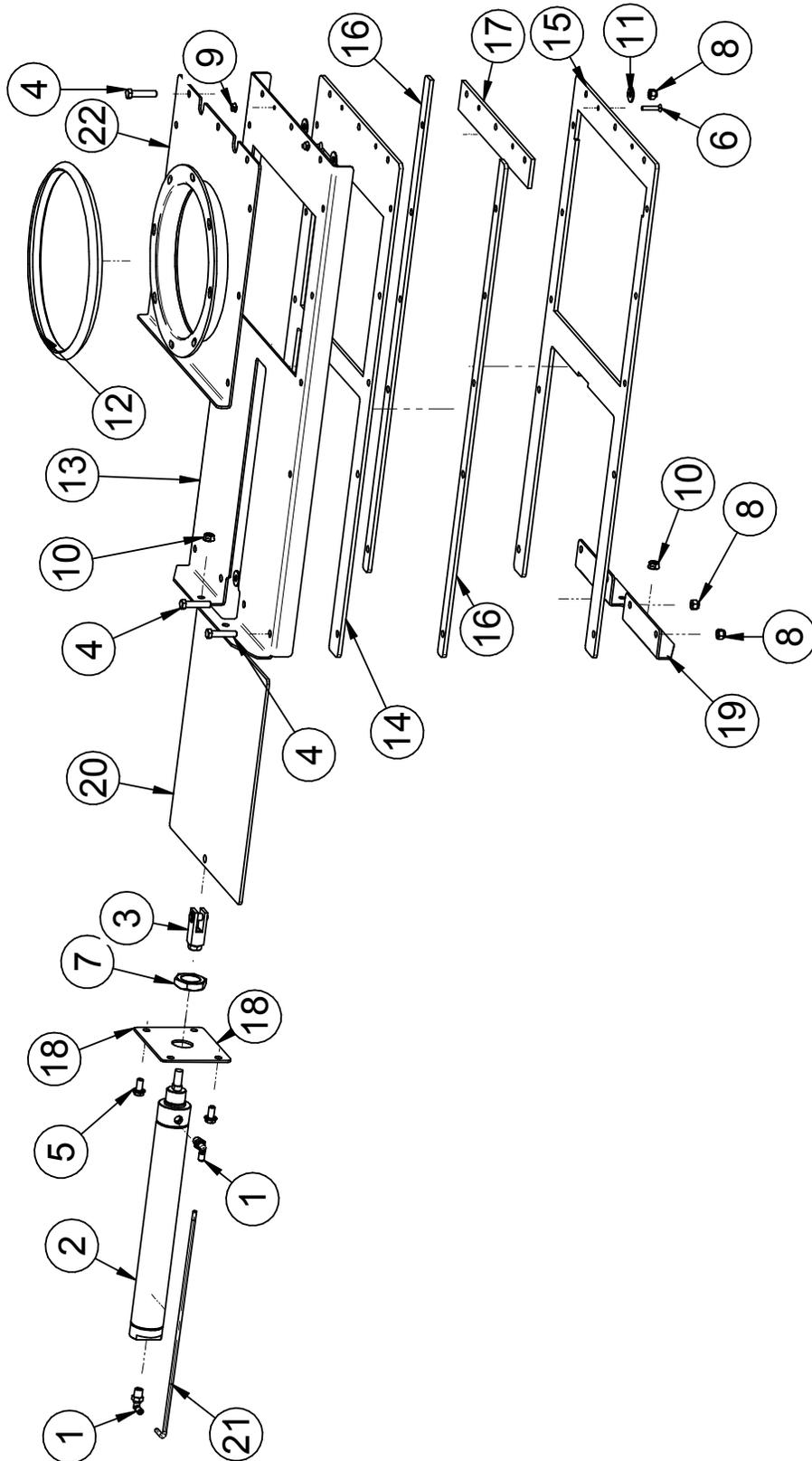
**ASSEMBLY UNIVERSAL 10 IN GATE WITH REED SWITCH (12-04-0050 REV B1)**



| PART # |            | 12-04-0050 REV B2                 |     |          |
|--------|------------|-----------------------------------|-----|----------|
| Item # | Part #     | Description                       | Qty | See Page |
| 1      | 03-17-0161 | SW MAG REED IFM MK5159            | 2   |          |
| 2      | 03-17-0163 | SW MAG REED STRAP IFM 1-3/4 TO 2" | 2   |          |
| 3      | 12-04-0078 | SLGT UNVRSL 10 IN GATE            | 1   | 19       |

WEIGH HOPPERS

ASSEMBLY UNIVERSAL 10 IN GATE (12-04-0078 REV A2)



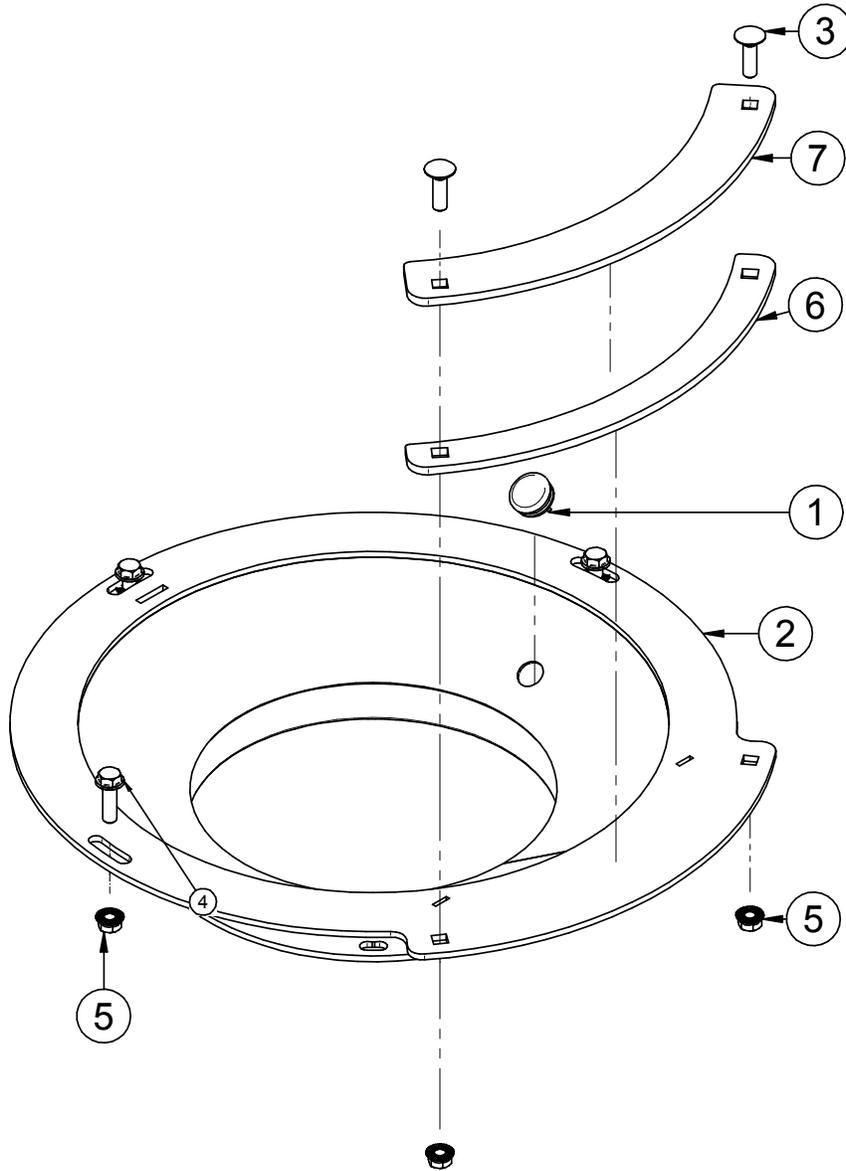
## WEIGH HOPPERS

**ASSEMBLY UNIVERSAL 10 IN GATE (12-04-0078 REV A2)**

| PART # |            | 12-04-0078 REV A2                  |     |
|--------|------------|------------------------------------|-----|
| Item # | Part #     | Description                        | Qty |
| 1      | 02-16-0044 | FTTG PUSH 90 DEG .250OD X .250 NPT | 2   |
| 2      | 03-17-0040 | CYLINDER AIR 12" STROKE 2" BORE    | 1   |
| 3      | 03-17-0041 | CLEVIS ASSY BIMBA D-8313-A         | 1   |
| 4      | 06-01-0019 | BOLT .375-16 X 1.75 ZP GR5         | 15  |
| 5      | 06-01-0124 | BOLT FLG .375-16 X .750 ZP GR5     | 4   |
| 6      | 06-01-0155 | SCRW MACH .250-20 X 1.25 SH FLHD   | 2   |
| 7      | 06-02-0064 | NUT BIMBA D-508                    | 1   |
| 8      | 06-03-0003 | NUT NYL LOCK .375-16 ZP GR5        | 15  |
| 9      | 06-03-0013 | NUT LOCK FLG .250-20 ZP GR5        | 2   |
| 10     | 06-03-0014 | NUT LOCK FLG .375-16 ZP GR5        | 4   |
| 11     | 06-05-0004 | WSHR FLAT .375 ZP                  | 15  |
| 12     | 06-07-0051 | CLMP BAND 10.00IN                  | 1   |
| 13     | 105218     | GATE FRAME                         | 1   |
| 14     | 105219     | GATE TOP SLIDE                     | 1   |
| 15     | 10521A     | GATE BTM SLIDE                     | 1   |
| 16     | 10521B     | GATE BTM SLIDE                     | 2   |
| 17     | 10521C     | GATE END SPCR                      | 1   |
| 18     | 10521D     | POWER PLATE                        | 1   |
| 19     | 10521E     | CYL MNT PLT                        | 1   |
| 20     | 10521F     | GATE SLIDE WB                      | 1   |
| 21     | 105D46     | SHIPPING TUBE                      | 1   |
| 22     | 12-04-0069 | WDMT FLNG ADPT SLD GATE            | 1   |

WEIGH HOPPERS

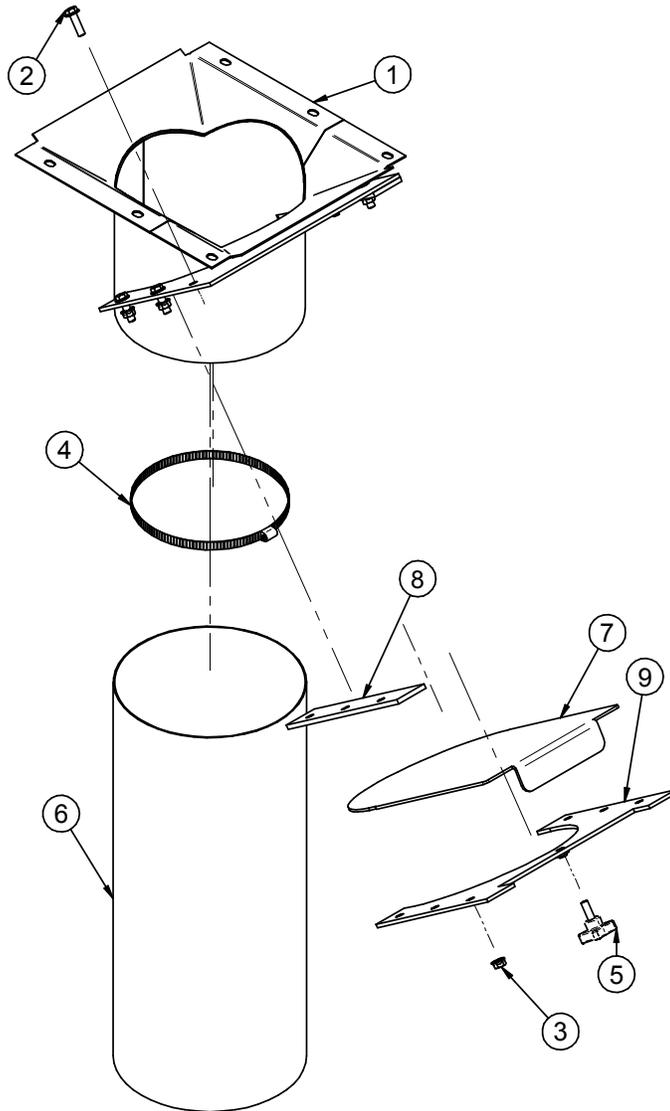
**ASSEMBLY ADAPTER SLIDE GATE TO 80 UNIT HOPPER (12-04-0053 REV A1)**



| PART # |            | 12-04-0053 REV A1               |     |
|--------|------------|---------------------------------|-----|
| Item # | Part #     | Description                     | Qty |
| 1      | 03-08-0130 | PLUG STEEL 22MM                 | 1   |
| 2      | 05-03-1771 | WDMT 80 U TO SLGT               | 1   |
| 3      | 06-01-0127 | BOLT CRG .375-16 X 1.25 ZP GR5  | 2   |
| 4      | 06-01-0189 | BOLT FLG .375-16 X 1.250 ZP GR5 | 3   |
| 5      | 06-03-0014 | NUT LOCK FLG .375-16 ZP GR5     | 5   |
| 6      | 105BDD     | PLT ATTACH SPACER               | 1   |
| 7      | 105BDE     | PLT ATTACH                      | 1   |

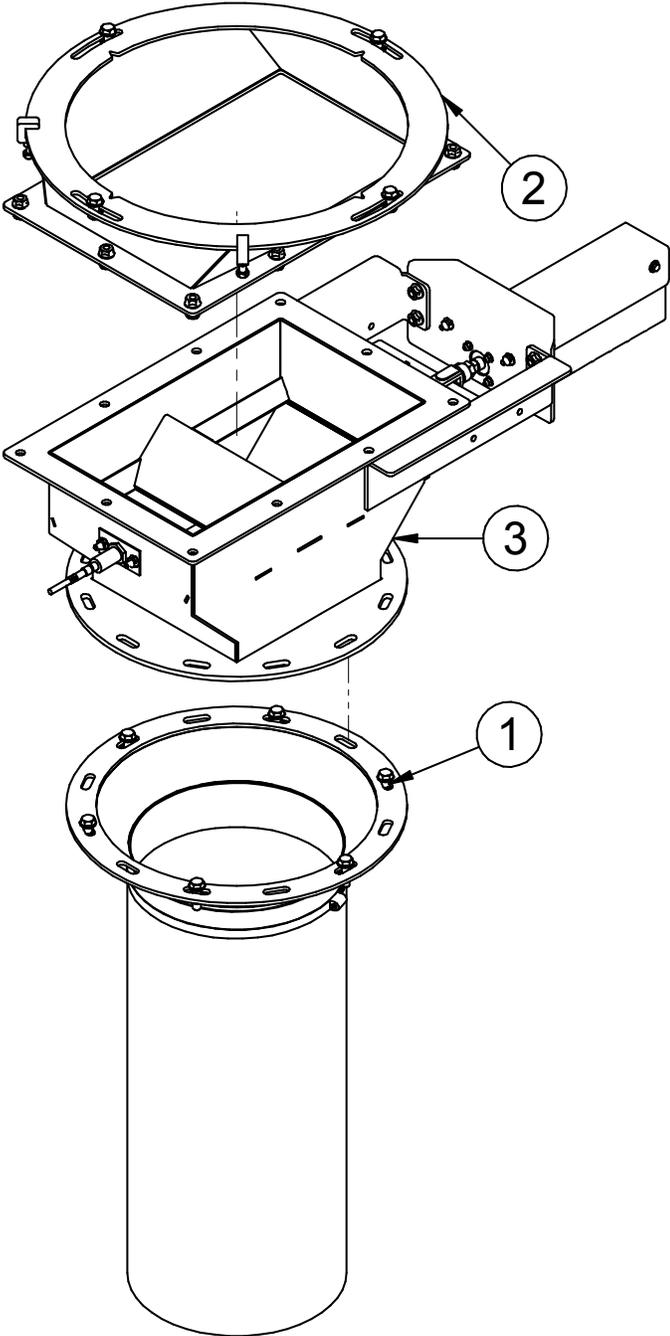
WEIGH HOPPERS

**ASSEMBLY FLOW CONTROL OUTLET (12-04-0057 REV B0)**



| PART # |            | 12-04-0057 REV B0                  |     |
|--------|------------|------------------------------------|-----|
| Item # | Part #     | Description                        | Qty |
| 1      | 05-03-1772 | WDMT FLOW CONTROL                  | 1   |
| 2      | 06-01-0189 | BOLT FLG .375-16 X 1.250 ZP GR5    | 6   |
| 3      | 06-03-0014 | NUT LOCK FLG .375-16 ZP GR5        | 6   |
| 4      | 06-07-0027 | CLMP HOSE 9.375 TO 12.25 X 9/16 SS | 1   |
| 5      | 06-09-0066 | KNOB .375 -16 X 1. 4 LUG PLASTIC   | 1   |
| 6      | 103D92     | CNVR DSCHG SPOUT EXT 10ID          | 1   |
| 7      | 105D3B     | SLIDER FLOW CONTROL                | 1   |
| 8      | 105D3D     | FC-11                              | 2   |
| 9      | 105D3F     | WDMT FC GATE PLT                   | 1   |

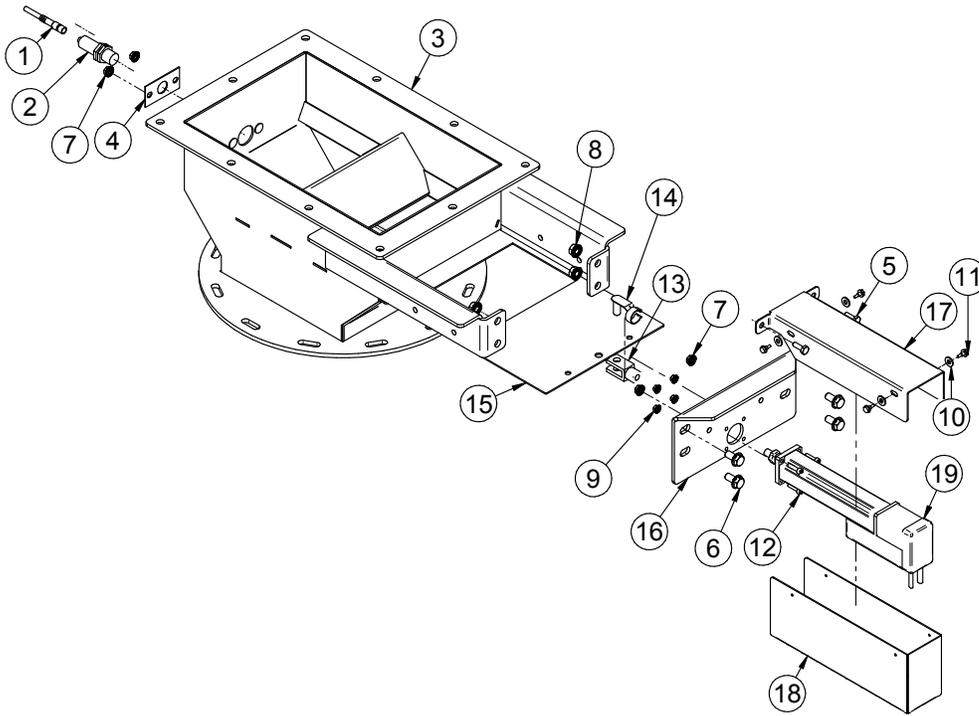
WEIGH HOPPERS  
**ASSEMBLY LIW GATE V-3 (GATE311 REV A0)**



| PART # |            | GATE311 REV A0                  |     |          |
|--------|------------|---------------------------------|-----|----------|
| Item # | Part #     | Description                     | Qty | See Page |
| 1      | 12-04-0072 | ASSY ADPT LIW GATE TO CNVR 10IN | 1   | 30       |
| 2      | 12-04-0075 | ASSY ADPT LIW 80 UNIT           | 1   | 29       |
| 3      | 12-04-0079 | ASSY LIW GATE V3 TRTR & WH      | 1   | 24       |

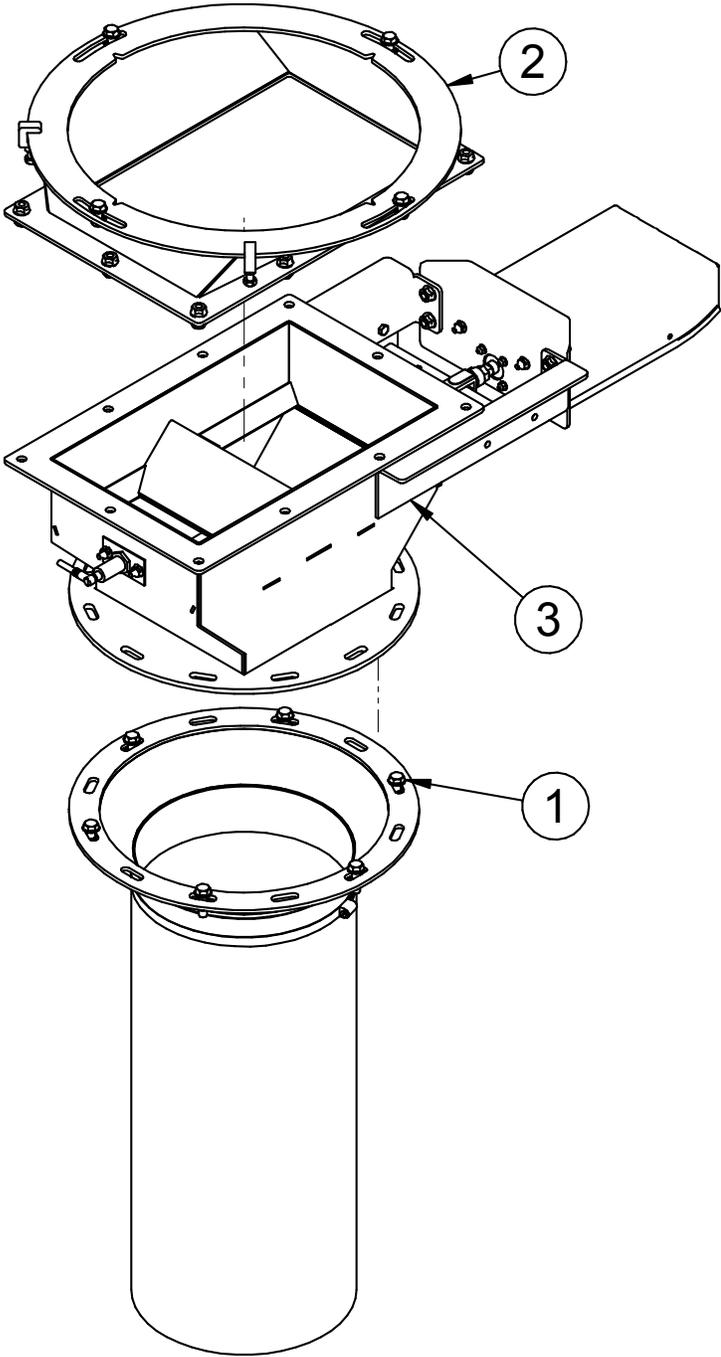
WEIGH HOPPERS

**ASSEMBLY LIW GATE V-3 (12-04-0079 REV B0)**



| PART # |            | 12-04-0079 REV B0                   |     |
|--------|------------|-------------------------------------|-----|
| Item # | Part #     | Description                         | Qty |
| 1      | 03-08-0316 | CONN TRCK RK4.4T-8-RS4.4T/S760/S771 | 1   |
| 2      | 03-10-0173 | SENS PROX 24VDC IFM KG6000          | 1   |
| 3      | 05-03-1764 | WDMT AT500 LIW GATE RECT            | 1   |
| 4      | 05-10-3316 | PLT SMW PROX SW MNT                 | 1   |
| 5      | 06-01-0006 | BOLT .250-20 X .750 ZP GR5          | 2   |
| 6      | 06-01-0124 | BOLT FLG .375-16 X .750 ZP GR5      | 4   |
| 7      | 06-03-0013 | NUT LOCK FLG .250-20 ZP GR5         | 4   |
| 8      | 06-03-0014 | NUT LOCK FLG .375-16 ZP GR5         | 4   |
| 9      | 06-03-0031 | NUT LOCK FLG M5-0.8 GR8.8           | 4   |
| 10     | 06-05-0017 | WSHR FLAT #10 ZP                    | 4   |
| 11     | 06-06-0005 | SCRW SDST 10-16 X .500 HH WSHR ZP   | 4   |
| 12     | 06-06-0083 | SCRW SH M5-0.8 X 20MM BO            | 4   |
| 13     | 06-12-0043 | CLVS 10-1.25 X 10MM                 | 1   |
| 14     | 06-12-0044 | PIN CLIP SPRING 10MM                | 1   |
| 15     | 105F4B     | LIW GATE SLIDE                      | 1   |
| 16     | 105F52     | ACTR MNT PLT                        | 1   |
| 17     | 105F85     | CVR ACTR LIW ADJ CHMBR AT500        | 1   |
| 18     | 106459     | ACTR BTM GRD                        | 1   |
| 19     | 13-05-0740 | ASSY DYADIC LIW ACTUATOR AT500/LPV  | 1   |

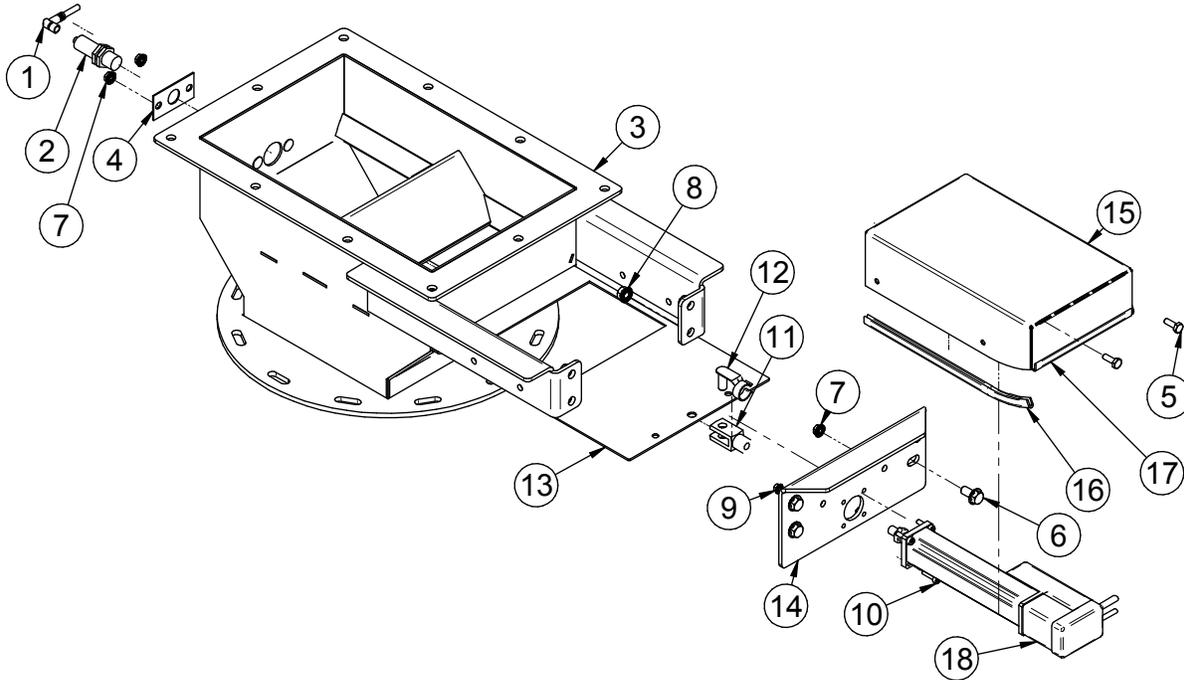
WEIGH HOPPERS  
**ASSEMBLY LIW GATE V-4 (GATEL11 REV A0)**



| PART # |            | GATEL11 REV A0                  |     |          |
|--------|------------|---------------------------------|-----|----------|
| Item # | Part #     | Description                     | Qty | See Page |
| 1      | 12-04-0072 | ASSY ADPT LIW GATE TO CNVR 10IN | 1   | 30       |
| 2      | 12-04-0075 | ASSY ADPT LIW 80 UNIT           | 1   | 29       |
| 3      | 12-04-0080 | ASSY LIW GATE V4 TRTR & WH      | 1   | 26       |

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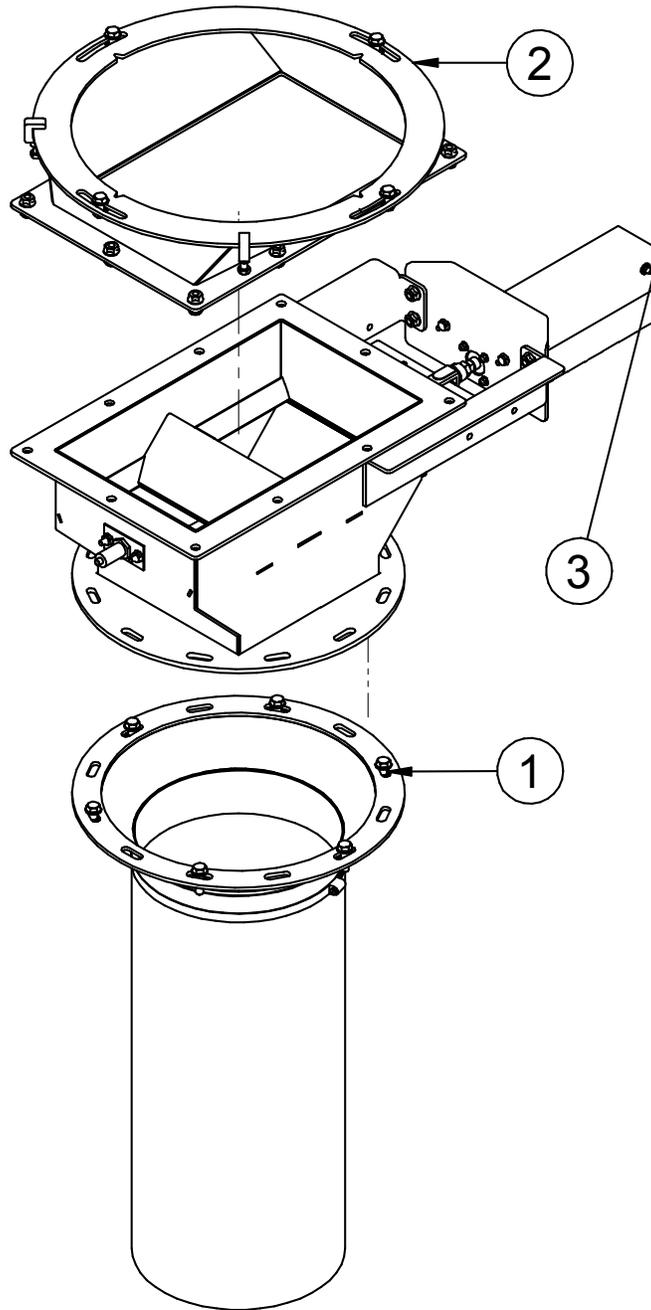
**ASSEMBLY LIW GATE V-4 (12-04-0080 REV B0)**



| PART # |            | 12-04-0080 REV B0                  |     |
|--------|------------|------------------------------------|-----|
| Item # | Part #     | Description                        | Qty |
| 1      | 03-08-0423 | CONN TRCK WK 4T-1-PSG 3M/S90       | 1   |
| 2      | 03-10-0173 | SENS PROX 24VDC IFM KG6000         | 1   |
| 3      | 05-03-1764 | WDMT AT500 LIW GATE RECT           | 1   |
| 4      | 05-10-3316 | PLT SMW PROX SW MNT                | 1   |
| 5      | 06-01-0006 | BOLT .250-20 X .750 ZP GR5         | 2   |
| 6      | 06-01-0124 | BOLT FLG .375-16 X .750 ZP GR5     | 4   |
| 7      | 06-03-0013 | NUT LOCK FLG .250-20 ZP GR5        | 4   |
| 8      | 06-03-0014 | NUT LOCK FLG .375-16 ZP GR5        | 4   |
| 9      | 06-03-0031 | NUT LOCK FLG M5-0.8 GR8.8          | 4   |
| 10     | 06-06-0083 | SCRW SH M5-0.8 X 20MM BO           | 4   |
| 11     | 06-12-0043 | CLVS 10-1.25 X 10MM                | 1   |
| 12     | 06-12-0044 | PIN CLIP SPRING 10MM               | 1   |
| 13     | 105F4B     | LIW GATE SLIDE                     | 1   |
| 14     | 105F52     | ACTR MNT PLT                       | 1   |
| 15     | 106BE2     | CVR ACTR LIW ADJ CHMBR LPV B2B     | 1   |
| 16     | 106BE3     | EDGING ACTR COVER                  | 2   |
| 17     | 106BE4     | EDGING ACTR COVER                  | 1   |
| 18     | 13-04-0288 | ASSY V4 LIW DYADIC ACTUATOR CNTRLS | 1   |

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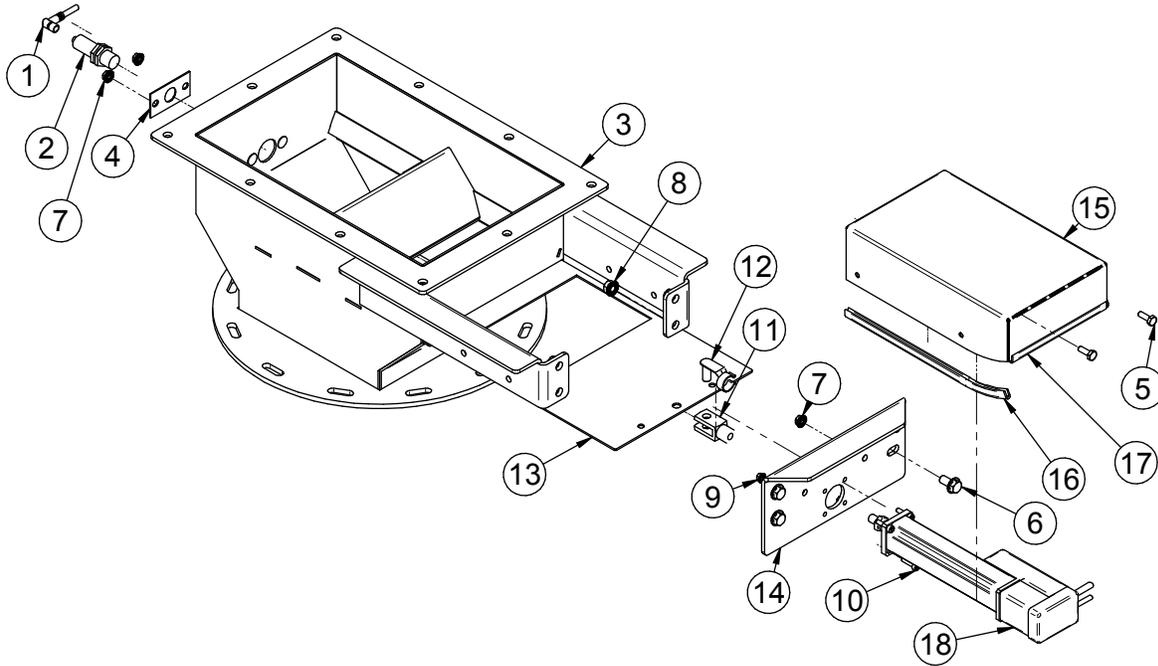
**ASSEMBLY LIW GATE U-TREAT LITE (GATEB11 REV A0)**



| PART # |            | GATEB11 REV A0                  |     |          |
|--------|------------|---------------------------------|-----|----------|
| Item # | Part #     | Description                     | Qty | See Page |
| 1      | 12-04-0072 | ASSY ADPT LIW GATE TO CNVR 10IN | 1   | 30       |
| 2      | 12-04-0075 | ASSY ADPT LIW 80 UNIT           | 1   | 29       |
| 3      | 12-04-0084 | ASSY LIW GATE                   | 1   | 28       |

WEIGH HOPPERS

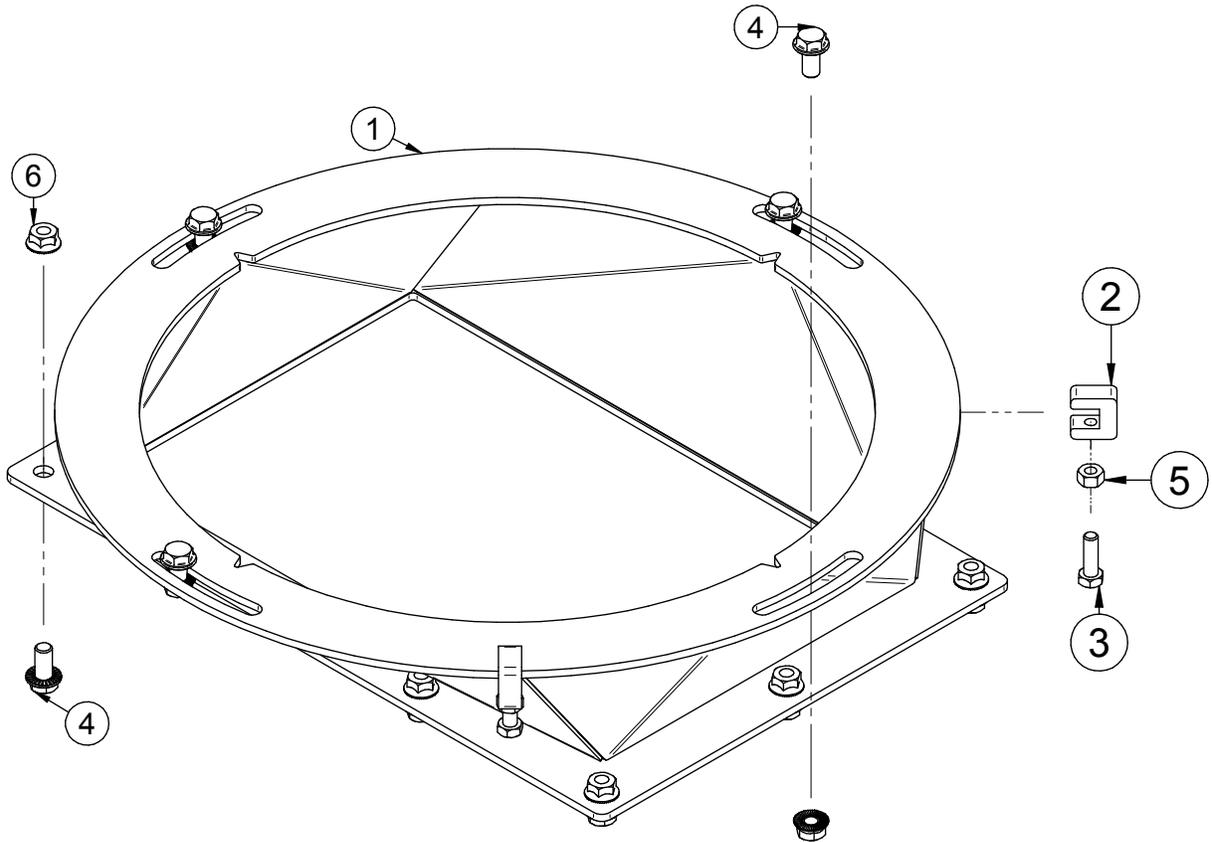
**ASSEMBLY LIW GATE (12-04-0084 REV A0)**



| PART # |            | 12-04-0084 REV A0                   |     |
|--------|------------|-------------------------------------|-----|
| Item # | Part #     | Description                         | Qty |
| 1      | 03-08-0316 | CONN TRCK RK4.4T-8-RS4.4T/S760/S771 | 1   |
| 2      | 03-10-0173 | SENS PROX 24VDC IFM KG6000          | 1   |
| 3      | 05-03-1764 | WDMT AT500 LIW GATE RECT            | 1   |
| 4      | 05-03-3316 | PLT SMW PROX SW MNT                 | 1   |
| 5      | 06-01-0006 | BOLT .250-20 X .750 ZP GR5          | 2   |
| 6      | 06-01-0124 | BOLT FLG .375-16 X .750 ZP GR5      | 4   |
| 7      | 06-03-0013 | NUT LOCK FLG .250-20 ZP GR5         | 4   |
| 8      | 06-03-0014 | NUT LOCK FLG .375-16 ZP GR5         | 4   |
| 9      | 06-03-0031 | NUT LOCK FLG M5-0.8 GR8.8           | 4   |
| 10     | 06-05-0017 | WSHR FLAT #10 ZP                    | 4   |
| 11     | 06-06-0005 | SCRW SDST 10-16 X .500 HH WSHR ZP   | 4   |
| 12     | 06-06-0083 | SCRW SH M5-0.8 X 20MM BO            | 4   |
| 13     | 06-12-0043 | CLVS 10-1.25 X 10MM                 | 1   |
| 14     | 06-12-0044 | PIN CLIP SPRING 10MM                | 1   |
| 15     | 105F4B     | LIW GATE SLIDE                      | 1   |
| 16     | 105F52     | ACTR MNT PLT                        | 1   |
| 17     | 105F85     | CVR ACTR LIW ADJ CHMBR AT500        | 1   |
| 18     | 106459     | ACTR BTM GRD                        | 1   |
| 19     | 13-05-0741 | ASSY DYADIC LIW ACTUATOR            | 1   |

WEIGH HOPPERS

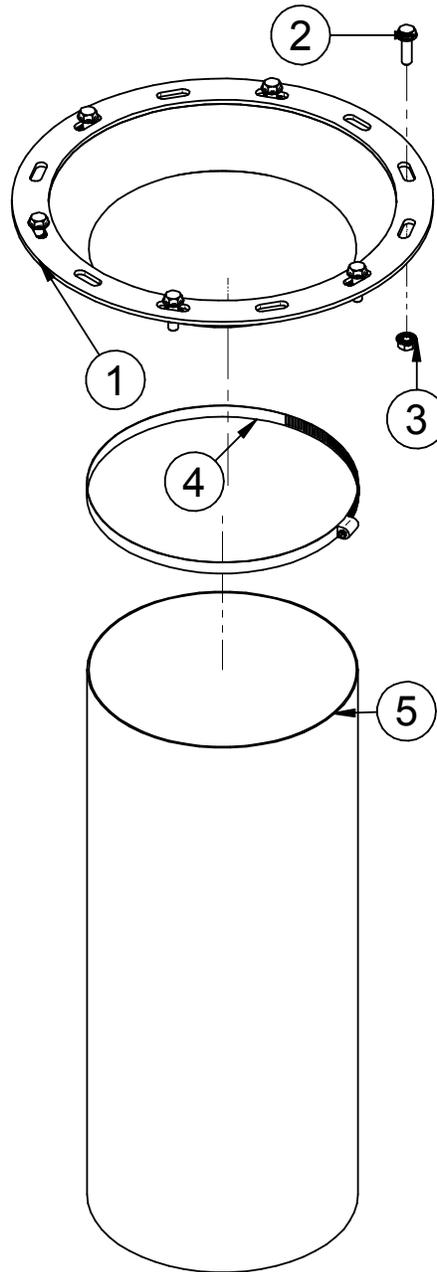
**ASSEMBLY ADAPTER LIW TO 80 UNIT (12-04-0075 REV A1)**



| PART # |            | 12-04-0075 REV A1                   |     |
|--------|------------|-------------------------------------|-----|
| Item # | Part #     | Description                         | Qty |
| 1      | 05-03-1868 | WDMT GATE ADPT                      | 1   |
| 2      | 05-10-0375 | BRKT C CLIP .451 W/.313-18 THD HOLE | 2   |
| 3      | 06-01-0012 | BOLT .313-18 X 1.00 ZP GR5          | 2   |
| 4      | 06-01-0124 | BOLT FLG .375-16 X .750 ZP GR5      | 14  |
| 5      | 06-02-0002 | NUT FULL .313-18 ZP GR5             | 2   |
| 6      | 06-03-0014 | NUT LOCK FLG .375-16 ZP GR5         | 14  |

WEIGH HOPPERS

**ASSEMBLY ADAPTER LIW GATE TO CONVEYOR 10 INCH (12-04-0072 REV A0)**



| PART # |            | 12-04-0072 REV A0                  |     |
|--------|------------|------------------------------------|-----|
| Item # | Part #     | Description                        | Qty |
| 1      | 05-03-1867 | WDMT AT500 LIW GATE ADPT 10IN OUT  | 1   |
| 2      | 06-01-0189 | BOLT FLG .375-16 X 1.250 ZP GR5    | 6   |
| 3      | 06-03-0014 | NUT LOCK FLG .375-16 ZP GR5        | 6   |
| 4      | 06-07-0027 | CLMP HOSE 9.375 TO 12.25 X 9/16 SS | 1   |
| 5      | 103D92     | CNVR DSCHG SPOUT EXT 10ID          | 1   |

## WEIGH HOPPERS

**KIT INDICATOR AND PRINT (13-05-0311 REV A0)**

| PART # |            | 13-05-0311 REV A0                |     |
|--------|------------|----------------------------------|-----|
| Item # | Part #     | Description                      | Qty |
| 1      | 03-07-0142 | CBL SERIAL 25 PIN TO 9 PIN       | 1   |
| 2      | 03-19-0061 | DSPL INDI WGHT CRDNL 180 20K.LBS | 1   |
| 3      | 05-10-3229 | BRKT LX PRINTER SHELF            | 1   |
| 4      | 06-01-0124 | BOLT FLG .375-16 X .750 ZP GR5   | 2   |
| 5      | 06-03-0014 | NUT LOCK FLG .375-16 ZP GR5      | 2   |
| 6      | 08-09-0142 | PAPER PNTR 3IN X 150 FT          | 3   |
| 7      | 09-05-0001 | PNTR 9 PIN DOT MATRIX SCL TICKET | 1   |
| 8      | 10306C     | BRKT AIR VLV MNT                 | 1   |
| 9      | 13-05-0303 | KIT AIR CONTROL FOR DA CYLINDERS | 1   |

**DECAL PACKAGE 80 UNIT HOPPER (13-05-0323 REV A0)**

| PART # |            | 13-05-0323 REV A0                  |     |
|--------|------------|------------------------------------|-----|
| Item # | Part #     | Description                        | Qty |
| 1      | 09-01-0003 | ATWK LBL MADE IN USA YEL 2.50X2.50 | 1   |
| 2      | 09-01-0043 | ATWK LBL USC 22.00 X 5.75 PRO-CUT  | 2   |

## WEIGH HOPPERS

**INDEX BY PART NUMBER**

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| 05-03-1390 | A2       | ASSY HOPP 71IN EXT .33 SECT 80 UNIT | 13     |
| 05-03-1394 | A1       | ASSY SEED LADDER 89 DIA 71 EXT      | 16     |
| 05-03-1396 | A1       | ASSY SEED LADDER 89 DIA 44 EXT      | 15     |
| 05-03-1402 | A2       | ASSY HOPP 44IN EXT .33 SECT 80 UNIT | 13     |
| 05-07-1044 | A1       | KIT LDCL RL WH80                    | 12     |
| 05-07-1061 | A0       | ASSY WH 80UNIT W FRAME 76 CTRS      | 11     |
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| 12-04-0053 | A1       | ADAPTER SLGT UNVRSL TO 80 U         | 21     |
| 12-04-0057 | B0       | FLOW CONTROL OUTLET                 | 22     |
| 12-04-0072 | A0       | ASSY ADPT LIW GATE TO CNVR 10IN     | 30     |
| 12-04-0075 | A1       | ASSY ADPT LIW 80 UNIT               | 29     |
| 12-04-0078 | A2       | SLGT UNVRSL 10 IN GATE              | 19     |
| 12-04-0079 | B0       | ASSY LIW GATE V3 TRTR & WH          | 24     |
| 12-04-0080 | B0       | ASSY LIW GATE V4 TRTR & WH          | 26     |
| 12-04-0084 | A0       | ASSY LIW GATE                       | 28     |
| 13-05-0311 | A0       | KIT INDI & PRNT                     | 31     |
| 13-05-0323 | A0       | DECAL PKG 80 UNIT HOPP              | 31     |
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| 13-05-0811 | A0       | KIT LEG WH 100.5 DSCHG HT           | 14     |
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| GATE311    | A0       | LIW GATE ASSEMBLY V-3               | 23     |
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WEIGH HOPPERS

**NOTES:**

**USC LIMITED WARRANTY****SECTION  
H**

USC LLC, (Manufacturer) warrants its seed treating equipment as follows:

1. **Limited Warranty:** Manufacturer warrants that the Products sold hereunder will be free from defects in material and workmanship for a period of 18 months from date of shipment. If the Products do not conform to this Limited Warranty during the warranty period, Buyer shall notify Manufacturer in writing of the claimed defects and demonstrate to Manufacturer satisfaction that said defects are covered by this Limited Warranty. If the defects are properly reported to Manufacturer within the warranty period, and the defects are of such type and nature as to be covered by this warranty, Manufacturer shall, at its expense, furnish replacement Products or, at Manufacturer's option, replacement parts for the defective products. Shipping and installation of the replacement Products or replacement parts shall be at the Buyer's expense.

2. **Other Limits:** THE FOREGOING IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. Manufacturer does not warrant against damages or defects arising from improper installation (where installation is by persons other than Manufacturer), against defects in products or components not manufactured by Manufacturer, or against damages resulting from such non-Manufacturer made products or components. Manufacturer passes on to the Buyer the warranty it received (if any) from the maker of such non-Manufacturer made products or components. This warranty also does not apply to Products upon which repairs and / or modifications have been effected or attempted by persons other than pursuant to written authorization by Manufacturer. This includes any welding on equipment which could damage electrical components. Manufacturer does not warrant against casualties or damages resulting from misuse and / or abuse of Products, improper storage or handling, acts of nature, effects of weather, including effects of weather due to outside storage, accidents, or damages incurred during transportation by common carrier.

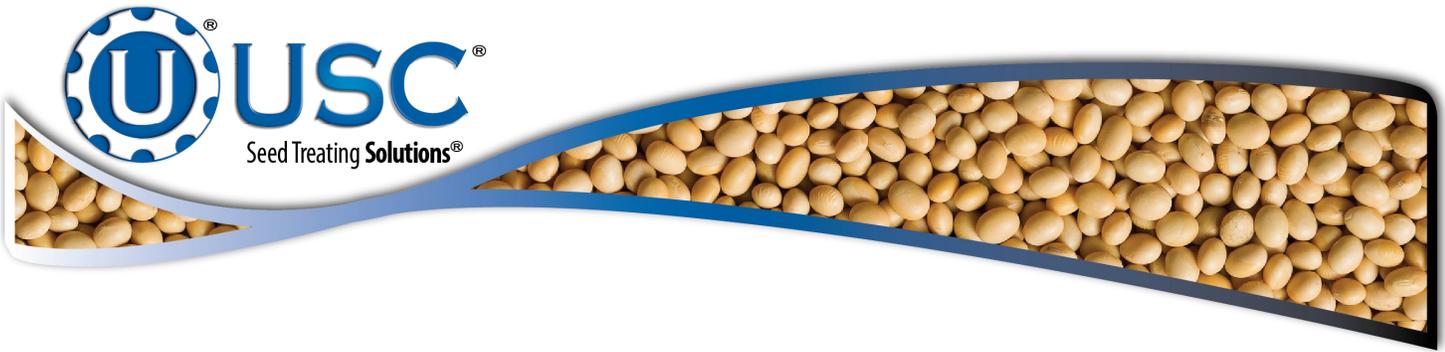
3. **Exclusive Obligation:** THIS WARRANTY IS EXCLUSIVE. The sole and exclusive obligation of Manufacturer shall be to repair or replace the defective Products in the manner and for the period provided above. Manufacturer shall not have any other obligation with respect to the Products or any part thereof, whether based on contract, tort, strict liability or otherwise. Under no circumstances, whether based on this Limited Warranty or otherwise, shall Manufacturer be liable for lost profits, lost revenue, lost sales (whether direct or indirect damages), incidental, special, punitive, indirect or consequential damages.

4. **Other Statements:** Manufacturer's employees or representatives' oral or other written statements do not constitute warranties, shall not be relied upon by Buyer, and are not a part of the contract for sale or this limited warranty.

5. **Return Policy:** Approval is required prior to returning goods to Manufacturer. A restocking fee will apply.

6. **Entire Obligation:** This Limited Warranty states the entire obligation of Manufacturer with respect to the Products. If any part of this Limited Warranty is determined to be void or illegal, the remainder shall remain in full force and effect.

US / Canada Non-Exclusive 2016



| DOCUMENT REVIEW RECORD |    |
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