BULK SEED TENDER
OPERATOR’S MANUAL

FOR OWNERS OF MODEL SEED TITAN 2 SE
WARRANTY REGISTRATION
This form must be filed out by the dealer and signed by both the dealer and the customer at the time of delivery. Please mail or fax the completed form for validation of the equipment registration.

Customer’s Name_____________________________________________________
Address ____________________________________________________________________________
City, State, Postal Code______________________________________________________________
Phone Number (_______) ______-_________ 

PRODUCT INFORMATION
Tender Model # ___________________ Serial Number # ___________________

DEALER INSPECTION REPORT
____ Tender frame secured to trailer  ______ Electric brakes in working condition
____ Check fuel level and gas shut-off  ______ All guards/shields installed correctly
____ Check engine oil level  ______ All safety signs installed and intact
____ Check reduction case oil level  ______ Reflectors and lights clean and working
____ Start Honda engine  ______ Review safety and operating instructions
____ Brake and lighting harness connection  ______ Inspect customer’s hitch for 2-5/16”
____ Remote throttle control functions  ______ ball/gooseneck hitch
____ Lubricate unit where necessary  ______ Verify receipt of all options ordered
____ Check air pressure in tires

I have thoroughly instructed the buyer on the above-described equipment, including review of the Operator’s Manual content, equipment care, adjustments, operational use, safety procedures, and applicable warranty policy.

Dealer/Company Name_________________________________________________________
City, State, Postal Code ____________________________________________________________
Dealer’s Signature _____________________________ Date __/___/____

The above equipment and Operator’s Manual have been received by me, and I have been thoroughly instructed as to care, adjustments, safe operation, and applicable warranty policy.

Owner’s Signature _____________________________ Date __/___/____

2902 Expansion Blvd. Storm Lake, Iowa  50588  Phone: 800-437-2334  Fax: 712-732-1028  Email: iowa_warranty@meridianmfg.com
CERTIFICATE OF ORIGIN

LICENSING INFORMATION

DEALER: ____________________________ Business ____________________________ Contact ____________________________ Address ____________________________ City, State, Zip

SOLD TO: ____________________________ Business ____________________________ Contact ____________________________ Address ____________________________ City, State, Zip

TENDER MODEL # _________________________________________________________
TENDER WEIGHT __________________________________________________________
TENDER SERIAL # __________________________________________________________
TRAILER MODEL # _________________________________________________________
TRAILER SERIAL* # _________________________________________________________
TRAILER WEIGHT _________________________________________________________

*(Only one serial number is issued for a complete tender package which will include the trailer. The trailer in these complete packages does not receive a separate serial number.)

Tender 110 BST Wagon 80110 1,004#
Tender 110 BST-T (trailer included) 80111 1,830#
Tender 220 BST Wagon 80220 1,866#
Tender 220 BST-T (trailer included) 80221 3,495#
Tender 240RT6 Wagon 80242 2,545#
Tender 240RT6-BWT (trailer included) 80247 4,475#
Tender 240RT6-T (trailer included) 80244 4,174#
Tender 240RT8 Wagon 80245 2,604#
Tender 240RT8-BWT (trailer included) 80241 4,534#
Tender 240RT8-T (trailer included) 80246 4,232#
Tender 240SE-T (trailer included) 80243 4,491#
Tender 375RT6 Wagon 80375 3,094#
Tender 375RT6-T (trailer included) 80378 5,636#
Tender 375RT6-BWT (trailer included) 80374 5,942#
Tender 375RT8 Wagon 80376 3,106#
Tender 375RT8-BWT (trailer included) 80377 5,913#
Tender 375RT8-T (trailer included) 80379 5,607#
Tender T2SE-T (trailer included) 80201 2,002#
Tender T2-T (trailer included) 80200 1,555#

Tender T4SE Wagon 80401 2,803#
Tender T4SE-BWT (trailer included) 80403 4,833#
Tender T4SE-T (trailer included) 80402 4,431#
T600NST Trailer 80311 826#
T1400NST Trailer 80307 1,628#
T1400GN Trailer 80342 1,663#
T2100NST Trailer 80308 2,501#
Tender 275BH-6DX (trailer included) 80203 4,807#
Tender 275GN-6DX (trailer included) 80204 5,399#
Tender 275BH-8DX (trailer included) 80206 4,924#
Tender 275GN-8DX (trailer included) 80207 5,517#
Tender 275BH-6DX (trailer included) 80332 5,029#
Tender 275GN-6DX (trailer included) 80333 5,623#
Tender 275BH-8DX (trailer included) 80335 5,146#
Tender 275GN-8DX (trailer included) 80336 5,739#
Tender 275-8DX 80334 4,460#
IMPORTANT INFORMATION

SERIAL NUMBER LOCATION

Please provide the serial number of your Meridian Titan 2 SE Seed Tender and engine when ordering parts or requesting service or other information.

The serial number plates are located where indicated. Please record the numbers in the space provided below for easy reference.

Model Number: Titan 2 SE
Serial Number: ____________________________
Engine Serial Number: ______________________

PATENT INFORMATION

Meridian continuously enhances its product offering through product improvements and new product innovations. Marketplace feedback, technological innovation, new materials and manufacturing methods, and a philosophy of continuous improvement constantly challenge the company to develop new and better ways of addressing market needs. Meridian is committed to innovation and reinvestment and as a result, the company maintains a portfolio of patents and intellectual property. For more information on our patents please see our website: www.meridianmfg.com/patents
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1. INTRODUCTION

1.1 CONGRATULATIONS
Congratulations on your choice of a Meridian Manufacturing Group 2 SE Bulk Seed Tender to complement your seed delivery system in your farming operation. This equipment has been designed and manufactured to meet the exacting standards for such equipment in the agricultural industry and will keep your seed delivery system at optimum efficiency.

The Bulk Seed Tender system is designed to handle any kind of bulk seed, quickly transport it, and then transfer it into planters and drills, as required.

Safe, efficient, and trouble-free operation of your Bulk Seed Tender requires that you and anyone else who will be operating or maintaining the machine, read and understand the Safety, Operation, Maintenance, and Troubleshooting information contained within this Operator’s Manual.

This manual covers the 2 SE model manufactured by Meridian Manufacturing Group, Inc. Use the Table of Contents and Index as a guide to locate required information.

1.2 OPERATOR ORIENTATION
The directions left, right, front, and rear, as mentioned throughout this manual, are as seen from the truck drivers’ seat and facing in the direction of travel.

1.3 OWNER/OPERATOR
It is the responsibility of the owner or operator to read this manual and to train all other operators before they start working with the machine. Follow all safety instructions exactly. Safety is everyone’s business. By following recommended procedures, a safe working environment is provided for the operator, bystanders, and the area around the worksite. Untrained operators are not qualified and must not operate the machine.

In addition to the design and configuration of equipment, hazard control and accident prevention are dependent upon the awareness, concern, prudence, and proper training of personnel involved in the operation, transport, maintenance, and storage of equipment. It is the responsibility of the owner or operator to read this manual and to train all operators before they start working with the machine. Follow all safety instructions as laid out in this manual.

Keep this manual handy for easy reference and to pass on to new operators or owners. Call your Meridian Manufacturing Group, Inc. dealer if you need assistance, information, or additional copies of the manuals.

The information, specifications, and illustrations in this manual are those in effect at the time of printing. We reserve the right to change specifications or design at any time without notice.
2. SAFETY

SAFETY ALERT SYMBOL

This Safety Alert symbol means
ATTENTION! BECOME ALERT!
YOUR SAFETY IS INVOLVED!

The Safety Alert symbol identifies important safety messages on the Meridian Bulk Seed Tender Models and in the manual. When you see this symbol, be alert to the possibility of personal injury or death. Follow the instructions in the safety message.

WHY IS SAFETY IMPORTANT TO YOU?

3 Big Reasons

• Accidents Disable and Kill •
  • Accidents Cost •
  • Accidents Can Be Avoided •

SIGNAL WORDS:

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

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.

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.

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.

If you have any questions not answered in this manual, require additional copies of the manual, or the manual is damaged, please contact your dealer or Meridian Manufacturing Group, 2902 Expansion Blvd., Storm Lake, Iowa, 50588, toll free 1-800-437-2334, phone (712) 732-1780, or fax (712) 732-1028.
YOU are responsible for the SAFE operation and maintenance of your Meridian Manufacturing Group Bulk Seed Tender. YOU must ensure that you and anyone else who is going to operate, maintain, or work around the Bulk Seed Tender 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 all good safety practices that should be adhered to while operating the Bulk Seed Tender system.

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 follow all the safety precautions. Most accidents can be prevented. Do not risk injury or death by ignoring good safety practices.

• Bulk Seed Tender system owners must give operating instructions to operators or employees before allowing them to operate the machine, and then annually thereafter per OSHA (Occupational Safety and Health Administration) regulation 1928.57.

• The most important safety feature on this equipment is a SAFE operator. It is the operator’s responsibility to read and follow ALL Safety and Operating instructions in the manual. Most 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. Always be and stay alert to any possible unsafe operating or maintenance procedures or conditions.

• Do not modify the equipment in any way. Unauthorized modification may impair the function and/or safety of the components and systems and could affect the life of the equipment, possibly invalidating the warranty coverage.

• Think SAFETY! Work SAFELY!

2.1 GENERAL SAFETY

1. Read and understand the Operator’s Manual and all safety signs before operating, maintaining, adjusting, filling, unloading, or unplugging the Bulk Seed Tender system.

2. Have a first aid kit available for use should the need arise and know how to use it.

3. Have a fire extinguisher available for use should the need arise and know how to use it.

4. Do not allow riders.

5. When working around or operating this equipment, wear appropriate personal protective equipment. This list includes but is not limited to:

- A hard hat
- Protective shoes with slip resistant soles
- Protective goggles, glasses, or face shield
- Heavy gloves and protective clothing
- Respirator

6. Do not allow long hair, loose fitting clothing, or jewelry around equipment.

7. Install and secure all guards before starting.

8. Stop engine, remove ignition key, and wait for all moving parts to stop before servicing, repairing, adjusting, loading, filling, or unplugging.

9. Establish a lock-out or tag-out policy for the worksite. Be sure all personnel are trained in and follow all procedures. Lock-out or tag-out all power sources before working around loading/unloading equipment.

10. Clear the area of people, especially small children, before starting.

11. Review safety related items annually with all personnel who will be operating, using, or maintaining the Bulk Seed Tender system.
2.2 EQUIPMENT SAFETY GUIDELINES

1. Safety of the operator and bystanders is one of the main concerns in designing and developing a machine. 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 or death, study the following precautions and insist those working with you, or for you, follow them.

2. In order to provide a better view, certain photographs or illustrations in this manual may show an assembly with a safety shield removed. However, equipment should never be operated in this condition. Keep all shields in place. If shield removal becomes necessary for repairs, replace the shield prior to use.

3. Never use alcoholic beverages or sedative drugs while operating this equipment. Consult your doctor about operating this machine while taking prescription medications.

4. Under no circumstances should young children be allowed to work with this equipment. 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 it works. Review the safety instructions with all users annually.

5. This equipment is dangerous to children and persons unfamiliar with its operation. The operator should be a responsible, properly trained, and physically able person familiar with farm machinery and trained in this equipment’s operations. If the elderly are assisting with farm work, their physical limitations need to be recognized and accommodated.

6. Never exceed the limits of a piece of machinery. If its ability to do a job, or to do so safely, is in question - DON’T TRY IT.

7. Do not modify the equipment in any way. Unauthorized modification may result in serious injury or death and may impair the function and life of the equipment.

8. In addition to the design and configuration of this implement, including Safety Signs and Safety Equipment, hazard control and accident prevention are dependent upon the awareness, concern, prudence, and proper training of personnel involved in the operation, transport, maintenance, and storage of the machine. Refer to Safety Messages and operation instruction in each of the appropriate sections of the auxiliary equipment and machine Manuals. Note all Safety Signs affixed to the auxiliary equipment.

2.3 SAFETY TRAINING

1. Safety is a primary concern in the design and manufacture of our products. Unfortunately, our efforts to provide safe equipment can be wiped out by a single careless act of an operator or bystander.

2. In addition to the design and configuration of equipment, hazard control and accident prevention are dependent upon the awareness, concern, prudence, and proper training of personnel involved in the operation, transport, maintenance, and storage of this equipment.

3. The best safety feature is an informed, careful operator. It is the operator’s responsibility to read and comply with ALL Safety and Operating instructions in the manual. Accidents can be avoided.

4. Working with unfamiliar equipment can lead to injuries. Read this manual, as well as the manual for your auxiliary equipment, before assembling or operating to acquaint yourself with the machines. If this machine is used by any person other than yourself, it is your responsibility to make certain that the operator reads and understands the operator’s manuals and is instructed in safe and proper use.

5. Know your controls and how to immediately stop the conveyor and any other auxiliary equipment in an emergency. Read this manual and the one provided with all auxiliary equipment.

6. Train all new personnel and review instructions frequently with employees. Be certain only a properly trained and physically able person will operate the machinery. 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.
2.4 SAFETY SIGNS
Refer to the 3.1 Safety Signs section for safety information.

2.5 PREPARATION
Refer to the 6.1 Pre-Operating Instructions section for safety information.

2.6 TRANSPORT SAFETY
Refer to the 7.1 Towing section for safety information.

2.7 OPERATING SAFETY
Refer to the 8.1 Operation section for safety information.

2.8 STORAGE SAFETY
Refer to the 9.1 Storage section for safety information.

2.9 MAINTENANCE SAFETY
Refer to the 10.1 Maintenance section for safety information.

2.10 LOCK-OUT OR TAG-OUT SAFETY
Refer to the 10.1.2 Maintenance section for safety information.

2.11 BATTERY SAFETY
Refer to the 10.3.1 Battery section for safety information.

2.12 REFUELLING SAFETY
Refer to the 10.5.1 Engine section for safety information.
2.13 SIGN-OFF FORM

Meridian Manufacturing Group follows the general Safety Standards specified by the American Society of Agricultural Engineers (ASAE) and Occupational Safety and Health Administration (OSHA). Anyone who will be operating and/or maintaining the Meridian Manufacturing Group Bulk Seed Tender must read and clearly understand ALL Safety, Operating, and Maintenance information presented in this manual.

Do not allow anyone to operate this equipment until such information has been reviewed. Annually review this information before the season start-up.

Make these periodic reviews of SAFETY and OPERATION a standard practice for all of your equipment. We feel an untrained operator is unqualified to operate this machine.

A sign-off sheet is provided for your recordkeeping to show that all personnel who will be working with the equipment have read and understand the information in the Operator’s Manual and have been instructed in the operation of the equipment.

---

**SIGN-OFF FORM**

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3. SAFETY SIGNS

3.1 SAFETY SIGNS
The types of safety signs and locations on the equipment are shown in the following pages. Good SAFETY AWARENESS requires that you familiarize yourself with the various safety signs, the type of warning and the area, or a particular function related to that area.

1. If safety signs have been damaged, removed, become illegible, or parts replaced without signs, new signs must be applied.
2. Replacement parts that displayed a safety sign should also display the current sign.
3. Replacement safety signs (labels) are available from your authorized Dealer Parts Department or the factory at no cost.

3.2 HOW TO INSTALL SAFETY SIGNS
1. Be sure that the installation area is clean and dry.
2. Be sure temperature is above 50°F (10°C).
3. Determine exact position before you remove the backing paper.
4. Remove the smallest portion of the split backing paper.
5. Align the sign over the specified area and carefully press the small portion with the exposed sticky backing in place.
6. Slowly peel back the remaining paper and carefully smooth the remaining portion of the sign in place.
7. Small air pockets can be pierced with a pin and smoothed out using a piece of sign backing paper.

3.3 DECAL LOCATIONS

1. NOTICE — Product Warranty (#18432)

Meridian Manufacturing Group herewith ("Meridian") warrants all products manufactured by it to be free of defect in material and workmanship for a period of 1 year from the date of purchase.

This Meridian warranty does not cover:

1. Accessories supplied by Meridian but manufactured by others. Meridian will facilitate the other manufacturer warranty for the benefit of the purchaser but will not be bound thereby (example augers, trailers, attachments, etc.).
2. Products that have been altered by anyone other than a Meridian employee or are used by the purchaser for purposes other than what was intended or was in place of manufacture or used in excess of the "built specifications".
3. Products that are custom manufactured by Meridian utilizing the purchaser's design which deviates from the Meridian normal production line manufacture or customized features of the products.
4. Malfunction or damages to the product from misuse, negligence, customer alteration, accidents or product abuse due to incorrect material or poor material flow ability or lack of required performance or required maintenance (e.g., poor material flow ability caused by incorrect feeding or fertilizer or other pyroxylin seal, etc.).
5. Loss of time, inconvenience, loss of material, down time or any other consequential damage
6. Product used for a function that is different than designed intent (e.g., storing pyroxylin seal in grain bins, unacceptable material in the bins such as cut or damaged material, etc.).

To activate this warranty, the purchaser must make contact in writing with Meridian within one (1) year of date of purchase. After contact, Meridian has the right to determine the cause and qualify the legitimacy of the claim. Meridian, upon acceptance of a warranty claim shall have a reasonable time to inspect any repair or replacement and may effect repair or replacement out of its factory or through contract with a local repair service. If a purchaser files warranty notice is made choosing to make the repair itself, Meridian must approve any expense before they are incurred to be reimbursable for customer reimbursement.

Meridian 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. Meridian will not be liable for any other or further remedy including defects or personal injury, property damage or consequential damage. The use of the State of Iowa shall govern and any such claim or any issues with regard to the same shall be resolved in the Iowa District Court for Buena Vista County, Iowa.

18432

2. Product Serial Number Decal (#19984)
3. **WARNING — Rotating Part Hazard (#19937)**

Entanglement with moving parts could cause serious injury or death:
- Do not operate without guard.
- Avoid contact with rotating parts.
- Stay clear of moving parts.

4. **DANGER — Entanglement Hazard (#18435)**

Entanglement with moving parts will cause serious injury or death:
- Do not operate without guard.
- Install guard before operating.

5. **CAUTION — Read and Understand (#19934)**

- Read and understand the Operator’s Manual before using. Review safety instructions annually.
- Stop engine, remove ignition key, and wait for all moving parts to stop before servicing, repairing, adjusting, loading, filling, or unplugging.
- Keep working area clean and free of debris to prevent slipping or tripping.
- Do not allow riders on the trailer or frame when transporting.
- Only enter seed compartment when it is empty.
- Keep hands, feet, hair, and clothing away from moving parts.
- Do not place hands, arms, or body between seed box and frame or lid to prevent pinching or crushing. Components can move unexpectedly.
- Do not place hands, fingers, or arms between unloading auger tube segments when placing in unloading configuration.
- Stay away from overhead power lines. Electrocution can occur without direct contact.
- Install and secure all guards before starting.
- Use care when climbing on frame or ladder to prevent slipping or falling.
- Do not smoke when refuelling or working around machine.
- Fasten frame securely to trailer before transporting.
- In two compartment seed tenders, always empty Compartment 2 first to prevent an unbalanced load. An unbalanced load can cause hitch to upend.

6. **WARNING — Entanglement Hazard (#19936)**

Avoid serious injury or death:
- Do not operate with access door open.
- Do not place hands or fingers near rotating or moving parts.
- Do not operate without guard.
- Stop engine, remove ignition key, and wait for moving parts to stop before performing any work on unit.
7. WARNING — Electrocution Hazard (#18433)

**WARNING**

**ELECTROCUTION HAZARD**

Avoid contact with overhead power lines or electrically powered objects.

- Be aware of your surroundings when raising or lowering any part of equipment.
- Maintain at least 20 feet between equipment and any electrical hazard.
- Contact with electricity can result in serious personal injury or death.

8. WARNING — Pinch Point Hazard (#19956)

**WARNING**

**PINCH POINT HAZARD**

Avoid serious injury from pinching or crushing:
- Keep body parts clear of seed boxes and frame when loading.
- Keep bystanders at least 15 ft. (4.5 m) away from loading area.

9. WARNING — Upending Hazard (#19938)

**WARNING**

**UPENDING HAZARD**

Tongue can violently swing upward if not properly attached to tow vehicle, causing serious injury or death:
- Do not stand over tongue when unhooking from tow vehicle.
- Fill front compartment or empty rear compartment first to maintain downward pressure on hitch.
4. SPECIFICATIONS

4.1 OVERALL 2 SE SEED TENDER SPECIFICATIONS

![Diagram of 2 SE Seed Tender Specifications]

- Overall Dimensions:
  - Height: 11’ 3”
  - Width: 10' 1”
  - Depth: 7’ 5”

- Additional Dimensions:
  - Height of seed hopper: 10’ 1”
  - Depth of seed hopper: 5’ 3”
4.3 BOLT SPECIFICATIONS

**WARNING**

**EQUIPMENT FAILURE**
The torque value for bolts and capscrews are identified by their head markings. Replacing higher “Grade” bolts (Grade 8) with lower Grade bolts (Grade 5) will lead to equipment failure and can result in injury or death. Always use replacement bolts with the same Grade markings as the removed bolt.

4.3.1 Bolt Torque Values

Torque figures indicated above 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 instructed in this manual. When using locking elements, increase torque values by 5%.

<table>
<thead>
<tr>
<th>Bolt Diameter “A”</th>
<th>SAE Grade 2 N·m (ft-lbs)</th>
<th>SAE Grade 5 N·m (ft-lbs)</th>
<th>SAE Grade 8 N·m (ft-lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4”</td>
<td>8 (6)</td>
<td>12 (9)</td>
<td>17 (12)</td>
</tr>
<tr>
<td>5/16”</td>
<td>13 (10)</td>
<td>25 (19)</td>
<td>36 (27)</td>
</tr>
<tr>
<td>3/8”</td>
<td>27 (20)</td>
<td>45 (33)</td>
<td>63 (45)</td>
</tr>
<tr>
<td>7/16”</td>
<td>41 (30)</td>
<td>72 (53)</td>
<td>100 (75)</td>
</tr>
<tr>
<td>1/2”</td>
<td>61 (45)</td>
<td>110 (80)</td>
<td>155 (115)</td>
</tr>
<tr>
<td>9/16”</td>
<td>95 (70)</td>
<td>155 (115)</td>
<td>220 (165)</td>
</tr>
<tr>
<td>5/8”</td>
<td>128 (95)</td>
<td>215 (160)</td>
<td>305 (220)</td>
</tr>
<tr>
<td>3/4”</td>
<td>225 (165)</td>
<td>390 (290)</td>
<td>540 (400)</td>
</tr>
<tr>
<td>7/8”</td>
<td>230 (170)</td>
<td>570 (420)</td>
<td>880 (650)</td>
</tr>
<tr>
<td>1”</td>
<td>345 (225)</td>
<td>850 (630)</td>
<td>1320 (970)</td>
</tr>
</tbody>
</table>

4.3.2 Grade Markings Chart

- **Grade 2**
  - Low or Medium Carbon Steel
  - No Marking

- **Grade 5**
  - Medium Carbon Steel Quenched and Tempered
  - 3 Radial Lines

- **Grade 8**
  - Medium Carbon Alloy Steel, Quenched and Tempered
  - 6 Radial Lines
5. MACHINE COMPONENTS AND CONTROLS

5.1 COMPONENT NOMENCLATURE AND LOCATION

The Meridian 2 SE Seed Tender is designed as a bulk seed transfer unit to transport large amounts of seed into a planter or drill.

Large bulk seed boxes are loaded onto the seed tender frame. The center-mounted conveyor then transfers the seed from the seed boxes into a planter or drill. Slide gates on the unit control the flow of seed into the conveyor.

A gas engine mounted on the frame powers the conveyor drive pulley. A reduction case centrifugal clutch (15) on the engine output shaft engages when the engine speed reaches 1400 RPM. Conveyor belt drive system (23) transmits power from the engine to the conveyor. Use conveyor throttle switch (13) to increase or decrease the speed of the conveyor.

The conveyor will unload to either side and out of the back of the unit.

Once the seed boxes are loaded, the conveyor transfers the seed through conveyor tube (5) and discharge spout (6) into planters or drills. Slide gate levers (11) on the unit control the flow of seed into the conveyor.


(11) Open/Close Slide Gate Handles. (12) 12 Volt Battery (inside of frame).

(13) Conveyor Throttle Switch.

(20) Remote Throttle Switch Auxiliary Plug.  
(21) Pull Start Rope.  
(22) Fuel Tank.  
(23) Conveyor Belt Drive and Guard.  
(24) Centrifugal Clutch Gearbox Oil Level.  
(25) Engine Oil Level.

(26) Electrical System Fuse.  
(27) Battery.  
(28) Battery Hold Down Strap.

5.2 OPTIONAL WEIGHING SYSTEM

The optional scale package allows the seed to be weighed as the seed tender is filled or as it is emptied into the planter.

Refer to the Optional Weighing System and other sections in this manual for additional information.
5.3 ENGINE AND CONTROLS

A Honda® engine is used with this unit. Always read the engine Operator’s Manual supplied with the seed tender for the detailed engine operating procedures.

1. Electrical System Key Switch
   This key switch controls the power to the electrical system. Turn the key clockwise to turn the electrical system ON. The key will remain in the ON position when the engine is running. Turn the key counterclockwise to stop the engine.

2. Starting Rope
   This retracting rope and T-bar is an optional method used to start the engine. Turn the key switch to the ON position. Grasp the T-bar firmly and pull the rope sharply to start the engine. The key switch must be in the ON position for the engine to run.

3. Throttle Actuator
   The throttle actuator is an electronic unit to control the engine speed by a switch mounted at the end of the discharge spout. This allows the person filling the planter boxes to control the output flow of seed.

4. Choke Lever
   The choke lever controls the fuel/air mixture to the engine. Close the choke when starting if the engine is cold. Open the choke as the engine warms. Always open the choke fully during operation.

5. Fuel Shut-Off Valve
   Each engine is equipped with a valve between the fuel tank and the carburetor. Slide the fuel valve toward the engine to turn ON and away for OFF. Turn the fuel OFF when not in use or before transporting.

6. Engine Circuit Protection
   The circuit protector protects the battery charging circuit. A short circuit, or a battery connected with reverse polarity, will trip the circuit breaker. The green indicator inside the circuit protector will pop out to show that the circuit protector has switched off.

7. Battery (12 Volt)
   A 12 Volt battery supplies the power to start the gasoline engine. The battery must be periodically recharged from an external source to keep it fully charged.
8. Conveyor/Engine Throttle Switch
This two-position toggle switch controls the throttle for the engine. Move the switch to the right to increase the engine speed and to the left to decrease the speed.

Note: The switch can be moved to any convenient location by relocating the switch and wiring harness.

5.4 ENGINE WARNING DECALS

1. WARNING — Read Owner’s Manual (contact Honda Mfg. for replacement of this decal).

2. CAUTION — Shut Off Fuel (contact Honda Mfg. for replacement of this decal).

3. IMPORTANT — Battery Recharging (#19991).

4. CAUTION — Hot Muffler (contact Honda Mfg. for replacement of this decal).

**WARNING**

Gasoline is highly flammable and explosive. Turn engine off and let cool before refueling.
The engine emits toxic carbon monoxide. Do not run in an enclosed area.
Read Owner’s Manual before operation.
6. PRE-OPERATING INSTRUCTIONS

6.1 SAFETY

1. Never operate the seed delivery system and auxiliary equipment until you have read and completely understand this manual, the auxiliary equipment Operator’s Manual, and each of the Safety Messages found on the safety signs on the delivery system and auxiliary equipment.

PROLONGED EXPOSURE TO LOUD NOISE MAY CAUSE PERMANENT HEARING LOSS! Motors or equipment can be noisy enough to cause permanent or partial hearing loss. We recommend that you wear hearing protection on a full-time basis if the noise in the operator’s position exceeds 80db. Note: Hearing loss from loud noise (tractors, chain saws, radios, and other such sources close to the ear) is cumulative over a lifetime with uncertain natural recovery.

2. Clear working area of debris, trash, or hidden obstacles that might be hooked or snagged, causing injury, damage, or tripping.

3. Operate only in daylight or good artificial light.

4. Be sure machine is properly attached to the trailer, adjusted, and in good operating condition.

5. Ensure that all guards, shielding, and safety signs are properly installed and in good condition.

6. Before starting, give the machine a “once over” for any loose bolts, worn parts, cracks, leaks, frayed belts, and make necessary repairs. Always follow maintenance instructions.

6.2 MACHINE BREAK-IN PERIOD

A special break-in procedure has been developed to ensure the integrity of the seed tender when first put into service. Follow the Before Starting instructions and then follow the Inspections for 1/2, 5, and 10 Hours instructions at the appropriate interval.

After completing these instructions, follow the normal service schedule in the Maintenance section and engine manual.

6.2.1 Before Starting

1. Read and follow the instructions in the Honda® engine and the Meridian Operator’s Manuals.

2. Review and follow the Pre-operation Checklist before starting machine.

3. Initially check wheel bolt torque and then again at 10, 25, and 50 miles. Refer to the Wheel Bolt Torque Requirements section in this manual for tightening instructions.

4. Start the engine and check the controls. Be sure that they function properly.

6.2.2 Inspections for 1/2, 5, and 10 Hours

1. Recheck the engine and reduction case fluid levels. Refill, as required.

2. Recheck the tension and alignment of the conveyor tube drive belt.

3. Recheck hardware and fasteners; frame to trailer tie-downs, all fasteners, and wheel bolts. Tighten to their specified torque.

4. At 10 hours, change the engine oil with the specified oil.

6.3 DAILY PRE-OPERATION CHECKLIST

Efficient and safe operation of the Meridian Bulk Seed Tender system requires that each operator reads and follows the operating procedures and all related safety precautions outlined in this section.

A preoperational checklist is provided for the operator. It is important for both personal safety and maintaining the efficient operation of the delivery system that this checklist be followed.

Before operating the delivery system and each time thereafter, the following areas should be checked:

1. Lubricate the machine, as outlined and shown in the lubrication photos in the Maintenance section of this manual. Follow the prescribed schedule.

2. Check the engine fluid levels, fuel, and reduction case oil level. Add, as required.
IMPORTANT
The engine warranty is void if the engine is run without oil.

3. Check the oil level in the engine’s centrifugal clutch reduction case.

4. Check hardware and fasteners; seed tender frame to trailer tie-downs, hitch bolts, trailer hitch to trailer bolts, and all other fasteners. Tighten to their specified torque.

5. Make sure the wheel bolt lug nuts are tight.

6. Check the tires and ensure that they are inflated to their specified pressure.

7. Remove all entangled material.

8. Visually inspect the conveyor, conveyor tube, and delivery spout for damage.

9. Test the break-away brake unit and the trailer brakes.
   a. Make sure the trailer brakes are operating properly.
   b. Make sure the trip wire to the break-away switch is connected to the tow vehicle.
   c. Make sure the pin is correctly installed in the break-away switch.
   d. Press the Test button. The indicator should illuminate green. If the red light illuminates, the battery charge is low. Refer to the Break-Away System in the Maintenance section for instructions on charging the battery.

10. Check the tension of the conveyor drive belt. Follow the instructions in the manual to correct the tension and/or alignment.
1. Complete the Pre-operation Checklist.

**WARNING**

**CRUSH HAZARD**
Ensure that all bystanders, especially small children, are clear of the working area. Ensure there is enough room and clearance to safely back up to the machine.

1. Use the trailer jack to lift the hitch above the height of the receiver on the tow vehicle (standard hitch assembly shown).

2. Remove the retainer pin. Release or open the receiver by pulling the locking cover back, as shown.

**WARNING**

**UPENDING HAZARD**
To prevent serious injury or death from upending hazard, do not stand over hitch when unhooking the trailer from the tow vehicle. Load seed box 1 (closest to the hitch) first to keep weight on the hitch. Unload seed box 2 first to keep weight on the hitch.
4. Slowly back the tow vehicle until the hitch and ball are aligned.

5. Lower the hitch onto the ball.

6. Raise the jack and place it in its stowed position.

7. Close the receiver by pulling the spring loaded locking collar back to release the hitch mechanism. Install the retainer clip to prevent unwanted opening of the receiver.

8. Attach the safety chain securely to the tow vehicle to prevent unexpected separation. Cross the chains when attaching.

9. Connect the wiring harness for the lights and brakes.

10. Connect the break-away system cable to the tow vehicle. Make sure the key on the end of the cable is properly plugged into the receiving unit.

11. Route all the cables in a manner that will prevent snagging. Be sure to provide slack for turning.
8. OPERATION

8.1 OPERATING SAFETY

1. Make sure that anyone who will be operating the Bulk Seed Tender system or working on or around the unit reads and understands all the operating, maintenance, and safety information in the operator’s manual.

2. Keep all bystanders, especially children, away from the machine when loading or unloading, or when authorized personnel are carrying out maintenance work.

3. Establish a lock-out or tag-out policy for the worksite. Be sure all personnel are trained in and follow all procedures. Lock-out or tag-out all power sources before servicing the unit or working around loading/unloading equipment.

4. Stop engine, remove ignition key, and wait for all moving parts to stop before servicing, repairing, adjusting, loading, filling, or unplugging.

5. Keep working area clean and free of debris to prevent slipping or tripping.

6. Do not allow riders on the trailer or frame when transporting.

7. Keep hands, feet, hair, and clothing away from rotating parts.

8. Do not place hands, fingers, or arms between moving parts.

9. Stay away from overhead power lines. Electrocution can occur without direct contact.

10. Install and secure all guards before starting.

11. Use care when climbing on frame or ladder to prevent slipping or falling.

12. Fasten frame securely to trailer before transporting.

13. Always empty seed box 2 first to prevent an unbalanced load. An unbalanced load can cause the tender to upend.

14. Review safety related items annually with all personnel who will be operating, using, or maintaining the seed delivery system.

8.2 LOADING AND UNLOADING SEED BOXES

The photos in this section represent the correct method for loading and unloading seed boxes from the unit. These photos may not represent the exact seed tender in this manual.

**WARNING**

UPENDING HAZARD

Always load the front seed box first to maintain a positive tongue weight. Negative tongue weight can cause the hitch to rapidly swing upward if not securely fastened to the tow vehicle, which can result in personal injury.

**WARNING**

CRUSH HAZARD

Use caution when lifting seed boxes. A typical seed box can weigh 330 lbs. (150 kg.) when empty. Most seed boxes have the capacity of holding up to 2500 lbs. (1135 kg.) of seed. Keep bystanders away from the loading area and at least 15 ft. (4.5 m) from the seed box. Use a lifting device with a rated lift capacity capable of safely moving the seed boxes.

1. Open the two latch pins.
2. Open both seed box lock-down arms.

3. Remove the two hairpin retainer clips and remove the protective cover. Place the clips back into the retainer studs. Store the cover in a location that prevents it from being damaged.

4. Make sure there are no foreign objects or impacted seed blocking the chute leading to the conveyor.

5. Make sure frame is clear of debris and stand clear when placing the seed box onto the seed tender.

6. Using a suitable lifting device, carefully place the seed box onto the unit.
7. Make sure the seed box is loaded properly onto the unit.

8. Make sure the rubber boot contacts the bottom of the seed box.

9. Close both seed box lock-down arms.

10. Lock both latch pins.

**WARNING**

CRUSH HAZARD

Make sure the latch pins are securely locked to keep the seed box attached to the unit.
11. Open the seed box gate valve.

8.3 TRANSFERRING SEED TO PLANTER

This Operation section provides a step-by-step procedure for first loading seed into the seed tender at the farm and then unloading it in the field.

1. Position the seed tender near the planter.

2. Before unloading, shut off the engine of the tow vehicle, set the parking brake, and remove the ignition key, and wait for all moving parts to stop before leaving the cab.

3. Check the surrounding area for overhead power lines that would contact the conveyor in its raised position. Contact with electricity can result in serious personal injury or death.

4. Remove the hairpin clip, raise the handle lock plate, and lift the lock plate handle. Raise the conveyor lock plate and secure it in place with the hairpin clip.

**WARNING ELECTROCUTION HAZARD**

Avoid contact with overhead power lines or electrically powered objects.

1. Be aware of your surroundings when raising or lowering any part of the equipment.

2. Maintain at least 20 feet between the equipment and any electrical hazard.

3. Contact with electricity can result in serious personal injury or death.
5. To reposition the conveyor, raise the handle to release the lock mechanism. Rotate the conveyor to the desired position and lock it in place.

6. Press and hold the remote throttle switch to the right to move the throttle lever 1/3 the distance of the full open position. An electronic actuator is connected to the throttle lever to increase and decrease the speed of the engine.

7. Start the gas engine.
   a. Move fuel valve lever (3) to the ON position.
   b. To start a cold engine, move choke lever (4) to the CLOSED position.
   c. Turn the key switch to the START position.

Note: The lock handle on the conveyor locks into the notches in the base of the unit. Make sure the lock handle is securely locked in place before unloading the seed boxes.
8. If necessary, decrease the engine speed below 1400 RPM using the remote throttle control switch. A centrifugal clutch on the engine will engage and rotate the conveyor when the engine speed exceeds 1400 RPM. Increasing the engine speed will increase the unloading rate.

Note: In the first photo the lock plate is in the closed position which will not allow the slide gates to open. The second photo shows the lock plate in the open position.

9. Open lock plate (1) to release the slide gate handles. Open the slide gate by pushing the handle inward. Close the slide gate by pulling the handle outward.

10. Fill the planting equipment.

   a. Move the delivery spout to the seed box or bin and increase engine RPM to rotate the conveyor.

   b. When the seed box or bin is full, reduce the engine RPM to low idle to stop the conveyor.

   c. Move the delivery spout to the next box or bin and increase engine RPM to fill the next one. Repeat this procedure until the remaining boxes or bins are filled.

   WARNING

   UPENDING HAZARD

   Always unload seed box 2 first to maintain a positive tongue weight. Negative tongue weight can cause the hitch to rapidly swing upward if not securely fastened to the tow vehicle, which can result in personal injury.

   WARNING

   UPENDING HAZARD

   Tongue can violently swing upward if not properly attached to tow vehicle, causing serious injury or death:

   • Do not stand over tongue when unhooking from tow vehicle.
   • Fill front compartment or empty rear compartment first to maintain downward pressure on hitch.
11. When the planter is filled, close the slide gate and then stop the conveyor.

12. When the transfer of seed is complete, press the conveyor speed control switch to reduce the engine RPM and stop the conveyor.

13. Close the slide gate by pulling the handle outward. Close the lock plate.

**IMPORTANT**

If the unit will not be used again for an extended period of time, the conveyor should be cleared of all seed. This will help prevent the seed from being clogged inside the tube.

14. Turn the gas engine off.

15. Place the engine’s fuel lever in the OFF position before towing the seed tender on the open road.
16. Before towing the unit on the road, return the conveyor to its transport position. Latch the lock plate.

### 8.4 UNPLUGGING CONVEYOR

#### WARNING

**ENTANGLEMENT HAZARD**

Avoid serious injury or death:
- Do not operate with access door open.
- Do not place hands or fingers near rotating or moving parts.
- Do not operate without guard.
- Stop engine, remove ignition key, and wait for moving parts to stop before performing any work on unit.

If the conveyor plugs, follow this procedure.

1. Stop the engine and remove the ignition key.
2. Open the access door at the bottom of the unloading conveyor.
3. Remove the obstruction.
4. Close and secure the access door.
8.5 OPTIONAL WEIGHING SYSTEM

8.5.1 Scale Unit

The scale unit is simple to operate. Described below are the basic functions of the scale; however, for complete instructions, see the OEM operator manual that was shipped with the seed tender. The manual can also be obtained by contacting the manufacturer.

This unit has an Automatic Shut-Down feature which can be turned off or programmed for up to 60 minutes. The default setting is ON (no shut down).

The unit is also equipped with a low battery warning. The Low Battery indicator will appear on the display when the Voltage reaches 10.5 Volts. An automatic shut-down will occur when the battery drops below 10.1 Volts.

**ZERO (2)**
This button forces the scale to display a zero weight if the weight shown is within 4% of the capacity and Tare is not selected.

To zero the scale, in case the zero is out of the 4% range, press and hold the “0” button for 2 seconds. This button is used any time the scale shows a non-zero value when there is no weight on the seed tender.

Using the zero feature allows the weight of any added items, such as seed boxes, to be disregarded. When the seed box is removed, a negative weight will appear until the system is zeroed again.

**TARE (3)**
This button changes the current reading to zero when there is a seed box with seed on the tender. This button operates within the full capacity range of the scale and waits for a balance, showing dashes on the display. Unloads of up to 9900 lbs. are shown with a negative sign (-); beyond this point the indicator shows positive values.

**ACCUM (4)**
Pressing this button will display the current weight in both “TOTAL” and “GRAND TOTAL” modes. The display will briefly show the “TOTAL” weight before returning to the current weight.

If the weight is not stable, the display will show “-----” as the scale waits for the load to stabilize. If the load does not stabilize in 10 seconds, the accumulation is cancelled and the message “Err E” is shown.

**VIEW TOTAL (5)**
Pressing this button will display a partial total weight. Pressing it again returns the display to the normal mode.

To delete this total, press and hold this button for two seconds. The display will show the “tot=0” message. Deleting “TOTAL” does not affect the “GRAND TOTAL”.

**GRAND TOTAL (6)**
Pressing this button will display the “GRAND TOTAL” weight. Pressing it again returns the display to the normal mode.

To delete the “GRAND TOTAL”, press and hold the button for two seconds. The display will show the “tot=0” message. Deleting “GRAND TOTAL” will also delete the “TOTAL” at the same time.
### 8.5.2 Specifications

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auto off</td>
<td>Turns the system OFF when a low battery situation is detected or after set time without use or motion.</td>
</tr>
<tr>
<td>Accuracy</td>
<td>±0.5% of applied load or ± display graduation, whichever is greater.</td>
</tr>
<tr>
<td>Auto Zero</td>
<td>Programmable, selectable from 0.7 up to 5 graduations.</td>
</tr>
<tr>
<td>Graduations</td>
<td>Selectable between 1, 2, 5, 10, 20, and 50 lbs.</td>
</tr>
<tr>
<td>Operating</td>
<td>Temperature -10°C to +40°C. (+14°F to +104°F)</td>
</tr>
<tr>
<td>Humidity</td>
<td>Up to 95%</td>
</tr>
<tr>
<td>Fuse</td>
<td>5 mm x 20 mm, 1A, 250V, fast acting</td>
</tr>
<tr>
<td>Electronic</td>
<td>Ports Two electronic ports are located on the bottom of the unit. One connector is used for communication and the other one is used to calibrate the scale. Contact the OEM for additional information.</td>
</tr>
</tbody>
</table>

### 8.5.3 Load Cells

Four load cells are used when the seed tender is equipped with a weighing system. There is no maintenance required for these load cells. If the seed tender does not seem to be functioning correctly, refer to the Troubleshooting section, call an authorized dealer, or call the factory.

### 8.5.4 Wiring Connections to Scale Box

All four load cells are connected to the scale box. If the system is not working correctly, make sure the wiring connections are securely attached to the bottom of the scale box. If the problem continues, contact Meridian.

### 8.5.5 Intercomp Scale

For any questions concerning the Intercomp scale, refer to the OEM manual that was provided with the seed tender.

Additional information can be obtained from:

Intercomp Co.
3839 County Road 116
Medina, MN 55340

Phone: 763-476-2531
Toll-Free: 1-800-328-3336
Fax: 763-476-2613
Web: www.intercompcompany.com
8.5.6 Error Message Outputs

The following are messages that may appear on the display and their meaning.

<table>
<thead>
<tr>
<th>Message</th>
<th>Message Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Err 0</td>
<td>Initial zero is out of range. The load cells are damaged.</td>
</tr>
<tr>
<td>Err1</td>
<td>Error in the ROM memory. The microprocessor has a failure.</td>
</tr>
<tr>
<td>Err 2</td>
<td>Error in the RAM memory. The microprocessor has a failure.</td>
</tr>
<tr>
<td>Err 4</td>
<td>Error in the check-sum of the calibration. Unit needs to be re-calibrated.</td>
</tr>
<tr>
<td>Err 5</td>
<td>Capacity out of range during calibration. The maximum capacity is out of range of the A/D converter.</td>
</tr>
<tr>
<td>Err 6</td>
<td>Signal is lower than 0.7μv per division. The readings may become unstable.</td>
</tr>
<tr>
<td>Err A</td>
<td>Weight accumulation is not available. Net weight is less than 5 graduations, or the scale did not pass through 0.</td>
</tr>
<tr>
<td>Err C</td>
<td>Calibration password is not valid.</td>
</tr>
<tr>
<td>Err E</td>
<td>Ten second waiting time for load stability has been exceeded.</td>
</tr>
<tr>
<td>Err F</td>
<td>Accumulated weight has been lost.</td>
</tr>
</tbody>
</table>
8.5.7 Calibration

This calibration procedure should be performed annually when used under normal operating conditions. If the load cells or scale display have been damaged or serviced, the system should be calibrated before placing the seed tender back into operation.

1. Press the ON button; the unit will perform a lamp test and a self-diagnostic test. Once the self testing is completed, the weighing system proceeds to the weight mode.

2. Allow the electronics to operate for three minutes after first turning on the power. This warm-up period allows the electronics to stabilize and, therefore, provides maximum accuracy when checking the calibration.

3. Make sure the display weight is “0” (zero). If not, press the “→0←” button.

4. Add known weights into the seed tender box throughout its weight range, and verify the displayed weight is within 1 percent of the actual weight being measured.

5. If possible apply a weight of 105% of capacity, and verify the scale shows “－－－－” on the display.

6. Remove the weight and verify the display returns to zero. If the display does not return to zero, follow Step 7.

7. If there is a slight difference between the known weight and the displayed weight, correct this difference using the following steps.
   a. Remove any weight previously used for testing.
   b. If needed, press the ON switch. Once the unit is ON, press and hold the “ON/OFF” button for approximately two seconds.
   c. The display screen should show five zeros (0).
   d. Enter the password code of “00007”. This is the default password which can be changed in the main calibration parameters menu (refer to the OEM manual).
   e. Input the value (difference) between the known weight and the displayed weight from Step 6.
   f. Press the Enter button.
   g. The display should show “00000”.
   h. Press the Enter button when you are done editing this value.
   i. The display weight and the known weight should now be the same.
   j. If the weights are different, repeat this process.

8. If there is a failure to meet any of the conditions above, please refer to the Calibration Procedure in the OEM manual or contact the manufacturer.

9. When all the conditions above are correct, the scale is operational.

8.5.8 Contacting Intercomp Service

Please have the following information available when contacting us for service.

1. Model: AT150XL
2. Purchase date?
3. Serial number?
4. Whom did you purchase the scale through?

For Intercomp Service call or fax:

FAX: (763)-476-2613
Phone: (763)-476-2531
Toll-Free: 1-800-328-3336
or fill out Service Support Form:

www.intercompcompany.com
9. STORAGE

9.1 STORAGE SAFETY
1. Store the unit in an area away from human activity.
2. Do not permit children to play on or around the stored machine.
3. Store the unit in a dry, level area. Support the frame with planks, if required.

9.2 GENERAL INFORMATION
After planting or when the machine will not be used for a period of time, completely inspect all major systems of the seed tender. Replace or repair any worn or damaged components to prevent unnecessary downtime at the beginning of the next season.

IMPORTANT
To prevent component damage, store the seed tender in a dry, level area. If the seed tender is not attached to a trailer, support the frame with planks to raise the unit off the ground.

9.3 PLACING IN STORAGE

CAUTION
PERSONAL INJURY HAZARD
Store the unit in an area away from human activity. To prevent the possibility of serious injury, do not permit children to play on or around the stored machine.

1. Remove all seed from the seed tender.
2. Place the gasoline engine fuel valve in the OFF position.
3. Thoroughly wash the machine with a pressure washer or water hose to remove all dirt, mud, or debris.
4. Inspect rotating parts for entangled material. Remove all entangled materials.
5. Check the condition of the conveyor and delivery spout. Replace or adjust, as required.
6. Check the condition of the centrifugal clutch reduction case, pulleys, idlers, and drive belt. Replace or adjust, as required.
7. Touch up paint nicks and scratches to prevent rusting.
8. Remove the ignition key and store in a secure place.
9. Remove the battery and store it in a cool, dry area on wooden blocks or a wooden pallet. Charge it monthly to maintain an adequate charge.
10. It is best to store the machine inside and if that is not possible, cover with a waterproof tarp and tie down securely.
11. Cover the unit with a tarp, if desired.

9.4 REMOVING FROM STORAGE
When removing the machine from storage, follow this procedure:

1. Remove the tarp, if covered.
2. Install and connect the battery.
3. Review and follow the Pre-Operation Checklist.
4. Review and follow the Service Checks in the Maintenance section.

IMPORTANT
If the machine has been stored for more than twelve months, warm the engine by running it for two to three minutes and then drain the oil. Change the oil while the oil is warm to remove any condensation. Refer to the Change Engine and Reduction Case Oil section in the Maintenance section.
10. MAINTENANCE

10.1 SAFETY

10.1.1 General Safety

1. Good maintenance is your responsibility. Poor maintenance is an invitation for trouble.

2. Follow good shop practices. Keep service area clean and dry. Be sure electrical outlets and tools are properly grounded. Use adequate light.

3. Ensure proper ventilation. Never operate the engine in a closed building. The exhaust fumes may cause asphyxiation.

4. Before working on this machine, shut off the engine and remove the ignition keys.

5. Never work under equipment unless it is securely blocked.

6. Always use personal protection devices, such as eye, hand, and hearing protectors, when performing any service or maintenance.

7. Where replacement parts are necessary for periodic maintenance and servicing, genuine factory replacement parts must be used to restore your equipment to the original specifications. The manufacturer will not be responsible for injuries or damages caused by use of unapproved parts and/or accessories.

8. A fire extinguisher and first aid kit should be readily accessible while performing maintenance on this equipment.

9. Periodically tighten all bolts, nuts, and screws and ensure all cotter pins are properly installed to ensure the unit is in safe condition.

10. When completing a maintenance or service function, make sure all safety shields and devices are installed before placing the unit in service.

11. Turn OFF all electrical power and tag-out or lock-out the power source before performing any electrical test or before connecting or disconnecting valve coils or other electrical loads.

12. Never operate or test any function of the equipment when people are in an area of a potential crush hazard.

13. Disconnect all electronic device cables from the seed tender before performing any arc welding repair. Damage from high currents may cause internal electronic device damage.

10.1.2 Lock-Out or Tag-Out Safety

1. Establish a formal Lock-Out or Tag-Out program for your operation.

2. Train all operators and service personnel before allowing them to work around the seed delivery system.

3. Provide tags on the machine and a sign-up sheet to record tag-out details.
10.2 LUBRICATION

Use the Service Record Chart (10.13) in the Maintenance section to keep a record of all scheduled maintenance.

1. Use an SAE multi-purpose high temperature grease or a multi-purpose lithium base grease.

2. Use only a handheld grease gun for all greasing.

3. Wipe grease fitting with a clean cloth before greasing to avoid injecting dirt and grit.

4. Replace and repair broken zerks immediately.

5. If zerks will not take grease, remove and clean the passageway. Replace fitting, if necessary.

10.2.1 Wheel Bearings

Each axle is equipped with a grease zerk under the center dust cap of the wheel. Add grease sparingly to the wheel bearings, using only wheel bearing grease. The wheel bearings should be repacked annually. Check for excessive end play and tighten, if necessary.

**IMPORTANT**

Over greasing wheel bearings can cause them to overheat, resulting in damage and/or failure.

10.3 BATTERY

Inspect the battery at least once every six months and before using the seed tender at the beginning of the season. Always follow the safety instructions when servicing a battery.

10.3.1 Battery Safety

1. Keep all sparks and flames away from batteries, as gas given off by electrolyte is explosive.

2. Avoid contact with battery electrolyte: wash off any spilled electrolyte immediately because battery acid can cause severe chemical burns.

3. Wear safety glasses when working near batteries.

4. Do not tip batteries more than 45 degrees to avoid electrolyte loss.

10.3.2 Battery Replacement and Maintenance Tips

- Check the batteries at least every six months for low Voltage, leakage, etc.

- Always use the correct size and type of battery. Replace old batteries with a new SP-30 Lawn and Garden battery with 230 CCA and 290 CA ratings.

- Do not install the battery cable to the wrong terminal. Make sure the RED cable is connected to the + (plus) terminal and the BLACK cable is connected to the – (minus) terminal.

- Remove the batteries from the seed tender if not expected to be in use for several months.

- Use recommended practices when recharging a dead battery.

- Remove any corrosion from the battery post using a wire brush terminal cleaner. Corrosion can also be removed using a baking soda paste and water to neutralize and remove the acid from the battery terminals.

- Dispose of old batteries properly.
10.3.3 Battery Maintenance

1. Make sure the tie-down strap is connected to the frame of the battery box and in good condition (not cracked, cut, or damaged).

2. The battery is not charged when the engine is operating. If the battery is not charging using an external charger, check the fuse. Replace the fuse if necessary.

10.4 CONVEYOR ROLLERS

Check conveyor rollers for damage and replace as necessary.

10.5 ENGINE

For any questions concerning the Honda® engine not provided in this manual, refer to the OEM manual that was provided with the seed tender.

To contact Honda®, refer to the OEM Literature section in this manual.

10.5.1 Refuelling Safety

1. Handle fuel with care. It is highly flammable.

2. Allow engine to cool for five minutes before refuelling. Clean up spilled fuel before restarting engine.

3. Do not refuel the machine while smoking or when near open flame or sparks.

4. Fill fuel tank outdoors.

5. Prevent fires by keeping machine clean of accumulated trash, straw, grease, and debris.

10.5.2 Approved Fuel

Use unleaded automotive gasoline for all operating conditions. The fuel tank capacity is 3.6 liters (0.95 gals).

10.5.3 Engine Oil

Use a typical SAE 10W-30 or 10W-40 multi-viscosity motor oil for normal operating conditions. Consult your engine manual for the recommended oil in cold temperatures. The crankcase capacity is 0.60 liters (.63 US qts.).

10.5.4 Change Engine and Reduction Case Oil

1. Review the Operator’s Manual for the engine.

2. Allow the engine to cool before changing the oil. Draining works best when the oil is warm.

3. Be sure the engine key switch is in the OFF position and the fuel valve is turned OFF.
4. Place a pan under drain plug (1) or (2). Remove the drain plug and allow the oil to drain for ten minutes.

5. Reinstall the drain plug and tighten.

6. Dispose of the oil in an approved container. Follow industrial disposal regulations.

7. Fill the engine or reduction case with SAE 10W-30 oil for general usage. If the engine is operated in more extreme conditions, refer to the OEM manual for oil recommendations.

8. Run the engine for one minute and recheck the oil level. Add oil, as needed.

10.5.6 Engine Circuit Protection

The circuit protector protects the battery charging circuit. A short circuit, or a battery connected with reverse polarity, will trip the circuit breaker.

The green indicator inside the circuit protector will pop out to show that the circuit protector has switched off. If this occurs, determine the cause of the problem, and correct it before resetting the circuit protector.

Push the circuit protector button to reset.

10.5.5 Clean Air Cleaner

Check and remove any debris from the foam cover of the air cleaner daily before each use. Thoroughly clean or replace the foam cover every three months or 50 hours of operation (clean it more frequently when used in dusty conditions).
10.6 ENGINE ACTUATOR REPLACEMENT

10.6.1 Actuator Removal

**WARNING**

CRUSHING HAZARD
Ensure the seed tender is blocked to prevent movement.

Ensure the engine is not running and remove the key during the following procedures. Serious injury or death can result from being caught in moving parts.

1. Remove bolt (1) that secures cover (2) to actuator mounting bracket (3). Remove the cover.

2. Disconnect the actuator cable from the engine harness at connector (4).

3. Remove four bolts (5), washers (6), lock nuts (7), and spacers (8).

4. Remove washer nut (9) and then disconnect spring (10) from actuator arm (11).

10.6.2 Actuator Installation

1. Connect the cable of the new actuator to engine harness connector (4).

2. Position actuator arm (11) so it is pointing away from the end where the cable is attached to the unit, as shown. Use actuator switch (12) on the delivery tube to position the arm.

**Note:** Do not move the arm manually or the unit will be damaged.
3. Place spring (10) onto the pin of actuator arm (11) and install washer nut (9) so the spring is free to rotate on the pin of actuator arm (11).

4. Position the actuator onto the mounting bracket so that the four mounting holes are aligned to bracket (3).
   a. Place spacers (8) between the actuator and the bracket. Note that actuator arm (11) is on the same level as the bracket.
   b. If actuator arm (11) is below the bracket (as shown), the arm will continue to rotate and not function properly. The bracket serves as a stop for the arm.
   c. Install four bolts (5), washers (6), and lock nuts (7), as shown. Note that the bolt nearest the engine is reversed for clearance with the lock nut on top.

   **Note:** The four spacers are all positioned under the mounting plate no matter which direction the bolt is installed.

5. Reinstall the cover.

6. Ensure all personnel are clear of unit. Start the engine and test the actuator by pressing actuator switch (12) to ensure the engine speed increases and decreases as designed.
10.6.3 Unplugging

**IMPORTANT**
Do not operate the conveyor when it is plugged with excess seed or is hindered from moving by a foreign object. Continued operation can cause damage to the conveyor or result in a broken conveyor belt.

**WARNING**
ENTANGLEMENT HAZARD

Avoid serious injury or death:
- **Do not operate with access door open.**
- **Do not place hands or fingers near rotating or moving parts.**
- **Do not operate without guard.**
- **Stop engine, remove ignition key, and wait for moving parts to stop before performing any work on unit.**

If the conveyor becomes plugged, follow this procedure:

1. Position the conveyor with easy access to both ends.

2. Stop the engine and remove the ignition key. Place a lock-out tag on the control box to prevent accidental starting of the conveyor.

3. Open the lower access door at the bottom of the conveyor and remove any excess seed or obstruction.

4. Close and secure the lower access door.

5. Also check the delivery hood for blockage and remove any obstructions.

6. In some extreme case it may be necessary to remove the galvanized belt guards and/or the belt itself.

10.7 BELT DELIVERY TUBE

10.7.1 Belt Tension Adjustment

1. Loosen the locknut on each side of the belt tension mechanism.

2. Tighten the two adjusting bolts equally to 23 ft-lbs. While holding the adjusting bolt in place, retighten both locking nuts.

3. Start the conveyor and make sure the belt is tracking in the center of the drive drum. If the belt is not tracking properly, use the Belt Tracking Adjustment procedure to correct the problem.

**IMPORTANT**
The drive drum at the bottom of the conveyor must be square (drive shaft must be equal distance from end of unit) for the belt to track properly.
10.7.2 Belt Tracking Adjustment

1. Loosen the locking nuts on the two adjusting bolts.

2. Tighten or loosen the bolts on either side of the discharge hood to correct the tracking problem.

3. Using a wrench, hold the adjusting bolt in place while tightening the locking nut against the housing. Repeat this procedure for the other adjusting bolt.

4. Start the conveyor and make sure the belt is tracking in the center of the drive drum. Readjust, if needed.

10.7.3 Belt Replacement

If the belt is unbroken, it may be possible to use the old belt to thread the new belt into the delivery tube.

1. Position the conveyor with easy access to both ends.

2. Open the clean out door.

3. Position the lower drive drum adjusting bolts to their loosest position.

4. If the old belt can be used to install the new belt, continue with this step; if not, continue to Step 5.
   a. Disconnect the two ends of the conveyor belt. Attach the replacement belt to the end of the old conveyor belt.
   b. Slowly pull the old belt out of the delivery tube and thread the new one into position.
   c. Disconnect the old belt and connect the ends of the new belt together.

5. If the old belt cannot be used:
   a. Remove the discharge hood and lower the galvanized belt guards.
b. Install the new belt and connect the two ends together.

6. Tighten the two drive drum adjusting bolts equally to 23 ft-lbs. While holding the adjusting bolt in place, retighten both locking nuts.

7. Start the conveyor to make sure the belt is tracking properly. If the belt is not tracking properly, use the Belt Tracking Adjustment procedure to correct the problem.

8. Recheck the tension and alignment of the belt frequently during the first ten hours of operation and adjust, as needed.

Note: Then, resume regular maintenance. Typically, a belt will seat itself during the first ten hours of operation and then require less or no adjustment.

10.8 CONVEYOR DRIVE BELT

The conveyor is driven by a belt from the motor. The belt is tightened by moving the engine base with the adjusting bolt.

10.8.1 Drive Belt Tension

Release the base when replacing the belt. Always install and secure the guard before resuming work.

1. Loosen the four engine mounting bolts (1).

2. Loosen the engine base stabilizing bolt.

3. Loosen the jam nut on engine base adjusting bolt (2), and move the engine base to set the desired belt tension.

4. Tighten the jam nut.

5. Tighten the four engine mounting bolts.

6. Tighten the engine base stabilizing bolt.

10.8.2 Drive Belt Installation

Use the following photo for the correct routing of the drive belt. Always check the alignment of the pulleys when replacing the belt.
10.9 ENGINE SPEED SETTING

**WARNING**

ROTATING PART HAZARD

The engine speed must be adjusted with the engine running. Use extreme caution when working near rotating parts.

To prevent serious injury from rotating parts, do not operate with rotating parts exposed. Make sure the belt guard is installed before adjusting the engine speed.

Every engine is set with a high idle of 3000 RPM. Before using the seed tender, check the RPM of the conveyor drive pulley.

1. Start the engine. Use the throttle switch on the delivery tube to set the engine to high idle (full throttle).

2. Use a tachometer to check the large drive pulley speed. The pulley should turn 200 RPM at high engine speed.

3. Use a screwdriver to reset the high idle stop screw, if required, to obtain the desired speed.

10.10 TRAILER BREAK-AWAY SYSTEM

10.10.1 Testing the Battery

1. Disconnect the trailer plug from the tow vehicle; otherwise, you are testing the tow vehicle’s battery.

2. Press the green TEST button on the control box located inside the frame of the trailer. The green indicator light should illuminate if the battery is fully charged. If the yellow or red indicator lights illuminate, the unit’s battery should be charged before towing the trailer.

**IMPORTANT**

If the battery is weak or dead (red indicator, even after charging), as indicated by the indicator light, the battery must be replaced.
3. Plug the trailer into the tow vehicle. The yellow “Charging” light should be ON.

4. Test the system by pulling the pin out of the break-away switch. The battery will activate the brakes. (Note: Do not use this kit as a parking brake). The battery should be charged and tested prior to each trailer outing.

10.10.2 Changing Battery

The battery in the break-away system is rechargeable. If the battery will not hold a charge, replace the battery.

10.10.3 Replacing Battery

The battery in the break-away system is replaceable. If the battery will not hold a charge, replace the battery. Contact the OEM supplier for a replacement battery.

10.11 WHEEL BOLT TORQUE REQUIREMENTS

1. Initially check the wheel bolt torque at 10, 25, and 50 miles and after each wheel removal. Refer to the Wheel Bolt Torque Requirements section in this manual for tightening instructions.

   Note: Torque wrenches are the best method to ensure the proper amount of torque is being applied to a wheel nut.

   **CAUTION**

   **EXPLOSIVE FORCE HAZARD**

   To prevent injury due to possible dangerous separation of wheels from the axle, the wheel nuts must be maintained at the proper torque levels. Properly tightened wheel nuts prevent loose wheels and broken studs.

2. Tighten the wheel nuts in three stages.
   — First stage: 20 to 25 foot pounds.
   — Second stage: 50 to 60 foot pounds.
   — Third stage: 90 to 120 foot pounds.

3. Tighten the wheel nuts in a clockwise, cross-axle alternating pattern.
10.12 AXLE BOLTS AND FRAME HOLD-DOWN BOLTS
Check the torque on the axle/frame bolts at least once per year.

10.12.1 Standard Seed Tender
Check the torque on the frame hold-down bolts at least once per year. Tighten the bolts to 40 ft-lbs.

10.12.1 Seed Tender with Optional Scale Unit
## 10.13 SERVICE RECORD CHART

The chart on the following page should be copied and filled out as maintenance is performed on the machine. Refer to the Lubrication, Maintenance, and Service sections for additional instructions.

<table>
<thead>
<tr>
<th>Date</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Serviced by</td>
<td></td>
</tr>
</tbody>
</table>

### 8 hours or Daily
- Check Engine Fluid Levels
- Check Reduction Case Oil Level
- Test Break-Away Brake System
- Inspect Tires
- Check Drive Belt Tension and Alignment

### 50 Hours or Weekly
- Clean Engine Air Intake Filter
- Check Tire Pressure
- Check Drive Belt Tension and Alignment

### 200 Hours or Semi/Annual
- Adjust Brakes
- Inspect Brake Magnets
- Battery - Make sure strap is securely holding battery onto frame, check electrolyte levels in the cells, and clean terminals to remove any dirt or corrosion.

### 400 hours or annually
- Change Engine Oil
- Change Reduction Case Oil
- Check Wheel Bolt Torque
- Check Frame Hold-Down Bolts
- Inspect Brake Lining Wear, Brake Cylinder, and Brake Wiring
- Repack Wheel Bearings and Check Hub for Wear
- Inspect Axle Grease Seal
- Inspect all electrical wiring connections for looseness or corrosion. Tighten and/or seal, as necessary.
- Thoroughly Clean Machine
- Check the scale to make sure it is calibrated correctly.
10.14  SERVICE CHECKS

10.14.1  Daily (8 Hours)

**WARNING**

**FIRE HAZARD**
Gasoline is a highly combustible fuel. Improper use, handling, or storage of gasoline can be dangerous. Never touch or fill a hot engine. **DO NOT** fill the engine’s fuel tank near an open flame while smoking or while engine is running. **DO NOT** fill tank in an enclosed area with poor ventilation. Wipe up spills immediately.

1. Check engine oil level (1) and fill, as needed.
2. Check engine fuel level and fill, as needed.
3. Check reduction case fluid level (2) and fill, as needed.
4. Test trailer break-away system.
5. Initially check wheel bolt torque at 10, 25, and 50 miles.
6. Check drive belt for proper tension and tracking.

10.14.2  Weekly (50 Hours)

1. Clean or replace the foam filter element. Replace the paper air filter, as required.
2. Check the tension on the delivery belt. Adjust tension if needed.
3. Check the tire pressure. Inflated the tires to the recommended pressure stated on the tire.

10.14.3  Annually (400 Hours)

1. Check wheel bolt torque.
2. Repack the wheel bearings and check for excessive end play in the bearings.
3. Check frame and trailer hold-down bolts.
4. Thoroughly clean the seed tender.
5. Check the tires for wear, and replace if needed.

10.15  AXLE MAINTENANCE

10.15.1  First 200 Miles

1. Adjust brakes. Refer to OEM manual for procedure.

10.15.2  3,000 Miles or 3 Months

1. Adjust brakes. Refer to OEM manual for procedure.
2. Check torque on wheel nuts. Refer to the section in this manual.
3. Inspect tires for wear. Refer to OEM manual for procedure.
10.15.3 6,000 Miles or 6 Months
1. Inspect brake magnets for wear. Refer to OEM manual for procedure.
2. Inspect suspension parts for wear. Refer to OEM manual for procedure.

10.15.4 12,000 Miles or 12 Months
1. Inspect brake lining wear, check brake cylinder for leaks, and inspect brake wiring for damage. Refer to OEM manual for procedure.
2. Grease the wheel bearings and check the hub for wear. Refer to OEM manual for procedure.
3. Inspect grease seal for leakage. Refer to OEM manual for procedure.
4. Inspect springs for any wear or loss of arch. Refer to OEM manual for procedure.

10.16 TIRES
Check the tires for normal and/or abnormal tire wear. Replace tires that are damaged or worn beyond normal tread life. Refer to the axle OEM manual for a Tire Wear Diagnostic Chart.

Replace the tires with Meridian part number 18131 or an equivalent tire:
- 3T235/80R16
- TR643
- Load Range E
- For Trailer Service Only

10.17 WELDING REPAIRS
Repair welding must be done with care and with procedures that may be beyond the capabilities of the ordinary welder. Before performing any type of welding repair to the seed tender, contact Meridian for approval.

WARNING
PERSONAL INJURY HAZARD
Repairs or modifications to the trailer, trailer tongue, or trailer hitch can result in serious injury or death should these repairs fail.

IMPORTANT NOTICE
Anyone performing a welding repair should be certified in accordance to the American Welding Society (AWS) standards.
11. OEM LITERATURE

OEM literature can be stored on the seed tender using the document storage tube.

11.1 HONDA® ENGINE

For any questions concerning the Honda® engine, refer to the OEM manual that was provided with the seed tender.

11.2 AXLE

For any questions concerning the Axis Products axle, refer to the OEM manual that was provided with the seed tender. An Owner’s Manual and parts listing is provided with the seed tender.

Additional information can be obtained from:
Axis Products, Inc.
3403 Reedy Drive
Elkhart, IN 46514
Phone: (574) 266-8282

11.3 INTERCOMP SCALE

For any questions concerning the optional Intercomp scale, refer to the OEM manual that was provided with the seed tender.

Additional information can be obtained from:
Intercomp Co.
3839 County Road 116
Medina, MN 55340

Phone: 763-476-2531
Toll-Free: 1-800-328-3336
Fax: 763-476-2613
Web: www.intercompcompany.com
## 12. TROUBLESHOOTING

### 12.1 TROUBLESHOOTING CHART

<table>
<thead>
<tr>
<th>PROBLEM</th>
<th>CAUSE</th>
<th>SOLUTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engine will not start.</td>
<td>No fuel.</td>
<td>Fill the fuel tank.</td>
</tr>
<tr>
<td></td>
<td>Low engine oil.</td>
<td>Fill the crankcase with oil.</td>
</tr>
<tr>
<td></td>
<td>Cold engine.</td>
<td>Open choke.</td>
</tr>
<tr>
<td></td>
<td>Ignition key switch off.</td>
<td>Turn ignition key switch on.</td>
</tr>
<tr>
<td></td>
<td>Battery dead.</td>
<td>Recharge or replace battery.</td>
</tr>
<tr>
<td>Conveyor will not start.</td>
<td>Not rotating.</td>
<td>Start engine and increase speed above 1400 RPM.</td>
</tr>
<tr>
<td></td>
<td>Drive pulley connection or conveyor coupling.</td>
<td>Repair or replace.</td>
</tr>
<tr>
<td></td>
<td>Drive belt slipping.</td>
<td>Increase belt tension.</td>
</tr>
<tr>
<td></td>
<td>No hydraulic oil in reduction case.</td>
<td>Check oil level.</td>
</tr>
<tr>
<td></td>
<td>Failed centrifugal clutch.</td>
<td>Replace clutch</td>
</tr>
<tr>
<td>Electrical functions are not working properly.</td>
<td>Battery cable or battery.</td>
<td>Check battery cable and make sure battery is fully charged.</td>
</tr>
<tr>
<td></td>
<td>Improper ground.</td>
<td>Check for proper grounding electrical circuit.</td>
</tr>
<tr>
<td>Remote throttle doesn’t work.</td>
<td>No input power.</td>
<td>Check charge of battery. Recharge or replace, as required.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Check connections in the remote throttle harness. Be sure connectors are clean and terminals are firmly pushed together.</td>
</tr>
<tr>
<td>Scale display is not working when power is ON.</td>
<td>No input power.</td>
<td>Inspect the power cable for possible damage.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Check the wiring connections for corrosion, bent pins, or wire damage.</td>
</tr>
<tr>
<td></td>
<td>Incorrect Voltage.</td>
<td>The required Voltage is over 10.5 Volts with a negative ground. If the Voltage drops to 10.1 Volts, the low battery indicator will appear.</td>
</tr>
<tr>
<td></td>
<td>Dead battery.</td>
<td>Make sure the seed tenders 12 VDC battery is fully charged and the output is 12 Volts.</td>
</tr>
<tr>
<td></td>
<td>Internal fuse.</td>
<td>Replace the 5 mm x 20 mm, 1 Amp, 250 Volt fast acting fuse.</td>
</tr>
<tr>
<td></td>
<td>Check for incorrect connection to the battery.</td>
<td>Connect BLACK wire to Ground and WHITE wire to +12 VDC.</td>
</tr>
<tr>
<td>Scale display turns OFF automatic.</td>
<td>Insufficient power.</td>
<td>The indicator will automatically turn OFF if the Voltage drops below 10.1 Volts.</td>
</tr>
</tbody>
</table>
# 13. WARRANTY

## 13.1 WARRANTY STATEMENT

**Limited Materials and Workmanship Warranty**  
**For Bulk Seed Tenders**

Meridian Manufacturing Group (hereinafter referred to as the Manufacturer) hereby warrants the Bulk Seed Tender(s) sold by it to be free from any defect in material or workmanship under normal use and service for a period of one (1) year from the date of shipment. The Manufacturer’s obligation under this warranty shall be limited to the repair or replacement only, FOB the original point of shipment, of any defective parts or portions of the seed tender or accessories manufactured by Meridian. Any warranty claim must be reported to the Manufacturer within one (1) year from the date of shipment.

**THIS WARRANTY IS SUBJECT TO THE FOLLOWING LIMITATIONS, PROVISIONS AND CONDITIONS:**

1. This warranty does not apply:
   a) To any product sold by the Manufacturer where it is used in areas exposed to corrosive or aggressive conditions including salt water, acids, alkaloid, ash, cement dust, animal waste or other corrosive chemicals from either inside or outside the bin.
   b) For failures or defects arising out of damage during shipment or during storage on site.
   c) To materials replaced or repaired under this warranty except to the extent of the remainder of the applicable warranty.
   d) To damage resulting from misuse, negligence, accident or improper site preparation by others.
   e) If the product has been altered or modified by others.
   f) If in the case of coating failures the failure is the result of damage, lack of proper maintenance or failure to remove road salt or other contaminants that may have come in contact with the bin surface.
   g) To loss of time, inconvenience, loss of material, down time or any other consequential damage.
   h) For a function that is different than original designed intent.

2. The obligation of the Manufacturer under this warranty shall not arise unless the Manufacturer is notified and this warranty is presented together with a written statement specifying the claim or defect within thirty (30) days after the failure is first detected or made known to the owner and within one (1) year from the shipment date. The Manufacturer in its sole discretion shall determine if the claim is valid and whether correction of the defect or failure shall be made by repair or replacement of the materials.

3. The coating warranty is based on the manufacturer’s performance specification for Polyester Powder finishes and does not include repair of minor blemishes or rusting that is normally part of the general maintenance of the seed tender. This warranty does not cover excessive wear on interior coatings. See attachment for full Performance Specification details on Polyester Powder Finishes.

4. The obligation of the Manufacturer hereunder extends only to the original owner and to the Meridian dealer to whom the materials may have been initially sold. This warranty shall not be subject to any assignment or transfer without the written consent of the Manufacturer.

5. The customer shall acknowledge that it has made its own independent decision to approve the use of the supplied materials and also the specific fabrication and construction procedures utilized to complete the seed tender, and has satisfied itself as to the suitability of these products for this particular application.

6. The foregoing sets forth the only warranties applicable to said materials and said warranties are given expressly and in lieu of all other warranties, expressed or implied, statutory or otherwise, of merchantability or fitness for a particular purpose and all warranties which exceed or differ from said warranties herein are disclaimed by the Manufacturer.

7. The owners sole and exclusive remedy against the Manufacturer shall be limited to the applicable warranty set forth herein and the endorsements, if any, issued together with this document and no other remedy (including but not limited to the recovery of assembly or disassembly costs, shipping costs, direct, incidental, special, indirect or consequential damages for lost profits, lost sales, injury to person or property or any other loss, whether arising from breach of contract, breach of warranty, tort, including negligence, strict liability or otherwise) shall be available to the owner or Meridian Dealer or any other person or entities whether by direct action or for contribution or indemnity or otherwise.

8. The financial obligation of the Manufacturer under this warranty shall be limited to the repair or replacement of the product as originally supplied and in no event shall exceed the original cost of the product supplied.

9. The Manufacturer shall not have any obligation under any warranty herein until all accounts for materials, installation and erection of the said product thereof and for labor and other work performed by the Manufacturer or its dealers have been paid in full by the owner.

**Warranty Claim Procedure**

1. Registering product with Meridian Manufacturing.
2. Contact the dealer unit was purchased from upon discovery of any defects.
3. A completed warranty claim form submitted by dealer to Meridian warranty representative for review and course of action.
4. Warranty repair work will only be performed by Meridian, the dealer or an approved representative. No warranty work completed prior to approval. Failure to follow procedure may affect any and all reimbursement.
5. Claims will be adjudicated at the sole discretion of the manufacturer and in accordance with the terms and conditions of the applicable limited warranty.
6. A complete list of warranty procedures can be procured from the Warranty Department or found in your owner’s manual.

*Effective July 1, 2009*
14. PARTS

The following pages contain a list of serviceable parts for the 2 SE Seed Tender unit.

Parts are available from your authorized Dealer Parts Department.

14.1 2 SE SEED TENDER

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## 14.4 2 SE LOWER INTAKE SHOOT

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### 14.5 2 SE LOWER INTAKE DRIVE WHEEL

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14.6 2 SE ENGINE AND ACTUATOR

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<td>21270-01 Nut, Push, 7/32&quot;</td>
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<td>19330 Bolt, Hex, 3/8-16 x 3&quot;</td>
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<td>19626 Bolt, Hex, Flanged, 3/8-16 x 1-3/4&quot;</td>
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<td>21251 Pulley, 3&quot;</td>
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<td>21261 Key, 1/4&quot; x 2&quot;</td>
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14.7 2 SE DELIVERY SPOUT

1 8 19318 Nut, Hex, Flanged, 5/16-18
2 2 19595 Nut, Hex, Flanged, 1/2-13
3 4 19369 Nut, Hex, 1/2-13
4 8 19568 Bolt, Hex, Flanged, 5/16-18 x 3/4"
5 1 36211 Weldment, Discharge Transition
6 2 27040 Housing, Roller Bearing
7 2 21258 Bearing
8 2 21258-00C Collar, Bearing
9 4 19540 Nut, Lock, Nylon, 3/8-16
10 4 27019 Washer, Spacer, Belt Tightener
11 1 27017 Weldment, Belt Tightener Plate
12 1 36201-01 Assembly, Smooth-Take-Up Roller
13 7 27055 Mount, Wire Harness
14 1 27035 Guard, Top Belt
15 4 19315 Bolt, Carriage, 5/16-18 x 3/4"
16 4 19586 Nut, Lock, Nylon, 5/16-18
17 4 19321 Washer, Plain, 5/16"
18 1 36204 Weldment, Belt Shield
19 1 36203-03 Assembly, Conveyor Tube
20 4 19577 Bolt, Hex, Flanged 3/8-16 x 3/4"
21 4 19335 Bolt, Carriage, 3/8-16 x 1-1/2"
22 2 19573 Bolt, Hex (Full Thd), 1/2-13 x 7"
23 1 27017-01 Weldment, Belt Tightener Plate
24 1 36209 Weldment, Discharge Hood
14.8  2 SE TRAILER

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14.9 OPTIONAL SCALE PACKAGE
EXPERIENCE THE ADVANTAGES OF MERIDIAN BUILT STORAGE SOLUTIONS

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