This manual is applicable to: 2017 Production and on

Record model number and serial number of your grain cart along with date purchased:

Model Number ________________________________
Serial Number ________________________________
Date Purchased ________________________________

SERIAL NUMBER

Record your serial number and purchase date above for quick reference.

The serial number provides important information about your grain cart and is required to obtain correct replacement parts. Always provide model and serial number to your Kinze Dealer when ordering parts or anytime correspondence is made with Kinze Manufacturing, Inc.

Serial Number Plate Location

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Shur-Co®, LLC is a registered trademark of Shur-Co.

Digi-Star®, LLC is a registered trademark of Digi-Star.

Camoplast® is a registered trademark of Camoplast Solideal Inc.

All other trademarks are the property of their respective owners.
851-1051 Grain Cart

TO THE DEALER

Predelivery service includes assembly, lubrication, adjustment and test. This service ensures cart is delivered to retail customer/end user ready for field use.

PREDE DELIVERY CHECKLIST

Use this checklist to inspect cart after it is completely assembled. Check off each item as it is found satisfactory or after proper adjustment is made.

- Wheel nuts tightened to correct torque. Refer to "Mounting Bolts and Hardware" on page 3-15.
- Tires inflated to specified air pressure. Refer to "Tire Servicing" on page 3-18. (If Applicable)
- All grease fittings lubricated and gearbox oil level checked. Refer to "Grease Fittings" on page 3-3.
- All safety decals and SMV sign are correctly located and legible. Replace if damaged.
- SMV decal is in place and shipping cover removed.
- Safety/warning lights working properly.
- Test run augers. Do not operate tractor PTO above 750 PTO RPM with augers empty.
- Check driveline. See “Driveline Inspection” in Operation section.
- Check track alignment. See “Track Alignment” in Maintenance section. (If Applicable)
- Safety screens over auger are in place and properly secured.
- Auxiliary safety chains are properly installed and hardware torqued to specification.
- Paint all parts scratched in shipment.

This wagon has been thoroughly checked and to the best of my knowledge is ready for delivery to the customer.

(Signature Of Set-Up Person/Dealer Name/Date)

OWNER REGISTER

Name ____________________________________________ Delivery Date ________________________________

Street Address ________________________________ Model No. ____________________________ Serial No. ____________

City, State/Province ________________________________ Dealer Name ____________________________

ZIP/Postal Code ________________________________ Dealer No. ________________________________
DELIVERY CHECKLIST

Check off each item as it is fully explained to retail customer/end user when grain cart is delivered.

☐ Durability and longevity is dependent on regular maintenance as directed in Operator Manual.

☐ Tell retail customer/end user about all safety precautions that must be observed while using this cart.

☐ Advise retail customer/end user of specified tractor requirement for use with this cart.

☐ Along with retail customer/end user check reflective decals and SMV sign are clearly visible with cart attached to tractor. Check safety/warning lights are in working condition. Tell retail customer/end user to check and follow federal, state/provincial, and local regulations before towing on a road or highway.

☐ Along retail customer/end user check hitch height when attached to tractor is sufficient to prevent severe bends in PTO U-joint angles. Check PTO is correct length for making turns and operating on uneven terrain.

☐ Give Operator and Parts Manuals to retail customer/end user and explain all operating adjustments.

☐ Complete Warranty And Delivery Report form.

To the best of my knowledge this machine has been delivered ready for field use and customer has been fully informed as to proper care and operation.

(Signature Of Delivery Person/Dealer Name/Date)

AFTER DELIVERY CHECKLIST

Suggested items to check during first season of use:

☐ Check cart performance with retail customer/end user.

☐ Review with retail customer/end user importance of proper maintenance and adherence with all safety precautions.

☐ Check for parts that may need to be adjusted or replaced.

☐ Retighten all wheel nuts to specified torque.

☐ Safety shields and screens are in place.

☐ Safety and reflective decals, and SMV sign are correctly located and decals are legible. Replace if damaged or missing.

☐ Check safety/warning lights are properly installed and working properly.

☐ Check recommended lubrication procedures are being followed.

(Signature Of Follow-Up Person/Dealer Name/Date)

All registrations must be submitted online at “business.kinze.com” within 5 business days of delivery. Retain a copy of this form for auditing purposes.
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Rev. 3/20
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Kinze Manufacturing, Inc. thanks you for your patronage. We appreciate your confidence in Kinze farm machinery. Your Kinze grain cart has been carefully designed to provide dependable operation in return for your investment.

This manual has been prepared to aid you in the operation and maintenance of the grain cart. It should be considered a permanent part of the machine and remain with the machine when you sell it.

It is the responsibility of the user to read and understand the Operator Manual in regards to safety, operation, lubrication and maintenance before operation of this equipment. It is the user's responsibility to inspect and service the machine routinely as directed in the Operator Manual. We have attempted to cover all areas of safety, operation, lubrication and maintenance; however, there may be times when special care must be taken to fit your conditions.

Throughout this manual the symbol and the words DANGER, WARNING, and CAUTION are used to call attention to safety information that if not followed, will or could result in death or injury. NOTICE and NOTE are used to call your attention to important information. The definition of each of these terms follows:

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

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

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

**NOTICE**
Used to address safety practices not related to personal injury.

NOTE: Special point of information or machine adjustment instructions.
To the Owner

Improperly operating or working on this equipment could result in death or serious injury. Read and follow all instructions in Operator Manual before operating or working on this equipment.

WARNING

Some photos in this manual may show safety covers, shields, or lockup devices removed for visual clarity. NEVER OPERATE OR WORK ON machine without all safety covers, shields, and lockup device in place as required.

WARNING

NOTE: Photos in this manual may be of prototype machines. Production machines may vary in appearance.

NOTE: Some photos and illustrations in this manual show optional attachments installed. Contact your Kinze Dealer for purchase of optional attachments.
Warranty

The Kinze Limited Warranty for your new machine is stated on the retail purchaser's copy of the Warranty And Delivery Receipt form. Additional copies of the Limited Warranty can be obtained through your Kinze Dealer.

Warranty, within the warranty period, is provided as part of Kinze’s support program for registered Kinze products which have been operated and maintained as described in this manual. Evidence of equipment abuse or modification beyond original factory specifications will void the warranty. Normal maintenance, service and repair is not covered by Kinze warranty.

To register your Kinze product for warranty, a Warranty And Delivery Receipt form must be completed by the Kinze Dealer and signed by the retail purchaser, with copies to the Dealer, and to the retail purchaser. Registration must be completed and submitted to Kinze Manufacturing, Inc. within 5 business days of delivery of the Kinze product to the retail purchaser. Kinze Manufacturing, Inc. reserves the right to refuse warranty on serial numbered products which have not been properly registered.

If service or replacement of failed parts which are covered by the Limited Warranty are required, it is the user's responsibility to deliver the machine along with the retail purchaser's copy of the Warranty And Delivery Receipt to the Kinze Dealer for service. Kinze warranty does not include cost of travel time, mileage, hauling or labor. Any prior arrangement made between the Dealer and the retail purchaser in which the Dealer agrees to absorb all or part of this expense should be considered a courtesy to the retail purchaser.

Kinze warranty does not include cost of travel time, mileage, hauling, or labor.

General Information

Model 1051 Corner Auger Grain Cart

Information used in these instructions was current at time of printing. However, due to Kinze's ongoing product improvement, production changes may cause your machine to appear slightly different in detail. Kinze Manufacturing, Inc. reserves the right to change specifications or design without notice and without incurring obligation to install the same on machines previously manufactured.

Right hand (R.H.) and left hand (L.H.), as used throughout this manual, are determined by facing direction machine travels in use unless otherwise stated.
## Specifications

### Feature Specification

<table>
<thead>
<tr>
<th>Feature</th>
<th>851</th>
<th>1051</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Capacity</strong></td>
<td>850 Bushels (29.9 m³)</td>
<td>1050 Bushels (36.9 m³)</td>
</tr>
<tr>
<td><strong>Bushels/Minute - Average</strong></td>
<td>450 Bushels/minute</td>
<td>450 Bushels/minute</td>
</tr>
<tr>
<td><strong>Vertical Auger</strong></td>
<td>20” Dia flighting in 21” Dia.</td>
<td>20” Dia flighting in 21” Dia.</td>
</tr>
<tr>
<td><strong>Bearings - Vertical Auger</strong></td>
<td>2”</td>
<td>2”</td>
</tr>
<tr>
<td><strong>Gearbox</strong></td>
<td>Bevel and spur gear with 2:1 ratio</td>
<td>Bevel and spur gear with 2:1 ratio</td>
</tr>
<tr>
<td><strong>PTO - 1000 RPM</strong></td>
<td>PTO auger drive with overrunning and torque limiting clutch</td>
<td>PTO auger drive with overrunning and torque limiting clutch</td>
</tr>
<tr>
<td><strong>PTO Yoke</strong></td>
<td>1¾”-20 spline</td>
<td>1¾”-20 spline</td>
</tr>
<tr>
<td><strong>Spindle</strong></td>
<td>Two 4½” high alloy</td>
<td>Two 4½” high alloy</td>
</tr>
<tr>
<td><strong>Hub</strong></td>
<td>20 bolt 13.189 bolt center (2) cast ductile iron</td>
<td>20 bolt 13.189 bolt center (2) cast ductile iron</td>
</tr>
<tr>
<td><strong>Safety Chains</strong></td>
<td>Two ½” grade 70 transport chains</td>
<td>Two ½” grade 70 transport chains</td>
</tr>
<tr>
<td><strong>Adjustable Discharge Spout</strong></td>
<td>Remotely adjustable spout with in/out motion and fitted with flexible discharge nozzle</td>
<td>Remotely adjustable spout with in/out motion and fitted with flexible discharge nozzle</td>
</tr>
<tr>
<td><strong>Tire Size/Pressure</strong></td>
<td>IF900/65R 32 CFO/191 B (R3) IF900/60R 32 CFO/188B (R1)</td>
<td>IF900/65R 32 CFO/191 B (R3) IF900/60R 32 CFO/188B (R1)</td>
</tr>
<tr>
<td><strong>Hydraulic Requirements</strong></td>
<td>3 SCVs with standard 2320 psi (15996 kPa) system minimum</td>
<td>3 SCVs with standard 2320 psi (15996 kPa) system minimum</td>
</tr>
<tr>
<td><strong>Track Width</strong></td>
<td>36” (91 cm)</td>
<td>36” (91 cm)</td>
</tr>
<tr>
<td><strong>Track Length</strong></td>
<td>136” (345 cm)</td>
<td>136” (345 cm)</td>
</tr>
<tr>
<td><strong>Track Length Contract</strong></td>
<td>100” (254 cm)</td>
<td>100” (254 cm)</td>
</tr>
<tr>
<td><strong>Track End Wheels (Per Track)</strong></td>
<td>Four, 31½” (80 cm) diameter</td>
<td>Four, 31½” (80 cm) diameter</td>
</tr>
<tr>
<td><strong>Track Mid Wheels (Per Track)</strong></td>
<td>Eight, 13.77” (34.9 cm) diameter</td>
<td>Eight, 13.77” (34.9 cm) diameter</td>
</tr>
<tr>
<td><strong>Weight - Empty</strong></td>
<td>14,640 lb (6640.5 kg)</td>
<td>15,100 lb (6849.2 kg)</td>
</tr>
<tr>
<td><strong>Hitch Weight - Empty</strong></td>
<td>2500 lb (1134 kg)</td>
<td>2500 lb (1134 kg)</td>
</tr>
<tr>
<td><strong>Hitch Weight - Loaded</strong></td>
<td>5000 lb (2268 kg)</td>
<td>5000 lb (2268 kg)</td>
</tr>
<tr>
<td><strong>Transport Width</strong></td>
<td>13’-5” (4.08 M)</td>
<td>13’-5” (4.08 M)</td>
</tr>
<tr>
<td><strong>Width - Grain Tank</strong></td>
<td>---</td>
<td>12’-4” (3.75 M)</td>
</tr>
<tr>
<td><strong>Length - Grain Tank</strong></td>
<td>---</td>
<td>19’-3” (5.86 M)</td>
</tr>
<tr>
<td><strong>Height - Grain Tank</strong></td>
<td>---</td>
<td>12’-10” (3.91 M)</td>
</tr>
<tr>
<td><strong>Length - Overall</strong></td>
<td>28’-4” (8.63 M)</td>
<td>30’-4” (9.24 M)</td>
</tr>
<tr>
<td><strong>Height - Grain Discharge</strong></td>
<td>13’-4” (4.06 M)</td>
<td>13’-4” (4.06 M)</td>
</tr>
</tbody>
</table>

* Approximate with 15% moisture corn. Capacity and bushels/minute will vary with moisture content of grain and/or PTO RPM.
General Safety Rules

1. Read and understand instructions provided in this manual and warning labels. Review these instructions frequently!

2. This machine is designed and built with your safety in mind. Do not make any alterations or changes to this machine. Any alteration to design or construction may create safety hazards.

3. A large portion of farm accidents happen from fatigue or carelessness. Safe and careful operation of tractor and grain cart will help prevent accidents.

4. Never allow cart to be operated by anyone unfamiliar with operation of all functions of the unit. Operators must read and thoroughly understand all instructions given in this manual before operating or working on equipment.

5. Be aware of bystanders, particularly children! Always look around to make sure it is safe to start tow vehicle engine or move grain cart. This is particularly important with higher noise levels and quiet cabs, as you may not hear people shouting.

6. Make sure cart weight does not exceed towing capacity of tractor, or bridge and road limits. This is critical to maintain safe control and prevent death or injury, or property and equipment damage.

7. Never ride or allow others to ride on cart.

8. Store cart in an area away from human activity. DO NOT permit children to play on or around stored unit.

9. Keep hands, feet, and clothing away from moving parts. Do not wear loose-fitting clothing which may catch in moving parts.

10. Always wear protective clothing, shoes, gloves, and hearing and eye protection applicable for the situation.

11. Do not allow anyone to stand between tongue or hitch and towing vehicle when backing up to cart.

12. Prevent electrocution, other injuries, or property and equipment damage. Watch for obstructions such as wires, tree limbs, etc. when operating machine. Be aware of clearances during turns and when folding/unfolding grain chute.

13. Pick levellest possible route when transporting across fields.

14. Never operate grain cart without PTO driveline guards, tractor master shield and implement shields in place. Make certain PTO driveline guards turn freely and are properly attached.

15. Make sure parked machine is on a hard, level surface. Wheel chocks may be needed to prevent unit from rolling.

16. Follow all federal, state/provincial and local regulations when towing farm equipment on a public highway. Use safety chain (not an elastic or nylon/plastic tow strap) to retain connection between towing and towed machines in the event of primary attaching system separation.

17. Make sure all safety/warning lights, SMV sign, and reflective decals are in place and working properly before transporting machine on public roads.

18. Maintain field drive speeds that are appropriate to the load condition and field condition.

19. Reduce speed prior to turns to avoid the risk of overturning. Avoid sudden uphill turns on steep slopes. Always drive at a safe speed relative to local conditions and ensure your speed is slow enough for a safe emergency stop.

20. Always keep the tractor in gear to provide engine braking when going downhill. Do not coast.

21. Always disengage PTO, shut off tractor engine and remove the ignition key before leaving tractor seat, lubricating or working on grain cart, or when cleaning out debris.

22. Always make sure PTO connecting yokes are securely locked on tractor and implement shaft before operating cart.

23. Be especially observant of the operating area and terrain. Watch for holes, rocks or other hidden hazards. Always inspect area before operation. DO NOT operate near edge of drop-offs or banks, or on steep slopes as overturn may result. Operate up and down (not across) intermediate slopes. Avoid sudden starts and stops. Be extra careful when working on inclines.

24. Prevent shedding of waste improperly can threaten the environment. To dispose of your equipment properly contact your local environmental or recycling center. Never pour waste onto the ground, down a drain, or into any water source.

25. When disposing of any fertilizer chemicals used, contact the supplier of the chemicals.

851/1051 cart consists of 85% recyclable materials, 10% recyclable plastic and rubber, and 5% waste.
Following are some common hazard warnings associated with this equipment. Pay close attention to all safety, operating, and maintenance information in this manual and decals applied to your equipment.

**DANGER**

Contacting or coming close to power lines or other high energy sources will cause death or serious injury.

| ![Warning Icon] | Keep away from power lines or high energy sources at all times. |

**WARNING**

Loss of control can cause death or serious injury, or damage to property and equipment. Tow only with farm tractor weight rated and configured for this equipment. Use safety chains and transport as specified in the Operator and Parts Manual.

| ![Warning Icon] | Loss of control can cause death or serious injury, or damage to property and equipment. Tow only with farm tractor weight rated and configured for this equipment. Use safety chains and transport as specified in the Operator and Parts Manual. |

**WARNING**

Improperly operating or working on this equipment could result in death or serious injury. Read and follow all instructions in Operator Manual before operating or working on this equipment.

| ![Warning Icon] | Improperly operating or working on this equipment could result in death or serious injury. Read and follow all instructions in Operator Manual before operating or working on this equipment. |

**WARNING**

Contact with rotating driveline will cause death or serious injury. Keep away at all times when operating.

| ![Warning Icon] | Contact with rotating driveline will cause death or serious injury. Keep away at all times when operating. |

**WARNING**

Explosive separation of rim and tire parts can cause death or serious injury. Overinflation, rim and tire servicing, improper use of rims and tires, or worn or improperly maintained tires could result in a tire explosion.

| ![Warning Icon] | Explosive separation of rim and tire parts can cause death or serious injury. Overinflation, rim and tire servicing, improper use of rims and tires, or worn or improperly maintained tires could result in a tire explosion. |
Safety signs and decals are placed on the machine to warn of hazards and provide important operating and maintenance instructions. Information on these signs are for your personal safety and the safety of those around you. FOLLOW ALL SAFETY INSTRUCTIONS!

• Keep signs clean so they can be easily seen. Wash with soap and water or cleaning solution as required.

• Replace safety signs if damaged, painted over, or missing.

• Check reflective decals and SMV sign periodically. Replace if they show any loss of reflective properties.

• When replacing decals, clean machine surface thoroughly with soap and water or cleaning solution to remove all dirt and grease.

NOTE: Safety sign and decal locations are shown in the Parts Manual for this machine.

SHIPPING TIE DOWNS

WARNING

**SHIPPING TIE DOWN ONLY.**

Pulling from this point can cause rollover or loss of control and result in death, serious injury, and damage to property and equipment.

Tie downs are located on the frame and axle to aid in securing the grain cart to a shipping trailer.

**SHIPPING LOCATION**

This location is used to extend track width for truck transport only. **Do not** operate cart with extended track width. Temporary pin is used to hold spindle in place. Discard pin after track is placed in operation position.
MACHINE PREPARATION

Lubricate grain cart per lubrication information in this manual prior to initial operation and at prescribed intervals. Make sure all tires are properly inflated or track tension is properly adjusted before each use. Torque all wheel lug nuts to specified torque.

TRACTOR REQUIREMENTS

Consult your dealer for information on horsepower requirements and tractor compatibility. Three SCV’s are required for standard cab operation. A 12 volt DC electrical system is required on all sizes to operate safety/warning lights, work lights, optional electronic scale system, or optional electronic roll tarp.

TRACTOR PREPARATION AND HOOKUP

1. Slide tractor drawbar in as far as possible, but still allows PTO shaft to have sufficient clearance to prevent damage to driveline components when making sharp turns and operating over uneven ground.

2. Position PTO as far right of hitch as possible until parking jack is stowed.

**NOTICE**

Avoid clevis hitch interference

**NOTICE**

Clevis hitch (hammer strap style) drawbars may need to be removed to prevent damage to PTO assembly.

**NOTICE**

Adjust tractor drawbar to prevent severe bends in PTO U-joint angles and to allow sufficient clearance between tractor drawbar/hitch pin and PTO shaft.
3. Connect cart to tractor hitch. Use a high quality hitch pin of sufficient length and strength and secure pin with a locking device. Torque attaching hardware to 840 ft-lb (1138 Nm).

![Jack stowed](image1.png)  ![Jack installed](image2.png)

**WARNING**

Parking on uneven or soft surfaces could cause death, serious injury and damage to property and equipment.

Park equipment on a hard, level surface. Wheel chocks may be needed to prevent unit from rolling.

**NOTICE**

Do not unhook cart while loaded.

4. Raise jack. Move jack to storage location.

**NOTICE**

Clean and grease PTO shaft coupling each time PTO is installed. Apply coating of high-speed industrial coupling grease, such as Chevron® Coupling Grease, that meets AGMA CG-1 and CG-2 standards to extend shaft spline life.

5. Attach cart PTO connecting yoke to tractor PTO shaft. Spring loaded yoke pin must engage groove in tractor PTO shaft. Slip tube grease fitting must be visible through hole of outer tube.

![Safety chains](image3.png)
6. Transport safety chain must be used to ensure connection is retained between cart and tractor in the event of a hitch pin/drawbar failure.

**WARNING**
Pressurized hydraulic fluid can penetrate body tissue and result in death, serious infection, or other injuries. Fluid injected under skin must be IMMEDIATELY removed by a surgeon familiar with this type of injury. Make sure connections are tight and hoses and fittings are not damaged before applying system pressure. Leaks can be invisible. Keep away from suspected leaks. Relieve pressure before searching for leaks or performing any system maintenance.

**NOTICE**
Wipe hose ends to remove any dirt before connecting couplers to tractor parts or contamination may cause equipment failure.

7. Connect hydraulic hoses to tractor. Kinze grain carts require 3 SCV's for operation.

<table>
<thead>
<tr>
<th>Hydraulic Control Settings</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Control</strong></td>
</tr>
<tr>
<td>SCV1</td>
</tr>
<tr>
<td>SCV2</td>
</tr>
<tr>
<td>SCV3</td>
</tr>
</tbody>
</table>

8. Connect seven terminal breakaway connector for the lighting system on cart to seven pin connector on tractor. If your tractor is not equipped with SAE Standard 7 terminal connector, obtain through your local tractor supply dealer. Check clearance lights, signal lights, and auxiliary work lights for proper operation.

9. Connect optional electric roll tarp and camera harnesses. Check for proper operation.
CART OPERATION

**WARNING**
Contact with rotating driveline will cause death or serious injury. Keep away at all times when operating.

Never operate without all guards and equipment shields properly installed.

**WARNING**
Towing loaded grain carts on public roads and bridges can result in death, serious injury, and damage to property and equipment.

Never tow a loaded grain cart on public roads and bridges.

**WARNING**
Limited visibility can conceal people, animals, or objects and result in death, injury, and damage to property or equipment.

Check completely around cart before moving!

**WARNING**
Wide loads or loads with a high center of gravity may cause instability or rollover when operating on hillsides or in rough terrain.

**WARNING**
Do not transport cart with vertical auger extended. This can cause loss of control and could result in death, serious injury, or damage to property or equipment.

**WARNING**
Falling from equipment can cause death or serious injury.

Use three points of contact when working on equipment.

Never ride on equipment!
Contact with hydraulic folding auger can cause death, serious injury, and damage to property and equipment. Stay away from folding auger at all times. Make sure auger is clear of people and objects before folding or unfolding.

Contacting rotating auger will cause death or serious injury. Never open or close cleanout door with auger operating.

Remove power source before working on equipment.

Moving auger can cause death or serious injury. Disable auger fold before climbing ladder.

Contacting or coming close to power lines or other high energy sources will cause death or serious injury.

Keep away from power lines or high energy sources at all times.

Entering the grain cart can result in death or serious injury.

- Never enter grain cart when there is an energy source attached to the cart.
- Flowing grain can trap and suffocate.
AUGER FOLD ENABLE/DISABLE
Use the lever located at the front of the grain cart next to the ladder to enable and disable auger fold.

Always disable auger fold before climbing ladder.
UNLOAD GRAIN CART


2. Unfold vertical auger.

3. Engage PTO at low tractor RPM.

4. Start to open flow gate and increase tractor RPM. An indicator on front panel shows position of flow gate.

5. Set grain flow gate and tractor RPM to desired level.

6. Adjust tip spout. Slow tractor RPM as cart reaches empty.

7. Close flow gate.

8. Allow vertical auger to clean out and disengage PTO.

9. Fold auger to storage position.

---

**NOTICE**

Operating tractor PTO above 750 RPM with augers empty will damage equipment.

Make sure grain is flowing properly before increasing to higher RPM’s. Read Operator’s Manual for instructions.

---

**NOTICE**

Roll tarp must be completely open during loading and unloading operations or suction will damage equipment.

---

**DANGER**

Never work around PTO or gearbox drive system or allow anyone else to do so while PTO is running.

---

Flow Gate Position Indicator

---

**WARNING**

Do not transport cart with vertical auger extended. This can cause loss of control and could result in death, serious injury, or damage to property or equipment.
PTO TORQUE LIMITING/OVERRUNNING CLUTCH PROTECTION

The torque limiting clutch disengages if auger becomes obstructed to prevent driveline and gearbox damage. The torque limiting clutch resets automatically when PTO RPM is reduced.

The overrunning clutch allows auger system to freewheel and protects tractor and cart from shock damage with PTO brake-equipped tractors.
**AUGER CLEANOUT DOOR**

**DANGER**

Never open inspection cover while PTO and/or augers are running.

**WARNING**

Contacting rotating auger will cause death or serious injury. Never open or close cleanout door with auger operating.

Remove power source before working on equipment.
Grain Carts are equipped with a cleanout door at the bottom of the vertical auger.

The cleanout door may be opened when total cleanout of the wagon is required, such as when changing crops, to preserve grain identity, or in preparation for storage.

To open cleanout door:
1. Push latch on cleanout door wheel towards tractor.
2. Rotate wheel counterclockwise to open door.

To close cleanout door:
1. Push latch on cleanout door wheel away from tractor.
2. Rotate wheel clockwise to close door.

At the end of each season or after extended use, the cleanout door should be opened and the auger chamber cleaned of all debris and accumulated grain to prevent rust and mold.

Fully close cleanout door after cleanout is complete.
VERTICAL AUGER WORK LIGHT

Work lights are mounted in a fixed location on the vertical auger and inside the grain cart, and cannot be moved. Limited adjustments can be made by swiveling light on its base.

CAMERAS

Contact with moving grain cart can cause death, serious injury, and damage to property or equipment. Camera coverage areas are limited. DO NOT rely on cameras to determine if the area around the cart is clear. Cameras are an aid to unloading and maneuvering only.

For the optional camera kit, cameras are mounted on the vertical auger below the work light and on the rear of the cart as shown above. The additional 2-camera kit is also available with one camera mounted inside the grain tub in the corner and the second installed in a location chosen by the operator.

NOTE: Refer to the operator's manual provided with camera.
MANUAL AND ELECTRIC ROLL TARP

NOTICE
Roll tarp must be completely open during loading and unloading operations or suction will damage equipment.

NOTICE
To prevent excess wear or damage: Keep tarp at 40-60 lb (18-27 kg) tension. Do not walk or stand on end caps. Open tarp system and secure roll tube to wagon for speeds of 30 mph (48 kph) or higher.

For Manual Tarp:

1. Lift crank out of retainer.
2. Rotate crank counterclockwise until tub is open and tarp is rolled up against the stops.
3. Lift crank back into retainer.

To Close:

1. Lift crank out of retainer.
2. Rotate crank clockwise over the tub and up under the rest plate.
3. Bring crank down toward the rear of the cart.
4. Lift crank back into retainer, making sure not to overtension the tarp.

To Adjust Tension:

1. Roll tarp down from latch plate.
2. Remove crank from shaft.
3. Rotate crank one or two teeth and reassemble.
For Electric Tarp:

**NOTE:** Mount the circuit breaker as close to the power source as possible. Direct connection to the battery or a primary battery-direct power buss is advised. Run 6ga minimum wire size to the tarp system connector plug.

Electric Roll Tarp can be operated with remote or manual switches.

Close Tarp: Push switch to **CLOSE** and hold. Observe tarp and release switch when tarp has fully closed and rolled tightly under rest plate.

Open Tarp: Push switch to **OPEN** and hold. Observe tarp and release switch when tarp has fully opened and rests against the tarp rests.

**Power-up/down:**
The transmitter will power up when the lid is opened. The transmitter will power down when the lid is closed or when the lid is left open three minutes after the last button is pushed.

**Standard operation:**
After power-up, the first channel will be immediately active and the LED indicator for this channel will be flashing. The *Open/On* and *Close/Off* buttons are operational for the indicated active channel. While pressed, the LED indicator will flash faster, indicating channel operation.

The *Select* button will cycle between enabled channels. If only one channel is enabled, there will be no apparent change when the Select button is pressed.
# ROLL TARP REMOTE CONTROL TROUBLESHOOTING

<table>
<thead>
<tr>
<th>PROBLEM</th>
<th>SOLUTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>No lights on remote when lid is open.</td>
<td>Close lid for three seconds, then reopen lid.</td>
</tr>
<tr>
<td></td>
<td>Make sure there are no magnets close to the transmitter.</td>
</tr>
<tr>
<td></td>
<td>Open transmitter case and make sure battery is placed correctly in the remote.</td>
</tr>
<tr>
<td></td>
<td>Remove battery and bend contacts closer together. Put battery back in and try again.</td>
</tr>
<tr>
<td></td>
<td>The battery may be dead and must be replaced. Replacement quantity is 2 “AAA” batteries.</td>
</tr>
<tr>
<td></td>
<td>SMART1+ is damaged and must be replaced.</td>
</tr>
<tr>
<td>System not operable with remote.</td>
<td>Make sure remote is set to the right channel. If you cannot set remote to the desired channel, it must be reprogrammed (see transmitter programming instructions).</td>
</tr>
<tr>
<td></td>
<td>Make sure no other transmitters are being used near your system.</td>
</tr>
<tr>
<td></td>
<td>Determine if the transmitter is the problem by testing it with a different receiver or by using a second remote. If receiver was the problem, reprogram receiver (see the receiver programming instructions). If this doesn't work, receiver should be replaced.</td>
</tr>
<tr>
<td></td>
<td>Make sure you are within a couple feet of the receiver and try again. If transmitter works at short range but not at greater distances, you have a range problem, so a new battery may be needed. If the remote battery is not the cause, call the Help Line.</td>
</tr>
<tr>
<td>The SMART1+ channel light is blinking, but when I press the Open/On or Close/Off button, the light goes out or just continues to blink at the same speed.</td>
<td>Remove battery and bend contacts closer together. Put battery back in and try again.</td>
</tr>
<tr>
<td></td>
<td>The battery may be dead and must be replaced. Replacement quantity is 2 “AAA” batteries.</td>
</tr>
<tr>
<td></td>
<td>SMART1+ is damaged and must be replaced.</td>
</tr>
</tbody>
</table>
TRACK SYSTEM COMPONENTS

Frame
The main frame consists of a casting, and the front alignment yoke and rear tension link are cast members.

Axles
Front and rear axles are machined from the yoke castings, allowing for dimensional stability and few moving parts. They feature oil bath hubs mounted on tapered bearings and mechanical seals for extreme working conditions. Each hub has its own oil reservoir with access port for maintenance and checking oil levels. Refer to Lubrication and Maintenance section for oil fill and greasing information.

Idlers and Midrollers
The idlers have the function of guiding the rubber track by acting on the lateral surfaces of the guide lugs. Rotation of belts is recommended to extend life.
The tensioning system is located between the 2 rear idlers. The tension force is provided by a mechanical spring mechanism. Track tension is provided by the spring and does not need adjustment during operating and changing field conditions. Provisions are made to compress the spring allowing for removal of idlers and track assemblies during maintenance and servicing. Special tools are available from Kinze to compress the spring and detension the tracks.

Rubber Tracks

Rubber tracks are manufactured with high quality rubber and high strength steel cabling inside. The tread layout ensures good flotation, excellent life, and self-cleaning characteristics.

<table>
<thead>
<tr>
<th>Operating Condition</th>
<th>Transport Speed (Maximum)</th>
<th>Transport Duration (Maximum)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Empty</td>
<td>25 mph (40 kph)</td>
<td>30 minutes</td>
</tr>
</tbody>
</table>

NOTE: Track carts should be limited to road use only when empty.

If additional distances are required, a 30 minute cool down period is recommended before transport is resumed. Absolute speed and duration levels may vary, depending on system type and ambient conditions. Recommended speed and duration information help avoid system heat buildup that could cause reduction in track life.
TRACK SYSTEM MINIMUM TURNING RADIUS LIMITATIONS

On either field or road, the minimum turning radius is 3 times the overall length of the tractor plus the implement.

Track systems operate best when running straight or in gentle turns. If a track system is pivot or spot-turned, the opportunity exists for soil and dirt to be ingested into the system. Even though the track system has a tension recoil system, if that tension recoil is exceeded, high loads in the frame and track can be generated which may cause track or system damage.

Minimum turning radius limits should be strictly observed to avoid damage to track system.

NOTICE

TRACK SYSTEM BREAK-IN PROCEDURES

Guide lug wear is reduced when correct break-in procedures are followed. During the break-in period, rolling components undergo a polishing-in process to achieve a smooth steel to rubber interface with the guide lug. Rubber uses dust and dirt as a dry lubricant during break-in and operation to minimize heat and reduce rubber stickiness. New tracks should be exposed to dry and dusty soil conditions as soon as possible. Operation without dust or soil in the system, especially during high speed roading, generates high levels of damaging heat. If roading must be done, a dry lubricant such as soil, talc, graphite, oil dry or cat litter should be applied to the guide lugs periodically during roading until field operation resumes.
TRACK SYSTEM OPERATIONAL GUIDELINES

- Any application differing from the ones prescribed in this manual is to be considered improper and potentially dangerous.

- Correct track tension is required for best performance and track life.

- Track system can work in extreme conditions: for operator and machine safety, be sure to know your surroundings.

- Track system is free to pivot around the main axle following ground conformation.

- During transition over uneven ground terrain, check for interferences and move slowly to avoid over-oscillating the undercarriage.

- Overall width and height of machine/equipment with track system could differ from the original width and height with tires. Be sure to know actual machine height and width as well as width restrictions prior to operation.

- Cross large ground irregularities with suitable speed reduction and/or proper incidence angle. In particular, when high, sharp bumps are crossed move forward slowly to avoid shocks on the machine.

- The track system does not damage standard road-bed constructions. Operators must know and respect road traffic laws.

Rubber tracks have not been designed for extended use on the road. Kinze is not responsible for track and system damage resulting for extended road use. Long road periods and/or roading at higher than recommended maximum speeds may cause premature wear or failure of the track or wheels. To reduce damage during roading, decrease overall machine weight and decrease machine speed, refer to "Track Transport Speeds on page 2-17" for further information.

- Long runs on side slopes increase the wear on the side of guide lugs and idlers.

- Keep material out of the undercarriage. Inspect undercarriage daily and remove any material as necessary. In some conditions inspect more frequently.

- If a machine becomes stuck, clear away as much material from the undercarriage as possible prior to pulling the machine out.

- Avoid short turning radius turns and operation(s) especially when loaded. Spot turning creates debris ingestion and can also induce high torque loading in the system.

- Configure drawbar and hitch correctly during field operation(s).

- Use caution when operating track systems in loose, flowing material. Loose material can become trapped between track and idlers, resulting in track damage.

- Keep material out of the undercarriage. This may require scraping material out of tight places and in some conditions require frequent inspection and cleaning.
ELECTRONIC SCALE - GT 400

Electronic scale option includes four axle weigh beams, one hitch weigh beam, a tractor-mounted scale indicator console and cables, brackets, and mounting hardware.

To measure what is unloaded, press “START/STOP UPLOAD” before starting to unload. When finished, press STOP.

To measure what is loaded (For example when doing a field yield check.), press “ZERO” to zero cart weight before loading.

NOTE: Scale is most accurate when cart is sitting still on level ground when weighing.

Suggested Operating Procedures

NOTE: Movement of cart causes scale indicator reading to fluctuate.

Step 1 Press [ON/OFF] to turn on scale.

NOTE: Allow one (1) minute for scale to warm up (allow 5-10 minutes in cold weather).

Step 2 Press and hold [0-9] to zero balance.

NOTE: Zero balance indicator when empty at least once a day or more as required. If zero balance is not correct it only affects gross weight reading, not accuracy of displayed net weight.

Step 3 Load cart.

Step 4 Press [START/STOP] to begin unloading.

Display reads zero. Arrows point to Net and Unload.

Step 5 Unload cart. Negative reading on scale indicator is pounds unloaded.

Step 6 Press [START/STOP] when unloading is complete.

Indicator displays remaining weight left on scale. Data is automatically added to accumulator and saved to Printer or DDL (data downloader kit).

Repeat Steps 4 - 6 each time cart is unloaded.

Entering Field ID

A user-entered, 6 character identification number is used for referencing fields, trucks, owners or other information.

Step 1 Press [FIELD].

FIELD displays and a flashing cursor or character displays in the first position.

Step 2 Press [FIELD] to scroll available characters.

Hold for 4 seconds to increase scroll rate.

Step 3 Press [FIELD] to scroll back.

Press [FIELD] to move to next character.

Step 4 Press [ON/OFF] to accept and save.

Refer to GT 400 manual provided and Troubleshooting Section of this manual for additional information.

Scale Setup and Calibration Numbers

Setup Number: 127070
Calibration Number: 41250
GT 560 Operation

NOTE: Indicator must be on active screen before loading or unloading.

Suggested Operating Procedures - With AutoLog

NOTE: Movement of cart causes scale indicator reading to fluctuate.

Step 1 Press ON.

Step 2 Press and hold ZERO for two seconds to zero balance the GT 560 indicator if the container is empty. Active screen is displayed.

NOTE: To operate GT 560 with AutoLog, the GT 560 must be connected to a PTO or switch sensor and AutoLog must be turned ON.

Step 3 Press.

Step 4 Press and to select field name.

Step 5 Press ID to select required field name.

Step 6 Press ENTER to select required ID.

NOTE: Make sure active screen displays.

Step 7 If AutoLog is enabled, start the PTO or open the discharge door. The GT 560 will display zero and enter the net mode.

Step 8 Unload grain. Upper Display shows amount unloaded. Gross value (total amount left on cart) displays on second line of Lower Display.

Step 9 If AutoLog is enabled, stop the PTO or close the door. The data record will be stored in memory of indicator. The data record screen will display the last data record for 10 seconds, then return to active screen.

Refer to GT 560 manual for additional information.

Scale Setup and Calibration Numbers

Setup Number: 127070
Calibration Number: 41250

GT 560 Operation

NOTE: Indicator must be on active screen before loading or unloading.

Suggested Operating Procedures - Without AutoLog

NOTE: Movement of cart causes scale indicator reading to fluctuate.

Step 1 Press ON.

Step 2 Press and hold ZERO for two seconds to zero balance the GT 560 indicator if the container is empty. Active screen is displayed.

NOTE: To operate GT 560 without AutoLog, the AutoLog feature must be turned OFF.

Step 3 Press.

Step 4 Press and to select field name.

Step 5 Press ID to select required field name.

Step 6 Press ENTER to select required ID.

NOTE: Make sure active screen displays.

Step 7 Press before unloading grain from container. The GT 560 will display zero and enter the net mode.

Step 8 Unload grain. Upper Display shows amount unloaded. Gross value (total amount left on cart) displays on second line of Lower Display.

Step 9 When unloading is complete, the data record will be stored in memory of indicator. The data record screen will display the last data record for 10 seconds, then return to active screen.

Step 10 Press STOP when finished unloading grain. Refer to GT 560 manual for additional information.
GRAIN MOISTURE SENSOR

Refer to the Digi-Star manual provided with your machine for complete information on optional features.

**General Guidelines**

- Make sure sensor is mounted in a location where grain flow is consistent while unloading, such as above the unload door.

- Grain must flow across the sensor in the first few seconds during unloading, and grain flow must continue for at least 50% of the unloading period.

- If grain flow stops flowing over sensor during unloading, the scale will automatically stop recording moisture.

- Sensor only reads grain flow along the vertical length of the sensor, as shown below, and not across the sensor.
GRAIN MOISTURE SENSOR TESTING

1. Verify all cables are connected and GT 560 is turned ON.

2. GT 560 GRAIN type should be set to CORN.

3. Test Moisture Sensor operation:
   a. If Wi-Fi and smartphone Harvest Tracker App are installed:
      i. Verify App is displaying weight on phone or tablet.
      ii. Go to Moisture Sensor, so that sensor face is within reach.
      iii. On App, access keypad function and type “6802” and press . This displays a rough moisture value, usually around 11%. This does NOT read actual grain moisture, and is only for system diagnostics.
      iv. Place palm of bare hand on sensor face. Value will increase to approximately 25-35%.
      v. Press key on App to exit.
      vi. Type in “6803” and press . This displays the temperature of the sensor in degrees F, which should be within 10 degrees of air temperature.
      vii. Press to exit.

   b. If Wi-Fi is not installed:
      i. Find a second person to help you.
      ii. Have one person in tractor cab, and the other within reach of the sensor.
      iii. On GT 560, type “6802” and press . This displays a rough moisture value, usually around 11%
      iv. Place palm of bare hand on sensor face. Value will increase to approximately 25-35%.
      v. Press on GT 560 to exit.
      vi. Type in “6803” and press . This displays the temperature of the sensor in F, which should be within 10 degrees of air temperature.
      vii. Press to exit.

   viii. Sensor and cabling is operational if these tests are passed.

4. Run a couple of loads to calibrate sensor; refer to Moisture Sensor Calibration on next page
GRAIN MOISTURE SENSOR CALIBRATION

The GT 560 Indicator and Moisture Sensor can be calibrated to a reference moisture, such as an elevator, hand held tester, or the combine. There are two ways to adjust the moisture percentage calibration as outlined on the following pages.

ON-THE-FLY QUICK CALIBRATION

This is the quick method for calibrating the moisture percentage when setting up each GRAIN type, based on the combine’s moisture reading. Grain must be flowing over the sensor while unloading the cart in AutoLog mode to perform this calibration. For the most accurate results and fine tuning, see Elevator Calibration section on the next page. Each GRAIN type should be calibrated when that grain is harvested, such as when changing from CORN to SOY.

1. Harvest grain as normal and transfer grain from combine into the grain cart until the cart is at least half full.
2. Keep track of the combine’s average moisture percentage for the harvested load.
3. Select GRAIN type on GT 560 (press select function button, then use ↑ & ↓ arrows, and press enter x4).
4. Begin unloading grain at normal speed. AutoLog will start on GT 560.
5. On main screen in center, observe the moisture percentage. See diagram below.
6. Press ← or → arrow keys to adjust moisture up or down. Grain must be unloading from the cart and passing by the Sensor for this step to work.
7. Finish load as normal.

NOTE: Moisture reading will likely stop before end of load. This is normal.

8. Run a second load and verify moisture percentage is close. Perform Elevator Calibration steps on next page to achieve greater accuracy.

NOTE: If moisture percentage is very inconsistent or does not appear to stay calibrated, the sensor may need to be repositioned. Readings that change unexpectedly or by large amounts while unloading is a symptom of poor grain flow past the sensor.

9. Repeat calibration steps for other GRAIN types.
ELECTRONIC SCALE PRINTING OPTIONS

Three printing options are available for use with the electronic scale with print-ready indicator console:

1. Printer connected directly to the indicator console.

2. (GT 560 ONLY) USB Flash Drive to transfer data between indicator and PC with Windows Operating System.

3. Data Downloader Kit which stores information in a downloader module for remote printing using any computer and printer with Windows 98/2000/XP/Vista operating systems. Module stores up to 1600 lines (64K bytes) of load data.

These printing options allow recording of load ID number, time, date, and weight.

PRINTER OPTION

A power and data cable is included with printer.

See User’s Manual supplied with printer for additional information.

DATA DOWNLOADER (DDL) OPTION

The Data Downloader Kit option includes:

1. Module cable to connect indicator to downloader module.

2. Interface cable to connect downloader module to computer serial "com" port.

3. Downloader module which plugs into memory converter cable to store information and into interface cable to print information.

4. Program CD.
The GT 560 indicator has many features but it also boasts simple handoff operation using a RPM sensor on the PTO shaft to trigger the start of the unloading process and the end of the unloading process. AutoLog prevents operator mistakes that could cause you to lose data on loads because the operator “Forgot” to push the “Start/Stop” key. You can still use “Start/Stop” key before unloading and again after unloading in case the sensor is damaged or not functioning for any reason. Weight, date, time, and additional information is stored automatically after each load is completed.

See GT 560 AutoLog Operators Manual provided and Troubleshooting Section of this manual for additional information.
The Data Downloader (DDL) stores and transfers data between indicator and a computer.

System requirements:
- Windows 98/2000/XP/Vista Operating System
- Serial Port
- 32 Mb of RAM
- Pentium 100 PC Or Higher
- 100 Mb Of Free Disk
- CD-Rom Drive

Step 1. Insert Data Transfer Utilities software (DTU) into CD-Rom.

Step 2. Connect interface and module cables.

Step 3. Connect interface cable (9-pin D-sub connector) to serial port on your computer.

NOTE: Cable must be securely connected to a COM port to function.

Step 4. Connect module cable to “Serial/J904” port on indicator. Press “PRINT” key. When printing is complete remove module cable only.

Step 5. Fasten downloader module to interface cable.

NOTE: To lock downloader module to interface cable, twist fastener on downloader module.

Step 6. Follow DTU software instructions to transfer data files to a Microsoft Excel spreadsheet (or comparable program):

Step 7. Save scale output to a text file (instructions included with DTU software).

Step 8. With Microsoft Excel open (a) Select “Data” file menu, select “Import External Data”, then “Import Data”. (b) Select text file to be transferred. (c) Text import wizard displays. (d) In original data type section select “delimited” and click NEXT button. (e) In delimiters section select SPACE check box and click NEXT button. (f) Click FINISH.

Step 9. Import to “Existing Worksheet” or “New Worksheet” and click OK.

Step 10. Text file now appears in separate cells and columns.
PRINT ACCUMULATOR

This option stores an accumulated value in a memory location called “PRTACC”. Each time a “PRINT” command is executed, the weight value on the display is added to the “PRTACC” value.

Three print formats are available:

“PRTAC1” and “PRTAC2” print formats include:

- Scale ID
- Weight
- Weight Tag (Net, Gross, Load/Unload)
- Accumulated Weight
- Print Accumulator Tag
- Date and Time

NOTE: “PRTAC1” displays data on one line and “PRTAC2” displays data on two lines.

“PRTAC3” includes Unit of Measure and Lock-On Status in addition to features listed above and displays data on one line.

Suggested Operation Procedures

Step 1. Press and hold “NET/GROSS” for 3 seconds.

NOTE: “SCALID” is displayed followed by current ID.

Step 2. Use left arrow (PRINT/TARE) and up arrow (NET/GROSS) keys to enter a new Scale ID.

Step 3. Press “ON” to view accumulated data.

NOTE: Press “ZERO” to clear total when accumulated weight is displayed.

Step 4. Press “ON” to resume weighing.

Step 5. Press and hold “PRINT/TARE” for 3 seconds to send data from serial port and store accumulated data.
ELECTRONIC SCALE TROUBLESHOOTING

1. **Does indicator come on?**
   - Yes
   - No

2. **Is reading on indicator stable?**
   - Yes
   - No

   **Stand on, or hang your weight over each load cell. Does indicator respond to your weight when you stand or hang on scale?**
   - Yes
   - No

   **Check j-box and all load cell cables for cuts or pinched/flat spots.**
   - Yes
   - No

3. **Your indicator is probably defective. Try another indicator to verify.**

   **NOTE:** Be aware of electrical interference that might affect your scale such as: mobile phones, CB radios, radio towers, electrical motors, etc. Also make sure load cell cables are not tied strapped to hydraulic lines or the hydraulic reservoir.

4. **Does scale weigh you correctly with your weight over any of the load cells?**
   - Yes
   - No

   **Does the scale weigh you approximately the same over all load cells?**
   - Yes
   - No

   **The indicator is probably not set up and calibrated correctly. Check decal on bottom of indicator. The decal shows for what type of load cells the indicator was calibrated. By pressing the “on” key while the indicator is already on, you will get the indicator’s “set-up” and “cal” numbers. Write these down and see if they compare to the set-up and calibration numbers on the indicator. Contact your dealer for further information.**

5. **If display is unstable, or flashes “±”, disconnect j-box cable from indicator. Is display still unstable?**
   - Yes
   - No

   **Remove the cover from j-box.**

   **Is there moisture in j-box?**
   - Yes
   - No

   **Dry out your j-box.**

6. **Look for loose connections. If you watch indicator display while moving around the wires inside the j-box, and by pressing on the j-box printed circuit board, you will see if there is a loose connection or poor solder joint.**

7. **Continued on top of next page.
ELECTRONIC SCALE TROUBLESHOOTING

Continued from bottom of previous page.

1. Disconnect all load cell wires from terminal blocks inside j-box. (You can leave indicator on while connecting or disconnecting load cell wires, you will not damage load cells or indicator if wires are shorted during this step.)

2. Zero balance indicator. (First press “Net/Gross” then “Zero”) Indicator should display “0”.

3. Connect one load cell back into one of terminals in j-box.
   NOTE: Reading you get for each load cell and how much weight is dependent on size and type of load cell and how much weight is over each load cell. In general, number should be a positive and be stable.

4. Write down indicator reading with the load cell connected.

5. Stand or hang your weight over the connected load cell. Write down how much weight increased with your weight over load cell.
   NOTE: If the scale responded to your weight, that's verification that the j-box is ok. If the scale did not respond to your weight, either that load cell or the j-box are defective. Try another load cell. If the scale still shows no response to your weight, the j-box is probably defective.

6. Disconnect first load cell and reconnect a second one. Write down indicator reading for that load cell. Stand or hang your weight over connected load cell. Write down how much weight increased with your weight over load cell.

7. Disconnect second load cell and reconnect third load cell. Also write down indicator reading for that load cell. Stand or hang your weight over connected load cell. Write down how much weight increased with your weight over load cell.

8. A defective load cell will cause a reading that is either unstable, or makes the indicator flash “±Range”, or is more than three times greater, or less than the average of the others. Additionally, the readings of your weight over each load cell should be similar. (Probably 2-3 times your actual weight, but similar to each other.) Any differences in the readings could be an indication of a defective load cell or a structural problem.

NOTE: You are going to hook up load cells to the j-box one at a time (meaning only one load cell connected at a time). The purpose of this is to get a reading for each load cell. Also, while performing this test, you should watch for any other symptoms such as erratic/unstable display, indicator flashing “±Range”, or a negative reading, etc. If indicator reading should ever appear abnormal with any load cell connected, that load cell is probably defective.

Have you found a poor connection or a loose wire?

Fix or replace j-box

Yes

No

Have you found a poor connection or a loose wire?

No
# Operation

## DATA DOWNLOADER TROUBLESHOOTING

<table>
<thead>
<tr>
<th>PROBLEM</th>
<th>POSSIBLE CAUSE</th>
<th>SOLUTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Warning no device match was found.</td>
<td>Poor connection to cable.</td>
<td>Check for proper connection to cable.</td>
</tr>
<tr>
<td></td>
<td>Poor connection of cable to serial port of computer.</td>
<td>Check for proper connection of cable to serial port of computer.</td>
</tr>
<tr>
<td></td>
<td>Not connected to correct serial port.</td>
<td>Check port setting in the DTU program to be sure DDL is on the correct serial port.</td>
</tr>
<tr>
<td></td>
<td>Faulty DDL.</td>
<td>Try another DDL.</td>
</tr>
<tr>
<td></td>
<td>Other software installed that uses same serial port.</td>
<td>If any other installed software that requires a serial port is trying to run and there is only one serial port, the second software will not be able to run. If the DTU software had been loaded first and then the (eg. Palm Pilot) software, the Palm software could have a problem. This is a hardware allocation problem. For sites that need to run both, a second serial port must be added or you have to turn off all other software packages that may be using the 1 serial port.</td>
</tr>
<tr>
<td>No such file or directory.</td>
<td>File was not saved.</td>
<td>Resave file.</td>
</tr>
<tr>
<td></td>
<td>File saved as incorrect format.</td>
<td>Save file as a text file (.txt).</td>
</tr>
<tr>
<td></td>
<td>Data was not saved in a valid Windows file folder and/or directory.</td>
<td>Resave file in valid Windows file folder and/or directory.</td>
</tr>
<tr>
<td>Data will not transfer to PC.</td>
<td>Poor connection to cable.</td>
<td>Check for proper connection to cable.</td>
</tr>
<tr>
<td></td>
<td>Poor connection of cable to serial port of computer.</td>
<td>Check for proper connection of cable to serial port of computer.</td>
</tr>
<tr>
<td></td>
<td>Not connected to correct serial port.</td>
<td>Check port setting in the DTU program to be sure DDL is on the correct serial port.</td>
</tr>
<tr>
<td>Some information is not listed.</td>
<td>64K capacity of the DDL is filled.</td>
<td>Check capacity.</td>
</tr>
<tr>
<td></td>
<td>Information may of been overwritten.</td>
<td>Resave file.</td>
</tr>
<tr>
<td>Dialog box and program locks up (not responding).</td>
<td>Computer error.</td>
<td>CRTL-ALT-DEL and end task, then restart computer.</td>
</tr>
</tbody>
</table>
## TRACK SYSTEM TROUBLESHOOTING

<table>
<thead>
<tr>
<th>PROBLEM</th>
<th>POSSIBLE CAUSE</th>
<th>SOLUTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uneven tread wear</td>
<td>High amount of roading</td>
<td>Swap tracks side to side</td>
</tr>
<tr>
<td>Splits/opening on the side or top of tread</td>
<td>High amount of roading or overheat of tread</td>
<td>Swap tracks side to side. Replace tracks if necessary.</td>
</tr>
<tr>
<td>Chunking on guide lug sides</td>
<td>Track not aligned properly</td>
<td>Align track</td>
</tr>
<tr>
<td></td>
<td>Side slope operation</td>
<td>Contact dealer</td>
</tr>
<tr>
<td>Breakaway of track guide lugs</td>
<td>Debris/material ingestion into track system</td>
<td>Contact dealer</td>
</tr>
<tr>
<td>Correct tensioning not possible</td>
<td>Verify position of track detensioning bolt at rear idler assembly.</td>
<td>Bolt fully retracted with no preload on spring applied</td>
</tr>
<tr>
<td>High temperature of idler or roller axle hub.</td>
<td>Bearing failure</td>
<td>Replace damaged bearing.</td>
</tr>
<tr>
<td></td>
<td>Lack of lubricant</td>
<td>Check oil level in reservoir.</td>
</tr>
<tr>
<td>Mud/dirt buildup on idlers/midrollers</td>
<td>Operation in muddy, wet or sticky soil types</td>
<td>Clean mud/dirt regularly to prevent track damage.</td>
</tr>
</tbody>
</table>
Proper lubrication of all moving parts will help ensure efficient operation of your Kinze Grain Cart and prolong the life of friction producing parts.

**WHEEL BEARINGS**

Wheel bearings should be checked and lubricated annually.

Raise wheel off the ground and support with axle. Remove the dust cap. Check for endplay in bearings by moving tire in and out. Rotate tire to check for roughness in bearings. If bearings sound rough, the hub should be removed and bearings inspected and replaced if necessary. Refer to “Wheel Bearing Replacement” on page 3-22.

If bearing replacement is not necessary, while wheel is raised and dust cap removed, pump grease into hub until grease comes out through bearing rollers. Replace dust cap.
GEARBOX OIL LEVEL

Gearbox Oil Capacity ........ 1 2/3 Gallons . . . SAE 90 weight oil.

Remove plug from fill/check plug hole on the gearbox. Oil level should be even with fill/check plug hole. Inspect oil at end of each annual season of use for moisture and contaminants, if found, change oil before storage. A drain plug is located on the bottom of the gearbox.

PTO SHAFT COUPLING

Clean and grease PTO shaft coupling each time PTO is installed.

Apply a coating of high-speed industrial coupling grease, such as Chevron® Coupling Grease meeting AGMA CG-1 and CG-2 Standards to extend life of shaft splines.
GREASE FITTINGS

Those parts equipped with grease fittings should be lubricated at the frequency indicated with an SAE multipurpose grease. Be sure to clean the fitting thoroughly before using grease gun. The frequency of lubrication recommended on the following pages is based on normal operating conditions. Severe or unusual conditions may require more frequent attention.

**NOTICE**

Extreme operating conditions such as dirt, temperature or speed may require more frequent lubrication.

NOTE: Disconnect PTO from tractor. Retract PTO assembly and rotate shield to expose grease fitting on PTO slide.

![Swivel Hitch (Qty. 1)](image)

![20 Bolt Hub Wheel Bearings (Qty. 1 Per Wheel Hub)](image)

NOTE: Loosen dust cap prior to pumping grease. Tighten after greasing.
LUBRICATION POINTS

Overrunning Clutch - 1 fitting
Continuous Velocity (CV) Joint - 3 fittings

Intermediate Drive Line, Rear - 1 fitting
Intermediate Drive Line, Center - 1 fitting

Intermediate Drive Line, Front - 1 fitting
PTO Shaft - 1 fitting
Lubrication and Maintenance

Vertical Auger Center Bearing - 1 fitting

Vertical Auger Upper Bearing - 1 fitting

Fold Linkage and Hinge - 6 fittings
Lubrication and Maintenance

TRACK SYSTEM MAINTENANCE

Every 50 Hours or Weekly

GREASE UPPER CARRIER HUBS, UNDERCARRIAGE AND TRACK SYSTEM PIVOT POINTS

Visually check oil in mid rollers through clear covers.

Every 100 Hours or Monthly

CHECK TRACK TENSION

System is self-tensioned via spring. Visually check track tension.

CHECK WHEEL BOLT TORQUE

NOTE: Always torque after wheel removal regardless of hours.

<table>
<thead>
<tr>
<th>Size</th>
<th>Torque (N·m)</th>
<th>Torque (ft-lb)</th>
</tr>
</thead>
<tbody>
<tr>
<td>M20</td>
<td>620 +/- 124</td>
<td>457 +/- 91</td>
</tr>
</tbody>
</table>
Lubrication and Maintenance

Every 500 Hours or Yearly

REPACK CARRIER ROLLER WHEEL BEARINGS

![Diagram of grain cart]

**Bearing Lock Nut Torque Chart**

<table>
<thead>
<tr>
<th>Size</th>
<th>Torque (N-m)</th>
<th>Torque (ft-lb)</th>
</tr>
</thead>
<tbody>
<tr>
<td>N-06</td>
<td>10 +/- 2</td>
<td>7.4 +/- 1.5</td>
</tr>
</tbody>
</table>

**NOTE:** Torque lock nut while rotating or oscillating hub. If any lock nut slot and lock washer tang are aligned, bend the aligned tang into the slot to lock in place. If no slot or tang aligns, tighten the locknut until the most nearly aligned slot and tang line up. Bend the aligned tang into the slot to lock in place.

Every 2000 Hours or Every 5 Years

DRAIN AND REPLACE IDLER AND MIDROLLER RESERVOIRS

Use 10W30 Universal Transmission/Hydraulic Oil

<table>
<thead>
<tr>
<th></th>
<th>Torque</th>
<th>Oil Qty.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N-m</td>
<td>in-lb</td>
</tr>
<tr>
<td>Mid Roller Clear Cover</td>
<td>4.5 ± 1</td>
<td>40 ± 9</td>
</tr>
<tr>
<td>Mid Roller Plastic Fill Plug</td>
<td>3 ± 1</td>
<td>27 ± 9</td>
</tr>
<tr>
<td>Idler Metal Cover</td>
<td>15 ± 3</td>
<td>132 ± 27</td>
</tr>
<tr>
<td>Idler Metal Fill Plug</td>
<td>34 ± 7</td>
<td>300 ± 62</td>
</tr>
</tbody>
</table>

Off Season Storage

For optimum life, tracks should be stored indoors, in dry environment with a temperature between 40° - 77° (5° - 25° C). The tracks should not be exposed to direct sunlight or heat. No petrochemicals and related vapors, no electrical devices producing ozone should be placed in the same area.

Should it be necessary to disassemble the tracks from the undercarriage, lay them on the ground on one edge avoiding bending radius less than 30" (750 mm). Do not lay the rubber components on dirty surfaces contaminated by oil, grease or other chemical products.

Do not paint rubber components.
CHECK TRACK ALIGNMENT

1. Prior to checking track alignment the implement should be empty.

2. Measure the inside distance left to right. Undercarriage toe must be parallel to within \( \frac{1}{4}'' \) (6mm). A suitable location for measurement is noted by arrows, shown on the diagram above, between the idler hub covers.

3. Pull the implement on a flat surface for a suitable time frame, allowing the belts to relax and move freely on the undercarriage rollers.

4. Drive in a straight line for roughly 200 feet and coast the tractor to a stop. Place the tractor in PARK and apply the emergency brake. Do not apply braking action during this process as sudden stops can affect track position during the alignment process.

5. Using a \( \frac{1}{4}'' \times 4'' \times 8'' \) shim slide between the front midroller and guide lugs. Bridge guide lugs with the shim maintaining pressure on 2 lugs minimum.

6. If the shim fits freely between the lugs and midroller on both sides of the undercarriage the alignment is correct. If the shim binds and does not fit between the midrollers/guide lugs track adjustment is necessary.
TRACK ALIGNMENT PROCEDURE

1. Remove the retainer lock plate cap screw and lock plate from the inboard and outboard sides of the track needing adjustment.

2. Loosen track alignment cap screw counterclockwise 1 - 1½ turns on the side of the undercarriage you want the track to move towards.

3. Tighten the track alignment cap screw on the opposite side to specification. (Cap screw torque is (221 ft-lb) 300 N-m. Tighten cap screw loosened in step 2 to the same specification.

NOTE: A single full turn is the standard increment during adjustment. Lessen this amount as final adjustment is approached.

4. Recheck track alignment and adjust until suitable clearance is obtained on both sides of the guide lugs.

NOTE: Lock plates are reversible for double the index increments. If needed, increase torque on the special cap screw slightly allowing advancement to a suitable lock plate position.

5. When alignment is complete, reinstall the lock plates and tighten cap screws to their required torque specification of (95 ft-lb) 130 N-m).
TRACK SYSTEM INSPECTION

Track System
Inspect track system for material build-up on frames and wheels. Clean material from undercarriage.

Idlers and Midrollers
Check the general condition of the idlers and midrollers, making sure material buildup is not occurring. If any material buildup is found, it must be removed or track damage may result.

Rubber Track Guide Lugs
Guide lugs keep the track on the track system. Proper alignment of the track is essential to improving overall life and decreasing operating costs. If track is misaligned or operating on side slope, guide lug wear or damage may occur. Also guide lug damage may occur if proper break-in procedures are not followed or system is operated outside the maximum speed recommendations listed in this manual. Monitoring guide lugs condition will alert the operator to an issue and generally if corrected early prior to loss of performance or durability.

Track Carcass
Inspect track surface to remove imbedded stones or debris. This contamination can work its way into the track and damage the steel cable.

Steel wire may come out from the track carcass without affecting the performance of the track. Remove loose wires by cutting them at the rubber surface.

Track Tread
Muddy soils usually cause limited wear, while roading long distances can bring about accelerated tread wear. Due to the crown of the road, and deflection in the system, the tread closest to the machine will tend to wear faster than the tread on the outer portion of the track. Adhere to speed and weight limitations. Refer to “Track Transport Speeds” on page 2-17.

Adjusting Track Tension
Tension is pre-set at the factory and requires no adjustment during operation. Provision is made to detension the track system allowing for removal of the rubber track.
TRACK REMOVAL

**WARNING**

Pinch point could result in serious injury. Install safety lock on cylinder before removing track.

IMPORTANT: A detensioning kit (PN A24944) is required for track removal and available from Kinze. Contact your Kinze dealer.

NOTE: A Porta Power is also required for track removal. Kinze recommends Blackhawk 10 Ton Porta Power Model B65115.

1. Remove plugs on rear track frame.

2. Attach a cylinder end cap to each end of the Porta Power.
3. Install one end of Porta Power on existing hook located between rear idlers.

4. Place detensioning mount where plugs were removed in step 1. Install other end of Porta Power on mount and secure with two M16 bolts.

**NOTE:** Ensure Porta Power hose is positioned as shown to avoid interference when removing idler wheel.

5. Pump the Porta Power until the tensioning spring is fully compressed.
6. Remove the rear M20 idler wheel bolts and torque plate castings. Remove idler wheel.


---

**WARNING**

Idler wheels weigh 200 lbs (90 kg) and will roll easily on a firm surface. Place a block under removed wheels to prevent rolling and potential injury.

8. Utilizing existing fork lift pockets or properly rated jack and safety stands, raise the undercarriage until there is sufficient clearance between the midwheels and track guide lugs.
TRACK REMOVAL (CONTINUED)

9. Using a suitable lifting device, lift the track belt slightly to provide clearance between the carrier and track guide lugs.

NOTE: If using a forklift or other steel lifting device, ensure the tines or lifting surface does not have sharp edges or track damage may occur.

10. Lift the track up and away from the undercarriage, placing in a suitable location. Place track on its side.

TRACK INSTALLATION

1. Raise the undercarriage to allow for the lower surface of the belt to slide underneath.

2. Lift the track and install on the top carrier rollers. Push the bottom of the track under the midrollers aligning with the front and rear idlers.

3. Install the idler wheels removed previously, ensuring the guide lugs are positioned properly between the midrollers and idlers. Torque M20 bolts on idler wheels to 457 ft-lb (620 N-m).

4. Lower the undercarriage assembly to the ground.

5. Remove lock from Porta Power cylinder.

6. Release pressure from Porta Power and remove.
Lubrication and Maintenance

MOUNTING BOLTS AND HARDWARE

**WARNING**
Parts separation can result in death, serious injury, and damage to property and equipment. Check all hardware is tight before operating the grain cart the first time. Check all hardware again after first 50 hours of operation and beginning of each season. Check wheel nuts daily during first use and weekly afterward.

**NOTICE**
Over-tightening hardware can reduce its shock load capacity and cause equipment failure.

Hardware used on Kinze grain carts are Grade 5 (high strength) unless otherwise noted. Grade 5 cap screws are marked with three radial lines on the head. Hardware must be replaced with equal size, strength, and thread type.

### TORQUE VALUES CHART - PLATED HARDWARE

<table>
<thead>
<tr>
<th>Diameter</th>
<th>Grade 2 (No marks)</th>
<th>Grade 5 (3 marks)</th>
<th>Grade 8 (6 marks)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coarse</td>
<td>Fine</td>
<td>Coarse</td>
</tr>
<tr>
<td></td>
<td>ft-lb</td>
<td>N-m</td>
<td>ft-lb</td>
</tr>
<tr>
<td>¼&quot;</td>
<td>50 in-lb</td>
<td>5</td>
<td>56 in-lb</td>
</tr>
<tr>
<td>⅛&quot;</td>
<td>8</td>
<td>10</td>
<td>9</td>
</tr>
<tr>
<td>⅛&quot;</td>
<td>15</td>
<td>20</td>
<td>17</td>
</tr>
<tr>
<td>⅜&quot;</td>
<td>25</td>
<td>33</td>
<td>27</td>
</tr>
<tr>
<td>½&quot;</td>
<td>35</td>
<td>47</td>
<td>40</td>
</tr>
<tr>
<td>⅜&quot;</td>
<td>50</td>
<td>67</td>
<td>60</td>
</tr>
<tr>
<td>⅜&quot;</td>
<td>70</td>
<td>95</td>
<td>80</td>
</tr>
<tr>
<td>⅝&quot;</td>
<td>130</td>
<td>176</td>
<td>145</td>
</tr>
<tr>
<td>⅔&quot;</td>
<td>125</td>
<td>169</td>
<td>140</td>
</tr>
<tr>
<td>1&quot;</td>
<td>190</td>
<td>257</td>
<td>205</td>
</tr>
<tr>
<td>1⅛&quot;</td>
<td>265</td>
<td>359</td>
<td>300</td>
</tr>
<tr>
<td>1⅜&quot;</td>
<td>375</td>
<td>508</td>
<td>415</td>
</tr>
<tr>
<td>1½&quot;</td>
<td>490</td>
<td>664</td>
<td>560</td>
</tr>
<tr>
<td>1¾&quot;</td>
<td>650</td>
<td>881</td>
<td>730</td>
</tr>
</tbody>
</table>

**NOTE:** Torque unplated hardware and bolts with lock nuts approximately ⅛ higher than above values. Torque bolts lubricated before installation to 70% of value shown in chart.

### SPECIAL TORQUE VALUES

<table>
<thead>
<tr>
<th>Cylinder Rod Piston Retaining Nut Torque Chart</th>
<th>Non-Nylock Nut</th>
<th>Nylock Nut</th>
</tr>
</thead>
<tbody>
<tr>
<td>⅛&quot;-20</td>
<td>55-70 ft-lb (75-95 N-m)</td>
<td>45-55 ft-lb (61-75 N-m)</td>
</tr>
<tr>
<td>¾&quot;-16</td>
<td>115-125 ft-lb (156-169 N-m)</td>
<td>100-115 ft-lb (136-156 N-m)</td>
</tr>
<tr>
<td>7½&quot;-14</td>
<td>150-180 ft-lb (203-244 N-m)</td>
<td>130-150 ft-lb (176-203 N-m)</td>
</tr>
<tr>
<td>1&quot;-14</td>
<td>275-330 ft-lb (373-447 N-m)</td>
<td>250-275 ft-lb (339-373 ft-lb)</td>
</tr>
<tr>
<td>1¼&quot;-12</td>
<td>300-375 ft-lb (407-508 N-m)</td>
<td>275-300 ft-lb (373-407 N-m)</td>
</tr>
<tr>
<td>1⅛&quot;-12</td>
<td>300-375 ft-lb (407-508 N-m)</td>
<td>275-300 ft-lb (373-407 N-m)</td>
</tr>
</tbody>
</table>

Wheel nuts 350 ft-lb (474 N-m)
Grain Cart

**Lubrication and Maintenance**

---

**DANGER**

Grain entrapment will result in death or serious injury. Never enter grain cart unless completely empty. Always use safety lines and have another person present when working on grain carts.

---

**DANGER**

Falling grain auger cart can crush and will cause death or serious injury. Never work around or under cart when raised without installing blocks to support cart. Use care when removing and installing components to prevent pulling or pushing cart off axles.

---

**WARNING**

Contacting rotating auger will cause death or serious injury. Never open or close cleanout door with auger operating.

Remove power source before working on equipment.

---

**WARNING**

Pressurized hydraulic fluid can penetrate body tissue and result in death, serious infection, or other injuries. Fluid injected under skin must be IMMEDIATELY removed by a surgeon familiar with this type of injury. Make sure connections are tight and hoses and fittings are not damaged before applying system pressure. Leaks can be invisible. Keep away from suspected leaks. Relieve pressure before searching for leaks or performing any system maintenance.
VERTICAL AUGER COUNTER BALANCE VALVES

Counter balance valves prevent auger fold cylinder from extending or retracting without applied hydraulic pressure. If valve(s) fail to lock auger in position or fail to function properly, remove valve(s) from valve block and check for foreign material. Replace valve if defective.

WHEEL SERVICING

Clean threads with a wire brush and oil lightly to retard corrosion when removing and installing wheels.

Torque wheel nuts as specified in “Mounting Bolts and Hardware” on page 3-15” and retorque daily during first 3 days of use and weekly thereafter.

NOTE: Retorque all track system idler and midroller bolts daily during first 3 days of use and monthly thereafter. Torque bolts to 457 ft-lbs (620 N-m).
TIRE SERVICING

Explosive separation of rim and tire parts can cause death or serious injury. Over-inflation, rim and tire servicing, improper use of rims and tires, or worn or improperly maintained tires could result in a tire explosion.

To prevent tire explosions:

- Maintain proper tire pressure. Inflating a tire above or below the recommended pressure can cause tire damage.
- Mount tires only by properly trained personnel using proper equipment.
- Replace tires with cuts or bubbles. Replace damaged rims. Replace missing lug bolts and nuts.
- Do not weld or heat wheel assembly. Heating increases tire pressure.

INFLATION SPECIFICATIONS

Over-inflation of tires can result in explosive separation of rim and tire and cause death or serious injury. Different size rims are designed for different tire pressures. Inflate to correct pressure for specific rim size.

Check tire pressure before each use.

<table>
<thead>
<tr>
<th>Tire Type</th>
<th>Pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td>IF900/65 R32 CFO 191B (Diamond Tread)</td>
<td>46 PSI (317 kPa)</td>
</tr>
<tr>
<td>IF900/60 R32 CFO 188B (Lug Tread)</td>
<td>46 PSI (317 kPa)</td>
</tr>
</tbody>
</table>
DRIVELINE INSPECTION

Inspect driveline after first 20 loads, at beginning of each season, and after every 150 loads or annually thereafter.

- Make a general inspection of driveline looking for loose hardware.
- Inspect all grease points for damage.
- Lubricate all grease fittings. See Lubrication section of this manual.
- Check gearbox oil level.
- Inspect bearings and seals in gearbox.
- Inspect PTO attaching hardware and safety shields.
- Repair or replace worn or damaged parts.
1. Position the vertical auger in a horizontal position as illustrated.

2. Remove ¾” hardware from center of bearing, ⅝” spring plate hardware and ⅝” spring mounting hardware.

3. Remove spring plate, flange bearing and sleeve.

4. Pull auger out of the bottom of the auger housing.

5. Remove ⅝” hardware securing bearing spindle and remove bearing spindle.

6. Install bearing spindle onto replacement auger. Install replacement auger inside auger housing. Locate auger with ½” (See Illustration) between bottom of hinge plate and end of auger assembly.

7. Reinstall sleeve, flange bearing and spring plate.
LOWER VERTICAL AUGER REPLACEMENT

1. Position vertical auger in the storage/transport folded position.

2. Remove five ⅝" x 1½" hanger bearing bracket carriage bolts at upper end of lower vertical auger (two bolts visible in photo above). Carefully work hanger bearing bracket loose from auger housing.

   NOTE: Do not bend hanger bearing bracket when moving auger.

3. Position strap around auger as shown above. Be sure strap is tight against auger center tube. Pull auger and hanger bearing assembly out of auger housing.

4. Remove ¾" x 5" cap screw at top of lower vertical auger and remove hanger bearing bracket components from auger.

5. Remove four ⅝" x 2" cap screws that attach bullet spindle to top of lower vertical auger.

6. Install bullet spindle onto top of replacement auger aligning ⅜" hole in auger with ⅜" hole in bullet spindle.

7. Position hanger bearing bracket components onto top of replacement auger. Torque ¾" x 5" cap screw at top of lower auger to 200 ft. lbs.

8. Lower replacement auger into lower auger housing and onto lower drive lugs.

9. Position hanger bearing bracket with the split in the bracket in "up" position. Install four hanger bearing carriage bolts and nuts and tighten.
1. Raise tire clear of ground and remove wheel.

2. Remove dust cap attachment hardware and remove cap from wheel hub.

3. Remove cotter pin, axle nut and 2” washer.

4. Slide hub from axle spindle, using a hub puller if necessary.

5. Remove bearings and cups from hub and discard. Thoroughly clean and dry wheel hub.

6. Press in new bearing cups with thickest edges facing in.

7. Pack bearing with heavy duty wheel bearing grease, thoroughly forcing grease between roller cone and bearing cage. Also fill the space between the bearing cups in the hub with grease.

8. Place inner bearing in hub and press in new grease seal with lip pointing towards bearing.

9. Clean axle spindle and install hub.

10. Install outer bearing, 2” washer and slotted hex nut. Tighten slotted hex nut while rotating the hub until there is some drag. This ensures that all bearing surfaces are in contact. Back off slotted nut to nearest locking slot and install cotter pin. Check for endplay in bearings.

11. Fill dust cap half full of wheel bearing grease and install on hub with attachment bolts.

12. Install wheel. Refer to “Wheel Servicing” on page 3-17 for procedure.

NOTE: Wheel hubs on Kinze grain carts contain high strength ductile iron material. Replace hub with proper part.
PREPARATION FOR STORAGE

Store machine in a dry sheltered area.

Store hydraulic hoses in slot on PTO cover.

Store 7-pin electrical connector in holder.

**DANGER**

Entering the grain cart can result in death or serious injury.

- Never enter grain cart when there is an energy source attached to the cart.
- Flowing grain can trap and suffocate.
**PREPARATION FOR STORAGE (CONTINUED)**

---

**DANGER**

Entering the grain cart can result in death or serious injury.

- Never enter grain cart when there is an energy source attached to the cart.
- Flowing grain can trap and suffocate.

---

**WARNING**

Contacting rotating auger will cause death or serious injury. Never open or close cleanout door with auger operating.

Remove power source before working on equipment.

---

**WARNING**

Contact with rotating driveline will cause death or serious injury. Keep away at all times when operating.

Never operate without all guards and equipment shields properly installed.

---

Remove all trash that may be wrapped on shafts and remove dirt that can draw moisture.

Open auger cleanout door and clean out all accumulated grain and debris from auger chamber.

Wash machine inside and out.

After washing machine, leave cleanout door open ½" to allow for drainage.

Lubricate machine at all lubrication points.

If possible, remove weight from all tires, particularly if unit is stored outdoors.

Repaint any areas where paint has been removed. This is particularly important in the inside of grain tank. Rust in this area will shorten cart life and prevent grain from smoothly sliding to bottom of tank.

Inspect machine for parts in need of replacement and order during “off” season.

Coat exposed surface of all cylinder piston rods with grease or rust preventative spray.
HYDRAULIC HOSE LIFE

Pressurized hydraulic fluid can penetrate body tissue and result in death, serious infection, or other injuries. Fluid injected under skin must be IMMEDIATELY removed by a surgeon familiar with this type of injury. Make sure connections are tight and hoses and fittings are not damaged before applying system pressure. Leaks can be invisible. Keep away from suspected leaks. Relieve pressure before searching for leaks or performing any system maintenance.

Proper storage of hydraulic hoses can significantly increase the life of the hoses, for a period of three to five years. After this period, service life of hoses may decrease, depending on variables such as variances in rubber materials and storage environment. Refer to the guidelines below for best practices when storing.

- Store in a clean, cool and dry area
- Avoid direct sunlight or moisture
- Do not store near high power electrical equipment
- Avoid contact with corrosive chemicals
- Avoid ultraviolet light
- Avoid areas with obvious signs of insects or rodents

Unusually long periods of storage or poor storage environment may lead to performance issues or premature failure. Always inspect all hoses prior to use for extensive wear, cuts, or holes. If such flaws are identified, replace immediately to avoid potential failure, property damage or bodily injury.
HYDRAULIC CONTROL SCHEMATIC - MANUAL

Interlock Valve

Counter balance valve

Auger Fold

Tilt Spout

Flow Gate

White

Yellow

Red
Additional auxiliary work lights are available from Kinze Repair Parts which may be wired into existing auxiliary light wires in the harness. The vertical auger work light and tub light is wired into the black terminal connector.

Grain cart safety/warning lights are the LED type and meet ASAE standards. Check with tractor manufacturer for correct wiring harness to be wired into lights on your tractor.
MOISTURE SENSOR HARNESS ROUTING

- Harness to Enter Tub Here
- Use Supplied Grommet
- Cable Routed Into R.H. Side Of Frame
- Cable Exit Frame
- Connection Between Supplied Harnesses Approximate Location (48.5)
- Connection Between Supplied Harnesses Approximate Location
- To Tractor

SECTION C-C

DETAIL A

DETAIL B

DETAIL D
AUTOLOG SENSOR HARNESS ROUTING

Reuse Original Nut

DETAIL A

DETAIL B
ELECTRONIC SCALE

The major elements of the electronic scale are the indicator, four 30,000 lb (13607 kg) rated weigh beams at the axle assembly (applicable to track and flotation type carts) and 3¾" hitch weigh beam, the junction box (j-box) and the battery power cable.

For additional information see “Electronic Scale Troubleshooting” for step-by-step procedures for troubleshooting failures that may be encountered with the electronic scale.
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