****IMPORTANT NOTE****

****REPLACING SCREENS****

WHEN FACING THE MACHINE AT THE HOPPER END, IT IS IMPORTANT TO PUT THE SCREENS IN SO THAT THE OUTSIDE SEAM IS FACING THE RIGHT SIDE OF THE MACHINE. OTHERWISE THE SEAM WILL CATCH ON THE AUGER AND THE GRAN.

NOTE:

After 2 hours of operation, check all setscrews in sprockets and pulleys. Tighten if loose. Check again after 10 hours of use.

NOTE:

When installing screens, have the outside seam facing to the right side as you are looking from the hopper end.
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Read this manual before operating your Norwood equipment. The information presented will prepare you to do a better and safer job. Keep this manual handy for ready reference. Require all operators to read this manual carefully and become acquainted with all the adjustment and operating procedures before attempting to operate. Replacement manuals can be obtained from your dealer.

The equipment you have purchased has been carefully engineered and manufactured to provide dependable and satisfactory use. Like all mechanical products, it will require cleaning and upkeep. Lubricate the unit as specified. Observe all safety information in this manual and safety decals on the equipment.

Use only genuine Norwood service parts. Substitute parts will void the warranty and may not meet standards required for safe and satisfactory operation. Record the model number and serial number of your equipment in the spaces provided:

Model: __________________________  Date of Purchase: __________________________
Serial Number: __________________________

Provide this information to your dealer to obtain correct repair parts.

Throughout this manual, the term IMPORTANT is used to indicate that failure to observe can cause damage to equipment. The terms CAUTION, WARNING and DANGER are used in conjunction with the Safety-Alert Symbol, (a triangle with an exclamation mark), to indicate the degree of hazard for items of personal safety.

This Safety-Alert Symbol indicates a hazard and means ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!

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

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

CAUTION
Indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury.

IMPORTANT
Indicates that failure to observe can cause damage to equipment.

NOTE
Indicates helpful information.
UK Edition

Serial Number Location

Always give your dealer the serial number of your KWIK KLEEN Grain Cleaner when ordering parts or requesting service or other information.

The serial number plate is located where indicated. Please mark the number in the space provided for easy reference.
INTRODUCTION

Congratulations on your choice of a KWIK KLEEN Grain Cleaner. This equipment has been designed and manufactured to meet the needs of the discerning operator for the cleaning of grain.

The Kwik Kleen grain cleaner is designed as a portable cleaner for removing objects from the grain that are smaller than the seed size. A rotating auger moves the material over a tubular screen that allows the smaller material to pass through the openings.

It is the responsibility of the owner or operator to read this manual before using the Kwik Kleen. Follow all safety instructions exactly. Safety is everybody’s business. By following recommended procedures, a safe working environment is provided for the operator, bystanders and the environment.

Many of the features incorporated into the machine are the result of suggestions made by customers like you. Read the manual carefully to learn to operate the machine safely and how to set it to provide maximum efficiency. The manual will take you step-by-step through your working day. By following the operating instructions in conjunction with a good maintenance program, your Kwik Kleen will provide many years of trouble-free service.

Keep this manual handy for frequent reference and to pass on to new operators or owners. Call your dealer or distributor if you need assistance or information.

This manual covers Models 572 and 772. Differences are covered and explained where appropriate.

OPERATOR ORIENTATION: The directions left, right, front and rear, as mentioned throughout this manual, are as seen when standing at the rear (opposite the hitch) and facing the machine.
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 Grain Cleaner 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:

DANGER: An immediate and specific hazard which WILL result in severe personal injury or death if the proper precautions are not taken

WARNING: A specific hazard or unsafe practice which COULD result in severe personal injury or death if proper precautions are not taken

CAUTION: Unsafe practices which COULD result in personal injury if proper practices are not taken, or as a reminder of good safety practices.
2 - SAFETY

SAFETY INTRODUCTION

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

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

- Kwik Kleen owners must give operating instructions to operators or employees before allowing them to operate.
- The most important way to ensure safe operation is through yourself. It is the operator’s responsibility to read and understand ALL Safety and Operating instructions in the manual and to follow these.
- A person who has not read and understood all operating and safety instructions is not qualified to operate the machine.
- Do not modify the machine or its components in any way. Unauthorized modification may impair the function, safety, and service life of the machine. It may also void your warranty.

GENERAL SAFETY

1. Read and understand the Instructions Manual and all safety signs before operating, maintaining or adjusting the machine.
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 effectively operate it.
4. Do not, under any circumstances, allow riders.
5. Wear appropriate Personal Protective Equipment (PPE). This includes:
   a. Hard hat
   b. Protective shoes
   c. Protective glasses/goggles
   d. Heavy gloves
   e. Wet weather gear when necessary
   f. Hearing protection
   g. Respirator/filter mask
6. Check to be sure that all guards are installed and secure prior to each use.
7. Be sure to follow all transportation guidelines as laid out on page
8. Review all safety related items with all personnel annually.
UK Edition

OPERATING SAFETY

1. Read and understand the entire Operator’s Manual and all safety items prior to use.
2. Make sure that all guards and shields are installed and secure prior to operation.
3. Keep all hands, feet, hair and clothing away from all moving and/or rotating parts.
4. Clear the area of people, children, animals and pets prior to beginning use.
5. Do not set up the Kwik Kleen near overhead power lines while tailings auger is extended.
6. Before applying pressure to the hydraulic system, make sure all components are tight and that steel lines, hoses and couplings are in good condition according to the maintenance instructions portion of this manual.
7. Review these instructions at least annually.

SAFETY DECALS

1. It is important to keep all safety decals and signs clean and legible at all times. This can be done simply by periodically wiping them off with a rag or cloth.
2. Replace all safety decals and signs that are missing or have become illegible.
3. For parts which display a safety sign, should their replacement be necessary, the new part should also display the sign.
4. Safety Decals or signs are available from the dealer from whom you purchased your Kwik Kleen.

MAINTENANCE SAFETY

1. Review this entire Instructions Manual and all related safety items prior to maintaining or cleaning the Kwik Kleen.
2. Shut off power to the machine, disconnect power source and wait for all moving parts to come to a complete stop prior to servicing, adjusting, or repairing the machine.
3. Before applying pressure to the hydraulic system, be sure that all components are tight and that all steel lines, hoses and couplings are in good condition.
4. Relieve pressure from hydraulic circuit before servicing or disconnecting the system from the tractor.
5. Keep hands, fee, clothing and hair away from all moving, rotating, and sharp-edged parts while performing maintenance.
6. After maintenance is complete, reinstall all guards and shields removed for servicing prior to resuming work.
7. Clear the area of bystanders while carrying out maintenance, repairs, or adjustments.
8. Place safety stands or blocks under the frame prior to working beneath the machine.
9. Note: all maintenance specs are described on page... of this manual.
HYDRAULIC SAFETY

1. Shut off power to machine, disconnect power source, and wait for all moving parts to stop prior to servicing, adjusting, or repairing the Kwik Kleen.
2. Make sure that all components in the hydraulic system are kept in good condition as described on page...
3. Replace any worn, cut, abraded, flattened, or cramped hoses. This procedure is described on page...
4. Do NOT attempt makeshift repairs to hydraulic hoses or fittings. Only the appropriate parts listed on page... should be used in the hydraulic system.
5. Wear safety glasses and puncture-resistant gloves while searching for a high-pressure hydraulic leak. Use a piece of cardboard as a backstop instead of hands to isolate and identify a leak.
6. If injured by a high-pressure stream of hydraulic fluid, seek medical attention immediately. Serious infection or toxic reaction can develop.
7. Before applying pressure to the system, make sure all components are tight and that hoses and fittings are in good condition.
8. Use of non-flammable,

TRANSPORT SAFETY

1. Read and understand ALL information in the Instructions Manual regarding procedures and safety when transporting the Kwik Kleen.
2. Check with local authorities regarding transportation on public roads. Obey all applicable laws and regulations.
3. Always travel at a safe speed. Use caution when making corners or meeting traffic.
4. Be sure that all lights and reflectors are in place, are clean, and can be seen clearly by all overtaking and oncoming traffic.
5. Ensure that the machine is hitched positively to the towing vehicle.
6. Keep to the right and yield the right-of-way to allow faster traffic to pass. Drive on the road shoulder so long as it is permitted by law.
7. Do not exceed 20 mph during transportation. Reduce speed as necessary on rough roads and surfaces.
8. Always use hazard warning flashers on tractor when transporting unless prohibited by law.

STORAGE SAFETY

1. Store your Kwik Kleen in an area away from frequent human or animal activity.
2. Do not allow children to play on or around the Kwik Kleen while in storage.
3. If possible, store the Kwik Kleen in a dry, clean atmosphere so as to prevent formation of rust and other corrosion.
UK Edition

Anyone who will be operating and/or maintaining the grain cleaner must read and clearly understand ALL safety, operating and maintenance information presented in this manual. Do not operate or allow anyone else 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. An untrained operator is UNQUALIFIED to operate this machine.

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

**SIGN-OFF FORM**

<table>
<thead>
<tr>
<th>DATE</th>
<th>EMPLOYEE'S SIGNATURE</th>
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</tbody>
</table>
3 – SAFETY DECAL LOCATIONS

The types of decals and locations on the equipment are shown in the illustration below. Good safety requires that you familiarize yourself with the various safety decals, the type of warning, and the area, or particular function related to that area, that requires your safety awareness.

Note: If safety decals have been damaged, removed, become illegible or in the case of parts replaced without decals, new decals must be applied. New decals are available from your authorized dealer.
The types of decals and locations on the equipment are shown in the illustration below. Good safety requires that you familiarize yourself with the various safety decals, the type of warning and the area, or particular function related to that area, that requires your safety awareness.

Note: If safety decals have been damaged, removed, become illegible or in the case of parts replaced without decals, new decals must be applied. New decals are available from your authorized dealer.
4 – Operation

SAFETY

1. Read and understand the entire Operator’s Manual and all safety items prior to use.
2. Make sure that all guards and shields are installed and secure prior to operation.
3. Keep all hands, feet, hair and clothing away from all moving and/or rotating parts.
4. Clear the area of people, children, animals and pets prior to beginning use.
5. Do not set up the Kwik Kleen near overhead power lines while tailings auger is extended.
6. Before applying pressure to the hydraulic system, make sure all components are tight and that steel lines, hoses and couplings are in good condition according to the maintenance instructions portion of this manual.
7. Review these instructions at least annually.

Machine Components

The Kwik Kleen grain cleaner is a set of 5 (Model 572) or 7 (Model 772) rotating augers, powered by a hydraulic motor, contained within tubular screens. As the augers move the material past the screens, centrifugal force propels the smaller objects through the openings in the screens. Brush or steel augers are available as required. Tailings are collected by the frame and moved to the discharge auger which expels them from the machine via a tailings auger. Clean grain is conveyed to the rear of the machine by the augers.

A: Hopper
B: Screens
C: Augers (under screens)
D: Augers (under screens)
E: Hydraulic Control
F: Hydraulic Motor
G: Clean Grain Discharge
H: Drive System
I: Tailings Auger
(772 Model)
**BREAK-IN**

Although there are no operational restrictions on the Kwik Kleen when it is used for the first time, it is recommended that the following mechanical items be checked:

A. After operating for ½ hour:
   1. Re-torque the wheel bolts
   2. Re-torque all other fasteners and hardware
   3. Check that all hydraulic components are tight, not leaking and in good condition. Be sure that hoses are not being pinched or rubbed. Adjust as required.
   4. Check belt tension

B. After 5 & 10 hours of operation:
   1. Re-torque all wheel bolts, fasteners and hardware
   2. Check that hydraulic components are tight, not leaking and in good condition. Be sure that none are being pinched or rubbed. Adjust as required.
   3. Check belt tension
   4. Reset setscrews in drive sprockets.
   5. Check all locking collars on auger bearings and tighten if necessary.

**PRE-OPERATION CHECKLIST**

Efficient and safe operation of the Kwik Kleen requires that each operator reads and understands the operation procedures and all related safety precautions outlined in this section. A pre-operation checklist is provided for the operator. It is important for both personal safety and maintaining the good mechanical condition of the machine that this checklist be followed.

Before operating the unit and each time thereafter, the following areas should be checked off:

1. Lubricate the machine per the schedule outlined in the Maintenance Section
2. Use only a towing vehicle of adequate power and weight to transport the Kwik Kleen.
3. Ensure that the machine is properly attached to the towing vehicle. Be sure that the hitch pin has a machine retainer and the safety chain is attached.
4. Check the hydraulic system. Ensure that the hydraulic reservoir of the powering unit is filled to the required specifications.
5. Inspect all hydraulic lines, hoses, fittings and couplers for tightness. Use a clean cloth to wipe any accumulated dirt from the couplers prior to starting.
6. Be sure the working area is dry.
7. Be sure the tailings and clean grain removal systems are in place and functioning properly.
8. Be sure the tailings auger is well away from power lines (at least 20ft [6m]).
9. Be sure the drive system guard is closed and properly secured.
UK Edition

CONTROLS

The machine is controlled by valves located at the panel on the left rear of the machine. Each operator should review the position and function of each control before starting.

1. For hydraulic power:
   a. ON/OFF Control:
      The system is turned ON or OFF by the operator by moving the hydraulic control lever in the power unit
   b. System Valve:
      Closed or open center hydraulic systems can be used with the machine. To match the power and machine systems, the system valve will have to be set. Turn the valve to the ON position (parallel to line) when using with an open center system. Turn to the OFF (90 deg. to line) position for a closed-center system. Always set before starting. Refer to tractor manual to determine tractor hydraulic system type.
   c. Machine Speed:
      Machine speed is determined by the amount of oil flowing through the hydraulic motor. This flow rate is changed by adjusting the circuit flow control or changing engine RPM. Do not exceed 650 engine RPM as excessive vibration may occur.
ATTACHING TO VEHICLE

The machine is designed to be attached to a tractor or a truck. When attempting to attach the machine, follow this procedure:

1. Clear the area of bystanders, animals, or children before beginning.

2. Make sure that the vehicle that you are attaching to is an appropriate towing vehicle.

3. Slowly back the vehicle up to the front side of the Kwik Kleen.

4. Since the machine’s hitch is designed to be removed during operation, you must first install it before trying to attach to the vehicle.

5. Slide the hitch onto the bracket located at the center front of the machine.

6. Raise the front of the machine until the hitch pole is able to be locked into place with the mechanical retaining pin. (See Figure 1)

7. With the hitch in place, lift the front of the Kwik Kleen to the appropriate height corresponding to the vehicle’s hitch height.

8. Connect the machine’s hitch to the vehicle’s hitch and secure using only an appropriate mechanical retainer.

9. Connect the electrical plug for the lights.

10. To detach the Kwik Kleen from a vehicle follow these steps in reverse order.
OPERATING

Although the Kwik Kleen is simple and easy to use, it is recommended that the operator review this section before starting to familiarize themselves with operational details. When using the machine, follow this procedure:

1. Clear the area of bystanders, especially small children before starting.
2. Unhook the machine from the towing vehicle (refer to 4.6).
3. Maneuver the machine into its working position. (Provide sufficient room for the transport truck to back up to the hopper).

DANGER: Stay away from overhead electrical lines when moving the machine with the tailings auger folded out. Stay at least 20 feet (6 meters) away from the lines. ELECTROCUTION CAN OCCUR WITH DIRECT CONTACT.

4. Position the systems or equipment to remove the clean grain and tailings. It is the responsibility of the operator to ensure that systems are installed to remove the clean grain and tailings.
5. Check the machine to be sure that the appropriate screens are installed (Refer to 5.2 for installation procedure).
6. Use Table 1 as a guide in selecting the appropriate screen.

Note: Grain and operating conditions vary widely in the field. The operator may have to change the screen, auger type, or RPM to obtain desired results.

<table>
<thead>
<tr>
<th>Screen Size</th>
<th>Grain Type</th>
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<tbody>
<tr>
<td>7/64</td>
<td>wheat, barley, oats, rice</td>
</tr>
<tr>
<td>1/8</td>
<td>wheat, barley, oats, soybeans</td>
</tr>
<tr>
<td>5/32</td>
<td>soybeans, sunflowers</td>
</tr>
<tr>
<td>3/16</td>
<td>soybeans, sunflowers, corn</td>
</tr>
<tr>
<td>1/4</td>
<td>corn, confectionary sunflowers</td>
</tr>
<tr>
<td>3/8</td>
<td>size confectionary sunflowers</td>
</tr>
<tr>
<td>3/32 x 3/4</td>
<td>size barley</td>
</tr>
<tr>
<td>7/64 x 3/4</td>
<td>size barley</td>
</tr>
<tr>
<td>1/8 x 3/4</td>
<td>corn, beans</td>
</tr>
</tbody>
</table>
7. **Provide Power:**
   a. Use a clean cloth or paper towel to clean the dirt and build up from around the couplers and the male tips.
   b. Insert the male ends into the couplers. Make sure they are locked in place.
   c. Route the hoses in a way that they will not be obstructive to the operator and secure with clips or ties.
   d. Set the system valve for open or closed-center hydraulics.
   e. Use the tractor flow control or RPM to set the oil flow volume and machine RPM. DO NOT ALLOW THE RPM TO EXCEED 650.

8. **Remove the hitch pole by raising the front frame slightly and removing the pin.** (Figure 1)

9. **Use the jacks on each wheel strut to raise the frame. Start with the jacks raised 9 inches (230 mm) above their lowest point.**

10. **If located on uneven ground, the jacks can be used to level the machine. Simply raise and lower each jack until you have obtained the desired position.** (Figure 2)

11. **Slowly back the truck up to the machine. Be sure that all people (workers and bystanders) and animals are out of the way.**

12. **Start the cleaner.**
   a. Start the engine to the remote hydraulic pump and engage the system.
   b. Be sure the systems are matched and the speeds are set as desired.

13. **Start the equipment to remove the clean grain and tailings.**

14. **Raise the hoist on the truck to unload and open the truck gate.**

15. **Open the hopper feed gate approximately 1 inch (100 mm) to start. It can be opened further until desired feed rate and cleaning results are obtained.** (Figure 3)
16. Operating hints:
   a. Maximum capacity is obtained when the machine is set at lower angles.
      i. Raise the unit higher or close feed gate if some foreign material is left in the grain.
      ii. Lower the machine or decrease RPM if the grain is clean and cracked.
   b. The best results are obtained when the augers are set to run at 500 to 600 RPM. Never exceed 650 RPM as excessive vibration may occur.
   c. Change speed on the hydraulic models by changing oil volume through the system.
   d. The cleaner can effectively be used to remove weed seed and insects from the grain and size certain types of seeds.
   e. Slow the auger speed and lower the angle when cleaning grain that cracks or chips easily. Try various settings to ensure complete cleaning.
   f. Use of the brush augers is recommended when cleaning peas, edible beans, or other crops that crack or chip easily. Reduce the angle and slow the auger speed.
   g. The spring loaded hopper prevents machine damage when unloading.
TRANSPORTING

The machine is designed to be easily and conveniently moved from location to location. When transporting, follow this procedure:

1. Clear the area of bystanders, especially small children, before starting.
2. Install the hitch pole to the front of the machine and secure with retainers.
3. Attach to the towing vehicle using a pin with provisions for a mechanical retainer.
4. Install and secure the safety chain.
5. Unhook the hydraulic hoses from the power unit and stow away.
6. Move tailings auger to the folded position.
7. Use the jacks to lower the machine.
8. Clean all lights and reflectors.
9. DO NOT allow riders on the machine.
10. Never exceed a safe travel speed (20 mph, 32km/hr).
11. Always use hazard flashers on the tractor.

STORAGE

At the end of the season, the machine should be thoroughly inspected and prepared for storage. Repair or replace any worn or damaged components to prevent any unnecessary down time at the beginning of the next season. To prepare for storage, follow this procedure.

1. Wash the machine thoroughly using a water hose or pressure washer to remove all dirt, mud, debris and residue.
2. Remove any twine, wire or other material that has become entangled in moving parts.
3. Inspect all hydraulic hoses, lines, fittings and couplers. Tighten any loose fittings. Replace any hose that is badly cut, nicked, abraded or is separating from the crimped end of the fitting.
4. Touch up all paint nicks and scratches to prevent rusting.
5. Store in an area that is dry, level, and free of debris.
6. Unhook from towing vehicle.
7. Store the unit in an area away from human activity.
8. DO NOT permit children to play on or around the stored machine.
5 - SERVICE AND MAINTENANCE

MAINTENANCE SAFETY

1. Review this entire Instructions Manual and all related safety items prior to maintaining or cleaning the Kwik Kleen.

2. Shut off power to the machine, disconnect power source and wait for all moving parts to come to a complete stop prior to servicing, adjusting, or repairing the machine.

3. Before applying pressure to the hydraulic system, be sure that all components are tight and that all steel lines, hoses and couplings are in good condition.

4. Relieve pressure from hydraulic circuit before servicing or disconnecting the system from the tractor.

5. Keep hands, fee, clothing and hair away from all moving, rotating, and sharp-edged parts while performing maintenance.

6. After maintenance is complete, reinstall all guards and shields removed for servicing prior to resuming work.

7. Clear the area of bystanders while carrying out maintenance, repairs, or adjustments.

8. Place safety stands or blocks under the frame prior to working beneath the machine.

9. Note: all maintenance specs are described on page... of this manual.

SERVICE

1. Grease: Use an SAE multi-purpose high temperature grease with extreme pressure (EP) performance. Also acceptable is an SAE multi-purpose lithium base grease.

2. Use an SAE 15W non-foaming hydraulic oil for all operating conditions.

3. Storing lubricants: Your machine can operate at top efficiency only if clean lubricants are used. Use clean containers to handle all lubricants. Store them in an area protected from dust, moisture and other contaminants.

GREASING:
Use the maintenance checklist provided to keep a record of all scheduled maintenance.

1. Use only a hand-held grease gun for all greasing. Air powered greasing systems can damage the seals on bearings and lead to early bearing failure.

IMPORTANT
Over greasing can damage bearing seals. A damaged seal will lead to early bearing failure. Replace all bearings with damaged seals immediately.

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

3. Replace and repair broken fittings immediately.

4. If a fitting will not take grease, remove and clean thoroughly. Also clean lubricant passageway. Replace fitting if necessary.
UK Edition

**SERVICING INTERVALS**

**Weekly or 40 Hours:**

1. Check the condition of the roller chains.

**Annually or 250 hours:**

1. Repack wheel bearings (both sides).
2. Check bearings on auger shafts.
**SERVICE RECORD**

See Lubrication and Maintenance sections for details of service. Copy this page to continue records.

<table>
<thead>
<tr>
<th>Maintenance</th>
<th>Hours:</th>
<th>Serviced By:</th>
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<tr>
<td>Tension of Input Drive Belt</td>
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<tr>
<td>Condition of Roller Chains</td>
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<td><strong>Annually or 250 Hours</strong></td>
<td></td>
<td></td>
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<tr>
<td>Wheel Bearings</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Auger Shaft Bearings</td>
<td></td>
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</tr>
</tbody>
</table>
MAINTENANCE

By following a careful service and maintenance program for your machine, you will enjoy many years of trouble free operation.

SCREEN REPLACEMENT

The screens are easily removed and require changing when going to a new grain. To change screens, follow this procedure:

1. Clear the area of bystanders, especially small children, before starting.

2. Disconnect all hydraulic hoses.

3. Move the machine to an area where it is accessible from all sides.

4. Place a safety stand under the front frame so the frame is at a convenient working height.

5. Remove the hitch pole.

6. Loosen and remove the 2 bolts holding the upper hopper in place.

7. Remove the upper hopper.

8. Loosen the screen clamps.

9. Slide the screen to within a few inches of the bearing plate.

10. Remove the 4 bearing plate mounting bolts.

11. Remove the 3 bearing flange bolts.

12. Leave the bearing on the shaft.
13. Slide the screen out the end of the frame. Support the screen as it is being removed. Rotating screens may result in easier removal. (Figure 3)


15. Install the bearing plate with the bearing flange bolt pointing up. Lift up on the bearing plate while tightening the four bolts.

16. Slide the screen all the way in until the end is seated in its retainer bracket.

17. Tighten the screen clamp.

18. Repeat with the other screens.

19. Install and secure the hopper.

20. Install the hitch pole.

21. Remove the safety stand.
AUGER REPLACEMENT

Brush or steel flighting is available on the auger. The brush auger is normally used with grain that is susceptible to cracking. To change augers, follow this procedure:

1. Clear the area of bystanders, especially small children.
2. Disconnect all hydraulic hoses.
3. Move the machine to an area where it is accessible from all sides.
4. Place a safety stand under the front frame so the frame is at a convenient working height.
5. Remove the hitch pole.
6. Loosen and remove the 2 bolts holding the upper hopper in place.
7. Remove the hopper.
8. Remove the drive chain and sprocket from auger shaft. Loosen locking collar on bearing on discharge end of the auger.
9. Remove the 4 bearing plate mounting bolts.
10. Remove the 3 bearing flange bolts.
11. Pull the auger out of the machine.
12. Remove the bearing from the auger.
13. Install the bearing on the replacement auger.
14. Slide the auger into the machine and secure with mounting bolts.
15. Install bearing plate with a bearing flange bolt pointing up. Lift up on bearing plate while securing four bolts.
16. Repeat with the other augers.
17. Install and secure the hopper.
18. Install the hitch pole.
19. Remove the safety stand.
# 6 – TROUBLE SHOOTING

The Triangle Industries Kwik Kleen grain cleaner uses a series of augers to move grain through tubular screens for cleaning. It is a simple system that requires minimal maintenance.

In the following trouble shooting section, we have listed many of the problems, causes and solutions to the problems that you might encounter.

If you encounter a problem that is difficult to solve, even after having read through this trouble shooting section, please contact your local dealer or distributor. Before you call, please have this Operator’s Manual and the serial number from your machine at hand.

<table>
<thead>
<tr>
<th>PROBLEM</th>
<th>CAUSE</th>
<th>SOLUTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Machine doesn’t run.</td>
<td>No power.</td>
<td>Connect and start power supply.</td>
</tr>
<tr>
<td>Cracked grain.</td>
<td>Running too fast.</td>
<td>Slow machine down.</td>
</tr>
<tr>
<td></td>
<td>Screen too large.</td>
<td>Replace screen to one with smaller openings.</td>
</tr>
<tr>
<td></td>
<td>Angle too steep.</td>
<td>Lower machine angle.</td>
</tr>
<tr>
<td></td>
<td>Wrong auger.</td>
<td>Change to brush auger.</td>
</tr>
<tr>
<td>Grain not clean.</td>
<td>Running too slow.</td>
<td>Increase machine speed.</td>
</tr>
<tr>
<td></td>
<td>Angle too shallow.</td>
<td>Increase angle of machine.</td>
</tr>
<tr>
<td></td>
<td>Wrong auger.</td>
<td>Change to metal flighting auger.</td>
</tr>
<tr>
<td></td>
<td>Screen too small.</td>
<td>Replace screen to one with larger openings.</td>
</tr>
</tbody>
</table>
7 – SPECIFICATIONS/FEATURES

MECHANICAL

- Adjustable feed gate.
- Height and leveling adjustment.
- Special sizing screens available upon request.
- Heavy gauge unitized construction.
- Low profile.
- Hydraulic drive.
- Six standard screen sizes available: 7/64, 1/8, 5/32, 3/16, 1/4, 1/8, 1/8 x 3/4 slot (inches)
  - Refer to Table 1 for selection
- Assembled Weight: 4230 N (572 model), 5120 N (772 model)
- Overall Dimensions (m) (Variable Height): 2.74L x 1.47W (572 model), 2.74L x 1.83W (772 model)
- Operational Capacity: 2500 BPH (572 model), 3500 BPH (772 model)
- Noise Emission: Average 93dB operating noise

HYDRAULIC SYSTEM

- Maximum recommended fluid contamination: 20/18/13
- Recommended working fluid temperature range: -34°C – 82°C
- Recommended fluid: premium quality, anti-wear, anti-flammable hydraulic oil
- Maximum flow rate: 55 Lpm (572 model) 75 Lpm (772 model)
- Maximum working pressure: 155 Bar (572 model) 205 Bar (772 model)
CE Declaration of Conformity

Manufacturer: Norwood Sales Inc.
11202 38th Street SW
Horace, ND 58047
United States of America

Telephone Number: 888-446-0316

Product: Kwik Kleen Grain Cleaner
Models: 572, 772
Starting Date: November 20, 2013

We declare, under our sole responsibility, the above-referenced products, to which this declaration relates, are in conformity with the provisions of:

ISO 12100: 2010

The Technical File required by these Directives is maintained at the headquarters of Norwood Sales Inc.,
11202 38th Street SW, Horace, ND 58047 USA.

Dan Norwood
President
## Warranty

### Warranty Registration

<table>
<thead>
<tr>
<th>Customer's Name</th>
<th>Dealer's Name</th>
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<table>
<thead>
<tr>
<th>Address</th>
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<th>Delivery Date</th>
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<tbody>
<tr>
<td></td>
<td>Commercial Use</td>
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<tr>
<td></td>
<td>Farm Use</td>
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</tbody>
</table>

### Dealer Inspection Report

- [ ] Wheel Nuts Tight
- [ ] Tire Pressure
- [ ] Fasteners Tight
- [ ] All Decals Installed
- [ ] Signal Lights Work Properly
- [ ] Safety Chain Installed
- [ ] Review Operating & Safety Instructions
- [ ] Operator Manual Supplied

I have thoroughly instructed the buyer on the above described equipment including a review of the Operator’s Manual content, equipment care, adjustments, safe operation and applicable warranty policy.

Date _______________  Dealer’s Signature _______________

I have received the above equipment and Operator’s Manual and I have been thoroughly instructed on its care, adjustments, safe operation and applicable warranty policy.

Date _______________  Owner’s Signature _______________
**Warranty**

**Limited Warranty Policy**

**Norwood Sales Inc.** warrants to the buyer that the new machinery is free from defects in material and workmanship.

This warrant is only effective on new machinery, which has not been altered, changed or repaired since its delivery to the buyer.

**Norwood Sales Inc.** shall only be liable for defects in materials or workmanship and specifically excludes liability for repairs arising as a result of normal wear and tear of the new machinery and without limiting the generality of the foregoing, excludes application or installation of parts not completed in accordance with **Norwood Sales Inc.** operator's manual, specifications, or printed instructions.

Written notice shall be given by registered mail, to **Norwood Sales Inc.** within seven (7) days after the defect shall have become apparent or the repairs shall have become necessary, addressed as follows: **Norwood Sales Inc., 11202 38th Street South, Horace, ND 58047.**

This warranty shall expire one (1) year after the date of delivery of the new machinery.

If these conditions are fulfilled, **Norwood Sales Inc.** at its option will either repair or replace any defect. The buyer shall be responsible for all expenses incurred as a result of repairs, labor, parts, transportation or any other work, unless **Norwood Sales Inc.** authorizes such expenses in advance.

The warranty shall not extend to any repairs, changes, alterations, or replacements made to the new equipment other than by **Norwood Sales Inc.** or its authorized dealers.

This warranty extends only to the original owner of the new equipment.

This warranty is limited to the terms stated herein and is in lieu of any other warranties whether expressed or implied, and without limiting the generality of the foregoing, excluded all warranties, expressed or implied or conditions whether statutory or otherwise as to quality and fitness for any purpose of the new equipment. **Norwood Sales Inc.** disclaims all liability for incidental or consequential damages.

This machine is subject to design changes and **Norwood Sales Inc.** shall not be required to retro-fit or exchange items on previously sold units except at its own option.