

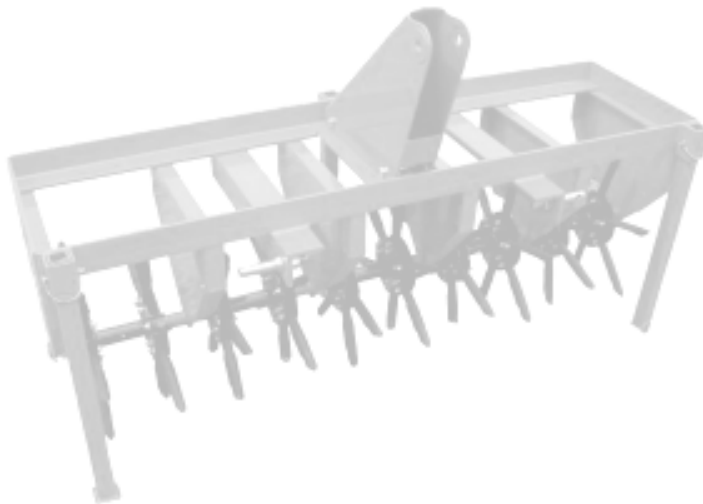


## Operation and Service Manual

### 20 SERIES AERATORS

for models

AE20-48, AE20-60 & AE20-72



**Cammond Industries**

*A Subsidiary of Superior Fabrication, Inc.*

902 Arlington Center, PMB 225

Ada, OK 74820

1-800-843-8354

# Thank you for choosing CAMMOND!

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The purpose of this manual is to assist you in operating and maintaining your Aerator for years of service. The information and instructions in this manual may be general in nature do to unknown and varying field conditions and operating conditions, However, through experience and these instructions you should be able to develop procedures suitable to your situation.

## General Safety Information

Note the use of the signal words Danger, Warning and Caution with the safety messages. The appropriate signal word each has been selected using the following guidelines:



### **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.

Safety of the operator is one of the main concerns when designing and developing a new piece of equipment. You, the operator, can avoid many accidents by observing the following precautions in this section.

- Replace any CAUTION, WARNING, DANGER or instruction safety decal that is not readable or is missing.
- Do not attempt to operate this equipment under the influence of drugs or alcohol.
- Review the safety instructions with all users.

This equipment is dangerous to children and persons unfamiliar with its operation. The operator should be a responsible adult familiar with the equipment and its operation. Do not allow persons to operate this unit until they have developed understanding of the safety precautions and of how it works.

To prevent injury or death, use a tractor equipped with a Roll Over Protective System (ROPS). Do not paint over, remove or deface any safety signs or warning decals on your equipment, Observe all safety signs and practice instructions on them.

Never exceed the limits of a piece of machinery. If its ability to do a job, or to do so safely, is in question – Don't try it.

Remember - Your best assurance against accidents is a careful and responsible operator. If there is any portion of this manual or function you do not understand, contact your local dealer or manufacturer.

If you have questions not answered in this manual or require additional copies or the manual is damaged, please contact your dealer or Cammond Industries.



### **Warning!**

For non-agricultural use OSHA, ASAE, SAE and ANSI standards require the use of appropriate protective guards at all times. The manufacturer strongly recommends the use of such guards for agricultural uses as well, to reduce the risk of property damage, serious bodily injury or even death from objects thrown out by or from contact with the cutting blades.

## Preparation

Before Operation - Carefully study and understand this manual.

- Do not wear loose-fitting clothing, which may catch in moving parts.
- Always wear protective clothing and substantial shoes.
- It is recommended that suitable protective hearing and eye protection be worn.
- The operator may come in contact with certain materials, which may require specific safety equipment, relative to the handling of such materials.
- Keep wheel lug nuts or bolts tightened to specific torque.
- Assure that agricultural implement tires are evenly inflated.
- Give the unit a visual inspection for any loose bolts, worn parts or cracked welds, and make necessary repairs. Follow the maintenance safety instructions included in this manual.
- Be sure that there are no tools lying on or in the equipment.
- Do not use the unit until you are sure that the area is clear, especially children and animals.
- Because it is possible that this equipment may be used in dry areas or in the presence of combustibles, special precautions should be taken to prevent fires and fire-fighting equipment should be readily available.
- Clear area of debris.
- Never permit any person, other than the operator, to ride on board the tractor at any time.
- DO NOT allow riders on implement at any time. Operate only in daylight or good artificial light. ALWAYS wear relatively tight and belted clothing when operating implement. Loose clothing should not be worn, as it could get caught in the moving parts or controls.
- A minimum of 20% of the tractor and equipment weight must be on the tractors front wheels with the box scraper in transport position. Without this weight, the tractor could tip over causing personal injury or death. The weight may be attained with front wheel weights, ballast in tires or front tractor weights. When attaining the minimum 20% weight on the front wheels, you must not exceed the Roll Over Protection Structure (ROPS) weight certification. Weigh tractor and equipment. Do not guess or estimate.

Don't hurry the learning process or take the unit for granted. Ease into it and become familiar with your new equipment. Practice operation of your equipment and its attachments. Completely familiarize yourself and other operators with its operations before using

## Attaching Unit

- The implement should be placed on level ground. Place the 3-point lift arm control in “position control” (non-floating) for attaching and detaching the rear-mounted implement. “Draft control” or “Position control” can be used while operating. Attach the top link to the top hitch mount and adjust so that the frame will be level in the operating position.
- Back the tractor until the ends of the lift arms can be attached to the bottom clevis pins on the implement. Secure the lift arms to the clevis pins.
- Slowly lift the implement 3” from the ground. Remove the pin from the legs and remove legs. The legs may be reversed and stored inverted in the sockets by replacing the pins or unit may be used without legs.
- Slowly move Aerator throughout the lift cycle of the tractor watching for interference between Aerator and tractor. Adjust top link if necessary to provide additional clearance.

## Operating Safety

- **NO PASSENGERS ALLOWED-** Do not carry passengers anywhere on, or in, the tractor or equipment, except as required for operation.
- Keep hands and clothing clear of moving parts.
- Do not clean, lubricate or adjust your equipment while it’s moving.
- When halting operation, even periodically, set the tractor or towing vehicle brakes, disengage the PTO, shut off the engine and remove the ignition key.
- Be especially observant of the operating terrain. Always inspect the area prior to operation.
- Do not operate near the edge of drop offs or banks.
- Do not operate on steep slopes as overturn may result.
- Operate up and down (not across) intermediate slopes. Avoid sudden starts and stops.
- Maneuver the equipment at safe speeds.
- Do not walk or work under raised components unless securely positioned and blocked.
- Never stand alongside of unit with engine running or attempt to start engine and/or operate machine while standing alongside or unit.
- Never leave running equipment attachments unattended.

## Operating Instructions

- Lower the Aerator as much as possible and securely support before making any adjustment.
- Level the implement from side to side and front to rear using adjustments on the tractor's 3-point lift system.
- With the tractor stopped, lower 3-point of tractor down until all weight is off tractor.
- Pull ahead slowly to start tine spools rotating. Increase speed up to a max of 5MPH.
- Care should be exercised during use of the Aerator to prevent hanging the tine points on impenetrable objects or otherwise use the implement under conditions beyond its designed capacity.

### Adding Weight

- Weight may be added to the Aerator by installing bricks, sand bage, blocks, ect., if securely fastened to frame.



### Warning!

Do not allow riders for extra weight!

## Maintenance Safety

The equipment you have purchased has been carefully engineered and manufactured to provide dependable and trouble-free use. Like all mechanical products, it will require cleaning and upkeep. Good maintenance is your responsibility. Poor maintenance is an invitation to trouble.

Before working on this machine, stop the towing vehicle, set the brakes, disengage the PTO and all power drives, shut off the engine and remove the ignition keys.

Be certain all moving parts on attachments have come to a complete stop before attempting to perform maintenance.

- Always use a safety support to block the wheels.
- Always use the proper tools or equipment for the job at hand.
- Use extreme caution when making adjustments.
- Never use your hand to locate a hydraulic leak on attachments. Use a small piece of cardboard or wood. Hydraulic fluid escaping under pressure can penetrate the skin.
- Openings in the skin and minor cuts are susceptible to infection from hydraulic fluid. If injured by the escaping hydraulic fluid, see a doctor at once. Without immediate medical treatment, serious infection can occur.
- After servicing, be sure all tools, parts and service equipment are removed.
- Do not allow grease or oil to build up on any step or platform.
- A fire extinguisher and first aid kit should be kept readily accessible while performing maintenance on this equipment

## Servicing Instructions

- Inspect your implement periodically and replace any worn or broken parts in order to have it ready for use when needed.
- Store the implement out of the weather when it is not in use. This helps prevent rusting of the blades and other components.
- Spools should be greased before every use with multi-purpose grease.
- Tines should be cleaned immediately after each use. Tines can become clogged with debris. This can be removed with the use of a tool such as a screwdriver or hard pointed object.

## Shut Down/Removal and Storage

Following operation, or when unhitching, stop the tractor or towing vehicle, set the brakes, disengage the PTO and all power drives, shut off the engine and remove the ignition keys.

### Removal

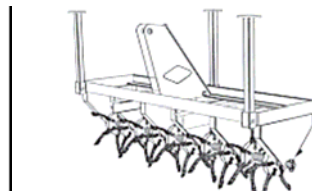
- Replace the legs in the standing position.
- Lower the Aerator to the ground with 3-point lift arm control in “position control”.
- Remove top link from top hitch mount, disconnect hitch arms from bottom clevis pins and pull tractor away from implement.

### Shut Down and Storage

- Store the unit in an area away from human activity.
- Do not park equipment where it will be exposed to livestock for long periods of time.
- Do not permit children to play on or around the stored unit.
- Make sure all parked machines are on a hard, level surface and engage all safety devices.
- Wheel chocks may be needed to prevent unit from rolling.



Storage position



Working position

## Highway and Transportation Operations

- Comply with state and local laws governing highway safety and movement of farm machinery on public roads.
- Use appropriate accessory lighting flags and necessary warning devices to protect operators of other vehicles on the highway during daylight and nighttime transport.
- Various safety lights and devices are available from your dealer.

# CAMMOND INDUSTRIES PRODUCT WARRANTY

Cammond Industries warrants its new equipment to be free of defects in material and workmanship at the time of delivery to the first retail purchaser. All equipment is warranted for six (6) months from the date of purchase by the first retail customer. Cammond will repair or replace, at its option, without charge for parts and labor, any defective part of the equipment during the six (6) months. All warranty work will be done by an authorized dealer or at the factory. Any work performed by the dealer must be authorized by the factory and charges will be determined based on the factory-approved rate. This warranty does not include transportation of equipment to the dealer or the factory, or the removal or replacement of any products attached to Cammond equipment. It is the responsibility of the owner, at the owner's expense, to transport the equipment to the service shop or an authorized dealer or alternatively to reimburse the dealer for any travel or transportation expense involved in fulfilling this warranty.

EXCEPTIONS TO THIS WARRANTY: This warranty will not apply in the following cases:

1. Warranty registration card is not completed and returned to Cammond Industries, 902 Arlington Center, PMB 225, Ada, OK. 74820
2. Normal wear of components and structure.
3. Damage caused by accident, fire, flood, abuse, negligence, alterations, lack of performance or lack of required maintenance.
4. Replacement of maintenance items such as hoses, hydraulic cylinders, etc. is not covered
5. Any unauthorized alteration of equipment or use of unauthorized parts.
6. Use of equipment in rental fleets.

This warranty is in lieu of all warranties of merchant ability, fitness for a purpose or other representations, warranties on conditions, expressed or implied. The remedies of the owner set forth herein are exclusive. Cammond Industries neither assumes nor authorizes any person to assume for it any other obligation or liability in connection with the sale of covered equipment. Correction of defects in the manner and for the applicable period of time provided above will constitute fulfillment of all responsibilities of Cammond Industries to the owner and Cammond will not be liable for negligence, under contract or in any other manner with respect to such equipment. **IN NO EVENT WILL THE OWNER BE ENTITLED TO RECOVER FOR INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES SUCH AS LOSS OF CROPS, PROFITS, REVENUE OR RENTAL COST.**

If you have any warranty claim contact your dealer within 30 days of the occurrence. Your dealer will contact Cammond Industries and together they will determine the manner that it will be handled. DO NOT HAVE UNAUTHORIZED REPAIRS COMPLETED AND THEN CLAIM A WARRANTY REIMBURSEMENT.

*If equipment has been altered in anyway from original design, Cammond does not accept any liability for warranty.*