



## ***THE FIRMINATOR***

OWNER'S MANUAL

4', 6' & 8' Models

Serial # \_\_\_\_\_

Ranew's Outdoor Equipment Inc.

1308 Highway 41 North

Milner, GA 30257

770-229-5090

## Limited Warranty

Ranew's Outdoor Equipment Inc., hereinafter referred to as "ROE" warrants the *Firminator* and *Firmiseeder* only against defects in materials and workmanship for one year after the date of purchase by the first user.

**ALL OTHER IMPLIED AND EXPRESSED WARRANTIES AS TO THE *FIRMINATOR* AND *FIRMISEEDER* ARE SPECIFICALLY AND EXPRESSLY EXCLUDED AND DISCLAIMED, SUCH EXCLUSION AND DISCLAIMER TO INCLUDE WITHOUT LIMITATION THE WARRANTY OF MERCHANTABILITY AND THE IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE. THE PRODUCTS ARE SOLD, DELIVERED, AND RECEIVED "AS IS" AND "WITH ALL FAULTS" AND THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THAT SPECIFICALLY RELATED AND STATED HEREIN.**

**THE RIGHT TO THE RECOVERY OF ANY CONSEQUENTIAL DAMAGES IS ALSO HEREBY SPECIFICALLY EXCLUDED.**

Should any part of the equipment prove defective within one year from date of purchase by the first user, the defective part shall be returned freight paid to the Dealer from whom the equipment was purchased or to ROE for inspection and analysis. If the part is found to be defective, the part will be replaced or a credit provided for the costs of the replacement part.

ROE will not assume liability for any labor costs, loss or damage caused by a defective part, consequential damages, or operational delays.

Altering or misuse of a part will void this "LIMITED WARRANTY". Repairing of a part without the expressed permission of ROE voids the Limited Warranty.

ROE neither assumes nor authorizes any person to assume for ROE any other obligations or liability in connection with the sale of its equipment.

ROE reserves the right to make improvements in design or changes in specifications at any time without incurring any obligations to owners of equipment previously sold.

## **Equipment Safety**

1. Keep all guards in place.
2. Permit no riders on farm field equipment other than persons required for instruction or assistance in machine operation.
3. Stop engine, disconnect power source, and wait for all machine movement to stop before servicing, adjusting, cleaning, or unclogging the equipment, except where the machine must be running to be properly serviced or maintained. In which case the employer shall instruct employees as to all steps and procedures which are necessary to safely service or maintain the equipment.
4. Make sure everyone is clear of machinery before starting the engine, engaging power, or operating the machine.
5. Lockout electrical power before performing maintenance or service on farmstead equipment.

# **Before Operation**

- **Carefully study and understand this manual.**
- **Do not wear loose-fitting clothing which may catch moving parts**
- **Always wear protective clothing and substantial shoes.**
- **It is recommended that suitable protective hearing and (eye protection) sight protectors 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 inflated evenly.
- Give the unit a visual inspection for any loose bolts, worn parts or cracked welds, and make any 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 of 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.
- 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 you equipment and its attachments. Completely familiarize yourself and other operators before using.
- Move tractor wheels to the widest recommended settings to increase stability.
- Securely attach to towing unit. Use a high strength, appropriately sized hitch pin with a mechanical retainer and attach a safety chain.
- Do not allow anyone to stand between the tongue or hitch and the towing vehicle when backing up the equipment.  
Do not allow anyone to ride on the unit.

## **During Operation**

- Beware of bystanders, particularly children! Always look around to make sure that it is safe to start the engine of the towing vehicle or move the unit. This is particularly important with higher noise levels and quiet cabs, as you may not hear people shouting.
  - NO PASSENGERS ALLOWED - Do not carry passengers anywhere on, or in, the tractor or equipment, except as required for operations.
- Keep hands and clothing clear of moving parts
- Do not clean, lubricate or adjust your equipment while it is moving.
- When halting operations, 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 area and terrain – watch for holes, rocks, or other hidden hazards. 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.
- Pick the most level route possible when transporting across fields. Avoid the edges of ditches or gullies and steep hillsides.
- Be extra careful when working on inclines.
- Periodically clear the equipment of brush, twigs or other materials to prevent buildup of dry combustible materials.
- Maneuver the tractor or towing vehicle at a safe speed.
- Avoid loose fill, rocks and holes; they can be dangerous for equipment operation or movement.
- Allow for unit length when making turns

- Do not walk or work under raised components or attachments unless securely positioned or blocked.
- Keep all bystanders, pets and livestock clear of work area.
- Operate the towing vehicles from operator's seat only.
- Never stand alongside of unit with engine running or attempt to start engine and/or operate machine while standing alongside of unit.
- Never leave running equipment attachments unattended.
- As a precaution, always recheck the hardware of equipment following every 20 hours of operation. Correct all problems. Follow the maintenance safety procedures.

## **Following Operation**

- Following operation, or when unhitching, stop the tractor or towing vehicle, set the brakes, disengage the PTO and all power drives, shut off engine and remove the ignition keys.
- Store the unit away from human activity.
- Do not park equipment where it will be exposed to livestock for long periods of time. Damage and livestock injury could result.
- 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 chock may be needed to prevent unit from rolling.

# **Highway and Transport Operations**

- Adopt safe driving practices:
- Keep the brake pedals latched together at all times. NEVER USE INDEPENDENT BRAKING WITH A MACHINE IN TOW AS LOSS OF CONTROL AND/OR UPSET OF UNIT CAN RESULT.
- Always drive at a safe speed relative to local conditions and ensure that your speed is low enough for an emergency stop to be safe and secure. Keep speed to a minimum.
- Reduce speed prior to turns to avoid the risk of overturning.
- Avoid sudden uphill turns on steep slopes.
- Always keep tractor or towing vehicle in gear to provide engine braking when going downhill. Do not coast.
- Do not drink alcohol and drive.
- Comply with state and local laws governing highway safety and movement of farm machinery on public roads.
- Use approved accessory lighting flags and necessary warning devices to protect operators of other vehicles on the highway during daylight and nighttime transport.
- Be a safe and courteous driver. Always yield to oncoming traffic in all situations, including narrow bridges, intersections, etc....
- Be observant of bridge loading ratings. Do not cross bridges rated lower than the gross weight at which you are operating.
- Watch for obstructions overhead and to the side while transporting.
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- Always operate equipment in a position to provide maximum visibility at all times. Make allowances for increased length and weight of the equipment when making turns, stopping the unit, etc....

## **Performing Maintenance**

- Good maintenance is your responsibility. Poor maintenance is an invitation to trouble.
- Make sure there is plenty of ventilation. Never operate the engine of the towing vehicle in a closed building. The exhaust fumes may cause asphyxiation.
- 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 and block the wheels. Never use a jack to support the machine.
- Always use the proper tools or equipment for the job at hand.
- Use extreme caution when making adjustments.
- Replace all shields and guards after servicing and before moving.
- After servicing, be sure all tools, parts and services equipment are removed.
- Do not allow grease or oil to build up on any step or platform.
- Never replace hex bolts with less than grade 5 bolts unless otherwise specified.
- Where replacement parts are necessary for periodic maintenance and servicing, genuine factory replacement parts must be used to restore your equipment to original specifications. The manufacturer will not claim responsibility for use of unapproved parts and/or accessories and other damages as a result of their use.
- If equipment has been altered in any way from original design, the manufacturer does not accept any liability for injury or warranty.
- A fire extinguisher and first aid kit should be kept readily accessible while performing maintenance on this equipment.



## **Maintenance**

- Check chain tension periodically. Both chains are equipped with tension idlers. Do not over tighten. A slightly loose chain is desired. There is a tension idler on each Firminator. It is found inside the access panel on the chain drive leg of the Firminator.
- Periodically remove the bottom access cover underneath the drive side frame leg and clear the inside of the frame of any soil and debris that may have accumulated. Also, annually spray the internal chain with WD40 or similar product.
- Lubricate bearings after every 20 hours of use.
- Keep unit clean and store indoors when not in use.
- Periodically inspect all hardware and tighten bolts if necessary.
- Do not store seed in hopper for prolonged periods of time.
- Never run fertilizer through the seed metering system.
- Do not use oil as a lubricant on the bronze bushings in the seed metering cups, as this will collect abrasive for material
- Powdered graphite may be applied into seed metering cups to lubricate rotating bronze bushings (once annually is sufficient)

## *General Instructions of Operation for The Firminator*

### Disking and Cultipacking

The Firminator is literally three implements on one gang. It is a heavy duty disc, a true agricultural grade cultipacker, and a very accurate ground-driven seed metering system. You can disc your food plot, then switch to cultipacking, then seed and pack your field without ever changing equipment.

4', 6' & 8' Tractor unit only -

To adjust disc gang you shorten the center link to tilt the machine forward and apply more weight to the disc gang. The shorter you adjust the center link, the deeper you will disk.

\* Note that the cultipacker will continue to contact the ground in all but the most aggressive disking depth (shortest center link adjustment). This is acceptable, as the cultipacker's wheels help break up clods produced by disking.

All units -

Adjust the disk angles from one of four angle settings by simply pulling a pin and sliding the disc beam to align with the next hole in the frame. Choose from zero (or straight setting) to 5, 10, and 15 degree angle settings.

Many find the straight or zero degree setting very useful for lightly opening thatch and soil to do over-seeding applications without disturbing the existing desired vegetation. By setting the disc depth to cut just deep enough to open the soil, you can drop seed and cultipack it right in, all in the same pass. *This is a great feature for those who re-seed brassicas back into existing clover mix plots every spring.*

To adjust to cultipacking only, lengthen the center-links until the disc blades physically lift out of the soil. Much of the unit's weight is now transferred to the cultipacker assembly to provide an optimum seed bed. \* Note: It is recommended to cultipack after thorough disking is done **prior to** seeding small seeds – alfalfa, clover, chickory, turfgrass seeds). This will ensure that the seeds are planted in the top ¼" of soil. This will produce the best germination percentages for these seeds.

It should also be noted that planting seeds that require depth in the soil can be done 2 ways with The Firminator.

- Method #1 would be to disk the soil loosely and evenly, and then seed directly into loose soil and allow the cultipacker to incorporate the seed into the soil.
- Method #2 would be to drop the seed in loose soil as above, but pass over again with the disk to allow even more soil coverage, then perform a final pass with cultipacker. Only to press seed into soil, and to remove air space.

## **Seed Metering System**

To select a seed size opening, loosen the wing-nut found on the linkage handle at the rear of the seed hopper, and work the handle left to right. View the seed size gauge at the left side of the seed hopper, and note where the indicator washer lines up on the gauge as the shaft moves in and out. Simply line up the indicator washer with the desired seed size on the gauge and lock the wing nut down. No more adjustment is necessary from this point, the metering system will deliver seed at the generally accepted rate based on the size setting. Note: Once seed is dropped into the seed metering cups, the adjustment size can be opened larger, but it is difficult to adjust it to a smaller size setting since seed is trapped in between the openings and will be “pinched” between and adjustable bushings not allowing them to close to a narrower setting. If unsure of the appropriate setting, always start small and open up accordingly if you find enough seed is not being metered out.

Once the appropriate seed opening size is selected, tighten the wingnut on the linkage lever and pour seed into the hopper. Seed will not fall through until the metering system is engaged.

The seed metering system is very easy to engage. To do so, open the cover on the chain drive leg and locate the silver pin and ring. Pull and turn this ring one quarter of a turn and release it. This will allow a pin to engage into a secondary hub located behind the large sprocket, and will now engage the hex metering shaft and allow it to turn as the cultipacker assembly rotates. To disengage the system, just pull and turn the knob a quarter turn and locate the detent position or locked position of the pin.

The seed metering system accurately delivers a very wide range of seed sizes, a benefit not found in most other seeding systems. It will accurately handle the tiniest clovers up to and including corn, soybeans, milo, etc. from 1/16” to 3/4” in size.

The seed agitator allows the planting of a mix containing a large variation of seed sizes through the system at the same time. Most commercially prepared seed blends do not necessitate this agitator. However, if you are custom mixing seeds of extreme differences in size, this agitator will allow the mix to stay well blended and not allow the small seeds to sift through quickly, as the metering size will have to be opened large enough to accommodate the largest seed in the blend. If hopper is not equipped with an agitator, periodic inspection of the seed in the hopper is suggested during the seeding process. It may require manually re-distributing the seed in the hopper to allow all metering cups to be covered by sufficient seed. This will allow for even seeding across the entire plot with no thin areas. Do not exceed 5 mph when seeding. The system is designed for that to be the maximum metering speed.

Warm season grasses that naturally have a fluffy seed coat can be ran through The Firminator’s Accu-seed system providing they have undergone the de-bearding or de-fluffing process. Of course, if the species has a hard seed coat, it can easily be metered through the system.

## **Emptying Hopper**

To empty the seed hopper before switching to a different species, either manually “scoop” the seed out of the hopper bottom, or shop vac out. The remaining seed that is in the metering cups can be allowed to fall through the spouts and can be collected by placing small baggies over the spouts. To run the seed through, loosen the wing-nut, open the linkage to the largest seed setting, and rotate the cultipacker shaft (cultipacker must be raised slightly off the ground). This will allow any remaining seed to work through the metering cups. Do not leave seed in the hopper for extended periods or allow seed in the hopper to get wet.

## **Features**

The new G3 Firminator is equipped with a center ripper bar for cutting out the area left between the two center disc blades. This bar is adjustable to two depth settings, and can be raised up out of the ground (important for over-seeding only usage) and locked into a transport or storage position.

Disc scrapers have also been added to The Firminator to keep disk gang free from build up of soil in wetter conditions and also to prevent vegetation from binding up between the blades.

The cultipacker is equipped with mud scrapers to keep the wheels moving freely, to prevent soil from packing up on the cultipacker wheels due to wetter conditions.