

# **OPERATOR'S MANUAL**

## **WITH WARRANTY**



### **415SP STAND-ON TOPDRESSER**

# ***Earth&Turf***

**America's Compact Topdresser Company**

**1867 Kirkwood Pike  
Kirkwood, Pennsylvania 17536  
888-693-2638**



**OCTOBER 2024**

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# ***415SP SAFETY PRECAUTIONS***

## **IMPORTANT SAFETY PRECAUTIONS**

# **DANGER!!**

### **OPERATOR MUST READ BEFORE USING UNIT**

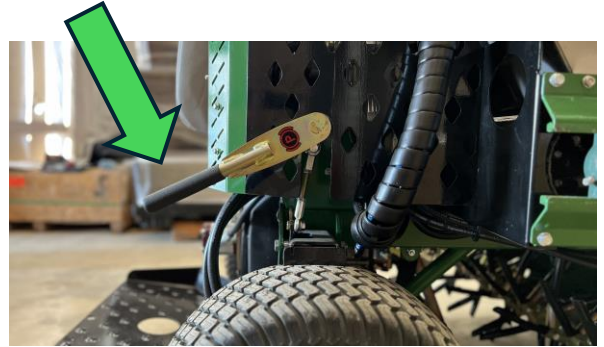
*Read and understand all instructions before operating this machine. If you do not understand any instructions, refer to someone who does. Failure to do so may result in serious injury or death.*

- **ALWAYS** turn off engine and engage parking brake before dismounting.
- **NEVER** turn or travel with parking brake engaged.
- **KEEP HANDS AWAY** from any moving parts of the spreader during operations.
- **NEVER** run machine unless all guards are securely in place.
- **NEVER** repair any parts or make adjustments while machine is in motion.
- **NEVER** wear loose clothing around any moving parts of the machine.
- **NEVER** allow anyone to ride inside or any position other than one operator on the standing plate of the spreader.
- **ALWAYS** operate while standing two feet on the riding platform.
- **ALWAYS** take caution with hills, ramps and unsure areas. When unsure if the angle is appropriate, do not try it! Do not travel sideways on hills over 15% grade or up/down hills over 40% grade.
- **ALWAYS** clear aerator area (if applicable) prior to starting and running machine.
- **ALWAYS** run the machine outdoors, **NEVER** indoors, carbon monoxide **KILLS**.

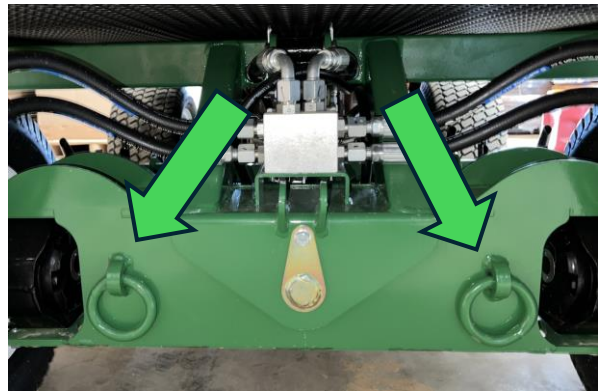
# 415SP TRANSPORT

*Failure to secure machine may result in serious injury or death.*

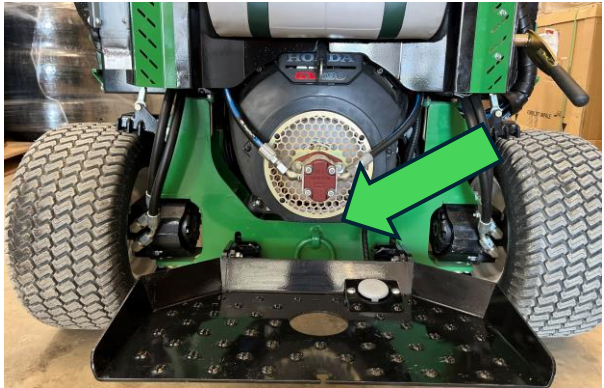
1. **Apply Parking Brake**– Once in position on trailer, apply trailer brake.



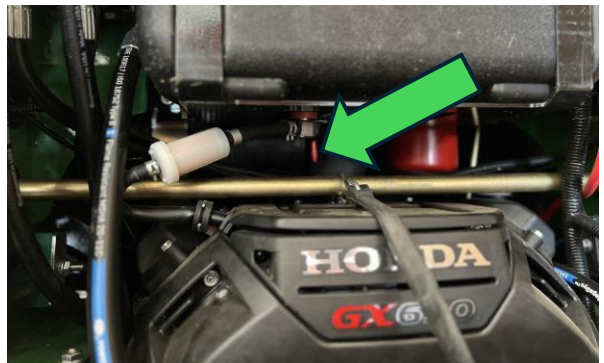
2. **Front Tie Downs** – Use front tiedowns to strap front of unit to the trailer.



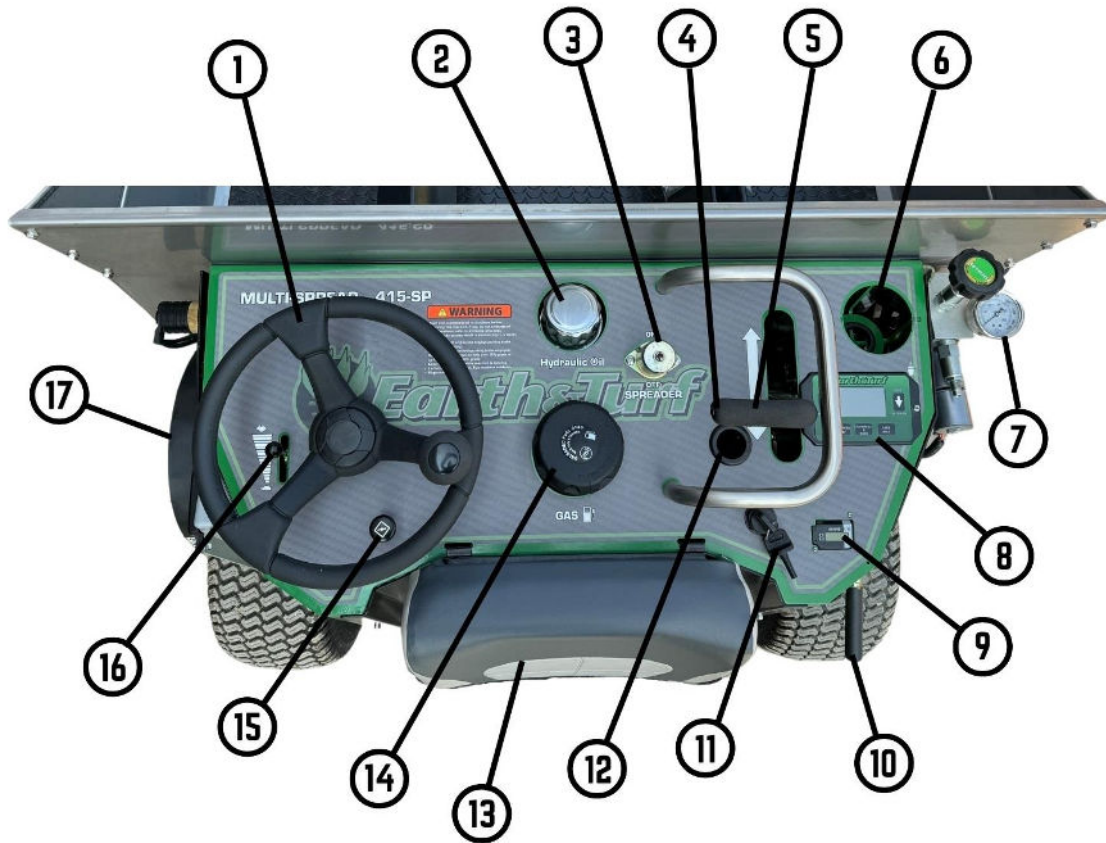
3. **Rear Tie Down** – Use rear tiedown to strap rear of unit to the trailer.



4. **Gas valve.** Be sure to close gas valve when transporting. Valve is located above the engine, below seat cushion as shown.



# 415SP DASHBOARD



- |  |                            |
|--|----------------------------|
| 1. STEERING WHEEL                      | 9. HOUR METER              |
| 2. HYDRAULIC OIL FILL                  | 10. PARKING BRAKE          |
| 3. SPREADER ENGAGEMENT                 | 11. KEY IGNITION           |
| 4. SPREADER OVERRIDE BUTTON            | 12. OIL FILL ACCESS HOLE   |
| 5. DIRECTIONAL CONTROL FORWARD/REVERSE | 13. HIP CUSHION            |
| 6. TUMBLER HOLDER                      | 14. GASOLINE FILL          |
| 7. AERATOR PRESSURE GAGE               | 15. CHOKE                  |
| 8. OPTIONAL SEEDBOX SELECTOR PANEL     | 16. THROTTLE               |
|  | 17. HYDRAULIC FLUID COOLER |

# 415SP OPERATION

1. **STEERING WHEEL** – Steers all 4 wheels in sync for a smooth sharp turn. Operator should take caution and drive slowly to get familiar with 4-wheel steering. The machine will sweep operator station to the side when steering, unlike a front steering machine. It may take time to get used to. On the wheel is a rotating knob for quick, responsive one-handed steering.



2. **HYDRAULIC OIL FILL** – Use a small funnel to avoid spillage. See changing instructions on page 23. Area should be cleaned before removing cap to avoid fluid contamination.

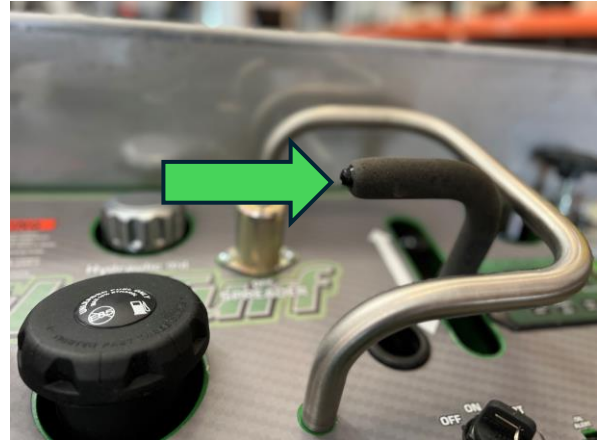


3. **ENGAGING THE SPREADER** – Flip the toggle switch into the upward position to engage the belt (**and seedbox if applicable**). When toggle is in the upward position, the belt will creep forward as the operator drives forward, then stops when the machine stops. This is part of the calibration, spreading at a speed that matches your ground speed, not faster or slower, but consistent.

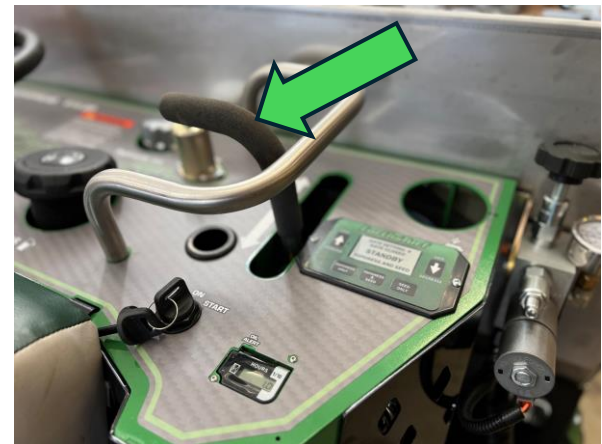


# 415SP OPERATION

**4. SPREADER OVERRIDE BUTTON** – The Button on the end of the drive lever will only work with the toggle switch in the upward position. Upon depress, the button engages the material belt to override ground speed and spreads the material at full flow rate. This is ideal when filling low spots, cleaning the machine, applying in reverse or general heavier spreading.



**5. Direction Control** – This lever engages wheel motors in the forward or reverse direction. To move the machine, simply push the lever in the desired direction of travel. Always stand on the machine platform when moving forward or reverse to avoid serious injury or death. **NOTE:** Drive lever will not move while parking brake is engaged to ensure no damage to tires.



**6. Tumbler Holder** – Sized to hold water bottle or tumbler. We recommend using a tumbler with a secure lid to avoid spills.

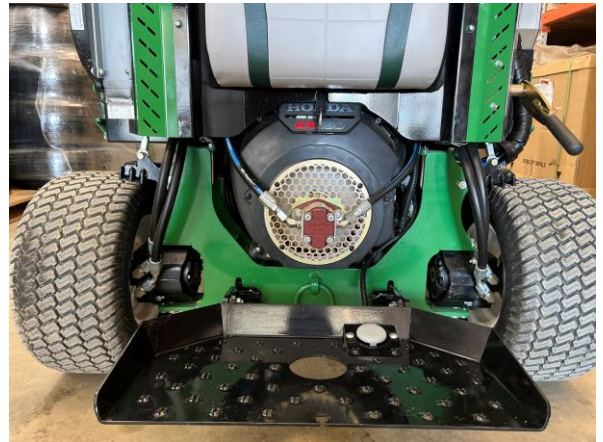




# 415SP OPERATION

## 7. ENGAGING AERATOR (OPTIONAL)

– Depress the electric foot switch with a closed-toe shoe to drop aerator into turf surface. Aerator pressure can be adjusted by using the dial on the right of the operator surface for harder or softer pressure. Settings will vary in effectivity per soil surface, turning clockwise to increase pressure or counterclockwise to reduce pressure. When foot pedal is lifted, aerator will retract into transport mode until pedal is pressed again.



# 415SP OPERATION

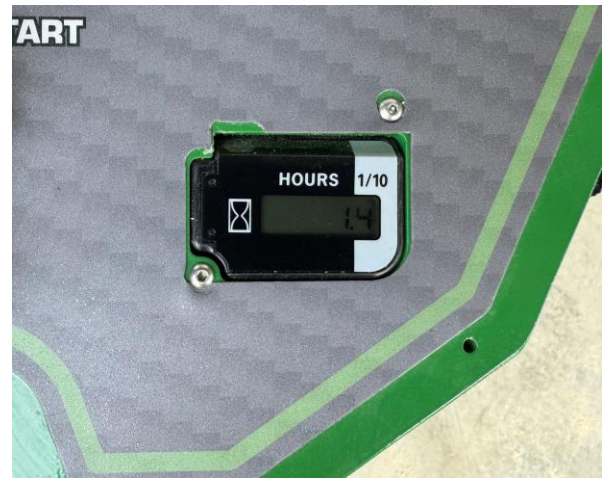
## 8. SELECTING SEEDBOX/SPREADER –

Enables you to set your 415SP to topdress only, seed only, or to do both at the same time. In addition, it enables you to adjust the gate setting which controls your seed application rate.

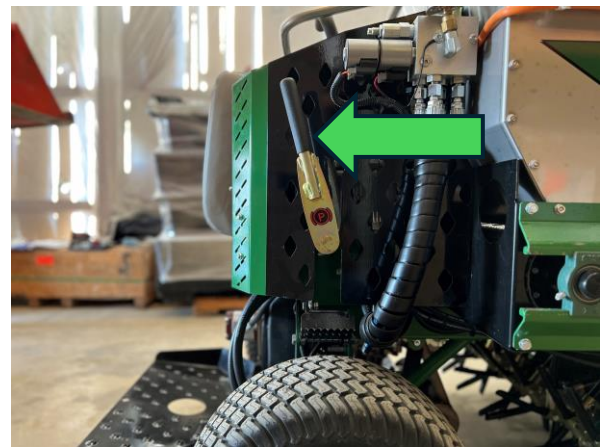


# 415SP OPERATION

9. **HOUR METER** – Records total amount of running hours on the engine.



10. **Parking Brake** – Locks rear wheels for transport on truck/trailer. (**Straps are still required for safe transit**). Also locks rear wheels to park while reloading, etc. While locked down, driver will not be able to operate forward/reverse due to parking brake lockout.

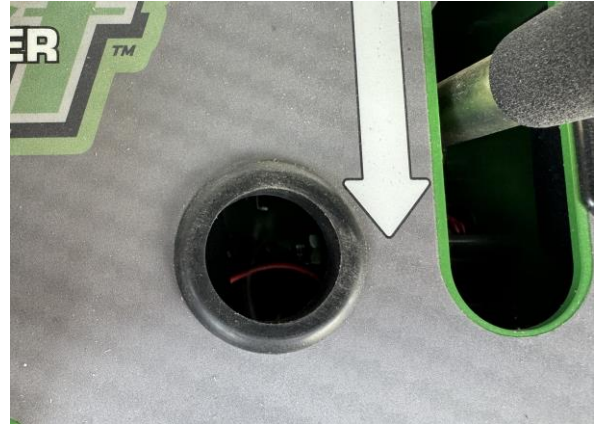


11. **Key Ignition** – Turn all the way to the right to start and then release once started. It may require the use of the choke when starting unit cold.



# 415SP OPERATION

**12. OIL FILL ACCESS HOLE** - This hole is for funnel access to top off or refill the engine oil. Please see “Changing the Engine Oil” on page 00.



**13. Hip Cushion** – For access to the engine, remove the cushion. Remove by pressing buttons “B” and pull up on the cushion and cushion assembly. To install, first place upper hooks in slots “A” then swing down lower hooks into lower slots “C” and push downwards on cushion assembly until buttons “B” snap into place.



# 415SP OPERATION

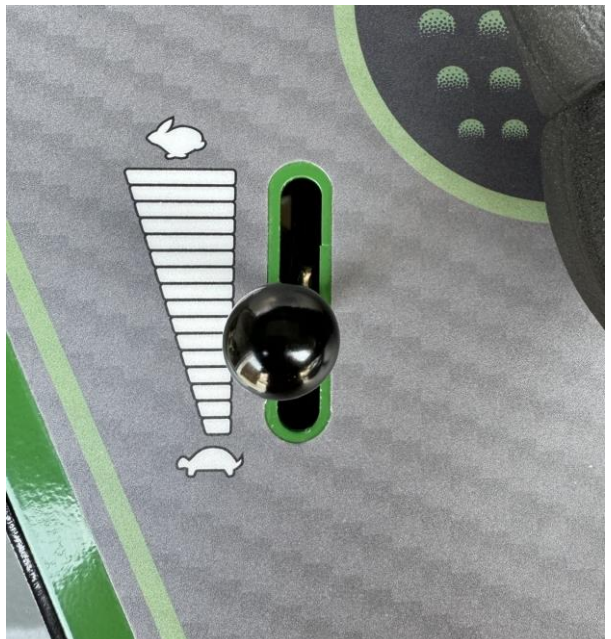
**14 GAS FILL** – We recommend refilling with a short funnel after engine is allowed to cool.



**15 ENGINE CHOKE** – For engine cold starts. Pull out to start and slowly push in after engine starts.

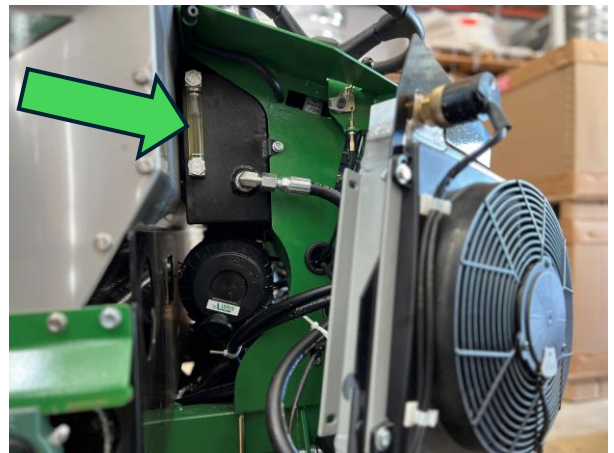


**16 THROTTLE LEVER** – Push upwards, increasing speed for smooth hydraulic operation. Leave on idle for loading to ensure hydraulic fluid circulates and cools in cooling fan.



# 415SP OPERATION

**17. HYDRAULIC OIL COOLER** – Runs when the hydraulic fluid reaches a temperature of 160° F and continues to run until the fluid cools below 135° F. While operating the machine the engine should run at full throttle during operation and low throttle when loading/reloading to ensure fan cools fluid for further operation. Oiler cooler can be lifted off by lifting upward releasing the 4 hooks that hold it in place. Inside you can view the hydraulic fluid temperature gage. The temperature gage also depicts the hydraulic fluid level. The level should **NEVER** read full when unit is cold as expansion room for the fluid is necessary as it becomes heated.



# **415SP RECOMMENDED DAILY MAINTENANCE**

1. Operators must read before using unit.
2. Entire unit must be washed thoroughly after each use. **NEVER** store material in spreader
3. Maintain proper air pressure (22psi) in tires to insure proper operation.
4. Lug nuts should be tightened to 120 ft. lbs.
5. Drive chain requires proper graphite lubrication.
6. All shields **MUST** be in place while operating this unit.
7. Check engine oil. The dip stick is to be up to the “full” line as marked. Use 10W-30 premium synthetic motor oil.
8. Check hydraulic fluid reservoir level by removing cooling fan per page 12. Reservoir should be approximately  $\frac{3}{4}$  full when cool. Use 15W-40 premium synthetic hydraulic fluid.
9. Check conveyor belt for tightness Adjust accordingly.



2. ENTIRE UNIT WASH



5. OPERATING CHAINS NEED LUBRICATED



9. CONVEOR BELT ADJUSTMENT

# 415SP SETTINGS & MATERIAL GUIDE

## TOPDRESSER

All topdressing Materials vary due to moisture, density, and source. Topdressing hopper spreads but is not limited to the following materials.

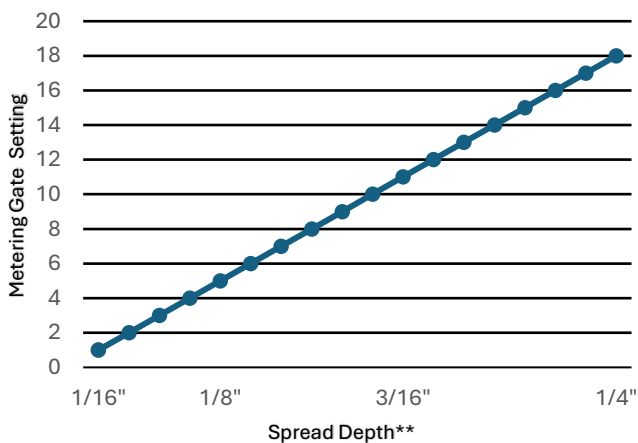
- Sand
- Compost
- Topsoil (screened)
- Crumb rubber
- Coconut husks and cork

Though it may spread, it is not designed or warranted for use with

- Lime
- Stone
- Mulch
- Cement dust
- Fertilizer (granular or pulverized)

\*NOTE: End users are responsible to spread and test material to assure desired coverage is reached, material coverage will vary with consistency and moisture. Topdressing belt will move according to ground speed.

**Flow Rate – Topdresser Settings\***



## SEEDBOX

Seed box will engage according to the setting selected *if the seedbox is selected as well*. It is intentionally designed to offer the option of seeding and topdressing at the same or different times. The selection is up to the user and their purpose. Seedbox will open and roll when moving in the forward direction and will stop automatically when machine stops as well as moving in reverse. The auger will spin at a fixed speed, which may allow small variance during speed change. It is recommended to set the seed setting at the full speed preferred setting and maintain speed as possible, the slower covered areas may have slightly heavier coverage, but not noticeable.

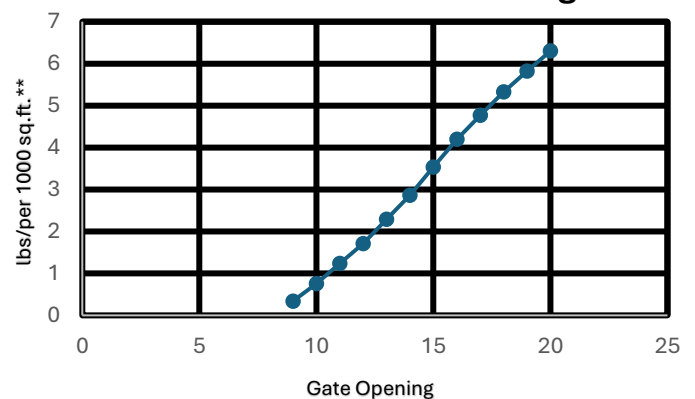
Seed box hopper spreads but is not limited to the following materials:

- Non-coated grass seed

Though it may spread, it is not designed or warranted for use with

- Coated seed
- Lime
- Cement dust
- Fertilizer (granular or pulverized)

**Flow Rate – Seedbox Settings\***





# 415SP MAINTENANCE GUIDE

## CLEANING YOUR 415SP

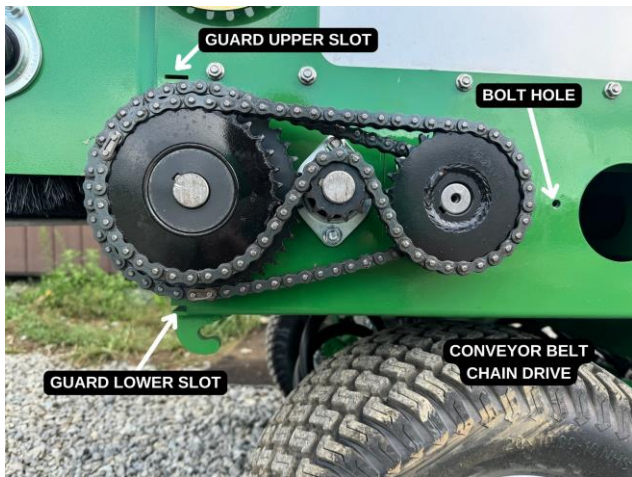
1. After each use the machine should be pressure washed thoroughly. Collected material may damage moving parts, material belt, and roller chains. Refer to video listed on page 13.
2. To clean out conveyor belt pressure wash inside each access hole from both sides of the machine while cycling the material belt. Continue cycling belt until draining water is clear of debris. Accumulation of material on belt rollers will damage conveyor belt.
3. Chain shields should be pressure washed from inside out or remove the shield to clean sand and compost prior to lubrication, alongside of cleaning the belt.
4. While the entire machine may be pressured washed thoroughly. Electronics, dashboard and engine should not be directly washed with high pressure or turbo tip.



# 415SP MAINTENANCE GUIDE

## CONVEYOR BELT CHAIN ROUTING

### 1. Routing

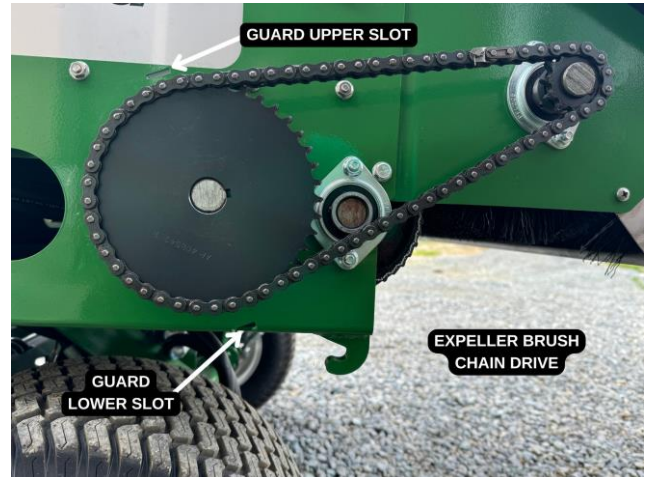


### 1. Guard attachment.

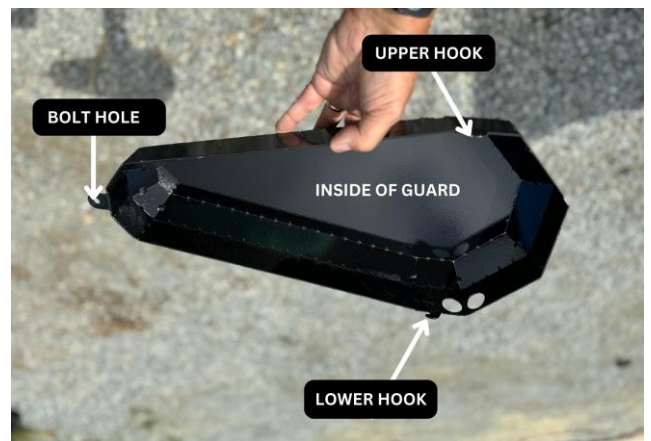


## EXPELLER BRUSH CHAIN ROUTING

### 1. Routing



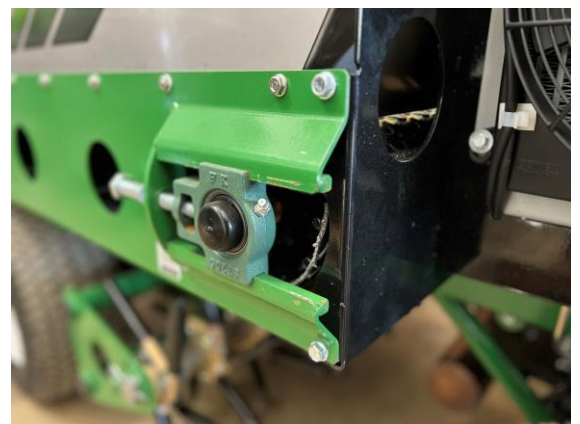
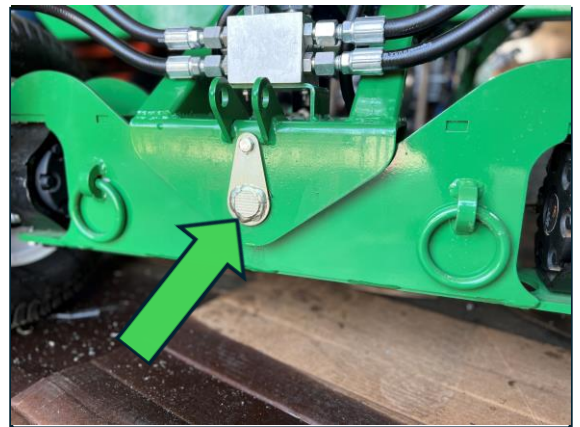
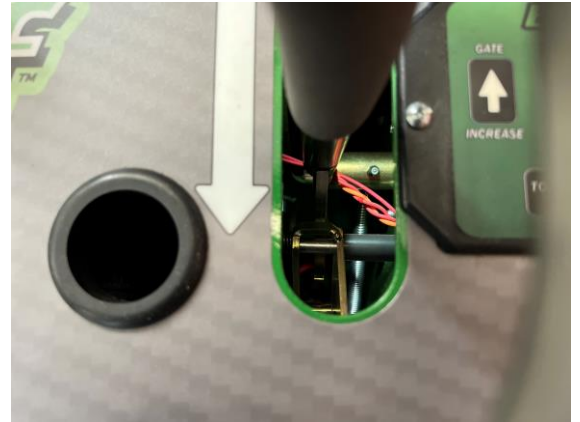
### 1. Guard attachment.



# 415SP MAINTENANCE GUIDE

## GREASING AND LUBRICATING

1. Grease zerk located below main drive handle every 50 hours or as needed.
2. Grease zerk at front axle swivel pin (if equipped) every 50 hours or as needed. (Current picture shows location only, Units built after September 2024 are equipped with a grease zerk at this location.)
3. Grease zerk on rear belt rollers as need. Use **CAUTION:** as these are sealed bearings, over greasing will destroy the seals.



# 415SP MAINTENANCE GUIDE

## GREASING AND LUBRICATING

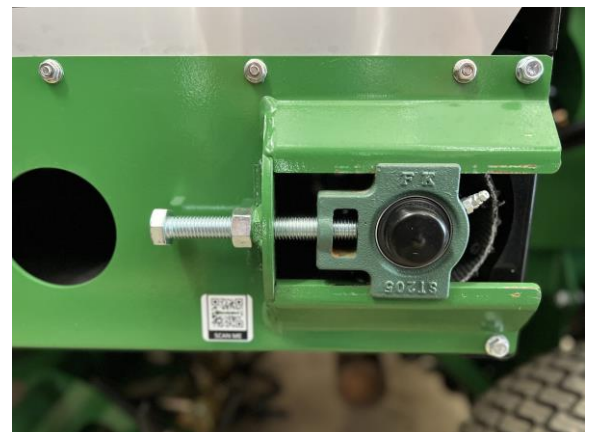
1. Lubricate brush chain through hole in shield every 50 hours. We recommend using an industrial graphite dry lubricant.
2. Lubricate seedbox chain through hole in shield every 50 hours. We recommend using an industrial graphite dry lubricant.
3. Lubricate belt chain through hole in shield every 50 hours. We recommend using an industrial graphite dry lubricant.



# 415SP MAINTENANCE GUIDE

## CONVEYOR BELT TIGHTENING

1. Use a 15/16” wrench to tighten conveyor or adjust when walking to the side. To tighten belt, loosen lock nut and turn bolt head a precise amount of turns that directionally move the bolt head towards the bearing (tightening towards the back of the machine). With one side completed, tighten lock nut and proceed with the same function on opposite side. **IMPORTANT:** if the belt was tracking correct, but not tight enough, track the amount of turns and be sure to do the same on each side. Otherwise, the material belt will track incorrectly to one side.
  
2. If material belt is tracking incorrectly, tighten the loose side in small increments (2-5 turns depending how much is needed) and run the belt to test it and work it back into position. Do not tighten more than 5 turns at a time or the belt may be imbalanced to the opposing side, causing the inverse issue. Cycle belt for at least 2 revolutions of the lacing to determine final adjustment is made and ready for more material.



# 415SP MAINTENANCE GUIDE

## ENGINE OIL CHANGE

1. Engine oil should be changed after the first 20 hours or 1 month. After first oil change the engine oil should be changed every 100 hours of use or 6 months, whichever comes first.

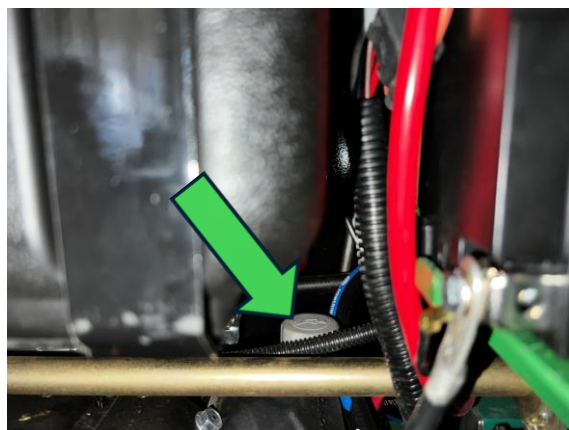


2. To change engine oil: Drain current oil by extending the drain hose and unscrewing the cap on bottom (11/16"). With oil drained and no oil continually flowing out of the drain hose, replace the plug and tighten to ensure no further drainage.

3. Replace the engine oil filter (**Honda Part 15400-PLM-A02**). Filter can be found to the left of the engine, behind the left rear wheel motor.



4. Oil fill cap can be found on the right of the gas tank behind the seat cushion and battery. The cap will have an oil symbol on top. To fill engine with new oil, run included funnel and hose through opening in dash for easy pouring.

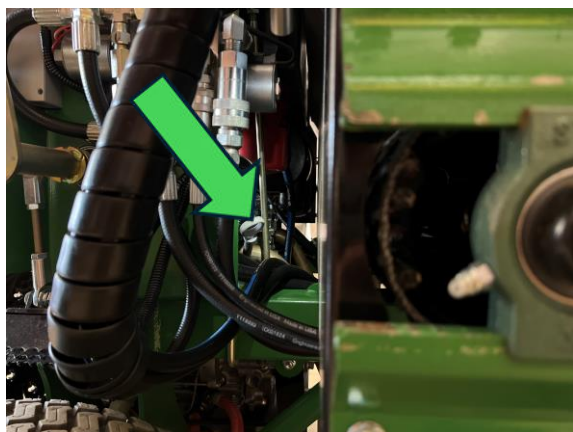


# 415SP MAINTENANCE GUIDE

## ENGINE OIL CHANGE (CONT.)



5. Engine oil capacity is **1.8 US quarts 10W 30 synthetic engine oil**. Once filled, remove funnel and replace fill cap. Wipe all surfaces clean to remove residual oil.

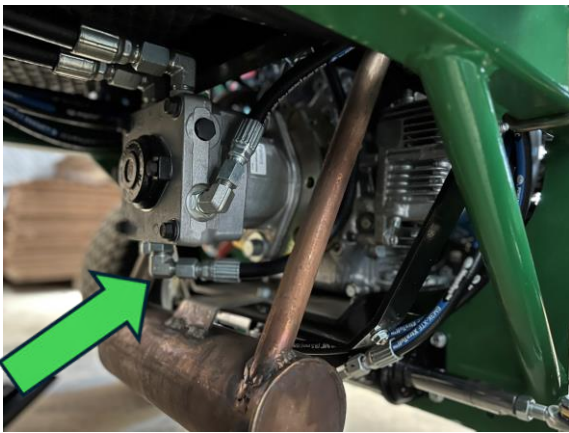


6. Check final engine oil level with engine dipstick located at the right rear of your machine.

# 415SP MAINTENANCE GUIDE

## HYDRAULIC FLUID CHANGE

1. Hydraulic oil should be changed after the first 50 hours, then again, every 250 hours of use or annually, whichever comes first. Drain current oil into oil drain pan with 5-gallon capacity by disconnecting suction hose on the left side of the gear pump (15/16")



2. With oil drained and no oil continually flowing out of the hose, replace the hose and tighten to ensure no further drainage.



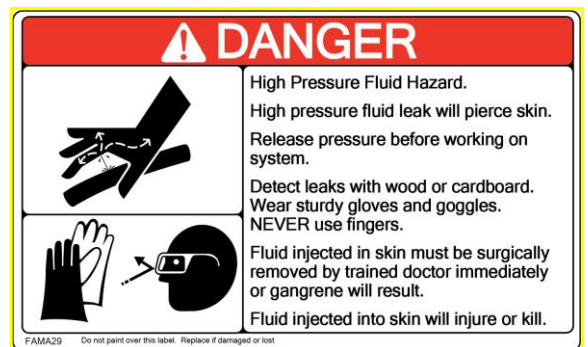
3. Replace the hydraulic oil filter (**Earth & Turf Part #15473, Baldwin Part #BT839**) Filter can be found above engine oil dipstick. NOTE: filter is easier to access with the spreader box off.



4. Spreader box removal.



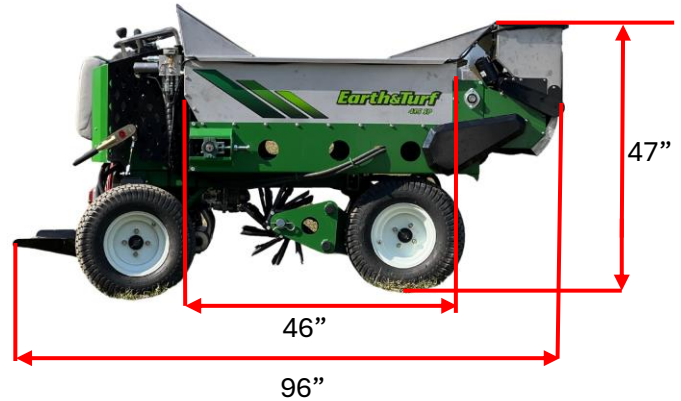
5. Hydraulic oil fill cap (stainless steel) is located on the top center of the dashboard. To fill the reservoir with new oil, use a small funnel to avoid spillage. Hydraulic oil capacity is **4.5 US gallons (15W 40 fully synthetic hydrostatic oil)**. Once filled, remove funnel and replace fill cap. Wipe all surfaces clean to remove residual oil.



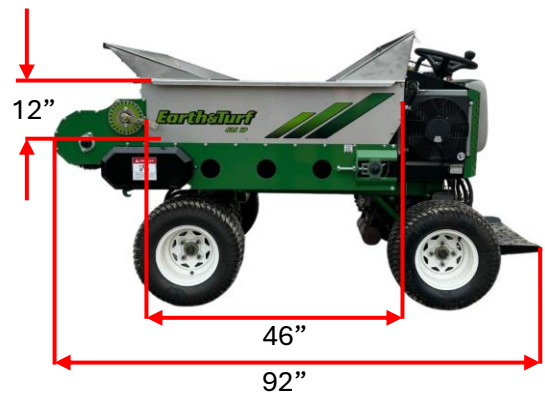


# 415SP SPECIFICATIONS

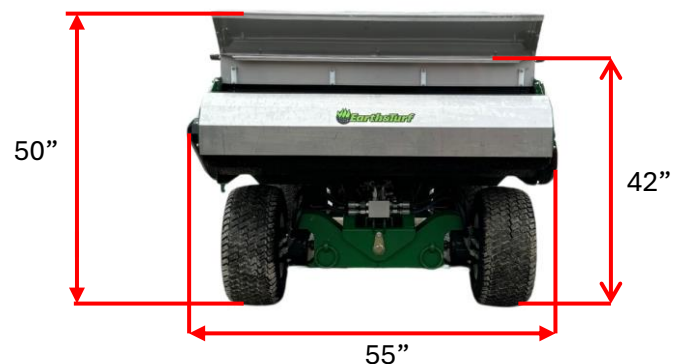
- Capacity:** 15 cu. ft. struck level, 1 cu. yard heaped
- Max Load Weight:** 1,500 lbs. (680 kg)
- Box Width:** 48" (121.92 cm)
- Box Length:** 46" (116 cm)
- Box Height:** 12" (30.48 cm)
- Total Width:** 55" (139.7 cm)
- Total Length:** 76" (193.04 cm)
- Total Height:** 50" (127 cm)
- Spread Thickness:** up to ¼" (without override button)
- Spread Width:** 48"
- Spread System:** Hydraulic Belt & Brush Expeller
- Unit Weight:** 1,400 lbs. + Options
- Aerator Weight:** 150 lbs.
- Seedbox Weight:** 90 lbs.
- Gross Weight Max:** 3,400 lbs.
- Drive:** Hydraulic Wheel Motors
- Engine:** GX690 (22HP)
- Spreading Speed:** 7MPH



415SP WITH OPTIONAL SEED BOX AND AERATOR



415SP LEFT SIDE



415SP FRONT

# **415SP TROUBLE SHOOTING**

## **Engine won't start?**

- Check battery voltage and attempt jump start.
- Check wiring and connections to ensure all fittings are tight and not hindered.
- Engage gas to flow through tube from gas tank. To turn gas valve on, remove rear seat cushion and turn red valve to downward position (open)

## **Belt Won't move?**

- Material jammed
- Check to see if the belt is tight enough
- Gate open, clean out
- Check to see if the chain is engaged and intact

## **Hydraulic fitting leaking?**

- Tighten fitting
- Clean and run, check in 20 minutes of use
- Check fitting crimp

## **Machine whining loudly?**

- Let it warm up
- Check hydraulic oil level to ensure reservoir has oil in the tank

# **415SP WARRANTY**

## **LIMITED WARRANTY**

Earth & Turf Products, a DBA of Conestoga Manufacturing warrants to the original purchaser, all Earth & Turf products, manufactured by it, to be free from defects in both material and workmanship under normal use and service. Earth & Turf Products, obligation under this warranty shall be limited to replacement or repair of any parts thereof, free of charge to the original purchaser, at its place of business, provided, however, that the part(s) to be replaced or repaired, shall within 1 year after delivery to the original purchaser, be demonstrated to be defective: which determination shall be made by company.

The said components or parts must be returned through the selling dealer or distributor directly to the company with all transportation charges prepaid. Notice of defects shall be furnished in writing to the seller and to the agent through whom the machinery was received, disclosing in full all known defects and failure in operation and use, and reasonable time shall be given to the seller to remedy any such defects and failures. Failure to make such trial or to give such notice shall be deemed an absolute acceptance by the buyer and satisfaction in full of this limited warranty. Under no circumstances does this warranty cover normal wear of any parts, components or material which, in the opinion of the seller and the company, have been subjected to neglect, misuse, alteration, accident, or if repaired, with parts other than those manufactured by and obtained from Earth & Turf Products. This warranty does not cover components which are already covered by a separate warranty provided by the supplier of said parts or components. Earth & Turf Products, obligation under this warranty is limited to repair or replacement, free of charge to the original purchaser, of any part which in the judgement of the company is defective. The company makes no warranty whatsoever in respect to accessories or parts not supplied by the company. The term "original purchaser", as used in this warranty, shall be deemed to mean that person for whom the product is originally supplied.

The company, under this warranty, cannot guarantee that existing conditions beyond its control will not affect its ability to obtain materials or manufacture necessary replacement parts. The company reserves the right to make design changes, or specifications at anytime, without any contingent obligation on its parts to purchasers of machines and parts previously sold. No one is authorized to alter, modify or change the terms of this warranty in any manner. The company warrants the construction of the equipment sold herein and will replace it at its expense for a period of one year from the date hereof, any parts which prove defective as determined under the terms of this limited warranty. This warranty shall apply only within the boundaries of the continental United States.

**THIS WARRANTY IS MADE EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY AND FITNESS FOR USE AND PURPOSE AND OF ALL OTHER OBLIGATIONS OR LIABILITIES ON ITS PART AND ANY IMPLIED PERSON TO ASSUME FOR IT, ANY OTHER LIABILITY IN CONNECTION WITH A SALE OF THESE PRODUCTS. THIS WARRANTY SHALL NOT APPLY TO THESE PRODUCTS OR TO ANY PART THEREOF WHICH HAS BEEN SUBJECT TO ACCIDENT, NEGLIGENCE, ALTERATION, ABUSE OR MISUSE.**

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