7500 and 8500 E-Cut™
Hybrid Fairway Mowers

Machine Optimization Document

TC_7500_8500_ECut_L3_EN

John Deere Turf Care

This manual serves as a quick reference for adjustments and controls of the machine for operators who are familiar with the machine and controls.
In no case does it replace the Operation Manual.

To prevent injury to persons or machines, the Operation Manual **must** be read carefully
before the machine is used.

7500 and 8500 E-Cut™ Hybrid Fairway Mowers

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The 7500 and 8500 E-Cut™ Hybrid Mowers are equipped with five QA5 reel cutting units. Reels are 5.0 inches (127 mm) in diameter, and available with either 7 blades or 11 blades to optimize cut quality for different turf mowing applications.

Cutting units are 22 inches (55.9 cm wide effective cutting width is 100 inches (254 cm). The reel drive motors are electric, powered by a 48V, 180 amp alternator.

The 7500 and 8500 E-Cut™ Hybrid Mowers are versatile and can be used in a variety of turf mowing applications not limited to golf courses. Four wheel stance and rear wheel steering offers stability advantages over three wheel mowers. Turf tires provide excellent weight distribution for less tracking, less marking, and less compaction.

The Four Wheel Drive GRIP system, Grass Catcher, Fairway Tender Conditioner (FTC), rear roller PowerBrush, and Canopy are available options.

The working lights are standard. Cruise control is a field installed option.

The 7500 and 8500 E-Cut™ Hybrid Mowers are powered by a turbocharged Yanmar™ Diesel engine.

A separate document is available that describes QA5 cutting unit setup and adjustments.

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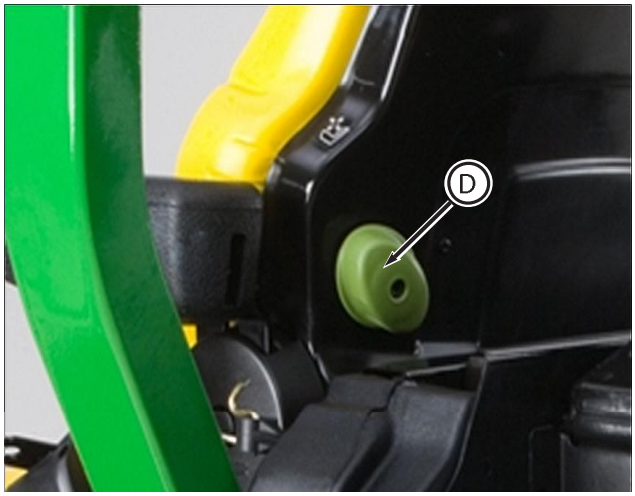
Seat Adjustment

A deluxe Grammer™ seat is provided as standard equipment to provide maximum operator comfort across a wide range of operator traits. The operator command arm attaches to the seat base. Therefore, controls move with the operator as height and weight adjustments are performed.

1. Adjust seat position based on the operator's height:
   - Lever (A) located under seat on left side.
2. Adjust internal spring force for correct operator ride and suspension:
   - Knob (B) located under seat in the center.
3. Tilt Adjustment for back portion of seat:
   - Lever (C) located under left armrest.



4. Lumber adjustment for proper back support:
   - Knob (D) located behind left armrest.

Steering Column Adjustment

A steering column adjustment is available to give additional room for the operator if needed.

1. Adjust the steering column by depressing the brown tab (A) at the bottom left of the steering column with your foot. When the desired steering column position is achieved, simply release the tab, and the column locks into place.

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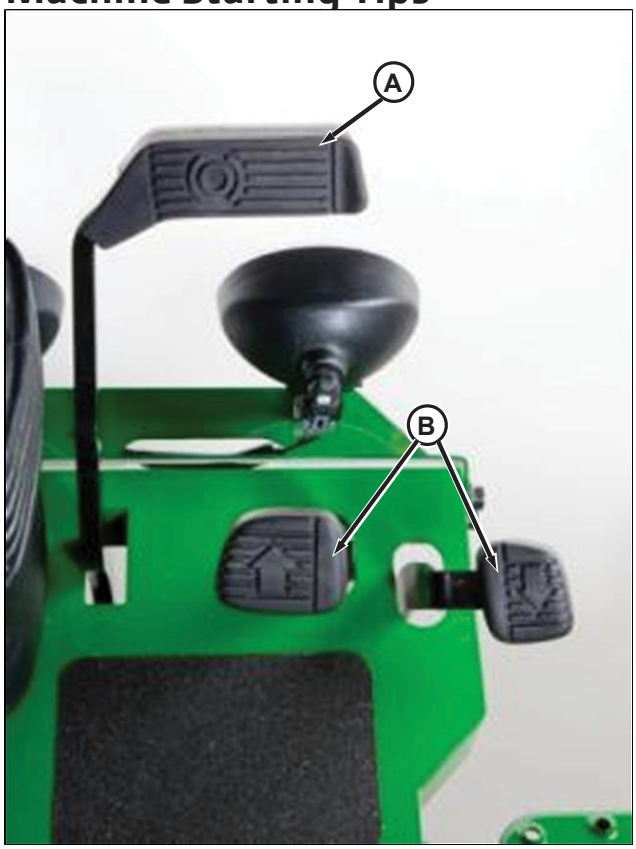
Machine Starting Tips



1. Park Brake (A) locked (towards operator).
2. Hydrostatic pedals (B) in neutral position.

3. Backlap function (C) disengaged (switches located underneath seat set to Forward reel direction and Mow).

4. Mow/Transport lever (D) in Transport position (lever pulled towards operator).
5. Turn key (E) to run position. Engine air preheater LED (F) on instrument cluster will illuminate 3-15 seconds and then go out. Engine can be started afterwards.
6. Run engine half throttle 2-3 minutes for warm-up. Avoid unnecessary idling.

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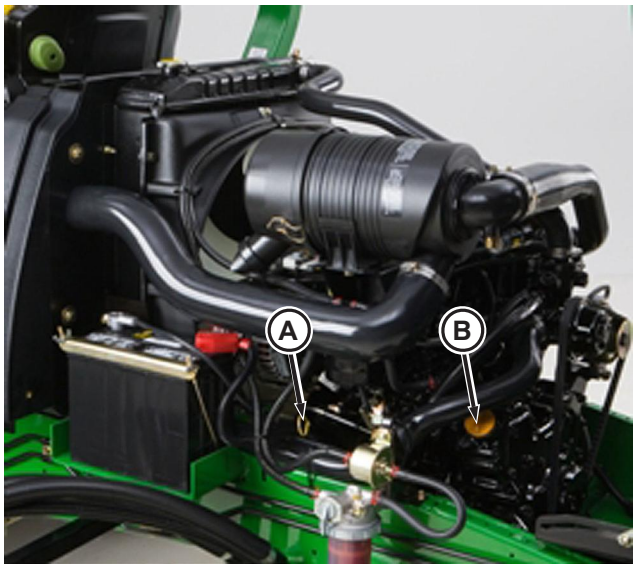
Key Setup and Adjustments – Machine

1. Inspect tires for proper inflation and wear. Use a pressure gauge accurate at lower pressures. Adjust pressure as necessary.
   - Inflate front tires to 12 psi (83 kPa)
   - Inflate rear tires to 18 psi (124 kPa)

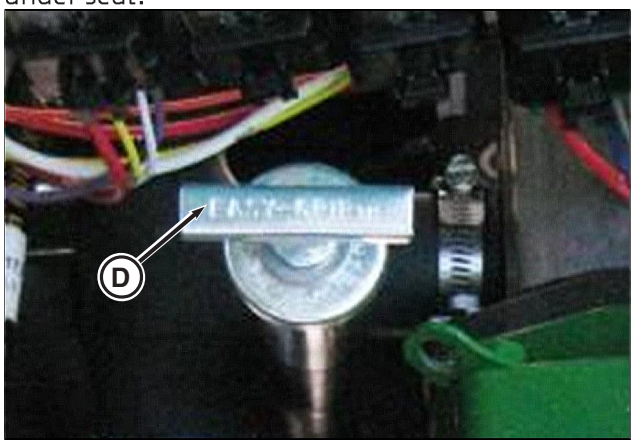
NOTE: Operating tires below recommended pressure can cause premature tire failure.

2. Check engine oil level. Add or remove oil as needed.



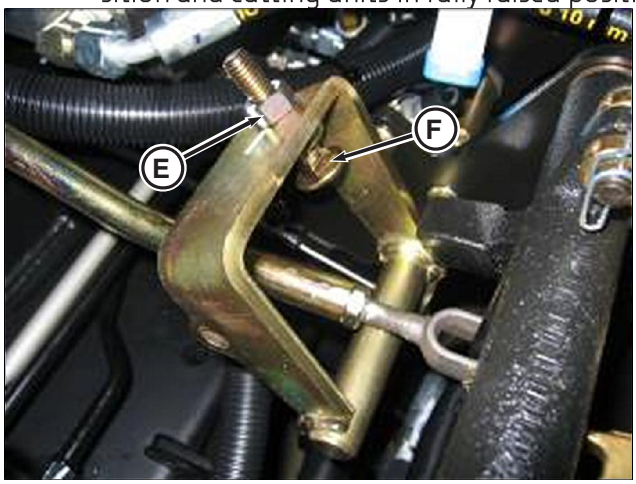
NOTE: Dipstick (A) and oil fill cap (B).

3. Check air filter restriction indicator (C):
   - Push reset button.
   - Run engine at full throttle.
   - Replace primary air filter if red plunger visible in window.
4. Check hydraulic oil level with dipstick located under seat:



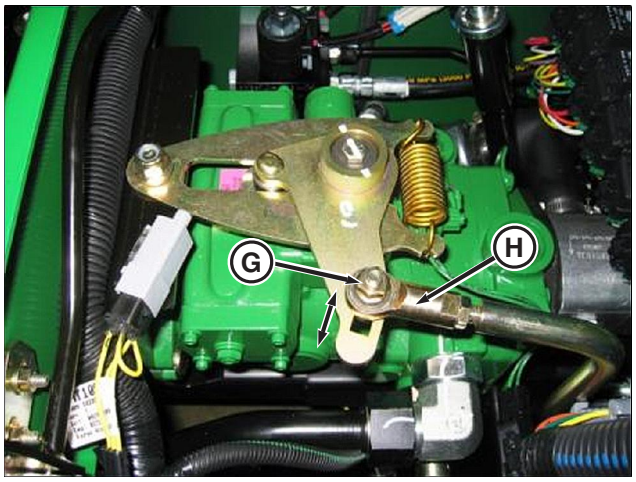
   - Turn T-Handle (D) counterclockwise until dipstick can be removed from tube.
   - Level on dipstick should not exceed the "H" (hot) or be below the "C" (cold) at average temperature.
   - Reinstall dipstick and rotate T-Handle clockwise to secure.

5. Verify travel speed for mowing is set to a maximum of 7.5 mph (12.1 kph). Equivalent speed is 11 feet per second (3.4 m/s).
   - Measure travel speed for mowing at full engine throttle with Mow/Transport lever in Mow position and cutting units in fully raised position.



6. Adjust mow stop if necessary to correct ground speed for mowing conditions. Move Mow/Transport lever to the Transport position and remove operator foot platform. Loosen jam nut (E) and adjust position of bolt (F) on bracket. Tighten jam nut afterwards.
   - Lengthening bolt towards inside of bracket will decrease mow speed.
   - Shortening bolt will increase mow speed.

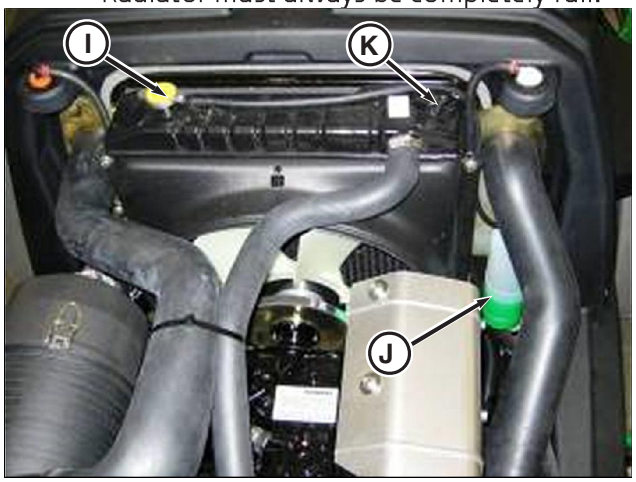
7. Verify travel speed for transport is set to a maximum of 11.5 mph (18.5 kph), equivalent to 17 feet per second (5.2 m/s) for 7500 and 12.5 mph (20.1 kph), equivalent to 18 feet per second (5.5 m/s) for 8500.
   - Measure travel speed for transport at full engine throttle with Mow/Transport lever in transport position and cutting units in fully raised position.



8. Adjust linkage if necessary to achieve desired ground speed for transport. Raise seat platform, loosen nut (G) and adjust position of turnbuckle (H) within slot on bracket. Tighten nut afterwards.
   - Moving turnbuckle away from transmission will decrease transport speed.
   - Moving turnbuckle towards transmission will increase transport speed.

CAUTION: Avoid injury. Only remove radiator cap when engine and radiator are cool. Open cap slowly, and carefully remove.

9. Check engine coolant levels inside radiator and overflow bottle.
   - Radiator must always be completely full.



   - Check level under fill cap (I).
   - Coolant in overflow bottle (J) should be approx. 1/3 full when cool.

10. Add coolant as required to achieve proper levels.
   - Open valve (K) at top corner of radiator to allow air to vent from top of radiator as coolant is being added. Close valve when radiator is full.
   - Only use approved coolant (such as John Deere Cool-Gard™ II).

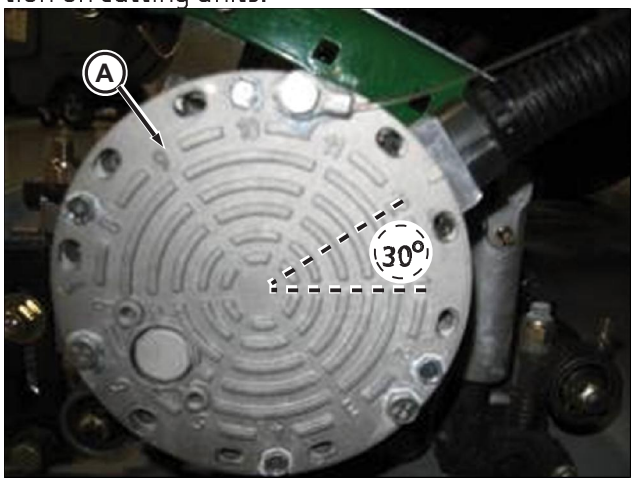
11. Check condition and routing of hose between radiator and overflow bottle. If hose not routed properly, coolant recovery process will not be effective. Correct hose routing as necessary.
   - Hose must be firmly attached to overflow bottle.
   - Hose must not be kinked or pinched.

IMPORTANT: After filling a new or flushed radiator, check coolant levels more frequently until level within radiator stabilizes to full. This will ensure that all air has been purged from the cooling system.

Key Setup and Adjustments – Cutting Units

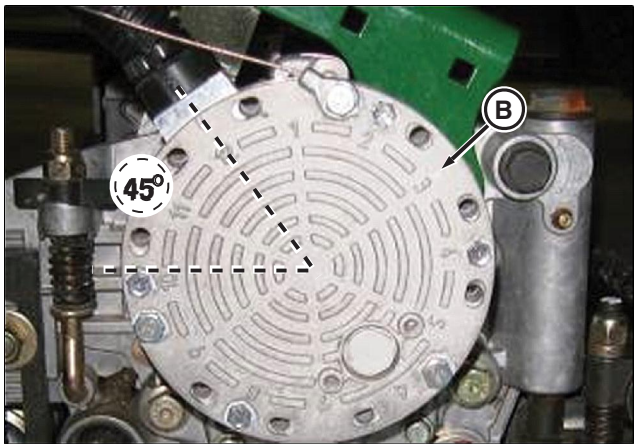
1. Verify reel motors are installed in proper locations on cutting units to ensure reels spin in correct direction when mowing.
   - Front right and rear right reel motors are installed on right side of cutting units.
   - Remaining reel motors (including front center) are installed on left side of cutting units.

2. Verify reel motors are installed in proper orientation on cutting units.



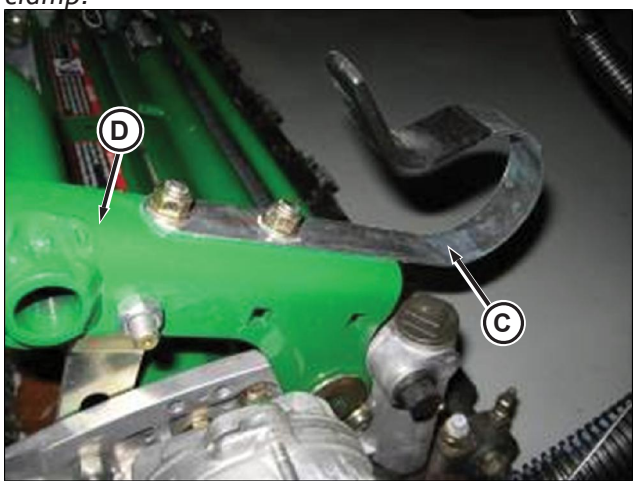
   - Motor wiring harness on front, center reel motor (A) is 30-degrees up from horizontal facing rearward.

NOTE: Harness must not be routed through uptstop on lift yoke.

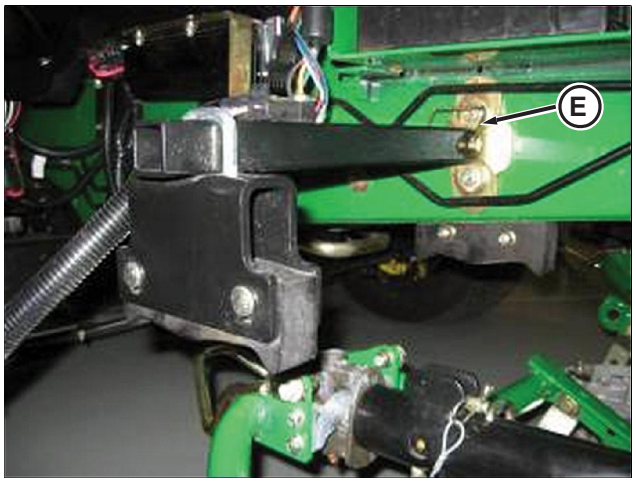


- Wiring harnesses on rear reel motors (B) are oriented 45-degrees up from horizontal facing forward.
- Wiring Harnesses on front left and right reel motors are oriented 90-degrees up from horizontal.

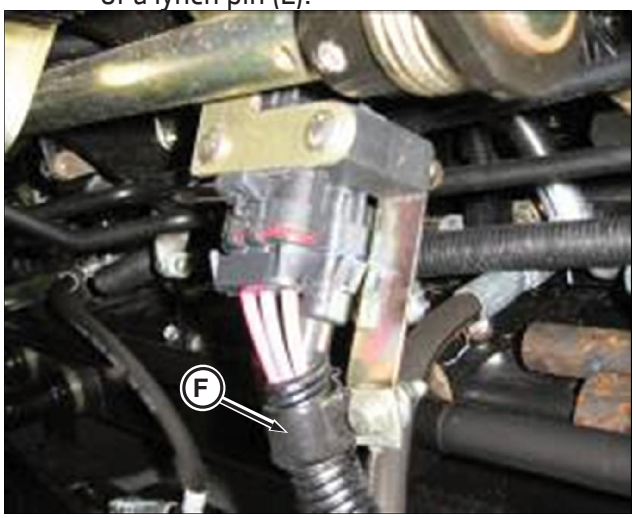
NOTE: Harness must be secured to lift yoke with clamp.



3. Verify upstops (C) are correctly installed on cutting unit lift yokes (D). Upstops serve to restrain movement of cutting units when raised for transport.
   - Front center cutting unit has two upstops installed on lift yoke.

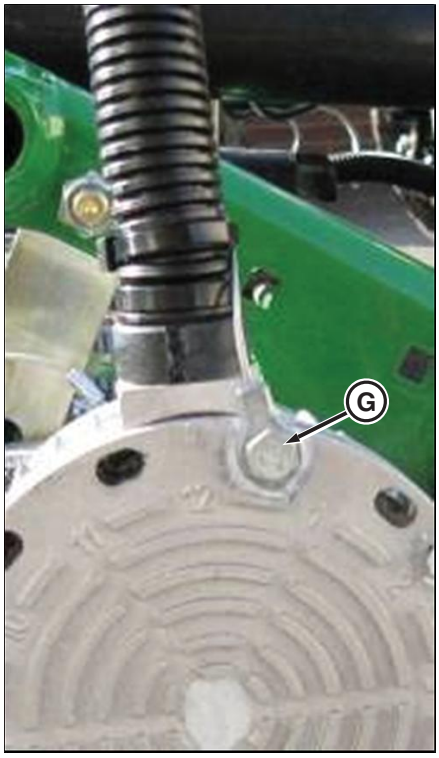


- Rear cutting units have two upstops installed on frame for either reel. One on the inner frame rail and one on the outer frame rail. The outer upstop can be easily removed by means of a lynch pin (E).

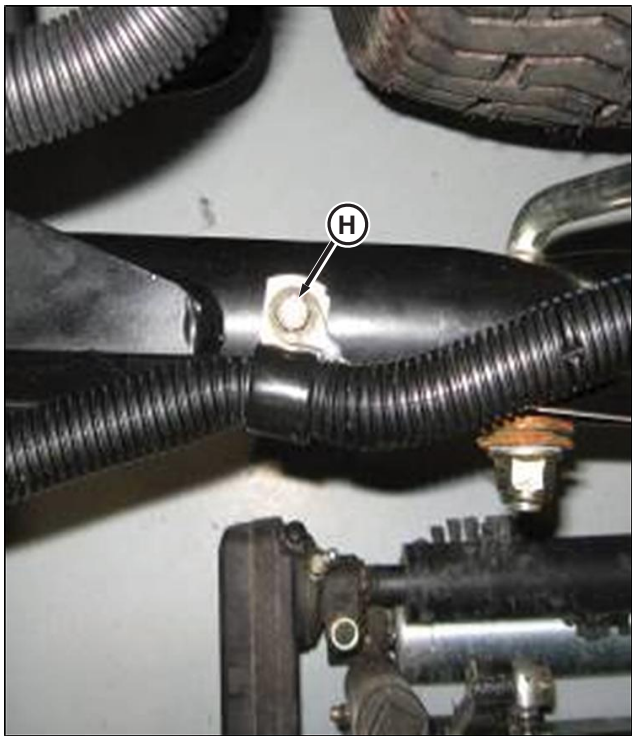


4. Verify clamps (F) are installed to secure reel motor and controller wire harness connectors.
   - Clamps provide strain relief for reel motor wiring harnesses.
   - Reel motor and reel drive housing should remain with machine when a cutting unit is removed (for example, to sharpen reel).

5. Verify cables are correctly installed:
   - Cable is shorter than reel motor wiring harness, and will pull tight if cutting unit with reel motor and reel drive housing still attached is rolled away from machine, protecting wire harness from damage.



   - One end of cable is installed onto reel motor, on bolt (G) and nut used to install reel motor on reel drive housing that is nearest reel motor wire harness.



- On front cutting units, other end of cable is installed onto lift arm using bolt (H).

- On rear cutting units, other end of cable is installed on same nut (I) and bolt used to install reel motor wire harness clamp.

Key Setup and Adjustments – Grass Catchers

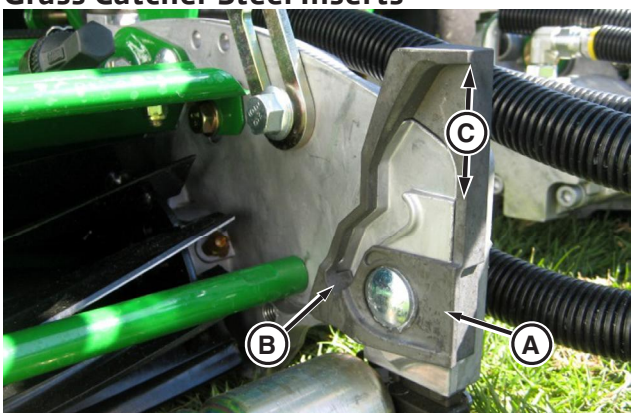
Cutting units can be operated with grass catchers attached.

Catcher mounting method transfers majority of weight to lift arm, minimizing impact to effective HOC as catcher fills and becomes heavier.

Front and rear catchers and mounting brackets are different.

- Rear catchers are slightly smaller than front catchers because rear cutting units cut slightly less grass than front cutting units.
- Front and rear catchers will fill at same rate and can be emptied together.

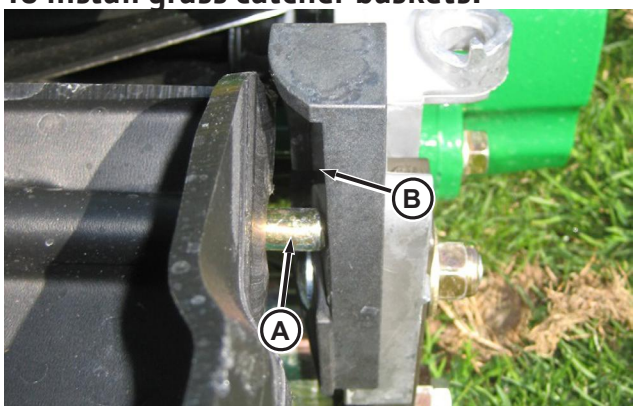
Grass Catcher Steel Inserts



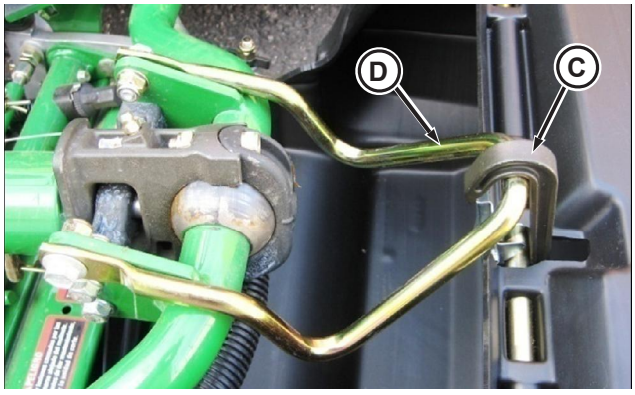
1. Verify steel inserts (A) are installed if using grass catchers. Steel inserts reinforce aluminum side panels of QA5 cutting unit frame.
2. Steel inserts provide following benefits:
   - Reduced wear of lower end of slot (B) in cutting unit frame that retains basket rod.
   - Reduced wear of basket alignment rod.
   - Larger opening (C) of slot enables operator to quickly and easily install basket.

NOTE: Do not install steel inserts on rear QA5 cutting units if new rear grass catcher kit is used.

To install grass catcher baskets:



1. Guide alignment pins (A) located on outer edges of basket into opening of slots (B) located on inside of cutting unit frame. Fully lower pins to bottom of slots.



2. Lock link handle (C) located on top of basket onto hanger bracket (D) located on cutting unit lift yoke.

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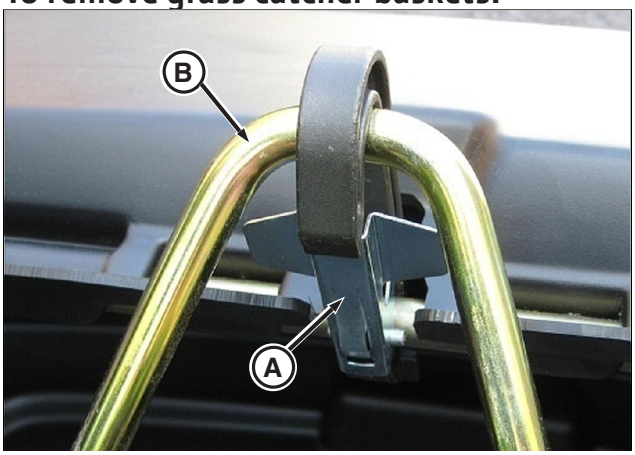
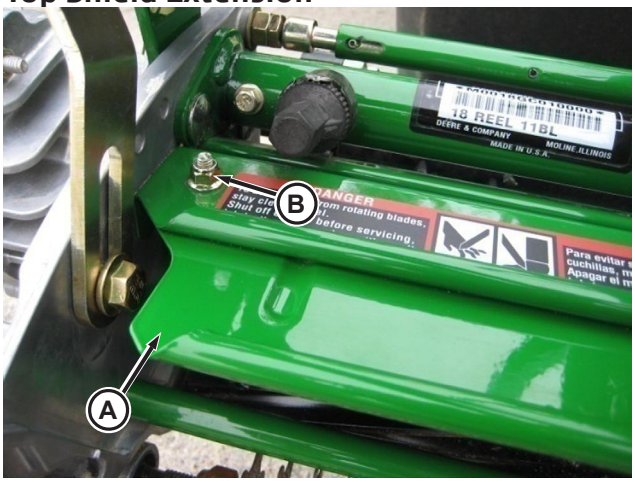
To remove grass catcher baskets:



1. Compress spring on link handle release (A) to unlock link handle from hanger bracket (B).
2. Lift basket off cutting unit.

Top Shield Extension

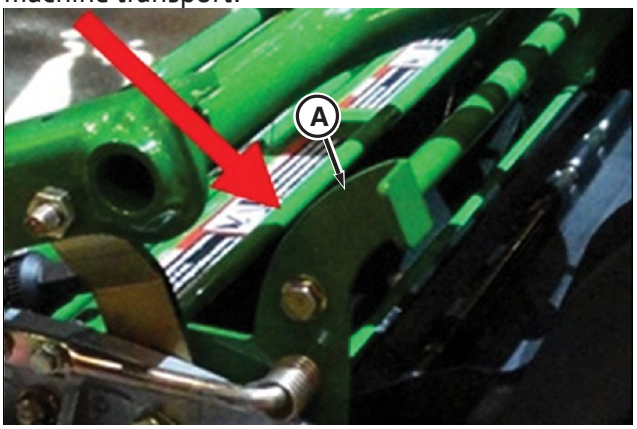


1. To improve grass catcher performance in dry turf conditions, install extension (A) onto existing cutting unit top shield. Extension installs with bolts and nuts (B).

NOTE: Remove cutting unit shield extensions in wet turf conditions. Only use shield extensions in dry turf conditions.

Front Wing Latch Kit

Front wing latch kits are needed when installing catchers onto 7500 and 8500 E-Cut™ Hybrid Mowers with QA5 cutting units. Latch kits are intended to hold the catchers firmly in place when the wing cutting units are raised to the vertical position for machine transport.



1. The spring-loaded system automatically locks the catcher in place. The grass catcher can be unlocked by moving the release lever (A) on either side of the cutting unit.

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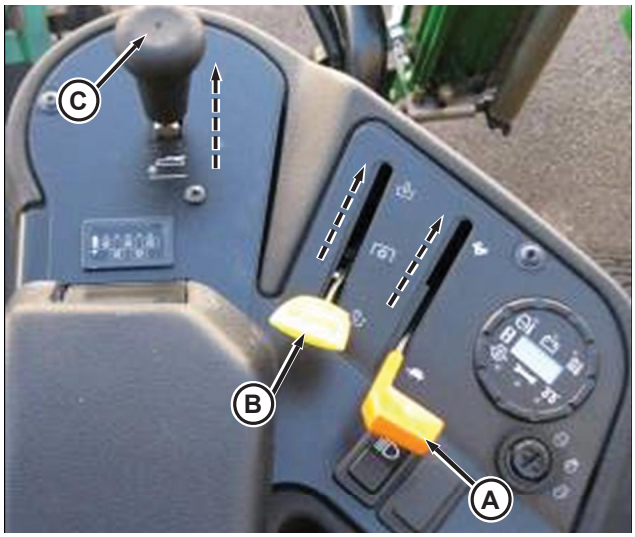
Operating Tips - Mowing

Park brake unlocked and operator in seat.



To engage Mow function:

1. Increase engine speed (A) to full throttle.

NOTE: 7500/8500 E-Cut™ Hybrid Mower engines can be operated at reduced throttle for noise reduction as well as fuel savings while maintaining full reel motor speed (normal turf conditions).

2. Move Mow/Transport lever (B) from Transport position to Mow position (away from operator).
3. Move Raise/Lower lever (C) to Lower position (away from operator). Cutting unit reels will begin spinning.

NOTE: Mow can also be engaged by first lowering cutting units and then moving Mow/Transport lever to Mow position. However, if cutting units are already in lowered position when engine is started, Raise/Lower lever will need to be cycled first.

Important: Ensure backlap switches under the seat on 7500/8500 E-Cut™ Hybrid's are set to mow.

4. Adjust reel speed depending on turf conditions and mowing speed:

- Rotate speed control knob (D) on Backlap control box clockwise to increase voltage from controllers to reel motors and make reels spin faster. Rotate knob counter-clockwise to make reels spin slower.

NOTE: Reduce reel speed if striping observed where cutting units overlap. Also, reduce reel speed when cutting taller grass to prevent grass from being blown over. Grass may consequently remain uncut. Faster reel speeds when mowing dry grass may cause grass clippings to be blown over grass catcher baskets. Install cutting unit shield extensions.

To disengage Mow function:

1. Decrease engine and ground speed.
2. Move Mow/Transport lever to Transport position.
3. Move Raise/Lower lever to Raise position.

Important: Do not attempt to engage or disengage Mow/Transport lever when hydrostat pedal fully depressed. Mow linkage provides stop for pedal linkage to set reduced speed during mowing. Damage to Mow cable, pedal linkages, front wing cylinders or cylinder stop may result and may cause the front wing units to raise past their intended design.

NOTE: Machine can leave trail of uncut grass in certain conditions on level ground as well as on slopes. Rear tires may lose traction when machine is traveling across a slope or if mow speed is too high in turns. Consequently, front and rear cutting units may unlap (lose available overlap). Traction is influenced by slope angle, turf conditions, moisture levels, tire pressure and mow speed. Reduce speed on slopes and when making turns.

Operating Tips – Mowing at Reduced Engine Speed

7500/8500 E-Cut™ Hybrid Mower engines can be operated at reduced throttle for noise reduction as well as fuel savings while maintaining full reel motor speed (normal turf conditions).

1. Start engine.

2. Move engine throttle lever past notch position (A) in command arm slot.
   - Engine rpm will be approximately 2300 rpm.
3. Move Mow/Transport lever to Mow position.
4. Lower cutting units to begin mowing.

NOTE: Operate engine at reduced speed only when mowing on flat terrain. Mowing with reduced engine speed on hilly terrain may cause engine speed to drop too much when mowing uphill and insufficient power to be supplied to reel motors. Reel stall error may occur.

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Operating Tips – Mow and Transport Position

- When the Mow/Transport lever is in the Mow position and the Raise/Lower lever is pulled to the Raise position, the cutting units will only raise partially. This allows the front wing cutting units to lower faster once the operator has completed a turn.

- When the Mow/Transport lever is in the Transport position and the Raise/Lower lever is pulled to the Raise position, the front wing cutting units will raise to the vertical position. This allows the unit to be transported into places that it normally could not go.
-

NOTE: Do not attempt to engage or disengage Mow/Transport lever when hydrostat pedal fully depressed. Mow linkage provides stop for pedal linkage to set reduced speed during mowing. Damage to Mow cable, pedal linkages, front wing cylinders or cylinder stop may result and may cause the front wing units to raise past their intended design.

Operating Tips – Transporting

When driving mower long distances, use lift locks to support front wing cutting units.

NOTE: This feature should also be used when storing the machine with the front wing cutting units in the transport position.

1. Raise front wing cutting units into transport position.

Picture Note: Unlocked position shown.

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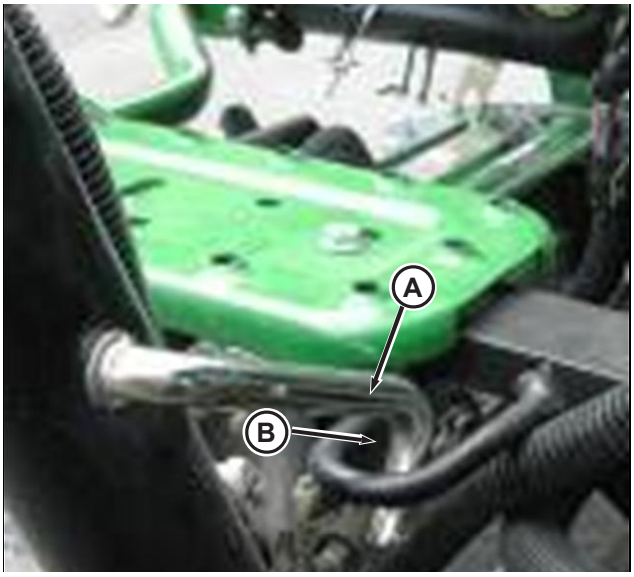


Picture Note: Locked position shown.

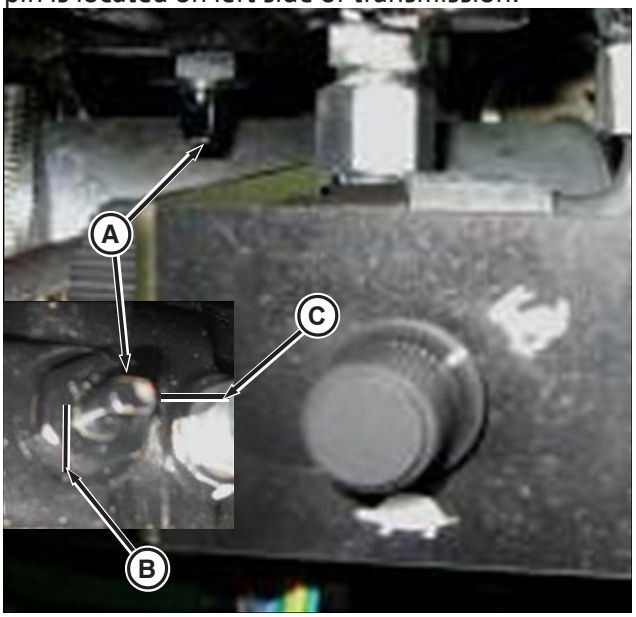
2. Rotate lock arm (A) down into loop (B) welded on machine frame.

Operating Tips - Moving Machine Manually

When mower needs to be moved when the engine is not running.

NOTE: Never tow mower or push long distances. Transport mower on trailer if possible.

1. Raise operator seat to service position. Unlock pin is located on left side of transmission.



2. Turn transmission unlock pin (A) so flats are in the vertical position (B) to disconnect transmission.
3. Turn transmission unlock pin (A) so flats are in the horizontal position (C) to reconnect transmission, (position shown).

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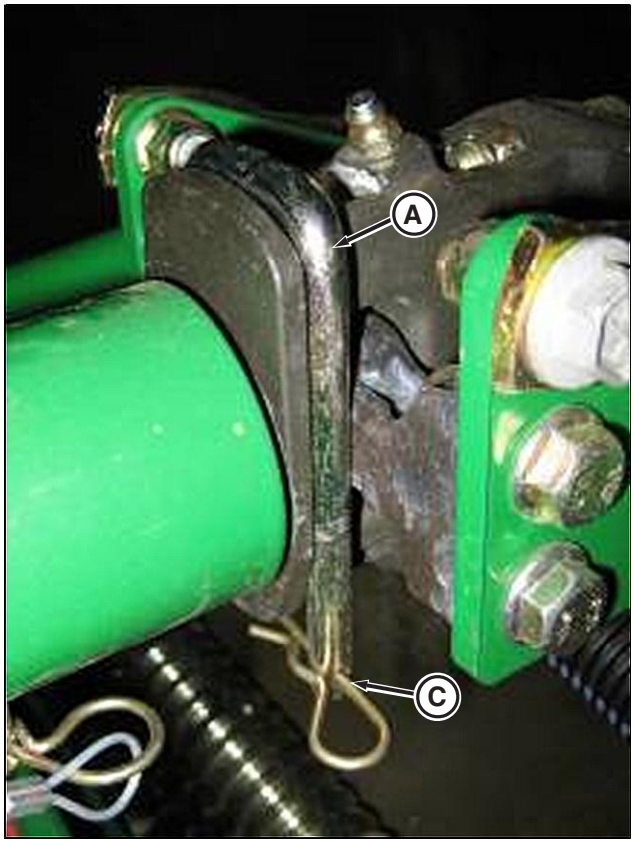
Operating Tips – Cutting Unit Anti-Steer

Yoke design on 7500 and 8500 E-Cut™ Hybrid Mowers enable cutting units to steer several degrees in either direction to accommodate changes in terrain. However, yokes can be locked to prevent steering if mowing in long straight lines on level terrain.

1. Remove U-shaped pin (A) from lift arm. Pin is retained in lift arm by spring clip.

2. Install pin into base of cast yoke support (B), near end of cutting unit lift arm.

NOTE: It may be necessary to steer cutting unit to enable pin to be pressed into position.



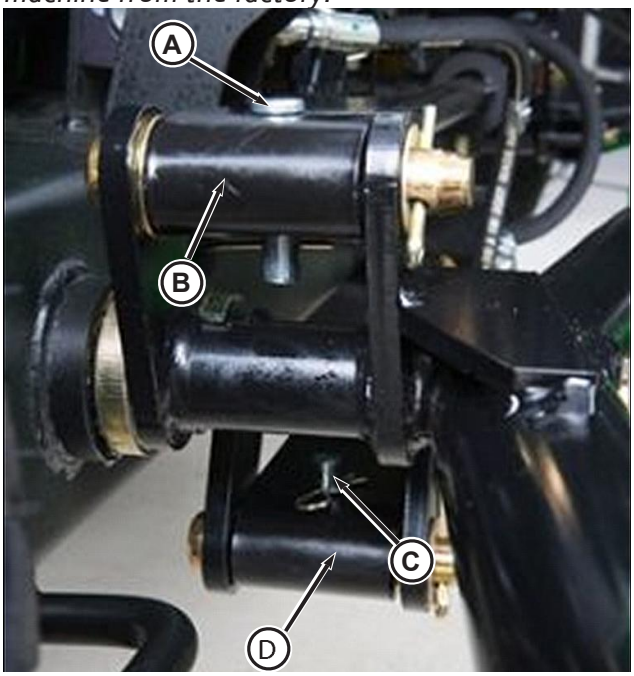
3. Install spring clip (C) to retain pin (A).

Operating Tips – Cutting Unit Down Pressure

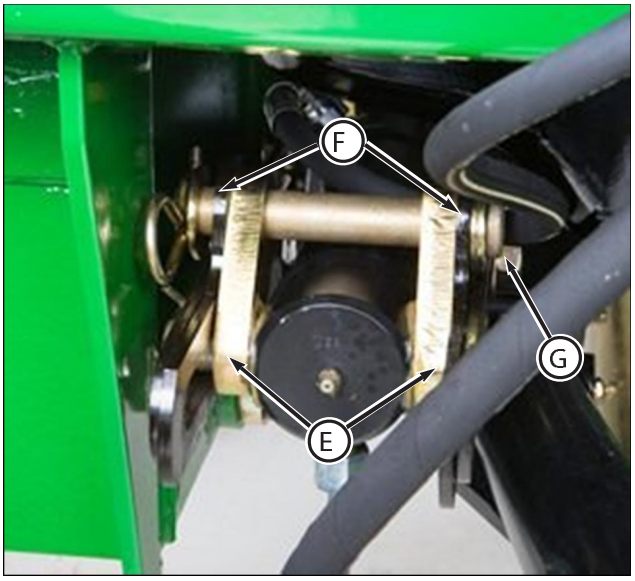
Verify down pressure is set up properly for customers application. To activate the hydraulic down pressure system, install the provided pins with the cutting units in the down position.

As an option, an adjustable hydraulic down pressure kit is also available and allows for increasing downward force.

Note: Pins were included in parts bag shipped with machine from the factory.



1. Insert down pressure pin (A) into lost motion cylinder (B) from the top as shown and secure with spring locking clip for front wing cutting units.
2. Insert down pressure pin (C) into lost motion cylinder (D) from the bottom as shown and secure with spring locking clip for front center cutting unit.

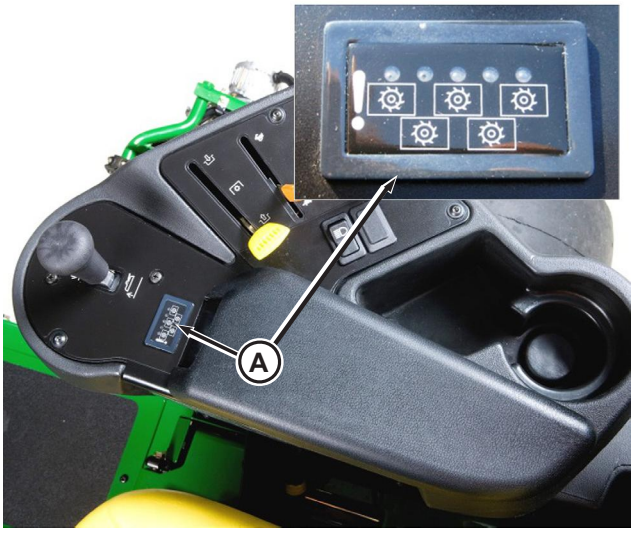


3. Rotate the two down pressure straps (E) and align with holes on plates (F). Insert down pressure pin (G) through plates and straps. Secure with spring locking clip. This is done on both sides of the rear cylinder.

NOTE: Standard down pressure adds 21 lbs (9.5 kg) to cutting units. Down pressure will consequently change effective HOC. Best practice is to utilize down pressure when ground is dry and uneven turf surface could cause cutting units to bounce. Down pressure requires increased engine power to push cutting units across ground.

Diagnostics – Reel Motor Controller Error Codes

7500 and 8500 E-Cut™ Hybrid Fairway Mowers feature on-board reel motor and controller diagnostics.



- Diagnostic panel (A) located on command arm contains five indicator lights. Each light is associated with the corresponding cutting unit position shown on the panel.

If a reel motor is suddenly interrupted during operation or fails to start, the indicator light will begin to flash a fault code to help the operator or technician troubleshoot and remedy the condition that is causing the problem.

NOTE: Indicator light will continue to flash single or multiple fault codes until Mow/Transport lever is moved to Transport position or engine is shut off. Indicator light will repeat a code for any condition that remains until corrected. Improper setup or operation are possible conditions to be considered when diagnosing fault codes.

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- Decal (B) located on inside of command arm lists six common fault codes that operators may encounter during mowing:

1-5	Motor No Start
1-6	Reel Stalled
1-7	48VDC Low
2-5, 2-6	Motor Over Current
2-10	Motor Over Temp

NOTE: Refer to the product Operator's Manual or Technical Manual for a comprehensive list of fault codes available for troubleshooting.

Operator can easily correct following conditions that may cause faulty reel motor operation:

- Improper reel or frequency of clip (FOC) adjustments.
- Plugged or jammed reel.
- Lack of scheduled maintenance.
- Dirt or debris on reel motor cooling fins.
- Engine speed set too low during mowing.

Operating Tips - Cruise Control

- Cruise control function applies a magnet to forward hydro pedal to hold pedal position.
- Cruise control can be used when mowing or transporting machine.

To Operate Cruise Control:

1. Press forward hydro pedal to select desired speed.
2. If mowing, engage cutting units and begin mowing.

3. Press cruise control toggle switch on command arm fully forward (A) to activate cruise control. Toggle switch will return to center position (B).
4. Remove foot from hydro pedal.

To disengage cruise control:

1. Press parking brake, or
2. Press cruise control switch to OFF position (C).

IMPORTANT: Only consider using cruise control when mowing in open areas with no sharp turns. Disengage cruise control before making any turns. Do not use cruise control on hills.

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Operating Tips – Safe Operation on Slopes

Operate machine with extreme caution on hills, slopes, and rough terrain to avoid losing traction and minimize rollover risk. Mowing sites should be carefully surveyed to assure slopes are safe for machine operation. Consider moisture and turf conditions. Wet slopes present significantly higher risk even though they may have been mowed successfully before. Look for dips and holes along the slope that could change the angle of vehicle operation.

Determining Safe Slope Angles:

1. Lay straight piece of sturdy lumber 4 ft (1.2 m) long on slope.
2. Measure slope angle with angle indicator or protractor level.

3. Repeat procedure at several points on same slope.

- Never mow or operate machine on slope angles greater than 25°.
- Exceeding the maximum recommended slope angle of 25° increases the risk of rollover accidents that can result in serious injury or death.
- Always consider potential turf conditions and slope angles when determining the risk of loss-of-control and tip-over accidents.
- On slope angles of 15° or less the risk of rollover is low, but as the slope angle increases to the John Deere recommended maximum of 25° the risk increases to a moderate level.

When Operating on Slope

- Carefully review all cautions included in machine Operators Manual.
- Always wear seat belt when operating machine, regardless of slope condition.
- Make sure that tires are properly inflated. Too low or too high tire pressure will cause the tires to lose traction.
- Whenever possible, mow up and down the slope rather than across it.
- Use lower speeds when mowing and operating on slopes.
- Use caution when making turns or changing directions on slopes.
- Decrease speed as the slope angle increases.
- Do not mow near drop-offs, ditches, embankments, or bodies of water. Machine could suddenly roll over if wheel goes over edge or edge caves in. Leave a safe margin between the machine and any hazard.
- Avoid areas where turf is wet or loose.
- Leave cutting units lowered on slopes to maximize stability. Never lift cutting units on steep slopes. Raising cutting units on a slope can cause the machine to become unstable.
- Use caution when operating machine on wet or loose turf. Tires may lose traction. If it begins to rain, discontinue operation on slope.

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Operation Checklist

Vehicle

- ☐ Check tire pressure.
- ☐ Check engine oil and hydraulic oil levels.
- ☐ Check engine coolant levels inside radiator and in recovery tank.
- ☐ Check fuel tank level. Add fuel as required. Capacity is 18.0 gallons (68.1 L).
- ☐ Lubricate all grease fittings on machine and cutting units. Wipe clean excess grease from fittings.

Cutting Units

- ☐ Inspect cutting unit reels and bedknives for sharpness. Backlap or grind edges if needed.
- ☐ Verify all cutting units are set to same HOC.
  Note that effective HOC after mowing will always be less than HOC set on a bench.
- ☐ Verify front roller brackets on all cutting units are in correct position for desired HOC.
  A lower front roller position at the same HOC will cause the reel to be more aggressive on turf.
- ☐ Verify clearance between bedknife and reel. Recommended clearance is 0.050 mm (0.002 in.) for Fairway mowing. Reel must not contact bedknife. Contact will accelerate wear and require more frequent reel and bedknife sharpening. Wear may result in observable cut quality issues. Contact will also generate heat and require more power to operate.
- ☐ Verify cutting units are properly aligned. Front roller must be parallel with bedknife and rear roller.
- ☐ Verify reel motors are installed in correct positions on cutting unit frame.
- ☐ Verify grass catcher baskets are properly installed (larger baskets on front cutting units).
  Install shield extensions in dry turf conditions for best grass catching performance..
- ☐ Verify Turf Conditioner and/or Rear Roller PowerBrush are adjusted properly and operational.
  Note that conditioner blades counter-rotate (opposite of reel rotation) when operating.

Operation

- ☐ Always wear seat belt when operating machine.
- ☐ Read Operator's Manual and become familiar with all controls and operating procedures.
- ☐ Check safety circuits when starting engine and engaging cutting units.
  Perform repairs if engine can be started or mow can be engaged with any safety switch out of position.
- ☐ Verify backlap function disengaged and reels spinning in forward direction prior to mowing.
- ☐ Verify reel speed control knob set to maximum reel speed when mowing lower HOC.
- ☐ Verify all down pressure pins are properly installed if mowing with down pressure.
- ☐ Verify anti-steering pins are installed in all lift arms if mowing long, straight Fairways.
  Remove pins to allow cutting units to steer.
- ☐ Check travel speed. Travel speed when mowing must not exceed 8 mph (13 kph), or should not exceed 5 mph (8 kph) if mowing hilly areas.

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Consequences of Improper Setup and/or Operation

Symptoms	Possible Causes
Tire sidewalls bubbled or failed	☐ Tires run at too low pressure
Poor cut quality	☐ Reel and/or bedknife is dull ☐ Bedknife position in cutting unit adjusted incorrectly; contact or excessive clearance between reel and bedknife ☐ Effective HOC set too low for turf height and conditions; not following "1/3" rule ☐ HOC not set equally on all cutting units ☐ Front roller not parallel to bedknife; front and rear rollers not parallel ☐ Front roller brackets in wrong position on cutting unit for HOC; bedknife pitched too shallow or too steep ☐ Incorrect front roller or bedknife being used for application ☐ Incorrect reel being used; more/less number of blades may be preferable ☐ Mow speed too fast for turf conditions and amount of grass being removed ☐ Reel speed too slow for turf conditions and mow speed; reel speed control knob not set correctly ☐ Hydraulic oil level is low; pump not supplying sufficient oil volume to reel motors
Cutting units leave uncut grass	☐ Reel and/or bedknife is dull ☐ Cutting unit not setup correctly; excessive clearance between reel and bedknife ☐ HOC set too low for turf height and conditions ☐ Mow speed too fast for turf conditions ☐ Machine losing traction when steering or mowing across slope, causing front cutting units to unlap (lose overlap) from rear cutting unit ☐ Incorrect front roller being used for turf conditions and application; grooved roller may be preferable to smooth roller
Discolored overlap stripe	☐ Reel and/or bedknife is dull ☐ Bedknife improperly sharpened ☐ Reel speed set too fast, causing over-stressed grass
Poor grass catching	☐ Reel shields misadjusted for conditions; may need shield extensions
Grass buildup on roller affecting HOC	☐ PowerBrush shaft not adjusted
Turf scuffing	☐ Travel speed too fast in turns or on slopes; tires skidding or slipping
Loss of traction while mowing or traveling across slope	☐ Tires not inflated to correct pressure ☐ Travel speed too fast for turf conditions ☐ Slope angle too steep for turf conditions ☐ Cutting units in raised position, affecting machine stability
Intermittent electric reel motor operation	☐ Contaminated or damaged connectors

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Service Intervals

Before Each Use

- ☐ Check engine oil
- ☐ Check hydraulic oil
- ☐ Check coolant
- ☐ Check for leaks
- ☐ Inspect tires and check air pressure
- ☐ Check safety interlock system
- ☐ Check brake system
- ☐ Check air filtration system
- ☐ Check for loose, missing, or damaged parts
- ☐ Check all safety guards and shields
- ☐ Check fuel/water separator
- ☐ Check pedals and/or steering control
- ☐ Check seat belt

After Each Use

- ☐ Check/fill fuel
- ☐ Clean debris from machine
- ☐ Clean debris from cooling system
- ☐ Clean debris from cutting units and attachments
- ☐ Lubricate machine after washing

Storage Tips

Preparing Machine for Long Term Storage

Note: Filling the fuel tank reduces the amount of air in the fuel tank and helps reduce deterioration of fuel.

- ☐ If you have been using "Stabilized Fuel," add stabilized fuel to tank until the tank is full. (See your Operator Manual for specific procedure.)
- ☐ If you have NOT been using "Stabilized Fuel," run engine until it runs out of fuel. (See your Operator Manual for specific procedure.)
- ☐ Service air cleaner.
- ☐ Clean debris from engine air intake screen, oil cooler coils and radiator cooling fins (if equipped).
- ☐ Check engine coolant level and freeze point.
- ☐ Check belts for damage and proper tension.
- ☐ Remove, charge, and store battery in a cool, dry place.
- ☐ Close fuel shut-off (if your machine is equipped).
- ☐ Store machine in a dry, protected place. If out side, put a waterproof cover over it.

Preparing Machine to Resume Operation

- ☐ Check tire pressure.
- ☐ Wipe grease off cutting units.
- ☐ Install cutting units (if removed).
- ☐ Be sure all shields, guards, or deflectors are in place.
- ☐ Check engine oil level.
- ☐ Check hydraulic oil in reservoir.
- ☐ Check all hoses, clamps, and connections.
- ☐ Check, charge and install battery.
- ☐ Lubricate all grease points.
- ☐ Open fuel shut-off, if your machine is equipped.

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