Congratulations for buying a Country Clipper product. Your Country Clipper Zero Turning Radius Riding Mower was designed and built to provide long and trouble free service. Keep in mind that it, like any other mechanical device, can be potentially dangerous if used improperly, and hazard control and accident prevention are dependent upon the awareness, concern, prudence, and proper training of personnel involved in the operation, transport, maintenance, and storage of the equipment. Study this manual and pay special attention to the important Safety Precautions on pages 3-5. Following these instructions will help you continue to enjoy the trouble-free performance.
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ACCIDENT PATTERNS TO AVOID

I. CONTACT WITH THE ROTATING BLADE -- This accident usually happens when the operator is clearing the discharge chute of grass, (especially when the grass is wet), or when the operator adjusts the machine without turning it off and waiting for the blades to completely stop.

II. PROPELLED OBJECTS -- Sticks, rocks, wires, and other objects can be propelled out through the discharge chute or from under the deck housing. Bystanders are particularly vulnerable.

III. GRASS CATCHER OR GUARD -- The mower shall not be operated without either the entire grass catcher or guard in place.

IV. OVERTURNING -- This happens when riding mowers are used on steep slopes, embankments or hills. The operator in these cases can come in contact with the blades or sustain injuries during a fall.

V. MOWER RUNNING OVER THE VICTIM -- This usually happens when a riding mower is driven in reverse. The accident victims are most often young children whom, unseen by the operator of the mower, were in the area being mowed.

AT COUNTRY CLIPPER, WE SHARE YOUR DESIRE TO PROTECT YOURSELF, YOUR FAMILY, YOUR FRIENDS AND YOUR NEIGHBORS FROM ACCIDENTAL INJURY. OBSERVING AND ENFORCING THE FOLLOWING GUIDELINES WILL HELP TO ENSURE THE SAFETY OF EVERYONE.

PLEASE BE CAREFUL!

SAFETY INSTRUCTIONS AND RECOMMENDATIONS

1. PEOPLE WHO OPERATE, SERVICE, OR ARE OTHERWISE ASSOCIATED with the Country Clipper Zero Turning Radius Mower should be trained in its proper use and warned of its dangers. Before operating, adjusting, or servicing the Country Clipper Zero Turning Radius Mower they should read and understand this entire manual and the engine owner’s manual.

2. AVOID CONTACT WITH MOVING PARTS. Keep hands and feet from under mowing deck and away from blades at all times. Turn engine (motor) off if you must unplug the chute.

3. AVOID HILLS AND SLOPES. Use extreme caution when mowing up or down slopes. NEVER mow across the face of a slope. If a slope must be ascended, back up the slope; drive forward when descending. Reduce speed and use caution to start, stop and maneuver. To prevent loss of control on a slope avoid sharp turns, sudden changes in direction, and sudden stops and starts.

4. DISENGAGE POWER TO MOWER BEFORE BACKING UP. Do not mow in reverse unless ABSOLUTELY necessary and then only after turning around and observing the entire area behind the mower. Go slowly. Most “running over victim” accidents occur in reverse.

5. BEGINNING OPERATORS SHOULD LEARN HOW TO STEER the Country Clipper Zero Turning Radius Mower before attempting to mow. Start with slow engine speed and drive without the blades engaged in an open area until comfortable with the machine.

6. KNOW HOW TO STOP QUICKLY. Know the location and operation of every control, especially how the brake and how to disengage the mower blades.

7. DO NOT MOVE CONTROL LEVER(S) from forward position to reverse position rapidly. The speed and/or direction of travel is affected instantly by movement of the Control Lever(s).
8. **DO NOT ALLOW CHILDREN TO OPERATE MOWER.** Do not allow others who have not had instruction to operate mower.

9. **ALWAYS TURN ENGINE OFF AND REMOVE KEY** before leaving the mower to prevent children and inexperienced operators from starting the engine. Never leave the mower unattended with engine running. Always wait for all moving parts and all sounds to stop before leaving operator’s seat.

10. **WEAR STURDY, ROUGH-SOLED WORK SHOES AND CLOSE-FITTING SLACKS AND SHIRTS.** Never operate mower in bare feet, sandals or sneakers.

11. **NEVER CARRY PASSENGERS.**

12. **KNOW THE AREA YOU ARE TO MOW.** Watch for hidden danger such as rocks, roots, sticks, holes, bumps, and drop-offs, etc. Before mowing, pick up all debris in area to be mowed. Sharp and hard objects can be propelled at a high speed and can act like shrapnel. Walk through tall grass BEFORE MOWING to make sure there are no hidden dangers. Mow higher than desired in tall grass to expose any hidden objects and/or obstacles, clean the area, and then mow to the desired height.

13. **NEVER REFUEL A MOWER INDOORS.** Allow the engine time to cool before refueling. Unseen vapors may be ignited by a spark. Always clean up spilled gasoline. Never run the engine indoors in a garage or any other closed building. Allow engine to cool before storing in any enclosure. The engine exhaust and gasoline fumes are dangerous.

14. **NEVER REMOVE THE FUEL CAP** or add gasoline to a running or hot engine that has not been allowed to cool for several minutes after running. Always make sure the gas cap is in place.

16. **KEEP GASOLINE IN A WELL-VENTILATED AREA** away from your living quarters and in tightly-capped safety cans. Never store mower with gasoline in the tank inside a building where fumes may reach open flame or spark.

17. **DISENGAGE BLADES, STOP ENGINE AND REMOVE IGNITION KEY** before any servicing. Be sure all moving parts and all sounds have stopped. Let engine cool and disconnect the spark plugs so the engine cannot start by accident. A SLIGHT ROTATION OF THE BLADES COULD START THE ENGINE.

18. **KEEP ALL NUTS, BOLTS, AND SCREWS TIGHT** to be sure equipment is in safe working condition, especially blade mounting bolts.

19. **VEHICLE SHOULD BE STOPPED AND INSPECTED FOR DAMAGE** after striking a foreign object and the damage should be repaired before restarting and operating the equipment. Stop immediately and check for damage or loose parts if mower should start vibrating.

20. **DISENGAGE BLADES BEFORE DRIVING ACROSS WALKS or projecting objects.**

21. **KEEP SAFETY DEVICES AND GUARDS IN PLACE.** If any of the safety switches become inoperable, have them repaired immediately.

22. **DO NOT STEP OR STAND ON THE MOWER DECK HOUSING.** Step or stand only on the foot deck.

23. **WATCH OUT FOR TRAFFIC near roadways and when crossing roads.**

24. **DO NOT USE MOWER WHEN GRASS IS WET AND SLIPPERY.**

25. **MOW ONLY DURING DAYLIGHT.**

26. **THIS MACHINE IS NOT MEANT FOR HIGHWAY OR STREET USE.** It is not a recreational vehicle and it should not be operated as such.
27. ALWAYS DISENGAGE THE MOWER BLADE CLUTCH when transporting.

SAFETY INTERLOCK SYSTEMS

Your Country Clipper Zero Turning Radius Mower is equipped with switches interlocked for your safety.

ON JOYSTICK MODELS NEUTRAL IS WHEN THE JOYSTICK IS IN THE “DOWN” POSITION.

ON TWIN STICK MODELS NEUTRAL IS WHEN BOTH HANDLES ARE IN THE “OUT” POSITION.

1. The mower blades must be disengaged before engine will start.

2. The Control Lever(s) must be in the neutral position before the engine will start.

3. The engine will stop if the mower blade clutch is engaged when the operator leaves the driver’s seat.

4. The engine will stop if the Control Lever(s) are not in the neutral position when the operator leaves the driver’s seat.

5. The engine will stop if the brake is “SET” and the Control Lever(s) are not in the neutral position.

6. The engine will stop if the brake is “SET” and the mower blade clutch is engaged.

DO NOT OPERATE MOWER IF SAFETY SWITCHES ARE NOT OPERATING PROPERLY

START UP AND OPERATION

CHECKLIST BEFORE OPERATION

1. Make sure fuel tank is full. Use regular unleaded gasoline (see engine owner’s manual for more details).

2. Make sure dirt and foreign matter is kept out of gas tank. Use a clean funnel and gas can.

3. Do not mix oil with gasoline.

4. Do not use white, high test or premium gasoline. Do not use de-icers, carburetor cleaners, or other such additives.

5. Check the crankcase oil level. Make sure the engine is off. The mower should be parked on a level area. Do not overfill. (See your engine manual for more detailed instruction.)

6. Check the hydrostatic transmission oil level. (See “Maintenance” section of this manual.)

7. Check battery fluid level.

8. Inspect V-belts.

9. Check tire pressure:

<table>
<thead>
<tr>
<th>Model</th>
<th>Front tires</th>
<th>Rear tires</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Models</td>
<td>12 psi</td>
<td>18 psi</td>
</tr>
</tbody>
</table>

10. Make sure underside of mower deck is free of grass.

11. Make sure mower blades are sharp and secured tightly.

12. Clean the air intake screen on the engine if necessary.

13. Perform any other maintenance as it becomes necessary. (See the “Maintenance” section of this manual.)

IMPORTANT: Before cutting grass, clutch must be broken-in as follows: With engine at full RPM engage deck until blades come to full speed and then disengage until blades come to a complete stop. Repeat 10 times to seat clutch properly.
## OPERATION - JOYSTICK

1. MOVE JOYSTICK CONTROL LEVER TO neutral "DOWN" position.

2. SET PARKING BRAKE. Pull up to set.

3. DISENGAGE MOWER BLADE CLUTCH by moving clutch switch to "OFF" position.

4. PULL ENGINE CHOKE CONTROL to full position for cold starts (non fuel injected models)

5. SET ENGINE THROTTLE TO 1/2 THROTTLE.

6. TURN IGNITION KEY to "START" position and release to "RUN" as soon as engine starts. NOTE: Prolonged cranking will damage starter motor and shorten the battery life.

ADJUST ENGINE THROTTLE AND CHOKE for desired engine smoothness and speed.

NOTE: When mowing always run engine at full throttle.

8. RELEASE PARKING BRAKE. Push brake lever down to release.

9. TO DRIVE: Move the Joystick Control Lever to the "UP" position. Move the Joystick Control Lever forward to move forward. Increasing forward movement of the Joystick Control Lever will increase the speed of travel. To reverse the direction, pull the Joystick Control Lever slightly back. To turn, move the Joystick Control Lever toward the direction you want to turn. To turn on a zero radius axis, go slowly and move the Joystick Control Lever to the side you wish to turn and slightly to the rear at the same time.

10. Make sure mower blades are sharp and secured tightly.

11. Clean the air intake screen on the engine if necessary.

12. Perform any other maintenance as it becomes necessary. (See the "Maintenance" section of this manual.)

### WARNING

AVOID INHALING EXHAUST FUMES -- CARBON MONOXIDE GAS IS COLORLESS AND ODORLESS, AND CAN CAUSE UNCONSCIOUSNESS, AND IS POTENTIALLY LETHAL. DO NOT RUN LAWN MOWER IN GARAGE OR OTHER CONFINED AREA.

### IMPORTANT:

Until the operator is familiar with the Country Clipper Zero Turning Radius Mower, he/she should follow these recommendations: Disengage the mower blades. Go very slowly until thoroughly familiar with the machine. Keep away from fences, buildings, and other obstructions. Move the Joystick Control Lever smoothly and slowly. Practice until operation is smooth and efficient.
TWINSTICK CONTROL LOCATIONS

WARNING

AVOID INHALING EXHAUST FUMES -- CARBON MONOXIDE GAS IS COLORLESS AND ODORLESS, AND CAN CAUSE UNCONSCIOUSNESS, AND IS POTENTIALLY LETHAL. DO NOT RUN LAWN MOWER IN GARAGE OR OTHER CONFINED AREA.

OPERATION – TWINSTICK

1. MOVE STEERING CONTROL LEVERS TO neutral “OUT” position.
2. SET PARKING BRAKE. Pull up to set.
3. DISENGAGE MOWER BLADE CLUTCH by moving clutch switch to “OFF” position.
4. PULL ENGINE CHOKE CONTROL to full position for cold starts (on non-fuel injected models).
5. SET ENGINE THROTTLE TO 1/2 THROTTLE.
6. TURN IGNITION KEY to “START” position and release to “RUN” as soon as engine starts. NOTE: Prolonged cranking will damage starter motor and shorten the battery life.
7. ADJUST ENGINE THROTTLE AND CHOKE for desired engine smoothness and speed.
   NOTE: When mowing, always run engine at full throttle.
8. RELEASE PARKING BRAKE. Push brake lever down to release.
9. TO DRIVE: Move the Steering Control Levers to the “IN” position. Move the Steering Control Levers forward to move forward. Increasing forward movement of the Steering Control Levers will increase the speed of travel. To reverse the direction, pull the Steering Control Levers slightly back. To turn, move one Steering Control Lever slightly ahead of the other. To turn on a zero radius axis, go slowly and move one Steering Control Lever forward and one Steering Control Lever rearward. (For a right hand turn the left hand Steering Control Lever will be ahead of the right hand Steering Control. For a left hand turn the right hand Steering control will be ahead of the left hand Steering Control.)

CAUTION

FOR SMOOTH, SAFE OPERATION, MOVE THE CONTROL LEVER(S) IN A GENTLE, SLOW MOTION. NEVER PULL OR PUSH THE CONTROL LEVER(S) RAPIDLY, ESPECIALLY ON GRADES.

10. BRAKING: To brake mower, gently move the Control Lever(s) in the direction opposite to travel. If the parking brake is engaged with the Joystick Control Lever in the “UP” position or the Twin Sticks (if equipped) in the “IN” position the engine will stop.
11. CUTTING HEIGHT ADJUSTMENT:
   With the Cut Height Adjustment Lever latched into the top cut height latch, insert Cut Height Stop Pin to desired cutting height. Pull Cut Height Adjustment Lever rearward and then to the left to clear top cut height latch. Lower Cut Height Adjustment Lever until it rests on Cut Height Stop Pin.

12. ENGAGE MOWER BLADE CLUTCH:
   Set the Blade Clutch Switch to the “ON” position. The engine will not start if the blade clutch is engaged. If the operator is not in the seat, the engine will stop if the clutch is engaged.

**CAUTION**
AVOID HILLS AND SLOPES. USE EXTREME CAUTION WHEN MOWING UP OR DOWN SLOPES. NEVER MOW ACROSS THE FACE OF A SLOPE. IF A SLOPE MUST BE ASCENDED, BACK UP THE SLOPE; DRIVE FORWARD WHEN DESCENDING.

13. TO STOP:
   A. Move Joystick Control Lever to neutral position and then to the “DOWN” position.
   A2. Move the Twinstick handles to the neutral position and then push both handles out as far as they will go.
   B. Disengage the mower blade clutch by moving the clutch to the “OFF” position.
   C. Set the parking brake.
   D. Turn ignition key to “OFF” (left) position.
   E. Remove the key and wait for all movement and all sound to cease before dismounting.

14. TO FREE WHEEL MACHINE:
   Unscrew the bypass valves (1/4 turn counter clockwise) found on the left front of the right pump and the valve on the right front of the left pump. Use a wide blade straight screwdriver.

**CAUTION**
WHEN LEAVING THE MOWER UNATTENDED, ALWAYS REMOVE THE KEY AND SET THE PARKING BRAKE, EVEN IF JUST FOR A FEW MOMENTS. HELP PROTECT CHILDREN AND OTHER UNAUTHORIZED PERSONS FROM ACCIDENTS.
CAUTION
NEVER OPERATE MOWER WITHOUT DISCHARGE CHUTE

MOWING RECOMMENDATIONS

2. Keep mower blades sharp.
3. Make sure deck and discharge are clean.

CAUTION
POWER MUST BE OFF TO CLEAN DISCHARGE CHUTE. TURN ENGINE OFF AND WAIT FOR ALL MOVING PARTS TO STOP.

3. When mowing tall grass, make two passes, mowing off 1/2 of the desired cut on the first pass, and then the desired height the second pass. Check for hidden dangers first.

4. Go slowly for trimming.

5. Always cut grass with the engine at full throttle speed. This “ENGINE” speed allows the cutting blades to operate at optimum cutting speed. Control “GROUND” speed with the Control Lever(s).

6. Vary ground speed to suit conditions (i.e. go slower in tall thick grass, on hills, wet conditions, etc.)
**MAINTENANCE**

<table>
<thead>
<tr>
<th>Maintenance Service Interval</th>
<th>Maintenance Procedure</th>
</tr>
</thead>
</table>
| **Before Each Use or Daily** | ☐ Check Engine Oil Level.  
☐ Check Mower Blades.  
☐ Check Operator Presence Control System.  
☐ Check for Loose Hardware.  
☐ Clean Engine Cooling System.  
☐ Remove Debris From Engine.  
☐ Remove Debris Build-Up Hydrostatic Transmission & Cooler |
| **After Each Use or Daily** | ☐ Clean Grass Build-Up from Deck Cutting Chamber. |
| **After First 5 Hours** | ☐ Change Engine Oil. |
| **After First 100 Hours** | ☐ Check Wheel Lug Nuts. (75 ft/lbs or 102 Nm)  
☐ Change Hydraulic Filter. |
| **Every 10 Hrs** | ☐ Check Tire Pressure. (12 Psi / 83 kPa Front 18 Psi / 124kPa Rear)  
☐ Check Battery Fluid  
☐ Sharpen Mower Blades |
| **Every 25 Hours** | ☐ Service Air Cleaner. (Increase Frequency Under Severe Conditions. See Engine Owner’s Manual for additional information.) |
| **Every 50 hours** | ☐ Check Hydraulic Oil Level.  
☐ Check Drive Belt Condition.  
☐ Check Engine RPM (3500-3600 rpm) |
| **Every 100 hours** | ☐ Change Engine Oil & Filter. (Increase Frequency Under Severe Conditions. See Engine Owner’s Manual for Additional Information.)  
☐ Remove Engine Shrouds & Clean Cooling Fins.  
☐ Check Spark Plug  
☐ Check Wheel Lug Nuts. (75 ft/lbs or 102 Nm) |
| **Every 400 Hours** | ☐ Change Hydrostatic Transmission Oil & Filter |
| **Every 500 Hours** | ☐ Grease Front Caster Pivots  
☐ Replace Air Filter Element  
☐ Check Spark Plugs  
☐ Service Battery |

Replace safety decals when illegible. Write factory for free replacement.
MAINTENANCE INSTRUCTIONS

1. ENGINE:

For complete maintenance and operating information for your engine, please refer to your engine operating and maintenance instructions furnished by the engine manufacturer and included in your Country Clipper Zero Turning Radius Mower information packet.

NOTE: Air intake screen must be kept clean. If plugged, engine may be seriously damaged by over heating.

2. BATTERY:

CAUTION

BATTERY ELECTROLYTE IS A POISONOUS AND CORROSIVE SULFURIC ACID SOLUTION. AVOID SPILLING ON SKIN, EYES, AND CLOTHING.

Keep the electrolyte level above the plates in each cell by adding distilled water as it becomes necessary. Add water just before operating the mower to mix the water with the solution. Be careful not to overfill the battery -- the electrolyte solution is corrosive and can cause damage to surrounding metal parts if it should spill. When taking the battery out of the mower for servicing, make sure to connect the cables to the battery exactly as they were prior to removal. Always disconnect the ground (-) wire first and always reconnect the ground (-) wire last.

Keep the battery clean. Remove the corrosion around the battery terminals by applying a solution of one part baking soda to four parts water. Coat all exposed terminal surfaces with a light layer of grease or petroleum jelly to prevent corrosion.

NOTE: At temperatures below 32 degrees F (0 degrees C) the full charge state must be maintained to prevent cell electrolyte from freezing and causing permanent battery damage.

3. TIRES:

Correct tire pressure is essential for efficient operation of the mower. Check tire pressure as requested in the maintenance schedule. Inflate tires to the pressures listed below:

<table>
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<tr>
<th>Model</th>
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<th>Rear tires</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Models</td>
<td>12 psi</td>
<td>18 psi</td>
</tr>
</tbody>
</table>

Lug nuts should be checked regularly for tightness.

4. MOWER BLADES:

Check sharpness of mower blades after every 10 hours of operation. To sharpen blades proceed as follows:

CAUTION

STOP ENGINE, REMOVE IGNITION KEY FOR SAFETY.

A. Remove bolt and blade washer mounting blade on shaft. Remove blade.

B. Blades should be discarded when worn excessively.

C. Sharpen blades with a hand file, electric grinder or blade sharpener. Wear gloves and eye protection when sharpening. Grind blade at original 25 degree bevel.
D. Check balance of blade by positioning the blade on a nail or blade balance pedestal. Grind the blade on the end that is heavier until both sides balance.

E. Install blade, blade washer, and bolt. Make sure to tighten bolt to 100 ft-lbs.

5. V-BELTS:

All belts should be checked every 50 hours. Replace any belts found to be in poor condition. All belts are equipped with spring loaded belt tighteners and do not require tightening adjustments.

6. LUBRICATION:

A. Engine: Follow engine manufacturer’s recommendation.

B. Hydrostatic Transmission & Filter: Follow instructions listed below.

**DIRT OR WATER IN OIL CAN RUIN THE HYDROSTATIC TRANSMISSIONS**

Check the oil level in hydrostatic transmission oil reservoirs after every 25 hours of usage. Check that the level of both reservoirs is visible through the sight window in the side panel. The level should be checked cold. (Slide the seat as far forward as possible for better visibility.) Replenish as needed with 20W-50 Motor Oil. **DO NOT OVERFILL.**

When replenishing the oil level, be very careful to keep the reservoir clean.

Change the oil in the reservoir and hydrostatic transmission filter after the first 100 hours of use, then every 400 hours after that. Remove the filter and be sure all oil has drained from the reservoir. Replace with new filter and 20W-50 Motor Oil.

7. PARKING BRAKE ADJUSTMENT:

A. Pull brake handle up until brakes engage.

B. Tighten the adjustment nut on the right rod until spring is compressed to 3/4 inch.

C. Repeat on left rod.
8. **TWINSTICK CONTROL LEVER**

**FORWARD ADJUSTMENT:**

A. Remove the fender skirts from each side of the machine.

B. Block up the unit so that the Drive Wheels are off the ground.

C. Loosen the locknuts on the turnbuckle on the upper linkage on each side.

D. Push both control levers forward until they hit the stops on the control arms.

E. Bungee cord the arm at this position and lengthen the upper linkage rods until they bottom out the transmissions.

F. Back off the turnbuckles ½ turn and lock in place with the locknuts.

---

**Tracking Adjustment Knob**

10. **TWINSTICK CONTROL LEVER**

**NEUTRAL ADJUSTMENT:**

A. Loosen the bolts holding the Neutral Plate.

B. With the engine running, pull back the control lever until the wheel spin is zero.

C. Tilt the Control lever outward, using the lever, position and tighten the bolts holding the Neutral Plates.

---

11. **TWINSTICK CONTROL LEVER**

**FORWARD TRACKING:**

Drive mower in a large open area, & actuate the control levers into the full forward position. If the mower veers in either direction left or right some adjustment is necessary. If the mower veers to the right, then the left transmission needs to be slowed down. If the mower veers to the left, then the right transmission needs to be slowed down.

A. Stop the machine and shut off the engine.

B. Slightly loosen the nuts around the turnbuckle on the faster side. Lengthen the linkage rod by ¼ turn increments, retighten and retest, until the mower tracks straight.

C. Once the tracking is to the operator’s liking, completely tighten the nuts on the turnbuckle. Recheck and adjust the Neutral Plate, if required.

D. Reinstall the side plates and tighten all bolts.

E. If the forward tracking still requires “fine tuning”, use the on-the-fly tracking adjustment knob on top of the fender cap, next to the Control lever. Make small adjustments to full forward as needed.
12. TO ADJUST “IN” OR OPERATING POSITION OF THE TWINSTICK STEERING CONTROL LEVERS:

If the Control levers are too close in the center or the Control levers drag on the Neutral Plate, adjust as follows:

A. Tilt the Control lever outward, loosen the locknut and adjust the bolt until the gap between the handles is correct or the Control lever does not rub the Neutral Plates.

B. Tighten the locknut after the adjustment is made.

**NOTE:** To prevent damage to Control Linkages the Control Lever must always hit on the Stop Screws. Never adjust Stops out so that the Control Lever “bottoms” out on other parts of the linkage.

13. ALIGNING THE HANDLES:

Once forward tracking and neutral are set, the handle position may be adjusted for operator comfort and alignment. Loosening the handle mount bolts, move the levers into the desired position and re-tighten the mounting bolts securely.

**JOYSTICK ADJUSTMENT**

1. SETTING TRACKING AND FORWARD SPEED:

A. The initial setting is done with the engine TURNED OFF.

B. Remove both fender skirts.

C. Start by setting the RH transmission speed. Disconnect the linkage that is connected to the **left** side transmission at the upper end.

D. On the outside (long) linkage that links the joystick to the **right** side transmission, Loosen the jam nuts on both ends of the coupling nut. (Upper is a left-hand thread.) Rotate the coupling nut several turns to lengthen it.
H. Loosen the jam nuts on both ends of the left side transmission linkage. One of these is a left-hand thread. Now rotate the linkage rod a couple turns to lengthen it.

I. Hold the joystick control handle firmly in the full forward position. Rotate the left side transmission linkage rod to shorten the linkage until resistance is felt from the transmission control bottoming out in the transmission. Rotate the rod back and forth a couple times to be sure, and mark this position.

J. Now rotate the linkage rod exactly one full turn longer and retighten the jam nuts. Make sure that the ball joints on both top and bottom are centered.

NOTE: This full turn longer is required to prevent internal damage to the transmission.

K. Test drive the mower to check for tracking at full speed. If needed, slow the fast side by lengthening the control rod connected to the faster transmission. Use small adjustments of about ¼ turn. Replace the fender skirts when done.

2. SETTING NEUTRAL:

If, with the joystick handle in the DOWN or start position and the engine running the mower moves or travels, it is necessary to adjust neutral. Raise the drive wheels off the ground, secure the mower on blocks or jack stands and proceed as follows:

A. Remove the fender skirt on the joystick side. Loosen the two nuts on the bottom of the joystick neutral plate just enough so that the plate can move freely.

G. Now set the LH transmission speed. Reconnect the linkage to the left side transmission. (see left side transmission illustration on previous page).

NOTE: This full turn longer is required to prevent internal damage to the transmission.
B. Start the engine. With the joystick still down, position the handle so both wheels are stationary.

C. Tighten the two nuts on the bottom of the neutral plate, being careful not to shift it out of position.

D. Recheck neutral before placing the mower back on the ground. Then shut off the engine and remove the mower from the blocks. Replace the fender skirt.

3. JOYSTICK CONTROL LEVER SENSITIVITY ADJUSTMENT:

To change the sideways turning response, adjust as follows:

A. Remove the right hand fender skirt exposing the Joystick Control Lever assembly.

B. Remove the cross bolt, nut, & spacers.

C. For quicker reacting steering place the long, silver colored spacers toward the inside of the rod end ball joints and the shorter, gold colored spacers on the outside of the ball joints. For slower reacting steering place the short, gold colored spacers on the inside and the longer, silver colored spacers on the outside. All 4 spacers must be used when reassembling.
DECK BELT ROUTING

60"        D-3796      B-124
72"        D-3797      B-142

ENGINE TO DECK BELT ROUTING

60"        D-3901      B-112
72"        D-3902      B-116
RAISING THE DECK (60” Decks):

A. Remove cut height adjustment pin and completely lower the cut height adjustment lever. Re-insert the cut height adjustment pin into the 3” cut height position (this will lock the cut height adjustment lever into the lowest position).

B. Release engine to deck belt tightener located behind the left rear tire. (See page 20) Flip up the foot deck to allow access to the engine to deck belt. Roll the belt off the center spindle. Hook the belt onto the bolt protruding from lower lip of the foot deck support angle.

C. On the right side of the mower, lift and hold up on the hook keeper. (see page 16) Lift up on the release handle to disconnect the back of the deck. The latch plate should catch and hold the release handle rod in place. (To adjust the latch plate, see Page 22.)

D. Position the front caster wheels so they are away from the deck (such as the tractor would be traveling in reverse).

E. Lift the nose of the deck until the deck is standing vertical (lifting can be made easier if someone stands on the rear bumper of the tractor). IMPORTANT NOTE: MAKE SURE THAT THE DECK IS LIFTED FAR ENOUGH TO GO COMPLETELY “OVER-CENTER”. This will prevent the deck from falling down when servicing the underside of the mower deck.

F. Release the deck prop from its stowed position and place the free end against the deck lift casting as shown on page 21. Make sure the point of the prop falls within the center clearance area.

2. LOWERING THE DECK:

A. Place the prop back in the stow position. (See page 21)

B. Push the bottom (back) of the deck towards the rear of the tractor. Lower the deck until it rests on the ground.

C. Lift up on the latch plate to release the release handle rod. Push down on the release handle until deck hooks lock into place.

D. Re-install the Engine to Deck Drive belt onto ALL of the pulleys, including the clutch. Ensure that the Engine to Deck Drive Belt is properly routed onto all of the pulleys and idlers in the drive train.

E. Carefully rotate the Deck Belt Tension Latch to re-tension the Engine to Deck Drive Belt.
Deck Prop shown in the “Stowed” position.

Deck Prop being placed against the Deck lift casting.

Deck Prop securely in place against Deck lift casting.
DECK FLIP JACK ASSEMBLY AND OPERATION 72” Deck

1. Back the mower up so the front caster wheels are rotated forward. Turn off lawn mower and set brakes. Remove cut/height adjust pin and lower deck lift handle to lowest position. Reinsert cut/height adjust pin above deck lift handle.

2. Release engine to deck belt tightener located behind the left rear tire.

3. Flip up the foot deck to allow access to the engine to deck drive belt, remove the engine to deck drive belt off the center spindle. Hook the engine to deck drive belt onto the bolt protruding out of the foot deck support angle. Flip the step up out of the way. Lift & hold up the hook keeper (see page 16) Unhook rear of deck by lifting the QRS handle.

4. Release bungee cord from end of jack. Rotate handle up into cranking position. Turn handle clockwise until the ball end of the jack enters the hole in the jack base on the deck. Continue turning until the rear wheel of mower is approximately 8 inches off of the ground.

5. Move to same rear wheel and push it back to the ground bringing the front of the deck off of the ground. Continue to turn the handle bringing the deck up into position to work on it. (Do not over turn crank! Damage may occur.)

6. To lower deck, reverse the process.

Note: When storing jack, the crank handle must be folded “closed” and secured to the drag bar with a bungee cord.

CAUTION: KEEP FEET CLEAR FROM EDGE OF DECK WHEN LOWERING DECK FROM STAND-UP TO OPERATION POSITION.

CAUTION: DECK FLIP TOOL MUST BE USED TO POSITION 72” MOWER DECKS TO THE STAND-UP SERVICE POSITION. ATTEMPTING TO MANUALLY RAISE 72” MOWER DECKS TO THE STAND-UP POSITION CAN RESULT IN SEVERE PERSONAL INJURY.
LEVELING THE DECK

1. Move the tractor to a hard, level surface (i.e. concrete or blacktop).
2. Set the tire pressure on all four tires to 12 psi.
3. Remove key from ignition switch.
4. Rotate the blade you are going to measure to run parallel with tractor frame, front to back.
5. Set the Deck Cut Height Lever to the 4’ cutting position.
7. Adjust the Front Left Hand Deck Hanger Bolt until the front edge of the Left Hand Blade is Approximately 4” from ground.
8. Adjust the Front Right Hand Deck Hanger Bolt until the front edge of the Right Hand Blade is within 1/8” of the Front Left hand Blade measurement. NOTE: “On 72” Decks” If the Front Right Hand blade measurement can not be obtained it will be necessary to shorten or lengthen the Adjustable Drag Bar Link on the right hand side of the deck suspension. Lengthening the Adjustable Draglink lowers the front end of the Right Hand blade and shortening the Adjustable Drag Bar Link raises the front of the Right Hand blade.
9. Adjust both Rear Deck Hanger Bolts until the back of the blades are 1/8” to 1/4” higher from the ground than the front of the blades. Inspect that the deck is solidly hanging on all four Deck hanger Bolts. Adjust rear Deck Hanger Bolts accordingly.
10. Inspect all of the above measurements. Tighten all four Deck Hanger Bolts Jam Nuts.

Note: If you run out of threads during the adjustment process, remount the deck mounting in this upper hole. IF ATTEMPTING TO ADJUST DECK HIGHER THAN DESIGN SPECIFICATIONS, DECK DRIVE FAILURE CAN
ADJUSTING THE LATCH PLATE

1. Level the deck before proceeding to adjust the latch plate. (Follow instructions on previous page.) Pin the deck in the lowest position before proceeding to adjust the latch plate.

2. Lift up on the hook keeper, while pulling up on the release handle. This will disconnect the rear of the deck.

3. Loosen nuts on the adjustment of the latch plate using a 7/16 wrench. Pull up on the release handle as far as it will allow. Slide adjustment back or forward to where the latch plate will catch the release handle rod at its highest location. Tighten nuts back.

4. Lift up on latch plate and push down on the release handle to lock deck hooks in place.

5. Double check the latch plate adjustment by releasing the deck hangers and pulling up on the release handle. If the latch plate catches the release handle rod, no further adjustment needs to be made. If it does not, follow steps 3-5, as needed.
TROUBLESHOOTING CHECKLIST

1. ENGINE WON'T TURN OVER:
   Mower blades engaged disengage blades
   Drive not in neutral move Joystick Control Lever to neutral “DOWN” position
   move Twinstick Control Levers to neutral “OUT” position
   Blown fuse replace fuse
   Dead battery charge or replace
   Solenoid consult dealer
   Ignition switch consult dealer
   Starter consult dealer

2. ENGINE WILL TURN OVER BUT WON'T START:
   No gas refuel
   clean or replace fuel filters
   Over or under choked adjust choke
   Spark plug not firing check spark plug
   condition and reset gap**
   Carburetor maladjustment reset carburetor adjustment*
   Ignition switch consult dealer

3. HARD TO START ENGINE:
   Fuel line clogged clean fuel line and check fuel filter
   Faulty fuel pump consult dealer
   Spark plug wire loose or grounded check spark plug wires
   Spark plug(s) faulty or improperly gapped check spark plug
   condition and reset gap**
   Electronic ignition defective consult dealer
   Dirty or maladjusted carburetor readjust carburetor**
   consult dealer for carburetor service

4. ENGINE STARTS BUT CUTS OUT:
   Water in gasoline drain old gasoline and replace with new gasoline
   clean carburetor bowl
   Clogged fuel line check fuel filter
   Vent Hose Pinched or Restricted* check vent hose
   Clean fuel line
   Faulty fuel pump consult dealer
   Maladjusted carburetor readjust carburetor**
   Engine dies when: Joystick Control Lever is pulled “UP” parking brake set
   Twinstick Control levers are pulled “IN” release brake

5. ENGINE KNOCKS:
   Low oil level check and add oil
   Ignition timing off consult dealer
   Fuel octane too low drain and replace with higher octane gasoline
   Over heated engine shut off engine and allow to cool

*Vent Hose is the “BLACK” hose located on TOP of the fuel tank running to the Engine Carburetor
**See engine manual for engine adjustments
6. ENGINE SOMETIMES SKIPS AT HIGHER SPEEDS:
   - Incorrect Ignition Timing: consult dealer
   - Carburetor maladjusted: readjust carburetor
   - Faulty spark plugs: check spark plug condition and reset gap*
   - Bouncing off seat safety switch: slow down on rough terrain

7. ENGINE OVER HEATED:
   - Air intake screen or fins clogged: clean intake screen and fins
   - Fuel mixture too lean: readjust carburetor*
   - Oil level too low or too high: adjust oil level
   - Improper ignition timing: consult dealer
   - Running engine too slow: run engine faster
   (NOTE: Always mow at full throttle setting.)

8. ENGINE IDLES POORLY:
   - Carburetor maladjustment: readjust carburetor
   - Improper spark plug gap: check and re-gap plug*

9. ENGINE BACKFIRES:
   - Carburetor maladjustment: readjust carburetor*

10. ENGINE RUNS BUT MOWER WON'T MOVE FORWARD:
    - Drive belt broken or slipping: replace drive belt
    - Transmission shift arm disconnected: reconnect
    - Transmission oil low: add oil
    - Transmission in free wheel position: tighten bypass valves (see pg. 7)
    - Hydrostat oil filter plugged: replace filter
    - Bad transmission: consult dealer

11. MOWER LOSES POWER OR TRANSMISSIONS OVER HEATS:
    - Hydrostat transmission oil too low or too high: add oil
    - Transmission damage: consult dealer
    - Transmission blowing oil out cap: overfilled or water contaminated

12. ENGINE STALLS WHEN BLADES ARE ENGAGED:
    - Operator not on seat: sit on seat
    - Faulty interlock system: consult dealer
    - Bad blade spindle bearing: consult dealer
    - Deck drive belt not properly routed: reroute
    - Blades blocked by foreign material: clean under deck

* See engine manual for engine adjustments.
Kohler Engine
Connector Front Wire End

To Kohler Engine Adapter Plug

Engine Indicator Light

Diose (EFI Only)

Kohler Engine
Disconnect Front Wire End

Red To voltage
Red-Carburetor

Green Engle
Engine Oil
Pressure Switch

Blue To Kohler Plug
Fuel Solenoid-Red

Red To Kohler Plug
Engine Oil
Pressure Switch

White-To Kohler Plug
Starter Coil

Yellow To Kohler Plug
Starter Coil

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**WIRING SCHEMATIC**

**KOHLEP ENGINE ADAPTOR**

**PLUG**

- **Fusel 12Ga**
- **Red**
- **Blue**
- **Black**
- **Yellow**
- **Green**
- **White**

**Kohler Engine Connector From Wire End**

**Engine Indicator Light**

- **Red**
- **Blue**
- **Black**

**Engine Plug Mag**

- **Ground**

**Joy Stick**

- **in drive**
- **in neutral**

**Switch**

- **Start**
- **Run**

**Kohler Engine Block Ground**

**E-6549**

**Twinstick Wire Harness**

**E-6417 Kawasaki (ONLY) Adapter**

**E-6547 KOHLER EFI ADAPTOR**

**POSITION** | **CIRCUIT "NAME"**
--- | ---
1 OFF | G + M
2 RUN | B + L + S
3 START | B + L + S

**To Start**

- Dutch not engaged & steering lever in neutral
- Engine Kill if steering levers in drive 
- Brake on or seat un-occupied
- If clutch is on and seat is not occupying
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## NOTES / SERVICE RECORDS:

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WARNING

The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.