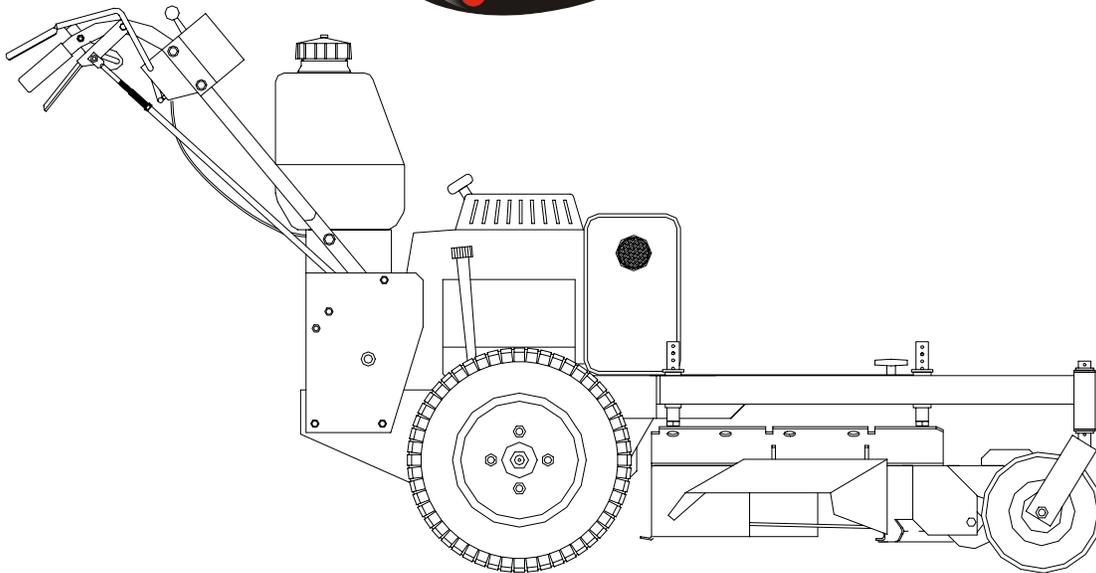


# Safety Instructions & Operators Manual

# **COUNTRY CLIPPER**



Congratulations for buying a **Country Clipper** product. Your **Country Clipper** Gear Drive Walk-behind 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 4-6. Following these instructions will help you continue to enjoy the trouble-free performance expected of the **Country Clipper** product.

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# SAFETY

## 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 mower 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 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 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 INSURE THE SAFETY OF EVERYONE.

**PLEASE BE CAREFUL**

## SAFETY INSTRUCTIONS AND RECOMMENDATIONS

1. **PEOPLE WHO OPERATE, SERVICE, OR ARE OTHERWISE ASSOCIATED** with the **Country Clipper** Gear Drive Walk-behind Mower should be trained in its proper use and warned of its dangers. Before operating, adjusting, or servicing the **Country Clipper** Gear Drive Walk-behind Mower they should read and understand this entire manual and the engine owner's manual. If the operator(s) or mechanic(s) can not read English it is the owner's responsibility to explain this material to them. The owner/user can prevent and is responsible for accidents or injuries occurring to themselves, other people or property.
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 unclog the chute.
3. **AVOID HILLS AND SLOPES.** Use extreme caution when mowing across slopes. NEVER mow up and down the face of a slope. 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** Gear Drive Walk-behind 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 to brake and how to disengage the mower blades.

7. **DO NOT MOVE SHIFT HANDLE(S)** from forward position to neutral position rapidly. The speed and/or direction of travel is instantly affected by movement of the shift handles.
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 position.
10. **WEAR STURDY, ROUGH-SOLED WORK SHOES AND CLOSE-FITTING SLACKS AND SHIRTS.** Never operate mower in bare feet, sandals or sneakers. Loose fitting clothing, jewelry or long hair can become entangled in moving parts.
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 MOW WHEN OTHER PEOPLE OR PETS ARE IN THE AREA.**
14. **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.
15. **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. **DO NOT SMOKE AROUND THE MOWER** or the gasoline storage container. Gasoline fumes can easily ignite.
17. **DO NOT STEP OR STAND ON THE MOWER HOUSING.**
18. **WATCH OUT FOR TRAFFIC** near roadways and when crossing roads. Slow down when near roadways and sidewalks.
19. **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. Use approved container to store gasoline.
20. **DISENGAGE BLADES, STOP ENGINE AND REMOVE IGNITION KEY** before any servicing, including emptying a grass collection system or unclogging the discharge chute. 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.**
21. **KEEP ALL NUTS, BOLTS, AND SCREWS TIGHT** to be sure equipment is in safe working condition, especially blade mounting bolts. Keep all parts in working order.
22. **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.
23. **DISENGAGE BLADES BEFORE DRIVING ACROSS WALKS, DRIVEWAYS** or projecting objects.
24. **KEEP SAFETY DEVICES AND GUARDS IN PLACE.** If any of the safety switches or devices become inoperable, have them repaired immediately.
25. **NEVER OPERATE WITHOUT GRASS DEFLECTOR** or entire grass collection system in place and in proper working order.
26. **DO NOT USE MOWER WHEN GRASS IS WET AND SLIPPERY.** Reduced footing could cause slipping.
27. **WALK, NEVER RUN BEHIND MOWER.** Be sure of your footing at all times.
28. **MOW ONLY DURING DAYLIGHT.**

29. **THIS MACHINE IS NOT MEANT FOR HIGHWAY OR STREET USE.** It is not a recreational vehicle and it should not be operated as such.
30. **ALWAYS DISENGAGE THE MOWER BLADE CLUTCH** when transporting.
31. **KEEP ALL SAFETY LABELS IN LEGIBLE CONDITION.** Remove grease, dirt, grass, etc. that may cover safety labels. Replace any safety label that is missing or damaged.
32. **WEAR PERSONAL PROTECTIVE EQUIPMENT.** Eye, ear, feet and head protection is recommended.
33. **ONLY USE COUNTRY CLIPPER APPROVED ACCESSORIES.**
34. **NEVER RAISE DECK WITH BLADES RUNNING.**
35. **DO NOT CHANGE THE ENGINE GOVERNOR SETTING** or over speed the engine.
36. **BEWARE OF MOWER DISCHARGE DIRECTION** and do not point it at anyone.
37. **DO NOT OPERATE THE MOWER UNDER THE INFLUENCE OF ALCOHOL OR DRUGS.**
38. **USE CARE WHEN LOADING OR UNLOADING MACHINE INTO A TRAILER OR TRUCK.**
39. **USE CARE WHEN APPROACHING BLIND CORNERS,** shrubs, trees, or other objects that may obscure vision.
40. **CLEAN ALL GRASS AND DEBRIS FROM MACHINE TO PREVENT FIRES.** Remove spilled oil or gasoline.
41. **CAREFULLY RELEASE PRESSURE FROM COMPONENTS WITH STORED ENERGY.**

42. **USE CARE WHEN REPLACING BLADES.** Wrap the blade(s) or wear gloves, and use caution when servicing them. Only replace blade(s). Never straighten or weld blade(s).
43. **KEEP HANDS AND FEET AWAY FROM MOVING PARTS.** If possible do not make adjustments with the engine running.
44. **USE JACKSTANDS TO SUPPORT COMPONENTS** when required.

## **SAFETY INTERLOCK SYSTEM**

Your *Country Clipper* Gear Drive Walk-behind Mower is equipped with switches interlocked for your safety.

1. The PTO must be disengaged before the engine will start.
2. The Transmission must be shifted into Neutral before the engine will start.
3. The Key switch Must be "ON" before the engine will start.
4. The engine will stop if the Operator releases the Operator Presence Bail when the Transmission is out of neutral.
5. The engine will stop if the Operator releases the Operator Presence Bail when the PTO is engaged.

**DO NOT OPERATE THE *COUNTRY CLIPPER* GEAR DRIVE WALK-BEHIND MOWER IF SAFETY SWITCHES AND GUARDS 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)



### **DANGER**



**HANDLE GASOLINE WITH CARE – IT IS HIGHLY FLAMMABLE. DO NOT SMOKE. ENGINE SHOULD BE OFF AND COOL. USE APPROVED GASOLINE CONTAINER. NEVER FILL FUEL TANK INDOORS. WIPE UP ANY SPILLS. REPLACE CAP TIGHTLY.**

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

Do not mix oil with fuel.

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

2. 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.)
3. Inspect V-belts.
4. Check tire pressure. Set all tires to 16 psi
5. Make sure underside of mower deck is free of grass.
6. Make sure mower blades are sharp and secured tightly.
7. Clean the air intake screen on the engine if necessary.
8. Perform any other maintenance as it becomes necessary. (See the "Maintenance" section of this manual.)

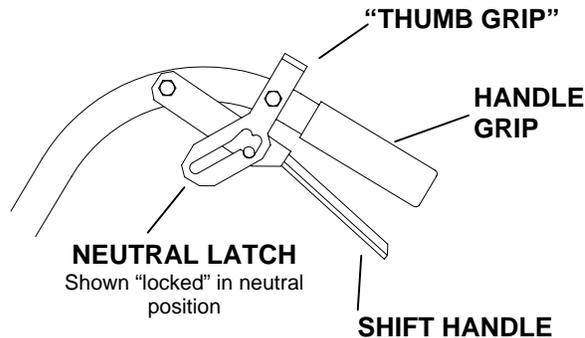
**IMPORTANT:** Before cutting grass, clutch must be broken-in as follows: With engine at full RPM engage deck until blades come to full speed and then disengage until blades come to a complete stop. Repeat 10 times to seat clutch properly.

## CONTROL LOCATIONS

1. **OPERATOR PRESENCE BAIL**  
Located above the handle bar/grip assemblies. When held down against the handle grips, the Operator Presence Bail senses that the operator is in the normal operator's position. If the operator releases the Operator Presence Bail while either the Twin Track Ground Speed Levers are out of neutral or the PTO switch is engaged the engine will stop running.
2. **TRANSMISSION SHIFT LEVER**  
Located below the Control Console and behind the Fuel Tank. Transmission Shift Lever shifts the Transmission into, 5 forward speeds and reverse assist. Shift Handles **MUST BE** in the neutral position **BEFORE** shifting the Transmission (failure to do so may cause Transmission failure).  
  
**NOTE:** Transmission is equipped with **REVERSE ASSIST** only. The Shift Handles must be pushed down and/or the machine pulled in order to travel in the reverse direction.
3. **PTO SWITCH**  
Located on the upper left hand corner of the control console. When pulled "UP" into the engage position, starts the electric clutch for the mower blades.
4. **FUEL SHUT-OFF VALVE**  
Located on the bottom of the fuel tank. Opening the Fuel Shut-off Valve turns fuel supply to engine on. Fuel Shut-off Valve should be closed when the machine is stored inside of a building, transported or when not operated for long periods of time.
5. **KEY SWITCH**  
Located towards the right side of the Control Console. When in the "ON" position allows the engine to run. When in the "OFF" position shuts the engine off. Removing the Key can prevent unauthorized operation.

## 6. NEUTRAL LATCHES

Located above the Shift Handles and on the inside of the handle bars. While squeezing the Shift Handles to hold the machine in neutral, rotation of the top “thumb grip” portion of Neutral Latches towards the rear of the machine will lock the Shift Handles into neutral. To release Neutral Latches squeeze the Shift Handles and rotate the top “thumb grip” portion of the Neutral Latches towards the front of the machine.



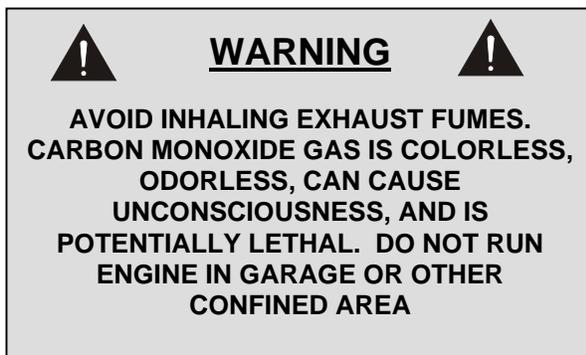
## 7. THROTTLE/CHOKE CONTROL

Located on the upper right hand corner of the Control Console. Moving Throttle/Choke Control “forward” increases engine speed. Maximum engine speed is obtained when the Throttle/Choke Control stops in the forward “detent” position. Moving Throttle/Choke Control beyond the “detent” position to “full” forward closes the choke on the engine.

## 8. SHIFT HANDLE(S)

Located below each handle grip. Squeezing the Left hand or right hand Shift Handle causes the machine to turn left or right respectively. Speed of turns depends on how far the respective Shift Handle is squeezed. Squeezing both Shift Handles simultaneously causes the machine to slow down and/or stop.

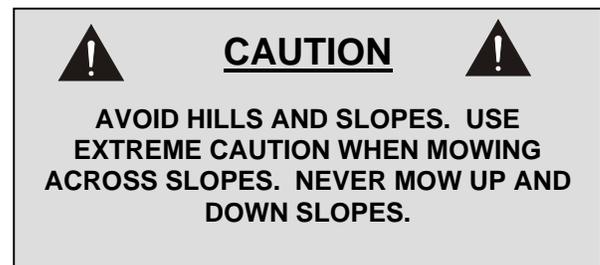
The Shift Handles have no effect on movement if the Transmission is in neutral or if the Neutral Latches are in the “lock” position.



## OPERATION

1. **TO START:** Open Fuel Shut-off Valve (if previously closed)
2. Move Transmission Shift Lever into “Neutral”.
3. Switch PTO to “OFF” position.
4. Lock Shift Handles into “Neutral” with the Neutral Latches.
5. Turn Key Switch to “RUN”
6. Move Engine Throttle/Choke Control to full choke position for cold starts. For warm starts place Throttle/Choke Control to ½ position.
7. Pull Recoil Rope to start Engine. Adjust Throttle/Choke Control to desired Engine RPM

**IMPORTANT:** Until the operator is familiar with the *Country Clipper* Gear Drive Walk-behind 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 Shift Handle(s) smoothly and slowly. Practice until operation is smooth and efficient.



8. **TO DRIVE:** Hold the Operator Presence Bail down against the handle bar.

With the Shift Handles “locked” into neutral. Set desired forward ground speed with the Transmission Shift Lever.

While slowly squeezing both Shift Handles release both Neutral Latches.

To travel straight forward slowly release both Shift Handles.

To stop squeeze both Shift Handles back to neutral.

 **CAUTION** 

**FOR SMOOTH, SAFE OPERATION, MOVE THE SHIFT HANDLE(S) IN A GENTLE, SLOW MOTION. NEVER MOVE THESE CONTROLS RAPIDLY, ESPECIALLY ON GRADES**

Squeeze the right hand Shift Handle to turn right.  
Squeeze the left hand Shift Handle to turn left.

To travel in reverse squeeze and lock both Shift Handles into neutral. Move the Transmission Shift Lever into neutral. Release and push down on the Shift Handles (Reverse motion is “assist only” machine may have to be “pulled” into motion)

For smooth operation avoid quick, jerky movement of the Shift Handles. Squeeze the Shift handles with deliberate intent and purpose.

9. **BLADE ENGAGEMENT:** Pull up on the PTO Switch to engage blade(s). Pushing down on the PTO Switch will disengage the blade(s).

 **DANGER** 

**THE ROTATING BLADE(S) UNDER THE MOWER DECK ARE DANGEROUS. CONTACT WITH BLADE(S) CAN CAUSE SERIOUS INJURY OR DEATH. DO NOT PUT FEET OR HANDS UNDER THE MOWER DECK WHILE THE BLADE(S) ARE ENGAGED.**

**Note:** The engine will stop if the operator releases the Operator Presence Bail while the PTO is engaged.

**IMPORTANT:** On power units equipped with Kawasaki 15 h.p. engines, NEVER engage blades when engine RPM is less than half throttle. Doing so may cause premature clutch failure and void clutch warranty.

10. **TO STOP:** Squeeze both Shift Handles into neutral and lock into place with the neutral latches.  
Move the Transmission Shift Lever into neutral.

 **CAUTION** 

**FAILURE TO SECURELY AND COMPLETELY LOCK BOTH SHIFT HANDLES WITH THE NEUTRAL LATCHES COULD CAUSE MACHINE TO UNEXPECTEDLY LURCH FORWARD CAUSING INJURY OR PROPERTY DAMAGE**

Release the Operator’s Presence Bail  
Turn the Key Switch to “OFF” and remove the Key.

 **CAUTION** 

**WHEN LEAVING THE MOWER UNATTENDED, ALWAYS REMOVE THE KEY. EVEN IF LEAVING FOR JUST A FEW MOMENTS. HELP PROTECT CHILDREN AND UNAUTHORIZED PERSONNEL FROM ACCIDENTS.**

**TO CHANGE DECK CUTTING HEIGHT:**  
While lifting the deck, remove the Deck Hanger Hairpin from the Deck Hanger Rod. Re-insert Deck Hanger Hairpin into desired hole on Deck Hanger Rod. **NOTE:** To obtain a level cut, all four Deck Hanger Hairpins must be installed in the same cutting height hole on each of the Deck Hanger Rods.

### ***MOWING RECOMMENDATIONS***

1. Keep mower blade(s) sharp.
2. Make sure mower deck and discharge chute are clean.

 **DANGER** 

**NEVER CLEAN THE DISCHARGE CHUTE OR MOWER DECK WHILE THE ENGINE IS RUNNING. TURN OFF ENGINE AND WAIT FOR ALL MOVEMENT TO STOP PRIOR TO CLEANING.**

3. When mowing tall grass, make two passes, mowing off ½ of the desired cut height on the first pass, and then the desired cut height on the second pass. Check for hidden dangers first.
4. Go slowly for trimming

5. When cutting grass always run the Engine at FULL throttle. This “Engine” speed allows the mower blades to operate at optimum cutting speed. Control “GROUND” speed with the Shift Handle(s) and/or proper gear selection of the Transmission.

6. Vary ground speed to suit conditions. (i.e. Go slower in tall thick grass, on slopes, wet conditions, etc.)

# SPECIFICATIONS

<b>POWER UNIT</b>	
Model	TG1500KA
Engine (see engine Owner's Manual for complete specifications)	15 h.p. Kawasaki (twin cylinder)
Transmission	5-speed Peerless (w/reverse assist)
Drive System	Direct Drive from transmission to Double Drive Belt
Turning Radius	Zero-Turn (around center of tire)
Ground Speed: Forward	5 speeds 2.3 to 7 mph
Reverse	3.5 mph (max.)
Electric Clutch	Warner Mag-Stop
Length (Power Unit ONLY)	44"
Height	43-1/2"
Width (outside rear drive tires)	35-7/8"
Weight approx. (including deck frame)	325#
Fuel capacity	6 Gallons
Belt, Engine to Transmission	P/N D-3699
Tires	
Rear Drive	16 x 6.50-8 (4 ply)
Front Caster	9 x 3.50-4 (4 ply)

<b>DECK</b>		
Model	36W	48W
Cutting Width	36"	48"
Overall Width (w/ chute)	46"	58"
Overall Length (w/ Power Unit)	79"	75"
Blades Length	18-3/8"	17"
Blade Tip Speed	18,500 – 18,950 fpm	
Blade Width x Thickness	2 1/2" x .204"	
Blade Quantity	2	3
Belt, Engine to Deck	P/N D-3684	P/N D-3606
Cutting Height	1-1/2" to 4-1/2" (1/2" increments)	1-1/2" to 4-1/2" (1/2" increments)
Weight approx. (less deck frame)	160#	185#
Material Thickness	10 ga.	
Reinforcement Thickness	7 ga.	
Spindle Bearings	25 mm	

**NOTE:** Power unit should be matched to deck to insure sufficient power is available for intended usage.

**NOTE:** All specifications subject to change without prior notice

# MAINTENANCE

## CAUTION

**BEFORE PERFORMING ANY MAINTENANCE, TURN OFF ENGINE, REMOVE KEY AND DISCONNECT SPARK PLUG(S). USE EXTREME CARE WHEN WORKING ON MACHINERY. DO NOT WEAR WATCHES OR JEWELRY. DO NOT WEAR LOOSE FITTING CLOTHES, AND OBSERVE ALL COMMON SAFETY PRACTICES WITH TOOLS.**

### **MAINTENANCE SCHEDULE**

<b>SERVICE</b>	<b>WHEN</b>
Check Safety Interlocks System -----	before each use
Check for loose hardware -----	before each use
Grease front caster pivots (3 pumps) -----	before each use
Check crankcase oil level -----	before each use
Check air intake screen -----	after each use
Clean grass from under deck -----	after each use
Check tire pressure -----	every 10 hours
Sharpen mower blades -----	every 10 hours
Grease Shifting Idler Arm pivots (2 pumps) -----	every 25 hours
Grease Brake arm pivots (2 pumps) -----	every 25 hours
Grease Transmission output shaft couplers (2 pumps) -----	every 25 hours
Check drive belts -----	every 50 hours (20 hours break-in)
Grease deck spindle bearings (3 pumps)-----	every 100 hours
Clean air filter pre-cleaner element -----	see engine owner's manual
Service/Replace Air Cleaner Filter Element -----	see engine owner's manual
Change engine crankcase oil -----	see engine owner's manual
Change engine oil filter -----	see engine owner's manual
Check/Replace spark plugs -----	see engine owner's manual
Clean engine air cooling system -----	see engine owner's manual
Change/Clean fuel filter -----	as required
-----	

**Replace 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** Gear Drive Walk-behind Mower information packet.

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

**2. TIRES:**

Correct tire pressure is essential for efficient operation of the mower. Check tire pressure as requested in the maintenance schedule. Inflate tires to 16 psi.

NOTE: If the machine veers to one side or the other it is recommended to increase the rear tire pressure of the slow side (up to 28 psi) until the machine travels in a straight forward direction.

Lug nuts should be checked regularly for tightness.

**3. MOWER BLADES:**

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

 **CAUTION** 

**BEFORE SERVICING BLADE(S). STOP ENGINE, REMOVE KEY, AND DISCONNECT SPARK PLUG(S) FOR SAFETY.**

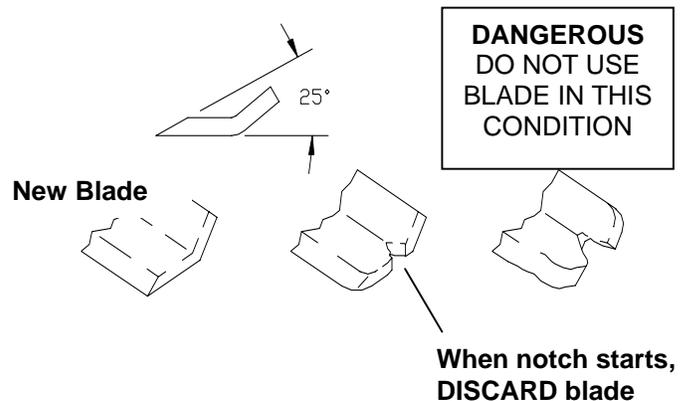
- A. Remove bolt, lockwasher, and cup washer mounting blade on shaft. Remove blade.

**NOTE:** Servicing the underside of the deck can be simplified by raising the deck into the servicing position. See Page 16 on how-to raise deck into servicing position.

- 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, cup washer, lockwasher, and bolt. Make sure to tighten bolt to 60 ft.lbs.



**4. 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.

NOTE: See page 18 for belt routings.

**5. LUBRICATION:**

- A. **Engine:** Follow engine manufacturer's recommendations.
- B. **Deck Spindles:** Lubricate with 3 "pumps" only, every 100 hours.

## 6. STEERING ADJUSTMENTS:

### A. STEERING ROD ADJUSTMENT

- i) Remove one end of Steering Rod. Loosen the jam nut on Steering Rod. With the Neutral Latch in the released position, adjust the length of Steering Rod by screwing it in or out until there is 1/2" to 5/8" clearance between the mounting bolt and the bottom of the slot on the Neutral Latch. Re-tighten the jam nut on the Steering Rod.

### B. BRAKE TENSION ADJUSTMENT

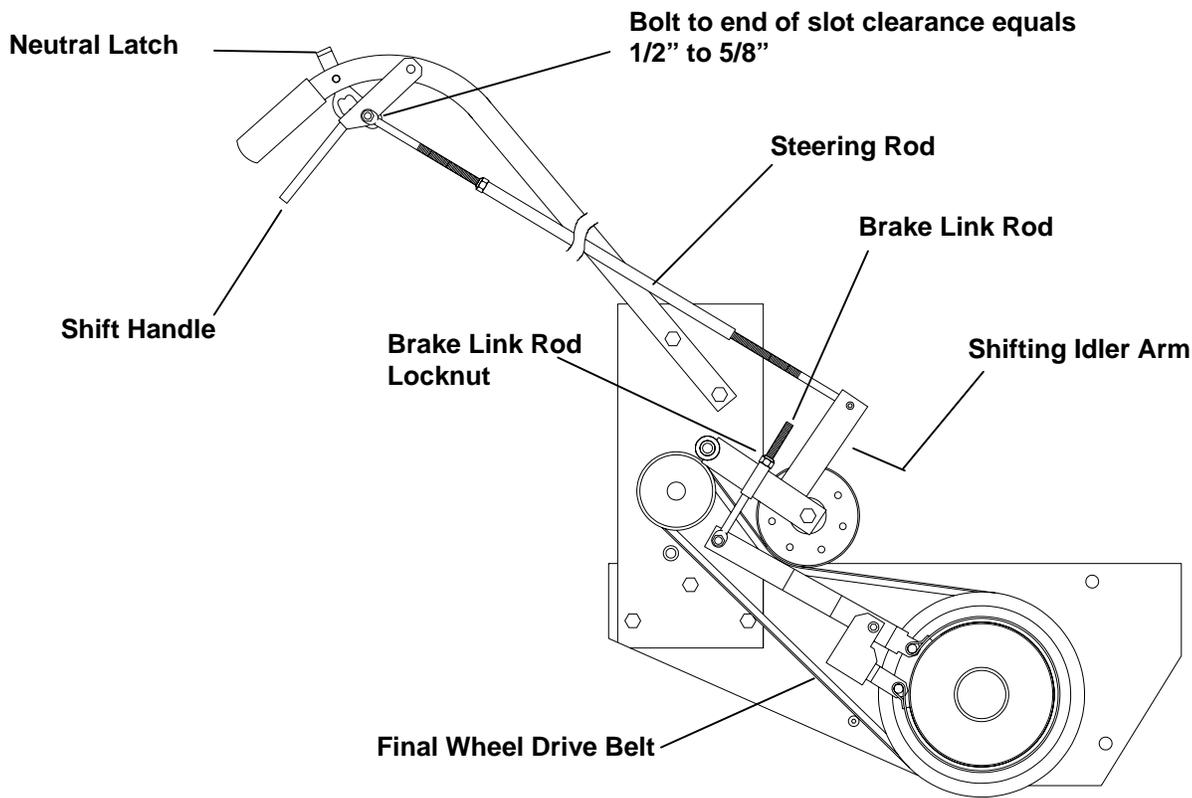
- i) Raise rear drive tires high enough to clear the ground and securely support.
- ii) Adjust the Brakes by moving the locknut on the Brake Link Rod until proper brake tension is obtained. With Neutral Latches released and the Transmission in neutral the rear drive tire should turn freely. With the Transmission in gear, the engine running, and the Neutral Latches engaged the Drive Tires should not rotate. **DO NOT OVER TENSION BRAKES.**

**NOTE:** The Operator Presence Bail must be held down while the engine is running and the Transmission is in gear.

## 7. SHIFTING IDLER ARM TENSION SETTINGS:

- A. For heavy or medium duty drive conditions (i.e. when pulling a sulky unit, or carrying a grass collection system), added spring force might be required on the Shifting Idler Arm to prevent the Final Drive Belt from slipping while pulling the extra load.
- B. To increase spring force, remove the Spring from the mounting bolt on the Shifting Idler Arm. Remove the mounting bolt from the Motor Mounting Frame and place it into one of the rear holes. Re-connect the Spring to the Shifting Idler Arm.
- C. Repeat for the opposite side.

**NOTE:** The middle hole on the Motor Mounting Frame is for "medium duty" service and the most rearward hole on the Motor Mounting Frame is for "heavy duty" service.

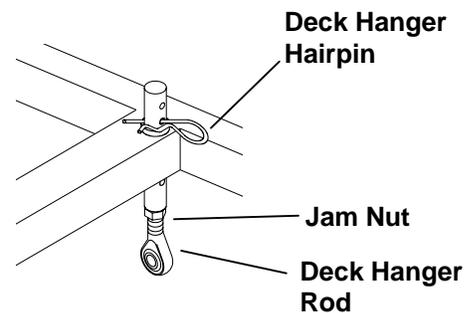


## 8. TRANSMISSION SHIFT LEVER DETENT ADJUSTMENT

- A. Turn Detent Screw, located on rear of transmission behind neutral switch, IN (clockwise) to hold Transmission Shift Lever more securely in gear. This will also increase the force required to shift the Transmission. Turning Detent Screw OUT (counterclockwise) will lighten for shifting force. Factory setting is to turn Detent Screw completely in and then back out 1-1/2 turns. **ADJUSTING DETENT SCREW IN TO FAR CAN PREVENT TRANSMISSION FROM SHIFTING.**

## 9. LEVELING THE MOWER DECK:

- A. Move machine onto hard level surface (i.e. concrete or blacktop).
- B. Set tire pressure on all four tires.
- C. Place all four Deck Hanger Hairpins so that deck is in highest cutting height.
- D. With all blades tips rotated to point straight forward measure from the ground to the front blade tips. If blade tips measure more than 3/16" different loosen the jam nuts on the Deck Hanger Rods. Adjust length of the appropriate Deck Hanger Rods until blade tips are within 3/16" of each other. The rear blade tips should be approximately 1/8" farther from the ground than the front blade tips. The deck should hang firmly on all four Deck Hanger Rods. Tighten the jam nuts on all four Deck Hanger Rods once desired side-to-side level and front-to-back rake is obtained.



**10. RAISING THE DECK TO SERVICE POSITION:**

- A. Change deck cutting height to be at the mid-position OR lower.
- B. Position the front caster wheel to point away from the deck (such as the mower would be travelling in reverse).
- C. Remove Belt Cover and push back the Ball on the idler bar releasing tension on belt. Remove the engine to deck belt from spindles.
- D. Remove Rear Deck Hanger Hairpin. Remove Lynch pin from Rear Deck Hanger Clevis pin. Remove Rear Deck Hanger Clevis pin. Re-install Rear Deck

Hanger hairpin. Repeat for other side.

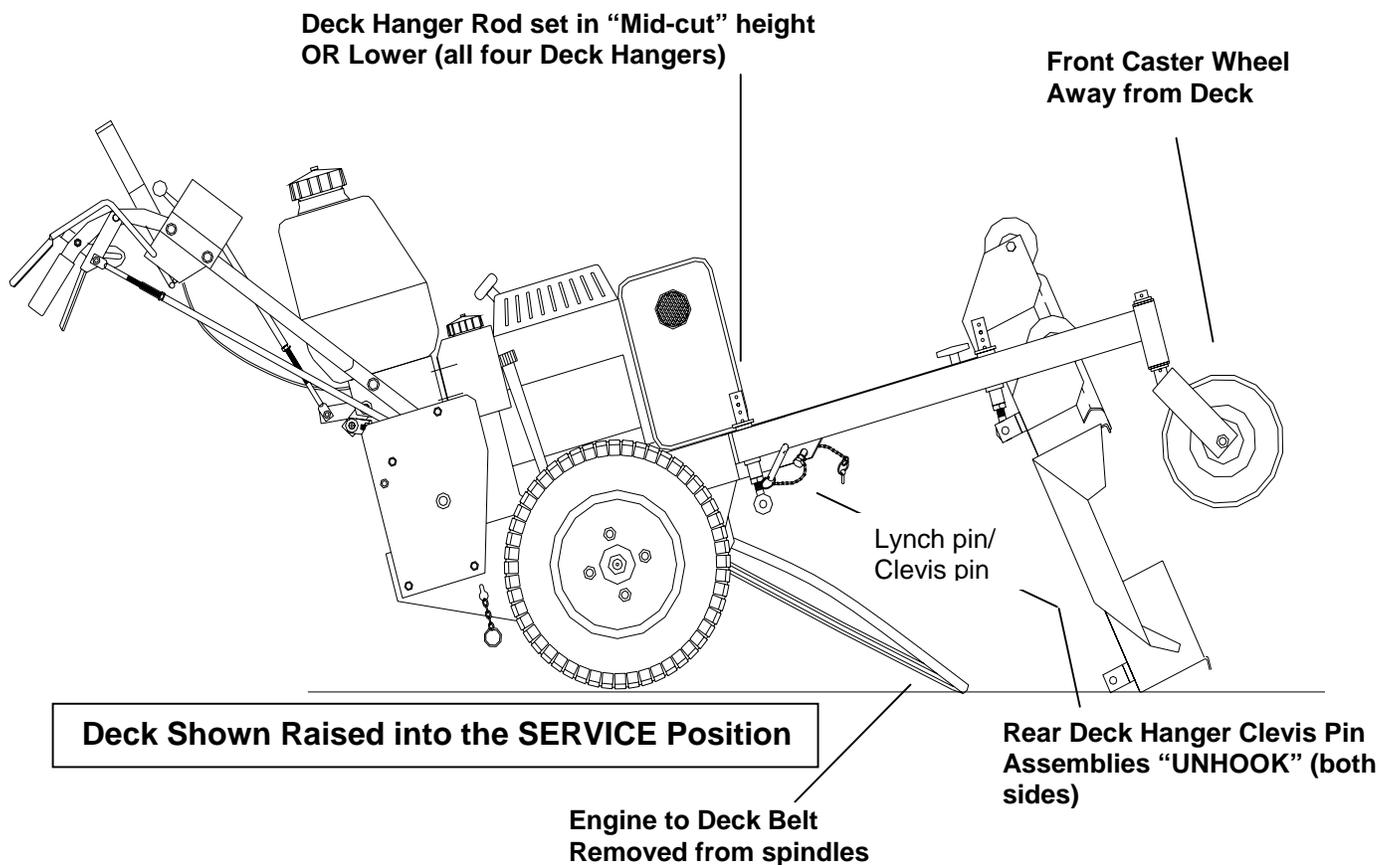
- E. Push down on handle bars until deck fully rotates up to the service position.

**11. LOWERING THE DECK TO OPERATION POSITION:**

- A. Push down on Handle Bars raising the deck off of the ground. Push the machine forward while lowering the deck back to the ground.
- B. Remove Rear Deck Hanger Hairpins. Re-install Rear Deck Hanger Clevis pins and Lynch pins. Re-install Rear Deck Hanger Hairpin.
- C. Re-install the Engine to Deck Belt back onto the Spindle pulleys (see page 18 for proper belt routing)
- D. Re-install the Belt Cover.
- E. Re-position Deck Hanger Hairpins on the Deck Hanger Rods to desired cutting height.

**CAUTION**

DECK MUST BE LIFTED FAR ENOUGH TO GO "OVER-CENTER", THUS PREVENTING IT FROM FALLING ON THE OPERATOR WHILE SERVICE WORK IS BEING PERFORMED.



# TROUBLE SHOOTING CHECKLIST

## 1. ENGINE WON'T START:

- Key Switch is "OFF" ----- turn key switch "ON"
- Mower blades engaged ----- disengage PTO
- Drive not in neutral ----- move Transmission Shift Lever into "Neutral" position
- Fuel shut-off Valve Closed ----- open fuel shut-off valve
- 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

## 2. HARD TO START ENGINE:

- Fuel line clogged ----- clean fuel line and check fuel filter
- 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

## 3. 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  
clean fuel line
- Vent in fuel cap plugged ----- check vent
- Maladjusted carburetor ----- readjust carburetor\*

## 4. ENGINE KNOCKS:

- Low oil level ----- check and add oil
- fuel octane too low ----- drain and replace with  
higher octane gasoline
- Over heated engine ----- shut off engine and allow to cool

## 5. ENGINE SOMETIMES SKIPS AT HIGHER SPEEDS:

- Carburetor maladjusted ----- readjust carburetor
- Faulty spark plugs ----- check spark plug  
condition and reset gap\*
- Operator's Presence Bail is being released ----- slow down on rough terrain

## 6. 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  
 Running engine too slow ----- run engine faster  
 (NOTE: Always mow at full throttle setting.)

**7. ENGINE IDLES POORLY:**

Carburetor maladjustment ----- readjust carburetor  
 Improper spark plug gap ----- check and re-gap plug\*

**8. ENGINE BACKFIRES:**

Carburetor maladjustment ----- readjust carburetor\*

**9. ENGINE RUNS BUT MOWER WON'T MOVE FORWARD OR VEERS ONE DIRECTION:**

Transmission not shifted completely into gear ----- properly shift transmission  
 Transmission Drive belt broken or slipping ----- replace drive belt  
 Shifting Idler Arms not pivoting freely ----- lubricate shifting idler arms  
 Shift Handles bottom out in Neutral Latches ----- adjust steering rods  
 Final Wheel Drive Belts slipping ----- replace final wheel drive belts  
**(replace Final Drive Wheel belts in PAIRS only)**  
 Final Wheel Drive Pullies obstructed by mud or grass ----- clean wheel drive pullies  
 Brakes not releasing or not tightening ----- adjust brake linkages  
 Incorrect Drive Tire pressure ----- adjust tire pressures  
 (add air to slow side, up to 28 psi, **readjust level of cut**)  
 Bad Transmission ----- consult dealer

**10. ENGINE STALLS WHEN BLADES ARE ENGAGED:**

Operator Presence Bail Released -----Hold Operator Presence Bail down  
 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

**11. DECK CUT UNLEVEL:**

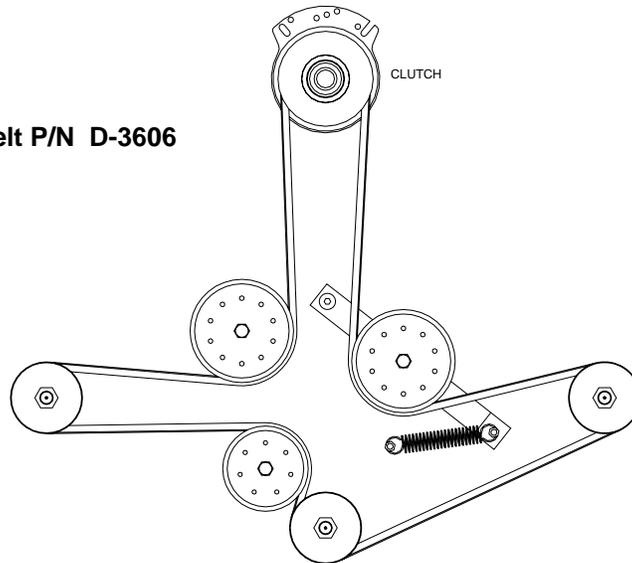
Low air pressure in tire ----- adjust tire pressure  
 Deck Mounting Hair Pins not in same holes ----- move Hairpins into same holes  
 Deck Hanging Pins out of adjustment ----- adjust hanging pins  
 Bent Blade(s) ----- replace blade(s)

- See engine manual for engine adjustments.

# BELT ROUTINGS

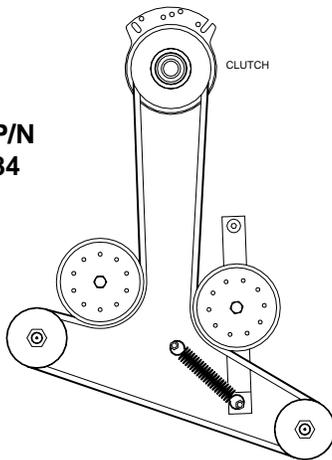
## 48" ENGINE TO DECK BELT

Belt P/N D-3606



## 36" ENGINE TO DECK BELT

Belt P/N D-3684



## TRANSMISSION DRIVE BELT

Belt P/N D-3699

