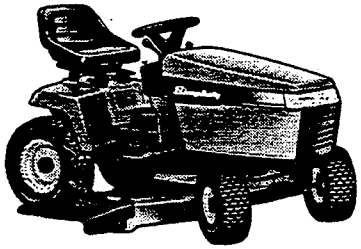
BROADMOOR SERIES



OPERATOR'S MANUAL

Simplicity®

TRACTOR & MOWER MODELS

This manual covers the following Simplicity tractor and mower deck combinations.

Engine HP/Transmission	Tractor Mfg. No.	Mower/Mfg. No.
12.5 - Gear	1691891	38"/1691704
15 - Gear	1692287 1692418	44"/1691705
12.5 - Hydro	1692073 1692105 1692261	38"/1691704
14 - Hydro	1692182 1692279 1692414 1692416	38"/1691704
16 - Hydro	1692071 1692106 1692283 1692420	44"/1691705

Reference to early style hydro models in this manual are for Mfg. Nos. 1692073, 1692105, 1692182, 1692071 & 1692106.

Reference to later style hydro models in this manual are for Mfg. Nos. 1692261, 1692279, 1692283, 1692414, 1692416 & 1692420.

Contents

NOTE: *In this manual, "left" and "right" are referred to as seen from the operating position.*

Safety Rules

Read these safety rules and follow them closely. Failure to obey these rules could result in loss of control of rider, severe personal injury or death to you, yourself or bystanders, or damage to property or equipment. **This mowing deck is capable of amputating hands and feet and throwing objects.** The triangle ⚠ in text signifies important cautions or warnings which must be followed.

IMPORTANT - Safe operation practices for riding mowers.

I. General operation

1. Read, understand, and follow all instructions in the manual and on the unit before starting.
2. Only allow responsible adults, who are familiar with the instructions, to operate the unit.
3. Clear the area of objects such as rocks, toys, wire, etc., which could be picked up and thrown by the blade(s).
4. Be sure the area is clear of other people before mowing. Stop unit if anyone enters the area.
5. Never carry passengers.
6. Do not mow in reverse unless absolutely necessary. Always look down and behind before and while backing.
7. Be aware of the mower discharge direction and do not point it at anyone. Do not operate the mower without either the entire grass catcher or the guard in place.
8. Slow down before turning.
9. Never leave a running unit unattended. Always turn off blades, set parking brake, stop engine, and remove keys before dismounting.
10. Turn off blades when not mowing.
11. Stop engine before removing grass catcher or unclogging chute.
12. Mow only in daylight or good artificial light.
13. Do not operate the unit while under the influence of alcohol or drugs.
14. Watch for traffic when operating near or crossing roadways.
15. Use extra care when loading or unloading the unit into a trailer or truck.

II. Slope operation

Slopes are a major factor related to loss-of-control and tip-over accidents, which can result in severe injury or death. All slopes require extra caution. If you cannot back up the slope or if you feel uneasy on it, do not mow it.

⚠ WARNING - SLOPE OPERATION

Never operate on slopes greater than 30 percent (16.7°) which is a rise of three feet vertically in 10 feet horizontally. When operating on slopes that are greater than 15 percent (8.5°) but less than 30 percent use front counterweights and rear wheel weights (see your dealer). Select slow ground speed before driving onto slope. In addition to front and rear weights, use extra caution when operating on slopes with rear-mounted grass catcher. Mow UP and DOWN the slope, never across the face, use caution when changing directions and DO NOT START OR STOP ON SLOPE.

DO

- See your authorized dealer for recommendations of wheel weights or counterweights to improve stability.
- Mow up and down slopes, not across.
- Remove obstacles such as rocks, tree limbs, etc.
- Watch for holes, ruts, or bumps. Uneven terrain could overturn the unit. Tall grass can hide obstacles.

(continued on next page)

- Use slow speed. Choose a low gear so that you will not have to stop or shift while on the slope.
- Use extra care with grass catchers or other attachments. These can change the stability of the unit.
- Keep all movement on the slopes slow and gradual. Do not make sudden changes in speed or direction.

DO NOT

- *Do not* start or stop on a slope. If tires lose traction, disengage the blade(s) and proceed slowly straight down the slope.
- *Do not* turn on slopes unless necessary, and then, turn slowly and gradually downhill, if possible.
- *Do not* mow near drop-offs, ditches, or embankments. The mower could suddenly turn over if a wheel is over the edge of a cliff or ditch, or if an edge caves in.
- *Do not* mow on wet grass. Reduced traction could cause sliding.
- *Do not* try to stabilize the unit by putting your foot on the ground.
- *Do not* use grass catcher on steep slopes.

III. Children

Tragic accidents can occur if the operator is not alert to the presence of children. Children are often attracted to the unit and the mowing activity. Never assume that children will remain where you last saw them.

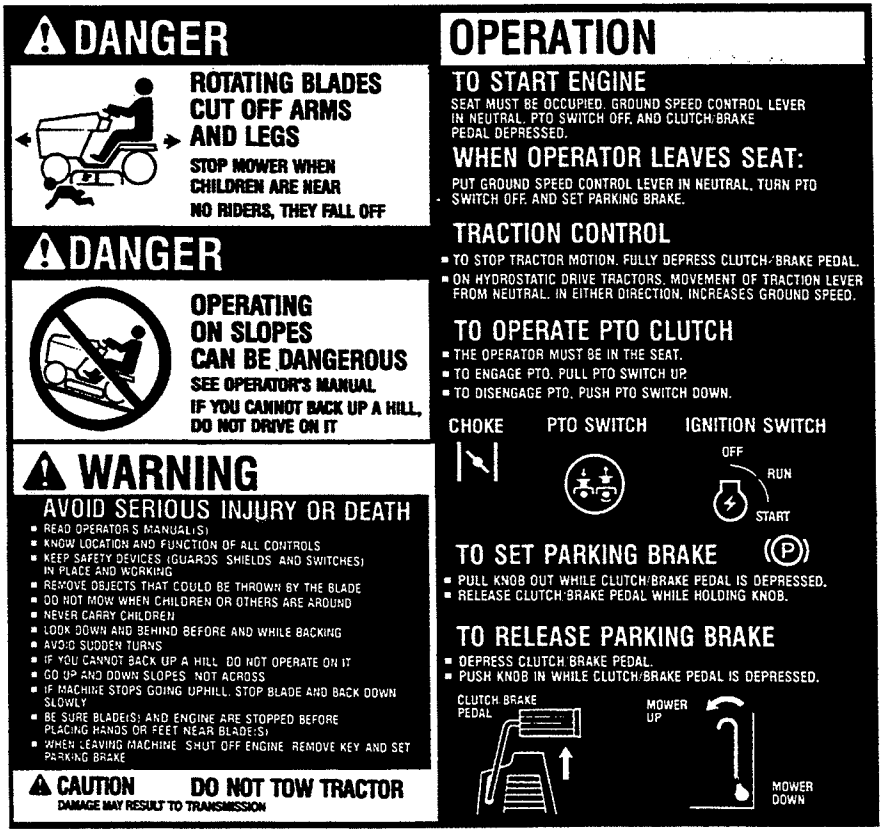
1. Keep children out of the mowing area and under the watchful care of another responsible adult.
2. Be alert and turn unit off if children enter the area.
3. Before and when backing, look behind and down for small children.
4. Never carry children. They may fall off and be seriously injured or interfere with safe unit operation.
5. Never allow children to operate the unit.
6. Use extra care when approaching blind corners, shrubs, trees, or other objects that may obscure vision.

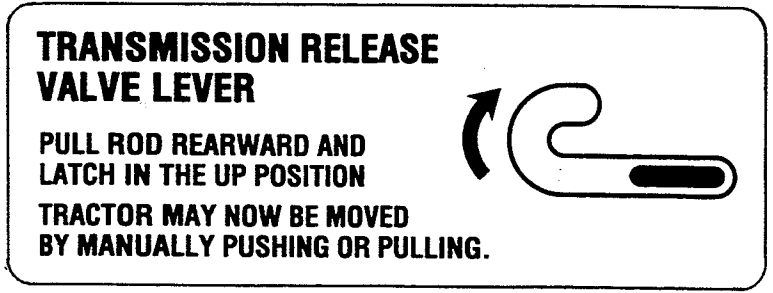
IV. Service

1. Use extra care in handling gasoline and other fuels. They are flammable and vapors are explosive.
   a) Use only an approved container.
   b) Never remove gas cap or add fuel with the engine running. Allow engine to cool before refueling. Do not smoke.
   c) Never refuel the unit indoors.
   d) Never store the unit or fuel container inside where there is an open flame or pilot light, such as in a water heater.
2. Never run a unit inside a closed area.
3. Keep nuts and bolts, especially blade attachment bolts, tight and keep equipment in good condition.
4. Never tamper with safety devices. Check their proper operation regularly.
5. Keep unit free of grass, leaves, or other debris build-up. Clean up oil or fuel spillage. Allow unit to cool before storing.
6. Stop and inspect the equipment if you strike an object. Repair, if necessary, before restarting.
7. Never make adjustments or repairs with the engine running.
8. Grass catcher components are subject to wear, damage, and deterioration, which could expose moving parts or allow objects to be thrown. Frequently check components and replace with manufacturer's recommended parts, when necessary.
9. Mower blades are sharp and can cut. Wrap the blade(s) or wear gloves, and use extra caution when servicing them.
10. Check brake operation frequently. Adjust and service as required.

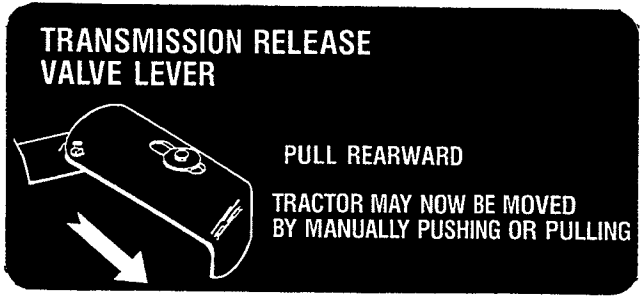
Decals

ALL WARNING, CAUTION, and instructional messages on your tractor and mower should be carefully read and obeyed. Personal bodily injury can result when these instructions are not followed. The information is for your safety and it is important. The safety messages on this page are on your tractor and mower.





Early Hydro Model



Later Hydro Model

TRACTOR CONTROLS

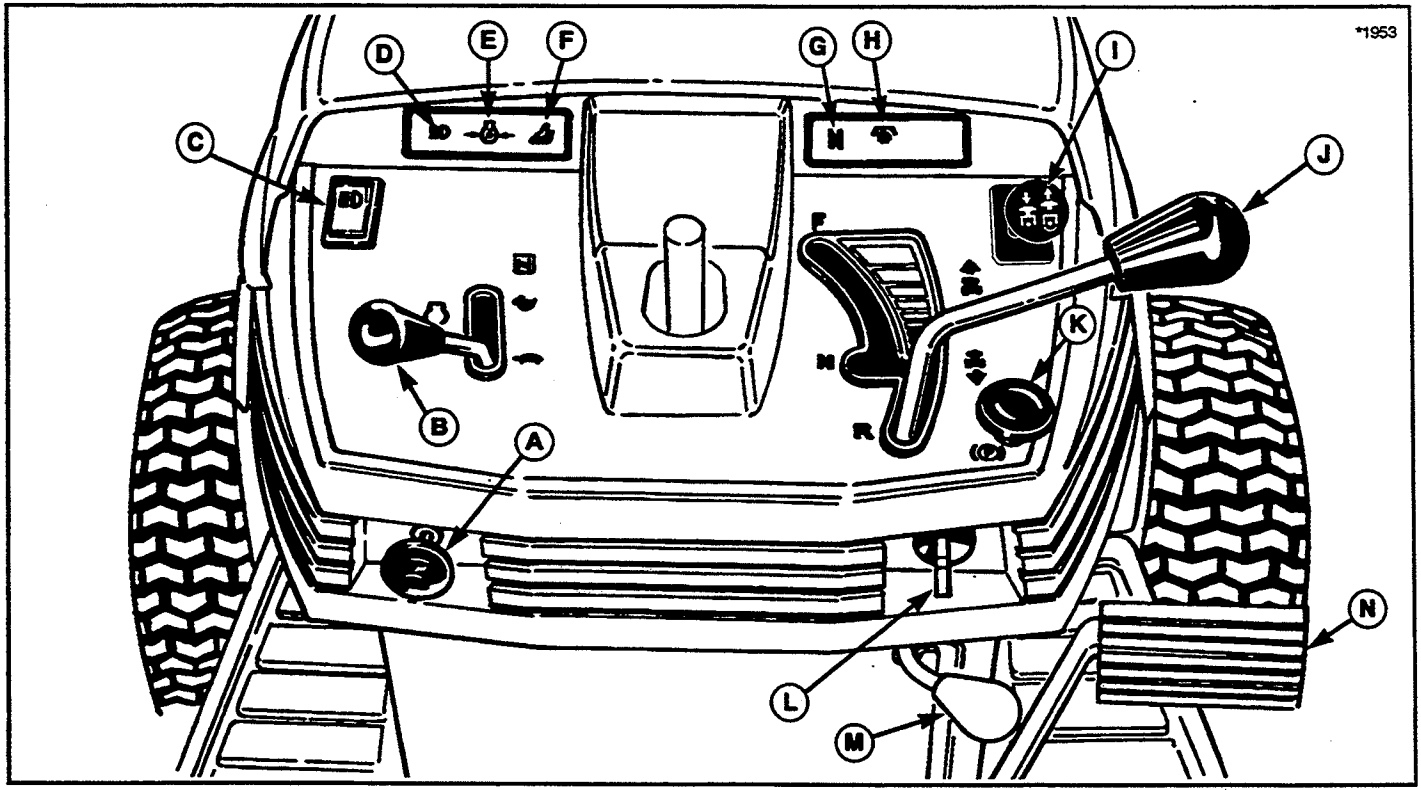


Figure 1. Tractor Controls (Hydro Model Shown)

***NOTE:** The only difference between the hydro and gear dash controls is the decal next to the Ground Speed Control Lever (J, figure 1).*

REF	NAME	FUNCTION
A	Choke (Twin Cylinder Only)	Pull out to close choke. Aids in starting a cold engine.
B	Engine Speed Control Lever	Controls engine speed. On single cylinder models, push fully forward to close choke. For warm starts & stopping, move control lever to START/STOP position.
C	Headlight Switch	Push front down to turn headlight on, push back to turn headlight off.
D	Headlight Indicator Light (Blue)	Indicates headlights on when lit.
E	Oil Pressure Indicator Light (Red)	Indicates low oil pressure (when engine is running). Lights up with ignition key (L) turned on. Should go out immediately after engine starts.
F	Operator Seated Indicator Light (Green)	Indicates operator present and seat switch engaged. Must be lit for engine to start. For more details, refer to Safety Interlock System.
G	Neutral Indicator Light (Green)	Indicates transmission lever (J) is in neutral gate. Must be lit for engine to start.
H	PTO Indicator Light (Red)	Indicates PTO switch (I) is on. Must be off for engine to start.,
I	PTO (Electric Clutch) Switch	Controls PTO for attachments. Pull up to engage clutch, push down to disengage. Activates PTO light (H).
J	Ground Speed Control Lever	Controls ground speed and forward/reverse motion. Push forward to go forward; pull back to go in reverse. On hydro models, ground speed is controlled by how far lever is in forward or reverse position.
K	Parking Brake Control Knob	Engages parking brake. Depress clutch/brake pedal (N) fully and pull up knob to engage parking brake. To disengage brake, depress pedal and push knob down.
L	Ignition Switch	Starts and stops the engine.
M	Mower Lift Control Lever	Lifts and locks mower into transport position when lever is raised and moved into top position.
N	Clutch/Brake Pedal	Press down to disengage clutch and apply brake. For parking brake, depress pedal fully and lift control knob (K).

TRACTOR & MOWER FEATURES

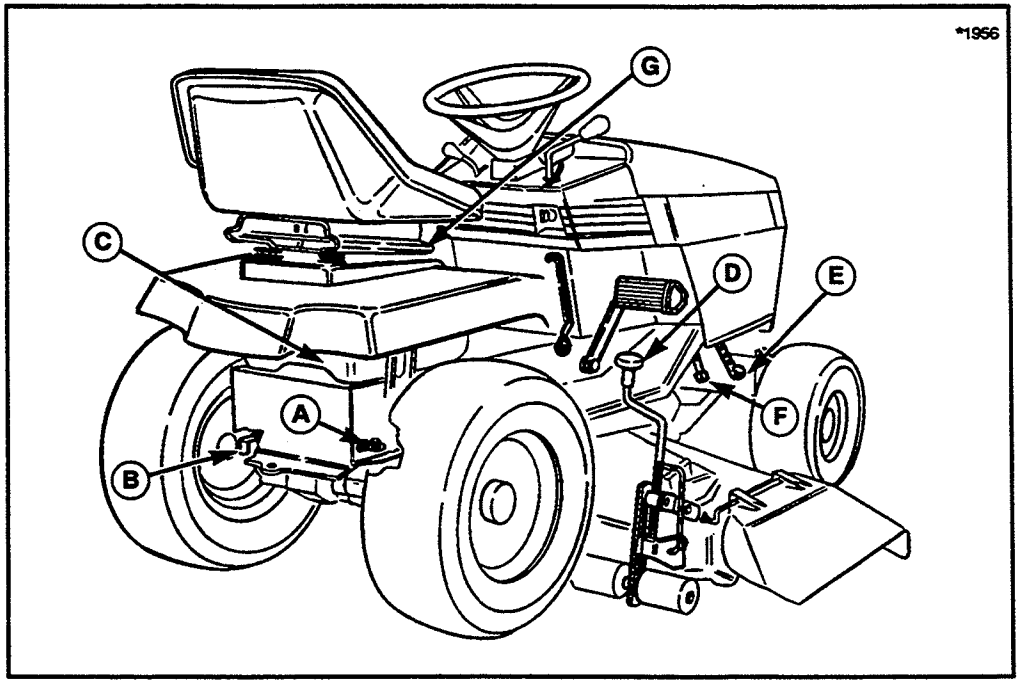


Figure 2. Tractor & Mower Features

REF.	NAME	FUNCTION
A	Transmission Release Lever (early hydro models only)	Disengages transaxle in order to push tractor by hand. See "Pushing Tractor by Hand" in the Operation section.
B	Transmission Release Lever (later hydro models only)	Disengages transaxle in order to push tractor by hand. See "Pushing Tractor by Hand" in the Operation section.
C	Fuel Tank with Gauge	4 gallon (15.1L) fuel tank with built-in gauge in filler cap (located under the seat).
D	Mower Height Adjuster	Controls height of mower cut. Infinitely adjustable from 1" to 3-5/8" cutting heights.
E	Hood Latch	Rubber straps secure hood to frame. Release strap on each side to raise engine hood.
F	Oil Drain	Oil drain extension tube allows for engine oil to be drained from underneath tractor frame.
G	Seat Lever	Releases seat for forward/back seat position.

ENGINE COMPARTMENT

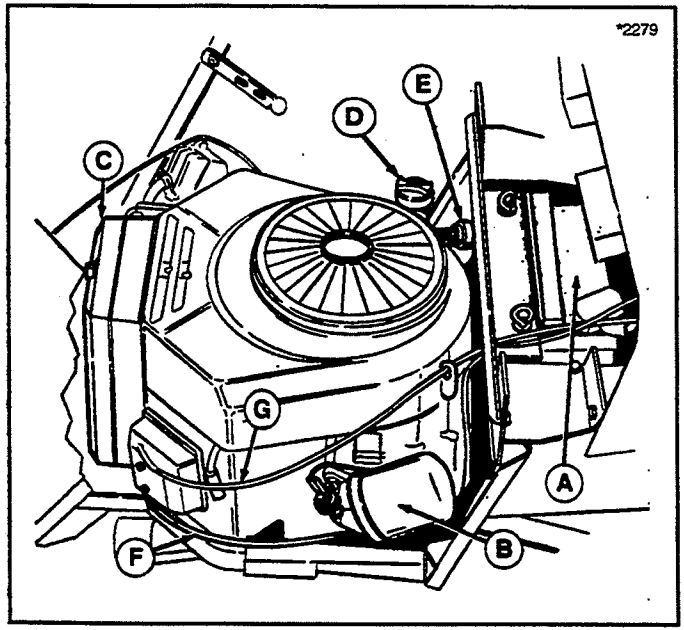


Figure 3. Engine Compartment - 12.5 HP, 14 HP & 16 HP Briggs & Stratton Twin Cylinder Engine
A. Battery
B. Oil Filter
C. Air Filter
D Oil Fill/Dipstick
E. Fuel Filter
F. Throttle Cable
G. Choke Cable

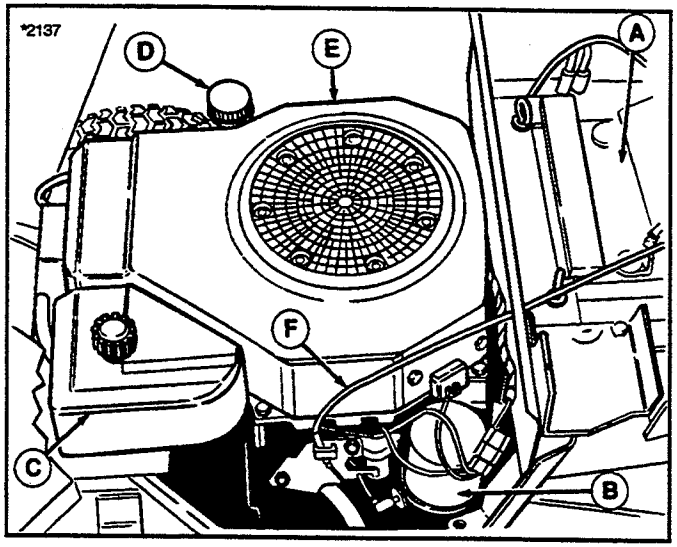


Figure 4. Engine Compartment - 14 HP Kohler Single Cylinder Engine
A. Battery
B. Oil Filter
C. Air Filter
D Oil Fill/Dipstick
E. Fuel Filter
F. Throttle/Choke Cable

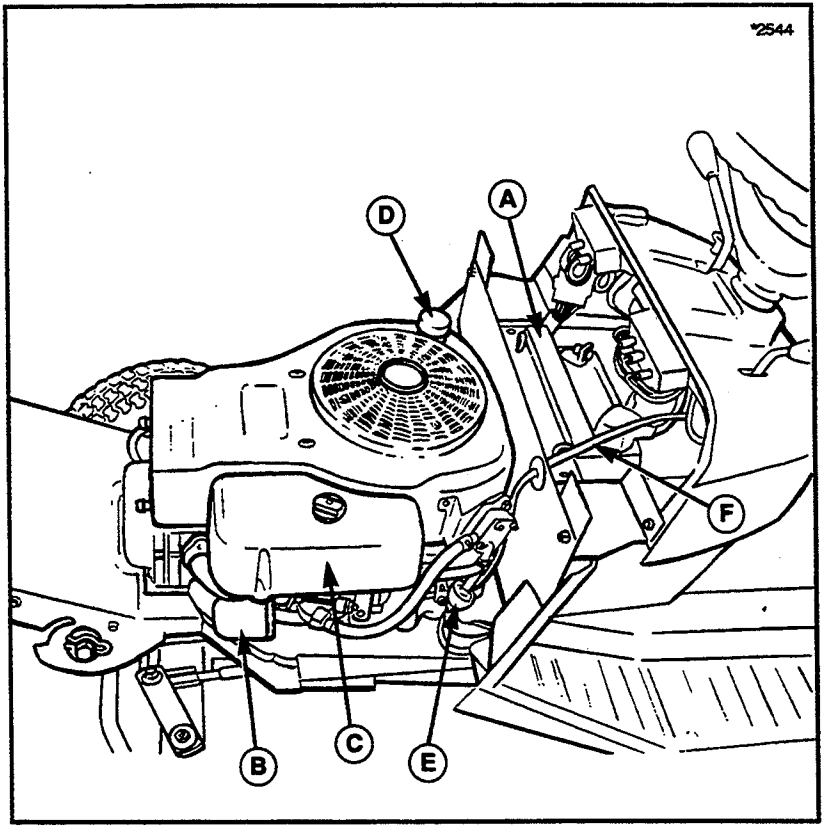


Figure 5. Engine Compartment - 15 HP Briggs & Stratton Single Cylinder Engine
A. Battery
B. Oil Filter
C. Air Filter
D Oil Fill/Dipstick
E. Fuel Filter
F. Throttle Cable

SAFETY INTERLOCK SYSTEM

Your tractor is equipped with a seat switch safety system that will automatically shut the engine off when the operator leaves the seat with the transmission control lever in gear or PTO engaged. Once the engine has stopped, the electric PTO switch must be turned off after operator returns to the seat in order to start the engine.

Check operation of dash safety lights. With operator in seat and ignition switch turned to ON (engine not running):

A. Neutral Indicator Light (G, figure 1) should go on with transmission lever in neutral gate and should go out when lever is moved to either the forward or reverse gate.

B. PTO Indicator Light (H, figure 1) should go on and off with operation of PTO switch.

C. Oil Pressure Indicator Light (E, figure 1)should be on and should go out immediately after engine starts.

D. Operator Seated Indicator Light (F, figure 1) should go on when operator is present in the seat and should go off as operator rises out of the seat.

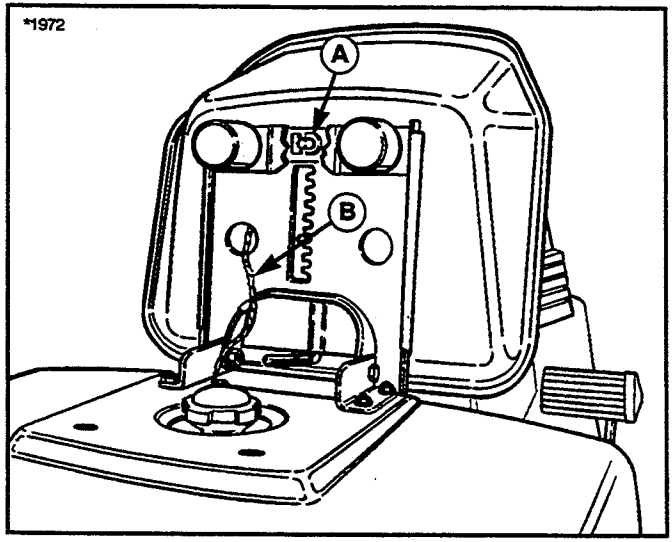


Figure 6. Seat Switch

Check the seat switch (A, figure 6) every fall and spring with the following four tests:

> **⚠ WARNING**
>
> **If the tractor does not pass the test, do not operate tractor. See your authorized dealer. Under no circumstance should you attempt to defeat the purpose of the safety system.**

Test 1 - Engine should NOT crank if:

A. seat is not occupied or
B. transmission lever out of neutral or
C. PTO switch engaged or
D. clutch/brake pedal not fully depressed.*

Test 2 - Engine should crank if:

A. seat is occupied and
B. transmission lever is in neutral and
C. PTO switch is disengaged and
D. clutch/brake pedal is fully depressed.*

* Later models only.

Test 3 - Engine should shut off if:

A. operator rises off seat with transmission lever in gear or
B. operator rises off seat with clutch/brake pedal not depressed* (parking brake on) or
C. operator rises off seat with PTO engaged.

NOTE: *If operator returns to seat before engine stops, the engine will re-start and electric PTO clutch will re-engage.*

Test 4 - PTO will disengage if:

A. operator rises off seat with engine running.

NOTE: *If operator returns to seat before engine stops, the engine will resume speed and electric PTO clutch will re-engage.*

Operation

Before operating this tractor for the first time, the owner should operate in an open area without mowing, to become accustomed to the unit. The left side of the mower can be used to trim close to objects. Be sure to read all information in the Safety and Operation sections before attempting to operate this tractor and mower.

⚠ WARNING

Never allow passengers to ride on the unit.

⚠ WARNING

To reduce fire hazard, keep the engine and mower free of grass, leaves and excess grease.

⚠ CAUTION

Towing the tractor will cause transmission damage. Do not use another vehicle to push or pull tractor.

⚠ WARNING

The interlock safety switches are for your safety. Do not attempt to bypass them.

⚠ WARNING

Never operate on slopes greater than 30 percent (16.7°) which is a rise of 3 feet (0.91 meters) vertically in 10' (3.1 meters) horizontally. Use front and rear wheel weights for slopes greater than 15 percent (8.5°) which is a rise of 1.5' (0.45 meters) vertically in 10' (3.1 meters) horizontally. See your dealer for wheel weights. Select slow ground speed before driving onto a slope.

MOWER INSTALLATION

⚠ WARNING

Stop engine and remove key. Do not engage PTO until mower is completely installed and operator is seated.

NOTE: *Perform mower installation on a hard, level surface such as a concrete floor.*

1. Park tractor and turn off PTO switch and engine, remove the key and apply parking brake. Turn the wheels fully to the left.
2. Place mower in the lowest cutting position using the mower height adjuster (B, figure 10). Place the mower lift lever (A, figure 10) in the lowest position, also. Slide mower deck under right side of tractor so that mower hitch is aligned with front tractor hitch.
3. See figure 7. Turn wheels straight. Pull back on the spring-loaded lever (B) while lifting up on the mower hitch. Install mower hitch onto tractor hitch brackets (A). When properly installed, the spring-loaded lever should seat fully underneath the brackets.

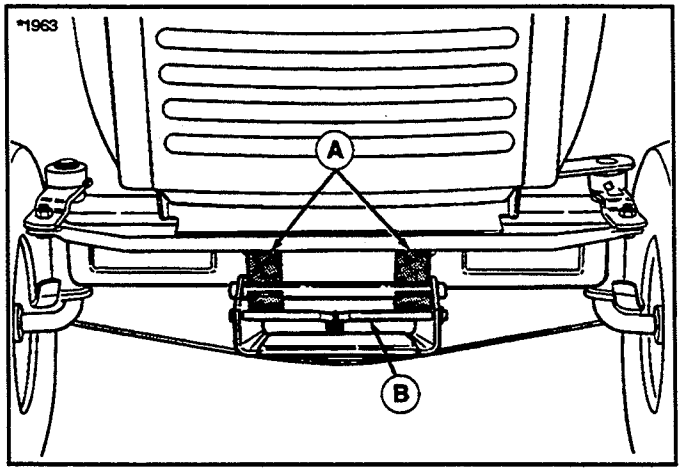


Figure 7. Mower Hitch
A. Tractor Hitch Brackets
B. Spring-Loaded Lever

4. See figure 8. Connect the mower lift arm (A) to the tractor lift arm (B) using the flat washer (C) and safety clip (D).

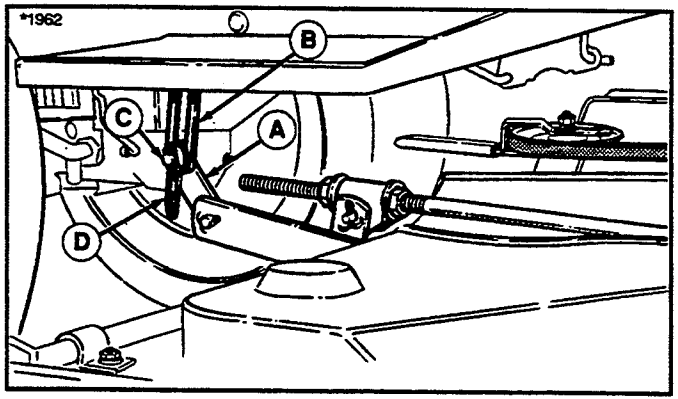


Figure 8. Lift Arms (Viewed from underneath right side of tractor)
A. Mower Lift Arm
B. Tractor Lift Arm
C. Flat Washer
D. Safety Clip

5. See figure 9. On left side of tractor, move idler pulley arm (A) to relieve belt tension. Install belt onto the PTO pulley (B).

NOTE: *On 38" mowers, push idler arm towards right side of tractor to relieve belt tension. On 44" mowers, pull idler arm towards you (left side of tractor) to relieve belt tension.*

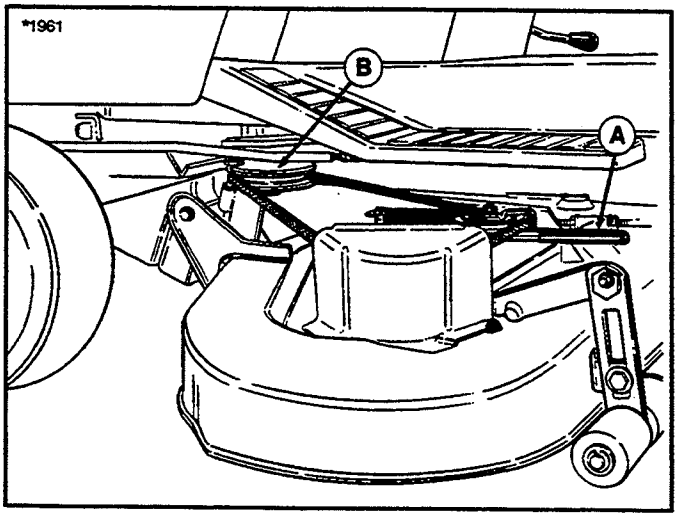


Figure 9. Installing Belt
A. Idler Pulley Arm **B. PTO Pulley**

MOWER REMOVAL

⚠ WARNING

Stop engine and remove key. Do not engage PTO until mower is completely installed and operator is seated.

1. Park tractor on a hard, level surface such as a concrete floor. Turn off PTO switch and engine, remove the key and apply parking brake. Turn the wheels fully to the left.
2. Place mower in the lowest cutting position using the mower height adjuster (B, figure 10).
3. Place the mower lift lever (A, figure 10) in the lowest position.
4. Disconnect the mower lift arm from the tractor lift arm (figure 8). Re-install washer and safety clip on mower lift arm for storage.
5. Remove belt from PTO pulley.
6. Turn wheels straight ahead. Pull back on spring-loaded lever (figure 7) and lift mower hitch off of the tractor brackets.
7. Turn wheels fully left, and slide mower deck out right side of tractor.

OPERATING THE MOWER

1. When traveling to or from the work site, raise the mower using the mower lift lever (A, figure 10). At the work site, lower mower using the lift lever.
2. Use the mower height adjuster (B, figure 10) to set the proper mowing height. See Mowing Patterns & Tips section for cutting height recommendations.

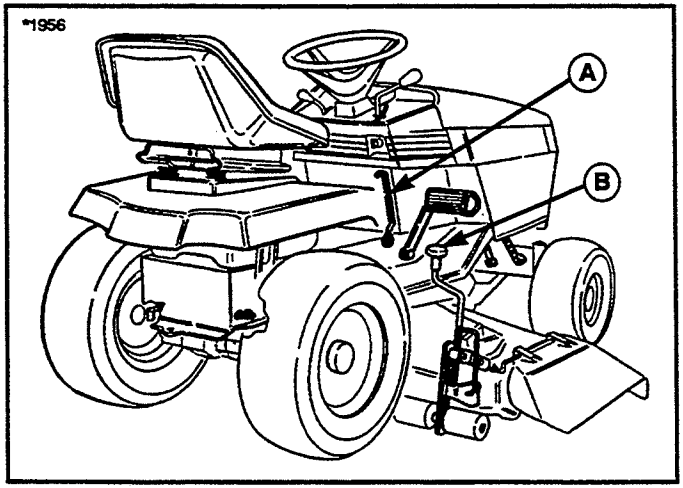


Figure 10. Mower Operation
A. Mower Lift Lever **B. Mower Height Adjuster**

CHECKS BEFORE STARTING

1. Make sure you have proper wheel or counterweights if required. See Slope Operation in the Safety Rules section. Make sure any slopes are within required limits.
2. Check that crankcase is filled to full mark on dipstick. See the engine Operator's Manual for instructions and oil recommendations.
3. Make sure all nuts, bolts, screws and pins are in place and tight.

⚠ WARNING

Gasoline is highly flammable and must be handled with care. Never fill the tank when the engine is still hot from recent operation. Do not allow open flame, smoking or matches in the area. Avoid overfilling and wipe up any spills.

4. Make sure you can reach all controls from operator's positions. If not, see Seat Adjustment.
5. Fill the gasoline tank with fresh gasoline. Fill to bottom of filler neck to avoid spillage and overflow. DO NOT mix oil with gasoline. Refer to engine manual for gasoline recommendations.

CLUTCH/BRAKE PEDAL OPERATION

1. See figure 11. Depressing the pedal from position A to B disengages the transmission drive, applies the tractor brake. On hydro models, depressing the pedal also returns the transmission control lever to neutral.
2. Parking brake is applied at pedal position B when parking brake control knob (C, figure 11) is pulled up with pedal fully depressed.

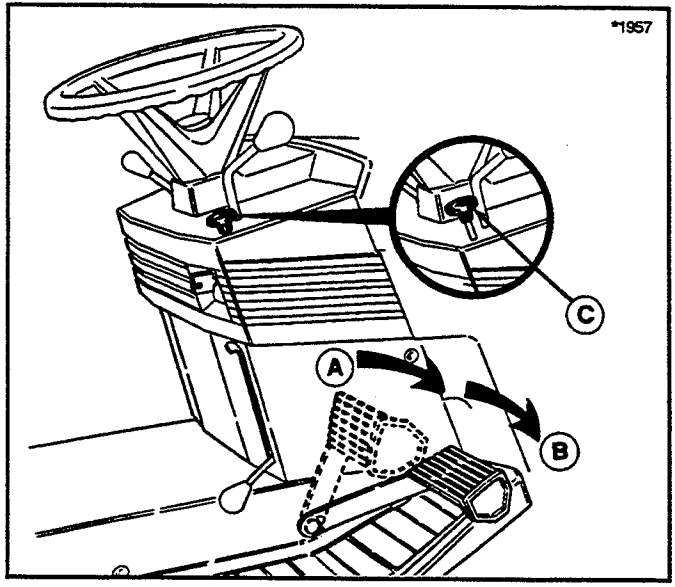


Figure 11. Clutch/Brake Pedal and Parking Brake
A. Clutch disengages
B. Brake is applied
C. Parking Brake Knob

STARTING THE ENGINE

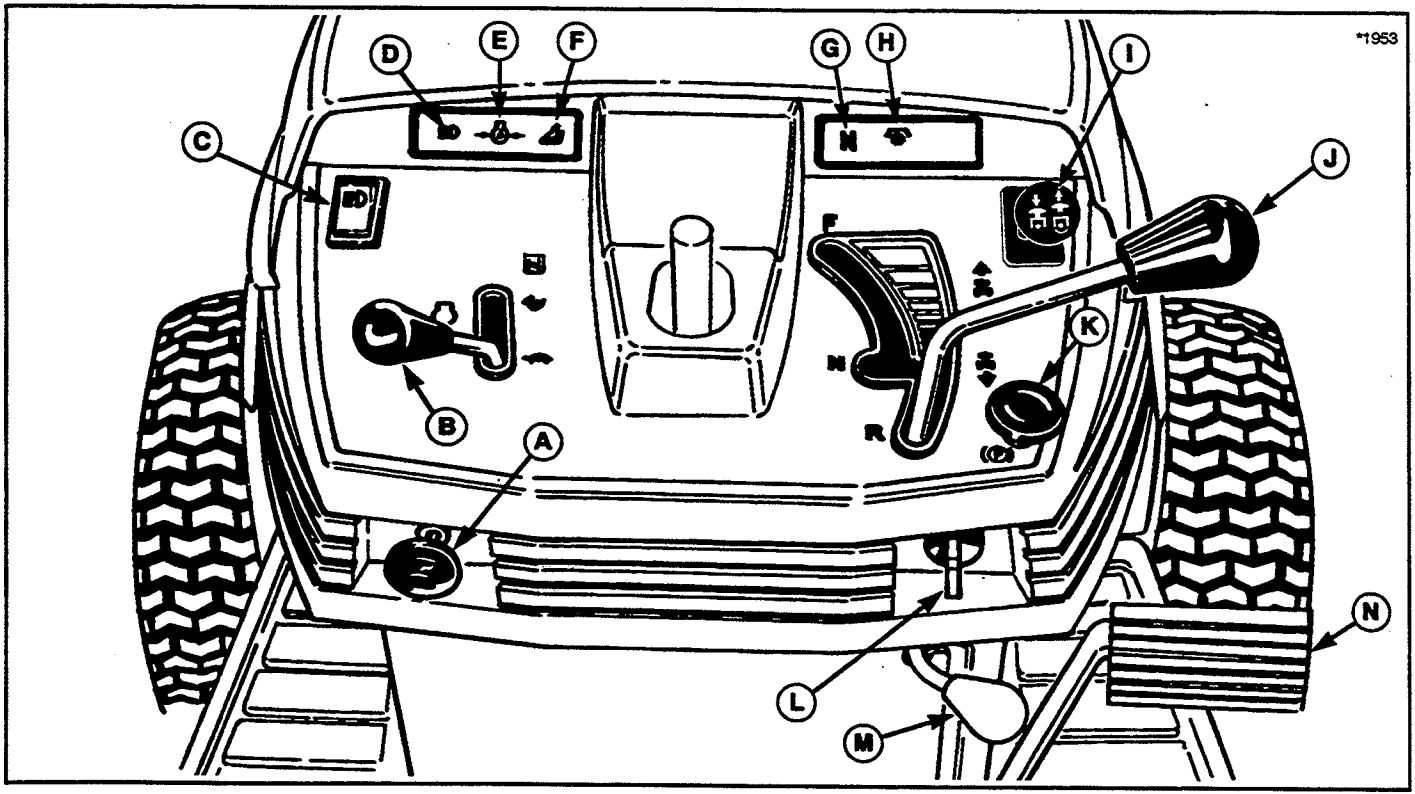
Refer to figure 12.

1. Seat yourself on the tractor seat in the operating position. Set the parking brake using the clutch/brake pedal (N) and parking brake knob. (K).
2. Push down on the switch (I) to disengage the PTO and place the ground speed control lever (J) in neutral.
3. For cold starts, pull choke knob (A, twin cylinder models) out or set the engine speed control (B, single cylinder models) to the choke position. For warm starts, set engine speed control lever at 1/2 throttle position (single cylinder) or leave choke knob (twin cylinder) pushed in.

NOTE: *On 14 HP Kohler single cylinder engines, engine speed control lever should not be held in the choke position for more than 5-10 seconds or the engine could be flooded. Once the engine has started, quickly move the control lever out of the choke position.*

4. Turn the key (L) to start and release when engine has started.
5. Move the engine speed control lever (B) to the slow position. Warm up the engine by running it for at least a minute before engaging the PTO or driving the tractor.

Figure 12. Tractor Controls (Hydro model shown)
A. Choke (Twin Cylinder only)
B. Engine Speed Control Lever
C. Headlight Switch
D. Headlight Indicator Light (Blue)
E. Oil Pressure Indicator Light (Red)
F. Operator Seated Indicator Light (Green)
G. Neutral Indicator Light (Green)
H. PTO Indicator Light (Red)
I. PTO Switch
J. Ground Speed Control Lever
K. Parking Brake Control Knob
L. Ignition Switch
M. Mower Lift Lever
N. Clutch/Brake Pedal


*1953
A
B
C
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SELECTING GROUND SPEED & ENGINE SPEED

On hydro models, ground speed is infinitely variable according to how far the control lever (J, figure 12) is moved in the forward or reverse position.

On gear models, ground speed is selected by moving the control lever (J, figure 12) to the appropriate gear selection. Most mowing is done in 3rd or 4th gear with engine speed between 3/4 and full speed. If the terrain is rough, hilly or sloping, use first or second gear. If the grass is wet or over 3" (76mm) high, use full engine speed (with low gear) so the mower will have enough power to cut the grass. Shift gears only with tractor stopped and clutch/brake pedal fully depressed.

⚠ WARNING

Make sure desired direction is clear of objects, people and animals.

1. If you are ready to mow, lower the mower from the transport position using lever (A, figure 10) and set the mowing height using the mowing height adjuster (B, figure 10).
2. Set the engine speed control lever (B, figure 12) for full speed.
3. Use the PTO switch (I) to engage the PTO.
4. Release the parking brake by depressing clutch/brake pedal (N, figure 12) and pushing knob (K) down.
5. On hydro models, move the ground speed control lever (J, figure 12) to the desired direction and speed of travel to set the tractor in motion.

   On gear models, depress clutch/brake pedal, use the ground speed control lever to select the proper gear for conditions, then slowly release clutch/brake pedal to set the tractor in motion.
6. Adjust engine speed control lever (B, figure 12) to the desired speed. Between 3/4 and full speed is recommended for mowing.

STOPPING THE TRACTOR

1. On hydro models, move the ground speed control lever (J, figure 12) into the NEUTRAL position to make a gradual stop. To make a more rapid stop, depress the clutch/brake pedal (N, figure 12). If you stop by depressing the pedal, move ground speed control lever to NEUTRAL before releasing the pedal.

   NOTE: *On later hydro models, the ground speed control lever will return to neutral automatically when the clutch/brake pedal is depressed.*

   On gear models, press the clutch/brake pedal (N, figure 12) down only far enough to disengage the clutch to make a gradual stop. For a more rapid stop, press pedal down farther to apply the brake. Move the ground speed control lever to NEUTRAL before releasing the pedal.

2. Engage the parking brake by fully depressing clutch/brake pedal and pulling up on parking brake knob (K, figure 12).

3. Use the PTO switch (I, figure 12) to disengage the PTO.

4. Set the engine speed control lever (B, figure 12) to 1/2 throttle setting and allow the engine to idle for 20 seconds. Stopping a hot engine too fast may cause engine damage.

5. Turn key (L, figure 12) to OFF and remove it.

⚠ WARNING

Before leaving the operator's position for any reason, engage the parking brake, disengage the PTO, stop the engine and remove the key.

⚠ WARNING

To reduce fire hazard, keep the engine, tractor and mower free of grass, leaves and excess grease. Do not stop or park tractor over dry leaves, grass or combustible materials.

PUSHING THE TRACTOR BY HAND

⚠ WARNING

Do not tow the tractor. Damage will result to the transmission/transaxle.

Hydro Models

1. With engine off and key removed, use the PTO switch (I, figure 12) to disengage the PTO.
2. Place the mower in the transport position (up) using the mower lift lever (M, figure 12).
3. See figure 13. The release lever is located under the rear tractor frame, above the transaxle. Release lever must be in the rearward position to push the tractor by hand.
4. To drive the tractor, release lever must be moved completely forward to engage the DRIVE position.

Gear Model

1. With engine off and key removed, use the PTO switch (I, figure 12) to disengage the PTO.
2. Place the mower in the transport position (up) using the mower lift lever (M, figure 12).
3. Place the ground speed control lever (J, figure 12) in the neutral position.
4. Unlock the parking brake.

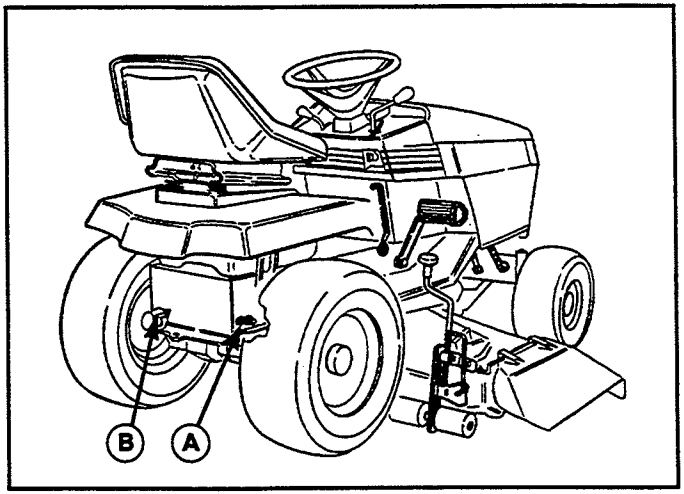

Figure 13. Transaxle Release Lever
A. Early Hydro Models
B. Later Hydro Models

Mowing Patterns & Tips

For the first use of the mower choose a smooth level area. Cut long straight strips overlapping slightly.

The size and type of area to be mowed determines the best mowing pattern to use. Obstructions such as trees, fences and buildings must also be considered. Where possible, make one or two passes in a counterclockwise direction around the outside of the area to keep the cut grass off fences and walks. The remainder of the mowing should be done in a clockwise direction so the clippings are dispersed on the cut area.

Keep in mind the following lawn care and mowing tips:

1. Too much maintenance is as detrimental to your lawn as neglect.
2. Mow when grass is 3-5 inches tall. Don't cut shorter than 2 to 2-1/2 inches. Cut only the top one-third of the grass blade. Cutting below this level can lead to thatch problems. Your mower has a cutting height adjustment that can help you maintain a proper length.
3. For extremely tall grass, set the cutting height at maximum for the first pass, and then reset to the desired height and mow again.
4. Mow often. Short clippings of an inch or less decompose more quickly than longer blades.
5. Keep the blades on your mower sharp for finer clippings.
6. Let grass grow a bit longer when it is hot to reduce heat build-up and protect grass from heat damage.
7. Use slow-release fertilizer for slow, even growth.
8. Don't cover grass surface with a heavy layer of clippings. Consider using a grass collection system and starting a compost pile.
9. Aerate lawn in spring, consider renting an aerator which removes cores of soil from the lawn. This increases the speed of clipping decomposition and deep root growth by opening up the soil and permitting greater movement of water, fertilizer and air.
10. Don't over-water. Too much water can encourage disease development.
11. Mow when the grass is dry, preferably in the late afternoon when the temperatures are cooler.
12. Where possible, change patterns occasionally to eliminate matting, graining or a corrugated appearance.
13. For wet grasses, grasses prone to wheel tracking and for collecting clippings:
    a. Use sharp blades.
    b. Raise deck 1/4" higher in front than in rear.
    c. Maximum engine speed.
    d. Clean deck of built-up material/caked-on grass.
    e. Check for free movement of mower idler pulley.
    f. Use slow ground speed.

(continued on next page)

14. For dry conditions where grass blow-out is a problem:
    a. Use sharp blades.
    b. Raise deck flat to 1/8" maximum lower in front.
    c. Use 3/4 engine speed.
    d. Clean deck of built-up material/caked-on grass.

MULCHING MOWER OPERATION (Optional Attachment)

Mulching

Mulching consists of actually cutting and recutting clippings into tiny particles and blowing them into the lawn. These tiny particles decompose rapidly into by-products your lawn can use. Under proper conditions, your mulching mower will virtually eliminate noticeable clippings on the lawn surface.

Keep in mind these mulching tips:

a. Use mulching mower or mulcher kit without shredders for grass mulching.
b. Install shredders for leaf shredding.
c. Use maximum engine speed.
d. Raise height of cut if excessive power is used.
e. Must use sharp blades. Do not use lift tabs or high lift blade when mulching.
f. Adjust to lower ground speeds in heavy grass or if windrow is present.
g. Clean deck of built-up material/caked-on grass.
h. Check for free movement of mower idler pulley.

Clippings Are Beneficial

A common misconception about clippings is that they automatically lead to thatch. However, clippings produced by mulching methods actually contribute to a healthy lawn because they:

1. Act as a safe, non-polluting and inexpensive fertilizer that nourishes your lawn. Fresh cut blades are a rich source of nitrogen which is essential to lush growth. And one garbage bag of clippings contains about 1/4 lb. of usable organic nitrogen.
2. Reduce the evaporation of water from your lawn.
3. Provide a cushioning layer to reduce lawn wear.
4. Moderate soil temperature.
5. Save money normally spent on trash bags.

Mowing Conditions

The best mulching results from mowing when lawn is dry and grass blades are not over 5" long. Follow these guidelines for best results:

a. Do not use the mower as a mulching mower during the first two or three mowings in the spring. The long grass blades, quick growth, and often wetter conditions are more suitable for side-discharge (broadcasting) or grass bagging operation.
b. Avoid mulching after rain or heavy dew. It may be better to mow later in the day or early evening when lawn is drier.

c. Change the mowing pattern each time.

d. If mulching baffles are removed, the original deflector must be in operating position for safe side-discharge mowing.

How Much Grass To Cut Off

Removing too much grass height in one cutting may result in an unsatisfactory cut: windrowing, clumping, or uneven dispersal of clippings may result. It is best to mow when the grass is between 3-5" tall, although this will depend on your personal preference for lawn appearance. A good rule to follow is to cut only the top one-third of the grass blade at a time (maximum of 1-1/2"). Cutting more off the grass blade, particularly in wet spring conditions, can lead to thatch problems.

Engine Speed & Ground Speed

Use full engine throttle matched with a slower ground speed so that clippings will be finely cut. A better cut may result from cutting the same area in two passes, each time cutting only 3/4" of grass blade. Short clippings of 1" or less decompose more quickly than longer blades.

***NOTE:** When mulching under heavy cutting conditions, a rumbling sound may be present and is normal.*

The Proper Equipment

Always keep the mower blades sharp and balanced. Blades should be sharpened at the beginning of every mowing season. If the tips of grass blades brown after cutting, this may be a sign of dull blades tearing, rather than cutting, the grass blades.

Keep the underside of the mower deck and baffles clean so that clippings are properly circulated, chopped, and discharged back into the lawn.

The Best Combination

We recommend that you experiment with the height of cut position and tractor ground speed that will give you the best cut. Start with a higher cutting height and try increasing lower settings until you find a cutting height that is matched to your mowing conditions and preferences. Since mulching requires more horsepower than side-discharging, using a slower ground speed is important for proper mulching operation.

Leaf Shredding (Mulcher Kit Only)

Patented Shredder Blades virtually eliminate raking leaves. Up to 512 cutting edges pulverize leaves into tiny particles, which quickly and naturally decompose into food for your lawn. Shredder Blades must be removed when you choose to mulch grass clippings.

Normal Care

SCHEDULE - The following schedule should be followed for normal care of your tractor and mower. You will need to keep a record of your operating time. Determining operating time is easily accomplished by multiplying the time it takes to do one job by the number of times you've done the job or installing the optional hourmeter.

Safety Items	See	Before First Use	Before Each Use	Every 5 Hours	Every 25 Hours	Every 100 Hours	Spring & Fall
Check safety interlock system.	pg. 13	●					●
Check tractor brakes.	pg. 49-51	●					●
Check mower blade stopping time.	pg. 56	●	After adjustment or service of electric PTO clutch				●
Normal Care Items							
Check tractor & mower for loose hardware.	–	●	●	●			
Check engine oil level.	*	●	●	●			●
Check engine & air filter.	*				***●		
Change engine oil and filter.**	*				***Every 50 hrs.		***●
Lubricate tractor & mower.	pg. 30-34				***●		
Check fluid levels & tire pressure	pg. 29	●	●		***●		
Check transmission fluid. (Early hydro only)	pg. 35	●		●			●
Change transmission fluid. (Hydro models only)	–		Every 400 hrs. or for transaxle service only.				
Check fuel filter.	pg. 29					●	
Clean battery & cables	pg. 36					●	
Clean/sharpen blades.	pg. 37					●	
Inspect spark plug(s).	*					●	

*See the engine manufacturer's owner's manual.
**Change original engine oil after first 5 hours of operation.
***More often in hot (over 85° F: 30° C) weather or dusty operating conditions.

RAISING THE HOOD

To gain access to the engine compartment, release the rubber strap (F, figure 2) on each side of the hood and raise the hood.

⚠ CAUTION

Do not run the engine with the hood raised. Engine heat will cause damage to the headlight bezel and hood.

CHECKING/ADDING GASOLINE

⚠ CAUTION

Never use gasoline containing METHANOL, gasohol containing more than 10% ethanol, gasoline additives, premium gasoline, or white gas because engine/fuel system damage could result.

Check the gas gauge/cap to be sure there is enough gasoline to complete the job. To add gasoline, remove the gas gauge/cap. Do not overfill. Leave room in the tank for fuel expansion. Refer to your engine manual for gasoline recommendations. Install and hand tighten the gas gauge/cap.

CHECKING TIRE PRESSURE

Front tire pressure should be 12 to 15 psi (82 to 103 kPa). Rear tire pressure should be 6 to 8 psi (41 to 55 kPa).

CHECKING FUEL FILTER

⚠ WARNING

Do not remove fuel filter when engine is hot, as spilled gasoline may ignite. Do Not spread hose clamps further than necessary. Ensure clamps grip hoses firmly over filter after installation.

The fuel filter is located in fuel line between fuel tank and carburetor. If filter is dirty or clogged, replace as follows. Place a container below filter to catch spilled gasoline.

1. Using a pliers, open and slide hose clamps from fuel filter.
2. Remove hoses from filter.
3. Install new filter in proper flow direction in fuel line. Secure with hose clamps. See warning at beginning of procedure.

LUBRICATION

Lubricating the Tractor

Lubricate the tractor as shown in figures 14 - 20. When a grease gun is shown, wipe the fitting clean, apply two or three shots of lithium base automotive grease, and wipe off excess grease. When an oil can is shown, wipe the area clean, apply a few drops of oil (SAE 30), then wipe up drips or spills.

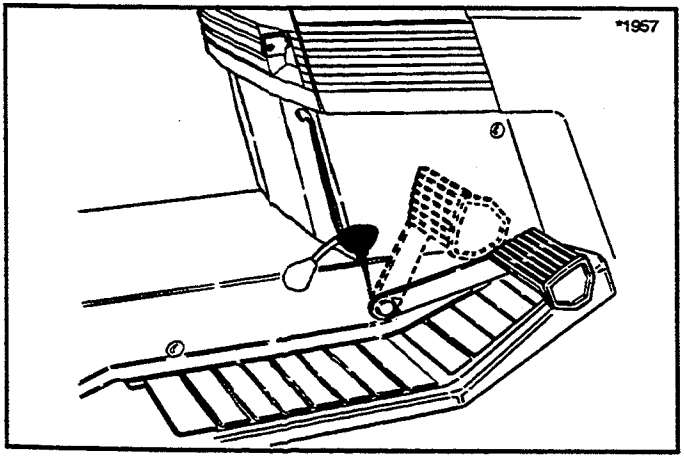

Figure 14. Brake Pedal Pivot Point

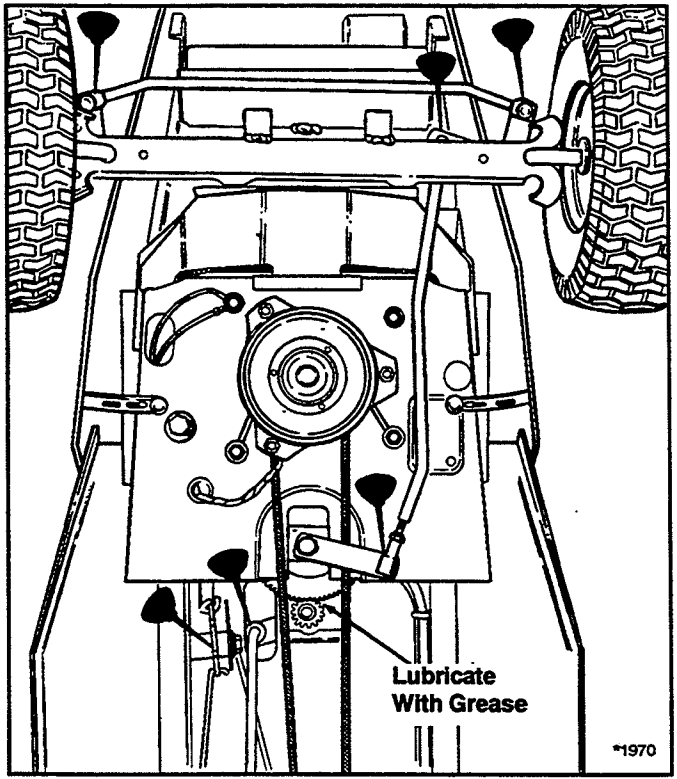

Figure 15. Tractor Lubrication Points - Front Half

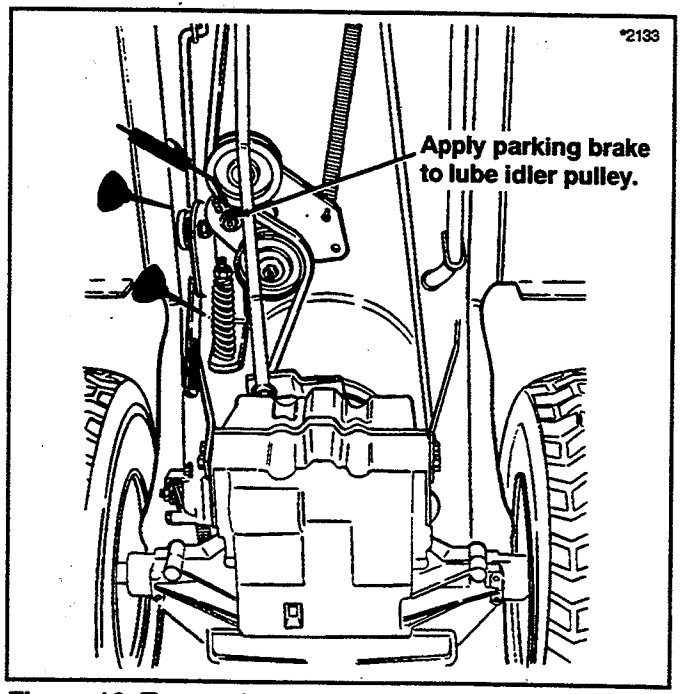

Figure 16. Tractor Lubrication Points - Rear Half (Gear)

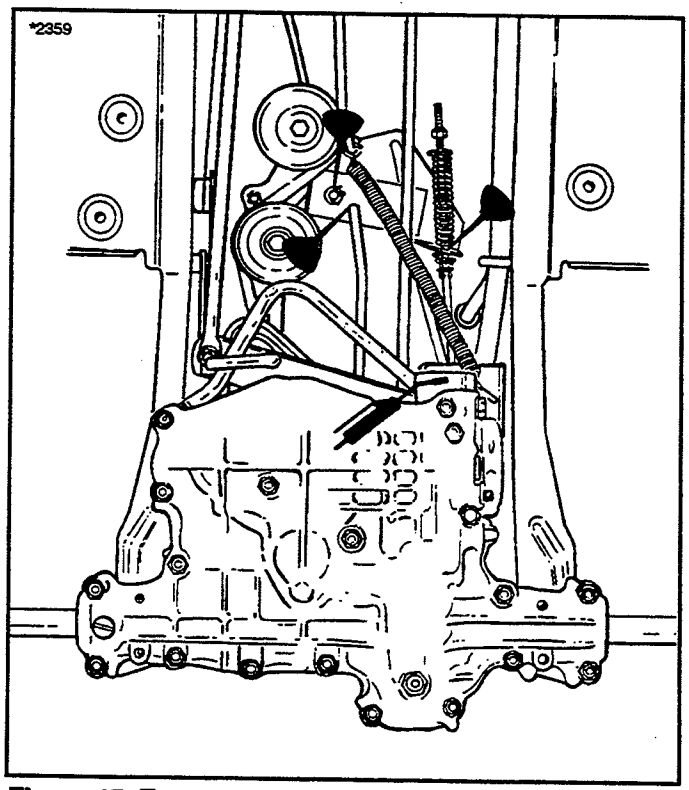

Figure 17. Tractor Lubrication Points - Rear Half (Early Hydro)

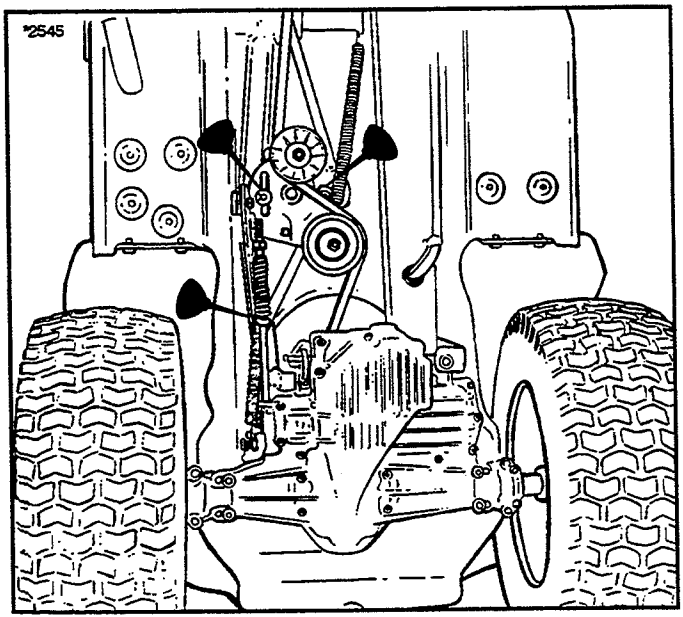

Figure 18. Tractor Lubrication Points - Rear Half (Later Hydro)

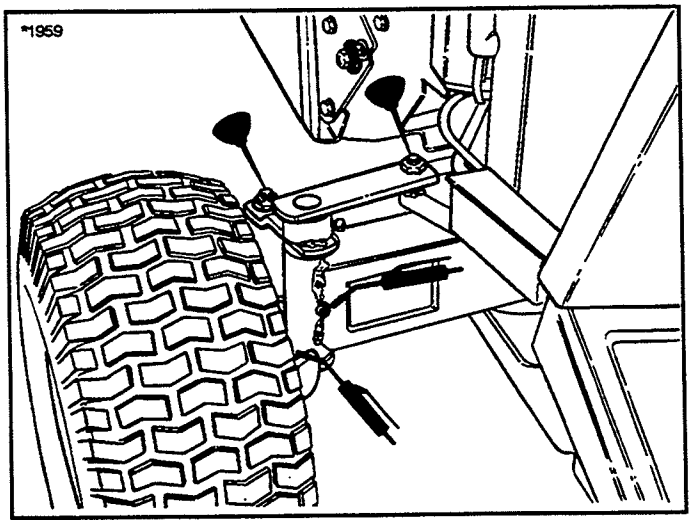

Figure 19. Front Axle Lubrication Points

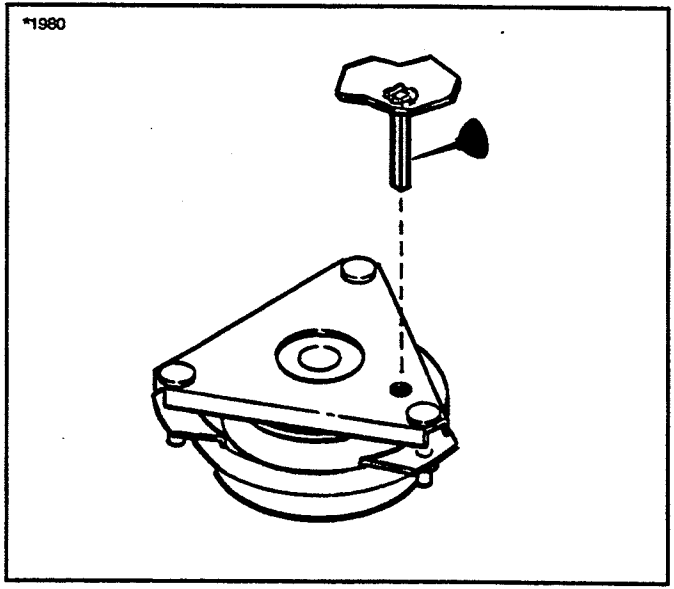

Figure 20. PTO Lubrication

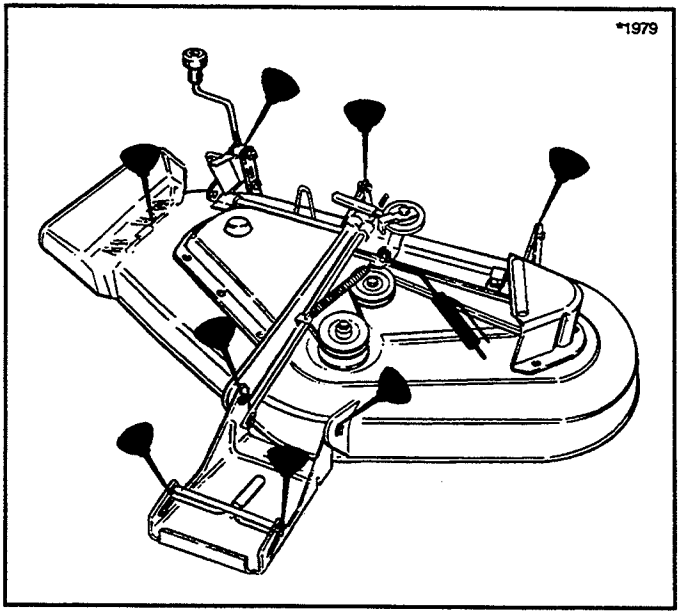

Figure 21. Mower Lubrication Points

Lubricating the Mower

Lubricate the mower as shown in figures 21 & 22. Also lubricate grease fittings on the mower idler pulley and arbors (underneath the mower deck). Use an oil can with medium weight (SAE 30) oil. Brush and wipe dirt and grass from the area before applying oil. Wipe up drips and spills. Keep oil off belts and pulleys.

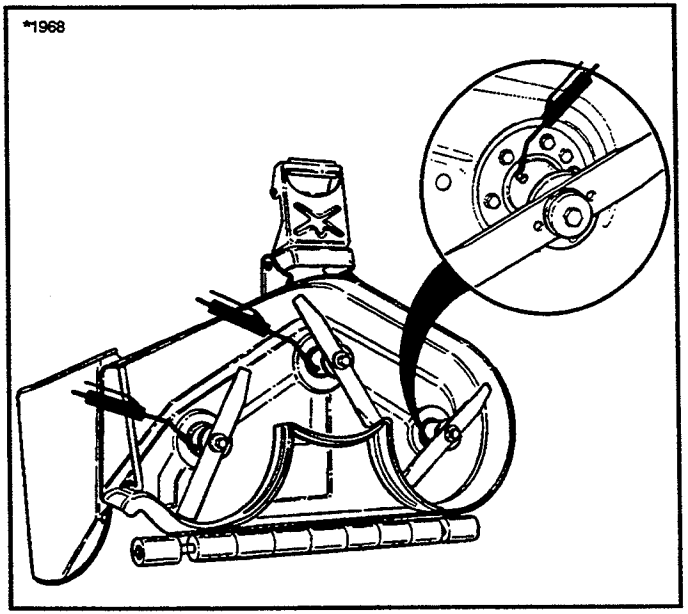

Figure 22. Arbor Lubrication Points

CHECKING TRANSAXLE FLUID LEVELS (EARLY HYDRO MODEL)

Allow tractor to cool after operation. Fluid must be cool for an accurate check. After initial operation and fluid check, transmission should not use any oil during operation.

1. The fluid level is visible in the reservoir at the rear of tractor (figure 23). The level should be at FULL mark. If not, go to step 2.
2. Clean the area around the reservoir. Add 10W-30 premium grade oil.
3. Fill reservoir to FULL mark. If the oil is black or milky, see your dealer to determine the cause.
4. It will take a while for the oil to seep through a filter screen in the inlet tube. Check the level again after operating the tractor a few times. If level is consistently low, see your dealer to check for leaks.
5. Keep cooling fins on transaxle free of grass and dirt accumulation.

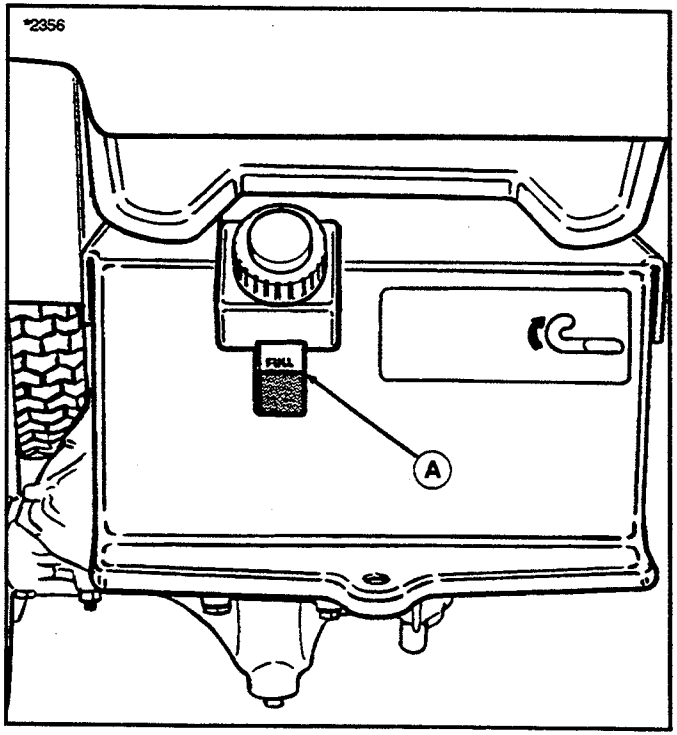

Figure 23. Hydrostatic Reservoir (Early Hydro Model)

BATTERY MAINTENANCE

Checking the Battery Fluid

1. Raise the hood.
2. Remove battery filler cap (figure 24) . Fluid must be even with split ring full mark. If not, add distilled water.
3. Reinstall filler cap.

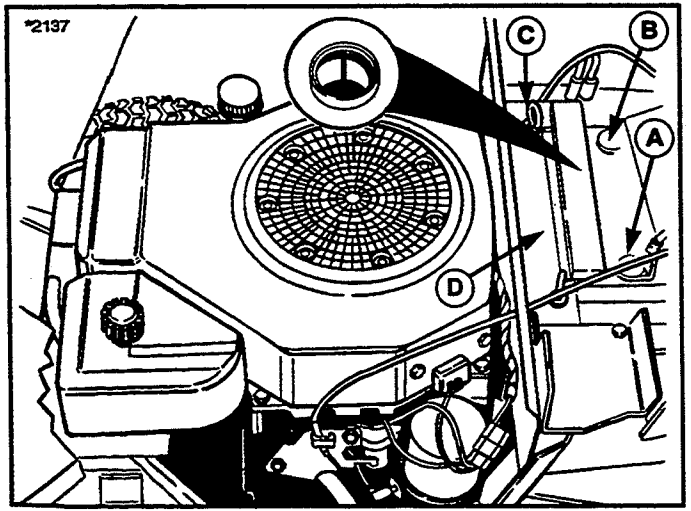

Figure 24. Battery

A. Positive Battery Terminal
B. Negative Battery Terminal
C. Holddown Rod
D. Battery Clamp

Cleaning the Battery Cables

⚠ WARNING

Be careful when handling the battery. Avoid spilling electrolyte. Keep flames and sparks away from the battery.

⚠ WARNING

When removing or installing battery cables, disconnect the negative cable FIRST and reconnect it LAST. If not done in this order, the positive terminal can be shorted to the frame by a tool.

1. Disconnect the cables from the battery, negative cable first (figure 24)
2. Remove the battery clamp, then remove the battery.
3. Scrub the battery, cables and battery compartment with baking soda and water.
4. Clean the battery terminals and cable clamps with a wire brush and battery post terminal cleaner.
5. Reinstall battery and clamp .
6. Connect cables, positive cable first.
7. Coat cable clamps and terminals with grease or petroleum jelly.

SERVICING THE MOWER BLADES

1. Remove mower from the tractor.
2. Blades should be sharp and free of nicks and dents. If not, sharpen blades as described in following steps.

⚠ WARNING

For your personal safety, do not handle the sharp mower blades with bare hands. Careless or improper handling of blades may result in serious injury.

3. To remove blade for sharpening, use wooden block to hold blade while removing its blade mounting capscrew (figure 25).
4. Use a file to sharpen blade to fine edge. Remove all nicks and dents in blade edge. If blade is severely damaged, it should be replaced.
5. Balance the blade as shown in figure 26. Center the blades' center hole on a nail lubricated with a drop of oil. A balanced blade will remain level.

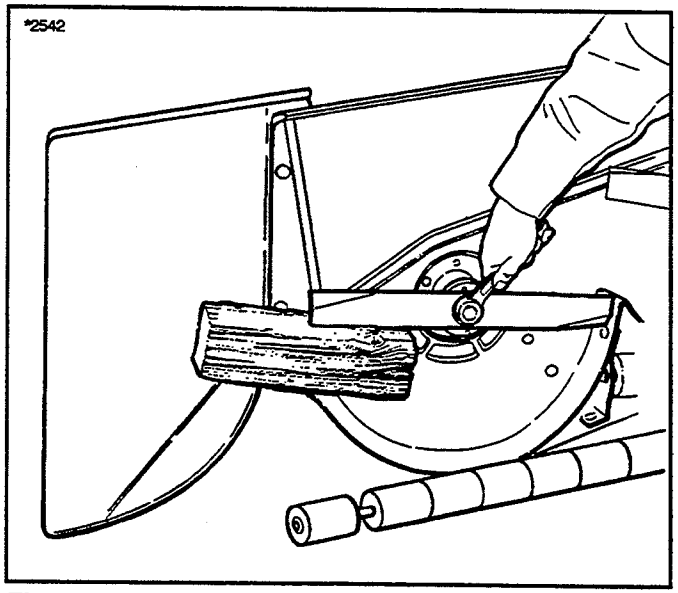

Figure 25. Removing the blade.

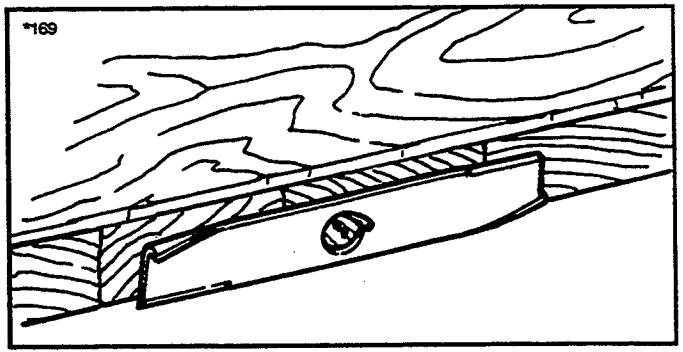

Figure 26. Balancing the Blade

⚠ WARNING

For your personal safety, blade mounting capscrews must each be installed with a cup washer and spline washer, then securely tightened. Torque blade mounting capscrew to 50 - 70 ft.lbs. (67 - 95 N.m.)

6. Reinstall each blade with the tabs pointing up toward deck as shown in figure 27. Secure with a capscrew (D), cup washer (C) and spline washer (B). Be sure spline washer hub fits inside blade mounting hole. Use a wooden block to prevent blade rotation and torque capscrews to 50-70 ft.lbs. (67-95 N.m.).

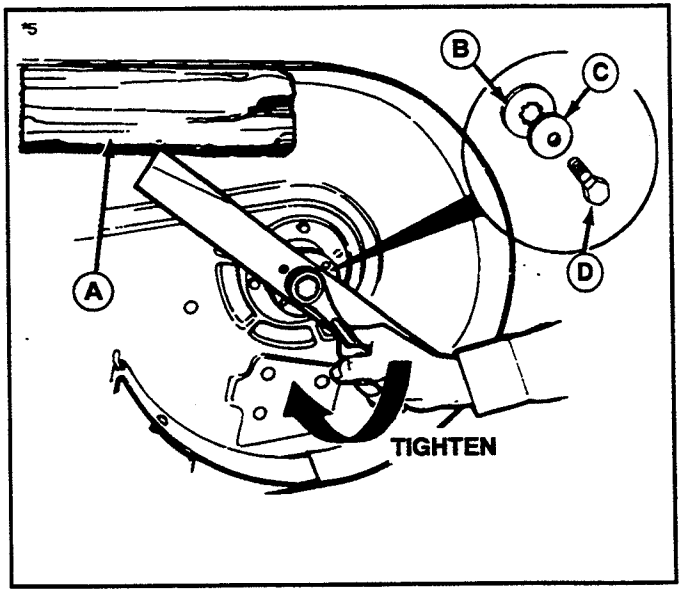

Figure 27. Installing the Blade
A. Wooden Block
B. Spline Washer
C. Cup Washer
D. Capscrew

Storage

NORMAL STORAGE

Clean all grass and dirt from the mower. To protect your tractor, store it in an enclosed dry area. Do not store it in an enclosure where fumes from the fuel tank could reach an open flame. Clean the seat with a vinyl cleaner.

To store your tractor in a cold area between winter snow removal jobs, we suggest that you fill the fuel tank at the completion of each job to prevent water condensation in the fuel tank. Wait for engine to cool before filling tank.

OFF-SEASON STORAGE (TWO MONTHS OR MORE)

1. Prepare the mower for storage as follows:
   a. Remove mower from tractor.
   b. Clean underside of mower.
   c. Coat all bare metal surfaces with paint or light coat of oil to prevent rusting.
   d. Clean, sharpen and balance the blades.
2. Add a gasoline stabilizer to the tank.

⚠ WARNING

Gasoline is highly flammable. Keep open flame or spark away from gasoline and fuel tank. Never store tractor where gasoline fumes may reach an open flame or spark.

3. Drain crankcase oil while engine is hot and refill with a grade of oil that will be required when tractor is used again.
4. Remove spark plug(s). Pour one ounce of 10W-30 oil into engine through spark plug hole. Crank engine a few times to distribute oil and then reinstall the spark plug(s).

(continued on next page)

5. Clean any dirt or grass from cylinder head cooling fins and engine housing and clean air cleaner element.
6. Cover air cleaner and exhaust outlet tightly with plastic or other waterproof material to keep moisture, dirt and insects out of engine.
7. Completely grease and oil tractor as outlined in earlier part of this section.
8. Clean up tractor and apply paint or rust preventive to any areas where paint is chipped or damaged.
9. Be sure the battery is filled to the proper level with water and is fully charged. Battery life will be increased if it is removed and put in a cool, dry place and fully charged about once a month. If battery is left in tractor, disconnect the negative cable.
10. If the tractor is to be stored 6 months or longer block the tractor up off the wheels to relieve weight and keep the tires off a damp floor. Protect the tires from prolonged exposure to direct sunlight.
11. Store the tractor in a dry place indoors.

STARTING AFTER STORAGE

Before starting the tractor after it has been stored, do the following:

1. Remove the blocks from under the tractor.
2. Install the battery (if removed).
3. Unplug the exhaust outlet and air cleaner.
4. Remove spark plug and wipe it dry. Crank the engine a few times to blow excess oil out of the plug hole. Reinstall plug.
5. Fill fuel tank with fresh gasoline. See engine manual for recommendations.
6. Check crankcase oil level, and add proper oil if necessary.
7. Inflate tires to proper operating pressure. Check fluid levels.
8. Start the engine and let it run slowly. DO NOT run at high speed immediately after starting. Be sure to run engine only out of doors or in well ventilated area.

SECTION CONTENT

This section of the manual provides troubleshooting and repair instructions for the more common and easily corrected problems. For other problems, it is recommended that you contact your dealer.

⚠ WARNING

To avoid serious injury, perform maintenance on the tractor or mower only when the engine is stopped and the parking brake engaged. Always remove the ignition key, disconnect spark plug wire and fasten away from the plug before beginning the maintenance, to prevent accidental starting of the engine.

TROUBLESHOOTING PROCEDURES

To use these procedures, first locate the problem description that best describes the trouble that you have encountered. Check the possible causes one at a time in the order that they are listed.

Troubleshooting The Tractor

1. Engine will not turnover or start.

A. Ground speed control lever not in neutral-start position. Shift into neutral.
B. Electric clutch switch in ON position. Place in OFF position.
C. Out of fuel. Allow engine to cool then refill the fuel tank.
D. Engine flooded. Push choke knob in (twin cylinder models) or move throttle control out of CHOKE position (single cylinder models).
E. Circuit breaker tripped. Wait one minute for automatic reset. Replace if defective (see your dealer).
F. Battery terminals require cleaning. See Normal Care section.
G. Battery discharged or dead. Recharge or replace.
H. Wiring loose or broken. Visually check wiring & replace broken or frayed wires. Tighten loose connections.
I. Solenoid or starter motor faulty. Repair or replace.
J. Safety interlock switch or module faulty. Replace if needed (see your dealer.)
K. Spark plug(s) faulty, fouled or incorrectly gapped. Clean and gap or replace. See engine manual.
L. Water in fuel. Drain fuel & refill with fresh fuel.
M. Old stale gas. Drain fuel & replace with fresh fuel.
N. Foot pedal not depressed.

2. Engine starts hard or runs poorly.

A. Fuel mixture too rich. Clean air filter. Check choke adjustment (engine speed control). See engine manual.

B. Carburetor adjusted incorrectly. See engine manual.

C. Spark plug(s) faulty, fouled, or incorrectly gapped. Clean and gap or replace. See engine manual.

3. Engine knocks.

A. Low oil level. Check/add oil as required.

B. Using wrong grade oil. See engine manual

4. Excessive oil consumption.

A. Engine running too hot. Clean engine fins, blower screen and air cleaner.

B. Using wrong weight oil. See engine manual.

C. Too much oil in crankcase. Drain excessive oil.

5. Engine exhaust is black.

A. Dirty air filter. Clean air filter. See engine manual.

B. Check engine speed control adjustment (choke). See engine manual.

6. Engine runs, but tractor will not drive.

A. Ground speed control lever in neutral. Shift in forward or reverse.

B. (Hydro models only) Transmission release lever in "push" position. Move into drive position.

C. Belt is broken. See Drive Belt Replacement.

D. Drive belt slips. (See problem and cause below.)

7. Tractor drive belt slips.

A. Clutch is out of adjustment. See your dealer.

B. Pulleys or belt greasy or oily. Clean as required.

C. Belt stretched or worn. Replace with correct belt.

D. Idler pulley pivot bracket "frozen" in declutched position. Remove idler pulley, clean and lubricate.

8. Brake will not hold.

A. Brake is incorrectly adjusted. See Brake Adjustment.

B. Internal brake disc on transaxle worn. See your dealer.

9. Tractor steers hard.

A. Steering linkage is loose. Check and tighten any loose connections. See Steering Gear Adjustment.

B. Improper tire inflation. Check and correct.

C. Spindle bearings dry. Grease spindles. See Lubricating the Tractor.

10. Drive belt does not stop when clutch/brake pedal depressed.

A. Belt stops out of adjustment. See Drive Belt Replacement.

Troubleshooting the Mower

1. **Mower will not raise.**
   A. Lift arms or lift link not properly attached or damaged. Attach or repair.
2. **Mower cut is uneven.**
   A. Mower not leveled properly. See Mower Leveling.
   B. Tractor tires not inflated equally or properly. See Normal Care.
3. **Mower cut is rough looking.**
   A. Engine speed too slow. Set for three-fourths to full speed.
   B. Ground speed too fast. Use ground speed control lever to control ground speed .
   C. Blades dull and require sharpening. See Servicing the Mower Blades.
   D. Mower drive belt slipping. Belt oily or worn. Clean or replace belt as necessary.
   E. Check PTO (Electric Clutch) Adjustment. Clutch may need to be adjusted.
   F. Blades not properly fastened to arbors. See Servicing the Mower Blades.
4. **Engine stalls easily with mower engaged.**
   A. Engine speed too slow. Set for 3/4 to full throttle.
   B. Ground speed too fast.
   C. Carburetor not adjusted properly.
   D. Cutting height set too low when mowing tall grass. Cut tall grass at maximum cutting height during first pass.
   E. Discharge chute jamming with cut grass. Cut grass with discharge pointing toward previously cut area.
5. **Excessive mower vibration.**
   A. Mower blades, arbors, or pulleys are bent. Check and replace as necessary.
   B. Mower blades are out of balance. Remove, sharpen and balance blades. See Servicing the Mower Blades.
   C. Belt installed incorrectly. See Belt Replacement.
6. **Excessive belt breakage.**
   A. Bent or rough pulleys. Repair or replace.
   B. Using incorrect belt. See your dealer.
7. **Mower drive belt slips or fails to drive.**
   A. Idler pulley spring broken or not properly attached. See your dealer.
   B. Belt stops out of adjustment. Check.
   C. Mower drive belt broken. Replace.

CHECKING THE BATTERY

The voltmeter can be used to determine condition of battery. When engine is off, the voltmeter shows battery voltage, which should be 12 volts. When engine is running, the voltmeter shows voltage of charging circuit which normally is 13 to 14 volts.

A dead battery or one too weak to start the engine may not mean the battery needs to be replaced. It may, as an example, mean that the alternator is not charging the battery properly. If there is any doubt about the cause of the problem, see your dealer. If you need to replace the battery, follow the steps under Cleaning the Battery & Cables in the Normal Care Section.

CHARGING A COMPLETELY DISCHARGED BATTERY

1. Be aware of all the safety precautions you should observe during the charging operation. If you are unfamiliar with the use of a battery charger and hydrometer; have the battery serviced by your dealer.

⚠ WARNING

Do not attempt to charge a frozen battery. Allow the battery to warm to 60° F (15.5° C) before placing on charge.

2. Add water sufficient to cover the plate (fill to the proper level near the end of the charge). If the battery is extremely cold, allow it to warm before adding water because the water level will rise as it warms. Also, an extremely cold battery will not accept a normal charge until it becomes warm.
3. Always unplug or turn the charger off before attaching or removing the clamp connections.
4. Carefully attach the clamps to the battery in proper polarity (usually red to [+] positive and black to [-] negative).

⚠ CAUTION

Keep open flames and sparks away from the battery; the gasses coming from it are highly explosive. Ventilate the battery well during charging.

5. While charging, periodically measure the temperature of the electrolyte. If the temperature exceeds 125° F (51.6° C), or if violent gassing or spewing of electrolyte occurs, the charging rate must be reduced or temporarily halted to prevent battery damage.
6. Charge the battery until fully charged (i.e. until the specific gravity of the electrolyte is 1.250 or higher and the electrolyte temperature is at least 60° F). The best method of making certain a battery is fully charged, but not over charged, is to measure the specific gravity of a cell once per hour. The battery is fully charged when the cells are gassing freely at low charging rate and less than 0.003 change in specific gravity occurs over a three hour period.

JUMP STARTING WITH AUXILIARY (BOOSTER) BATTERY

Jump starting is not recommended. However, if it must be done, follow these directions. Both booster and discharged batteries should be treated carefully when using jumper cables. Follow exactly the procedure that follows, being careful not to cause sparks. Refer to figure 28.

⚠ WARNING

For your personal safety, use extreme care when jump starting. Never expose battery to open flame or electric spark – battery action generates hydrogen gas which is flammable and explosive. Do not allow battery acid to contact skin, eyes, fabrics, or painted surfaces. Batteries contain a sulfuric acid solution which can cause serious personal injury or property damage.

1. Both batteries must be of the same voltage (6, 12, etc.).
2. Position the vehicle with the booster battery adjacent to the vehicle with the discharged battery so that booster cables can be connected easily to the batteries in both vehicles. Make certain vehicles do not touch each other.
3. Wear safety glasses and shield eyes and face from batteries at all times. Be sure vent caps are tight. Place damp cloth over vent caps on both batteries.
4. Connect positive (+) cable to positive post of discharged battery (wired to starter or solenoid).

(Continued on next page)

5. Connect the other end of same cable to same post marked positive (+) on booster battery.
6. Connect the second cable negative (-) to other post of booster battery.
7. Make final connection on engine block of stalled vehicle away from battery. Do not lean over batteries.
8. Start the engine of the vehicle with the booster battery. Wait a few minutes, then attempt to start the engine of the vehicle with the discharged battery.
9. If the vehicle does not start after cranking for thirty seconds, STOP PROCEDURE. More than thirty seconds seldom starts the engine unless some mechanical adjustment is made.
10. After starting, allow the engine to return to idle speed. Remove the cable connection at the engine or frame. Then remove the other end of the same cable from the booster battery.
11. Remove the other cable by disconnecting at the discharged battery first and then disconnect the opposite end from the booster battery.
12. Discard the damp cloths that were placed over the battery vent caps.

⚠ WARNING

To avoid engine damage, do not disconnect battery while engine is running. Be sure terminal connections are tight before starting.

⚠ WARNING

Any procedure other than the preceding could result in: (I) personal injury caused by electrolyte squirting out the battery vents, (2) personal injury or property damage due to battery explosion, (3) damage to the charging system of the booster vehicle or of the immobilized vehicle.

Do not attempt to jump start a vehicle having a frozen battery because the battery may rupture or explode. If a frozen battery is suspected, examine all fill vents on the battery. If ice can be seen or if the electrolyte fluid cannot be seen, do not attempt to start with jumper cables as long as the battery remains frozen.

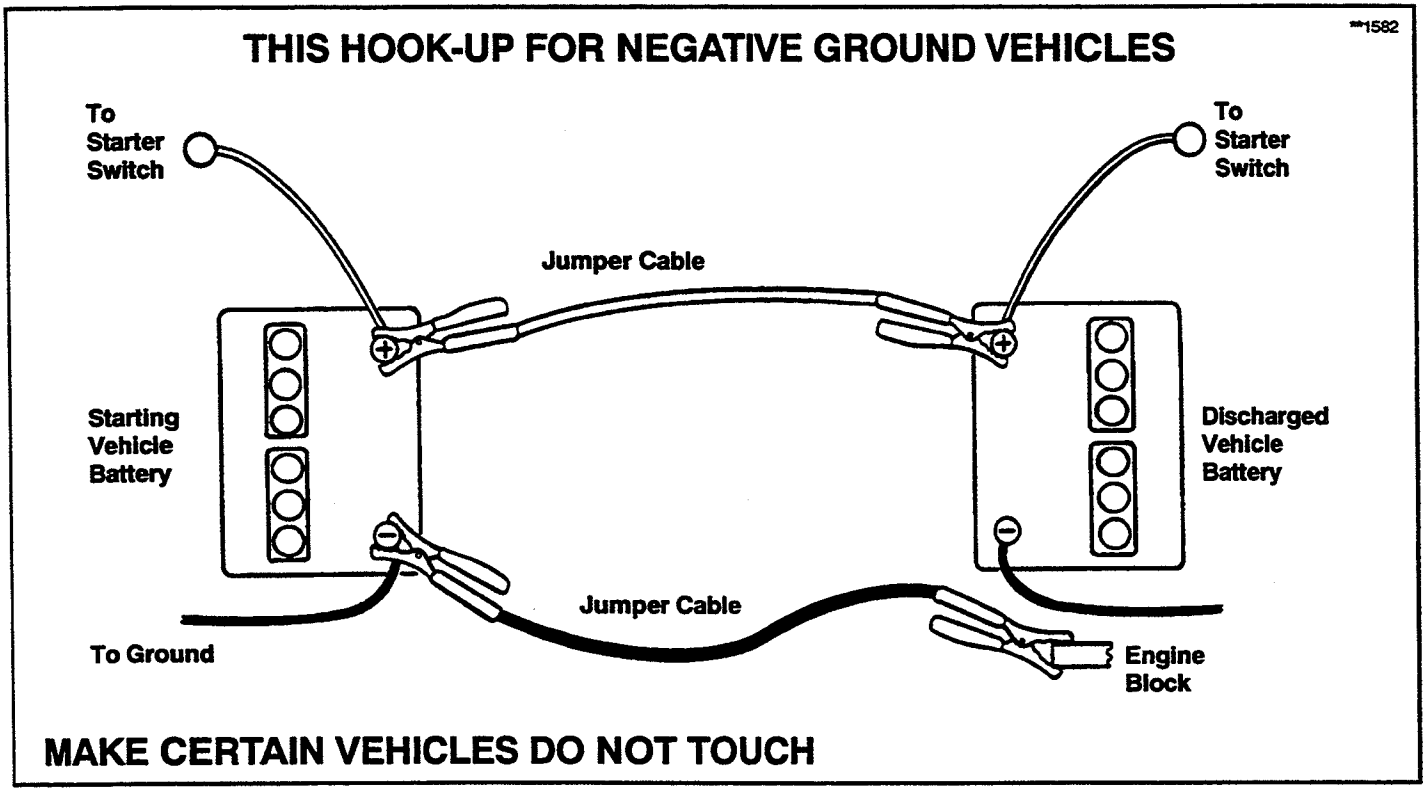

Figure 28. Jump Starting Diagram

⚠ WARNING

To avoid serious injury, perform adjustments only with engine stopped, key removed and tractor on level ground.

SEAT ADJUSTMENT

See figure 29. Use the lever to adjust the seat forward or rearward for best rider comfort.

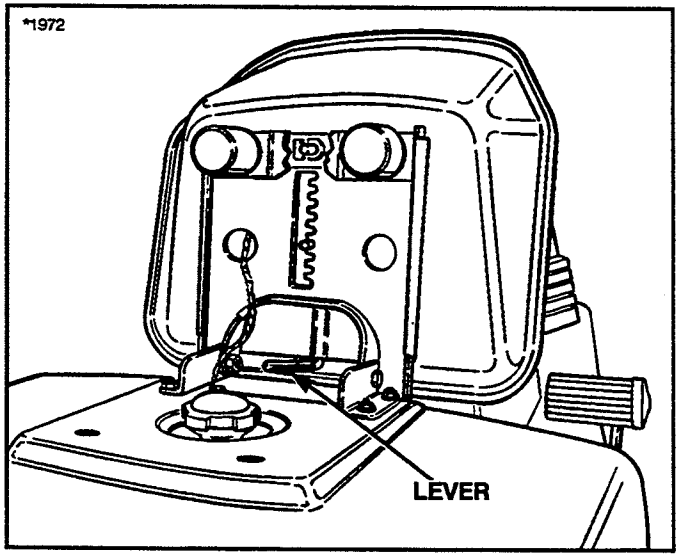

Figure 29. Seat Adjustment

BRAKE ADJUSTMENT - HYDRO MODELS

Brake Adjustment - Early Hydro Model

1. Fully depress the clutch/brake pedal and lock the parking brake by pulling up on the parking brake knob (K, figure 1).
2. See figure 30. The brake rod spring should measure 2-1/2" when compressed. Turn the adjustment nut as necessary to obtain correct spring length.

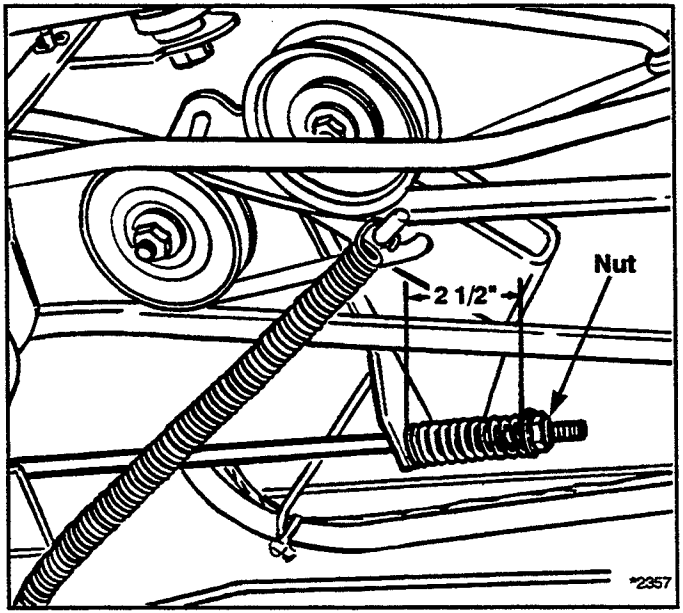

Figure 30. Brake Adjustment - Early Hydro Model (Viewed from right side of tractor)

Brake Adjustment - Later Hydro Model

1. See figure 31. With parking brake released, rotate the brake cam (A) forward until it stops. There should be 5/16" gap between transaxle housing (B) and rear point of brake cam.
2. If adjustment is required, remove cotter pin and turn adjusting nut (C) until proper 5/16" clearance is achieved. Turning the nut in will decrease clearance and turning the nut out will increase clearance. Install cotter pin after adjustment.
3. Fully depress the clutch/brake pedal and lock the parking brake by pulling up on the parking brake knob (K, figure 1).
4. The brake rod spring (D) should measure 2-7/8" when compressed. Turn the adjustment nut (E) as necessary to obtain correct spring length.

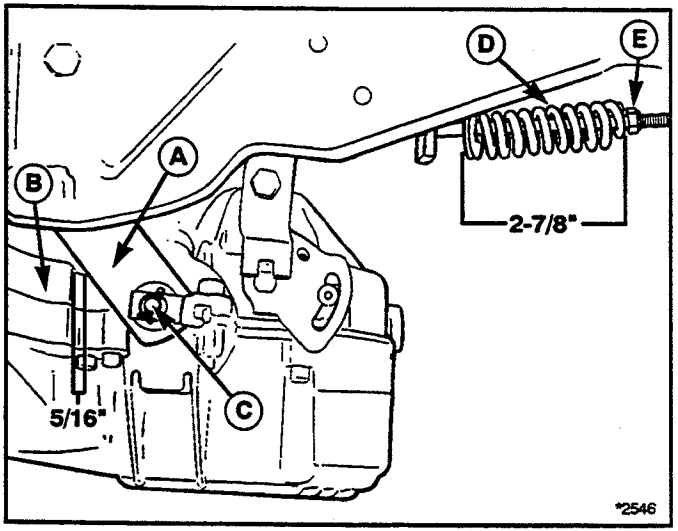

Figure 31. Brake Adjustment - Later Hydro Models

A. Brake Cam
B. Transaxle Housing
C. Adjusting Nut
D. Brake Rod Spring
E. Adjustment Nut

BRAKE ADJUSTMENT - GEAR MODEL

1. Place the transmission in gear and release the parking brake.
2. See figure 32. Move the brake rod (A) back and forth to be sure there is no tension on the brake pads.
3. Push the cam lever (B) forward (toward front of tractor) to take out any slack. The gap between lever (B) and stop (C) should be 1/8" (0.3mm). Use a feeler gauge to measure. if adjustment is required, proceed to step 4.
4. Loosen or tighten the adjustment nut (D) to obtain the correct dimension.
5. Fully depress the clutch/brake pedal and lock the parking brake by pulling up on the parking brake knob (K, figure 1).
6. If equipped with a set collar (F), the brake rod spring should measure 2-55/64" when compressed. If there is no set collar, spring should measure 2-57/64". Turn the adjustment nut (E) as necessary to obtain correct spring length.
7. If equipped with a set collar (F), adjust set collar 1/4" from brake arm assembly with spring compressed to 2-55/64"

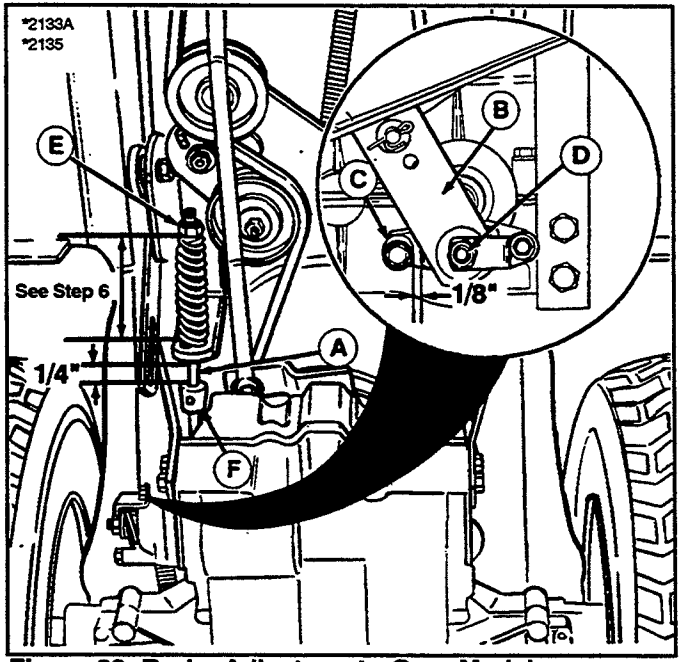

Figure 32. Brake Adjustment - Gear Model

A. Brake Rod
B. Brake Cam Lever
C. Stop
D. Adjustment Nut
E. Spring Adjustment Nut
F. Set Collar (Mfg. No. 1691891 Only)

NEUTRAL ADJUSTMENT - GEAR MODEL

If the tractor creeps forward or backward with the transmission control speed lever positioned in the neutral gate, perform the following adjustment.

1. Raise the rear of the tractor off ground with suitable hoist or floor jack. Install jackstands underneath transaxle and block the front wheels.
2. Start the engine and use the transmission control speed lever to find neutral, even if control lever is not in the neutral gate. Shut off engine.
3. See figure 33. Loosen the nut (A) so that the transmission control rod (B) is free to move.
4. Shift the transmission control lever firmly into the neutral gate on the dashboard. Retighten nut (A).
5. Remove tractor from jackstands or jack.

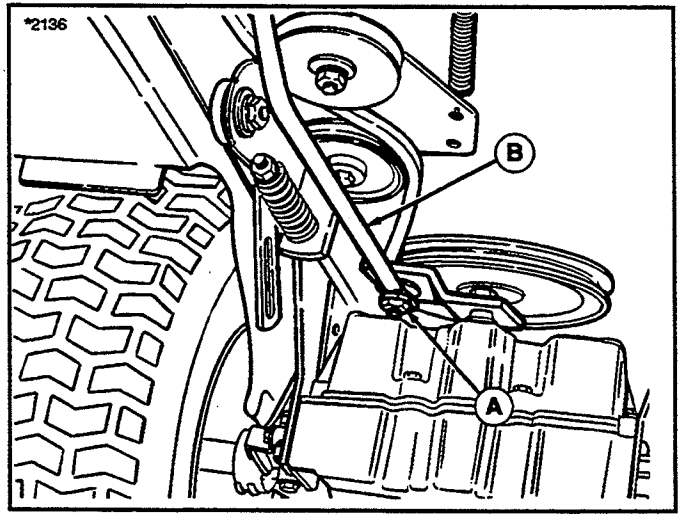

Figure 33. Neutral Adjustment - Gear Model
A. Nut
B. Transmission Control Rod

PTO (ELECTRIC CLUTCH) ADJUSTMENT

1. Make sure engine is off and key removed.
2. Use a 0.010 - 0.012 feeler gauge to check the PTO at three places. See figure 34. Insert the gauge between the drive spring rivets. There should be a slight resistance as gauge is moved in and out of slot. If adjustment is required, proceed to step 3.
3. Loosen or tighten one of the nuts (B) as required to obtain the specified clearance. Loosen the nuts to increase the gap, tighten the nuts to decrease the gap.
4. After adjusting one nut, check the other two with a feeler gauge. Adjustment at one location will change the measurement at the other two locations. Make sure all three locations have proper adjustment.

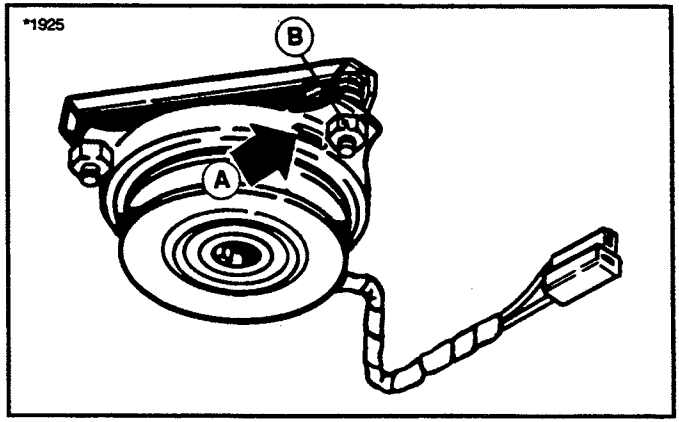

Figure 34. PTO Clutch Adjustment
A. Slot
B. Adjustment Nut

STEERING GEAR ADJUSTMENT

If there is excessive slack in the steering system, the steering gear back lash can be removed.

1. See figure 35. Loosen the two capscrews and adjust the bracket so the gear teeth are closely meshed.
2. Tighten nuts after adjustment.

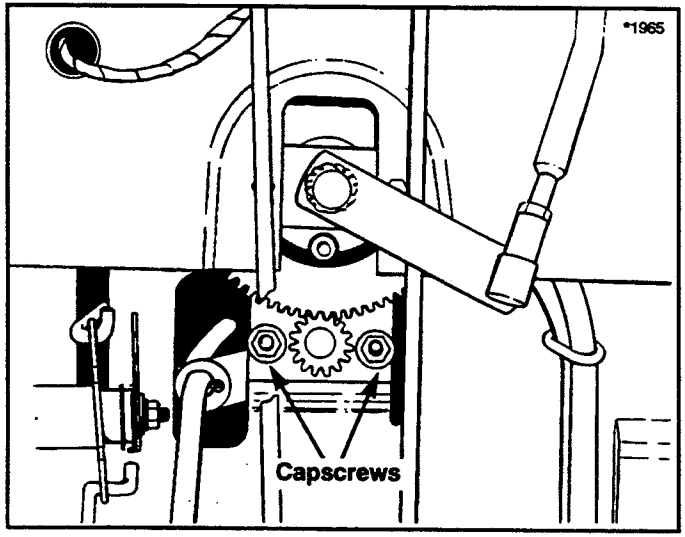

Figure 35. Steering Gear Adjustment

MOWER ADJUSTMENTS

⚠ WARNING

Before checking mower, shut off PTO and engine. Allow all moving parts to stop. Remove ignition key, then disconnect the spark plug wire and fasten it away from the spark plug.

Leveling The Mower

If the cut is uneven, the mower may need leveling. Unequal or improper tire pressure may also cause an uneven cut. Make sure tire pressure is correct as specified in Checking Tire Pressure.

1. With the mower installed, place the tractor on a smooth, level surface such as a concrete floor. Turn the front wheels straight forward.
2. Check for bent blades and replace if necessary.
3. Disengage the PTO. Place the mower in mid-cut position. Arrange the mower blades so that they are pointing from side-to-side, then engage the PTO.

4. Measure the distance between the outside tips of each blade and the ground. If there is more than 1/8" (3mm) difference between the measurements on each side, proceed to step 5. If the difference is 1/8" (3mm) or less, proceed to step 6.
5. See figure 36. Loosen the outside nut (A). Turn the eccentric nut (B) to raise or lower left-hand side of mower. When mower is level, hold the eccentric nut while tightening the outside nut.

NOTE: *When using a turbo collection system, raise the discharge side of the mower approximately 1/4" to compensate for turbo assembly weight. Check the level of the cut grass and adjust the 1/4" measurement as necessary for a smooth, even cut.*

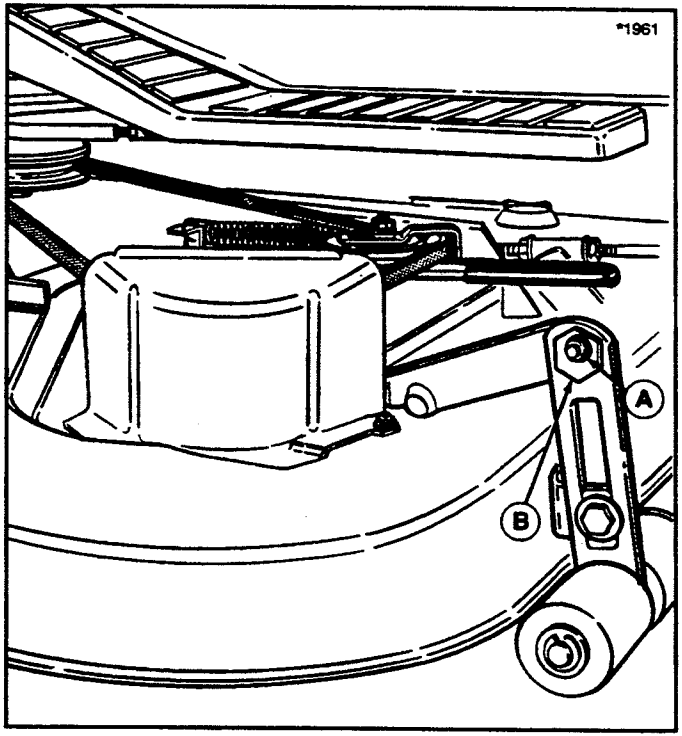

Figure 36. Leveling The Mower Side-To-Side
A. Outside Nut
B. Eccentric Nut

6. Disengage the mower PTO. Arrange the blades so they face front-to-back, then engage the PTO.
7. Turn the blades front-to-back. On 44" deck, measure the distance from the ground to the front tip of the center blade, and from the ground to rear tips of left-hand and right-hand blades. On 38" deck, measure the distance from the ground to front tip of the left and right-hand blades. Front tip should be 1/4" higher. If it is not proceed with steps 8 - 10.

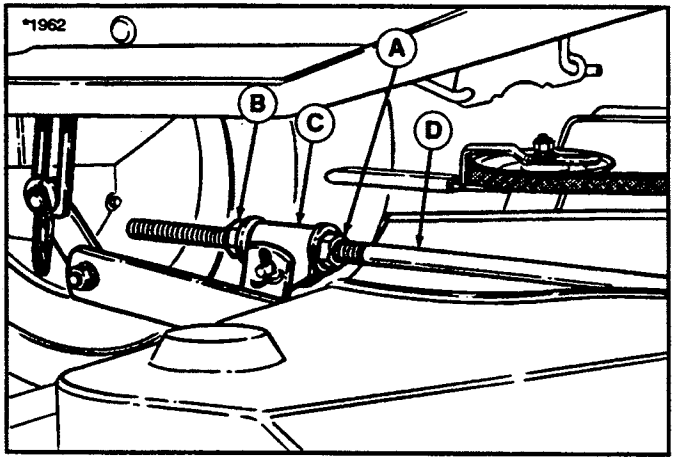

Figure 37. Leveling The Mower Front-To-Back

A. Front Nut
B. Rear Nut
C. Mower Bracket
D. Adjustment Rod

8. See figure 37. To raise front of mower deck, loosen front nut (A) and turn rear nut (B) against bracket (C) to shorten rod (D).
9. To lower front of mower deck, loosen rear nut (B) and bracket (C) will move backwards to lengthen rod.
10. Re-check measurement before tightening front nut (A) against bracket.

BLADE BRAKE ADJUSTMENT

Mower blades and mower drive belt should come to a complete stop within five seconds after electric PTO switch is turned off.

1. With tractor in neutral, PTO disengaged and operator in seat, start the tractor engine.
2. Look over the left-hand footrest at the mower drive belt. Engage the PTO and wait several seconds. Disengage the PTO and check the amount of time it takes for the mower drive belt to stop.
3. If mower drive belt does not stop within 5 seconds, perform the steps described under PTO (Electric Clutch) Adjustment. Repeat steps 1 and 2. If belt still does not stop within 5 seconds, see your dealer to service the PTO.

⚠ WARNING

To avoid damaging belts, do not pry belts over pulleys.

TRACTOR DRIVE BELT - GEAR MODELS

1. Park the tractor on a smooth, level surface such as a concrete floor. Disengage the PTO, turn off the engine and lock the parking brake. Remove the key.
2. Remove the mower as described under Mower Removal in the Operation section.
3. See figure 38. To remove the belt from the idler pulley (A), loosen flange whiz nuts (B). Slip belt from between belt stop (C) and idler bracket.
4. Release the parking brake. Rotate idler pulley to relieve spring tension and remove spring (D, figure 38).

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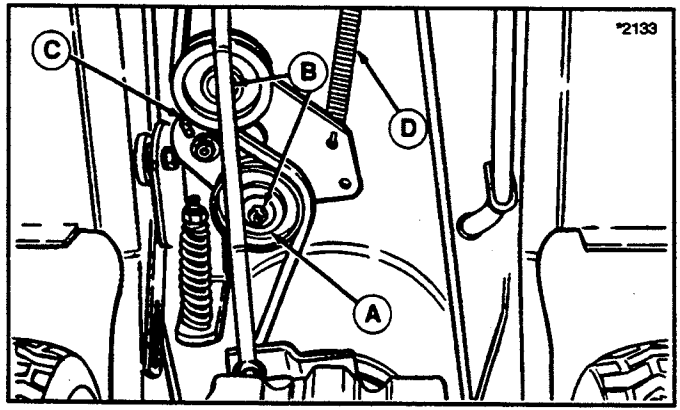


Figure 38. Drive Belt Idler Pulley
A. Idler Pulley
B. Flange Whiz Nuts
C. Belt Stop
D. Spring

5. See figure 39. To remove belt from engine pulley, the electric clutch must be removed and the belt slid over the top of the pulley. Disconnect the clutch wire. Remove the capscrew (A) along with the washer and lockwasher securing the electric clutch to the engine crankshaft. Slide belt over the top of the engine pulley.

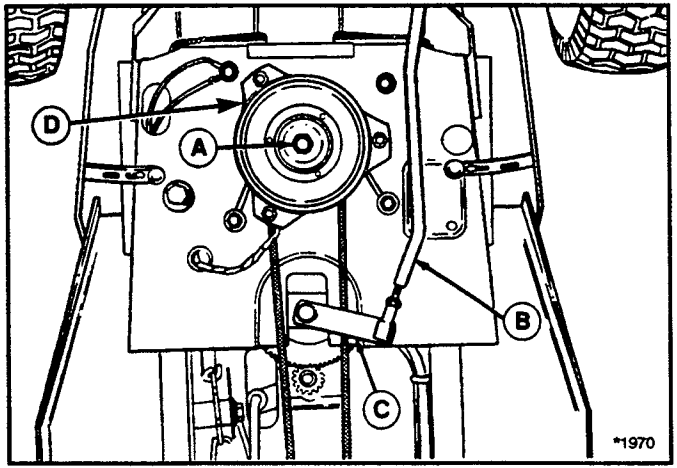


Figure 39. Drive Belt Engine Pulley

A. Capscrew
B. Drag Link
C. Steering Arm
D. Weld Tab Location

6. See figure 39. Install new belt over engine pulley before re-installing the electric clutch. Install washer, lockwasher and capscrew (A). Lubricate weld tab on underside of tractor (D). Make sure tab is aligned with hole in top of electric clutch, then tighten capscrew to 45-50 ft. lbs. Recheck torque after 1 hour of operation.

7. See figure 39. On left-hand side of tractor, remove nut securing drag link (B) to steering arm (C). Drop old belt below drag link. Route new belt above drag link before re-installing nut on drag link, then tighten nut.

8. See figure 40. Slip belt from the transaxle and idler pulleys. Loosen the belt stops on the idler pulley as necessary. Remove belt from the tractor.

9. Install new belt to the transaxle and idler pulleys as shown in figure 40. Adjust belt stops to 1/16" - 1/8" from belt.

10. Re-install idler pulley spring (D, figure 38) to frame with new belt routed between spring and bottom of frame.

11. Lock parking brake to position idler pulley bracket. Install new belt to the idler pulleys as shown in figure 38. Make sure belt is properly routed on flat and V-sided pulleys. Refer to figure 40 for proper routing. Tighten nuts (B, figure 38) securing pulleys.
12. See figure 40. Check belt routing around engine pulley, idler pulleys, and transaxle pulley. Check that the electric clutch, drag link and idler pulley spring are all correctly installed.
13. Start tractor engine and check operation of belt by placing transmission lever in gear and engaging/disengaging the clutch/brake pedal.

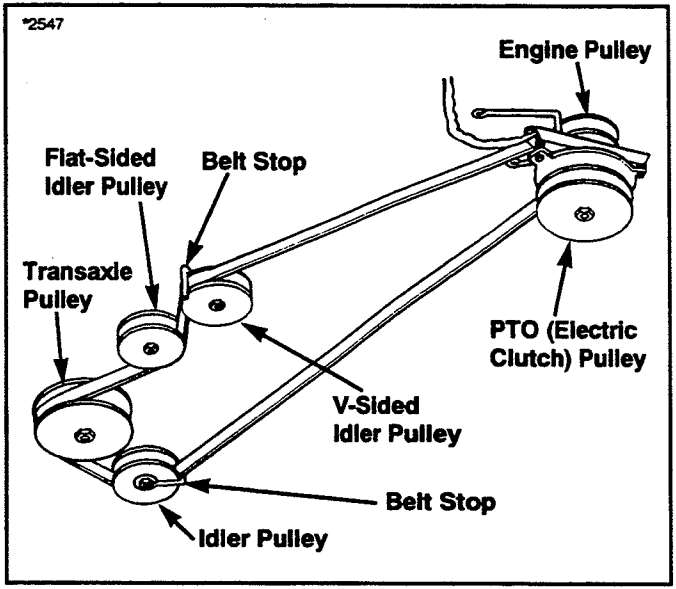


Figure 40. Tractor Drive Belt Routing - Gear Models

TRACTOR DRIVE BELT - HYDRO MODELS

1. Park the tractor on a smooth, level surface such as a concrete floor. Disengage the PTO, turn off the engine and lock the parking brake. Remove the key.
2. Remove the mower as described under Mower Removal in the Operation section.
3. See figure 41. To remove the belt from the idler pulley (A), loosen flange whiz nuts (B). Slip belt from between belt stop (C) and idler bracket.
4. Release the parking brake. Rotate idler pulley to relieve spring tension and remove spring (D, figure 41)
5. See figure 39. To remove belt from engine pulley, the electric clutch must be removed and the belt slid over the top of the pulley. Disconntect the clutch wire. Remove the capscrew (A) along with the washer and lockwasher securing the electric clutch to the engine crankshaft. Slide belt over the top of the engine pulley.
6. See figure 39. Install new belt over engine pulley before re-installing the electric clutch. Install washer, lockwasher and capscrew (A). Lubricate weld tab on underside of tractor (D). Make sure tab is aligned with hole in top of electric clutch, then tighten capscrew to 45-50 ft. lbs. Re-check torque after 1 hour of operation. Reconnect the clutch wire.

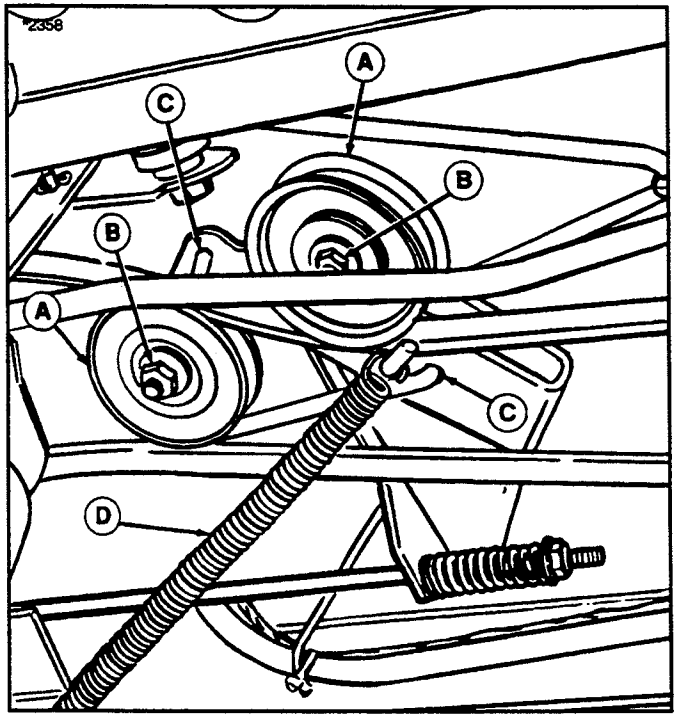


Figure 41. Drive Belt Idler Pulley - Hydro Models
A. Idler Pulley **C. Belt Stops**
B. Flange Whiz Nuts **D. Spring**

7. See figure 39. On left-hand side of tractor, remove nut securing drag link (B) to steering arm (C). Drop old belt below drag link. Route new belt above drag link before re-installing nut on drag link, then tighten nut.
8. See figure 42. Turn the transaxle cooling fan counterclockwise to slip belt through fan blade and slip belt from the transaxle pulley and tractor.
9. Install new belt to the transaxle pulley by turning cooling fan clockwise.
10. Re-install idler pulley spring (D, figure 41) to frame with new belt routed between spring and bottom of frame.
11. Lock parking brake to position idler pulley bracket. Install new belt to the idler pulleys as shown in figure 38. Make sure belt is properly routed on flat and V-sided pulleys. Refer to figure 40 for proper routing. Tighten nuts (B, figure 38) securing pulleys.
12. See figure 42. Check belt routing around engine pulley, idler pulleys, and transaxle pulley. Check that the electric clutch, drag link and idler pulley spring are all correctly installed.
13. Start tractor engine and check operation of belt by placing transmission lever in gear and engaging/disengaging the clutch/brake pedal.

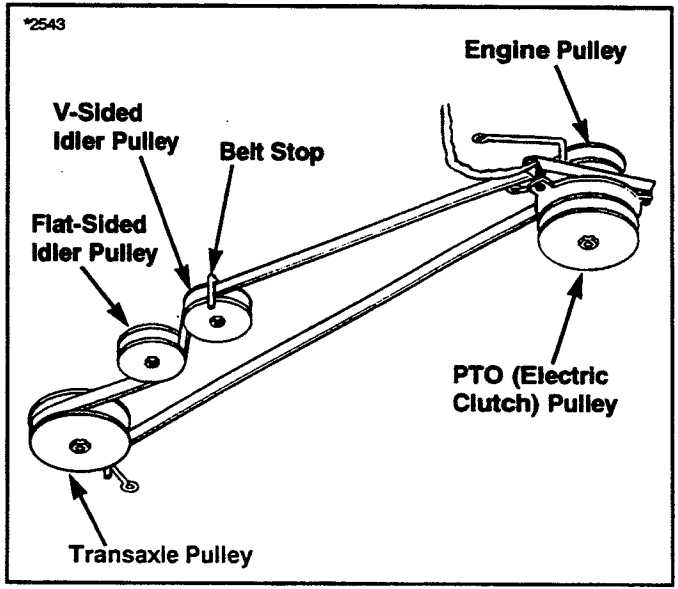


Figure 42. Tractor Drive Belt Routing - Hydro Models

MOWER BELT - 38"

NOTE: *It is not necessary to remove the mower to install a new belt. However, for easier access mower can be removed following the steps in Mower Removal in the Operation section.*

1. Park the tractor on a smooth, level surface such as a concrete floor. Disengage the PTO, turn off the engine and lock the parking brake. Remove the key.
2. If mower is not removed, place the mower in the lowest cutting position.
3. See figure 43. Push the idler arm (A) away from you to relieve belt tension. Drop belt from the PTO (electric clutch) pulley.
4. Loosen bracket belt stop (D) on idler pulley.
5. Remove old belt and replace with new belt. Make sure V-side of belt runs in arbor pulley grooves and flat side of belt runs against the idler pulley.
6. Position the bracket belt stop (D) up against arm (A) so that there is a 1/8" gap between pulley and belt stop.
7. Tighten the belt stops (C) on arbor drive pulleys with 1/8" gap between stops and pulleys.
8. Install mower on tractor if it was removed. See Operation section, Mower Installation. Install belt to PTO pulley.
9. Run the mower under no-load condition for about 5 minutes. Check blade brake adjustment after 1 hour of operation.

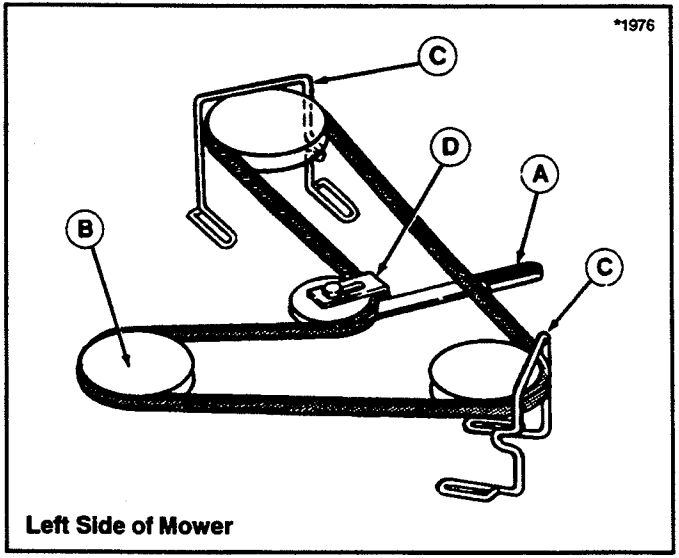


Figure 43. Mower Belt - 38"

A. Idler Pulley Arm
B. PTO Pulley
C Belt Stops
D. Bracket Belt Stop

MOWER BELT - 44"

NOTE: *It is not necessary to remove the mower to install a new belt. However, for easier access mower can be removed following the steps in Mower Removal in the Operation section.*

1. Park the tractor on a smooth, level surface such as a concrete floor. Disengage the PTO, turn off the engine and lock the parking brake. Remove the key.
2. If mower is not removed, place the mower in the lowest cutting position.
3. See figure 44. Push the idler arm (A) away from you to relieve belt tension. Drop belt from the PTO (electric clutch) pulley.
4. Loosen nut and lockwasher securing bracket belt stop (C) on idler pulley. Remove three capscrews securing left-hand arbor cover (D, figure 45).
5. Remove old belt and replace with new belt. Make sure V-side of belt runs in arbor pulley grooves.
6. Re-install arbor cover using original three capscrews.
7. See figure 44. Position the bracket belt stop (C) up against arm (A) so that there is a 1/8" gap between pulley and belt stop.
8. Install mower on tractor if it was removed. See Operation section, Mower Installation. Install belt to PTO pulley.
9. Run the mower under no-load condition for about 5 minutes. Check blade brake adjustment after 1 hour of operation.

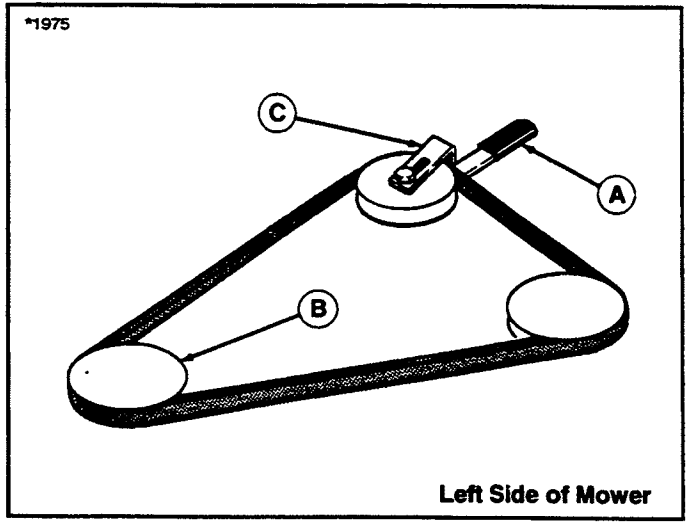


Figure 44. Mower Belt - 44"
A. Idler Pulley Arm **C. Bracket Belt Stop**
B. PTO Pulley

DECK DRIVE BELT - 44"

1. Park the tractor on a smooth, level surface such as a concrete floor. Disengage the PTO, turn off the engine and lock the parking brake. Remove the key.
2. Remove the mower from the tractor. See Mower Removal in the Operation section.
3. See figure 45. Remove the two capscrews securing upstop (A) and remove the upstop.
4. Remove four additional capscrews securing right-hand arbor cover (B). Remove three capscrews securing left-hand arbor cover (D).
5. Using a vise-grip or pliers, remove idler pulley spring (C) from slot in deck.
6. Loosen capscrew (E) securing idler pulley to bracket. Belt can be slipped between pulley and idler bracket hub.
7. Install new belt as shown in figure 46. Make sure that V-side of belt runs in arbor pulley grooves and flat side of belt runs against idler pulley.
8. Install spring (C, figure 45) to slot in mower deck. Tighten capscrew securing idler pulley.
9. Install left and right arbor covers and upstop using original hardware.
10. Install mower to tractor.

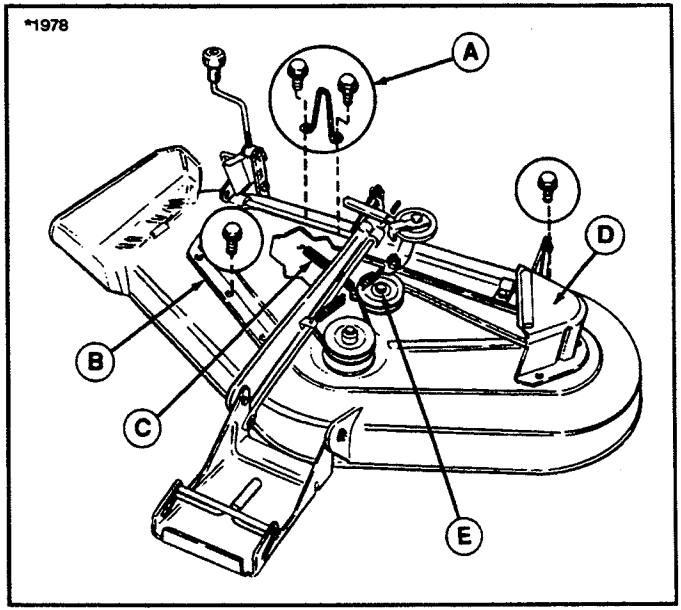


Figure 45. Mower Deck - 44"
A. Upstop
B. Right-hand Arbor Cover
C. Spring
D. Left-hand Arbor Cover
E. Capscrew

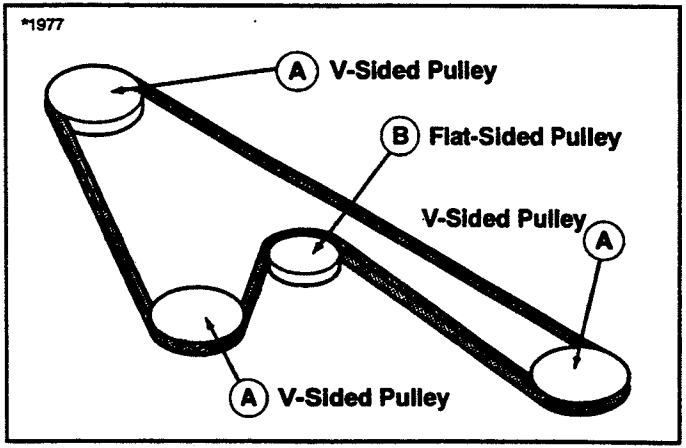


Figure 46.
A. Arbor Drive Pulley (V-sided)
B. Idler Pulley (Flat-sided)

Specifications

HYDRO MODELS

ENGINE:

12.5 HP, 14 HP & 16 HP Briggs & Stratton

Make	Briggs & Stratton
Model	Vanguard V-Twin
Horsepower	12.5 & 16 HP @ 3600 rpm
Cylinders	2
Bore	2.68 In. (68 mm)
Stroke	2.60 In. (66 mm)
Displacement	29.3 Cu. In. (480 cc)
Construction	Overhead Valve, Cast Iron Sleeves, Aluminum Crankcase
Electrical System	12 Volt, 16 Amp Alternator Regulated Battery: 340 Cold Cranking Amps, 41 min. Reserve Capacity, Industrial Rated Starter Motor
Ignition	Magnetron Electronic Ignition
Air Cleaner	Ducted Paper Cartridge and Foam Precleaner large 325 sq. in. Air Filtering System
Lubrication	Full Pressure Lube w/ Oil Filter
Oil Capacity	3.5 Pints w/Filter (1.6 L)
Fuel Tank	Material: Non-Corrosive Polyethylene Fuel Tank Gauge Built Into Filler Cap Capacity: 4 Gallons (15.1 L)
Muffler	Quiet Compact, Low Back Pressure

14 HP Kohler

Make	Kohler
Model	Command™
Horsepower	14 HP @ 3600 rpm (10.4 kw)
Cylinder	1
Bore	3.43 In. (87 mm)
Stroke	2.64 In. (73 mm)
Displacement	24.3 Cu. In. (398 cc)
Construction	Overhead Valve, Cast Iron Sleeves, Aluminum Crankcase
Electrical System	12 Volt, 15 Amp Alternator Regulated Battery: 12 Volt, 340 Cold Cranking Amps, 41 min. Reserve Capacity
Ignition	High Energy Electronic Ignition
Air Cleaner	Ducted Paper Cartridge and Foam Precleaner
Lubrication	Full Pressure Lube w/Oil Filter
Oil Capacity	4.0 Pints w/Filter (1.9 L)
Fuel Tank	Material: Non-Corrosive Polyethylene. Fuel Tank Gauge Built Into Filler Cap Capacity: 4 Gallons (15.1 L)
Muffler	Quiet Compact, Low Back Pressure

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.

TRANSMISSION:

Type	Hydrostatic
Pump	Variablo Displacement Piston
Motor	Fixed Displacement Piston
Hydraulic Fluid (Early Hydro Models)	3 5 Qts (3 3 L) SAE 1 0W-30 Premium Grade Engine Oil
Control	Single Lever w/Neutrai Detent, Release Lever for Manuai Tractor Movement, Continuously Variable, Forward & Reverse, without Braking or Gear Changing
Speeds @3400 RPM	**Forward:** 0 - 5.5 MPH (0 - 8 km/h) **Reverse:** 0 -1.7 MPH (0 - 2.7 km/h)
Differential	AutomotiveType

CHASSIS:

Frame	Heavy Gauge Steel Channel Power Take-Off Point Front Engine Mounting Above Front Axle Pivot Point Location Front Axle
Rear Wheel	**Tractor with 44" Mower** Tire Size 20 x 8.00-10 Turf Type **Tractor with 38" Mower** Tire Size 18 x 8.50-8 Turf Type Pneumatic Inflation Pressure 6-8 psi (41-55 kPa)
Front Axle	1-3/4" x 3" 12 Ga Fabricated Rectangular Tube
Front Wheels	Tire Size 15 x 6.00-6 Pneumatic Inflation Pressure 12-15 psi (82-103 kPa)
Accessibility	Hood Tips Forward
Seat	Type Bucket, High Back, Adjustable w/ Spring Suspension Adjustable to Suit Different Size Operators
Turning Radius	Inside Rear Tire 16 In (40.6 cm)

CONTROLS:

Steering	Full Circle Steering Wheel System Gear and Sector
Clutch/ Brake Pedal	Location Right Front Combination Clutch/Brake/Parking Brake Pedal Standard Equipment
Location	Mower Lift Lever Right Side, Lower Dash Tower PTO Clutch Electric, Dash Mounted Shift Lever Dash Mounted Ignition Key Switch on dash panel Throttle Lever and Choke Lever on dash panel Light Switch on dash panel Separate Indicator Lights for Safety Interlock Switch Operator Present, Transmission Neutral, PTO Disengaged, Clutch/Brake Pedal Depressed Low Oil Pressure Warning Light

DIMENSIONS:

16 HP

Overall Length	67 In. (170.2 cm)
Overall Width	35 In. (88.9 cm)
Height	To Top of Steering Wheel 40 In. (1016 cm) To Top of Engine Cover 34 In. (86.7 cm)
Wheel Base	48 In. (121.9 cm)
Weight (approx.) without mower	Net: 455 lbs. (206 kg) Shipping: 575 lbs. (261 kg)

12.5 & 14 HP

Overall Length	67 In. (170.2 cm)
Overall Width	34.5 In. (87.6 cm)
Height	To Top of Steering Wheel 39 In. (99 cm) To Top of Engine Cover 33 In. (84 cm)
Wheel Base	48 In. (121.9 cm)
Weight (approx) without mower	Net: 440 lbs. (200 kg) Shipping: 560 lbs. (254.5 kg)

MOWER:

44"

Effective Cutting Width	44" Mower - 44 In. (1118 cm)
Overall Width with Deflector	44" Mower - 56 In. (142.2 cm)
Weight	44" Mower - 115 lbs. (52 kg)
Variable Cutting Ht.	1- 3.6 In. (2.5 to 91 cm)
Blade Arrangement	Three Staggered Blades
Mower Drive	V-Belt From Tractor PTO Pulley
Spindle Bearings	Lubricated and Sealed Ball Bearings

38"

Effective Cutting Width	38" Mower - 38 In. (96.5 cm)
Overall Width with Deflector	38" Mower - 49.5 In. (125.7 cm)
Weight	38" Mower -100 lbs. (45 kg)
Variable Cutting Ht.	10 - 3.6 In (2.5 to 9.1 cm)
Blade Arrangement	Two Blades
Mower Drive	V-Belt From Tractor PTO Pulley
Spindle Bearings	Lubricated and Sealed Ball Bearings

GEAR MODELS

ENGINE:

Make	Kohler
Model	Command™
Horsepower	12.5 HP @ 3600 rpm (10.25 kw)
Cylinder	1
Bore	3.43 In. (87 mm)
Stroke	2.64 In. (67 mm)
Displacement	24.3 Cu. In. (398 cc)
Construction	Overhead Valve, Cast Iron Sleeves, Aluminum Crankcase
Electrical System	12 Volt, 15 Amp Alternator Regulated Battery: 12 Volt, 340 Cold Cranking Amps, 41 min. Reserve Capacity,
Ignition	High Energy Electronic Ignition
Air Cleaner	Ducted Paper Cartridge and Foam Precleaner
Lubrication	Full Pressure Lube w/Oil Filter
Oil Capacity	4.0 Pints w/Filter (1.9 L)
Fuel Tank	Material: Non-Corrosive Polyethylene Fuel Tank Gauge Built into Filler Cap Capacity: 4 Gallons (15.1 L)
Muffler	Quiet Compact, Low Back Pressure

TRANSMISSION:

Type	Spur Gear
Material	Gear: Heat Treated Shaft: Hardened and Ground Bearings: Needle Roller, Sealed Ball and Bushings
Lubrication	Bentonite Grease
Speeds	Five Forward, One Reverse
Speeds @ 3400 RPM	**1st:** 1.1 MPH (1.8 km/h) **2nd:** 2.2 MPH (3.5 km/h) **3rd:** 3.4 MPH (5.5 km/h) **4th:** 4.2 MPH (6.8 km/h) **5th:** 5.1 MPH (8.2 km/h) **Reverse:** 2.4 MPH (3.9 km/h)
Differential	Bevel Gear Type

CHASSIS:

Frame	Heavy Gauge Steel Channel. Power Take-Off Point: Front Engine Mounting: Above Front Axle Pivot Point Location: Front Axle
Rear Wheels	Tire Size: 18 x 8.50-8 Turf Type Pneumatic Inflation Pressure: 6-8 psi (41-55 kPa)
Axle	1-3/4" x 3" 12 Ga. Fabricated Tube
Front Wheels	Tire Size: 15 x 6.00-6 Pneumatic Inflation Pressure: 12-15 psi (82-103 kPa)

Accessibility	Hood Tips Forward
Seat	Type: Bucket, High Back, w/Adjustable Spring Suspension Adjustable to Suit Different Size Operators
Turning Radius	Inside Rear Tire: 16 In. (40.6 cm)

CONTROLS:

Steering	Full Circle Steering Wheel System: Gear and Sector
Clutch/ Brake Pedal	Location: Right Front Combination Clutch/Brake/Parking Brake Pedal Standard Equipment
Location	Mower Lift Lever: Right Side, Lower Dash Tower PTO Clutch: Electric, dash mounted Shift Lever: dash mounted Ignition Key Switch: on dash panel Throttle Lever and Choke Lever: on dash Danel Light Switch: on dash panel Separate Indicator Lights for Safety Interlock Switch: Operator Present, Transmission Neutral, PTO Disengaged, Clutch/Brake Pedal Depressed Low Oil Pressure Warning Light

DIMENSIONS:

Overall Length	68 In. (170.2 cm)
Overall Width	34.5 In. (87.6 cm)
Height	To Top of Steering Wheel: 39 In. (99 cm) To Top of Engine Cover: 33 In. (84 cm)
Wheel Base	49 In. (121.9 cm)
Weight (approx.) without mower	Net: 440 lbs. (200 kg) Shipping: 560 lbs. (254.5 kg)

MOWER:

Effective Cutting Width	38" Mower - 38 In. (96.5 cm)
Overall Width with Deflector	38" Mower - 49.5 In. (125.7 cm)
Weight	38" Mower -100 lbs. (45 kg)
Variable Cutting Ht.	1.0 - 3.6 In. (2.5 to 9.1 cm)
Blade Arrangement	Two Blades
Mower Drive	V-Belt from Tractor PTO Pulley
Spindle Bearings	Lubricated and Sealed Ball Bearings

Common Replacement Parts

Listed below are part numbers for the more common replacement parts. Use the order form at the back of the manual to order a complete, illustrated parts manual. Only genuine Simplicity/AGCO Allis replacement parts will assure optimum performance and safety. Do not attempt repairs or maintenance unless proper procedures and safety precautions are followed. For assistance in any area, see your dealer.

REPLACEMENT PARTS

QTY. PER UNIT	PART DESCRIPTION	NUMBER
	Mower Blades	
	R.H., 38" Deck	1704101
	L.H., 38" Deck	1704100
	44" Low Lift Deck	1704100
	44" High Lift Deck	1704856
	Mower Belts	
	38" Mower Drive	1666698
	44" Mower Drive	1601672
	44" Deck Drive	1607813
	Tractor Drive Belt	
	Gear (Mfg. No. 1691891)	1703836
	Gear (Mfg. No. 1692287)	1657044
	Hydro (Early Models)	108508
	Hydro (Later Models)	1672135
1	Safety Clip - Mower Lift	176012
1	Key, Ignition	1704348
2	Interlock Switch, Neutral	1701521
1	Interlock Switch, Seat	1704379
1	Battery	1685215
1	Solenoid	1685290
1	Switch, Electric Clutch	1703798
1	Headlamp Bulb	1677371

MAINTENANCE ITEMS

DESCRIPTION	PART NUMBER
• **Simplicity Engine Oils** (Your dealer has 1 qt. cans)	
SAE 5W-30 SF/CD	
(Cold Weather 30° & under) Case of 12 Qts.	1685576
SAE 30 Wt. 3G1CC (Warm weather 32° & up)	1685659
• **Touch-Up Paint**	
Deep Orange Spray Paint, 13 Oz. Can	1685611
Deep Orange Spray Paint	
(Case of 12 -13 Oz. Cans)	1685614
Deep Orange Paint, 1 Qt.	1685612
White Spray Paint, 13 Oz. Can	103049
Touch-Up Daubers	
Deep Orange 1/2 Oz. w/Brush Cap	1685615
• **Grease Gun Kit** w/8 Oz. Grease Tube	1685510
Replacement 8 Oz. Grease Tube for above	103077
• **Designer Seat Cover**	1685541
• **Tire Sealant** - Stops Tire Leaks. Prevents Flats.	
11 Oz. Tube	1685523
• **Gas Can** - No Tip Design. Durable Polyethylene.	
1 Gallon 1685587	
2-1/2 Gallon	1685555
5-1/4 Gallon	1685556
• **Cleaner, Polish, Sealant & Protectant**	
8 Oz. Bottle	1685696
• **Degrimer/Degreaser**	
32 Oz. Bottle w/Trigger Spray	1685619
1 Gallon Bottle	1685621

Optional Attachments & Accessories

See your dealer to purchase these items.

Turbo Clean Sweep Twin Catcher

Clean Sweep Twin Catcher

Turbo Quad Bagger™

Dethatcher

Dump Cart

36" & 42" Snowthrower

42" Dozer Blade

Snow Cab

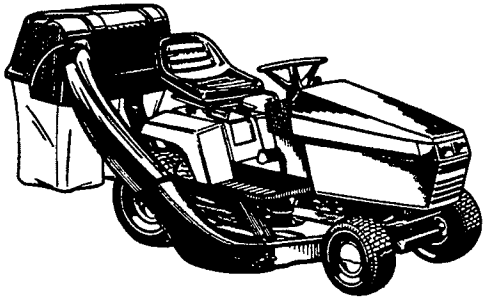
Front Counterweights

Rear Wheel Weights

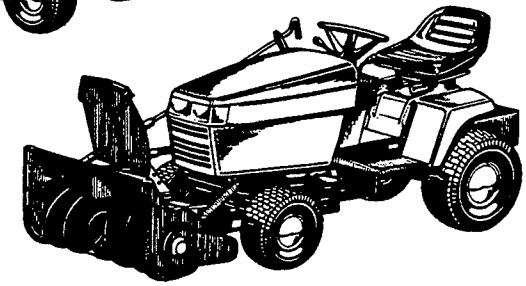
Weight/Tote Box

Hubcaps

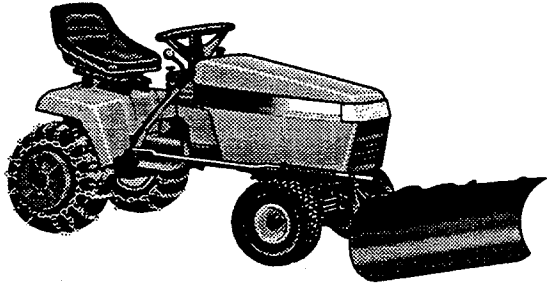
Tire Chain



Clean Sweep Twin Bag Collector - Collect grass clippings, thatch, and leaves with our blade-driven vacuum collector.



36" & 42" Snowthrower - Efficient single stage operation to handle the heaviest of snows. Now with spring assisted lift.



42" Snow Plow/Dozer Blade - For snow removal and light dozing of dirt, gravel, etc. Now with spring-assisted lift.

Parts Manual Availability

Parts Manuals are fully illustrated. All of the assemblies are shown in exploded views which show the relationship of the parts and how they go together. Important assembly notes and special torque values are included in the illustrations. For standard hardware, a torque specification chart is included.

For the manual applicable for your model, contact the Simplicity Customer Publications Department at (414) 284-8519. Have the following information available when phoning in your request.

Model: _____

Mfg. No.: _____

Your Name: _____

Address: _____

City, State, Zip: _____

Visa/MasterCard No.: _____

Expiration Date: _____

Allow 3-4 weeks for delivery.

Extend Equipment Life - Use Only Genuine Factory Authorized Repair Parts

Notes

Notes

Notes

International Symbols

Fast

Slow

Operator Present Switch (Seat)

PTO Engaged

Lights

Oil Pressure

Forward

Reverse

Parking Brake

Choke

Engine Running

Simplicity Manufacturing, Inc.
500 N. Spring St., P.O. Box 997
Port Washington, WI USA 53074-0997

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