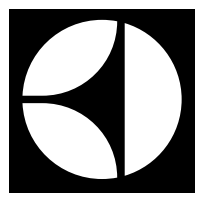


For Husqvarna Parts Call 606-678-9623 or 606-561-4983



Electrolux

HOME PRODUCTS



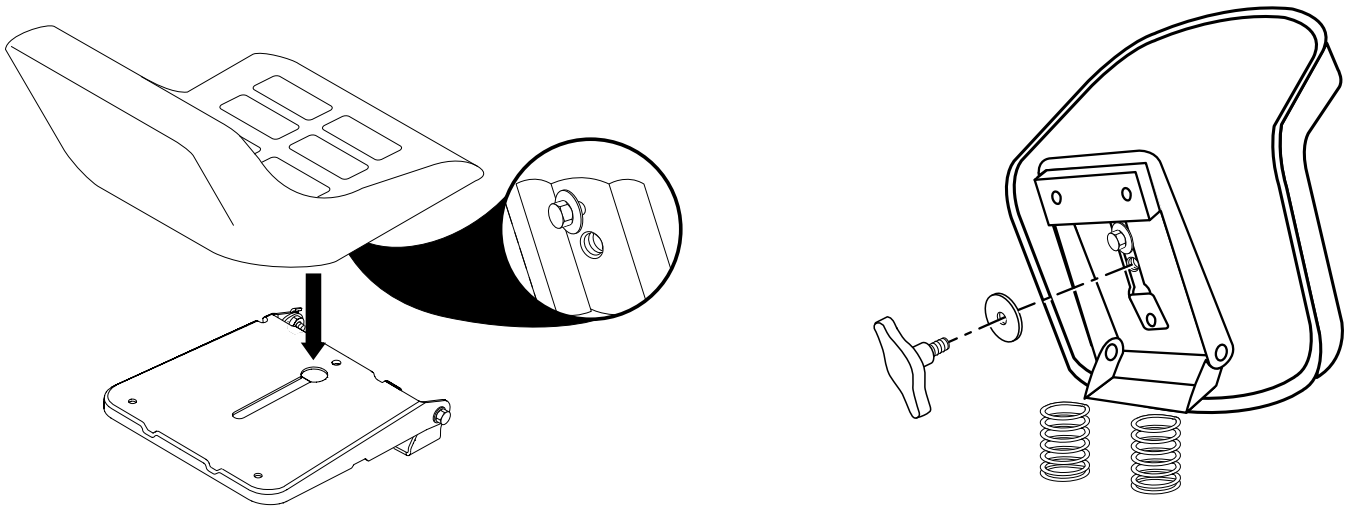
2001 SERVICE UPDATE INFORMATION

www.mymowerparts.com

NOTES

Table of Contents	3
Seat Pan changed for easier assembly	4
Oil Drain	4
Solenoid / Fuse / PTO Switch	5
Solenoid Diagnostic Procedure	6
Electrical Components Quick List	7
Hydro Gear 0510 Service Information	8
Hydro Gear 0510 Neutral Adjustment for Lever LT	9
Lever Controlled Automatic LT Neutral Adjustment	10
Foot Controlled Automatic LT Speed Adjustment	11
Quick Attach Bagger	11
Cruise Control for Foot Pedal Operated LT Automatic	12
New GT Automatic Belt Replacement Procedure	13
New GT Automatic Starting Procedure for Extreme Cold	13
Hydro Gear 3000 for Garden Tractors Service Information	14
Hydro Gear 3500 Return to Neutral Adjustment for Trans	15
GT Automatic Speed Lever Neutral Adjustment for Tractor	16
GT Muffler changes	16
Blade Listing	17
New Front Suspension for Mowers	18
New Mandrel for 48" Mower	18
New 48" H.D. Mower	19
KOHLER Liquid Cooled V-Twin	20-21
New 21" Front Drive Mower	22-24
Touch-Up Paints	25
New Weed Trimmer	26-27
21" Rear Drive Adjustments	28-29
42" Mower Cable Clutch Kit # 175067	30

Quick Attach Tractor Seat



Tractors will now be shipped with a quick attach seat that will have a quick install feature for the seat shoulder bolt. The seat will have the shoulder bolt mounted from the factory. The customer will place the shoulder bolt over the front end of the slot and push down. The head of the shoulder bolt will go through and is retained. The seat knob and washer is then installed.

Quick Release Tractor Engine Oil Drain Valve

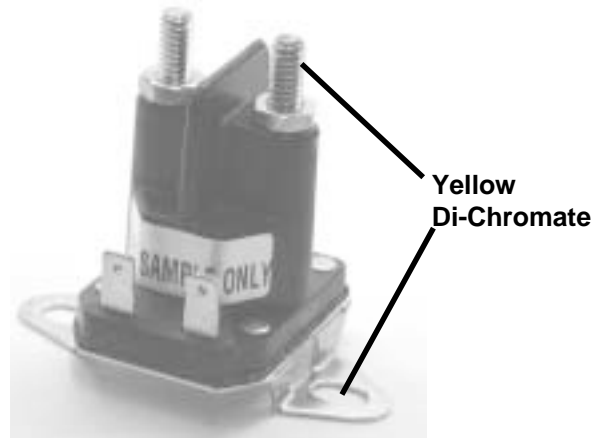


A quick release oil drain valve will be on many 2001 tractor engines. The drain is released with a slight push and a counterclockwise turn. There is a yellow cap on end that will retain oil if the valve is not properly closed. Customers will be supplied a 10" clear PVC tube to help drain the oil into a container. The tube is a 3/8" I.D. clear PVC and can be purchased in bulk locally.

The valve has special threads that do not require pipe dope or teflon tape that is needed for the brass elbow used on some twin cylinder engines.

New Solenoid # 171141

- Yellow Di-Chromate finish for improved corrosion resistance inside and out over previously used zinc finish.
- Lowered Voltage contact surface pull in, as low as 8.5 VDC.
- Coil Resistance is **3.8 to 4.3 Ohms**. Previous solenoids were 5.0 to 6.5 Ohms.
- The Solenoid Kit number will continue to be **146154**.



FUSE change on Lawn Tractors

A 20 AMP fuse part number **175158** will now be used on lawn tractors. Lawn tractors made in 1999 and 2000 with a 15 AMP fuse can also use the 20 AMP fuse.
GTs will still use the 30 AMP fuse.



A 30 AMP FUSE SHOULD NEVER BE USED IN PLACE OF A 15 OR 20 AMP FUSE.

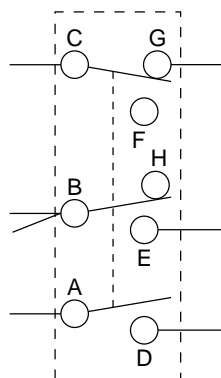
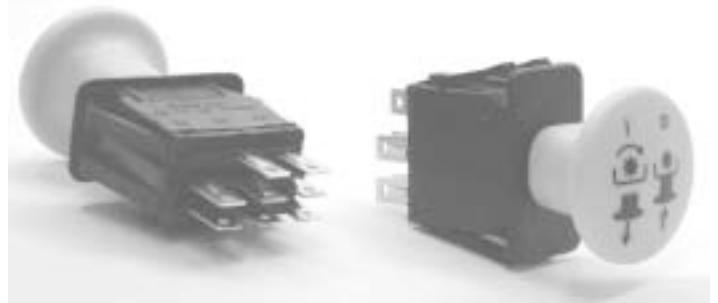
PTO SWITCH CHANGE

The new PTO Switch will have 8 terminals instead of 7 terminals.

The switch with 8 terminals can be used for product made before 2001.

Part numbers for the new and old switches are on the **page 5** electrical parts reference.

There will be a new 175567 snap-in Ignition Switch for tractors without headlights.



PTO SWITCH

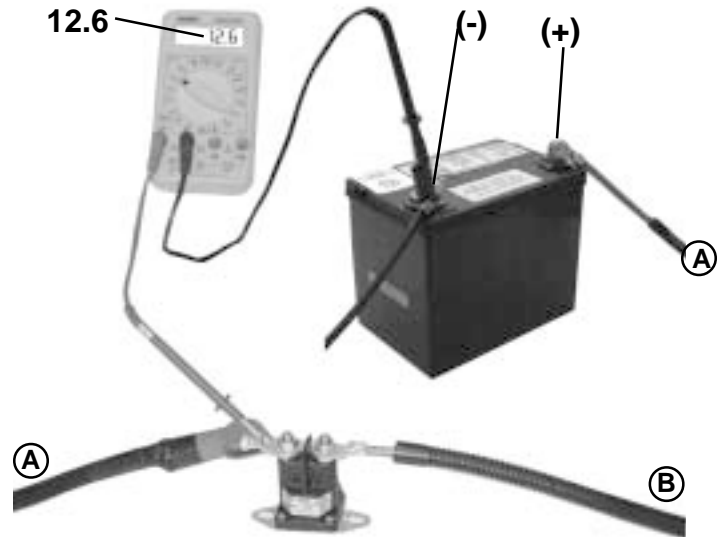
POSITION	CIRCUIT
OFF	C + G, B + H
ON	C + F, B + E, A + D

Diagnosis of Starter Solenoids

- Remove the red cable from the engine starter motor before testing.
- Place digital meter selector on D.C. Voltage scale that includes 13 Volts.

Step # 1.

1. Place meter probes on battery terminals. If the reading is 12.2 VDC or more, proceed to the next step. If the reading is below 12.2 VDC, charge or replace the battery with one that has at least 12.2 V DC.



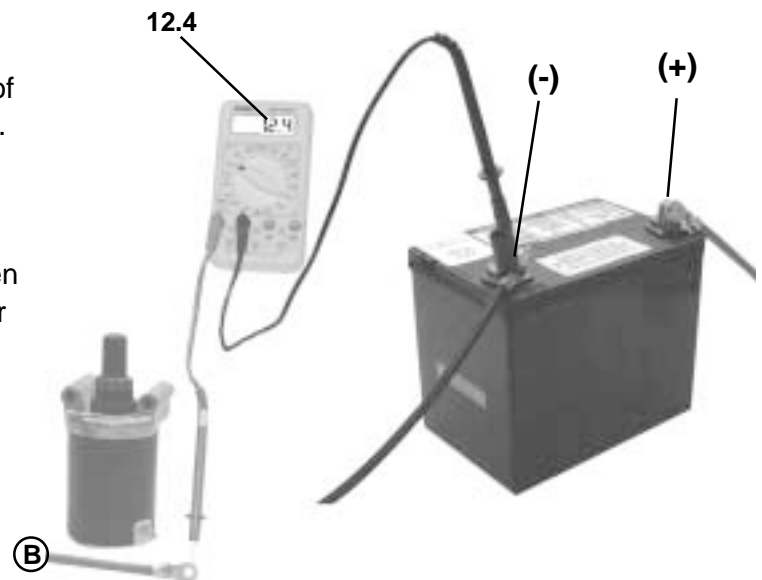
Step # 2.

1. Connect negative (black) meter lead to the battery negative (-) terminal.
2. Connect the positive (red) meter lead to the 'hot' terminal of the solenoid.
3. Note the voltage reading.



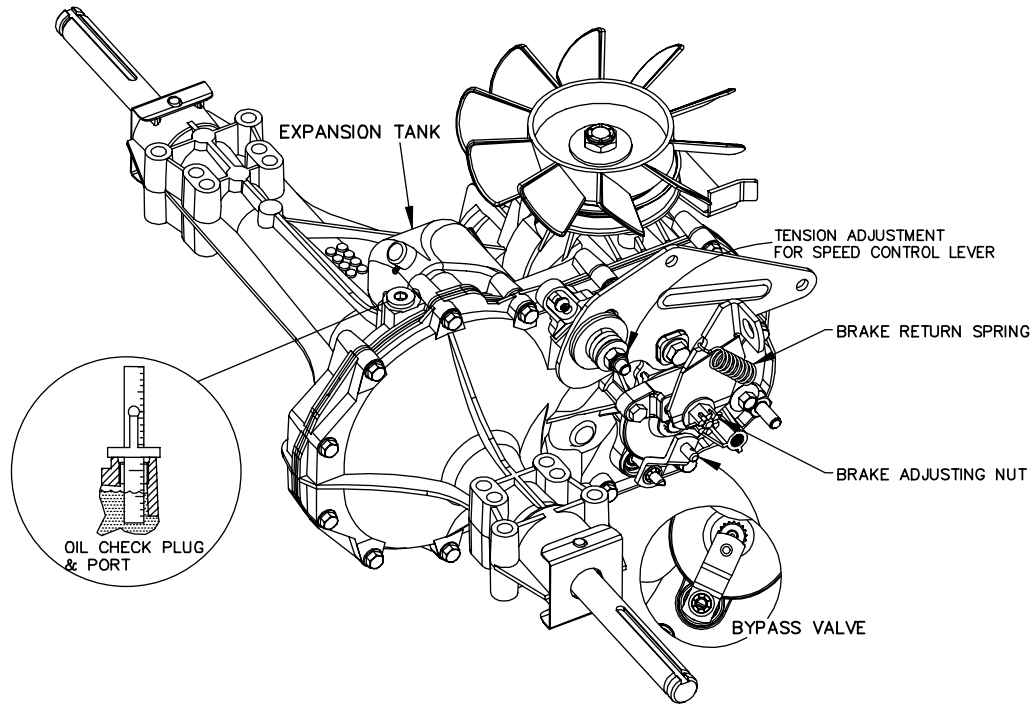
Step # 3.

1. Keep the meter selector in the same position and the negative meter lead connected to the battery negative terminal.
2. Connect the positive (red) meter lead to the end of the cable normally connected to the starter motor.
3. Engage the parking brake and turn the ignition switch to the "START" position.
4. Note the voltage reading.
5. If the voltage drop is more than 0.50 VDC between the two noted readings, the solenoid or the starter cable is suspect. Replace the solenoid.
6. Re-install the red cable to the starter motor. If the solenoid checks acceptable and the starter does not crank, check for clean tight battery connections and check the grounds for the battery and the engine.



Ignition Switch std 365401 screws/ Indak (diecast) (Delco Starter Generator)	Ignition Switch std365402 / 4406R 5 terminals / Indak (diecast) White plastic back	Ignition Switch 2683R 5 terminals / Indak (diecast) Battery Ignition / ONAN	Ignition Switch 140301 - 7 terminals / Indak (diecast) terminals in pyramid	Ignition Switch 158913 - 5 terminals / Indak (diecast) Gray Plastic Back	Ignition Switch 163968 -> 175566 7 terminals / DELTA (plastic) snap - in
Ignition Key (delta) 140401 generic cover	Ignition Key (delta) 140402 bright finish	Ignition Key (delta) 140403 Craftsman cover	Ignition Key (indak) 109310X Craftsman cover	Ignition Key (indak) 122147X generic cover	Ignition Switch 5 terminals / DELTA (plastic) 175567 - No Headlights snap - in
NUT, Ign Sw, (Delta) 140400 (Plastic)	NUT, Ign Sw, (Indak) 124211X (Plastic)	COVER, Ign Sw Nut 123620X (Rubber)	20 AMP Fuse 175158 (Yellow)	30 AMP Fuse 108824X (Green)	
Interlock Switch 161343-> NO / NO - snap-in Black / Gray	Interlock Switch 153664-> NO / NC - snap-in Gray	Terminal Connector Kit 148691 (parts to repair harness)	Diagnostic Jumper Kit 150834 (diagnostic tool)	PTO Switch (7 terminals) 154963 - Red Knob 169417 - Black Knob retainer REQUIRED 140405 - Retainer, Switch will NOT work if 8 terminals m.y. 2000 and before	PTO Switch (8 terminals) 174651 - Red Knob 174652 - Black Knob 174653 - Yellow Knob 140405 - Retainer, Switch will work for 7 terminals new for 2001
Interlock Switch 109553X NO / NC screws - Gray	Interlock Switch 109869X NC / screws - Gray	Interlock Switch 104445X NO / screws	Interlock Switch 166299 for CRD NO / screws / spring tension	Hourmeter (LTX) 175549 Round (new 2001)	
Seat Switch 121305X NC Gray	Seat Switch 160784 - NO - Olive Green	Cover, Terminal(Red) 131563 (Rubber)		Hourmeter (rectangular) 169635	Relay 109748X
Jumper Wire 140844 - (ammeter)	Ammeter (15 Amp) 122822X	Battery Cable Ring Terminal 148698	Solenoid 171141	Hourmeter Bracket 169639	Holder, Relay 172989
Wire Loop 141940 - (hourmeter)	Ammeter (6 Amp) 122453X	Buzzer for CRD 169419	Solenoid Kit 146154		
	Ammeter (DLT) 175548 Round (new 2001)	Halogen Headlight Assembly 175448 DLT tractors only (2001 & newer product)	Headlight Socket (small) 175242 two terminals - (bulb 7152J) (2001 & newer)	Headlight Socket (large) 148709 two terminals - (bulb 7152J)2001 & before	Headlight Socket 163996 Stealth Hood only (bulb 7152J)

The 0510 Automatic Transmission from HYDRO-GEAR for Lawn Tractors

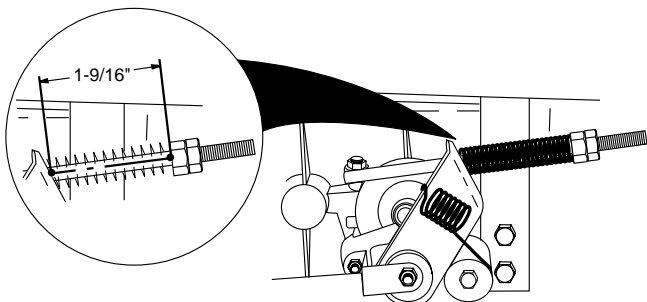


Oil should NOT be checked unless there is a complaint about the operation of the transmission. There is a gold colored plug in the top of the transmission. Clean the underside of the frame and the top of the transmission before checking the oil level. Contamination cannot be allowed to get into the transmission. When the plug is removed, a 6 inch metal scale can be used to check the oil level. When the transmission is cold, the oil level should be from .50 to 1.25 inches from the top of the casting. **20W50 engine oil** can be added to the level of the bottom thread for the oil plug. The oil never needs to be changed for maintenance.

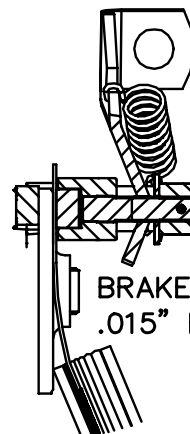
The 0510 transmission has an expansion tank. This allows for oil to expand into the tank when the transmission is hot, and as the oil cools it is drawn back inside the transmission. The expansion tank will be silver-gray in color and should not be opened.

If you are working on a tractor where the operator experiences transmission complaints:

- Check to see that the **brake return spring** is in position.
- Check the movement of the **by pass valve** and the **freewheel control rod**.
- Check the **brake adjustments**, if adjusted too tight, the transmission can overheat.



Brake Rod Spring Adjustment



Brake Disc / Puck Clearance

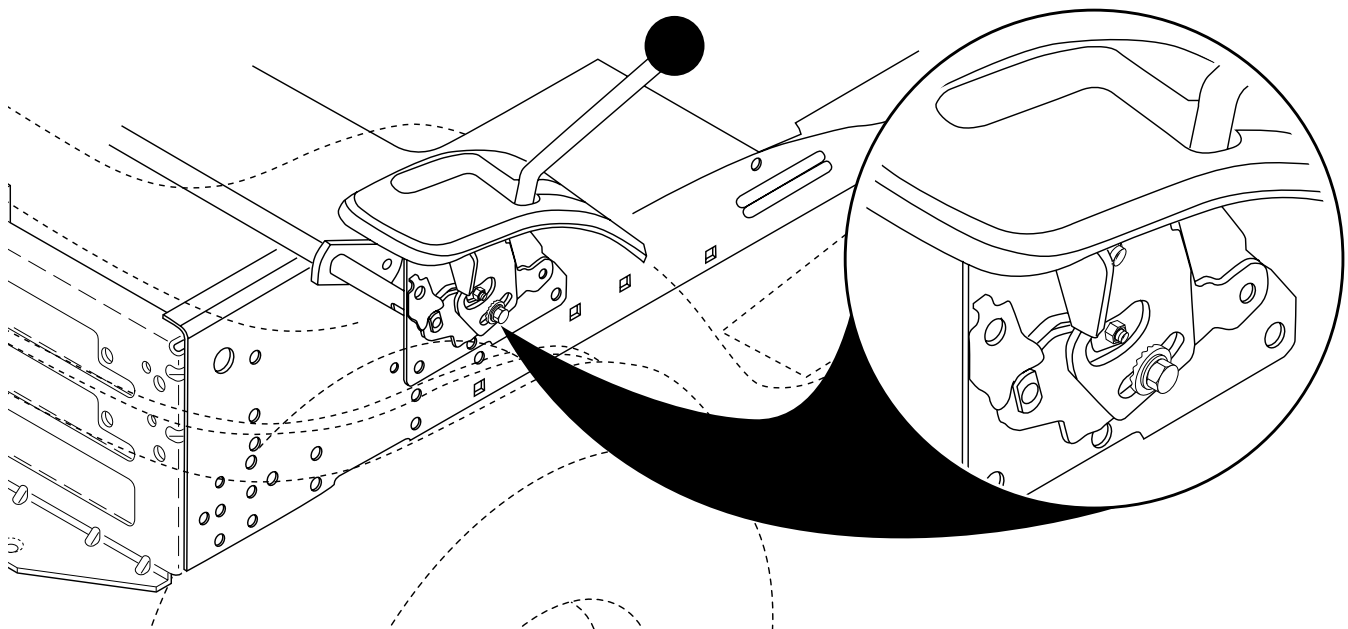
NEUTRAL ADJUSTMENT FOR LAWN TRACTORS WITH LEVER CONTROL

1. Place the tractor on a smooth paved level surface.
2. Loosen Adjustment Bolt in front of the right rear wheel, and lightly tighten using a 1/2" wrench.
3. Start Engine and move Lever until tractor does not move forward or backward. Hold Control Lever in that position and do not move. Turn the engine off.
4. While holding the Control Lever to keep it from moving, loosen the Adjustment Bolt . Move the Control Lever to the position indicated for Neutral on the fender. Tighten Adjustment Bolt securely.

FINE TUNE THE NEUTRAL ADJUSTMENT ON AUTOMATIC DRIVE

1. Place the tractor on a smooth paved level surface.
2. Loosen the Adjustment Bolt using a 1/2" wrench. If the tractor is creeping forward, move the Control Lever forward 1/4 to 1/2 inch. Move the Control Lever rearward 1/4 to 1/2 inch if the tractor is creeping backwards. Tighten the Adjustment Bolt securely.
3. Start engine and test from both forward and reverse.
4. If tractor still creeps, repeat step # 2 until satisfied.

NOTE: If additional clearance is needed to get to adjustment bolt, move mower deck height to the lowest position.



RETURN TO NEUTRAL ADJUSTMENT Lawn Tractor Hydro Gear 0510 Automatic Transmission with Footpedal Control

WARNING: Potential for Serious Injury

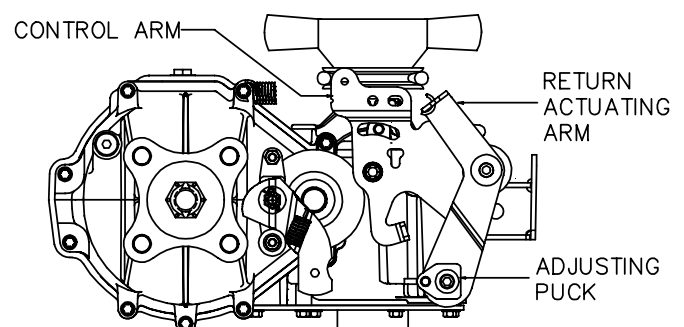
Certain procedures require the engine to be operated and the tractor is raised off the ground. To prevent possible injury to the technician or bystander, insure the tractor is properly secured.

The return to neutral mechanism on the transmission is designed to go to the neutral position after the operator's foot is removed from the foot pedals.

Use illustration at the bottom of page.

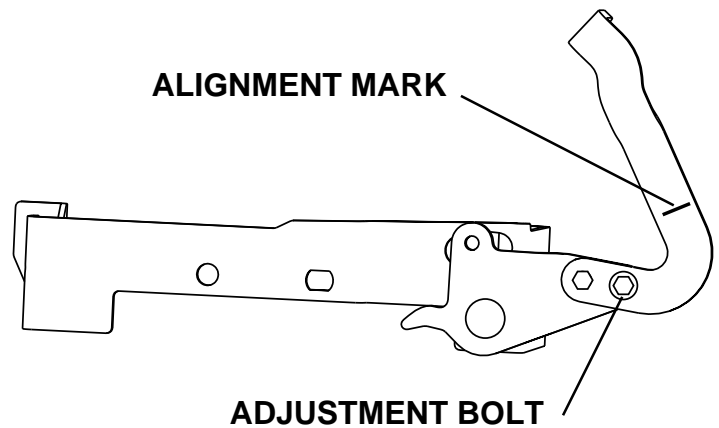
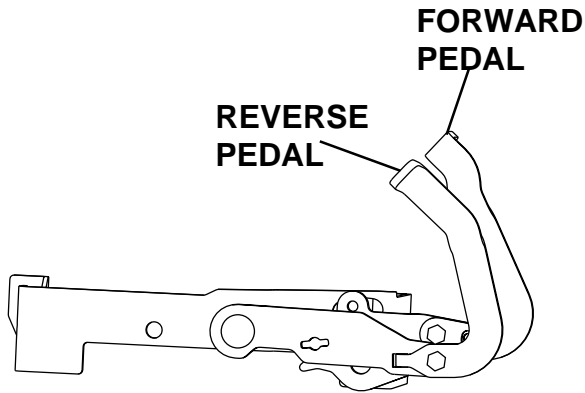
1. Confirm the freewheel rod at the back of the tractor is in the position for the transaxle to move the tractor. Raise the rear tires of the tractor off the ground to allow free rotation.
2. Remove the tractor footpedal linkage from the transmission control arm. **NOTE: It may be necessary to remove the drawbar plate or the right rear wheel to remove the tractor footpedal linkage.**
3. Start the engine and raise the throttle to full speed.
4. Check for axle rotation. If the axles do not rotate, go to step 5. If the axles do rotate, go to step 6.
5. Stop the engine. Reattach the footpedal linkage then recheck using steps 3 and 4. If the axles do not turn, the adjustment is completed. Stop engine.
6. Note the direction of rear axle rotation of the right rear axle. Stop the engine. Loosen the adjusting puck screw until the puck can be rotated. Rotate the puck in the opposite direction of the wheel rotation in 5 degree increments. Tighten the adjusting puck screw to 250 to 320 inch pounds. Recheck using steps 3 and 4. Stop the engine. Continue to adjust the puck and test until the rear axles do not rotate. Reattach the footpedal linkage then recheck using steps 3 and 4. If the axles do not turn, the adjustment is completed. Stop engine.

WARNING: Do not attempt to make any adjustments with the engine running. Use extreme caution while inspecting the vehicle linkage.



Forward Speed Adjustment for Footpedal Control Lawn Tractors

Loosen indicated bolt under the footpad. Find the alignment mark in the metal at the base of the forward foot pedal. Hold the pedal to align the mark with the edge of the footpad, and tighten the bolt.



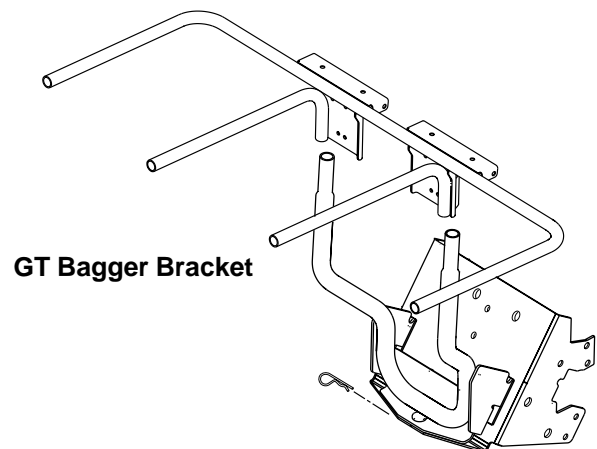
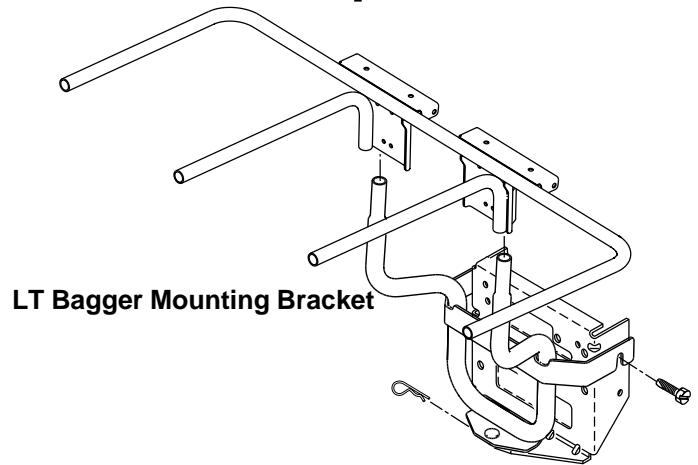
Three Bin Baggers with Quick Attach Improvements

Bagger Attachments with three bins will have improvements to make assembly easier.

The Bracket for lawn tractors will have two shoulder bolts at the top of each side of the drawbar plate. The Bracket will fit over the shoulder bolts and is secured with a Retainer Spring.

The Bracket for garden tractors will fit into two slots in the angled drawbar plate. A Retainer Spring will secure the bracket.

Brackets and chutes will be the major differences between baggers for 46" and 48" mowers.

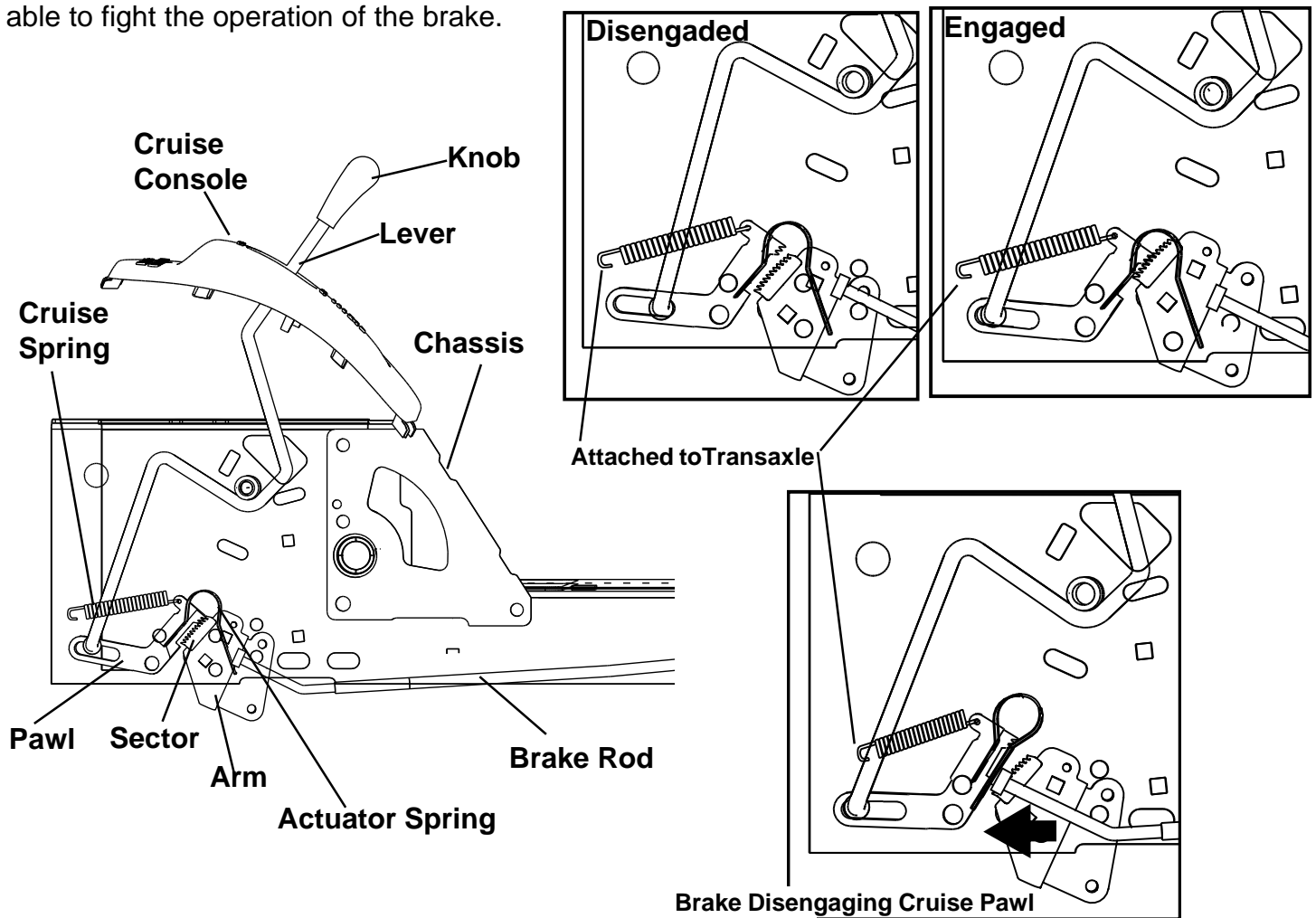


CRUISE CONTROL FOR FOOT PEDAL OPERATED AUTOMATIC LT

There will be an actuating rod for the cruise control with a knob on the right fender. The operator uses the forward foot pedal to get the desired forward speed; then pushes forward on the knob to engage the cruise control. This causes the teeth of the Cruise Pawl to engage the Cruise Sector Gear, which will hold the transmission Control Arm in the position for that speed.

The operator can disengage the Cruise Control manually by pulling backwards on the fender Cruise Knob or by using the forward speed pedal to go faster. This pulls the teeth of the cruise pawl out of the sector gear and the tractor will slow to neutral unless the operator pushes on the pedal.

The brake rod can also disengage the Cruise Control. There is a locknut on the end of the brake rod that will push on the Cruise Disengage Actuator Spring. This will push the Cruise Pawl away from the Cruise Sector Gear and the automatic transmission will go to neutral and the transmission will not be able to fight the operation of the brake.

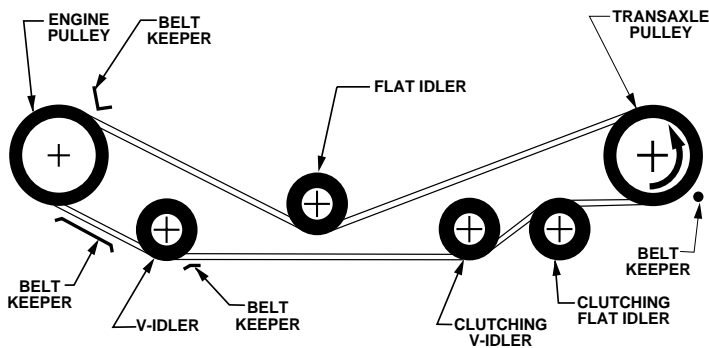


* There is a Damper Cylinder in the system to smooth the tractor speed changes when the cruise control is disengaged. If the operator complains that the tractor jerks or is not smooth, this part may need to be replaced. You should correct for any loose fitting parts in the system and re-test before replacing the damper cylinder.

DRIVE BELT REPLACEMENT PROCEDURE

Garden Tractor with Hydro Gear 3000/3500 series Automatic Transmission

- Remove the mower deck from the tractor.
- Remove the Retainer Spring from the Drive Belt Tension Handle located under the left footpad near the rear tire.
- Remove the old belt from the idler pulleys, transaxle pulley, and then from the engine pulley.
- Start the new belt at the tractor front on the engine pulley, install on the transaxle pulley, and last into the idlers. Check belt keeper positions.
- Replace the Retainer Spring in the engaged Drive Belt Tension Handle.
- Re-install the mower.



Retainer Spring

Tension Handle

Drive Belt Routing

Drive Belt Tension Handle

PROCEDURE TO START ENGINE IN EXTREME COLD

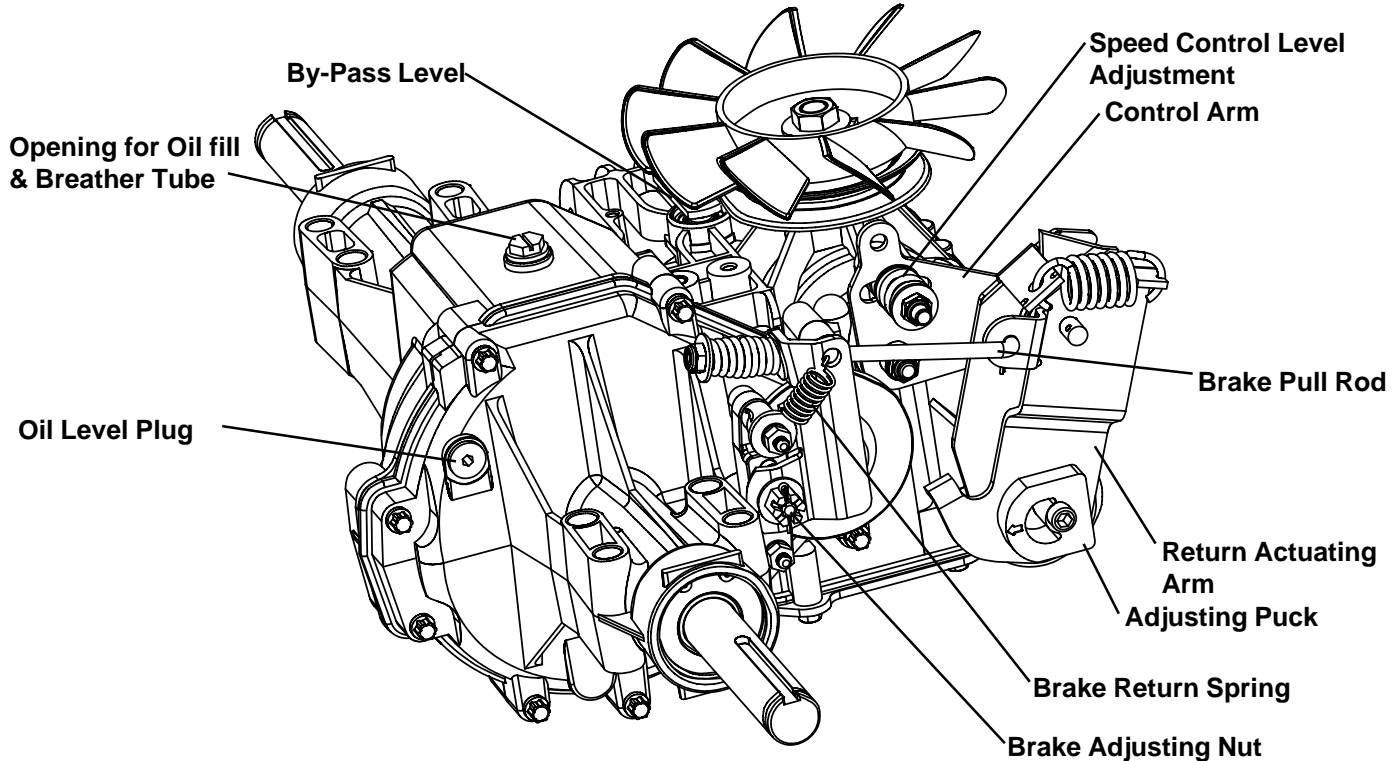
Garden Tractor with Hydro Gear 3000/3500 series Automatic

If the engine will not start and the outside temperature is extremely cold, the operator may need to perform this procedure.

- Depress the foot pedal and engage the parking brake rod. The parking brake must remain engaged until this procedure is completed.
- Locate the handle under the left side footpad near the rear tire.
- Remove the Retainer Spring from the Drive Belt Tension Handle to relieve tension on the drive belt.
- Start the engine and allow it to warm for 3 minutes.
- Engage the Drive Belt Tension Handle and replace the Retainer Spring.

CAUTION: If the Drive Belt Tension Handle is left in the disengaged position, the tractor will not move without tension on the drive belt.

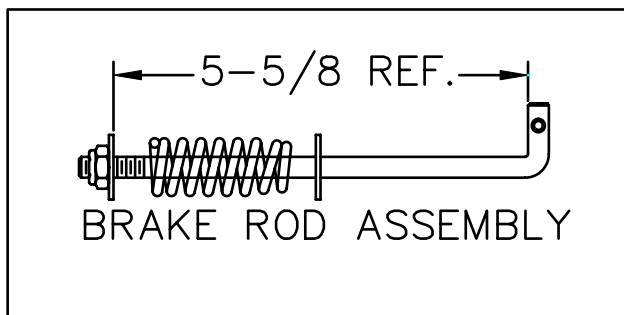
The 3000 / 3500 AUTOMATIC TRANSMISSION from HYDRO-GEAR for GARDEN TRACTORS



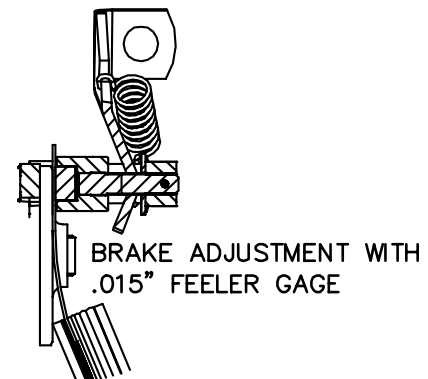
Oil should NOT be checked unless there is a complaint about the operation of the transmission. There is a gold colored plug in the right rear of the transmission case. Clean the underside of the frame and the top of the transmission before checking the oil level. Contamination cannot be allowed to get into the transmission. Place the tractor on a level surface and remove the drawbar plate. When the plug is removed, the oil should come to the bottom of the opening. **20W50 engine oil** can be added to the level of the bottom of the oil plug. The oil never needs to be changed for maintenance.

If you are working on a tractor where the operator experiences transmission complaints:

- Check to see that the neutral return adjustments for the transmission and the tractor are correct. (Both are elsewhere on this manual.)
- Check the movement of the **by pass valve** and the **freewheel control rod**.



(This is not an adjustment)



RETURN TO NEUTRAL ADJUSTMENT GT Hydro Gear 3000/3500 Automatic Transmission with Hand Control

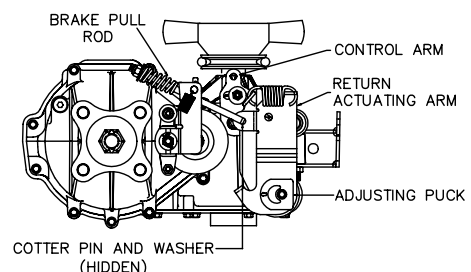
WARNING: Potential for Serious Injury

Certain procedures require the engine to be operated and the tractor is raised off the ground. To prevent possible injury to the technician or bystander, insure the tractor is properly secured.

The return to neutral mechanism on the transmission is designed to go to the neutral position after the operator's foot fully depresses the foot pedal .

1. Confirm the freewheel rod at the back of the tractor is in the position for the transaxle to move the tractor. Raise the rear tires of the tractor off the ground to allow free rotation.
2. Remove the tractor linkage from the hand control from the transmission control arm. **NOTE: It may be necessary to remove the drawbar plate or the right rear wheel to remove the linkage.**
3. Remove the cotter pin and the washer securing the brake pull rod to the return actuating arm. Remove the rod from the return actuating arm.
4. Push the tractor foot pedal down and lock the parking brake rod. Start the engine and raise the throttle to full speed.
5. Check for axle rotation. If the axles do not rotate, go to step 6. If the axles do rotate, go to step 7.
6. Stop the engine. Reattach the hand control linkage then recheck using steps 4 and 5. If the axles do not turn, the adjustment is completed. Stop engine. Re-install the brake pull rod in the return actuating arm using the washer and a new cotter pin.
7. Note the direction of rear axle rotation of the right rear axle. Stop the engine. Loosen the adjusting puck screw until the puck can be rotated. Rotate the puck in the opposite direction of the wheel rotation in 5 degree increments. Tighten the adjusting puck screw to 250 to 320 inch pounds. Recheck using steps 4 and 5. Stop the engine. Continue to adjust the puck and test until the rear axles do not rotate.
8. Reattach the hand control linkage then recheck using steps 4 and 5. If the axles turn, perform the Neutral Adjustment for the tractor Automatic Speed Lever on page 14. Stop engine. Re-install the brake pull rod in the return actuating arm using the washer and a new cotter pin.

WARNING: Do not attempt to make any adjustments with the engine running. Use extreme caution while inspecting the vehicle linkage.



Neutral Adjustment for GT Automatic Speed Lever

Garden Tractor with Hydro Gear 3000 series Automatic

- Place the parking brake in the engaged position.
- Loosen the position bolt on the automatic lever assembly, under the right fender.
- Move the automatic speed lever into the fender console neutral slot.
- Tighten the position bolt on the lever assembly.

If this procedure does not solve the problem, it will be necessary to do the neutral adjustment on the Hydro Gear 3000 or 3500 transaxle, before doing this procedure again.



FRONT MUFFLERS ON 2001 GARDEN TRACTORS



GARDEN TRACTORS BEFORE 2001 HAD THE MUFFLER BESIDE THE ENGINE



2001 GARDEN TRACTORS HAVE THE MUFFLER IN FRONT OF THE ENGINE

KOHLER Command Twin cylinder engines will have an integral solenoid shift starter in 2001. The solenoid will be on the engine, not on the tractor.



*** BLADE LISTING ***
by RETAINER HOLE CHARACTERISTICS

PART NUMBER	DECK SIZE	CONSTRUCTION	TYPE	DECK TYPE	HOLE(S)	BLADE BOLT(S)	RETAIL NUMBER
145106	20"	REGULAR	MULCH		3	1	71-33255
146749	20"	PREMIUM	MULCH		3	1	71-33271
701211	20"	PREMIUM	STANDARD		3	1	71-33270
850972	20"	REGULAR	STANDARD		3	1	71-33233
154208	20"	ELECTRIC	MULCH	CAST DECK	3	1	
156716	20"	ELECTRIC	MULCH	REAR DISCHARGE		3	
159267	21"	REGULAR	MULCH	REAR DRIVE	3	1	71-33273
161541	21"	REGULAR	STANDARD	REAR DRIVE	3	1	
165833	21"	REGULAR	MULCH	PUSH	3	1	71-33274
175064	21"	REGULAR	MULCH / BAG FRONT GEAR		3	1	
176135	21"	PREMIUM	MULCH / BAG FRONT GEAR		3	1	
175052	21"	REGULAR	MULCH ONLY FRONT GEAR		3	1	
152202	22"	REGULAR	MULCH	SIDE DISC EZ3		3	
157101	22"	REGULAR	MULCH	REAR DISCHARGE	3	3	71-33269
141114	22"	REGULAR	MULCH		3	1	71-33256
141443	22"	PREMIUM	MULCH			1	71-33272
701213	22"	PREMIUM	STANDARD			1	71-33223
850973	22"	REGULAR	STANDARD		3	1	71-33234
138970	38"	PREMIUM	HI LIFT		STAR	1	71-24651
138497	38"	REGULAR	HI LIFT		STAR	1	71-24671
139774	38"	PREMIUM	MULCH		STAR	1	71-24654
134148	38"	REGULAR	MULCH		STAR	1	71-24692
121263X	38"	REGULAR	BAGGER			1	71-24673
104418X	38"	REGULAR	CROSS / BAGGER			1	
134998	38"	REGULAR	MULCH			1	
170037	92 c.m.	REGULAR	3 in One	Left	Star 5	1	
170038	92 c.m.	REGULAR	3 in One	Right	Star 6	1	
170039	92 c.m.	REGULAR	Super Bagger	Left	Star 5	1	
170040	92 c.m.	REGULAR	Super Bagger	Left	Star 6	1	
168720	107 c.m.	REGULAR	3 in One	Left	Star 5	1	
168721	107 c.m.	REGULAR	3 in One	Right	Star 6	1	
138971	42"	PREMIUM	HI LIFT		STAR		71-24652
138498	42"	REGULAR	HI LIFT		STAR	1	
139775	42"	PREMIUM	MULCH		STAR	1	71-24655
134149	42"	REGULAR	MULCH		STAR	1	71-24676
130652	44"	PREMIUM	STANDARD		STAR	1	71-24678
25034	44"	REGULAR	STANDARD		1	1	71-24677
152443	46"	PREMIUM	MULCH		STAR	1	71-24004
176084	46"	PREMIUM	2 in One		STAR	1	71-24015
159705	46"	PREMIUM	BAHIA		STAR	1	
173920	48"	PREMIUM	BAG/DISCHARGE		STAR	1	
173921	48"	PREMIUM	MULCH		STAR	1	
137380	50"	PREMIUM	STANDARD		STAR	1	71-24005
156468	50"	PREMIUM	STANDARD-THICK		STAR	1	

BLADE PART NUMBERS WITHIN SHADED AREAS ARE INTERCHANGABLE.

CONSTRUCTION - BLADES INDICATED AS PREMIUM ARE MADE OF BETTER STEEL WITH A BETTER HEAT TREAT PROCESS TO RESIST SAND ABRASION.

NEW Mandrel for NEW 48" Mower

Two Versions

- Greaseable Bearings
- Sealed Bearings
- Mounted at four points instead of three on previous mandrels
- Dust Cup
- Blade easier to mount
- Repairable
- Larger 7/16" GR8 Blade Bolt
- Torque blade bolt to 40-50 FtLbs.
- Pulley Nut torqued 55 to 65 Ft. Lbs.



New Front Mower Suspension for three blade Mowers



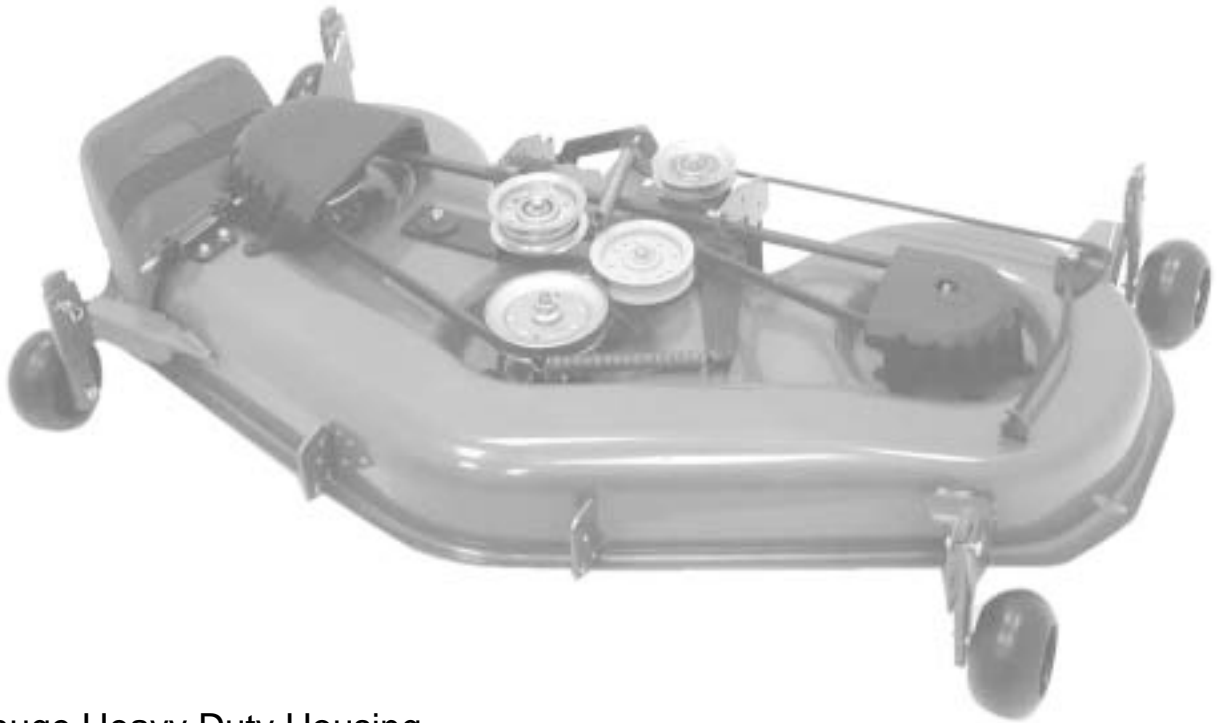
Mower Suspension Links



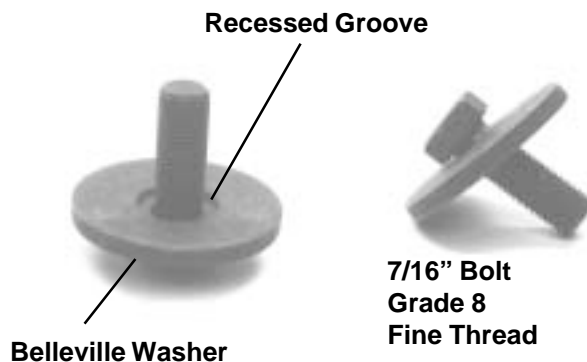
NEW GT Version Front Mower Suspension

176084 Blade for the 46" Mower will replace the 170698 Blade. It will be a thicker .187" instead of .151". The new blade will offer improved performance with longer life. This blade is designed for the customer who does not want to mulch. It will give a good quality of cut on a lawn or a rough yard without having to change blades.

New 48" Heavy Duty Mower



- 10 gauge Heavy Duty Housing
- Heavier Lift Links
- New Front Mower Suspension
- Thicker Blades at .197" from .151"
- Shipped with 173920 Blade for bagging and discharging grass
- Mulching Kit with 173921 Blade optional
- Premium version will have lever to tension the drive belt



NEW KOHLER ENGINE - LIQUID COOLED TWIN



FEATURES

23 Horsepower V-Twin
Liquid Cooled
Solenoid Shift Starter

ENGINE REQUIREMENTS:

Regular Gasoline
SAE 10W30 Oil above 32degrees F
SAE 5W30 Oil below 32 degrees F
4 pints Engine Oil with new oil filter
3.5 pints Engine Oil w/o new filter
Ethelene Glycol Antifreeze
1.47 quarts Antifreeze Capacity
Antifreeze at 50% with water
Spark Plug Champion RC14YC
Spark Plug Gap 0.030" or 0.76mm
Spark Tester 25-455-01-S
Kohler Engine Service Manual # TP-2509

ENGINE OIL:

Select the SAE oil viscosity grade based on the expected operation temperature. Change the Oil every 50 hours of operation or once a year.

Check the engine oil level before starting the engine. Remove the dipstick and wipe oil with a clean cloth. Do not thread the dipstick into the tube before taking the reading.

ENGINE OIL FILTER:

Replace the engine oil filter once each season or every other oil change (100 hours) if the oil is changed more than once a year.

SPARK PLUGS:

Replace spark plugs once each season or every 100 hours.

AIR FILTER:

Clean the engine pre-cleaner after every 25 hours of operation or at least once each season. Use detergent and water to clean the pre-cleaner. Squeeze it dry in a clean cloth. Work clean engine oil into foam pre-cleaner and remove oil excess by squeezing in a clean dry cloth.

Change the paper cartridge air filter once each year or after every 100 hours of operation. **DO NOT** wash the paper cartridge air filter. **DO NOT** use pressurized air to 'blow out' the filter as this will damage the paper element.

BLOWER HOUSING AND AIR SCREEN

The air screen must be kept clean to prevent engine damage from overheating. Clean with compressed air or a brush to remove dirt and stubborn dried gum fibers. The blower housing is easily removed after unhooking four retaining straps.

AIR INTAKE / COOLING

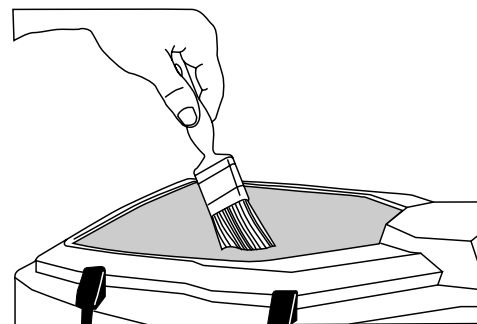
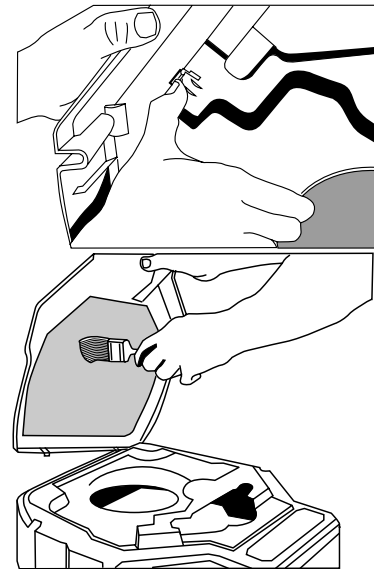
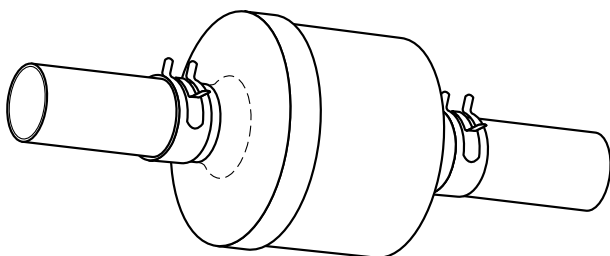
To ensure proper air circulation, make sure the air intake screen, radiator, cooling fins, and other external surfaces of the engine are kept clean. Every 100 hours of operation remove the upper blower housing assembly. Clean the cooling fins of the radiator, external surfaces, and the air intake screen in the blower housing assembly. The screen assembly may be separated to permit more thorough cleaning. Make sure all parts are re-installed before starting the engine. This may be needed more often in dusty or dirty conditions.

Cleaning should be done with compressed air or a soft brush. To avoid damaging the cooling fins, **DO NOT use a pressure washer.**

NOTE: Operating the engine with a blocked intake screen, dirty or plugged radiator cooling fins, or cooling shrouds removed, will cause engine damage due to overheating.

IN LINE FUEL FILTER

The fuel filter should be replaced each season. If the fuel filter becomes clogged, obstructing the fuel flow to the carburetor, replacement is required.

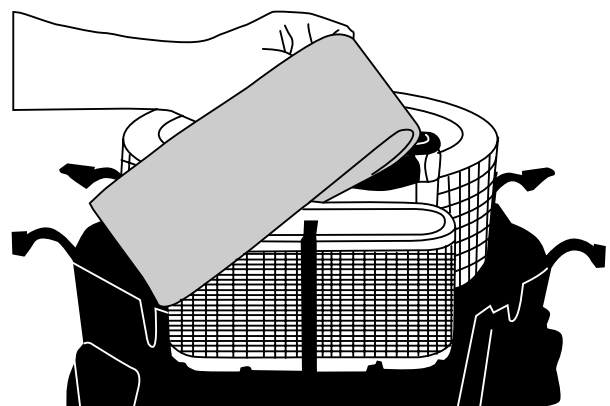


RADIATOR COOLANT

The coolant should be changed every 1000 hours. See the engine service manual for complete procedure on changing the coolant. Mix equal parts of ethylene glycol antifreeze and distilled water for the proper coolant concentration.

The condition of the hoses, clamps, and associated parts should be inspected when exposed during engine servicing.

NOTE: Properly dispose of old coolant according to local regulations.



For Husqvarna Parts Call 606-678-9623 or 606-561-4983

NEW 21" FRONT WHEEL GEAR DRIVE MOWER



- 21 inch cut
- Rear Discharge
- Side Discharge Deflector
- Mulcher Plug in rear door
- Welded Baffles
- Self Tapping screws

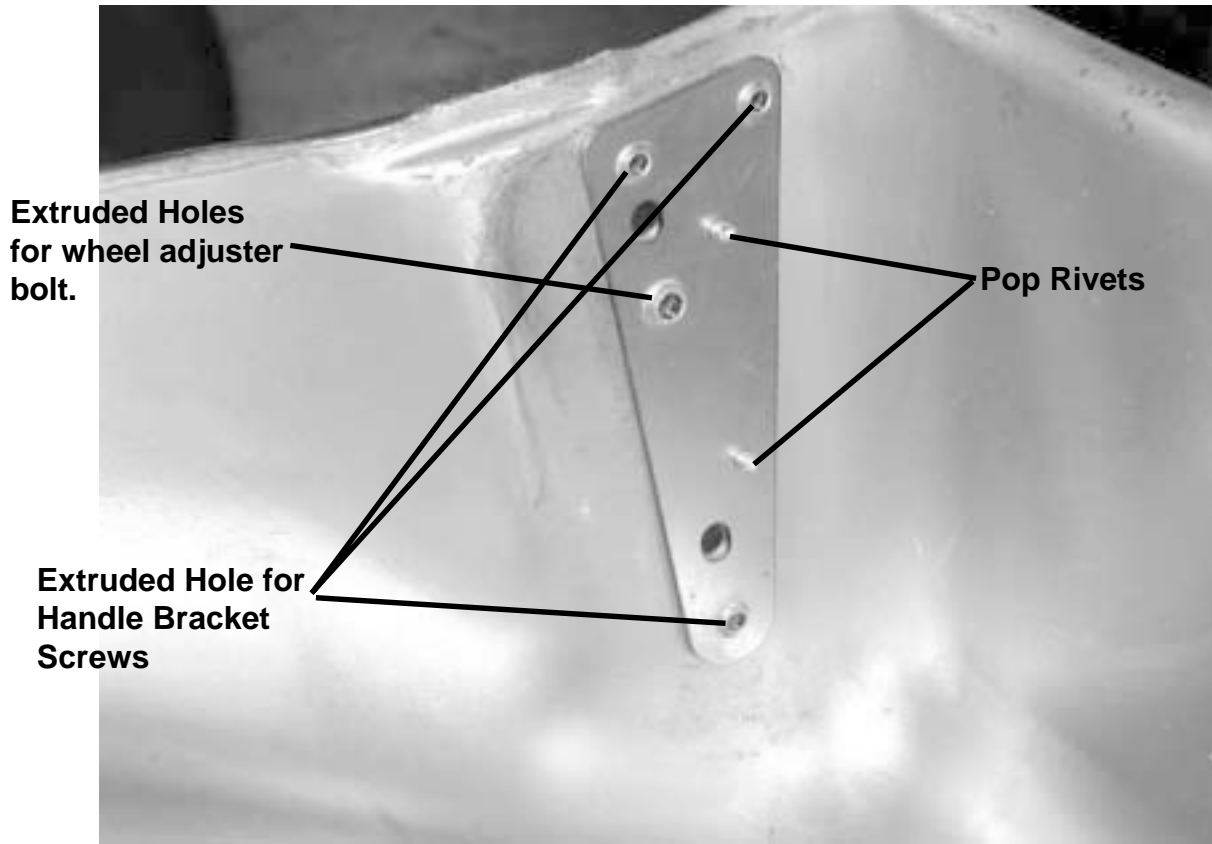
DRIVE SYSTEM COMPONENTS ARE LIKE 22" MODELS



BLADES for 21" Front Drive only

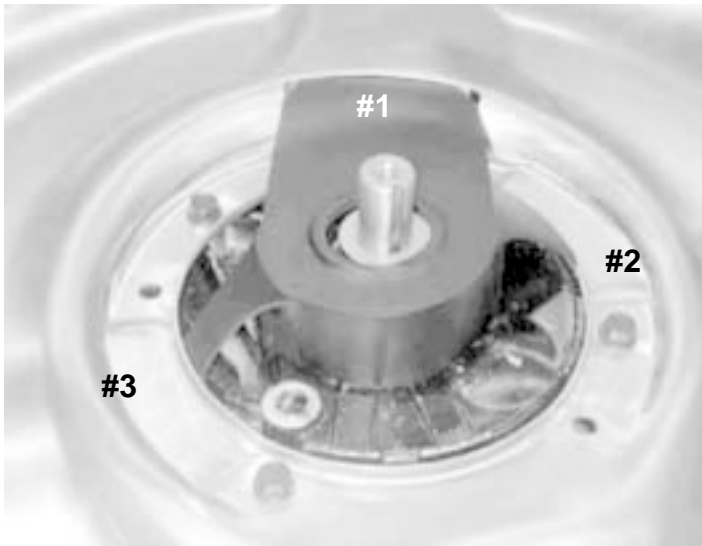
175064	REGULAR STEEL	MULCH / BAG / DISCHARGE
176135	PREMIUM STEEL	MULCH / BAG / DISCHARGE
175052	REGULAR STEEL	MULCH only

There will be extruded holes in reinforcing plates for self tapping screws used for the Handle Brackets and the Rear Wheel Adjusters. The brackets will be pop riveted to the housing to assist ease of assembly. Models with high wheels will use the wheel adjuster bolt hole for another self tapping screw and additional support to the handle bracket.



- Rear door springs are easily replaceable
- A spring fits into each side of the rear door at the hinge.
- Install the bolt that holds the rear door to the handle brackets
- Use a hook to load the door springs against the handle bracket tabs.

BELT COVER INSTALLATION



- Install the drive pulley .130" from engine, place belt on pulley and through opening in deck
- Insert Belt Cover into opening in deck for belt #1
- Insert right tab between housing and engine #2
- Push left leg of belt cover so that it is under edge of housing #3

DRIVE COVER INSTALLATION



- Insert two tabs at end of cover into housing belt opening
- Locating tabs on the front of the Drive Cover will position over the transmission opening
- Install screw to secure Drive Cover

REAR WHEEL ADJUSTER IMPROVEMENTS



- Sector Plate formed into handle brackets
- Belleville Washer eliminated with form of selector lever
- Pal nut holds parts onto shoulder bolt for easy assembly
- Recessed area in spacer washer for pal nut
- Self tapping shoulder bolt eliminates nut inside housing
- Longer selector spring levers

Touch - Up Paints for Lawn & Garden

PART No.	DESCRIPTION	PAINT CODE
177392	RED LTX, Spray Paint	615
175247	DESERT GOLD Spray Paint	612
175246	STORM GRAY Spray Paint	613
169696	ANTIQUE SAGE Spray Paint	598
169695	ANNIVERSARY RED Spray Paint	603
169694	FOREST GREEN Spray Paint	602
150131	SATIN BLACK Spray Paint	
150020	POLO GREEN Spray Paint (SEARS)	558
144401	GREEN Spray Paint	550
136247	RED Spray Paint	505, 506, 394, 423
136246	BLUE (Dark) Spray Paint	510, 511
130939	GREEN (POULAN) Spray Paint	419
130937	DOVER GRAY Spray Paint	459, 478
161394	HIGH GLOSS BLACK Spray Paint	428
126967X	NEW SEARS SILVER Spray Paint	417
126966X	GRAY Spray Paint(Husqvarna/WA)	410, 418
126965X	ORANGE Spray Paint Husqvarna)	412, 422

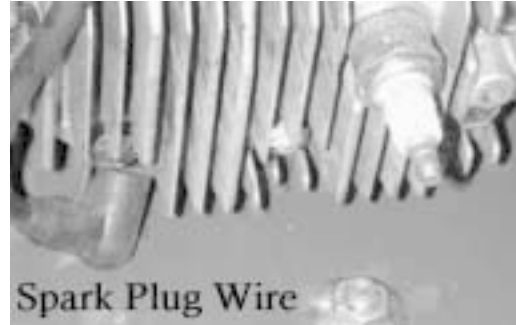


NOTE: The paint code can be matched to the end of the part number for painted parts needing touch-up.

WEED TRIMMER from ELECTROLUX Home Products



While servicing a weed trimmer, remove the wire from the spark plug and secure the wire in a position where it cannot contact the spark plug.

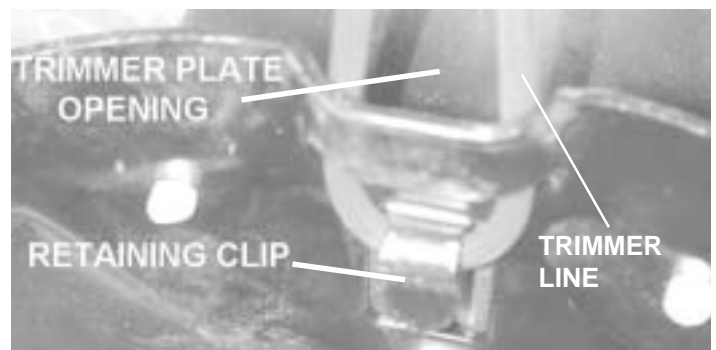
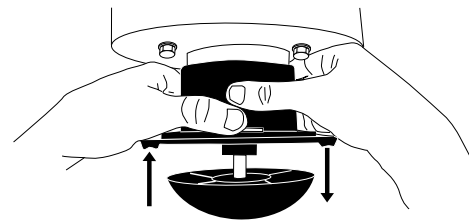
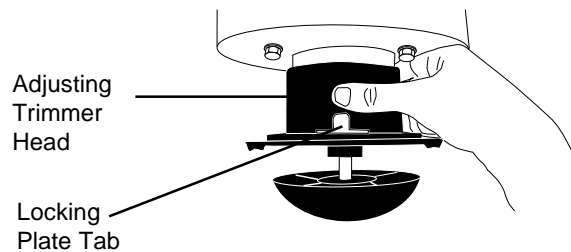


There are two head assemblies used, one is adjustable with from 1.5 to 3 inches of height and the other is a fixed height. You will find a Locking Plate Tab on the adjustable head. When the Tab is depressed, the trimmer head can be moved to the desired position.

Use .155 inch diameter Trimmer Line that is cut to 18 $\frac{3}{4}$ inches in length before installing. To install, fold the trimmer line in half. Push the folded end through the opening in the trimmer plate and over the retainer clip. Pull the trimmer line into the retainer clip to lock it in place. It is important that after trimmer lines are installed, that the length is checked or an unbalanced condition may occur. The length of all lines must not vary by more than one inch.

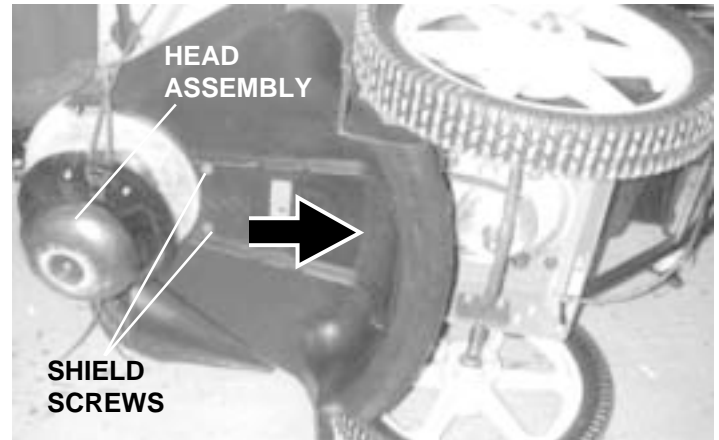
There is a cover on the engine secured by one knob for easy access. The screen inside the cover as well as the engine air intake screen should be cleaned during routine servicing.

There is a Skirt at the left front corner of the Debris Shield. It should be replaced if damaged.

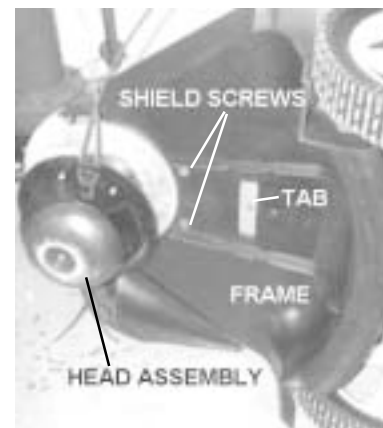
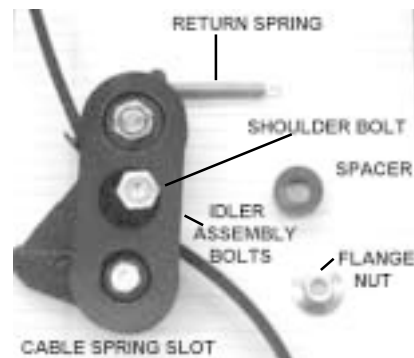
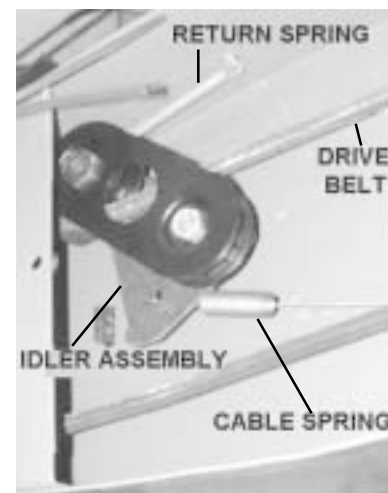


SKIRT

BELT REPLACEMENT PROCEDURE



- Remove the spark plug wire and secure away from the spark plug
- Remove the Cover Screw to access the belt at the front pulley
- Remove the Screw on each side holding the Shield by the wheels
- Place weed trimmer on side with air filter up.
- Remove the two Shield Screws on underside by the head
- Pull Debris Shield toward the rear of the as shown by arrow
- Remove Drive Belt from Engine Pulley and Pulley on the Head Assembly.
- Remove the Return Spring from the chassis of the weed trimmer
- Remove the Cable Spring from the idler bracket
- Remove shoulder bolt holding idler assembly and belt to chassis. Move belt to get socket on the head of the shoulder bolt. Hold Flange Nut of top of chassis while loosening the shoulder bolt.
- Install new Drive Belt in Idler Assembly
- To reinstall Idler Assembly, place Shoulder Bolt through Idler Assembly, Spacer, and Chassis. Loosely attach Flange Nut on top of the chassis.
- Install the Return Spring into the notch in Chassis side
- Install the engagement cable Spring into the Idler Assembly Bracket from the underside, so it is trapped between the chassis and the bracket.
- Tighten the Flange Nut and Shoulder Bolt.
- Install the Drive Belt on the front Head Assembly Pulley and then on the Engine Pulley.
- Install the Debris Shield. Line up the tab on the chassis side and the front edge between chassis and the head assembly and push forward until the screw holes line up. Install the two Shield Screws on underside.
- Install Shield Screws either side of the chassis
- Install the Screw in the front Cover
- Replace the Wire on the Spark Plug



21" Rear Wheel Gear Drive Adjustment and Troubleshooting

Anytime the Speed Cable is disassembled or the drive pulley under the deck is disturbed, the adjustment procedure should be performed.

CAUTION: Disconnect the Spark Plug Wire before working on the mower.

Procedure to Adjust Speed Control Cable and to Install the Speed Control Cable.

1. Move the lever on the speed control cable to the slowest position before installing onto the handle.
2. Install the Cable End over the end of the Pivot Rod at the side of the engine. Snap the cable Fitting into the housing Bracket. Do NOT lock in the Adjustment Tab.
3. Set the Speed Lever to one notch below the fastest speed.
4. Hold down the engine control bail and pull starter rope through to rotate engine several revolutions to seat the drive belt under the deck.
DANGER: The BLADE is turning when this step is performed. The mower must be upright; and care must be taken to keep any object from coming in contact with the blade, especially hands and feet

5. Pull all slack from the speed control fitting by pushing lightly on the Pivot Rod, toward the housing Bracket. Snap the Adjustment Tab into place.

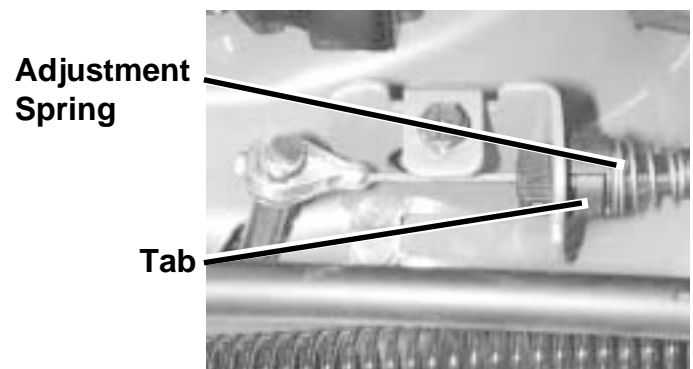
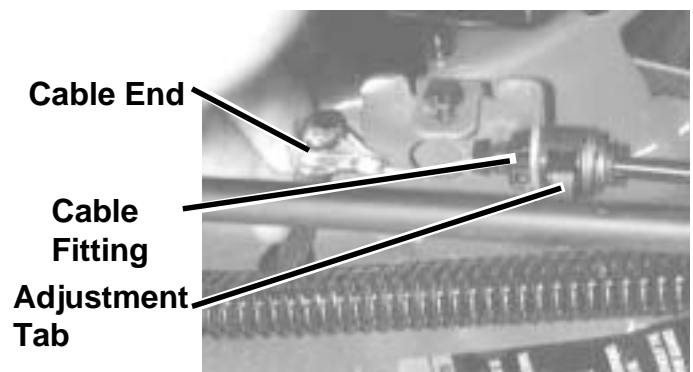
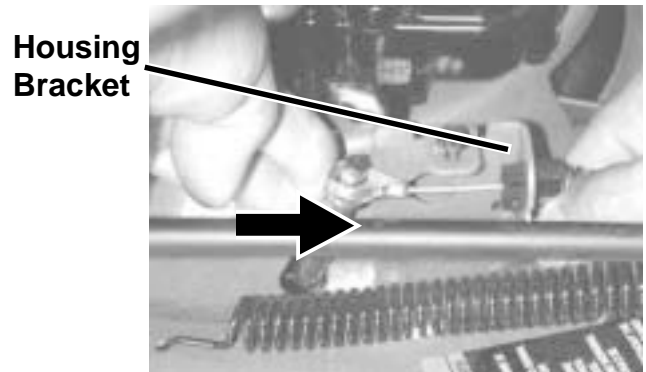
6. Return the speed lever to the low speed position.

This is NOT CORRECT. If slack is found in the cable, it is NOT properly adjusted. Repeat step #5.

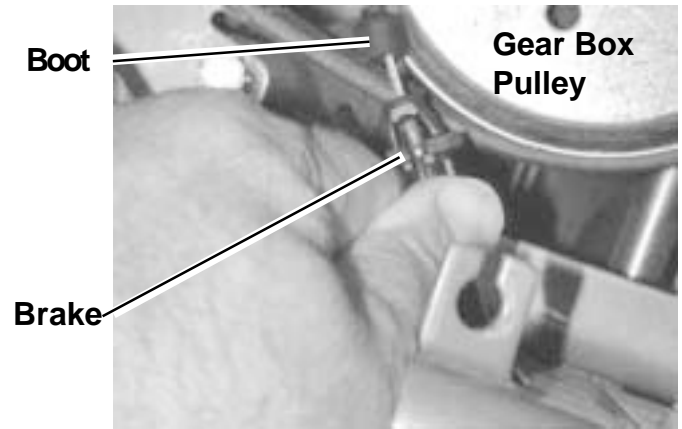
NOTE: The Adjustment Tab at the side of the cable is not yet locked in place. The cable fitting is locked into the housing bracket.

This shows the correct adjustment, with the Adjustment Tab locked in and no slack in the cable.

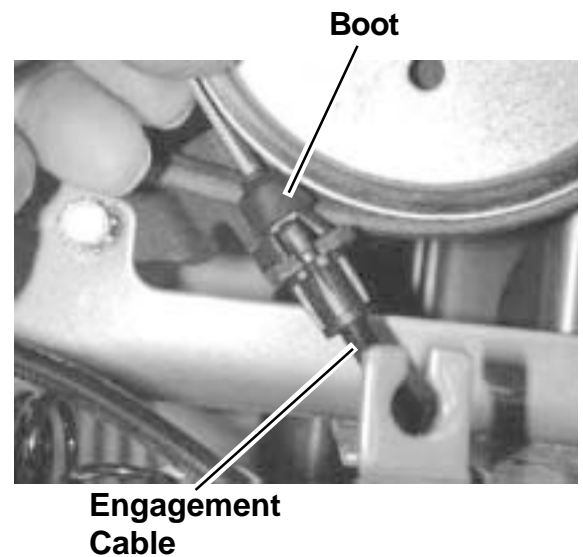
NOTE: The cable adjustment spring is not necessarily collapsed after the adjustment.



7. The fitting on the Speed Control Cable End, should be securely attached to this bracket. Inspect the Belt Keeper Bracket, speed control Cable Holding Arm to see if it is at a 90 degree upright position. If the angle is other than 90 degrees, adjust this arm.

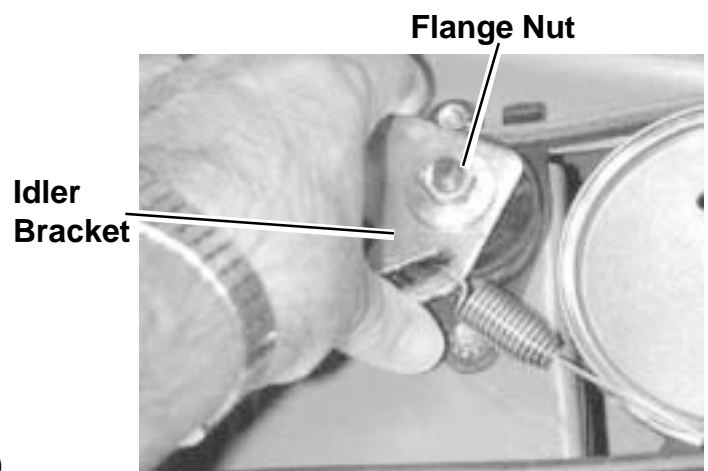


8. The rubber boot should be in this position to protect the cable from debris and moisture. Also check the condition of the cables at the middle of the handle. If the cables have been damaged, they may not be able to move into the proper position.



9. Check the movement of the idler bracket. It should travel from the deck tunnel to the engaged belt position. Check in both the fastest and slowest speed positions. It may be necessary to loosen the flange nut slightly to get the idler bracket to smoothly travel across the needed range of movement.

10. It is difficult to tell if the speed has changed as you move the speed lever, because the speed differences are so small. It is best to remove the cover over the idler pulleys while evaluating the drive speeds. You should see a different idler bracket position when you move the speed lever.



**PROBLEM: REPEATED PROBLEM WITH MOWER CABLE CLUTCH FAILURE AT CABLE SPRING
SOLUTION: INSTALL 42" MOWER CABLE CLUTCH REPLACEMENT KIT #175067**

CLUTCH CABLE REPLACEMENT KIT NO. 175067 FOR 42 INCH MOVER

KIT CONTENTS:

- (1) 169676 Clutch Cable
- (1) 173443 Carriage Bolt (Special)
- (1) 7192J Cable Tie

INSTALLATION INSTRUCTIONS

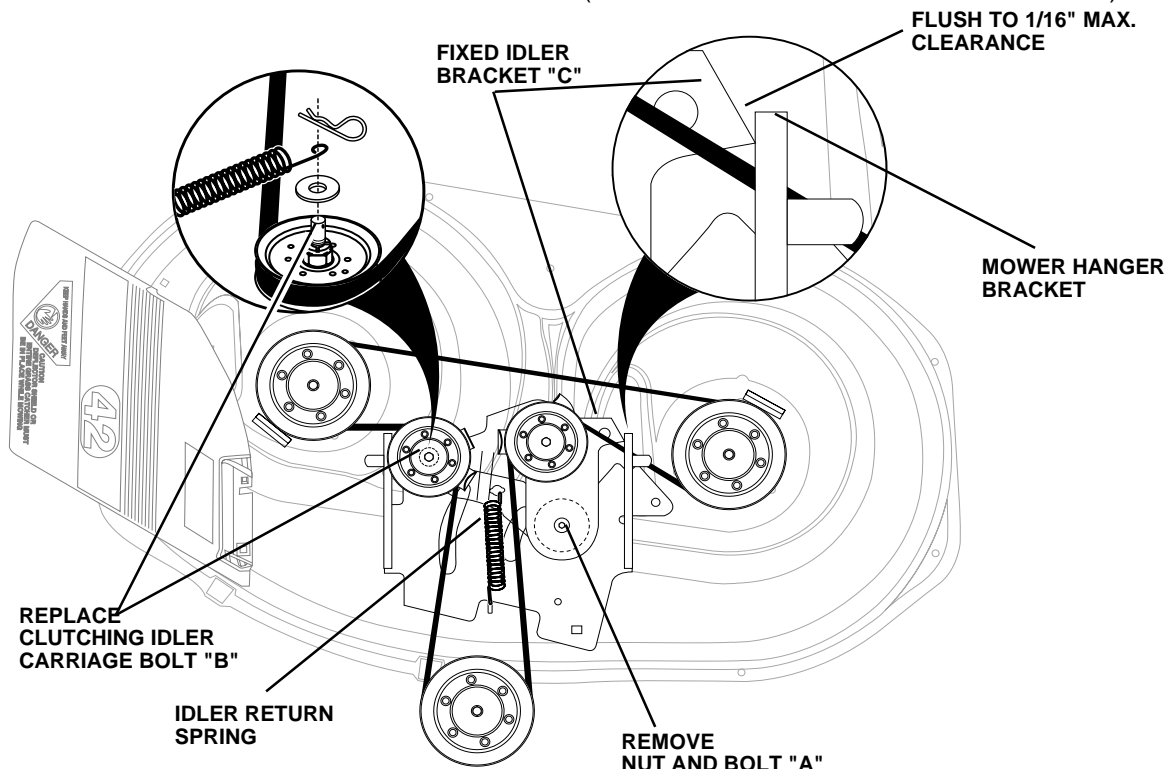
1. Remove the mower from tractor (See Tractor Owner's Manual for instructions).
2. Remove and discard clutch cable from tractor. Note the location of the cable tie.
3. Assemble new clutch cable to tractor. Secure cable to right side of chassis with the cable tie provided in kit.

REPLACE CLUTCHING IDLER CARRIAGE BOLT

4. Disconnect idler return spring from idler arm.
5. To access carriage bolt, remove nut and bolt "A" securing idler brackets to mower deck.
6. Remove and replace clutching idler carriage bolt "B" with carriage bolt supplied in kit.
7. Reassemble idler brackets to mower deck.

IMPORTANT: After tightening nut and bolt "A", the fixed idler bracket "C" must be tight and flush against mower hanger bracket (Max. 1/16" clearance) and the clutching idler arm must move freely.

8. Reconnect idler return spring to idler arm.
9. Properly position belt on mower and install mower to tractor (See Tractor Owner's Manual for instructions).



AVAILABLE TECHNICAL INFORMATION

- 163578 MANUAL, Tractor and Rear Tine Tiller
- 163579 MANUAL, Mower and Front Tine Tiller
- 173699 MANUAL, 2000 Sears Product Accessories
- 174702 MANUAL, 2000 Sears Electrical Schematics
- 168695 VIDEO, FHP Mower Leveling
- 169287 VIDEO, FHP 'Automatic' Drive Servicing



NOTES

For Husqvarna Parts Call 606-678-9623 or 606-561-4983