

DIXON®

ZTR®

5421

OPERATORS MANUAL

IMPORTANT - READ CAREFULLY

The Dixon ZTR Mower is both easy and fun to operate. However, any power mower must be operated properly to be safe. It is not a toy or a recreational vehicle. Before you start to use the mower, read the operator's manual carefully, and become completely familiar with the controls.

The information in this operator's manual applies to all Dixon ZTR Model 5421 Mowers. Your Dixon dealer will gladly provide a check-out ride, and answer any questions.

See your dealer for warranty service, parts and repairs.



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SAFETY

RIDING LAWNMOWERS, IF IMPROPERLY OPERATED, CAN CAUSE SERIOUS INJURY

The following examples are the most common causes of injury to the operator or bystander...

1. **BLADE CONTACT:** The operator or bystander inserts a hand or foot into the discharge chute or under the mower deck and into the path of the cutting blade. Never run the mower blades when there are people nearby. Always turn the engine off when cleaning or working around the mower deck.
2. **RUN-OVER:** This situation occurs when a bystander is run-over or backed over by the mower. The most frequently cited examples are with small children who wander into, or are allowed to play in an area where the mower is being operated. Never run the mower blades when there are people nearby, especially children. Young children should be indoors and watched by an adult. Always look behind you before backing up.
3. **TIP-OVER:** This occurs when the mower tips over, usually sideways or to the rear. This situation is due to operation of the mower on steep inclines or near a drop-off. Mow across the slope to slightly uphill. Mow slopes when the grass is dry and watch for bumps, holes and other obstacles. Test the slope with the blades off. A good rule of thumb is "Don't mow on a slope you can't back up". Stay clear of drop-offs, especially if they are on the down side of a slope.
4. **THROWN OBJECTS:** The fast spinning mower deck blade can strike stones or other objects which can be hurled into the path of a bystander. To prevent this from happening, never remove the safety discharge chute from the mower deck, or operate the mower when other people are around.
5. **FIRES:** Most accidents of this type occur during re-fueling of the mower or placing the mower in a storage situation. The exhaust system and related engine components operate at very high temperatures which can ignite any fuel spilled on or near them. Always allow the mower to cool before re-fueling or placing in storage.
6. **OPERATION BY CHILDREN:** This mower is not a toy or a recreational vehicle. Never allow children to operate the mower in any manner or to ride as a passenger.

NOTE: The six examples are the most frequently cited injury causing situations. Please review all the safety precautions outlined on the following pages prior to operation of the mower. Our aim is to enhance the safe and satisfactory use of this product.

SAFETY

SAFETY REMINDERS: READ CAREFULLY BEFORE OPERATION

1. Wear appropriate, safe clothing when mowing - close fitting jeans or slacks and heavy leather or safety shoes with rough soles. Never operate this mower with bare feet or open sandals.
2. Do not operate on wet or slippery grass.
3. Always mow at the slowest speed that will cut satisfactorily.
4. Keep hands and feet away from the blade at all times.
5. Keep persons clear of the discharge chute. Do not operate mower unless deflector is in place.
6. When mowing hills or slopes, use extreme caution. Reduce speed, do not make sudden starts, stops or turns.
7. Always disengage blades before taking the mower across walks or objects that project above the surface.
8. Stay alert for holes, rocks and roots in the terrain, and other hazards. Keep away from drop-offs.
9. When the mower is not in use, turn the engine off and remove key. Never leave the engine running unattended. Your Dixon mower is equipped with a weight-sensitive switch that kills the engine when operator leaves the seat while blades are engaged.

Note: This important safety feature must be tested prior to each mowing. This may be done by starting engine, engaging blades and then rising slightly from seat. If engine does not stop, see your dealer for necessary repair.

10. Before adjusting or servicing your mower, turn off the engine and let it cool. Be sure all moving parts are stopped. Never run the 5421 with the body open.
11. Never run the engine indoors; the fumes are dangerous.
12. Before backing your Dixon Mower; stop, turn around and look.
13. Handle gasoline with care - it is highly flammable.
 - A. Use approved gasoline container.
 - B. Never remove the fuel cap of, or add gasoline to, a running or hot engine, or an engine that has not been allowed to cool after running. Never fill the tank indoors and always clean up spilled gasoline.
 - C. Never store the mower, with gasoline in the tank, inside the building where fumes may reach an open flame or spark. Allow the engine to cool before storing in any enclosure.

SAFETY REMINDERS: (Continued)

14. Never lift lawnmower by the body, lift only by the frame.
15. *Never carry passengers.*
16. Use care when pulling loads or using heavy equipment.
 - A. Use ONLY approved drawbar hitch points.
 - B. Limit loads to those you can safely control.
 - C. Do not turn sharply. Use care when backing.
17. Watch out for traffic when crossing or near roadways.
18. Keep the mower in good operating condition, and keep safety devices in place and working.
19. Keep all nuts, bolts and screws tight to be sure the mower is in safe working condition.
20. To reduce fire hazard, keep the engine free of grass, leaves or excessive grease.
21. The mower should be stopped and inspected for damage after striking a foreign object or if it starts vibrating, and any damage should be repaired before restarting and operating the mower.
22. When mowing, proceed as follows:
 - A. Mow only in daylight or in good artificial light.
 - B. Shut the engine off when removing the grass catcher or unclogging chute.
 - C. Check the blade mounting bolts for proper tightness at frequent intervals.
 - D. Never operate the machine when using medication or under the influence of alcohol or drugs.

DIXON LIMITED WARRANTY POLICY -- HYDRO-GEAR MODELS

This warranty policy applies to all Hydro-Gear mowers or any 50" model, purchased on or after March 1, 1990.

WARRANTY: Dixon Warranty term is for a period of one (1) year from date of purchase or 400 hours of use, whichever occurs first. Mowers used for residential homeowner applications (used only at owner's primary place of residence) are warranted for two (2) years from date of purchase or 400 hours of use, whichever occurs first. DIXON ZTR MOWERS ARE WARRANTED AGAINST DEFECTS IN MATERIALS AND WORKMANSHIP AND PROVIDES FOR REPLACEMENT OR REPAIR OF PARTS INCLUDING LABOR COSTS. THIS WARRANTY IS SUBJECT TO THE FOLLOWING CONDITIONS AND LIMITATIONS:

1. Warranty applies only to original retail purchaser of new and unused mowers and accessories.
2. All Dixon warranty must be accomplished by authorized Dixon dealers and in accordance with Dixon warranty policy and allowances. All warranty claims must be approved by Dixon Industries, Inc.
3. Battery warranty: Limited to 90 days from date of purchase.
4. Accessories Warranty (Grass Catchers, Snow Blades, Tine Rakes, Covers, etc.): Limited to 90 days from date of purchase.
5. Warranty does not apply to damage in transit or incidents of misuse, negligence, accidents, or alteration. The use of parts or components other than those supplied by Dixon Industries, Inc. VOIDS ALL WARRANTY.
6. The following items are not covered by this warranty policy:
 - (a) Pick up and delivery charges for transportation of mower to and from an Authorized Dixon Dealer's place of business.
 - (b) Routine maintenance or adjustments.
 - (c) Belts / chains / sprockets / cutting blades.
 - (d) Engines -- All engines used on Dixon ZTR mowers are warranted by each individual engine manufacturer.
 - (e) Any costs or expense of providing substitute equipment while repair work is being performed on a warranted mower.
7. There is no other express warranty. Implied warranties, including those of merchantability and fitness for a particular purpose, are limited to the same duration of the express warranty, and to the extent permitted by law any and all implied warranties are excluded. Liabilities for consequential damages under any and all warranties are excluded.

DATE OF PURCHASE _____	Model _____	S/N _____	DM- _____
_____	_____	_____	_____
(Owner's Name)		(Dealership)	
_____	_____	_____	_____
(Address)		(Address)	
_____	_____	_____	_____
(Owner's Signature)		(Dealer's Signature)	

SEE DEALER FOR DETAILS

SPECIFICATIONS

CHASSIS:	11 GA - rectangular tube.
BODY:	Two piece - made of rotational molded polyethylene. Front body contains access panels for battery service and engine to mower deck belt removal. Rear body tilts up to allow service on the entire drive system.
SEAT:	Designed for operator comfort by use of high density closed cell foam, padded back and arm rests. Seat is adjustable fore and aft.
MOWER DECK:	13 GA stamped steel construction, 3 blades, 42" cut width, cut height approximately 1 " to 4" via 7 position lift handle.
BLADE DRIVE:	Electric clutch.
DRIVE SYSTEM:	<p>Each rear wheel is independently driven by a Hydro Gear BDU-10L Series 70 hydrostatic transmission. The hydrostatic transmissions, in turn, power a fully enclosed Hydro Gear gearbox. The gears in the Hydro Gear gearbox are permanently lubricated using a special grease which completely eliminates the need for any type of maintenance.</p> <p>The Hydro Gear BDU-1 OL Series 70 hydrostatic transmissions are serviced with any high quality 10W-30 motor oil. The oil is filtered by a 10 micron oil filter. Recommended service interval for filter is after the first 250 hours of operation, then after every 400 hours of operation. If the system becomes contaminated by dirt or other foreign debris, both oil and filter must be replaced immediately.</p>
ENGINE:	16 HP Kohler Magnum, Vertical Crankshaft, 4-Cycle, Air Cooled, Gasoline, Twin Cylinder Opposed, Aluminum Crankcase, Removable Cast Iron Cylinder Barrels, Electronic Ignition, Full Pressure Lubrication.
STARTING SYSTEM:	Electric by key switch operation with safety interlocks on parking brake and blade drive clutch.
TIRES:	Front 1 1 X 4.10 X 4 smooth profile. Rear 1 8 X 9.5 X 8 turf savers.
CAPACITIES:	Fuel - 4.8 gallons total (dual tanks). Hydrostat oil tank - 3 quart with inline 10 micron filter. Hydrostat oil recommendation - name brand SAE 10W-30 motor oil.
DIMENSIONS:	Width 51" Height 45" Length 72" Weight 615lbs.
NOTE:	Additional information provided in service instructions under the individual component.

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.

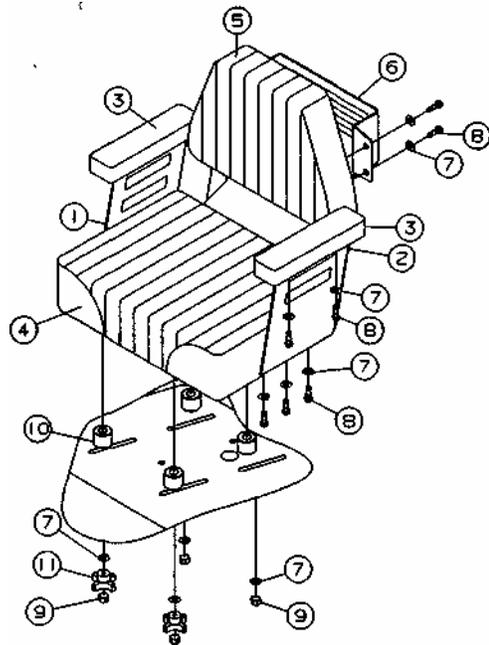
SET UP AND SERVICE

1. Seat Assembly Instructions
2. Upper Control Lever Installation
3. Mower Deck Installation
4. Deck Leveling
5. Final Preparation

SEAT ASSEMBLY INSTRUCTIONS

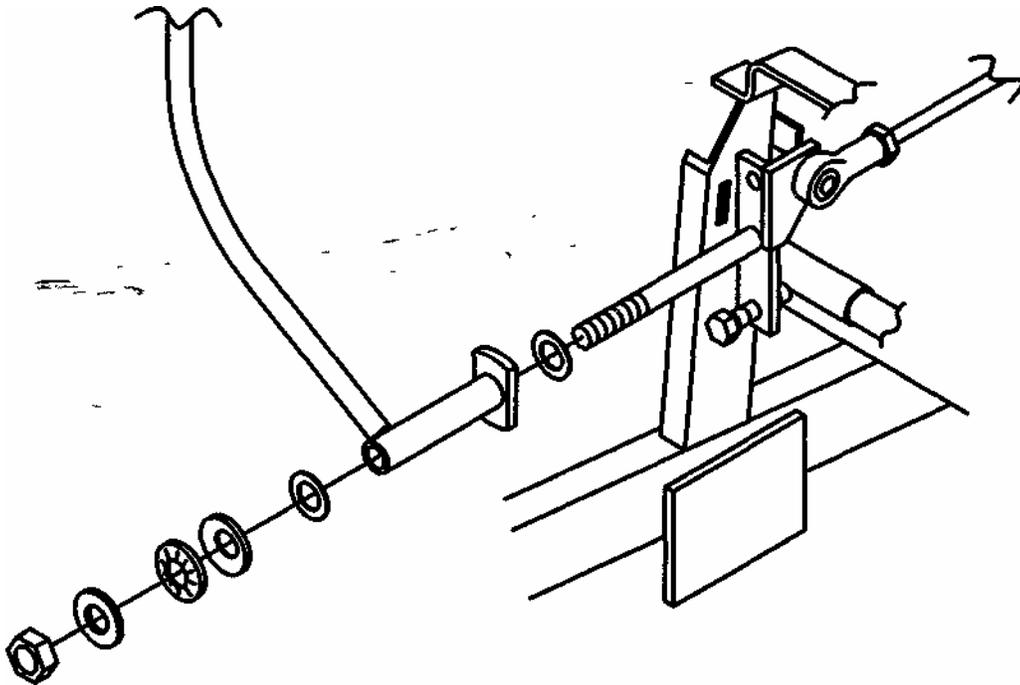
1. Assemble one arm rest bracket to arm rest cushion using (2) 5/16 standard flat washers (3020) and (2) 5/16-18 x 1 hex head nylok bolts (3224). Do not tighten hardware at this time.
2. Assemble arm rest bracket/cushion to seat bottom using (3) 5/16 standard flat washers (3020) and (3) 5/16-18 x 1 hex head nylok bolts (3224). Do not tighten hardware at this time.
3. Repeat steps 1 and 2 for other arm rest bracket.
4. Assemble arm rest brackets and utility box to seat back using (4) 5/16 standard flat washers (3020) and (4) 5/16-18x1 hex head nylok bolts (3224). Tighten all seat hardware at this time.
5. Place seat assembly on body, and connect seat safety switch.
6. Place (1) seat spacer (1849) on each stud protruding through seat bottom, and insert studs through slots in body. Firmly hold seat assembly against body with one hand while body is raised to fully open position. Continue to hold seat against body to prevent damage to seat safety switch wiring.
7. Install (1) 5/16 standard flat washer (3020), (1) seat knob (3874), and (1) nylok nut (3205) on each of the front studs extending through body and seat frame, and tighten these nuts.
8. Install (1) 5/16 standard flat washer (3020) and (1) nylok nut (3205) on each of the rear studs. Do not fully tighten these nuts, thus allowing for easy slide action of seat, as provided by knobs on front studs.

DET	QTY	P/N	DESCRIPTION
1	1	4402	ARM REST BRACKET RH
2	1	4401	ARM REST BRACKET LH
3	2	4400	ARM REST - OFFSET
4	1	4733	SEAT BOTTOM
5	1	4450	SEAT BACK
6	1	4256	UTILITY BOX
7	18	3020	5/16 STD FLAT WASHER
8	14	3224	5/16-18 X 1 HHB G5 W/NY
9	4	3205	5/16-18 HEX NUT W/NY
10	4	1849	SEAT SPACER
11	2	3874	SEAT KNOB 5/16-18



UPPER CONTROL LEVER INSTALLATION

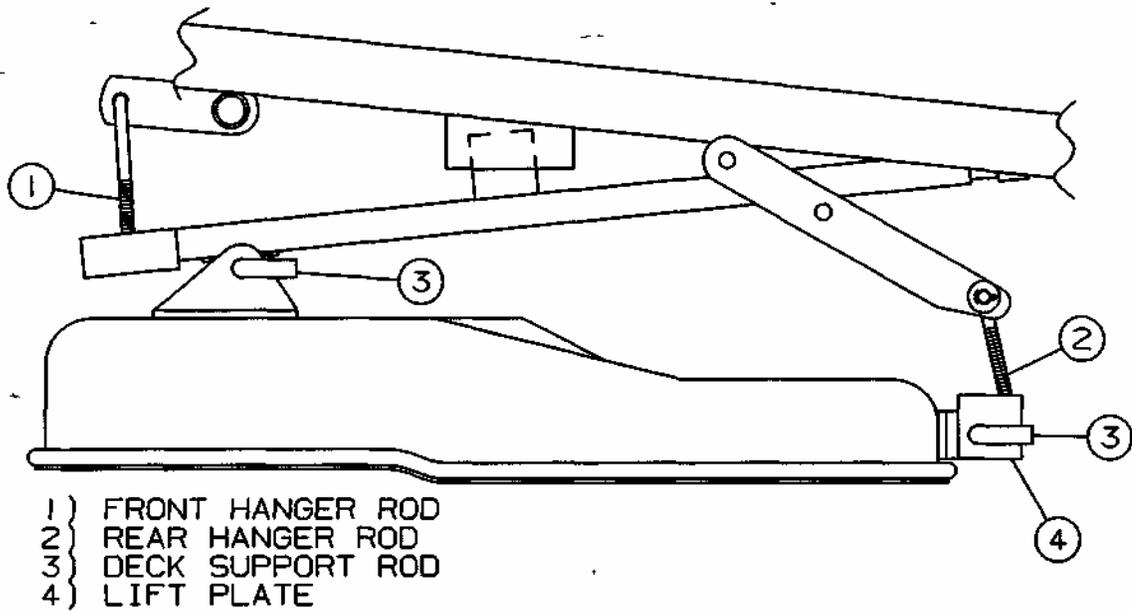
1. Raise rear body cover to fully open position.
2. Install flat washer on right hand swivel plate weldment. Next install right hand control lever, then second flat washer.
3. Push control lever into the neutral slot and install (2) cup washers, (1) flat washer and jam nut. (See illustration)
4. Tighten jam nut. Proper tightness or tension on jam nut is achieved when swing out movement of upper control levers requires some pressure. Levers should not fall to the side or be sloppy in movement.
5. Repeat above procedure on left side.



MOWER DECK INSTALLATION

NOTE: Brake link (P/N 5283) normally used for installation of engine to mower deck drive belt, has been placed in position during assembly of the lift frame at the factory. For shipment purposes, the brake link has been secured with a cotter pin and washer. REMOVE AND DISCARD cotter pin and washer after engine to mower drive belt has been installed.

1. Loosen and remove front body mounting bolts (P/N 3368) and washers (P/N 3066). Disconnect headlight wiring plug from wiring harness. Lift front body from chassis.
2. Install rear hanger rods on lift frame. Slide lift plate on hanger rods, small holes in lift plate will face rear of mower, and start nylok nuts on each hanger rod until approximately 1/2 inch of threads are exposed.
3. Position mower deck under chassis.
4. Raise front of mower deck and slide front support rod through lift frame and tabs on mower deck. Install hair pin clips on front and rear of support rods.
5. Move lift lever to lowest cut position, install engine to mower deck drive belt on top center pulley. Check belt routing after installation to make certain that belt is centered in groove of electric clutch pulley.
6. Move lift lever toward high cut position and remove brake link from hole on lift lever.
7. Install front body, connect headlight wiring.



MOWER DECK LEVELING PROCEDURE

LEVELING PRINCIPALS:

A. There are a total of (4) threaded adjusters which will control the attitude or pitch of the mower deck. The adjusters have lock nuts on the bottom which can be turned up or down to raise or lower the front and rear of the mower deck. Deck should be level or pitched slightly higher in rear.

LEVELING THE DECK:

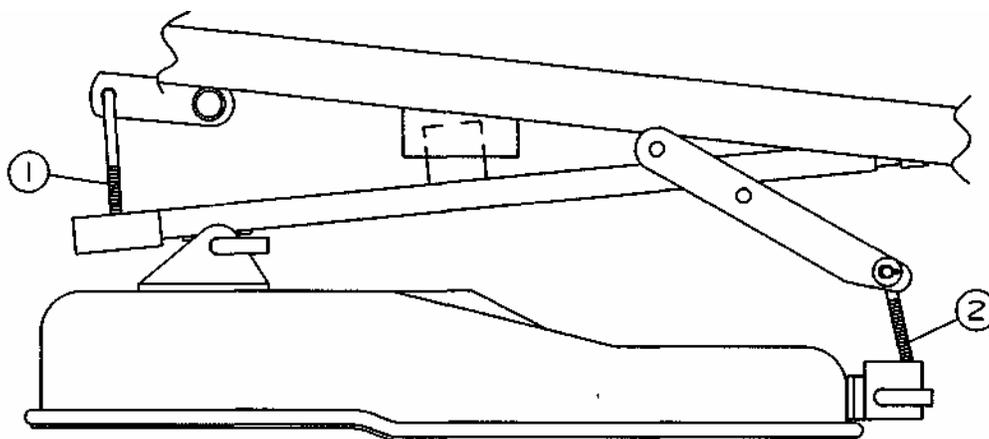
A. Place the mower on a smooth level surface, check tire pressures to insure the mower has a correct stance. Inflate tires as required: Front - 19 - 21 lbs maximum Rear- 10 - 14 lbs maximum

B. Rotate or turn each outer blade tip to align with the edge of the deck or side to side.

C. Measure from the surface up to the bottom of the blade tip on the discharge side of the mower deck. Retain this measurement. Move to the opposite side, check that measurement is the same. If adjustment is required, turn the nut on the bottom of the front threaded adjuster up or down until both side to side measurements are equal. Retain measurement.

D. Rotate or turn both outer blades to align with the deck in front to rear manner. Move to the left rear threaded adjuster, "left rear is designated from operator position on the mower". Turn adjuster nut up or down until rear of mower deck is positioned level to 1/8th of an inch higher than the side to side measurement. At this time, the mower deck will hang or be suspended on (3) points. Move the right rear adjuster and take out the slack which will be present by turning adjuster lock nut up. Confirm the measurement used on the left rear of the deck.

NCTE This will place the mower deck in a base measurement position. Additional adjustment may be required to achieve desired cut for the type of grass or conditions being mowed.



DECK LEVELING ADJUSTMENT POINTS

FINAL PREPARATION

MOWER DECK DEFLECTOR:

Remove hair pin cotter (P/N 3072) from deflector pin (P/N 6297), remove pin. Position deflector (P/N 8799) on mower deck. Reinstall deflector pin and hair pin cotter.

BATTERY:

1. Remove battery from chassis.
2. Fill each cell with electrolyte (acid) to ring at bottom of fill cap.
3. Allow battery to sit for (1 0) minutes, re-check acid level and top off any cells that are low.
4. Trickle charge battery using a charger of less than (6) amps until all cells are gassing freely. Hydrometer readings may be taken, if desired.
5. Install permanent battery caps and wash any accumulated acid from battery before re-installation on chassis.
6. Observe proper battery polarity when re-connecting leads on chassis. Always connect positive lead first.

ENGINE SERVICE:

Final preparation of engine should be completed using engine service manual provided with mower.

INITIAL START AND HYDROSTAT TRANSMISSION CHECK:

1. Final hydrostat checks have been performed at the factory, however, it is necessary to check that the pressure relief bypass on each hydrostatic transmission is completely released before attempting to drive mower.
2. Each hydrostat has a bypass relief pin located at the rear of the hydrostatic unit. A bypass keeper is provided to allow the mower to be rolled around without complete servicing of the unit. To accomplish this, the bypass keeper springs must be positioned to depress the bypass relief pins. Remove bypass keeper springs prior to actual operation of the mower.

OPERATION INSTRUCTIONS

The safe and successful operation of the Model 5421 will depend upon the operator having the correct knowledge of all controls used on the mower and making good judgements about the terrain to be mowed. *NEVER* allow anyone to operate the mower without complete knowledge of all controls and their functions.

Sound judgement by the owner will prevent accidents.

All controls are described from operators position:

PARKING BRAKE:

The parking brake used on the Model 5421 is designed to hold the mower from moving and is not intended for use in stopping the mower while it is in motion. An additional safety feature of the parking brake is that the engine cannot be started unless the brake is applied.

HYDROSTATIC DRIVE SYSTEM:

Allows the mower to turn on its own axis (zero radius). Each lever controls one side of the mower. The pressure required to operate the mower is very light and a minimum of 112 hour should be spent simply driving the mower in a non-mowing application to gain the confidence necessary to mow like a pro.

LEVER MOVEMENTS:

No shifting or clutching required.

TO GO FORWARD:

Release parking brake. From neutral position, gently push both drive levers forward; to increase speed, move levers farther forward.

TO GO BACKWARD:

From neutral position, gently pull both drive levers toward you.

TURNING:

Turning is controlled by moving one drive lever slightly forward or rearward of the other. To turn left, move left lever rearward of the right lever. To turn "square corners" move lever of desired direction to neutral. To turn on mower's own axis (zero radius) reduce speed and move one lever to reverse position and the other to forward position.

OPERATION INSTRUCTIONS: (Continued)

BRAKING:

To brake mower, move both levers in direction opposite of travel, release levers to neutral, set parking brake. Park only on level surfaces.

GROUND SPEED:

Ground speed (controlled by movement of hand levers) must be carefully controlled for safety and best mowing results. Never operate at high speed in unfamiliar areas or on slopes.

CHOKE CONTROL LEVER:

Used to start a cold engine. (Engine has not been operated for a length of time). Located on control panel to operators right.

THROTTLE CONTROL LEVER:

Controls engine speed, slow to maximum. Lever should be set to the maximum or wide open setting to insure adequate cooling of the engine and to maintain mower deck blade speed while mowing.

MOWER DECK CUT HEIGHT LIFT LEVER:

Controls the cutting height of the mower deck. Seven positions of adjustment in which the very top, or highest notch, is used for transporting the mower in a non-mowing situation. Located in front of operator on the right side of mower.

BLADE DRIVE:

To engage the mower deck cutter blades, lift switch up lightly and push forward. To disengage blades, pull switch backward. Switch is clearly marked "on and off".

CIRCUIT BREAKER:

Protection of the electrical system is by (1) 15 amp circuit breaker. If circuit breaker engages, push button to reset. If this condition repeats, consult dealer for inspection and repair.

CARE AND MAINTENANCE - MODEL 5421

This portion of the Model 5421 owners manual deals with normal service items which can be performed by the owner. Please remember that if you are in doubt as to the correct service procedures to be followed, these and other service situations can be handled by a Dixon ZTR Dealer who is familiar with the service of your mower.

NOTE: Due to the precision nature of the hydrostatic transmissions used on the Model 5421, internal service repairs cannot be recommended. Current service requirements will necessitate replacement of an entire hydro unit if failure should occur.

MAINTENANCE SCHEDULE:

To insure a long and trouble free service life on all the components used on the Model 5421 a regular and thorough maintenance schedule should be followed. As with any type of precision made equipment, a certain amount of initial bedding in or seating of the components will take place. The following items should be checked after the first (10) hours of operation and on a weekly basis, or each (40) hours of use:

1. Drive system, belts and controls.
 2. Mower deck belts.
 3. Tire pressures.
 4. Hydrostat oil.
 5. Tightness of all nuts and bolts.
 6. Electric blade clutch air gap setting.
- * Refer to Page 15 for details

Refer to engine service manual provided with your mower for maintenance schedules and procedures to be used on the engine.

PROCEDURE FOR ELECTRIC CLUTCH ADJUSTMENT

Dixon has used two types of electric clutches. One type is the Borg Warner and the second one is the Ogura. Even though these clutches come from different manufacturers, the test procedures are the same for both. Few people realize that clutches have maintenance procedures to extend the life of the clutch as they wear over time. Below is the information to make these maintenance adjustments and also a procedure to check for a faulty coil. In the case that the clutch has failed a part, the entire clutch must be replaced since there are no parts available.

A. AIR GAP ADJUSTMENT

1. Remove the clutch from the engine. This is recommended because it is easier to verify the gap.
2. Locate the three rivet joints which fasten the leaf springs to the armature (figure 1).
3. Rotate the pulley until these rivet joints are located midway along the edge of the triangular field adapter (figure 1).
4. Locate the three holes in the brakeplate, one near each adjustment nut (figure 2).
5. Insert a .012 inch feeler gauge into one of the three windows. Be careful to position the feeler gauge between the rotor and armature faces (figure 3).
6. Tighten the adjusting nut adjacent to the window with the feeler gauge inserted until the gauge fits snugly between the rotor and armature. The gap should not be so tight that the feeler gauge cannot be reinserted after removal.
7. Repeat Steps 5 and 6 at the other two windows.
8. Re-check the air gap at each window and make minor adjustments as necessary to achieve a consistent .012 inch air gap.
9. Reinstall the clutch to the engine. Be sure to torque the mounting bolt back to 50 ft. lbs.

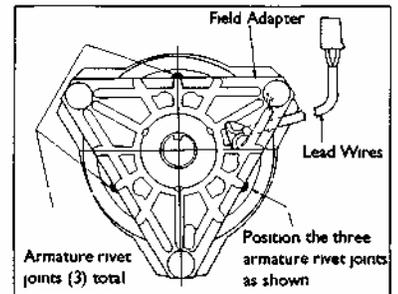


figure 1

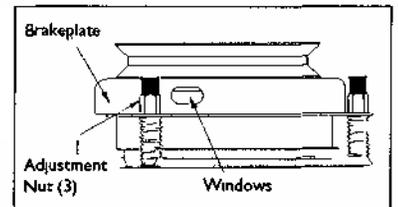


figure2

B. OHMS TEST:

1. Disconnect clutch from mower wiring harness which is located on the right side of the mower frame.
2. Set the multi-meter on RX1 and attach the two leads to the two wires coming from the electric clutch.
3. The reading you receive should be between 2.4 to 2.9 OHMS.
4. If the resistance is outside this range the clutch coil is faulty.
5. If the clutch coil is faulty, the clutch must be replaced.

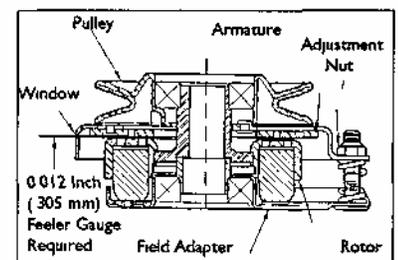


figure3

CARE AND MAINTENANCE - MODEL 5421

MOWER DECK SERVICE

CUTTER BLADE REMOVAL - BELT TENSION:

"CAUTION" The removal of the cutter blades for either sharpening or replacement is best accomplished by removing the deck assembly from the mower. *DO NOT* attempt to raise or lift the front of the mower unless proper safety equipment is available to support the mower. If you do not have the necessary equipment, entrust this task to your dealer.

DECK REMOVAL:

Remove front belt access cover from body. Stand in front of mower, grasp lift quadrant lever with left hand. Move lever to align with the 5th hole from the bottom on the quadrant plate. At this time, connect brake link into hole on lift lever. Move lift lever toward lowest cut position and remove belt from the top of center deck hub assembly.

Remove the hair pin cotter pins from the ends of the deck support rods. Slide deck support rods from deck while supporting deck assembly with a suitable brace, or by the use of an assistant to hold the deck while rods are removed. Slide deck from under chassis.

3. Reverse procedure to re-install deck assembly.

CUTTER BLADE REMOVAL:

1. Carefully place deck assembly in a manner which will allow access to the blade bolts. Hold blade from turning while bolt is removed from the center of each hub assembly. *"Caution"* wear heavy, thick gloves when holding onto cutter blade, avoid the sharp edge of the blade.
2. When reassembling blades to hub assemblies, fully tighten blade bolts to a minimum of 60 ft. lbs. torque. The use of air impact tools is recommended for installation to insure bolt tightness.

BELT TENSION:

1. The engine to mower deck drive belt on the Model 5421 is automatically held in proper tension by springs which push the deck assembly forward, and does not require any additional adjustment to be made. Both the belt and the idler system should be periodically inspected due to the nature of the job they perform.
2. Serpentine deck belt tension is maintained by a manual adjustment rod which is located on the top of the mower deck assembly. Proper belt tension is critical to insure cut quality. If adjustment is required, tighten lock nut on adjustment rod until belt free play or movement between pulleys is approximately 1/4 of an inch.

CARE AND MAINTENANCE - MODEL 5421

DRIVE SYSTEM ADJUSTMENTS:

Adjustment of the drive system is limited to the actual function of the hydrostatic transmissions as outlined below.

1. The idler pulley travel required to engage the belt drive should be held to approximately 1 3/4". To adjust this distance, loosen the nuts on both ends of the rod extending between the idler plate and the brake shaft. Turn the rod as required to achieve desired pulley travel of approximately 1 3/4" when the brake handle is released. Tighten nuts firmly against the ball joint rod ends. See Figure 1 .
2. The twisted idler belt (P/N 1 860) should be aligned in the center of the pulley. To adjust the alignment, tighten or loosen the nut which holds on the pulley, as required, until belt is visually centered on the pulley. Start engine and disengage brake to determine whether pulley alignment is maintained during operation. Shut off engine and repeat procedure, if necessary. See Figure 2.
3. The brake bands should fit tightly around brake drums with the brake handle "on", and release drums with handle in the "off" position. Brake handle should be placed in both "off" and "on" positions several times to determine whether brake bands are functioning correctly. If band is too loose, tighten the nut on the threaded end of eyebolt extending from brake band. If band does not release drum, loosen nut until achieving desired results. Repeat procedure, if necessary. See Figure 3.
4. Neutral Adjustment. Swing upper control levers out into the neutral slots. Raise upper body to the fully open position. Start engine and disengage parking brake. Caution should be used when releasing parking brake as mower may tend to creep or move prior to adjustment. If adjustment is required, loosen lock nuts at each end of the control rods and back off the tension on each spring block. Turn control rods in or out until neutral is obtained on each hydrostat. Re-tighten lock nuts and tension bolts on spring blocks.
5. Forward travel speed adjustments. Stop engine, move levers to drive position, lightly push each upper control lever forward until a resistance is felt on the lever. At this time, check that the forward lever stops on the bottom of each lever are hitting the stop blocks. If adjustment is required, loosen the lock nuts on the lever stop and turn the bolt in until the lever hits the stop block before resistance is felt in the hydrostat. See Figure 4.
6. Balance of travel speed. If mower tends to pull to either side, readjust lever stop on fast side to slow the hydrostat down and even out the ground speed. **DO NOT SPEED UP THE SLOW SIDE, AS OVER STROKING OF THE HYDROSTAT COULD RESULT IN DAMAGE TO THE UNIT.** If upper control levers are slightly off-set following this adjustment, they can be realigned by bending them slightly.

Refer to the diagrams on the following pages for the location of adjustment points.

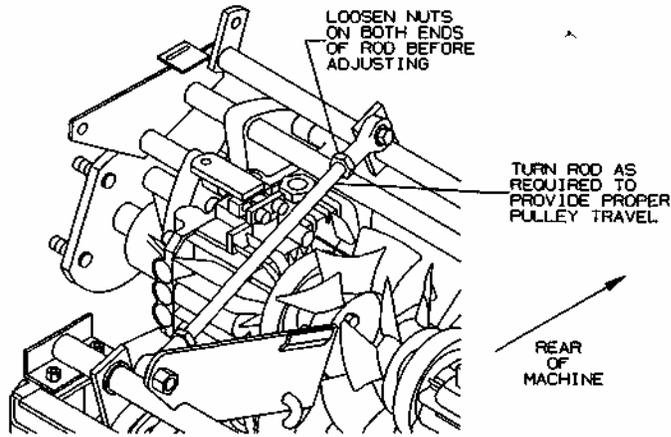


Figure 1

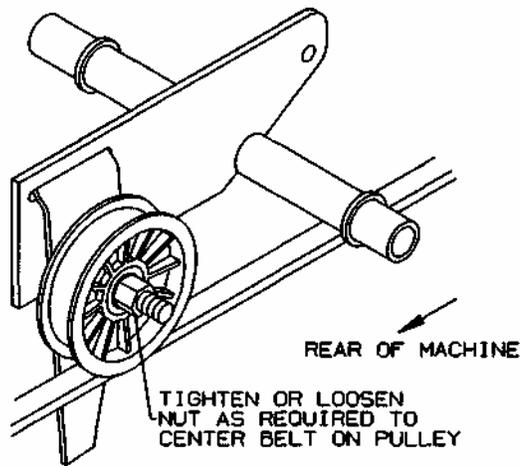


Figure 2

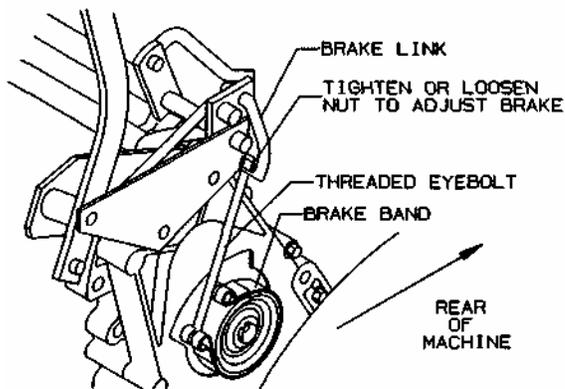
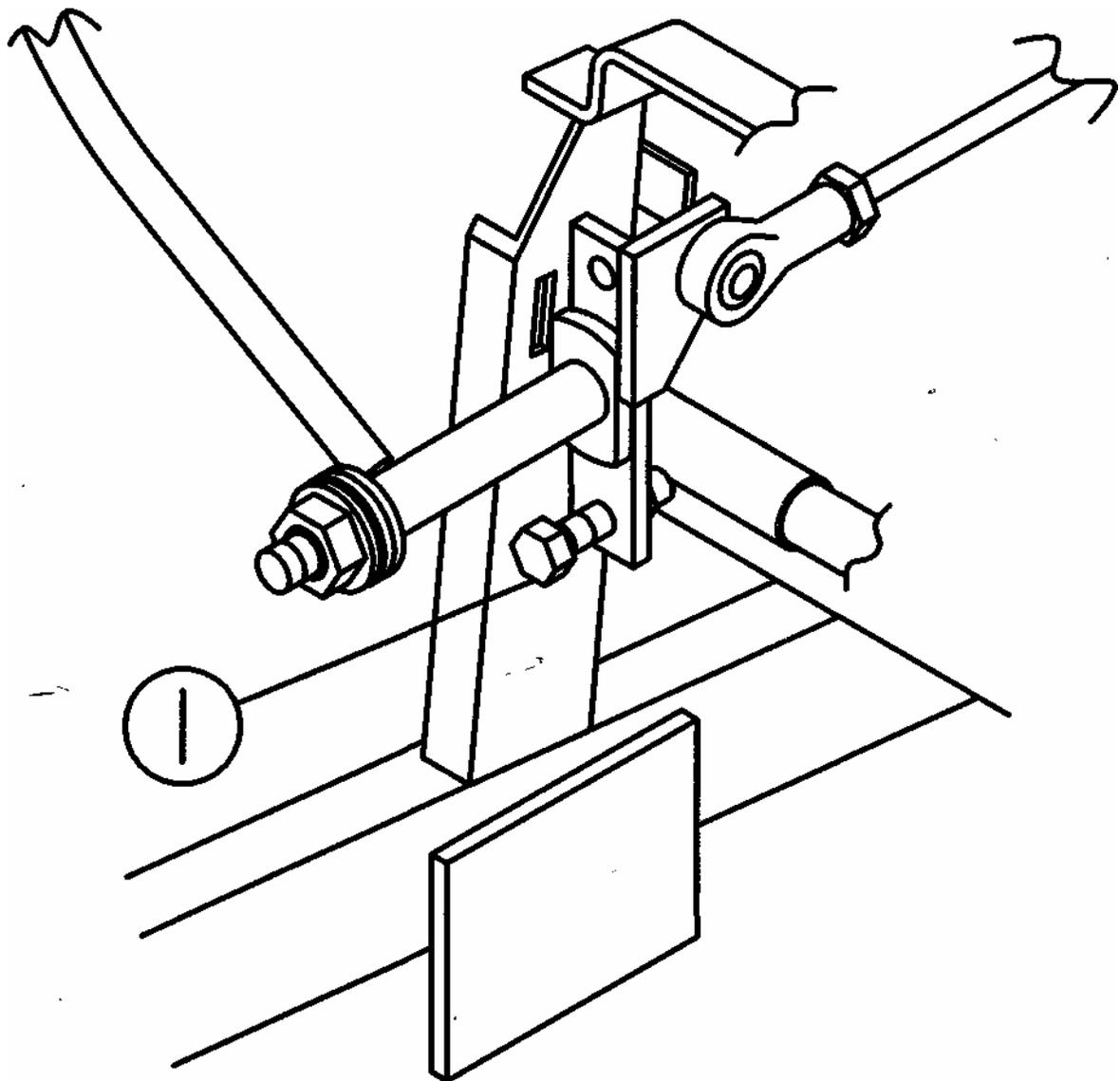


Figure 3

①

FORWARD LEVER STOP ADJUSTMENT



CARE AND MAINTENANCE - MODEL 5421

LUBRICATION

CHASSIS AND MOWER DECK: Number of grease zerks used: (7)

LOCATIONS: (1) each front wheel caster, front wheel, and deck hub for front wheels

SERVICE INTERVALS: Every 50 hours of operation

RECOMMENDED GREASE: Name brand wheel bearing or multi-purpose grease

CAUTION: The use of compressed air pressure greasing methods is not recommended as damage to seals and bearings could occur.

Using a hand pressure grease gun, lubricate each front wheel to allow even distribution of grease within the wheel, rotate or spin each front wheel after (3) pumps of the grease gun. Repeat process until the appearance of grease is noted completely around each caster axle.

ENGINE OIL CHANGES:
OIL RECOMMENDATIONS:
SERVICE INTERVALS: "Refer to separate owners manual furnished by the engine manufacturer."

*PLEASE DISPOSE OF USED OILS AT PROPER COLLECTION CENTERS.
PROTECT YOUR ENVIRONMENT*

CARE AND MAINTENANCE - MODEL 5421

CLEANING THE MOWER:

A clean machine is a source of pride to the owner. However, cleaning by use of high pressure commercial washes is not recommended. The high water pressure, combined with solvents or alkaline detergents, can lead to corrosion of electrical components or damage to the sealed bearings used on your mower. A better approach is the use of the mild household soaps and low water pressure. A stiff brush can be used to loosen excess grass and dirt build up. Avoid directing water pressure onto the mower deck hub assemblies, electrical wiring and engine components such as air filter openings. To remove excess water which accumulated during washing of the mower, either blow off with compressed air, if available, or start the engine, allowing a long enough operation time to dry thoroughly. It is advisable to engage the mower deck for a short time to disperse all water from pulleys and belts.

PLEASE HELP PROTECT THE ENVIRONMENT BY AVOIDING ALL CHEMICALS WHICH MAY DAMAGE OR CAUSE HARM TO PLANTS AND ANIMALS IN YOUR AREA.

TROUBLESHOOTING

MOWER CUT QUALITY:

There are many variables that can effect the cut quality of any multi-blade mower. Type and conditions of grass, cut height setting, engine RPM and ground speed are some of the variables that interact creating differences in cut quality. Examination of one or more of the above will generally produce a quality cut.

The Troubleshooting Chart suggests practices and adjustments that may be helpful in improving cut quality. Your Dixon ZTR Dealer is also available to provide assistance to you.

SITUATION	CAUSES	REMEDY
Poor cut quality	Ground speed	Reduce mowing speed
Poor cut quality	Loose belts	Adjust per operators manual
Poor cut quality	Engine RPM too low	Increase engine RPM to maximum
Poor cut quality	Dull or bent blades	Sharpen or replace as required
Poor cut quality	Unlevel mower deck	Adjust per operators manual
Poor cut quality	Grass build-up under mower deck	Clean out underside of mower deck
Poor cut quality	Improper blades	Replace with original equipment blades which are designed for the Model 5421
Poor cut quality	Uneven tire pressures	Check and adjust as required per operators manual

TROUBLESHOOTING

DRIVE SYSTEM:

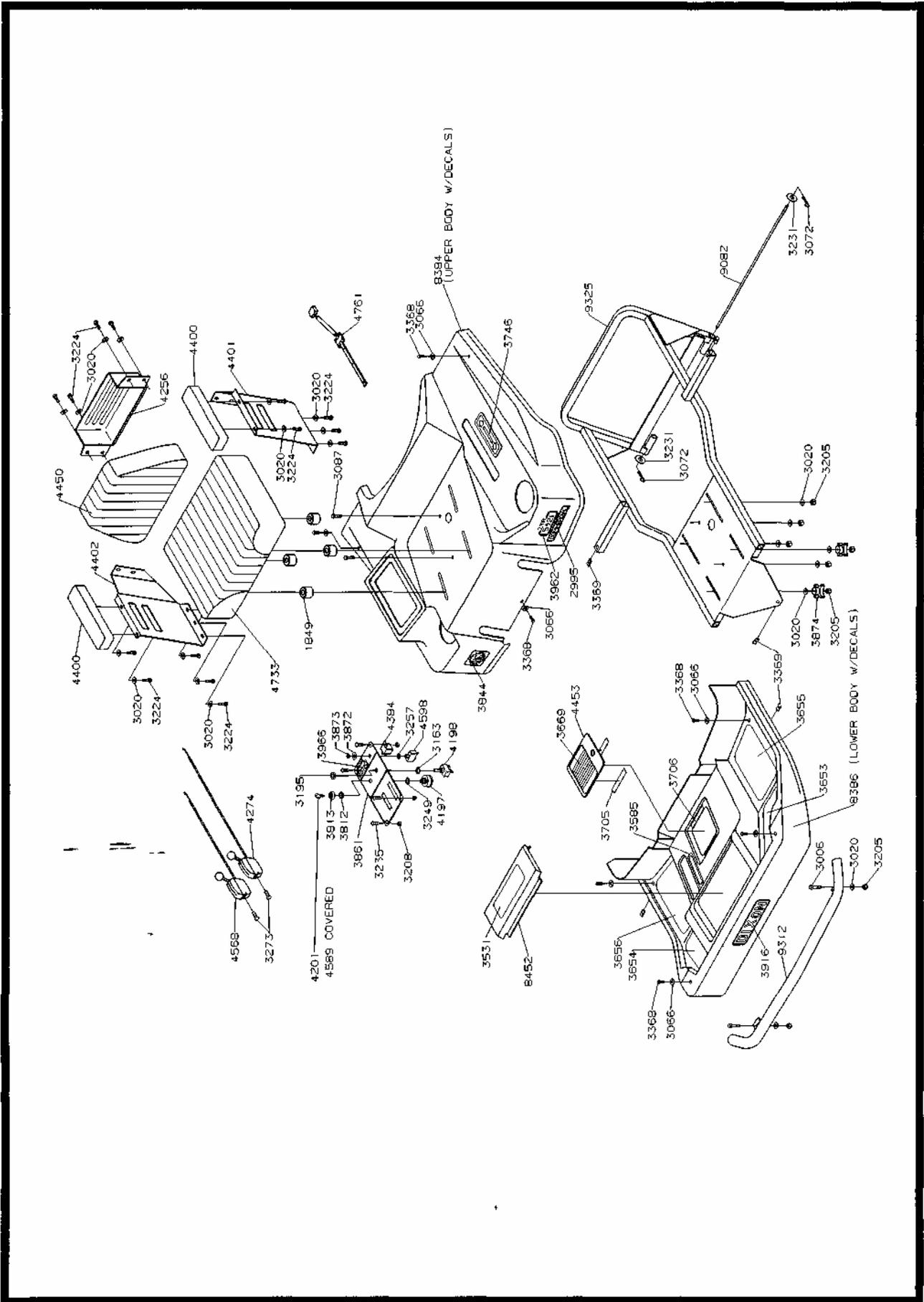
SITUATION	CAUSES	REMEDY
Mower pulls to one side or the other	Drive adjustment	Adjust per operators manual Consult your dealer for repair
Loss of drive power on one side or the other	T-Box belts slipping	Adjust per operators manual Consult your dealer for repair
Loss of power on both wheels after being operated for a length of time	Belt from engine to T-Box is slipping	Adjust per operators manual Consult your dealer for repair
Poor driving performance	Operation of mower	Review operators section of owners manual
Oil leaks	Loose or missing hose clamps	Tighten or replace as required

TROUBLESHOOTING

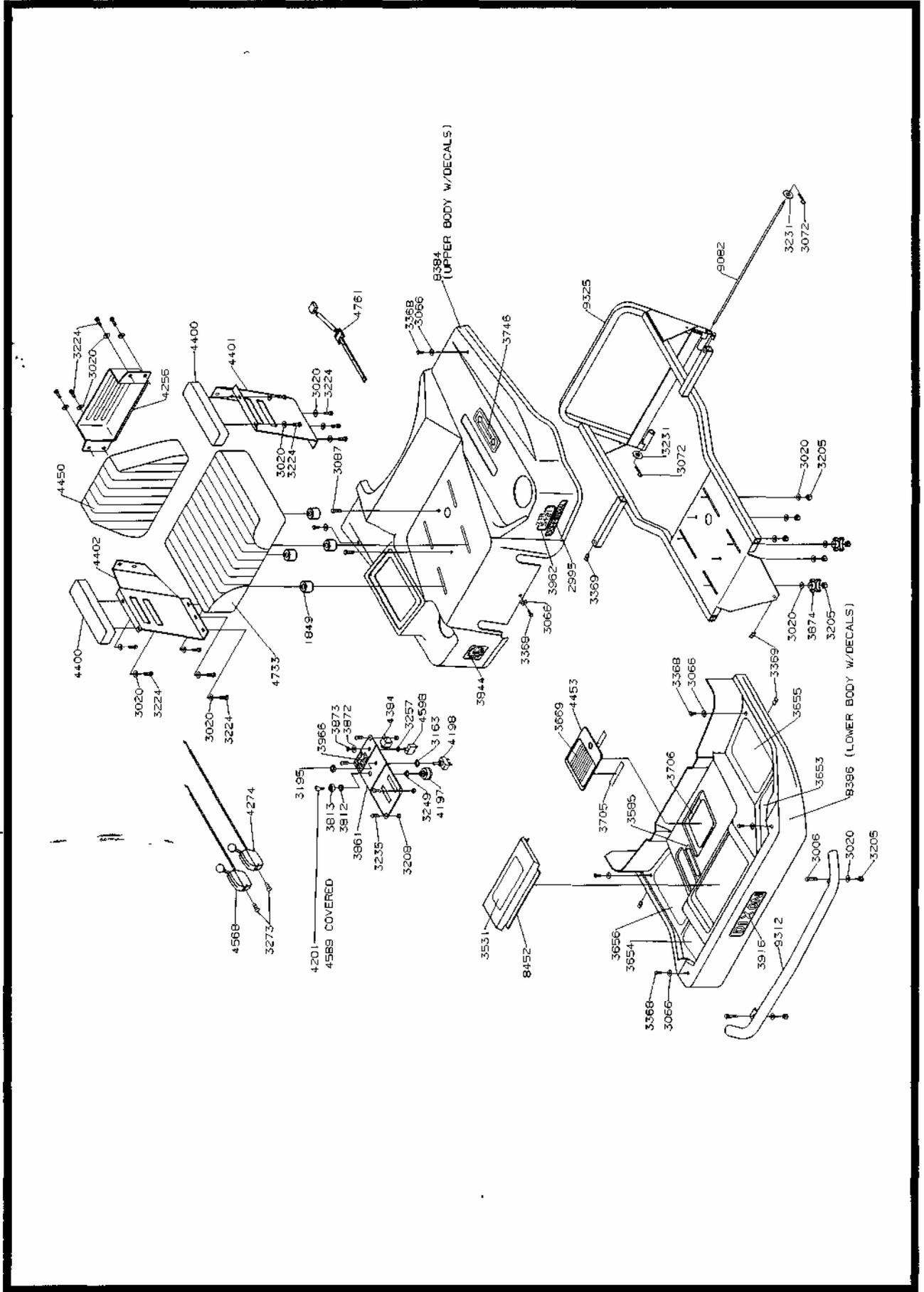
ELECTRICAL SYSTEM:

SITUATION	CAUSES	REMEDY
Starter will not turn engine over	Circuit breaker engaged	Push button to reset Consult your dealer for repair
Starter will not turn engine over	Dead battery	Charge battery
Battery discharge	Poor connections on battery Battery water low Wrong battery installed in mower	Tighten or replace as required
Battery discharge	Engine electrical system not functioning correctly	Have electrical system checked by your dealer
Battery discharge	Engine being operated at too low an RPM	Increase engine RPM Contact your dealer for information
Electric clutch will not engage mower deck blades	Low battery condition Poor connections on clutch switch Broken wiring	Repair or replace as required Consult your dealer for repair

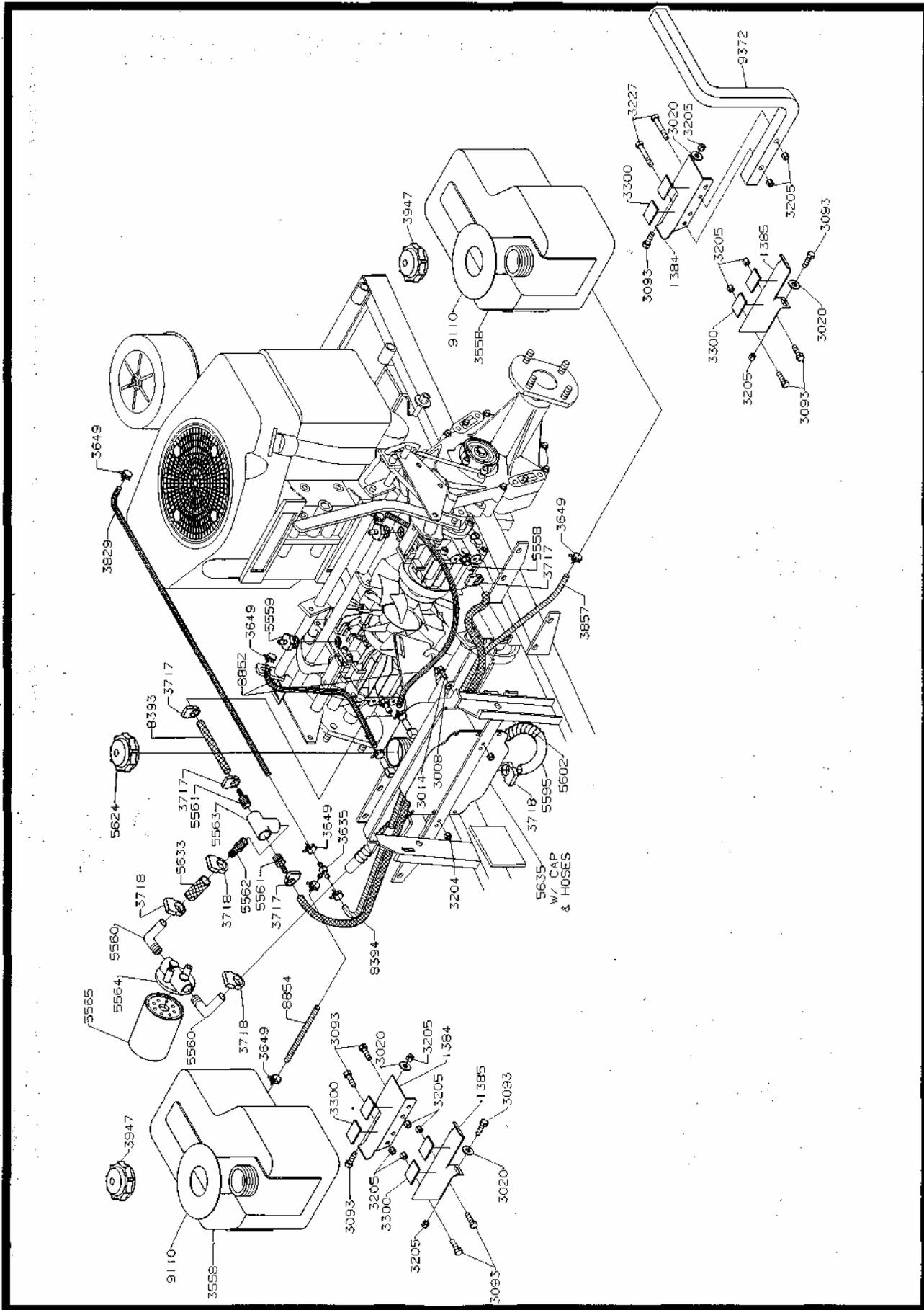
NOTE: Electrical system failures are generally simple in nature, always check the obvious first and then move onto the more complicated parts used. Poor battery service, loose connections, corrosion, frayed or broken wiring, are more likely than component failure.



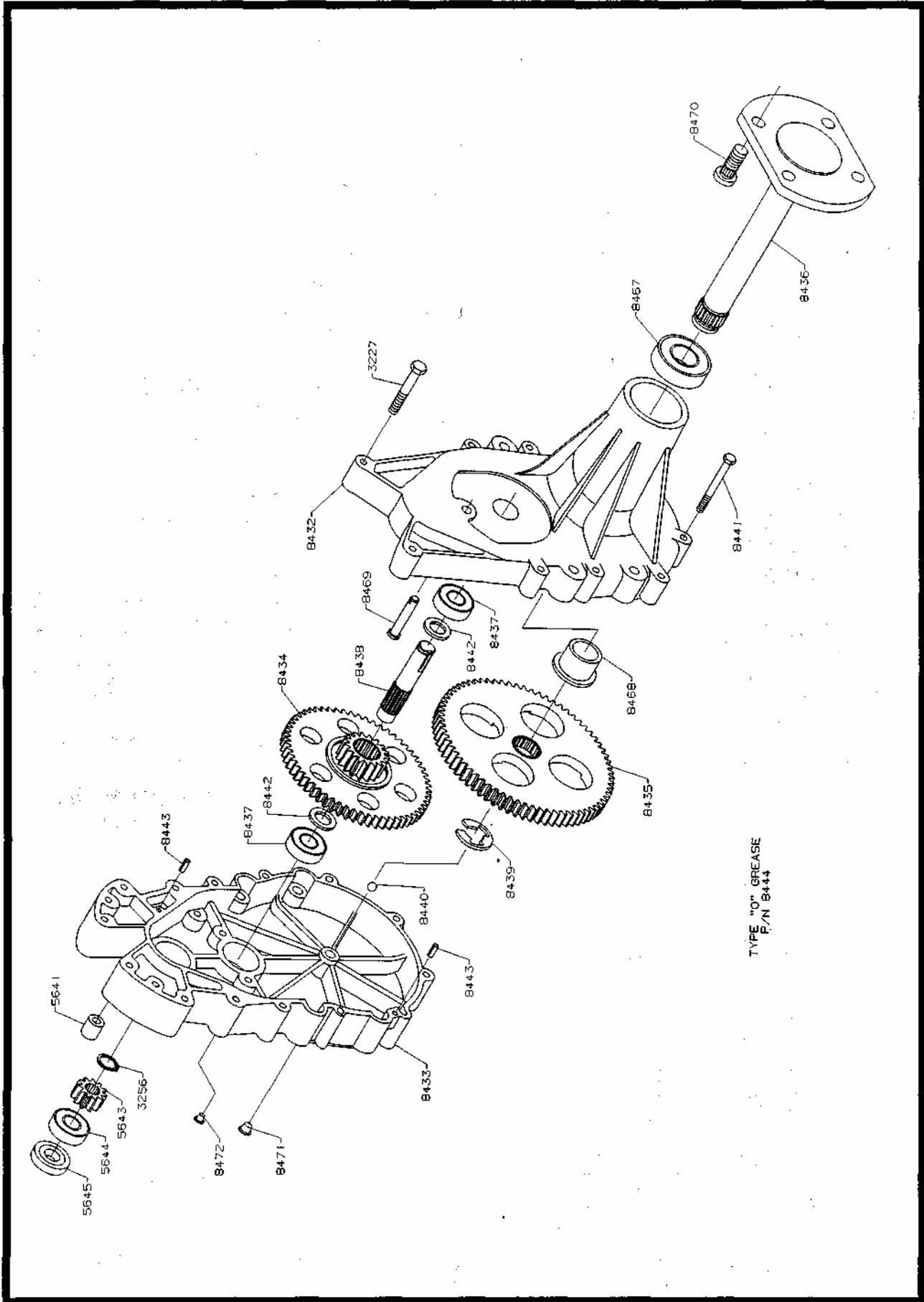
5421 Body Assembly



5421 Body Assembly



5421 Fuel and Hydraulics Tanks and Fitting Assembly



5000 Series Gearbox Assembly

ZTR 5421 PARTS LIST

1108	Front Tire	3093	5/1 6"-1 8 UNC X 1 " HH Bolt GR5
1109	Inner Tube - Front Wheel	3100	7/1 6" HD Flat Washer
1384	Tank Mount Bracket (Short)	3106	1/4"X1" Spiral Pin
1385	Tank Mount Bracket (Long)	3130	1/2" Contact Belleville Spring
1512	Rear Tire	3160	5/16" Flat Washer
1668	Drive Pulley	3161	5/1 6"-24 UNF LH Thread
1685	L-Rod	3163	1/2" Int Tooth Lock Washer
1687	Idler Pulley	3178	3/8"-16 X 2 1/2" HH Bolt GR5
1701	Wheel/Deck Hub Bearing	3182	Flip Lock Bushing
1751	Transaxle Idler Pulley	3187	#10-32 Hex Nut
1763	Tie Down w/Insulator	3188	#10 Ext Tooth Lock
1826	Caster Bushing	3193	Washer .43 X 1 .38 X .25
1849	Seat Spacer	3195	Face Nut 1/2"-27
1850	Drive Pulley	3203	3/8" ID Flat Washer (Narrow)
1851	4" A-Pulley	3204	1/4"-20HexNutw/Nylok
1860	V-Belt	3205	5/16"-18HexNutw/Nylok
1863	Caster Tube	3206	3/8"-16HexNutw/Nylok
1938	Anchor Bracket	3208	#10-24 Hex Nut w/Nylok
2128	Sleeve	3217	1/4" SAE Flat Washer
2475	Control Rod	3220	7/16"-20 x 2 3/4" HH Bolt GR5
2533	Brake Rod	3224	5/16"-18 X 1" HH Bolt w/Nylok GR5
2648	Deck Hub Key	3225	3/8"-16X21/4"HHBolt
2995	Commercial Decal	3227	5/16"-18X2"HHBoltGR5
3002	5/16"-18X21/2"HHBoltGR8	3231	9/1 6" Std Flat Washer
3005	5/16"-18UNCHexNut	3235	#10-24 X 5/8" Phillips Pan Hd Screw
3006	5/16"-18X1 1/4" HH Bolt GR5	3237	Eye Bolt 5/1 6" X 6.00
3007	1/4"-20 UNC Hex Nut	3247	#6-20 X 1/2" Phillips Pan Hd Screw
3008	1/4" ID X 3/4" OD Flat Washer	3249	5/8" Int Tooth Lock Washer
3009	5/1 6"- 18 UNC X 1 3/4" HH Bolt GR5	3256	Snap Ring
3012	3/8"-16UNCHexNut	3257	7/16" Int Tooth Lock Washer
3014	1/4"-20 UNC X 3/4" HH Bolt GR5	3266	1/4" Int Tooth Lock Washer
3019	5/16" Helical Lock Washer	3267	5/1 6"- 18 X 1 3/8" HH Bolt GR5
3020	5/16" Std Flat Washer	3268	3/8"-24 X 1 1/4" HH Bolt GR8 w/Nylok
3023	1/4" Helical Lock Washer	3269	5/16"-18X1" Soc Head Bolt
3033	1/2" SAE Flat Washer	3272	5/16" Int Tooth LW
3052	3/32" X 1 " Cotter Pin	3273	8-18X3/8" Phillips Pan Hd
3057	3/8" Std Flat Washer	3297	1/2"-13Thin Profile Nylok
3061	5/16"-18 UNC 1 3/4" Soc Set Screw	3298	Washer .51 5 X. 874 X. 031
3066	3/1 6" Std Flat Washer	3300	Foam Pad
3068	1/8"X1" Cotter Pin	3310	5/16"-18Thin Profile Nylok
3072	1/8" X 1 3/4" Hair Pin Cotter	3318	3/8"-16X 2 1/4" HH BoltGRS
3074	5/16"-24UNFHexJamNut	3319	Idler Shock Mount
3087	5/16"-18 UNC X 3/4" HH Bolt GR5	3321	5/16"-18X 8 HH BoltGRS
3088	1/4"-20X1"HH BoltGRS	3322	5/16"-18 X 5 1/2" HH Bolt GR8
3091	1/2"-20 UNF Hex Lug Nut	3325	3/8"-16 X 3/12" HH Bolt GR8

ZTR 5421 PARTS LIST

4584	Start Cable	5643	Input Gear - GB
4585	Battery Ground Cable	5644	Bearing - Gearbox
4587	Wire Cover 61 "	5645	Bearing Spacer - GB
4589	Covered Key	5648	CW Fan-Machined
4594	Wire Cover 14"	5649	CCW Fan-Machined
4598	Circuit Breaker	5650	Hydro
4645	Wire Cover 30"	5651	Hydro
4733	Seat Bottom	6065	Serpentine Idler Spring
4761	Seat Switch Assembly	6075	Engaging Idler Bracket Spacer
4783	Upper Wire Loom	6100	Outer Shaft Key
4784	Lower Wiring Loom	6101	Center shaft Key
4979	Hinge	6109	Serpentine Blade Drive Belt
5070	Key 3/16" SqX 7/8"	6111	Deck Drive Belt
5085	Brake Band	6168	Trash Guard
5170	Spring	6236	Mower Blade 42" Standard
5189	Bushing	6260	Blade Washer
5242	Plug w/Hole	6263	Hub Spacer - .459
5249	5/8" Bearing w/Snap	6264	Deck Hub - Machined
5257	Brake Drum (Keyed)	6272	V-Pulley
5283	Link	6282	Tapped Shaft Weldment Long
5522	Brake Link Right	6283	Tapped Shaft Weldment Short
5525	Brake Link Left	6293	Deflector Mount Bracket
5530	Control Pivot Shaft	6297	Deflector Pin
5531	Adjustable Collar	6366	Mower Deck Weldment
5537	Control Arm Bracket	6370	Mower Deck Assembly
5540	Neutral Adjust Collar	6392	Blow-By Baffle 42"
5554	Spacer 1/2" OD X 1/4"	6744	Spring
5558	Hose Fitting	7015	"L" Rod - 7"
5559	Hose Fitting	7594	Thrust Bearing
5560	Elbow - Male	7647	Wheel & Tire Assembly
5561	Adapter - Male (For 3/8" ID Hose)	7648	Caster Axle RH
5562	Adapter - Male (For 5/8" ID Hose)	7649	Caster Axle LH
5563	Tee - Cast Iron	8167	Caster Wheel Bearing
5564	Filter Head	8244	Clutch Kit
5565	Oil Filter	8384	Upper Body
5585	Tab	8386	Lower Body
5595	Hose 5/8" X 14"	8389	Frame Assembly
5602	Hose Guard Spring	8390	Front Rim - Black
5624	Tank Cap	8393	3/8" Black Hose 3.75
5625	Gearbox	8394	3/8" Black Hose 28.5
5632	3/8" Hose - 5"	8395	Wire Kit
5633	5/8" Hose - 2"	8429	Oil Valve/Hose Assembly
5635	Reservoir Assembly	8452	Battery Cover
5636	Brass Ferrule	8455	Serpentine Idler w/Stud
5641	G-Box Mount Spacer	8457	Deflector w/Decal

ZTR 5421 PARTS LIST

8576	Rear Rim	9624	Lift Cam Drilled RH
8688	Mower Blade Hi-Lift	9634	Lift Frame Weldment
8772	Belt Set (1859)	9646	Lift Plate
8852	Fuel Line 26.5	9655	Lift Shaft Weldment
8854	Fuel Line 6"		
9031	Spacer		
9049	Lift Bushing Bracket		
9067	Control Rod		
9082	Seat Frame Pivot Rod		
9098	L-Rod9/16"X153/16"		
9110	Tank Cover		
9142	Lift Rod - Rear		
9156	Right Swivel Plate		
9157	Left Swivel Plate		
9158	Control Lever w/Grip Left		
9159	Control Lever w/Grip Right		
9164	Brake Plate		
9165	Brake Plate		
9171	Spacer 1 .75		
9172	Spacer 1 .50		
9174	Brake Rod		
9191	Connecting Link		
9196	Plate		
9212	Spring (Belt Tensioner)		
9268	Spacer 1. 25 OD X 1.1 4		
9280	Engine Plate		
9312	Bumper Weldment		
9325	Seat Frame Weldment		
9329	Tie Bar Weldment		
9330	Tie Bar Weldment		
9332	Spring Anchor		
9334	Pulley Mount Plate		
9335	Pivot Shaft		
9336	Pulley Shaft		
9339	Rear Wheel & Tire		
9342	Idler/Tube Weldment		
9344	Angle Weldment		
9346	Engine Plate Weldment		
9347	Idler Spring Plate		
9350	Brake Shaft Weldment		
9372	Body Brace		
9374	Brace		
9377	Brake Lever		
9618	Lift Handle Weldment		
9623	Lift Cam Drilled RH		

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