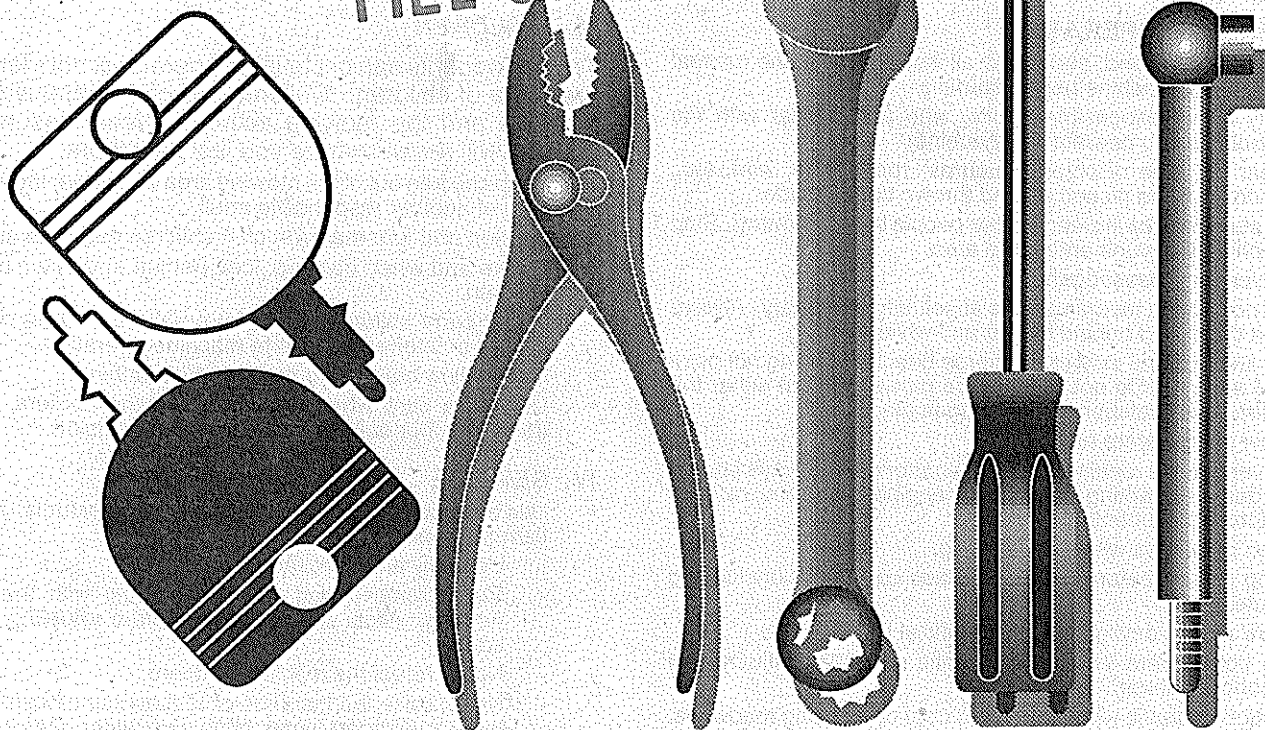


Do Not Remove
Rev 0

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OWNER'S MANUAL MODEL NO. HD3K4E9A 14.5 HP 42 Inch Lawn Tractor

- Assembly
 - Operation
 - Customer Responsibilities
 - Service and Adjustments
 - Storage
 - Troubleshooting
 - Repair Parts

For Parts and Service, contact our authorized distributor: call 1-800-849-1297
For Technical Assistance: call 1-800-829-5886

WEED EATER® VIP™

152336 3.05.95 JH
PRINTED IN U.S.A.

SAFETY RULES



Safe Operation Practices for Ride-On Mowers

IMPORTANT: THIS CUTTING MACHINE IS CAPABLE OF AMPUTATING HANDS AND FEET AND THROWING OBJECTS. FAILURE TO OBSERVE THE FOLLOWING SAFETY INSTRUCTIONS COULD RESULT IN SERIOUS INJURY OR DEATH.

III. CHILDREN

- Tragically accidents can occur if the operator is not alert to the presence of children. Children are often attracted to the machine and the mowing activity. *Never* assume that children will remain where you last saw them.
- Keep children out of the mowing area and under the watchful care of another responsible adult.
- Be alert and turn machine off if children enter the area.
- Before and when backing, look behind and *down* for small children.
- Never carry children. They may fall off and be seriously injured or interfere with safe machine operation.
- Never allow children to operate the machine.
- Use extra care when approaching blind corners, shrubs, trees, or other objects that may obscure vision.

IV. SERVICE

- Use extra care in handling gasoline and other fuels. They are flammable and vapors are explosive.
- Use only an approved container.
- Never remove gas cap or add fuel with the engine running. Allow engine to cool before refueling. Do not smoke.
- Never refuel the machine indoors.
- Never store the machine or fuel container inside where there is an open flame, such as a water heater.
- Never run a machine inside a closed area.
- Keep nuts and bolts, especially blade attachment bolts, tight and keep equipment in good condition.
- Never tamper with safety devices. Check their proper operation regularly.
- Keep machine free of grass, leaves, or other debris build-up. Clean oil or fuel spillage. Allow machine to cool before storing.
- Stop and inspect the equipment if you strike an object. Repair, if necessary, before restarting.
- Never make adjustments or repairs with the engine running. 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.
- Mower blades are sharp and can cut. Wrap the blade(s) or wear gloves, and use extra caution when servicing them.
- Check brake operation frequently. Adjust and service as required.

Look for this symbol to point out important safety precautions. It means SAFETY IS INVOLVED.



CAUTION: Always disconnect spark plug wire and place wire where it cannot contact starting when setting up, transporting, adjusting or making repairs.



WARNING

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

I. GENERAL OPERATION

- Read, understand, and follow all instructions in the manual and on the machine before starting.
- Only allow responsible adults, who are familiar with the instructions, to operate the machine.
- Clear the area of objects such as rocks, toys, wire, etc., which could be picked up and thrown by the blade.
- Be sure the area is clear of other people before mowing. Stop machine if anyone enters the area.
- Never carry passengers.
- Do not mow in reverse unless absolutely necessary. Always look down and behind before and while backing.
- 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.
- Slow down before turning.
- Never leave a running machine unattended. Always turn off blades, set parking brake, stop engine, and remove keys before dismounting.
- Turn off blades when not mowing.
- Stop engine before removing grass catcher or unclogging chute.
- Mow only in daylight or good artificial light.
- Do not operate the machine while under the influence of alcohol or drugs.
- Watch for traffic when operating near or crossing roadways.
- Use extra care when loading or unloading the machine into a trailer or truck.

II. SLOPE OPERATION

- 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 machine. *All grass can hide obstacles.*
- Use slow speed. Choose a low gear so that you will not have to stop or shift while on the slope.
- Follow the manufacturer's recommendations for wheel weights or counterweights to improve stability.
- Use extra care with grass catchers or other attachments. These can change the stability of the machine.
- Keep all movement on the slopes *slow* and *gradual*. Do not make sudden changes in speed or direction.
- Avoid starting or stopping on a slope. If tires lose traction, disengage the blades and proceed slowly *straight* down the slope.
- **DO NOT:**
 - 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 machine by putting your foot on the ground.
 - Do not use grass catcher on steep slopes.

CONGRATULATIONS on your purchase of a new tractor. It has been designed, engineered and manufactured to give you the best possible dependability and performance. Should you experience any problem you cannot easily remedy, please contact your nearest authorized service center/department. We have competent, well-trained technicians and the proper tools to service or repair this tractor. Please read and retain this manual. The instructions will enable you to assemble and maintain your tractor properly. Always observe the "SAFETY RULES".

MODEL	
NUMBER	HD3K4E9A
SERIAL	
NUMBER	_____
DATE OF PURCHASE	_____
THE MODEL AND SERIAL NUMBERS WILL BE FOUND ON A PLATE UNDER THE SEAT.	
YOU SHOULD RECORD BOTH SERIAL NUMBER AND DATE OF PURCHASE AND KEEP IN A SAFE PLACE FOR FUTURE REFERENCE.	

CUSTOMER RESPONSIBILITIES

- Read and observe the safety rules.
- Follow a regular schedule in maintaining, caring for and using your tractor.
- Follow the instructions under "Customer Responsibilities" and "Storage" sections of this owner's manual.

PRODUCT SPECIFICATIONS

HORSEPOWER:	14.5
GASOLINE CAPACITY AND TYPE:	2 GALLONS UNLEADED REGULAR
OIL TYPE (API-SF/SG):	SAE 30 (above 32°F) SAE 5W-30 (below 32°F)
OIL CAPACITY:	3.0 PINTS
SPARK PLUG: (GAP: .030")	CHAMPION RJ19LM
VALVE CLEARANCE:	INTAKE: .005" - .007" EXHAUST: .009" - .011"
GROUND SPEED (MPH):	FORWARD: 1st 1.1 2nd 1.4 3rd 2.3 4th 3.5 5th 4.5 6th 5.7 REVERSE: 1.8
TIRE PRESSURE:	FRONT: 14 PSI REAR: 10 PSI
CHARGING SYSTEM:	3 AMPS BATTERY 5 AMPS HEADLIGHTS
BATTERY:	AMP/HR: 25 MIN. CCA: 190 CASE SIZE: U1R
BLADE BOLT TORQUE:	30-35 FT. LBS.

WARNING: This tractor is equipped with an internal combustion engine and should not be used on or near any unimproved forest-covered, brush-covered or grass-covered land unless the engine's exhaust system is equipped with a spark arrester meeting applicable local or state laws (if any). If a spark arrester is used, it should be maintained in effective working order by the operator.

A spark arrester for the muffler is available through your nearest authorized service center/department (See REPAIR PARTS section of this manual).

In the state of California the above is required by law (Section 4442 of the California Public Resources Code). Other states may have similar laws. Federal laws apply on federal lands.

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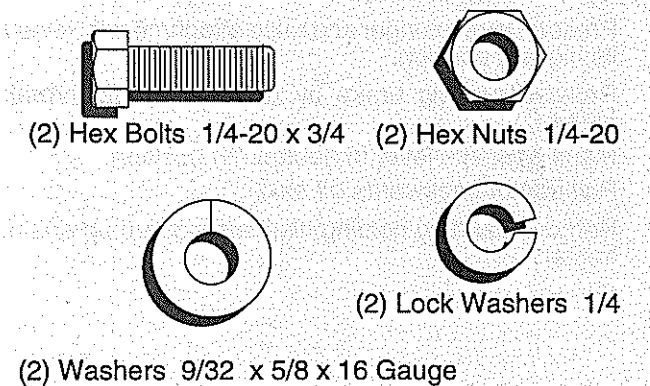
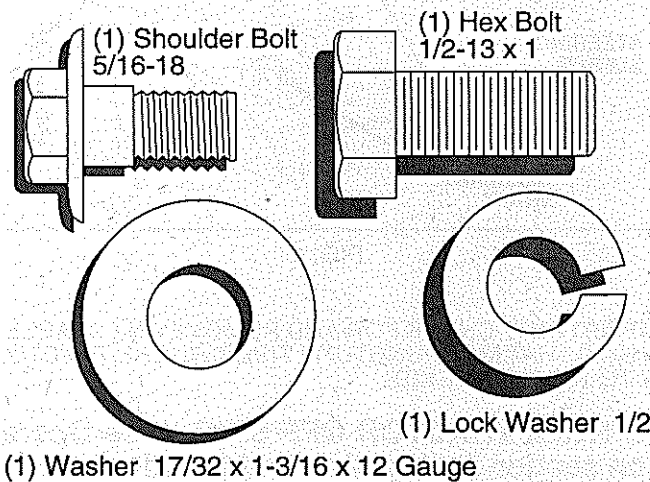
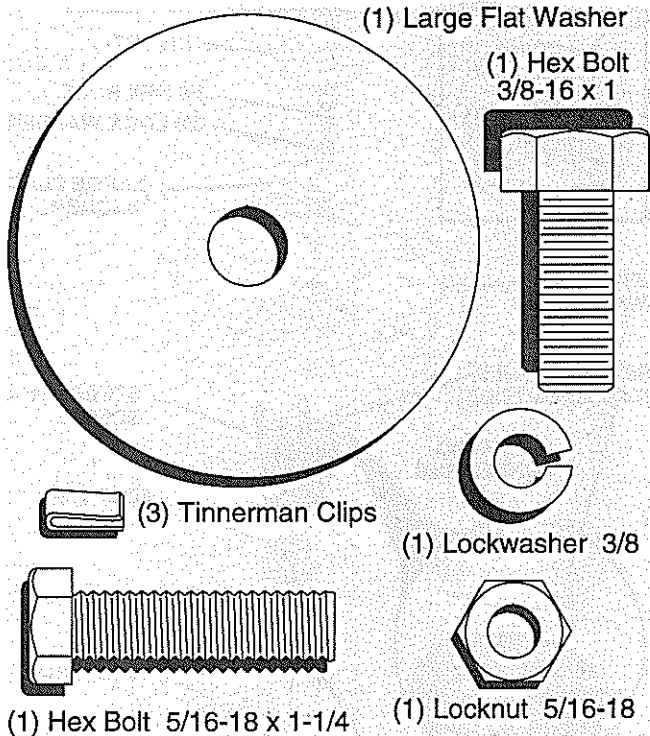
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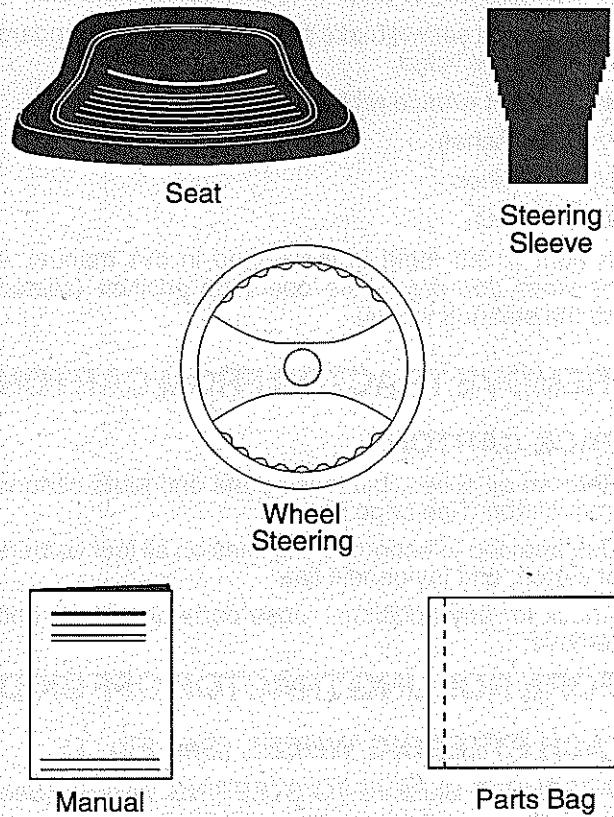
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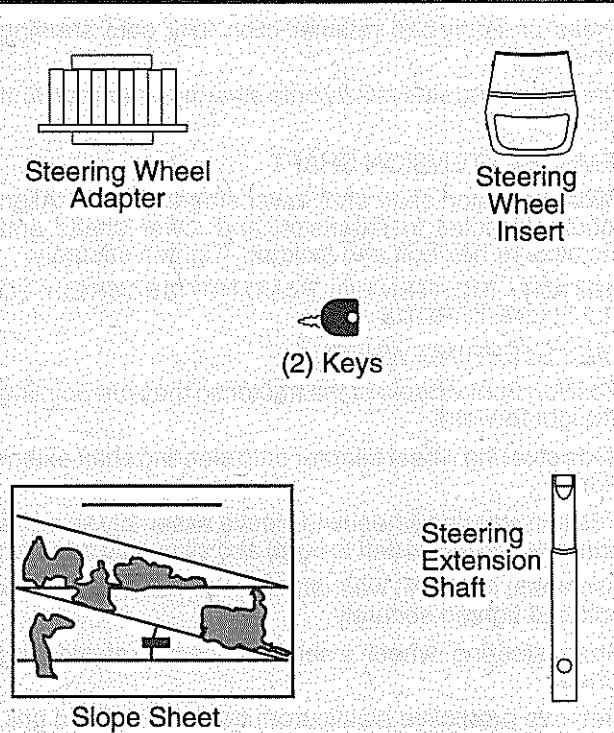
Parts Bag contents shown full size



Parts packed separately in carton



Parts bag contents not shown full size



Your new tractor has been assembled at the factory with exception of those parts left unassembled for shipping purposes. To ensure safe and proper operation of your tractor all parts and hardware you assemble must be tightened securely. Use the correct tools as necessary to insure proper tightness.

TOOLS REQUIRED FOR ASSEMBLY

A socket wrench set will make assembly easier. Standard wrench sizes are listed.

- (1) 3/4" Socket w/drive ratchet Utility knife
- (2) 7/16" wrenches
- (2) 1/2" wrenches
- (1) 9/16" wrench

When right or left hand is mentioned in this manual, it means when you are in the operating position (seated behind the steering wheel).

TO REMOVE TRACTOR FROM CARTON

UNPACK CARTON

- Remove all accessible loose parts and parts cartons from carton (See page 5).
- Cut, from top to bottom, along lines on all four corners of carton, and lay panels flat.
- Check for any additional loose parts or cartons and remove.

BEFORE ROLLING TRACTOR OFF SKID

ATTACH STEERING WHEEL (See Fig. 1)

PREASSEMBLE SLEEVE TO STEERING WHEEL (See Fig. 1 Inset)

- Install sleeve, retainer clips, evenly spaced around steering wheel hub, with formed tabs toward the outside of hub.
- Press or lightly tap retainer clips fully onto steering wheel hub.
- Press steering sleeve fully onto steering wheel hub and clips.

ASSEMBLE EXTENSION SHAFT

- Slide extension shaft onto lower steering shaft. Align mounting holes in extension and lower shafts and install 5/16 hex bolt and locknut. Tighten securely.

INSTALL STEERING WHEEL

- Position front wheels of the tractor so they are pointing straight forward.
- Slide steering wheel adapter onto steering shaft extension.

- Position steering wheel and sleeve assembly so cross bars are horizontal (left to right) and slide onto adapter.
- Assemble large flat washer, 3/8 lock washer, 3/8 hex bolt and tighten securely.
- Snap steering wheel insert into center of steering wheel.

- Remove protective plastic from tractor hood and grill.

IMPORTANT: CHECK FOR AND REMOVE ANY STAPLES IN SKID THAT MAY PUNCTURE TIRES WHERE TRACTOR IS TO ROLL OFF SKID.

TO ROLL TRACTOR OFF SKID (See Operation section for location and function of controls)

- Press lift lever plunger and raise attachment lift lever to its highest position.
- Release parking brake by depressing clutch/brake pedal.
- Place gearshift lever in neutral (N) position.
- Roll tractor backwards off skid.
- Remove banding holding discharge guard up against tractor.

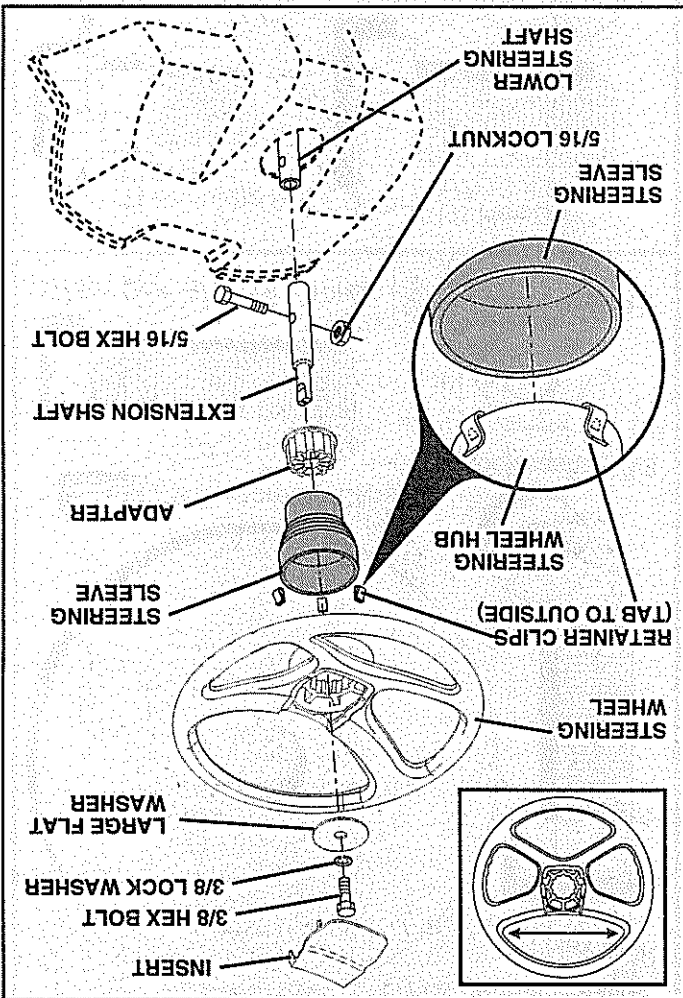


FIG. 1

ASSEMBLY

CONNECT BATTERY (See Figs. 2 and 3)



CAUTION: Do not short battery terminals. Before connecting battery, remove metal bracelets, wristwatch bands, rings, etc.

Positive terminal must be connected first to prevent sparking from accidental grounding.

- Remove cardboard packing from seat pan and lift seat pan to raised position.
- Open battery box door.
- Remove terminal protective caps and discard.
- If this battery is put into service after month and year indicated on label (label located between terminals) charge battery for minimum of one hour at 6-10 amps.
- First connect RED battery cable to positive (+) terminal with hex bolt, flat washer, lock washer and hex nut as shown. Tighten securely.
- Connect BLACK grounding cable to negative (-) terminal with remaining hex bolt, flat washer, lock washer and hex nut. Tighten securely.
- Close battery box door.

Open battery box door for:

- Inspection for secure connections (to tighten hardware).
- Inspection for corrosion.
- Testing battery.
- Jumping (if required).
- Periodic charging.

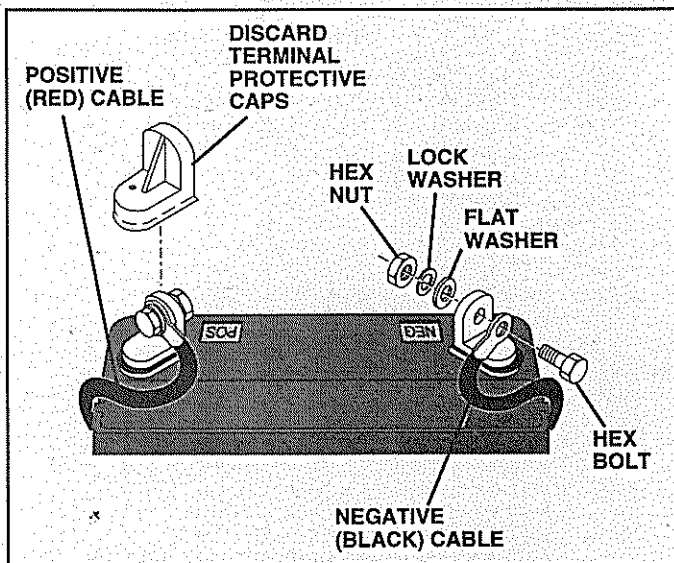


FIG. 2

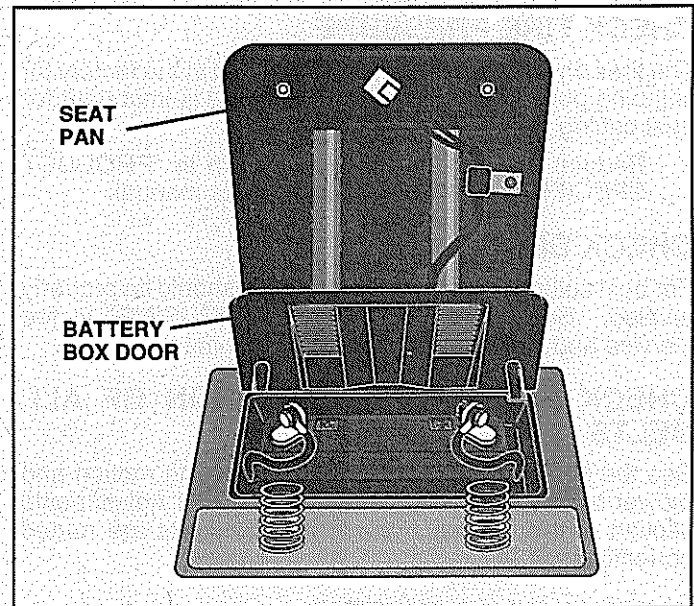


FIG. 3

INSTALL SEAT (See Fig. 4)

Adjust seat before tightening adjustment bolt.

- Remove cardboard packing on seat pan.
- Place seat on seat pan and assemble shoulder bolt.
- Assemble adjustment bolt, lock washer and flat washer loosely. Do not tighten.
- Tighten shoulder bolt securely.
- Lower seat into operating position and sit on seat.
- Slide seat until a comfortable position is reached which allows you to press clutch/brake pedal all the way down.
- Get off seat without moving its adjusted position.
- Raise seat and tighten adjustment bolt securely.

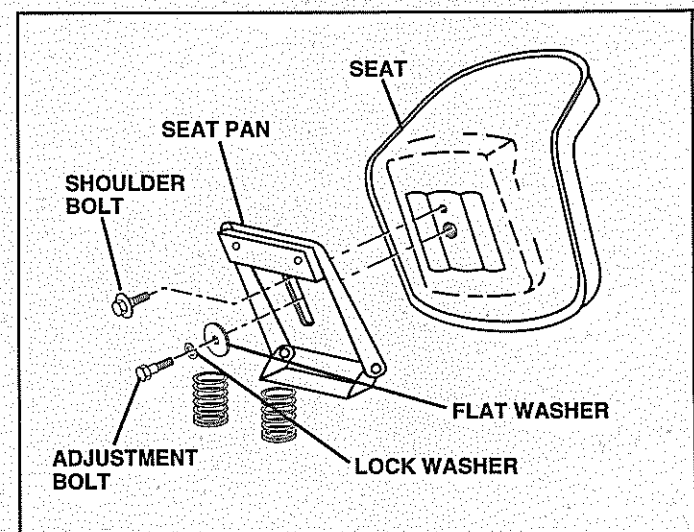


FIG. 4

ASSEMBLY

✓ CHECKLIST

BEFORE YOU OPERATE AND ENJOY YOUR NEW TRACTOR, WE WISH TO ASSURE THAT YOU RECEIVE THE BEST PERFORMANCE AND SATISFACTION FROM THIS QUALITY PRODUCT.

PLEASE REVIEW THE FOLLOWING CHECKLIST:

- ✓ All assembly instructions have been completed.
- ✓ No remaining loose parts in carton.
- ✓ Battery is properly prepared and charged. (Minimum 1 hour at 6 amps).
- ✓ Seat is adjusted comfortably and tightened securely.
- ✓ All tires are properly inflated. (For shipping purposes, the tires were overinflated at the factory).
- ✓ Be sure mower deck is properly leveled side-to-side/ front-to-rear for best cutting results. (Tires must be properly inflated for leveling).
- ✓ Check mower and drive belts. Be sure they are routed properly around pulleys and inside all belt keepers.
- ✓ Check wiring. See that all connections are still secure and wires are properly clamped.

WHILE LEARNING HOW TO USE YOUR TRACTOR, PAY EXTRA ATTENTION TO THE FOLLOWING IMPORTANT ITEMS:

- ✓ Engine oil is at proper level.
- ✓ Fuel tank is filled with fresh, clean, regular unleaded gasoline.
- ✓ Become familiar with all controls - their location and function. Operate them before you start the engine.
- ✓ Be sure brake system is in safe operating condition.

CHECK TIRE PRESSURE

The tires on your tractor were overinflated at the factory for shipping purposes. Correct tire pressure is important for best cutting performance.

- Reduce tire pressure to PSI shown in "PRODUCT SPECIFICATIONS" on page 3 of this manual.

CHECK DECK LEVELNESS

For best cutting results, mower housing should be properly leveled. See "TO LEVEL MOWER HOUSING" in the Service and Adjustments section of this manual.

CHECK FOR PROPER POSITION OF ALL BELTS

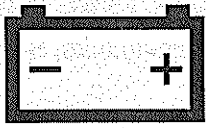
See the figures that are shown for replacing motion and mower blade drive belts in the Service and Adjustments section of this manual. Verify that the belts are routed correctly.

CHECK BRAKE SYSTEM

After you learn how to operate your tractor, check to see that the brake is properly adjusted. See "TO ADJUST BRAKE" in the Service and Adjustments section of this manual.

OPERATION

These symbols may appear on your tractor or in literature supplied with the product. Learn and understand their meaning.



BATTERY



CAUTION OR WARNING



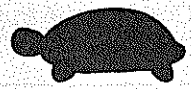
REVERSE



FORWARD



FAST



SLOW



ENGINE ON



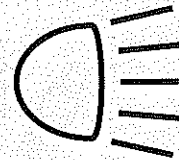
ENGINE OFF



OIL PRESSURE



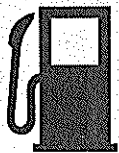
CLUTCH



LIGHTS ON



LIGHTS OFF



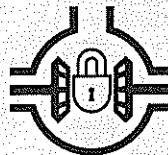
FUEL



CHOKE



MOWER HEIGHT



DIFFERENTIAL LOCK



PARKING BRAKE LOCKED



UNLOCKED



MOWER LIFT

R

REVERSE

N

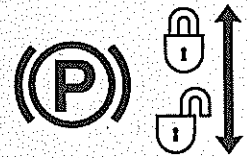
NEUTRAL

H

HIGH

L

LOW



PARKING BRAKE



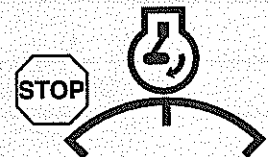
MOWER LIFT



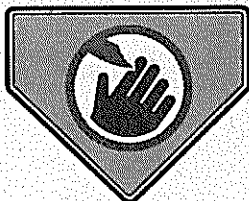
ATTACHMENT CLUTCH ENGAGED



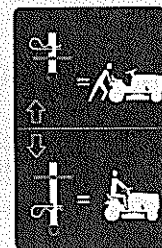
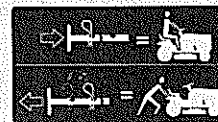
ATTACHMENT CLUTCH DISENGAGED



IGNITION



DANGER, KEEP HANDS AND FEET AWAY



HYDROSTATIC FREE WHEEL
(Hydro Models only)

OPERATION

KNOW YOUR TRACTOR

READ THIS OWNER'S MANUAL AND SAFETY RULES BEFORE OPERATING YOUR TRACTOR. Compare the illustrations with your tractor to familiarize yourself with the locations of various controls and adjustments. Save this manual for future reference.

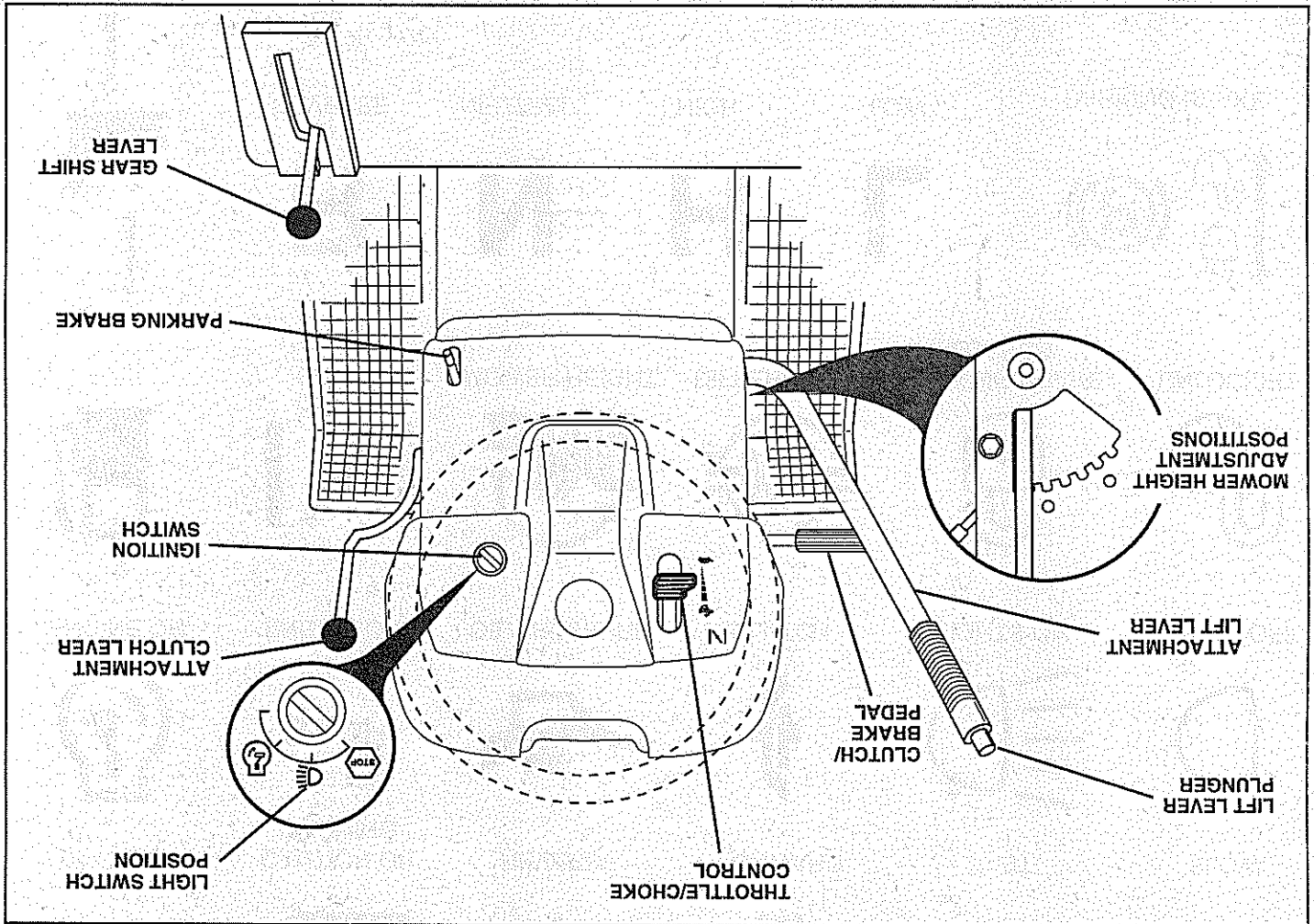


FIG. 5

Our tractors conform to the safety standards of the American National Standards Institute.

ATTACHMENT CLUTCH LEVER: Used to engage the mower blades, or other attachments mounted to your tractor.
LIGHT SWITCH: Turns the headlights on and off.
THROTTLE/CHOKE CONTROL - Used for starting and controlling engine speed.
CLUTCH/BRAKE PEDAL: Used for declutching and braking the tractor and starting the engine.
PARKING BRAKE: Locks clutch/brake pedal into the brake position.

GEARSHIFT LEVER: Selects the speed and direction of tractor.
ATTACHMENT LIFT LEVER - Used to raise and lower the mower deck or other attachments mounted to your tractor.
LIFT LEVER PLUNGER: Used to release attachment lift lever when changing its position.
IGNITION SWITCH: Used for starting and stopping the engine.

OPERATION



The operation of any tractor can result in foreign objects thrown into the eyes, which can result in severe eye damage. Always wear safety glasses or eye shields while operating your tractor or performing any adjustments or repairs. We recommend a wide vision safety mask over the spectacles or standard safety glasses.

HOW TO USE YOUR TRACTOR

TO SET PARKING BRAKE (See Fig. 6)

Your tractor is equipped with an operator presence sensing switch. When engine is running, any attempt by the operator to leave the seat without first setting the parking brake will shut off the engine.

- Depress clutch/brake pedal into full "BRAKE" position and hold.
- Place parking brake lever in "ENGAGED" position and release pressure from clutch/brake pedal. Pedal should remain in "BRAKE" position. Make sure parking brake will hold tractor secure.

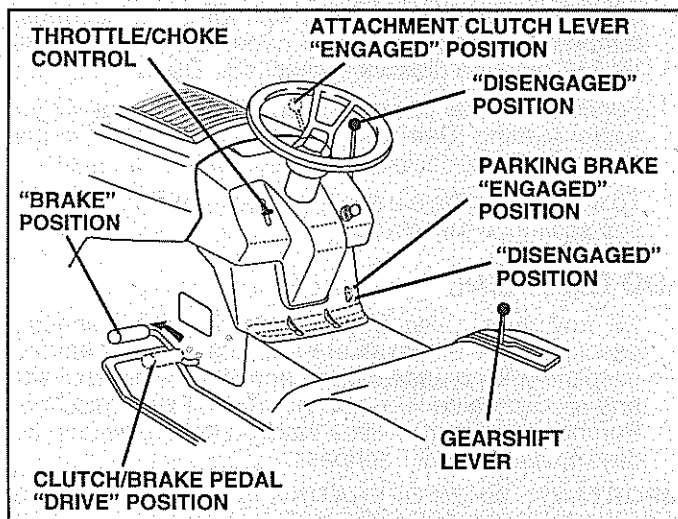


FIG. 6

STOPPING (See Fig. 6)

MOWER BLADES -

- Move attachment clutch lever to "DISENGAGED" position.

GROUND DRIVE -

- Depress clutch/brake pedal into full "BRAKE" position.
- Move gearshift lever to neutral (N) position.

ENGINE -

- Move throttle control to slow () position.

NOTE: Failure to move throttle control to slow () position and allowing engine to idle before stopping may cause engine to "backfire".

- Turn ignition key to "OFF" position and remove key. Always remove key when leaving tractor to prevent unauthorized use.
- Never use choke to stop engine.

NOTE: Under certain conditions when tractor is standing idle with the engine running, hot engine exhaust gases may cause "browning" of grass. To eliminate this possibility, always stop engine when stopping tractor on grass areas.



CAUTION: Always stop tractor completely, as described above, before leaving the operator's position; to empty grass catcher, etc.

TO USE THROTTLE CONTROL (See Fig. 6)

Always operate engine at full throttle.

- Operating engine at less than full throttle reduces the battery charging rate.
- Full throttle offers the best bagging and mower performance.

TO MOVE FORWARD AND BACKWARD (See Fig. 6)

The direction and speed of movement is controlled by the gearshift lever.

- Start tractor with clutch/brake pedal depressed and gearshift lever in neutral (N) position.
- Move gearshift lever to desired position.
- Slowly release clutch/brake pedal to start movement.

IMPORTANT: BRING TRACTOR TO A COMPLETE STOP BEFORE SHIFTING OR CHANGING GEARS. FAILURE TO DO SO WILL SHORTEN THE USEFUL LIFE OF YOUR TRANSAXLE.

TO ADJUST MOWER CUTTING HEIGHT (See Fig. 5)

The position of the attachment lift lever determines the cutting height.

- Grasp lift lever.
- Press plunger with thumb and move lever to desired position.

The cutting height range is approximately 1-1/2 to 4". The heights are measured from the ground to the blade tip with the engine not running. These heights are approximate and may vary depending upon soil conditions, height of grass and types of grass being mowed.

- The average lawn should be cut to approximately 2-1/2 inches during the cool season and to over 3 inches during hot months. For healthier and better looking lawns, mow often and after moderate growth.
- For best cutting performance, grass over 6 inches in height should be mowed twice. Make the first cut relatively high; the second to desired height.

TO OPERATE MOWER (See Fig. 7)

- Your tractor is equipped with an operator presence sensing switch. Any attempt by the operator to leave the seat with the engine running and the attachment clutch engaged will shut off the engine.
- Select desired height of cut.
- Start mower blades by engaging attachment clutch control.
- TO STOP MOWER BLADES - disengage attachment clutch control.

CAUTION: Do not operate the mower without either the entire grass catcher, or the discharge guard in place.

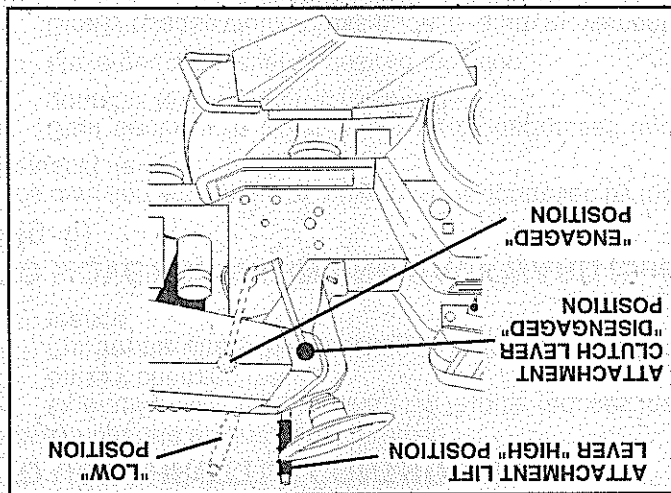


FIG. 7

TO OPERATE ON HILLS

CAUTION: Do not drive up or down hills with slopes greater than 15° and do not drive across any slope.



- Choose the slowest speed before starting up or down hills.
- Avoid stopping or changing speed on hills.
- If slowing is necessary, move throttle control lever to slower position.
- If stopping is absolutely necessary, push clutch/brake pedal quickly to brake position and engage parking brake.
- Move gearshift lever to 1st gear. Be sure you have allowed room for tractor to roll slightly as you restart movement.
- To restart movement, slowly release parking brake and clutch/brake pedal.
- Make all turns slowly.

TO TRANSPORT

- Raise attachment lift to highest position with attachment lift control.
 - When pushing or towing your tractor, be sure gearshift lever is in neutral (N) position.
 - Do not push or tow tractor at more than five (5) MPH.
- NOTE:** To protect hood from damage when transporting your tractor on a truck or a trailer, be sure hood is closed and secured to tractor. Use an appropriate means of tying hood to tractor (rope, cord, etc.)

BEFORE STARTING THE ENGINE

CHECK ENGINE OIL LEVEL (See Fig. 12)

- The engine in your tractor has been shipped, from the factory, already filled with summer weight oil.
- Check engine oil with tractor on level ground.
- Remove oil fill cap/dipstick and wipe clean, reinsert the dipstick and screw cap tight, wait for a few seconds, "FULL" mark on dipstick is reached. Do not overfill.
- For cold weather operation you should change oil for easier starting (See "OIL VISCOSITY CHART" in the Customer Responsibilities section of this manual).
- To change engine oil, see the Customer Responsibilities section in this manual.

ADD GASOLINE

- Fill fuel tank. Use fresh, clean, regular unleaded gasoline with a minimum of 87 octane. (Use of leaded gasoline will increase carbon and lead oxide deposits and reduce valve life). Do not mix oil with gasoline. Purchase fuel in quantities that can be used within 30 days to assure fuel freshness.

IMPORTANT: WHEN OPERATING IN TEMPERATURES BELOW 32°F(0°C), USE FRESH, CLEAN WINTER GRADE GASOLINE TO HELP INSURE GOOD COLD WEATHER STARTING.

WARNING: Experience indicates that alcohol blended fuels (called gasohol or using ethanol or methanol) can attract moisture which leads to separation and formation of acids during storage. Acidic gas can damage the fuel system of an engine while in storage. To avoid engine problems, the fuel system should be emptied before storage of 30 days or longer. Drain the gas tank, start the engine and let it run until the fuel lines and carburetor are empty. Use fresh fuel next season. See Storage Instructions for additional information. Never use engine or carburetor cleaner products in the fuel tank or permanent damage may occur.

CAUTION: Fill to bottom of gas tank filler neck. Do not overfill. Wipe off any spilled oil or fuel. Do not store, spill or use gasoline near an open flame.



OPERATION

TO START ENGINE (See Fig. 6)

When starting engine for the first time or if engine has run out of fuel, it will take extra cranking time to move fuel from the tank to the engine.

- Depress clutch/brake pedal and set parking brake.
- Place gearshift lever in neutral (N) position.
- Move attachment clutch to "DISENGAGED" position.
- Move throttle control lever to choke (| \ |) position for cold engine start. For warm engine start, move throttle control to fast (←) position.
- Insert key into ignition and turn key clockwise to "START" position and release key as soon as engine starts. Do not run starter continuously for more than fifteen seconds per minute. If engine does not start after several attempts, move throttle control to fast (←) position, wait a few minutes and try again.
- When engine starts, move throttle control to desired position.
- Allow engine to warm up for a few minutes before engaging drive or attachments.

NOTE: If at a high altitude (above 3000 feet) or in cold temperatures (below 32°F), the carburetor fuel mixture may need to be adjusted for best engine performance. See "TO ADJUST CARBURETOR" in the Service and Adjustments section of this manual.

MOWING TIPS

- Tire chains cannot be used when the mower housing is attached to tractor.
- Mower should be properly leveled for best mowing performance. See "TO LEVEL MOWER HOUSING" in the Service and Adjustments section of this manual.
- The left hand side of mower should be used for trimming.
- Drive so that clippings are discharged onto the area that has been cut. Have the cut area to the right of the tractor. This will result in a more even distribution of clippings and more uniform cutting.
- When mowing large areas, start by turning to the right so that clippings will discharge away from shrubs, fences, driveways, etc. After one or two rounds, mow in the opposite direction making left hand turns until finished (See Fig. 8).
- If grass is extremely tall, it should be mowed twice to reduce load and possible fire hazard from dried clippings. Make first cut relatively high; the second to the desired height.
- Do not mow grass when it is wet. Wet grass will plug mower and leave undesirable clumps. Allow grass to dry before mowing.
- Always operate engine at full throttle when mowing to assure better mowing performance and proper discharge of material. Regulate ground speed by selecting a low enough gear to give the mower cutting performance as well as the quality of cut desired.
- When operating attachments, select a ground speed that will suit the terrain and give best performance of the attachment being used.

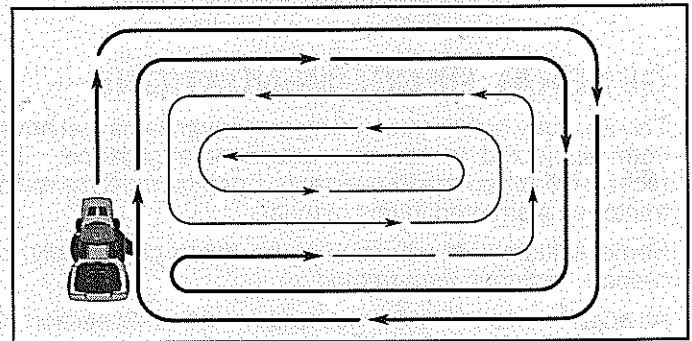


FIG. 8

CUSTOMER RESPONSIBILITIES

MAINTENANCE SCHEDULE		REGULAR SERVICE		AS YOU COMPLETE		FILL IN DATES		
		EVERY 2 HOURS		EVERY 8 HOURS		EVERY 25 HOURS		
		EVERY 50 HOURS		EVERY 100 HOURS		BEFORE EACH USE		
		BEFORE STORAGE		BEFORE SEASON		SERVICE DATES		
TRACTOR	Check Brake Operation	✓						
	Check Tire Pressure	✓						
	Check for Loose Fasteners	✓						
	Sharpen/Replace Mower Blades		✓					
	Lubrication Chart		✓					
	Check Battery Level/Recharge		✓					
	Clean Battery and Terminals		✓					
	Check Transaxle Cooling		✓					
	Adjust Blade Belt(s) Tension			✓				
	Adjust Motion Drive Belt(s) Tension			✓				
	ENGINE	Check Engine Oil Level	✓					
		Change Engine Oil		✓				
Clean Air Filter			✓					
Clean Air Screen			✓					
Inspect Muffler/Spark Arrester			✓					
Replace Oil Filter (if equipped)				✓				
Clean Engine Cooling Fins				✓				
Replace Spark Plug				✓				
Replace Air Filter Paper Cartridge				✓				
Replace Fuel Filter				✓				

- 1 - Change more often when operating under a heavy load or in high ambient temperatures.
- 2 - Service more often when operating in dirty or dusty conditions.
- 3 - If equipped with oil filter, change oil every 50 hours.
- 4 - Replace blades more often when mowing in sandy soil.
- 5 - If equipped with adjustable system.
- 6 - Not required if equipped with maintenance-free battery.
- 7 - Tighten front axle pivot bolt to 35 ft.-lbs. maximum.
- Do not overtighten.

GENERAL RECOMMENDATIONS

The warranty on this tractor does not cover items that have been subjected to operator abuse or negligence. To receive full value from the warranty, operator must maintain tractor as instructed in this manual.

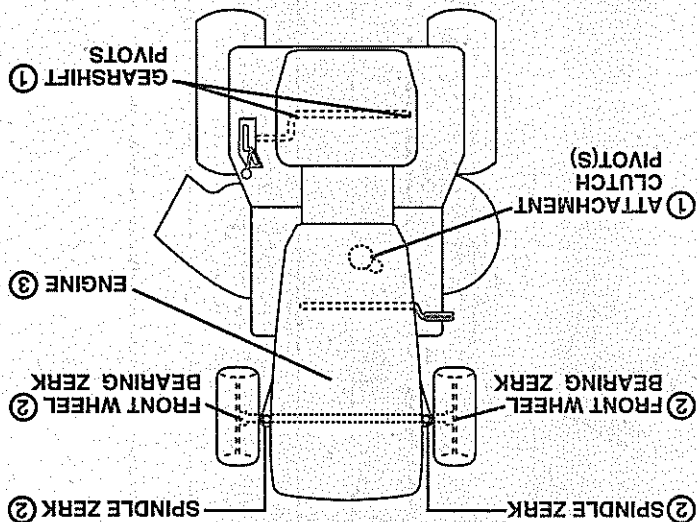
Some adjustments will need to be made periodically to properly maintain your tractor.

All adjustments in the Service and Adjustments section of this manual should be checked at least once each season.

- Once a year you should replace the spark plug, clean or replace air filter, and check blades and belts for wear. A new spark plug and clean air filter assure proper air-fuel mixture and help your engine run better and last longer.

BEFORE EACH USE

- Check engine oil level.
- Check brake operation.
- Check tire pressure.
- Check for loose fasteners.



LUBRICATION CHART

① SAE 30 OR 10W30 MOTOR OIL

② GENERAL PURPOSE GREASE

③ REFER TO CUSTOMER RESPONSIBILITIES "ENGINE" SECTION

IMPORTANT: DO NOT OIL OR GREASE THE PIVOT POINTS WHICH HAVE SPECIAL NYLON BEARINGS. VISCOUS LUBRICANTS WILL ATTRACT DUST AND DIRT THAT WILL SHORTEN THE LIFE OF THE SELF-LUBRICATING BEARINGS. IF YOU FEEL THEY MUST BE LUBRICATED, USE ONLY A DRY, POWDERED GRAPHITE TYPE LUBRICANT SPARINGLY.

CUSTOMER RESPONSIBILITIES

TRACTOR

Always observe safety rules when performing any maintenance.

BRAKE OPERATION

If tractor requires more than six (6) feet stopping distance at high speed in highest gear, then brake must be adjusted. (See "TO ADJUST BRAKE" in the Service and Adjustments section of this manual).

TIRES

- Maintain proper air pressure in all tires (See "PRODUCT SPECIFICATIONS" on page 2 of this manual).
- Keep tires free of gasoline, oil, or insect control chemicals which can harm rubber.
- Avoid stumps, stones, deep ruts, sharp objects and other hazards that may cause tire damage.

BLADE CARE

For best results mower blades must be kept sharp. Replace bent or damaged blades.

BLADE REMOVAL (See Fig. 9)

- Raise mower to highest position to allow access to blades.
- Remove hex bolt, lock washer and flat washer securing blade.
- Install new or resharpened blade with trailing edge up towards deck as shown.
- Reassemble hex bolt, lock washer and flat washer in exact order as shown.
- Tighten bolt securely (30-35 Ft. Lbs. torque).

IMPORTANT: BLADE BOLT IS GRADE 8 HEAT TREATED.

NOTE: We do not recommend sharpening blade - but if you do, be sure the blade is balanced.

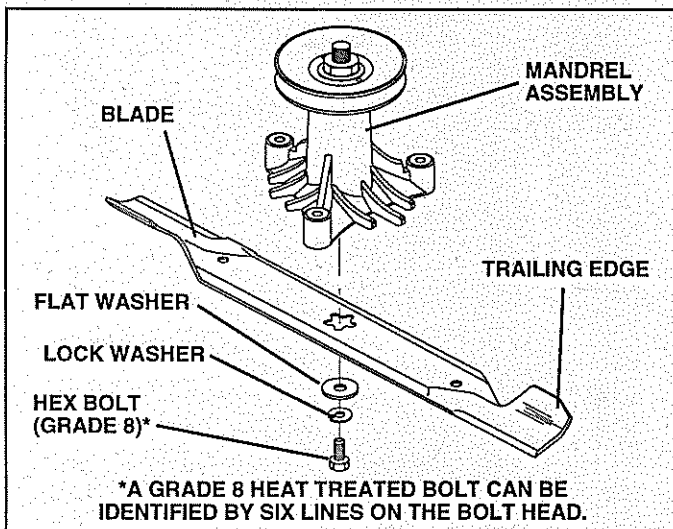


FIG. 9

TO SHARPEN BLADE (See Fig. 10)

Care should be taken to keep the blade balanced. An unbalanced blade will cause excessive vibration and eventual damage to mower and engine.

- The blade can be sharpened with a file or on a grinding wheel. Do not attempt to sharpen while on the mower.
- To check blade balance, you will need a 5/8" diameter steel bolt, pin, or a cone balancer. (When using a cone balancer, follow the instructions supplied with balancer).
- Slide blade on to an unthreaded portion of the steel bolt or pin and hold the bolt or pin parallel with the ground. If blade is balanced, it should remain in a horizontal position. If either end of the blade moves downward, sharpen the heavy end until the blade is balanced.

NOTE: Do not use a nail for balancing blade. The lobes of the center hole may appear to be centered, but are not.

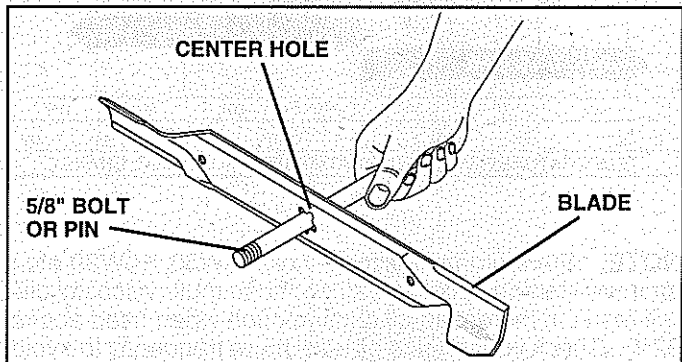


FIG. 10

BATTERY

Your tractor has a battery charging system which is sufficient for normal use. However, periodic charging of the battery with an automotive charger will extend its life.

- Keep battery and terminals clean.
- Keep battery bolts tight.
- Keep small vent holes open.
- Recharge at 6-10 amperes for 1 hour.

TO CLEAN BATTERY AND TERMINALS

Corrosion and dirt on the battery and terminals can cause the battery to "leak" power.

- Open battery box door.
- Disconnect BLACK battery cable first then RED battery cable and remove battery from tractor.
- Rinse the battery with plain water and dry.
- Clean terminals and battery cable ends with wire brush until bright.
- Coat terminals with grease or petroleum jelly.
- Reinstall battery (See "CONNECT BATTERY" in the Assembly section of this manual).

CUSTOMER RESPONSIBILITIES

V-BELTS

Check V-belts for deterioration and wear after 100 hours of operation and replace if necessary. The belts are not adjustable. Replace belts if they begin to slip from wear.

TRANSAXLE COOLING

Keep transaxle free from build-up of dirt and chaff which can restrict cooling.

ENGINE

LUBRICATION

Only use high quality detergent oil rated with API service classification SF or SG. Select the oil's SAE viscosity grade according to your expected operating temperature.

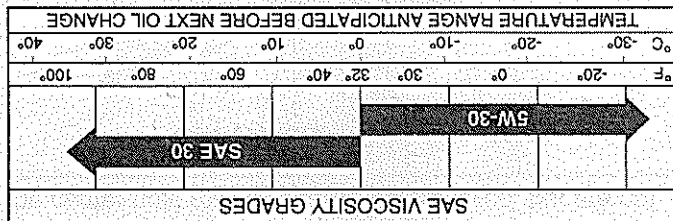
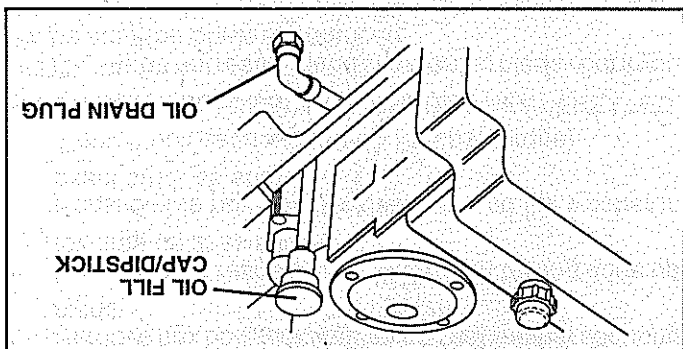


FIG. 11

NOTE: Although multi-viscosity oils (5W30, 10W30 etc.) improve starting in cold weather, these multi-viscosity oils will result in increased oil consumption when used above 32°F. Check your engine oil level more frequently to avoid possible engine damage from running low on oil.

FIG. 12



- Change the oil after the first two hours of operation and every 25 hours thereafter or at least once a year if the tractor is not used for 25 hours in one year.
- Check the crankcase oil level before starting the engine and after each eight (8) hours of operation. Tighten oil fill cap/dipstick securely each time you check the oil level.
- **TO CHANGE ENGINE OIL** (See Figs. 11 and 12)
 - Determine temperature range expected before oil change. All oil must meet API service classification SF or SG.
 - Be sure tractor is on level surface.
 - Oil will drain more freely when warm.
 - Catch oil in a suitable container.
 - Remove oil fill cap/dipstick. Be careful not to allow dirt to enter the engine when changing oil.
 - Remove drain plug.
 - After oil has drained completely, replace oil drain plug and tighten securely.
 - Refill engine with oil through oil fill dipstick tube. Pour slowly. Do not overfill. For approximate capacity see "PRODUCT SPECIFICATIONS" on page 3 of this manual.
 - Use gauge on oil fill cap/dipstick for checking level. Be sure dipstick cap is tightened securely for accurate reading. Keep oil at "FULL" line on dipstick.

CUSTOMER RESPONSIBILITIES

AIR FILTER (See Fig. 13)

Your engine will not run properly using a dirty air filter. Clean the foam pre-cleaner after every 25 hours of operation or every season. Service paper cartridge every 100 hours of operation or every season, whichever occurs first.

Service air cleaner more often under dusty conditions.

- Remove knob(s) and cover.

TO SERVICE PRE-CLEANER

- Slide foam pre-cleaner off cartridge.
- Wash it in liquid detergent and water.
- Squeeze it dry in a clean cloth.
- Saturate it in engine oil. Wrap it in clean, absorbent cloth and squeeze to remove excess oil.
- If very dirty or damaged, replace pre-cleaner.
- Reinstall pre-cleaner over cartridge.
- Reinstall cover and secure with knob(s).

TO SERVICE CARTRIDGE

- Remove cartridge nut.
- Carefully remove cartridge to prevent debris from entering carburetor. Clean base carefully to prevent debris from entering carburetor.
- Clean cartridge by tapping gently on flat surface. If very dirty or damaged, replace cartridge.
- Reinstall cartridge, nut, pre-cleaner, cover and secure with knob(s).

IMPORTANT: PETROLEUM SOLVENTS, SUCH AS KEROSENE, ARE NOT TO BE USED TO CLEAN THE CARTRIDGE. THEY MAY CAUSE DETERIORATION OF THE CARTRIDGE. DO NOT OIL CARTRIDGE. DO NOT USE PRESSURIZED AIR TO CLEAN OR DRY CARTRIDGE.

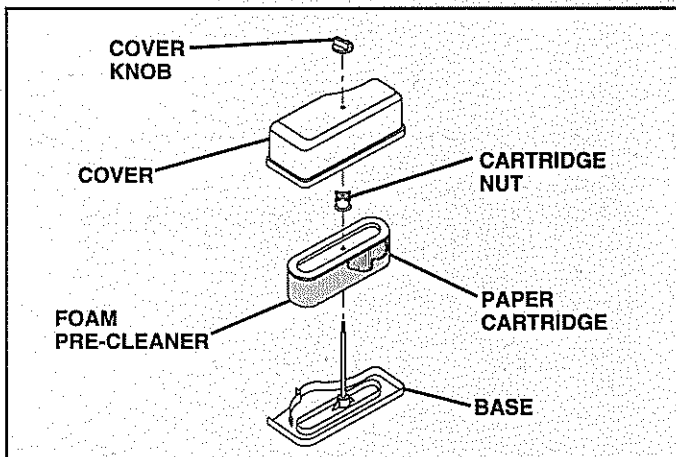


FIG. 13

CLEAN AIR SCREEN (See Fig. 14)

Air screen must be kept free of dirt and chaff to prevent engine damage from overheating. Clean with a wire brush or compressed air to remove dirt and stubborn dried gum fibers.

ENGINE COOLING FINS (See Fig. 14)

Remove any dust, dirt or oil from engine cooling fins to prevent engine damage from overheating.

- Remove screws from blower housing and lift housing and dipstick tube assembly off engine.
- Cover oil fill opening to prevent entry of dirt.
- Use compressed air or stiff bristle brush to thoroughly clean engine cooling fins.
- To reassemble, reverse above procedure.

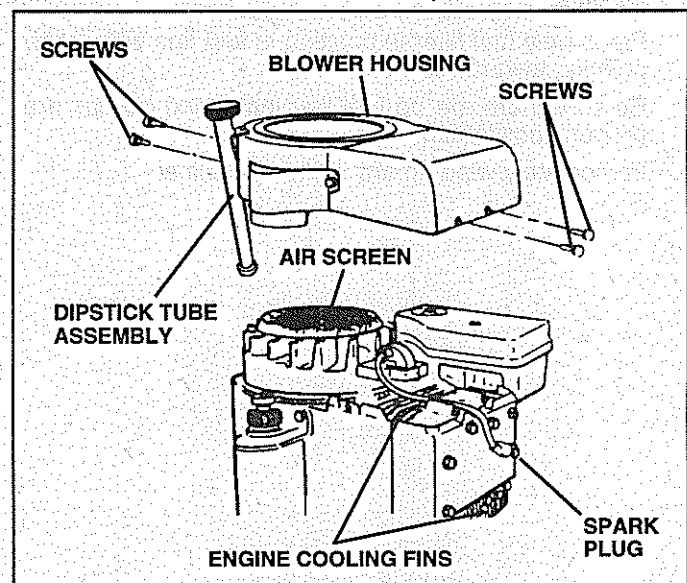


FIG. 14

CUSTOMER RESPONSIBILITIES

MUFFLER

Inspect and replace corroded muffler and spark arrester (if equipped) as it could create a fire hazard and/or damage.

SPARK PLUGS

Replace spark plugs at the beginning of each mowing season or after every 100 hours of operation, whichever occurs first. Spark plug type and gap setting are shown in "PRODUCT SPECIFICATIONS" on page 2 of this manual.

IN-LINE FUEL FILTER (See Fig. 15)

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

- With engine cool, remove filter and plug fuel line sections.
- Place new fuel filter in position in fuel line with arrow pointing towards carburetor.
- Be sure there are no fuel line leaks and clamps are properly positioned.
- Immediately wipe up any spilled gasoline.

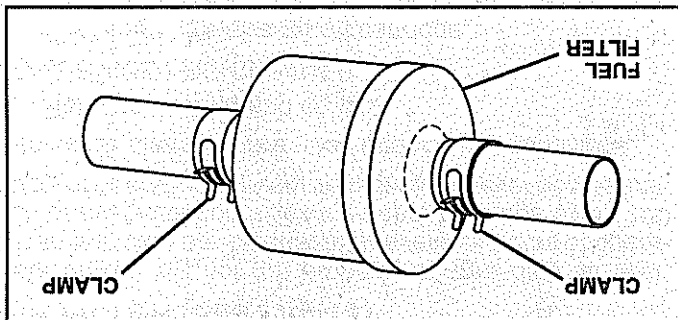


FIG. 15

CLEANING

- Clean engine, battery, seat, finish, etc. of all foreign matter.
 - Keep finished surfaces and wheels free of all gasoline, oil, etc.
 - Protect painted surfaces with automotive type wax.
- We do not recommend using a garden hose to clean your tractor unless the electrical system, muffler, air filter and carburetor are covered to keep water out. Water in engine can result in a shortened engine life.

SERVICE AND ADJUSTMENTS



CAUTION: BEFORE PERFORMING ANY SERVICE OR ADJUSTMENTS:

- Depress clutch/brake pedal fully and set parking brake.
- Place gearshift lever in neutral (N) position.
- Place attachment clutch in "DISENGAGED" position.
- Turn ignition key "OFF" and remove key.
- Make sure the blades and all moving parts have completely stopped.
- Disconnect spark plug wire from spark plug and place wire where it cannot come in contact with plug.

TRACTOR

TO REMOVE MOWER (See Fig. 16)

Mower will be easier to remove from the right side of tractor.

- Place attachment clutch in "DISENGAGED" position.
- Move attachment lift lever forward to lower mower to its lowest position.
- Roll belt off engine pulley.
- Disconnect clutch rod from clutch lever by removing retainer spring.
- Disconnect anti-sway bar from chassis bracket by removing retainer spring.
- Disconnect suspension arms from rear deck brackets by removing retainer springs.
- Disconnect front links from deck by removing retainer springs.
- Raise lift lever to raise suspension arms. Slide mower out from under tractor.

IMPORTANT: IF AN ATTACHMENT OTHER THAN THE MOWER IS TO BE MOUNTED TO THE TRACTOR, REMOVE THE FRONT LINKS.

TO INSTALL MOWER (See Fig. 16)

- Raise attachment lift lever to its highest position.
- Slide mower under tractor with discharge guard to right side of tractor.
- Lower lift lever to its lowest position.
- Install mower in reverse order of removal instructions.

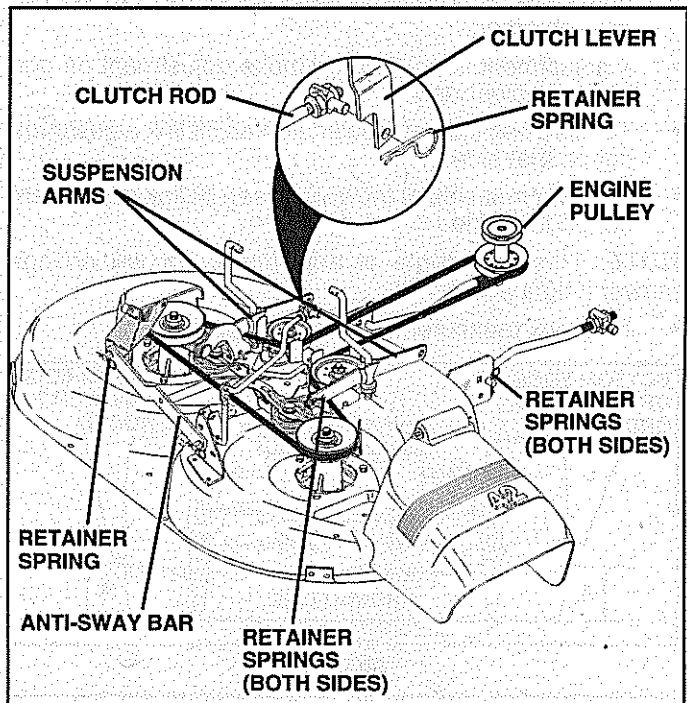


FIG. 16

SERVICE AND ADJUSTMENTS

TO LEVEL MOWER HOUSING

Adjust the mower while tractor is parked on level ground or driveway. Make sure tires are properly inflated (See "PRODUCT SPECIFICATIONS" on page 2 of this manual). If tires are over or underinflated, you will not properly adjust your mower.

SIDE-TO-SIDE ADJUSTMENT (See Figs. 17 and 18)

- Raise mower to its highest position.
- At the midpoint of both sides of mower, measure height from bottom edge of mower to ground. Distance "A" on both sides of mower should be the same or within 1/4" of each other.
- If adjustment is necessary, make adjustment on one side of mower only.
- To raise one side of mower, tighten lift link adjustment nut on that side.
- To lower one side of mower, loosen lift link adjustment nut on that side.
- NOTE: Three full turns of adjustment nut will change mower height about 1/8".
- Recheck measurements after adjusting.

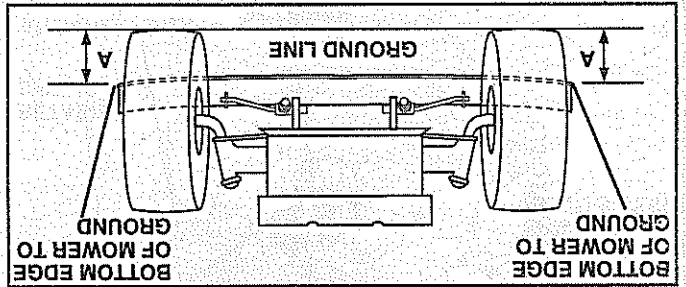


FIG. 17

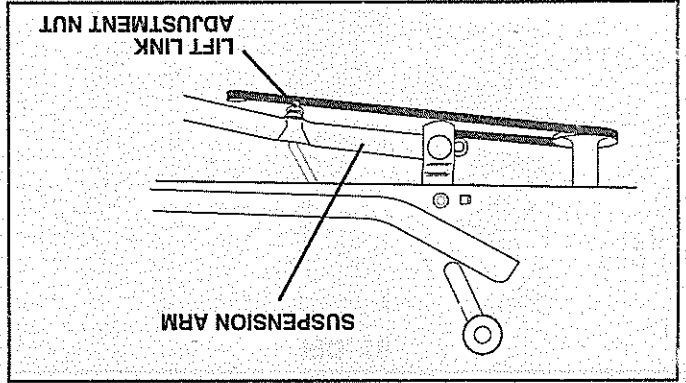


FIG. 18

FRONT-TO-BACK ADJUSTMENT (See Figs. 19 and 20)
IMPORTANT: DECK MUST BE LEVEL SIDE-TO-SIDE. IF THE FOLLOWING FRONT-TO-BACK ADJUSTMENT IS NECESSARY, BE SURE TO ADJUST BOTH FRONT LINKS EQUALLY SO MOWER WILL STAY LEVEL SIDE-TO-SIDE.

To obtain the best cutting results, the mower housing should be adjusted so that the front is approximately 1/4" to 3/4" lower than the rear when the mower is in its highest position.

Check adjustment on right side of tractor. Measure distance "D" directly in front and behind the mandrel at bottom edge of mower housing as shown.

- Before making any necessary adjustments, check that both front links are equal in length. Both links should be approximately 10-3/8".
- If links are not equal in length, adjust one link to same length as other link.
- To lower front of mower, loosen nut "E" on both front links an equal number of turns.
- When distance "D" is 1/4" to 3/4" lower at front than rear, tighten nuts "F" against trunnion on both front links.
- To raise front of mower, loosen nut "E" from trunnion on both front links. Tighten nut "E" on both front links an equal number of turns.
- When distance "D" is 1/4" to 3/4" lower at front than rear, tighten nut "E" against trunnion on both front links.
- Recheck side-to-side adjustment.

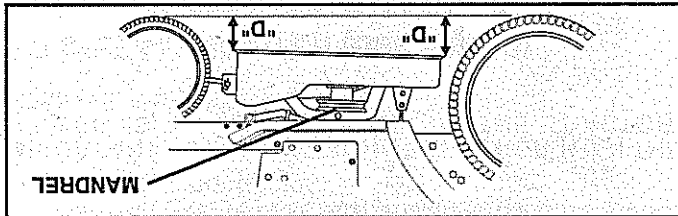


FIG. 19

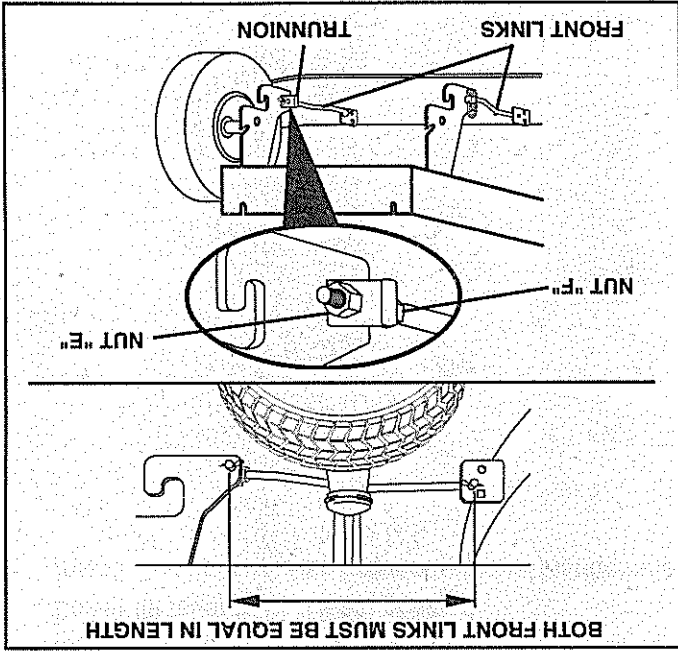


FIG. 20

BOTH FRONT LINKS MUST BE EQUAL IN LENGTH

SERVICE AND ADJUSTMENTS

TO REPLACE MOWER BLADE DRIVE BELT (See Fig. 21)

The mower blade drive belt may be replaced without tools. Park the tractor on level surface. Engage parking brake.

BELT REMOVAL -

- Remove mower from tractor (See "TO REMOVE MOWER" in this section of this manual).
- Work belt off both mandrel pulleys and idler pulleys.
- Pull belt away from mower.

BELT INSTALLATION -

- Install new belt in reverse order of removal.
- Make sure belt is in all pulley grooves and inside all belt guides.
- Install mower in reverse order of removal instructions.

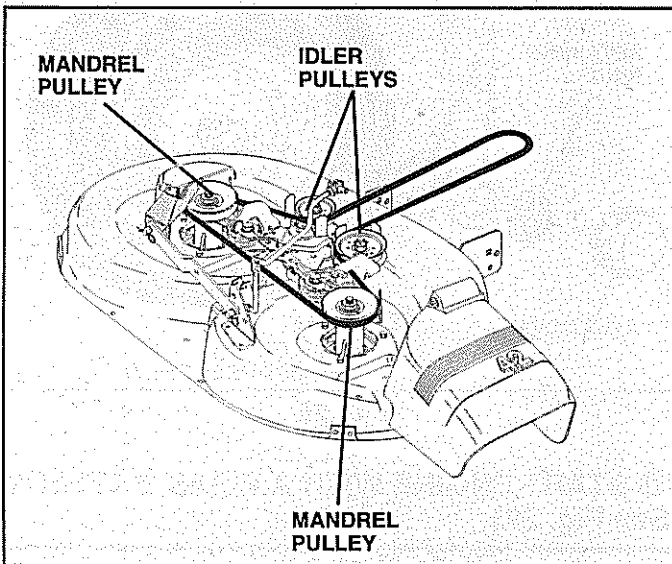


FIG. 21

TO ADJUST BRAKE (See Fig. 22)

Your tractor is equipped with an adjustable brake system which is mounted on the right side of the transaxle.

If tractor requires more than six (6) feet stopping distance at high speed in highest gear, then brake must be adjusted.

- Depress clutch/brake pedal and engage parking brake.
- Measure distance between brake operating arm and nut "A" on brake rod.
- If distance is other than 1-1/2", loosen jam nut and turn nut "A" until distance becomes 1-1/2". Retighten jam nut against nut "A".
- Road test tractor for proper stopping distance as stated above. Readjust if necessary. If stopping distance is still greater than six (6) feet in highest gear, further maintenance is necessary. Contact your nearest authorized service center/department.

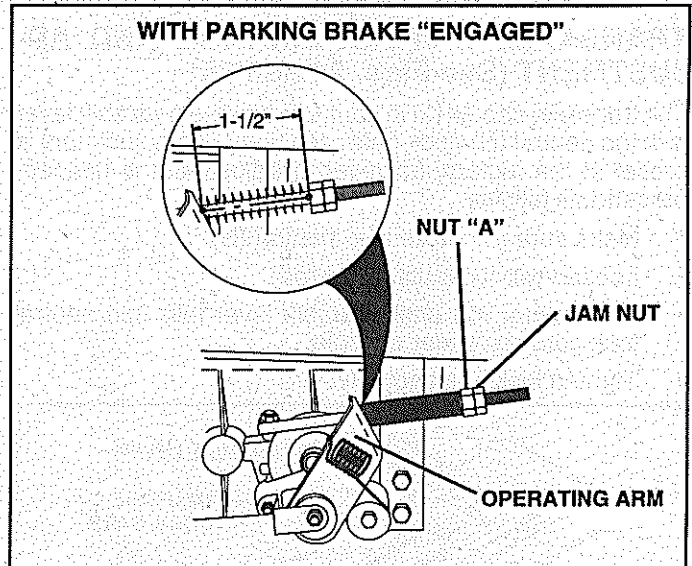


FIG. 22

TO REPLACE MOTION DRIVE BELT (See Fig. 23)

Park the tractor on level surface. Engage parking brake. For assistance, there is a belt installation guide decal on bottom side of left footrest.

- Remove mower (See "TO REMOVE MOWER" in this section of this manual.)
- Remove upper belt keeper.
- Remove belt from stationary idler and clutching idler.
- Pull belt slack toward rear of tractor. Remove belt upwards from transaxle pulley by deflecting belt keepers.
- Pull belt toward front of tractor and remove downwards from around engine pulley.
- Install new belt by reversing above procedure.

IMPORTANT: MAKE SURE UPPER BELT KEEPER IS POSITIONED PROPERLY BETWEEN LOCATOR TABS.

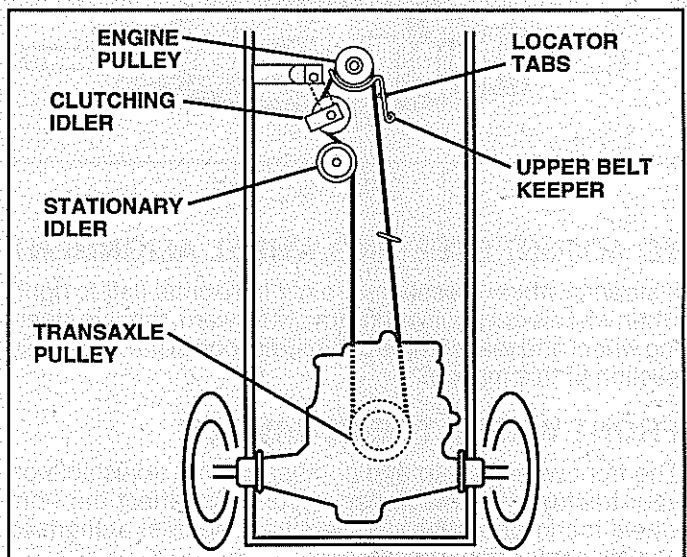


FIG. 23

SERVICE AND ADJUSTMENTS

TRANSAXLE SHIFTER LINKAGE AND ADJUSTMENT (See Figs. 24 and 25)

The transaxle should be in neutral when the gear shift lever is in the neutral (N) (lock gate) position. The adjustment is preset at the factory; however, if adjustment is needed, proceed as follows:

- Make sure transaxle is in neutral (N).
- Loosen two locknuts on the rod.
- Turn center rod until gearshift lever falls into neutral lock gate on fender console.
- Tighten locknuts securely.

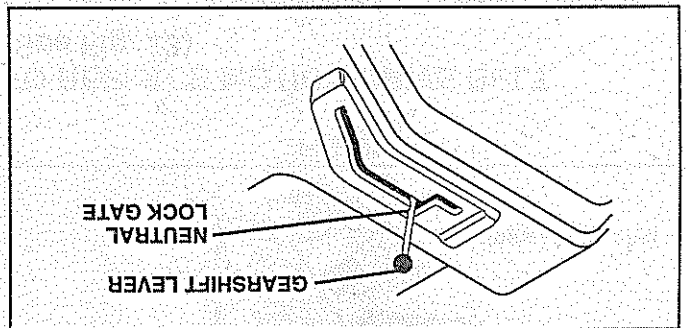


FIG. 24

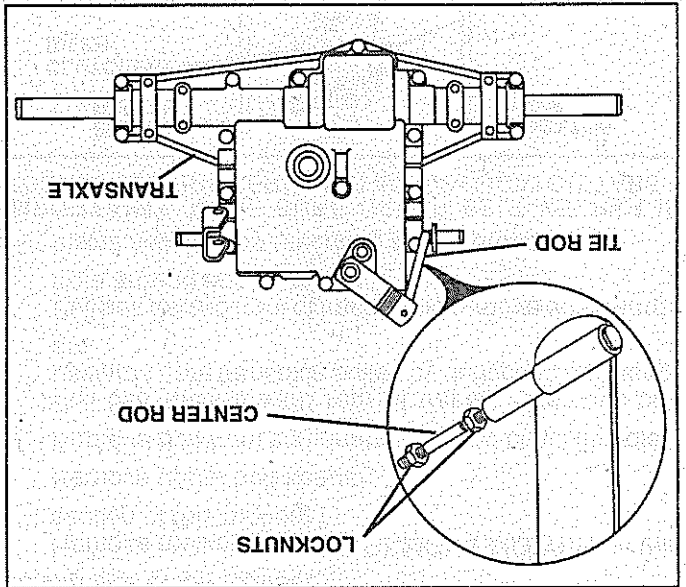


FIG. 25

TO ADJUST STEERING WHEEL ALIGNMENT

If steering wheel crossbars are not horizontal (left to right) when wheels are positioned straight forward, remove steering wheel and reassemble per instructions in the Assembly section of this manual.

FRONT WHEEL TOE-IN/CAMBER

The front wheel toe-in and camber are not adjustable on your tractor. If damage has occurred to affect the front wheel toe-in or camber, contact your nearest authorized service center/department.

TO REMOVE WHEEL FOR REPAIRS (See Fig. 26)

- Block up axle securely.
- Remove axle cover, retaining ring and washers to allow wheel removal (rear wheel contains a square key - Do not lose).
- Repair tire and reassemble.
- On rear wheels only: align grooves in rear wheel hub and axle. Insert square key.
- Replace washers and snap retaining ring securely in axle groove.
- Replace axle cover.

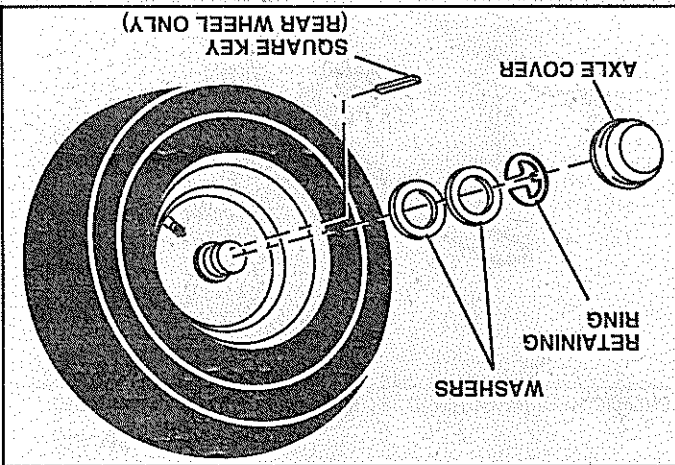


FIG. 26

TO START ENGINE WITH A WEAK BATTERY (See Fig. 27)

CAUTION: Lead-acid batteries generate explosive gases. Keep sparks, flame and smoking materials away from batteries. Always wear eye protection when around batteries.

If your battery is too weak to start the engine, it should be recharged. If "jumper cables" are used for emergency starting, follow this procedure:

IMPORTANT: YOUR TRACTOR IS EQUIPPED WITH A 12 VOLT NEGATIVE GROUND SYSTEM. THE OTHER VEHICLE MUST ALSO BE A 12 VOLT NEGATIVE GROUND SYSTEM. DO NOT USE YOUR TRACTOR BATTERY TO START OTHER VEHICLES.

TO ATTACH JUMPER CABLES -

- Connect each end of the RED cable to the POSITIVE (+) terminal of each battery, taking care not to short against chassis.
- Connect one end of the BLACK cable to the NEGATIVE (-) terminal of fully charged battery.
- Connect the other end of the BLACK cable to good CHASSIS GROUND, away from fuel tank and battery.
- TO REMOVE CABLES, REVERSE ORDER -
- BLACK cable first from chassis and then from the fully charged battery.
- RED cable last from both batteries.

SERVICE AND ADJUSTMENTS

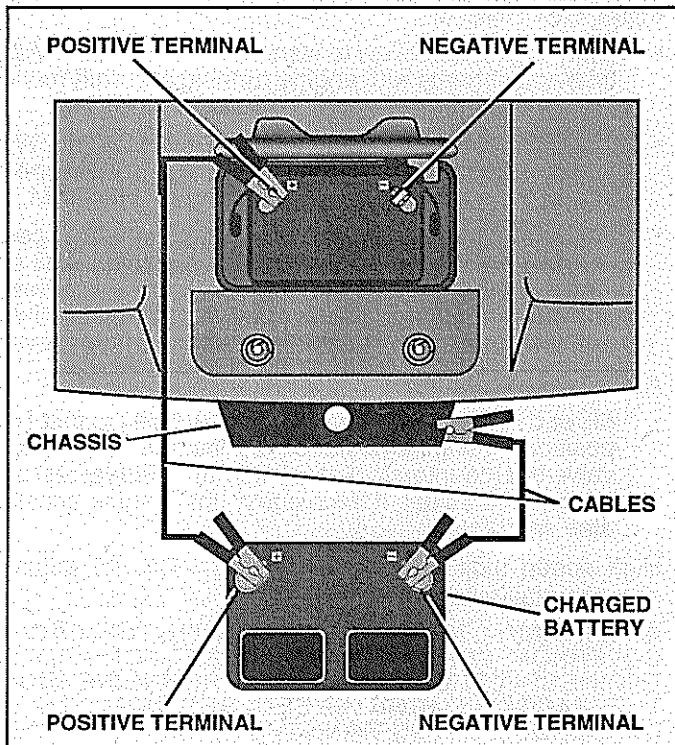


FIG. 27

TO REPLACE HEADLIGHT BULB

- Raise hood.
- Pull bulb holder out of the hole in the backside of the grill.
- Replace bulb in holder and push bulb holder securely back into the hole in the backside of the grill.
- Close hood.

INTERLOCKS AND RELAYS

Loose or damaged wiring may cause your tractor to run poorly, stop running, or prevent it from starting.

- Check wiring. See electrical wiring diagram in the Repair Parts section of this manual.

TO REPLACE FUSE

Replace with 30 amp automotive-type plug-in fuse. The fuse holder is located behind the dash.

TO REMOVE HOOD AND GRILL ASSEMBLY (See Fig. 28)

- Raise hood.
- Unsnap headlight wire connector.
- Stand in front of tractor. Grasp hood at sides, tilt toward engine and lift off of tractor.
- To replace, reverse above procedure.

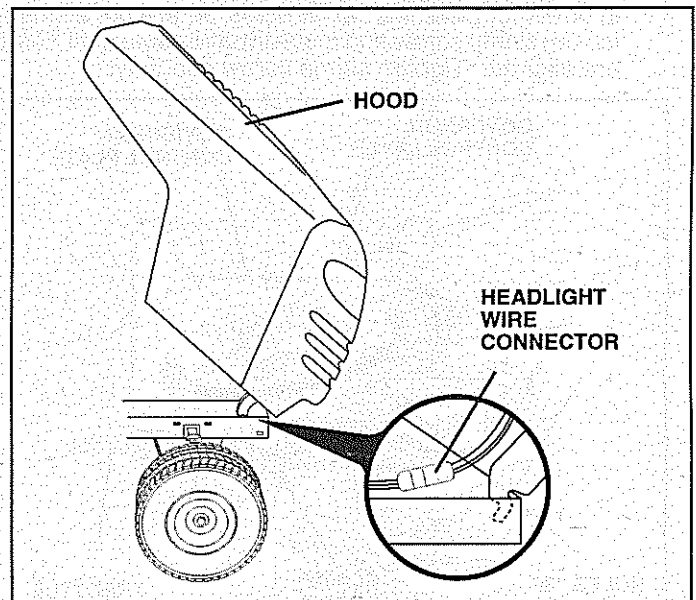


FIG. 28

SERVICE AND ADJUSTMENTS

FINAL SETTING -

- Start engine and allow to warm for five minutes. Make final adjustments with engine running and shift/motion control lever in neutral (N) position.
- Move throttle control lever to slow (S) position. With finger, rotate and hold throttle lever against idle speed screw. Turn idle speed screw to attain 1750 RPM.
- While still holding throttle lever against idle speed screw, turn idle mixture valve in (clockwise) until engine begins to die and then turn out (counterclockwise) until engine runs rough. Turn valve to a point midway between those two positions. Release throttle lever.
- Move throttle control lever from slow (S) to fast (F) position. If engine hesitates or dies, turn idle mixture valve out (counterclockwise) 1/8 turn. Repeat test and continue to adjust, if necessary, until engine accelerates smoothly.

High speed stop is factory adjusted. Do not adjust - damage may result.

IMPORTANT: NEVER TAMPER WITH THE ENGINE GOVERNOR, WHICH IS FACTORY SET FOR PROPER ENGINE SPEED. OVERSPEEDING THE ENGINE ABOVE THE FACTORY HIGH SPEED SETTING CAN BE DANGEROUS. IF YOU THINK THE ENGINE-GOVERNED HIGH SPEED NEEDS ADJUSTING, CONTACT YOUR NEAREST AUTHORIZED SERVICE CENTER/DEPARTMENT WHICH HAS PROPER EQUIPMENT AND EXPERIENCE TO MAKE ANY NECESSARY ADJUSTMENTS.

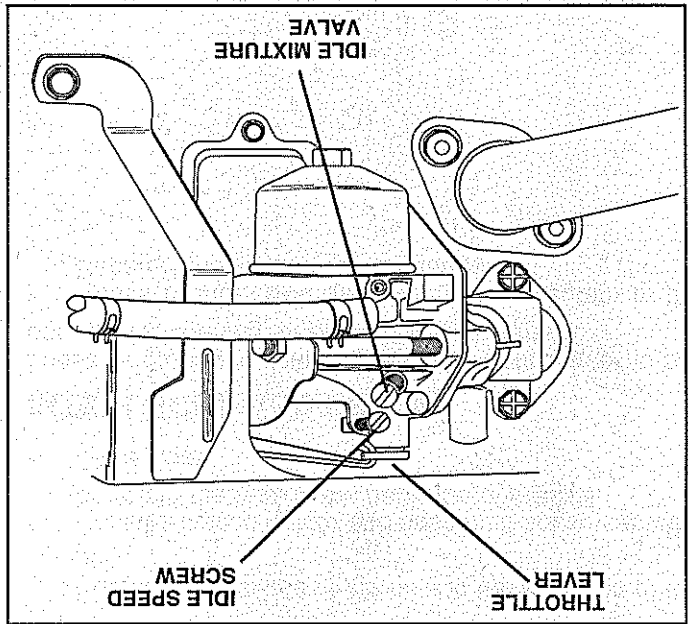


FIG. 30

TO ADJUST THROTTLE CONTROL CABLE

(See Fig. 29)

- The throttle control has been preset at the factory and adjustment should not be necessary. Check adjustment as described below before loosening cable. If adjustment is necessary, proceed as follows:
- With engine not running, move throttle control lever from slow (S) to choke (N) position. Slowly move lever from choke (N) to fast (F) position.
 - Check that holes "A" in governor control lever and hole in governor plate line-up. If holes "A" are not aligned, loosen clamp screw and move throttle cable until holes are aligned. Tighten clamp screw securely.

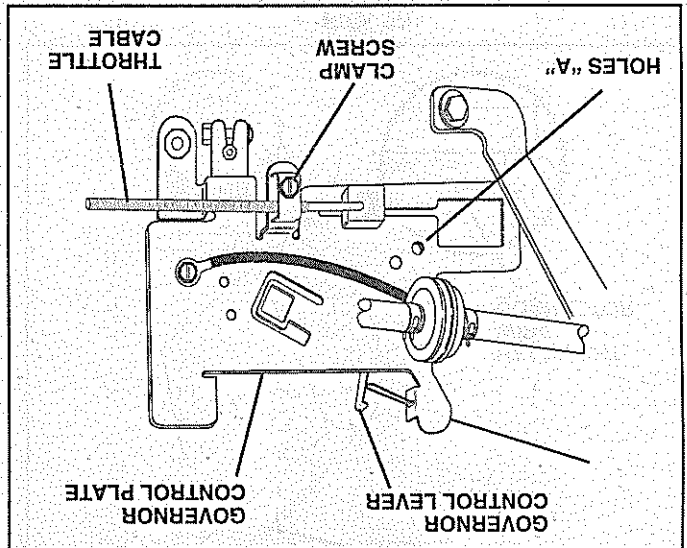


FIG. 29

TO ADJUST CARBURETOR (See Fig. 30)

The carburetor has been preset at the factory and adjustment should not be necessary. However, minor adjustment may be required to compensate for differences in fuel, temperature, altitude or load. If the carburetor does need adjustment, proceed as follows:

In general, turning idle mixture valve in (clockwise) decreases the supply of fuel to the engine giving a leaner fuel/air mixture. Turning the idle mixture valve out (counterclockwise) increases the supply of fuel to the engine giving a richer fuel/air mixture.

IMPORTANT: DAMAGE TO THE NEEDLE VALVE AND THE SEAT IN CARBURETOR MAY RESULT IF SCREW IS TURNED IN TOO TIGHT.

PRELIMINARY SETTING -

- Air cleaner assembly must be assembled to the carburetor when making carburetor adjustments.
- Be sure the throttle control cable is adjusted properly (see above).
- With engine off turn idle mixture valve in (clockwise) closing it finger tight and then turn out (counterclockwise) 1 full turn.

STORAGE

Immediately prepare your tractor for storage at the end of the season or if the tractor will not be used for 30 days or more.



CAUTION: Never store the tractor with gasoline in the tank inside a building where fumes may reach an open flame or spark. Allow the engine to cool before storing in any enclosure.

TRACTOR

Remove mower from tractor for winter storage. When mower is to be stored for a period of time, clean it thoroughly, remove all dirt, grease, leaves, etc. Store in a clean, dry area.

- Clean entire tractor (See "CLEANING" in the Customer Responsibilities section of this manual).
- Inspect and replace belts, if necessary (See belt replacement instructions in the Service and Adjustments section of this manual).
- Lubricate as shown in the Customer Responsibilities section of this manual.
- Be sure that all nuts, bolts and screws are securely fastened. Inspect moving parts for damage, breakage and wear. Replace if necessary.
- Touch up all rusted or chipped paint surfaces; sand lightly before painting.

BATTERY

- Fully charge the battery for storage.
- After a period of time in storage, battery may require recharging.
- To help prevent corrosion and power leakage during long periods of storage, battery cables should be disconnected and battery cleaned thoroughly (see "TO CLEAN BATTERY AND TERMINALS" in the Customer Responsibilities section of this manual).
- After cleaning, leave cables disconnected and place cables where they cannot come in contact with battery terminals.
- Be sure battery drain tube is securely attached.
- If battery is removed from tractor for storage, do not store battery directly on concrete or damp surfaces.

ENGINE

FUEL SYSTEM

IMPORTANT: IT IS IMPORTANT TO PREVENT GUM DEPOSITS FROM FORMING IN ESSENTIAL FUEL SYSTEM PARTS SUCH AS CARBURETOR, FUEL FILTER, FUEL HOSE, OR TANK DURING STORAGE. ALSO, EXPERIENCE INDICATES THAT ALCOHOL BLENDED FUELS (CALLED GASOHOL OR USING ETHANOL OR METHANOL) CAN ATTRACT MOISTURE WHICH LEADS TO SEPARATION AND FORMATION OF ACIDS DURING STORAGE. ACIDIC GAS CAN DAMAGE THE FUEL SYSTEM OF AN ENGINE WHILE IN STORAGE.

- Drain the fuel tank.
- Start the engine and let it run until the fuel lines and carburetor are empty.
- Never use engine or carburetor cleaner products in the fuel tank or permanent damage may occur.
- Use fresh fuel next season.

NOTE: Fuel stabilizer is an acceptable alternative in minimizing the formation of fuel gum deposits during storage. Add stabilizer to gasoline in fuel tank or storage container. Always follow the mix ratio found on stabilizer container. Run engine at least 10 minutes after adding stabilizer to allow the stabilizer to reach the carburetor. Do not drain the gas tank and carburetor if using fuel stabilizer.

ENGINE OIL

Drain oil (with engine warm) and replace with clean engine oil. (See "ENGINE" in the Customer Responsibilities section of this manual).

CYLINDERS

- Remove spark plug(s).
- Pour one ounce of oil through spark plug hole(s) into cylinder(s).
- Turn ignition key to "START" position for a few seconds to distribute oil.
- Replace with new spark plug(s).

OTHER

- Do not store gasoline from one season to another.
- Replace your gasoline can if your can starts to rust. Rust and/or dirt in your gasoline will cause problems.
- If possible, store your tractor indoors and cover it to give protection from dust and dirt.
- Cover your tractor with a suitable protective cover that does not retain moisture. Do not use plastic. Plastic cannot breathe which allows condensation to form and will cause your tractor to rust.

IMPORTANT: NEVER COVER TRACTOR WHILE ENGINE AND EXHAUST AREAS ARE STILL WARM.

TROUBLESHOOTING POINTS

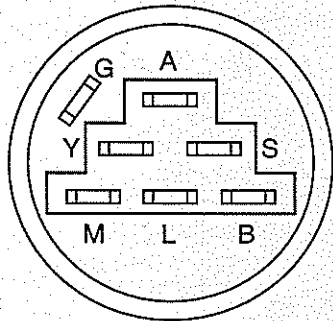
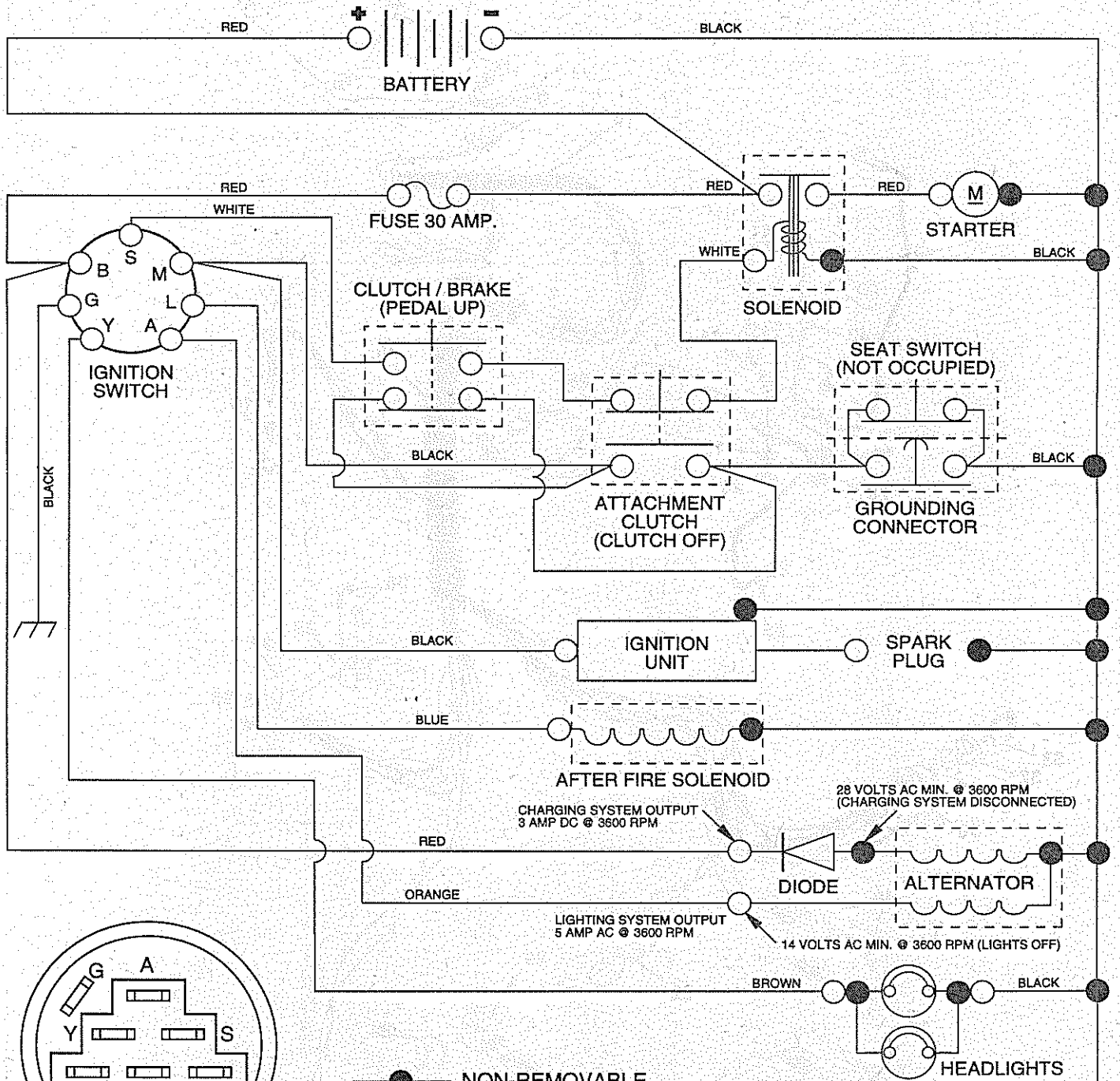
PROBLEM	CAUSE	CORRECTION
Will not start	<ol style="list-style-type: none"> 1. Out of fuel. 2. Engine not "CHOKED" properly. 3. Engine flooded. 4. Bad spark plug. 5. Dirty air filter. 6. Dirty fuel filter. 7. Water in fuel. 8. Loose or damaged wiring. 9. Carburetor out of adjustment. 10. Engine valves out of adjustment. 	<ol style="list-style-type: none"> 1. Fill fuel tank. 2. See "TO START ENGINE" in Operation section. 3. Wait several minutes before attempting to start. 4. Replace spark plug. 5. Clean/replace air filter. 6. Replace fuel filter. 7. Drain fuel tank and carburetor, refill tank with fresh gasoline and replace fuel filter. 8. Check all wiring. 9. Contact an authorized service center/department. 10. Contact an authorized service center/department.
Hard to start	<ol style="list-style-type: none"> 1. Dirty air filter. 2. Bad spark plug. 3. Weak or dead battery. 4. Dirty fuel filter. 5. Stale or dirty fuel. 6. Loose or damaged wiring. 7. Carburetor out of adjustment. 8. Engine valves out of adjustment. 	<ol style="list-style-type: none"> 1. Clean/replace air filter. 2. Replace spark plug. 3. Recharge or replace battery. 4. Replace fuel filter. 5. Drain fuel tank and refill with fresh gasoline. 6. Check all wiring. 7. Check/replace ignition switch. 8. Check/replace solenoid or starter. 9. Contact an authorized service center/department.
Engine will not turn over	<ol style="list-style-type: none"> 1. Clutch/brake pedal not depressed. 2. Attachment clutch is engaged. 3. Weak or dead battery. 4. Blown fuse. 5. Corroded battery terminals. 6. Loose or damaged wiring. 7. Faulty ignition switch. 8. Faulty solenoid or starter. 9. Faulty operator presence switch(es). 	<ol style="list-style-type: none"> 1. Depress clutch/brake pedal. 2. Disengage attachment clutch. 3. Recharge or replace battery. 4. Replace fuse. 5. Clean battery terminals. 6. Check all wiring. 7. Check/replace ignition switch. 8. Check/replace solenoid or starter. 9. Contact an authorized service center/department.
Engine clicks but will not start	<ol style="list-style-type: none"> 1. Weak or dead battery. 2. Corroded battery terminals. 3. Loose or damaged wiring. 4. Faulty solenoid or starter. 	<ol style="list-style-type: none"> 1. Recharge or replace battery. 2. Clean battery terminals. 3. Check all wiring. 4. Check/replace solenoid or starter.
Loss of power	<ol style="list-style-type: none"> 1. Cutting too much grass/too fast. 2. Throttle in "CHOKED" position. 3. Build-up of grass, leaves and trash under mower. 4. Dirty air filter. 5. Low oil level/dirty oil. 6. Faulty spark plug. 7. Dirty fuel filter. 8. Stale or dirty fuel. 9. Water in fuel. 10. Spark plug wire loose. 11. Dirty engine air screen/fins. 12. Dirty/clogged muffler. 13. Loose or damaged wiring. 14. Carburetor out of adjustment. 15. Engine valves out of adjustment. 	<ol style="list-style-type: none"> 1. Set in "Higher Cut" position/reduce speed. 2. Adjust throttle control. 3. Clean underside of mower housing. 4. Clean/replace air filter. 5. Check oil level/change oil. 6. Clean and regap or change spark plug. 7. Replace fuel filter. 8. Drain fuel tank and refill with fresh gasoline. 9. Drain fuel tank and carburetor, refill tank with fresh gasoline and replace fuel filter. 10. Connect and tighten spark plug wire. 11. Clean engine air screen/fins. 12. Clean/replace muffler. 13. Check all wiring. 14. Contact an authorized service center/department. 15. Contact an authorized service center/department.
Excessive vibration	<ol style="list-style-type: none"> 1. Worn, bent or loose blade. 2. Bent blade mandrel. 3. Loose/damaged part(s). 	<ol style="list-style-type: none"> 1. Replace blade. Tighten blade bolt. 2. Replace blade mandrel. 3. Tighten loose part(s). Replace damaged parts.

TROUBLESHOOTING POINTS

PROBLEM	CAUSE	CORRECTION
Engine continues to run when operator leaves seat with attachment clutch engaged	<ol style="list-style-type: none"> 1. Faulty operator-safety presence control system. 	<ol style="list-style-type: none"> 1. Check wiring, switches and connections. If not corrected, contact an authorized service center/department.
Poor cut - uneven	<ol style="list-style-type: none"> 1. Worn, bent or loose blade. 2. Mower deck not level. 3. Buildup of grass, leaves, and trash under mower. 4. Bent blade mandrel. 5. Clogged mower deck vent holes from buildup of grass, leaves, and trash around mandrels. 	<ol style="list-style-type: none"> 1. Replace blade. Tighten blade bolt. 2. Level mower deck. 3. Clean underside of mower housing. 4. Replace blade mandrel. 5. Clean around mandrels to open vent holes.
Mower blades will not rotate	<ol style="list-style-type: none"> 1. Obstruction in clutch mechanism. 2. Worn/damaged mower drive belt. 3. Frozen idler pulley. 4. Frozen blade mandrel. 	<ol style="list-style-type: none"> 1. Remove obstruction. 2. Replace mower drive belt. 3. Replace idler pulley. 4. Replace blade mandrel.
Poor grass discharge	<ol style="list-style-type: none"> 1. Engine speed too slow. 2. Travel speed too fast. 3. Wet grass. 4. Mower deck not level. 5. Low/uneven tire air pressure. 6. Worn, bent or loose blade. 7. Buildup of grass, leaves and trash under mower. 8. Mower drive belt worn. 9. Blades improperly installed. 10. Improper blades used. 11. Clogged mower deck vent holes from buildup of grass, leaves, and trash around mandrels. 	<ol style="list-style-type: none"> 1. Place throttle control in "FAST" position. 2. Shift to slower speed. 3. Allow grass to dry before mowing. 4. Level mower deck. 5. Check tires for proper air pressure. 6. Replace/sharpen blade. Tighten blade bolt. 7. Clean underside of mower housing. 8. Replace mower drive belt. 9. Reinstall blades sharp edge down. 10. Replace with blades listed in this manual. 11. Clean around mandrels to open vent holes.
Headlight(s) not working (if so equipped)	<ol style="list-style-type: none"> 1. Switch is "OFF". 2. Bulb(s) burned out. 3. Faulty light switch. 4. Loose or damaged wiring. 5. Blown fuse. 	<ol style="list-style-type: none"> 1. Turn switch "ON". 2. Replace bulb(s). 3. Check/replace light switch. 4. Check wiring and connections. 5. Replace fuse.
Battery will not charge	<ol style="list-style-type: none"> 1. Bad battery cell(s). 2. Poor cable connections. 3. Faulty regulator (if so equipped). 4. Faulty alternator. 	<ol style="list-style-type: none"> 1. Replace battery. 2. Check/clean all connections. 3. Replace regulator. 4. Replace alternator.
Engine "backfires" when turning engine "OFF"	<ol style="list-style-type: none"> 1. Engine throttle control not set at "SLOW" position for 30 seconds before stopping engine. 	<ol style="list-style-type: none"> 1. Move throttle control to "SLOW" position and allow to idle for 30 seconds before stopping engine.

TRACTOR -- MODEL NUMBER HD3K4E9A

SCHEMATIC



IGNITION SWITCH

POSITION	CIRCUIT	"MAKE"
OFF	G + M + L	NONE
RUN/LIGHT	B + L	A + Y
RUN	B + L	NONE
START	B + L + S	NONE

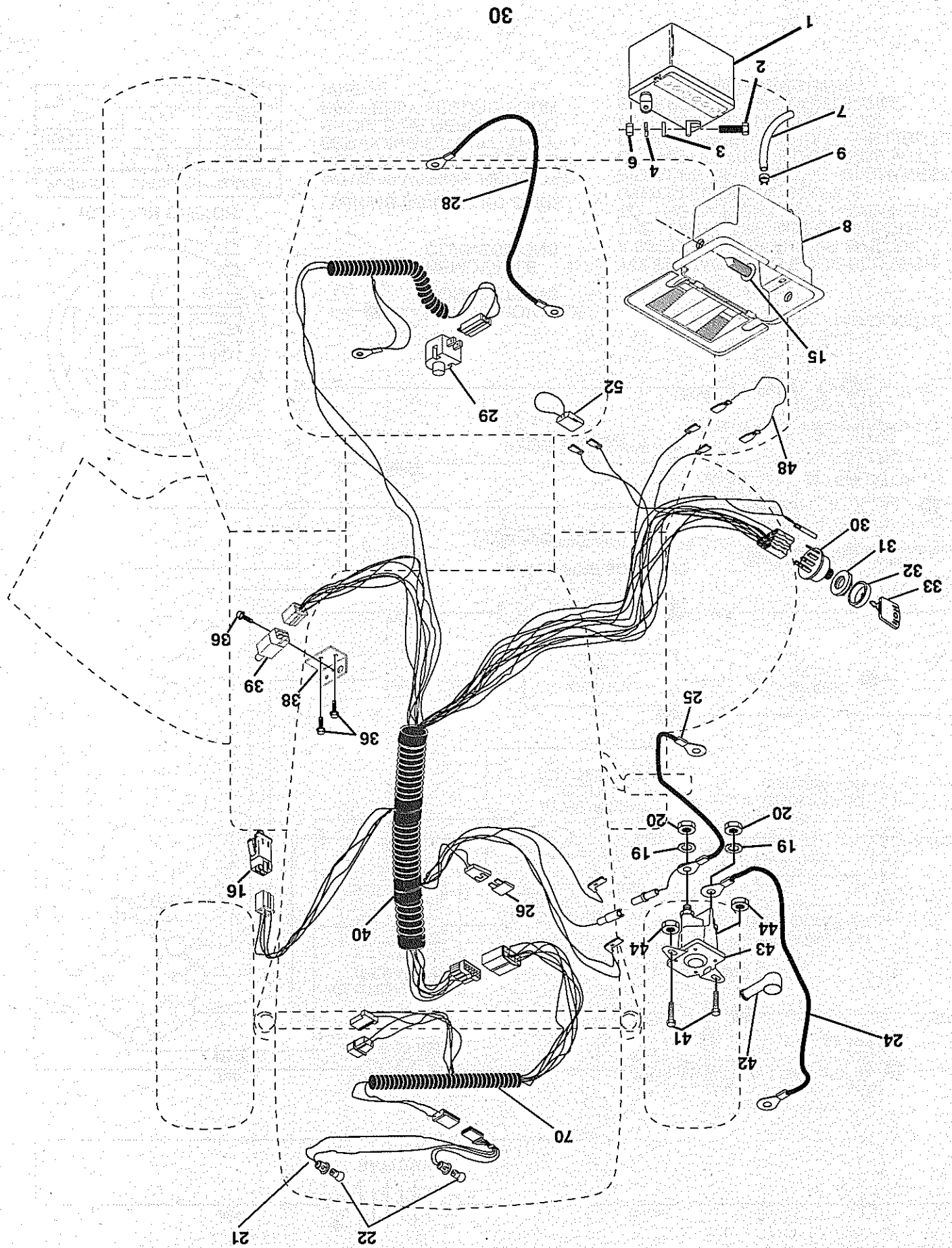
- NON-REMOVABLE CONNECTIONS
- REMOVABLE CONNECTIONS

WIRING INSULATED CLIPS

NOTE: IF WIRING INSULATED CLIPS WERE REMOVED FOR SERVICING OF UNIT, THEY SHOULD BE REPLACED TO PROPERLY SECURE YOUR WIRING

NOTE

YOUR TRACTOR IS EQUIPPED WITH A SPECIAL ALTERNATOR SYSTEM. THE LIGHTS ARE NOT CONNECTED TO THE BATTERY, BUT HAVE THEIR OWN ELECTRICAL SOURCE. BECAUSE OF THIS, THE BRIGHTNESS OF THE LIGHTS WILL CHANGE WITH ENGINE SPEED. AT IDLE THE LIGHTS WILL DIM. AS THE ENGINE IS SPEEDED UP, THE LIGHTS WILL BECOME THEIR BRIGHTEST.



REPAIR PARTS
TRACTOR - - MODEL NUMBER HD3K4E9A
ELECTRICAL

REPAIR PARTS

TRACTOR - - MODEL NUMBER HD3K4E9A

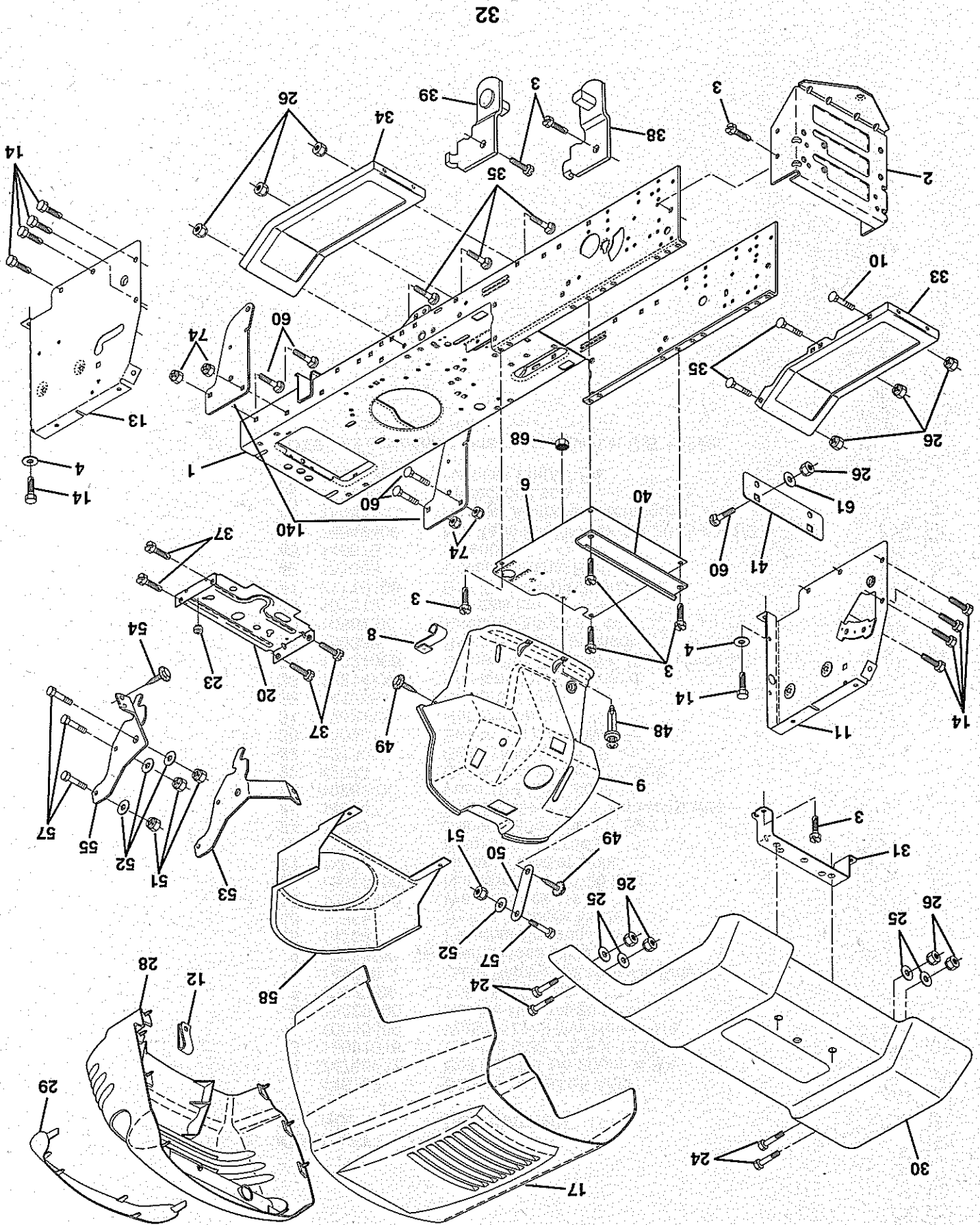
ELECTRICAL

KEY PART NO. NO.	DESCRIPTION
1 146139	Battery 12 Volt 25 Amp
2 74760412	Bolt Hex Hd 1/4-20unc X 3/4
3 19091016	Washer 9/32 X 5/8 X 16 Ga
4 10040400	Washer Lock Hvy Helical 1/4
6 73220400	Nut Fin Hex 1/4-20 Unc
7 109238X	Tube Plastic 12"
8 144940	Case Battery w/2 Holes w Bnty
9 109596X	Clamp Hose Olive
15 147688	Fastener Snap-In
16 153664	Switch Interlock Push-In
19 10090400	Washer Lock 1/4
20 73350400	Nut Jam Hex 1/4-20 Unc
21 136850	Harness Socket Light
22 4152J	Bulb, Light # 1156
24 4799J	Cable Starter 6ga 11" Red
25 146147	Cable Battery 6 Ga Red w/16 wire
26 108824X	Fuse 30 Amp Auto Green
28 4207J	Cable Ground 6ga 12"black
29 121305X	Switch Plunger Nc Gray
30 140301	Switch Ign 4 Pos W/L P/L
31 124211X	Nut Ignition
32 141226	Cover Sw Key
33 122147X	Key Ign Molded Generic
36 17021008	Screw Hex Tapping # 10-24 Unc x 1/2
38 140336	Bracket Switch Interlock
39 109553X	Switch Interlock 4 Term
40 151212	Harness Ign
41 71110408	Bolt Fin Hex 1/4-20uncx 1/2
42 131563	Cover Terminal Red
43 145673	Solenoid
44 73640400	Nut Keps Blk Fin Hex 1/4-20 Unc x 1/2
48 140844	Adapter Ammeter Rectangular
52 141940	Protection Loop
70 141164	Harness Eng LT P/L

NOTE: All component dimensions given in U.S. inches
1 inch = 25.4 mm

REPAIR PARTS
TRACTOR -- MODEL NUMBER HD3K4E9A

CHASSIS AND ENCLOSURES



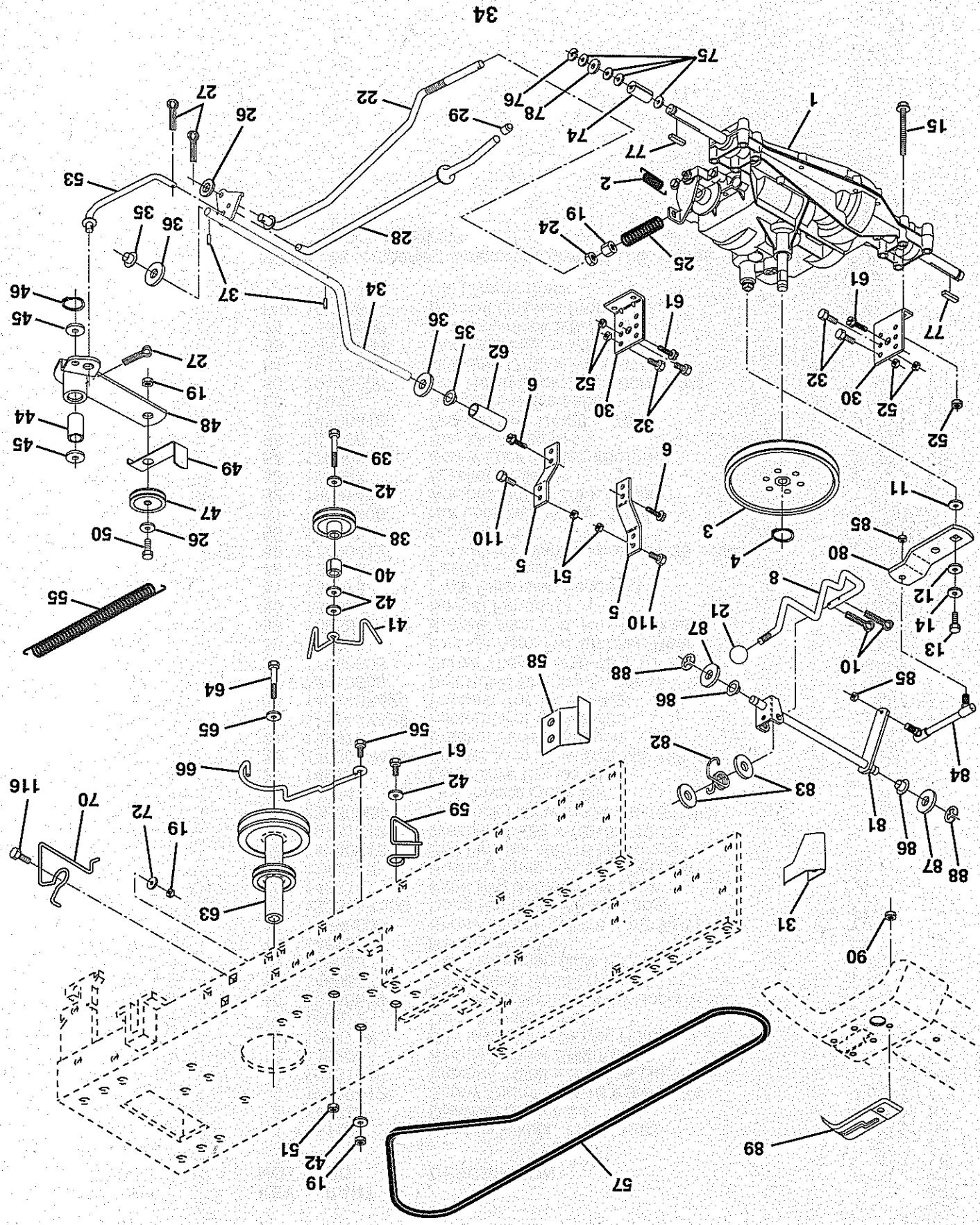
REPAIR PARTS

TRACTOR - - MODEL NUMBER HD3K4E9A

CHASSIS AND ENCLOSURES

KEY NO.	PART NO.	DESCRIPTION
1	151169	Chassis Wldmt. 11Ga. 1996
2	140356	Drawbar Stretch 94
3	17490612	Screw Thdrol. 3/8-16 x 3/4 Ty-Tt
4	19131216	Washer 13/32 x 3/4 x 16 Ga.
6	145206	Saddle Fender Shift Flat
8	126471X	Clip Insulator .406 Mtg Hole
9	140072	Dash Private Label
10	72140608	Bolt RdHd Sqnk. 3/8-16 Unc x 1
11	146965	Panel Asm. Dash Lh
12	145660	Clip Tinnerman Grille P/L
13	146959	Panel Dash Rh
14	17490608	Screw Thdrol. 3/8-16 x 1/2 Ty-Tt
17	139394X550	Hood Pnt Steel Private Label
20	145210	Plate Mtg Battery/Fuel Tank
23	124028X	Bushing Snap Nyl. Blk Fuel Line
24	74780616	Bolt Fin Hex 3/8-16 Unc x 1 Gr. 5
25	19131312	Washer 13/32 x 13/16 x 12 Ga.
26	73800600	Nut Lock Hex w/Insert 3/8-16 UNC
28	140141	Grill Private Lable Blk
29	140273	Lens Grille Private label
30	140001X428	Fender Asm LT w/Shift MS-428
31	139976	Bracket Fender Support
33	145244X428	Footrest Pnt. Lh Ms-428
34	145243X428	Footrest Pnt. Rh Ms-428
35	72110606	Bolt RdHd Sht. Sqnk. 3/8-16 x 3/4
37	17490508	Screw Thdrol. 5/16-18 x 1/2 Tyt
38	139886	Bracket Asm. Pvt. Lh Mwr. Rear
39	139887	Bracket Asm. Pvt. Rh Mwr. Rear
40	139977	Spacer Fender Lt
41	139978	Plate Extension Fender Lt
48	138096	Fastener, Push-in
49	17490412	Screw Hex Wsh. Thdrol. 1/4-20 x 3/4
50	142779	Brace
51	73800400	Nut Lock Hex W/Ins. 1/4-20
52	19091416	Washer 9/32 x 7/8 x 16 Ga.
53	144697	Bracket Grille LH
54	17030814	Screw Lock Spider #8 x 7/8
55	144696	Bracket, Grille RH
57	74780412	Bolt Fin Hex 1/4-20 x .75
58	150127	Air Duct Private Label
60	72140606	Bolt RdHd Sqnk. 3/8-16unc x 3/4
61	19171416	Washer 17/32 x 7/8 x 16 Ga.
68	73510400	Nut Keps Hex 1/4-20 UNC
74	73680600	Nut Crownlock 3/8-16 UNC
140	150556	Bracket Chassis Front 7 Ga.
--	134014	Plug Dome Black

NOTE: All component dimensions given in U.S. inches
1 inch = 25.4 mm



TRACTOR -- MODEL NUMBER HD3K4E9A

DRIVE

REPAIR PARTS

REPAIR PARTS

TRACTOR - - MODEL NUMBER HD3K4E9A

DRIVE

KEY NO.	PART NO.	DESCRIPTION	KEY NO.	PART NO.	DESCRIPTION
1	145605	Transaxle 6 Sp Dana Model Number 4360-96	47	127783	Pulley Idler V Groove Plastic
2	146682	Spring Return Brake	48	123789X	Bellcrank Asm Clutch
3	123666X	Pulley Transaxle	49	123205X	Retainer Belt Style Spring
4	12000028	Ring Retainer	50	74760624	Bolt Hex Hd 3/8-16unc X 1-1/2
5	121520X	Strap Torque 30 Degrees	51	73680600	Nut Crownlock 3/8-16 Unc
6	17490512	Screw Thdrol 5/16-18 X 3/4 TYT	52	73680500	Nut Crownlock 5/16-18
8	141003	Rod Shift Blk Dana	53	105710X	Link Clutch 7 66
10	76020416	Pin Cotter 1/8 X 1 Cad	55	105709X	Spring Return Clutch 6 75
11	105701X	Washer Plate Shf 388 Sq Hole	56	74760620	Bolt Fin Hex 3/8-16 x 1-1/4
12	19151216	Washer 15/32 X 3/4 X 16 Ga	57	130801	V-Belt Ground Drive 95 25
13	74550412	Bolt 1/4-28unf Gr8 w/Patch	58	127274X	Keeper Belt RH LT Pnt/zinc 16g
14	10040400	Washer Lock Hvy Helical 1/4	59	140312	Keeper Belt Chassis Span Ctr
15	74490544	Bolt Hex Flghd 5/16-18 Gr. 5	61	17490612	Screw Thdrol 3/8-16x3/4 Ty-tt
18	74780616	Bolt Fin Hex 3/8-16unc X 1 Gr 5	62	8883R	Cover Pedal Blk Round
19	73800600	Nut, Lock 3/8-16	63	140186	Engine Pulley LT/YT
21	106933X	Knob Rd 1/2-13 Plstc Thds Blk	64	71170764	Bolt Hex 7/16-20x4 Gr 5
22	130804	Rod Brake LT	65	10040700	Washer Lock Hvy Hlcl Spr 7/16
24	73350600	Nut Hex Jam 3/8-16 Unc	66	153400	Keeper Belt Engine LH LT
25	106888X	Spring Rod Brake 2 00 Zinc	70	134683	Guide Belt Mower Drive RH
26	19131316	Washer 13/32 X 13/16 X 16 Ga	72	19132012	Washer 13/32 X 1-1/4 X 12 Ga
27	76020412	Pin Cotter 1/8 X 3/4 Cad	74	109502X	Spacer Axle
28	145204	Rod Brake Parking LT/YT	75	121749X	Washer 25/32 X 1 1/4 X 16 Ga
29	71673	Cap Brake Parking Black	76	12000001	E-ring #5133-75
30	130807	Bracket Transmission	77	123583X	Key Square 2 0 X 1845/ 1865
31	127275X	Keeper Belt LH 14 Ga	78	121748X	Washer 25/32 X 1-5/8 X 16 Ga
32	74760512	Bolt Hex Hd 5/16-18 x 3/4	80	131487	Arm, Shift Transaxle
34	151128	Shaft Asm Pedal Foot	81	136933	Shaft Asm. Cross
35	120183X	Bearing Nylon Blk 629 Id	82	123782X	Spring, Torsion
36	19211616	Washer 21/32 X 1 X 16 Ga	83	19171216	Washer 17/32 x 3/4 x 16 Ga.
37	1572H	Pin Roll 3/16 X 1"	84	132183	Rod, Tie
38	123674X	Pulley Idler Flat	85	150360	Nut, Centerlock 1/4-28 Fnthd
39	74760644	Bolt Fin Hex 3/8-16unc X 2-3/4	86	71208	Bushing, Rod
40	4470J	Spacer Split 395 X 59 Bzp	87	19212016	Washer 21/32 x 1-1/4 x 16 Ga.
41	153399	Keeper Belt Retainer	88	12000008	Ring, Clip
42	19131312	Washer 13/32 X 13/16 X 12 Ga	89	139964	Console, Shift
44	105706X	Bearing Nyl 503 X 628 X 1 25	90	124346X	Nut, Self-Thd 1/4
45	110812X	Washer Hardened	110	74760612	Bolt Fin Hex 3/8-16unc x 3/4
46	12000039	Ring Klip #t5304-50	116	72110610	Bolt Rdhd Sqnk 3/8-16 x 1.25

NOTE: All component dimensions give in U.S. inches.
1 inch = 25.4 mm.

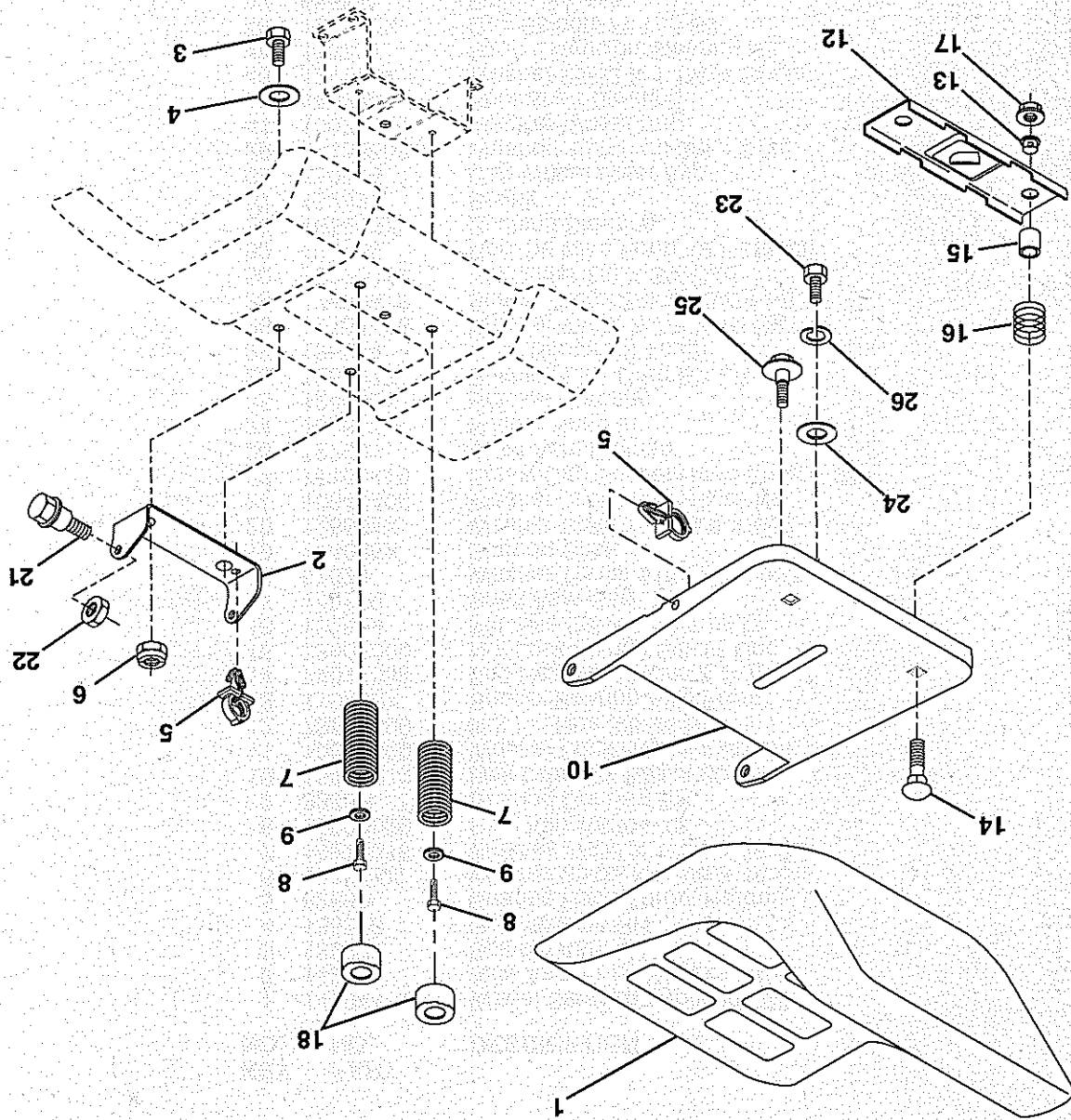
REPAIR PARTS

TRACTOR - - MODEL NUMBER HD3K4E9A

STEERING ASSEMBLY

KEY NO.	PART NO.	DESCRIPTION
1	140044	Wheel Steering Ayp/kelch Blk
2	142033	Axle Asm Fr LT W/gzks 38/42
3	135227	Spindle Asm LH
4	135228	Spindle Asm RH
5	6266H	Bearing Race Thrust Harden
6	121748X	Washer 25/32 X 1-5/8 X 16 Ga
7	19272016	Washer 27/32 X 1-1/4 X 16 Ga
8	12000029	Ring Klip #t5304-75
9	3366R	Bearing Col Strg Blk
10	130468	Link Drag Sol Ball Jt 20 064
11	10040600	Washer Lock Hvy Hlcl Spr 3/8
12	73610600	Nut Fin Hex 3/8-24 Unf
13	110438X	Spacer Bearing Axle Front
14	74011056	Bolt Hex 5/8-11 Unc X 3-1/2
15	73901000	Nut Lock Flange 5/8-11 Unc
16	132624	Pin Axle 5/8 X 1 55/1 54 Lg
17	140176	Shaft Asm Strg
18	57079	Washer Thrust 515x 750x 033
19	124035X	Support Shaft
20	126684X	Washer Shim 1/4 X 5/8 X 062
21	10040400	Washer Lock Hvy Helical 1/4
22	71100410	Screw Cap Socket Head Phos & Oil
23	127501	Shaft Asm Pittman
24	109816X	Nyliner Snap In
25	124036X	Bracket Steering
26	126847X	Bushing Link Drag Blk LR
27	136874	Gear Sector 22 Teeth
28	19131416	Washer 13/32 X 7/8 X 16 Ga
29	17490612	Screw Thdrol 3/8-16x3/4 Ty-tt
30	76020412	Pin Cotter 1/8 X 3/4 Cad
32	130465	Rod Tie Wire Form 19 75 Mech
36	102803X	Bushing Steering
37	152927	Screw
38	140045	Cap Wheel Steer Ayp
39	19133808	Washer 13/32 x 2-3/8 x 8 Ga
41	100711L	Adapter Wheel Strg
42	140216	Boot Shaft Steering
43	121749X	Washer 25/32 X 1 1/4 X 16 Ga
44	153721	Shaft Extension Steering P/L
46	121232X	Cap Spindle Fr Top Blk
47	6855M	Fitting Grease
50	17490412	Screw Hex Wsh Thdrol 1/4-20 x 3/4
51	73800500	Nut Lock Hex W/Ins. 5/16-18 Unc P
54	74780520	Bolt Fin Hex 5/16-18 Unc P
55	140285	Clip Timmerman
57	140172	Support Shaft Steering
62	149686	Kit Steering Assembly Service
63	74780616	Bolt Fin Hex 3/8-16unc x 1 Gr. 5

NOTE: All component dimensions given in U.S. inches
1 inch = 25.4 mm



KEY NO.	PART NO.	DESCRIPTION
1	140117	Seat 2400/1416 BIK/bik AYPPL
2	140551	Bracket Pivot Seat 8 720
3	74760616	Bolt Fin Hex 3/8-16 Unc x 1
4	19131610	Washer Flat 13/32 x 1 x 10 Ga
5	145006	Clip Push In Hinged
6	73800600	Nut Crownlock 3/8-16 Unc
7	124181X	Spring Seat Cprsn 2 250 BIK ZI
8	17490616	Screw Thdrol 3/8-16 X 1 Ty-tt
9	19131614	Washer 13/32 X 1 X 14 Ga
10	140552	Pan Seat
11	121246X	Bracket Mounting Switch
12	121248X	Bushing Snap BIK NYI 50 Id
13	121248X	Bushing Snap BIK NYI 50 Id
14	72050411	Bolt Rchd Sht NK 1/4-20x1-3/8

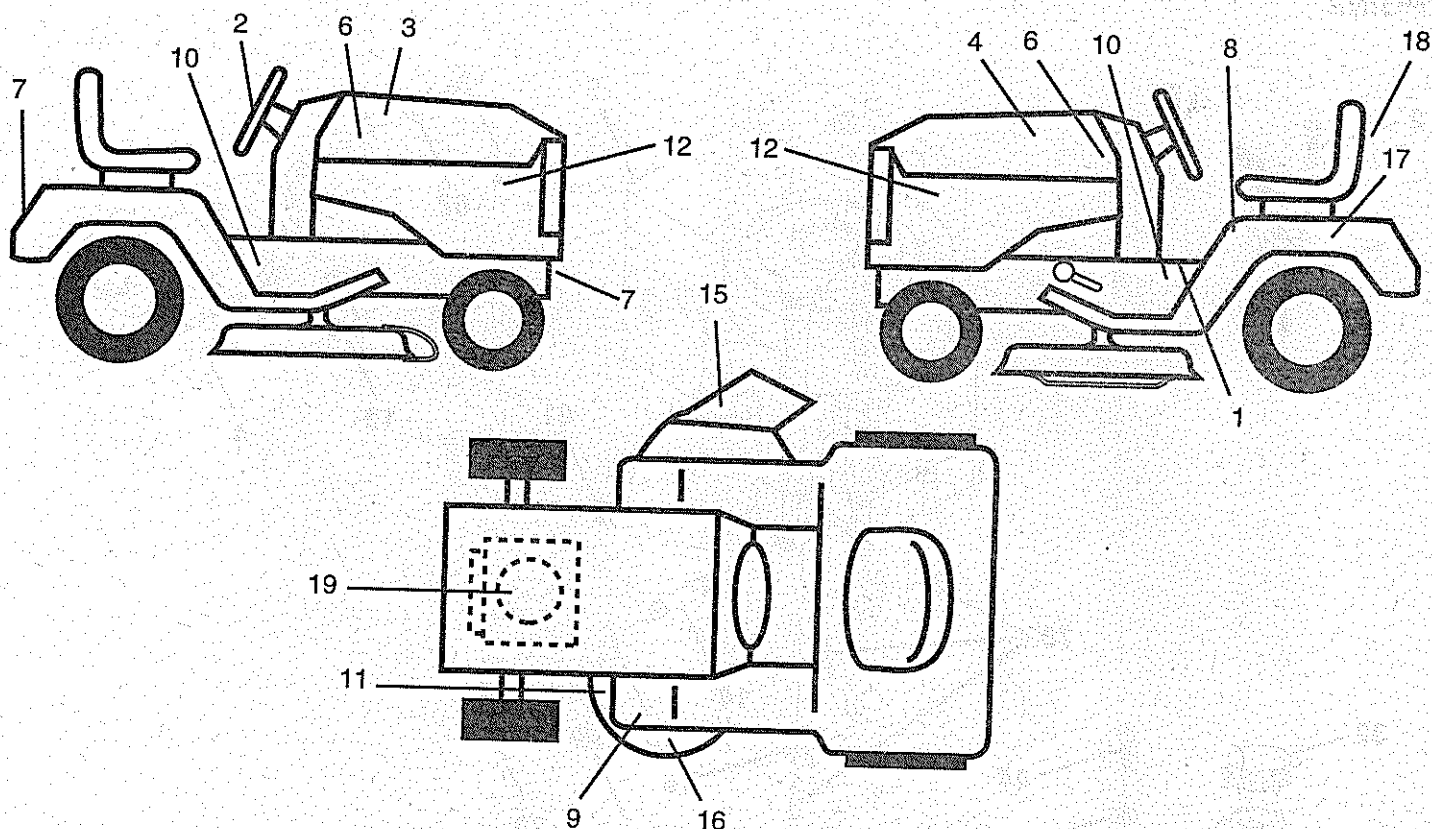
KEY NO.	PART NO.	DESCRIPTION
15	134300	Spacer Split 28x 96 Yel Zinc
16	121250X	Spring Cprsn 1 27 BIK Pnt
17	123976X	Nut Lock 1/4 Lge Fig Gr 5 Zinc
18	124238X	Cap Spring Seat
21	153236	Bolt Shoulder 5/16-18 Unc BIKz
22	73680500	Nut Crown Lock 5/16-18
23	74780814	Bolt Fin Hex 1/2-13 X 7/8 Gr 5
24	19171912	Washer 17/32 X 1-3/16 X 12 Ga
25	127018X	Bolt Shoulder 5/16-18 X 62
26	10040800	Washer Lock Hvy Hicl Spr 1/2

NOTE: All component dimensions given in U.S. inches
1 inch = 25.4 mm

REPAIR PARTS

TRACTOR -- MODEL NUMBER HD3K4E9A

DECALS



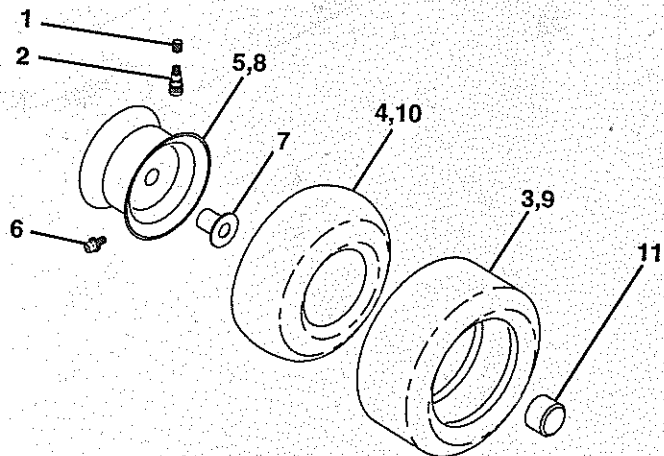
KEY NO.	PART NO.	DESCRIPTION
1	148914	Decal Saddle Inst. Oper Eng/Sp P/L
2	148801	Decal Steering Wheel Insert
3	152525	Decal Hood RH
4	152526	Decal Hood LH
6	138804	Decal Fender Quick Shft Rly Yellow
7	148800	Decal Fende Home Depot
8	141898	Decal Caution Fender Eng/Sp
9	141897	Decal Clutch/brake Eng/Sp
10	148686	Decal Sch Ground Drive 42"
11	148687	Decal V-Belt Sch
12	148819	Decal Pnl Side
15	137259	Decal Warning Multi-Language
16	148803	Decal Mulch Mur Bag Hmdpt
17	146451	Decal Btry Dngr/Psn P/L Sym Ac

KEY NO.	PART NO.	DESCRIPTION
18	152445	Decal Seat Acc
19	152505	Decal Replcmnt Parts B&S I6 HP
--	138311	Decal Handle Lft Height Adjust
--	133671	Pad Footrest Ribbed
--	152336	Manual Owner's English
--	152337	Manual Owner's Spanish

Available accessories not included with tractor:

--	LBD48	42" Snow Blade
--	LSB42	42" Snow Blower
--	LC05	Wheel Weights
--	C42	Grass Catcher
--	LC06	Tire Chains

WHEELS AND TIRES



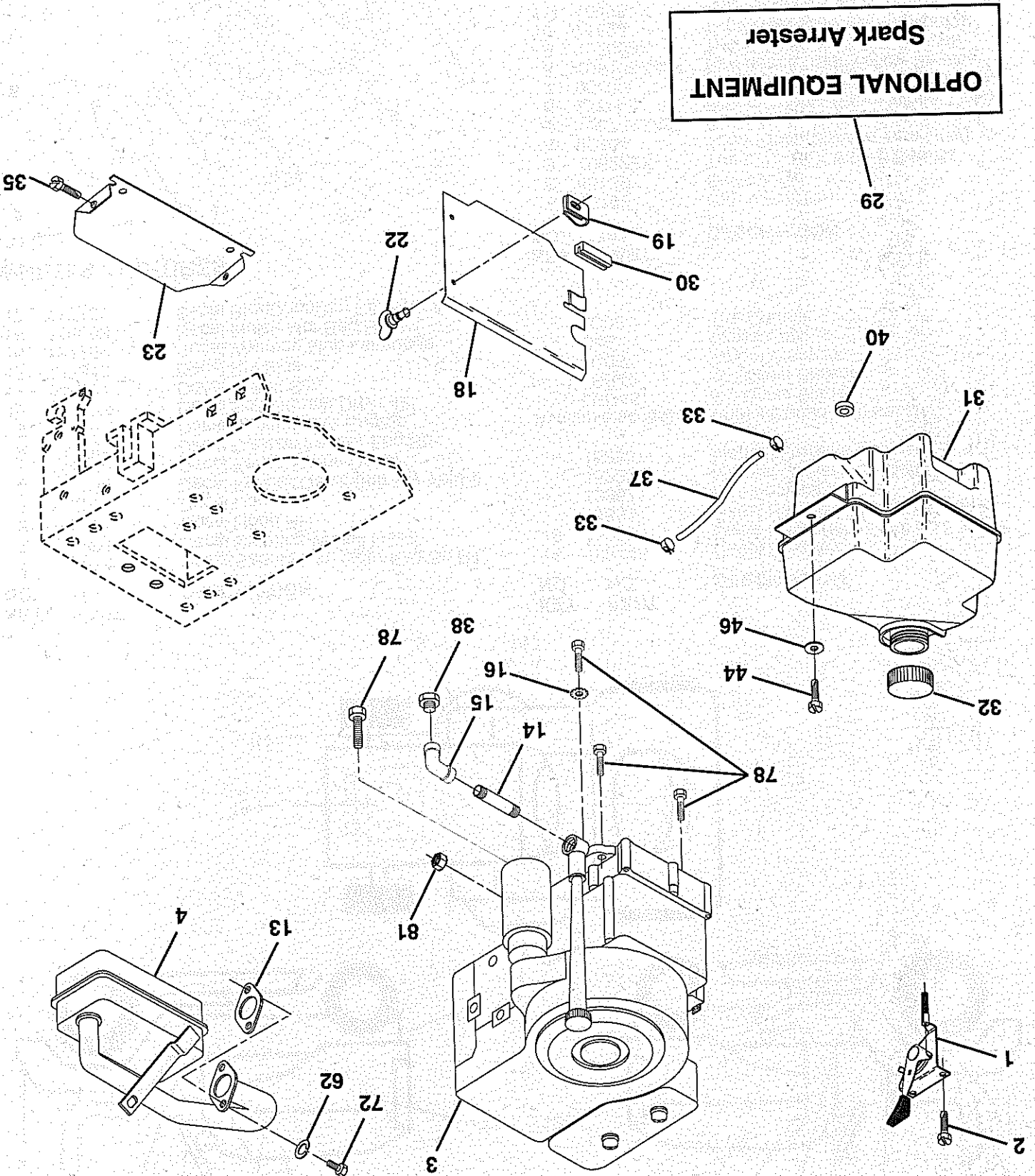
KEY NO.	PART NO.	DESCRIPTION
1	59192	Cap Valve Tire
2	65139	Stem Valve
3	106222X	Tire F Ts 15 X 6 0 - 6 Service
4	59904	Tube Front (Service Item Only)
5	106732X427	Rim Asm 6" front Yellow Service
6	278H	Fitting Grease (Front Wheel Only)
7	9040H	Bearing Flange (Front Wheel Only)
8	106108X427	Rim Asm 8" rear Yellow Service
9	122082X	Tire R Ts 20 X 10-8 C Service
10	7152J	Tube Rear (Service Item Only)
11	104757X	Cap Axle Blk 1 50 X 1 00
--	144334	Sealant, Tire (10 oz. Tube)

NOTE: All component dimensions given in U.S. inches
1 inch = 25.4 mm

REPAIR PARTS

TRACTOR - - MODEL NUMBER HD3K4E9A

ENGINE



REPAIR PARTS

TRACTOR - - MODEL NUMBER HD3K4E9A

ENGINE

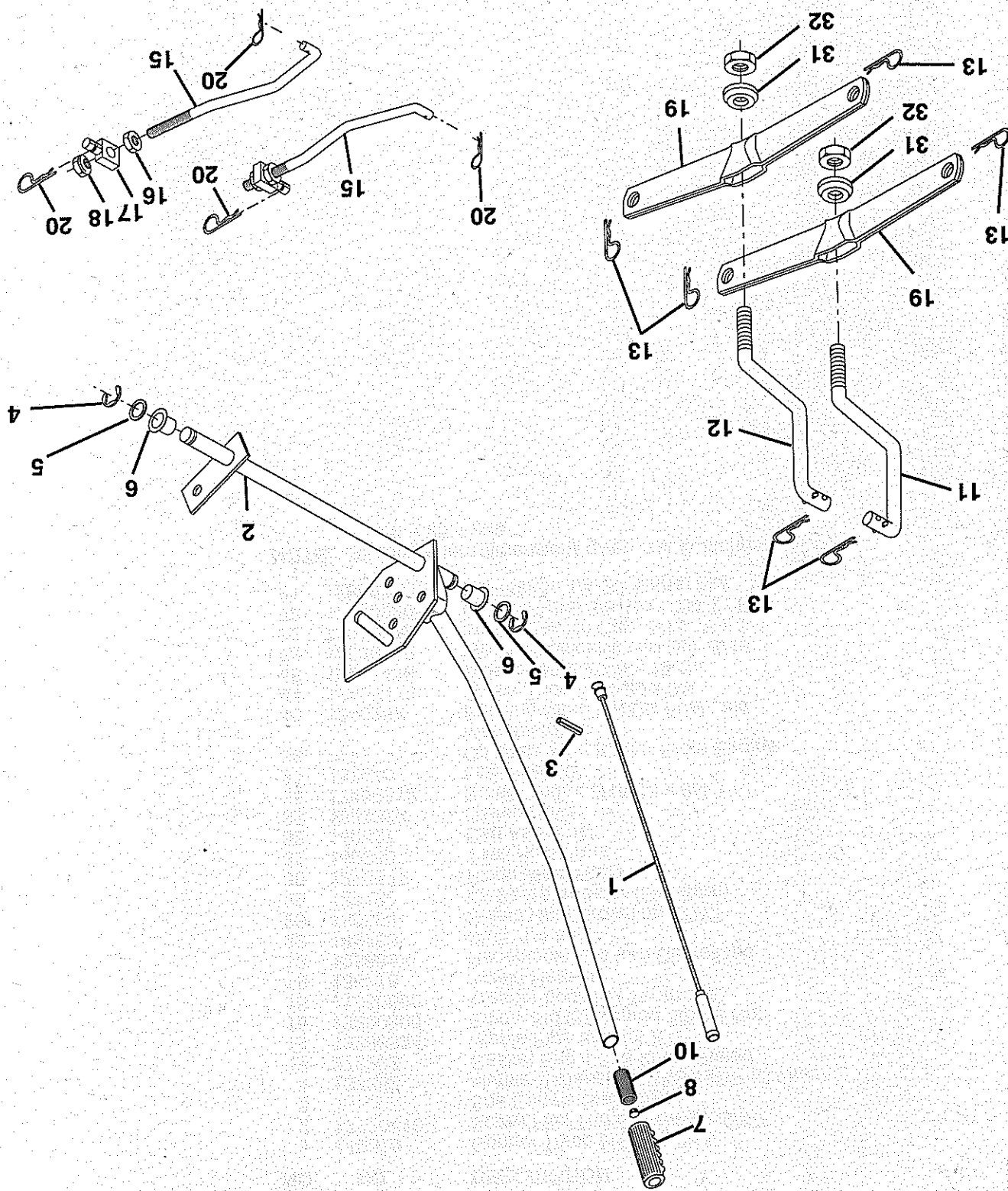
KEY NO.	PART NO.	DESCRIPTION
1	140310	Control Th/ch LH Flag 23.5
2	17720410	Screw Hex Thd Cut 1/4-20x5/8 T
3	-----	See Engine Breakdown
4	137352	Muffler Exhaust LT B&S 14HP IC OHV
13	272293	Gasket Eng 1 313 Id Tin Plated
14	13280324	Nipple Pipe 3/8 Npt X 3"
15	13200300	Elbow Std 90 Degree 3/8-18 Npt
16	11050600	Washer Lock Ext Tooth 3/8
18	136718	Shield Heat Lt
19	105839X	Receptacle 1/4 turn Dacrotized
22	149763	Stud 1/4 turn
23	150554	Shield Heat Browning LT/YT
29	137180	Kit Spark Arrestor (Flat Scrn)
30	127057X	Pinch Weld Hood
31	140280	Tank Fuel Front
32	140527	Cap Asm Fuel
33	123487X	Clamp Hose
35	17490512	Screw Thdrol 5/16-18 x 3/4 TYT
37	137040	Line Fuel 20"
38	-----	Oil Drain Plug (Order From Engine Manufacturer)
40	124028X	Bushing Snap Nyl Blk Fuel Line
44	17490412	Screw Thdrol 1/4-20 x 3/4
46	19091416	Washer 9/32 x 7/8 x 16 Ga
62	10040500	Washer Lock Hvy Hlcl Spr 5/16
72	71070512	Screw Hex Hd Cap 5/16-18 x 3/4
78	17490620	Screw Thdrol 3/8-16x1-1/4 TYTT
81	128861	Nut Flange 1/4-20 Starter Nut

NOTE: All component dimensions given in U. S. inches
1 inch = 25.4 mm

REPAIR PARTS

TRACTOR -- MODEL NUMBER HD3K4E9A

LIFT



REPAIR PARTS

TRACTOR - - MODEL NUMBER HD3K4E9A

.LIFT

KEY NO.	PART NO.	DESCRIPTION
1	136973	Wire Asm Inner W/Plunger
2	140278	Shaft Asm Lft LH
3	138284	Pin Groove
4	12000002	E-ring Truarc #5133-62
5	19211621	Washer Pltd 21/32 X 1 X 21 Ga
6	120183X	Bearing Nylon
7	109413X	Grip Handle Bicycle
8	124526X	Button Plunger Black
10	122512X	Spring Cprsn
11	139865	Link Lift LH
12	139866	Link Lift RH
13	4939M	Retainer Spring
15	127218	Link Front
16	73350800	Nut Jam Hex 1/2-13 Unc
17	130171	Trunnion Blk Zinc
18	73800800	Nut Lock W/wsh 1/2-13unc
19	139868	Arm Suspension Rear
20	3146R	Retainer Spring
31	140302	Bearing Pvt. Lift Spherical
32	73540600	Nut Crownlock 3/8-24

NOTE: All component dimensions given in U.S. inches
1 inch = 25.4 mm

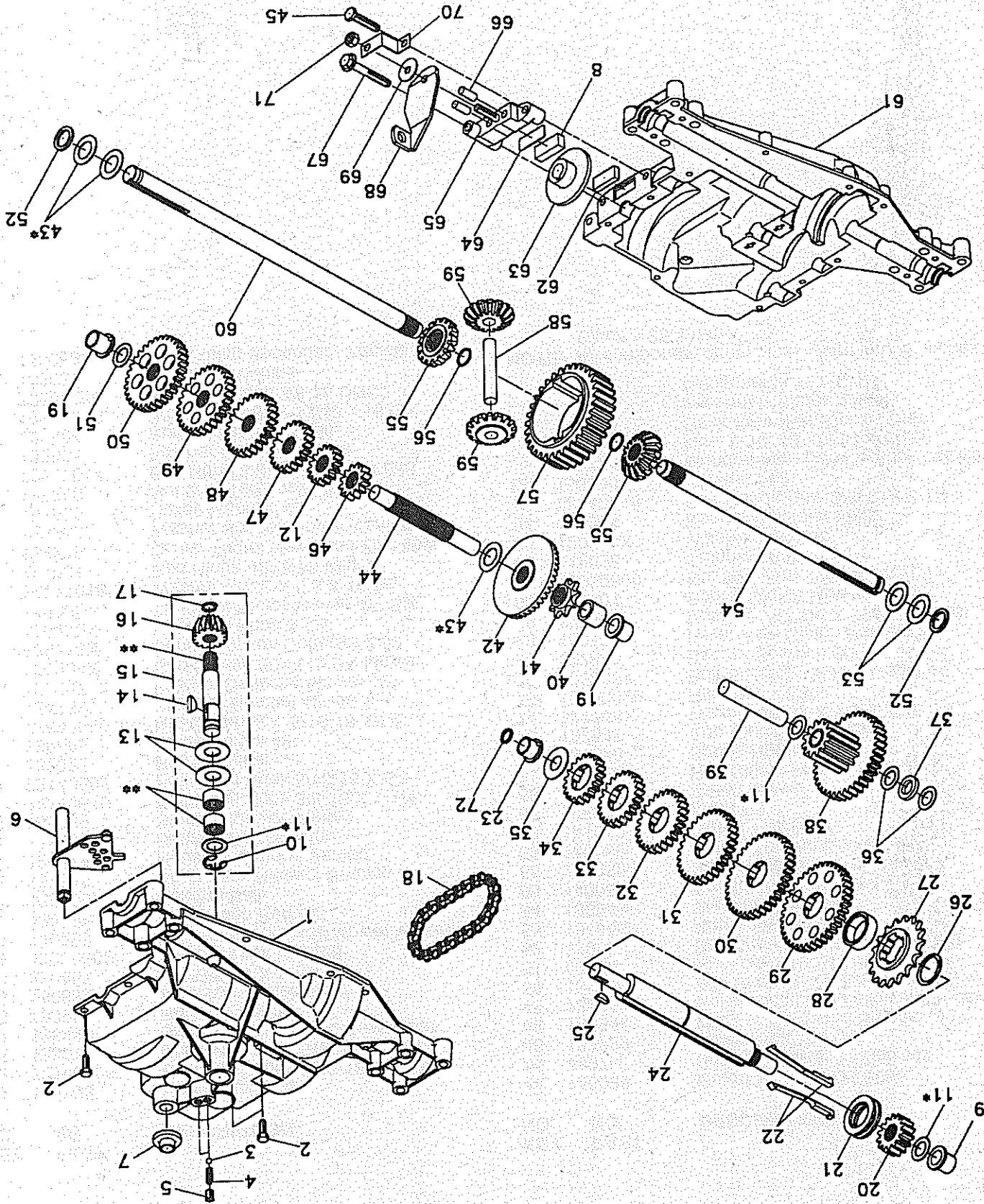
REPAIR PARTS

TRACTOR - - MODEL NUMBER HD3K4E9A

42" MOWER DECK

KEY NO.	PART NO.	DESCRIPTION	KEY NO.	PART NO.	DESCRIPTION
1	144393	Mower Housing	44	140088	Guard Mandrel LH Black
2	72140506	Bolt Rdhd Sqnk 5/16-18unc X3/4	45	4497H	Spring Retainer 1" Zinc/cad
3	138017	Bracket Asm Fr Sway Bar 38/42	46	137729	Screw Hex Thd Cut
4	138440	Bracket Asm Deck 42" sway Bar	48	133944	Washer Hardened Smaller
5	4939M	Retainer Spring	49	133940	Roller Asm Cam Follower 42" dec
6	130832	Arm Suspension Rear	50	131340	Bolt Shldr 10-24 Zinc Gr 5 42"
8	850857	Bolt 3/8-24 X 1 1/4	51	69180	Nut Lock #10-24 Unc
9	10030600	Washer Lock Hvy 3/8	52	139888	Bolt Shoulder 5/16-18 Unc Blkz
10	140296	Washer Hard Blade Mower Vented	53	131845	Arm Asm Pad Brake
11	138498	Blade High Perf 42"	54	133943	Washer Hardened
12	129895	Bearing Ball	55	140084	Arm Idler 42" mower LT/YT
13	137645	Shaft Asm W/lower Bearing	56	122052X	Spacer Retainer Pm Mower
14	128774	Housing Mandrel Vented	58	140086	Spring Torsion Brakes 42"
15	110485X	Bearing Ball Mandrel	59	141043	Guard TUV Idler
16	140329	Stripper Mower Vented	67	106933X	Knob Rd
17	72110610	Bolt Rdhd Sqnk 3/8-16 X 1-1/4	68	144200	V-Belt Mower
18	72140505	Bolt Rdhd Sqnk 5/16-18 X 5/8	71	142427	Rod Clutch Primary 38/42
19	132827	Bolt Shoulder	72	131870	Spring Return
20	136888	Baffle Vortex 42	73	127847	Arm Clutch Secondary
21	73680500	Nut Crownlock 5/16-18 UNC	74	121748X	Washer 25/32 X 1-5/8 X 16 Ga
22	134753	Stiffener Bracket 42" deck	75	12000029	Ring Klip #t5304-75
23	131267	Bracket Deflector Mower 42"	76	128903	Bolt Shoulder 3/8-16 Unc 1 44
24	105304X	Cap Sleeve 80x 112 Blk Mower	77	127845	Keeper Spring 4 000
25	123713X	Spring Torsion Deflector 2 52	78	140179	Lever Asm Clutch Primary P/L
26	110452X	Nut Push Phos & Oil	79	127498	Bushing 747 Od X 794 Lg Brass
27	130968	Shield Deflector Mower 42" Blk	80	153701	Spring Clutch Mower
28	19111016	Washer 11/32 X 5/8 X 16 Ga	81	73350600	Nut Hex Jam 3/8-16 Unc
29	131491	Rod Hinge 42" 6 75 Wig	82	142028	Trunnion Adj
30	138776	Screw Thdroi Hex Head Zinc Mwr	83	120958X	Washer Sintered
31	129963	Washer Spacer Mower Vented	84	144394	Keeper Belt Idler Fixed
32	153535	Pulley Mandrel 42"	85	72140618	Bolt Rdhd Sqnk 3/8-16 x 2-1/4
33	137266	Nut 9/16 Top Lock Flng	128	153390	Washer Felt
34	72110614	Bolt Rdhd 3/8-16uncx1-3/4 Gr5	--	130794	Mandrel Asm Service (Includes Key Nos. 8-10, 12-15, 31 and 33)
35	133835	Fastner Christmas Tree	--	144783	Deck Serv (Std. Deck - Order seperately gauge wheel components 111-121.)
36	131494	Pulley Idler Flat 3 060			
37	19131316	Washer 13/32 x 13/16 x 16 Ga			
40	73680600	Nut Crownlock 3/8-16 UNC			
41	133551	Rod Pivot W/nibs			
43	140083	Rod Clutch Secondary W/nibs			

NOTE: All component dimensions given in U.S. inches
1 inch = 25.4 mm



REPAIR PARTS
TRACTOR - - MODEL NUMBER HD3K4E9A
TRANSAXLE DANA - MODEL NUMBER 4360-96

REPAIR PARTS

TRACTOR - - MODEL NUMBER HD3K4E9A

TRANSAXLE DANA - MODEL NUMBER 4360-96

KEY PART NO. NO.	DESCRIPTION	KEY PART NO. NO.	DESCRIPTION
1 132671	Housing, Upper	39 124639X	Shaft, Idler
2 2274J	Screw, Tapping, Large 1/4-20 x .734	40 120472X	Spacer .633 x .87 x .755
3 134400	Ball, Detent	41 105928X	Sprocket, 9 Teeth (Reverse)
4 105904X	Spring, Detent	42 106605X	Gear, Bevel, 42 Teeth
5 105905X	Screw, Set	43 134394	Assembly, Kit, Shim, .750 Shaft
6 138235	Kit, Shifter Assembly	44 120473X	Shaft, Drive
7 134399	Boot, Shifter	45 106596X	Screw, Tapping, Large 5/16-18 x 1.44
8 120951X	Puck, Friction	46 142678	Gear, Spur, 12 Teeth (1 ^a)
9 148266	Bearing, Flange	47 120407X	Gear, Spur, 20 Teeth (3 ^a)
10 2225J	Ring, Retaining	48 106589X	Gear, Spur, 25 Teeth (4 ^a)
11 134793	Assembly, Kit, Shim, .625 Shaft	49 120408X	Gear, Spur, 28 Teeth (5 ^a)
12 143679	Gear, Spur, 15 Teeth (2 ^a)	50 105937X	Gear, Spur, 31 Teeth (6 ^a)
13 120415X	Washer, Plain .632 x 1.38 x .046	51 2226J	Washer, Plain .632 x 1.00 x .060
14 142674	Key, Woodruff, #9	52 134401	Washer, Neoprene
15 106846X	Assembly, Kit, Input Shaft	53 2264J	Washer, Plain .758 x 1.25 x .031
16 106095X	Pinion, Bevel, 14 Teeth	54 120474X	Axle, L.H.
17 105909X	Ring, Retaining	55 110081X	Gear, Miter, 15 Teeth
18 105910X	Chain, 24 Pitches	56 105941X	Ring, Retaining
19 105911X	Bearing, Flange	57 110071X	Gear, Spur, 32 Teeth
20 142675	Gear, Spur, 14 Teeth	58 120952X	Shaft, Cross
21 148267	Collar, Clutch	59 110082X	Gear, Miter, 15 Teeth
22 138237	Assembly, Kit, Clutch Keys	60 120475X	Axle, R.H.
23 148268	Bearing, Flange	61 142680	Housing, Lower
24 142676	Shaft, Intermediate	62 120961X	Puck, Friction
25 2244J	Key, Woodruff, #61	63 7294J	Disc, Brake
26 105916X	Ring, Retaining	64 108989X	Spacer
27 120470X	Sprocket, 18 Teeth (Reverse)	65 120953X	Jaw, Brake
28 110070X	Spacer	66 120954X	Pin, Dowel
29 142677	Gear, Spur, 37 Teeth (1 ^a)	67 134799	Screw, Tapping 5/16-18 x 2.25
30 142681	Gear, Spur, 35 Teeth (2 ^a)	68 138244	Lever, Actuating
31 124644X	Gear, Spur, 30 Teeth (3 ^a)	69 108996X	Washer, Plain .321 x 1.00 x .055
32 108980X	Gear, Spur, 25 Teeth (4 ^a)	70 120956X	Bracket, Anti-Rotation
33 120406X	Gear, Spur, 22 Teeth (5 ^a)	71 73810500	Locknut 5/16-24
34 134796	Gear, Spur, 19 Teeth (6 ^a)	72 148269	Seal, Oil
35 105925X	Washer, Plain .640 x 1.37 x .061	73 120416X	Grease
36 2232J	Washer, Plain .632 x 1.00 x .026		
37 108978X	Spacer .630 x 1.00 x .169		
38 110079X	Assembly, Gear, Combination, 12 Teeth and 35 Teeth		

NOTE: All component dimensions given in U.S. inches
1 inch = 25.4 mm

SERVICE NOTES

SERVICE NOTES

This warranty does not cover transmission units used for commercial purposes.

Some states do not allow limitations on warranties so the above limitation may not apply to you. This Warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

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The EXPRESSED WARRANTY contained herein shall not apply to any damage resulting from accident, abuse, or neglect. Nor will this LIMITED WARRANTY apply to damage resulting from failure to follow the manufacturer's instructions for operation and maintenance nor from improper selection of a particular application.

All transportation charges on and damage or loss incurred in connection with the transportation of parts submitted for replacement or repair under this LIMITED WARRANTY shall be borne by the purchaser.

Dana Corporation, Spicer-Off-Highway Axle Division, will at its option, replace or repair without charge to the original purchaser for materials or labor, any part or parts manufactured by it and found upon examination to be DEFECTIVE IN MATERIAL AND OR WORKMANSHIP, if received for examination within TWO YEARS* from the date of original purchase.

LIMITED WARRANTY
DANA CORPORATION
Spicer-Off-Highway Axle Division
Fredericktown, OH 43019

The Manufacturer warrants to the original consumer purchaser that this product as manufactured is free from defects in materials and workmanship. For a period of two (2) years from date of purchase by the original consumer purchaser, we will repair or replace, at our option, without charge for parts or labor incurred in replacing parts, any part which we find defective due to materials or workmanship. This Warranty is subject to the following limitations and exclusions.

1. This warranty does not apply to the engine, other than AYP manufactured transaxle/transmission components, battery (except as noted below) or components parts thereof. Please refer to the applicable manufacturer's warranty on these items.

2. Transportation charges for the movement of any power equipment unit or attachment are the responsibility of the purchaser. Transportation charges for any parts submitted for replacement under this warranty must be paid by the purchaser unless such return is requested by American Yard Products.

3. Battery Warranty: On products equipped with a Battery, we will replace, without charge to you, any battery which we find to be defective in manufacture, during the first ninety (90) days of ownership. After ninety (90) days, we will exchange the Battery, charging you 1/12 of the price of a new Battery for each full month from the date of the original sale. Battery must be maintained in accordance with the instructions furnished.

4. The Warranty period for any products used for rental or commercial purposes is limited to 90 days from the date of original purchase.

5. This Warranty applies only to products which have been properly assembled, adjusted, operated, and maintained in accordance with the instructions furnished. This Warranty does not apply to any product which has been subjected to alteration, misuse, abuse, improper assembly or installation, delivery damage, or to normal wear of the product.

6. Exclusions: Excluded from this Warranty are belts, blades, blade adapters, normal wear, normal adjustments, standard hardware and normal maintenance.

7. In the event you have a claim under this Warranty, you must return the product to an authorized service dealer. Should you have any unanswered questions concerning this Warranty, please contact:

American Yard Products Service Department P.O. Box 1687 Orangetown, SC 29116 USA	American Yard Products 1580 Trinity Drive, Units 5-8 Mississauga, Ontario L5T 1L6
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In Canada contact:

giving the model number, serial number and date of purchase of your product and the name and address of the authorized dealer from whom it was purchased.

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This is a limited Warranty within the meaning of that term as defined in the Magnuson-Moss Act of 1975.

LIMITED WARRANTY

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