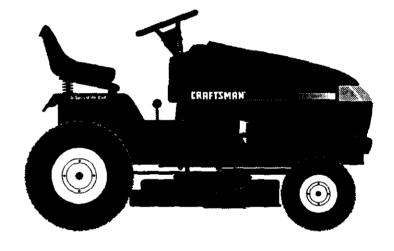
Owner's Manual **CRAFTSMAN** 22.0 HP ELECTRIC START 46" MOWER 6 SPEED GARDEN TRACTOR

Model No. 917.273111



- Safety
- Assembly
- Operation
- Maintenance
- Repair Parts



This product has a low emission engine which operates differently form previously built engines. Before you stain the engine, read the monochromodity built engines. Before you stain the engine, read

CAUTION:

Read and follow all Safety Rules and Instructions before operating this equipment. For answers to your questions about this product, Call:

1-800-659-5917 Sears Craftsman Help Line 5 am - 5 pm, Mon - Sat

Sears, Roebuck and Co., Hoffman Estates, IL 60179

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WARRANTY

LIMITED TWO YEAR WARRANTY ON CRAFTSMAN RIDING EQUIPMENT

For two (2) years from the date of purchase, if this Craftsman Riding Equipment is maintained, lubricated and tuned up according to the instructions in the owner's manual, Sears will repair or replace, free of charge, any parts found to be defective in material or workmanship.

This Warranty does not cover:

- Expendable items which become worn during normal use, such as blades, spark plugs, air cleaners, belts, etc.
- Tire replacement or repair caused by punctures from outside objects, such as nails, thorns, stumps, or glass.
- Repairs necessary because of operator abuse, negligence, improper storage or accident or the failure to maintain the equipment according to the instructions contained in the owner's manual.
- · Riding equipment used for commercial or rental purposes.

LIMITED 90 DAY WARRANTY ON BATTERY

For ninety (90) days from date of purchase, if any battery included with this riding equipment proves defective in material or workmanship and our testing determines the battery will not hold a charge, Sears will replace the battery at no charge. In-home warranty service on your Craftsman riding equipment is available at no charge for 30 days from the date of purchase. Please contact your nearest service center. After 30 days from the date of purchase, warranty service is available by taking your Craftsman riding equipment to your nearest Sears Service Center. (In-home warranty service will still be available after 30 days from the date of purchase but a standard trip charge will apply). This warranty applies only while this product is in the United States. This Warranty gives you specific legal rights, and you may also have other rights which may vary from state to state.

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SAFETY RULES

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.

SAFETY RULES

- 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.

SLOPE OPERATION

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

DO:

- 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. Tall 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.

CHILDREN

Tragic 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.

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.

SAFETY RULES

- 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.



- 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.
- Never carry children. They may fall off and be seriously injured or interfere with safe machine operation.
- 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.

Look for this symbol to point out important safety precautions. It means CAU-TION!!! BECOME AWARE!!! YOUR SAFE-TY IS INVOLVED.

CAUTION: In order to prevent accidental starting when setting up, transporting, adjusting or making repairs always disconnect spark plug wire and place wire where it cannot contact spark plug.

- 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.



- Mow up and down slopes (15° Max), not across.
- Remove obstacles such as rocks, tree limbs, etc.
- Watch for holes, ruts, or bumps. Uneven terrain could overturn the machine. *Tall* 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.
- Avoid starting or stopping on a slope. If tires lose traction, disengage the blades and proceed slowly straight down the slope.
- Do not turn on slopes unless necessary, and then, turn slowly and gradually downhill, if possible.

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

PRODUCT SPECIFICATIONS

| GASOLINE CAPACITY AND TYPE: | 3.5 GALLONS UNLEADED REGULAR | | | |
|--|---|--|--|--|
| OIL TYPE (API-SF/SG/SH): | SAE 10W-30 (above 32°F) SAE 5W-30 (below 32°F) | | | |
| OIL CAPACITY: | W/FILTER: 4.2 PINTS W/O FILTER: 3.7 PINTS | | | |
| SPARK PLUG: (GAP: .040") | Champion RC12YC | | | |
| GROUND SPEED (MPH): | HI: LO: 0.7 1.7 1.4 3.3 2.3 5.4 | | | |
| REVERSE: | 0.9 2.1 | | | |
| TIRE PRESSURE: FRONT: 14 PSI REAR: 10 PSI | | | | |
| CHARGING SYSTEM: | 15 AMPS@ 3600 RPM | | | |
| BATTERY: | AMP/HR: 35 MIN. CCA: 280 CASE SIZE: U1R | | | |
| BLADE BOLT TORQUE: | 27-35 FT. LBS. | | | |

CONGRATULATIONS on your purchase of a Craftsman 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 Sears Authorized Service Center.

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".

MAINTENANCE AGREEMENT

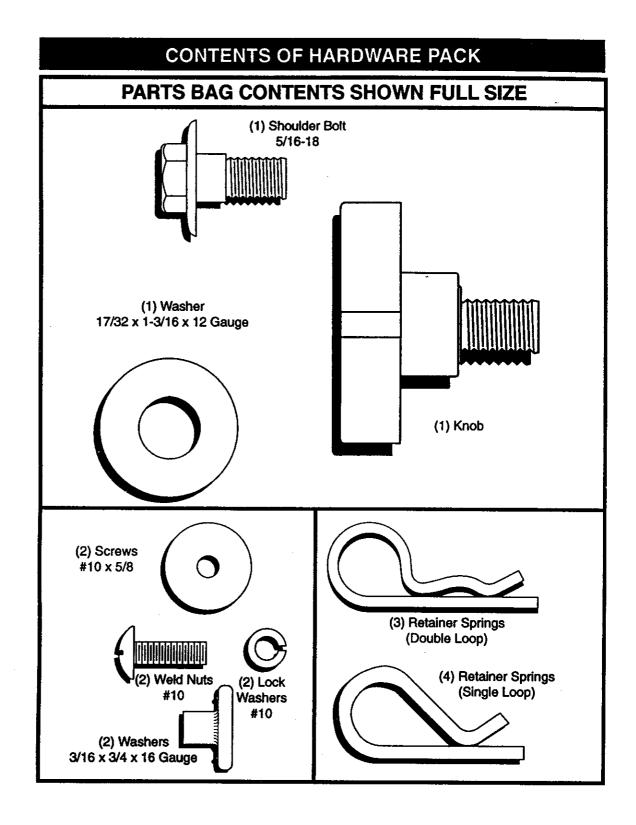
A Sears Maintenance Agreement is available on this product. Contact your nearest Sears store for details.

CUSTOMER RESPONSIBILITIES

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

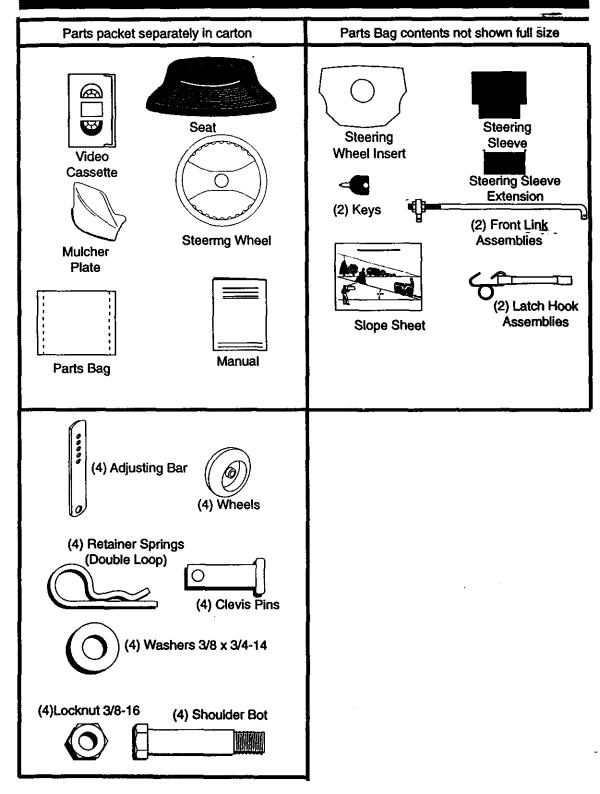
A WARNING: This tractor is equipped with an internal combustion engine and should not be used on or near any unimproved forest-covered, brush-covered or grass-covered land unless the engine's exhaust system is equipped with a spark arrester meeting applicable local or state laws (if any). If a spark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

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. A spark arrester for the muffler is available through your nearest Sears Authorized Service Center (See REPAIR PARTS section of this manual).



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CONTENTS OF HARDWARE PACK



ASSEMBLY

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 tracto all parts and hardware you assemble must be tightened securely. Use the correct tools as necessary to insure proper tightness. Review the video cassette before you begin.

TOOLS REQUIRED FOR ASSEMBLY

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

- (1) 9/16" wrench
- (1) 1/2" wrench
- (1) Utility knife
- (1)Pliers

drive rachet (1) Phillips Screwdriver

(1) 3/4" Socket w/

(1) Tire pressure gauge

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

TO REMOVE TRACTOR FROM CARTON

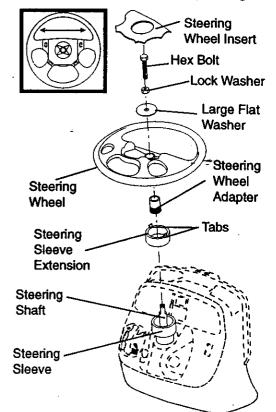
UNPACK CARTON

- Remove all accessible loose parts and parts boxes from shipping carton (See page 6).
- Cut, from top to bottom, along lines on all four corners of shipping carton, and lay panels flat.
- Remove mower and package materials.
- Check for any additional loose parts or boxes and remove.

BEFORE ROLLING TRACTOR OFF SKID

ATTACH STEERING WHEEL

- Remove hex bolt, lock washer and large flat washer from steering shaft.
- Position front wheels of the tractor so they are pointing straight forward.
- Slide the steering sleeve over the steering shaft.
- Align tabs and press steering sleeve extension into bottom of steering wheel.
- Position steering wheel so cross bars are horizontal (left to right) and slide onto steering wheel adapter.
- Secure steering wheel to steering shaft with hex bolt, lock washer and large flat washer previously removed. Tighten securely.
- Snap steering wheel insert into center of steering wheel.
- Remove protective materials from tractor hood and grill.



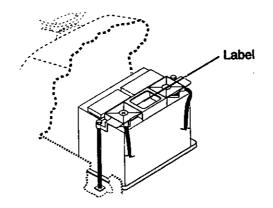
IMPORTANT: Check for and remove any staples in skid that may puncture tires where tractor is to roll off skid.

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 forward off skid.

HOW TO SET UP YOUR TRACTOR CHECK BATTERY

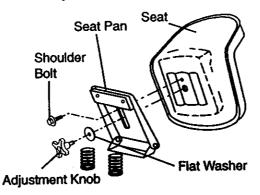
- Lift hood to raised position.
- If this battery is put into service after month and year indicated on label (label located between terminals) charge battery for minimum of one hour at 6-10 amps. (See "BATTERY" in MAINTE-NANCE section of this manual for charging instructions).



INSTALL SEAT

Adjust seat before tightening adjustment knob.

- Remove cardboard packing on seat pan.
- Place seat on seat pan and assemble shoulder bolt. Tighten shoulder bolt securely.
- Assemble adjustment knob and flat washer loosely. Do not tighten.
- 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 knob securely.



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 5 of this manual.

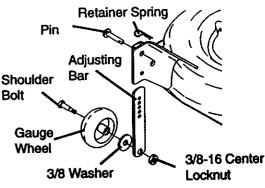
CHECK BRAKE SYSTEM

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.

ASSEMBLE GAUGE WHEELS TO MOWER DECK

The gauge wheels are designed to keep the mower deck in proper position when operating mower. Be sure they are properly adjusted to ensure optimum mower performance.

- Slide gauge wheel bar down into bracket channel, Be sure that gauge wheel bar aligning holes are on top. Assemble gauge wheels as shown using shoulder bolts, 3/8 washers and 3/8-16 center locknuts and tighten securely.
- For ease of mower to tractor assembly, raise gauge wheels to highest position and retain with clevis pins and spring retainers.
- Adjust gauge wheels before operating mower. See "TO ADJUST GAUGE WHEELS" in the Operation section of this manual.



INSTALL MOWER AND DRIVE BELT

Be sure tractor is on level surface and mower suspension arms are raised with attachment lift control. Engage parking brake.

- Cut and remove ties securing anti-sway bar and belts. Swing anti-sway bar to left side of mower deck.
- Slide mower under tractor with discharge guard to right side of tractor.
 IMPORTANT: Check belt for proper routing in all mower pulley grooves. Install belt into electric clutch pulley groove.
- Install one front link in top hole of the left hand front mower bracket and left hand front suspension bracket. Retain with two single loop retainer springs as shown.
- Install second front link in right hand front suspension bracket only and retain with single loop retainer spring as shown.
- Slide right side of mower back and install link in top hole of right hand front mower bracket. Retain with single loop retainer spring as shown.
- Turn height adjustment knob counterclockwise until it stops.
- Lower mower linkage with attachment lift control.

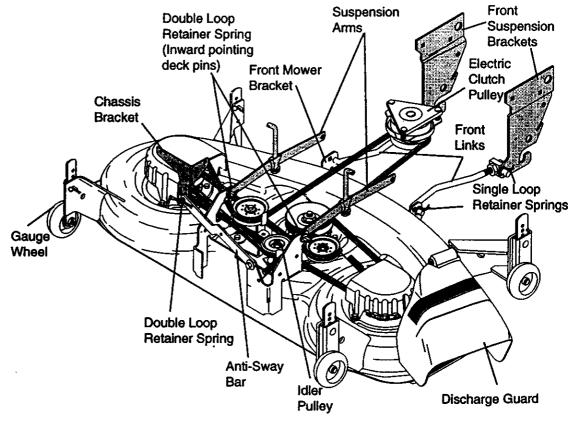
- Place the suspension arms on inward pointing deck pins. If necessary, rock and raise front of mower to align deck pins with the holes in suspension arms. Retain with double loop retainer spring with loops down as shown.
- Connect anti-sway bar to chassis bracket under left footrest and retain with double loop retainer spring.
- Turn height adjustment knob clockwise to remove slack from mower suspension.
- Raise deck to highest position.
- Adjust gauge wheels before operating mower as shown in the Operation section of this manual.

CHECK MOWER LEVELNESS - - - -

For best cutting results, mower 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, mower drive, and mower blade drive belts in the Service and Adjustments section of this manual. Verify that the belts are routed correctly.



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INSTALL MULCHER PLATE

 Install two latch hooks to mulcher plate using screw, washer, lock washer, and weld nut as shown.

NOTE: Pre-assemble weld nut to latch hook by inserting weld nut from the top with hook pointing down. Tighten hardware securely.

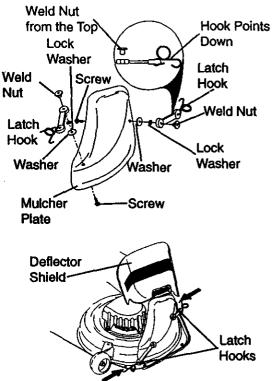
- Raise and hold deflector shield in upright position.
- Place front of mulcher plate over front of mower deck opening and slide into place, as shown.
- Hook front latch into hole on front of mower deck.
- Hook rear latch into hole on back of mower deck.

ACAUTION: Do not remove discharge guard from mower. Raise and hold guard when attaching mulcher plate and allow it to rest on plate while in operation.

TO CONVERT TO BAGGING OR DISCHARGING

Simply remove mulcher plate and store in a safe place. Your mower is now ready for discharging or installation of optional grass catcher accessory.

NOTE: It is not necessary to change blades. The mulcher blades are designed for discharging and bagging also.



✓ CHECKLIST

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:

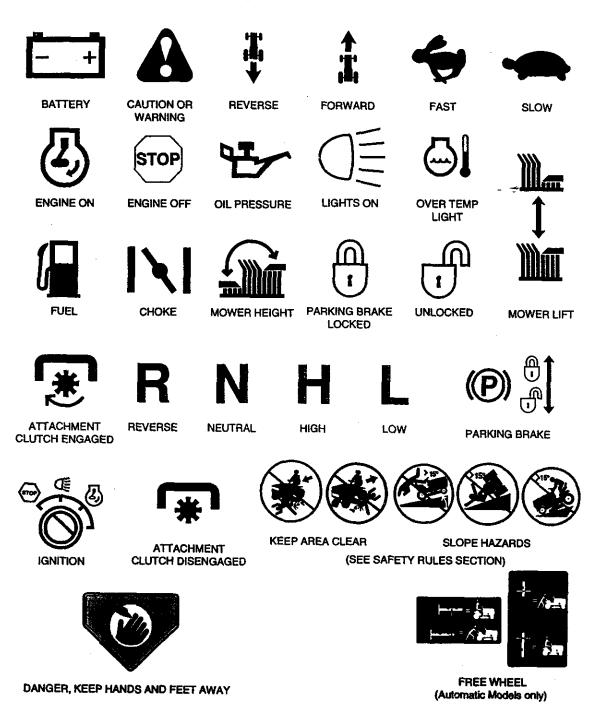
✓ Engine oil is at proper level.

- 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.

OPERATION

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

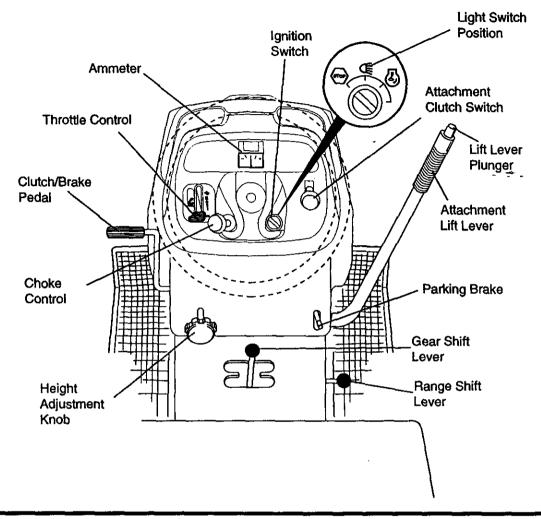
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KNOW YOUR TRACTOR

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.



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

ATTACHMENT CLUTCH SWITCH: Used RANGESHIFT LEVER: Allows high (H) to engage the mower blades, or other atand low (L) speed for all forward and tachments mounted to your tractor. reverse gears. LIGHT SWITCH: Turns the headlights on ATTACHMENT LIFT LEVER: Used to raise and lower the mower deck or other **THROTTLE CONTROL:** Used to control attachments mounted to your tractor. LIFT LEVER PLUNGER: Used to release CLUTCH/BRAKE PEDAL: Used for attachment lift lever when changing its position.

IGNITION SWITCH: Used for starting and stopping the engine.

AMMETER: Indicates battery charging (+) or discharging (-).

PARKING BRAKE: Locks clutch/brake into the brake position.

and off.

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engine speed.

declutching and braking the tractor and starting the engine.

CHOKE CONTROL: Used when starting a cold engine.

HEIGHT ADJUSTMENT KNOB: Used to adjust the mower cutting height. **GEARSHIFT LEVER:** Selects the speed and direction of the tractor.

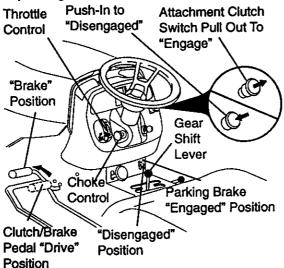
The operation of any tractor can result in foreign objects thrown into the eyes, which can result in severe eye damage. Always wear safety glasses or eye shields while operating your tractor or performing any adjustments or repairs. We recommend a wide vision safety mask over spectacles, or standard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

HOW TO USE YOUR TRACTOR

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.

TO SET PARKING BRAKE

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



STOPPING

MOWER BLADES -

 To stop mower blades, move attachment clutch switch to "DISENGAGED" position.

GROUND DRIVE -

- To stop 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 caus. 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. **IMPORTANT:** Leaving the ignition switch in any position other than "OFF" will cause the battery to be discharged, (dead).

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.

THROTTLE CONTROL

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.

CHOKE CONTROL

Use choke control whenever you are starting a cold engine. Do not use to start a warm engine.

• To engage choke control, pull knob out. Slowly push knob in to disengage.

TO MOVE FORWARD AND BACKWARD

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 and range shift levers 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

The cutting height is controlled by turning the height adjustment knob in desired direction.

- Turn knob clockwise (C) to raise cutting height.
- 14

The cutting height range is approximately 1-1/2" to 4-1/2". 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.

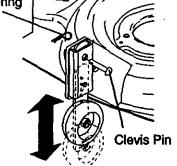
- The average lawn should be cut to approximately 2-1/2 inches during the cool season and to over 3 inches during hot months. For healthier and better looking lawns, mow often and after moderate growth.
- For best cutting performance, grass over 6 inches in height should be mowed twice. Make the first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

TO ADJUST GAUGE WHEELS Gauge wheels are properly adjusted when they are slightly off the ground when mower is at the desired cutting height in operating position. Gauge wheels then keep the deck in proper position to help prevent scalping in most terrain conditions.

- Be sure tractor is on a flat level surface.
- Lower mower and adjust mower to desired cutting height.
- Remove retainer spring and clevis pin which secure each gauge wheel bar.
- Lower gauge wheels to ground. Raise gauge wheels slightly to align holes in bracket and gauge wheel bar and insert clevis pin. Gauge wheels should be slightly off the ground.

• Replace retainer spring into clevis pin. IMPORTANT: Be sure to readjust gauge wheels if you change the cutting height of the mower deck.

Retainer spring

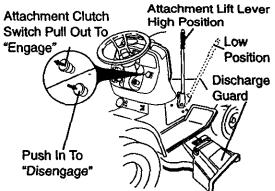


TO OPERATE MOWER

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.
- Lower mower with attachment lift control.
- 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, on mowers so equipped, or the discharge guard in place.



TO OPERATE ON HILLS

ACAUTION: Do not drive up or down hills with slopes greater than 15° and do not drive across any slope. Use the slope guide provided at the back of this manual.

- Choose the slowest speed before start-, ing 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, pustclutch/brake pedal quickly to brake position and engage parking brake.
- Move gearshift lever to 1st gear and range shift lever to low (L) position. 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.).

TOWING CARTS AND OTHER ATTACHMENTS

Tow only the attachments that are recommended by and comply with specifications of the manufacturer of your tractor. Use common sense when towing. Too heavy of a load, while on a slope, is dangerous. Tires can lose traction with the ground and cause you to lose control of your tractor.

BEFORE STARTING THE ENGINE CHECK ENGINE OIL LEVEL

- 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.
- Unthread and remove oil fill cap/dipstick; wipe oil off. Reinsert the dipstick into the tube and rest oil fill cap on the tube. Do not thread the cap onto the tube. Remove and read oil level. If necessary, add oil until "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.

IMPÓRTANT: When operating in temperatures below 32°F(0°C), use fresh, clean winter grade gasoline to help insure good cold weather starting.

AWARNING: 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 le 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.

TO START ENGINE

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

- Sit on seat in operating position, depress clutch/brake pedal and set parking brake.
- Place gear shift lever in neutral (N) position.
- Move attachment clutch to "DISEN-GAGED" position.
- Move throttle control to fast position
- Pull choke control out for a cold engine start attempt. For a warm engine start attempt the choke control may not be needed.

NOTE: Before starting, read the warm and cold starting procedures below.

 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 the engine does not start after several attempts, push choke control in, wait a few minutes and try again. If engine still does not start, pull the choke control out and retry.

WARM WEATHER STARTING (50° F AND ABOVE)

- When engine starts, slowly push choke control in until the engine begins to run smoothly. If the engine starts to run roughly, pull the choke control out slightly for a few seconds and then continue to push the control in slowly.
- The attachments and ground drive can now be used. If the engine does not accept the load, restart the engine and allow it to warm up for one minute using the choke as described above.

COLD WEATHER STARTING (50° F AND BELOW)

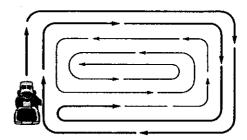
- When engine starts, slowly push choke control in until the engine begins to run smoothly. Continue to push the choke control in small steps allowing the engine to accept small changes in speed and load, until the choke control is fully in. If the engine starts to run roughly, pull the choke control out slightly for a few seconds and then continue to push the control in slowly. This may require an engine warm-up period from several seconds to several minutes, depending on the temperature.
- The attachments can be used during the engine warm-up period and may require the choke control be pulled out slightly.

NOTE: 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 tuming 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.
- 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 the best 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.

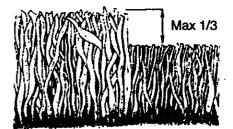


MULCHING MOWING TIPS

IMPORTANT: For best performance, keep mower housing free of built-up grass and trash. Clean after each use.

- The special mulching blade will recut the grass clippings many times and reduce them in size so that as they fall onto the lawn they will disperse into the grass and not be noticed. Also, the mulched grass will biodegrade quickly to provide nutrients for the lawn. Always mulch with your highest engine (blade) speed as this will provide the best recutting action of the blades.
- Avoid cutting your lawn when it is wet. Wet grass tends to form clumps and interferes with the mulching action. The best time to mow your lawn is the early afternoon. At this time the grass has dried and the newly cut area will not be exposed to the direct sun.
- For best results, adjust the mower cutting height so that the mower cuts off only the top one-third of the grass blades. For extremely heavy mulching, reduce your width of cut on each pass and mow slowly.

- Certain types of grass and grass conditions may require that an area be mulched a second time to completely hide the clippings. When doing a seeond cut, mow across or perpendicular to the first cut path.
- Change your cutting pattern from week to week. Mow north to south one week then change to east to west the next week. This will help prevent matting and graining of the lawn.



| | MAINTENANCE | | | | | | | | | | | | |
|--------------|---|---|----------|------------|----------|------------|----------|-----------|----------|----------|----------|----------|----------|
| US | JSTOMER RESPONSIBILITIES | | | | | | | | | | | | |
| FILL AS ' | MAINTENANCE SCHEDULE Provinsion of the second | | | | | | | | | | | | |
| | Check Brake Operation | | ~ | | | | | | | | | | |
| | Check Tire Pressure | ~ | ~ | | | | | | | | | | |
| т | Check Operator Presence and Interlock Systems | ~ | | | | | | _ | | | | | |
| R | Check for Loose Fasteners | ~ | | | | 17 | | <u> </u> | | I | | | |
| A | Sharperv/Replace Mower Blades | | | 1 | | | | | | | | | |
| A C T | Lubrication Chart | | | ~ | | | | <u>/</u> | | | | | |
| 6 | Check Battery Level | | <u> </u> | V . | | | | | | | | | _ |
| Ř | Clean Battery and Terminals/Recharge | | 1 | | | | | <u>~</u> | | <u> </u> | | | |
| Ī | Check Transaxle Cooling | | | ~ | | | | | | | | | <u> </u> |
| | Adjust Blade Belt(s) Tension | | | | | V 5 | | | | | | | |
| Ì | Adjust Motion Drive Belt(s) Tension | | | | | V . | | | | | | | |
| | Check Engine Oil Level | ~ | 1 | | | | | | | | ļ | | |
| | Change Engine Oil | | | 123 | | | | ~ | | | | | |
| Ε | Clean Air Filter | | | 1/2 | | ļ | | ┨ | | | <u> </u> | | |
| N | Clean Air Screen | | | 12 | | | | | | | | ╂─── | ┣───┦ |
| G | Inspect Muffler/Spark Arrester | | | | / | | _ | <u> </u> | | | | | - |
| | Replace Oil Filter (If equipped) | | | | L | 1.2 | ļ | <u> </u> | ┣ | | | ∔ | |
| NE | Clean Engine Cooling Fins | | · · | | | 12 | | ļ | 1 | | — | \vdash | |
| •••• | Replace Spark Plug | | | | | V | ~ | <u> </u> | | | | | ┢──┥ |
| | Replace Air Filter Paper Cartridge | | | <u> </u> | L | 1/2 | <u> </u> | _ | | <u> </u> | - | <u> </u> | ┨───┤ |
| | Replace Fuel Filter | | | | | | ~ | 1 | 1 | table sv | | | |

1 - Change more often when operating un 2 - Service more often when operating in dirty or dusty conditi 3 - If equipped with oil filter, change oil every 50 hours.

4 - Replace blades more often when mowing in sandy soil.

C

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 periodi- @ Front Wheelcally to properly maintain your tractor. All adjustments in the Service and Adjustments section of this manual should be checked at least once each season.

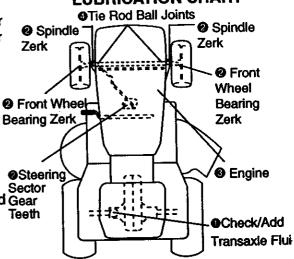
· Once a year you should replace the spark plug, clean or replace air filter, and Gear check blades and belts for wear. A new spark plug and clean air filter assure proper air-fuel mixture and help your engine run better and last longer.

BEFORE EACH USE

- Check engine oil level.
- Check brake operation.
- Check tire pressure.
- Check operator presence and interlock systems for proper operation.
- Check for loose fasteners.

Not required if equipped with maintenance-free battery 7 - Tighten front axle pivot bolt to 35 ft-lbs. maximum.

Do not overtighten LUBRICATION CHART



OSAE 30 Motor Oil API SF/SG/SH OGeneral Purpose Grease ORefer to Maintenance "ENGINE" Section OSpray silicone lubriant (Move Boots to Lubricate)

IMPORTANT: Do not oil or grease the pivot point which have special nylon bearings. Viscous lubri cants will attract dust and dirt that will shorten the life of the self-lubricating bearings. If you feel the must be lubricated, use only a dry, powdered graphite type lubricant sparingly.

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 3 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.

NOTE: To seal tire punctures and prevent flat tires due to slow leaks, tire sealant may be purchased from your local parts dealer. Tire sealant also prevents tire dry rot and corrosion.

OPERATOR PRESENCE SYSTEM

Be sure that operator presence and interlock systems are working properly. If your tractor does not function as described below, repair the problem immediately.

- The engine should not start unless the clutch/brake pedal is fully depressed and attachment clutch control is in the disengaged position.
- When the engine is running, any attempt by the operator to leave the seat without first setting the parking brake should shut off the engine.
- When the engine is running and the attachment clutch is engaged, any attempt by the operator to leave the seat should shut off the engine.
- The attachment clutch should never operate unless the operator is in the seat.

BLADE CARE

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

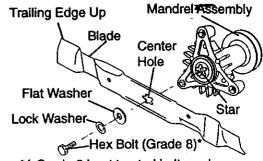
BLADE REMOVAL

- 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.
 IMPORTANT: To ensure proper assembly, center hole in blade must align with

star on mandrel assembly.

- Reassemble hex bolt, lock washer and flat washer in exact order as shown.
- Tighten bolt securely (27-35 Ft. Lbs. torque).

IMPORTANT: Blade bolt is Grade 8 heat treated.



*A Grade 8 heat treated bolt can be identified by six lines on the bolt head.

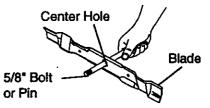
TO SHARPEN BLADE

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

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 it is 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 onto 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.



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.

- Remove terminal guard.
- 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 "REPLACING BATTERY" in the SERVICE AND ADJUSTMENTS section of this manual).

V-BELTS

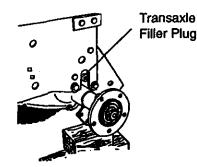
Check V-belts for deterioration and wear after 100 hours of operation and replace if necessary. The belts are not adjustable. Replace belts if they begin to slip from wear.

TRANSAXLE COOLING

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

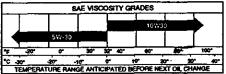
CHECK TRANSAXLE OIL LEVEL

- Block up rear axle securely.
- Remove left rear wheel by removing hub bolts.
- Remove filler plug from transaxle. Oil level must be even with plug threads. If necessary, fill with SAE 30 motor oil, API SF, SG or SH. Replace filler plug.
- Reassemble wheel to hub.



ENGINE LUBRICATION

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



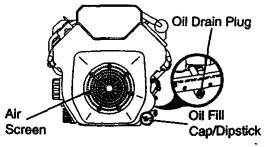
Change the oil after every 50 hours of operation or at least once a year if the tractor is not used for 50 hours in one year.

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

Determine temperature range expected before oil change. All oil must meet API service classification SF, SG, or SH.

- 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 "PROD-UCT SPECIFICATIONS" on page 5 of this manual.
- Use gauge on oil fill cap/dipstick for checking level. Insert dipstick into the tube and rest the oil fill cap on the tube. Do not thread the cap onto the tube when taking reading. Keep oil at "FULL" line on dipstick. Tighten cap onto the tube securely when finished.



CLEAN AIR SCREEN

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.

CLEAN AIR INTAKE/COOLING AREAS

To insure proper cooling, make sure the grass screen, cooling fins, and other external surfaces of the engine are kept clean at all times.

Every 100 hours of operation (more often under extremely dusty, dirty conditions), remove the blower housing and other cooling shrouds. Clean the cooling fins and external surfaces as necessary. Make sure the cooling shrouds are reinstalled.

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

AIR FILTER

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.

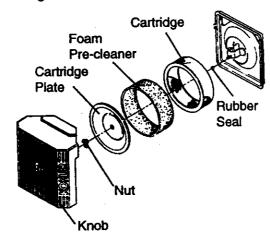
Service air cleaner more often under dusty conditions.

· Loosen knob and remove 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. Allow it to dry.
- Saturate it in engine oil. Wrap it in clean, absorbent cloth and squeeze to remove excess oil.

TO SERVICE CARTRIDGE

 Replace a dirty, bent, or damaged cartridge.



NOTE: Do not wash the paper cartridge or use pressurized air, as this will damage the cartridge.

- Remove nut and cartridge plate.
- Reinstall the pre-cleaner (cleaned and oiled) over the paper cartridge.
- Check rubber seal for damage and proper position around stud. Replace if necessary.
- Reassemble air cleaner, cartridge plate, and nut.
- Reinstall air cleaner cover and secure by tightening knob.

ENGINE OIL FILTER

Replace the engine oil filter every season or with every second oil change if the tractor is used more than 100 hours in one _ year.

MUFFLER

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

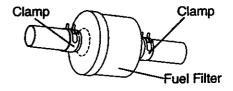
SPARK PLUGS

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 5 of this manual.

IN-LINE FUEL FILTER

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.



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

ACAUTION: 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

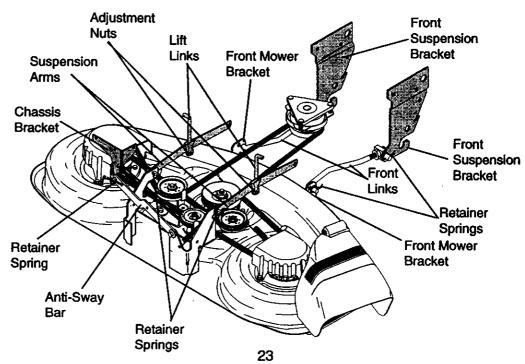
- Place attachment clutch in "DISEN-GAGED" position.
- Turn height adjustment knob to lowest setting.
- Lower mower to its lowest position.
- Remove retainer spring holding antiswaybar to chassis bracket and disengage anti-swaybar from bracket.
- Remove retainer springs from suspension arms at deck and disengage arms from deck.
- Raise attachment lift to its highest position.

- Remove two retainer springs from each front link and remove links.
- Slide mower forward and remove belt from electric clutch pulley.
- Slide mower out from under right side of tractor.

IMPORTANT: If an attachment other than the mower deck is to be mounted on the tractor, remove the front links.

TO INSTALL MOWER

Follow procedure described in "INSTALL MOWER AND DRIVE BELT" in the Assembly section of this manual.



TO LEVEL MOWER HOUSING

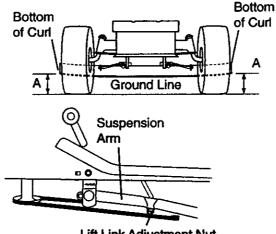
Adjust the mower while tractor is parked on level ground or driveway. Make sure tires are properly inflated (See "PROD-UCT SPECIFICATIONS"). If tires are over or underinflated, you will not properly adjust your mower.

SIDE-TO-SIDE ADJUSTMENT

- Raise mower to its highest position.
- Measure height from bottom of deck curl to ground level at front corners of mower. Distance "A" on both sides of mower should be the same.
- 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: Each full turn of adjustment nut will change mower height about 3/16".

Recheck measurements after adjusting.



Lift Link Adjustment Nut

FRONT-TO-BACK ADJUSTMENT

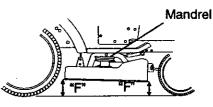
IMPORTANT: Deck must be level side-toside. If the following front-to-back adjustment is necessary, be sure to adjust both front links equally so mower will stay level side-to-side.

To obtain the best cutting results, the mower housing should be adjusted so the front is approximately 1/8" to 1/2" lower than the rear when the mower is in its highest position. Check adjustment on right side of tractor. Measure distance "F" directly in front of and behind the mandrel at bottom edge of mower housing as shown.

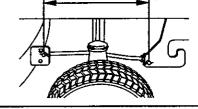
- Before making any necessary adjustments, check that both front links are equal in length.
- If links are not equal in length, adjust one link to same length as other link.
- To lower front of mower housing, loosen nut "G" on both front links an equal number of turns.
- When distance "F" is 1/8" to 1/2" lower at front than rear, tighten nut "H" against trunnion on both front links.
- To raise front of mower housing, loosen nut "H" from trunnion on both front links. Tighten nut "G" on both front links an equal number of turns.
- When distance "F" is 1/8" to 1/2" lower at front than rear, tighten nut "H" against trunnion on both front links.

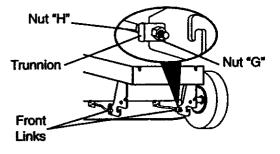
NOTE: Each full turn of nut "G" will change dim. "F" by approximately 3/8".

Recheck side-to-side adjustment.



Both Front Links Should be Equal in Length





TO REPLACE MOWER DRIVE BELT

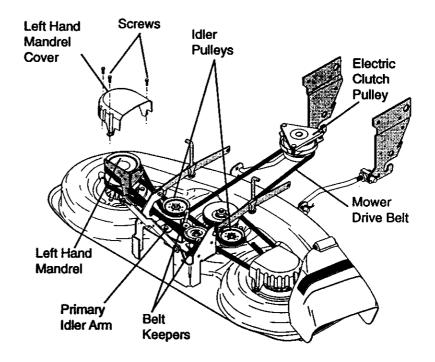
MOWER DRIVE BELT REMOVAL

- Park tractor on a level surface. Engage parking brake.
- Remove screws from left hand mandrel cover and remove cover.
- Roll belt over the top of left hand mandrel pulley.
- Remove belt from electric clutch pulley.
- Remove belt from idler pulleys.
- Remove any dirt or grass clippings which may have accumulated around mandrels and entire upper deck surface.
- Check primary idler arm and two idlers to see that they rotate freely.

 Be sure spring is securely hooked to primary idler arm and bolt in mower housing.

MOWER DRIVE BELT INSTALLATION

- Install belt in both idlers. Make sure belt is in both belt keepers at the idlers as shown.
- Install new belt onto electric clutch pulley.
- Roll belt into upper groove of left hand mandrel pulley.
- Carefully check belt routing making sure belt is in the grooves correctly and inside belt keepers.
- · Reassemble left hand mandrel cover.

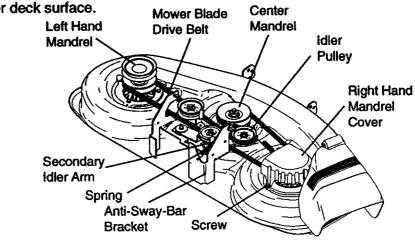


TO REPLACE MOWER BLADE DRIVE BELT

Park the tractor on level surface. Engage parking brake.

- Remove mower drive belt (See "TO REPLACE MOWER DRIVE BELT" in this section of this manual).
- Remove mower (See "TO REMOVE MOWER" in this section of this manual).
- Remove screws from right hand mandrel cover and remove cover. Unhook spring from bolt on mower housing.
- Carefully roll belt off right hand mandrel pulley.
- Remove belt from center mandrel pulley, idler pulley, and left hand mandrel pulley.
- Remove any dirt or grass which may have accumulated around mandrels and entire upper deck surface.

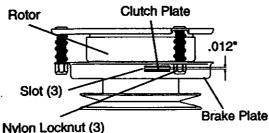
- Check secondary idler arm and idler to see that they rotate freely.
- Be sure spring is hooked in secondary idler arm and sway-bar bracket.
- Install new belt in lower groove of left hand mandrel pulley, idler pulley, and center mandrel pulley as shown.
- Roll belt over right hand mandrel pulley. Make sure belt is in all grooves properly.
- Reconnect spring to bolt in mower housing and reinstall right hand mandrel cover.
- Reinstall mower to tractor (See "INSTALL MOWER AND DRIVE BELT" in the Assembly section of this manual).
- Reassemble mower drive belt (See "TO REPLACE MOWER DRIVE BELT" in this section of this manual).



TO ADJUST ATTACHMENT CLUTCH

The electric clutch should provide years of service. The clutch has a built-in brake that stops the pulley within 5 seconds. Eventually, the internal brake will wear which may cause the mower blades to not engage, or, to not stop as required. Adjustments should be made by your nearest authorized service center/department.

- Make sure attachment clutch and ignition switches are in "OFF" position.
- Adjust the three nylon locknuts until space between clutch plate and rotor measures .012" at all three slot locations cut in the side of brake plate.



NOTE: After installing a new electric clutch, run tractor at full throttle and engage and disengage electric clutch 10 cycles to wear in clutch plate.

TO ADJUST BRAKE

Your tractor is equipped with an adjustable brake system which is mounted on the left 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 1-3/4", loosen jam nut and turn nut "A" until distance becomes 1-3/4". 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.

TO REPLACE MOTION DRIVE BELT

Park the tractor on level surface. Engage parking brake. For ease of service there is a belt installation guide decal on bottom of left footrest. It is not necessary to remove mower.

BELT REMOVAL -

- Engage parking brake (creates slack in belt).
- Remove mower drive belt from electric clutch pulley only (See "TO REPLACE MOWER DRIVE BELT" in this section of this manual).
- Roll motion drive belt off transaxle pulley.
- Roll belt off clutching idler pulleys, then off engine pulley and front V-idler pulley.
- Pull belt out of all belt keepers.

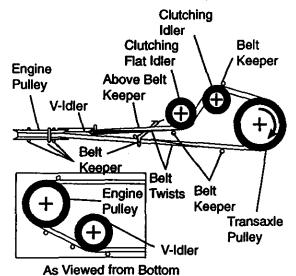
BELT INSTALLATION -

- Place V part of belt into grooves on engine pulley and front V-idler, making sure to route belt inside of belt keepers.
- Put belt coming from V-idler above midspan belt keeper, then onto clutching idler pulleys as shown.
- Make sure V part of belt engages Vidler.
- Place belt around transaxle pulley, beginning at top.
 V part of belt should engage transaxle

pulley.

- Place long lower section of belt through loop in midspan belt keeper.
- Check to be sure belt is on proper side of all belt keepers.
- Reinstall mower drive belt onto electric clutch pulley.

IMPORTANT: Check brake adjustment.



TO ADJUST STEERING WHEEL ALIGN-MENT

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 ADJUSTMENT

Front wheel toe-in is required for proper steering operation. Toe-in was set at the factory and adjustment should not be necessary. If parts in the front axle or steering mechanism have been replaced or damaged, check toe-in and adjust if necessary.

TO CHECK TOE-IN

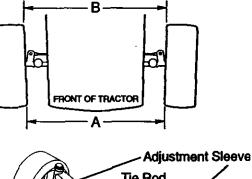
- Position front wheels straight ahead.
- Measure distance between wheels at front and rear of tires (dimensions "A" and "B").
- Front dimension "A" should be 1/8" to 1/4" less than rear dimension "B".

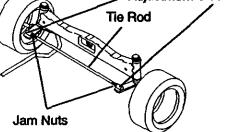
TO ADJUST TOE-IN

- Loosen jam nuts at adjustment sleeves on tie rod.
- Adjust tie rod until dimension "A" is 1/8" to 1/4" less than dimension "B".
- Tighten jam nuts securely.

FRONT WHEEL CAMBER

The front wheel camber is not adjustable on your tractor. If damage has occurred t affect the front wheel camber, contact you nearest authorized service center/department.





TO REMOVE WHEEL FOR REPAIRS

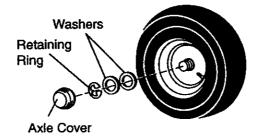
FRONT WHEEL

- Block up axle securely.
- Remove axle cover, retaining ring and washers to allow wheel removal.
- Repair tire and reassemble.
- Replace washers and snap retaining ring securely in axle groove.
- Replace axle cover.

REAR WHEEL -

- Block rear axle securely.
- Remove five (5) hub bolts to allow wheel removal.
- Repair tire and reassemble. Replace and tighten hub bolts securely.

NOTE: To seal tire punctures and prevent flat tires due to slow leaks, tire sealant may be purchased from your local parts dealer. Tire sealant also prevents tire dry rot and corrosion.



TO START ENGINE WITH A WEAK BATTERY

▲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. (See "BATTERY" in the MAINTENANCE section of this manual).

If "jumper cables" are used for emergency starting, follow this procedure:

IMPORTANT: Your tractor Is equiped with a 12 volt negative grounded system. The other vehical must also be a 12 volt negative grounded system. Do not use your tractor battery to start other vehicals.

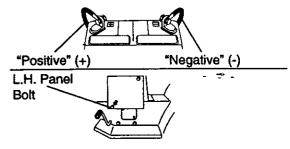
TO ATTACH JUMPER CABLES -

 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.

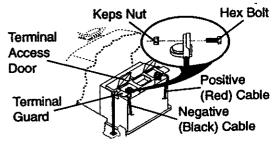


REPLACING BATTERY

▲CAUTION: Do not short battery terminals by allowing a wrench or any other object to contact both terminals at the same time. Before connecting battery, remove metal bracelets, wristwatch bands,rings,etc.

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

- Lift hood to raised position.
- Remove terminal guard.
- Disconnect BLACK battery cable then RED battery cable and carefully remove battery from tractor.
- Install new battery with terminals in same position as old battery.
- Reinstall terminal guard.
- First connect RED battery cable to positive (+) battery terminal with hex bolt and keps nut as shown. Tighten securely.
- Connect BLACK grounding cable to negative (-) battery terminal with remaining hex bolt and keps nut. Tighten securely.
- Close terminal access doors.



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.

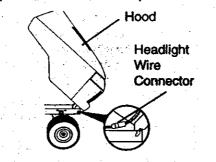
TO REPLACE FUSE

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

formed by an authorized engine manufacturer's service outlet.

TO REMOVE HOOD AND GRILL ASSEMBLY

- 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.



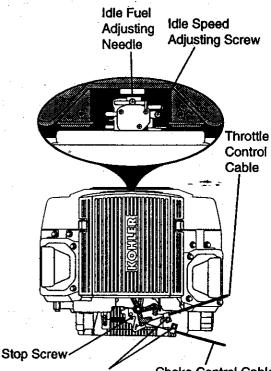
ENGINE

Maintenance, repair, or replacement of the emission control devices and systems, which are being done at the customers expense, may be performed by any nonroad engine repair establishment or individual. Warranty repairs must be performed by an authorized engine manufacturer's service outlet.

TO ADJUST THROTTLE CONTROL CABLE

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 to fast position. Check that speed control lever is against stop screw. If it is not, loosen casing clamp screw and pull throttle cable until lever is against screw.
 Tighten clamp screw securely.

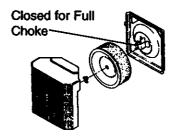


Clamp Screw Choke Control Cable

TO ADJUST CHOKE CONTROL

The choke 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 choke
- control (located on dash panel) to full choke position.
- Remove air cleaner cover, filter and cartridge plate to expose carburetor choke (See "AIR FILTER" in the Customer Responsibilities section of this manual).
- Choke should be closed. If it is not, loosen casing clamp screw and move choke cable until choke is completely closed. Tighten casing clamp screw securely.
- Reassemble air cleaner.



TO ADJUST CARBURETOR

The carburetor has been present 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 the adjusting needles in (clockwise) decreases the supply of fuel to the engine giving a leaner fuel/air mixture. Turning the adjusting needles out (counterclockwise) increases the supply of fuel to the engine giving a richer fuel/air mixture...

IMPORTANT: Damage to the needles and the seats in carburetor may result if screw is turned in too tight.

PRELIMINARY SETTING -

- Be sure you have a clean air filter, and the throttle control cable is adjusted properly (see "TO ADJUST THROTTLE CONTROL CABLE" in the Service and Adjustments section of this manual).
- With engine off turn idle fuel adjusting needle in (clockwise) closing it finger tight and then turn out (counterclockwise) 1 turn.

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.
- The high idle is set at the factory and cannot be adjusted.

- Idle speed setting With throttle control lever in slow position, engine should idle at 1200 RPM. If engine idles too slow or fast, turn idle speed adjusting screw in or out until correct idle is attained.
- Idle fuel needle setting With throttle control lever in slow position, turn idle fuel adjusting needle in (clockwise) until engine speed decreases and then turn out (counterclockwise) approximately 3/4 turn to obtain the best low speed performance.
- Recheck idle speed. Readjust if necessary.

ACCELERATION TEST -

 Move throttle control lever from slow to fast position. If engine hesitates or dies, turn idle fuel adjusting needle 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 facory 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.

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.

ACAUTION: 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. This will allow you to clean it thoroughly. Remove all dirt, grease, leaves, etc. Store in a clean, dry area.

- Clean entire tractor (See "CLEANING" in the Maintenance 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 Maintenance 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 TERMI-NAL OF is the Maintenance period

NALS" in the Maintenance section of this manual).

- After cleaning, leave cables disconnected and place cables where they cannot come in contact with battery terminals.
- 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 alconol 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 Maintenance section of this manual).

CYLINDER(S)

- 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 it 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 cause your tractor to rust.

IMPORTANT: Never cover tractor while engine and exhaust areas are still warm.

TROUBLESHOOTING CHART

| PROBLEM | CAUSE | CORRECTION |
|-------------------------------------|---|---|
| Will not start | Out of fuel. Engine not "CHOKED" properly. Engine flooded. Bad spark plug. Dirty air filter. Dirty fuel filter. Water in fuel. Loose or damaged wiring. Carburetor out of adjust | Fill fuel tank. See "TO START ENGINE" in Operation section. Wait several minutes before attempting to start. Replace spark plug. Clean/replace air filter. Replace fuel filter. Drain fuel tank and carbure- tor, refill tank with fresh gasoline and replace fuel fil- ter. Check all wiring. See "To Adjust Carburetor" |
| | Engine valves out of adjustment. | in Service and Adjustments section. Contact an authorized service center. |
| Hard to start | Dirty air filter. Bad spark plug. Weak or dead battery. Dirty fuel filter. Stale or dirty fuel Loose or damaged wiring. Carburetor out of adjustment. Engine valves out of adjustment. | Clean/replace air filter. Replace spark plug. Recharge or replace battery. Replace fuel filter. Drain fuel tank and refill with fresh gasoline. Check all wiring. See "To Adjust Carburetor" in Service and Adjustments section. Contact an authorized ser- vice center. |
| Engine will not turn over | Clutch/brake pedal not depressed. Attachment clutch is engaged. Weak or dead battery. Blown fuse. Corroded battery terminals. Loose or damaged wiring. Faulty ignition switch. Faulty solenoid or starter. Faulty operator presence switch(es). | Depress clutch/brake pedal. Disengage attachment clutch. Recharge or replace battery. Replace fuse. Clean battery terminals. Check all wiring. Check/replace ignition switch. Check/replace solenoid or starter. Contact an authorized ser- vice center. |
| Engine clicks but will not start | Weak or dead battery. Corroded battery terminals. Loose or damaged wiring. | Recharge or replace battery. Clean battery terminals. Check all wiring. |

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TROUBLESHOOTING CHART

| PROBLEM | CAUSE | CORRECTION |
|--|--|---|
| Engine clicks but will not start (cont) | Faulty solenoid or starter. | Check/replace solenoid or starter. |
| Loss of power | Cutting too much grass/too fast. Throttle in "CHOKE" posi- tion. Build-up of grass, leaves and trash under mower. Dirty air filter. Low oil level/dirty oil. Faulty spark plug. Dirty fuel filter. Stale or dirty fuel. Water in fuel. | Set in "Higher Cut" position/reduce speed. Adjust throttle control. Clean underside of mower housing. Clean/replace air filter. Check oil level/change oil. Clean and regap or change spark plug. Replace fuel filter. Drain fuel tank and refill with fresh gasoline. Drain fuel tank and carburetor, refill tank with fresh gasoline and replace fuel filter. |
| | Spark plug wire loose. Dirty engine air screen/fins. Dirty/clogged muffler. Loose or damaged wiring. Carburetor out of adjust- ment. | Connect and tighten spark plug wire. Clean engine air screen/fins. Clean/replace muffler. Check all wiring. See "To Adjust Carburetor" in Service and Adjustments section. |
| Excessive vibration | Engine valves out of adjustment. Worn, bent or loose blade. Bent blade mandrel. Loose/damaged part(s). | Contact an authorized service center. Replace blade. Tighten blade bolt. Replace blade mandrel. Tighten loose part(s). Replace damaged parts. |
| Engine continues to run when operator leaves seat with at- tachment clutch engaged | Faulty operator-safety presence control system. | Check wiring, switches and connections. If not corrected, contact an autho- rized service center/ department. |
| Poor cut - uneven | Worn, bent or loose blade. Mower deck not level. Buildup of grass, leaves, and trash under mower. Bent blade mandrel. Clogged mower deck vent holes from buildup of grass, leaves, and trash around mandrels. | Replace blade. Tighten blade bolt. Level mower deck. Clean underside of mower housing. Replace blade mandrel. Clean around mandrels to open vent holes. |

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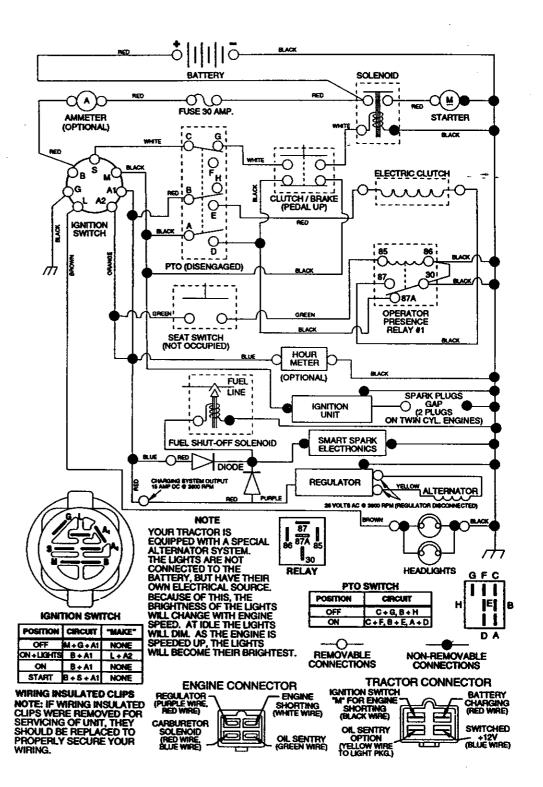
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| PROBLEM | CAUSE | CORRECTION | | | |
|--|---|--|--|--|--|
| Mower blades will not rotate. | Obstruction in clutch mech- anism. Wom/damaged mower drive belt. Frozen idler pulley. Frozen blade mandrel. | Remove obstruction. Replace mower drive belt. Replace idler pulley. Replace blade mandrel. | | | |
| Poor grass dis- charge | Engine speed too slow. Travel speed too fast. Wet grass. Mower deck not level. Low/uneven tire air pressure. Worn, bent or loose blade. Buildup of grass, leaves and trash under mower. Mower drive belt worn. Blades improperly installed. Improper blades used. Clogged mower deck vent holes from buildup of grass, leaves, and trash around mandrels. | Place throttle control in "FAST" position. Shift to slower speed. Allow grass to dry before mowing. Level mower deck. Check tires for proper air pressure. Replace/sharpen blade. Tighten blade bolt. Clean underside of mower housing. Replace mower drive belt. Reinstall blades sharp edge down. Replace with blades listed in this manual. Clean around mandrels to open vent holes. | | | |
| Headlight(s) not working (if so equipped) | Switch is "OFF". Bulb(s) burned out. Faulty light switch. Loose or damaged wiring. Blown fuse. | Turn switch "ON". Replace bulb(s). Check/replace light switch. Check wiring and connections. Replace fuse. | | | |
| Battery will not charge | Bad battery cell(s). Poor cable connections. Faulty regulator (if so equipped). Faulty alternator. | Replace battery. Check/clean all connections. Replace regulator. Replace alternator. | | | |
| Engine "backfires" when turning engine "OFF" | Engine throttle control not set at "SLOW" position for 30 seconds before stopping engine. | Move throttle control to "SLOW" position and allow to idle for 30 seconds before stopping engine. | | | |

TROUBLESHOOTING CHART

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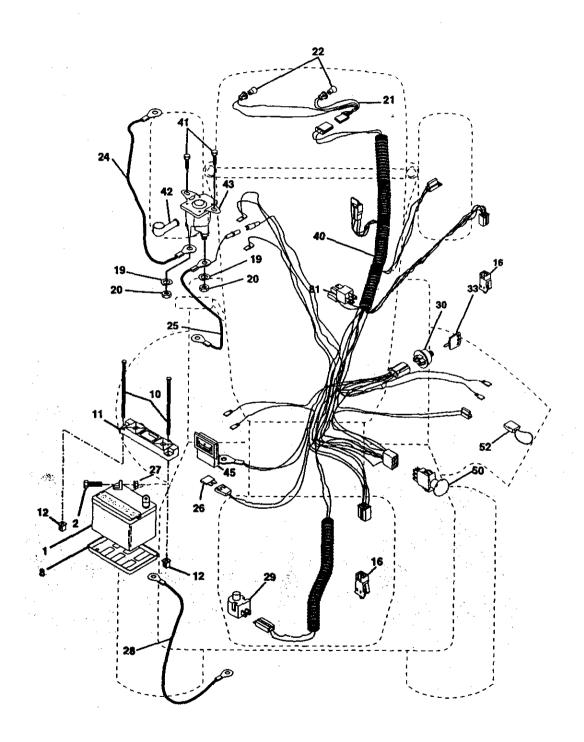
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REPAIR PARTS

TRACTOR - - MODEL NUMBER 917.273111

ELECTRICAL



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ELECTRICAL

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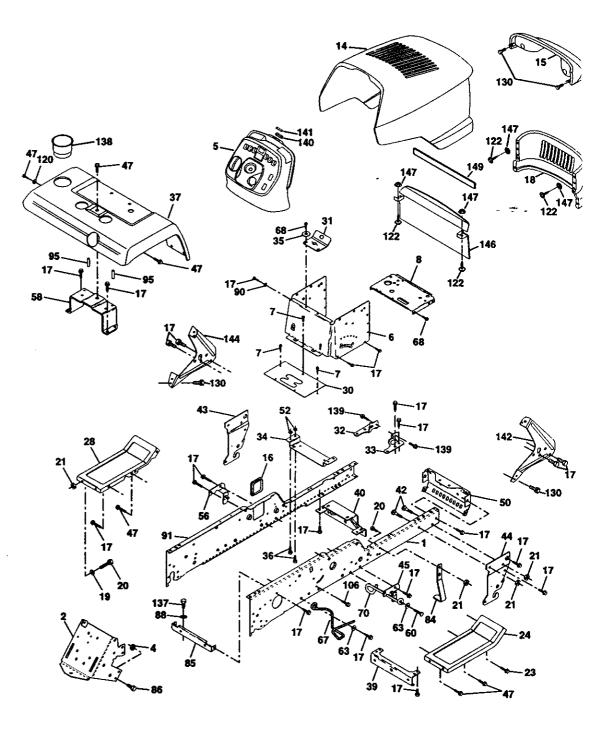
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| KEY NO. | PART NO. | DESCRIPTION |
|------------|-------------|------------------------------|
| 1 | 144927 | Battery |
| 2 | 74760412 | Bott Hex Head 1/4-20 x 3/4 |
| 8 | 7603J | Tray, Battery |
| 10 | 145211 | Bolt 1/4-20 x 7.5 Zinc |
| 11 | 150109 | Hold down Battery Dash Mount |
| 12 | 145769 | Nut Push Nylon 1/4" |
| 16 | 153664 | Switch Interlock Push-In |
| - 19 | STD551125 | Washer, Lock 1/4 |
| .20 | 73350400 | Nut, Jam Hex 1/4-20 |
| 21 | 161785 | Harness Socket Light W/4152J |
| 22 | 4152J | Bulb Light |
| 24 | 4014J | Cable, Battery |
| 25 | 146686 | Cable, Battery |
| 26 | 108824X | Fuse |
| 27 | 73510400 | Nut Keps Hex 1/4-20 Unc |
| 28 | 157899 | Cable, Ground |
| 29 | 160784 | Switch, Plunger |
| | 163968 | Switch, Ign |
| 33 | 140403 | Key, Ignition |
| 40 | 164069 | Harness Ign. |
| 41 | 17720408 | Screw 1/4-20 x 1/2 |
| 42 | 131563 | Cover, Terminal |
| 43 | 145673 | Solenoid |
| 45 | 122822X | Ammeter |
| | 154963 | Switch, PTO |
| 52 | 141940 | Protection Wire Loop |
| 81 | 109748X | Relay Asm. |



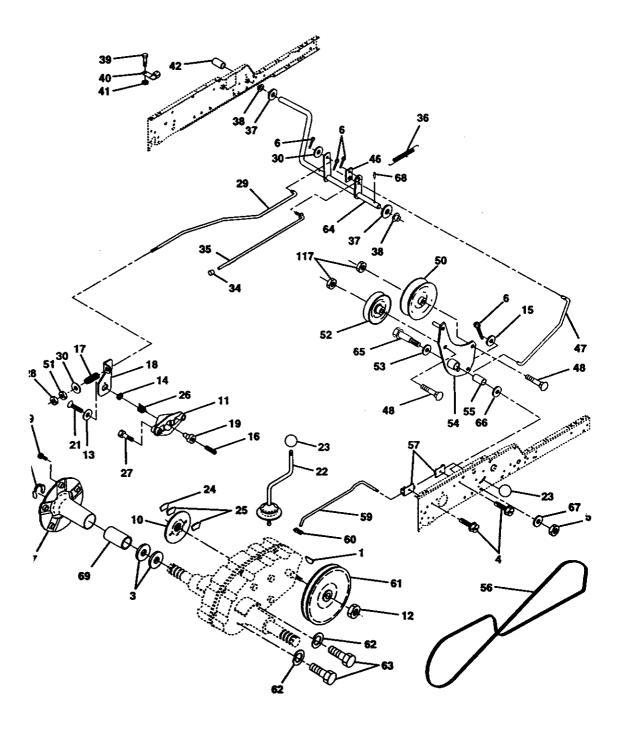
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CHASSIS AND ENCLOSURES

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| KEY | PART | | KEY | PART | |
|----------|--------------------|---|------|-----------|------------------------------------|
| NO. | NO. | DESCRIPTION | NO. | NO. | DESCRIPTION |
| 1 | 150253 | Rail, Frame RH | 50 | 152728 | Bracket, Chassis Front |
| 2 | 140506 | Drawbar, Gt | 52 | STD541431 | Nut, Crownlock 5/16-18 Unc |
| 4 | 73800700 | Nut, Lock Hex 7/16 Unc | 56 | 155914 | Bracket Asm., Susp Chassis Lh |
| 5 | 163976 | Dash YTGT 2 Cyl | 58 | 137113 | Bracket Asm., Fender |
| 6 | 157882 | Dash, Lower Vgt One Piece | 60 | 17490620 | Screw Thdrol. 3/8-16 x 1-1/4 |
| 7 | 17720408 | Screw, Thd Cut 1/4-20 x 1/2 | 63 | 19131614 | Washer 13/32 x 1 x 14 Ga. |
| 8 | 145166 | Support, Battery | 67 | 156793 | Guide, Belt Gear Drive |
| 14 | 161023X558 | Hood Asm., Pnt | 68 | 17490508 | Screw Thdrol. 5/16-18 x 1/2 |
| 15 | 160568 | Lens Asm Headlight Bar | . 70 | 137159 | Guide, Belt Mid Span |
| 16 | 121794X | Cover, Access | 84 | 142992 | Stop, Over Center Mower - |
| 17 | 17490612 | Screw, Thdrol 3/8-16 x 3/4 | 85 | 144911 | Bracket, Support Transaxle |
| 18 | 160564X558 | Grille | 86 | 74760716 | Bolt Fin Hex 7/16-14 UNC x 1 |
| 19 | 19131312 | Washer 13/32 x 13/16 x 12 Ga. | 88 | STD551143 | Washer, Lock Hvy Hicl Spr |
| 20 | STD523710 | Bolt, Fin Hex 3/8-16 x 1 | | | 7/16 |
| 21 | STD541437 | Nut Crownlock 3/8-16 Unc | 90 | STD551237 | Washer, Lock External Tooth |
| 23 | 17490616 | Screw Thdrol 3/8-16 x 1 Ty-Tt | | | 3/8 |
| 24 | 145243X558 | Footrest, RH | 91 | 156586 | Rail, Frame Lh |
| 28 | 145244X558 | Footrest, LH | 95 | 105531X | Push Nut, Nylon |
| 30 | 145051X014 | Saddle, Sikscr Vgt | 106 | 138776 | Screw, Thdrol Hex Head Zinc Mwr |
| 31 | 161419 | Brace, Supt 1-pc VGT Steering | 120 | 19131616 | Washer 13/32 x 1 x 16 Ga. |
| 32 | 161327 | Bracket, Pivot Chassis Lh | 120 | 161464 | Screw Hex Wshd 8-18 x 7/8 |
| 33 | 161326 | Bracket, Pivot Chassis Rh | 130 | 17521312 | Screw Sltd H Hd W/Pin Washer |
| 34 | 142131 | Bracket, Engine Support Rear | 137 | 74780716 | Bolt Fin Hex 7/16-14 x 1 Gr. 5 |
| 35 | 19111116 | Washer 11/32 x 11/16 x 16 Ga. | 138 | 163975 | Cupholder YTGT |
| 36 | 74780512 | Bolt, Fin Hex 5/16-18 x 3/4 | 139 | 161330 | Bolt Shoulder 5/16-18 TT |
| 37 | 163981X558 | Fender YTGT PNT WO/SH Cup | 140 | 163806 | Magnet |
| - | 400004 | 558 Desclust, Audo Escart | 140 | 163805 | Striker Plate YTGT |
| 39 | 136961 | Bracket, Axle Front | 142 | 161897 | Bracket Dash Rh |
| 40 42 | 156111 72140608 | Bracket, Support Axle/Engine | 144 | 161900 | Bracket Dash Lh |
| | | Bolt, Carriage 3/8-16 x 1 | 146 | 161237 | Duct. Hood Heat |
| 43 44 | 136939 136940 | Bracket, Spnsn Front Lh Bracket, Spnsn Front Rh | 147 | 162967 | Fastener Nut Pal |
| 44 45 | 154913 | | 149 | 164769 | Pinch Welt Hood 3.5" |
| 45 47 | 17490608 | Bracket Asm., Susp Chassis Rh Screw Thdrol. 3/8-16 x 1/2 | | | |
| 4/ | 17490000 | SCIEW INCIDE 3/0*10 X 1/2 | | | |

GROUND DRIVE



GROUND DRIVE

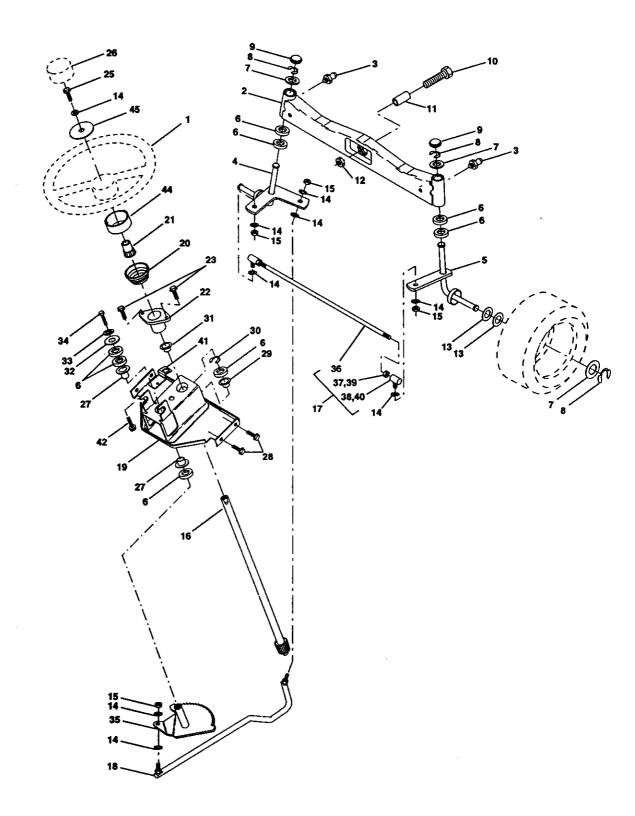
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| KEY NO. | PART NO. | DESCRIPTION | KEY NO. | PART NO. | DESCRIPTION |
|------------|-------------|-------------------------------|------------|-------------|-------------------------------|
| 1 | 9858M1 | Key, Woodruff | 36 | 149412 | Spring, Drive Ground |
| 3 | 7563R | Washer, Thrust, Axle | 37 | 121749X | Washer 25/32 x 1-1/4 x 16 Ga. |
| 4 | 17490508 | Screw Thdrol 5/16-18 x 3/4 | 38 | 150035 | Nyliner |
| 5 | STD541437 | Nut, Crownlock 3/8-16 | 39 | 74321016 | Screw, Fin. #10-24 x 1 |
| 6 | STD561210 | Pin, Cotter | 40 | 5304J | Actuator, Interlock Switch |
| 7 | 149176 | Wheel, Hub Assembly | 41 | 73661000 | Locknut #10-24 |
| 8 | 12000034 | Klip, Ring | 42 | 8883R | Cover, Pedal |
| 9 | 140080 | Bolt, Hub | 46 | 145170 | Retainer, Spring |
| 10 | 142509 | Disc, Brake | 47 | 138228 | Clutch Rod |
| 11 | 136927 | Yoke, Brake Disc | 48 | 72110612 | Bolt, Carriage 3/8-16 x 1-1/2 |
| 12 | 73750800 | Nutlock 1/2-20 Unf | | | Gr. 5 |
| 13 | 139419 | Washer, Special | 50 | 131494 | Pulley, Idler, Flat |
| 14 | 138901 | Bushing | 51 | STD541437 | Nut, Crownlock 3/8-16 UNC |
| 15 | STD551037 | Wahser 13/32 x 13/16 x 16 Ga. | 52 | 139123 | Pulley, Idler, Grooved |
| 16 | 143012 | Set, Screw 1/4-28 x 3/4 | 53 | 207J | Washer, Hardened |
| 17 | 126909X | Spring | 54 | 161590 | Clutch, Arm Assembly |
| 18 | 137104 | Lever, Brake | 55 | 105706X | Bearing, Idler |
| 19 | 136926 | Carn, Brake Disc | 56 | 137153 | V-Belt |
| 21 | 23260412 | Screw, Flat Head 1/4-28 x 3/4 | 57 | 141756 | Bracket, Shift Rod, Hi-Lo |
| 22 | 633A109 | Gearshift, Lever Assembly | 59 | 122253X | Shift Rod, Hi-Lo |
| 23 | 106932X | Knob | 60 | 122268X | Spring Clip, Connecting Link |
| 24 | 136925 | Support, Puck Brake | 61 | 137524 | Pulley, Transaxle |
| 25 | 136923 | Puck, Brake Top | 62 | STD551143 | Washer, Lock 7/16 |
| 26 | 137552 | Spring, Return | 63 | 74760720 | Bolt, Fin Hex 7/16-14 x 1-1/4 |
| 27 | 17490528 | Screw, Hex Wsh Thd. | 64 | 154752 | Shaft, Clutch/Brake Pedal |
| | | 5/16-18 x 1-3/4 | 65 | 67609 | Bolt, Shoulder |
| 28 | 73350600 | Nut, Hex Jam 3/8-16 | 66 | 140296 | Washer, Hardened |
| 29 | 137213 | Brake, Rođ | 67 | 19131312 | Washer, Flat |
| 30 | 19131616 | Washer 13/32 x 1 x 16 Ga. | 68 | 5142H | Pin, Roll |
| 34 | 124236X | Cap, Plunger | 69 | 136327 | Hub, Cover |
| 35 | 137648 | Rod, Parking Brake | 117 | 73900600 | Nut, Lock Fig. 3/8-16 Unc |

STEERING ASSEMBLY



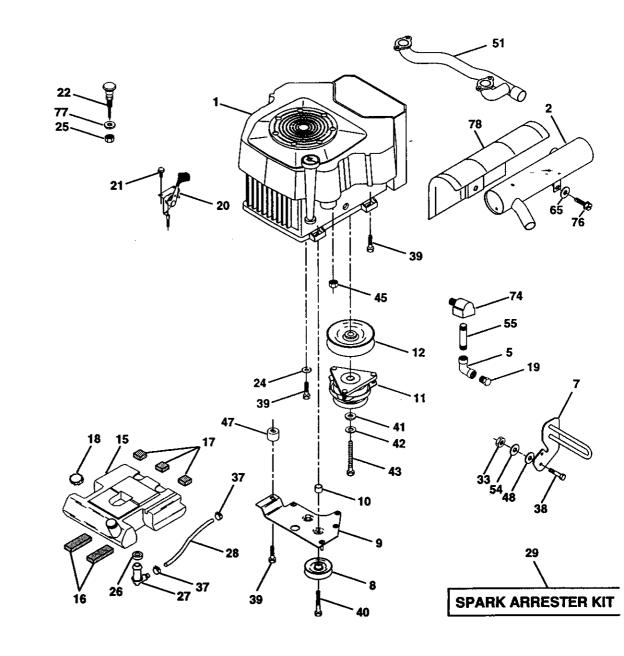
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STEERING ASSEMBLY

| KEY NO. | PART NO. | DESCRIPTION |
|------------|------------------|--|
| 1 | 159944 | Wheel, Steering |
| 2 | 137094 | Axle Asm., Front |
| 3 | 6855M | Fitting, Grease |
| 4 | 161849 | Spindle Asm, LH |
| 5 | 161848 | Spindle Asm., RH |
| 6 | 6266H | Bearing, Race Thrust Harden |
| . 7 | 121748X | Washer 25/32 x 1-5/8 x 16 Ga. |
| 8 | 12000029 | Ring, Klip #T5304-75 |
| 9 | 121232X | Cap, Spindle |
| 10 | 74781044 | Bolt, Fin Hex 5/8-11 x 2-3/4 |
| 11 | 136518 | Spacer Bearing Axle Front |
| 12 | 73901000 | Nut, Lock Flange 5/8-11 Unc |
| 13 | 121749X | Washer 25/32 x 1-1/4 x 16 Ga. |
| 14 | STD551137 | Washer, Lock Hvy Hicl Spr 3/8 |
| 15 | STD541537 | Nut, Lock Center 3/8-24 UNF |
| 16 | 145103 | Shaft Asm., Steering |
| 17 | 137347 | Rod Asm., Tie Ball J Ball Vgt (Inc. Key No. 36-40) |
| 18 | 137155 | Draglink, Ball Joint Solid Vgt |
| 19 | 156011 | Support Asm., Steering Vgt |
| 20 | 163887 | Boot, Steering |
| 21 | 159945 | Adapter, Wheel Steering |
| 22 | 155105 | Bushing, Strg. Blk |
| 23 | 152927 | Screw |
| 25 | STD523710 | Bolt, Fin Hex 3/8-16 x 1 Gr. 5 |
| 26 | 159946 | Cap, Wheel Steering |
| 27 | 3366R | Bearing, Col. Strg. |
| 28 | 17490612 | Screw, Thrdrol 3/8-16 x 3/4 |
| 29 | 104239X | Bearing, Flange |
| 30 | 12000034 | Ring, Klip Truarc #5304-75 |
| 31 | 138136 | Bushing, Nyliner Snap |
| 32 | 19111610 | Washer 11/32 x 1 x 10 Ga. |
| 33 34 | STD551131 | Washer, Lock Hvy Hicl Spr 5/16 |
| 34 35 | STD523107 | Bolt, Hex Hd 5/16-18 x 3/4 |
| 35 36 | 138059 137156 | Gear, Sector Steering Tie Rod |
| 30 | 73360600 | Jam Nut RH Thread |
| 38 | 109850X | Joint Asm. Ball RH Thread |
| 39 | 73700600 | Jam Nut EH Thread |
| 40 | 109851X | Joint Asm. Ball LH Thread |
| 40 | 155246 | Bracket Switch Interiock VGT 97 |
| 41 | 17490508 | Screw Thdrol 5/16-18 x 1/2 Tyt |
| 44 | 160135 | Extension, Steering |
| 45 | 19132411 | Washer 13/32 x 1-1/20 x 11 Ga. |
| | | dimensions given in U.S. inches |
| NULE | 1 inch = 25.4 n | |

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ENGINE



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ENGINE

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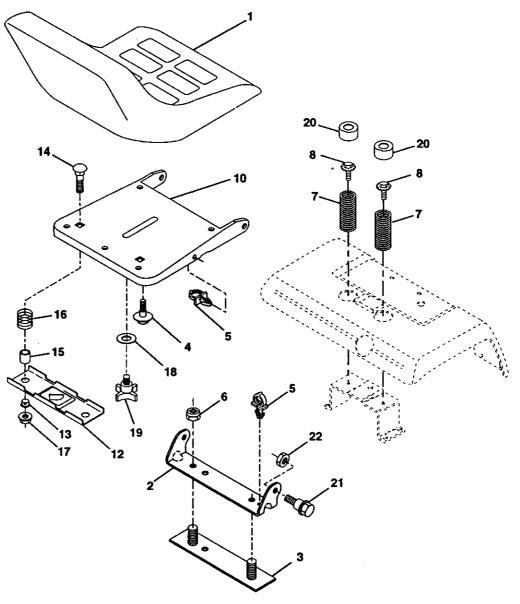
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| KEY NO. | PART NO. | DESCRIPTION |
|------------|--------------------|---|
| 1 | | Engine (See Breakdown) Kohler Model No. CV22S-67544 |
| 2 | 161062 | Muffier Side 1-1/8" 98 |
| 5 | 13200300 | Elbow STD 90 Degree 3/8 - 18 NPT |
| 7 | 151396 | Muffler Asm Guard |
| 8 | 121361X | Pulley V-Idler |
| 9 | 150828 | Keeper Asm. Belt Engine |
| 10 | 105432X | Bushing |
| 11 | 140923 | Clutch Electric |
| 12 | 143996 | Pulley Engine VGT Elect Clutch |
| 15 | 151346 | Tank Fuel Rear 3.50 Yt/Gt 96 |
| 16 | 109227X | Pad Spacer |
| 17 | 106082X | Pad Spacer |
| 18 | 161493 | Cap Asm Fuel W/Gauge |
| 19 20 | 13290300 | Plug Oil Drain (Order From Engine Manufacturer) |
| 20 | 164067 17521312 | Control Throttle Screw SLTD Hex HD W/PIn Washer |
| 21 | 164415 | Control Choke |
| 24 | STD551237 | Washer Ext Tooth 3/8 |
| 25 | 73920600 | Nut Keps 3/8 - 24 UNF |
| 26 | 3645J | Bushing |
| 27 | 139277 | Stem Tank Fuel |
| 28 | 7834R | Fuel Line |
| 29 | 132920 | Spark Arrester Kit |
| 33 | STD541437 | Nut Lock Hex w/Ins. 3/8 - 16 |
| 37 | 123487X | Clamp Hose |
| 38 | 74780624 | Bolt Fin Hex 3/8 - 16 x 1-1/2 |
| 39 | 17490636 | Screw TT 3/8-16 x 2-1/4 UNC |
| 40 | 17490664 | Screw TT 3/8-16 x 4 UNC |
| 41 | 126197X | Washer 1-1/2 OD X 15/32 ID X .250 |
| 42 | STD551143 | Washer Lock 7/16 |
| 43 | 150280 | Bolt Hex 7/16 - 20 X 4 - 1/4 Ga 5 |
| 45 | 128861 | Nut Flange 1/4-20 Starter Nut |
| 47 48 | 142040 | Spacer Engine |
| 40 51 | 19132007 | Washer 13/32 x 1-1/4 x 7 Ga. |
| 54 | 161230 19131414 | Manifold Pipe VGT CV 1-1/8" |
| 55 | 13280336 | Washer Flat 13/32 x 7/8 x 14 Ga. Nipple Pipe 4-1/2 |
| 65 | 19131614 | Washer 13/32 x 1 x 14 Ga. |
| 74 | 162295 | Elbow Street Brass |
| 76 | 17490612 | Screw Thorol 3/8-16 x 3/4 Ty-TT |
| 77 | STD551037 | Washer 13/32 x 13/16 x 16 Ga. |
| 78 | 164323 | Shield Muffler |
| | | |

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

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SEAT ASSEMBLY

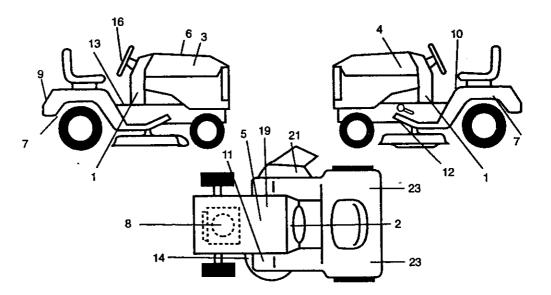


| KEY NO. | PART NO. | DESCRIPTION | KEY NO. | PART NO. |
|------------|-------------|-------------------------------|------------|---------------|
| 1 | 140124 | Seat | 14 | 72050412 |
| 2 | 140551 | Bracket, Pivot Seat | 15 | 121249X |
| 3 | 140675 | Strap, Fender | 16 | 123740X |
| 4 | 127018X | Bolt, Shoulder 5/16-18 x .62 | 17 | 123976X |
| 5 | 145006 | Clip, Push In, Hinged | 18 | 19171912 |
| 6 | STD541437 | Nut, Crownlock 3/8-16 Unc | | |
| 7 | 124181X | Spring, Seat Cprsn | 19 | 120068X |
| 8 | 150176 | Bolt 5/16-18 Unc x 3/4 w/Sems | 20 | 124238X |
| 10 | 155925 | Pan, Seat | 21 | 153236 |
| 12 | 121246X | Bracket, Mounting Switch | 22 | STD541431 |
| 13 | 121248X | Bushing, Snap | NOTE: | All component |

DESCRIPTION

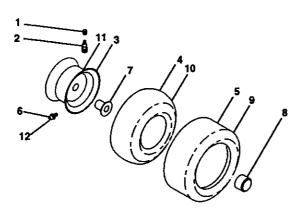
| Bolt, Carriage 1/4-20 X 1-1/2 |
|-------------------------------|
| Spacer, Split |
| Spring, Cprsn |
| Nut, Lock 1/4 Lge Fig Gr. 5 |
| Washer 17/32 x 1-3/16 x 12 |
| Ga. |
| Knob, Seat 1/2-13 Unc |
| Cap, Spring Seat |
| Bolt, Shoulder 5/16-18 |
| Nut, Crownlock 5/16-18 Unc |

DECALS



| KEY NO. | PART NO. | DESCRIPTION | KEY NO. | PART NO. | DESCRIPTION |
|------------|-------------|----------------------------|------------|-------------|---------------------------------|
| 1 | 163266 | Decal, Dash Panel | 12 | 146047 | Decal, V-Belt Drive Schematic |
| 2 | 164085 | Decal, Dash | 14 | 160397 | Decal, V-Beit Schematic |
| 3 | 163916 | Decal, Hood, Craftsman, RH | 18 | 164065 | Decal, Insert Strg |
| 4 | 163917 | Decal, Hood, Craftsman, LH | 19 | 138047 | Decal, Battery |
| 5 | 149516 | Decal, Battery DNGR/PSN | 21 | 163203 | Decal, Mower EZ3 |
| - | | ENG Asm | 23 | 106202X | Reflector, Taillight |
| 6 | 133644 | Decal, Maintenance | | 138311 | Decal, Handle Lft Height Adjust |
| 7 | 163210 | Decal, Fender | | | (Lift Handle) |
| 8 | 164760 | Decal, Eng | | 157199 | Pad, Footrest |
| 9 | 163204 | Decal, Fender, Craftsman | | 165029 | Manual, Owner's (Eng) |
| 10 | 156439 | Decal, Fender Danger | | 165030 | Manual, Owner's (Span) |
| 11 | 4900J | Decal, Clutch/Brake | | | |

WHEELS & TIRES

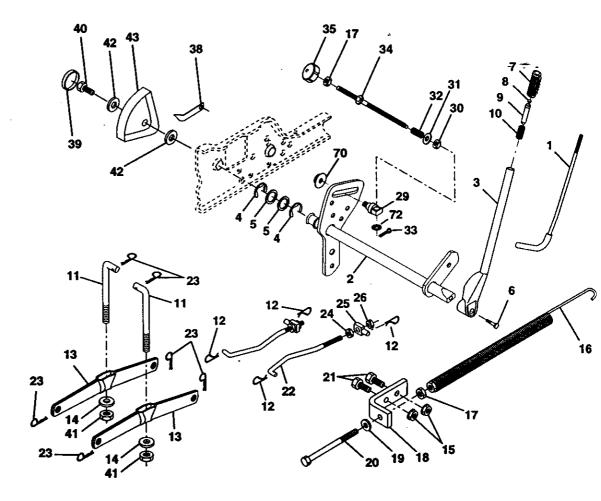


| | PART | DECODERION |
|-----|------------|---------------------------------------|
| NO. | NO. | DESCRIPTION |
| 1 | 59192 | Cap, Valve, Tire |
| 2 | 65139 | Stern, Valve |
| 3 | 106228X427 | Rim Assembly, Front |
| 11 | 106277X427 | Rim Assembly, Rear |
| 4 | 8134H | Tube, Front (Service Item Only) |
| 10 | 7154J | Tube, Rear (Service Item Only) |
| 5 | 106230X | Tire, Front |
| 9 | 105588X | Tire, Rear |
| 6 | 278H | Fitting, Grease (Front Wheel Only) |
| 12 | 6856M | Fitting, Grease |
| 7 | 9040H | Bearing, Flange (Front Wheel Only) |
| 8 | 104757X | Cap, Axle (Front Wheel Only) |
| •- | 144334 | Sealant, Tire (10 oz. Tube) |

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LIFT ASSEMBLY

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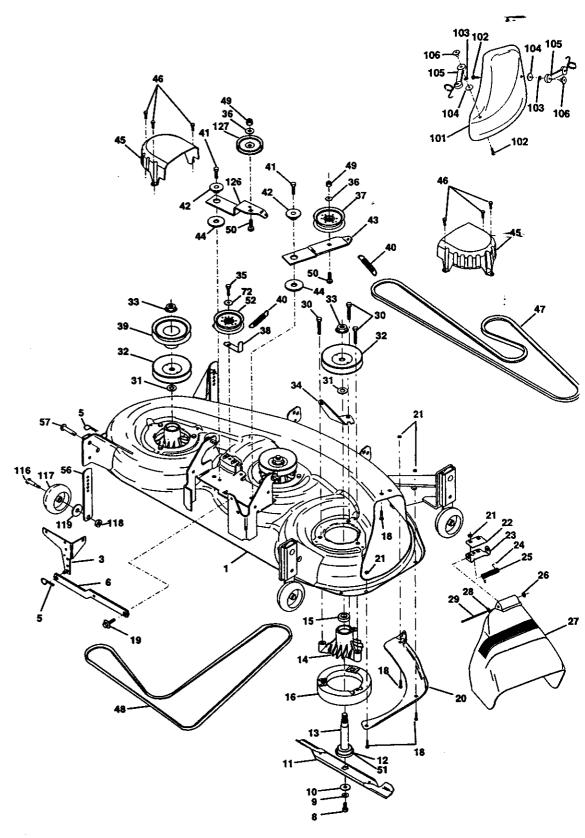
LIFT ASSEMBLY

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| KEY NO. | | DESCRIPTION |
|------------|---------------------|--|
| 1 | 121006X | Rod Asm., Lever |
| 2 | 159187 | Shaft Asm., Lift Vgt |
| 3 | 159189 | Lever Asm., Lift Rh |
| 4 | 12000022 | E-Ring Truarc #5133-87 |
| 5 | 19292016 | Washer 29/32 x 1-1/4 x 16 Ga. |
| 6 | 74780624 | Bolt, Fin Hex 3/8-16 x 1-1/2 |
| 7 | 125631X | Grip, Handle Fluted |
| 8 | 122365X | Button, Plunger |
| 9 | 122364X | Plunger, Button |
| 10 | 2876H | Spring 2-1/8" |
| 11 | 146704 | Link Lift |
| 12 | 163552 | Retainer, Spring |
| 13 | 139868 | Arm, Suspension Vgt |
| 14 | 140302 | Bearing |
| 15 | STD541437 | Nut, Crownlock 3/8-16 Unc |
| 16 | 674A247 | Spring Asm., Assist Lift |
| 17 | STD541237 | Nut, Hex Jam 3/8-16 Unc |
| 18 | 143363 | Bracket, Spring Assist |
| 19 | STD551037 | Washer 13/32 x 13/16 x 16 Ga. |
| 20 | 5328J | Bolt, Adjust Spring Assist |
| 21 | STD523710 | Bolt, Fin Hex 3/8-16 x 1 |
| 22 | 127218 | Link, Front |
| 23 | STD624008 | Retainer, Spring |
| 24 | 73350800 | Nut, Jam Hex 1/2-13 Unc |
| 25 | 130171 | Trunnion |
| 26 | 73800800 | Nut, Lock W/Wsh 1/2-13 Unc |
| 29 | 150233 | Trunnion, Infin Height |
| 30 | 110807X | Nut, Special |
| 31 | 19131016 | Washer 13/32 x 5/8 x 16 Ga. |
| 32 | 137150 | Spring, Compression Inf Hgt |
| 33 | 76020308 | Pin, Cotter 3/32 x 1/2 |
| 34 | 137167 | Rod, Adj Lift |
| 35 | 138057 | Knob, inf 3/8-16 Unc |
| 38 | 155097 | Pointer, Height Indicator |
| 39 40 | 123935X 17490512 | Plug, Hole Screw Hex Wsh 5/16-18 x 3/4 |
| 40 | 73540600 | |
| 41 | 19112410 | Nut, Crownlock 3/8-24 Washer 11/32 x 1-1/2 x 10 Ga, |
| 42 43 | 123934X | Scale, Indicator Height |
| 43 70 | 145212 | Nut Hex Flange Lock |
| 70 | 145212 110452X | Nut Plex Plange Lock |
| 12 | 1104928 | mul rush rnos & VII |

MOWER DECK



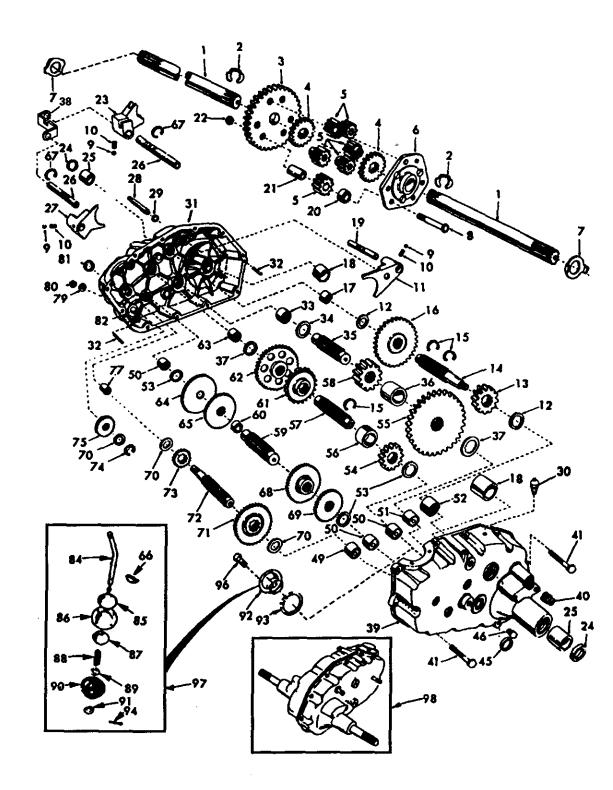
MOWER DECK

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| KEY | PART | | KEY | PART | |
|----------|---------------------|---|-----|-----------------|--|
| NO. | NO. | DESCRIPTION | NO. | NO. | DESCRIPTION |
| 1 | 164811 | Deck Weldment. w/Adj. GWB | 39 | | Pulley, Idler, Driven |
| • | 100457 | 46" Renelicet App, Surgy Bor | 40 | 137273 | Spring, Secondary 44/46/50 Vent |
| 3 5 | 138457 STD624008 | Bracket Asm., Sway Bar Retainer Spring | 41 | 17490620 | Screw, Thdroll 3/8-16 x 1-1/4 |
| 6 | 130832 | Arm, Suspension, Rear (Sway | | 11 100020 | Tytt |
| Ŭ | 100002 | Bar) | 42 | 122052X | Spacer, Retainer |
| 8 | 850857 | Bolt, Patched 3/8-24 x 1-1/4 | 43 | | Arm, Idler Secondary |
| | | Gr. 8 | 44 | | Washer, Hardened |
| 9 | STD551137 | Washer, Lock Hvy., Unplated | 45 | | Cover, Mandrel Deck |
| | | 3/8 Mississe Llead Diade Mawar | 46 | | Screw, Thdroll. 1/4-20 x 5/8 |
| 10 | 140296 | Washer, Hard Blade, Mower Vented | 47 | | V-Belt, Mower, Secondary |
| 11 | 163819 | Blade | 48 | | V-Belt, Mower, Primary |
| 12 | 129895 | Bearing, Ball, Mandrel #6204 | 49 | | • |
| 13 | 137553 | Shaft Asm. w/Lower Bearing | 50 |) 72110612 | Bolt, Carriage 3/8-16 x 1-1/2 Gr. 5 |
| 10 | 10/000 | (includes Key No. 12) | 51 | 153390 | Washer Felt |
| 14 | 137152 | Housing, Mandrel | 52 | | Pulley Idler 46" Prim. Drive |
| 15 | 110485X | Bearing, Ball, Mandrel | 56 | | |
| 16 | 140329 | Stripper, Mower Round | | | Guage |
| 18 | STD533106 | Bolt, Carriage 5/16-18 x 5/8 | 57 | 7 156941 | Pin Head Rivet |
| 19 | 132827 | Bolt, Hex Head, Shoulder | 72 | 2 19131616 | Washer 13/32/1/16 Ga. |
| | | 5/16-18 | 101 | 145579 | Cover, Mulching |
| 20 | 145055 | Baffle, Vortex Mower 46" | 102 | 2 71161010 | Screw |
| 21 | STD541431 | Nut, Crownlock 5/16-18 UNC | 103 | 3 STD551110 | Washer, Lock #10 |
| 22 | 134753 | Stiffener, Bracket | 104 | + | Washer |
| 23 | 131267 | Bracket, Deflector | 105 | | Latch Asm. Bagger |
| 24 | 105304X | Cap, Sleeve Spring, Torsion, Deflector | 106 | | Nut, Weld |
| 25 26 | 149287 110452X | Nut, Push | 116 | • • • • • • • • | Bolt, Shoulder |
| 20 27 | 157788 | Shield, Deflector Mower | 11 | | Gauge Wheel |
| 28 | 19111016 | Washer 11/32 x 5/8 x 16 Ga. | 118 | - | Nut, Centerlock 3/8-16 UNC |
| 20 | 131491 | Rod, Hinge | 119 | | Washer 3/8 x 7/8 x 14 Ga. |
| 30 | 157722 | Screw Thdrol Washer Head | 120 | | Arm, Idler, Primary Deck 46" |
| 31 | 129963 | Washer, Spacer Mower Vented | 121 | | Pulley, idler, V-Groove Dim. 4.25 |
| 32 | 153531 | Pulley, Mandrel | - | - 164825 | Mower Service 46" (Standard |
| 33 | 137266 | Nut, Fig. Top Lock Cntr. 9/16 | | | Deck - Order separately mulching and nose roller com- |
| 34 | 144945 | Anchor, Spring Deck 46" | | | ponents Key Nos. 101-106 |
| 35 | 17490628 | Screw, Thdroll 3/8-16 x 1-3/4 | | | and 90-95) |
| | 11400020 | Tytt | - | - 143651 | Mandrel Asm 44/50 Service |
| 36 | STD551037 | Washer 13/32 x 13/16 x 16 Ga. | | | (Includes Key Nos. 8-10, 12- 15, 31 and 33) |
| 37 | 131494 | Pulley, Idler, Flat | NOT | | nt dimensions given in U.S. inches |
| 38 | 156086 | Keeper, Belt, Idler | | 1 inch = 25.4 | - |

TRANSAXLE



TRANSAXLE

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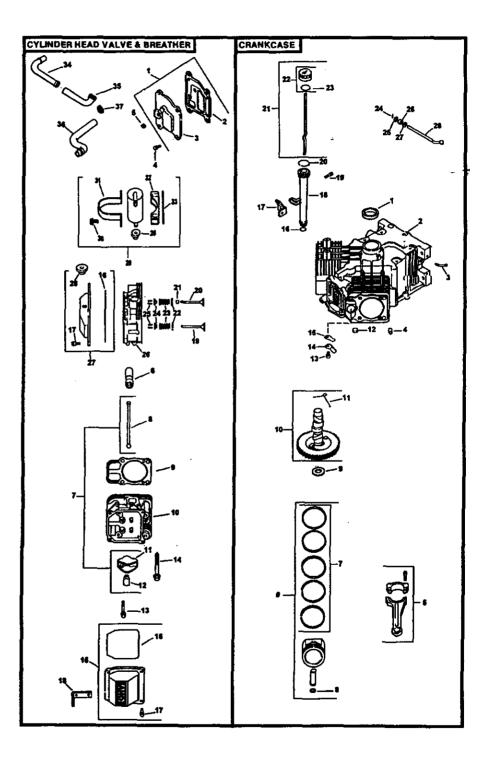
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| KEY NO. | PART NO. | DESCRIPTION | KEY NO. | PART NO. | DESCRIPTION |
|------------|-------------|--|------------|-----------------|--|
| 1 | 4197R | Axle Shaft | | | |
| 2 | 12000034 | Retaining Ring | 52 | 8119M | Needle Bearing |
| 3 | 4199R | Final Drive Gear | 53 | 4220R | Thrust Bearing Race |
| 4 | 4216R | Differential Gear | 54 | 4209R | 3rd Reduction Pinion, Low |
| 5 | 4215R | Differential Pinion | 55 | 4213R | 4th Reduction Gear |
| 6 | 4217R | Differential Carrier | 56 | 4442R <u></u> | 3rd Reduction Pinion Spacer |
| 7 | 6256H | Axle Thrust Washer | 57 | 4195R | 2nd Reduction Gear Shaft |
| 8 | 74020652 | Bolt, Hex Head 3/8-24 x 3-1/4 | 58 | 4214R | Final Drive Pinion |
| | | (1" Thread Length) | 59 | 4194R | 1st Reduction Gear Shaft |
| 9 | 7392M | Steel Ball | 60 | 7528R | 1st Reduction Shaft Spacer |
| 10 | 137261 | Spring Shift Fork Detent | 61 | 4208R | 3rd Reduction Plnion High |
| 11 | 4985R | Shift Fork, High-Low Range | 62 | 4207R | 2nd Reduction Gear |
| 12 | 6266H | Thrust Bearing Race | 63 | 7398H | Needle Bearing |
| 13 | 4212R | 4th Reduction Pinion | 64 | 4203R | Low Speed Gear and 2nd |
| 14 | 137125 | Shaft, Brake | | | Reduction Pinion Cluster |
| 15 | 6276H | Snap Ring, Crescent Type | 65 | 4204R | Reverse Gear |
| 16 | 633A63 | High-Low Range Gears | 66 | 2898J | Key, Hi-Pro 1/8 x 17/32 |
| 17 | 8118M | Needle Bearing | 67 | 12000033 | Klip Ring |
| 18 | 8740H1 | Sintered Iron Bearing | 68 | 4205R | Intermediate Speed Gear |
| 19 | 122238X | Shift Fork Shaft, High-Low | 69 | 4206R | High Speed Gear |
| | | Range | 70 | 1370H | Thrust Bearing Race |
| 20 | 4218R | Differential Pinion Spacer | 71 | 633A69 | Intermediate and High Speed Cluster Pinions |
| 21 | 6252H1 | Differential Pinion Bushing | 70 | 100100 | Input Shaft |
| 22 | 7810H | Gripco Centerlock Nut 3/8-24 | 72 73 | 139120 4201R | • • • |
| 23 | 6262H | Shift Fork, R.H. | 73 | 12000008 | Low Speed Pinion E-Ring |
| 24 | 7393R | Oil Seal | 74 | 1153R | Reverse Idler Gear |
| 25 | 992R1 | Sintered Iron Bearing | 75 | 6803J | Needle Bearing |
| 26 | 139111 | Shift Fork Shaft | 79 | 1167R | Sealing Washer |
| 27 | 4986R | Shift Fork, L.H. | 80 | 73360700 | Nut, Hex, Jam 7/16-20 |
| 28 | 122254X | Shift Shaft, High-Low Range | 81 | 6270H | Oil Seal |
| 29 | 6269H | Oil Seal | 82 | 136984 | Reverse idler Shaft |
| 30 | 5855H | Pressure Relief Valve | 82 84 | 5384J | Gearshift Lever, Bent |
| 31 | 139538 | Gearcase, Reverse Idler Shaft | 85 | 2978J | Gearshift Cap |
| | | and Bearings, R.H. (Includes Key No.Ōs 17,18, 25, 33, 50, | 86 | 633A85 | Gearshift Ball Cover and Pin |
| | | 63, 77 and 82) | 80 87 | 8739H1 | Shift Lever Guide Ball, Keyed |
| 32 | 6277H | Dowel Pin | 88 | 4924H | |
| 33 | 4225R | Needle Bearing | 89 | 19151516 | Spring Washer 15/32 x 15/16 x 16 |
| 34 | 7396H | Thrust Bearing Race | 03 | 19151510 | Gauge |
| 35 | 4198R | 4th Reduction Gear Shaft | 90 | 110542X | Shift Mechanism Seal |
| 36 | 4200R | 4th Reduction Gear Spacer | 91 | 19181511 | Washer 9/16 x 15/16 x 12 |
| 37 | 7395H | Thrust Bearing Race | ••• | | Gauge |
| 38 | 160789 | Gate Lower Shift VGT | 92 | 75J | Gearshift Gate and |
| 39 | 139536 | Gearcase and Bearings, L.H. | | | Reinforcement |
| | | (Includes Key Numbers 18, 25, | 93 | 6274H | Shift Ball Cover Gasket |
| | | 49, 50 (2), 51 and 52) | 94 | 76020412 | Cotter Pin 1/8 x 3/4 |
| 40 | 13320400 | Pipe Plug 1/2-14 N.P.T. | 96 | 159783 | Screw Hx W Hd Machine |
| 41 | 17580520 | Bolt, Hex 5/16-18 UNC x 1-1/4 | 97 | 633A109 | Gearshift Lever Assembly |
| 45 | 6271H | Oil Seal | 98 | 161823 | Transaxle, 6 Speed, |
| 46 | 13060200 | Pipe Plug 1/4-18 N.P.T. | | | Complete Assembly |
| 49 | 4895H | Needle Bearing | | | |
| 50 | 4222R | Needle Bearing | NOTE | : All compone | nt dimensions given in U.S. inches |
| 51 | 1529R | Needle Bearing | | 1 inch = 25.4 | - |
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HEAD/VALVE/BREATHER

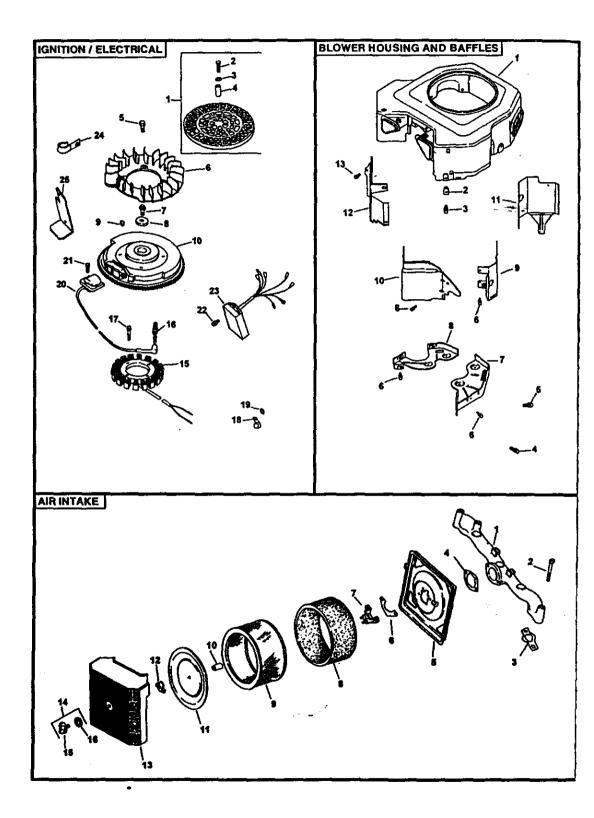
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CRANKCASE

PART

| KEY NO. | PART NO. | DESCRIPTION | KEY NO. |
|------------|-------------|--|------------|
| 1. | 24-033-03 | Kit, breather cover w/gasket | 1. |
| _ | | (Includes 2,3) | 2. |
| 2. | 24-041-23 | Gasket, breather | _ |
| 3. | 24-096-15 | Cover, breather | З. |
| 4. | M-0645020 | Screw, hex. flange M6x1.0x20 (4) | 4. |
| 5. | X-75-23 | Plug, allen hd. 1/8" | 5. |
| 6. | 12-351-02 | Lifter, valve (4) | |
| 7. | 24-755-66 | Kit, valve train (Includes 8,11,12) | 6. |
| 8. | 24-411-05 | Rod, push (4) | |
| 9. | 24-041-08 | Gasket, cylinder head (2) | |
| 10. | 24-318-12 | Head assembly, #2 cylinder | _ |
| 11. | 25-186-01 | Arm, rocker (4) | 7. |
| 12. | 24-599-01 | Pivot, rocker arm (4) | |
| 13. | M-0640034 | Screw, hex. flange M6x1.0x34 (4) | |
| | 12-086-16 | Screw, hex. flange M10x1.5x90 (8) | 8. |
| 15. | 24-755-74 | Kit, valve cover - plain (Includes 16,17) | 9. |
| 16. | 24-153-16 | O-Ring | |
| 17. | 24-086-32 | Screw, shoulder (4) | |
| 18. | 24-445-01 | Strap, lifting | |
| 19. | 24-016-01 | Valve, exhaust (Std.) (2) | |
| | 24-016-02 | Valve, exhaust (.25) (2) | |
| 20. | 24-017-01 | Valve, intake (Std.) (2) | 10. |
| | 24-017-02 | Valve, intake (.25) (2) | 11. |
| 21. | 24-032-05 | Seal, valve stem (2) | 12. |
| 22. | 235011 | Retainer, spring (4) | 13. |
| 23. | 24-089-02 | Spring, valve (4) | 14. |
| 24. | 12-173-01 | Cap, valve spring (4) | 15. |
| 25. | 12-755-03 | Kit, retainer (4) | 16. |
| 26. | 24-318-11 | Head assembly, #1 cylinder | 17. |
| 27. | 24-755-76 | Kit, valve cover - breather (Incl.16,17,28) | 18. 19. |
| 28. | 25-313-02 | Grommet, rubber | 20. |
| 29. | 24-755-57 | Kit, breather separator (Includes 28,30-33) | 21. |
| 30. | M-0545016 | Screw, hex. flange M5x0.8x16 (2) | 22. |
| 31. | 24-445-02 | Strap, breather | 23. |
| 32. | 24-126-44 | Bracket, breather separator | 24. |
| 33. | 24-112-12 | Spacer | 25. |
| 34. | 24-294-06 | Fitting | 26. |
| 35. | 24-326-13 | Hose, breather | 27. |
| 36. | 24-326-14 | Hose, breather | 28. |
| 37. | X-426-9 | Clamp, hose (2) | |
| - | | | NOTE |

| PARI | |
|-----------|---------------------------------------|
| NO. | DESCRIPTION |
| 24-032-01 | Cool oil front |
| 24-032-01 | Seal, oil front Crankcase |
| | (USE: Miniblock 24 782 05) |
| 24-294-13 | Fitting |
| 12-380-17 | Pin, dowel locating (6) |
| 24-067-13 | Connecting Rod (Std.) (2) |
| 24-067-13 | Connecting Rod (.25)=(2) |
| 24-874-01 | Piston w/Ring Set (Std.) (2) |
| 24-074-01 | (Includes 7,8) |
| 24-874-02 | Piston w/Ring Set (.25) (2) |
| 24-874-03 | Piston w/Ring Set (.50) (2) |
| 24-108-01 | Ring Set (Std.) (2) |
| 24-108-02 | Ring Set (.25) (2) |
| 24-108-03 | Ring Set (.50) (2) |
| 24-018-01 | Retainer, piston pin (4) |
| 12-422-09 | Shim, camshaft (A.R.) |
| 12-422-13 | Shim, camshaft (A.R.) |
| 12-422-07 | Shim, camshaft (A.R.) |
| 12-422-08 | Shim, camshaft (A.R.) |
| 12-422-10 | Shim, camshaft |
| 12-422-11 | Shim, camshaft (A.R.) |
| 12-422-12 | Shim, camshaft (A.R.) |
| 24-010-03 | Camshaft |
| 24-089-21 | Sprint, actuating (ACR) |
| 52-139-09 | Plug, cup |
| M-0545010 | Screw, hex. flange M5x0.8x10 (|
| 24-018-04 | Retainer, reed (2) |
| 24-402-05 | Reed, breather (2) |
| 12-153-01 | O-Ring, lower oil fill tube |
| 24-126-19 | Bracket, oil fill tube |
| 12-123-04 | Tube, oil fill |
| M-0545016 | Screw, hex. fiange M5x0.8x16 |
| 12-153-02 | O-Ring, upper oil fill tube |
| 24-038-04 | Dipstick assembly (Includes 22,23) |
| 24-755-46 | Kit, oil fill cap (Includes 23) |
| 12-153-03 | O-Ring, dipstick |
| 12-380-04 | Pin, hitch |
| M-0631005 | Washer, plain 6 mm |
| 12-032-01 | Seal, governor cross shaft |
| X-25-102 | Washer, plain 1/4" |
| 24-144-01 | Shaft, governor cross |
| | |



IGNITION/CHARGING

BLOWER HOUSING & BAFFLES

| KEY NO. | PART NO. | DESCRIPTION | KEY NO. |
|------------|--------------------|--|------------|
| 1. | 54-755-15 | Kit, grass screen | 1. |
| | | (includes 2-4, and 24 113 18) | _ |
| 2. | M-0403025 | Screw, hex. cap M4x0.7x25 (4) | 2. |
| 3. | X-25-92 | Washer, plain 5/16" (4) | З. |
| 4. | 24-112-04 | Spacer, grass screen (4) | |
| 5. | 25-086-47 | Bolt, shoulder (4) | 4. |
| 6. | 24-157-03 | Fan | E |
| 7. | 12-086-14 | Screw, hex. flange M10x1.5x46 | 5. |
| 8. | 12-468-03 | Washer, plain 3/8". | 6. |
| 9. | X-42-15 | Key | 7. |
| 10. | 24-025-05 | Flywheel | 8. |
| 11. | 25-403-03 | Rectifier-regulator | 9. |
| 12. | X-25-92 | Washer, plain 3/16" (2) | 10. |
| 13. | 24-086-18 | Screw, phillips hd. 11-16x7/8 (2) | 10. |
| 14. | | Connector (3 contact) | 12. |
| 15. | 54-755-09 | Kit, 15 amp stator | 13. |
| | | (Includes 24 126 71) | 13. |
| 16. | 12-132-06 | Spark Plug (2) | NOT |
| 17. | M-0548025 | Screw, hex. cap M5x0.8x25 (2) | |
| 18. | 48-154-02 | Clip, cable | |
| 19. | X-25-63 | Washer, plain 1/4* | |
| 20. | 24-584-11 | Module, ignition (2) | |
| 21. | M-0561025 | Screw, thread forming M5x0.8x25 (4) | |
| 22. | M-0448010 | Screw, hex. flanage M4x0.7x10 (2) | AIR I |
| 23. | 24-584-09 | Module, speed advance | KEY |
| 24. | 47-154-01 | Clip, cable | NO. |
| 25. | 24-063-27 | Baffle, heat shield | 110. |
| NOTI | LLUSTRATED | | 1. |
| | 2 4-126-7 1 | Bracket, stator wire | 2. |
| | X-22-11 | Washer, lock 1/4" (2) | ۷. |
| | 24-176-27 | Hamess, wiring | 3. |
| | | Lead, black (rectreg. 4" - 18 | 4. |
| | | gauge | 5. |
| | 25-518-28 | insulated grip barrel eyelets) | 6. |
| | 24-113-18 | Decal, grass screen | 7. |
| | 12-454-01 | Tie, wire | 8. |
| | | | 0. |

| key No. | PART NO. | DESCRIPTION |
|-----------------|-------------|--------------------------------------|
| 1. | 54-027-95 | Housing, blower |
| | | (Incl. M-0545010 & 24 063 36) |
| 2. | 24-100-02 | Nut, plastic (2) |
| 3. | M-0545020 | Screw, hex. flange M5x0.8x20 (2) |
| 4. | M-0545016 | Screw, hex. flange M5x0.8x16 (5) |
| 5. | M-0551016 | Screw, hex. flange M5x0.8x16 |
| 6. | M-0645016 | Screw, hex. flange 7M6x1.0x16 (6) |
| 7. | 24-146-02 | Plate, backing - # 2 side |
| 8. | 24-146-08 | Plate, backing - # 1 side |
| 9. | 24-063-20 | Baffle, cylinder barrel-# 2 side |
| 10. | 24-063-14 | Baffle, valley - #2 side |
| 11. | 24-063-30 | Baffle, cylinder barrel-# 1 side |
| 12. | 24-063-23 | Baffle, valley - #1 side |
| 13. | M-0545010 | Screw, hex. flange M5x0.8x10 (2) |
| NOT ILLUSTRATED | | |
| | 24-063-36 | Baffle, blower housing |
| | M-0545010 | Screw, hex. flange M5x0.8x10 (2) |
| | N/A | Cover, control |
| | 24-086-06 | Screw, phillips hd. 11-16x3/4" (2 |

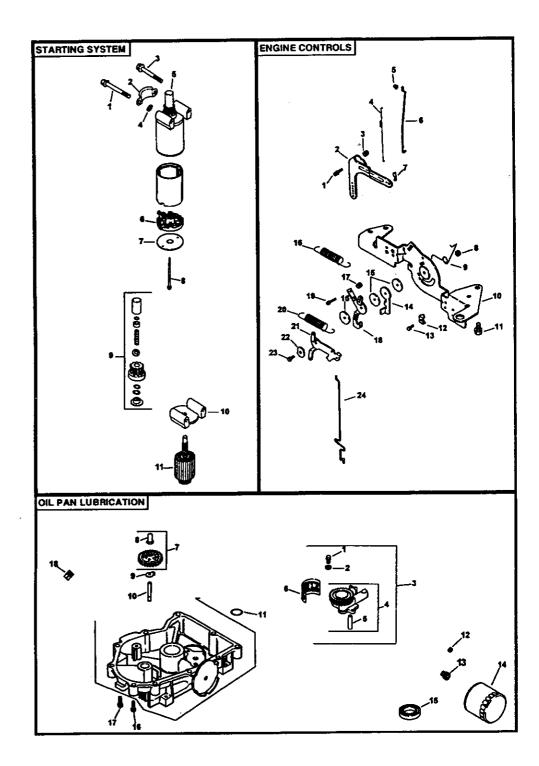
AIR INTAKE/FILTRATION

| KEY NO. | PART NO. | DESCRIPTION |
|------------|-------------|-------------------------------------|
| 1. | 24-164-06 | Manifold, intake |
| 2. | M-0651055 | Screw, hex. ilange M6x1.0x55 (4) |
| 3. | 24-041-01 | Gasket, intake manifold (2) |
| 4. | 24-041-14 | Gasket, air cleaner base |
| 5. | 24-094-13 | Base, air cleaner |
| 6. | 24-041-13 | Gasket, fuel spitback cup |
| 7. | 24-109-05 | Cup, fuel spitback |
| 8. | 24-083-05 | Precleaner, element |
| 9. | 24-083-03 | Element, air cleaner |
| 10. | 230046 | Seal, breather |
| 11. | 24-096-01 | Cover, inner air cleaner |
| 12. | 12-100-01 | Wing Nut |
| 13. | 24-096-65 | Cover, air cleaner |
| 14. | 54-755-01 | Kit, knob with seal |
| | | (Includes 15 & 16) |
| 15. | 24-153-15 | Ö-Ring |
| 16. | 25-341-03 | Knob, cover |

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

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STARTING SYSTEM

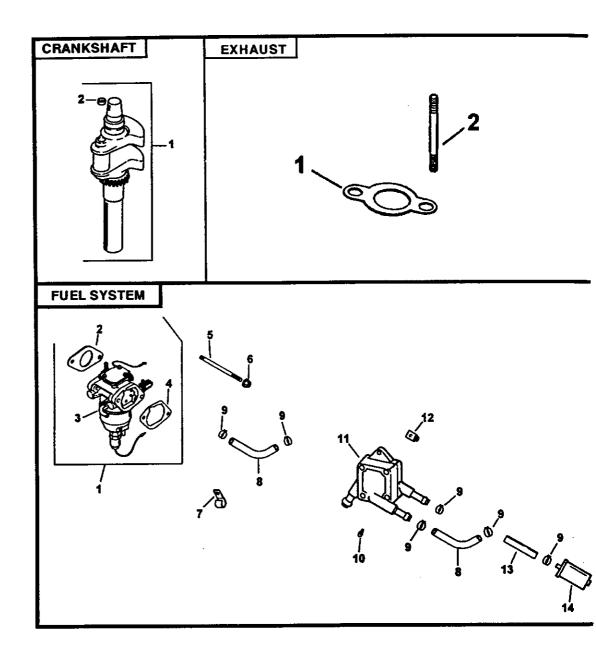
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OIL PAN/LUBRICATION

| KEY NO. | PART NO. | DESCRIPTION | Key No. |
|--------------|-------------|-------------------------------------|------------|
| 1. | M-0839070 | Screw, hex. flange M8x1.25x70 | 1. |
| 2. | 24-096-05 | Cover, pinion | ~ |
| 3. | M-0839080 | Screw, hex. flange M8x1.25x80 | 2. |
| 4. | 12-468-01 | Washer, plain 11/32" (3) | 3. |
| 5. | 25-098-05 | Starter, (Includes 6-11) | 4. |
| · 6. | 12-221-01 | Kit, brush | |
| 7. | 12-227-13 | Cap | 5. 6. |
| 8. | 12-211-01 | Bolt, thru (2) | 0. 7. |
| 9. | 12-755-54 | Kit, drive | 1. |
| 10. | 12-227-06 | Cap, drive end | 8. |
| 11. | 12-170-05 | Armature | 9. |
| ENGI | NE CONTROLS | | 10. |
| CNG | NE CONTROLS | | 11. |
| KEY | PART | | 12. |
| NO. | NO. | DESCRIPTION | 13. |
| 110. | | | 14. |
| 1. | SM-0642025 | Screw, hex. flange M6x1.0x25 | 15. |
| 2. | 24-090-14 | Lever, governor | 16. |
| 3. | M-0641060 | Nut, hex. flange M6x1.0 | 17. |
| 4. | 24-089-01 | Spring, linkage | |
| 5. | 25-158-08 | Bushing, linkage retaining | 18. |
| 6. | 24-079-04 | Linkage, throttle | NOTE |
| 7. | 25-158-11 | Bushing, throttle linkage | 1 inch |
| 8. | M-0547050 | Nut, hex. lock M5x0.8 | |
| 9. | 24-089-03 | Spring, throttle | |
| 10. | 24-126-56 | Bracket, control | |
| 11. | M-0645016 | Screw, hex. flange M6x1.0x16 (4) | |
| 12. | 12-237-01 | Clamp, cable (2) | |
| 13. | M-0545016 | Screw, hex. flange M5x0.8x16 (3) | |
| 14. | 24-090-07 | Lever, thorttle actuator | |
| · 15. | 24-468-01 | Washer, plain 5.5 mm (3) | |
| 16. | | Spring, governor | |
| - 17. | | Nut, hex M4x0.7 | |
| 18. | | Lever, throttle control | |
| 19. | | Screw, hex. flange M5x0.8x20 | |
| 20. | | Spring, throttle limiter | |
| 21. | | Lever, choke | |
| 22. | | Washer, spring 1/4* | |
| 23. | | Screw, hex. cap M4x0.7x25 | |
| 24. | 24-079-05 | Linkage, choke | |

| Y | PART | |
|------|---------------|-------------------------------------|
|). | NO. | DESCRIPTION |
| 1. | M-0645025 | Screw, hex. flange M6x1.0x25 (2) |
| 2. | M-0631005 | Washer, plain 6 mm (2) |
| 3. | 24-199-07 | Pan, oil assembly |
| | ÷ | (Includes 1,2,&4-10) |
| 4. | 24-393-08 | Oil pump assembly (Includes 5) |
| 5. | 24-123-05 | Tube, oil pickup |
| 6. | 24-162-26 | Screen, oil |
| 7. | 24-043-12 | Kit, governor gear w/pin |
| | | (Includes 8) |
| 8. | 12-380-01 | Pin, governor regulating |
| 9. | 52-448-02 | Tab, locking |
| 10. | 12-144-02 | Shaft, governor gear |
| 11. | 24-153-08 | O-Ring |
| 12. | X-75-32 | Plug, hex. ctsk. 3/8" |
| 13. | 24-136-01 | Nipple, oil filter |
| 14. | 52-050-02 | Filter, oil |
| 15. | 52-032-08 | Seal, oil (PTO end) |
| 16. | 24-086-17 | Screw, hex. flange M8x1.25x45 |
| 17. | 24-086-16 | Screw, hex. flange M8x1.25x45 |
| | | (9) |
| 18. | X-75-10 | Plug, sq. hd. solid 3/8" N.P.T.F. |
| DTE: | All component | dimensions given in U.S. inches |
| | | |

nch = 25.4 mm



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CRANKSHAFT

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FUEL SYSTEM

| KEY NO. | PART NO. | DESCRIPTION |
|------------|-------------|-------------------------|
| 1. | 24-014-72 | Crankshaft (Includes 2) |
| 2. | 52-139-09 | Plug, cup |

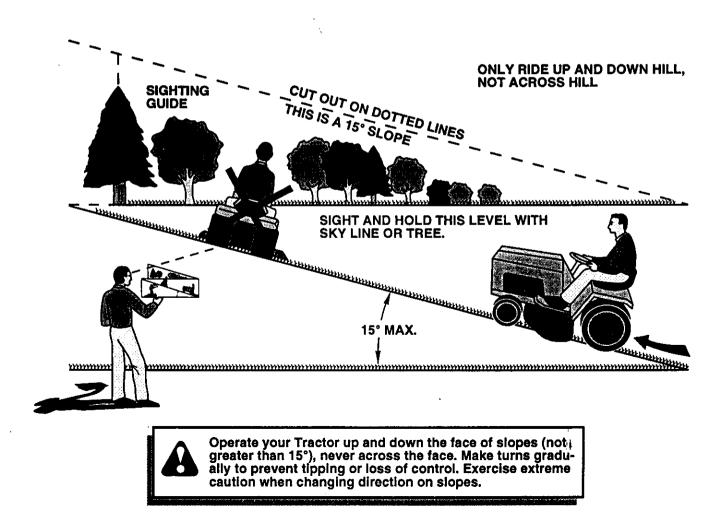
EXHAUST

KEYPART NO.NO.DESCRIPTION

| 1. | 24-041-02 | Gasket, exhaust (2) |
|----|-----------|----------------------|
| 2. | 25-072-04 | Stud, M8x1.25x33 (4) |
| | 24 522 16 | Short Block |
| | 24 782 05 | Miniblock |
| | 24 755 03 | Gasket Set |

| NO. | NO. | DESCRIPTION |
|-----------------|-----------|--|
| 1. | 24-853-25 | Kit, carburetor w/gaskets |
| • | 04.044.45 | (Includes 2-4) |
| 2. | 24-041-15 | Gasket, carburetor |
| 3. | - | Carburetor assembly (For infor- mation only not |
| | | available separately) |
| | | (Includes 24-757-18,- |
| | | 24-053-25 24-757-19, 24-757- |
| | | 20, 24-757-22) |
| 5. | M-0629095 | Stud, M6x1.0x95 (2) |
| 6. | M-0641060 | Nut, hex. flange M6x1.0 (2) |
| 7. | 47-154-01 | Clip, cable |
| 8. | 24-353-03 | Line, fuel 10-5/8" (2) |
| 9. | X-426-9 | Clamp, hose (6) |
| 10. | 24-086-12 | Screw, hex. cap. M6x1.7x18 (2) |
| 11. | 24-393-04 | Pump, fuel - pulse |
| 12. | 24-100-01 | Nut, plastic (2) |
| 13. | 25-353-03 | Line, fuel 13-1/2* |
| 14. | 24-050-02 | Filter, fuel |
| NOT ILLUSTRATED | | |
| | 24-757-18 | Kit, overhaul w/gaskets |
| | 24-757-19 | Kit, choke repair w/gaskets |
| | 24-757-20 | Kit, gasket |
| | 24-757-22 | Kit, solenoid replacement w/gaskets |

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- Model Number
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