# Owner's Manual CRAFTSMAN

# 16.5 HP ELECTRIC START 46" MOWER 6 SPEED TRANSAXLE LAWN TRACTOR



Model No. 917.272011



- Assembly
- Operation
- Maintenance
- Repair Parts



This product has a low emission engine which operates differently from previously built engines. Before you start the engine, read and understand this owners Manual.

# **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

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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.

Sears, Roebuck and Co., D/817 WA, Hoffman Estates, IL 60179

# 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.
- Denot 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.
- 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.
   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.
- Mow up and down slopes (15° Max), not across.

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

**ACAUTION:** 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.

- 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.

**AWARNING:** 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: 4.0 PINTS W/O FILTER: 3.5 PINTS
SPARK PLUG: (GAP: .030")	Champion RC12YC
GROUND SPEED (MPH):	FORWARD: 1 <sup>ST</sup> 1.1 2 <sup>ND</sup> 1.4 3 <sup>RD</sup> 2.3 4 <sup>TH</sup> 3.5 5 <sup>TH</sup> 4.5 6 <sup>TH</sup> 6.0 REVERSE: 1.7
TIRE PRESSURE:	FRONT: 14 PSI REAR: 10 PSI
CHARGING SYSTEM:	15 AMPS @ 3600 RPM
BATTERY:	AMP/HR: 30 MIN. CCA:280 CASE SIZE: U1R
BLADE BOLT TORQUE:	27–35 FT. LBS.

#### 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).

**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 property. Always observe the "SAFETY RULES".





# 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 tractor 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) 3/4" wrench
- (1) 3/4" Socket w/ (2) 1/2" wrench
- (1) Pliers
- drive rachet (1) Phillips Screw-

driver

- (1) Utility knife
- (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 locknut 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 adapter.
- · Secure steering wheel to steering shaft with locknut 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 Maintenance 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.

#### 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 right hand front mower bracket and right hand front suspension bracket. Retain with two single loop retainer springs as shown.
- Install second front link in left hand front suspension bracket only and 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 left hand suspension arm on outward pointing deck pin. If necessary, rock and raise front of mower to align deck pin with the hole in suspension arm. Retain with double loop retainer spring with loops down as shown.

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- Slide left side of mower back and install the unattached front link in top hole of the left hand front mower bracket. Retain with single loop retainer spring as shown.
- Place the right hand suspension arm on outward pointing deck pin. If necessary, rock and raise front of mower to align deck pin with the hole in suspension arm. 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 mower to highest position.
- Assemble gauge wheels (See "TO ADJUST GAUGE WHEELS" 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.



#### **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.

#### These symbols may appear on your tractor or in literature supplied with the product. Learn and understand their meaning. REVERSE FORWARD FAST BATTERY CAUTION OR SLOW WARNING STOP LIGHTS ON OVER TEMP ENGINE ON ENGINE OFF OIL PRESSURE LIGHT î. UNLOCKED FUEL CHOKE MOWER HEIGHT PARKING BRAKE MOWER LIFT LOCKED 1 ATTACHMENT REVERSE NEUTRAL HIGH LOW PARKING BRAKE CLUTCH ENGAGED KEEP AREA CLEAR SLOPE HAZARDS ATTACHMENT (SEE SAFETY RULES SECTION) IGNITION CLUTCH DISENGAGED FREE WHEEL

**OPERATION** 

DANGER, KEEP HANDS AND FEET AWAY

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(Automatic Models only)

#### **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 to engage the mower blades, or other attachments mounted to your tractor. LIGHT SWITCH: Turns the headlights on and off.

THROTTLE/CHOKE CONTROL: Used to control engine speed.

CLUTCH/BRAKE PEDAL: Used for declutching and braking the tractor and starting the engine.

HEIGHT ADJUSTMENT KNOB: Used to adjust the mower cutting height.

GEAR SHIFT LEVER : Selects the speed and direction of the tractor. ATTACHMENT LIFT LEVER: Used to raise and lower the mower deck or other attachments mounted to your tractor. LIFT LEVER PLUNGER: Used to release attachment lift lever when changing its position.

**IGNITION SWITCH:** Used for starting and stopping the engine.

AMMETER: Indicates battery charging (+) or discharging (-). PARKING BRAKE: Locks clutch/brake into the brake position. FORESIGNT IS BETTER THAN NO SOMT 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 cause engine to "backfire".

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

**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.

**A** 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.

#### 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 lever to desired position.
- Slowly release clutch/brake pedal to start movement.

**IMPORTANT:** Bring tractor to a complete stop before shifting or changing gears. Failure to do so will shorten the useful life of your transaxle.

#### TO ADJUST MOWER CUTTING HEIGHT

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

- Turn knob clockwise (C) to raise cutting height.
- Turn knob counterclockwise (つ) to lower cutting height.

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

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

#### TO 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.

- Adjust gauge wheels with tractor on a flat level surface.
- Adjust mower to desired cutting height (See "TO ADJUST MOWER CUTTING HEIGHT" in the Operation section of this manual).
- With mower in desired height of cut position, gauge wheels should be assembled so they are slightly off the ground. Install gauge wheel in appropriate hole with shoulder bolt, 3/8 washer, and 3/8-16 locknut and tighten securely.
- Repeat for opposite side installing gauge wheel in same adjustment hole.



#### **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.

**ACAUTION:** Do not operate the mower without either the entire grass catcher, on mowers so equipped, or the discharge guard in place.

Attachment Clutch Attachment Lift Lever Switch Pull Out To High Position



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

#### **TO TRANSPORT**

- Raise attachment lift to highest position with attachment lift control.
- When pushing or towing your tractor, be sure gearshift lever is in neutral (N) position.
- Do not push or tow tractor at more than five (5) MPH.

**NOTE:** To protect hood from damage when transporting your tractor on a truck or a trailer, be sure hood is closed and secured to tractor. Use an appropriate means of tying hood to tractor (rope, cord, etc.).

#### 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 Maintenance section of this manual).
- To change engine oil, see the Customer Responsibilities section in this manual.

#### ADD GASOLINE

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

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

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 let it run until the fuel lines and carburetor are empty. Use fresh fuel next season. See Storage Instructions for additional information. Never use engine or carburetor cleaner products in the fuel tank or permanent damage may occur.

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

**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, move throttle control to fast position, wait a few minutes and try again. If engine still does not start, move the throttle control back to the choke position and retry.

WARM WEATHER STARTING (50° F AND ABOVE)

- When engine starts, move the throttle control to the fast position.
- 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, allow engine to run with the throttle control in the choke position until the engine runs roughly, then move throttle control to fast position. This may require an engine warmup period from several seconds to several minutes, depending on the temperature.
- The attachments can also be used during the engine warm-up period.

**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 turning to the right so that clippings will discharge away from shrubs, fences, driveways, etc. After one or two rounds, mow in the opposite direction making left hand turns until finished.
- 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 second 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

### **CUSTOMER RESPONSIBILITIES**

AS	MAINTENANCE SCHEDULE     IUSE       FILL IN DATES     AS YOU COMPLETE       AS YOU COMPLETE     BEFORE EVEN & YOURS       REGULAR SERVICE     BEFORE EVEN EVEN EVEN WOW SEASON       Check Brake Operation     V											
	Check Brake Operation	~	V		l I					1		
	Check Tire Pressure	~	1									
Т	Check Operator Presence and Interlock Systems	~					-					
R	Check for Loose Fasteners	1	1			17		1				
A	Sharpen/Replace Mower Blades		Γ	<b>V</b> .								
Ş	Lubrication Chart			1				~				
l o	Check Battery Level			1.								
Ř	Clean Battery and Terminals/Recharge			~				<b>/</b>			-	
	Check Transaxle Cooling			1								
	Adjust Blade Belt(s) Tension					1.				1		
	Adjust Motion Drive Belt(s) Tension					1.						
	Check Engine Oil Level	~	V							1		
	Change Engine Oil			1,2,3				~		1		
E	Clean Air Filter			1/2						1		
N	Clean Air Screen			1/2								
G	Inspect Muffler/Spark Arrester				~	1						
N	Replace Oil Filter (If equipped)					1.2		1				
Ē	Clean Engine Cooling Fins		1		1	1/2			1	1	1	
	Replace Spark Plug		T	-		1	V					
	Replace Air Filter Paper Cartridge		1		1	1/2		1	I			
	Replace Fuel Filter			1	1		~	1	1		1	

1 - Change more often when operating under a heavy load or in high ambient temperatures.

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

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

### **GENERAL RECOMMENDATIONS**

The warranty on this tractor does not cover items that have been subjected to operator abuse or negligence. To receive full value from the warranty, operator must maintain tractor as instructed in this manual. Some adjustments will need to be made periodically to properly maintain your tractor. All adjustments in the Service and Adjustments section of this manual should be checked at least once each season.

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

#### **BEFORE EACH USE**

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

5 - If equipped with adjustable system. 6 - Not required it equipped with maint

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

#### **LUBRICATION CHART**



SAE 30 or 10W30 Motor Oil

- General Purpose Grease
- Refer to Maintenance "ENGINE" Section

**IMPORTANT:** Do not oil or grease the pivot points which have special nylon bearings. Viscous lubricants will attract dust and dirt that will shorten the life of the selflubricating bearings. If you feel they 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.

#### BLÁDE 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.
   NOTE: Make sure center hole in blade aligns 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.



#### **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).

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

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.



#### 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.

- 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. 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.

- · Remove knob and cover.
- Remove wing nut and air cleaner from base.

#### 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 i
- 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.

- Reinstall the pre-cleaner (cleaned and oiled) over the paper cartridge.
- Reassemble air cleaner, wing nut, cover and tighten knob securely.

#### **ENGINE OIL FILTER**

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

- Drain oil from engine crankcase (See "TO CHANGE ENGINE OIL" in this section of this manual, through step remove drain plug).
- Remove oil filter and wipe off filter adapter.
- Apply a thin coating of new engine oil to the rubber gasket on replacement oil filter.
- Install replacement oil filter on filter adapter. Turn oil filter clockwise until rubber gasket contacts the filter adapter, then tighten filter an additional 1/2 turn.



- Fill crankcase with new oil (See "TO CHANGE ENGINE OIL" in this section of this manual). For approximate capacity see "PRODUCT SPECIFICATIONS" on page 5 of this manual.
- Start the engine and check for oil leaks. Correct any leaks before placing engine into full operation.

#### 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 clam.ps 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.
- At the midpoint of both sides of mower, measure height from bottom edge of mower to ground. Distance "A" on both sides of mower should be the same or within 1/4" of each other.
- If adjustment is necessary, make adjustment on one side of mower only.
- To raise one side of mower, tighten lift link adjustment nut on that side.
- To lower one side of mower, loosen lift link adjustment nut on that side.

NOTE: Each full turn of adjustment nut



will change mower height about 1/8".

· Recheck measurements after adjusting.

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 that 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 "D" directly in front and behind the mandrel at bottom edge of mower housing as shown.

- Before making any necessary adjustments, check that both front links are equal in length. Both links should be approximately 10-3/8".
- If links are not equal in length, adjust one link to same length as other link.
- To lower front of mower loosen nut "E" on both front links an equal number of turns.
- When distance "D" is 1/8" to 1/2" lower at front than rear, tighten nuts "F" against trunnion on both front links.
- To raise front of mower, loosen nut "F" from trunnion on both front links. Tighten nut "E" on both front links an equal number of turns.
- When distance "D" is 1/8" to 1/2" lower at front than rear, tighten nut "F" against trunnion on both front links.
- 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 four 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 BRAKE**

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

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

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

#### With Parking Brake "Engaged"



#### TO REPLACE MOTION DRIVE BELT

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

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



# TRANSAXLE SHIFTER LINKAGE AND ADJUSTMENT

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

- Make sure transaxle is in neutral (N).
- Loosen two locknuts on tie rod.
- Turn center rod until gearshift lever falls
   into notificity parts and fonder concells





#### 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/CAMBER

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

#### TO REMOVE WHEEL FOR REPAIRS

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

**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 "BĂTTÉRY" 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 arounded 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

**ACAUTION:** 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 secure-
- ly. Connect BLACK grounding cable to negative (-) battery terminal with remaining hex bolt and keps nut. Tighten securely.

- Close terminal access doors.
- Close hood.



#### TO REPLACE HEADLIGHT BULB

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

#### INTERLOCKS AND RELAYS

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

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

#### TO REPLACE FUSE

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

#### TO REMOVE HOOD AND GRILL ASSEMBLY

- 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 from slow to choke position. Slowly move lever from choke to fast position.
- Check to see if hole in throttle lever and hole in speed control bracket are aligned.
- If holes are not aligned, loosen cable clamp screw and align the holes by inserting a pencil or a 1/4" drill bit through both holes.



#### TO ADJUST CARBURETOR

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

In general, turning 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 needle is turned in too tight.

**NOTE:** The carburetor on this engine is low emission. It is equipped with an idle fuel adjusting needle with a limiter cap, which allows some adjustment within the limits allowed by the cap. Do not attempt to remove the limiter cap. The limiter cap cannot be removed without breaking the adjusting needle.

- Be sure you have a clean air filter and the throttle control cable is adjusted properly (see above).
- Start engine and allow to warm for five minutes. Make adjustments with engine running and shift/motion control lever in neutral (N) position.
- Idle speed setting With throttle control lever in slow position, engine should idle at 1750 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 adjustment needle in (clockwise) until engine begins to die and then turn out (counterclockwise) until engine runs rough. Turn needle to a point midway between those two positions.
- 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 factory high speed setting can be dangerous. If you think the engine-governed high speed needs adjusting, contact your nearest AUTHO-RIZED service center, 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-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 filt<u>er</u>, fuel hose, or tank during storage. Also, experience indicates that alcohol blended fuels (called gasohol or using ethanol or methanol) can attract moisture which leads to separation and formation of acids during storage. Acidic gas can damage the fuel system of an engine while in storage.

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

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

#### ENGINE OIL

Drain oil (with engine warm) and replace with clean engine oil. (See "ENGINE" in the 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

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

# TROUBLESHOOTING CHART

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

### TROUBLESHOOTING CHART

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

#### SCHEMATIC



# REPAIR PARTS

# TRACTOR - - MODEL NUMBER 917.272011

ELECTRICAL



#### ELECTRICAL

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KEY NO.	PART NO.	DESCRIPTION
1	163465	Battery, 12 Volt 28 Amp
	74760412	Bolt, Hex 1/4-20 x 3/4
8	7603J	Tray Battery
10	145211	Bolt Btr Frt 1/4-20 x 7.5
11	150109	Hold down Battery Front Mount
12	145769	Nut Push Nylon 1/4" Battery Frt
16	153664	Switch, Interlock Push-In
18	17720408	Screw Thd Cut 1/4-20 x 1/2
19	STD551125	Washer, Lock 1/4
20	73350400	Nut, Hex, Jam 1/4-20 UNC
21	161785	Hamess, Light Socket (w/4152J)
22	4152J	Light Bulb
24	8860R	Cable, Battery, 6 Gauge, Red, 17"
25	146148	Cable, Battery, 6 Gauge, Red, W16 Wire
26	108824X	Fuse, 30 Amp
27	73510400	Nut, Keps Hex 1/4-20 UNC
28	145491	Cable, Ground, 6 Gauge, Black, 21"
29	160784	Switch, Plunger Normal OP Olive
30	163968	Switch, Ignition Delth Push-In
33	140403	Key, Molded, Craftsman
40	164098	Harness, Ignition
42	131563	Cover, Terminal
43	145673	Solenoid
45	122822X	Ammeter, Rectangular 15 Amp
	154963	Switch PTO 3PDT Red Delta
55	17490508	Screw Thdrol 5/16-18 x 1/2
-	140426	Harness, Engine Kohl Cmd-L 15AR
	146685	Hamess Clutch EVX
81	109748X	Relay Asm.

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

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TRACTOR - - MODEL NUMBER 917.272011 CHASSIS AND ENCLOSURES


#### TRACTOR - - MODEL NUMBER 917.272011 CHASSIS AND ENCLOSURES

#### **KEY PART** NO. NO. DESCRIPTION Chassis Assembly 1 160392 2 140356 Drawbar 3 17490612 Screw, Thd., Roll. 3/8-16 x 3/4 9 161566 Dash 10 STD533710 Bolt, Carriage 3/8-16 x 3/4 11 163455 Panel, Dash, LH 13 163456 Panel, Dash, RH 17 161023X558 Hood Assembly 19 17521312 Screw Sitd Hex Hd w/Pin Washer 20 162026 Plate Battery STYT Washer 13/32 x 13/16 x 12 Gauge 25 19131312 26 STD541437 Locknut 28 160564X558 Grille 29 161235 Lens, Grille 30 154791X558 Fender/Footrest Pnt STYT w/CH TL 31 139976 Bracket, Fender/Support 37 17490508 Screw Thdrol 5/16-18 x 1/2 Pivot Bracket Assembly, LH, 38 139886 39 139887 Pivot Bracket Assembly, RH 50 161236 Baffle Stealth YTGT B&S/KOHL 54 161464 Screw, Hex Wshd #8-18 x 7/8 59 110436X Bushing Snap Split Blk 60 STD533707 Bolt, Rdhd Sonk 3/8-16 UNC x 3/4 64 Dash, Lower STYT 162025 74 STD541437 Nut, Crownlock 3/8-16 UNC 140 158418 Bracket, Suspension Front 142 156095 Plate, Reinforcement STLT 143 154966 Backrest, Swaybar Chassis 144 154207 Bracket, Footrest STLT 145 156524 Rod Pivot Chassis/Hood 154 161897 Bracket Dash Rh 155 161900 Bracket Dash Lh 156 163805 Striker Plate YTGT 157 163806 Magnet YTGT

- 158
   162037
   Bracket Parking Brake

   159
   155123
   Cupholder STL Black

   160
   162967
   Fastener Nut Pal

   161
   164769
   Pinch-Welt Hood

   -- 5479J
   Plug, Button
- NOTE: All component dimensions given in U.S. inches 1 inch = 25.4 mm

### TRACTOR - - MODEL NUMBER 917.272011

### **GROUND DRIVE**



### TRACTOR - - MODEL NUMBER 917.272011

#### **GROUND DRIVE**

KEY NO.	PART NO.	DESCRIPTION	KEY NO.	PART NO.	DESCRIPTION
1	161451	Transaxle(See Breakdown)	47	127783	Pulley, Idler, V-Groove, Plastic
		Dana, Model Number 4360-122	48	154407	Bellcrank Clutch Grnd Drv Sti
2	146682	Spring, Return, Brake	49	123205X	Retainer, Belt
3	123666X	Pulley, Transaxle	50	STD523715	Bolt
4	12000028	Ring, Retainer	51	STD541437	Nut Crown Lock 3/8-16 UNC
5	121520X	Strap, Torque	52	STD541431	Nut Crown Lock 5/16-18 UNC
6 8	17490512	Screw, Thd., Roll. 5/16-18 x 3/4	53	105710X	Link, Clutch
9	154792 145028	Rod Shifter Fender STLT	55	105709X	Spring, Clutch Return
10	STD561210	Clutch Elect EVX Pin, Cotter	56	STD523712	Bolt Fin Hex 3/8-16 x 1-1/4
11	105701X	Washer, Shift Plate	57	160855	V-Belt, Ground Drive
13	74550412	Bolt 1/4-28 UNF W/Patch	58	127274X	Keeper, Belt, R.H.
15	74330412	Grade 8	59	140312	Keeper, Belt, Center Span
14	STD551125	Washer	61	17490612	Screw, Thd., Roll. 3/8-16 x 3/4
15	74490544	Bolt, Hex Fighd 5/16-18 Gr. 5	62	8883R	Cover, Pedal
16	STD541431	Nut Lock Hx w/ins 5/16-18Unc	63	145868	Pulley Clutch Elect EVX
18	STD523710	Bolt Fin Hex 3/8-16 UNC x 1	65	STD551143	Washer
19	STD541437	Gr. 5	66	154778	Keeper, Belt, Engine, Fool- Proof
20	150280	Nut	74	109502X	Spacer, Split
20	106933X	Bolt Hex 7/16-20 x 4-1/4	75	121749X	Washer 25/32 x 1-1/4 x 16 Ga.
21	130804	Knob Read Parks	76	STD581075	E-Ring
22	154978	Rod, Brake	77	123583X	Key, Square 2.0 x .1845/.1865
23	134970	Bracket Asm Clutch Mtg EVX 97	78	121748X	Washer 25/32 x 1-5/8 x 16 Ga.
24	STD541237	Nut	80	160783	Arm, Shift
25	106888X	Spring, Brake Rod	81	161077	Shaft Assembly
26	STD551037	Washer	82	123782X	Spring, Torsion
27	STD561210	Pin	83	19171216	Washer 17/32 x 3/4 x 16
28	145204	Rod, Parking Brake	04	445040	Gauge
29	124236X	Cap, Parking Brake, Red	84	145643	Tie Rod
30	130807	Bracket, Transaxle	85	150360	Nut, Nylock
31	127275X	Keeper, Belt, L.H.	86 87	157480	Bushing
32	STD523107	Bolt		19212016	Washer
33	72140506	Bolt Rdhd Sank	88 89	12000008	E-Ring
		5/16-18Unc x 3/4	- 69 90	158391 124346X	Console, Shift, STLT
34	155071	Shaft Assembly, Foot Pedal	90	1243468	Nut, Self-Threading, Washer Hd
35	120183X	Bearing, Nylon	100	19111216	Wahser 11/32 x 3/4 x 16 Ga.
36	STD551062	Washer	112	19091210	Washer 9/32 x 3/4 x 10 Gauge
37	STD571810	Roll Pin	148	159103	Spacer
38	123674X	Pulley, Idler, Flat	149	122052X	Spacer Retainer Prn Mower
	STD523727	Bolt	150	150935	Bushing Nylon Collered
40	4470J	Spacer, Split .395 x .59	151	19133210	Washer 13/32 x 2 x 10 Ga.
41	154777	Keeper, Belt, Idler Fool-Proof			
42	19131312	Washer 13/32 x 13/16 x 12 Ga.			dimensions given in U.S. inches
			1 ii	nch = 25.4 mm	

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## TRACTOR - - MODEL NUMBER 917.272011 STEERING ASSEMBLY



## TRACTOR - - MODEL NUMBER 917.272011 STEERING ASSEMBLY

KEY NO.	PART NO.	DESCRIPTION
1	159944	Wheel, Steering
2	154427	Axle, Asm Front
3	156483	Spindle, Asm Lh
4	157473	Spindle, Asm Rh
5	6266H	Bearing, Race Thrust Harden
6	121748X	Washer, 25/32 x 1 5/8 x 16ga
7	19272016	Washer, 27/32 x 1 1/4 x 16 Ga
8	12000029	Ring, Klip #t5304-75
9	3366R	Bearing, Col Strg Blk
10	156438	Draglink, Extended Stamped
11	STD551137	Washer, Lock Hvy Hicl Spr 3/8
12	73940800	Nut Hex Jam Toplock 1/2-20 UNF
13	154779	Bearing, Axle STLT/GT
15	73901000	Locknut, Flange 5/8-11 UNC
17	156543	Shaft, Asm Strg
18	57079	Washer, Thrust 515 x 750 x 033
19	124035X	Support, Shaft
20	126684X	Washer,Shim 1/4 x 5/8 x 062 Screw,Hex Socket Hd 1/4-20 x 5/8
22 23	71200410 127501	Shaft, Asm Pittman
23 25	154406	Bracket, Steering
25 27	136874	Gear, Sector
29	17490612	Screw, Thdroi 3/8-16x3/4 Ty-tt
32	139929	Rod, Tie BJ Solid 1975 Manual
33	19111216	Washer 11/32 x 3/4 x 16 Ga.
34		Washer Lock Hvy Hicl Spr 5/16
35	73810500	Locknut 5/16-24 UNF
36	155105	Bushing, Strg
37	152927	Screw, TT #10-32 x 5 x 3/8 Flange
38	159946	Insert, Steering Wheel
40	STD541537	Gripco Nut
41	159945	Adaptor, Wheel Strg
42	163888	Boot Stealth Steering
43	121749X	Washer, 25/32 x 1-1/4 x 16 Gauge
46	121232X	Cap, Spindle Fr Top Blk
47	6855M	Fitting, Grease
62	156595	Kit, Steering Assembly
65	154780	Spacer, Axle
66	154404	Bearing, Arm Pittman
67	74781044	Bolt, Fin Hex 5/8-11 UNC x 2-3/4
68		Axle, Brace
72	19182411	Washer 9/16 ID x 1-1/2 ID 11Ga. Zin
73	160135	Extension Steering Premium

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

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### ENGINE



#### ENGINE

KEY NO.		DESCRIPTION
1	164091	Control, Throt Ch
3		Engine (See Breakdown) Kohler Model No. CV165-43512
4	159420	Muffler
13	12-041-03	Gasket Kohler
14	13280328	Nipple, Pipe 3/8 NPT x 3-1/2
15	13200300	Elbow, Std 90 Degree 3/8-18 Npt
16	STD551231	Washer
23	159880	Shield, BRN/DBR Guard
29	137180	Arrestor, Spark
31	157103	Tank, Fuel
32	161696	Cap Fuel Guage
33	123487X	Clamp, Hose Blk
34	106082X	Pad Spacer 1 x 1 x 1
35	17490512	Screw, Thdrol 5/16-18 x 3/4 TYT
37	8543R	Line Fuel
38	••••	Plug Oil Drain (Order From Engine Manufacturer)
39	109227X	Pad Idler
62	STD551131	Washer, Lock
77	19101216	Washer 5/16 x 3/4 x 16 Gauge
79	M740108025	Bolt, Hex
80	74760508	Bolt, Hex Hd 5/16-18 UNC x 1/2
81	128861	Nut, Flange 1/4-20 Starter Nut
101	M73030800	Nut, Flange M8-1.25
102	17521312	Screw Sttd Hex Hd w/Pin Washer

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

TRACTOR - - MODEL NUMBER 917.272011 SEAT ASSEMBLY



KEY	PART		KEY	PART	
NO.	NO.	DESCRIPTION	NO.	NO.	DE
1	140123	Seat 3450/1415 Bik/bik	12	121246X	Brac
		Craftsman	13	121248X	Bus
2	140551	Bracket Pnt Pivot Seat (blk)	14	72050412	Bolt
3	STD523710	Bolt Fin Hex 3/8-16unc X 1	15	134300	Spa
4	19131610	Washer 13/32 X 3/4 X 10 Ga	16	121250X	Spri
5	145006	Clip Push In Hinged	17	123976X	Nut
6	STD541437	Nut Hex Lock w/ins 3/8-16 Unc	18	124238X	Cap
7	124181X	Spring Seat Cprsn 2 250 Blk Zi	21	153236	Bolt
8	17490616	Screw Thdrol 3/8-16 X 1 Ty-tt	22	STD541431	Nut
9	19131614	Washer 13/32 X 1 X 14 Ga	24	19171912	Was
10	155925	Pan Pnt Seat (blk )	25	127018X	
11	120068X	Knob Seat 1/2-13 Unc Blk	20	12/0108	Bolt
			NOTE		dimon

DES	CRIP	TION

Bracket Pnt Mounting Switch Bushing Snap Blk Nyl 50 ld Bolt Rdhd Sht Nk 1/4-20x1-1/2 Spacer Split 28 X 96 Zinc Spring Cprsn 1 27 Blk Pnt Nut Lock 1/4 Lge Flg Gr 5 Zinc Cap Spring Seat Bolt Shoulder 5/16-18 Unc-2A Nut Hex Lock w/ins 5/16-18 Washer 17/32 X 1-3/16 X 12 Ga. Bolt Shoulder 5/16-18 X 62

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



KEY NO.	PART NO.	DESCRIPTION	KEY NO.	PART NO.	DESCRIPTION
1	164085	Decal, Dash Amm Eng Gr.	11	164088	Decal, Brake Clutch Stph
2	106202X	Reflector Tail Light Red/Amber	12	146046	Decal, V-Belt Drive Schematic
3	163916	Decal, Hood, R.H.	13	164065	Decal, Strng Whi Domed Prem
4	163917	Decal, Hood, L.H.			Srs
5	163208	Decal, Fender Sd White	14	160397	Decal, V-Belt Schematic
-		Rad/6sp 46"	20	149516	Decal Battery Dngr/Psn Eng
6	133644	Decal, Customer Maintenance	21	138047	Decal, Battery Diehard Sears
7	163263	Decal, Dash Pnl Kohler 16.5		138311	Decal, Lift Handle
		Ohv		154515	Pad Footrest LH STLT
8	163203	Decal, Deck EZ3/Mulch Srs		154516	Pad Footrest RH STLT
9	163204	Decal, Fender, Craftsman		165105	Owner's Manual, English
10	156439	Decal, Fender Danger		165106	Owner's Manual, Spanish

#### **WHEELS & TIRES**



KEY	PART	
NO.	NO.	DESCRIPTION
1	59192	Cap Value Tire
2	65139	Stem Value
3	106222X	Tire Front
4	59904	Tube Front Tire (Not Provided, Service Item Only
5	106732X427	Rim Front
6	278H	Fitting Grease (Front Wheel Only)
7	9040H	Bearing Flange (Front Wheel Only)
8	106108X427	Rim Rear
9	122082X	Tire Rear
10	7152J	Tube Rear Tire (Not Provided, Sercie Item Only
11	104757X	Cap Axle
	144334	Sealant, Tire (10 oz. tube)

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

# TRACTOR - - MODEL NUMBER 917.272011

LIFT ASSEMBLY



#### LIFT ASSEMBLY

KEY NO.	PART NO.	DESCRIPTION
1	159461	Wire Asm., Inner w/plunger
2	159476	Shaft Asm Lift
3	138284	Pin Groove
4	12000002	E Ring #5133-62
5	19211621	Washer 21/32 X 1 X 21 Ga
6	120183X	Bearing Nylon
7	125631X	Grip Handle Fluted
8	122365X	Button, Plunger
11	139865	Link Lift Lh
12	139866	Link Lift Rh
13	STD624008	Retainer Spring
	127218	Link Front
16		Nut Jam Hex 1/2-13 Unc
17	130171	Trunnion Blk Zinc
	73680800	Nut Crownlock 1/2-13 UNC
19		Arm Suspension Rear
20	163552	Spring Retainer
23		Nut Special
24	19131016	Washer 13/32 X 5/8 X 16 Ga
	164024	Spring
26		Pin Cotter 3/32 x 1/2
27		Rod Adjust Lift
28	73350600	Nut Hex Jam 3/8-16 Unc
29	138057	Knob Infinite 3/8-16 Unc Black
30		Trunnion Infin Height
31	140302	Bearing Pvt. Lift Spherical
32	73540600	Nut, Crownlock 3/8-24
36		Pointer, Height Indicator
37	123935X	Plug, Hole
- 38	17490512	Screw Thdrol 5/16-18 x 3/4
40	19112410	Washer 11/32 x 1-1/2 x 10 Gauge
41		Indicator Height STLT
49	145212	Nut Hex Flange Lock
50	110452X	Nut Push Phos & Oil

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

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## TRACTOR - - MODEL NUMBER 917.272011

### **MOWER DECK**



#### MOWER DECK

KEY NO.	PART NO.	DESCRIPTION	KEY NO.	PART NO.	DESCRIPTION			
1	164210	Housing, Mower 46"	40	137273	Spring, Secondary 44/46/50 Vent			
3	138457	Bracket Asm., Sway Bar	41	17490620	Screw, Thdroll 3/8-16 x 1-1/4 Tytt			
5	STD624008	Retainer Spring	42	122052X	Spacer, Retainer			
6	130832	Arm, Suspension, Rear (Sway	43	144949	Arm, Idler Secondary			
		Bar)	44	133943	Washer, Hardened			
8	850857	Bolt, Patched 3/8-24 x 1-1/4 Gr. 8	45	145059	Cover, Mandrel Deck			
9	STD551137	Washer, Lock Hvy., Unplated 3/8	46	137729	Screw, Thdroll. 1/4-20 x 5/8			
10	140296	Washer, Hard Blade, Mower	47	144959	V-Belt, Mower, Secondary			
		Vented	48	139573	V-Beit, Mower, Primary			
11	163819	Blade, 46" Mower Deck	49	STD541437	Nut, Crownlock 3/8-16 UNC			
12	129895	Bearing, Ball, Mandrel #6204	50	72110612	Bolt, Carriage 3/8-16 x 1-1/2 Gr. 5			
13	137553	Shaft Asm. w/Lower Bearing	51	153390	Washer Felt			
		(Includes Key No. 12)	52	156493	Pulley Idler			
14	137152	Housing, Mandrel	53	19131312	Washer 13/32 x 13/16 x 12 Ga.			
15	110485X	Bearing, Ball, Mandrel	54	74780616	Bolt Fin Hex 3/8-16 UNC x 1 Gr.5			
16	140329	Stripper, Mower Round	55	72140608	Bolt Rdhd Sqnk 3/8-16 UNC x 1			
18	72140505	Bolt, Carriage 5/16-18 x 5/8	72	19131616	Washer 13/32 x 1 x 16 Ga.			
19	132827	Bolt, Hex Head, Shoulder 5/16-18	92	STD541437	Nut Lock Hex w/Ins 3/8-16 UNC			
20	145055	Baffle, Vortex Mower 46*	101	14557 <del>9</del>	Cover, Mulching			
21	STD541431	Nut, Crownlock 5/16-18 UNC	102	71161010	Screw			
22	134753	Stiffiner, Bracket	103	10071000	Washer, Lock #10			
23	131267	Bracket, Deflector	104	19061216	Washer			
24	105304X	Cap, Sleeve	105	160793	Latch Asm. Bagger			
25	149287	Spring, Torsion, Deflector	106	2029J	Nut, Weld			
26	110452X	Nut, Push	116	137644	Bolt, Shoulder			
27	157788	Shield, Deflector Mower	117	133957	Gauge Wheel, Wide			
28	19111016	Washer 11/32 x 5/8 x 16 Ga.	118	73930600	Nut, Centerlock 3/8-16 UNC			
29	131491	Rod, Hinge	119	19121414	Washer 3/8 x 7/8 x 14 Ga.			
30	157722	Screw, Thd Rolling Washer Head	126	144948	Arm, Idler, Primary Deck 46*			
31	129963	Washer, Spacer Mower Vented	127	146763	Pulley, Idler, V-Groove Dim. 4.25			
32	153531	Pulley, Mandrel	••	164822	Deck Complete (Std. Deck-Order			
33	137266	Nut, Fig. Top Lock Cntr. 9/16			separately mulcher plate and			
34	144945	Anchor, Spring Deck 46"			gauge wheel components Key			
35	17490628	Screw, Thdroll 3/8-16 x 1-3/4 Tytt			Nos. 101-106 and 116-118)			
36	STD551037	Washer 13/32 x 13/16 x 16 Ga.		143651	Mandrel Assembly (Includes Key			
37	131494	Pulley, Idler, Flat			Numbers 8-10, 12-15, 31 and 33)			
38	156086	Keeper, Belt, Idler	1000		ant dimensions shan in t1 C inches			
39	144917	Pulley, Idler, Driven	NUT	NOTE: All component dimensions given in U.S.inches 1 inch = 25.4 mm				
				i incr = 25.	4 600			

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## TRACTOR - - MODEL NUMBER 917.272011 DANA TRANSAXLE - - MODEL NUMBER D4360-122



#### TRACTOR - - MODEL NUMBER 917.272011

#### DANA TRANSAXLE - - MODEL NUMBER D4360-122

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KEY	PART		KEY	PART	
NO.	NO.	DESCRIPTION	NO.	NO.	DESCRIPTION
1	160955	Housing, Upper	37	2231J	Washer, Plain, .632 X 1.00 X .031
2	2274J	Screw, Tapping, 1/4-20 X .734	38	160944	Assy, Gear, Comb., 12T & 30T
3	134400	Ball, Detent	39	124639X	Shaft, Idler
- 4	105904X	Spring, Detent	40	120472X	Spacer, .633 X .87 X .755
5	160940	Screw, Tapping, No. 10-24 X .482	41	105928X	Sprocket, 9T
6	134788	Assy, Kit, Shifter	42	161565	Gear, Bevel, 36T
7	108727X	V-Ring	43	134394	Assy, Kit, Shim, .750 Shaft
8	120951X	Puck, Friction	44	120473X	Shaft, Drive
9	148266	Bearing, Flange	45	160942	Cover, Detent
10	2225J	Ring, Retaining	46	142678	Gear, Spur, 12T
11	134793	Assy, Kit, Shim, .625 Shaft	47	124641X	Gear, Spur, 20T
12	143697	Gear, Spur, 15T	48	106589X	Gear, Spur, 25T
13	120415X	Washer, Plain, .632 X 1.38 X .046	49	120408X	Gear, Spur, 28T
14	142674	Key, Woodruff, No. 9	50	105937X	Gear, Spur, 31T
15	161563	Assy, Kit, Input Shaft	51	2226J	Washer, Plain, .632 X 1.00 X .060
16	161564	Pinion, Bevel, 12T	52	134401	Washer, Neoprene
17	105909X	Ring, Retaining	53	2264J	Washer, Plain, .758 X 1.25 X .031
18	105910X	Chain, 24 Pitches	54	160946	Axie, LH
19	148269	Seal, Oit	55	160947	Gear, Miter, 12T, Splined
20	160943	Gear, Spur, 12T	56	160948	Ring, Retaining
21	138246	Collar, Clutch	57	110071X	Gear, Spur, 32T
22	138238	Assy, Kit, Clutch Keys	58	120952X	Shaft, Cross
23	148268	Bearing, Flange	59	160949	Gear, Miter, 12T, Idler
24	143673	Shaft, Intermediate	60	160950	Axle, RH
25	2244J	Key, Woodruff, No. 61	61	160951	Housing, Lower
26	105916X	Ring, Retaining	62	120961X	Puck, Friction
27	120470X	Sprocket, 18T	63	7294J	Disc, Brake
28	110070X	Spacer, 1.131 X 1.45 X .494	64	108989X	Spacer, Brake Puck
29	142677	Gear, Spur, 37T	65	160952	Jaw, Brake
30	142681	Gear, Spur, 35T	66	120954X	Pin, Dowel
31	124644X	Gear, Spur, 30T	67	160953	Screw, Tapping, 5/16-18 X 2.35
32	108980X	Gear, Spur, 25T	68	138244	Lever, Actuating
33	120406X	Gear, Spur, 22T	69	108996X	Washer, Plain, .321 X 1.00 X .055
34	134796	Gear, Spur, 19T	70	160954	Bracket, Anti-Rotation
35	105925X	Washer, Plain, .640 X 1.37 X .061	71	73810500	Nut, Lock, 5/16-24
36	2228J	Washer, Plain, .632 X 1.00 X .046	72	120416X	Grease

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



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#### CYLINDER HEAD/VALVE/BREATHER

CRANKCASE

KEY	PART		KEY	PART	
NO.	NO.	DESCRIPTION	NO.	NO.	DESCRIPTION
1	12-351-02	Lifter, valve (2)	1	12-032-03	Seal, crankshaft
2	12-755-63	Kit, cylinder head (Includes 3-17)	2		(Use Short Block 12 522 18)
3	12-411-01	Rod, push (2)	3	12-445-02	Strap, lifting
4	12-041-10	Gasket, cylinder head	4	M-0839025	Screw, hex. flange M8x1.25x25
5	12-017-01	Valve, intake (Std.)	5	12-380-17	Dowel, locating (4)
	12-017-02	Valve, intake (.25)	6	12-755-49	Kit, camshaft (includes 7-8)
6	12-016-01	Valve, exhaust (Std.)	7	12-089-18	Spring, actuating
	12-016-02	Valve, exhaust (.25)	8	12-422-08	Shim, camshaft - blue
7	X-75-23	Plug, allen hd. pipe 1/8		12-422-09	Shim, camshaft (A.R.) red
8	12-318-19	Cylinder Head		12-422-10	Shim, camshaft (A.R.) yellow
9	25-186-01	Arm, rocker (2)		12-422-11	Shim, camshaft (A.R.) green
10	12-599-03	Pivot, rocker arm (2)		12-422-12	Shim, camshaft (A.R.) gray
11	M-0640034	Screw, hex. flange M6xI.0x34 (2)		12-422-13	Shim, camshaft (A.R.) black
12	12-089-01	Spring, valve (2)		12-422-07	Shim, camshaft (A.R.) white
13	12-173-01	Cap, valve spring (2)	9	12-144-19	Shaft, balance
14	12-755-03	Kit, retainer (2)	10	12-874-07	Piston w/Ring Set (Std.)
15	12-468-05	Washer, plain 13/32			(Includes 11-12)
16	12-112-13	Spacer, head bolt exhaust port		12-874-08	Piston w/Ring Set (.25)
17	12-086-15	Screw, hex. flange M10x1.5x81 (5)		12-874-09	Piston w/Ring Set (.50)
18	X-426-9	Clamp, hose (2)	11	12-018-02	Retainer, piston pin (2)
19	12-326-03	Hose, breather	12	12-108-07	Ring Set (Std.)
20	M-0645020	Screw, hex. flange M6x1.0x20 (5)		12-108-08	Ring Set (.25)
21	12-096-07	Cover, valve w/nipple		12-108-09	Ring Set (.50)
22	M-0545010	Screw, hex. flange M5x0.8x10	13	12-067-05	Connecting Rod (Std.)
23	12-018-01	Retainer, breather reed		12-067-06	Connecting Rod (.25)
24	12-402-02	Reed, breather	14	12-380-01	Pin, governor regulating
			15	12-043-05	Gear, governor assembly
			16	M-0631005	Washer, plain 6mm
			17	12-144-02	Shaft, governor gear
			18	52-139-09	Plug, cup
			19	12-755-64	Kit, gov. cross shaft w/clip (Includes 20,24)
			20	12-144-24	Shaft, governor cross
			21	X-25-102	washer, plain 1/4
			22	12-032-01	Seal, governor cross shaft
			23	SM-0631015	Washer, plain 6mm
			24	12-154-05	Clip, hitch pin

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#### **IGNITION/ELECTRICAL**

**KEY PART** 

#### **BLOWER HOUSING & BAFFLES**

NO.	NO.	DESCRIPTION		<b>D4 D7</b>	
			KEY	PART	
- 1	12-086-14	Screw, hex. flange MIO x 1.5 x 46	NO.	NO.	DESCRIPTION
2 3 4	12-468-03 24-162-03 M-0639016	Washer, plain 3/8 Screen, grass Screw, hex. flange	1 2	M-0545010 24-468-10	Screw, hex. flange M5 x 0.8 x 10 (8) Washer, plain 1/4
		M6 x 1.0 x 16 (6)	3	12-146-07	Plate, blower housing
5 6	12-112-01 12-157-03	Spacer, fan (4) Fan	4	M-0645020	Screw, hex. flange M6 x 1.0 x 20
7	41-403-09	Regulator, rectifier	5	24-096-05	Cover, pinion
8	X-22-11	Washer, lock (2)	6	220534	Washer, plain 5/16 (2)
9	236602	Connector	7	12-027-54	Housing, blower
10	X-42-15	Key	8	12-063-05	Baffle, intake side
11	12-025-35	Flywheel	9	25-154-02	Clip, mounting (3)
12	41-155-02	Connector (4 contact)	10	SM-0545020	Screw, hex. flange
13 14	M-0548025 24-085-01	Screw, hex. cap M5 x 0.8 x 25 (2) Stator assembly - 15 amp	11	M-0645016	M5 x 0.8 x 20 (3) Screw, hex. flange
15	12-132-02	Spark Plug	10	10.000.00	M6 x 1.0 x 16 (2)
16	X-728-1	Clip, cable (2)	12	12-063-08	Baffle, cylinder head
17	M-0545010	Screw, hex. flange M5 x 0.8 x 10 (2)	13	12-063-01	Baffle, cylinder
18	12-584-07	Module, ignition	AIR I	NTAKE/FILT	RATION
19	12-452-02	Terminal			
20	12-086-35	Screw, hex. socket M5 x 0.8 x 20 (2)	KEY	PART	
21	M-0461013	Screw, pan head M4.2 x 13 (2)	NO.	NO.	DESCRIPTION
22	12-584-06	Module, speed advance			
NOT IL	LUSTRATED	•••	1	25-341-03	Knob, air cleaner cover
	25-518-29	Lead	2	12-096-24	Cover, air cleaner
	25-518-05	Lead	3	12-083-08	Precleaner, element
	12-176-31	Harness	4	12-100-01	Wing Nut
	11	••• • • • • • • • • • • • • • • • • •	~	40.000.07	

Harness Washer, plain 5/16"

X-25-5

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Decal, air cleaner

Gasket, air cleaner

Stud M6x1.0x75

Element, air cleaner

Base, air cleaner (Includes 8-9)

Screw, hex. cap #10 Hi-Lo thread forming (2)

(Includes 6)

Seal

5 12-083-05

6 12-032-10

7 12-094-12 8 12-072-03

9 12-086-01 10 12-041-02

NOT ILLUSTRATED 12-113-53

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#### **STARTING SYSTEM**

#### **ENGINE CONTROLS**

KEY	PART		KEY	PART	
NO.	NO.	DESCRIPTION	NO.	NO.	DESCRIPTION
-			ne.	110.	
1	M-0839070	Screw, hex. flange			
		M8 x 1.25 x 70 (2)	1	12-079-07	Linkage, choke
2	25-098-05	Starter assembly (Includes 3-8)	2	12-237-01	Clamp, cable
3	12-755-54	Kit, drive end	3	M-0664020	Screw, lobed socket
4	12-227-06	Cap, drive end			M6 x I.0 x 20 (2)
5	12-170-05	Armature	4	M-0545016	Screw, hex. flange
6	12-221-01	Kit, brush & spring			M5 x 0.8 x 16
7	12-227-13	Cap, commutator end	5	12-536-10	Control, speed assembly
8	12-211-01	Bolt, hex. flange	-		(Includes 6,8,9?)
		1/4-20 x 4-5/8 (2)	6	M-0443020	Screw, pan head
					M4 x 0.7 x 20
OIL PAN/LUBRICATION			7	12-089-11	Spring, speed control (2)
			8	12-089-23	Spring, choke return
KEY	PART		9	12-089-24	Spring, governor
			10	12-755-83	Kit, governor lever
NO.	NO.	DESCRIPTION			(Includes 11-13)
			11	12-100-07	Nut, hex. flange M6 x 1.0
1	12-038-01	Dipstick assembly	12	52-211-04	Bolt, round head
		(Includes 2-3)	13	12-090-26	Lever, governor
2	25-755-13	Kit, oil fill cap (Includes 3)	14	25-158-11	Bushing, throttle linkage
3	12-153-03	O-Ring, oil fill cap	15	12-079-01	Linkage, throttle
4	12-153-02	O-Ring, upper oil fill tube	16	25-158-08	Bushing, linkage retaining
5	12-123-04	Tube, oil fill			
6	SM-0545020	Screw, hex. flange			
		M5 x 0.8 x 20			
7	12-153-01	O-Ring, lower oil fill tube			
8	25-162-07	Screen, oil pickup			
9	12-096-03	Cover, oil pickup screen			
10	M-0545016	Screw, hex. flange			

M5 x 0.8 x 16

Plug, pipe

Filter, oil

Pan, oil

Valve, oil pressure relief

Plug, sq. hd. solid 3/8

Pump, oil assembly O-Ring, oil pump cover Cover, oil pump

Screw, hex. flange M5 x 0.8 x 16 (3) Seal, oil (P.T.O. end) Screw, hex. flange

M8 x 1.25 x 45 (11)

Screw, hex. flange M8x1.25x45

11 25-462-09

13 12-050-01 14 X-75-10

15 12-393-01

12-153-06 12-096-34

M-0545016

12-032-03 20 24-086-16

24-086-17

22 12-199-38

16

17 18

19

21

12 X-75-2

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#### **FUEL SYSTEM**

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#### CRANKSHAFT

KEY	PART		KEY	PART		
NO.	NO.	DESCRIPTION	NO.	NO.	DESCRIPTION	
1	M-0641060	Nut, hex. flange M6 x 1.0 (2)	1	12-014-37	Crankshaft (Includes 2)	
2	X-25-63	Washer, plain 1/4	2	12-139-01	Plug, cup	
3	X-22-11	Washer, star 1/4	-	12-100-01	r iog, cop	
4	M-0629122	Stud M6 x 1.0 x 122 (2)	EVIL	WOT		
5	12-853-83	Kit, carburetor w/gasket (Includes 6,7,8 qty 1)	EXHAUST			
6	12-041-02	Gasket, air cleaner	KEY	PART		
7	12-053-83	Carburetor assembly				
		(For information only not	NO.	NO.	DESCRIPTION	
8	12-041-01	available separately)	4	25-072-04	Shud (0)	
9	12-265-04	Gasket, carburetor (2) Deflector, heat	1	12-041-03	Stud (2) Gasket, exhaust manifold	
10	47-154-01	Clip, cable	4	12-041-03	Bracket, muffler	
11	X-426-9	Clamp, hose (6)	5	12-445-06	Strap, lifting	
12	52-353-22	Line, fuel 12"	6	M-0645025	Screw, hex. flange	
13	25-050-02	Filter, fuel	0	10040020	M6 x 1.0 x 25 (2)	
14	25-155-02	Connector, 90; hose		12-522-18	Short Block	
15	12-559-01	Kit, fuel pump w/gaskets		12-755-82	Gasket Set	
		(Includes 16-18)				
16	12-112-05	Spacer, fuel pump				
17	25-041-09	Gasket, fuel pump (2)				
18	M-0645020					
	M6 x 1.0 x 20 (2)					
19	X-380-1	Connector, straight hose				
20	12-353-01	Line, fuel 1-1/4"				
21	12-123-19	Line, metal fuel				
22	M-0545010	Screw, hex. flange				
		M5 x 0.8 x 10				
23	12-154-01	Clamp, fuel line				
24	12-431-01	Sleeve, insulating				
25	12-313-01	Grommet, fuel line				
26	12-353-10	Line, fuel 2-1/2"				
NOT ILLUSTRATED						
	12-757-02	Kit, float				
	12-757-03	Kit carburetor repair				

	ros, nosat
12-757-03	Kit, carburetor repair
12-041-01	Gasket, carburetor
12-041-02	Gasket, air cleaner
12-041-05	Gasket, bowl -
12-041-06	Gasket, bowl screw
12-032-06	Seal, solenoid
12-757-09	Kit, solenoid
12-041-06	Gasket, bowl screw

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   Part Description

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