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S. C.

BOLENS HUSKYS



**HUSKY TRACTOR
Model 1886-04
HYDROSTATIC**



**OWNER OPERATION &
MAINTENANCE MANUAL**





HUSKY TRACTOR Model 1886-04 HYDROSTATIC

AND

K4825 **KOHLER** ENGINE

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TO THE OWNER

This is an operational and general maintenance manual which does not attempt to cover major repairs. All major repair work must be performed by an AUTHORIZED DEALER for the factory warranty to be valid. BOLENS equipment is carefully designed, engineered, and manufactured to give good performance if properly operated and maintained.

The AUTHORIZED DEALER will repair or replace any parts which fail due to defective material or workmanship during the warranty period. He will also provide continuing repair service and supply factory replacement parts.

CONTACT YOUR DEALER FOR ANY REPLACEMENT PARTS OR SERVICE NEEDED. DO NOT RETURN PARTS DIRECTLY TO THE FACTORY. THE FACTORY REQUIRES PRIOR APPROVAL ON RETURNS, AND APPROVALS ARE ISSUED ONLY TO BOLENS DEALERS OR DISTRIBUTORS.

READ YOUR WARRANTY (YELLOW) STATEMENT AND BE SURE THE POSTPAID WARRANTY REGISTRATION (WHITE) CARD IS MAILED TO THE FACTORY.

GENERAL SAFETY PRECAUTIONS

CAUTION

Preventing accidents is the responsibility of every equipment operator. The following general safety precautions *must* be fully understood and followed by every operator of this tractor and its attachments. Review them frequently and NEVER TAKE CHANCES. BE CAREFUL BEFORE, DURING AND RIGHT AFTER USE OF ANY POWERED EQUIPMENT. *ACCIDENTS CAN BE PREVENTED.*

1. Study your manual. Know your tractor before operating it. Take time to operate the unit in the safest manner.

2. Study all attachment manuals thoroughly before using attachments with tractor. By doing so you will be aware of both the tractor and attachment capabilities when used as a unit, and also the safest manner in which to operate them.

3. Always follow manufacturer's operational suggestions.

4. Do not fill gasoline tank when engine is running or hot. Add gas (using funnel) only outdoors and when engine is cool. KEEP SMOKERS AND FLAMES AWAY FROM UNIT WHILE FUELING. This will help eliminate the possibility of fire and/or explosion from spilled gasoline or fumes.

5. Refuel tractor from the Left side, the side on which the fuel tank is mounted. This is safer and more convenient than reaching over engine with fuel can.

6. Store fuel in approved container out of reach of children. Do not store fuel in the house. Gasoline is highly flammable and the fumes highly explosive.

7. Never wear loose clothing when operating unit. Loose clothing can get caught in moving parts and cause severe injuries.

8. Mount vehicle, place transmission shift lever in PARK and put P.T.O. lever in OFF position prior to starting engine. Engine will not start unless transmission lever is in PARK or NEUTRAL and P.T.O. lever is in OFF position.

9. Do not mount or leave vehicle while it is in motion or in actual operation, nor leave vehicle unattended while engine is running. Injury to the operator or a tractor run-away could occur.

10. Always shut off engine, remove key, and place transmission lever in PARK whenever vehicle is to be left unattended. Also, lower all attachments to the ground and place P.T.O. lever in OFF position to prevent injury to bystanders.

11. Never operate tractor with mower, snow caster, or any other attachment having moving parts, when any child or another person is in travel path or discharge area. *Children must not be allowed in or near working areas when equipment is being used.* Items or objects such as wire, stones, small toys and etc. can be ejected at high velocity out of the discharge chute. Clear work area of all objects which might be picked up and thrown.

CAUTION

12. Always look back to be certain no one is in the way before using reverse. This will avoid the possibility of running over any children, other persons or pets who might be in the area in back of the vehicle.

13. Children shall not be allowed to operate vehicle at any time. The average child is not capable of coping with the intricacies of operating a power tool.

14. Do not allow adults to operate vehicle without proper instructions including all safety instructions. In doing so, you will be sure they know how to operate unit properly and also are aware of all the safety precautions.

15. Attachments must be lowered to the ground when storing tractor. This will prevent the attachment from being dropped accidentally and causing injury. Place P.T.O. lever in OFF position.

16. Do not tow vehicle. Damage to the vehicle could occur.

17. Use care when pulling heavy loads. Use only the approved draw bar hitch.

18. Do not carry passengers. The passenger could fall off the vehicle and be injured.

19. Keep tractor and attachments free of excess grease and oil. The unit will operate cooler, be easier to maintain, and safer to operate.

20. Engine must be stopped, and P.T.O. disengaged when cleaning, servicing, adjusting, repairing, or installing attachments on tractor. This is necessary to avoid possible injury from moving parts.

21. Always disconnect ground (-) battery cable from battery before doing any work on the electrical system. Reconnect it LAST when work is done. This is to prevent accidental burns and shorting of electrical system.

22. Before starting unit check to be sure *all* guards and safety devices are in place and in working condition. This will help assure you against possible injury.

23. Do not drive this unit on a public thoroughfare at any time. The operator is risking injury from passing vehicles. Most local ordinances prohibit operating a unit such as this on a public thoroughfare.

24. Do not drive too close to a creek or ditch; also be alert for holes and other hazards. If you would drive into any of the above you could lose control of the unit.

25. Be careful on slopes, reduce speed and avoid sharp turns to prevent tipping or loss of control. Do not stop or start suddenly when going uphill or downhill.

26. Do not start or operate vehicle in an inside area, unless it is adequately ventilated. Engine exhaust contains carbon monoxide fumes, which are very poisonous.

27. Do not operate attachments when transporting vehicle.

SERIAL NUMBER

To ensure prompt service when repairs or adjustments are required, your Bolens dealer must have the following information. For your own personal reference, fill in the serial number spaces provided below.

Model number of Tractor, (Fig. 1) 1886-04

Serial number of Tractor, (Fig. 1) _____

Engine Model Number, (Fig. 2) K482S

Engine Serial Number, (Fig. 2) 3223385

Engine Spec. Number, (Fig. 2) 35113B

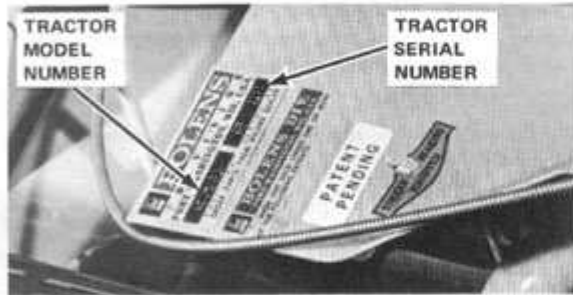


Figure 1

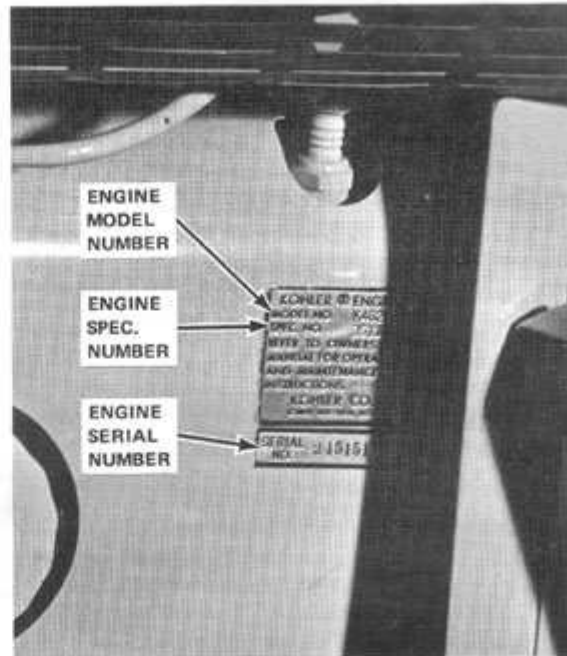


Figure 2

SPECIFICATIONS

BOLENS RESERVES THE RIGHT TO MAKE CHANGES OR IMPROVEMENTS TO ITS PRODUCTS WITHOUT OBLIGATION TO INSTALL SAME ON PRODUCTS PREVIOUSLY MANUFACTURED.

Engine Kohler 18 Hp. at 3600 RPM
 Type 4 cycle, 2 cylinder, air cooled
 Fuel capacity 5.3 gallons
 Engine oil capacity .. 3 quarts + 1 pint with filter change
 Air cleaner Dry type
 Drive Hydrostatic transmission
 Transmission oil capacity 10 quarts
 Speed. Infinitely
 variable Forward: approx. 0-8 mph
 Reverse: approx. 0-4 mph
 Power to attachments Triple belt drive (P.T.O.)
 with universal joints and
 splined shaft.
 Tires See optional equipment section, page 23.
 Height 45 inches

Width With regular tires — 38 inches
 With Terra tires — 46 inches
 Length 75 inches
 Wheelbase 52 inches
 Turning radius 54 inches
 Ground clearance 8-1/2 inches
 Shipping weight 910 lbs.
 Standard equipment P.T.O. splined shaft
 to drive front, center or rear attachments; hydraulic lift system; electric starting; head lights and tail lights; full fenders; adjustable moulded contour seat — with spring suspension (easily removable for weather protection); 45 amp battery; interlock switches to prevent tractor from being started with P.T.O. lever in ON position; tapered roller bearing front wheels and replaceable spindle bushings; automotive type muffler; coil ignition; rectifier-regulator; ammeter; extra-heavy channel frame.

CONTROLS

LOCATION AND FUNCTION

Before operating the tractor, the operator should become familiar with the function and location of each control to ensure proper and efficient operation.

The following listed numbers and accompanying information correspond to those numbers assigned to the controls indicated in Figure 3.

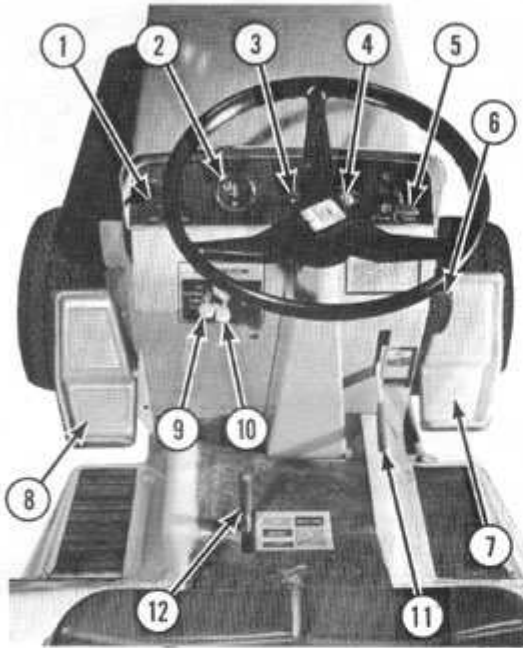


Figure 3

1. CHOKE.

Choke lever "UP" towards the "ON" position closes choke for starting. Choke lever "DOWN" to "OFF" position opens choke for operation.

2. AMMETER.

Indicates rate of charge to or discharge from battery.

3. LIGHT SWITCH.

Pull light switch knob out to turn on lights — push in to turn lights off.

4. IGNITION-STARTER SWITCH.

Turn ignition key to the right to start engine. Release when engine starts.

5. THROTTLE.

Move throttle lever "UP" one-half way for starting.

6. FOOT BRAKE.

Use when vehicle is being moved or free-wheeling; when moving transmission selector lever (12) from NEUTRAL or PARK position to DRIVE position.

7. TRAVEL PEDAL.

Depress pedal with toe of foot for forward motion. Depress with heel of foot for reverse motion.

8. FOOT REST.

9. HYDRAULIC LIFT LEVER.

Pull lever up to raise and push lever down to lower attachments. Push lift lever all the way down to lock for FLOAT position.

10. HYDRAULIC CONTROL LEVER.

This lever regulates the auxiliary control cylinders on any attachments which are plugged into either the front or rear auxiliary hydraulic connections.

11. POWER TAKE-OFF (P.T.O.) LEVER.

Engages and disengages power to attachments.

12. TRANSMISSION LEVER.

Places tractor in drive, park or neutral positions.

PRE-OPERATIONAL CHECKS

The operator should become familiar with the following pre-operational check list prior to starting or operating the Husky; REFER TO MAINTENANCE SECTION OF MANUAL, page 10.

1. Check for proper level of engine oil. Fill crankcase thru dipstick opening. The oil level is indicated by marks on the dipstick. See Figure 4.

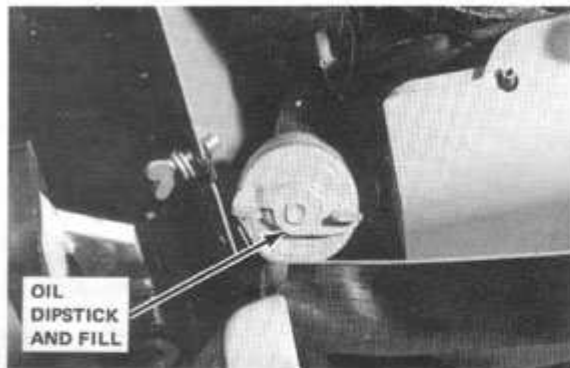


Figure 4

2. Check gasoline tank for sufficient gas supply.



KEEP SMOKERS AND FLAMES AWAY WHEN REFUELING. BE CAREFUL NOT TO SHORT FUEL CAN ON ELECTRICAL CONNECTIONS.

3. Inspect battery for:

- A. Proper electrolyte level.
- B. Clean cables.
- C. Clean terminals.

Refer to Figure 5 for battery and its location.

4. Check to see that air cleaner element is free of debris. Check and clean regularly. Refer to Figure 5.

5. Clean flywheel screen. Check and clean regularly. Refer to Figure 5.



Figure 5

6. Visually check for loose or missing nuts, screws, and damaged parts. Replace and tighten before starting engine.

7. Check for even tire inflation. FRONT AND REAR TIRE INFLATION SHOULD NOT BE LESS THAN 8 LBS. NOR MORE THAN 12.

8. With transmission cold, thoroughly clean area around hydrostatic transmission fill plug area. Check that transmission lever is in PARK. Start engine and allow it to idle. Remove fill plug dipstick and check transmission fluid level. Refer to Figure 6.

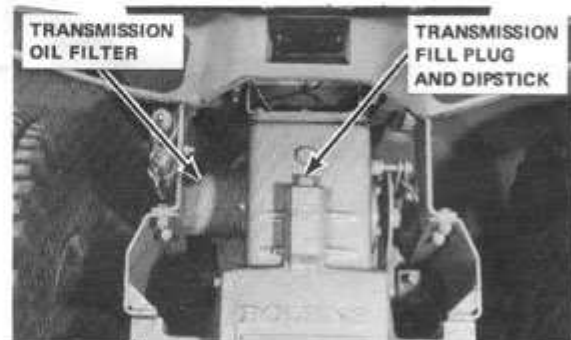


Figure 6

BREAK-IN PERIOD

A special "break-in" oil is used at the factory during the engine test and run-in period. After factory "run-in", the special oil is drained and the engine filled with 10W30 SD grade oil. Further use of "break-in" oil is not required nor recommended for new Kohler Engines.

NOTE: AFTER RUN-IN OF NEW ENGINES, USE OIL RECOMMENDED IN LUBRICATION CHART. (Page 18.)

The engine should be placed under load, but not overloaded, from the very beginning as this will improve the final seating of the rings.

6.

The engine oil level must be maintained in the "safe" operating range at all times. Oil level must be between the L (low) and F (full) marks on the dipstick. Always clean area around dipstick so that dirt does not fall into engine when dipstick is removed. Check daily and add oil as necessary to maintain proper level — **DO NOT OVER-FILL.**

On a new engine, change oil after the first 5 hours and thereafter at 50 hour intervals. Drain oil (Figure 7) while it is hot for it will then flow more freely and thus carry away more impurities.

BREAK-IN PERIOD (Continued)

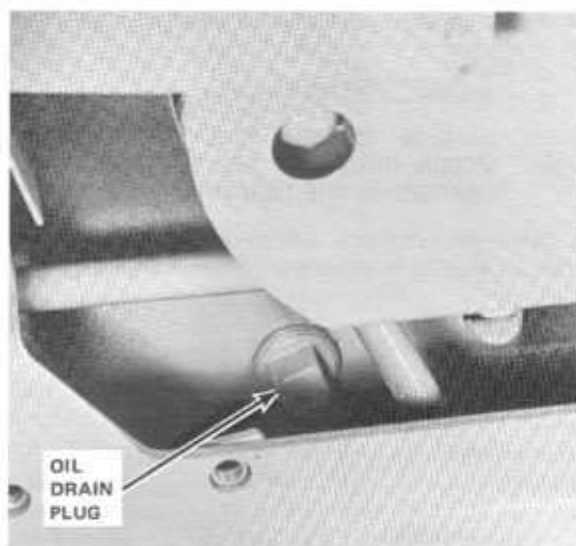


Figure 7

Change the oil filter at every other oil change (every 100 hours.) Refer to Figure 8 for location.

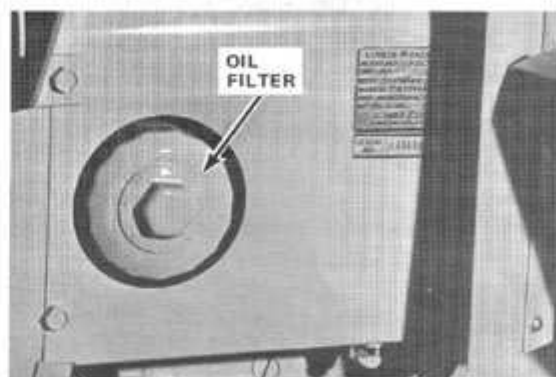


Figure 8

After completely draining oil, reinstall drain plug then remove oil filler cap and add 3 quarts of oil. Check the oil level on the dipstick before adding more. Bring the level up in the safe range but do not exceed the full mark. If the oil filter has been changed, add one more pint (half quart) of oil. Select oil weight and type according to outside temperature. Refer to lubrication chart on page 18.

STARTING THE ENGINE

NORMAL STARTING

1. THE ENGINE WILL START ONLY WHEN P.T.O. CONTROL LEVER IS IN "OFF" POSITION AND TRANSMISSION LEVER IS IN "PARK" OR "NEUTRAL" POSITION.
2. Move choke lever all the way up (choke on). Experience will indicate need for more or less choking due to variations in temperature, grade of fuel, etc.
3. Move throttle lever up about half-way.
4. Insert ignition key and turn to the right to start engine. Release when engine starts.

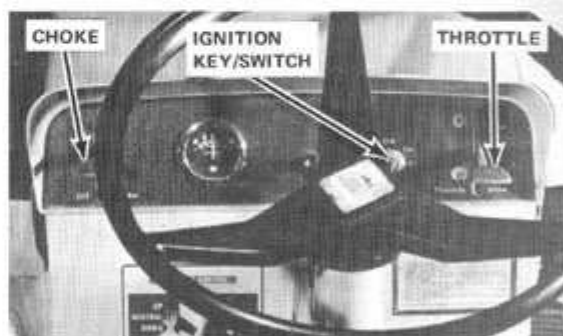


Figure 9



IN THE EVENT OF A "FALSE START" (ENGINE GETS UP SUFFICIENT SPEED TO DISENGAGE STARTER BUT FAILS TO CONTINUE RUNNING), THE ENGINE MUST BE COMPLETELY STOPPED BEFORE ANOTHER STARTING ATTEMPT IS MADE. IF THE FLYWHEEL IS STILL ROTATING, THE DRIVE PINION AND RING GEAR WILL CLASH AND BE DAMAGED. LIMIT CRANKING (CONTINUOUS) TO A PERIOD OF 30 SECONDS TO PREVENT OVERHEATING OF THE STARTER. IF CRANKED OVER 30 SECONDS, STARTER SHOULD NOT BE OPERATED AGAIN FOR 60 SECONDS TO ALLOW TIME FOR COOLING.

5. Move choke lever down about half-way as soon as engine starts. Gradually push all the way down as the engine warms up. In normal operation, choke lever should be in off (down) position for best engine efficiency and fuel economy.

6. Move throttle lever up to full speed when operating tractor.

7. To stop the engine, bring engine back to idle, place transmission lever in "PARK" and P.T.O. lever in "OFF" position and turn ignition switch off. Remove the ignition key when the tractor is not in use, or left unattended. If engine has been working hard let it idle several minutes before shutting it off. This will allow engine temperatures to normalize more rapidly preventing overheating.

STARTING THE ENGINE (Continued)

EMERGENCY STARTING

In the event of electrical failure, get in touch with your DEALER for assistance in locating the trouble.

Should the battery be too low on power to start the unit, it is always best to remove it and have it recharged. However, should jumper cables be used the following must be observed.

1. REMOVE CELL CAPS WHEN USING JUMPER CABLES.
2. BE CERTAIN jumper cables are connected positive to positive and negative from the booster battery to the engine block of the tractor, NOT TO NEGATIVE (-) TERMINAL OF BATTERY.
3. Check P.T.O. clutch (must be in OFF position) and transmission lever must be in park.

4. Follow procedure outlined under Electric Starting.

5. Remove tractor battery and have it fully charged as soon as possible.

NOTE: DAMAGE TO THE ELECTRICAL SYSTEM WOULD RESULT IF THE BATTERY IS RECHARGED IN THE TRACTOR.

6. After the battery is fully recharged and has been checked, reinstall it in the tractor, connecting the ground cable last.

CIRCUIT BREAKER

If electrical system fails while operating engine, shut engine off and let tractor stand a few minutes to allow circuit breaker to cool and reset. See Figure 23 for location.

OPERATION

BEFORE DRIVING THE HUSKY, THE OPERATOR SHOULD BE FAMILIAR WITH THE LOCATION AND FUNCTIONS OF ALL CONTROLS. THE ENGINE WILL START ONLY WHEN P.T.O. LEVER IS IN OFF POSITION AND TRANSMISSION LEVER IN PARK OR NEUTRAL.

TRANSMISSION LEVER

Before placing the transmission control lever in PARK or NEUTRAL, position the travel pedal in its centered or neutral position. This prevents use of the travel pedal when selector lever is in PARK or NEUTRAL.

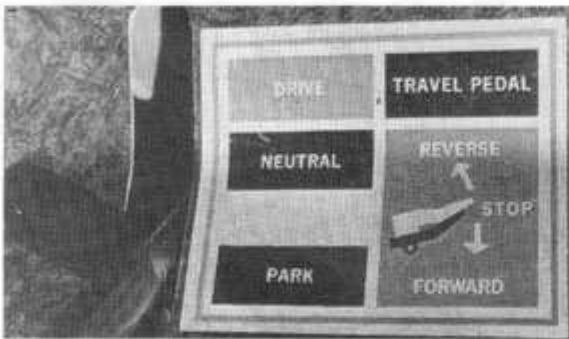


Figure 10



DO NOT ATTEMPT TO PLACE TRANSMISSION LEVER IN PARK POSITION UNTIL TRACTOR HAS COME TO A FULL STOP, MECHANICAL DAMAGE WOULD RESULT.

SHOULD ENGINE STALL WHEN SHIFT LEVER IS IN DRIVE, TRAVEL PEDAL MUST BE BROUGHT BACK TO NEUTRAL POSITION TO PLACE SHIFT LEVER INTO NEUTRAL, OR PARK, TO RESTART MOTOR.

HYDROSTATIC TRANSMISSION

The hydrostatic transmission gives the operator a choice of infinitely variable speeds from 0 to 8 mph forward, and 0 to 4 mph in reverse. Avoid excessive HIGH travel speed whenever possible. Lower travel speeds are best for most jobs such as snow casting or mowing.

It is required that the tractor operate at FULL THROTTLE. While operating under heavy load conditions, listen to the engine RPM. If the engine begins to labor, *do not advance the travel pedal*. By letting up on the travel pedal, the ground speed will decrease and the engine speed will increase, thereby allowing engine to maintain constant P.T.O. speed.

Depress foot brake (Figure 3, Reference 6) and place transmission lever in DRIVE position. ALWAYS DEPRESS FOOT BRAKE PEDAL BEFORE MOVING TRANSMISSION LEVER INTO "NEUTRAL," "PARK" OR "DRIVE" POSITION TO AVOID CREEPING.

Release brake pedal, and slowly apply pressure to the travel pedal with toe of right foot for forward motion, or if reverse motion is desired, slowly apply pressure to travel pedal with heel of right foot. (See Figure 11.)

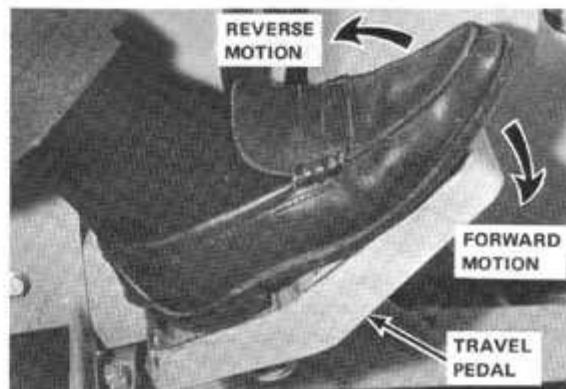


Figure 11

OPERATION (Continued)

The travel (control) pedal is generally used for dynamic braking. To slow down or stop the tractor while it is in forward motion, gradually apply pressure to the travel control pedal with heel of right foot until tractor comes to a full stop. To slow down or stop the tractor while it is in reverse motion, apply pressure to travel control pedal with toe of right foot until tractor comes to a full stop.

To move the tractor manually, place the transmission lever in NEUTRAL position. Use foot brake pedal to stop vehicle.

HYDRAULIC LIFT VALVE

The hydraulic lift valve can be maneuvered while vehicle is at rest or in motion. Lift lever to raise and push down on lever to lower attachments. When released, lever will automatically return to NEUTRAL position and hold, except when in the FLOAT position. Push lift lever all the way down to lock in FLOAT position. The FLOAT position *must* be used when the operator wants the attached implement to follow ground contours independently. (See Figure 12.) Consult your attachment manual for correct lift lever position.

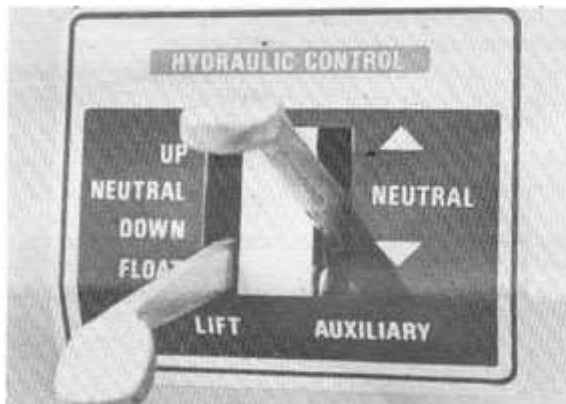


Figure 12

CAUTION BE SURE ATTACHMENT IS COMPLETELY HOOKED UP BEFORE USING HYDRAULIC LIFT. DAMAGE COULD RESULT. MOVE THE ATTACHMENT THROUGH ITS COMPLETE RANGE SLOWLY TO MAKE SURE IT DOES NOT BIND OR HAVE INTERFERENCE. MAKE NECESSARY ADJUSTMENT IF REQUIRED.

AUXILIARY VALVE

This is a 3 position valve, with the center position being "OFF" or "NEUTRAL." This valve is used only for operating small double acting cylinders on the remote or auxiliary hydraulically controlled attachments.

AUXILIARY HYDRAULIC CONNECTIONS

Refer to Figures 13 and 14. These are connections for the auxiliary hydraulic controls. To use, clean all dirt and debris from around connections. Push lock collar back towards tractor, remove rubber plugs and insert hydraulic hose end. When not in use, rubber cap plugs must be in place at all times to prevent entry of dirt into hydraulic system.

NOTE: THESE CONNECTIONS MUST BE KEPT CLEAN. THIS IS NECESSARY TO PREVENT CONTAMINATION OF THE HYDRAULIC FLUID AND CONSEQUENT DAMAGE TO THE HYDRAULIC COMPONENTS.

ONLY BOLENS APPROVED ATTACHMENTS ARE TO BE ATTACHED TO THESE AUXILIARY HYDRAULIC CONNECTIONS. CONSEQUENTIAL DAMAGE TO THE HYDRAULIC SYSTEM COULD RESULT FROM THE USE OF UNAPPROVED ATTACHMENTS, THUS VOIDING WARRANTY.



Figure 13

The P.T.O. and hydrostatic transmission are separate systems; therefore, the P.T.O. can be engaged or disengaged as desired by the operator.

CAUTION DO NOT ENGAGE P.T.O. WITHOUT AN IMPLEMENT ATTACHED. ALWAYS REMOVE UNIVERSAL JOINTS FROM P.T.O. SHAFT AFTER ATTACHMENT IS REMOVED. SERIOUS DAMAGE WILL RESULT IF UNIVERSAL JOINTS ARE LEFT ON, AND P.T.O. IS ENGAGED.



Figure 14

PREVENTIVE MAINTENANCE

A little time spent each day by the operator on preventive maintenance will lead to longer operating life of the HUSKY.

The removal of debris, dirt and grease accumulations are considered normal maintenance practices and can help discover minor difficulties before they become troublesome.

LUBRICATION

See Lubrication Chart on page 18.

ENGINE

The engine oil level must be maintained in the "safe" operating range at all times. Oil level must be between the "L" (low) and "F" (full) marks on the dipstick. Clean area around dipstick so dirt does not fall into crankcase when dipstick is removed. Check daily and add oil as necessary to maintain proper level — **DO NOT OVER-FILL**. Oil level must not exceed the "F" mark. After completely draining oil, reinstall drain plug then remove oil filler cap and refill with 3 quarts of oil — check the oil level on the dipstick before adding more — then bring the level up in the safe range. If the oil filter has been changed, add one additional pint (half quart) of oil. Select oil weight and type according to outside temperature. Refer to Lubrication Chart on page 18.

OIL FILTER

The filter is mounted on the crankcase of the engine. These are "throw away" cartridge type filter elements. If the cartridge has been overtightened during installation, a strap wrench may have to be used to remove it but usually it can be removed by hand. Use the following procedure to replace:

1. Place rags or a pan below the cartridge to catch spilled oil. Unscrew and discard the cartridge.
2. Wipe up any spilled oil, then wipe the adapter clean.
3. Apply grease on gasket then turn new cartridge (with gasket in place) on the adapter in clockwise direction — hand tighten only.
4. After replenishing oil and restarting engine, check area around cartridge for signs of oil leakage. Correct leakage if need be by turning cartridge tighter.

Failure to change oil filter elements at the recommended intervals can lead to serious damage to the engine. An oil filter does a very effective job; however, it must be replaced *each 100 hours* of operation (every other oil change) under normal conditions or more often if the engine is subject to extremely dirty conditions.

AIR SCREEN

Clean flywheel air screen frequently. A dirty air screen and/or engine will cause the engine to overheat and damage the engine.

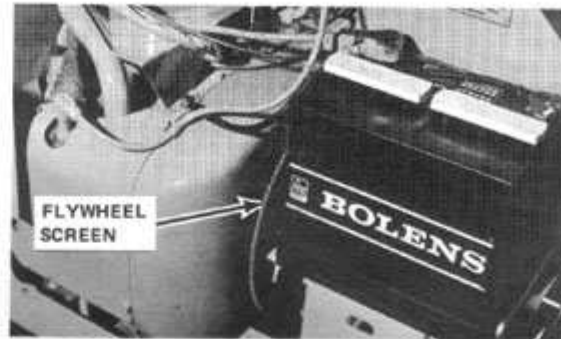


Figure 15

AIR CLEANER

Under normal operating conditions, disassemble and service air cleaner components every 50 hours of operation. Do this more frequently (even daily) if extremely dusty or dirty conditions prevail. The dry type element is cleaned by gently tapping on a flat surface — when doing this, be careful not to damage gasket surfaces on element. *Do not* attempt to clean dry type elements in any liquid or with compressed air as this will damage paper filter material. Wipe dirt or dust accumulation from cover including base plate where used.



Figure 16

Dry type elements should be replaced after each 100 to 200 hours — replace at 100 hours if engine is operated under dirty conditions — replace every 200 hours under good clean air conditions.

The importance of maintaining an air cleaner in proper condition cannot be overemphasized! Dirt induced through improperly installed, improperly serviced or inadequate elements, wears out more engines than does long hours of operation.

PREVENTIVE MAINTENANCE (Continued)

SPARK PLUG

Every 100 hours remove plug, check condition and reset at .025 inch or replace plug if needed. Good operating conditions are indicated if plug has light coating of gray or tan deposit. A dead white, blistered coating could indicate overheating. A black (carbon) coating may indicate an "overrich" fuel mixture caused by clogged air cleaner or improper carburetor adjustment. *Do not* service plug in poor condition — best results are obtained with a new plug.



Figure 17

NOTE: CLEANING OF SPARK PLUGS IN CLEANING MACHINES THAT USE ABRASIVE GRIT IS NOT RECOMMENDED. SPARK PLUGS SHOULD BE CLEANED BY SCRAPING OR WIRE BRUSHING AND WASHING WITH A COMMERCIAL SOLVENT.

BREAKER POINTS

Operation is greatly affected by breaker point condition and adjustment of point gap. If points are burned or badly oxidized, little or no current will pass and as a result the engine may not operate at all, or if it does run, it is likely to miss particularly at full throttle.

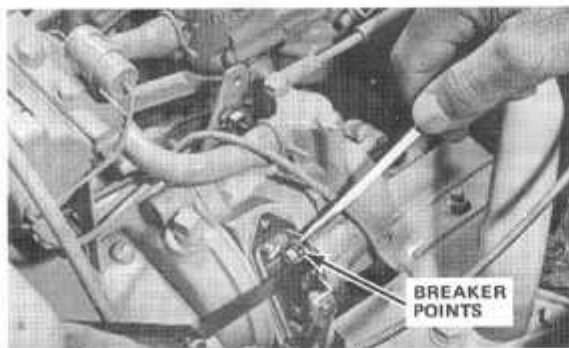


Figure 18

The points are located under the cover on top of the governor. Use the following procedure to adjust breaker point gap:

1. Remove breaker point cover.
2. Turn engine over until breaker points are full open — measure gap with a feeler gauge. Maximum opening should be .020". Adjust by loosening gap adjusting screw

then insert a screwdriver blade in adjusting notch to shift movable plate until .020" maximum opening is attained. Retighten gap adjusting screw and replace breaker point cover after initial adjustment.

Always replace badly burned or pitted breaker points.

TIMING

Timing should be performed only by an Authorized Kohler Dealer.

CYLINDER HEAD SERVICE

After each 500 hours of operation have your authorized Kohler Dealer remove the carbon deposits from in the two cylinders.

NOTE: UNDER CERTAIN OPERATING CONDITIONS CARBON MAY BUILD UP MORE RAPIDLY. THESE BUILD-UPS ARE INDICATED BY HEAVY DEPOSITS OF CARBON ON THE SPARK PLUG ELECTRODES. WHEN THIS CONDITION EXISTS 250 HOUR INTERVALS ARE RECOMMENDED.

VALVE SERVICE

After each 500 operating hours (or sooner if a noisy valve is detected) have your authorized Kohler Dealer service and adjust the valves.

FUEL TANK

Fill with clean fresh gasoline of regular grade. (For cold weather operation use winter blend gasoline.) **DO NOT MIX OIL WITH GASOLINE. REFUEL OUTDOORS WITH ENGINE STOPPED AND COOL.**

Check to see that vent hole in fuel tank cap is not plugged.

FUEL VALVE

The fuel valve is located under the fuel tank as shown in Figure 19. This valve must be fully open for proper operation of the tractor.

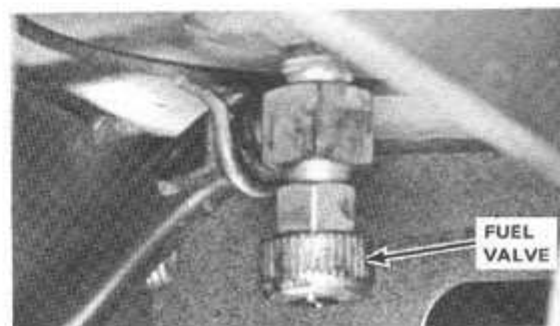


Figure 19

PREVENTIVE MAINTENANCE (Continued)

FUEL FILTER

The fuel filter is a cartridge type in-line filter. See Figure 20 for location. For cleaning, shut off fuel valve and separate filter with a counterclockwise twist. See Figure 21 for separated filter. When reassembling filter, twist the two valves counterclockwise each about one-half turn. This preloads the filter to lock it together.



Figure 20



Figure 21

BATTERY

Keep cables and terminals clean and apply a light coat of petroleum jelly or oil for protection. Check battery bracket for corrosion and keep clean. Do not *over-tighten* battery mounting. Reinstall in same position.



Figure 22



ELECTRIC STORAGE BATTERIES GIVE OFF HIGHLY FLAMMABLE HYDROGEN GAS WHEN CHARGING, AND CONTINUE TO DO SO FOR SOME TIME AFTER RECEIVING A STEADY CHARGE. DO NOT UNDER ANY CIRCUMSTANCES ALLOW AN ELECTRIC SPARK OR AN OPEN FLAME NEAR THE BATTERY. DO NOT LAY TOOLS ACROSS BATTERY TERMINALS AS THIS MAY RESULT IN A SPARK OR SHORT CIRCUIT WHICH MAY CAUSE AN EXPLOSION. BE CAREFUL TO AVOID SPILLING ANY ELECTROLYTE ON HANDS OR CLOTHING.

NOTE: WHEN SERVICING THE BATTERY, BE SURE BATTERY CABLES ARE DISCONNECTED BEFORE ATTEMPTING REMOVAL OF THE BATTERY FROM THE TRACTOR. ALWAYS DISCONNECT GROUND (-) CABLE FIRST. WHEN INSTALLING THE BATTERY, ALWAYS CHECK THE POLARITY OF THE BATTERY TERMINALS TO BE SURE THE BATTERY IS NOT REVERSED. THE NEGATIVE TERMINAL (-) IS GROUND. APPLY A LIGHT COAT OF PETROLEUM JELLY OR OIL TO THE INSIDE OF THE CLAMP TERMINALS AND OVER THE BOLT STUD BEFORE CONNECTING TERMINALS. ALWAYS CONNECT THE GROUND TERMINAL (-) LAST. WHEN REINSTALLING THE BATTERY: (1) PLACE HOLD DOWN RODS IN PLACE. (2) TIGHTEN WINGNUTS FINGER TIGHT ONLY, TO AVOID POSSIBLE DAMAGE TO BATTERY CASE.

The electrolyte (acid and water) in each cell should be at triangle level at all times to prevent battery failure. When the electrolyte is below this level, *add pure, distilled water.*

UNDER NO CIRCUMSTANCES ADD ANY SPECIAL BATTERY "DOPES," SOLUTIONS OR POWDERS OR EXOTIC ADDITIVES: THIS VOIDS WARRANTY.

ALTERNATOR SYSTEM

The Alternator system provides electrical energy to charge a 12 volt battery and also for lighting. Engine has the 30 amp Alternator system with the Rectifier-Regulator Assembly which is externally mounted on the heat shield. The Rectifier-Regulator Assembly is shown in Figure 23. In addition to the Rectifier-Regulator, the Alternator system has two other basic components which are: the permanent field magnet ring and the Alternator-stator. The flywheel must be removed to gain access to these two components.

PREVENTIVE MAINTENANCE (Continued)

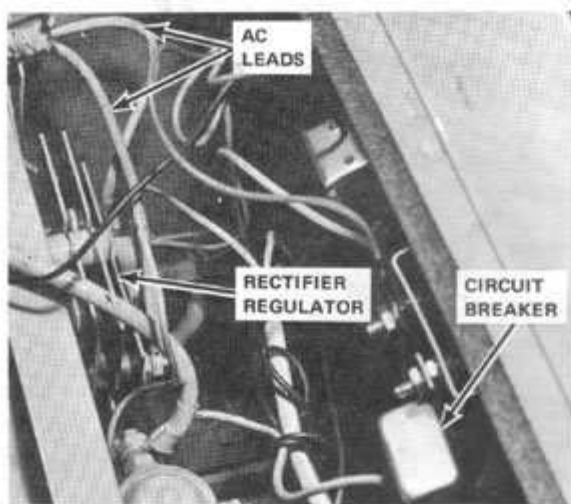


Figure 23

With the exception of the permanent magnet ring which is affixed to the flywheel, the 30 amp Alternator system has no moving or mechanically operated parts and is therefore virtually service free. The only service required is an occasional check to make sure all electrical connections are tight and that wires are not frayed or cracked.



TO AVOID DAMAGE TO THE ALTERNATOR SYSTEM, MAKE SURE THE FOLLOWING PRECAUTIONS ARE TAKEN.

1. Battery polarity must be correct – negative (-) battery terminal is connected to ground.
2. Rectifier-Regulator must be in common ground with engine and battery.
3. Make sure that no fuses, resistors, or wires smaller than No. 10 AWG are in connection from battery to rectifier.
4. Disconnect wire at terminal marked "BATT. NEG." if arc welding is done on equipment in common ground with engine.
5. Disconnect battery to regulator lead when battery is being recharged.
6. **DO NOT** operate engine with battery disconnected from Alternator System.
7. Make sure AC leads are protected from being grounded at all times. Refer to Figure 23.

HYDROSTATIC TRANSMISSION

Remove ignition key. Remove all dirt from around transmission filler plug area and filter. Clean transmission cooling fins periodically. If tractor is operated in a dusty environment, check and clean cooling fins more frequently. Consult your Bolens dealer for transmission maintenance. (See Figures 24 and 25.)

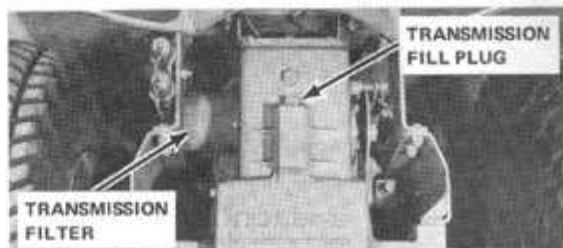


Figure 24

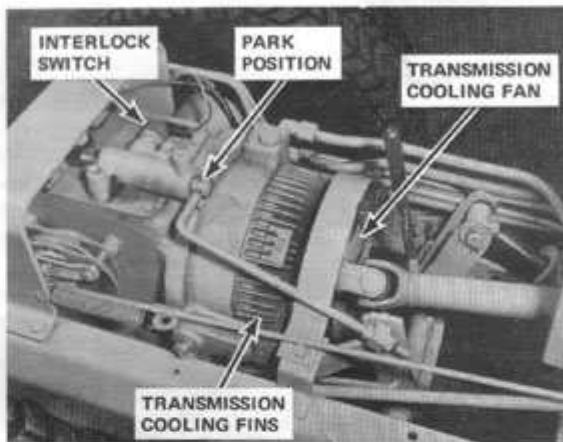


Figure 25

FRONT WHEEL BEARINGS

1. Remove dust cap.
2. Remove cotter pin and unscrew slotted nut.
3. Remove outer bearing.
4. Remove wheel and hub assembly from spindle.
5. Remove inner bearing.
6. Clean bearings in a commercial solvent. Dry with a clean cloth.
7. Pack bearings with a good grade of wheel bearing grease.
8. Reinstall bearings into hub.
9. Reinstall wheel and hub assembly to spindle.
10. Turn slotted nut on spindle hand-tight, test-spin wheel to align bearings, then back nut off to nearest slot in line with hole in spindle, and install a new cotter pin.
11. Press on dust cap.

PNEUMATIC TIRES

Keep both front and rear tires inflated evenly. Under no circumstances should tire inflation be less than 8 pounds, nor more than 12 pounds. Check air pressure regularly with a low pressure gauge. Operating with incorrect pressures may damage tires.

ADJUSTMENTS

CARBURETOR

Carburetor is adjusted at the factory and should not have to be reset. If black exhaust smoke is noted, check the air cleaner first. An "overrich" mixture is usually caused by a poorly serviced, clogged air cleaner element, not an improperly adjusted carburetor.

If readjustment becomes necessary, stop the engine. Turn the MAIN and IDLE fuel adjusting screws all the way in until they bottom *lightly* — do not force them closed as this will damage the needle valves. For preliminary setting, turn MAIN fuel screw out (counterclockwise) 2 full turns and the IDLE 1-1/4 turns. For final adjustments, start engine and allow it to warm up then operate at full throttle and under load, if possible. Turn MAIN fuel screw in until engine slows down (lean side) then out until it slows down again from overrich setting — note positions of screw at both settings, then set it about half-way between the two. The IDLE fuel setting can then be adjusted in the same manner for smoothest idle. Rough idle is often due to the idle speed being set too low — check this also.

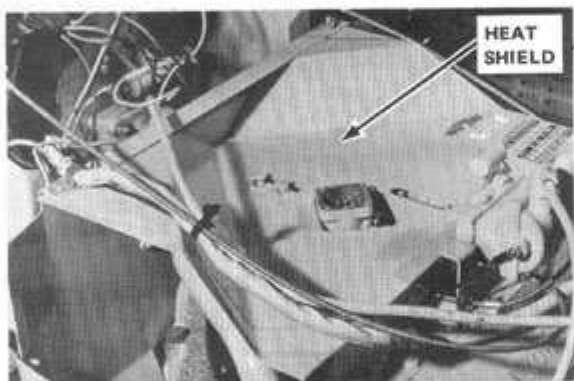


Figure 26

To adjust idle speed, remove heat shield (Figure 26) to gain access to adjusting screw (Figure 27). The idle speed should be no less than 1,200 RPM. The proper idle speed will help prevent carburetor "load up" and engine "kill."

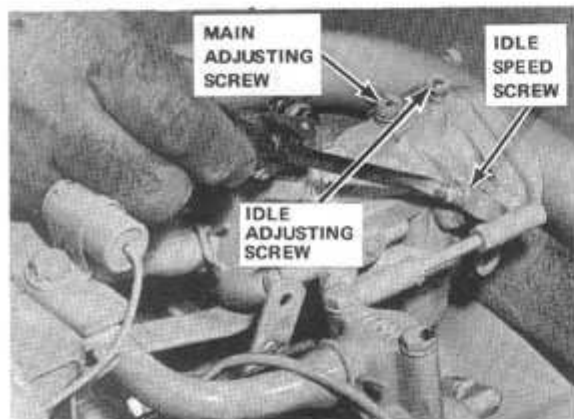


Figure 27

FRONT WHEEL ALIGNMENT

1. Turn steering wheel so that front wheels are straight ahead.
2. Disconnect R.H. side of tie rod from steering arm. Measure distance across front of tire, center line to center line. Measure distance across rear of front tire, center line to center line and adjust toe-in from 0 to 3/8" maximum, by turning tie rod in or out as required. (Front reading should be less than rear reading when measured across tire center lines.)
3. Tighten hex nut securely, and reinstall tie rod into steering arm making sure lockwasher is between ball joint and arm.
4. Check length of steering drag link. Overall length should be approximately 27-1/16". Adjust if necessary.

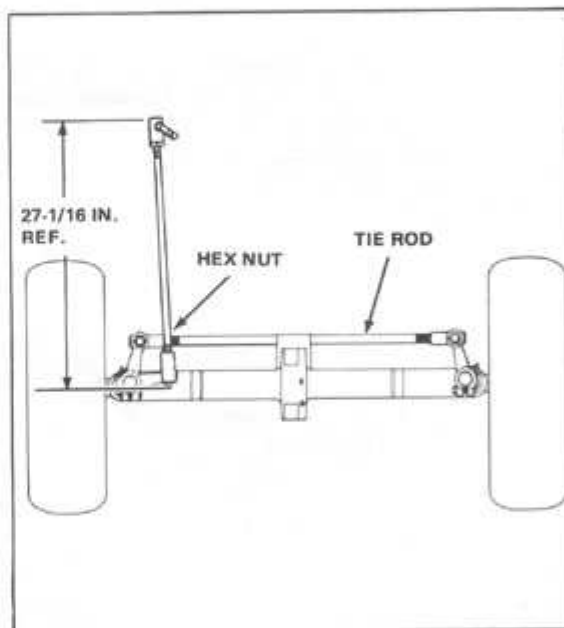


Figure 28

TURNING RADIUS

5. Adjust turning radius if, in making short turns, a front tire interferes with front mounted attachment brackets or center mounted attachments. Adjusting screws are provided as follows:

A. You will find a slot in the right hand frame at the rear of the steering drag link where it connects to the steering gear. (See Figure 29.) Near each end of this slot is a square head setscrew, with lock nut, inserted in the frame.

B. The screw at the front of the slot area controls the LEFT turning radius. The screw at the rear controls the RIGHT turning radius.

ADJUSTMENTS (Continued)

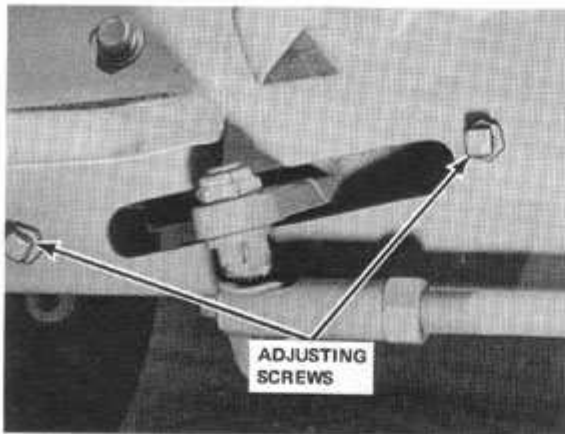


Figure 29

C. Turning these screws IN will increase the tractor turning radius. Turning screws OUT will decrease the radius.

NOTE: ADJUST SCREWS SO THAT TRACTOR TURNING RADIUS IS APPROXIMATELY THE SAME, LEFT AND RIGHT.

6. Check to make sure the stops are being used.

FRONT AXLE STOP

If the clearance between the Front axle assembly "A" and the Stop assemblies "B", Figure 30, is 1/16 inch or more, the stops must be adjusted.

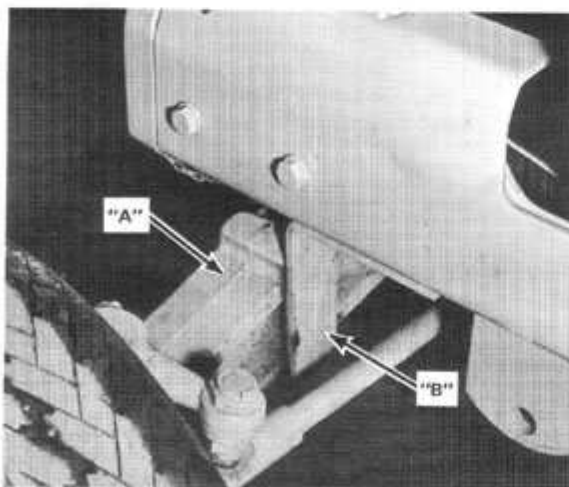


Figure 30

- Loosen capscrews "A", Figure 31.
- Move Stop assemblies "B", Figures 30 and 31, up against Front axle assembly "A", Figure 30.
- Secure capscrews "A", Figure 31.

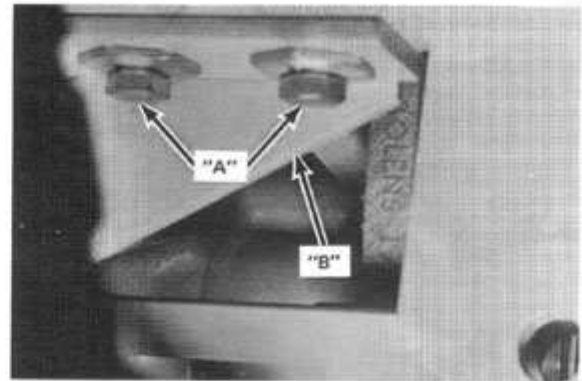


Figure 31

POWER TAKE-OFF (P.T.O.) LEVER

- Place P.T.O. lever in the OFF position.
- Remove spring cotter pin and turn the P.T.O. control rod in until the desired tension is obtained. Reinstall spring cotter pin.

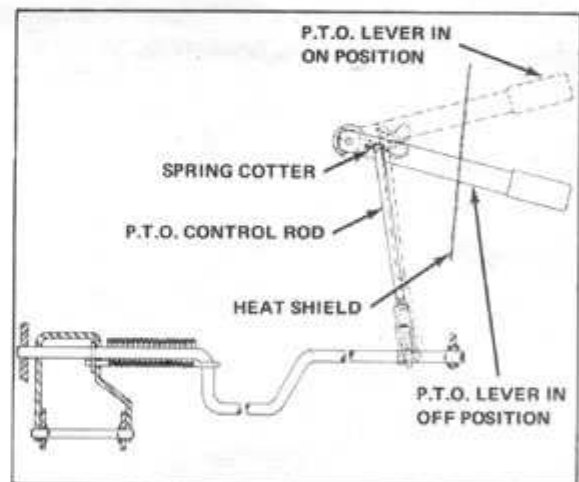


Figure 32

- With the P.T.O. lever still in the ON position, loosen the hex capscrew which secures the upper belt guide shown in Figure 33. Adjust upper belt guide for 1/8 to 1/4 inch clearance between belt and belt guide. Tighten hex capscrew securely.

P.T.O. BELTS

Should it become necessary to replace P.T.O. belts, install new belts as follows:

- Place P.T.O. lever in the OFF position.
- DO NOT disturb upper belt guide, if 1/8 to 1/4 inch gap is evident with P.T.O. lever in the "ON" position.
- Remove lower belt guide and old belts.

ADJUSTMENTS (Continued)

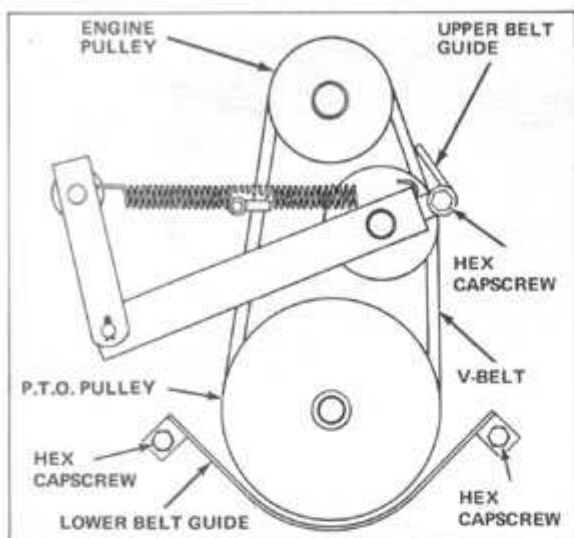


Figure 33

4. With hood open place the three NEW BELTS over both ENGINE and IDLER pulley with your right hand while feeding belts up from below with left hand, then feed into grooves of P.T.O. pulley.

5. Reinstall lower belt guide and adjust for a 3/32 to 1/8 inch clearance between belt guide and belts with P.T.O. lever in the "ON" position. Tighten the two hex cap screws securely. Check upper belt guide and adjust if necessary. Place P.T.O. lever in OFF position.

DISC BRAKE

1. Remove cotter pin and clevis pin from brake rod assembly.
2. Hold brake pedal in its normal relaxed position. Turn end yoke until 1/4 inch maximum free brake pedal travel is attained before pedal depression gives braking action.
3. Reinstall clevis pin and secure with cotter pin.

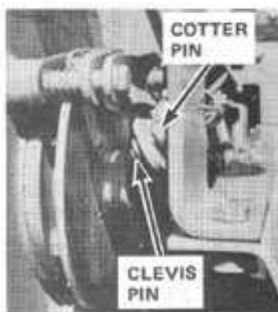


Figure 34

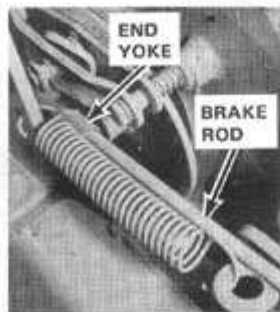


Figure 35

NOTE: BEFORE ADJUSTING, INSPECT DISC BRAKE ASSEMBLY TO DETERMINE WHETHER AN ADJUSTMENT IS NEEDED OR IF BRAKE PAD REPLACEMENT IS NECESSARY. FOR DISC BRAKE SERVICE, CONSULT YOUR BOLENS DEALER.

SEAT

1. Tilt seat forward and lift up out of fender.
2. Position the lugs of the seat assembly into either of the three pair of slots in the top of the fender assembly. See "A" Figure 36.



Figure 36

NOTE: BE SURE THE LUGS ARE IN CORRESPONDING SLOTS ON EACH SIDE OR SEAT WILL NOT BE STRAIGHT. WHEN LOWERING SEAT INTO POSITION PLACE ENDS OF LEAF SPRING TO THE REAR OF PINS IN ASSEMBLY. SEE "B" FIGURE 36.

TRAVEL PEDAL

The travel pedal angle can be adjusted for the operator's comfort. Refer to Figure 37.

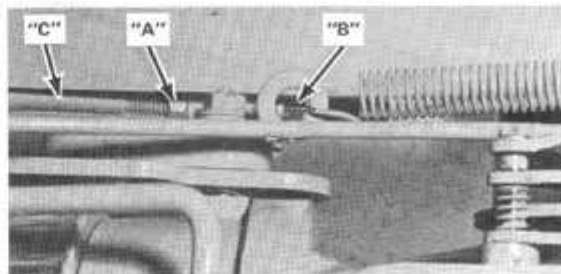


Figure 37

1. Loosen two nuts "A" and nut "B".
2. To bring toe of pedal closer to operator, shorten rod "C".
3. To reverse, lengthen rod "C".
4. Lock nuts "A" and "B" securely after desired adjustment is reached.

ADJUSTMENTS (Continued)

TRAVEL-PEDAL DAMPNER

If the travel pedal becomes stiff or difficult to return to neutral the travel-pedal dampner needs adjustment. Refer to Figure 38. The bowed washers "B" must be placed against pivot block "A" as shown. To loosen the pedal action loosen hex locknut "C" and turn capscrew "D" counterclockwise until pedal is free. After proper adjustment is achieved secure with locknut "C" while holding capscrew "D".

If the travel pedal becomes too loose causing the pedal to flutter, loosen locknut "C" Figure 38 and turn capscrew "D" clockwise to obtain desired pedal tightness. After proper adjustment is achieved secure with locknut "C" while holding capscrew "D".

For any adjustments not discussed in the manual, consult your Bolens dealer.

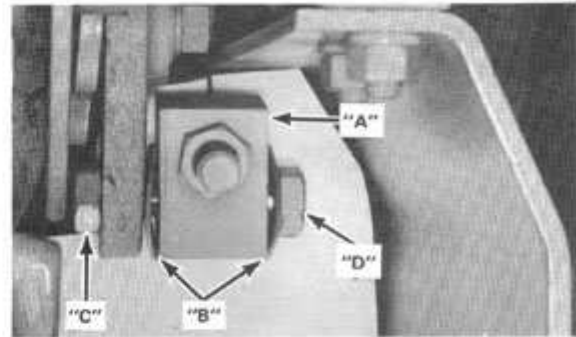


Figure 38

POWER TAKE-OFF (P.T.O.)

Drive shaft delivers power directly from power take-off (P.T.O.) to front, rear and center-mounted attachments. Switching powered attachments requires only a short time. Liberally grease P.T.O. shaft. Slide universal joint



Figure 39

over end of splined power take-off shaft until locking collar snaps into lock groove in shaft. Liberally grease square drive shaft on attachment. Slide attachment drive and P.T.O. drive shaft universal joint together; install pins into hitch points. The P.T.O. (power take-off) drive shaft is located under the front of the tractor frame and is connected to the engine by three drive belts. This assembly has a drive shaft which is splined at both ends so that front, center and rear power attachments can be coupled directly to it. Universal joints on the attachments are equipped with needle-bearings allowing you to raise or lower attachments (with hydraulic lift lever) while the tractor is under full power.



ALWAYS REMOVE UNIVERSAL JOINT FROM POWER TAKE-OFF SHAFT WHEN ATTACHMENTS ARE REMOVED FROM TRACTOR. IF THE UNIVERSAL JOINT IS NOT REMOVED AND THE POWER TAKE-OFF IS ENGAGED, DAMAGE WILL RESULT FROM WHIPPING ACTION OF THE FREE UNIVERSAL JOINT, AND PERSONAL INJURY COULD OCCUR.

FRONT WHEELS

The Model 1886-04 has front wheels which are demountable like the rear wheels. The tractor is shipped with a No. 172-3092 Wheel Spacer, Figure 40, attached to each of the front wheel hubs and eight (8) No. 171-5428 wheel bolts 1/2-20. This spacer and these bolts are to be used with the Model 18027 High Floatation front wheels only.



Figure 40

LUBRICATION CHART

LUBRICATION REQUIRED		Length of Operation	Type of Lubrication	Amount Required
1. Engine Crankcase —		Daily & 8 Hrs.	Bolens Engine Oil	Add Oil To Full Mark
Average Temperature	(Spring, Summer, Autumn) (+120° F. to 40° F.)	50 Hrs.*	Bolens 16014 SAE 30 Oil	Replace 3 Qt.**
	(Winter) (+40° to 0° F.)	50 Hrs.*	Bolens 16015 SAE 10W-30 Oil	Replace 3 Qt.**
	(Winter) (Below Zero)	50 Hrs.*	Bolens 16016 SAE 5W-30 Oil	Replace 3 Qt.**
2. Hydrostatic Transmission — (Capacity 10 qts.)		Weekly or 25 Hrs.	Dexron or Type "A" Automatic Trans. Fluid	Add to Plug Level with Engine Idling and Cold
3. Front Wheel Bearings —		Once a year	Wheel Bearing Grease	Pack
4. Front Wheel Spindles —		8 Hrs.	Grease With Bolens 16020	1-2 Strokes
5. Front Axle Pivot —		8 Hrs.	Grease With Bolens 16020	1-2 Strokes
6. PTO Housing —		8 Hrs.	Grease With Bolens 16020	1-2 Strokes
7. Tie Rod Ends and Drag Links —		8 Hrs.	Oil	Small Amount
8. Steering Shaft —		8 Hrs.	Grease With Bolens 16020	1-2 Strokes
9. Pivot Shaft —		8 Hrs.	Grease With Bolens 16020	1-2 Strokes
10. Brake Linkage —		8 Hrs.	Oil	Small Amount
11. Travel Pedal Shaft —		8 Hrs.	Oil	Small Amount

*More often under extreme conditions.

**Plus 1 pint when changing oil filter.

NOTE: A hand type grease gun is recommended when greasing your unit. This type grease gun can be purchased from your Bolens dealer. Ask for Bolens Grease Gun No. 16023 with Bolens Grease No. 16020. *Hi-pressure type grease guns* could cause damage to the fittings and bearing seals. Lubricate all linkages, levers and pins not equipped with grease fittings with an oil can once a week, or oftener depending on operating conditions.

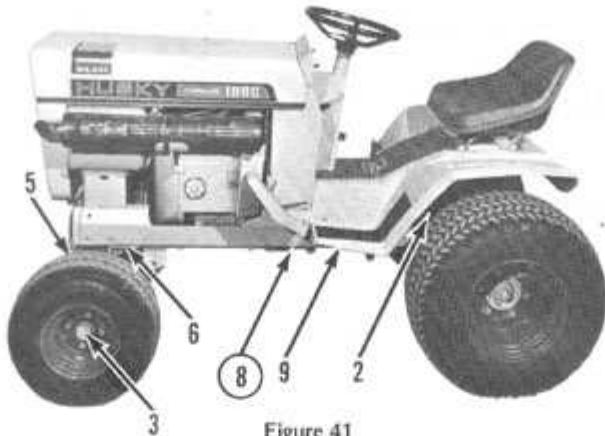
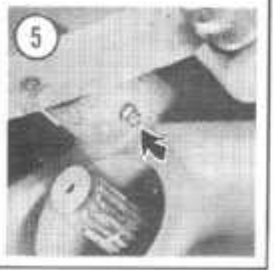
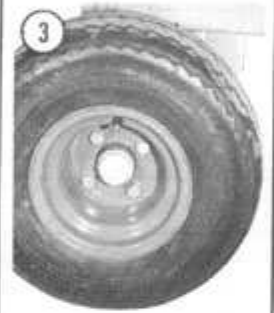


Figure 41

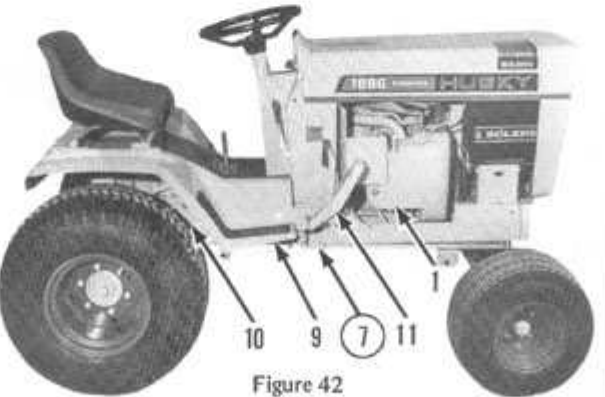
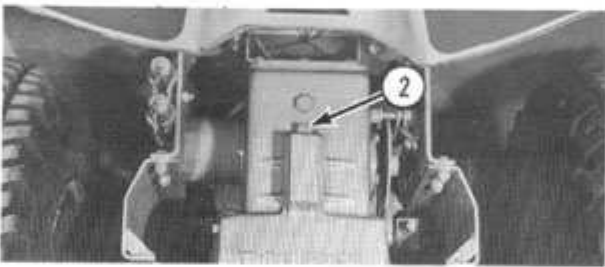
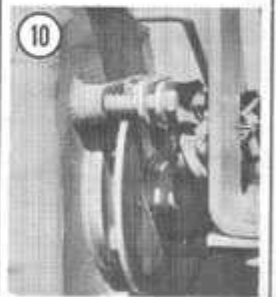
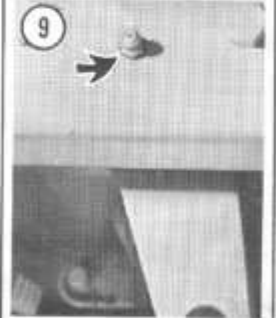


Figure 42



MAINTENANCE CHART

MAINTENANCE REQUIRED	Length of Operation	Type of Maintenance
Engine Oil Filter –	100 Hrs.*	Replace
Engine Cooling Air Screen –	Daily or 8 Hrs.*	Brush Clean
Engine Air Cleaner –	50 Hrs.*	Shake Out Dirt
	100 Hrs.*	Replace
Cooling Fins – (Engine) –	Daily or 8 Hrs.	Clean – Use Air Hose if Available
Spark Plugs –	100 Hrs.	Service or Replace
Breaker Points –	500 Hrs.	Service or Replace
Ignition Timing –	500 Hrs.**	Adjust
Engine Valves –	500 Hrs.**	Adjust
Engine Cylinder Heads –	500 Hrs.**	Remove Carbon
Fuel Filter –	100 Hrs.	Clean
Battery –	Daily	Check Water Level – Add As Necessary
Cooling Fins – (Hydrostatic) –	Daily or 8 Hrs.	Clean – Use Air Hose if Available
Belts –	50 Hrs.*	Check for Wear and Adjust
Tires –	25 Hrs.	Check for Damage and Air Pressure
Transmission Filter –	300 Hrs. or with oil change	Change

*More often under extreme conditions.

**Services should be performed by an Authorized Kohler Engine Dealer.

MINOR TROUBLESHOOTING GUIDE

IF TRACTOR ACTS IN FOLLOWING MANNER:	CHECK FOR POSSIBLE CAUSE												
	CLEAN OFF ENGINE FINS FLYWHEEL SCREEN (CLEAN)	FAULTY IGNITION*	FAULTY SPARK PLUG	EMPTY FUEL TANK	BATTERY	CARBURETOR	OIL	AIR CLEANER (CLEAN)	CHOKE	SEE YOUR BOLENS DEALER	CONTROLS ADJUSTED INCORRECT	CONTROLS NOT IN CORRECT POSITION	CHECK INTERLOCK SWITCHES
Engine will turn over but won't start			X	X	X	X			X	X			
Engine will not turn over						X				X		X	X
Starts only after repeated tries			X	X		X			X	X			
Stalls in a few seconds					X	X				X			
Stalls when hot	X	X	X	X	X	X	X	X		X			
Idles rough			X	X		X			X	X			
Engine overheats	X	X	X			X	X	X		X			
Can not put transmission control in neutral or park										X	X	X	

*See Your Authorized Dealer.

HYDRAULIC CIRCUIT DIAGRAM

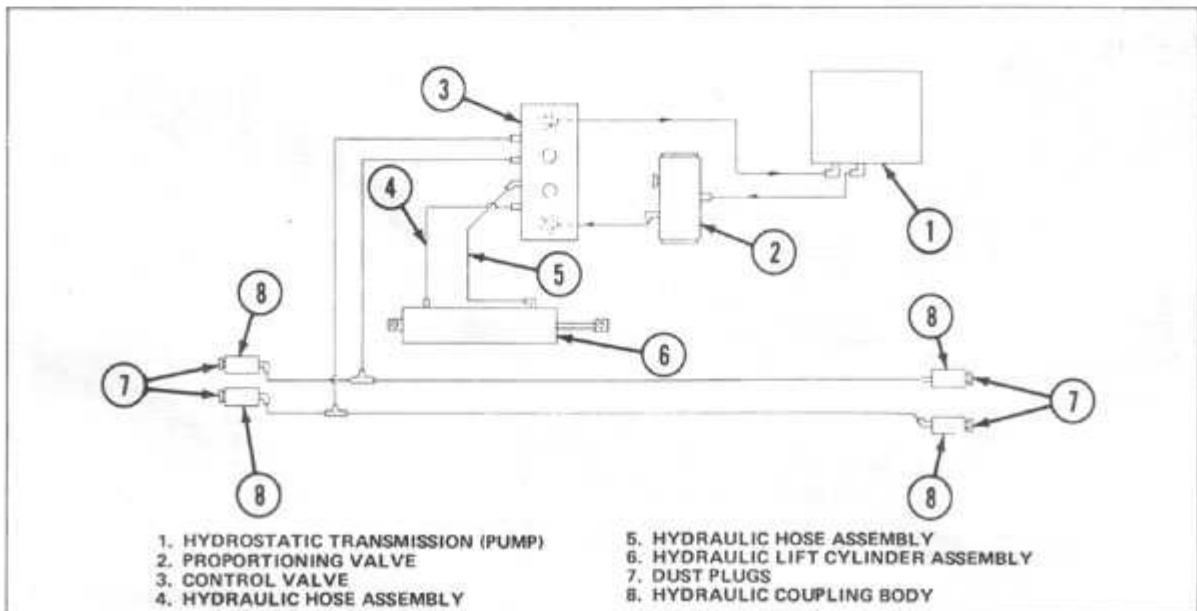


Figure 43

WIRING DIAGRAM

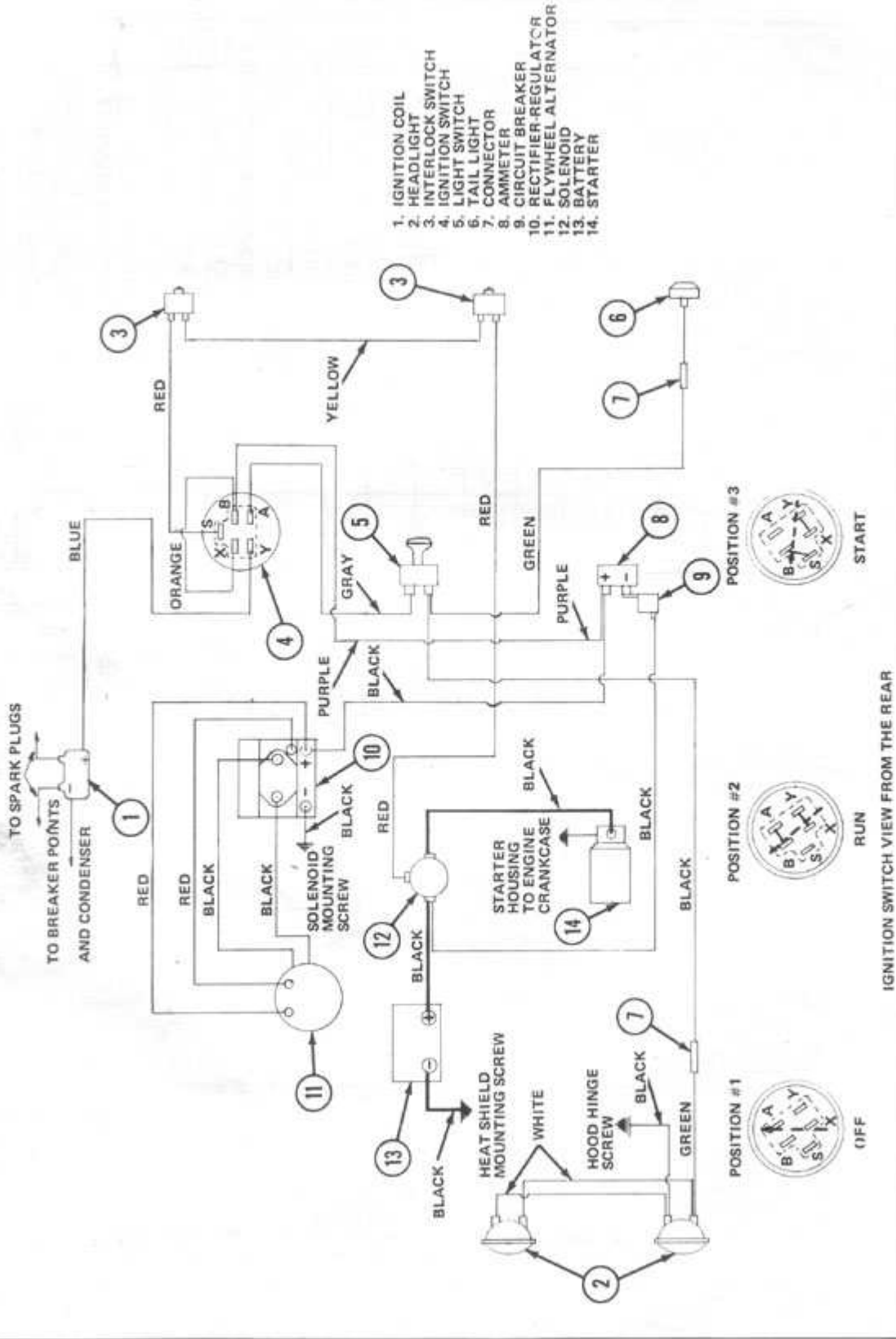


Figure 44

OPTIONAL EQUIPMENT



REGULAR FRONT WHEEL KIT
(5.70/5.00 x 8.00 TIRE)
MODEL NO. 18028-01



HIGH FLOTATION
FRONT WHEEL KIT
(18 x 8.50-8 TIRE)
MODEL NO. 18027-01



REGULAR LAWN & GARDEN TIRE
KIT (27 x 8.50-15)
MODEL NO. 18018-01



LAWN & GARDEN TERRA TIRE KIT
(26 x 12.00-12)
MODEL NO. 18016-01



TERRA TIRE KIT
(26 x 12.00-12)
MODEL NO. 18017-01



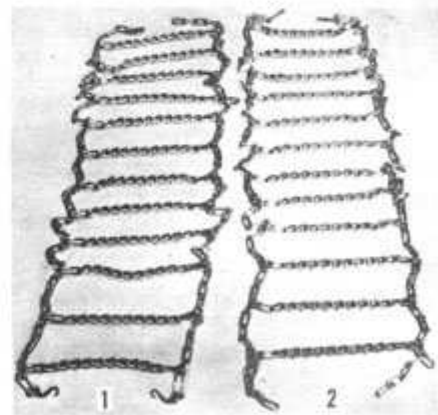
REGULAR AGRICULTURAL TIRE
KIT (27 x 8.50-15)
MODEL NO. 18019-01



DUAL WHEEL KIT (27 x 8.50-15)
MODEL NO. 18020-01



WHEEL WEIGHT KIT
MODEL NO. 19617



TIRE CHAINS
(1) Model No. 19614-01
For 26 x 12.00-12 Tire
(2) Model No. 19613-01
For 27 x 8.50-15 Tire

CAUTION

DO NOT INSTALL MORE
THAN THREE WHEEL
WEIGHTS TO ONE WHEEL.

STORING YOUR HUSKY TRACTOR

Always keep your HUSKY tractor in a dry protected place when not in use to prolong its usefulness and appearance. With year around use, it is not necessary to "store" the tractor; but when it is not to be used for some time, it should be prepared for storage in the following manner:

1. Completely clean all accumulated dirt or trash from all parts, especially hydrostatic fins, engine fins and flywheel screen.
2. Wipe oil or a rust preventive on any parts that may rust. Touch up any area where paint has been chipped or worn off on tractor.
3. Drain gas tank and carburetor.
4. Drain oil from crankcase while engine is still hot and flush with clean, light oil. Refill crankcase.
5. Clean fuel filter.
6. Remove, clean and regap spark plugs and put a small amount of oil (SAE 30) into cylinder. Turn the engine over a few times to fully lubricate the cylinder walls, valve seats and valve stems. This can be done by engaging the key starter briefly. Replace spark plugs.
7. Keep tractor covered.
8. BATTERY — Keep terminal posts cleaned of corrosion salts and coat with petroleum jelly or grease. Keep cables clean. Stored battery must be kept fully charged and with all cells filled to triangle. Store at cool temperature, 20^o to 50^o. Check each two months and charge as necessary.
9. The air cleaner should be cleaned and sealed off with a plastic bag or facsimile, for the duration of the storage period.
10. If tractor is stored with an attachment mounted on it, the attachment MUST be lowered to the ground, and P.T.O. lever put in OFF position.

Bolens reserves the right to change specifications, add improvements, or discontinue the manufacture of any of its equipment without notice or obligation to purchasers of its equipment.

Bolens approval of the use of attachments manufactured by other manufacturers is limited to assurance that such use will not void Bolens warranty on the Bolens equipment to which the outside manufactured attachments are adapted. The responsibility for the design, performance, durability, safety and operation, service repair availability, and warranty obligation remain with the outside manufacturer. Bolens specifically excludes from its warranty obligation all such outside manufactured attachments.

Bolens warranty will be voided if unapproved attachments are adapted to use with Bolens equipment and are so used.



BOLENS

PORT WASHINGTON, WISCONSIN, U.S.A.