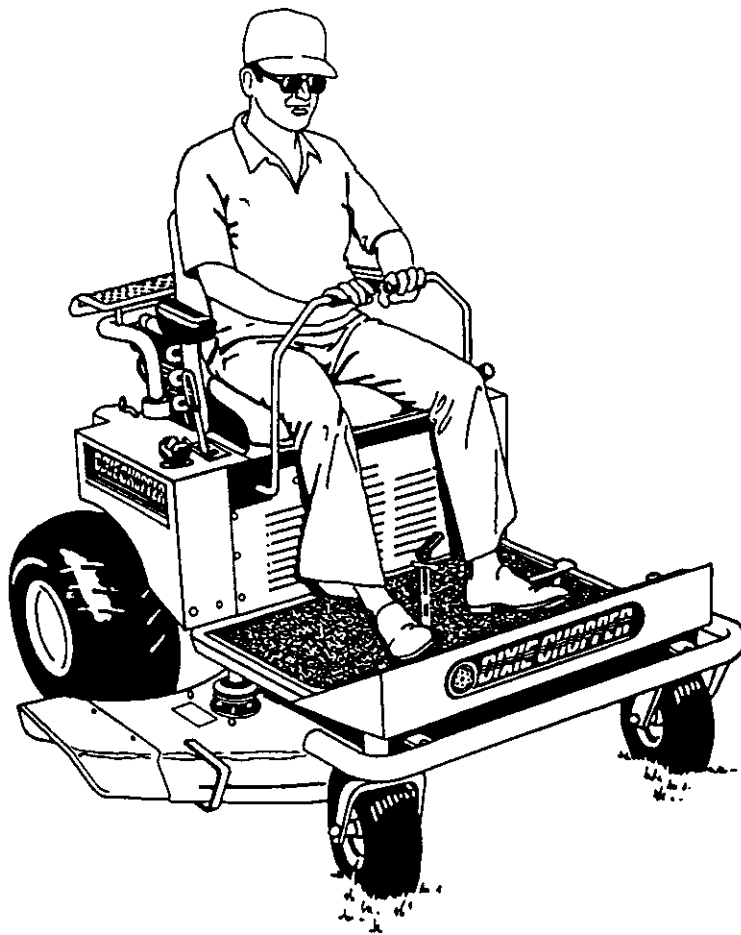


DIXIE CHOPPER

The World's Fastest Lawn Mower



Parts/Operator's Manual

INTRODUCTION

Prior to operating the Dixie Chopper Mowing Machine, you should be trained in its proper use and warned of its dangers before operating, adjusting, or servicing it. You should also read and understand this entire manual.

DANGER *This symbol if used warns of immediate hazards which will result in severe personal injury or death.*

WARNING *This symbol refers to a hazard or unsafe practice which can result in severe personal injury or death.*

CAUTION *This symbol referes to a hazard or unsafe practice which can result in personal injury or product or property damage.*

- Familiarize yourself with the controls and know how to stop the mower quickly.
- Inspect your work area carefully. Remove debris from the turf area to be cut.
- Avoid contact with moving parts. Keep away from whirling blades. Keep feet and hands from underneath mower deck.
- Never direct the discharge of material toward bystanders nor allow anyone near the machine while in operation.
- This machine is not meant for highway or street use. It is not a recreational vehicle and you should never carry passengers.
- Never tamper with safety devices or guards. If a guard or safety device is damaged, or removed, replace before operating the mower.
- Handle gasoline carefully. Never add fuel to tank while the engine is running or hot.

SECTION 1

GENERAL SAFETY SUGGESTIONS

Recommended by Outdoor Power Equipment Institute

SAFE OPERATION PRACTICE — RIDING VEHICLES

1. Know the controls and how to stop quickly — READ THIS OWNER'S MANUAL and instructions furnished with attachments.
2. Do not allow children to operate machine. Do not allow adults to operate machine without proper instruction.
3. Do not carry passengers. **Do not mow when children and others are present.**
4. Clear work area of objects (wire, rocks, etc.) which might be picked up and thrown.
5. Disengage all attachment clutches and shift into neutral before attempting to start engine (motor).
6. Disengage power to attachments and stop engine (motor) before leaving operator position.
7. Disengage power to attachment(s) and stop engine (motor) before making any repairs or adjustments.
8. Disengage power to attachments when transporting or not in use.
9. Take all possible precautions when leaving vehicle unattended; such as disengaging power-take-off, lowering attachments, shifting into neutral, setting parking brake, stopping engine and removing key.
10. Do not stop or start suddenly when going uphill or downhill. Mow up and down the face of steep slopes; never across the face. If a steep hill must be ascended, **back** up the hill; drive forward when descending.
11. Reduce speed and exercise extreme caution on slopes and in sharp turns to prevent tipping or loss of control. Be especially cautious when changing directions on slopes.
12. Stay alert for holes, rocks and roots in the terrain which may cause the vehicle to upset. Keep away from drop-offs.
13. Use care when pulling loads or using heavy equipment.
 - a. Use only approved drawbar hitch points.
 - b. Limit loads to those you can safely control.
 - c. Do not turn sharply. Use care when backing.
 - d. Use counterweight(s) or wheel weights when suggested in owner's manual.
14. Watch out for traffic when crossing or near roadways.
15. When using any attachments never direct discharge of material toward bystanders nor allow anyone near vehicle while in operation.
16. Handle gasoline with care — it is highly flammable.
 - A. Use approved gasoline container. Place container out of the reach of children.
 - B. Use gasoline only as a fuel — never as a cleaner. Never remove cap or add gasoline to a running or hot engine or an engine that has not been allowed to cool for several minutes after running. Never fill fuel tank indoors. Wipe up spilled gasoline. And positively **NO SMOKING.**
 - C. Open doors if engine is run in garage — exhaust fumes are dangerous. Do not run engine (motor) indoors.
17. Keep vehicle and attachments in good operating condition and keep safety devices in place and working.
18. Keep all nuts, bolts, and screws tight to be sure equipment is in safe working condition.
19. Never store equipment with gasoline in the tank inside a building where fumes may reach an open flame or spark.
20. Allow engine to cool before storing in any enclosure.
21. To reduce fire hazard keep engine free of grass, leaves or excessive grease.
22. Vehicle and attachments should be stopped and inspected for damage after striking a foreign object and the damage should be repaired before restarting and operating the equipment.
23. Do not change engine governor settings or over-speed engine.
24. When using vehicle with mower:
 - (1) Mow only in daylight or in good artificial light.
 - (2) Never make a cutting height adjustment while engine (motor) is running if operator must dismount to do so.
 - (3) Shut engine (motor) off when unclogging chute.
 - (4) Check blade mounting bolts for proper tightness at frequent intervals.
25. Under normal usage, grass catcher bag material is subject to deterioration and wear. It should be checked frequently for bag replacement. Replacement bags should be checked to ensure compliance with original manufacturers recommendations or specifications.
26. Disengage power to mower before backing up. Do not mow in reverse unless absolutely necessary and then only after careful observation of the entire area behind the mower.
27. Use personal protective equipment when operating or performing maintenance such as (but not limited to) protection for eyes, ears, feet & head.

CAUTION

TO AVOID INJURY

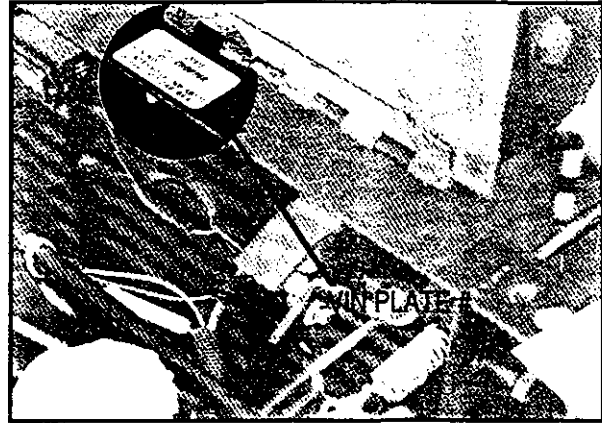
READ OPERATOR'S MANUAL KNOW LOCATION & FUNCTION OF CONTROLS • MAINTAIN SAFETY DEVICES • REMOVE POTENTIAL THROWN OBJECTS • NEVER MOW NEAR PEOPLE • NEVER CARRY PASSENGERS • LOOK BEFORE BACKING • AVOID SLIPPERY OR STEEP AREAS • STOP BLADE & BACK SLOWLY IF MACHINE STOPS GOING UPHILL • AVOID BLADE UNLESS BLADE & ENGINE ARE STOPPED • SET PARKING BRAKE & REMOVE KEY IF LEAVING MACHINE.

VEHICLE IDENTIFICATION NUMBER (VIN) LOCATIONS

Vehicle identification numbers are used to identify your new mowing machine and attachments. These numbers should always be referred to when consulting your dealer or the factory concerning service, parts, or other information you may require. If these plates are removed during repair operations, they should always be replaced.

The mowing machine vehicle identification number plate is located on frame under seat. This number identifies **both** the chassis and mower. Engine identification number is located on engine shrouding, and indicates model, type number and serial number of your mowing machines engine.

For your convenience and ready reference, enter mowing machine and engine numbers below.



Mowing Machine Identification Number Dixie Chopper Vin Plate

Model _____

Vin _____

Engine Identification Number

Model/Spec. _____

Serial No. _____

OWNER REGISTRATION

Service and warranty assurance are so important to Dixie Chopper as they are to you, the owner. Magic Circle Corp. requires factory registration to facilitate warranty service at an Authorized Dixie Chopper Dealer. A registration card is supplied with each new machine and attachment. Either you or your dealer must fill in the required information and mail the card to Magic Circle Corp.

The Dixie Chopper Limited Warranty Statement is de-

scribed on page 6. This statement describes what items are covered by the Dixie Chopper Limited Warranty, your rights and obligations, and the procedure to follow to obtain warranty service. Please familiarize yourself with the warranty statement. All of us at Dixie Chopper want you to be satisfied with your Dixie Chopper mowing machine. Please don't hesitate to contact us for assistance.

SECTION 3

WARRANTY

INTRODUCTION

Congratulations on your purchase of a DIXIE CHOPPER lawn mower. We believe you have exercised excellent judgment. We are most appreciative of your patronage. We recommend you read this entire manual before operating this unit. Time spent in becoming fully acquainted with its performance features, adjustments and maintenance will add a longer and more satisfactory life to your DIXIE CHOPPER. The manufacturer reserves the right to make changes or add improvements to its product at any time without incurring any obligation to make such changes to its product manufactured previously. As with all lawn mowers, if handled carelessly, it is a dangerous piece of equipment. If incorrectly used, this machine can cause severe injury. **YOU THE OPERATOR ARE RESPONSIBLE WHEN OPERATING IT.** Therefore, safety is of the utmost importance.

WARRANTY

This mower is warranted for one year from date of purchase or 400 hours of use against all defects in materials and workmanship. Each new mower is warranted against manufacturing defects in material and workmanship under normal use and service. Our obligation, under this warranty, shall be limited to the replacement, to the original retail purchaser, of any part or parts, which, within the warranty period, shall be shown to be defective due to

faulty workmanship at the factory. All parts claimed defective must be returned to the factory. All parts claimed defective must be returned to the factory for inspection, repair or replacement with transportation charges prepaid. This warranty does not apply to damage in transit or damage caused by misuse negligence, or accident, to alterations or repairs done outside the factory or authorized service center, nor does it obligate us to assume any transportation charges in connection with the replacement of the parts claimed to be defective.

OUR WARRANTY DOES NOT APPLY TO THE CHAINS, BLADES OR BELTS ON OUR MOWERS DUE TO THE VERY NATURE OF THE FUNCTION THEY PERFORM AND THE ELEMENTS THEY ARE EXPOSED TO.

The warranty specifically excludes engines, tires and batteries which are warranted separately by their respective manufacturers. All claims for defective engines or engine parts must be made in accordance with the engine manufacturers warranty. This warranty is null and void if any parts other than the original manufacturers parts are used. There is no other expressed warranty.

Implied warranties, including those of merchantability and fitness for a particular purpose, are limited to one year from purchase and, to the extent permitted by law. Any and all implied warranties are excluded.

SAFETY PRECAUTION

Those who come in contact with the DIXIE CHOPPER should be trained in its proper use and warned of its dangers before operating, adjusting, or servicing it. They should also read and understand this entire manual, and the engine owners manual.

Familiarize yourself with the controls and learn how to stop the mower quickly.

Inspect your work area carefully. Remove debris from the turf area to be cut.

Avoid contact with moving parts. Keep away from whirling blades. Keep feet and hands from underneath mower deck. Never direct the discharge of material toward bystanders, nor allow anyone near the machine while in operation. This machine is not meant for highway or street use. It is not a recreational vehicle and you should never carry passengers. Never tamper with safety devices or guards. If a guard or safety device is damaged, or removed, replace before operating mower. Handle gasoline carefully. Never add fuel to fuel tank while the engine is running or hot.

STARTING INSTRUCTIONS

To start machine observe the following procedure: Swing control levers out to neutral position. Engage parking brake. Check to be sure the deck engaging handle is in the disengaged position. Set throttle handle to half-throttle position. Turn key to start position and release when engine fires.

***NOTE - PARKING BRAKE MUST BE ENGAGED BEFORE MACHINE WILL START.**

CUTTING HEIGHT ADJUSTMENT

Mower deck height is adjustable from 1" to 6" at 5/8" increments with a foot actuated lever.

Mower deck may be leveled side to side by adjusting eye bolts at the front of the deck.

Mower deck pitch, front to rear, may be adjusted by changing stabilizer arm position at front or rear (at 1/2" increments). Adjustment at the rear of the deck or in the middle stabilizer arm will result in 1" change in pitch.

***NOTE — To mow in the 2' : " to 4" range, leave as shipped**

— stabilizer arm one hole down from top front and middle and bottom hole in the rear. For cutting below 2 1/2", it may be necessary to lower the rear of the deck.

***NOTE — Never allow the rear of the deck to be lower than the front; unless the cutting height is in full up position (6"), and you are mowing tall weeds. This is the only exception and will happen automatically with the deck in the full up position.**

MOWING INSTRUCTIONS

Always cut grass with the engine at 3/4 to full throttle. This engine speed allows the cutting blades to operate at optimum cutting speed. Control ground speed with steering levers.

***NOTE — Operating engine at less than 3/4 throttle will result in decreased air flow through the cowling causing engine overheat.**

MAINTENANCE & SERVICE

DECK PITCH ADJUSTMENT

The mower deck is set to mow level at 3 1/2" from the factory, using these settings: MOWER DECK FRONT — 2nd hole from the top. MOWER DECK REAR — 2nd hole from the top. AXLE MOUNT — bottom hole. When mowing at a lower height, with the factory setting it is possible to leave a streaking appearance. This is easily remedied by pitch adjustment of the deck. Dropping the rear of the deck one hole will result in a 1" change in pitch. However, dropping the front AND the rear will result in only a 1/2" change in pitch. Which should provide satisfactory results when mowing at a lower height.

TRANSMISSION DRIVE BELT ADJUSTMENT

(Vertical shaft engines only)

1. Loosen engine mounting nuts and bolts.
2. Loosen drive belt tensioning jam nut, and tighten drive belt tensioning bolt until 1/2" to 3/4" deflection exists midway between the double engine and transmission pulleys.
3. Re-tighten engine mounting bolts and locknuts.
4. Re-tighten jam nut.

TRANSMISSION DRIVE BELT ADJUSTMENT

(Horizontal shaft engines only)

1. Loosen engine mounting nuts and bolts.
2. Place pry bar between right-angle gearbox and engine mounting plate. Use pry bar to draw engine back on mounting plate until 1/2" to 3/4" belt deflection exists midway between the double engine and transmission pulleys.
3. Re-tighten engine mounting nuts and bolts.

MAINTENANCE INTERVALS

Engine Oil Change:

Break-in oil	5 hrs.
Normal conditions	every 25 hrs.
Extremely dusty conditions	every 8 hrs.
Synthetic oil normal conditions	every 50 hrs.
Synthetic oil extremely dusty	every 8 hrs.
Oil Capacity:	
20 hp. Kohler	2 1/4 qts.
24 hp. Kohler	3 1/4 qts.
CV22 Kohler	3 3/4 qts. w/filters
Sundstrand Pump	2 1/2 gal.

RECOMMENDED HYDRO FILTER CHANGE

1st timeat 50-100 hours
Thereafterevery 300 to 400 hours

1. Clean area around filters so its free of any dirt and debris.
2. Fill replacement filter with #30 Schaffers oil part #60106. Filter will absorb oil, so fill until it takes no more.

3. Remove old filter on unit and replace with new.
4. You may want to loosen the charge line at the pump and pressurize the reservoir to purge air from the line, purge the line until no air is present (tighten fitting).
5. With handles in neutral and engine plug wires disconnected crank engine over with the starter and observe oil movement in clear line from filter base to the charge pump (flashlight may be necessary).
6. Oil should be flowing from the filter to the pump when you are cranking the engine. **DO NOT START THE ENGINE UNLESS OIL IS FLOWING FROM FILTER TO PUMP.**
7. If step 6 is not accomplished, check for air leaks between charge pump port and reservoir. Note: You must have pump primed before starting engine, if it is not primed it will self-destruct in 16 seconds or less.
8. With above steps accomplished, replace plug wires, leave handles in neutral and throttle at idle speed. You may now start the unit. Let idle in neutral and observe oil flow in clear line from filter mount to pump. It should be flowing toward the pump. You may see a few air pockets shoot through the line. That is OK as long as you have movement toward the pump. If oil stops flowing toward the pump shut down immediately (check for air leaks between charge pump and inlet to reservoir).
9. Let unit idle in neutral for at least 2 minutes and until no more air is observed.
10. Then gently stroke levers for an additional 2 minutes. At this point unit can be put back in service.

NOTES:

1. **Failure to observe this procedure will destroy pumps in 16 seconds or less.**
2. **Pump failure due to charge pump loosing its prime is not a warranty item.**
3. **Read instructions carefully.**

LUBRICATION

DIXIE CHOPPERS are equipped with greaseable upper and lower steering pivots. These should be lubricated every 100 hours. Front wheel casters, once filled, should not require further lubrication. Doing so will simply blow off the dust covers.

Mower deck hubs — EVERY 8 hours.

All other grease fittings — Every 25 hours or when engine oil is changed.

T-Gearbox pump drive: Check and fill with 90-W gear lube, every 50 hours.

Curtis Right Angle Gearbox: (horizontal shaft engines only) Some early models equipped with the Curtis right angle gearbox did not have the greaseable input shaft spline. On these machines the gearbox should be removed, and the spline joint lubricated every 500 hours.

*NOTE — Newer models equipped with the greaseable input shaft should be lubricated every 100 hours.

SECTION 3

MAINTENANCE & SERVICE (CONTINUED)

TIRE PRESSURE

This vehicle has been designed to achieve maximum operator comfort and ride. This cannot be achieved without proper tire pressure.

FRONT TIRE: 12-15 lbs.

REAR TIRE: 6 lbs.

A Low Pressure Gauge Is Required.

*NOTE—Vehicle is driven and steered by the rear wheels. REAR TIRE CIRCUMFERENCE DIRECTLY EFFECTS THE STEERING OF THE MACHINE. If the machine will not drive in a straight line, check air pressure and adjust accordingly.

NEUTRAL ADJUSTMENT

THE FOLLOWING PROCEDURE SHOULD BE DONE WITH THE REAR WHEELS OFF THE GROUND AND THE ENGINE ON.

1. Remove clevis pin from neutral adjustment yoke at right side pump control arm and at steering pivot on left side drive linkage.
2. Loosen neutral spring mounting bolt, located on oil filter mounting bracket, adjust neutral spring assembly to the front or rear until the pump is in neutral and there is no motion at drive wheels. Once this is achieved tighten neutral spring mounting bolt.
3. Loosen jam nut on adjustment yoke and turn yoke so that clevis can be inserted without force. When control lever is in neutral lock position the wheel should continue to sit still.
4. Start engine, operate tires in forward and reverse and return lever to the neutral lock position, tires should not move. If tires move repeat above procedure.

FORWARD LEVER STOP ADJUSTMENT

THIS PROCEDURE DONE WITH THE ENGINE OFF!!!

1. Move control lever to the full forward position, applying gentle pressure.
2. With control lever in full forward position, turn forward lever stop bolt down until it contacts steering lever pivot block arm. Once contact is made give additional 1/4 to 1/2 turn. Re-tighten jam nut.
3. Test drive machine and observe operation at full forward on level surface. If machine does not go straight, correct by slowing fast wheel, (lengthen lever stop bolt). Adjust lever stop until machine travels in a straight path with both control levers at full forward.
4. Align control levers by swinging into neutral lock position and bending levers until handles are parallel. Both controls should be spaced evenly at rest and should travel together and reach full forward uniformly.

* Lubricate between the transmission frame mounting point and steering lever pivot block.

*NOTE — Late model machines are equipped with a greaseable mounting bolt. These mounting bolts utilize a compression spring for positive steering resistance.

Although this assembly does not require adjustment, it should be lubricated every 100 hours.

SUNDSTRAND PUMP INSTALLATION AND START UP PROCEDURE

*NOTE — All replacement pumps are American-built. Early units however, have Japanese-built pumps. The Japanese pump can be identified by the splined dump valve shaft and by the straight style pump control arm.

1. Before removing the pump, check above note and determine whether you are removing a Japanese pump or an American pump. If you are replacing an American pump with an American pump you may reuse all fittings.

NOTE — If you are replacing a Japanese pump with an American pump, you will need the following parts:

US PUMP CHANGE KIT F/X SERIES

1	65108.....	Clear Hose 40"
2	60125.....	90° Fitting
1	67016.....	Straight Fitting
2	67015.....	90° Fitting
2	65010 or 65011.....	Line
1	65207.....	Control Arm
5	67013.....	Spring Clamps
1	60124.....	Worm Clamp

US PUMP CHANGE KIT F/LX SERIES

1	65108.....	Clear Hose 40"
2	60125.....	90° Fitting
1	67016.....	Straight Fitting
1	67015.....	90° Fitting
2	67010 or 67011.....	Line
1	65207.....	Control Arm
5	67013.....	Spring Clamps
1	60124.....	Worm Ciamp

NOTE — Remaining parts are the same as left side.

INSTALLATION INSTRUCTIONS

2. Lift rear of machine, support with jackstands. Remove rear wheel on corresponding side you are replacing the pump.
3. Remove top fender bolt and rear fender flange nut and swing out fender.
4. Remove hairpin clips from steering and neutral rods, push steering rod upwards out of the way and remove positive neutral linkage rod by removing rod support.
5. Remove top large hydraulic line — then remove bottom large hydraulic line. Note: Mark hoses so they are re-installed correctly.
6. Remove 1/4" bolts that hold on filter mount and swing filter and mount up out of the way.
7. Remove charge pump return line from 90° fitting.
8. Remove pump input line from 90° fitting.
9. Remove 3/8" nuts front and back of pump. Note: Do not move 3/8" jam nuts on back side of bellhousing!
10. Pull pump straight back from gearbox and remove from machine.

MAINTENANCE & SERVICE (CONTINUED)

11. Remove fittings and pump control arm from old pump and install on new pump.
12. Remove large O-ring from old pump and install on new. (Replace O-ring if damaged.)
13. Place new pump back in machine and install 3/8" nuts – pump mounting nuts – and tighten. Note: You may have to turn engine or pump shaft by hand to line up pump spline.
14. Reinstall filter mount back in proper position.
15. Install bottom large hydraulic line, then install charge pump inlet line. Now install large top hydraulic line.
16. Remove charge pump return 90° and fill pump cavity with oil and replace 90° fitting.
17. Install neutral and steering linkage back in place.
18. Check fluid level in pump drive box and fill if necessary with 90 weight gear oil.

SUNDSTRAND PUMP START UP PROCEDURE

1. With new pump installed and charge pump return line disconnected, pinch hose together to seal off hose 1" behind swivel fitting. Note: Vice grips will work to pinch hose, it must be sealed off completely.
2. Remove reservoir overflow tube from plastic overflow nipple.
3. The system is now ready to pressurize. Note: This is done to purge air from the lines on the inlet side of the pump and to assure the pump has an immediate oil supply to the inlet side of the pump. Maximum 5 lbs.
4. Using an air regulator, pressurize the system until clear line is full of oil down to pump inlet 90° fitting (Page 60, Fig. 10) and oil comes out of charge pump return 90° fitting. Note: Maintain pressure on the reservoir through step 5.
5. With handles in neutral position, and engine plug wires disconnected (Note: Brake must be in off position) crank engine over and observe oil in clear tube. The oil should be traveling towards the pump and coming out of the charge pump return 90° fitting. Do not start engine unless you have determined you have oil flowing to the pump while cranking engine with the starter. Note: If this condition does not exist check for air leaks from 90° inlet fitting to reservoir.
6. Remove pressure from reservoir and install overflow tube back onto overflow nipple, and remove vise grips from charge pump return line and connect line back onto charge pump return 90° fitting. Reconnect engine plug wires. With throttle in idle position and handles in neutral, start engine, let idle for no less than 60 seconds, then lightly stroke the levers. After 2 minutes of lightly stroking the levers and achieving steady movement of the wheel hub, you may stroke the levers fully.

7. Swing fender back into place and secure with bolt and flange nut.
8. Reinstall rear wheel and lug nuts.
9. Check fluid level in hydraulic reservoir and fill if necessary.

NOTES:

1. You must follow this procedure.
2. Failure to observe above procedure will destroy this pump in 16 seconds or less.
3. Pump failure due to a dry start up is not a warranty item.
4. You may profit from reading your instructions twice!

ENGINE TO DECK BELT ADJUSTMENT

This belt only requires 40 lbs. of tension to achieve satisfactory results. New machines equipped with the 30209-1 connecting arm may be adjusted using this procedure: with engine off, engage mower deck, hold turnbuckle stationary while tightening bolt to compress spring. Proper tension has been achieved when spring height reaches 2" in the engaged position, which should allow 1/2" to 3/4" distance between the double jam nut and the tensioner assembly. A visual check can be made by simply engaging the mower deck. During this action the last 1/4 turn should be spring compression.

ENGINE MANUFACTURERS RECOMMENDATIONS

KOHLER ENGINES

FUEL: For best results, use only clean, fresh, regular grade unleaded gasoline with a pump sticker octane rating of 87 or higher. Unleaded is recommended since it leaves less combustion chamber deposits. Regular leaded gasoline may be used; however, be aware that the combustion chamber and cylinder head will require more frequent service.

Do not overfill the fuel tank. Leave room for fuel to expand.

Required maintenance:

Clean air intake screen.....	Daily
Check oil level.....	Daily
Check/Replace fuel filter	As required
Service foam pre-cleaner	25 hrs.
Clean cooling fins	50 hrs.
Replace paper air cleaner element.....	100 hrs.
Check spark plugs.....	100 hrs.
Have valve-tappet clearance checked.....	500 hrs.
Have cylinder heads serviced.....	500 hrs.
Have starter motor drive serviced.....	500 hrs.

SECTION 4

MOWING MACHINE CONTROLS

1. THROTTLE CONTROL

Throttle is located on top of right fuel tank just ahead of fuel cap. Move throttle forward all the way to operate machine. Move throttle all the way to rear before shutting engine off.

2. IGNITION SWITCH

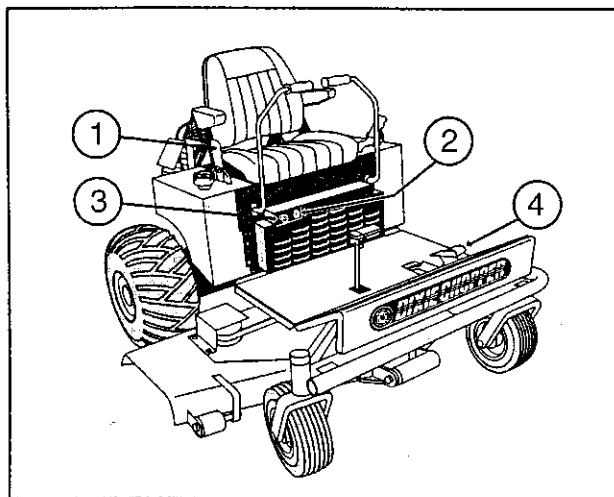
Ignition switch is located on right side of front panel below seat. Ignition switch has three positions: (1) Off, (2) Run, (3) Start. To start engine turn key all the way to Start. Release key when engine starts and it will automatically return to Run position. Turn switch to Off position to stop engine.

3. CHOKE CONTROL

Choke control is located on right side of front panel next to ignition switch. Pull choke knob out when starting engine. Slowly push knob in after engine starts. If engine is warm and has been running, choking may not be necessary to restart engine.

4. MOWER LIFT PEDAL

Mower foot lift pedal is located on left side of foot platform. To raise mower, push down on front of pedal. To lower mower, push down and rotate foot to move bottom of pedal down; remove foot from pedal when desired height is obtained.

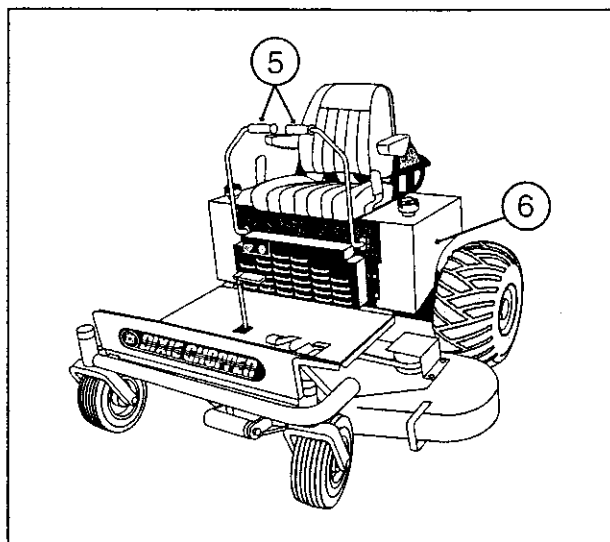


5. RIGHT AND LEFT MOTION CONTROL LEVERS

To enter seat, move levers all the way left and right into neutral lock position. Enter seat and move levers in toward center of machine. Left lever controls left rear wheel and right lever controls right rear wheel. To go forward, push both levers forward evenly; the further levers are pushed forward, the faster the machine will travel. To go in reverse, pull both levers to rear evenly; the further levers are pulled, the faster the machine will travel. To turn, slow machine down and slow speed of wheel in direction you want to turn.

6. FUEL TANK VALVES

Fuel tank valves are located at bottom of each tank. Fuel valves are normally left open except when service on fuel system becomes necessary.



OPERATING YOUR MOWING MACHINE

SAFETY INTERLOCK SYSTEM

Each machine has interlock switches. Switches are actuated by the seat. Seat switch will stop engine when seat is vacated with engine running. Seat must be occupied.

If machine will not start, check that seat is occupied.

Safety interlock system must be tested periodically. To test operation, the following functions must be observed. If not, immediate repairs must be performed by an Authorized Dixie Chopper Dealer for your protection.

1. Engine should NOT start if seat is not occupied.
2. With engine running, test operate seat switch by rising off seat. Engine should shut off.

CORRECT ENGINE OPERATION



CAUTION



Before starting engine, become familiar with all controls. Read this Operator's Manual thoroughly. Always check engine oil level before starting engine.

OPERATING YOUR MOWING MACHINE



WARNING



Care should be taken to avoid inhaling exhaust gases as they contain carbon monoxide gas which is colorless and odorless. Carbon monoxide is a dangerous gas that can cause unconsciousness and is potentially lethal. Do not run engine in confined areas such as a closed garage.

STARTING ENGINE

Because of a built-in safety interlock system, your machine will not start unless seat is occupied.

To start engine, occupy seat. Move throttle control lever halfway to Operate position. Pull choke control all the way out to Cold position. Turn ignition key to Start position to engage starter. When engine starts, release key. Switch is springloaded and will return to Run position automatically.

If the engine fails to start after 10 seconds of continuous cranking, turn the key to the Off position and allow the starter motor to cool. Check for the cause of hard starting; consult the Troubleshooting Checklist.

Once engine has started, slowly return choke control to its normal position. If engine stalls at low speeds, or hesitates during acceleration, choke should be applied as necessary until engine reaches normal operating temperature.

STOPPING ENGINE

To stop engine, move throttle lever to idle position and turn ignition key to Off position. If engine has been working hard or engine is hot, allow engine to idle a short time before turning key off. This practice will help cool engine before stopping.

Note: In case of emergency engine may be stopped by turning ignition key to Off position.



CAUTION



Always remove key when leaving machine unattended, even if for just a few minutes. Prevent accidents; don't give children or unauthorized persons an opportunity to operate this machine.

THROTTLE CONTROL

Throttle control regulates speed of engine as measured in RPM (Revolutions Per Minute). This control **should not** be used to regulate the ground speed.

Engine has been designed with a special governor that limits engine RPM. Unlike an automobile, this governor allows engine to operate most efficiently at a set speed and protects it from damage caused by excessive RPM. Always operate machine with throttle control set at 3/4 to full speed.

CHOKE CONTROL

Choke control activates a "butterfly" valve in carburetor. When choke is partially or completely closed, less air is admitted to engine. This results in a higher fuel-to-air (richer) mixture that is easier to ignite when engine is cold. Choking engine is required when engine is started cold. Warm engines may not need choking.

FUEL SPECIFICATION

(Refer to Section 7, "Engine")



CAUTION



Handle fuel with care — it is highly flammable. Use only approved fuel container. Never add fuel while engine is running. Fill fuel tanks outdoors with extreme care. Never fill fuel tanks indoors. Replace gasoline cap securely and wipe up all spilled fuel.

OIL SPECIFICATION

(Refer to Section 7, "Engine")

CORRECT

TRANSMISSION OPERATION TO GO FORWARD OR REVERSE

Machine is equipped with a separate transmission for each rear wheel. Transmissions are controlled with "Motion Control Levers," one for each wheel.



CAUTION



Sudden starts can be damaging to equipment and could cause loss of operator control. For safe operation, never move the motion control lever too rapidly, especially on grades.

To go forward, push both levers forward evenly.
To go in reverse, pull back on both levers evenly.

SECTION 5

OPERATING YOUR MOWING MACHINE (CONTINUED)

TO CHANGE SPEED OR DIRECTION

To change direction of machine, slowly move levers to neutral and move levers in direction you want to go.

The further levers are moved away from neutral position, the faster machine will travel. To turn machine left or right, slow speed of wheel in direction you want to turn.

TO STOP

To stop machine, return both levers evenly to neutral position.

CORRECT MACHINE USAGE



CAUTION



Read manuals provided with attachments before operating. These manuals give a more detailed description of operation and point out other areas of caution. Familiarize yourself thoroughly with equipment before attempting to use it.

OPERATION OF THE MACHINE WITH MOWER

IMPORTANT

Keep all shields and mower discharge chute in place. Never attempt to clear discharge areas or mower blades without disengaging mower and removing ignition key.

For best operation on average lawns, operate engine at full throttle, control ground speed with transmission. Average lawns are usually cut at a height between 2 and 3 in. (5-7.6 cm). Tall grass and weeds should be cut with the mower in its highest position, making a second pass cutting to height desired. Always keep mower blades sharp.

MOWING SPEED

Mower is designed to operate most efficiently at maximum blade speeds. Speed of machine should allow mower blades to maintain this maximum speed while mowing across turf. Slow machine for cutting tall grass, grass which is heavy with moisture, or when moving uphill. If ground speed is too fast, or blade speed is too slow, mowing will be uneven because mower blades will not be able to lift grass into cutting position as mower passes over ground.

MOWING HEIGHT

Best cutting height for your lawn has probably been established from previous experience. First time you mow, set mower to cut a little higher than you have in past. This will help you determine best approach to uneven areas, to be sure wider cut does not result in scalping high spots. In general, recommended cutting height is 2 to 3 in. (5-7.6 cm).

Very tall or wet grass can be cut without difficulty by using a little care. Set mower in its highest cutting position and enter area slowly. If necessary, take a cut one half width of mower, overlapping previously cut area on each pass. Then, with mower set to desired height, make a finish cut over entire area.

MAINTAINING YOUR MACHINE



CAUTION

To minimize chance of injury, perform all maintenance and adjustments on your machine with engine off and ignition key removed, unless instructed otherwise in this section. Use extreme care when working near operating machinery. Do not wear loose fitting clothing. Remove watch and jewelry before beginning work and observe common safety practices when using tools.

MAINTENANCE CHECKLIST

	Before Each Use	Every 8 Hours	Every 25 Hours	Every 50 Hours	Every 100 Hours	Every 100 Hours/One Year (2)
NOTE: Service intervals shown are considered MAXIMUM under normal operating conditions. Increase frequency under extremely dirty or dusty conditions.						

SERVICE OPERATION

Check Safety Interlock System	X					
Check Engine Oil Level	X					
Check Battery Water Level	X					
General Equipment Condition	X					
Clean Engine Chaff Screen	X					
Check Tire Pressure				X		
Check Fasteners In Place & Tight				X		
Check Mower Level				X		
Clean Air Filter/Pre-cleaner				X		
Lubricate Mower Spindles		X				
Lubricate Chassis				X		
Lubricate Front Wheels				X		
Change Engine Oil (1)					X	
Check Brake Adjustment					X	
Clean Engine Exterior and Cooling Fins					X	
Replace Engine Oil Filter						X
Replace Spark Plugs						X
Replace Air Filter						X

Refer to Engine Section (7) for Applicable Information Concerning

Adjustments

Special Cleaning Instructions

Recommended Dealer Maintenance

(1) Refer to text for initial service interval for new mowing machines.

(2) Whichever occurs first.

ENGINE OIL QUALITY

For maximum engine protection under all operating conditions use API Service Classification SC, SD, SE, or SF oil. These Letters may appear on oil can singularly or in combination with other letters.

OIL LEVEL

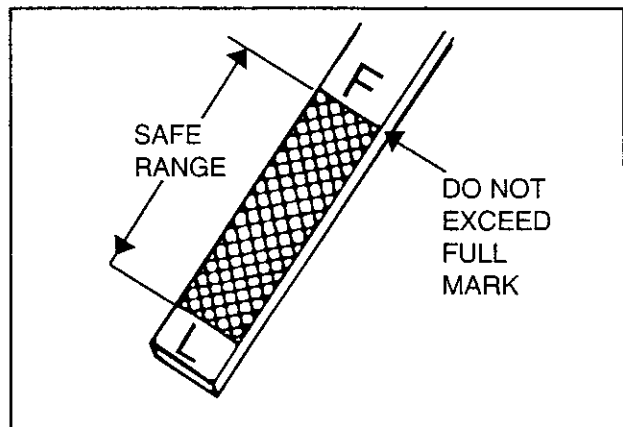
Form a habit of checking oil level regularly.

Check oil level of engine every time machine is used. An improper oil level can cause extensive internal damage to engine.

Oil filler dipstick and oil drain location for engine is illustrated in following illustrations.

To check engine oil level, stop machine where engine is level. Shut off engine, set parking brake, and remove ignition key.

Remove oil dipstick from engine.



Correct Oil Level

Remove dipstick from tube. Wipe with clean lint-free cloth. Reinsert dipstick without turning to lock. Remove dipstick and read scale on lower portion of dipstick.

Add oil through fill tube located next to oil dipstick. Turn cap counterclockwise to remove it.

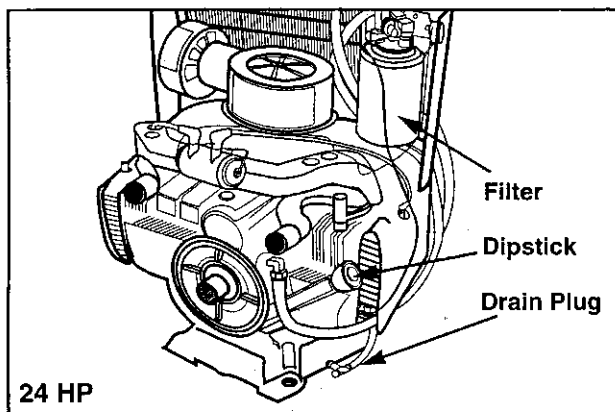
OIL CHANGES

(Refer to Section 7, "Engine")

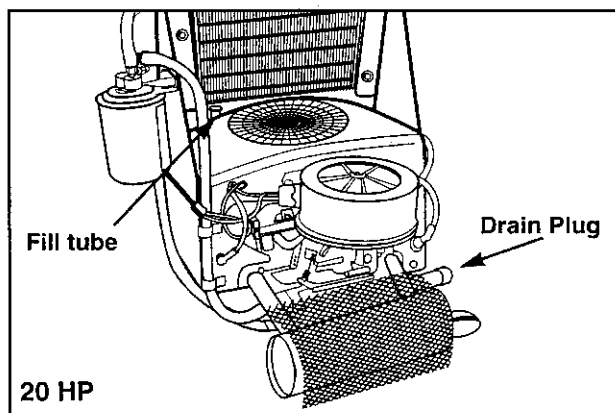
SECTION 6

MAINTAINING YOUR MACHINE (CONTINUED)

Failure to change engine oil at recommended intervals can lead to serious damage to engine. This is especially true when using detergent oils which are designed to hold impurities in suspension; when saturation point is reached, oil may suddenly break down to form a gelatin-like substance which seriously impairs and can even stop flow of oil. Increase frequency of oil changes if machine is operated under extremely dusty conditions.



Engine Oil Filler and Drain Plug



Engine Oil Dipstick and Fill Tube

AIR FILTER

(Cleaner) (Refer to Section 7, "Engine")

Dirt induced through improperly installed, poorly serviced, or inadequate air filter elements, is more often cause of a worn out engine than long hours of operation. A small amount of dirt will destroy a set of piston rings in a matter of hours. A clogged element causes a richer fuel mixture which wastes gasoline, and may lead to formation of harmful sludge deposits.

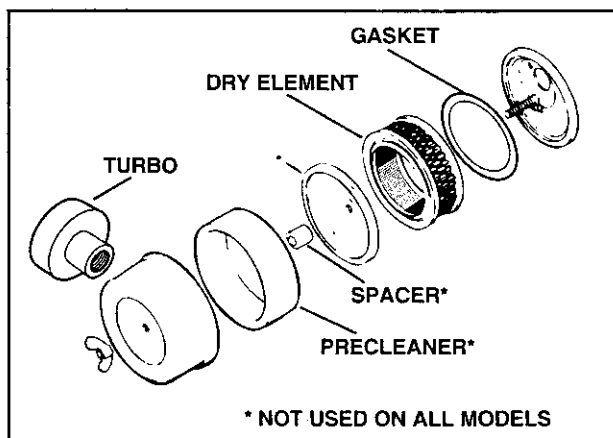
Check following when installing a new or serviced element:

1. Back plate must be securely tightened to carburetor. Replace back plate if bent or cracked.
2. Gasket surfaces of element must be flat against back plate and cover to seal effectively.
3. Tighten screws securely.
4. Be sure cover seals and gaskets are in good condition and will seal properly. Bad gaskets and seals can let unfiltered air into carburetor.

To prevent any dirt or other contaminants from entering engine, always cover carburetor air horn when air cleaner is removed.

Dry type air filter element is cleaned by tapping it lightly on a flat surface to remove loose dirt particles. Replace element if dirt does not drop off easily. DO NOT wash elements in liquid.

Do not attempt to blow dirt off with compressed air as this can puncture filter element.



Air Cleaner

SPARK PLUG (Refer to Section 7, "Engine")

Always clean area around spark plugs before removing them to prevent dirt from entering engine. Use a spark plug wrench to remove and install plugs.

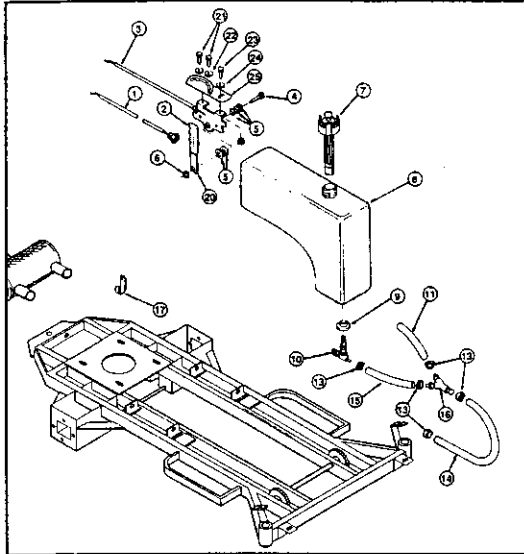
Check condition of plugs. Good operating conditions are indicated by a light coating of gray or tan deposit. A dead white, blistered coating could indicate engine overheating. A black coating could indicate an "overrich" fuel mixture caused by a clogged air cleaner, or improper carburetor adjustment.

Replace spark plugs that are not in good condition.

Never sandblast, wire brush, scrape or otherwise service a spark plug in poor condition. Best results are obtained with a new plug.

MAINTAINING YOUR MACHINE (CONTINUED)

FUEL SYSTEM



Fuel Strainer

CARBURETOR ADJUSTMENT

Carburetors are adjusted at factory and should not have to be reset. If however, one of following conditions is noted, carburetor should be readjusted immediately as continued operation with incorrect setting can lead to fouled spark plugs, overheating, excessive valve wear or other problems. If black exhaust smoke is noted, check air cleaner first — an "overrich" mixture is usually caused by a poorly serviced, clogged air cleaner element, not an improperly adjusted carburetor.

CONDITION

- A. Black, sooty exhaust smoke, engine sluggish.
- B. Engine misses and backfires at high speed.
- C. Engine starts, sputters and dies under cold weather starting.
- D. Engine runs rough or stalls at idle speed.

POSSIBLE CAUSE/PROBABLE REMEDY

- A. Mixture too rich — readjust main fuel needle.
- B. Mixture too lean — readjust main fuel needle.
- C. Mixture too lean — readjust main fuel needle.
- D. Idle speed too low or improper idle adjustment — readjust speed then idle fuel needle if needed.

Carburetor Adjustment Chart

Correct carburetor adjustment requires a significant amount of knowledge as well as special equipment, such as a good tachometer. In addition, other adjustments, such as governor settings, may also be necessary after

adjusting carburetor. For these reasons, it is suggested that carburetor adjustments be performed by an authorized dealer.

A fine-mesh screen type strainer is incorporated into fitting at bottom of each fuel tank, which filters foreign matter from gasoline before it reaches carburetor. This strainer normally requires service only if fuel supply becomes severely contaminated.

Always clean area around fuel cap before removing it to prevent excessive amounts of dirt from entering fuel system. Also insure that fuel storage container you are using is clean and in good condition.

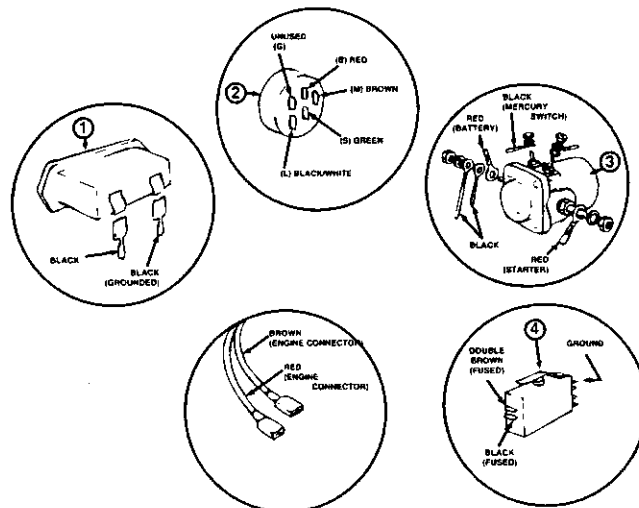
Fuel strainer gives only limited protection against moisture in fuel system. Keep fuel tank full during winter operation, when cold and damp weather conditions can cause moisture to condense in tank.

CHARGING SYSTEM

An alternator is used to charge battery. Alternator charging system normally requires no service other than periodically checking that all exposed wiring and electrical connections on machine are clean, tight and in good condition.

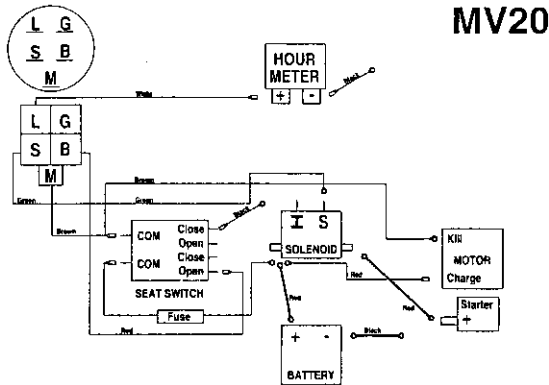
Proper polarity is critical with an alternator equipped charging system. Always disconnect battery ground cable (negative) before working on any part of electrical system. Verify all components are connected correctly before reconnecting ground cable (negative) or damage to alternator system components will result.

Never run engine if battery is removed, or if battery is not connected to charging system. Serious damage to charging system components may result.



SECTION 6

MAINTAINING YOUR MACHINE (CONTINUED)

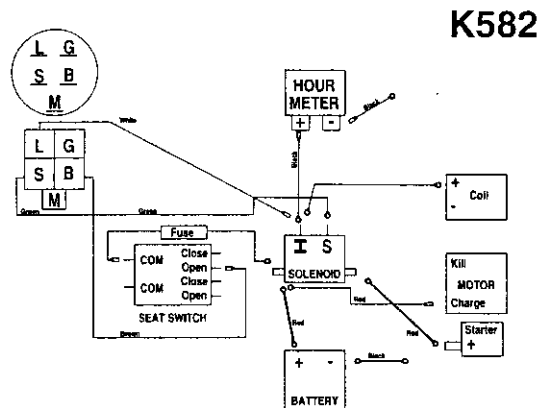


CAUTION



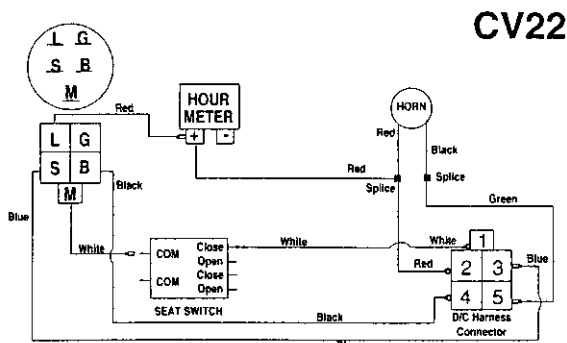
Batteries produce flammable hydrogen gas. Avoid creating sparks and open flames and do not smoke when working near batteries.

Battery electrolyte solution is poisonous and can be injurious to eyes, skin and clothing. In event of an accident, flush affected area immediately with a solution of one part baking soda to four parts water. Notify physician immediately. If baking soda is not immediately available, flush affected area with water. Notify physician immediately.



Maintain electrolyte level above plates in each cell by adding distilled water as necessary. Best time to add water is just prior to operating machine so water will mix with solution. Do not overfill battery. Electrolyte solution is corrosive and overfilling can cause damage to surrounding metal parts. Battery should be maintained at 1.265 specific gravity charge. When battery has been removed for servicing, take care to connect cables to battery exactly as they were before removal.

For longest service life, battery should be kept clean by wiping it off with a paper towel. Any corrosion around battery terminals should be removed by applying a solution of one part baking soda to four parts water. A light coating of grease or petroleum jelly may be applied to all exposed terminal surfaces to prevent corrosion.



NOTES: D/C Harness Connector and Kohler Harness Connector plug together.

At temperatures below 32°F (0°C), full charge state must be maintained to prevent cell electrolyte from freezing and causing permanent battery damage.

BATTERY



CAUTION



When servicing battery or any other part of electrical system, or if battery must be removed for any reason, always disconnect negative (ground) cable **FIRST** and reconnect it **LAST** to avoid possibility of electrical shorts.

DRIVE ADJUSTMENTS

Check steering and motion controls. Steering and motion controls should be uniform in all speeds forward and reverse. Levers should return to neutral automatically when released.

To check:

- Check air pressure in tires. Equal tire pressure is critical for proper drive operation.
- Check linkage for excessive play.
- Raise rear of machine until rear wheels are off ground.
- Put control levers in neutral lock position (control levers swung outward).
- Start engine; wheels should not rotate. If one or both rear wheels are turning, perform procedures under "Neutral Adjustment" (page 8) for side(s) that wheel turns.

KOHLER ENGINE

FUEL


For best results, use only clean, fresh, regular grade unleaded gasoline with a pump sticker octane rating of 87 or higher. In countries using the Research method, it should be 90 octane minimum.

Unleaded is recommended since it leaves less combustion chamber deposits. Regular grade leaded gasoline may also be used; however, be aware that the combustion chamber and cylinder head will require more frequent service. See "Required Maintenance" on page 19.


Always use fresh gasoline. Fresh gasoline is blended for the season and reduces gum deposits which could clog the fuel system. Do not use gasoline left over from the previous season.

Do not add oil to the gasoline.

Do not overfill the fuel tank. Leave room for the fuel to expand.



WARNING



Explosive Fuel

Gasoline is extremely flammable, and its vapors can explode if ignited. Store gasoline only in approved containers, in unoccupied buildings, away from sparks or flames. Do not add gasoline while the engine is hot or running, or start the engine near spilled gasoline. Never use gasoline as a cleaning agent.

OIL

Using the proper type and weight crankcase oil is extremely important as is checking oil daily and changing oil and filter regularly. (See page 18.) Failure to use the correct oil or using dirty oil causes premature engine wear and failure.

Before each start, make sure the crankcase is filled with proper type and quantity of oil.

OIL TYPE

Use high-quality detergent oil of API (American Petroleum Institute) service class SF. Select the viscosity based on the air temperature at the time of operation as shown in the table.

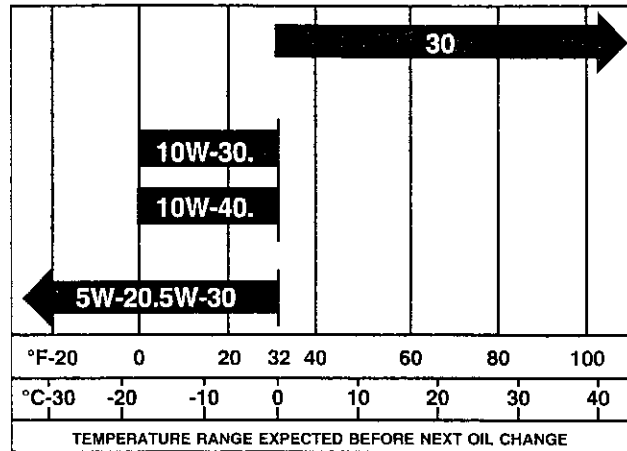
Straight 30-weight oil is recommended. If multiviscosity oil is used in temperatures above 32°F (0°C), be aware of the following:

- Increased oil consumption and a corresponding increase in combustion deposits requiring more frequent cylinder head service.
- More frequent oil changes are required.

CAUTION: Using other than service class SF oil or extending oil change intervals longer than recommended could cause engine damage which is not covered by the engine warranty.

A logo or symbol on oil containers identifies the API service class and SAE viscosity grade.

Recommended SAE Oil Viscosity Grades



CHECKING OIL

Check oil **BEFORE EACH USE** as follows:

1. Make sure the engine is stopped and resting on a level surface. Also make sure the engine is cool and the oil has had time to drain into the sump.
2. Before removing the oil fill cap or dipstick, clean the area around these parts to keep dirt and debris out of the engine.
3. Remove the dipstick and wipe oil off. Reinsert the dipstick and wipe oil off. Reinsert the dipstick and push it all the way down into the tube. Remove the dipstick and check the level.
4. Add the proper type of oil if the level is low. Bring the level up to, but not over, the "F" mark on the dipstick. Always check the level on the dipstick before adding more oil.

CAUTION: Do not operate the engine with the oil level below "L" mark or over "F" mark.

OIL SENTRY™



Some engines are equipped with optional Oil Sentry oil pressure monitor. If the oil pressure gets low, Oil Sentry will either shut down the engine or trigger a warning signal, depending on the application.

CAUTION: Make sure the oil level is checked **BEFORE EACH USE** and maintained up to the "F" mark on dipstick. This includes engines equipped with Oil Sentry.

CHANGING OIL

For a new engine, change oil after the first 5 hours of operation, and then as shown in the "Oil Change Intervals" table.

SECTION 7

KOHLER ENGINE (CONTINUED)

Oil Change Intervals

Temperature	Oil Type	Engine Type	Interval
ABOVE 32°F(0°C)	SAE 30	With Filter	50 hours*
		Without Filter	25 hours
	Multiviscosity	With Filter	25 hours
		Without Filter	25 hours
BELOW 32°F(0°C)	Multiviscosity	With Filter	50 hours
		Without Filter	25 hours

*25 hours for continuous and/or heavy duty operation.

Drain oil while the engine is warm from operation. The oil will flow freely and carry away more impurities. Drain oil as follows:

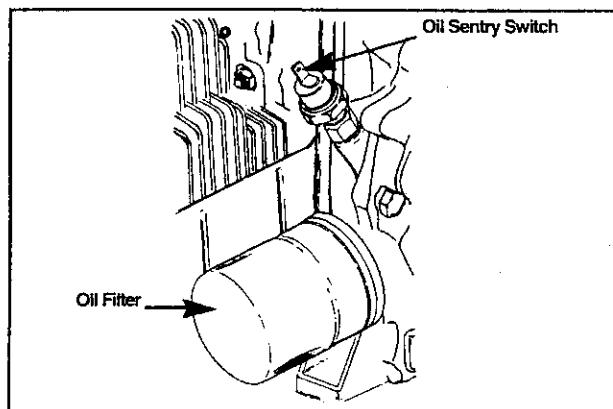
1. Remove the oil drain plug and oil fill cap. Tilt the engine slightly towards the oil drain to obtain better drainage.
2. Reinstall the drain plug. Make sure it is tightened securely.
3. Fill with new oil of the proper type to the "F" mark on the dipstick. Always check the level on the dipstick before adding more oil.
4. Reinstall the oil fill cap. Make sure it is tightened securely.

Make sure the engine is level when filling and checking oil.

OIL FILTER

All engines are equipped with an oil filter. Replace the oil filter in accordance with the "Oil Change Intervals" table on page 18. Always use a genuine Kohler oil filter and replace as follows:

1. Drain crankcase oil, then remove old filter.
2. Before installing replacement filter, apply a thin coating of oil on the surface of the rubber seal.
3. Turn filter clockwise until rubber seal contacts the filter adapter, then tighten filter an additional 2/3 to 3/4 turn.
4. Add an additional 1/2 pint of oil for the filter capacity. See SPECIFICATIONS" on page 25.
5. Start the engine and check for oil leakage.



OPERATING INSTRUCTIONS

ALSO READ THE OPERATING INSTRUCTIONS OF THE EQUIPMENT THIS ENGINE POWERS.

PRE-START CHECKLIST

- Check oil level. Add oil if low.
- Check fuel level. Add fuel if low.
- Check cooling air intake areas and external surfaces of engine. Make sure they are clean and unobstructed.
- Check that the air cleaner components and all shrouds, equipment covers, and guards are in place and securely fastened.
- Check that any clutches or transmissions are disengaged or placed in neutral. This is especially important on equipment with hydrostatic drive. The lever must be exactly in neutral to prevent resistance which could keep the engine from starting.

⚠ WARNING ⚠ Lethal Exhaust Gases

Engine exhaust gases contain poisonous carbon monoxide. Avoid inhaling fumes, and never run the engine in a closed building or confined area.

STARTING

1. Move the throttle control lever midway between the SLOW and FAST positions.
2. Move the choke control into the FULL CHOKE position.
3. Activate the starter switch. Release the switch as soon as the engine starts.

CAUTION: Do not crank the engine continuously for more than 10 seconds at a time. If the engine does not start, allow a 60-second cool-down period between starting attempts. Failure to follow these guidelines can burn out the starter motor.

CAUTION: If the engine develops sufficient speed to disengage the starter but does not keep running (a "false start"), the engine rotation must be allowed to come to a complete stop before attempting to restart the engine. If the starter is engaged while the flywheel is rotating, the starter pinion and flywheel ring gear may clash, resulting in damage to the starter.

If the starter does not turn the engine over, shut off starter immediately. Do not make further attempts to start the engine until the condition is corrected. Do not jump start using another battery (refer to "BATTERY" below.) See your Kohler Engine Service Dealer for trouble analysis.

4. Gradually return the choke control to the OFF position after the engine starts and warms up.

BATTERY

A 12-volt battery with a rating of approximately 32-amp hours is normally used. Refer to the operating instructions

KOHLER ENGINE (CONTINUED)

of the equipment this engine powers for specific information.

If the battery charge is not sufficient to turn over the engine, recharge the battery.

CAUTION: Do not attempt to jump start the engine with another battery. Starting with batteries larger than those recommended can burn out the starter motor.

Also see "CHARGING SYSTEM" on page 22.

OPERATING

Optional spark arrestor mufflers are available for your Kohler Engine Service Dealer. Check your local laws and statutes regarding engine spark arrestor muffler requirements.

CAUTION: Do not operate the engine continuously at angles exceeding 30° in any direction. Engine damage may result from lack of lubrication. Also refer to the operating instructions of the equipment this engine powers. It may have more stringent guidelines as to angle of operation due to equipment design.

CAUTION: If debris builds up on air intake screen and other intake areas, STOP the engine immediately and clean. Obstructed air intake areas cause engine damage due to overheating.

⚠ WARNING ⚠ Hot, Moving Parts

The engine and exhaust system get extremely hot from operation. Do not operate the equipment with covers, shrouds, or guards removed. Keep hands, feet, clothing, and hair away from all moving parts. Do not allow the equipment to run unattended.

CAUTION: Do not tamper with the governor setting to increase the maximum engine speed. Overspeed is hazardous and will void the warranty.

STOPPING

Turn the starter switch or keyswitch to the STOP or OFF position.

MAINTENANCE INSTRUCTIONS

These required maintenance procedures should be performed at the frequency stated in the table. They should also be included as part of any seasonal tune-up.

REQUIRED MAINTENANCE	FREQUENCY*
Clean Air Intake Screen	DAILY*
Check Oil Level	DAILY
Fill Fuel Tank	As required
Check/Replace Fuel Filter	As required
Change Oil and Filter	As Specified on Page 18
Service Foam Precleaner	25 Hrs.*
Clean Cooling Fins and External Surfaces	50 Hrs.
Check Paper Air Cleaner Element	100 Hrs.*
Check Spark Plugs	100 Hrs.
Have Valve-Tappet Clearance Checked**	500 Hrs.
Have Cylinder Heads Serviced**	500 Hrs.†
Have Starter Motor Drive Serviced**	500 Hrs.

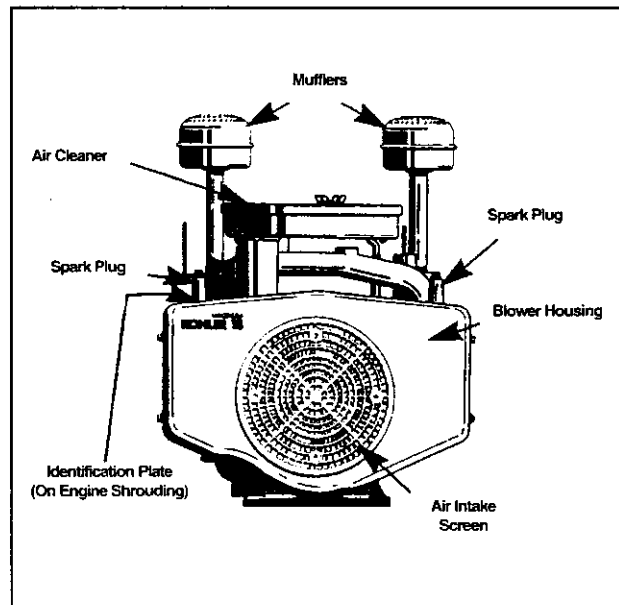
* Perform these maintenance procedures more frequently when the engine is operated under extremely dusty and dirty conditions.

** Have a Kohler Engine Service Dealer perform these services.

† 250 hours when leaded gasoline and/or multiviscosity oil is used.

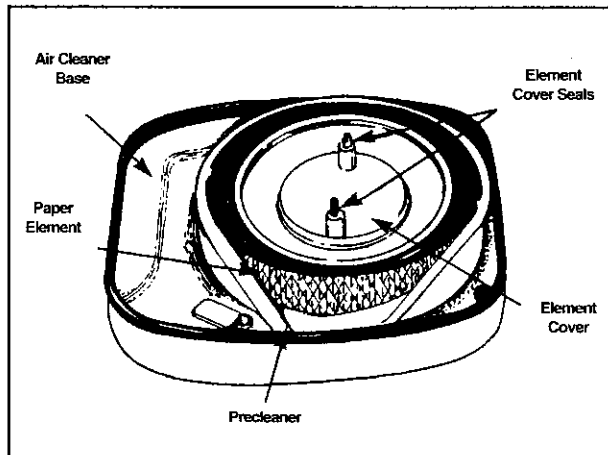
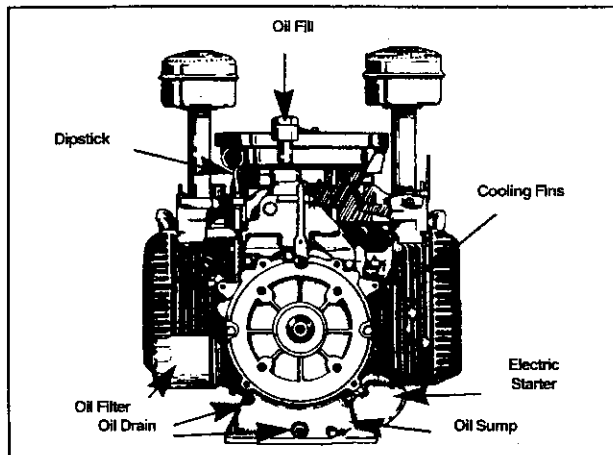
⚠ WARNING ⚠ Accidental Starts

Before servicing the engine or equipment, always remove the spark plug leads to prevent the engine from starting accidentally. Ground the leads to prevent sparks that could cause fires.



SECTION 7

KOHLER ENGINE (CONTINUED)



IGNITION SYSTEM

This engine is equipped with a dependable electronic ignition system. Other than periodically checking/replacing the spark plugs, no maintenance, timing, or adjustments are necessary or possible with this system. In the event starting problems should occur which are not corrected by replacing the spark plugs, see your Kohler Engine Service Dealer for trouble analysis.

CAUTION: Do not apply 12-V DC to kill terminal of ignition module as module will burn out.

See wiring diagram on page 22.

COOLING SYSTEM

Every 50 operating hours (more often under extremely dusty or dirty conditions) remove cooling shrouds and clean cooling fins. Also clean dust, dirt, and oil from external surfaces of engine which can cause improper cooling. Make sure cooling shrouds are reinstalled. Operating the engine without cooling shrouds will cause engine damage due to overheating.

AIR CLEANER

This engine is equipped with a high-capacity, dual-element air cleaner. An oiled foam precleaner surrounds a high-density paper element which efficiently removes dust and dirt from the air.

PRECLEANER

Every 25 operating hours (more often under extremely dusty or dirty conditions) wash and reoil the precleaner as follows:

1. Remove wing nuts, air cleaner cover, element cover seals and element cover.
2. Remove precleaner from paper element. Wash the precleaner in warm water with detergent.
3. Rinse the precleaner thoroughly until all traces of detergent are eliminated. Squeeze out excess water (do not wring). Air dry.
4. Saturate precleaner in clean, fresh engine oil and squeeze out excess oil.
5. Reinstall precleaner over paper element.

PAPER ELEMENT

Every 100 operating hours (more often under extremely dusty or dirty conditions) check the paper element. Clean or replace the element as necessary.

1. Remove the precleaner from paper element.
2. Gently tap the flat side of paper element to dislodge dirt. Do not wash the paper element or use pressurized air as this will damage the element. Replace a dirty, bent, or damaged element with a genuine Kohler element. Handle new elements carefully. Do not use if surfaces are bent or damaged.
3. With air cleaner disassembled, check the base. Make sure it is secured and not bent or damaged. Also check the element cover, seals, and breather tube for damage or improper fit. Replace all damaged components.

CAUTION: Damaged or loose components could allow unfiltered air into the engine causing premature wear and failure.

4. Reinstall the paper element, precleaner, element cover, element cover seals, air cleaner cover, and wing nuts. Tighten wing nuts 1/2 to 1 full turn after nuts contact cover. Do not overtighten.

SPARK PLUGS

Every 100 operating hours remove the spark plugs, check condition and reset gaps, or replace with new plugs as follows:

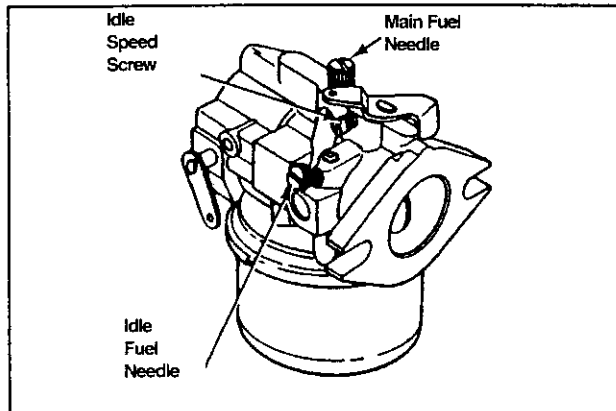
1. Before removing spark plugs, clean the area around base of plugs to keep dirt and debris out of engine.
2. Remove plugs and check condition. Incorrect spark plugs, worn or fouled plugs, cracked porcelain, or improper spark gaps can cause hard starting or engine misfire.
3. Do not clean the spark plugs in a machine using abrasive grit. Replace plugs when dirty or if reuse is questionable. See "SPECIFICATIONS" on page 25 for plug type.
4. Check gaps (0.025") using a wire feeler gauge. Adjust the gaps as necessary by carefully bending the ground electrode. Install the plugs and torque to 10-15 ft. lb.

KOHLER ENGINE (CONTINUED)

TO ADJUST CARBURETOR

1. Stop the engine. Turn the main fuel and idle fuel adjusting needles clockwise until they bottom *lightly*.

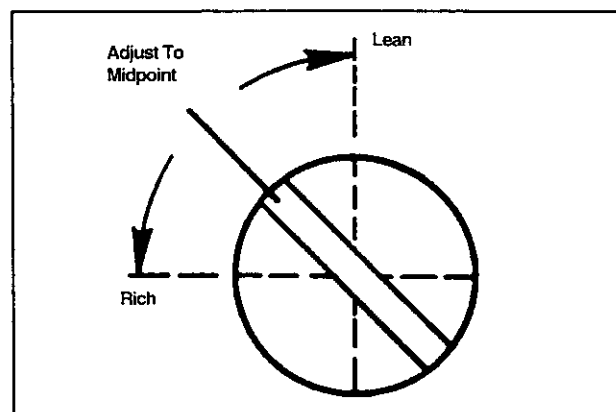
CAUTION: The ends of the main fuel and idle fuel adjusting needles are tapered to critical dimensions. Damage to needles and seats will result if the needles are forced.



2. **Preliminary Settings:** Turn the main fuel and idle fuel adjusting needles out from lightly bottomed as follows:
Main Fuel: 2 1/2 turns
Idle Fuel: 1 turn
3. Start the engine and run at half-throttle for 5-10 minutes to warm up. Engine must be warm before making final settings (steps 4-6).
4. **Final Setting — Main Fuel:** Place throttle in wide open position; and if possible, place engine under load. Turn main fuel adjusting needle out from preliminary setting until the engine speed decreases (rich). Note the position of the needle.

Now turn the adjusting needle in. The engine speed may increase, then it will decrease as the needle is turned in (lean). Note the position of the needle.

Set the adjusting needle midway between the rich and lean settings noted.



5. **Final Setting — Idle Fuel:** Place throttle into idle or

slow position. Set idle fuel adjusting needle using the same procedure as in step 4.

NOTE: To ensure best results when setting idle fuel mixture, the idle speed must not exceed 1500 RPM. Typical idle speed is 1200 RPM. See step 6*.

6. **Idle Speed Setting:** Place throttle into idle or slow position. Set idle speed to 1200 RPM (± 75 RPM) by turning the idle speed adjusting screw in or out. See your Kohler Engine Service Dealer for assistance with carburetor and idle speed adjustments.

*Refer to equipment manufacturer's instructions for specific idle speed settings.

FUEL FILTER

Some engines are equipped with an in-line fuel filter. Visually inspect the filter periodically and replace when dirty with a genuine Kohler filter.

STORAGE

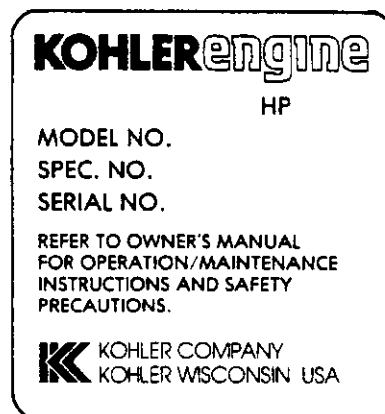
If the engine will be out of service for approximately two months or more, use the following storage procedure:

1. Change oil and filter when engine is still warm from operation. See "Changing Oil" and "Oil Filter" on pages 17 and 18.
2. Drain fuel tank and fuel system (or run engine until fuel tank and fuel system are empty).
3. Remove the spark plugs. Add one tablespoon of engine oil into each spark plug hole. Install plugs but do not connect plug leads. Crank the engine two or three revolutions.
4. Clean exterior surfaces of the engine. Spread a light film of oil over any exposed metal surfaces of engine to prevent rust.
5. Store the engine in a clean dry place.

PARTS ORDERING

The engine Specification, Model, and Serial numbers are required when ordering replacement parts from your Kohler Engine Service Dealer. These numbers are found on the identification plate which is affixed to the engine shrouding. Include letter suffixes if there are any.

Record your engine identification numbers on the identification plate illustration for future reference.



SECTION 7

KOHLER ENGINE (CONTINUED)

MAJOR REPAIR

Major repair information is available in Kohler Engine Service Manuals. However, major repair generally requires the attention of a trained mechanic and the use of special tools and equipment. Your Kohler Engine Service Dealer has the facilities, training, and genuine Kohler replacement parts necessary to perform the service. Check the Yellow Pages under ENGINES, GASOLINE.

MODEL DESIGNATION

Model M18S for example: M indicates MAGNUM engine. 18 indicates the horsepower. A letter suffix designates a specific version as follows:

Suffix	Designates
S	Electric Start
G	Tapered Crankshaft (Generator Application)
Q	Quiet Model

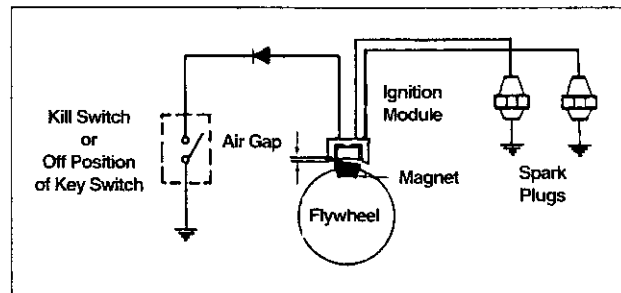
CAUTION: DO NOT CONNECT 12 V. TO IGNITION SYSTEM OR TO ANY WIRE CONNECTED TO IGNITION MODULE. The ignition system operates independently of the battery, starting, charging, and other auxiliary electrical systems. Connecting 12 V. to ignition module will cause damage which is not covered by the engine warranty.

*A Break-before-make type key switch is required to prevent damage to ignition module. Use Kohler key switch No. 25 099 02 or equivalent.

CHARGING SYSTEM

! WARNING !
**Dangerous Acid,
Explosive Gases**

Batteries contain sulphuric acid. Avoid contact with skin, eyes, and clothing. Batteries produce explosive hydrogen gas while being charged. Ventilate the area when charging the battery. Keep cigarettes, sparks, open flame, and other sources of ignition away from battery at all times. Keep batteries and acid out of the reach of children. Remove all jewelry when working on battery.



TROUBLESHOOTING

When a problem occurs, do not overlook the simple causes. For example, starting problems could be caused by an empty fuel tank. The table lists some common causes of troubles.

Do not attempt to service or replace major items or any items that call for special timing or adjustment procedures (governor, valves, etc.). Have this work done by your Kohler Engine Service Dealer.

Problem	No Fuel	Improper Fuel	Dirt In Fuel Line	Dirty Air Screen	Incorrect Oil Level	Engine Over-Loaded	Dirty Filter Element	Faulty Spark Plugs
Will not start	X		X			X	X	X
Hard starting	X	X	X			X	X	X
Stops suddenly	X		X	X	X	X	X	
Lacks power		X	X	X	X	X	X	X
Operates erratically		X	X	X		X	X	X
Knocks or pings		X		X		X		X
Skips or misfires		X	X	X			X	X
Backfires			X			X	X	X
Overheats			X	X	X	X	X	
High fuel consumption							X	X

KOHLER ENGINE COMMAND 22

MAINTENANCE SCHEDULE

These required maintenance procedures should be performed at the frequency stated in the table. They should also be included as part of any seasonal tune-up.

FREQUENCY	MAINTENANCE REQUIRED
Daily Or Before Starting Engine	<ul style="list-style-type: none"> • Fill fuel tank. • Check oil level. • Check air cleaner for dirty¹, loose, or damaged parts. • Check air intake and cooling areas, clean as necessary¹.
Every 25 Hours	<ul style="list-style-type: none"> • Service precleaner element¹.
Every 100 Hours	<ul style="list-style-type: none"> • Service air cleaner element¹. • Change oil. • Remove cooling shrouds and clean cooling areas¹. • Check oil cooler fins, clean as necessary (if equipped).
Every 200 Hours	<ul style="list-style-type: none"> • Change oil filter. • Check spark plug condition and gap.
Annually or Every 500 Hours	<ul style="list-style-type: none"> • Have starter motor drive serviced².

¹ Perform these maintenance procedures more frequently under extremely dusty, dirty conditions.

² Have a Kohler Engine Service Dealer perform these services.

CHECK OIL LEVEL

The importance of checking and maintaining the proper oil level in the crankcase cannot be overemphasized. Check oil **BEFORE EACH USE** as follows:

1. Make sure the engine is stopped, level, and is cool so the oil has had time to drain into the sump.
2. To keep dirt, grass clippings, etc., out of the engine, clean the area around the dipstick before removing it.
3. Unthread and remove the oil fill/dipstick; wipe oil off. Reinsert the dipstick into the tube and rest the oil fill cap on the tube. Do not thread the cap onto the tube.
4. Pull the dipstick out and check the oil level. The oil level should be up to, but not over, the "Full" mark on the dipstick. See Figure 1.

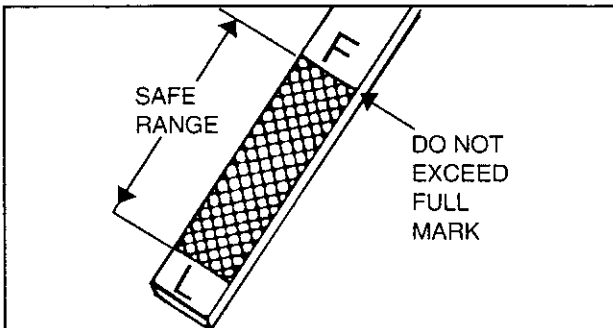


Figure 1. Oil Level Dipstick.

5. If the level is below the "Add" line, add oil of the proper type, up to the "Full" mark on the dipstick. (Refer to "Oil Type" on page 23). Always check the level with the dipstick before adding more oil.

NOTE: To prevent extensive engine wear or damage, always maintain the proper oil level in the crankcase. Never operate the engine with the oil below the "Add" line or over the "Full" mark on the dipstick.

Oil Type

Use high-quality detergent oil of **API (American Petroleum Institute) service class SF, SG or SH**. Select the viscosity based on the air temperature at the time of operation as shown in the following table.

Recommended SAE Viscosity Grades

	10W-30, 10W-40.								
	5W-20, 5W-30								
°F-20	0	20	32	40	60	80	100		
°C-30	-20	-10	0	10	20	30	40		
TEMPERATURE RANGE EXPECTED BEFORE NEXT OIL CHANGE									

NOTE: Using other than service class SF, SG or SH oil or extending oil change intervals longer than recommended can cause engine damage.

SECTION 7

KOHLER ENGINE COMMAND 22

(CONTINUED)



OIL SENTRY™

Some engines are equipped with an optional Oil Sentry oil pressure switch monitor. If the oil pressure decreases below an acceptable level, the Oil Sentry will either shut off the engine or activate a warning signal, depending on the application.

*NOTE — Make sure the oil level is checked BEFORE EACH USE and is maintained up to the "Full" mark on the dipstick. This includes engines equipped with Oil Sentry.

CHANGE OIL

For a new engine, change oil after the first 5 hours of operation. Thereafter, change oil after every 100 hours of operation.

For an overhauled engine or those rebuilt with a new short block, use 10W-30 - *weight* service class SF or SG oil for the first 5 hours of operation. Change the oil after this initial run-in period. Refill with service class SF, SG or SH oil as specified in the "Viscosity Grades" table on page 23.

Change the oil while the engine is still warm. The oil will flow freely and carry away more impurities. Make sure the engine is level when filling, checking, and changing the oil.

Change the oil as follows:

1. Remove one of the oil drain plugs and the oil fill cap/dipstick. Be sure to allow ample time for complete drainage.
2. Reinstall the drain plug. Make sure it is tightened to **13.6 N•m (10 ft. lb.)** torque.
3. Fill the crankcase with new oil of the proper type, to the "Full" mark on the dipstick. Refer to "Oil Type" on page 23. Always check the level with the dipstick before adding more oil.
4. Reinstall the oil fill cap and dipstick and tighten securely by turning to the right.

*NOTE — To prevent extensive engine wear or damage, always maintain the proper oil level in the crankcase. Never operate the engine with the oil level below the "Add" line or over the "Full" mark on the dipstick.

CHANGE OIL FILTER

Replace the oil filter **every other oil change (every 200 hours of operation)**.

Replace the oil as follows:

1. Drain the oil from the engine crankcase.
2. Allow the oil filter to drain.
3. Remove the old filter and wipe the filter adapter gasket surface.
4. Apply a thin coating of new oil to the rubber gasket on the replacement oil filter.
5. Install the replacement oil filter to the oil cooler. Turn the oil filter clockwise until the rubber gasket contacts the filter adapter, then tighten the filter an additional **1/2 turn**.
6. Reinstall the drain plug. Make sure it is tightened to **13.6 N•m (10 ft. lb.)** torque.
7. Fill the crankcase with new oil of the proper type, to the "Full" mark on the dipstick. Add 0.24 L (1/2 pint) of oil for the filter capacity.
8. Start the engine and check for oil leaks. Correct any leaks before placing the engine into service. Check oil level to be sure it is up to but not over the "Full" mark.

CLEAN AIR INTAKE/COOLING AREAS

To ensure 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.

Engine Speed

*NOTE — Do not tamper with the governor setting to increase the maximum engine speed. Overspeed is hazardous and will void the engine warranty. The maximum allowable high idle speed for these engines is 3750 RPM, no-load.

KOHLER ENGINE (CONTINUED) SPECIFICATIONS

	Model M18	Model M20	Model CV22	Model K582S
Power Rating @ 3600 RPM.....hp	18	20	22	23.5
kw	13.4	14.9	16.4	17.1
Displacementcu. in.	42.18	46.98	38.1	57.7
cc	691.3	769.8	624	946.0
Bore.....in.	3.12	3.12	3.03	3.50
mm	79.2	79.2	77	88.9
Strokein.	2.75	3.06	2.64	3.0
mm	69.85	78.0	67	76.2
Compression Ratio	6.0:1	6.6:1	8.5:1	
Approx. Weightlb.	130	130	90	187
kg	59.0	59.0	41	85.0
Oil Capacity*U.S. Quarts	1.5	1.5	3.75	4.0
L	1.4	1.4	2.1	3.8
Spark Plug TypeChampion® or Equiv.	RV15YC	RV15YC	RC12YC	RH 10
Spark Plug Gap.....in.	0.025	0.025	0.040	0.025
mm	0.65	0.65	1.02	0.65
Spark Plug Torqueft. lb.	10-15	10-15	18-22	10-15
Nm	14-20	14-20	24-30	14-20
Ignition Module Air Gap in.	0.008-0.012	0.008-0.012	N/A	.020
	(.010 Nominal)	(.010 Nominal)		
Breaker Point Gap on K582mm	0.200-0.300	0.200-0.300	N/A	.508
	(.250 Nominal)	(.250 Nominal)		

*For best results, fill to "F" mark on dipstick as opposed to adding a given quantity of oil. Always check level on dipstick before adding more oil.

SECTION 8

MOWER

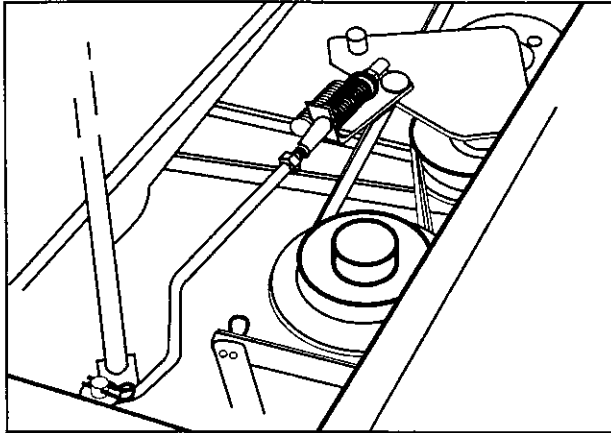
GENERAL

Refer to Usage Section of this manual for basic mowing information.

MOWER ADJUSTMENTS

Drive and Spindle Belts

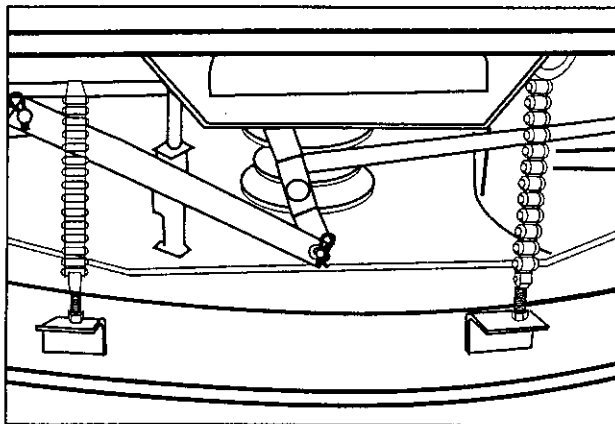
- Check that all belts seat in pulleys.
- Check that connecting arm spring height is 2 inches in the engaged position. Adjust turnbuckle if necessary.



Mower Drive and Spindle Belts

LEVEL MOWER

Side-to-side leveling of mower deck is accomplished by lowering mower and adjusting threaded eye bolts at front of deck. Park mower on level surface and place a level across front of mower deck or position mower blade tips side-to-side. Adjust eye bolts so that mower is level, or distance between right and left blade tip ends and surface is the same.

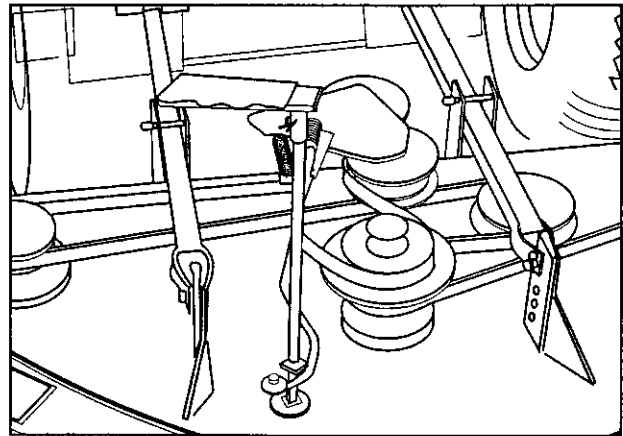


Side-To-Side Level Adjustment

Mower level front-to-rear is adjusted by changing stabilizer bar positions. Always adjust each side evenly. Adjust at rear or middle of stabilizer bar by removing hair pin cotters and clevis pins and raising or lowering stabilizer bar position, changing mower deck pitch.

To mow in 2½" to 4" cutting height range, leave as shipped. For cutting below 2½", it may be necessary to lower rear of deck.

NOTE: NEVER allow rear of deck to be lower than front unless cutting height is in fully raised position (6"), and you are mowing tall weeds. This is the ONLY exception and will happen automatically with deck at fully raised position.



Front-To-Back Level Adjustment

BLADE MAINTENANCE



CAUTION



Sharp edges of mower blades can cut you during blade maintenance or adjustment. Use suitable covering over cutting edges of blade to prevent bodily harm.

To obtain optimum mowing results, mower blades should be kept sharp and well balanced. To sharpen blades, simply lift front of machine and support it with jack stands or floor jack. Remove blade attaching bolts and washers from end of spindles and remove blades. A short piece of 2 x 4 lumber may be placed between side of mower deck and blade to "lock" it in position when loosening attaching hardware.

File or grind blades evenly. Take care to retain angle of original cutting edge. Blade balance can be checked on an inexpensive blade balancer, available at most hardware stores.

Reinstall blades with lift area (turned up section) facing mower deck. Tighten blade attaching bolts to a torque of 80-100 ft. lbs. (112-140 nm).

UNDERSIDE CLEANING

It is of vital importance to clean the underside of deck frequently. Accumulation of matter clippings seriously impairs mower's ability to "lift" grass blades into cutting position and discharge clippings evenly. Matted grass clogging underside of mower is often cause of uneven cutting.

MOWER (CONTINUED)

MOWER DRIVE BELT REPLACEMENT

Be sure to purchase genuine Dixie Chopper belts for replacement purposes as these belts are designed specifically for each application.

TO REMOVE MOWER DRIVE BELT:

- Remove connecting arm bracket at triangle plate. This is done by removing hair pin cotter and washer from pin on triangle plate.
- Remove belt from top groove of center deck pulley.
- Remove triangle plate from its stand at the rear of the mower deck.
- Loosen engine belt guard at mounting bolts near the engine at the rear of the machine, and remove belt from double groove engine pulley.
- Remove flat idler pulley from triangle plate allowing belt removal. Note location of shim under pulley.

MOWER SPINDLE BELT REPLACEMENT

Be sure to purchase genuine Dixie Chopper belts for replacement purposes as these belts are designed specifically for each application.

TO REMOVE MOWER SPINDLE BELT:

- Remove connecting arm bracket at triangle plate.
- Remove engine to deck belt from top groove of center spindle.
- Make note of wrapping procedure of belt to insure placement of new belt.
- Grasp belts on both sides of either outboard deck spindle and pull belt away from pulley until it is possible to remove belt. Once this is done remove from remaining pulleys and discard.

**(FOR MOWER BELT INSTALLATION,
REVERSE SEQUENCE OF REMOVAL
PROCEDURES.)**

CLEANING AND STORAGE

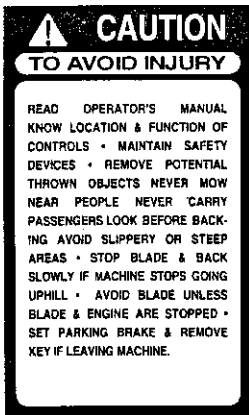
After 30 days, painted surfaces may be waxed to protect the luster of the original finish. Machine should be washed regularly with a mild automotive type detergent and water.* Exposed bare metal surfaces should be coated with oil or a light coating of grease to prevent rust until permanent repairs can be made. Aerosol cans of touch up paint are available through your Authorized Dealer.

When the machine will not be used for an extended period of time, the following steps will help insure minimum

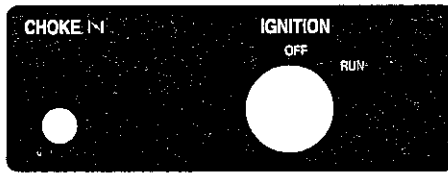
difficulty when unit is returned to service:

- Perform required maintenance steps called for in the "Maintenance Checklist".
- Check tires for proper inflation.
- Wash machine and repaint all bare metal surfaces.
- Start machine and engage mower for approximately 1 minute to remove excess water from belts and pulleys. Let engine run out of gas. As gasoline grows old, it becomes less volatile and forms harmful gum and varnish deposits in carburetor and fuel system. **DO NOT STORE GASOLINE FOR MORE THAN 2 MONTHS.**
- If applicable, charge battery. In temperatures lower than 40°F (4°C) a battery will maintain a charge for about 60 days. In temperatures above 40°F (4°C) water level should be checked and battery "trickle charge" every 30 days (more often in higher temperatures). Battery must be fully charged to prevent freezing and internal damage in weather below 32°F (0°C).
- Remove key from machine.
- Cover seat switch and solenoid from direct water spray.

SECTION 9



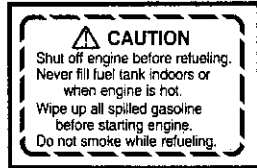
1. Fender Caution



2. Ignition/Choke



3. Deck Danger



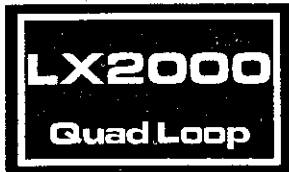
4. Fuel Caution



12. 42" Cut



5. Parking Brake



6. LX2000 Front Panel



7. LX2001 Front Panel



13. 50" Cut



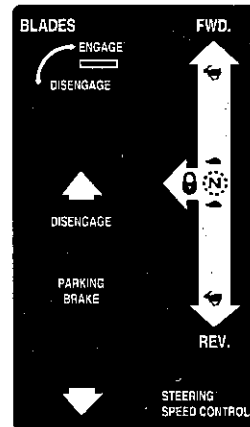
14. 60" Cut



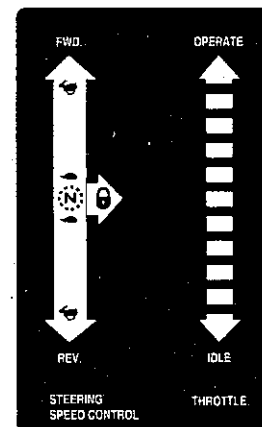
8. LX2400 Front Panel



9. LX2401 Front Panel



15. Brake and Steering



16. Throttle



10. X2000 Front Panel



11. X2400 Front Panel



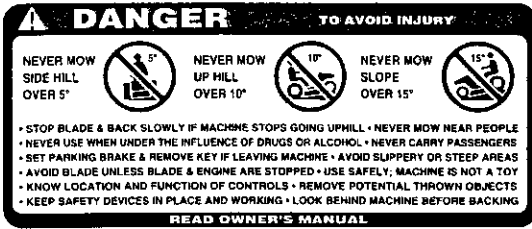
17. Fender



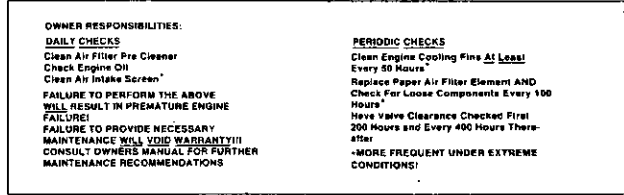
18. Floor Pan

DECALS

SECTION 9



19. Hillside Caution



20. Air Filter Decal



21. Made in USA



22. Warranty Notice



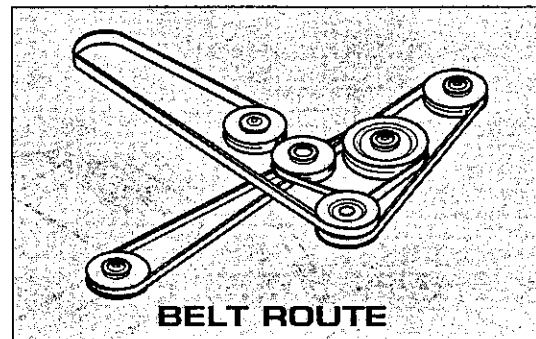
23. X2001 Front Panel



24. X2401 Front Panel

ITEM NO.	DESCRIPTION	PART NO.
1.	Fender Caution.....	30585
2.	Ignition/Choke.....	20272-87
3.	Deck Danger.....	30229
4.	Fuel Caution.....	40118
5.	Parking Brake.....	65406
6.	LX2000 Front Panel.....	67402
7.	LX2001 Front Panel.....	67404
8.	LX2400 Front Panel.....	65404
9.	LX2401 Front Panel.....	LX2401-D
10.	X2000 Front Panel.....	65403
11.	X2400 Front Panel.....	65404
12.	42 Inch Cut.....	65407
13.	50 Inch Cut.....	65408
14.	60 Inch Cut.....	65409
15.	Brake and Steering.....	40202-87
16.	Throttle.....	40203-87
17.	Fender.....	30571
18.	Floor Pan.....	30573
19.	Hillside Caution.....	30588
20.	Air Filter Decal.....	30589
21.	Made in USA.....	30590
22.	Warranty Notice.....	30591
23.	X2001 Front Panel.....	65415
24.	X2401 Front Panel.....	65414
25.	Belt Route Decal.....	65422
26.	Belt Info Decal.....	65423
27.	Decal Set.....	30500

Must identify model and deck size

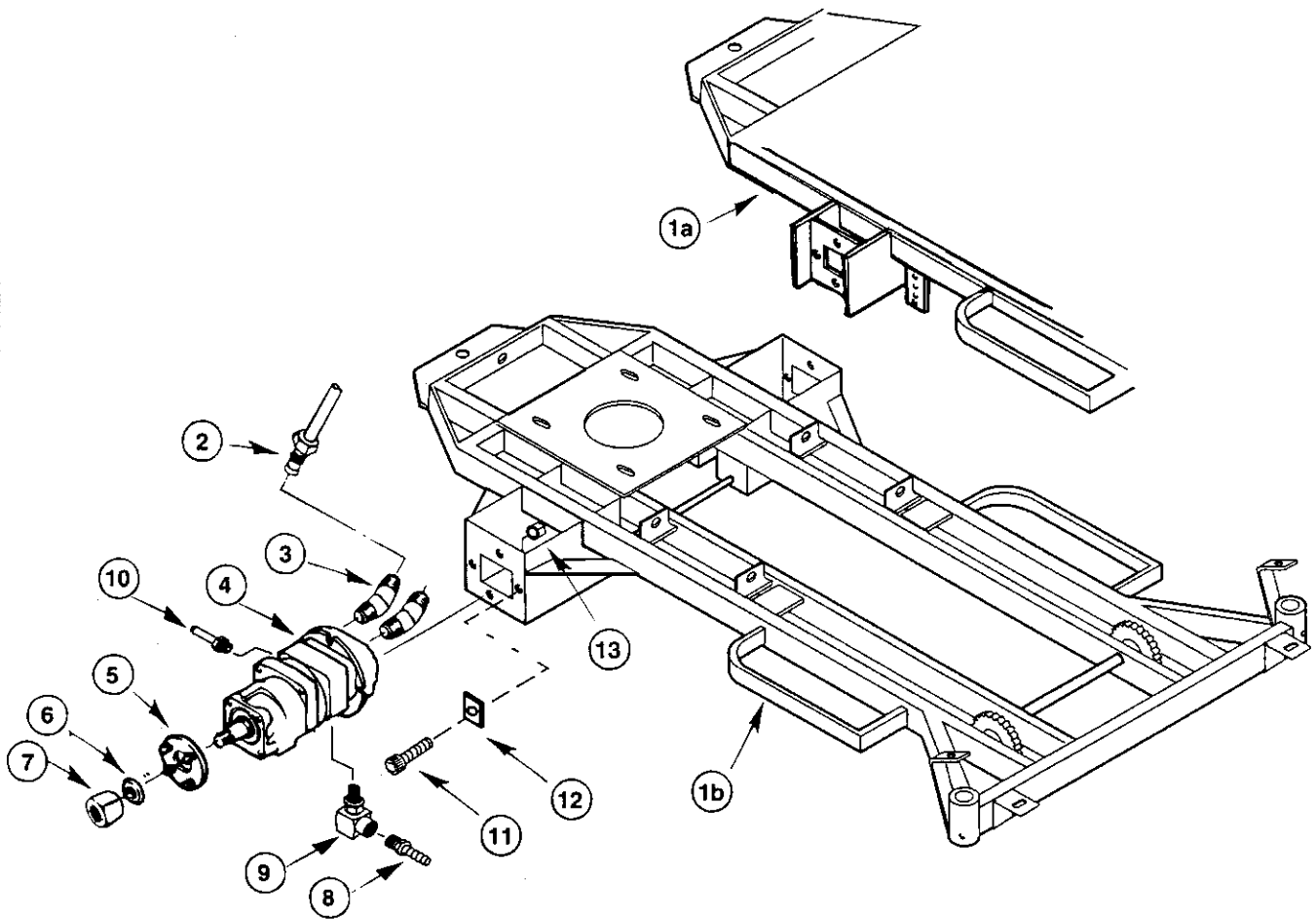
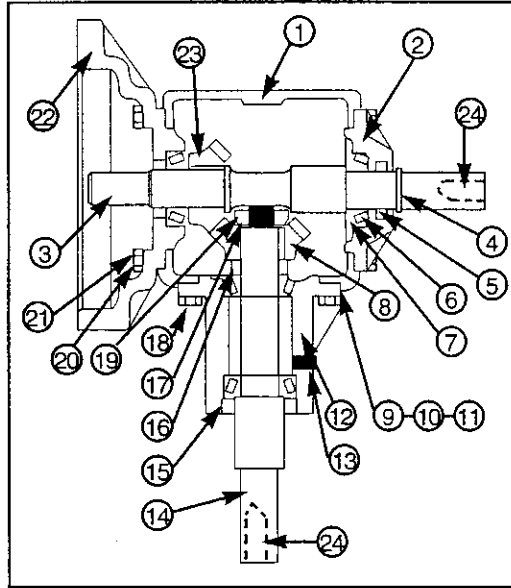


25. Belt Route Decal

BELTS			
MODEL	ENG. - TRANS.	ENG. - DECK	DECK SPINDLE
42"	20256	65080	63203
	B - 38	B - 80	A - 89
50"	20256	30204	30203
	B - 38	B - 78	B - 103
60"	20256	65080	30236 - 0
	B - 38	B - 80	B - 128

26. Belt Info Decal

SECTION 9



GEAR BOX – KOHLER

SECTION 9

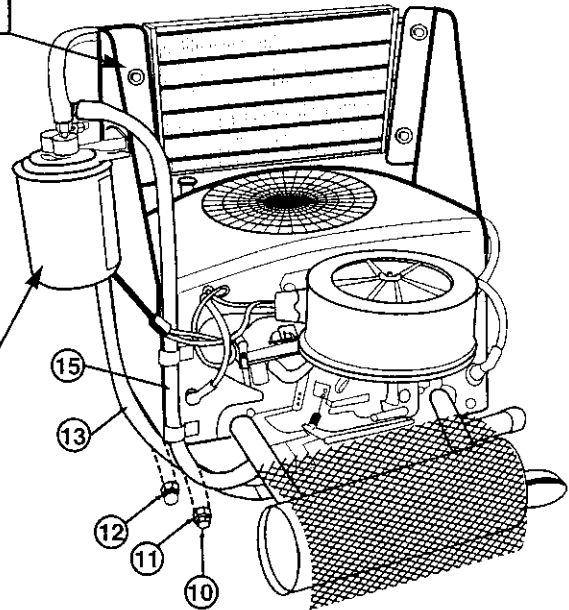
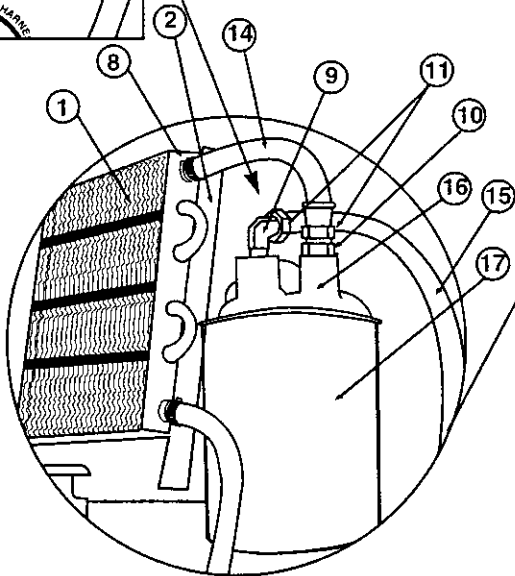
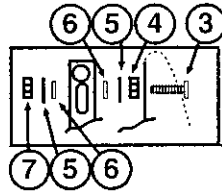
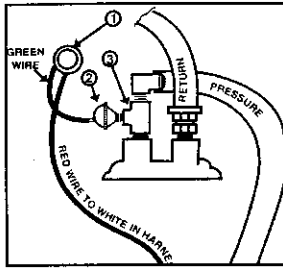
Complete Gear Box – Kohler 24 HP67201

ITEM NO.	DESCRIPTION	PART NO.
1.	Housing	20302
2.	Cap	20301
3.	Shaft	20312-C24
4.	Retaining Ring	20311
5.	Seal Front and Rear	20318
6.	Bearing Cone.....	10207
7.	Bearing Race.....	10206
8.	Gear Set	20303
9.	Gasket (.015).....	20321-15
10.	Gasket (.005).....	20321-05
11.	Gasket (.003).....	20321-03
12.	Cap	054395
13.	Pipe Plug (Solid).....	20315
14.	Shaft	20313-A-C
15.	Seal Bottom	20319-C
16.	Spacer	452060
17.	Lockwasher	411587
18.	Sems Cap Screw.....	410076
19.	Locknut	411595
20.	Lockwasher	412262
21.	Hex Head Cap Screw	412270
22.	Bell Cap	054379
	24 HP Kohler	67202
23.	Gear Set	20303
24.	Key ¼ sq x ¾ - Hard	20314
25.	Pipe Plug (vented).....	60130
	Vent	20316

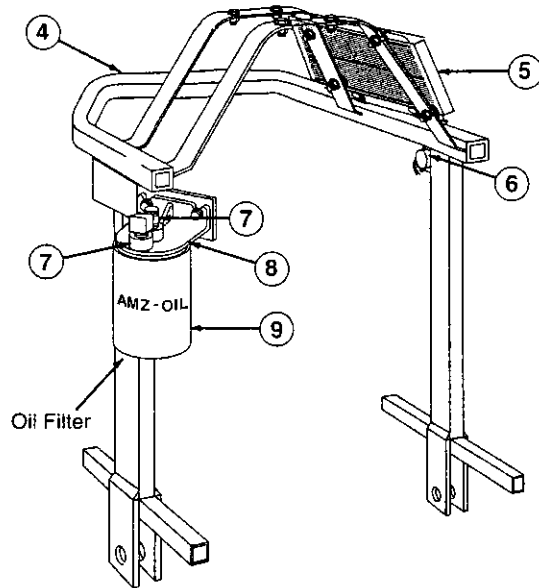
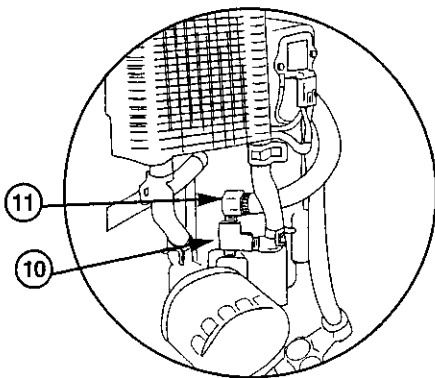
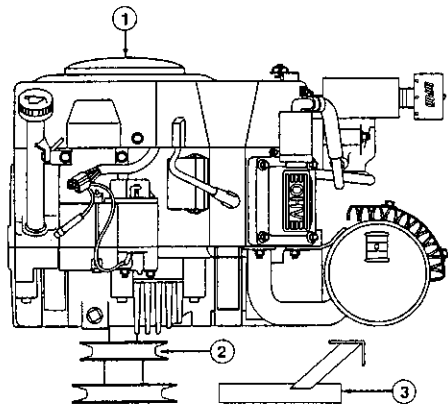
MAIN FRAME X AND LX MODELS

ITEM NO.	DESCRIPTION	PART NO.	ITEM NO.	DESCRIPTION	PART NO.
1a.	Main Frame LX-Model	67100	11.	Wheel Motor Bolt	B-183
1b.	Main Frame X-Model	65100	12.	Wheel Motor Square Washer.....	W-137
2.	Hydraulic Line Right		13.	Wheel Motor Nut	N-107
	X-Model	65010			
	Hydraulic Line Left				
	X- Model	65011			
	Hydraulic Line (Long Rubber)				
	LX-Model Right.....	67010			
	Hydraulic Line (Short Rubber)				
	LX-Model Left	67011			
3.	Fitting 45° LX-Model.....	87103			
	Fitting – Straight X-Model	87104			
4.	Wheel Motor (HB Series) 1" Axle	65014			
	Wheel Motor (HB Series) 1¼" Axle	67114			
5.	Wheel Hub 1" ID.....	65002			
	Wheel Hub 1¼" ID.....	67002			
6.	Cupped Washer 1" Axle	W-132			
	Cupped Washer 1¼" Axle	W-137			
7.	Solid Nut 1" Axle.....	N-148			
	Solid Nut 1¼" Axle	N-151			
8.	¾" Barbed Fitting	67014			
9.	¾" 90° Swivel.....	67017			
10.	¾" Straight Nipple	67016			

SECTION 9



MAGNUM 20 ENGINE



COMMAND 20 ENGINE

ENGINES X AND LX MODELS

SECTION 9

Kohler Magnum 20 Engine40215-K20V

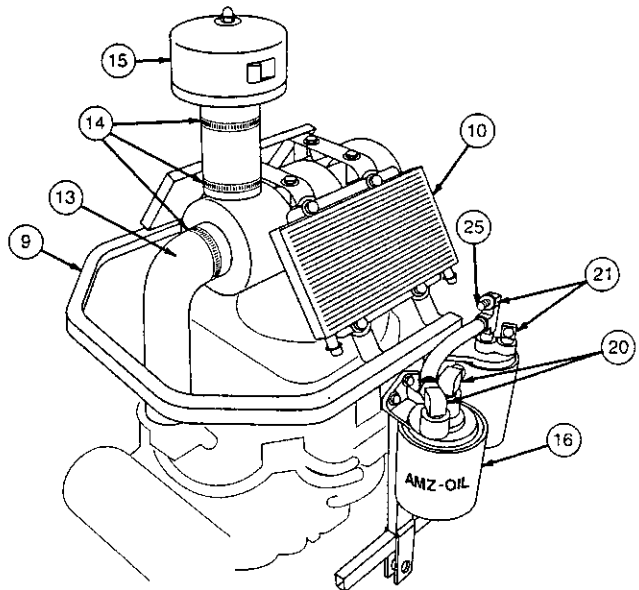
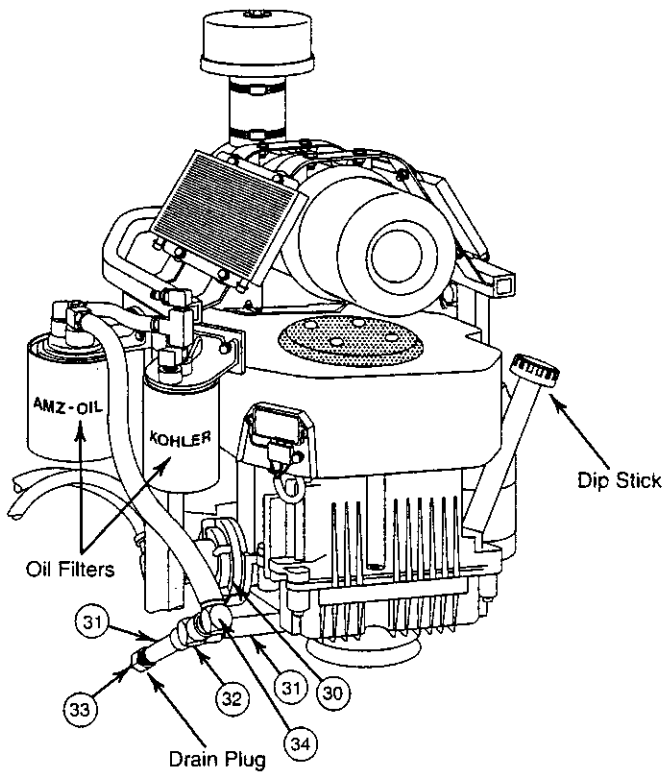
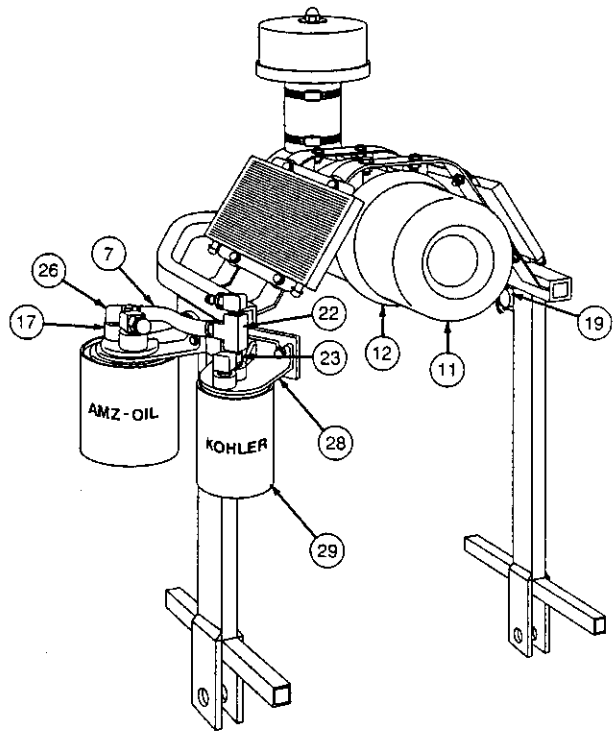
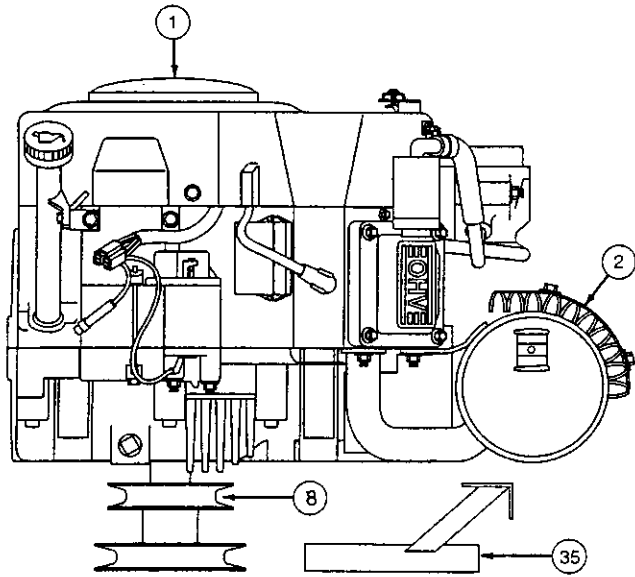
ITEM NO.	DESCRIPTION	PART NO.
1.	Cooler	60103
2.	Cooler BRKT LH.....	67121
	Cooler BRKT RH	67120
3.	1/16 x 1 1/4 Bolt.....	B-105
4.	1/8 Nut	N-108
5.	3/8 Fender Wash.....	W-106
6.	1/8 Rubber Wash	W-103
7.	1/8 Nylon Lock Nut.....	N-107
8.	Hose Clamp.....	60124
9.	1/4 to 3/4 Flare	60113
10.	1/4 to 3/4 Straight	60114
11.	Barbed Swivel.....	60116
12.	3/4 Male DIP to Barb.....	87113
13.	3/4 Hose 25 in	60109-72
14.	3/4 Hose 8 in	60109-72
15.	3/4 Hose 27 1/2 in.....	65515
16.	Filter Base	60122

ITEM NO.	DESCRIPTION	PART NO.
1.	Low Oil Horn.....	60117
2.	Sending Unit.....	48-099-07
3.	1/2" Street T	67118
	Muffler.....	40115K
	Muffler Guard.....	40136-0S
	Belt Guard	Call for P.N.
	Cooler Bolt Plastic Caps.....	65402

Kohler Command 20 Engine

ITEM NO.	DESCRIPTION	PART NO.
1.	Kohler Engine CV20.....	40215-C20V
2.	Engine Pulley.....	85216
3.	Belt Guard.....	40217
4.	Engine Guard.....	70100-20
5.	Hydro Cooler.....	60103-L
6.	Low Oil Horn.....	60117
7.	90° Fitting 1/4 MP-3/4 MS.....	60113
8.	Filter Mounting Base.....	60122
9.	Amsoil 1-Micron Filter.....	60119
10.	1/4 Street "T".....	67022
11.	90° 1/4 MP x 3/4 Barb.....	67019

SECTION 9



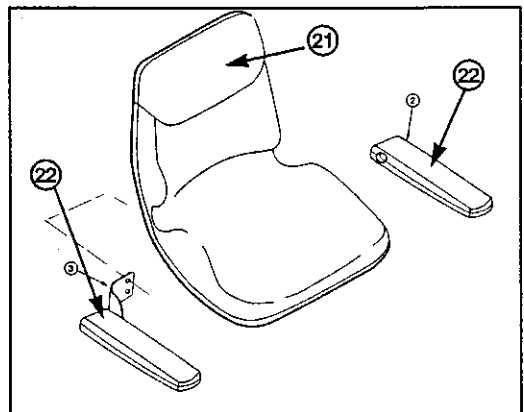
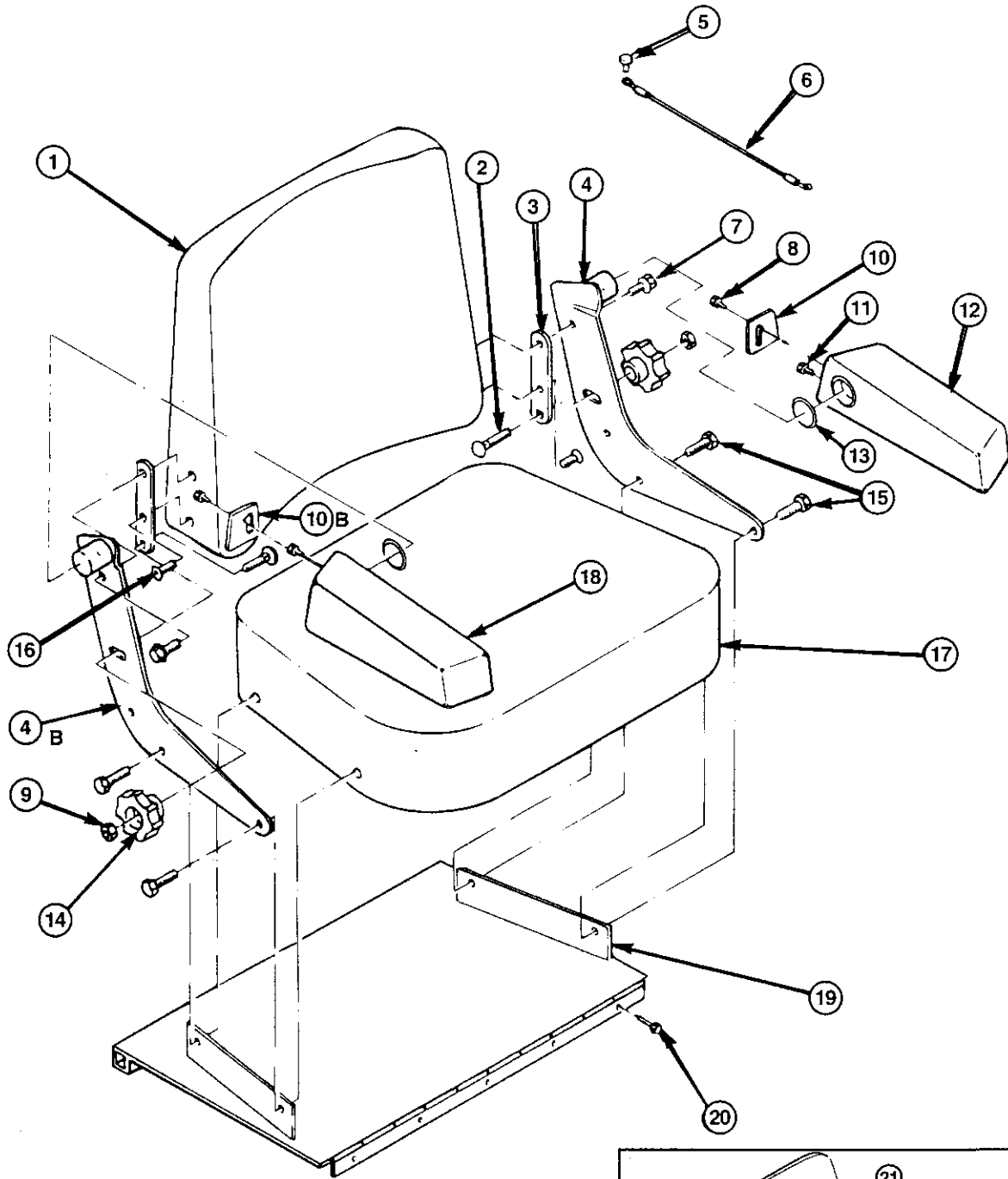
COMMAND ENGINES

Kohler Command 22 Engine.....40215-K22V

SECTION 9

ITEM NO.	DESCRIPTION	PART NO.
1.	Kohler Command 22 HP Engine	40215-K22V
2.	Muffler Guard	40136-os
3.	3/8" MP Nipple 5" L	10230
4.	3/8" MP "T"	60102
5.	3/8" MP Cap	10231
6.	90° Fitting 3/8" MP-3/8" Barb	60125
7.	3/8" ID Black Oil Line	60109
8.	Engine Pulley	85216
9.	Engine Guard	70100-22
10.	Oil & Trans Cooler	60103-L
11.	Donaldson Air Cleaner	90121
11A.	Filter Element	90122
12.	Donaldson Band	90123
13.	Air Cleaner Hose	90124
14.	2-1/2" Hose Clamps	90125
15.	Turbo Precleaner	90115
16.	Amzoil Filter	60119
17.	Amzoil Filter Base	60122
18.	Filter Guard (not shown)	67317
19.	Oil Horn	60117
20.	90° Fitting 1/8" MP-3/8" 45° MS	60113
21.	90° Fitting 1/4" M -1/4" FP	65035
22.	1/4" FE "T"	65037
23.	1/4" Male Nipple 1 1/2" Long	65038
24.	Straight Fitting 45° FE SW-3/8" Barb	60116
25.	Straight Fitting 1/4" Male Pipe-3/8" Barb	67014
26.	Green Spring Hose Clamp	67013
27.	#6 Adj Hose Clamp	60124
28.	Filter Mount	25-029-01
29.	Filter (Kohler)	277233
30.	Filter Adapter	24-029-02
31.	3/8" x 4" Nipple	10230
32.	3/8" "T" Fitting	60102
33.	3/8" Cap	10231
34.	3/8" 90° Elbow	6012535
35.	Belt Guard	40217

SECTION 9



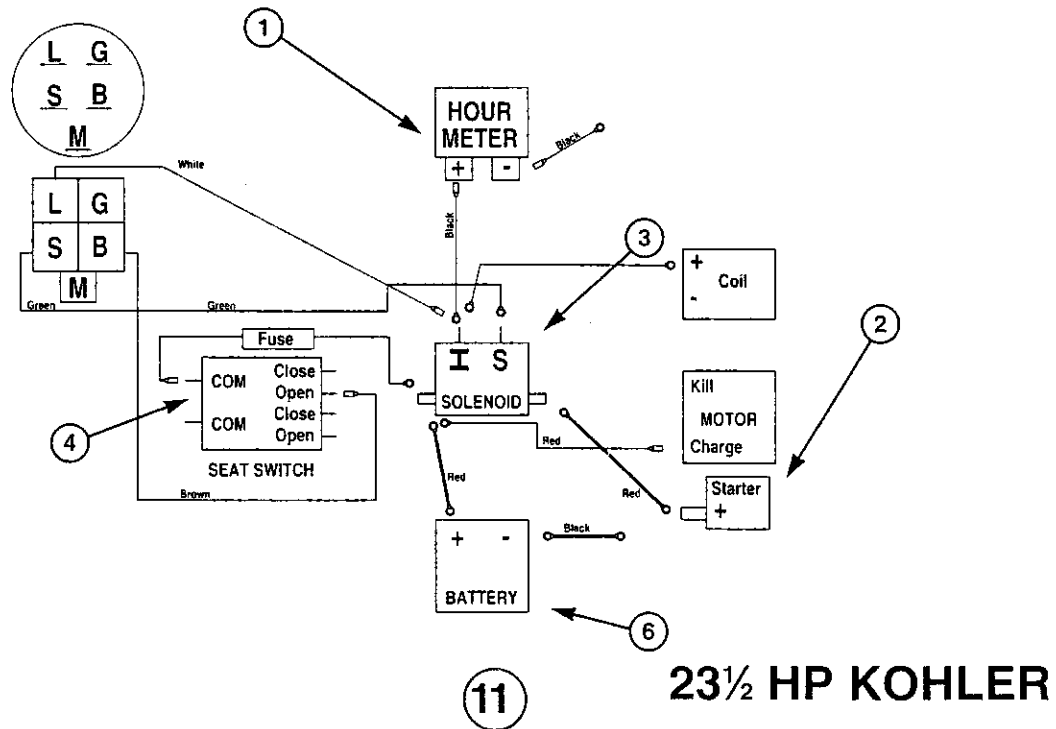
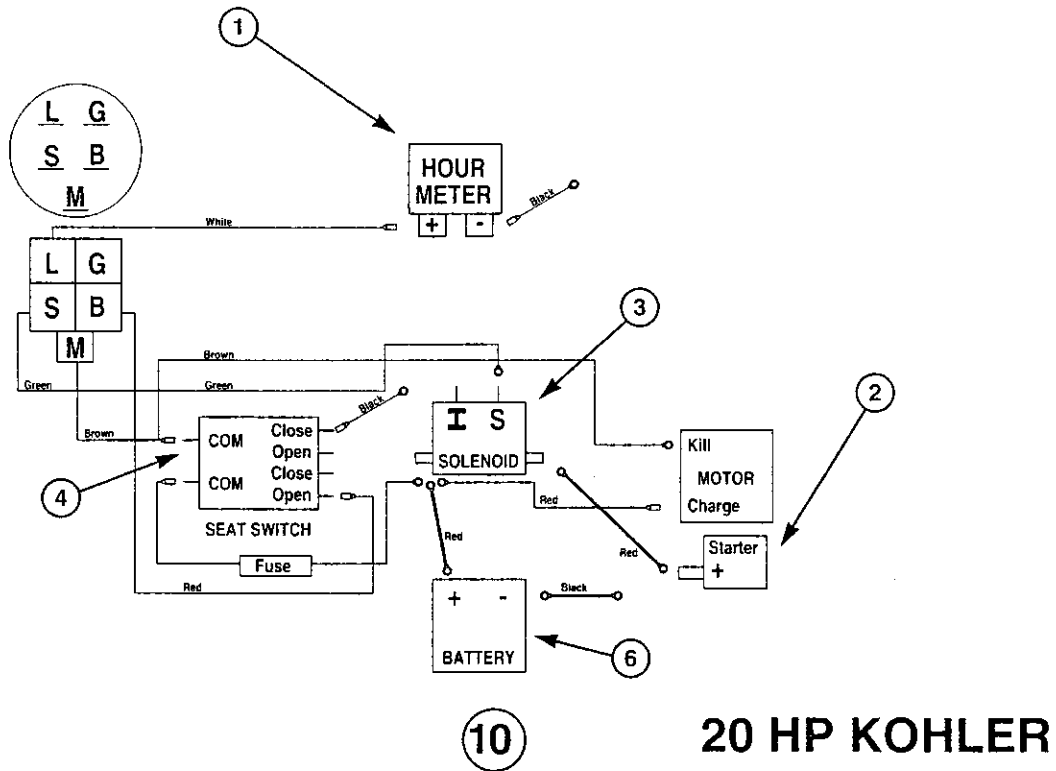
SEAT

Complete Seat Assembly40100-W

SECTION 9

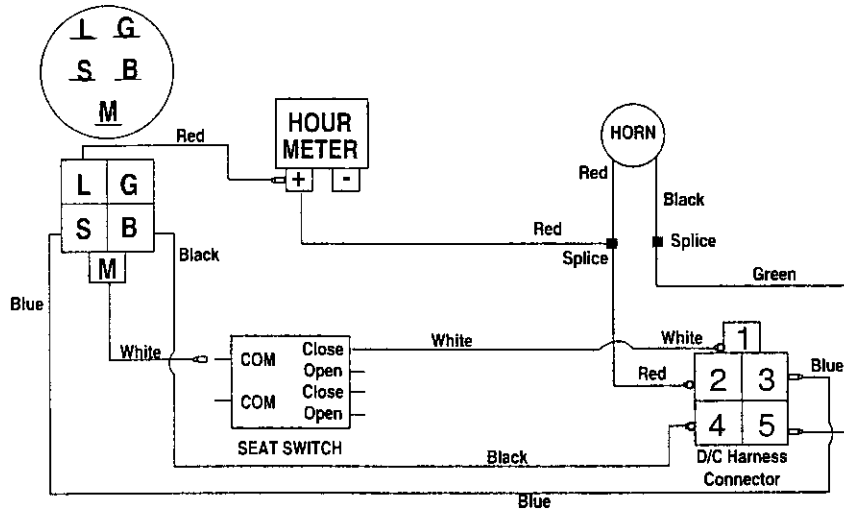
ITEM NO.	DESCRIPTION	PART NO.
1.	Seat Back	40101
2.	Carriage Bolt $\frac{3}{8}$ -16 x $1\frac{1}{2}$	B-112
3.	Lumbar Friction Plate	40223
4.	Back Support R.H.	40227
4B.	Back Support L.H.	40226
5.	Bolt $\frac{1}{4}$ -20 x $\frac{1}{2}$	B-101
6.	Seat Cable	40218
7.	Hex Bolt $\frac{3}{8}$ -16 x $\frac{3}{4}$	B-110
8.	Sheet Metal Screw	S-102
9.	$\frac{3}{8}$ Lock Nut	40106
10.	Arm Rest Cover Plate L.H.	40225
10B.	Arm Rest Cover Plate R.H.	40224
11.	SK Hd. Screw $\frac{1}{4}$ -20 x $\frac{1}{2}$	B-134
12.	Arm Rest L.H.	40103
14.	Lumbar Control Knob	40105
15.	Hex Bolt $\frac{1}{2}$ -13 x $1\frac{1}{4}$	B-117
16.	Phillips Hd. Screw $\frac{3}{8}$ -16 x $\frac{3}{4}$	B-133
17.	Seat Bottom	40102
18.	Arm Rest R.H.	40104
19A.	Seat Mounting Bracket LX.....	67401
19B.	Seat Mounting Bracket X.....	65401
20.	Hex bolt $\frac{1}{4}$ -20 x $\frac{1}{2}$	B-101
21.	LX Seat.....	64100-S
22.	LX Arm Rest Kit Only.....	64101

SECTION 9

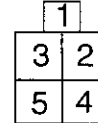


ELECTRICAL SYSTEM

SECTION 9



Kohler Engine Harness Connector



Kohler Harness Wires

1. White (kill)
2. Red (charge)
3. Blue (start)
4. Fused wire (to hot post on starter)
5. Green (from oil sending unit)

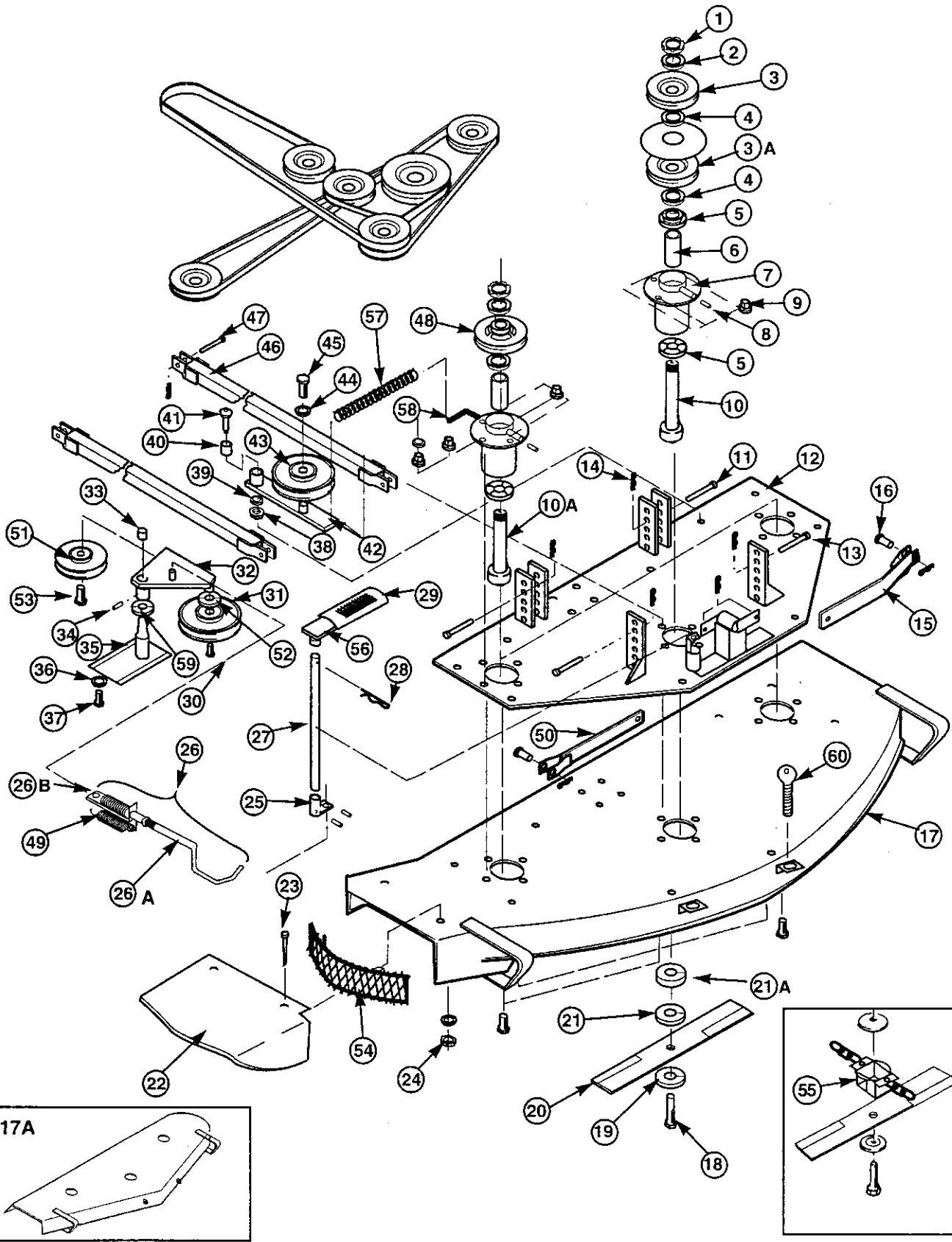
NOTES: D/C Harness Connector and Kohler Harness Connector plug together.

22 HP KOHLER

ITEM NO.	DESCRIPTION	PART NO.
1.	Hour Meter.....	20246
1A.	Hour Meter/Tach.....	20246-T
2.	Ignition Switch.....	20245
3.	Starter Solenoid.....	20253
4.	Safety Switch.....	20244
5.	3/4 Hose Clamp.....	60124
6.	Battery.....	20225
7.	Battery Strap.....	20228
8.	Battery Cable Boot.....	20225-B
9.	Fuse Holder.....	20254
10.	20 HP Kohler Harness.....	20251-K
	23 1/2 HP Kohler Harness.....	20251-0
	22 HP Kohler Harness.....	65522
	Battery Cable Grd. (12").....	20226-B
	Battery Cable.....	20228
	Battery Cable Pos. (52").....	20227
	Battery Cable Starter (32").....	20226-K
	Battery Cable (14").....	20226-R
	Tach Bracket.....	68247

SECTION 9

50" MOWER DECK 50" HEAVY DUTY MOWER DECK



50" MOWER DECK 50" HEAVY DUTY MOWER DECK

SECTION 9

Complete Deck (Cast Pulleys).....30200-50

ITEM NO.	DESCRIPTION	PART NO.
1.	Castle Nut 1 in.....	N-142
2.	Lock Washer.....	W-120
3.	Single Cast Pulley	30220-50V
3A.	Single Steel Pulley.....	63221
	Single Cast Pulley	30220-50
4.	1" Flat Washer	W131
5.	Mower Bearing	30218*
6.	Spacer	30219
7.	Mower Hub	30241
8.	Grease Fitting 90°	F-101
9.	Hex Nut 3/8-16.....	N-108
10.	Mower Shaft (Long Center)	30217-L
10A.	Mower Shaft	30217
11.	Clevis Pin.....	P-103
12.	Top Plate	30201
13.	Clevis Pin 3/8 x 1 1/4.....	P-102
14.	Hairpin Cotter	30213
15.	L. H. Scissor Link.....	30232
16.	Clevis Pin 5/16 x 1.....	P-101
17.	50" Mower Deck	30100-50
17A.	50" Heavy Duty Deck.....	30100-H50
18.	Hex Bolt 3/8-18x 2 1/2.....	B-121
	Hex Bolt 3/8-18 x 3.....	B121-L
19.	Cupped Blade Washer	W-100
20.	Mower Blade 17"	30227
21.	Fiber Washer.....	W-101
21A.	1/2" Spacer.....	30242
22.	Discharge Chute.....	30226
23.	Carriage Bolt 3/8-18 x 3/4.....	B-104
24.	Hex Nut 3/8-18	N-103
25.	Cam Weldment.....	30210
26.	Rod Assembly	30209-1
26A.	Rod.....	30209-R
26B.	L. Bracket	30209-B
27.	Engaging Shaft 14".....	30211
28.	Hairpin Cotter	30213
29.	Engaging Handle Grip	20258
30.	Hex Bolt 1/2-13 x 3/4.....	B-115
31.	Flat Idler Pulley.....	30224
32.	Belt Tensioning Swing Arm	30236

ITEM NO.	DESCRIPTION	PART NO.
33.	Bronze Bushing	30206
34.	Grease Fitting.....	F-100
35.	Belt Tensioning Pivot Stand	30235
36.	Hex Nut 1/4-20 x 3/4.....	N-102
37.	Hex Bolt 1/4-20 x 3/4.....	B-102
38.	Ser. Flange Hex Nut 3/8-16	N-108
39.	3/8 Flat Washer	W-104
40.	Bronze Bushing	20276
41.	Shoulder Bolt 1/2-13 x 1 1/4	B-118-G
42.	Belt Idler Arm	30223-87
43.	Flat Idler Pulley	30224
44.	1/2 Flat Washer	W-109
45.	Hex Bolt 1/2-13 x 1 1/4	B-117
46.	Stabilizer Bar.....	30214-86
47.	Clevis Pin 3/8 x 1 1/4	P-102
48.	Single Cast Pulley	30220-50
	Single Steel Pulley	63221
49.	Spring.....	30207-S
49A.	Return Spring	20217
50.	Right Hand Scissor Link	30231
51.	"V" Idler Pulley.....	30234
52.	1/2" Lock Washer	W-111
53.	Hex Bolt 3/8-11 x 1	B-120
54.	Mulcher	50122-50"
55.	Wiz Mow (Magic Mulcher).....	30302
56.	Engaging Handle.....	30212
57.	Long Tension Spring	10222
58.	Spring Tab.....	65308
59.	3/8" Shim	Qty. 4 - 30112
60.	Rod End Eye Bolt	B-113

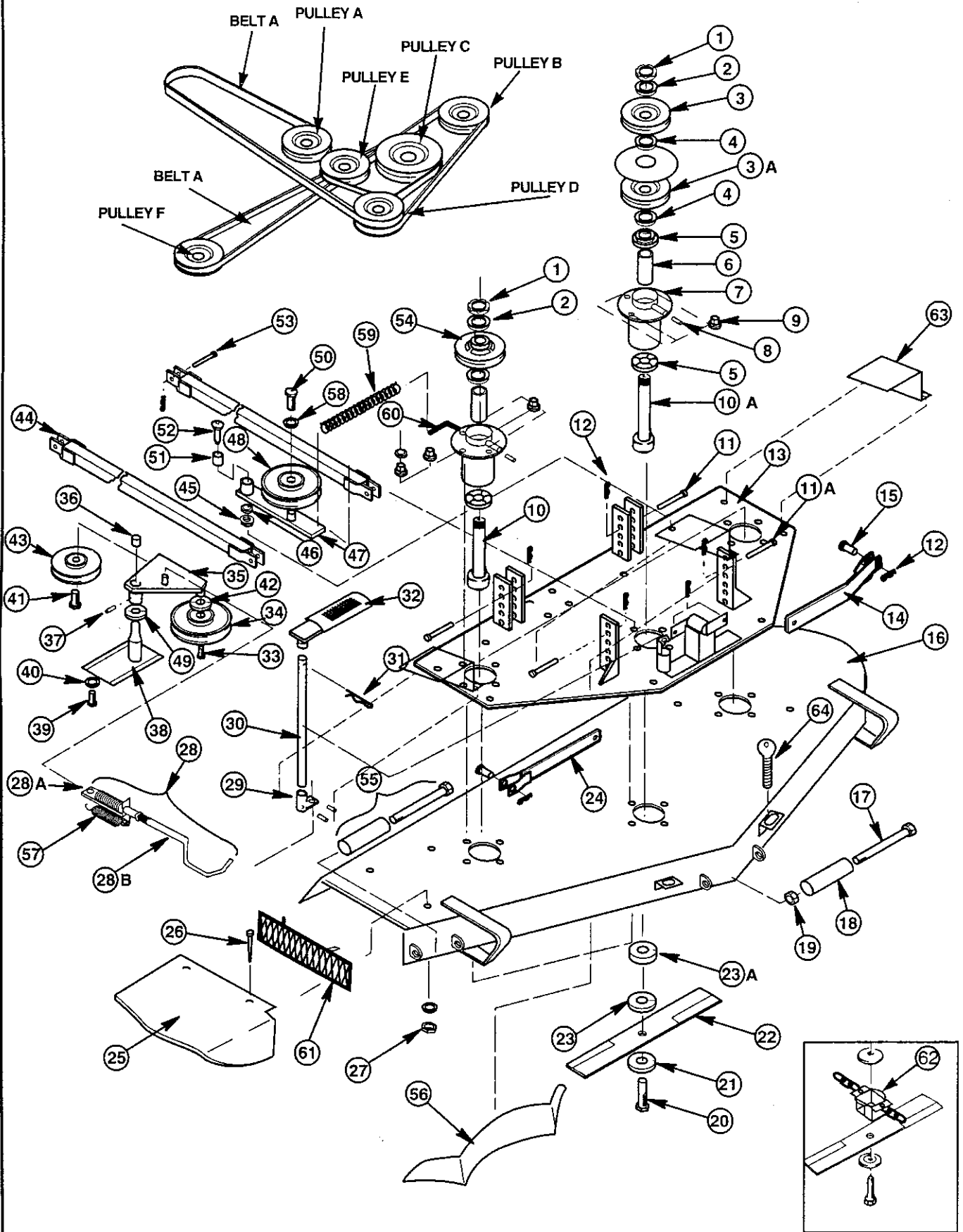
#1 Thru 10 Spindle Hub Assy (Less #3) 10161

1" Washer for Pulley Assembly.....W131

5/8" Spacer for Pulley AssemblyW136

*Remove inner seal before installing to allow grease to lubricate bearing.

SECTION 9



60" MOWER DECK, BELTS AND PULLEYS.

Complete 60" Deck (Cast Pulleys).....30200-60

SECTION 9

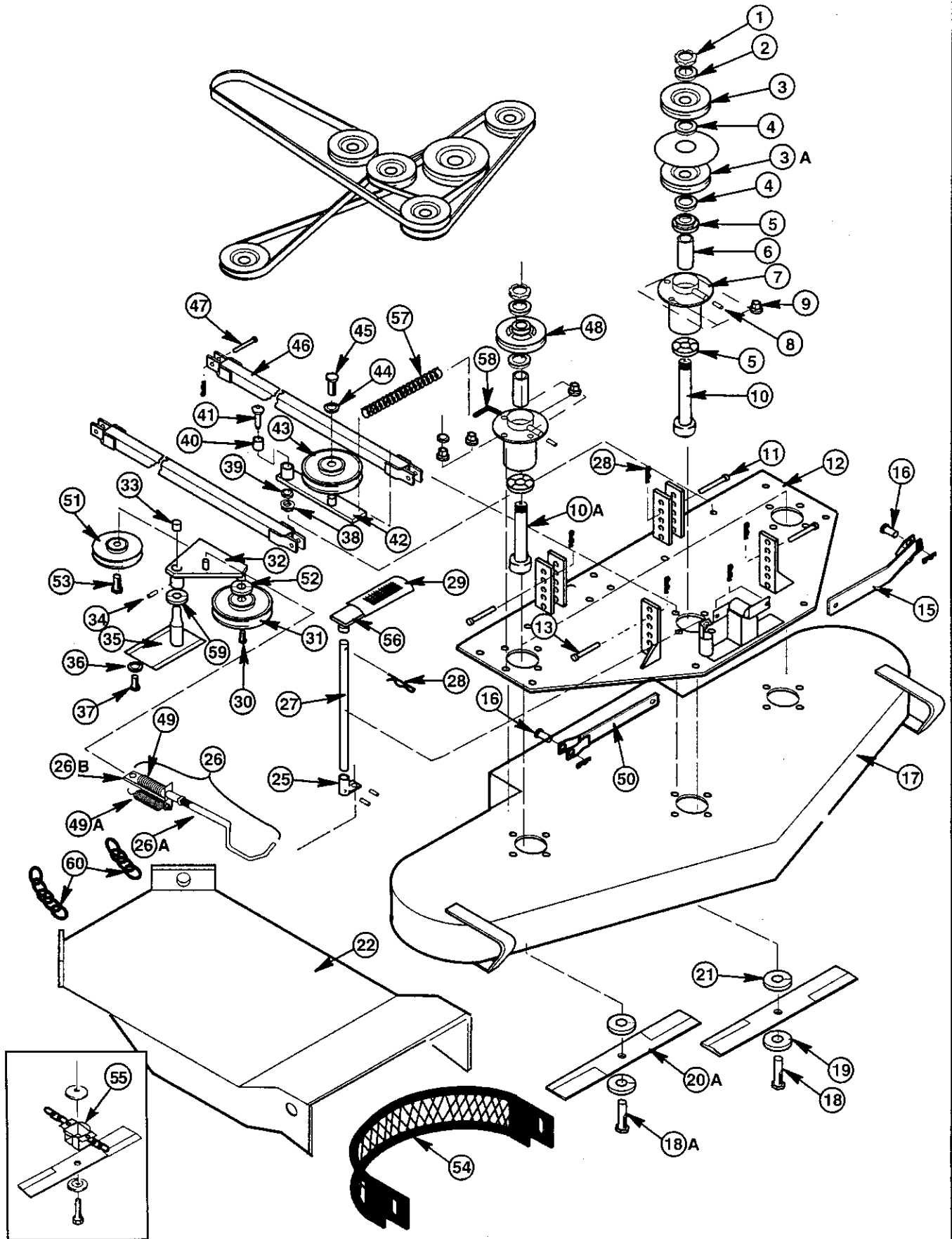
ITEM NO.	DESCRIPTION	PART NO.	ITEM NO.	DESCRIPTION	PART NO.
1.	Castle Nut 1 in.....	N-142	32.	Engaging Handle	30212
2.	Lock Washer.....	W-120	33.	Hex Bolt 1/2-13 x 3/4.....	B-115
3.	Single Cast Pulley (20 HP).....	30220-60V	34.	Flat Idler Pulley	30224
	Single Cast Pulley (24 HP).....	30220-60	35.	Belt Tensioning Swing Arm	30236
3A.	Single Cast Pulley	30220-60	36.	Bronze Bushing	30206
	Single Steel Pulley.....	62265	37.	Grease Fitting	F-100
4.	1" Flat Washer.....	W131	38.	Belt Tensioning Pivot	30235
5.	Mower Bearing	30218	39.	Hex Bolt 1/4-20 x 3/4.....	B-102
6.	Spacer 1 x 2.775	30219	40.	Hex Nut 1/4-20	N-102
7.	Mower Hub	30241	41.	Hex Bolt 3/8-11 x 1.....	B-120
8.	Grease Fitting 90°	F-101	42.	1/2" Lock Washer	W-111 -V on 1/2
9.	Hex Nut 3/8-16	N-108	43.	"V"—Idler Pulley	30234
10.	Mower Shaft	30217	44.	Stabilizer Bar	30214-86
10A.	Mower Shaft (Long Center).....	30217-L	45.	Ser. Flange Hex Nut 3/8-16	N-108
11.	Clevis Pin 3/8 x 2 1/4 Long.....	P-103	46.	3/8 Flat Washer	W-104
11A.	Clevis Pin 3/8 x 1 1/2.....	P102	47.	Belt Idler Arm	30223-87
12.	Hairpin Cotter	20224	48.	Flat Idler	30224
13.	60" Top Plate.....	30201-60	49.	3/8 Shim.....	Qty. 4 - 30112
14.	L.H. Stabilizer	30232	50.	Hex Bolt 1/2-13 x 1 1/4.....	B-117
15.	Clevis Pin 3/8 x 1	P-101	51.	Bronze Bushing	20276
16.	60" Mower Deck	30100-60	52.	Shoulder Bolt 1/2-13 x 1 1/4	B-118-G
17.	Hex Bolt 3/8 x 9 1/2.....	B-146	53.	Clevis Pin 3/8 x 1 1/4.....	P-102
18.	Roller	30240-0	54.	Single Cast Pulley	30220-60
19.	Hex Nuts.....	N-120		Single Steel Pulley.....	62265
20.	Hex Bolt 3/8 -18 x 2 1/2.....	B-121	55.	Additional Roller	67240
	Hex Bolt 3/8 -18 x 3.....	B-121-L		Bolt	B122
21.	Cupped Blade Washer	W-100		Nut.....	N115
22.	Mower Blade 20 1/2".....	30227-60		Spacer	10203
23.	Fiber Washer.....	W-101	56.	Deck Baffle	30134-60
23A.	1/2" Spacer.....	30242	57.	Spring	30207-S
24.	R.H. Stabilizer.....	30231		Return Spring	20217
25.	Discharge Chute	30226	58.	1/2" Flat Washer.....	W-109
26.	Carriage Bolt 3/8-18 x 3/4	B-104	59.	Long Tensioning Spring.....	10222
27.	Hex Nut 3/8-18	N-103	60.	Spring Tab.....	65308
28.	Rod Assembly	30209-1	61.	Mulcher.....	50122-60
28A.	Rod.....	30209-R	62.	Wiz Mow (Magic Mulcher)	30302
28B.	L. Bracket	30209-B	63.	Pulley Guard	QT2-67317
29.	Cam Weldment	30210	64.	Rod End Eye Bolt	B-113
30.	Engaging Shaft 14"	30211		#1 Thru 10 Spindle Hub Assy (Except #3)	10161
				5 1/2" Spacer for Pulley Assembly.....	W136

BELT AND PULLEY SELECTION GUIDE

MODEL	ENG. -TRANS.	ENG. - DECK	SPINDLE	ENGINE PULLEY	NSCR REFERENCE
LX 2001-42	20256	65080	63203	67216 1-1/8" Bore 4" Top 6" Bottom	20256 = B-38 30203 = B-103 30204 = B-78 30236-0 = B-128 63203 = A-89 65080 = B-80
LX 2000-42	20256	65080	63203	67216 1-1/8" Bore 4" Top 6" Bottom	
X 2001-50	20256	30204	30203	85216 1-1/8" Bore 4" Top 4-3/4" Bottom	
X 2000-50	20256	30204	30203	85216 1-1/8" Bore 4" Top 4-3/4" Bottom	
X 2401-50	20256	30204	30203	85216 1-1/8" Bore 4" Top 4-3/4" Bottom	
X 2400-50	20256	30204	30203	85216 1-1/8" Bore 4" Top 4-3/4" Bottom	
XW 2001-60	20256	65080	30236-0	85216 1-1/8" Bore 4" Top 4-3/4" Bottom	
XW 2401-60	20256	65080	30236-0	85216 1-1/8" Bore 4" Top 4-3/4" Bottom	
XW 2000-60	20256	65080	30236-0	85216 1-1/8" Bore 4" Top 4-3/4" Bottom	
XW 2400-60	20256	65080	30236-0	85216 1-1/8" Bore 4" Top 4-3/4" Bottom	
Flat					
Lander 50	20256	30204	30203	85216 1-1/8" Bore 4" Top 4-3/4" Bottom	
Flat					
Lander 60	20256	65080	30236-0	85216 1-1/8" Bore 4" Top 4-3/4" Bottom	

SECTION 9

50" MOWER DECK REAR DISCHAGE



50" MOWER DECK REAR DISCHARGE

Complete Deck (Cast Pulleys)...30200-50RD

SECTION 9

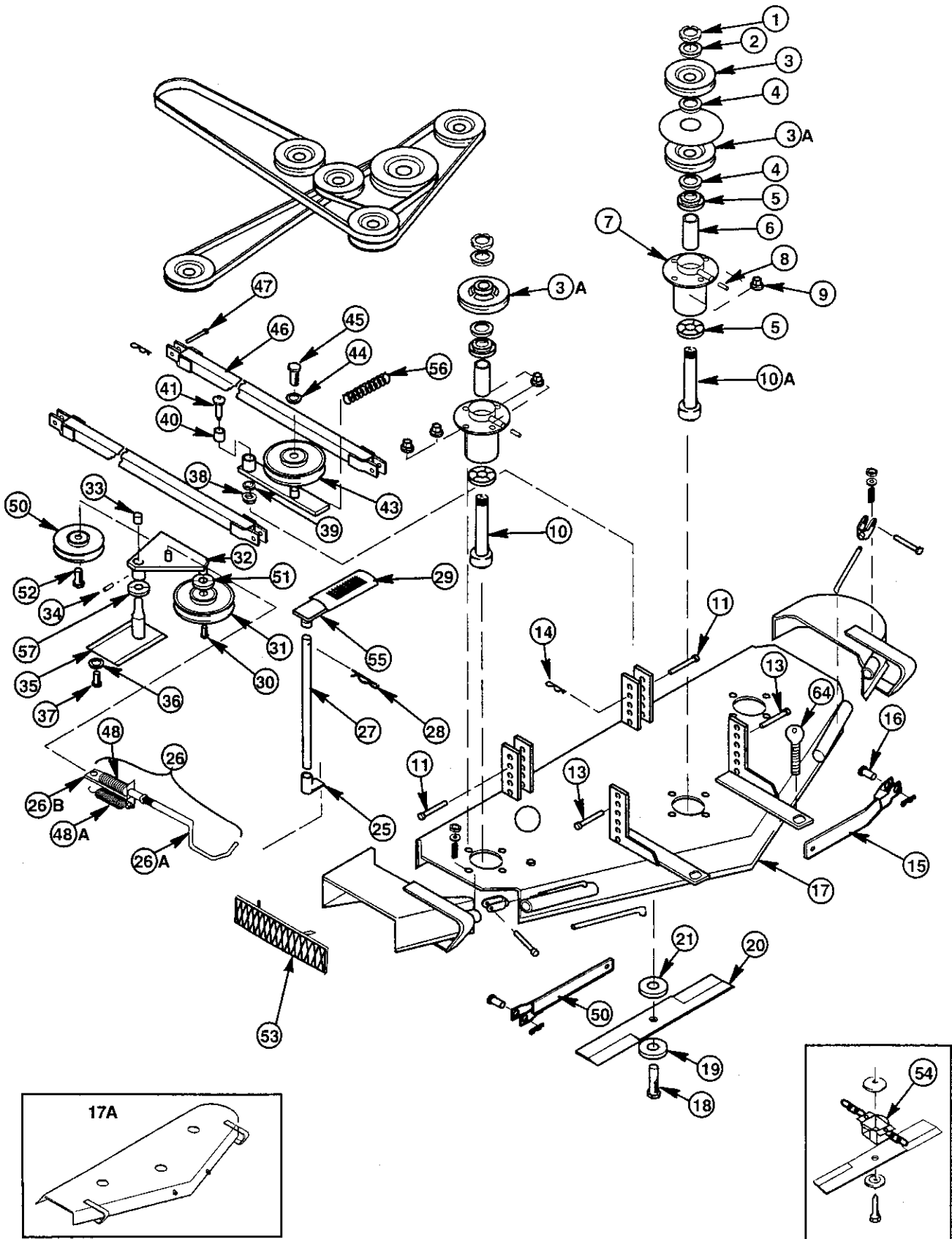
ITEM NO.	DESCRIPTION	PART NO.	ITEM NO.	DESCRIPTION	PART NO.
1.	Castle Nut 1 in.....	N-142	33.	Bronze Bushing	30206
2.	Lock Washer.....	W-120	34.	Grease Fitting.....	F-100
3.	Single Cast Pulley	30220-50V	35.	Belt Tensioning Pivot Stand	30235
3A.	Single Cast Pulley	30220-50	36.	Hex Nut 1/2-20 x 3/4.....	N-102
4.	1" Flat Washer	W131	37.	Hex Bolt 1/2-20 x 3/4.....	B-102
5.	Mower Bearing	30218*	38.	Ser. Flange Hex Nut 3/8-16	N-108
6.	Spacer	30219	39.	3/8 Flat Washer	W-104
7.	Mower Hub	30241	40.	Bronze Bushing	20276
8.	Grease Fitting 90°	F-101	41.	Shoulder Bolt 1/2-13 x 1 1/4	B-118-G
9.	Hex Nut 3/8-16.....	N-108	42.	Belt Idler Arm	30223-87
10.	Mower Shaft	30217	43.	Flat Idler Pulley	30224
11.	Clevis Pin.....	P-103	44.	1/2 Flat Washer	W-109
12.	Top Plate	30201	45.	Hex Bolt 1/2-13 x 1 1/4	B-117
13.	Clevis Pin 3/8 x 1 1/4.....	P-102	46.	Stabilizer Bar.....	30214-86
14.	Hairpin Cotter	30213	47.	Clevis Pin 3/8 x 1 1/4.....	P102
15.	L. H. Stabilizer	30232	48.	Single Cast Pulley	30220-50
16.	Clevis Pin 3/8 x 1	P-101	49.	Spring	30207-S
17.	50" Mower Deck Rear Discharge	30100-50R	49A.	Return Spring	20217
18.	Hex Bolt 3/8-18x 2 1/2.....	B-121	50.	Stabilizer Bar Right Hand	30231
	Hex Bolt 3/8-18 x 3.....	B121-L	51.	"V" Idler Pulley.....	30234
19.	Cupped Blade Washer	W-100	52.	1/2" Lock Washer	W-111
20.	Mower Blade 17"	30227	53.	Hex Bolt 3/8-11 x 1	B-120
21.	Fiber Washer	W-101	54.	Mulcher	50122-50R
22.	Discharge Chute.....	67226	55.	Wiz Mow (Magic Mulcher).....	30302
23.	Carriage Bolt 3/8-18 x 3/4.....	B-104	56.	Engaging Handle.....	30212
24.	Hex Nut 3/8-18	N-103	57.	Long Tension Spring.....	10222
25.	Cam Weldment.....	30210	58.	Spring Tab.....	65308
26.	Rod Assembly	30209-1	59.	3/8 Shim	Qty.4 - 30112
26A.	Rod	30209-R	60.	10 Link Chain 3/8 x 1".....	67223
26B.	L. Bracket	30209-B		#1 Thru 10 Spindle Hub Assy (Less #3)	10161
27.	Engaging Shaft 14".....	30211		1" Washer for Pulley Assembly	W131
28.	Hairpin Cotter	30213		5/8" Spacer for Pulley Assembly	W136
29.	Engaging Handle Grip	20258			
30.	Hex Bolt 1/2-13 x 3/4.....	B-115			
31.	Flat Idler Pulley.....	30224			
32.	Belt Tensioning Swing Arm	30236			

*Note Right Side Blade Spindle is counter rotating. See following for parts description.

10A.	Mower Shaft (Left Hand Thread)	67228
18A.	Blade Bolt (Left Hand Thread) 2 1/2"	B-151
	Blade Bolt (Left Hand Thread) 3".....	B-151-L
20A.	Blade (Left Hand)	30227-L

*Remove inner seal before installing to allow grease to lubricate bearing.

SECTION 9



42" – 36" MOWER DECK 42" MOWER DECK

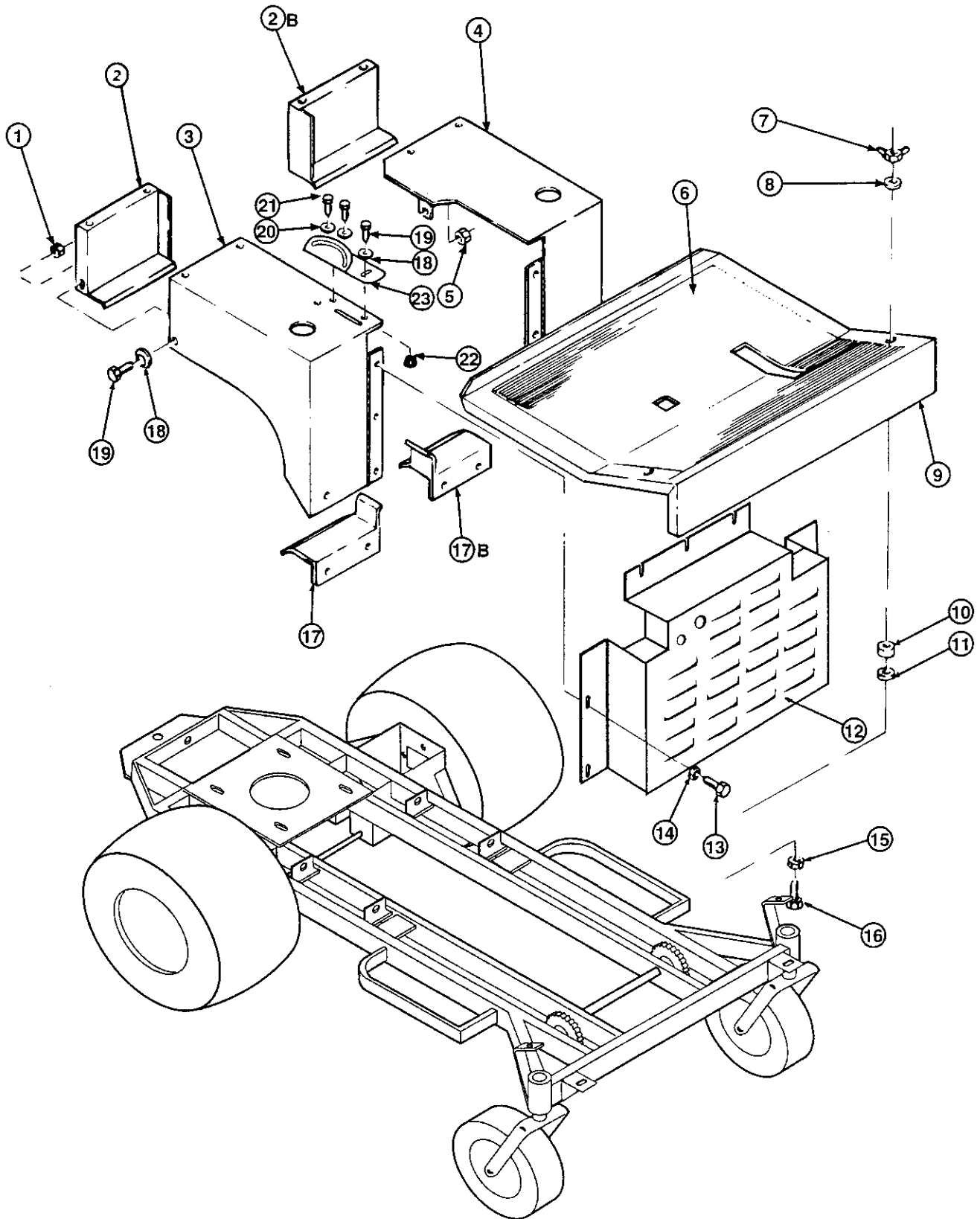
SECTION 9

Complete Deck (Cast Pulleys).....30200-42

ITEM NO.	DESCRIPTION	PART NO.	ITEM NO.	DESCRIPTION	PART NO.
1.	Castle Nut 1 in	N-142	33.	Bronze Bushing	30206
2.	Lock Washer	W-120	34.	Grease Fitting	F-100
3.	Single Cast Pulley	30220-50V	35.	Belt Tensioning Pivot Stand	30235
3A.	Single Steel Pulley	63221	36.	Hex Nut ¼-20 x ¾	N-102
4.	1" Flat Washer	W131	37.	Hex Bolt ¼-20 x ¾	B-102
5.	Mower Bearing	30218*	38.	Ser. Flange Hex Nut ¾-16	N-108
6.	Spacer	30219	39.	¾ Flat Washer	W-104
7.	Mower Hub	30241	40.	Bronze Bushing	20276
8.	Grease Fitting 90°	F-101	41.	Shoulder Bolt ½-13 x 1¼	B-118-G
9.	Hex Nut ¾-16	N-108	42.	Belt Idler Arm	30223-87
10.	Mower Shaft	30217	43.	Flat Idler Pulley	30224
10A.	Mower Shaft (Long Center)	30217-L	44.	½ Flat Washer	W-109
11.	Clevis Pin	P-103	45.	Hex Bolt ½-13 x 1¼	B-117
13.	Clevis Pin ¾ x 1¼	P-102	46.	Stabilizer Bar	30214-86
14.	Hairpin Cotter	30213	47.	Clevis Pin ¾ x 1¼	P-102
15.	L. H. Stabilizer	30232	48.	Spring	30207-S
16.	Clevis Pin ¾ x 1	P-101	48A.	Return Spring	20217
17.	42" – 36" Mower Deck	30100	49.	Stabilizer Bar Right Hand	30231
17A.	42" Mower Deck	30100-42	50.	"V" Idler Pulley	30234
18.	Hex Bolt ¾-18 x 2½	B-121	51.	½" Lock Washer	W-111
	Hex Bolt ¾-18 x 3	B121-L	52.	Hex Bolt ¾-11 x 1	B-120
19.	Cupped Blade Washer	W-100	53.	Mulcher	50122-42"
20.	Mower Blade 14"	63227	54.	Wiz Mow (Magic Mulcher)	30302
21.	Fiber Washer	W-101	55.	Engaging Handle	30212
22.	Discharge Chute	30226	56.	Long Tension Spring	10222
23.	Carriage Bolt ¾-18 x ¾	B-104	57.	¾" Shim	Qty. 4 - 30112
24.	Hex Nut ¾-18	N-103	58.	Linkage Rod	20220
25.	Cam Weldment	30210	59.	Clevis Pin	P-107
26.	Rod Assembly	30209-1	60.	Spring	20280
26A.	Rod	30209-R	61.	Washer	W-311
26B.	L. Bracket	30209-B	62.	¾" Flange nut	N-134
27.	Engaging Shaft 14"	30211	63.	¾" Clevis	20214
28.	Hairpin Cotter	30213	64.	Rod End Eye Bolt	B-113
29.	Engaging Handle Grip	20258	#1 Thru 10 Spindle Hub Assy (Less #3)	10161	
30.	Hex Bolt ½-13 x ¾	B-115	1" Washer for Pulley Assembly	W131	
31.	Flat Idler Pulley	30224	5½" Spacer for Pulley Assembly	W136	
32.	Belt Tensioning Swing Arm	30236			

*Remove inner seal before installing to allow grease to lubricate bearing.

SECTION 9

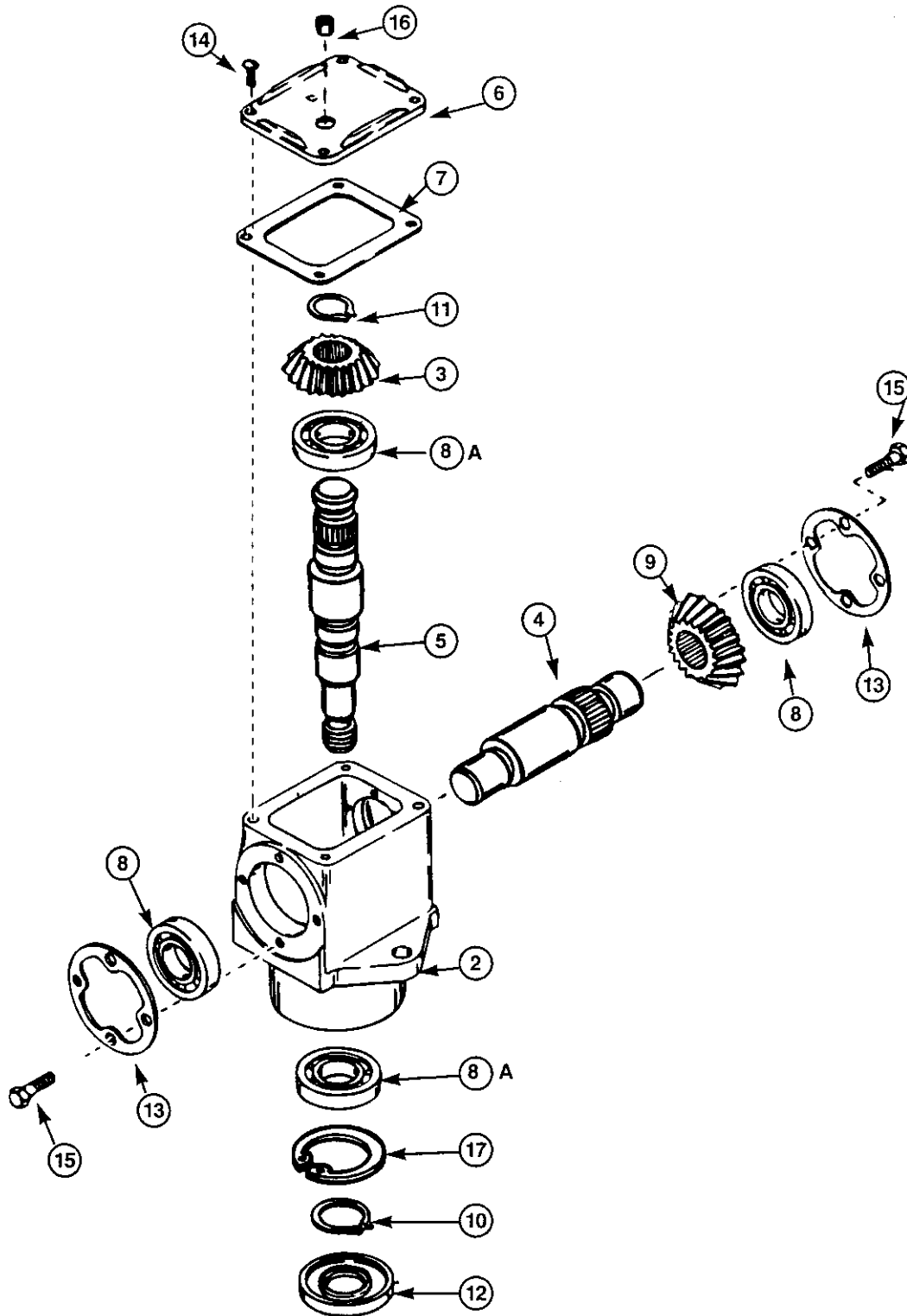


FENDERS AND COVERS

SECTION 9

ITEM NO.	DESCRIPTION	Stainless	Powder Coated
		PART NO.	
1.	¼-20 Whiz Nut	N-102	
2.	Rear Fender Bracket R.H.....	20266-R	67272
2B.	Rear Fender Bracket L.H.....	20266-L	67273
3.	Fender R.H. Swing-out	20270-R1	67270
4.	Fender L.H. Swing-out.....	20269-L1	67269
5.	Hex Nut ½-13	N-110	
6.	Carpet--Black	20275	
7.	Wing Nut ⅝-18	N-106	
8.	Fender Washer ¾	W-106	
9.	Floor Pan (92 & Newer, All).....	67268	67271
10.	Rubber Washer	W-103	
11.	Fender Washer	W-106	
12.	Front Panel LX.....	67267	
12a.	Front Panel X.....	82267	
13.	Hex Bolt ¼-20 x ½	B-101	
14.	Flat Washer ¼.....	W-102	
15.	Hex Nut ⅝-18	N-103	
16.	Full Thread Bolt ⅝-18 x 1½	B-105	
17.	Front Fender Bracket R.H	20275-R	67275
17B.	Front Fender Bracket L.H	20275-L	67274
18.	Flat Washer ¼.....	W-102	
19.	Hex Bolt ¼-20 x ½	B-101	
20.	Flat Washer ¼.....	W120	
21.	Hex Bolt ¼-20 x ½	B155	
22.	Nut	7133	
23.	Throttle	65270	

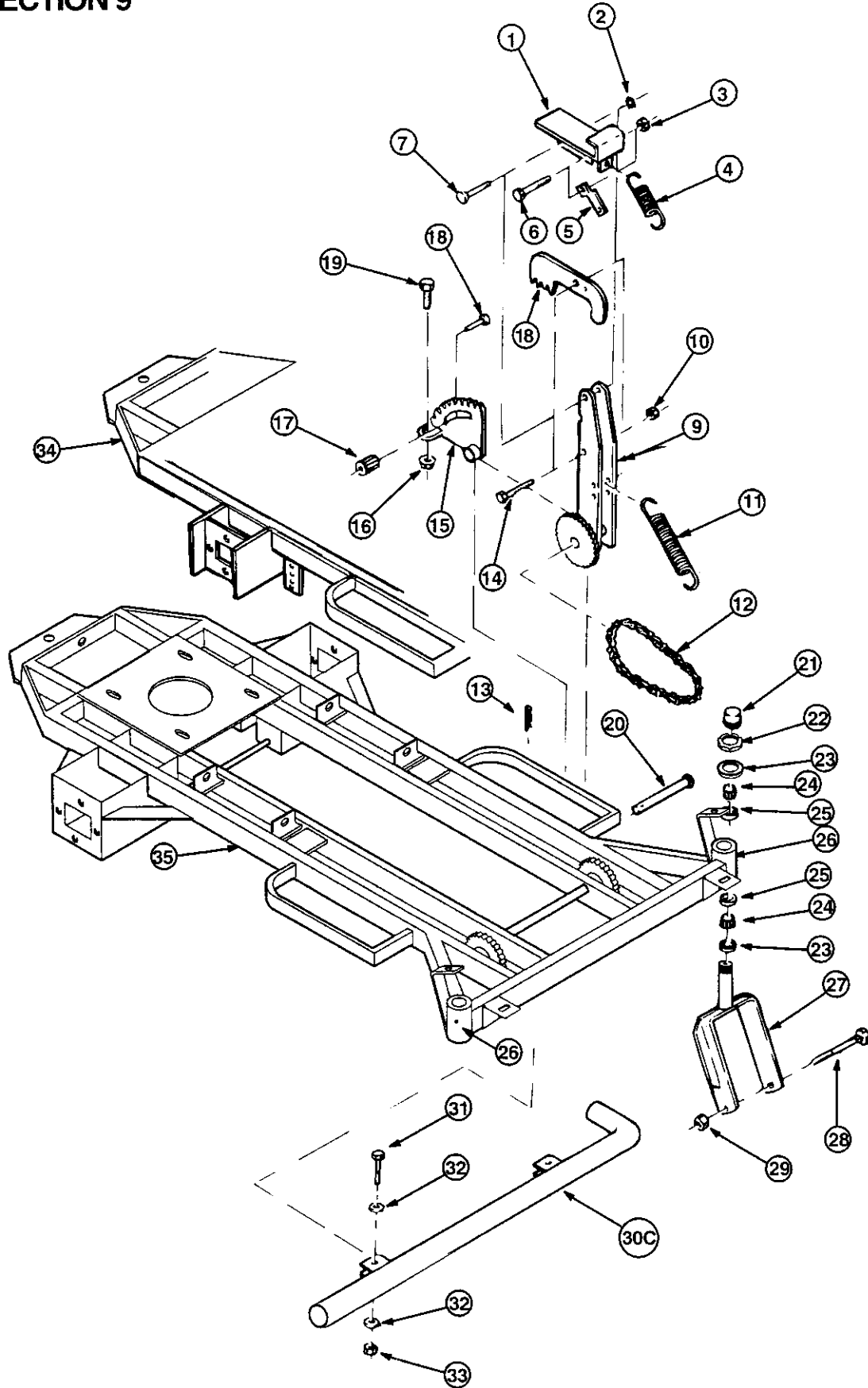
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**T DRIVE HEAD
MODEL NO. 1000-047****SECTION 9**

ITEM NO.	DESCRIPTION	PART NO.
1.	Complete Gear Box.....	65201
2.	Housing, "T" Drive.....	770093
3.	Gear, Miter.....	778101
4.	Shaft, Input (4.212" Long).....	776305
5.	Shaft, Output (5.225" Long).....	776306
	Shaft, Output (93 & Newer).....	776360
6.	Cover.....	772067
7.	Gasket, Cover.....	3045
8.	Bearing, Ball.....	780034
8A.	Bearings, Ball.....	780174
9.	Gear, Miter.....	778210
10.	Ring, Snap.....	788019
11.	Ring, Snap.....	788018
12.	Seal, Oil.....	20317
	Seal, Oil (93 & Newer).....	788081
13.	Gasket, Cap.....	3046
14.	Screw, Pan hd. Self-tap. 10-24 x 1/2.....	792025
15.	Screw, Hex hd., 1/4-20 x 7/8.....	792026
16.	Pipe plug, Hex Countersunk Headless 1/8-27.....	28534
17.	Ring, Snap.....	792119

SECTION 9



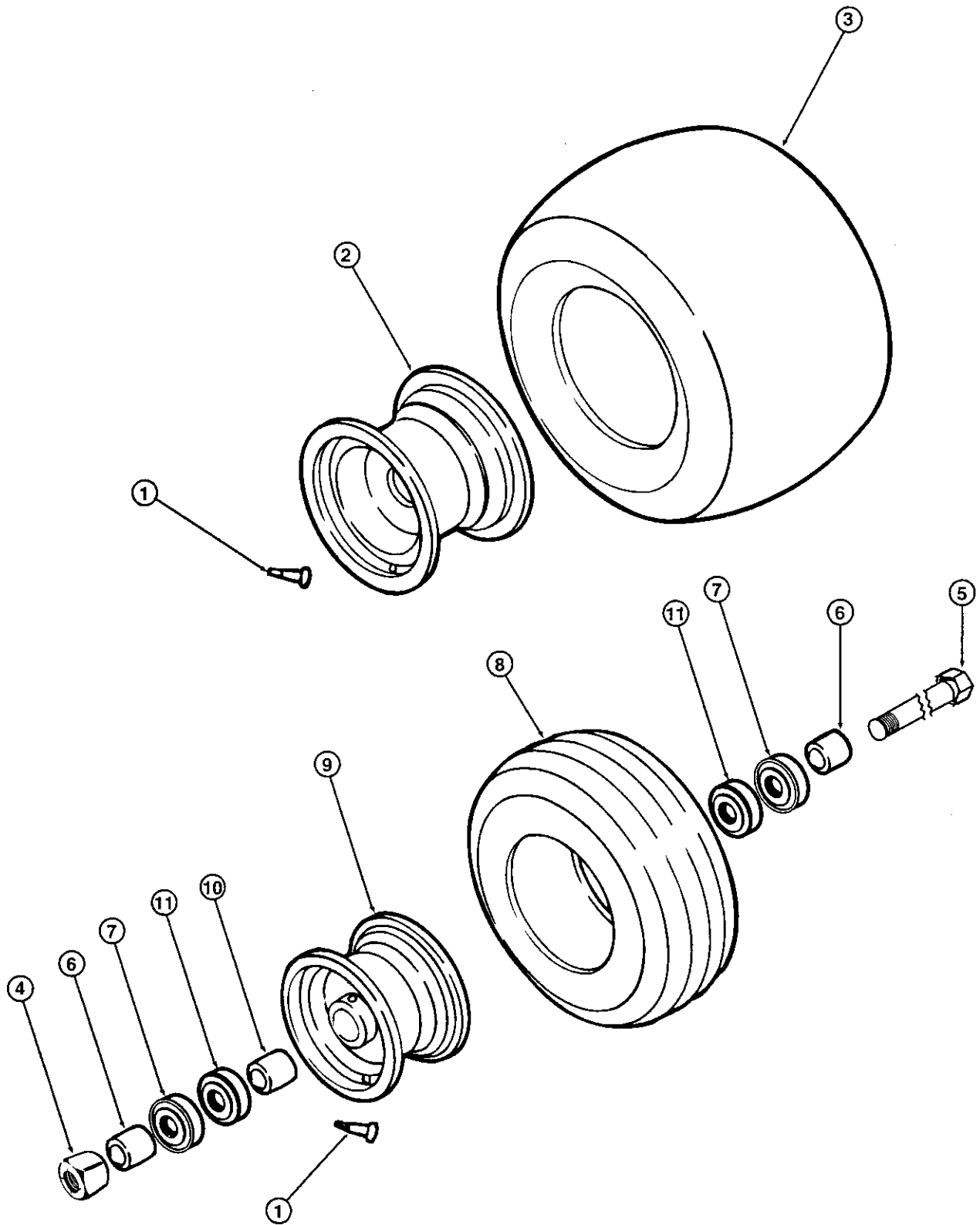
MOWER HEIGHT CONTROL, FRAME AND FORK

SECTION 9

ITEM NO.	DESCRIPTION	PART NO.
1.	Foot Pedal	10218-1
2.	Hairpin Cotter	30213
3.	Nut $\frac{3}{16}$ -18	N-103
4.	Short Foot Spring	20217
5.	Pivot Link	10223-1
6.	Full Thread Hex Bolt $\frac{3}{16}$ -18 x 1 $\frac{1}{2}$	B-105
7.	Clevis Pin $\frac{3}{16}$ x 1	P-101
8.	Lift Arm Pawl	10224-1
9.	Lever Arm & Sprocket Assembly	10225-1
10.	Nut $\frac{3}{16}$ -18	N-103
11.	Long Foot Spring	10222
12.	Foot Pedal Chain	10219
13.	Hairpin Cotter	30213
14.	Full Thread Hex Bolt $\frac{3}{16}$ -18 x 1 $\frac{1}{2}$	B-105
15.	Height Control Sprocket	10226-1
16.	Hex Nut $\frac{3}{16}$ -18 Ser. Fl	N-103-W
17.	Coupler Nut $\frac{3}{16}$ "	N-130
18.	Hex Bolt $\frac{3}{16}$ -18 x 1	B-131
19.	Hex Bolt $\frac{3}{16}$ -18 x 1"	B-131
20.	Pin	10228-1
21.	Dust Cap	10220
22.	Slot Nut 1"	N-142
23.	Seal	10208
24.	Front Fork Cones	10207
25.	Front Fork Race	10206
26.	Grease Fitting	F-100
27.	Front Wheel Forks	10201
27A.	NX Forks.....	68201-L68201-R
28.	Hex Bolt $\frac{3}{8}$ -11 x 7	B-122
29.	E. S. Nut $\frac{3}{8}$ -11.....	N-115
30.	DIXIE CHOPPER Bumper Assy	10100-BDC
30A.	1992 LX & X Bumper Assy	67045
30B.	NX Bumper	68045
30C.	NW Bumper	10100-ST
31.	$\frac{3}{8}$ -16 x 1 $\frac{1}{2}$ Bolt	B-124
32.	$\frac{3}{8}$ STD Flat Washer	W-104
33.	$\frac{3}{8}$ -16 Whiz Flange Lock Nut	N-108
	LX Bearings (Prior 1991)	61205
	Wheel Lug Nut $\frac{1}{2}$ -20	N-113
	Wheel Stud $\frac{1}{2}$ -20 x 1 $\frac{1}{4}$	B-126
	Cotter Pin Front Caster.....	P108
	Deck Lift Chain	10217
	Chain Master Link.....	10213
	Chain Eye Bolt.....	B113
34.	Main Frame LX-Model	67100
35.	Main Frame X-Model	65100
	(Specify 50" or 60")	
	Main Frame X-Model Wide.....	65100-W
36.	Dust Deflector (Not Illustrated)	40131-L40132-R

Complete Assembly
10107-1

SECTION 9



TIRES AND WHEELS

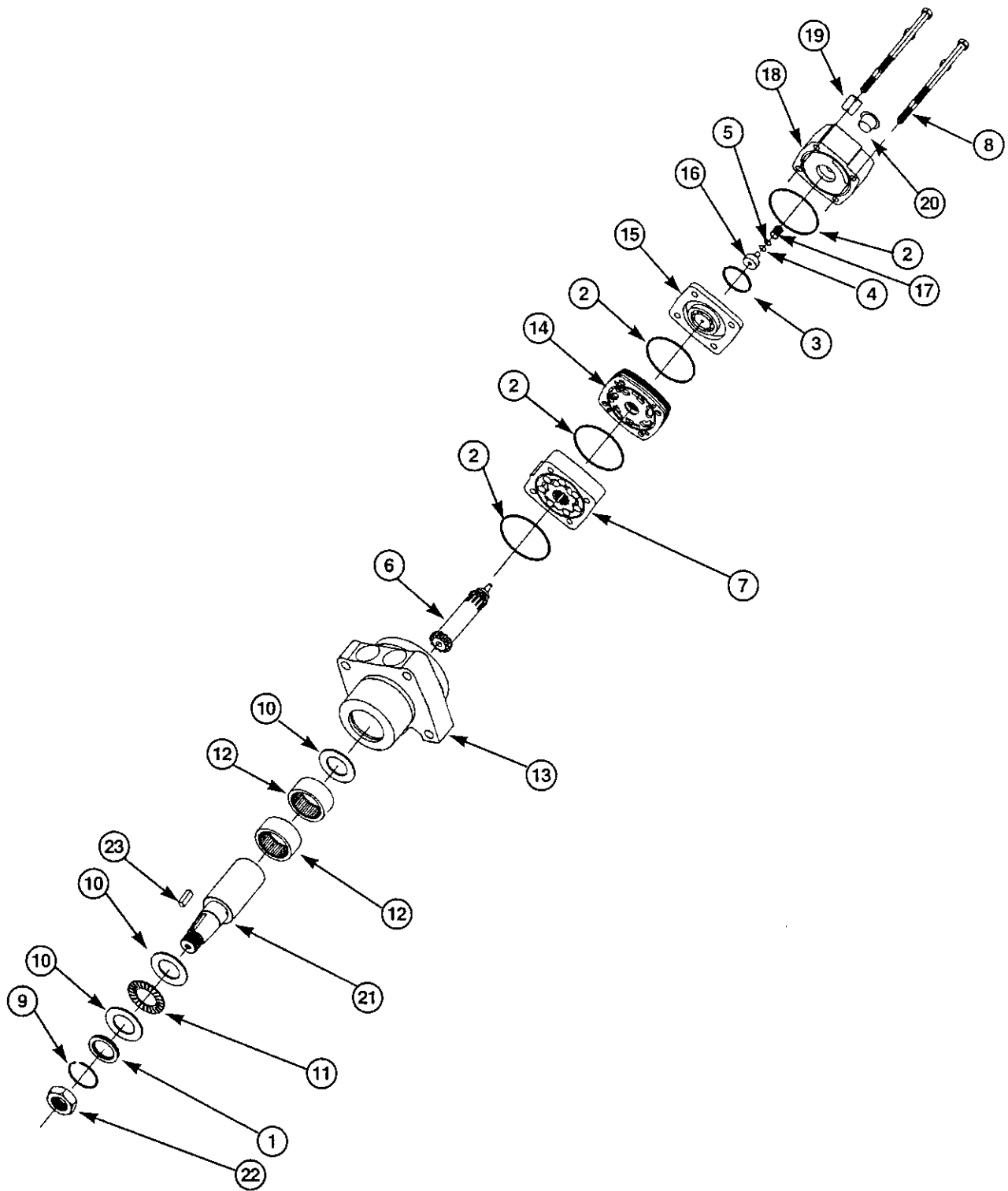
SECTION 9

ITEM NO.	DESCRIPTION	PART NO.
1.	Air Valve	10127-S
2.	Rear Rim, Silver	10238
	Rear Rim, Silver LX	61238
3.	Rear Tire, Dico	10156-D
	Turf Boss.....	10156-B
4.	Nut	N115
5.	Bolt	B122
6.	Front Wheel Spacer, 5/8 X 1	10203
7.	Front Wheel Bearing.....	10205
8.	Front Tire 13 x 5.00-6	10157
9.	Front Wheel, Silver	10239
10.	Front Wheel Inner Spacer	67204
11.	New Front Inner Bearing	67205

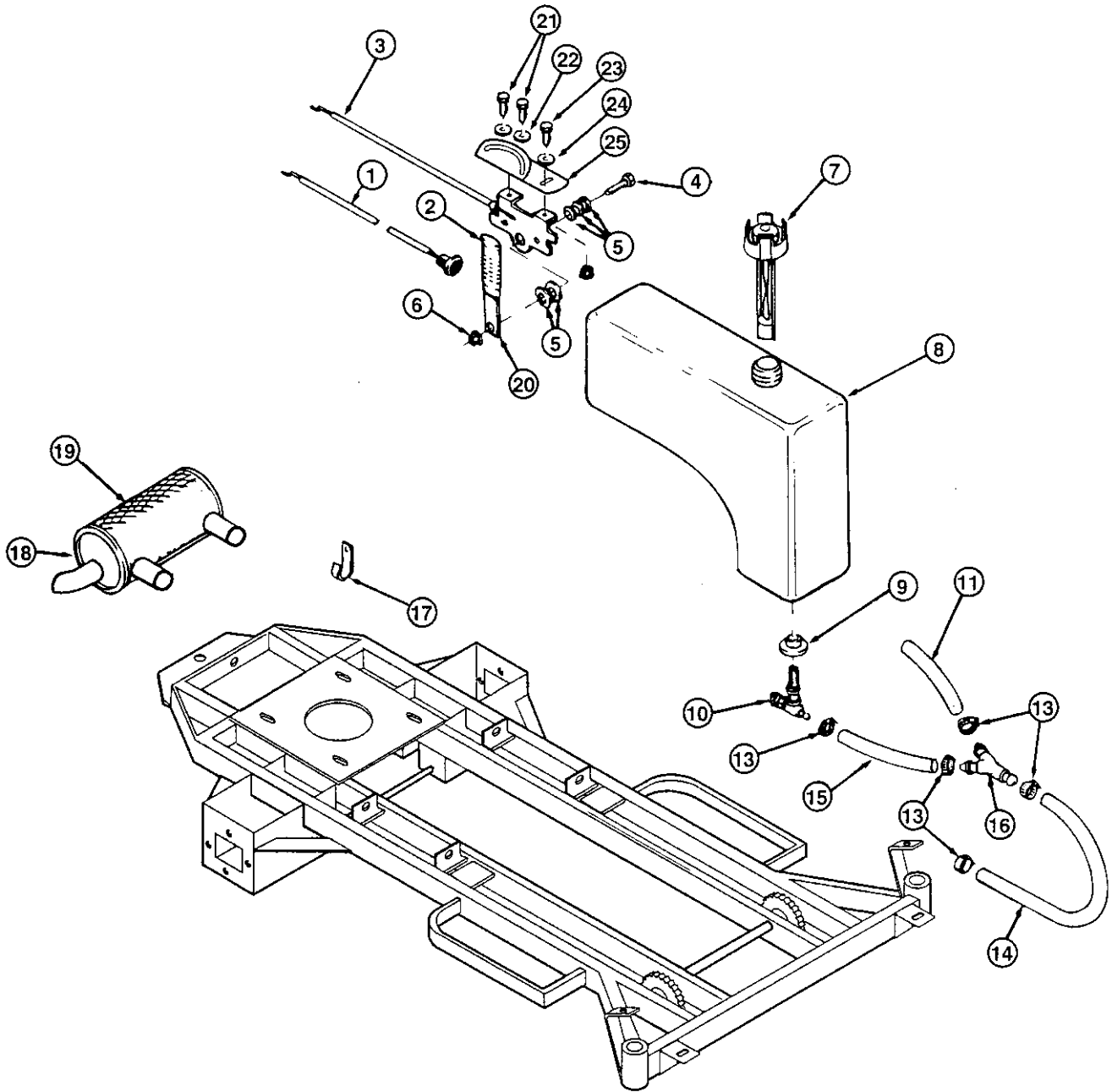
TIRE AND RIM OPTIONS

#1,2,3.	Dico Rear Tire and Rim Assembly.....	10214-D
#1,2,3.	LX2001 Rear Tire and Rim Assembly	61214-4
8,9.	Front Tire and Rim	10202-K

SECTION 9



SECTION 9

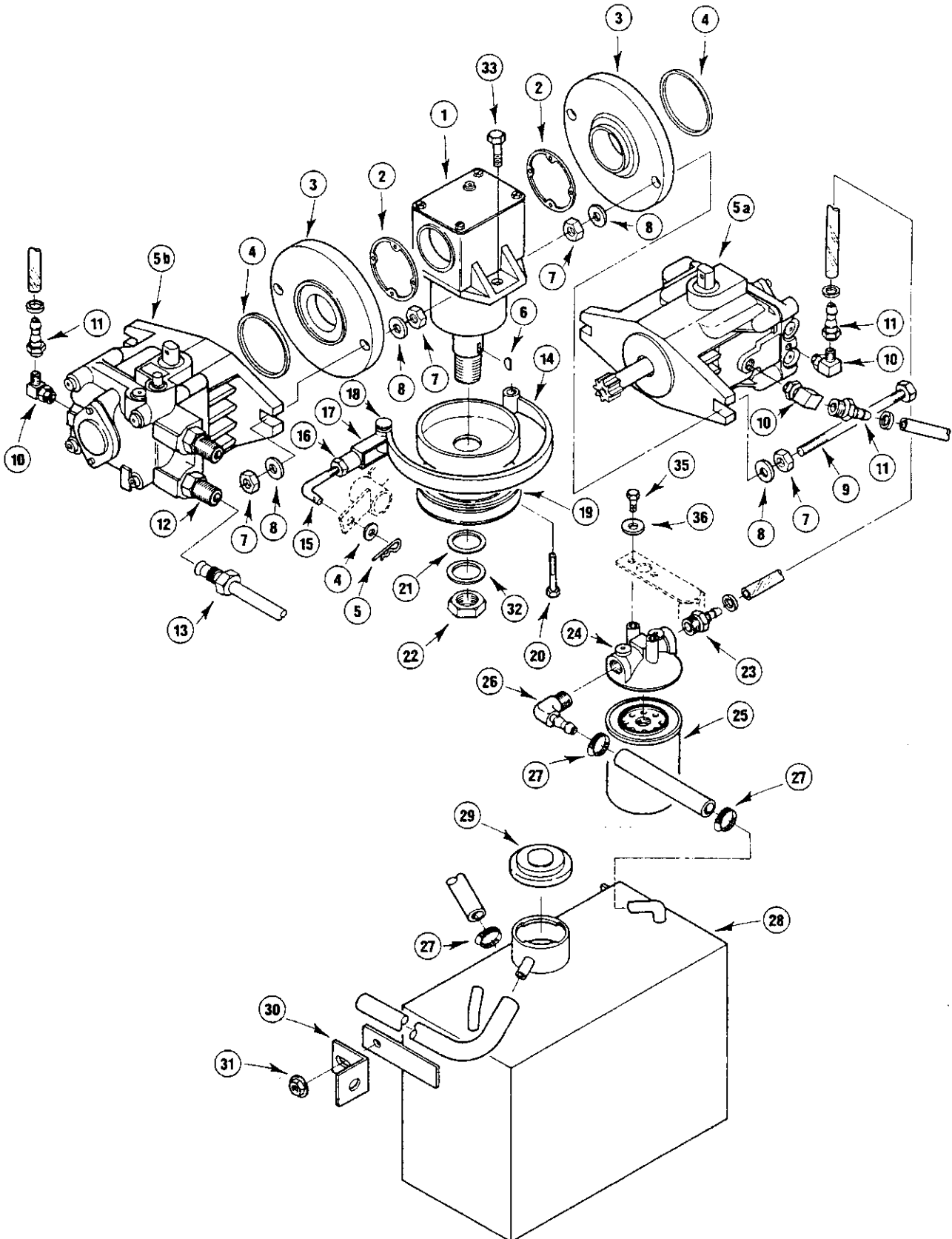


FUEL & EXHAUST SYSTEM**SECTION 9**

ITEM NO.	DESCRIPTION	PART NO.
1.	Choke Cable	20248
2.	Handle Grip Black	67258
3.	Complete Throttle Cable	20249-87
4.	Hex Bolt $\frac{3}{8}$ -16 x 1 $\frac{1}{2}$	B-124
5.	$\frac{3}{8}$ Dish Spring Washer	W-126
6.	Ser. Flange Hex Nut	N-108
7.	Gas Cap Guage—Manual Vent	40117-1
8.	3 Gallon Gas Tank	40204-1
9.	Gas Tank Grommet	40220
10.	Gas Tank Valve	40219
11.	Gas Line*	
13.	$\frac{3}{8}$ Hose Clamp	60124
14.	Gas Line*	
15.	Gas Line*	
16.	Gas Line "Y"	40230
17.	Engine Clip	45-083-01
18.	Kohler 18 Hp Muffler	40115-K18
	20hp Muffler.....	40115-K
	22hp Muffler.....	40115-K22
	24hp Muffler.....	40115-K24
19.	Removable Heat Shield	40136-0S
20.	Handle, Throttle Cable	20250-H87
21.	#8-32 x $\frac{1}{2}$	B-155
22.	#8 Flat Washer.....	W-121
23.	$\frac{1}{4}$ - 20 x $\frac{1}{2}$	B-101
24.	$\frac{1}{4}$ -Flat Washer.....	W-102
25.	Throttle Bracket	20250-89

*#11, 14, 15 are Part No. 40211-72,
72 inches of gas line tubing

SECTION 9



TRANSMISSION AND DRIVE

SECTION 9

ITEM NO.	DESCRIPTION	PART NO.
1.	Pump Drive Box	65201
2.	Bearing Plate Gasket	3046
3.	Bellhousing	65001
4.	O-ring	65024
5a.	Sundstrand Pump - Left Side	65015
5b.	Sundstrand Pump - Right Side	65016
6.	Woodruff Key $\frac{3}{16}$ x $\frac{3}{4}$	K-102
7.	Hex Nut $\frac{3}{8}$ - 24	N-150
8.	Flat Washer $\frac{3}{16}$	W-113
9.	Pump Connecting Rod $\frac{3}{8}$ SAE	65206
10.	Elbow Fitting 90°	65006
11.	Straight Barb Fitting	65007
12.	Straight Threaded Fitting	65004
13a.	Hydraulic Line Right X	65010
13b.	Hydraulic Line Left X	65011
13c.	Hydraulic Line (rubber) Short Front Right LX	67010
13f.	Hydraulic Line (rubber) Long Rear Left LX	67011

ITEM NO.	DESCRIPTION	PART NO.
14.	Brake Band	20210
15.	Brake Engaging Link	65214
16.	Hex Nut $\frac{3}{8}$ - 24	N-105
17.	Yoke $\frac{3}{8}$ - 24	20214
18.	Clevis Pin $\frac{3}{8}$ x $1\frac{1}{4}$	P-102
19.	Brake/Drive Assembly	65265
20.	Hex Head Bolt $\frac{3}{8}$ x $1\frac{1}{4}$	B-109
21.	Flat Washer 1	W-131
22.	Hex Nut $\frac{3}{4}$ - 16	N-114
23.	Straight Barb Fitting	65003
24.	Oil Filter Mount	60104
25.	Oil Filter 10 Micron	60105
26.	Elbow Fitting 90°	60125
27.	Hose Clamp	60124
28.	Reservoir Tank	65018
29.	Reservoir Cap	40117
30.	Neutral Mounting Bracket	65213
31.	Nut, Wiz-Loc $\frac{3}{8}$ - 16	N-108
32.	Cupped Washer $\frac{3}{4}$ X $1\frac{1}{2}$ O.D	W-132
33.	Hex Bolt $\frac{3}{8}$ - 16 x 1	B-108
34.	Fine Thread Rod	65206
35.	Hex Bolt $\frac{1}{4}$ - 20 x $\frac{3}{4}$	B-102
36.	Flat Washer $\frac{1}{4}$	W-102
	Clear Tubing	65109

U.S. Pump Change Kit

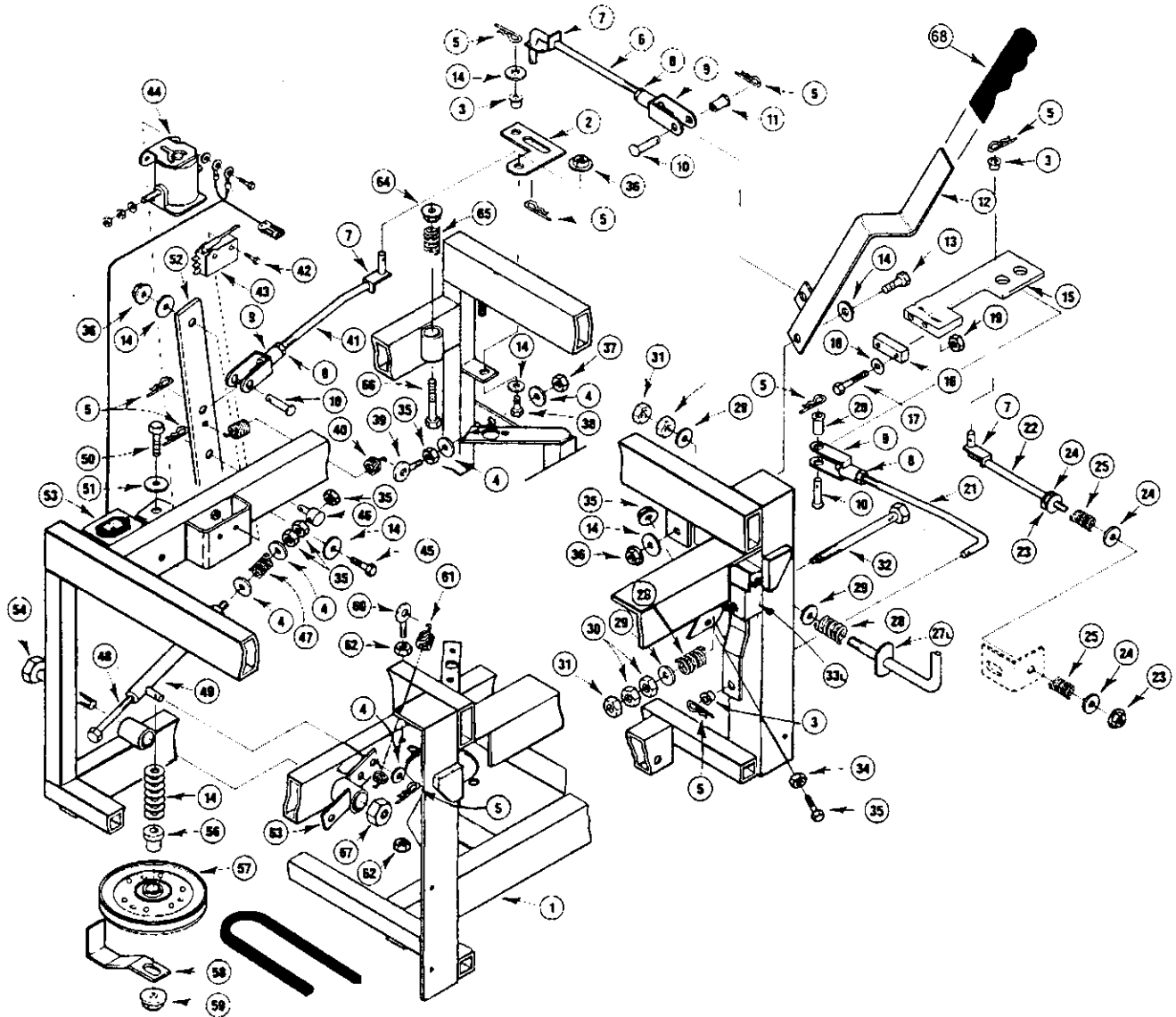
For X Series

QTY	PART NO.	DESCRIPTION
1	65108	Clear Hose 40"
2	60125	90° Fitting
1	67016	Straight Fitting
2	67015	90° Fitting
2	65010 or 65011	Line
1	65207	Control Arm
5	67013	Spring Clamps
1	60124	Worm Clamp

For LX Series

QTY	PART NO.	DESCRIPTION
1	65108	Clear Hose 40"
2	60125	90° Fitting
1	67016	Straight Fitting
1	67015	90° Fitting
2	67010 or 67011	Line
1	65207	Control Arm
5	67013	Spring Clamps
1	60124	Worm Clamp

SECTION 9



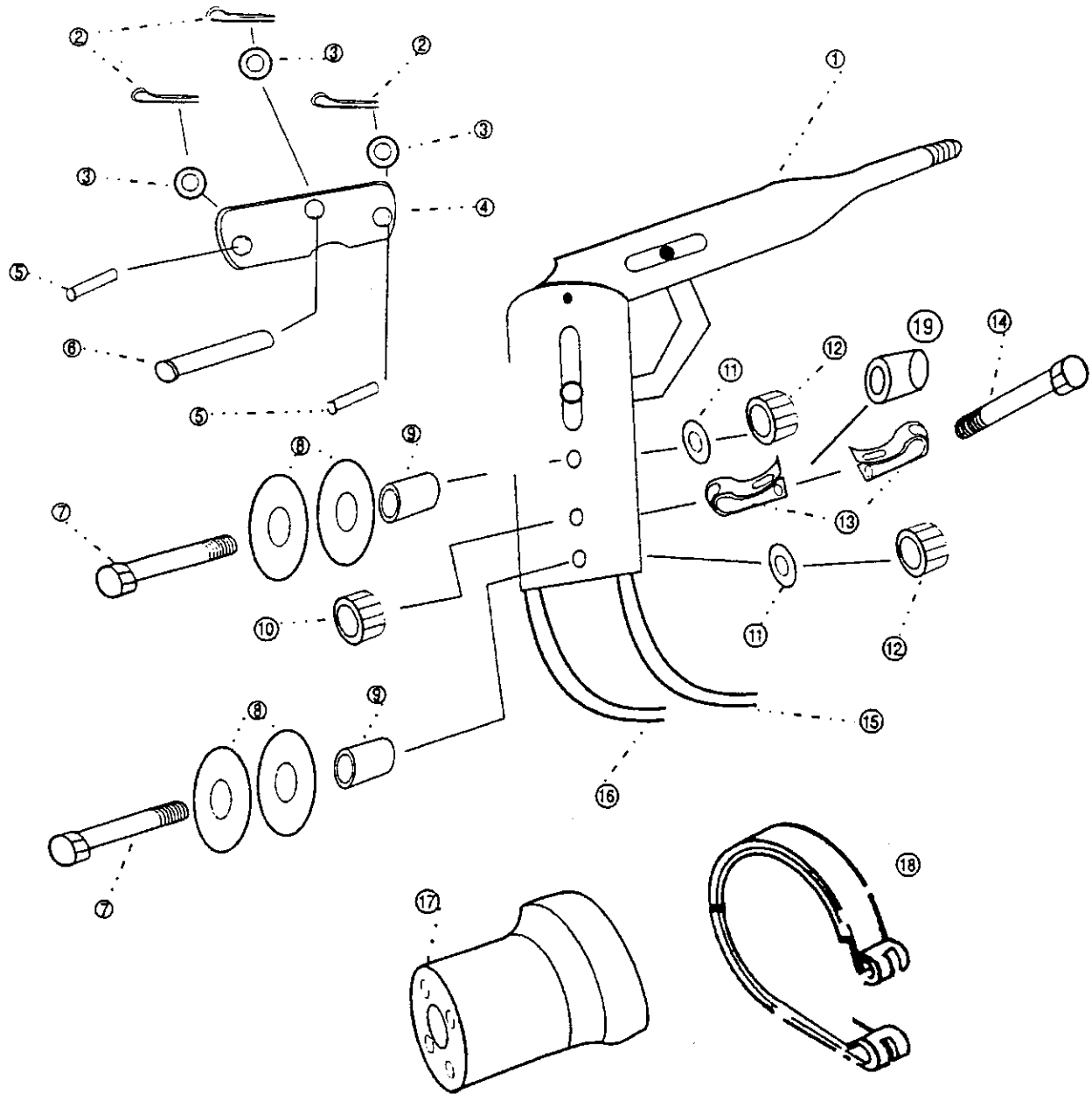
TRANSMISSION DRIVE LINKAGE

SECTION 9

ITEM NO.	DESCRIPTION	PART NO.
1.	Transmission Frame	65250
2.	Angle Bracket (Parking Brake) 90°	65203
3.	Nylon Bushing	20222
4.	Flat Washer $\frac{5}{16}$	W-113
5.	Hairpin Clip	20224
6.	Linkage Rod (Parking Brake)	65241
7.	Backing Clip	20223
8.	Hex Nut $\frac{5}{16}$ - 24	N-105
9.	Yoke $\frac{5}{16}$ - 24	20214
10.	Clevis Pin $\frac{5}{16}$ x $1\frac{1}{4}$	P-102
11.	Nylon Bushing	20222
12.	Parking Brake Lever	65204
13.	Hex Bolt $\frac{3}{8}$ - 16 x $1\frac{1}{4}$	B-109
14.	Flat Washer $\frac{3}{8}$	W-104
15.	Pump Control Arm	65207
16.	Control Arm Backing Block	65208
17.	Hex Bolt $\frac{1}{4}$ - 20 x $1\frac{1}{4}$	B-178
18.	Loc-Washer $\frac{1}{4}$	W-122
19.	Hex Nut $\frac{1}{4}$ - 20	N-100
20.	Nylon Bushing	20222
21.	Linkage Rod (Steering)	65214
22.	Neutral Linkage	65212
23.	Hex Nut $\frac{5}{16}$ - 24	N-105
24.	Step Washer $\frac{5}{16}$	W-133
25.	Neutral Spring	20280-20
26.	Neutral Rod Mounting Bracket.....	65213
27L.	Steering Lever (Left)	20231
27R.	Steering Lever (Right)	20232
28.	Steering Lever Spring	20252
29.	Machine Washer $\frac{1}{2}$	W-110
30.	Hex Nut $\frac{1}{2}$ - 13	N-110
31.	Jam Nut $\frac{1}{2}$ - 13	N-111
32.	Grease Fitting Bolt $\frac{1}{2}$ - 13 x $4\frac{1}{2}$	B-143-G

ITEM NO.	DESCRIPTION	PART NO.
33.	Steering Control Block	65205
34.	Full Thread Bolt $\frac{5}{16}$ - 18 x $1\frac{1}{4}$	B-105
35.	Hex Nut $\frac{5}{16}$ - 18	N-103
36.	Large Flange Loc-Nut $\frac{5}{16}$ - 16	N-117
37.	Hex Nut $\frac{5}{16}$ -18	N-103
38.	Hex Bolt $\frac{3}{8}$ - 16 x $1\frac{1}{4}$	B-109
39.	Eye Bolt $\frac{5}{16}$ x 4	B-150
40.	Spring	20217
41.	Linkage Rod (Parking Brake)	65241
42.	Hex Bolt #6 - 32 x 1	B-134
43.	Seat Safety Switch	20244
44.	Solenoid	20253
45.	Hex Bolt $\frac{3}{8}$ - 16 x 2	B-165
46.	Trunnion	50163
47.	Spring	20252
48.	Hex Bolt $\frac{5}{16}$ - 18 x 8	B-168
49.	Parking Brake Engaging Sleeve.....	65210
50.	Hex Bolt $\frac{3}{8}$ - 16 x $2\frac{1}{2}$	B-179
51.	Flat Washer $\frac{5}{16}$	W-113
52.	Parking Brake Swing Arm	65209
53.	Hour Meter	20246
54.	Hex Bolt $\frac{1}{2}$ - 13 x 3	B-119
56.	Idler Pulley Bushing	61250
57.	V-Idler Pulley	30234
58.	Belt Guide.....	65264
59.	Large Flange Loc-Nut $\frac{5}{16}$ - 16	N-117
60.	Eye Bolt $\frac{1}{4}$ - 20	B-100
61.	Spring	20217
62.	Hex Nut $\frac{1}{2}$ - 13 STD.....	N-110
63.	Parking Brake Bell Crank	65202
64.	Large Flange Loc-Nut $\frac{5}{16}$ - 18	N-134
65.	Seat Spring.....	20280-L40
66.	Hex Bolt $\frac{5}{16}$ - 18 x 2	B-156
67.	Hex Loc-Nut $\frac{1}{2}$ - 13	N-146
68.	Red Brake Handle Grip	67258R

SECTION 9



Parking Brake**SECTION 9**

Item No.	Description	Part No.	Item No.	Description	Part No.
1.	Brake Handle Assy.....	65245	11.	Flat Washer 5/16".....	W-113
2.	Cotter Pin 3/32" x 1-1/2".....	P-108	12.	Flange Lock Nut 5/16".....	N-121
3.	Flat Washer.....	W-113	13.	Cable Retainer Clamps.....	65061
4.	Plate.....	65060	14.	Hex Bolt 5/16 x 1-1/2".....	B-171
5.	Clevis Pin 5/16"x3/4".....	P-112	15.	Long Brake Cable.....	65247
6.	Clevis Pin 5/16" x 1-1/4".....	P-107	16.	Short Brake Cable.....	65246
7.	Hex Bolt 5/16" x 2".....	B-156	17.	Brake Drum.....	67266
8.	Fender Washer 5/16".....	W-118	18.	Brake Band.....	65244
9.	Spacer (Long).....	65062	19.	Short Spacer (Retainer Clamps).....	65063
10.	Hex Nut 5/16" Wiz-lock.....	N-103			

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DIXIE CHOPPER

Revision #4 11/97