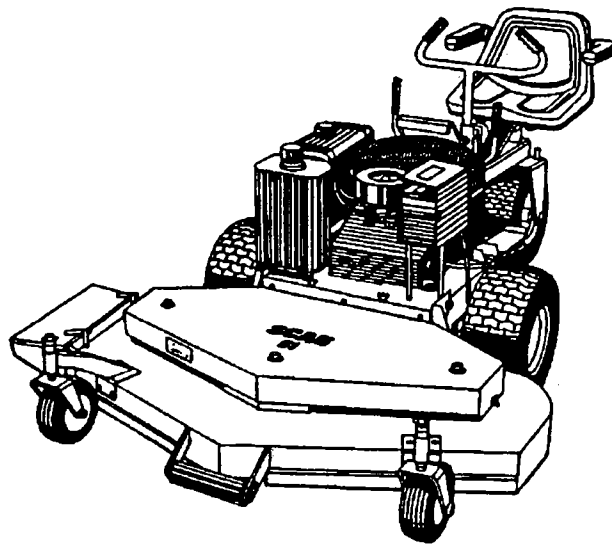


SCAG®

HYDROSTATIC DRIVE COMMERCIAL MOWERS TECHNICAL MANUAL



MODELS

STHM-20KH

SM-52

SM-61

SM-72

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SCAG POWER EQUIPMENT, INC.
SUBSIDIARY OF METALCRAFT OF MAYVILLE

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Your mower was built to the highest standards in the industry. However, your mower is only as safe as the operator. Carelessness or error on the part of the operator may result in serious bodily injury. Hazard control and accident prevention are dependent upon the awareness, concern, prudence, and proper training of the personnel involved in the operation, transport, maintenance, and storage of the equipment. Make sure every operator is properly trained and thoroughly familiar with all of the controls before operating the equipment.

SAFETY INSTRUCTIONS

1. Know the controls and how to stop quickly. READ THIS TECHNICAL MANUAL and instructions furnished with attachments. A replacement manual is available by sending complete model and serial number to:
SCAG Power Equipment, Inc.
1000 Metalcraft Drive
Mayville, WI 53050
2. Do not allow children to operate the machine. Do not allow adults to operate it without proper instruction.
3. Do not carry passengers. Do not mow when children and others are around.
4. Clear the work area of objects (wires, rocks, etc.) that might be picked up and thrown.
5. Disengage power to all attachments, do not depress foot pedal and engage parking brake before attempting to start the engine.
6. Disengage power to attachments and engage parking brake before leaving the operator's position.
7. Disengage power to attachments, stop the engine and remove key before making any repairs or adjustments.
8. Disengage power to attachments when transporting or not in use.
9. Take all possible precautions when leaving the machine unattended, such as disengaging the power-take-off, lowering the attachments, setting the parking brake, stopping the engine, and removing the key.
10. Do not operate machine while wearing sandals, tennis shoes, sneakers or shorts. Also, do not wear loose fitting clothing which could get caught in moving parts. Always wear long pants and substantial shoes. Wearing safety glasses and safety shoes is advisable and required by some local ordinances and insurance regulations.
11. Do not stop or start suddenly when going uphill or downhill. Mow up and down the face of steep slopes; never across the face.
12. Reduce speed and exercise extreme caution on slopes and in sharp turns to prevent tipping or loss of control. Be especially cautious when changing direction on slopes.
13. Stay alert for holes, rocks, and roots in the terrain and other hidden hazards. Keep away from drop-offs.
14. 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 counterweights or wheel weights when suggested in this technical manual.
15. Watch out for traffic when crossing or near roadways.
16. When using any attachments, never direct discharge of material toward bystanders nor allow anyone near the machine while in operation.
17. Handle gasoline with care - it is highly flammable.
 - a. Use approved gasoline container.
 - b. Never remove the fuel cap of, 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 the tank indoors and always clean up spilled gas.
 - c. Open doors if the engine is run in the garage- exhaust fumes are dangerous. Do not run the engine indoors.
18. Keep the machine and attachments in good operating condition, and keep safety devices and shields in place and in working condition.

19. Keep all nuts, bolts, and screws tight to be sure the equipment is in safe working condition.
20. Never store the equipment with gasoline in the tank inside a building where fumes may reach an open flame or spark. Allow the engine to cool before storing in any enclosure.
21. To reduce fire hazard, keep the engine free of grass, leaves or excessive lubricants.
22. The machine 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 the engine governor settings or overspeed the engine.
24. When using the machine with mower, proceed as follows:
 - a. Mow only in daylight or in good artificial light
 - b. Never make a cutting height adjustment while the engine is running
 - c. Shut the engine off and remove key when removing the grass catcher or unclogging chute.
 - d. Check the blade mounting bolts for proper tightness at frequent intervals.
25. Under normal usage, the grass catcher bag material is subject to deterioration and wear. Check bag frequently for deterioration and wear and replace worn bags. Check that replacement bags comply with the original manufacturer's recommendations or specifications.
26. Disengage power to mower before backing up. Do not mow in reverse unless absolutely necessary and then only after observation of the entire area behind the mower.
27. The discharge chute must be installed and in the down position on the side discharge mower except when optional grass catcher is completely installed. If the mower discharge ever plugs, shut engine off and wait for all movement to stop before removing obstruction.

28. Perform only those maintenance instructions described in this manual. If major repairs are ever needed or assistance is desired, contact an Authorized Scag Servicing Dealer. To ensure optimum performance and safety, always purchase genuine SCAG replacement parts and accessories. NEVER USE "WILL FIT" replacement parts and accessories made by another manufacturer. Use of unapproved replacement parts may void the warranty.

WARNING

DO NOT operate on steep slopes. To check a slope, attempt to back up (with cutter deck down). If machine can back up the slope without the wheels slipping reduce speed and use extreme caution.

HYDRAULIC SAFETY

- Safely relieve all pressure in the system before disconnecting the lines or performing work on the system.
- Keep body and hands away from pin holes or nozzles that eject hydraulic fluid under high pressure. Use paper or cardboard and not hands to search for leaks.
- Hydraulic fluid escaping under high pressure may have sufficient force to penetrate skin and cause serious injury. If foreign fluid is injected into the the skin, it must be surgically removed within a few hours by a doctor familiar with this form of injury or gangrene may result.
- Make sure all hydraulic fluid connections are tight and all hydraulic hoses and lines are in good condition before applying pressure to the system.

ASSEMBLY INSTRUCTIONS

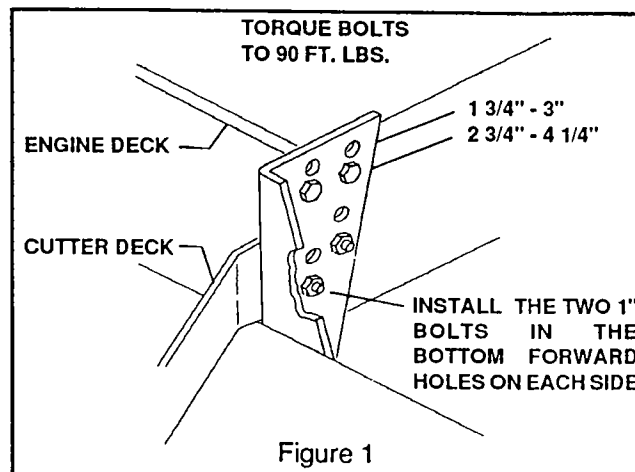
1. Remove all crating and packing materials. Layout loose mounting hardware according to the "Where Used" as listed in the hardware package contents.
2. Remove battery from battery support.

⚠ WARNING: Severe chemical burns can result from improper handling of battery electrolyte. Use proper eye, skin and clothing protection to prevent contact with eyes, skin and clothing.
 External contact: Flush with water.
 Internal contact: Drink large quantities of water, followed with milk of magnesia, beaten egg or vegetable oil. **CALL A PHYSICIAN IMMEDIATELY!**
IMPORTANT - In case of internal contact DO NOT give fluids that would induce vomiting.
 Eye contact: Flush with water for at least 15 minutes and get medical attention immediately!

⚠ WARNING: Explosive gases are vented from a battery when being charged or discharged which could explode if exposed to a flame or spark.

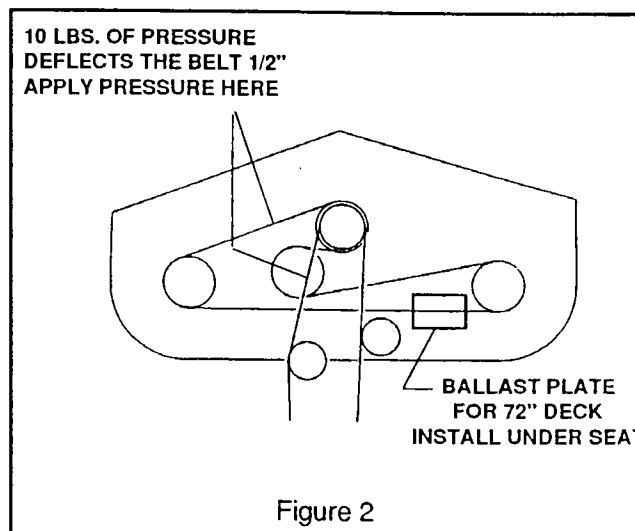
Fill with electrolyte solution.
 Charge at 3 to 5 amps for about 2 hours.
 Check fluid level and add electrolyte until level is up to the bottom of the split ring.
NOTE: Future need to adjust fluid level requires distilled water.
 Wash and dry off battery. Coat terminals with grease to minimize corrosion.

3. Attach the seat assembly to the seat support spring using two 3/8-16 x 1" bolts and lock washers. The seat and/or spring may be positioned forward or back for operator comfort.
4. Attach arm rests to seat back and use setscrews to adjust arm rests so they are horizontal. Tighten setscrews until tight and then back off 1/4 to 1/2 turn.
5. Slide steering handle on to shaft and secure with one 5/16-18 x 1-1/2" bolt, two flat washers, and a lock nut. Tighten securely.
6. Set the cutter deck on blocks about 2" off of a level floor. Remove the belt cover and control rod. Determine what height of cut is needed before attaching the cutter deck to the engine deck (See fig.1).
7. Move the tractor assembly to the cutter deck assembly. Loosen the winch cable and tilt the engine deck to a horizontal position. Align the holes and insert drift pins to assist in assembly.



NOTE: The two lower front bolts on the left hand side must be installed with the nut, lock washer, and flat washer on the outside. Secure together using six 1/2-13 x 1-1/2" bolts, two 1/2-13x1" bolts, flat washers, lock washers, and hex nuts. **Tighten all eight bolts to 90 ft. lbs. then go back and retorquing each one.**

8. Raise the cutter deck using the winch and attach each front caster wheel using four 5/16-18 x 3/4" bolts, lock washers, and hex nuts.
NOTE: If installing a 72" cutter deck, remove ballast from cutter deck and install under seat prior to raising cutter deck. (See fig. 2)



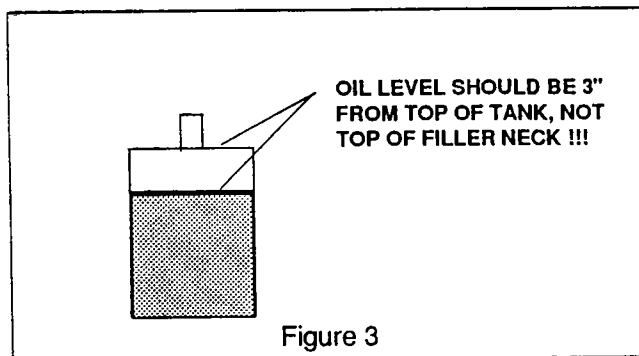
9. Install the mower engagement control rod, to the mower engagement lever arm located under the engine deck and to the over-center mechanism in the front, with hair pin cotter.
10. Route the blade drive belt around the engine pulley and the cutter deck pulleys.

ASSEMBLY INSTRUCTIONS CONT'D

11. Push the mower engagement lever forward until the over-center mechanism snaps into place. Check the over-center spacing as shown in figure 7. Check belt guide, adjust if necessary. Adjust belt tension as shown in figure 2 after over-center spacing is set. Reinstall belt cover.

! NEVER engage cutter deck without belt cover in place!!

12. Attach the discharge chute to the cutter deck using two 5/16-18 x 1" bolts and elastic stop nuts. Tighten only enough to remove excessive end play. Discharge chute must be free to move up and down.
13. Install battery into the battery support, connect the positive cable to the positive terminal and cover with the boot, then attach the negative cable. Install the battery box cover and tighten the wing nuts finger tight.
14. Check engine oil level, add as necessary (unit was filled with 30W motor oil at the factory).
15. Check hydrostatic oil reservoir, oil should be 3" from the top of the reservoir. (See fig. 3)
!DO NOT OVER FILL!
Add SAE 10W30 motor oil if necessary.



16. Check bolts for proper tightness.
17. Fill fuel tank with gasoline.
18. Open shut-off valve under tank.

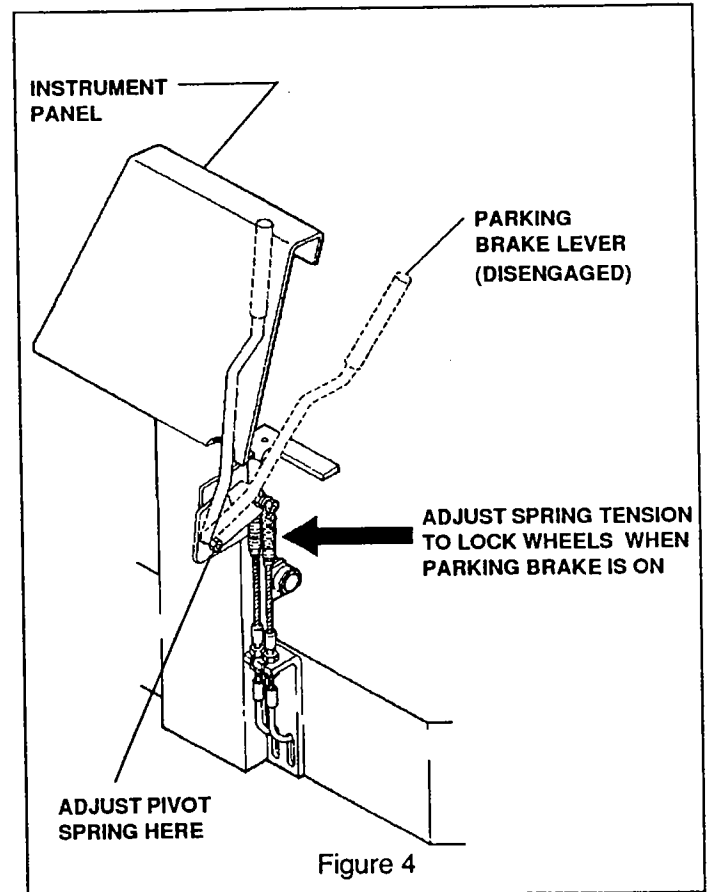
ADJUSTMENTS

Tire Pressures

| | |
|---------------------|--------|
| Caster Wheels | 25 PSI |
| Rear Steering Wheel | 25 PSI |
| Drive Wheels | 15 PSI |

Parking Brake

Adjust the nuts on the cable, so that the wheels are locked when the parking brake is in the engaged position. Parking brake should be completely released when in disengaged position. Drive wheels should "slide" rather than "roll" when brake is engaged. The pivot spring is adjusted so that the handle just clears the side edge of the instrument panel. (See fig. 4)



ADJUSTMENTS CONT'D

Neutral Adjustment

Note: If hydraulic components (pump, motors, hoses, etc.) are replaced, all air **must** be bled from system prior to making neutral adjustment.

1. Set the engine deck up on jack stands, so the wheels are free to rotate. Block caster wheels to prevent an accident should the unit fall off the jack stands.
2. Start engine and determine if the drive wheels rotate.

If drive wheels **consistently** rotate when foot pedal control is in neutral, go to step 3.

If drive wheels **inconsistently** rotate; ie. drive wheels sometimes rotate and sometimes do not when foot pedal is not depressed then check neutral adjustment bolt for "zero free play" in neutral control spring. (See fig. 5) To do this, shut off engine. Tighten nut on neutral adjustment bolt until all free play is removed between bolt and spring (fore & aft). **Do not over tighten.** If you turn nut to much you will compress spring, making too much end play. Go to step 3.

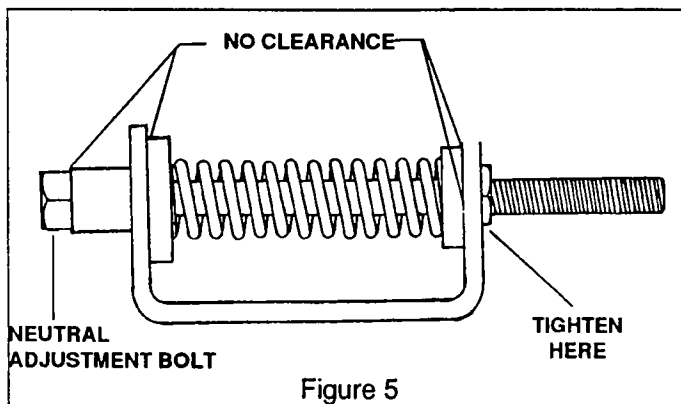


Figure 5

3. If drive wheels rotate in forward travel direction, turn adjustment bolt clockwise until rotation stops. If drive wheels rotate in rearward travel direction, turn adjustment bolt counter-clockwise until rotation stops.
4. Check adjustments of foot control pedal for full forward speed. Pedal should rest on foot plate when pump is stroked in full forward position. To make adjustment, disconnect ball joint from pedal arm and loosen jam nut. (See fig. 6) Place foot control pedal forward against foot rest and adjust ball joint on rod until stud aligns with hole in arm. Bolt ball joint to arm and tighten jam nut.

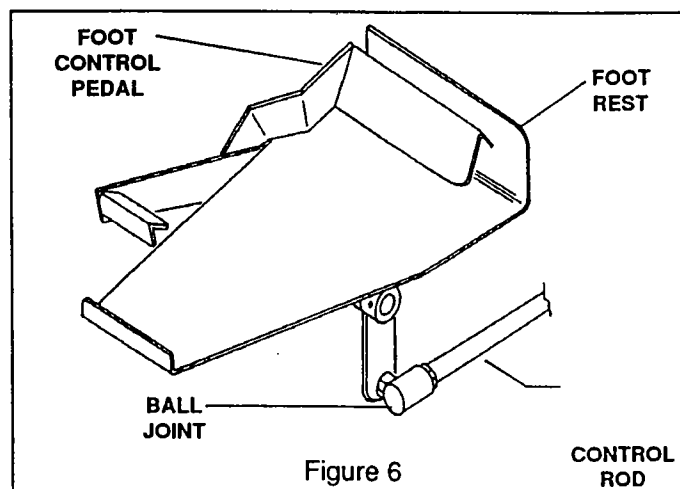


Figure 6

5. Start engine. Wheels should rotate only when foot control pedal is depressed.

Mower Belt Cam Link Over-Center Adjustment

The over-center adjustment must be checked and adjusted before setting the belt tension.

Engage the blade clutch lever and check for proper over-centering. There should be about 3/8" between rod and straight edge (See fig. 7). Bend the stop tab to adjust the clearance.

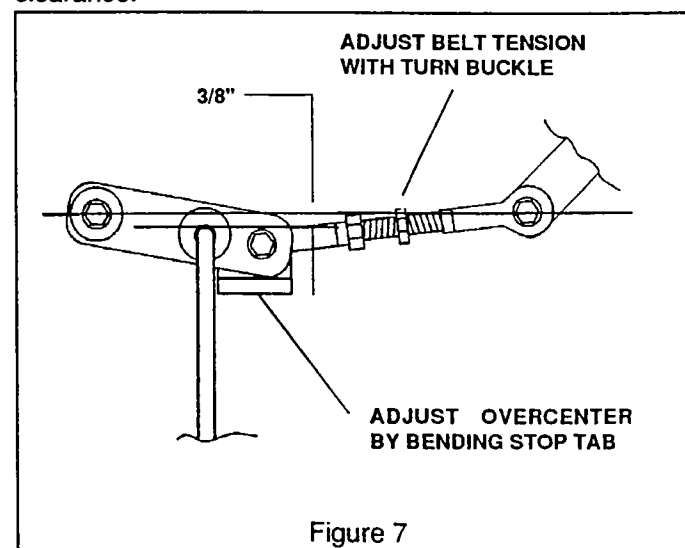


Figure 7

Belt Alignment Adjustment

Align belt horizontally between the center spindle pulley and engine pulley. Remove or install the spacer located under the stationary idler bracket to get belt and pulley alignment, on 61" and 72" decks.

ADJUSTMENTS CONT'D

Belt Tension

Hydro Drive Belt

This belt is spring loaded and does not require adjustment.

Cutter Deck Drive Belt

Belt tension should not be adjusted until over-center spacing is checked. Adjust the belt tension so that the b moves 1/2" with 10 pounds of pressure (See fig. 2). Adjustment is made by loosening the wing nut and tightening or loosening the turnbuckle.

Blade Drive Belt

Adjust the belt tension so that the belt moves 1/2" with 10 lbs. of pressure. Adjust tension by tightening or loosening the "J"-bolt.

Cutter Deck Adjustments

Due to the many conditions that exist, it is difficult to suggest a setting that will work for every lawn. There are two adjustments that can be made on these decks, pitch and height.

PITCH is the angle of the blades (comparing front to rear). A *positive pitch* is when the front (leading) edge of the cutting plane is lower than the rear (trailing) edge, *level pitch* is when both front and rear are basically level, a *negative pitch* is when the leading edge is higher than the rear edge.

HEIGHT is the nominal distance the blade is off of the ground (this measurement is made with the blades pointed side to side and distance is measured between cutting tip and ground). Adjusting the blade height can be done by moving any number of the five spacers on the blade mounting bolts to the top of the spindle shaft or below the spindle shaft (all blades should be positioned equally). Unit is shipped with one spacer on top and four underneath (see fig. 8 & 9). This adjustment does not effect blade pitch.

For best results, keep the cutter deck high in relation to the engine deck and the blades low in the cutter deck; ie. 3,4,5 spacers below the spindle shaft.

Additional range to the cutting height can be achieved by repositioning the cutter deck in relationship to the engine deck (This adjustment also affects the pitch of the deck). There are 2 positions (see fig. 1), suggested mounting is the bottom hole. For cutting lower, mount the cutter deck in the upper hole which drops the deck down. Check the cutter deck belt alignment after repositioning it.

Caster spacers also can be repositioned to change cutting heights and to change the pitch of the deck (see fig. 10).

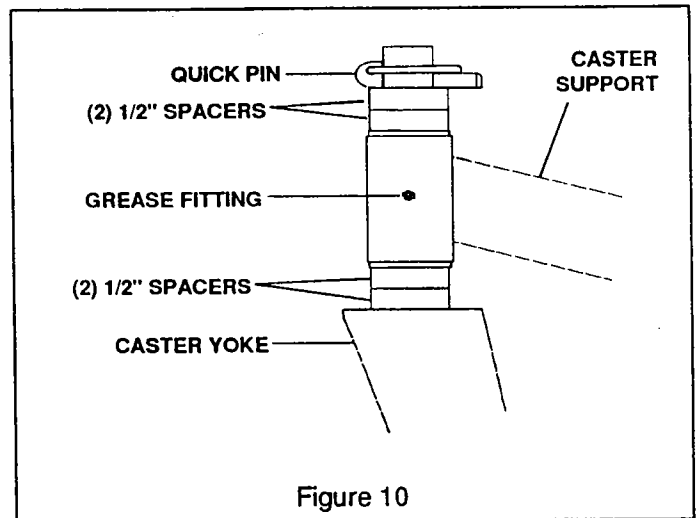
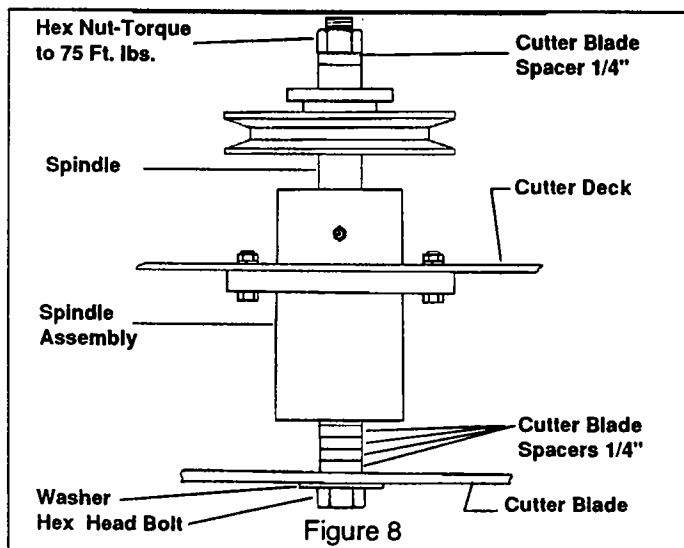


Figure 10

ADJUSTMENTS CONT'D

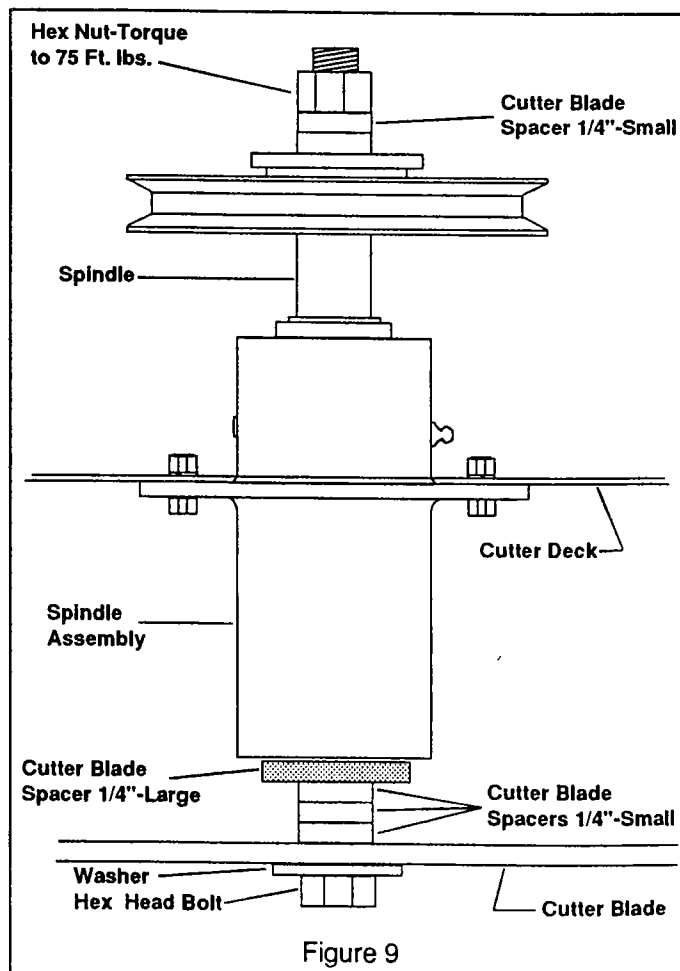
BALL BEARING SPINDLE ASSEMBLY

Adjusting the blade height can be done by moving any number of the five spacers on the blade mounting bolts to the top of the spindle shaft or below the spindle shaft (all blades should be positioned equally). Unit is shipped with one spacer on top and four underneath (see figure 9). For best cut and discharge a minimum of three spacer should be between the blade and spindle.



TAPERED BEARING SPINDLE ASSEMBLY

Adjusting the blade height can be done by moving any number of the four smaller 1/4" spacers on the blade mounting bolts to the top of the spindle shaft or below the spindle shaft. (All blades should be positioned equally). The tapered bearing spindle has a large 1/4" spacer that is installed directly below the spindle housing and is secured to the spindle with two roll pins. The blade can be adjusted all the way up to the spindle assembly if all the smaller 1/4" spacers are removed and installed above the pulley. The larger 1/4" spacer can then be removed along with the roll pins. (Do not install the larger 1/4" spacer above the pulley, store it in a convenient location away from the machine). When any 1/4" spacers are installed above the blades the larger 1/4" spacer must be installed directly below the spindle housing. If a smaller 1/4" spacer is installed directly below the spindle housing and contacts the retaining ring this will cause a spindle failure and not be warrantable. For best cut and discharge a minimum of three spacers should be between the blade and spindle. (SEE FIGURE 10)



OPERATION AND INITIAL RUN-IN

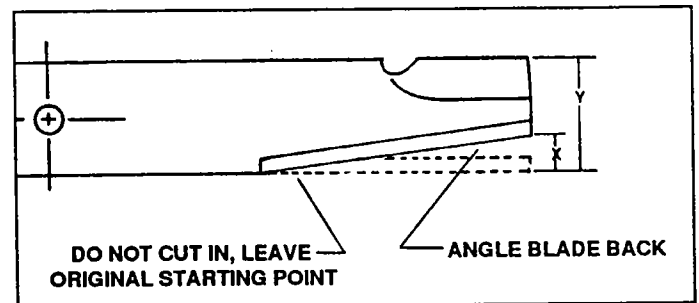
1. Check for correct routing of belts and for correct clearance of belt guides.
2. Check for correct alignment and initial tension of cutter blade drive belts.
3. Check that all fasteners are correctly tightened.
4. Check oil levels in engine and hydraulic reservoir.
5. Fill fuel tank with clean fresh lead free gasoline.
6. To start engine:
Pull mower engagement lever to off position.
Depress the left foot (operator presence) pedal.
Put parking brake in engaged position.
Adjust throttle and choke as required.
Do not depress hydro foot pedal.
Turn ignition key to start.
7. To engage blades release the parking brake. Observe to see that the unit does not creep forward or backwards. If it does creep, adjust hydro neutral control as specified in adjustment section.
8. Release the parking brake. Push mower engagement lever forward until over-center snaps into the engaged position. At initial run in allow belts to run-in for 5 minutes.
9. To operate the unit forwards and backwards, depress right foot pedal at the toe end to make the machine drive forward, depress the right foot pedal at the heel end to make the machine drive in reverse. Check that all systems function correctly.
10. Shut off engine and recheck cutter deck drive belts for proper tension, and any signs of rubbing. Correct and adjust as necessary.

Freewheel Position

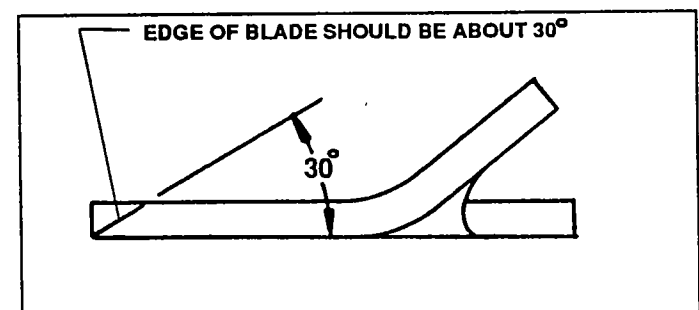
To move machine around without having the engine running, rotate dump valve lever located on the left hand side of the pump approximately 1/2 turn. **Lever must be returned to original position in order to operate machine.**

MAINTENANCE

Cutter Blades



Do not sharpen (X) beyond 1/3 of the width (Y) of the blade.



Suggestion: Dress the blade with a file. Using a wheel grinder may burn the blade.

Steering Cable Routing

When the steering cable is routed between the front pulley and the rear steering collar, it is very important that the cable does not rub where it crosses. The top of the cable end from the front pulley must go over the top of the lower cable end. (See fig. 10) Cable should be tightened until the slackness has been removed. Cable should **not** be under tension.

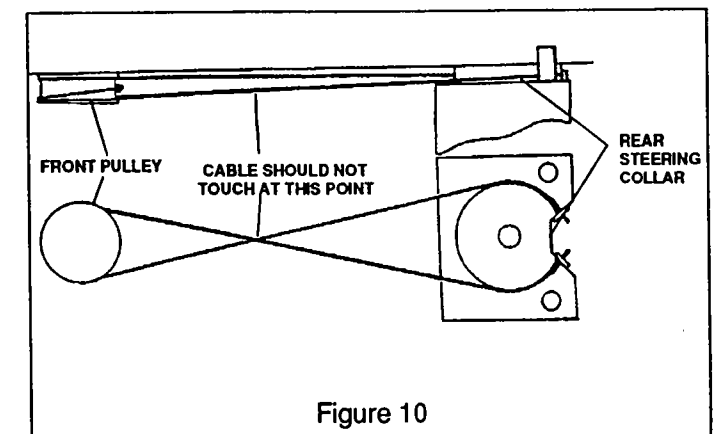


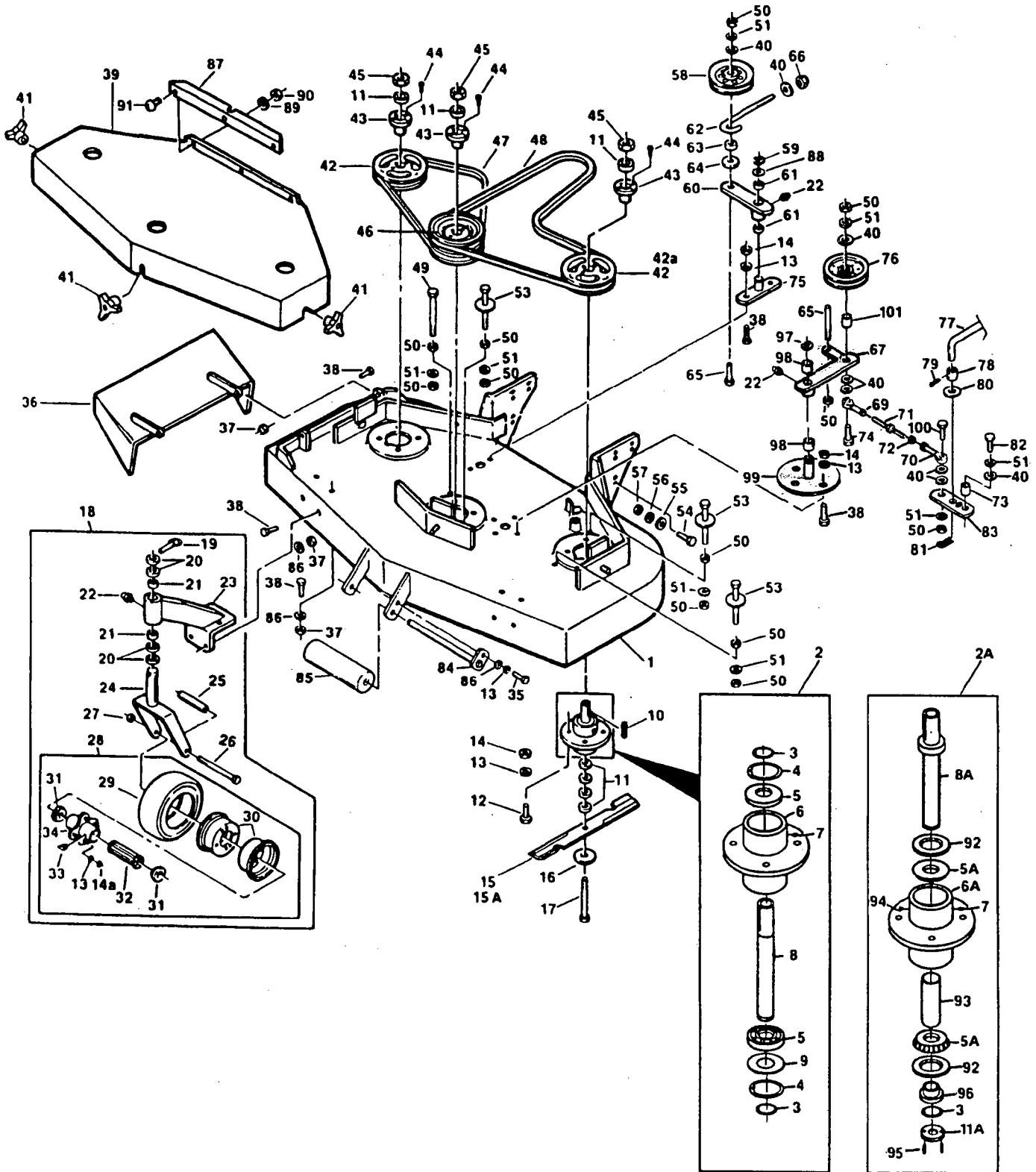
Figure 10

LUBRICATION & MAINTENANCE

| | | Break-In | 8 Hours (Daily) | 40 Hours (Weekly) | 100 Hours (Biweekly) | 200 Hours (Monthly) | PROCEDURE | COMMENTS |
|---|---|----------|-----------------|-------------------|----------------------|---------------------|--|---|
| X | X | X | | | | | Check all hardware for proper tightness Change engine oil and filter at 5 hours Change hydrostatic oil filter at 20 hours | Adjust oil level as needed - SAE 10W30 |
| X | X | X | X | X | X | X | Check engine oil Clean blower screen Remove debris from under belt cover Sharpen cutter blades Grease spindle bearings 2 pumps of hand gun Clean air filter | Do not over fill MORE OFTEN IF NEEDED * * * * * * * * * * + US Lithium MP White Grease 2125 MORE OFTEN IF NEEDED |
| X | X | X | X | X | X | X | Check battery acid level Check tire pressure Replace air filter - qualify Change engine oil - qualify | Distilled water only Add or adjust as required MORE OFTEN IF NEEDED MORE OFTEN IF NEEDED |
| X | X | X | X | X | X | X | Grease caster wheel bearings Grease caster wheel pivots Grease idler arm pivots | Chassis grease Chassis grease Chassis grease |
| X | X | X | X | X | X | X | Check all hardware for proper tightness Change engine oil filter Check hydro fluid resevoir level Clean and Adjust spark plugs Grease rider frame pivot Grease control bell cranks Grease steering handle bearing Grease foot pedal bearings Grease rear wheel pivot vertical Grease rear wheel bearing | See engine mfg. information See engine mfg. information Chassis grease Chassis grease Chassis grease Chassis grease Chassis grease Chassis grease + US Lithium MP White Grease 2125 |
| | | | | | | | Every 500 hours Drain Hydraulic System and replace fluid Change hydrostatic oil filter | Use SAE 10W30 motor oil Clean area before removing filter |

- * Depending on climate and enviroment, lubrication may be required every 8 to 40 hours.
- * Do not over grease as this may damage seal.
- + Compatible Greases:
 - Lidok EP #2 found at industrial shops
 - Ronex MP found at Exxon Service Stations
 - Shell Alvania #2 found at Shell Service Stations
 - Mobilux #2 found at Mobil Service Stations
 - Super Lube M EP #2 and Super Stay-M #2 found at Conoco Service Stations

SM-52 CUTTER DECK

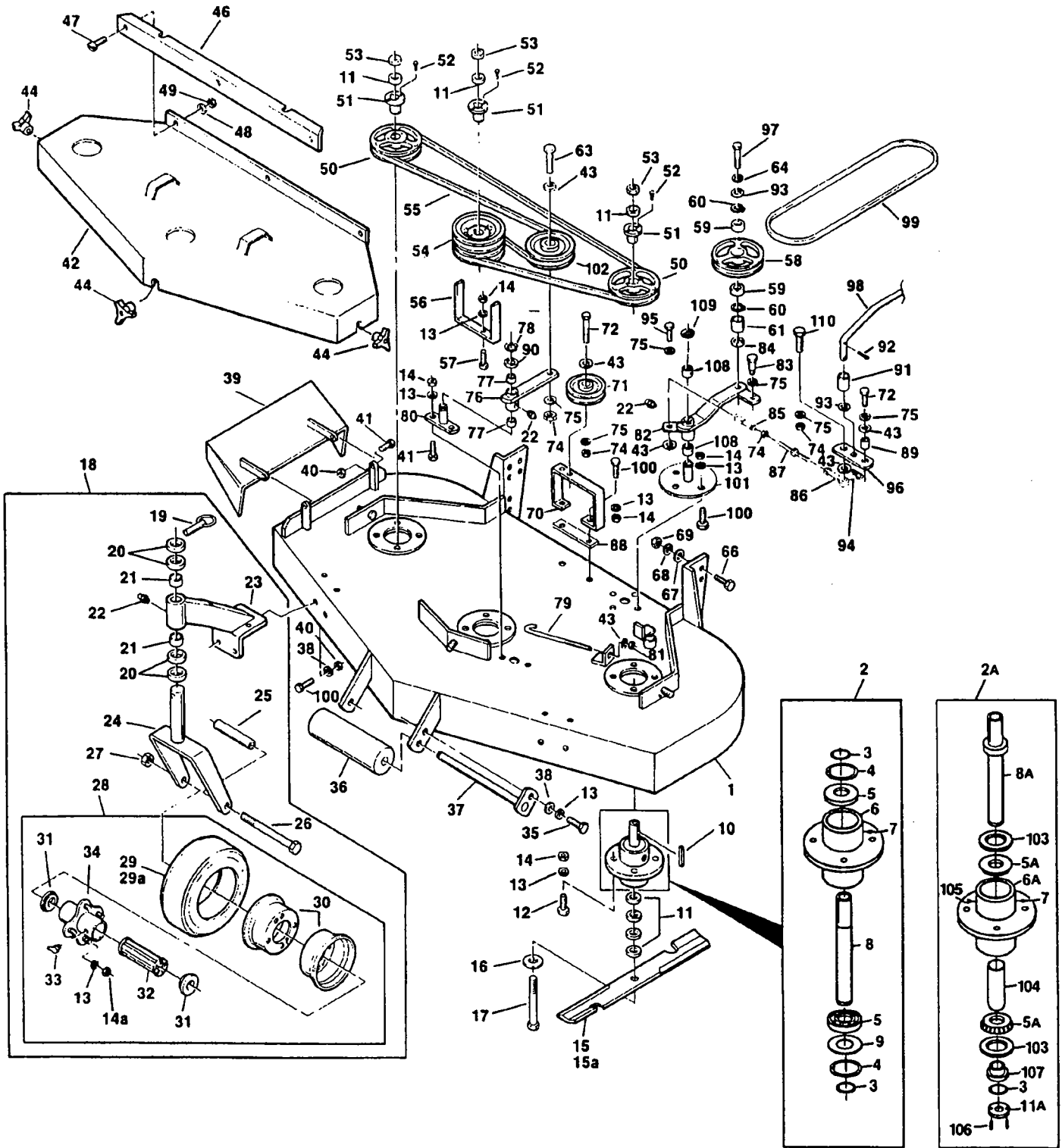


SM-52 CUTTER DECK

| Ref. Part No. | Part Number | Description | Ref. Part No. | Part Number | Description |
|---------------|-------------|--|---------------|-------------|--|
| 1 | 46318 | Cutter Deck (Includes decals) | 48 | 48530 | Belt, Blade Drive |
| 2 | 46020 | Cutter Spindle Assy. (Includes 3-9) | 49 | * | Hex Head Bolt, 3/8-16 x 5 |
| 2A | 46400 | Spindle Assembly, Tapered Bearing | 50 | * | Hex Nut, 3/8-16 |
| 3 | 04050-04 | Retaining Ring, 1" Ext.-Inverted | 51 | * | Lockwasher, 3/8 Spring |
| 4 | 04050-07 | Retaining Ring, 2-7/16 Int.-Basic | 53 | 45098 | Belt Guide |
| 5 | 48101-02 | Bearing, Cutter Spindle | 54 | * | Hex Hd. Bolt, 1/2-13 x 1-1/4 |
| 5A | 48668 | Tapered Bearing | 54 | * | Hex Hd. Bolt, 1/2-13 x 1-1/2 |
| 6 | 41001 | Spindle Housing | 55 | * | Flat Washer, 1/2 |
| 6A | 41007 | Spindle Housing, Tapered Bearing | 56 | * | Lockwasher, 1/2 |
| 7 | 48114-02 | Grease Fitting, Str. 5/16 Serr. | 57 | * | Hex Nut, 1/2-13 Elastic Stop |
| 8 | 43001-02 | Spindle, Cutter Blade | 58 | 48181 | Pulley |
| 8A | 45391 | Spindle Shaft, Tapered Bearing | 59 | 04050-02 | Retaining Ring, 3/4" Ext. - "E" |
| 9 | 04041-02 | Washer, 1-15/16 x 2-13/32 x 16 ga. | 60 | 46081 | Idler Arm Assembly (Includes 22 & 61) |
| 10 | 04063-08 | Key, 1/4 x 1/4 x 2 | 61 | 48100-05 | Bronze Bearing |
| 11 | 43038 | Spacer, Cutter Blade | 62 | 43028 | J.Rod. Idler Pulley |
| 11A | 43201 | Spacer, Cutter Blade | 63 | 43077 | Spacer |
| 12 | * | Hex Head Bolt, 5/16-18 x 1-1/4 | 64 | 04041-12 | Washer, 3/8 x 1-1/2 x 16 ga. |
| 13 | * | Lockwasher, Spring, 5/16 | 65 | 04004-04 | Stud |
| 14 | * | Hex Nut, 5/16-18 | 66 | * | Hex Nut, 3/8-16 Elastic Stop |
| 15 | 48108 | Cutter Blade, 18" Std. | 67 | 46434 | Idler Arm (incl. 22 & 98) — 46145 |
| 15a | 48185 | Cutter Blade, 18" Hi Lift | 68 | * | Flat Washer, 3/8" |
| 16 | 04040-10 | Flat Washer, 5/8 | 69 | 48544 | Rod End LH THD (Silver) — 04070-C1 |
| 17 | 04001-41 | Hex Head Bolt, 5/8-11 x 9-1/2 | 70 | 48464 | Rod End RH THD (Gold) — 04070-02 |
| 18 | 46079 | Caster Assy, Complete (Includes 19-28) | 71 | 48590 | Link, Turnbuckle |
| 19 | 04066-01 | Quick Pin | 72 | * | Hex Nut, 3/8-24 — 43025 |
| 20 | 43037-01 | Spacer, Caster Yoke, 1/2 Long | 73 | 43042 | Sleeve, Cam Clutch |
| 21 | 48100-01 | Bronze Bearing | 74 | * | Hex Head Bolt, 3/8-16 x 3 1/4" |
| 22 | 48114-04 | Grease Fitting, Str. 1/4-28 | 75 | 45037 | Idler Pivot |
| 23 | 46082 | Support Assy. (Includes 21-22) | 76 | 48269 | Pulley, Idler |
| 24 | 45006 | Caster Yoke | 77 | 44054 | Blade Clutch Rod |
| 25 | 43022 | Sleeve, Caster Wheel Bearing | 78 | 43043 | Sleeve, Clutch Rod |
| 26 | 04001-37 | Hex Head Bolt, 1/2-13 x 5-1/2 | 79 | * | Cotter Pin, 3/32 x 1 |
| 27 | * | Hex Locknut, 1/2-13 | 80 | * | Flat Washer, 33/64 x 1 x 16 ga. |
| 28 | 48307-01 | Wheel Assy. (Includes 13-14, 14a, 29-34) | 81 | 04062-01 | Hair Pin, Large |
| 29 | 48307-02 | Tra. Only, Caster Wheel | 82 | * | Hex Hd. Bolt, 3/8-16 x 1 |
| 29a | 48006-03 | Inner Tube Only, Caster Wheel | 83 | 421107 | Cam Link — 42057 |
| 30 | 48307-04 | Rim Pair, Caster Wheel | 84 | 45046 | Roller Shaft |
| 31 | 48006-07 | Retainer, Bearing, Caster Wheel | 85 | 48038 | Guide Roller |
| 32 | 48006-06 | Roller Bearing, Caster Wheel | 86 | * | Flat Washer, 5/16 |
| 33 | 48114-03 | Grease Fitting, 45° 1/4-28 | 87 | 42045 | Belt Cover Skirt |
| 34 | 48006-05 | Hub Assy. w/Bolts, Caster Wheel | 88 | 04041-085 | Flat Washer, 49/64 x 1-1/4 x 16 ga. |
| 35 | * | Hex Head Bolt, 5/16-18 x 3/4 | 89 | * | Lockwasher, 1/4 |
| 36 | 45100 | Discharge Chute | 90 | * | Hex Nut, 1/4-20 |
| 37 | * | Hex Nut, 5/16-18 Elastic Stop | 91 | * | Machine Screw, 1/4-20 x 1/2 Slit. Truss Hd |
| 38 | * | Hex Head Bolt, 5/16-18 x 1 | 92 | 48681 | Seal, Tapered Bearing Spindle |
| 39 | 46319 | Belt Cover (Includes decals) | 93 | 43218 | Sleeve, Cutter Spindle |
| 40 | * | Flat Washer, 25/64 x 15/16 x 12ga. | 94 | 48677 | Relief Fitting, Cutter Spindle |
| 41 | 04029-03 | Wing Nut, 3/8-16 | 95 | * | Roll Pin, 1/8 x 1/2" |
| 42 | 48127 | Pulley (Includes 43-44) | 96 | 43217 | Spindle Bushing |
| 43 | 48141 | Taper Hub | 97 | 04050-05 | Retaining Ring, 1 1/8" Ext. - "E" |
| 44 | * | Hex Hd. Bolt, 1/4-20 x 3/4 | 98 | 48100-02 | Bronze Bearing |
| 45 | * | Hex Nut, 5/8-11 | 99 | 45329 | Idler Pivot — 45037 |
| 46 | 48412 | Pulley, Double (Includes 43-44) | 100 | * | Hex Head Bolt, 3/8-16 x 1 1/2" |
| 47 | 48285 | Belt, RH Blade Drive | 101 | 43077 | Spacer |

* Common hardware which should be purchased locally. All bolts Grade 5 plated, all other fasteners zinc plate.

SM-61 & SM-72 CUTTER DECK

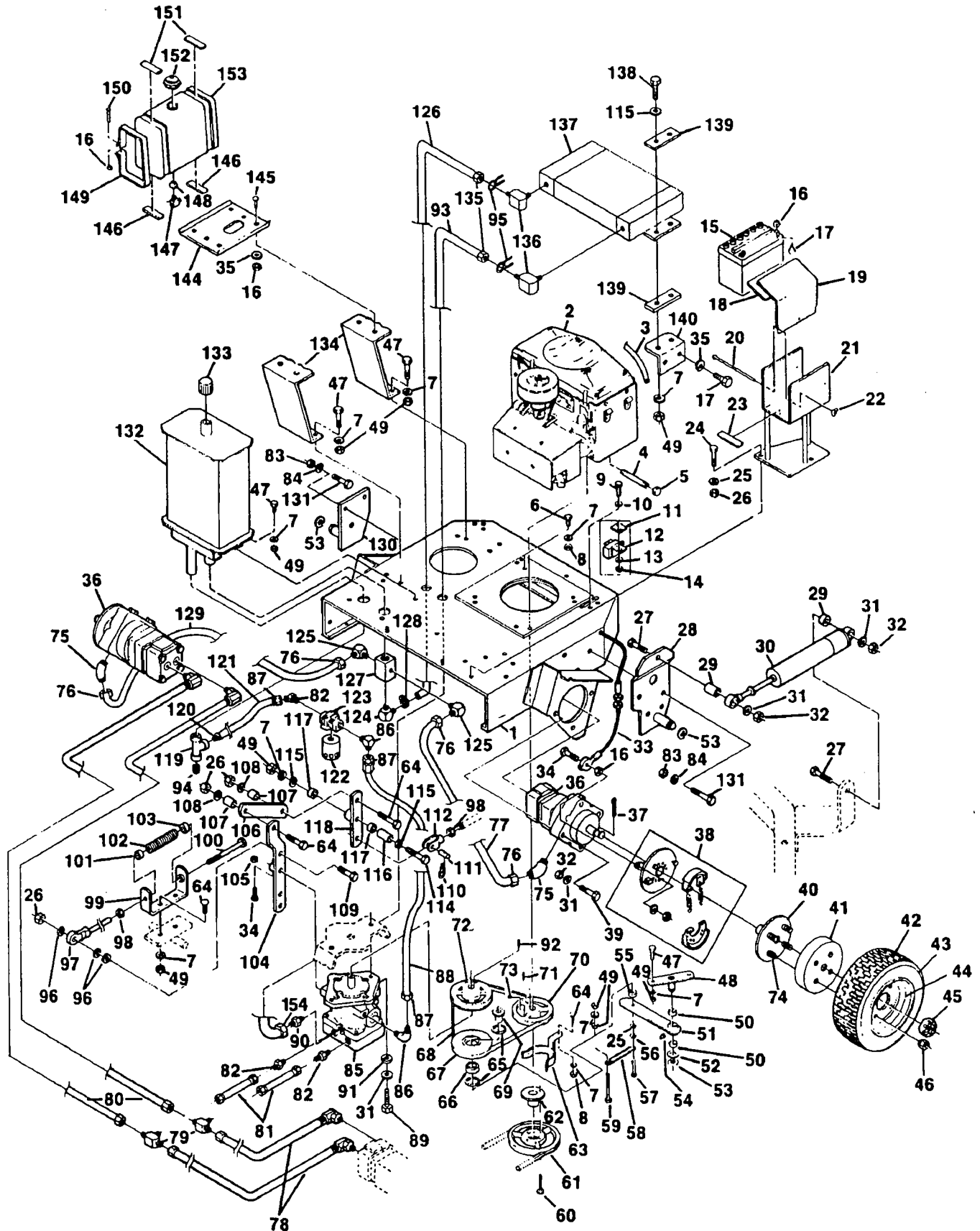


SM-61 & SM-72 CUTTER DECK

| Ref. Part No. | Part No. | Description | SM 61 | SM 72 | Ref. Part No. | Part No. | Description | SM 61 | SM 72 |
|---------------|----------|---------------------------------------|-------|-------|---------------|----------|---|-------|-------|
| 1 | 46150 | Cutter Deck (incl. Decal) | x | | 52 | * | Bolt, Hex Hd., 1/4-20 x 3/4 | x | x |
| 1 | 46245 | Cutter Deck (incl. Decal) | | x | 53 | * | Hex Nut, 5/8-11 | x | x |
| 2 | 46020 | Cutter Spindle Assy. (incl. 3-9) | x | x | 54 | 48128 | Pulley, Double (includes 51-52) | x | |
| 2A | 46400 | Spindle Assembly, Tapered Bearing | x | x | 54 | 48302 | Pulley, Double (incl. 51-52) | | x |
| 3 | 04050-04 | Retaining Ring, 1" Ext. Inverted | x | x | 55 | 48607 | Belt, Blade Drive | x | |
| 4 | 04050-07 | Retaining Ring, 2-7/16 Int. Basic | x | x | 55 | 48608 | Belt, Blade Drive | | x |
| 5 | 48101-02 | Bearing, Cutter Spindle | x | x | 56 | 42063 | Belt Guide | x | |
| 5A | 48668 | Tapered Bearing | x | x | 56 | * | Bolt, Hex Hd., 3/8-16 x 5 | | x |
| 6 | 41001 | Spindle Housing | x | x | 57 | * | Bolt, Hex Hd., 5/16-18 x 1-1/2 | x | x |
| 6A | 41007 | Spindle Housing, Tapered Bearing | x | x | 58 | 48062 | Pulley Idler | x | x |
| 7 | 48114-02 | Grease Fitting, Str. 5/16 Serr. | x | x | 59 | 48102 | Bearing | x | x |
| 8 | 43001-02 | Spindle, Cutter Blade | x | x | 60 | 04050-06 | Retaining Ring, 1-9/16 Int. Basic | x | x |
| 8A | 45391 | Spindle Shaft, Tapered Bearing | x | x | 61 | 43045 | Sleeve, Idler Bearing | x | x |
| 9 | 04041-02 | Washer, 1-5/16 x 2-7/16 x 16 ga. | x | x | 62 | 43040 | Spacer, Idler Bearing | x | x |
| 10 | 04063-08 | Key, 1/4 x 1/4 x 2 | x | x | 63 | * | Bolt, Hex Hd., 3/8-16 x 2-3/4 | x | x |
| 11 | 43038 | Spacer, Cutter Blade | x | x | 64 | * | Lockwasher, Spring 1/2 | x | x |
| 11A | 43201 | Spacer, Cutter Blade | x | x | 66 | * | Bolt, Hex Hd., 1/2-13 x 1-1/4 | x | x |
| 12 | * | Bolt, Hex Hd., 5/16-18 x 1-1/4 | x | x | 66 | * | Bolt, Hex Hd., 1/2-13 x 1-1/2 | x | x |
| 13 | * | Lockwasher, Spring, 5/16 | x | x | 67 | * | Flat Washer, 1/2 | x | x |
| 14 | * | Hex Nut, 5/16-18 | x | x | 68 | * | Lockwasher, 1/2 | x | x |
| 14A | * | Hex Nut, 5/16-24 | x | x | 69 | * | Hex Nut, 1/2-13, Elastic Stop | x | x |
| 15 | 48111 | Cutter Blade, 21" Std. | x | | 70 | 42536 | Idler Pulley Support | x | x |
| 15 | 48112 | Cutter Blade, 24" Std. | | x | 71 | 48413 | Pulley, Belt Guide | x | x |
| 15A | 48304 | Cutter Blade, 21" High Lift | x | | 72 | * | Bolt, Hex Hd., 3/8-16 x 2 | x | x |
| 16 | 04040-10 | Flat Washer, 5/8W | x | x | 74 | * | Hex Nut, 3/8-16 | x | x |
| 17 | 04001-41 | Bolt, Hex Hd., 5/8-11 x 9-1/2 | x | x | 75 | * | Lockwasher, Spring, 3/8 | x | x |
| 18 | 46079 | Caster Assy. Comp. (incl. 19-28) | x | x | 76 | 46081 | Idler Arm Assy. (incl. 22 & 77) | x | x |
| 19 | 04066-01 | Quick Pin | x | x | 77 | 48100-05 | Bronze Bearing | x | x |
| 20 | 43037-01 | Spacer, Caster Yoke, 1/2 Long | x | x | 78 | 04050-02 | Retaining Ring, 3/4 Ext. "E" | x | x |
| 21 | 48100-01 | Bronze Bearing | x | x | 79 | 43028 | Rod, Idler Pull, J | x | x |
| 22 | 48114-04 | Grease Fitting, Str. 1/4-28 | x | x | 80 | 45037 | Idler Pivot | x | x |
| 23 | 46082 | Support Assy. (incl. 21-22) | x | x | 81 | * | Hex Nut, 3/8-16 Elastic Stop | x | x |
| 24 | 45006 | Caster Yoke | x | x | 82 | 46383 | Idler Arm Assy. (incl. 22 & 77) | x | x |
| 25 | 43022 | Sleeve, Caster Wheel Bearing | x | x | 83 | 43054 | Shoulder Bolt | x | x |
| 26 | 04001-37 | Bolt, Hex Hd., 1/2-13 x 5-1/2 | x | x | 84 | 43041 | Spacer, Idler | x | x |
| 27 | * | Hex Locknut, 1/2-13 | x | x | 85 | 48544 | Rod End, LH (gold colored) | x | x |
| 28 | 48307-01 | Wheel Assy. (Incl. 13-14, 14a, 29-34) | x | x | 86 | 48464 | Rod End, RH (silver colored) | x | x |
| 29 | 48307-02 | Tire Only, Caster Wheel | x | x | 87 | 48590 | Link, Turnbuckle | x | x |
| 29A | 48006-03 | Inner Tube Only, Caster Wheel | x | x | 88 | 42917 | Spacer Bar | x | x |
| 30 | 48307-04 | Rim Pair, Caster Wheel | x | x | 89 | 43042 | Sleeve, Cam Clutch | x | x |
| 31 | 48006-07 | Retainer, Bearing, Caster Wheel | x | x | 90 | 04041-08 | Washer 3/4 (49/64 x 1-1/4 x 16 ga.) | x | x |
| 32 | 48006-06 | Roller Bearing, Caster Wheel | x | x | 91 | 43043 | Sleeve, Clutch Rod | x | x |
| 33 | 48114-03 | Grease Fitting, 45° 1/4-28 | x | x | 92 | * | Cotter Pin, 3/32 x 1 | x | x |
| 34 | 48006-05 | Hub Assy. w/Bolts | x | x | 93 | * | Washer, 33/64 x 1 x 16 ga. | x | x |
| 35 | * | Bolt, Hex Hd., 5/16-18 x 3/4 | x | x | 94 | 04062-01 | Hair Pin, Large | x | x |
| 36 | 48038 | Guide Roller | x | x | 95 | * | Bolt, Hex Hd., 3/8-16 x 1 | x | x |
| 37 | 45046 | Roller Shaft | x | x | 96 | 421107 | Cam Link | x | x |
| 38 | * | Washer, 3/8 x 7/8 x 13 ga. | x | x | 97 | * | Bolt, Hex Hd., 1/2-20 x 2 | x | x |
| 39 | 45029 | Discharge Chute | x | x | 98 | 44054 | Rod, Blade Engage (approx. 27" long) | x | x |
| 40 | * | Hex Nut, 5/16-18 Elastic Stop | x | x | 99 | 48083 | Belt, Cutter Drive | x | |
| 41 | * | Bolt, Hex Hd., 5/16-18 x 1 | x | x | 99 | 48359 | Belt, Cutter Drive | | x |
| 42 | 446151 | Belt Cover (incl. Decals) | x | | 100 | * | Bolt, Hex Hd., 5/16-18 x 1 | x | x |
| 42 | 46395 | Belt Cover (incl. Decals) | | x | 101 | 45329 | Idler Pivot | x | x |
| 43 | * | Washer, 25/64 x 15/16 x 12 ga. | x | x | 102 | 48531 | Pulley, Idler | x | x |
| 44 | 04029-03 | Wing Nut, 3/8-16 | x | x | 103 | 48681 | Seal, Tapered Bearing Spindle | x | x |
| 45 | 43123 | Spacer | x | x | 104 | 43218 | Sleeve, Tapered Bearing Spindle | x | x |
| 46 | 42045 | Belt Cover Skirt | x | x | 105 | 48677 | Relief Fitting, Tapered Bearing Spindle | x | x |
| 47 | * | Mach Scrw, 1/4-20 x 1/2 Truss Hd. | x | x | 106 | * | Roll Pin, 1/8 x 1/2" | x | x |
| 48 | * | Lockwasher, Spring, 1/4 | x | x | 107 | 43217 | Bushing, Tapered Bearing Spindle | x | x |
| 49 | * | Hex Nut, 1/4-20 | x | x | 108 | 48100-02 | Bronze Bearing | x | x |
| 50 | 48127 | Pulley (Incl. 51-52) | x | x | 109 | 04050-05 | Retaining Ring - Est. "E" - 1-1/8" | x | x |
| 51 | 48141 | Taper Hub | x | x | 110 | * | Hex Hd. Bolt, 3/8-16 x 1-1/2" | x | x |

* Common hardware which should be purchased locally. All bolts Grade 5 plated, all other fasteners zinc plate.

ENGINE DECK



ENGINE DECK

| Ref. No. | Part Number | Description |
|----------|-------------|---|
| 1 | 45368 | Engine Deck |
| 2 | 48371 | Engine, 20 HP Kohler (MV20S PS-57511) |
| 3 | 48058-13 | Hose, Fuel |
| 4 | 48511 | Oil Drain Extension (Includes plug) |
| 5 | * | Cap, 3/8 JIC Male Plug |
| 6 | * | Bolt, Hex Hd., 5/16-18 x 1-3/4 |
| 7 | * | Lockwasher, 5/16 Spring |
| 8 | 04021-10 | Hex Nut, Elastic Stop Lock, 5/16-18 |
| 9 | * | Screw, Hex Hd., #10-32 x 3/4 |
| 10 | * | Flat Washer, #10 |
| 11 | 42459 | Stop, Mower Engage |
| 12 | 48395 | Switch, Mower Engage |
| 13 | * | Lockwasher, External Tooth, #10 |
| 14 | * | Hex Nut, #10-32 |
| 15 | 48015 | Battery |
| 16 | * | Hex Nut, 1/4-20 |
| 17 | * | Bolt, Hex Hd., 1/4-20 x 1/2 |
| 18 | 48099 | Insulation, Battery Cover |
| 19 | 42392 | Battery Cover |
| 20 | * | Bolt, Carriage Rd. Hd. Sq. Nk., 1/4-20 x 6 |
| 21 | 45265 | Battery Box |
| 22 | 04029-01 | Wing Nut, 1/4-20 |
| 23 | 48661 | Pad, Battery Support |
| 24 | * | Bolt, Hex Hd., 3/8-16 x 1 |
| 25 | * | Lockwasher, 3/8 Spring |
| 26 | * | Hex Nut, 3/8-16 |
| 27 | * | Bolt, Hex Hd., 1/2-13 x 2 |
| 28 | 45257 | Hitch Bracket, LH |
| 29 | 43041 | Sleeve, Shock Absorber Mount |
| 30 | 48516 | Shock Absorber |
| 31 | * | Lockwasher, 1/2 Spring |
| 32 | * | Hex Nut, 1/2-13 |
| 33 | 48467 | Parking Brake Cable Assembly - LH |
| 33a | 48466 | Parking Brake Cable Assembly - RH |
| 34 | * | Bolt, Hex Hd., 1/4-20 x 1-1/4 |
| 35 | * | Lockwasher, 1/4 Spring |
| 36 | 48439 | Motor, White (Includes item 45, less brake assy.) |
| 37 | * | Cotter Pin, 5/32 x 1-1/2 |
| 38 | 48461 | Parking Brake Assembly |
| 39 | * | Bolt, Hex Hd., 1/2-13 x 2-1/2 |
| 40 | 45332 | Hub Assembly (Includes Bolts) |
| 41 | 48513 | Brake Drum |
| 42 | 48416-07 | Rim and Tire Assembly |
| 43 | 48416-02 | Tire, 20 x 8.00-10, 4 ply |
| 44 | 48416-04 | Rim Only |
| 45 | 04027-03 | Castle Nut, 1.0-20 UNEF |
| 46 | 04028-01 | Wheel Nut |
| 47 | * | Bolt, Hex Hd., 5/16-18 x 3/4 |
| 48 | 45037 | Idler Pivot Base |
| 49 | * | Hex Nut, 5/16-18 |
| 50 | 48100-05 | Bronze Bushing |
| 51 | 46327 | Pump Idler Arm (Includes (2) 50 and (1) 54) |
| 52 | 04041-08S | Flat Washer, 3/4 (49/64 x 1-1/4 x .035) |
| 53 | 04050-02 | Retaining Ring, 3/4 "E" |
| 54 | 48114-01 | Grease Fitting |
| 55 | 43063 | Spacer, Idler |
| 56 | * | Hex Nut, Jam 3/8-16 |

* Common hardware which should be purchased locally. All bolts grade 5 plated, all other fasteners zinc plate.

ENGINE DECK CONTINUED ON FOLLOWING PAGE

ENGINE DECK CONT'D

| Ref. No. | Part Number | Description |
|----------|-------------|---|
| 57 | * | Bolt, Hex Hd., 3/8-16 x 1-1/2 |
| 58 | 48560 | Spring, Traction Drive Belt |
| 59 | * | Bolt, Hex Hd., 5/16-18 x 2-1/4 |
| 60 | * | Bolt, Hex Hd., 1/4-20 x 1-3/8 |
| 61 | 48378-01 | Pulley, Blade Drive (includes 60 and 62) |
| 62 | 48378-03 | Hub, Tapered |
| 63 | 45222 | Belt Guide |
| 64 | * | Bolt, Carriage Rd. Hd. Sq. Nk., 5/16-18 x 1 |
| 65 | 04050-06 | Retaining Ring, 1-9/16 Internal |
| 66 | 48102 | Bearing, Idler Pulley |
| 67 | 46370 | Pulley, Idler - Traction Drive (incl. 65, 66, 69) |
| 68 | 48585 | Belt, Pump Drive |
| 69 | 43117 | Sleeve, Idler (tapped) |
| 70 | 48583 | Pulley, Engine - Pump |
| 71 | 04063-11 | Key, 1/4 x 1/4 x 2-1/2 (plated) |
| 72 | 48581 | Pulley, Pump Input |
| 73 | * | 5/16-18x3/8" Hex Socket Set Screw |
| 74 | 04008-01 | Bolt, Hub |
| 75 | 48485-03 | Elbow, 45 deg. Male, JIC to "O" ring |
| 76 | 48353-02 | Coupling, SAE Flare Swivel, Push On Hose End |
| 77 | 48482-02 | Hose, Push On 1/4 ID - LH |
| 78 | 48501 | Hose Assembly - LH Motor |
| 79 | 48505-01 | Tube Tee |
| 80 | 48509 | Hose Assembly - RH Motor |
| 81 | 48500 | Tube Assembly |
| 82 | 48485-01 | Elbow, 45 deg. Male, JIC to "O" ring |
| 83 | * | Hex Nut, 7/16-14 |
| 84 | * | Lockwasher, 7/16 Spring |
| 85 | 48438 | Pump, Sunstrand |
| 86 | 48350-02 | Elbow, 90 deg., JIC to "O" ring |
| 87 | 48353-01 | Coupling, SAE Flare Swivel, Push On Hose End |
| 88 | 48351-07 | Hose, 1/2 ID, Oil Filter to Pump |
| 89 | 04015-03 | Capscrew, 1/2-13 x 1-1/4 Socket Hd. |
| 90 | 48483-02 | Union, Tube JIC to "O" ring |
| 91 | * | Flat Washer, 1/2 |
| 92 | 04063-12 | Key, 3/16 x 5/8 Woodruff #61 |
| 93 | 48634 | Hose |
| 94 | 48731-02 | Pipe Plug, 1/2 NPT - Magnetic |
| 95 | 48502-02 | Corbin Clamp -1" |
| 96 | * | Flat Washer, 3/8 (.406 x .821 x .065) |
| 97 | 48464 | Rod End |
| 98 | * | Hex Nut, 3/8-24 |
| 99 | 42667 | Retainer, Neutral Spring |
| 100 | 48512 | Bolt, Hex Hd., 3/8-24 x 6-3/4 special |
| 101 | 43151 | Bushing, Spring Keeper, Short |
| 102 | 48463 | Spring, Neutral Return |
| 103 | 43150 | Bushing, Spring Keeper, Long |
| 104 | 45260 | Control Arm, Pump |
| 105 | 04021-08 | Hex Nut, Elastic Stop Lock, 1/4-20 |
| 106 | 42658 | Link, Speed Control |
| 107 | 43042 | Sleeve, Pump Control Link |
| 108 | * | Flat Washer, 3/8 (25/64 x 15/16 x 12 ga.) |
| 109 | * | Bolt, Carriage Rd. Hd. Sq. Nk., 3/8-16 x 1-1/2 |
| 110 | 04062-02 | Hair Pin Cotter, Small |
| 111 | 44024 | Clevis Pin |
| 112 | 48343-02 | Clevis, Pump Control |
| 114 | * | Bolt, Hex Hd., 5/16-18 x 2-3/4 |
| 115 | * | Flat Washer, 5/16 (.344 x .688 x .065) |
| 116 | 43110 | Sleeve, Control Arm |

* Common hardware which should be purchased locally. All bolts grade 5 plated, all other fasteners zinc plate.

ENGINE DECK CONTINUED ON FOLLOWING PAGE

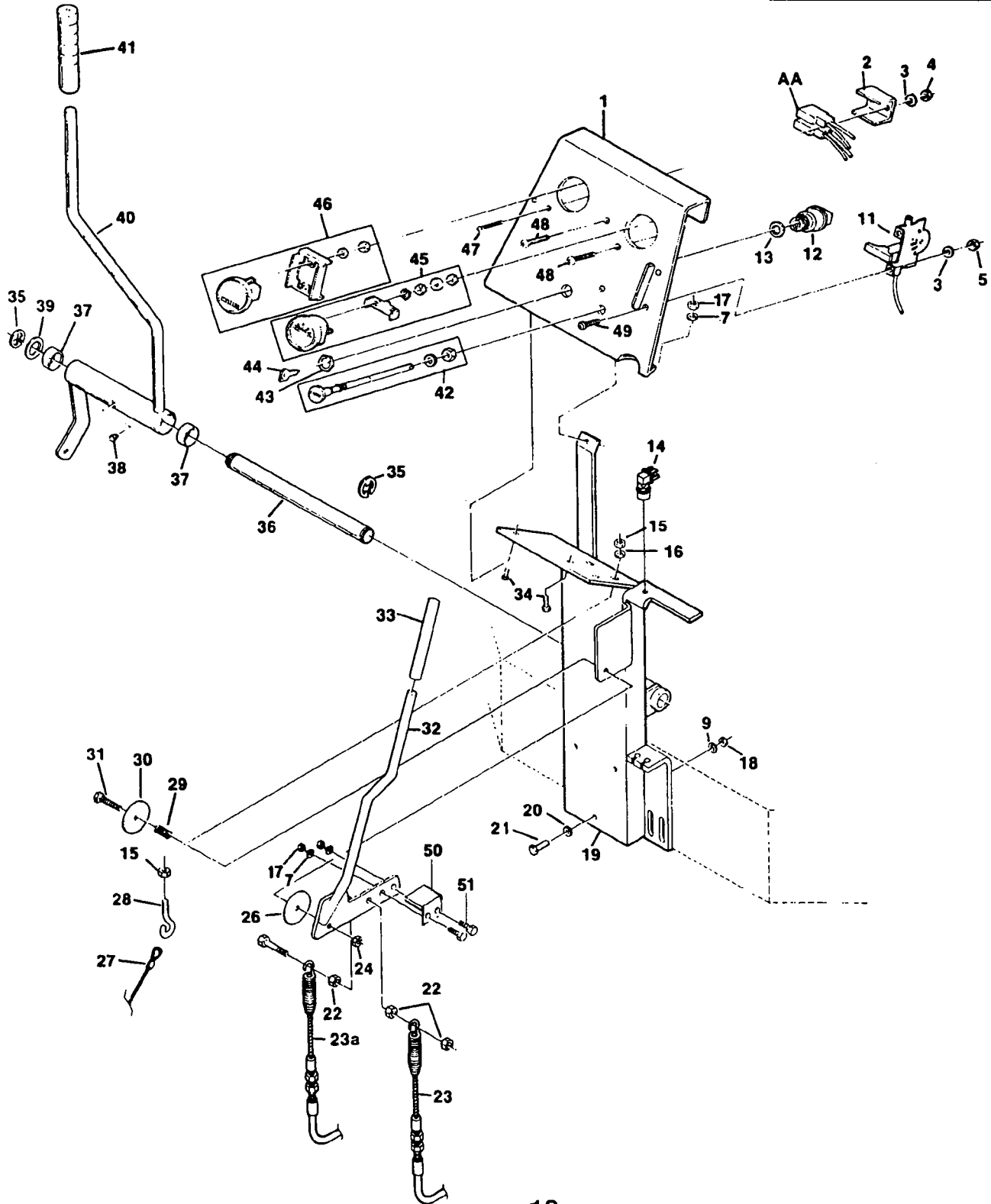
ENGINE DECK CONT'D

| Ref. No. | Part Number | Description |
|----------|-------------|---|
| 117 | 48100-04 | Bronze Bushing |
| 118 | 46328 | Control Arm, Bellcrank (Includes (2) 117) |
| 119 | 48365 | Pipe Tee, 1/2 NPT |
| 120 | 48352-01 | Coupling, Straight Male, Pipe NPT, Push On Hose End |
| 121 | 48351-06 | Hose, Tee to Oil Filter |
| 122 | 48462-01 | Oil Filter (special) |
| 123 | 48462-02 | Head, Oil Filter |
| 124 | 48486-02 | Elbow, 90 deg. Male, Pipe NPT, Push On Hose End |
| 125 | 48489-01 | Elbow, 90 deg. Male, JIC to NPT |
| 126 | 48635 | Hose |
| 127 | 48532 | Manifold |
| 128 | 48136-04 | Clamp, Worm Drive |
| 129 | 48482-01 | Hose, Push On, 1/4 ID - RH |
| 130 | 45256 | Hitch Bracket - RH |
| 131 | * | Bolt, Hex Hd, 7/16-14 x 1 |
| 132 | 45266 | Oil Reservoir |
| 133 | 48376 | Cap, Oil Reservoir |
| 134 | 42386 | Mounting Bracket, Fuel Tank |
| 135 | 48353-04 | Coupling |
| 136 | 48350-05 | Elbow 90 deg |
| 137 | 48645 | Radiator, Oil Cooler |
| 138 | * | Bolt, Hex Hd 5/16-18x1 1/4. |
| 139 | 48636 | Pad, Rubber |
| 140 | 42925 | Bracket, Radiator Mounting |
| 141 | + | Part Removed From Illustration |
| 142 | + | Part Removed From Illustration |
| 143 | + | Part Removed From Illustration |
| 144 | 42377 | Support, Fuel Tank |
| 145 | * | Bolt, Carriage Rd. Hd. Sq. Nk., 1/4-20 x 3/4 |
| 146 | 48205 | Pad, Fuel Tank Support |
| 147 | 48308 | Fuel Shut Off Valve |
| 148 | 48309 | Bushing, Fuel Tank Valve |
| 149 | 42369 | Strap, Fuel Tank |
| 150 | * | Screw, Slotted Rd. Hd. Machine, 1/4-20 x 2 |
| 151 | 48292 | Pad, Fuel Tank Strap |
| 152 | 48658 | Cap, Fuel Tank |
| 153 | 46174 | Fuel Tank Assembly (Includes 147, 148) |
| 154 | 48353-03 | Coupling, 3/4-16 SAE Flare Swivel, 5/8" Push-On |

* Common hardware which should be purchased locally. All bolts grade 5 plated, all other fasteners zinc plate.

INSTRUMENT PANEL

AA - Fuse Holders
Part of Wiring Harness
See Page 20.

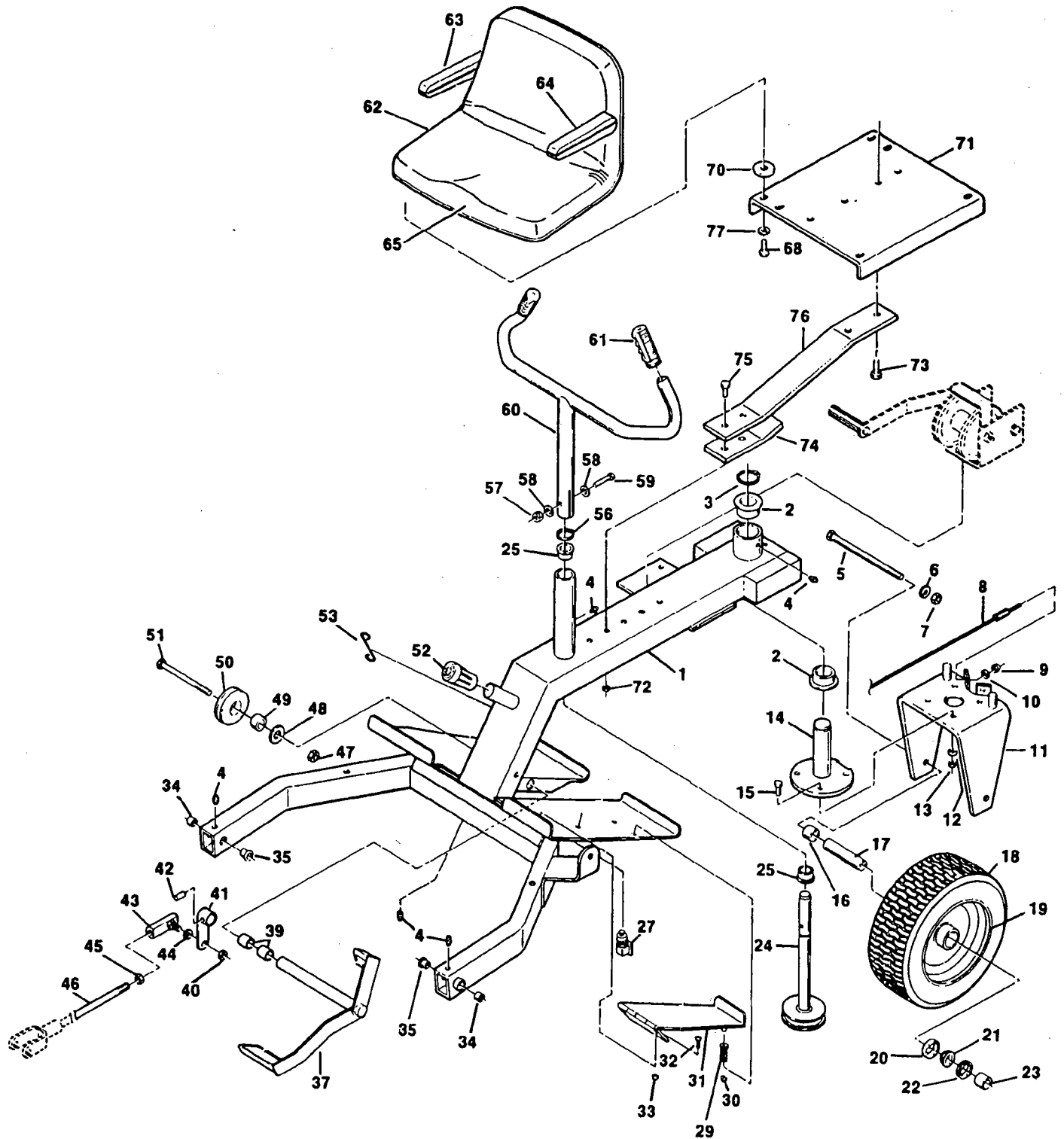


INSTRUMENT PANEL

| Ref. No. | Part Number | Description |
|----------|-------------|---|
| 1 | 46330 | Instrument Panel (includes decal) |
| 2 | 42413 | Bracket, Fuse Holder |
| 3 | 04031-01 | Lockwasher, #10 external tooth |
| 4 | 04021-01 | Hex Nut, Elastic Stop Lock #10-32 |
| 5 | * | Hex Nut, #10-32 |
| 6 | * | Flat Washer, 1/4" |
| 7 | * | Lockwasher, 1/4 spring |
| 8 | * | Hex Nut, 5/16-18 |
| 9 | * | Lockwasher, 5/16 spring |
| 10 | + | Removed From Illustration |
| 11 | 48090 | Throttle Control |
| 12 | 48017 | Switch, Key |
| 13 | 48017-03 | Lockwasher, 5/8 internal tooth |
| 14 | 48522 | Switch, Parking Brake |
| 15 | * | Hex Nut, 3/8-16 |
| 16 | * | Lockwasher, 3/8 spring |
| 17 | * | Hex Nut, 1/4-20 |
| 18 | * | Hex Locknut, 5/16 |
| 19 | 45284 | Console Support |
| 20 | * | Flat Washer, 5/16 |
| 21 | * | Bolt, Hex Hd., 5/16-18 x 2-1/4 |
| 22 | * | Hex Lock Jam Nut, 3/8-16 |
| 23 | 48466 | Cable Assy, Parking Brake - RH |
| 23A | 48467 | Cable Assy, Parking Brake - LH |
| 24 | 04021-09 | Hex Nut, Elastic Stop Lock 3/8-16 |
| 25 | * | Bolt, Hex Hd., 3/8-16 x 1-3/4 |
| 26 | 04041-12 | Flat Washer, 3/8 x 1-1/2 x 16 ga. |
| 27 | 48045 | Cable, Winch |
| 28 | 04070-03 | Eye Bolt, 3/8-16 x 2 |
| 29 | 48050 | Spring, Shift Lever |
| 30 | 04041-12 | Flat Washer, 3/8 x 1-1/2 x 16 ga. |
| 31 | * | Bolt, Hex Hd., 3/8-16 x 1-3/4 |
| 32 | 45285 | Handle, Parking Brake |
| 33 | 48342 | Grip, Parking Brake |
| 34 | * | Bolt, Hex Hd., 1/4-20 x 3/4 |
| 35 | 04050-02 | Retaining Ring, 3/4 "E" |
| 36 | 43158 | Shaft, Bellcrank Pivot |
| 37 | 48100-06 | Bronze Bushing |
| 38 | 48114-01 | Grease Fitting |
| 39 | * | Flat Washer, 3/4 (49/64 x 1-1/4 x 16 ga.) |
| 40 | 45022 | Bellcrank, Belt Clutch |
| 41 | 48093 | Grip, Clutch Lever |
| 42 | 48091 | Choke Control (includes hardware) |
| 43 | 48017-04 | Hex Nut, 5/8-11 |
| 44 | 48017-02 | Key, Ignition |
| 45 | 48022 | Ammeter (includes hardware) |
| 46 | 48023 | Hour Meter (includes hardware) |
| 47 | * | Screw, Phillips Hd., #10-32 x 1-1/2 |
| 48 | * | Screw, Phillips Truss Hd., 1/4-20 x 3/4 |
| 49 | * | Screw, Phillips Washer Hd., #10-32 x 1/2 |
| 50 | 42729 | Bkt, Parking Brake Switch Actuating |
| 51 | * | Hex Head Bolt, 1/4-20x3/4 |

* Common hardware which should be purchased locally. All bolts grade 5 plated, all other fasteners zinc plate.

RIDER FRAME ASSEMBLY



RIDER FRAME ASSEMBLY

| Ref. No. | Part Number | Description |
|----------|-------------|---|
| 1 | 46380 | Steering Frame (incl. bushings & grease fittings) |
| 2 | 48100-02 | Bronze Bushing |
| 3 | 04050-05 | Retaining Ring, 1-1/8 external |
| 4 | 48114-01 | Grease Fitting |
| 5 | * | Bolt, Hex Hd. 5/8-11 x 9 |
| 6 | * | Lock Washer, 5/8 spring |
| 7 | * | Hex Nut, 5/8-11 |
| 8 | 48042 | Cable, Steering |
| 9 | * | Hex Nut, 1/4-28 lock |
| 10 | * | Flat Washer, 1/4 |
| 11 | 45035 | Rear Wheel Yoke |
| 12 | * | Lock Washer, 3/8 spring |
| 13 | * | Hex Nut, 3/8-16 |
| 14 | 45008 | Rear Wheel Pivot |
| 15 | * | Bolt, Hex Hd., 3/8-16 x 1-3/8 |
| 16 | 43020-02 | Spacer, Rear Wheel |
| 17 | 43021 | Sleeve, Rear Wheel |
| 18 | 48005-01 | Rear Wheel Assy. (Incl. 19,20,21,22) |
| 19 | 48005-03 | Rim Only |
| 20 | 48005-04 | Bearing Cup |
| 21 | 48005-05 | Bearing Cone |
| 22 | 48005-06 | Seal, Grease |
| 23 | 43020-01 | Spacer, Rear Wheel, short |
| 24 | 45009 | Steering Shaft |
| 25 | 48100-07 | Bronze Bushing |
| 26 | + | Part Removed From Illustration |
| 27 | 48026 | Switch, Foot Safety |
| 28 | + | Part Removed From Illustration |
| 29 | 48049 | Spring, Foot Safety Switch |
| 30 | 04021-08 | Hex, Nut, Elastic Stop Lock, 1/4-20 |
| 31 | 45175 | Pedal, Foot Safety Switch |
| 32 | * | Screw, slotted flat hd #10-32 x 3/4 |
| 34 | 48100-06 | Bronze Bushing |
| 35 | 48100-03 | Bronze Bushing |
| 36 | + | Part Removed From Illustration |
| 37 | 45151 | Foot Pedal |
| 38 | + | Part Removed From Illustration |
| 40 | * | Hex Locknut, 3/8-24 |
| 41 | 45264 | Foot Pedal Arm |
| 42 | 04065-01 | Pin, Drive Lock, 3/16 x 1-1/4 |
| 43 | 48118 | Ball Joint |
| 44 | * | Flat Washer, 3/8 |
| 45 | * | Hex Nut, 3/8-24 |
| 46 | 44044 | Control Rod |
| 47 | 04021-07 | Hex Nut, Elastic Stop Nut, 1/2-13 |
| 48 | * | Flat Washer, 1/2 (.531 x 1.062 x .095) |
| 49 | 48100-04 | Bronze Bushing |
| 50 | 48208 | Pulley, Winch Cable |
| 51 | * | Bolt, Hex Hd., 1/2-13 x 5-1/2 |
| 52 | 48097 | Bumper Stop Cover |
| 53 | 44028 | Retainer, Winch Cable |
| 54 | + | Part Removed From Illustration |
| 56 | 04050-03 | Retaining Ring, 7/8 external |
| 57 | * | Hex Nut, 5/16-18 center lock |
| 58 | * | Flat Washer, 3/8 x 7/8 x 13 ga. |
| 59 | * | Bolt, Hex Hd., 5/16-18 x 1-1/2 |
| 60 | 46029 | Steering Handle (Incl. 61) |
| 61 | 48159 | Grip |

* Common hardware which should be purchased locally. All bolts grade 5 plated, all other fasteners zinc plate.

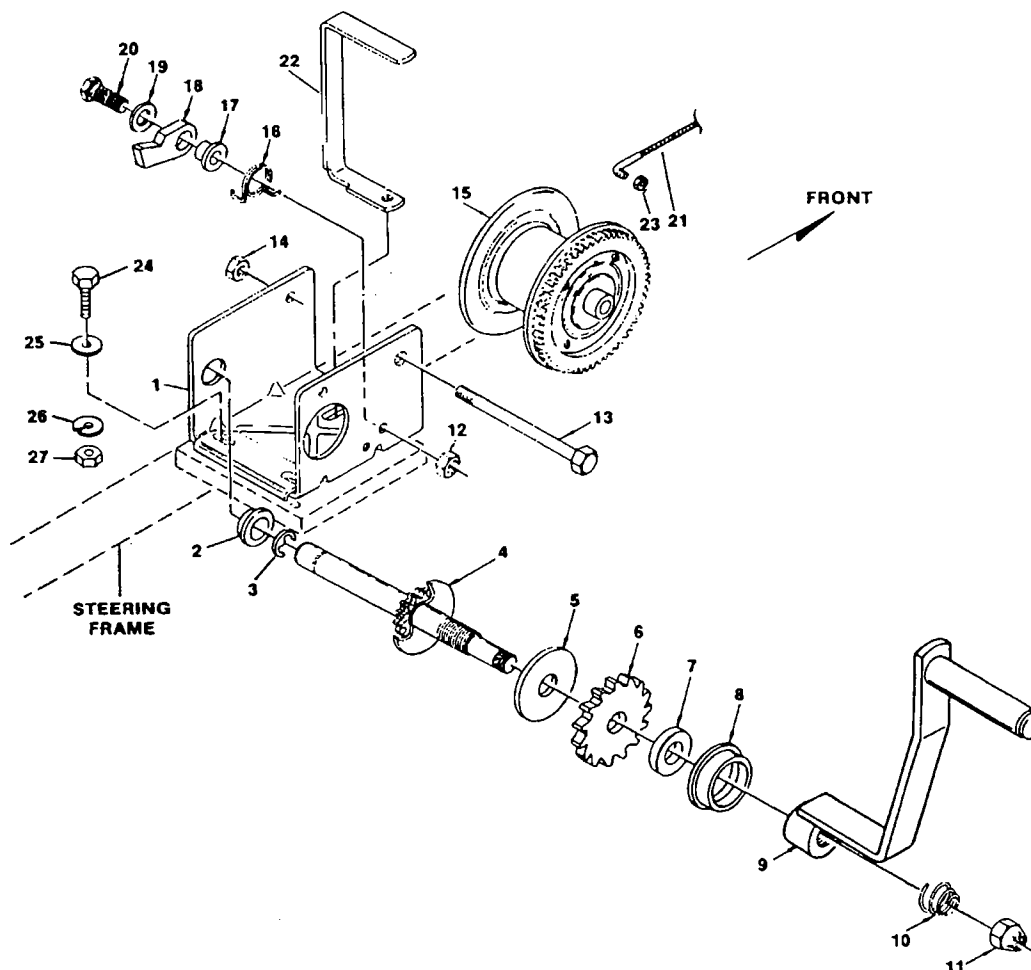
RIDER FRAME ASSEMBLY CONTINUED ON NEXT PAGE

RIDER FRAME ASSEMBLY CONT'D

| Ref. No. | Part Number | Description |
|----------|-------------|------------------------------------|
| 62 | 48702 | Seat Assy. (incl. 63,64 &65) |
| 63 | 48704-04 | Arm Pad - R.H. |
| 64 | 48704-05 | Arm Pad L.H. |
| 65 | 48704-03 | Cushion Assembly |
| 70 | 04041-11 | Flat Washer, 13/32 x 1-1/2 x 7 ga. |
| 71 | 45210 | Seat Plate |
| 72 | * | Hex Elastic Stop Nut, 7/16-14 |
| 73 | * | Bolt, Hex Hd., 3/8-16 x 1 |
| 74 | 42366 | Reinforcement, Seat Spring |
| 75 | * | Bolt, Hex Hd., 7/16-14 x 3-1/2 |
| 76 | 42026 | Seat Spring |
| 77 | * | Lock Washer, 5/16 spring |

* Common hardware which should be purchased locally. All bolts grade 5 plated, all other fasteners zinc plate.

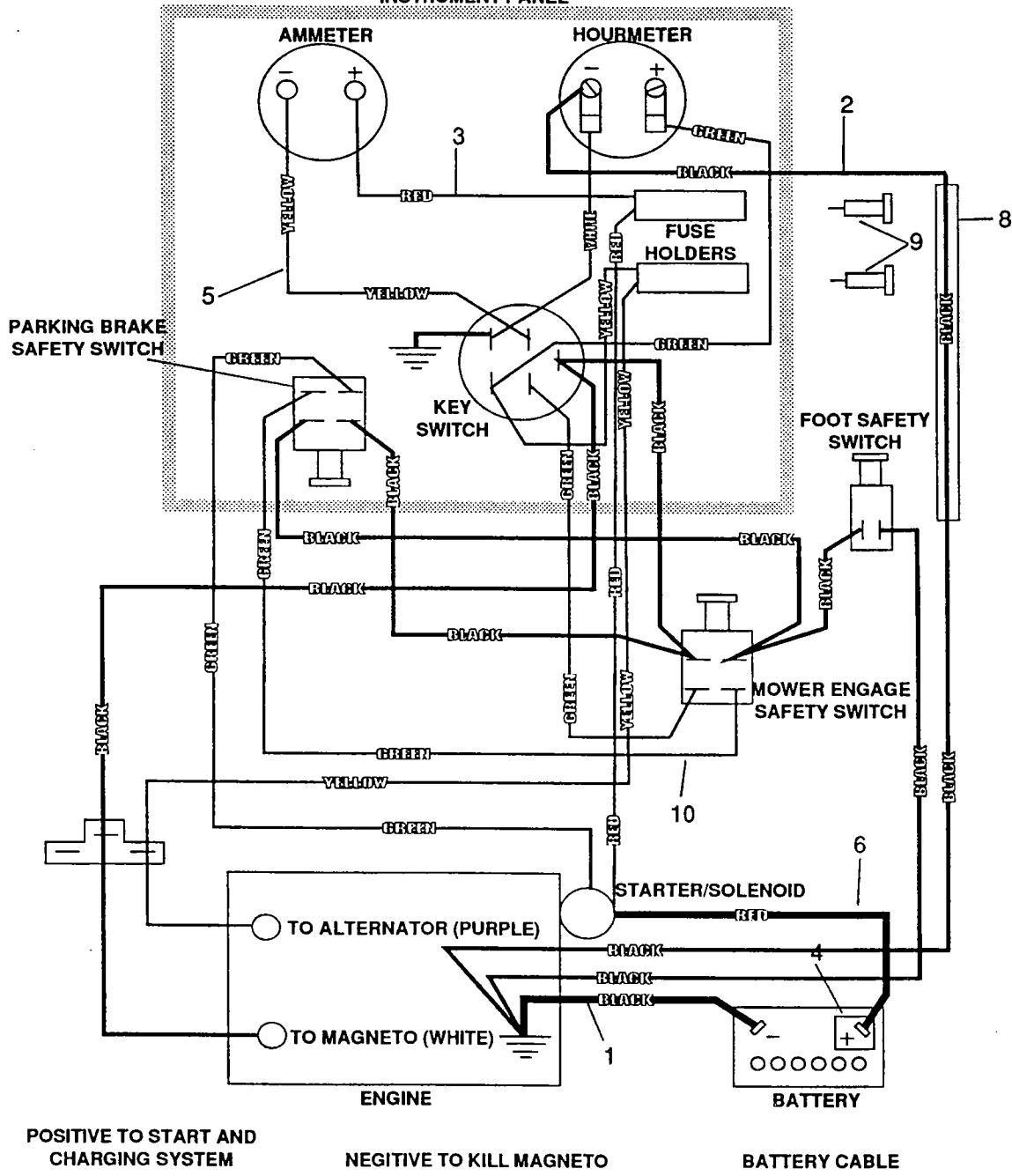
WINCH LIFT SYSTEM



| Ref. No. | Part Number | Description | Ref. No. | Part Number | Description |
|----------|-------------|-----------------------------------|----------|-------------|-------------------------------------|
| 1 | 48043 | Winch Assembly (incl. 1-8, 10-20) | 15 | 304227 | Winch Reel |
| 2 | 204009 | Shaft Bushing | 16 | 204363 | Ratchet Spring |
| 3 | 205116 | E-Ring | 17 | 404166 | Ratchet Spacer |
| 4 | 304228 | Drive Shaft | 18 | 404409 | Ratchet Pawl |
| 5 | 204362 | Pressure Plate | 19 | 205024 | Flat Washer |
| 6 | 404164 | Ratchet Wheel | 20 | 205167 | Ratchet Bolt |
| 7 | 404163 | Pressure Washer | 21 | 48045 | Winch Cable Assembly |
| 8 | 204359 | Shaft Bushing | 22 | 42127 | Cable Guide |
| 9 | 48044 | Winch Handle | 23 | 04021-03 | Hex Lock Nut, 1/4-28 |
| 10 | 204364 | Handle Spring | 24 | * | Hex Hd. Bolt, 3/8-16 x 1 |
| 11 | 205015 | Handle Nut | 25 | * | Flat Washer, 13/32 x 13/16 x 16 ga. |
| 12 | 205011 | Hex Locknut, 3/8-16 | 26 | * | Lock Washer, 3/8 spring |
| 13 | 205008 | Reel Shaft | 27 | * | Hex Nut, 3/8-16 |
| 14 | 205155 | Lock Nut, 7/16-14 | | | |

* Common hardware which should be purchased locally. All bolts grade 5 plated, all other fasteners zinc plate.

ELECTRICAL SYSTEM INSTRUMENT PANEL



| Ref. Part No. | Part No. | Description | Ref. Part No. | Part No. | Description |
|---------------|----------|-----------------------------------|---------------|----------|------------------------------------|
| 1 | 48029-01 | Battery Cable, Ground | 8 | 48033-01 | Conduit, Black Nylon |
| 2 | 48616 | Wire Harness, Foot Safety Switch | 9 | 48298 | Fuse, 20 AMP Blade Type Automotive |
| 3 | 48368 | Wire Harness, Solenoid to Ammeter | 10 | 48615 | Wire Harness, Lower |
| 4 | 48126 | Rubber Boot | NS | 48028-01 | Cable Tie |
| 5 | 48743 | Wire Harness, Instrument panel | NS | 48498 | Wire Harness Adapter |
| 6 | 48029-02 | Battery Cable, Long | | | |

REPLACEMENT DECALS



1



2



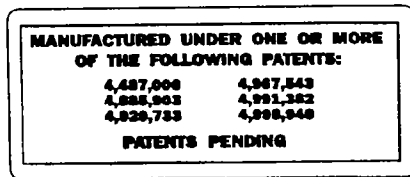
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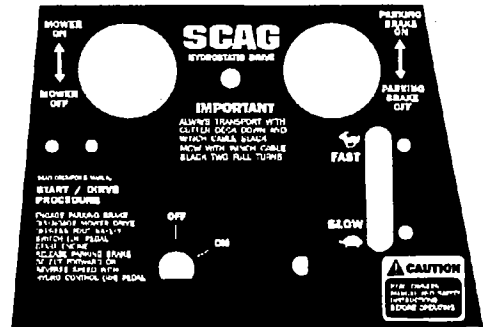
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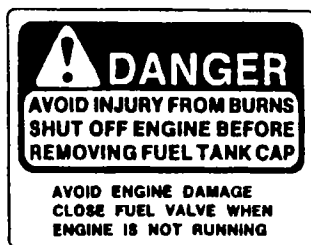
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10



11

| Ref. No. | Part Number | Description | Ref. No. | Part Number | Description |
|----------|-------------|------------------------------|----------|-------------|-------------------------------------|
| 1 | 48072 | Decal, Heavy Duty Commercial | 7 | 48073 | Decal, Danger |
| 2 | 48314 | Decal, Scag Logo | 8 | 48656 | Decal, Patent |
| 3 | 48071 | Decal, OPEI Safety | 9 | 48460 | Decal, Instrument Panel |
| 4 | 48319 | Decal, 52 | 10 | 48281 | Decal, Operator Warning - Fuel Fill |
| 5 | 48320 | Decal, 61 | 11 | 48401 | Decal, Cutting Height Adjustment |
| 6 | 48327 | Decal, 72 | | | |

WARNING

If incorrectly used, this machine can cause severe injury. Those who use and maintain the machine should be trained in its proper use, warned of its dangers, and should read the entire manual before attempting to set up, operate, adjust or service the machine.

LIMITED WARRANTY-COMMERCIAL EQUIPMENT

Any part of the Scag commercial mower manufactured by Scag and found, in the reasonable judgment of Scag, to be defective in material or workmanship, will be repaired or replaced by an Authorized Scag Service Dealer without charge for parts and labor.

The Scag mower including any defective part must be returned to an Authorized Scag Service Dealer within the warranty period. The expense of delivering the mower to the dealer for warranty work and the expense of returning it back to the owner after repair or replacement will be paid for by the owner. Scag's responsibility in respect to claims is limited to making the required repairs or replacements, and no claim of breach of warranty shall be cause for cancellation or rescission of the contract of sale of any Scag mower. Proof of purchase will be required by the dealer to substantiate any warranty claim. All warranty work must be performed by an Authorized Scag Service Dealer.

This warranty is limited to one year from the date of original retail purchase for any Scag mower that is used for commercial purposes, or any other income-producing purpose (90 days for rental use). Traction drive system will be warranted for two full years from date of original retail purchase against defects in material or workmanship excluding hoses, lines and drive belts. Belts and tires are warranted for 90 days against defects in workmanship or materials.

This warranty does not cover any mower that has been subject to misuse, neglect, negligence, or accident, or that has been operated in any way contrary to the operating instructions as specified in the Technical Manual. The warranty does not apply to any damage to the mower that is the result of improper maintenance, or to any mower or parts that have not been assembled or installed as specified in the Technical Manual.

The warranty does not cover any mower that has been altered or modified. In addition, the warranty does not extend to repairs made necessary by normal wear, or by the use of parts or accessories which, in the reasonable judgment of Scag, are either incompatible with the Scag mower or adversely affect its operation, performance or durability. This warranty does not cover engines and electric starters, which are warranted separately by their manufacturer.

Scag Power Equipment reserves the right to change or improve the design of any mower without assuming any obligation to modify any mower previously manufactured.

All other implied warranties are limited in duration to the one (1) year warranty period or ninety (90) days for mowers used for rental purpose. Accordingly, any such implied warranties including merchantability, fitness for a particular purpose, or otherwise, are disclaimed in their entirety after the expiration of the appropriate one-year or ninety day warranty period. Scag's obligation under this warranty is strictly and exclusively limited to the repair or replacement of defective parts and Scag does not assume or authorize anyone to assume for them any other obligation. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

Scag assumes no responsibility for incidental, consequential or other damages including, but not limited to, expense for gasoline, expense of delivering the mower to an Authorized Scag Service Dealer and expense of returning it back to the owner, mechanic's travel time, telephone or telegram charges, rental of a like product during the time warranty repairs are being performed, travel, loss or damage to personal property, loss of revenue, loss of use of the mower, loss of time or inconvenience. Some states do not allow the exclusion or limitation of incidental or consequential damages. So the above limitation or exclusion may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

PLEASE BE CAREFUL

1. Keep all shields in place, especially grass discharge guard.
2. Stop machine and remove spark plug wire to adjust or service.
3. When mechanism becomes clogged, stop engine before cleaning.
4. Keep hands, feet and clothing away from power-driven parts.
5. Keep off implement unless seat or platform is provided.
6. Keep others off of the tractor (only one person at a time).

REMEMBER - YOUR MOWER IS ONLY AS SAFE AS THE OPERATOR!

FAILURE TO FOLLOW CAUTIOUS OPERATING PRACTICES MAY RESULT IN SERIOUS BODILY INJURY. BESIDES, WE WOULD LIKE YOU TO CONTINUE TO ENJOY AND PROFIT BY USING OUR PRODUCTS.

OWNER REFERENCE

TRACTOR MODEL _____

TRACTOR SERIAL NUMBER _____

MOWER MODEL _____

MOWER SERIAL NUMBER _____

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