SERVICE / PARTS MANUAL

MODELS: WolfPac™ 2500

1 - 1/4 TON STATIC RIDE ON

A 100% employee-owned American manufacturer

REVISION: D 4/02 P/N 56383

TABLE of CONTENTS

WolfPac™ 2500

TABLE of CONTENTS

FOREWORD

These instructions include:

Safety regulations
Operating instructions
Maintenance instructions

These instructions have been prepared for operation on the construction site and for the maintenance engineer.

These instructions are intended to simplify operation of the machine and to avoid malfunctions through improper operation.

Observing the maintenance instructions will increase the reliability and service life of the machine when used on the construction site and reduce repair costs and downtimes.

Always keep these instructions at the place of use of the machine.

Only operate the machine as instructed and follow these instructions.

Observe the safety regulations as well as the guidelines of the civil engineering trade association. Observe the safety rules for the operation of road rollers and compactors and the pertinent regulations for the prevention of accidents.

Stone Construction Equipment, Inc. is not liable for the function of the machine when used in an improper manner or for other than the intended purpose.

Operating errors, improper maintenance and the use of incorrect operating materials are not covered by the warranty.

The above information does not extend the warranty and liability conditions of business of Stone Construction Equipment, Inc.

Warranty Information

Please enter the following data. This will help expedite any service or warranty work.

1. Machine Type: _____

   Machine S/N: _____

2. Engine Type: _____

   Engine S/N: _____

3. VIN: _____

4. Purchase Date: _____

5. Dealer/Distributor Information:

   Name: _____

   Address: _____

   _____

   Phone #: _____

   Fax #: _____

Location of above information:

1. Information on S/N tag.
2. Information on engine tag.
3. Information on S/N tag - if applicable.
4. Date you purchased machine.
5. Dealer machine was purchased from.

Stone Construction Equipment, Inc.
P.O. Box 150, Honeoye, New York 14471
Phone: (800) 888-9926
Fax: (585) 229-2363

Limited Warranty

The Manufacturer warrants that products manufactured shall be free from defects in material and workmanship that develop under normal use for a period of 90 days for concrete vibrators and electric pumps, one year for Rhino®, Bulldog®, WolfPac Rollers™, trowels, Stompers®, saws, forward plates, engine powered pumps, Lift Jockey™, Mortar Buggy™ and 6 months for all other products from the date of shipment. The foregoing shall be the exclusive remedy of the buyer and the exclusive liability of the Manufacturer. Our warranty excludes normal replaceable wear items, i.e. gaskets, wear plates, seals, O-rings, V-belts, drive chains, clutches, etc. Any equipment, part or product which is furnished by the Manufacturer but manufactured by another, bears only the warranty given by such other manufacturer. (The Manufacturer extends the warranty period to "Lifetime" for the drum bearings and seals for the mortar mixers, and agrees to furnish, free of charge, the bearings and seals only upon receipt of the defective parts. The warranty is two years for eccentric bearings on the forward plate compactors, mortar and plaster mixer drums, trowel gearboxes and five years on the Bulldog trench roller eccentric bearings.) A Warranty Evaluation Form must accompany all defective parts. Warranty is voided by product abuse, alterations, and use of equipment in applications for which it was not intended, use of non-manufacturer parts, or failure to follow documented service instructions. The foregoing warranty is exclusive of all other warranties whether written or oral, expressed or implied. No warranty of merchantability or fitness for a particular purpose shall apply. The agents, dealer and employees of Manufacturer are not authorized to make modification to this warranty, or additional warranties binding on Manufacturer. Therefore, additional statements, whether oral or written, do not constitute warranty and should not be relied upon.

The Manufacturer's sole responsibility for any breach of the foregoing provision of this contract, with respect to any product or part not conforming to the Warranty or the description herein contained, is at its option (a) to repair, replace or refund such product or parts upon the prepaid return thereof to location designated specifically by the Manufacturer. Product returns not shipped prepaid or on an economical transportation basis will be refused (b) as an alternative to the foregoing modes of settlement - the Manufacturer's dealer to repair defective units with reimbursement for expenses, except labor, and be reviewed with the Manufacturer prior to repair. A Warranty Evaluation Form must accompany all warranty claims.

Except as set forth hereinabove and without limitation of the above, there are no warranties or other affirmations which extends beyond the description of the products and the fact hereof, or as to operational efficiency, product reliability or maintainability or compatibility with products furnished by others. In no event whether as a result of breach of contract or warranty or alleged negligence, shall the Manufacturer be liable for special or consequential damages including but not limited to: Loss of profits or revenues, loss of use of the product or any associated product, cost of capital, cost of substitute products, facilities or services or claims of customers.

No claim will be allowed for products lost or damaged in transit. Such claims should be filed with the carrier within fifteen days.

Effective September 2001.

Stone Construction Equipment, Inc. **Phone: 1-800-888-9926 • 1-585-229-5141**
8662 Main Street, P. O. Box 150 **Fax: 1-585-229-2363**
Honeoye, NY 14471-0150 www.stone-equip.com • e-mail: sceny@mcimail.com

1. TECHNICAL DATA

1. TECHNICAL DATA

1.1 Stone WolfPac 2500 Specifications

MODEL	STONE WolfPac 2500
Dimensions L x W x H	84" x 36" x 56"
Weight Total Dry	1585 lbs.
Operating Weight	2070 lbs.
Weight Ballasted Out	2680 lbs.
Front Roller Dia. Rear Roller Dia. Front Roller Width Rear Drive Roller Width	20" 24" 28" 32"
Wall Clearance	1/2"
Curb Clearance	9"
Wheelbase	58"
Drum Thickness	3/8"
Operating System Engine	8.5 hp Robin with low oil alert 8 hp Honda with low oil alert 11 hp Honda with low oil alert
Power Steering	yes (hydraulic)
Hydrostatic Transmission	yes
Hydrostatic Pump	Eaton #11
Drive Motor	Char-Lynn
Hydraulic Reservoir Cap.	6.7
Water Tank	Polyethylene (w/ level gauge)
Capacity	30 gallons
Front Roller Mounting	(4) Ball Bearings
Rear Roller Mounting	(2) Ball Bearings
Performance Infinitely Variable Speed	0 - 4.5 mph
Inside Turning Radius	8.3 ft
Gradeability	30% (17°)
Standards	Cocoa Mat, Machined Drums, Adjustable Seat, Tool Box Under Seat, Feathering System (Trans), Neutral Ignition Interlock, Enclosed Engine Compartment, Parking Brake - hand operated, disc

1. TECHNICAL DATA

1.2 MACHINE DATA

Brakes **Service** **Parking**	 Hydrostatic Manual Operation Disc
Recommended Fuel	Gasoline 86 Octane Minimum Gx240 / EH25 1.6 gallons (6 liters) Gx340 1.7 gallons (6.5 liters)
Electric	12-Volt System Battery BCI Group U1 - 12 165 cca 5 amp Charge System
Hydraulic Oil	Mobilfluid 424 (VI-152) SUS255 55CST ISO VG55 Capacity 6.7 gallons (25.4 liters)
Engine Oil	Mobil Delvac 1200 10W-30 (API, SH or SJ) Gx240 / Gx340 Capacity 1.16 quarts (1.1 liters) EH25 1.06 quarts (1 liter)
Spark Plugs	Honda Gx240 / Gx340 NGK BRP6ES gap .028 in. (.7 mm) Robin EH250 gap .025 in. (.6 mm) NGKBGHS
Grease Fittings	Mobilgrease XHP 222 (NLGI 2EP lithium complex) 2 - 3 Hits with grease gun 90 - 120 Milliliters

1.3 ENGINE RPM

Do not exceed rpm, adjust engine rpm to obtain proper speed. A minimum idle RPM is required. Full RPM should not be exceeded and will void the engine warranty.

IDLE RPM	1400 MIN
FULL RPM	3600 $\pm$100

1.4 MACHINE SOUND LEVEL TEST

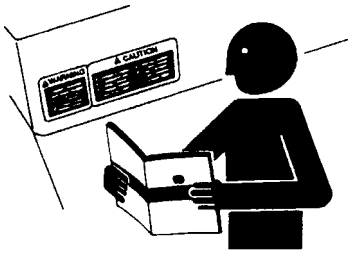
Machine Type:	WolfPac 2500
Sound Level Meter Calibration Date:	January 2, 1996
Meter Type:	Simpson Model 886-2 Type 2
Test Date:	January 2, 1996
Test Conditions:	
Temperature:	65 degrees Fahrenheit/18 degrees Celsius
Ambient Sound:	60 dba slow mode
Soil Condition:	Silts and clays
Moisture Limit:	Approximately equal to - percent
Engine Speed:	3600 RPM
Frequency:	-----
Test Site:	Honeoye, New York USA
Sound Level at Operator Position:	95 dba 8 Honda 93 dba 11 Honda

2. HEALTH & SAFETY

2. HEALTH & SAFETY

Before using this equipment, study this entire manual to become familiar with its operation. Do not allow untrained or unauthorized personnel, especially children, to operate this equipment. Use only factory authorized parts for service.

When warning decals are destroyed or missing, contact the Manufacturer immediately at 1-800-888-9926 for replacement. For the safety of yourself and others, it is imperative that the following rules are observed. Failure to do so may result in serious injury or death.



FOLLOW SAFETY INSTRUCTIONS

Carefully read all safety messages and decals in this manual and on your machine safety signs. Keep decals in good condition. Replace missing or damaged decals. Be sure new equipment components and repair parts include the current safety signs. Replacement safety signs and decals are available through your dealer.

Learn how to operate the machine and how to use controls properly. Do not let anyone operate without instruction.

Keep your machine in proper working condition. Unauthorized modifications to the machine may impair the function and/or safety and affect machine life.

If you do not understand any part of this manual and need assistance, contact your dealer.

This notation appears before warnings in the text. It means that the step which follows must be carried out to avoid the possibility of personal injury or death. These warnings are intended to help the technician avoid any potential hazards encountered in the normal service procedures. We strongly recommend that the reader takes advantage of the information provided to prevent personal injury or injury to others.

⚠ DANGER

⚠ WARNING

⚠ CAUTION

UNDERSTAND SIGNAL WORDS

A signal word – DANGER, WARNING, or CAUTION – is used with the safety-alert symbol. DANGER identifies the most serious hazards.

DANGER or WARNING safety signs are located near specific hazards. General precautions are listed on CAUTION safety signs. CAUTION also calls attention to safety messages in this manual.

USE COMMON SENSE WHEN HANDLING FUELS

- Transport and handle fuel only when contained in approved safety container.
- Do not smoke when refueling or during any other fuel handling operation.
- Do not refuel while the engine is running or while it is still hot.
- If fuel is spilled during refueling, wipe it off from the engine immediately and discard the rag in a safe place.
- Do not operate the equipment if fuel or oil leaks exist - repair immediately.
- Never operate this equipment in an explosive atmosphere.

- Operator must always be seated when roller is running.
- Never allow more than one person on roller.
- Always turn engine off before dismounting from roller.
- Always apply parking brake when not in use.
- Never park roller on a hill.
- Never operate roller on slope greater than 15 degrees.
- Do not operate the roller in standing water.

- Ear protection required when operating this equipment.
- Exposure to loud noise can cause impairment or loss of hearing.

HOT SURFACES

- Muffler, engine, and engine shroud may be hot.
- Allow all components in the engine compartment to cool before performing any service work.

- Never operate unit in a poorly ventilated or enclosed area.
- Avoid prolonged breathing of exhaust gases.
- Engine exhaust fumes can cause sickness or death.

2. HEALTH & SAFETY

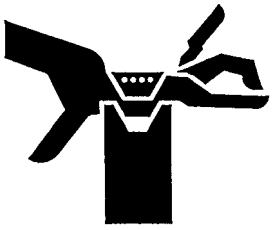
- Qualified personnel only. No untrained operators. Serious injury may occur.
- Users must be trained to operate this roller. Read the Operator's Manual and Engine Owner's Manual. Learn to operate this roller safely.
- Do not articulate on grades larger than 15°, roller may tip over.
- Do not operate across the sides of hills, roller may tip over.
- Do not operate at the edge of mats or roads, roller may tip over.
- Do not stand, be seated when roller is running.
- Do not park the roller on hills.
- Always turn off engine and apply brake before dismounting.

- Hydraulic system produces high pressures--incorrect hose replacement can cause serious personal injury. When performing service, refer to Operator's Manual for hose identification and connections.

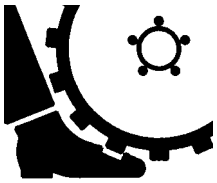
- Caution: Escaping hydraulic fluid under pressure can have sufficient force to penetrate the skin, causing serious personal injury.
- Hydraulic fluid escaping under pressure from a very small hole can be almost invisible. Use a piece of cardboard or wood to search for possible leaks.
- Never use your hands to detect pressure leaks.
- Hydraulic tank temperature can reach 180° F maximum.

- Pressurized release of fluids from hydraulic system can cause serious burns.

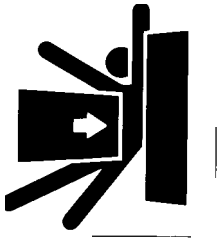
- Shut off engine. Only remove filler cap when cool enough to touch with bare hands. Slowly loosen cap to first stop to relieve pressure before removing completely.



- Never perform any work on the roller while it is running. Before working on the roller, stop the engine and disconnect the spark plug wire(s) to prevent accidental starting, block drums to prevent rolling.
- Keep engine cover closed during the operation.
- Keep hands, clothing and jewelry away from all moving parts.
- Keep all guards in place.



- Keep feet clear of all drums.
- Keep work area free of bystanders.
- For foot protection, wear steel toe shoes or toe pads.

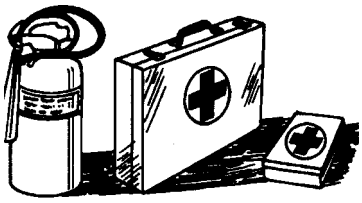


- Caution: Keep away from the machine's articulation area when the engine is running.
- Only start engine from operator's seat.
- Before starting machine, make sure that there are no persons or obstacles near or under machine.

PRACTICE SAFE MAINTENANCE

- Understand service procedure before doing work. Keep area clean and dry.
- Never lubricate, service or adjust machine while it is moving. Keep hands, feet, and clothing from power-driven parts. Disengage all power and operate controls to relieve pressure. Lower equipment to the ground. Stop the engine. Remove the key. Allow machine to cool.
- Securely support any machine elements that must be raised for service work.
- Keep all parts in good condition and properly installed. Fix damage immediately. Replace worn or broken parts. Remove any buildup of grease, oil, or debris.
- Disconnect battery ground cable (-) before making adjustments on electrical systems or welding on machine.

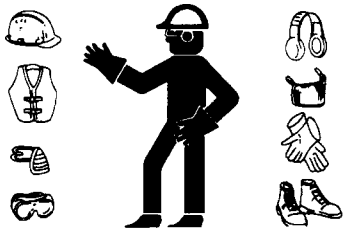
PREPARE FOR EMERGENCIES



- Be prepared if a fire starts.
- Keep a first aid kit and fire extinguisher handy.
- Keep emergency numbers for doctors, ambulance service, hospital, and fire department near your telephone.

- Starting fluid (ether) is highly flammable, do not use or an explosion or fire may result.

WEAR PROTECTIVE CLOTHING

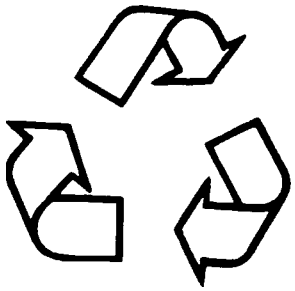


- Wear close fitting clothing and safety equipment appropriate to the job.
- Prolonged exposure to loud noise can cause impairment or loss of hearing.
- Wear a suitable hearing protective device such as earmuffs or earplugs to protect against objectionable or uncomfortable loud noises.
- Operating equipment safely requires the full attention of the operator. Do not wear radio or music headphones while operating machine.

PREVENT BYPASS STARTING

- Avoid possible injury or death from engine runaway.
- Do not start engine by shorting across starter terminal. Engine will start with PTO engaged if normal circuitry is bypassed.
- Start engine only from operator's station with PTO disengaged or in neutral.

DISPOSE OF WASTE PROPERLY



- Improperly disposing of waste can threaten the environment and ecology. Potentially harmful waste used with equipment include such items as oil, fuel, coolant, brake fluid, filters, and batteries.
- Use leakproof containers when draining fluids. Do not use food or beverage containers that may mislead someone into drinking from them.
- Do not pour waste onto the ground, down a drain, or into any water source.
- Air conditioning refrigerants escaping into the air can damage the Earth's atmosphere. Government regulations may require a certified air conditioning service center to recover and recycle used air conditioning refrigerants.
- Inquire on the proper way to recycle or dispose of waste from your local environmental or recycling center.

3. MAINTENANCE

3. MAINTENANCE

3.1 INTRODUCTION & OPERATING PRINCIPLE

Congratulations on your purchase of the WolfPac 2500! You've made an excellent choice! The WolfPac 2500 is ergonomically engineered to optimize operator interface with the total machine--it's really "user friendly". Besides good visibility to the roll-edge as well as the work surface, you'll find that the controls are exactly in the right places for maximum comfort.

The roller is designed to give you high productivity at a low cost. High compaction force is obtained by the line contact the drum makes with the surface to be compacted. A two inch wide contact area over the length of the drum, produces more than ten times the unit area pressure than that of a ten thousand pound eccentric force vibratory plate compactor.

This product is completely hydrostatically controlled. The variable flow pump delivers oil to the fixed displacement motor which in turn drives the rear drum via a chain. Movement of the forward / reverse lever allows infinitely variable speed in both the forward and reverse direction. The feathering characteristics of the pump eliminates scuffing and or tearing of the asphalt mat when changing direction.

There is power steering--a feature no operator wants to be without. This eliminates the hard steering and erratic movement that an operator experiences with no power steering units.

A 30-gallon polyethylene water tank provides long running time between refills. A water level sight gauge, visible from the operator's compartment, can be monitored during actual operation. The low maintenance, gravity flow sprinkler system features dual controls and noncorrosive sprinkler bars. For spreading the water and cleaning the drums, there are cocoa mats and scrapers.

Upon receipt of your WP2500, carefully check for any freight damage. Any damage should be immediately reported to the carrier and a claim registered.

The roller is manufactured to the strictest specifications and inspection procedures. If any material or manufacturing defects are found, return the tag on the machine with assembler's signature and your findings to the manufacturer. We want to know when a product is less than perfect. We also welcome any and all input on how the product may serve you better.

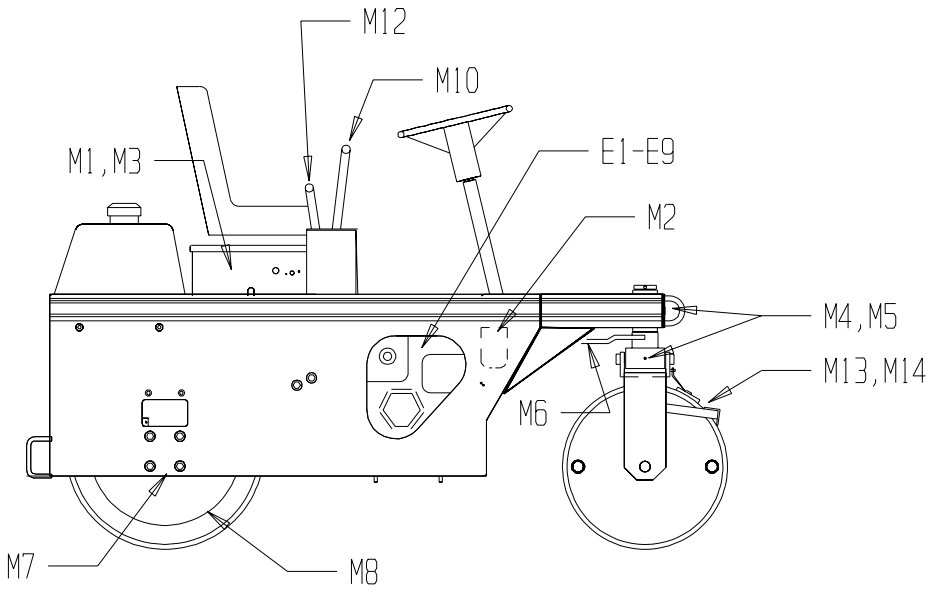
The following instructions were compiled to provide you information on how to obtain long and trouble free use of the roller. Periodic maintenance of the roller is essential. Read the manual in its entirety and follow the instructions carefully. Failure to do so may injure yourself or a bystander.

3.1.1 Important Maintenance Information

IMPORTANT

The person attempting *any* of the following maintenance tasks must be authorized to do so and have read *and* understood *all* sections within this manual.

3.2 MAINTENANCE CHART



✔ CHECK/ADJUST O CLEAN/REPLACE	DAILY	WEEKLY	OTHER	INSTRUCTIONS
ENGINE #				READ EMISSION WARRANTY, OPERATING & ENGINE MANUAL
E1 OIL LEVEL	✔		O	HONDA REPLACE AT 20 HRS,THEN EVERY 100 HRS SAE 10W-30 SH OR SJ
OIL LEVEL	✔		O	ROBIN REPLACE AT 20 HRS,THEN EVERY 50 HRS SAE 10W-30 SH OR SJ
E2 FUEL CAP & STRAINER	✔		O	CHECK DAILY, CLEAN EVERY 6 MONTHS OR 100 HRS
E3 SEDIMENT CUP & FILTER			O	CLEAN EVERY 100 HRS, GX240/GX340 P/N 31258, EH250 P/N 31260
E4 AIR FILTER & PRECLEANER	✔		O	CLEAN EVERY 50 HRS REPLACE EVERY 300 HRS, GX240 P/N 31257
AIR FILTER & PRECLEANER	✔		O	CLEAN EVERY 50 HRS REPLACE EVERY 300 HRS, GX340 P/N 31256
AIR FILTER & PRECLEANER	✔		O	CLEAN EVERY 50 HRS REPLACE EVERY 300 HRS, EH250 P/N 31259
E5 SPARK PLUGS GX240/GX340			O	100 HRS CLEAN & GAP.028" 300 HRS REPLACE P/N 31234 (NGK BPR6ES)
SPARK PLUGS EH250			O	50 HRS CLEAN & GAP.025" 300 HRS REPLACE P/N 31261 (NGK B6HS)
E6 ENGINE RPM IDLE/FULL			✔	CHECK IDLE & FULL SPEED RPM EVERY 300 HRS #
E7 CLEAN COOLING SYS.		✔	O	CLEAN/BLOW OUT AIR INLETS,ENGINE FINS (30 PSI MAX)
E8 VALVE CLEARANCE ##			✔	CHECK/ADJUST HONDA 300 HRS, ROBIN 500 HRS
E9 FUEL TANK			✔	CLEAN EVERY YEAR OR 300 HRS
MACHINE				IMPORTANT READ OPERATING MANUAL & ENGINE MANUAL
M1 HYDRAULIC OIL LEVEL	✔		O	REPLACE EVERY 800 HRS MOBIL424
M2 HYDRAULIC FILTER			O	REPLACE EVERY 100 HRS (P/N 35445)
M3 HYDRAULIC BREATHER			O	REPLACE EVERY 800 HRS (P/N 35483)
M4 STEERING PIVOT PIN		O		LUBE WEEKLY WITH LITHIUM BASE GREASE
M5 STEERING TILT BLOCK		O		LUBE WEEKLY WITH LITHIUM BASE GREASE
M6 STEERING PIVOT ARM		O		LUBE WEEKLY WITH LITHIUM BASE GREASE
M7 REAR DRUM BEARINGS (2)		O		LUBE WEEKLY WITH LITHIUM BASE GREASE
M8 CHAIN & CONN LINKS			O	CHECK/TENSION/LUBRICATE CHAIN WEEKLY WITH CHAIN LUBE
M9 FUEL LINES & CLAMPS			O	CHECK WEEKLY/REPLACE FUEL LINES EVERY 2 YEARS (P/N 46186)
M10 CONTROLS	✔			CHECK OPERATION,LUBE CABLES & LEVERS EVERY 200 HRS,LIGHT OIL
M11 BATTERY/CHARGE SYSTEM			O	CHECK & CLEAN MONTHLY/CHECK FOR 13-14 VOLTS AT FULL RPM
M12 PARKING BRAKE	✔			CLEAN UNIT & INSPECT
M13 SCRAPERS/COCOA MATS	✔		O	CLEAN UNIT & INSPECT
M14 SPRINKLERS	✔			CLEAN UNIT & INSPECT
M15 LEAKS OIL & FUEL	✔			CLEAN UNIT & INSPECT
M16 HARDWARE/ENGINE MOUNT	✔			CLEAN UNIT & CHECK TORQUE

IMPORTANT READ ENGINE EMISSION WARRANTY STATEMENT, STONE MANUAL & ENGINE MANUAL
SEE AUTHORIZED ENGINE SERVICE DEALER AND/OR REFER TO ENGINE SHOP MANUAL FOR PROCEDURES

55390C

3.3 MAINTENANCE OVERVIEW

⚠WARNING

BEFORE MAKING ANY ADJUSTMENTS, BE SURE THE ROLLER IS PARKED ON LEVEL GROUND, PARKING BRAKE IS ON AND DRUMS ARE BLOCKED. DISCONNECT BATTERY TO AVOID ACCIDENTAL IGNITION OF ENGINE OR SEVERE PERSONAL INJURY MAY OCCUR.

IMPORTANT: Read Engine Manual before operating or performing maintenance.

3.3.1 Additional Service Information

This is not a detailed engine service manual. If you want more detailed service information refer to engine manuals:

56343 Honda Manual Engine GX240/GX340
56344 Robin Manual Engine EH250

3.4 ENGINE OIL

3.4.1 Honda

Replace oil at 20 hours, then change oil every 100 hours.

3.4.2 Robin

Replace oil at 20 hours, then change oil every 50 hours.

1. Remove the oil filler cap drain bolt. Drain oil into a suitable container.

2. Clean and install the drain bolt, tighten securely.

3. Fill with the recommended oil, fill to the upper limit mark on the dipstick, and tighten the oil filler cap securely.

4. Run engine for 2 – 3 minutes, stop engine and check oil level and check for leaks.

NOTE: Please dispose of used motor oil and filter in a manner that doesn't harm the environment.

Under heavy loads, change engine oil more frequently.

3.5 AIR CLEANER

Foam Pre-cleaner: Clean in warm soapywater, rinse and dry thoroughly. Apply oil to the foam and squeeze out excess oil. The engine will smoke if too much oil is left in the foam.

Paper Element: Tap the element lightly on a hard surface to remove excess dirt or blow pressurized air (30 psi max.) through the filter from the air cleaner cover side. Do not brush the dirt off.

Replace elements if damaged or excessively dirty.

3.6 SPARK PLUGS

To ensure proper engine operation, the spark plug must be properly gapped and free of deposits.

Clean and replace at scheduled maintenance. Clean engine before removing spark plugs. Visually inspect the spark plug, discard if insulator or tip is damaged. Check that the spark plug washer is in good condition. If spark plug is to be reused, clean with a wire brush and set plug gap. Thread the spark plug in by hand to prevent cross threading. After the spark plug is seated, tighten with a spark plug wrench to compress the washer.

- If installing a new spark plug, tighten 1/2 turn after the spark plug seats to compress the washer.
- If reinstalling a used spark plug, tighten 1/8 – 1/4 turn after the spark plug seats to compress the washer.

NOTICE:

- The spark plug must be securely tightened.

An improperly tightened spark plug can become very hot and may cause engine damage.

- Use only the recommended spark plug or equivalent. A spark plug that has an improper heat range may cause engine damage.

3.7 ENGINE RPM

Start the engine and allow it to warm up to normal operating temperature, check the idle speed (1,400 ± 100), and adjust idle stop screw as required.

Check the full speed, Honda 3,600 ± 100. Adjust full speed stop screw as required.

3.8 CLEANING

The machine should be cleaned at scheduled maintenance. This should include cleaning the engine cooling fins. Wash machine with warm soapy water, rinse off mud and dirt with water and use pressurized air (30-psi max.) to blow dirt and debris from fins and engine.

3.9 VALVE CLEARANCE

Due to special tool requirements and training, an authorized engine dealer should perform this service unless the owner has the proper tools and proper shop manuals.

3.10 HYDRAULIC OIL

⚠WARNING

ESCAPING HYDRAULIC FLUID UNDER PRESSURE CAN HAVE SUFFICIENT FORCE TO PENETRATE THE SKIN, CAUSING SERIOUS PERSONAL INJURY.

HYDRAULIC FLUID ESCAPING UNDER PRESSURE FROM A VERY SMALL HOLE CAN BE ALMOST INVISIBLE. USE A PIECE OF CARDBOARD OR WOOD TO SEARCH FOR POSSIBLE LEAKS. NEVER USE YOUR HANDS TO DETECT PRESSURE LEAKS.

IF YOU ARE INJURED BY ESCAPING HYDRAULIC FLUIDS, SEE A DOCTOR AT ONCE. SERIOUS INFECTION OR REACTION CAN DEVELOP IF PROPER MEDICAL TREATMENT IS NOT ADMINISTERED IMMEDIATELY.

Mobilfluid 424 is recommended for the hydraulic system. Do not mix hydraulic oils. Check oil level daily, replace hydraulic oil every 800 hours.

1. Clean hydraulic tank, remove oil breather cap slowly.
2. Remove drain plug and drain into suitable container.
3. Clean drain plug, apply thread sealant to the plug, install and tighten.
4. Add fresh hydraulic oil until level is 1 1/2" - 2" from the top of the expansion tank.
5. Clean breather cap, install and tighten.
6. Idle engine 2-3 minutes, stop engine and check oil level.

CAUTION: If hoses, filter and/or hydraulic components were changed, start the engine and purge the air from the system prior to checking the oil level. To do this, idle the engine for three minutes with control lever in NEUTRAL position. Slowly engage forward to reverse. This allows fluid to replace air introduced with the filter change. If this procedure is not followed, partial or complete failure of the pump may result.

3.11 HYDRAULIC OIL FILTER

Replace at 5 hours. This is to rid the system of any trapped contamination from the wear-in of parts. Then replace every 100 hours. Use beta rated filter (i.e. Parker 12AT-10C,10 micron filter).

1. Remove the spin-on hydraulic oil filter.

2. Lightly oil the seal on the new filter, install and tighten.

3. Idle engine 2-3 minutes stop engine and check for proper hydraulic oil level and check for leaks.

CAUTION: NEVER overfill the hydraulic tank. Before disconnecting any hydraulic lines, be sure engine is shut off and relieve all pressure. Before applying pressure to system, be sure all connections are tight and lines, fittings and hoses are not damaged.

3.12 HYDRAULIC BREATHER CAP

Replace every 800 hours or yearly.

3.13 GREASE FITTINGS

Use a grease gun to grease below fittings, use lithium grease. Remove the blue protection cap off fitting before greasing.

Steering Pivot Pin
Steering Tilt Block
Steering Pivot Arm
Rear Drum Bearings (2)

3.14 CHAIN

Lubricate weekly with chain lube, inspect connecting links and check chain slack 3/8-1/2 inch.

- Chain lubrication is required weekly. To avoid sprocket wear, replace chain when fully stretched.
- For chain replacement, use only factory authorized parts.

3.14.1 Chain Adjustment

Loosen mounting bolts on side, tighten chain 3/8 to 1/2 inch chain slack. For further chain adjustment, remove the half link. Retighten mounting bolts. Avoid overtightening chain as this causes excessive wear and power loss.

3.15 FUEL CAP/STRAINER

Check daily. Clean every six months or 100 hours.

3.16 SEDIMENT CUP/FILTER

Clean every 100 hours.

3.17 FUEL TANK

Drain and flush the fuel tank every 300 hours or yearly.

3.18 FUEL LINES

Inspect fuel line condition and clamps weekly. Replace fuel lines every 2 years.

3.19 FORWARD/REVERSE/NEUTRAL ADJUSTMENT

The forward/reverse lever should be aligned with "NEUTRAL" on the console when the roller is moving neither forward nor reverse with the engine running. If the lever is not aligned, adjust it as described below.

1. Check neutral switch mounting and adjust screw nuts. They are loctited at factory and must be secure. Check and if required, adjust neutral safety switch. See Neutral Interlock Adjustment.

2. Shut off the engine with the forward/reverse lever lift in operating neutral position. The position when the roller moves neither forward nor reverse. Apply the parking brake.

3. Remove the engine access panel.

4. Disconnect the linkage from the hydrostatic transmission. Do this by removing the lock nut and bolt from the rod end.

5. Move transmission lever to forward position and check for proper alignment. Now move lever to reverse position and check for proper

alignment. To accommodate both lever positions, adjust rod end accordingly. Transmission lever may deflect slightly in either position.

6. Secure the rod end to the transmission lever with the nut and bolt, secure with lock nut.

Linkage play must be minimal at both connections. Replace rod ends and/or link if required.

3.20 NEUTRAL INTERLOCK ADJUSTMENT

The purpose of the neutral interlock switch is to prevent engine from starting when the forward/reverse lever is NOT in the NEUTRAL position.

1. Disconnect the battery cables from the battery.

2. a. Disconnect two wires from neutral interlock switch and connect it to leads from an ohmmeter.
   b. When switch is actuated, ohmmeter should read zero resistance.

3. Adjust switch back in and out to obtain the proper engagement time. Proper engagement time, reading on the ohmmeter, is a maximum movement of the forward reverse lever at the surface of the console of 1/4 inch. The center of the engagement time should be within 1/16 of the NEUTRAL position.

4. Once neutral switch location is fixed, back stop screws out and move transmission lever to forward position. Turn top screw in until lever backs off forward position. Turn screw one additional turn and tighten lock nut. Move lever to reverse position and repeat above using lower screw.

5. Disconnect ohmmeter and reconnect interlock wires and battery cables.

3.21 CONTROL CABLES

Forward/reverse, brake, throttle, and choke. Lubricate all cable ends every 200 hours with penetrating oil.

⚠WARNING

DO NOT ADJUST THE CONTROL CABLE WITH THE POWER ON OR THE ENGINE RUNNING. SERIOUS INJURY OR DEATH COULD RESULT.

A GRADUAL OR SUDDEN INCREASE IN THE NO-LOAD FRICTION (CABLE DISCONNECT AT BOTH ENDS) OF A CONTROL CABLE IS AN INDICATION OF A PENDING OR PRESENT PERFORMANCE PROBLEM.
THE CONTROL CABLE SHOULD BE REPLACED, OTHERWISE SERIOUS INJURY OR DEATH COULD RESULT.

A GRADUAL OR SUDDEN DECREASE IN THE USABLE STROKE IS AN INDICATION OF A PENDING OR PRESENT PERFORMANCE PROBLEM. THE CONTROL CABLE SHOULD BE REPLACED, OTHERWISE SERIOUS INJURY OR DEATH COULD RESULT. CONTROL CABLES THAT HAVE MOISTURE INSIDE OF THEM AND/OR HAVE FROZEN SHOULD BE REPLACED. DO NOT APPLY HEAT TO THAW OR DRY CONTROL CABLES.

3.22 PARKING BRAKE

Periodically the brakes should be inspected and tested. If adjustments are needed, follow these brake adjustment procedures.

1. Block the drums to prevent rolling.

2. Disengage brake.

3. Pull the cotter pin from the clevis pin, remove clevis pin from clevis and loosen the locking nut below the clevis.

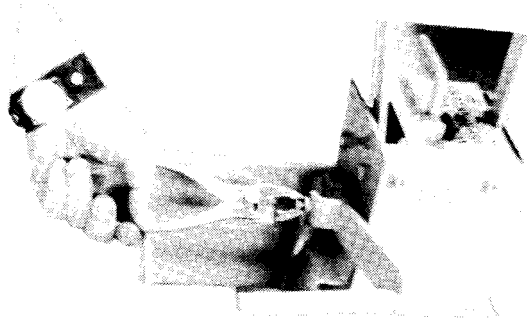


Figure 1

4. If contact pressure needs to be added to the brakes, the clevis should be turned clockwise. To relieve pressure, turn the clevis counterclockwise.

5. The clevis should not be turned in either direction more than one full revolution before being tested. Replace clevis pin and cotter pin and test. Use a spring scale to measure the force needed to engage the brake. Attach the scale to brake lever and pull to engage the brake. See reference figure 2. The scale should read between 40 to 45 lbs. Repeat steps 3 and 4 until correct force is obtained.

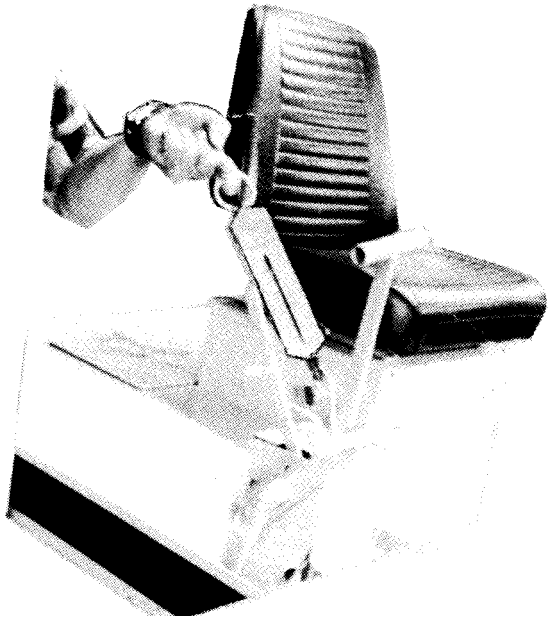


Figure 2

3.23 THROTTLE LEVER

Throttle should operate smoothly and hold engine at full RPM. Throttle should require 10 lbs. to operate. To adjust tension, loctite locknut and tighten until 10 lbs. is required to move from full to idle position.

3.24 WATER TANK

The water tank is polyethylene to prevent corrosion. The water tank holds 65 US gallons. Dirty water will clog the sprinkler bars. If the water tank is subject to freezing temperatures, all the water lines and the water tank must be drained by drawing through sprinkler tubes or removing the cover at the rear of the machine to gain access to the water tank, flush and drain plug.

3.25 SPRINKLERS

The sprinkler tube assemblies are PVC to prevent corrosion. The sprinkler tube assemblies are removable for cleaning when required.

3.26 ENGINE MOUNTING

Check weekly. Tighten all mounting hardware for proper torque, refer to parts illustrations for proper torque.

3.27 HARDWARE

Inspect all hardware for tightness. Refer to parts illustrations for proper torque.

Shear bolts are designed to fail under predetermined loads. Always replace shear bolts with identical grade. Fasteners should be replaced with the same or higher grade. If higher grade fasteners are used, these should only be tightened to the strength of the original.

Make sure fasteners' threads are clean and that you properly start thread engagement. This will prevent them from failing when tightening.

3.28 LOCTITE

Loctite 262 threadlocker is required to prevent hardware from loosening.

Refer to exploded diagrams and parts list for "*" where loctite is required.

3.29 BATTERY

3.29.1 Servicing Battery

⚠WARNING

BATTERY GAS CAN EXPLODE. KEEP SPARKS AND FLAMES AWAY FROM BATTERIES. USE A FLASHLIGHT TO CHECK BATTERY ELECTROLYTE LEVEL.

NEVER CHECK BATTERY CHARGE BY PLACING A METAL OBJECT ACROSS THE POSTS. USE A VOLTMETER OR HYDROMETER.

ALWAYS REMOVE GROUNDED NEGATIVE (-) BATTERY CLAMP FIRST AND REPLACE IT LAST.

1. On regular batteries, check electrolyte level. Fill each cell to bottom of filler neck with distilled water.

2. Keep batteries clean by wiping them with a damp cloth. Keep all connections clean and tight. Remove any corrosion, and wash terminals with a solution of 1 part baking soda and 4 parts water. Tighten all connections securely.

NOTE: Coat battery terminals and connectors with a mixture of petroleum jelly and baking soda to retard corrosion.

3. Keep battery fully charged, especially during cold weather. If a battery charger is used, turn charger off before connecting charger to battery(ies). Attach POSITIVE (+) battery post. Then attach NEGATIVE (-) battery charger lead to a good ground.

Once a month, check the battery for proper charge of 12.5 volts. Check for proper fluid level. Use distilled water when adding and run 30 minutes to mix. Clean battery, posts and terminals. Disconnect battery cables before charging to avoid damage to the electrical system.

⚠WARNING

SULFURIC ACID IN BATTERY ELECTROLYTE IS POISONOUS. IT IS STRONG ENOUGH TO BURN SKIN, EAT HOLES IN CLOTHING AND CAUSE BLINDNESS IF SPLASHED INTO EYES.

Avoid the hazard by:

- **Filling batteries in a well-ventilated area.**
- **Wearing eye protection and rubber gloves.**
- **Avoiding breathing fumes when electrolyte is added.**
- **Avoiding spilling or dripping electrolyte.**
- **Using proper jump start procedure.**

If you spill acid on yourself:

1. **Flush your skin with water.**
2. **Apply baking soda or lime to help neutralize the acid.**
3. **Flush your eyes with water for 10 – 15 minutes. Get medical attention immediately.**

If acid is swallowed:

1. **Drink large amounts of water or milk.**
2. **Then drink milk of magnesia, beaten eggs, or vegetable oil.**
3. **Get medical attention immediately.**

In freezing weather, run engine at least 30 minutes to assure thorough mixing after adding water to battery.

If necessary to replace battery(ies), replacements must meet or exceed the following recommended

capabilities at - 18° C (0° F):

12 Volt – Standard duty battery
BCI group U1 - 12 165CCA

3.29.2 Battery Installation

⚠WARNING

ALWAYS CONNECT GROUNDED CABLE LAST. CLEAN AND SECURELY CONNECT EACH CABLE TO BATTERY TERMINAL OF THE SAME POLARITY. BATTERY SHOULD BE SECURELY FASTENED WITH PROPERLY INSTALLED HOLD-DOWNS.

3.30 JUMP STARTING

CAUTION: DO NOT let vehicles touch. Put emergency brake ON. Set both vehicles in PARK (NEUTRAL if manual transmission) and turn ignition and electrical accessories OFF.

Attach jumper cables in this order:

1. dead positive block to
2. good positive
3. good negative to
4. engine block or frame of dead car. Start GOOD vehicle and let run a few minutes. Then start DEAD VEHICLE. Remove cables in reverse order 4, 3, 2, 1.

3.31 CHARGE SYSTEM

Charge system should be checked every month. With the engine running at full speed voltage should be 13 – 14 volts.

3.32 SWITCH BOX / FUSE 5A (HONDA ONLY)

If charge system fails, check the fuse located at the key switch box. If fuse fails frequently, it usually indicates a short circuit or an overload in the electrical system. Refer to wiring diagram and inspect wires.

NOTICE: Electrical system is not designed for field add-on electrical options, DO NOT modify the electrical system. Contact your authorized dealer.

3.32.1 Specified Fuse: 5A

Turn the engine switch OFF and remove the key before checking or replacing fuses to prevent accidental short-circuiting.

To replace fuse, pull the old fuse out of the clips with your finger. Push a new fuse into the clips.

NOTICE: NEVER use a fuse with a different rating from that specified. Serious damage to the electrical system or a fire may result.

3.33 IGNITION SYSTEM

The WP2500 is equipped with electronic ignition. Checking and replacing the spark plug is the only ignition system maintenance required.

3.34 BELT TENSION

Check belts and idler weekly for proper tension. For optimum performance, replace belt yearly. If any belt squealing is present, belts must be tightened or replaced.

3.35 STORAGE

1. Store the roller on level ground with drums blocked and parking brake on.
2. Remove the key. Operations of roller by untrained persons could result in personal injury.
3. In freezing climates, drain the water from the water tank, sprinkler tubes and drums.
4. During extended storage, drums should be coated with any type of oil or grease to prevent rusting.
5. Storage instructions for the engine are stated in the Engine Manual and should be carried out.

3.36 TROUBLESHOOTING

PROBLEM	CAUSE	REMEDY
Engine will not crank over.	Forward/Reverse lever not in neutral position.	Place lever in neutral position.
	Battery not fully charged.	Charge or replace.
	Loose battery or starter cables.	Check and tighten.
	Faulty engine starting circuit.	Check appropriate section in Engine Manual.
	Faulty or improperly adjusted neutral interlock switch.	Make sure neutral switch is adjusted properly and wires are all secured. Test with ohmmeter. Readjust neutral switch. Replace if defective.
Engine will not start, but cranks over.	Low on fuel.	Add fuel.
	Engine low on oil.	Add oil.
	Fuel filter plugged.	Check fuel filter, replace if necessary.
	Spark plug fouled.	Clean or replace.
	No spark at plug.	Check low oil alert circuit - Check engine ignition system in Engine Manual.
Roller will not move forward or reverse.	Objects in front of drums.	Remove.
	Loose or broken forward/reverse linkage.	Readjust linkage or replace worn arm linkage.
	Loose or broken chain.	Make sure chain is on sprocket. Adjust tension or replace if chain shows excessive wear.
	Loose or broken transmission belts.	Replace and/or tighten.
	Low hydraulic oil.	Make sure expansion tank is max. of 1/2 full.
		Test hydraulic pressure for 2250 PSI at full load on drive motor with engine RPM at 3600.

3.36 TROUBLESHOOTING Continued

PROBLEM	CAUSE	REMEDY
Unit lacks power moving forward--but okay in reverse or vice versa.	Improperly adjusted forward / reverse linkage.	Adjust linkage.
Unit lacks power.	Engine not properly warmed up.	Idle before operating to achieve operating temperature.
	Chain misalignment or too much tension.	Adjust.
	Low hydraulic oil level.	Add.
	Plugged hydraulic filter.	Replace.
	Insufficient belt tension.	Adjust and check spring on idle arm or replace belts.
	Engine RPM too low.	Check throttle linkage for proper actuation (3600 RPM) Consult Engine Manual.
	Faulty hydraulic pump or drive motor.	Test hydraulic pressure for 2250 PSI at full load on drive motor with engine RPM at 3600. Replace pump if pressure is not in specified range in hydraulic motor drive circuit.
	Engine valves worn.	Adjust valve clearances.

3.37 SERVICE RECORD

Model No. _____ Serial No. _____

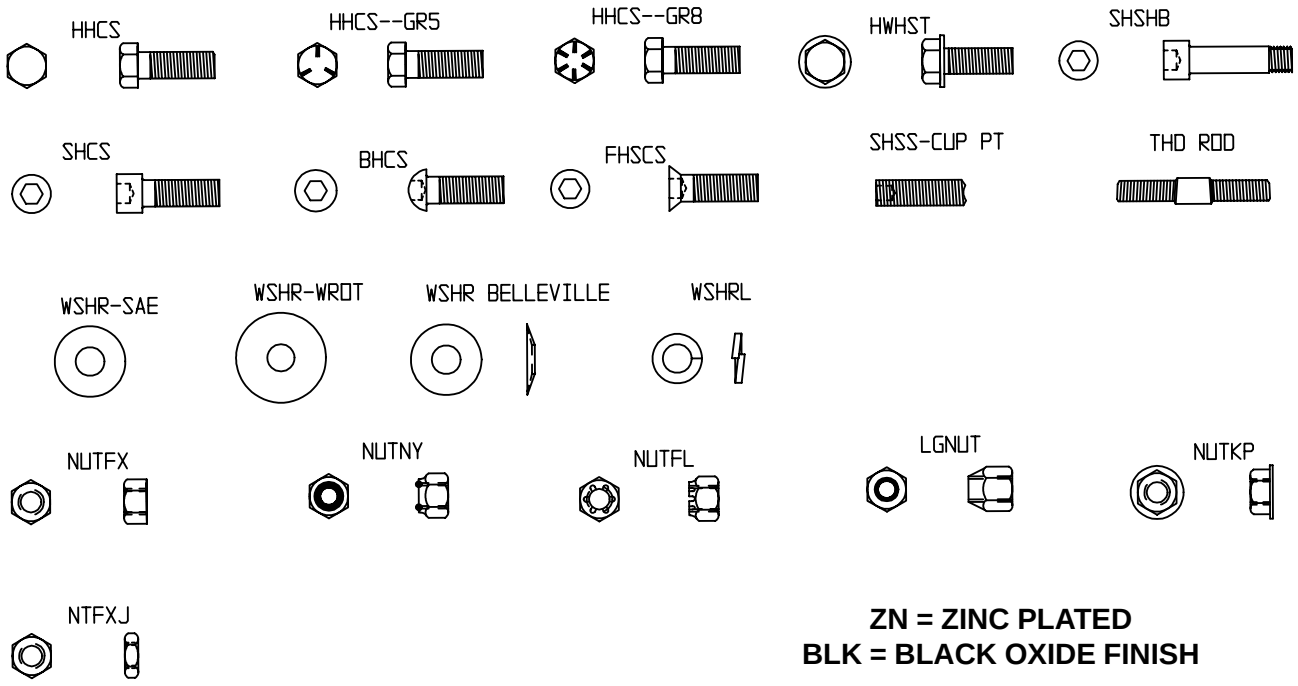
Service Area		Engine Oil	Hyd Oil	Fuel Filter	Engine Oil Filter	Hyd Oil Filter	Hyd Breather
Date	Hours	40 hrs	300 hrs	100 hrs	40 hrs	100 hrs	300 hrs

4. EXPLODED VIEWS WITH PARTS

4. PARTS LIST

Exploded Views with Parts

4.1 HARDWARE KEY



ZN = ZINC PLATED
BLK = BLACK OXIDE FINISH

SAE GRADE 5 Coarse Thread, Zinc-Plated		
SIZE	**TORQUE**	
	ft. lbs.	**Nm**
1/4 - 20 (.250)	6	8
5/16 - 18 (.3125)	13	18
3/8 - 16 (.375)	23	31
7/16 - 14 (.4375)	37	50
1/2 - 13 (.500)	57	77
9/16 - 12 (.5625)	82	111
5/8 - 11 (.625)	112	152
3/4 - 10 (.750)	200	271
7/8 - 9 (.875)	322	436.5
1 - 8 (1.000)	483	655

SAE GRADE 8 Coarse Thread, Zinc-Plated		
SIZE	**TORQUE**	
	ft. lbs.	**Nm**
1/4 - 20 (.250)	9	12
5/16 - 18 (.3125)	18	24
3/8 - 16 (.375)	33	45
7/16 - 14 (.4375)	52	70
1/2 - 13 (.500)	80	108
9/16 - 12 (.5625)	115	156
5/8 - 11 (.625)	159	215
3/4 - 10 (.750)	282	382
7/8 - 9 (.875)	454	615
1 - 8 (1.000)	682	925

SAE GRADE 5 Fine Thread, Zinc-Plated		
SIZE	**TORQUE**	
	ft. lbs.	**Nm**
1/4 - 28 (.250)	7	10
5/16 - 24 (.3125)	14	19
3/8 - 24 (.375)	26	35
7/16 - 20 (.4375)	41	56
1/2 - 20 (.500)	64	87
9/16 - 18 (.5625)	91	123
5/8 - 18 (.625)	128	173
3/4 - 16 (.750)	223	302
7/8 - 14 (.875)	355	481
1 - 12 (1.000)	529	717
1 -14 (1.000)	541	733

SAE GRADE 8 Fine Thread, Zinc-Plated		
SIZE	**TORQUE**	
	ft. lbs.	**Nm**
1/4 - 28 (.250)	10	14
5/16 - 24 (.3125)	20	27
3/8 - 24 (.375)	37	50
7/16 - 20 (.4375)	58	79
1/2 - 20 (.500)	90	122
9/16 - 18 (.5625)	129	175
5/8 - 18 (.625)	180	244
3/4 - 16 (.750)	315	427
7/8 - 9 (.875)	501	679
1 - 12 (1.000)	746	1011
1 -14 (1.000)	764	1036

t-chrt_i.doc

Property Class 8.8

ZINC-PLATED

SIZE	Coarse Thread		Fine Thread	
	Nm	ft. lbs.	Nm	ft. lbs.
M6	9.9	7	10	7
M8	24	18	25	18
M10	48	35	49	36
M12	83	61	88	65
M14	132	97	140	103
M16	200	148	210	155
M20	390	288	425	313
M24	675	498	720	531

Property Class 10.9

ZINC-PLATED

SIZE	Coarse Thread		Fine Thread	
	Nm	ft. lbs.	Nm	ft. lbs.
M6	14	10	14	10
M8	34	25	35	26
M10	67	49	68	50
M12	117	86	125	92
M14	185	136	192	142
M16	285	210	295	218
M20	550	406	600	443
M24	950	701	1000	738

Property Class 12.9

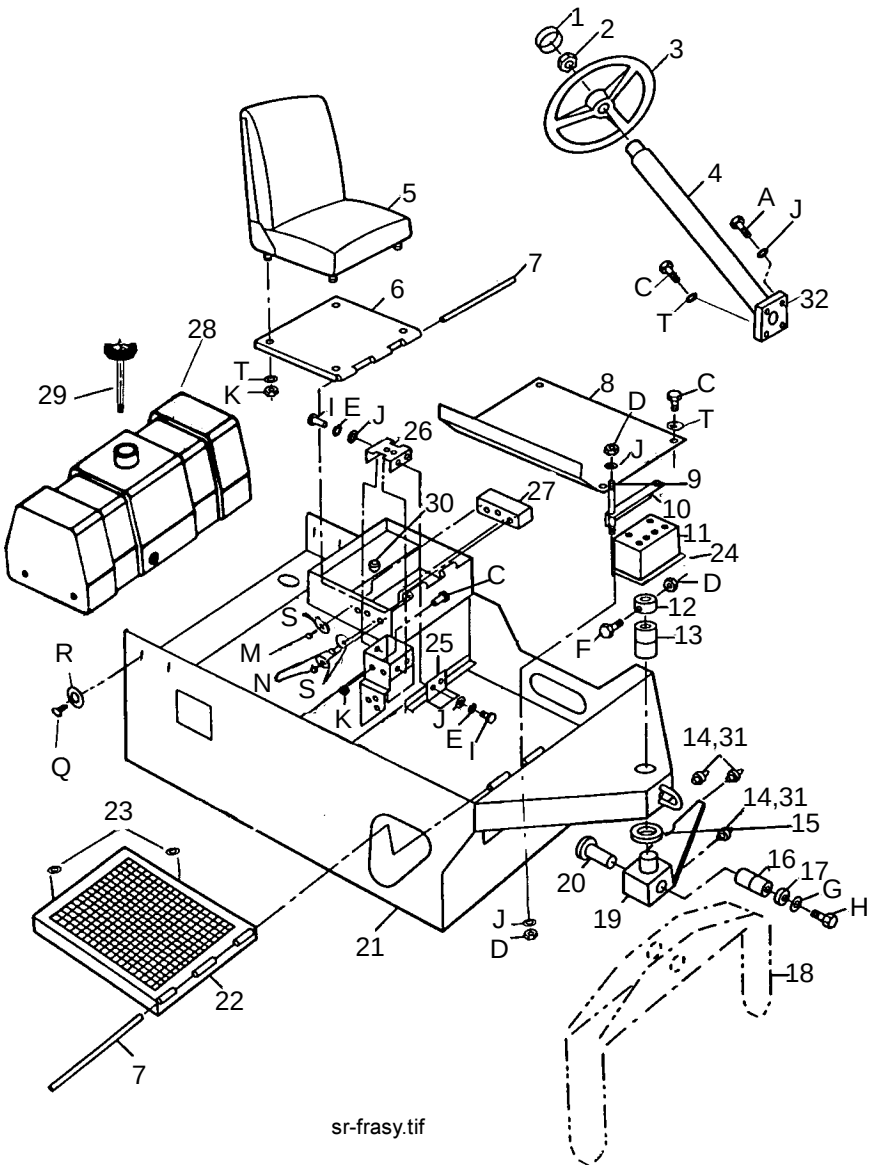
ZINC-PLATED

SIZE	Coarse Thread		Fine Thread	
	Nm	ft. lbs.	Nm	ft. lbs.
M6	16.5	12	16.5	12
M8	40	30	42	31
M10	81	60	82	60
M12	140	103	150	111
M14	220	162	235	173
M16	340	251	350	258
M20	660	487	720	531
M24	1140	841	1200	885

Conversion Factor: 1 ft. lb. = 1.3558 Nm

4. PARTS LIST

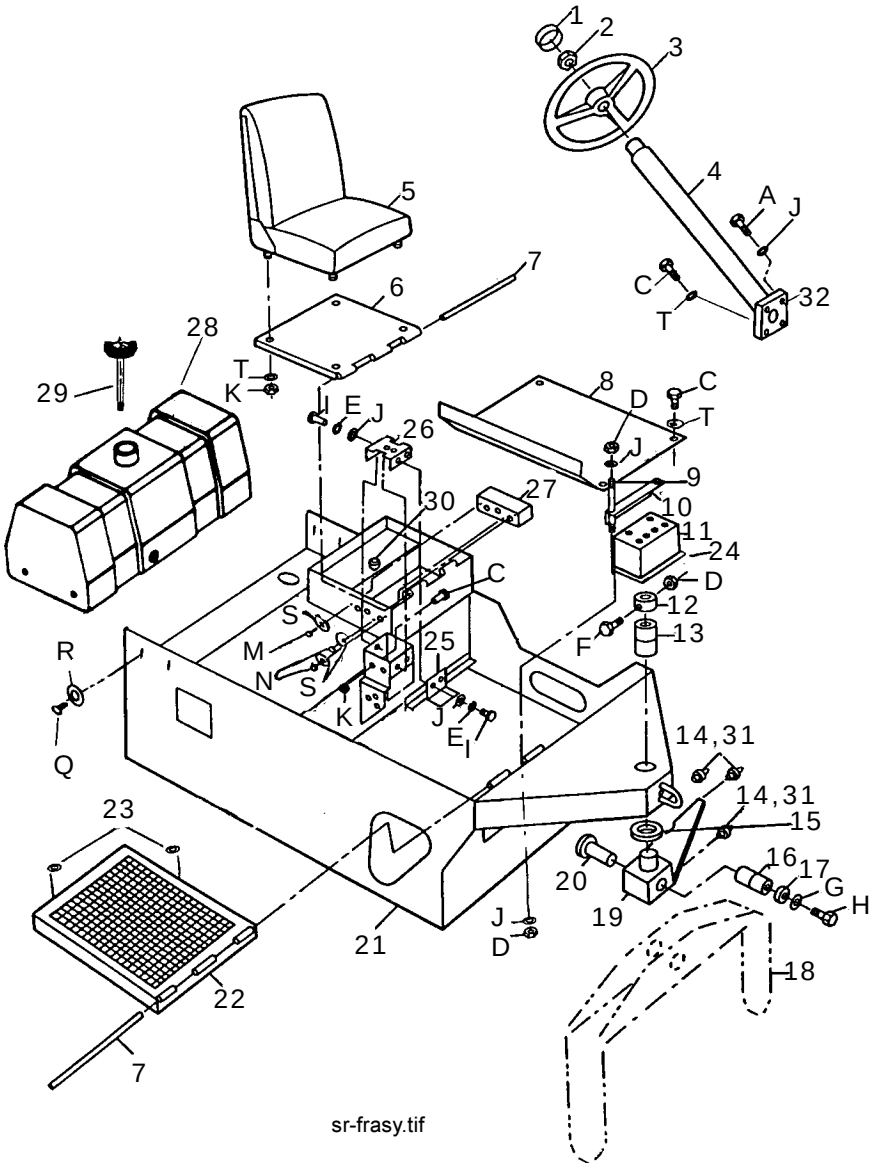
4.3 Frame Assembly



4. PARTS LIST

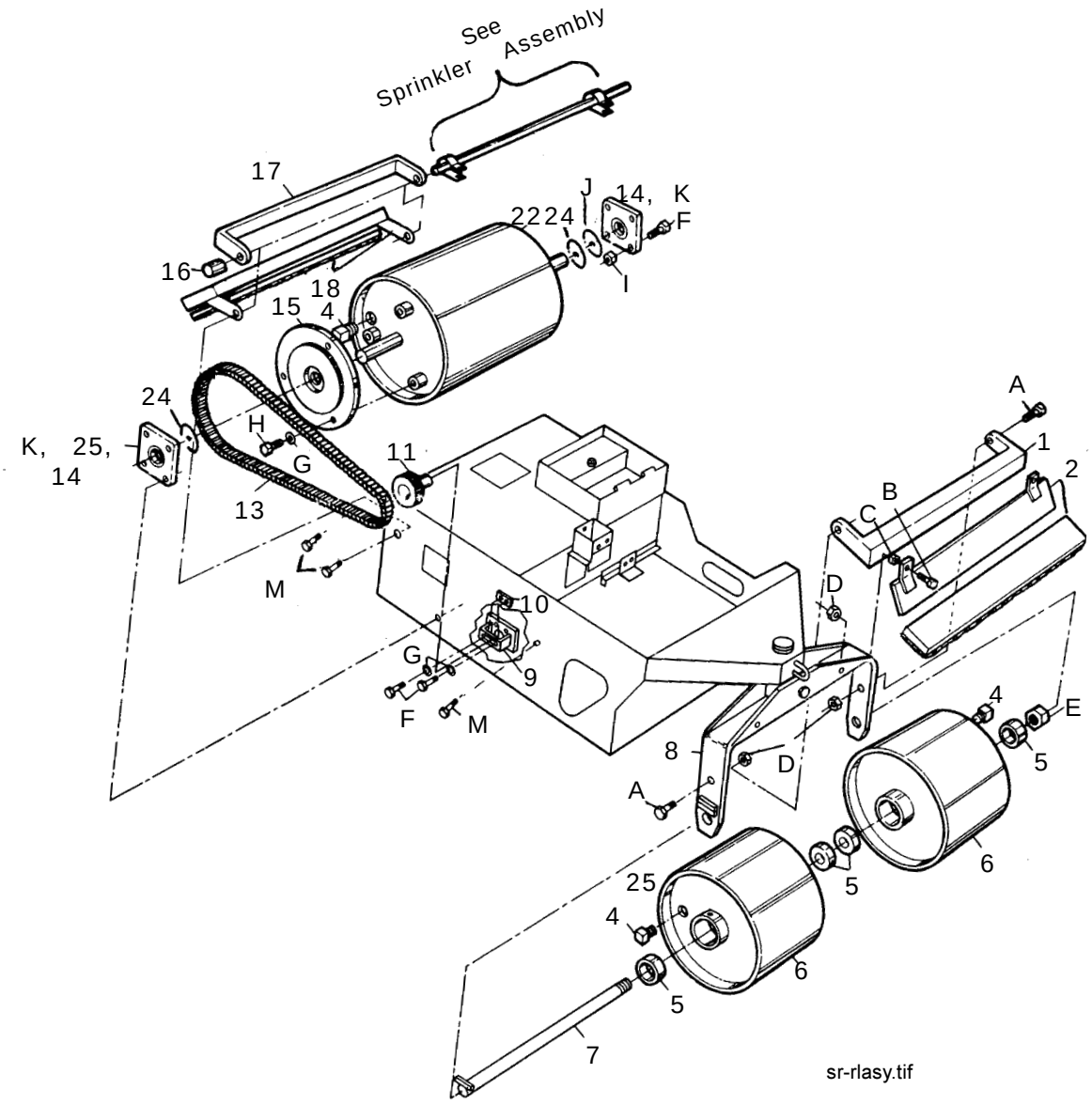
4.3 Frame Assembly

ITEM	PART NO.	DESCRIPTION	QTY.
1	47401	Cap Wheel Steering	1
2	46656	Nut Wheel Steering	1
3	41018	Wheel Steering	1
4	46655	Column Steering	1
5	47195	Seat Assy.	1
6	22493-2	Cover Box Tool Weld	1
7	44103	Pin Hinge BRS 1/4 x 13 - 1/2	2
8	29063-2	Board Floor	1
9	28544	THD 1/4 - 20 x 9	2
10	28543-2	Clamp Battery	1
11	35321	Battery	1
12	28446-2	Collar Pivot	1
13	32203	Bushing	2
14	46042	Fitting 1641 B	3
15	28512	Washer Thrust	1
16	32205	Bushing	2
17	27413	Washer 1 - 3/4 x 11/16 x 1/4	2
18	22485-2	Yoke Drum FRT	1
19	22761-2	Pivot York FRT	1
20	42342	Pin	1
21	22636-2	Frame Main	1
22	22267-2	Cover Engine	1
23	39999	Bumper .117 High x .50 Diameter	4
24	47244	RBR 60 Duro 1.5 x 6.75	4
25	29074-2	Cover FRT Box CONT	1
26	29065-2	Cover Control Box	1
27	36267	Switch Ignition Honda	1
28	47283	Water Tank 30 Gal. Polyethylene	1
29	47288	Cap Water Tank w/ Gauge	1
30	35483	Cap Breather & Filler	1
31	47001	Cap Blue	3
32	43117	Plate Steering	1


1
2
3
4
A
J
C
T
32
5
6
7
28
29
T
K
J
E
J
26
8
D
C
T
J
9
10
11
24
D
12
13
F
27
30
C
S
M
N
S
K
25
J
E
I
R
Q
14,31
14,31
15
16
17
G
H
20
19
23
21
J
D
22
18
7
sr-frasy.tif

ITEM	PART NO.	DESCRIPTION	QTY.	TORQUE FT. LBS.	TORQUE Nm
A*	80811	HHCS M6-125 x 25 MM ZN	4	15	(20)
C*	80161	HHCS 5/16 - 18 x 1 GR5 ZN	9	13	(18)
D	80236	NUTKP 1/4 - 20 ZN	5	-	-
E	80116	WSHRL 14 MED SPLIT ZN	3	-	-
F*	80450	HHCS 1/4 - 20 x 3 GR5 ZN	1	6	(8)
G	80337	WSHRL 5/8 MED SPLIT ZN	2	-	-
H*	80204	HHCS 5/8 - 11 x 1 1/2 GR5 ZN	2	112	(152)
I*	80434	HHCS 1/4 - 20 x 3/4 GR5 ZN	3	6	(8)
J	80347	WSHR 1/4 WROT ZN	7	-	-
K	80114	NUTNY 5/16 - 18 ZN	5	-	-
M	80549	PPHMSM M4 x 0.7 - 6G x 20 MM LG	1	-	-
N	80606	PPHMSM M3 x 0.5 - 6G x 16 MM LG	2	-	-
Q	80649	BHSCS 3/8 - 16 x 3/4 BLK	4	13	(18)
R	80657	WSHR FLAT 3/8 ID x 7/8 OD BLK	4	-	-
S	80346	WSHR #10 FLAT SAE ZN PL	7	-	-
T	80348	WSHR 5/16 WROT ZN	8	-	-

* Loctite Required


See Sprinkler Assembly
17
16
18
15
4
22
24
J
14, K
F
I
24
K, 25, 14
H
G
13
11
M
A
1
2
B
C
D
10
9
G
F
M
8
D
A
4
E
5
6
25
4
5
6
7
sr-rlasy.tif

4. PARTS LIST

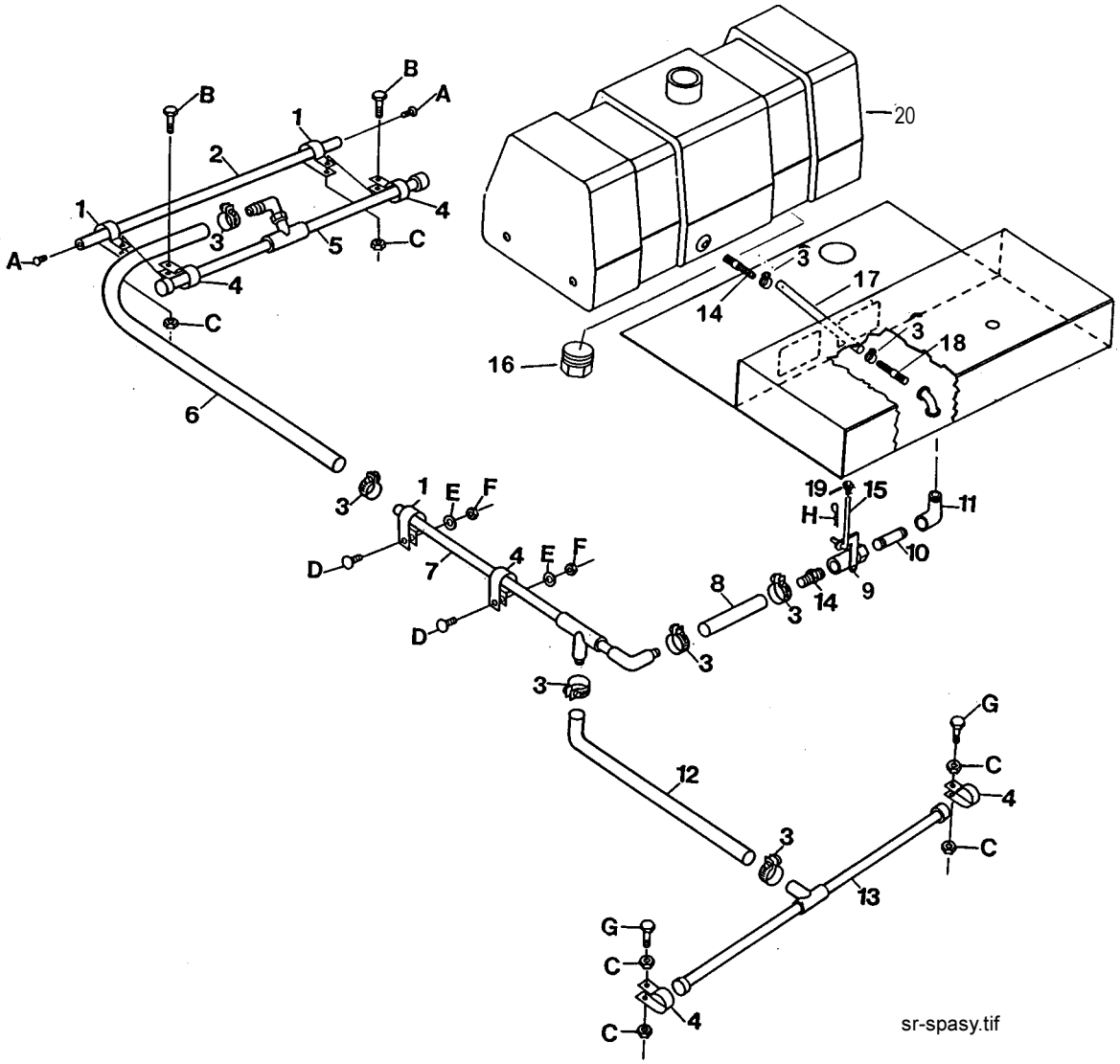
ITEM	PART NO.	DESCRIPTION	QTY.
1	22269-2	Scraper FRT	1
2	22399	Assy Mat Cocoa Front	1
4	46172	Plug Pipe 1NPT SQ SOC	6
5	32275	Bearing Ball 1 - 1/4	4
6	22891	Kit, Drums Front	1
7	22486	Shaft Drum Front	1
8	22485-2	Yoke Drum Front	1
9	22491-2	Bracket Mtr HYD	1
10	29066-2	Bar Nut 1/2 - 13 2C To 3C	1
11	35452	Sprocket 6013 x 1	1
13	22420	Chain Drive	1
14	32206	Bearing Flange 1 - 1/4	2
15	22292	Sprocket & Rotor Weld	1
16	28511	Spacer	1
17	22291	Scraper Rear WELD	1
18	22400	Assy Mat Cocoa Rear	1
22	22273-2	Drum Rear	1
24	42138	Spacer Drum SR2500	2
25	47001	Caplug Blue	4

				TORQUE	
ITEM	PART NO.	DESCRIPTION	QTY.	FT. LBS.	(NM)
A*	80163	HHCS 5/16 - 18 x 1 - 1/2 GR5 ZN	2	13	(18)
B*	80169	HHCS 5/16 - 18 x 2 GR5 ZN	2	13	(18)
C	80245	NUTFX 5/16 - 18 ZN	2	-	-
D	80114	NUTNY 5/16 - 18 ZN	4	-	-
E	80395	NUTNY 1 - 1/4 - 12 ZN	1	-	-
F	80075	HHCS 1/2 - 13 x 1 - 1/2 GR5 ZN	10	57	(77)
G	80117	WSHRL 1/2 MED SPLIT ZN	5	-	-
H	80378	HHCS 1/2 - 13 x 1 GR5 ZN	3	57	(77)
I	80051	NUTNY 1/2 - 13 ZN	8	-	-
J	80400	WSHR FLAT 1 - 1/4 SAE ZN	1	-	-
K*	80724	SHSS 5/16 x 3/8 CUPPT BLK	4	-	-
M	80224	RHSMS 10 - 24 x 3/4 ZN	1	-	-

* Loctite Required

4. PARTS LIST

4.5 Sprinkler Assembly



4. PARTS LIST

4.5 Sprinkler Assembly

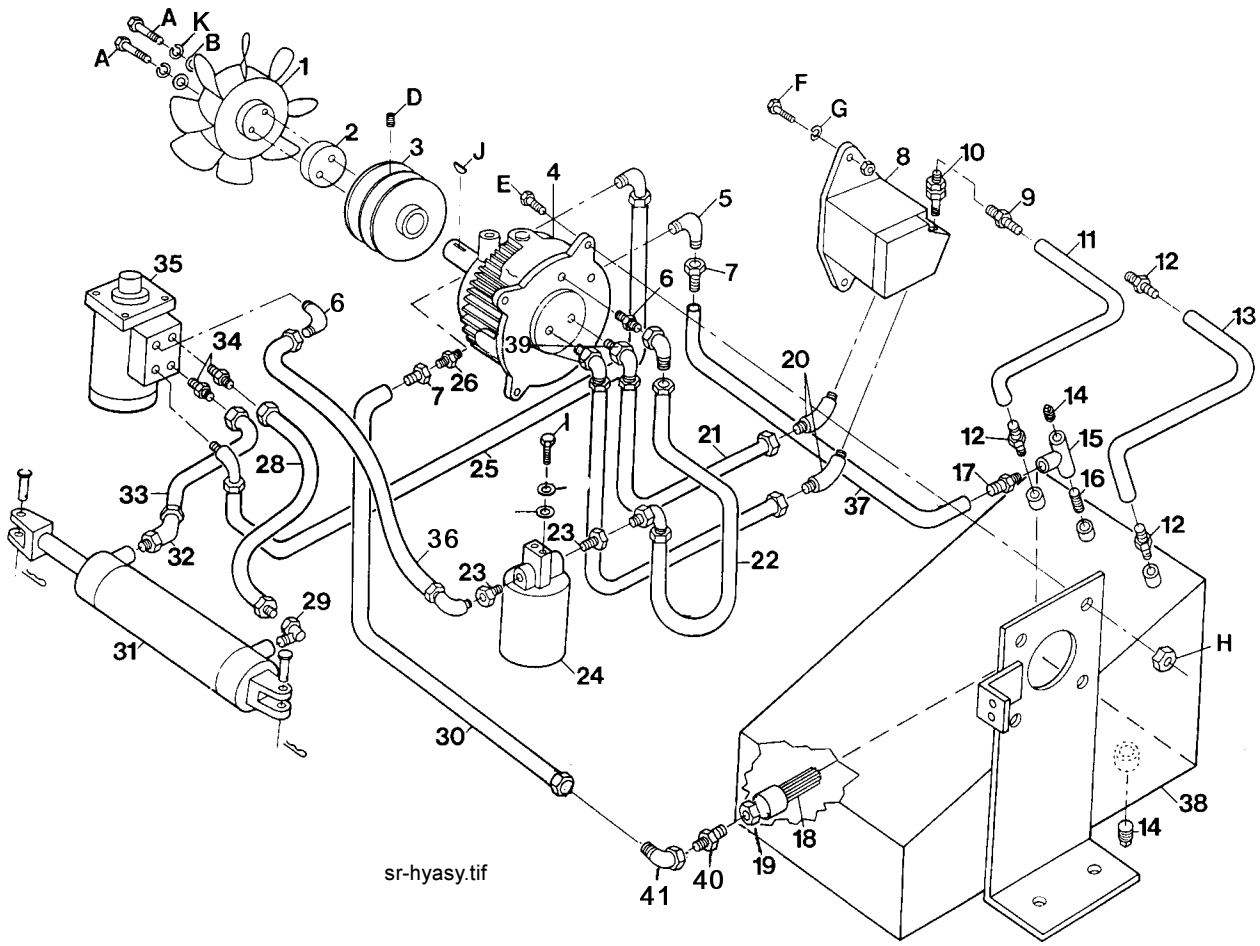
ITEM	PART NO.	DESCRIPTION	QTY.
1	38662	Clamp Cable 3/4 in.	3
2	28448-2	Rod Mat Cocoa Rear	1
3	35447	Clamp Worm Drive 1 in.	8
4	35448	Clamp Cable 5/8 in.	5
5	22296	Sprinkler Rear Assy	1
6	90359	Hose Water Black 5/8 ID	22"
7	22525	Tee Water Assy	1
8	90359	Hose Water Black 5/8 ID	4"
9	22365	Valve	1
10	46193	Nipple Pipe 1/2 x 8	1
11	46112	Elbow Street 1/2 x 90 Degrees	1
12	90359	Hose Water Black 5/8 ID	68"
13	22266	Sprinkler Front Assy	1
14	46146	Adapter 1/2 - 14 NPT Poly	2
15	29069-2	Rod CONT Sprinkler	1
16	38797	Plug PVC 1 - 1/2 NPT	1
17	90359	Hose Water Black 5/8 ID	32"
18	46453	1/2 NPT Male x 1/2 Barb	1
19	47213	Bushing Nylon .438	1
20	47283	Water Tank	1

ITEM	PART NO.	DESCRIPTION	QTY.	TORQUE FT. LBS.	TORQUE (NM)
A*	80174	HHCS 3/8 - 16 x GR8 ZN	2	23	(31)
B	80434	HHCS 1/4 - 20 x 3/4 GR5 ZN	2	6	(8)
C	80236	NUTKP 1/4 - 20 ZN	6	-	-
D	80224	RHSMS 10 - 24 x 3/4 ZN	2	-	-
E	80346	WSHR #10 SAE ZN	2	-	-
F	80693	NUTNY 10 - 24 ZN	2	-	-
G	80154	HHCS 1/4 - 20 x 1 - 1/4 GR5 ZN	2	6	(8)
H	80424	PINCT 1/8 x 3/4 ZN	1	-	-

* Loctite Required

4. PARTS LIST

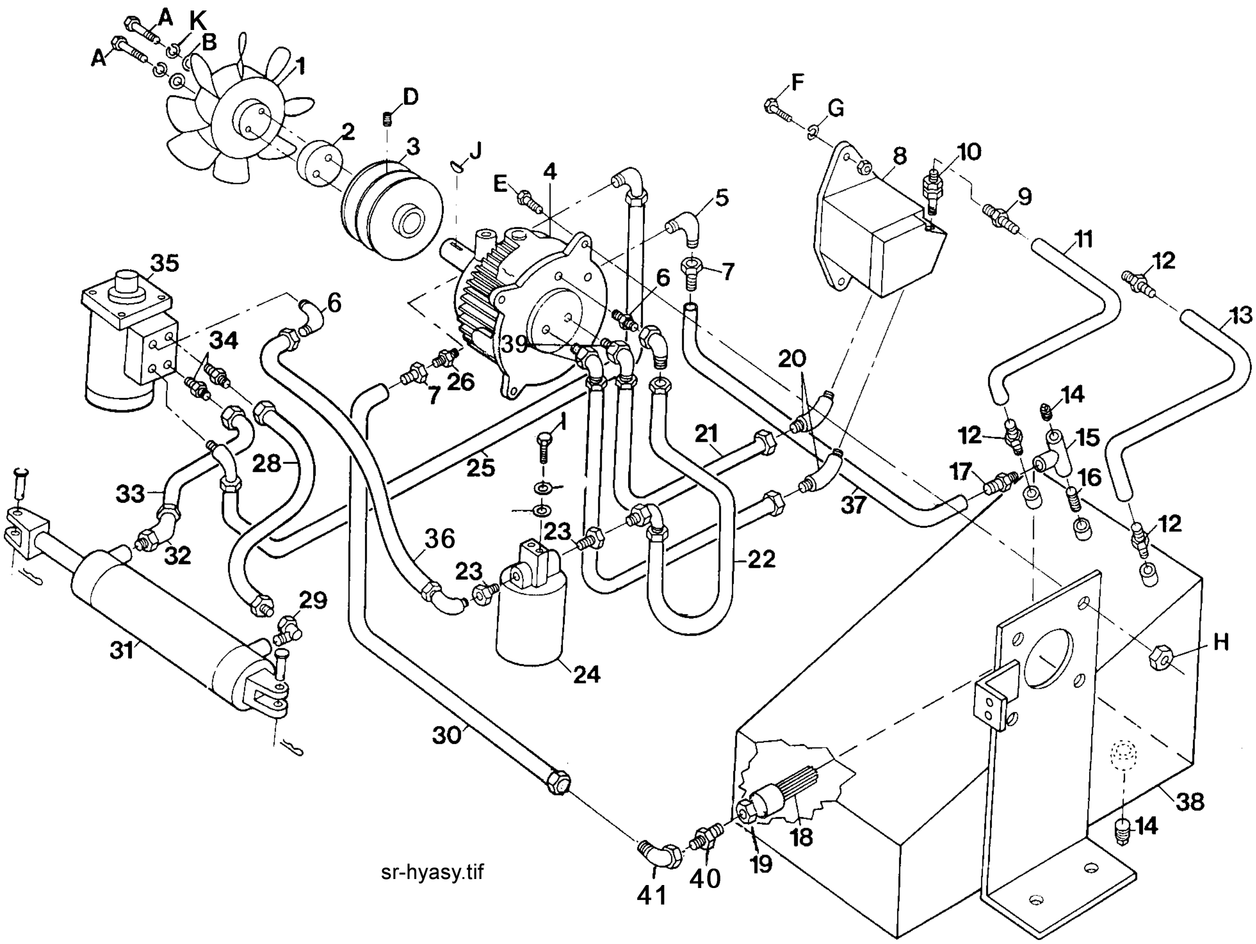
4.6 Hydraulic Assembly



4. PARTS LIST

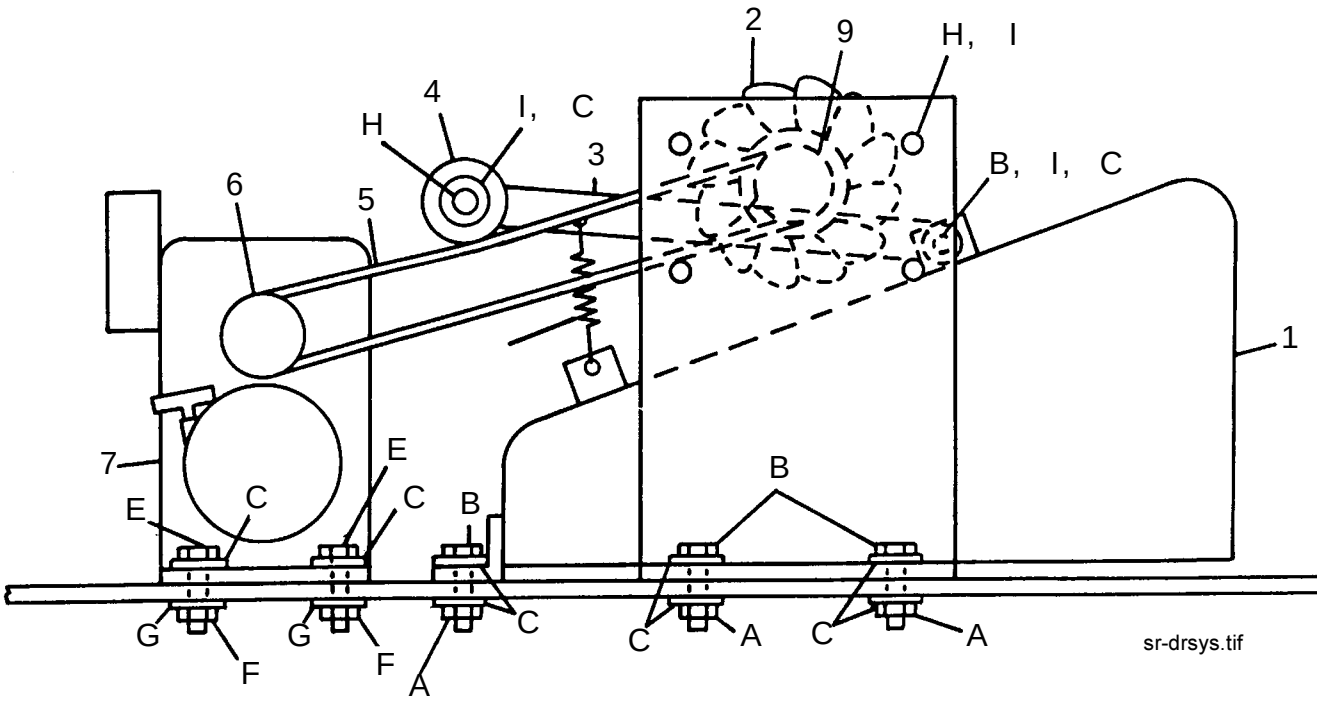
4.6 Hydraulic Assembly

ITEM	PART NO.	DESCRIPTION	QTY.
1	29386	Fan Mach 7 IN DIA CW	1
2	29385	Spacer Fan	1
3	29384	Sheave MACH 2AK30 x 3/4	1
4	38189	Pump Hyd Eaton Model 11 CCW	1
5	46133	FTG HYD 90 7/8J x 7/8 ORG	1
6	46115	FTG HYD 9/16J STR 9/16 ORG	2
7	46125	End Hose 7/8J x 5/8 BARB	1
8	35446	Motor HYD	1
9	46185	End Hose 7/16J x 1/4 BARB	1
10	46184	FTG HYD STR 7/16J x 7/16 ORG	1
11	46186	Hose 1/4 Low Pressure	28"
12	46183	End Hose 3/8 N x 1/4 BARB	3
13	46186	Hose 1/4 Low Pressure	32"
14	46107	Plug Pipe 1/2 NPT SQ HD	2
15	46139	Tee Pipe 1/2 NPT GALV	1
16	46192	Nipple Pipe 1/2 x Close	1
17	46132	End Hose 1/2N x 5/8 BARB	1
18	35482	Strainer SL 25 GPM	1
19	46156	Bushing RDCR 1 - 1/4N x 1/2N	1
20	46128	FTG HYD 3/4J x 7/8 OR	2
21	46555	Hose 3/4FJ x 3/4RJ X33	2
22	46556	Hose 9/16FJ x 9/16RJ x 19	1
23	46557	FTG HYD 9/16J x 3/4NPT	2
24	35444	Filter Hydraulics ASSY	1
	35445	Cartridge HYD Filter	1
25	46188	Hose HYD 90 To 90 24LG	1
26	46124	FTG HYD STR 7/8J OR 7/8 ORG	1
28	46659	Hose HYD 7/16 FJ x 7/16 FJ-25"	1
29	46663	FTG HYD 90 7/16 FJ x 1/4MPT	1
30	46554	Hose HYD 7/8FJ x 7/8FJ x 22	1
31	35440	CYL HYD W/CLVPN + PINCT	1
	39551	PIN	2
	80424	COTTER	2
32	46662	FTG HYD 45 7/16 J x 1/4MPT	1
33	46660	Hose HYD 7/16FJ x 7/16 FJ 18"	1
34	46154	FTG HYD STR 7/16J x 9/16 ORG	2
35	46653	Steering Control Unit	1
36	46661	Hose 9/16 FJ x 9/16 RJ 27"	1
37	46131	Hose HYD Low Press 5/8ID	5 1/2"
38	22487-2	Tank HYD	1
39	46197	FTG HYD 3/4J x 7/8 OR	2
40	46179	FTG HYD 1/2NPT x 7/8J	1
41	46558	FTG HYD EL 45° 7/8J	1


A
K
B
A
1
D
2
3
J
4
E
5
F
G
8
10
9
11
12
13
35
6
7
6
34
39
26
7
20
14
12
15
17
16
12
1
21
25
28
33
37
22
23
32
36
23
29
24
H
31
30
38
18
14
19
40
41
sr-hyasy.tif

ITEM	PART NO.	DESCRIPTION	QTY.	TORQUE FT. LBS.	TORQUE (NM)
A*	80070	PPHMS 10 - 24 x 1 ZN	2	-	-
B	80346	WSHR #10 SAE ZN	2	-	-
C	80116	WSHRL 1/4 MED SPLIT ZN	2	-	-
D*	80412	SHSS 1/4 x 20 x 3/8 CUPPT BLK	2	-	-
E*	80181	HHCS 3/8 - 16 x 2 - 1/2 GR5 ZN	4	23	(31)
F*	80569	SHCS 1/2 - 13 x 1 - 1/2 BLK	2	57	(77)
G	80117	WSHRL 1/2 MED SPLIT ZN	2	-	-
H	80056	NUTNY 3/8 - 16 ZN	4	-	-
I*	80434	HHCS 1/4 - 20 x 3/4 GR5 ZN	2	6	(8)
J	80444	KEY #9 WOODRUFF	1	-	-
K	80065	WSHRL #10 MED SPLIT ZN	2	-	-
L	80347	WSHR 1/4 WROT ZN	2	-	-

* Loctite Required


2
9
H, I
4
H
I, C
3
B, I, C
6
5
1
7
E
C
E
C
B
B
G
F
G
F
A
C
C
A
C
A
sr-drsys.tif

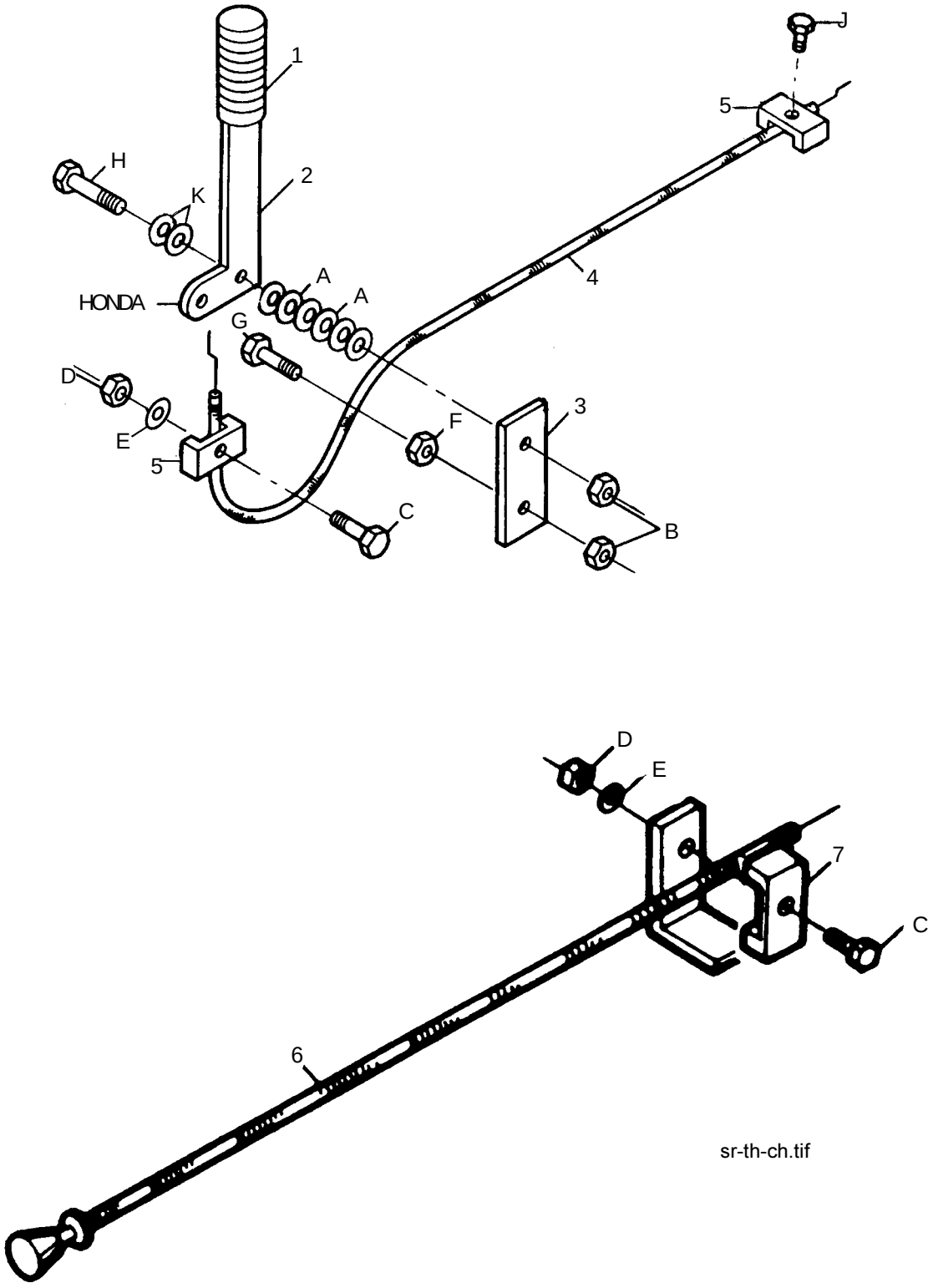
ITEM	PART NO.	DESCRIPTION	QTY.
1	22487-2	Tank HYD	1
2	29386	Fan 7 in Dia. CW Rotation	1
3	29073-2	Arm Pulley Tension	1
4	35917	Pulley Idler 3 - 1/2 OD	1
5	34526	V-Belt A-34 Honda	2
	35934	V-Belt A-37 Robin	2
6	38106	Sheave 2AK30H x 1 Hub	1
7	30225	Engine 8 HP Honda	1
	31210	Engine 11 HP Honda	1
	30337	Engine 8.5 hp Robin	1
8	38207	Spring EXT	1
9	29384	Sheave MACH 2AK30 x 3/4 Hub	1

				TORQUE	
ITEM	PART NO.	DESCRIPTION	QTY.	FT. LBS.	(NM)
A	80056	NUTNY 3/8 - 16 ZN	7	-	-
B*	80145	HHCS 3/8 - 16 x 1/4 GR5 ZN	4	23	(31)
C	80043	WSHR 3/8 WROT ZN	13	-	-
E*	80187	HHCS 3/8 - 16 x 2 GR5 ZN	4	23	(31)
G	26325	WSHR 3/8 x 10D x 3/16 ZN	4	-	-
H*	80181	HHCS 3/8 - 16 x 2 - 1/2 GR5 ZN	5	23	(31)
I	80056	NUTNY 3/8 - 16 ZN	6	-	-

* Loctite Required

4. PARTS LIST

4.8 Throttle/Choke Assembly



sr-th-ch.tif

4. PARTS LIST

4.8 Throttle/Choke Assembly

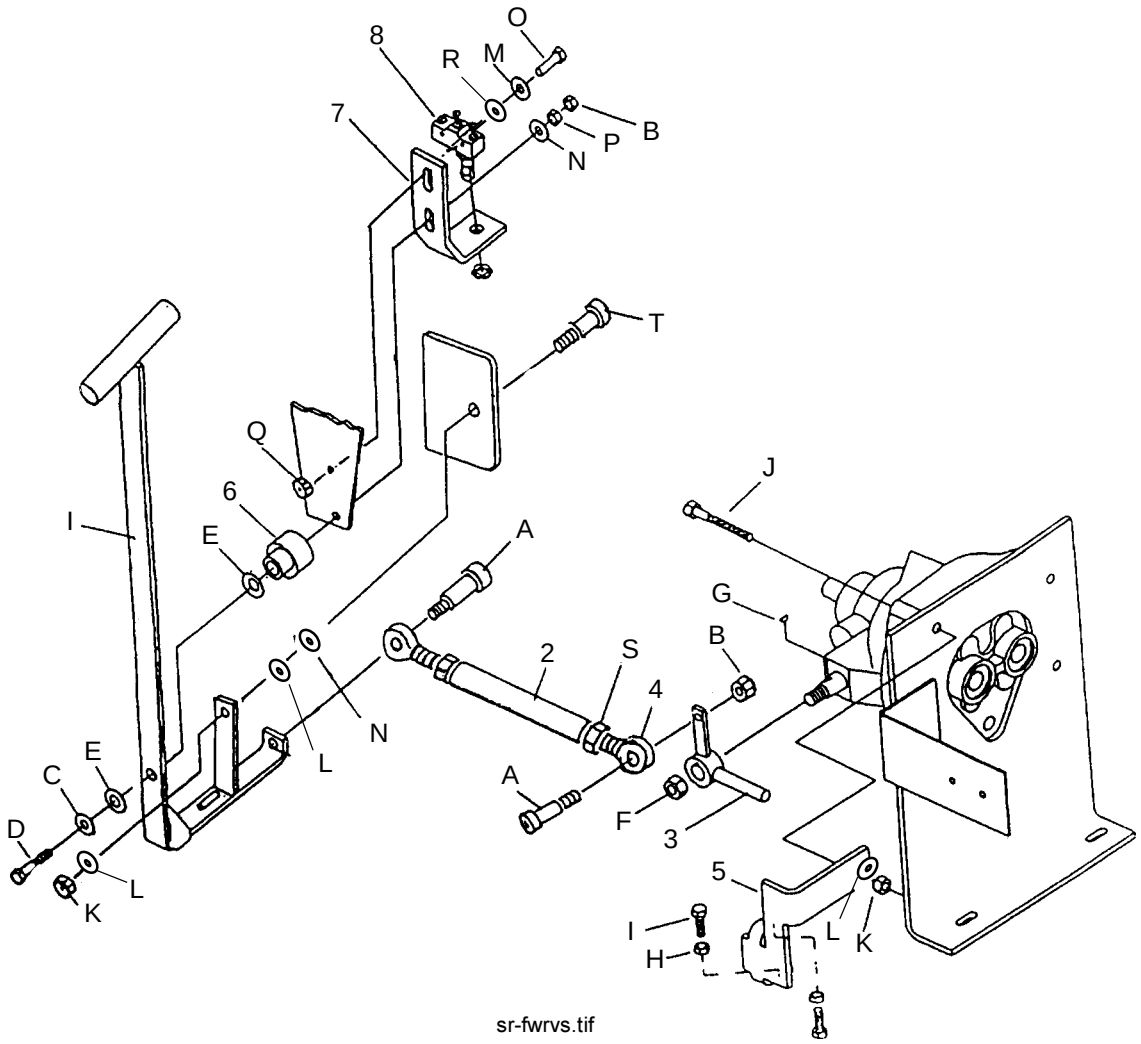
ITEM	PART NO.	DESCRIPTION	QTY.
1	34687	Flex-Grip	1
2	22489-2	Lever Throttle	1
3	28460-2	Arm Throttle Drag	1
4	39011	Cable Throttle Honda	1
	43008	Cable Throttle Assy Robin	1
5	30127	Clamp	1
6	35456	Cable Choke 42 In.	1
7	30127	Clamp	1

				TORQUE	
ITEM	PART NO.	DESCRIPTION	QTY.	FT. LBS.	(NM)
A	80011	WSHBL 3/8 x 3/4 ZN	6	-	-
B	80114	NUTNY 5/16 - 18 ZN	2	-	-
C*	80224	RHSMS 10 - 24 x 3/4 ZN	2	-	-
D	80693	NUTNY 10 - 24 ZN	2	-	-
E	80346	WSHR #10 SAE ZN	2	-	-
F	80245	NUTFX 5/16 - 18 ZN	2	-	-
G*	80161	HHCS 5/16 - 18 x 1 GR5 ZN	1	13	(18)
H*	80163	HHCS 5/16 - 18 x 1 - 1/2 GR5 ZN	1	13	(18)
I	80347	WSHR 1/4 WROT ZN	1	-	-
J	80230	HWHST 10 x 5/8 (Honda) ZN	1	-	-
K	80348	WSHR 5/16 WROT ZN	2	-	-

* Loctite Required

4. PARTS LIST

4.9 Forward/Reverse Lever and Neutral Switch



sr-fwrvs.tif

4. PARTS LIST

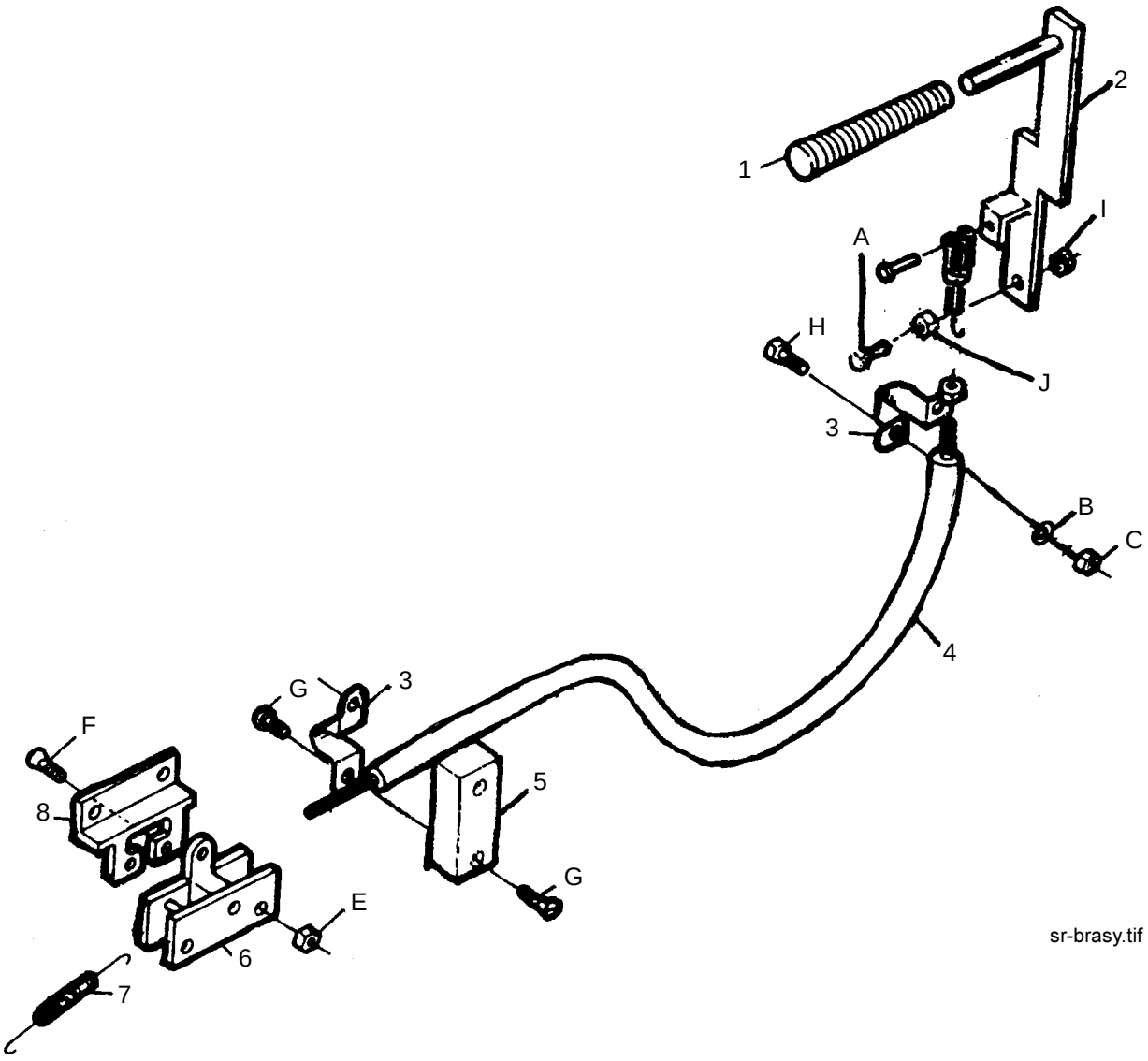
4.9 Forward/Reverse Lever and Neutral Switch

ITEM	PART NO.	DESCRIPTION	QTY.	
1	42443-2	Lever FWD / RVS	1	1
2	42793-2	FWD / RVS Linkage	1	1
3	22492-2	Lever Pump	1	1
4	32124	Rod End	2	2
5	29854-2	Bracket Pump Control	1	1
6	42102-2	Spacer FWD / RVS WP2500	1	1
7	42444-2	Bracket Neut Sf SW	1	1
8	39015	Switch Neutral Safety	1	1

ITEM	PART NO.	DESCRIPTION	QTY.	TORQUE FT. LBS.	TORQUE Nm
A*	80285	SHSHB 3/8 x 1/2 BLK	2	13	(18)
B	80114	NUTNY 5/16 - 18 ZN	2	-	-
C	80348	WSHR 5/16 WROT ZN	1	-	-
D*	80579	HHCS 5/16 - 18 x 2 - 1/4 GR5 ZN	1	13	(18)
E	80639	WSHSP 1/2 ID ZN	2	-	-
F	80051	NUTNY 1/2 - 13 ZN	1	-	-
G	80015	KEY WOODRUFF #5 ZN	1	-	-
H	80246	NUTKP 5/16 - 18 ZN	2	-	-
I*	80588	HHTB 5/16 - 18 x 18 1 - 1/4 ZN	2	-	-
J*	80182	HHCS 3/8 - 16 x 2 - 3/4 GR5 ZN	1	23	(31)
K	80056	NUTNY 3/8 - 16 ZN	1	-	-
L	80043	WSHR 3/8 WROT ZN	6	-	-
M	80347	WSHR 1/4 WROT ZN	1	-	-
N	26325	WSHR 3/8 10D x 3/8 THK ZN	2	-	-
O	80224	RHSNS 10 - 24 x 3/4 ZN	1	-	-
P	80245	NUTFX 5/16 - 18 ZN	1	-	-
Q	80693	NUTNY 10 - 24 ZN	1	-	-
R	80346	WSHR #10 SAE ZN	1	-	-
S	80243	NUTFXJ 3/8 - 24 ZN	2	-	-
T*	80072	HHCS 3/8 - 16 x 1 3/4 GR5 ZN	1	-	-

*Loctite Required

4. PARTS LIST



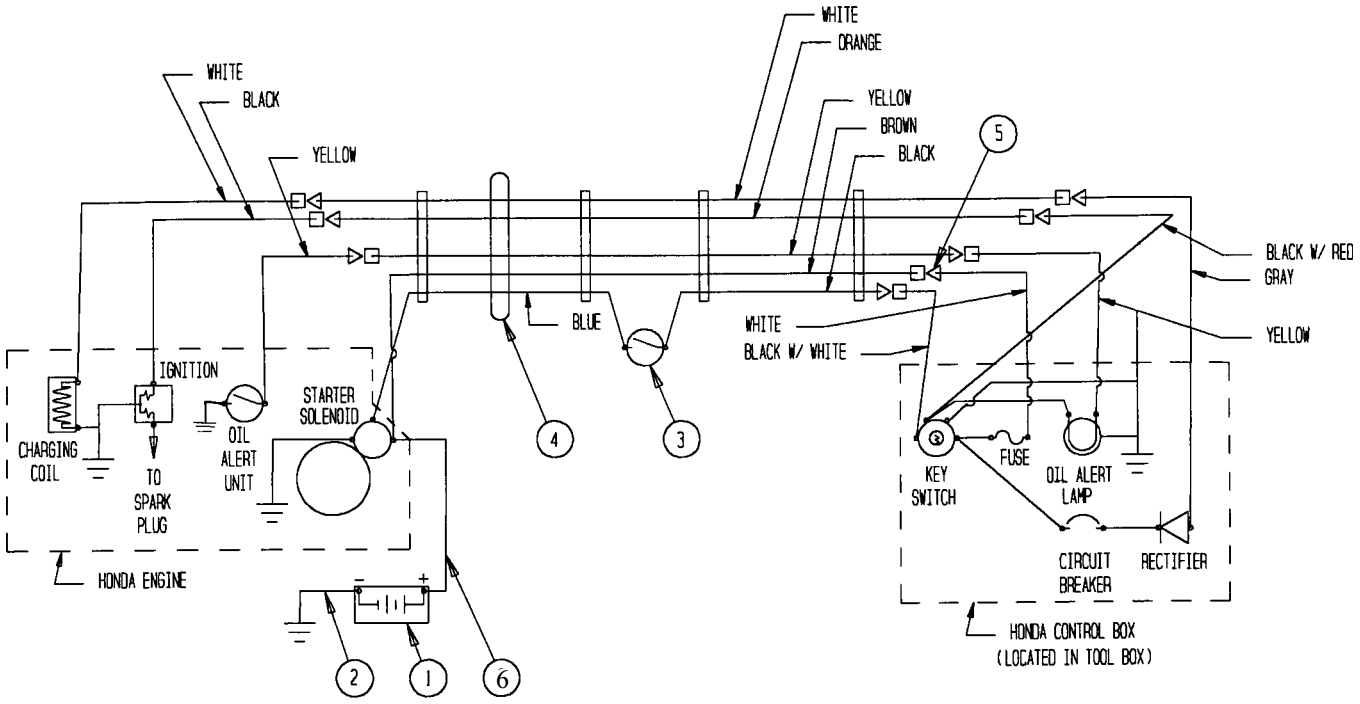
ITEM	PART NO.	DESCRIPTION	QTY.
1	34687	Flex-Grip	1
2	22488-2	Arm Brake	1
3	48275	Clamp	2
4	35458	Cable Brake Assy	1
5	28463	Spacer	1
6	35459	Caliper Brk	1
	38683	Brake Pad	1
	38684	Brake Pad	1
7	35460	Spring EXT	1
8	35828-2	Bracket CLPR BRK	1

ITEM	PART NO.	DESCRIPTION	QTY.	TORQUE FT. LBS.	TORQUE (NM)
A*	80403	HHTB 1/2 - 13 x 2 ZN	1	-	-
C	80693	NUTNY 10 - 24 ZN	2	-	-
E	80114	NUTNY 5/16 - 18 ZN	2	-	-
F*	80161	HHCS 5/16 - 18 Z 1 GR5 ZN	4	13	(18)
G	80357	RHSMS 10 - 24 x 3/8 ZN	4	-	-
H*	80449	SHCS 10 - 24 x 5/8 ZN	2	-	-
I	80250	NUTFX 1/2 - 13 ZN	1	-	-
J	80051	NUTNY 1/2 - 13 ZN	1	-	-

*Loctite Required

4. PARTS LIST

4.11 8HP & 11HP Honda Wiring Harness



4. PARTS LIST

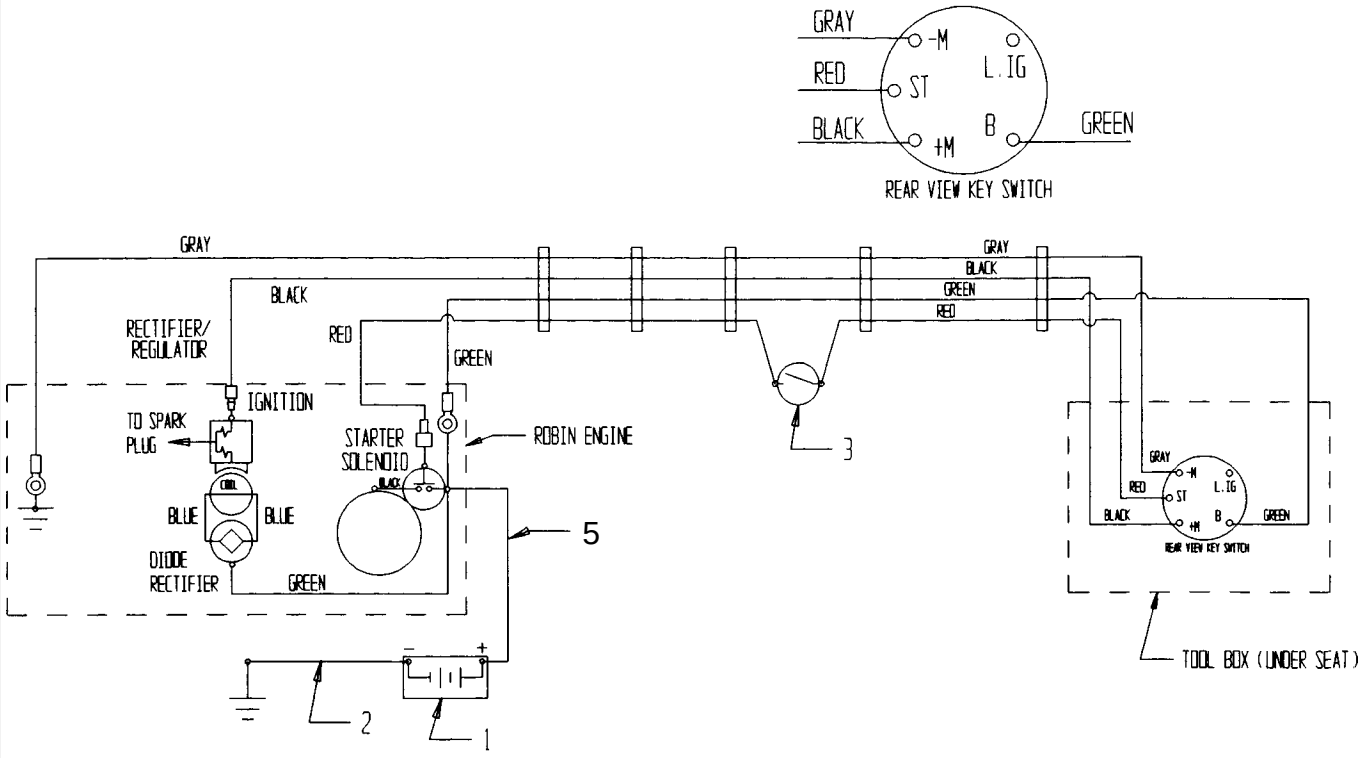
4.11 8HP & 11HP Honda Wiring Harness

ITEM	PART NO.	DESCRIPTION	QTY.
1	35321	Battery	1
2	48284	Cable Battery 25” Blk	1
3	39015	Switch Neutral Safety	1
4	48362	Wire Harness Honda	1
5	48285	Term Male 14-16	1
6	48359	Cable Battery 25” Red	1
7^	46363	Key Ignition 8/11 HP Honda	1

* Loctite Required
^ Not Shown

4. PARTS LIST

4.12 8.5HP Robin Wiring Harness

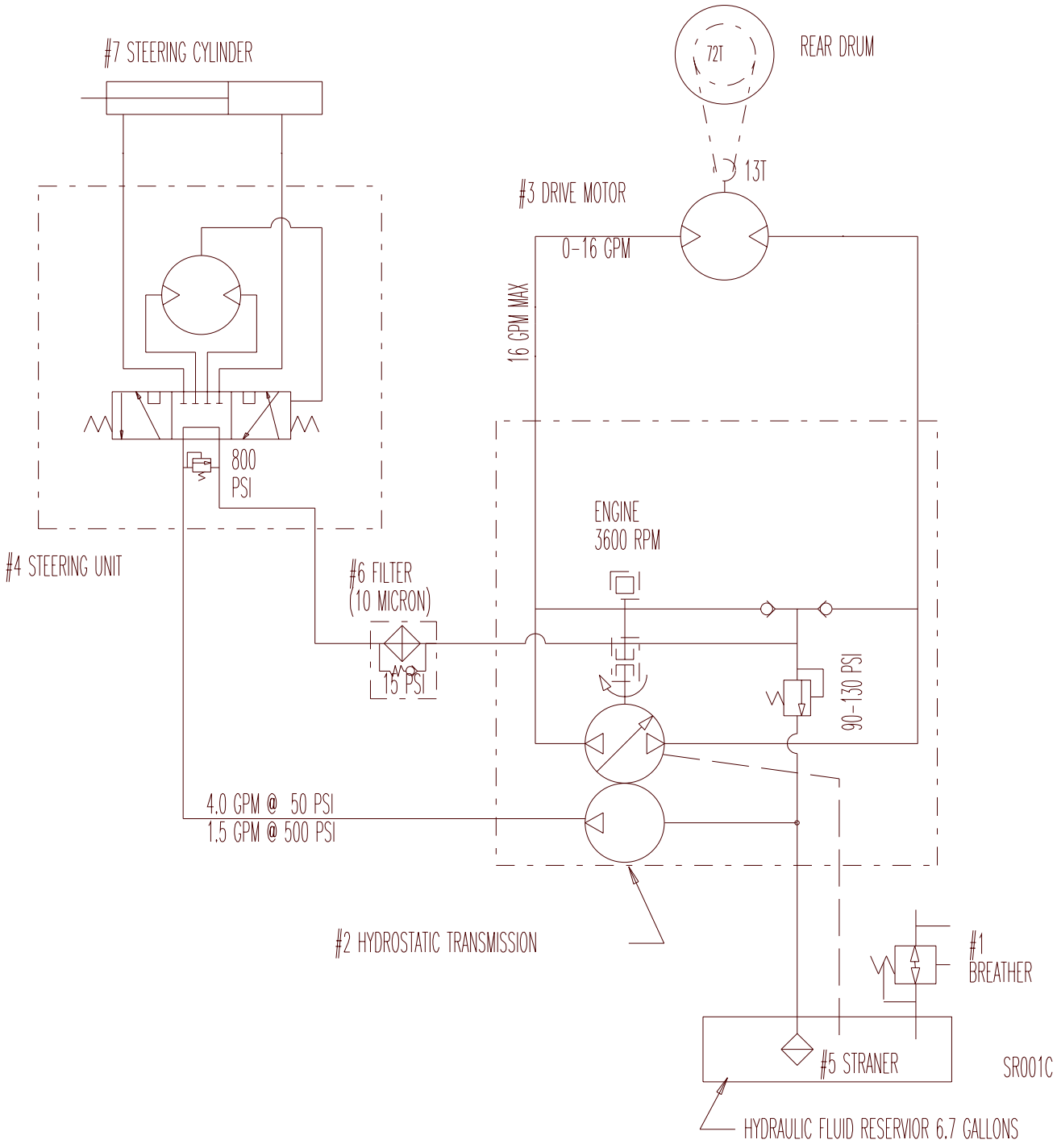


4. PARTS LIST

4.12 8.5HP Robin Wiring Harness

ITEM	PART NO.	DESCRIPTION	QTY.
1	35321	Battery	1
2	48284	Cable Battery 25" Blk	1
3	39015	Switch Neutral Safety	1
4	48352	Wire Harness Robin	1
5	48359	Cable Battery 25" Red	1

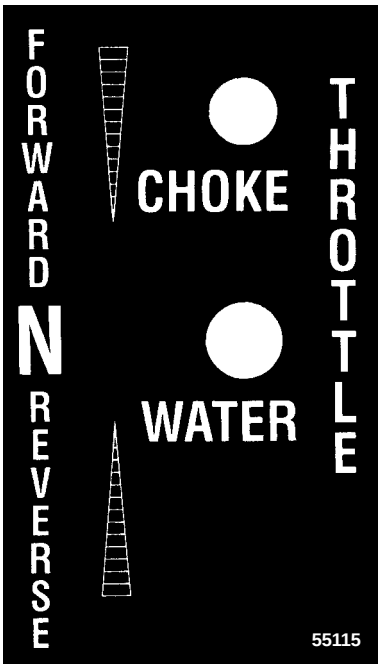
^Included with sprinkler assy.


#7 STEERING CYLINDER
72T
REAR DRUM
13T
#3 DRIVE MOTOR
0-16 GPM
16 GPM MAX
800
PSI
ENGINE
3600 RPM
#4 STEERING UNIT
#6 FILTER
(10 MICRON)
15 PSI
90-130 PSI
4.0 GPM @ 50 PSI
1.5 GPM @ 500 PSI
#2 HYDROSTATIC TRANSMISSION
#1
BREATHER
#5 STRANER
SR001C
HYDRAULIC FLUID RESERVIOR 6.7 GALLONS

ITEM	PART NO.	DESCRIPTION	QTY.
1	35483	Breather	1
2	38189	Pump Transmission	1
3	35446	Motor Drive	1
4	46653	Control Steering	1
5	35482	Strainer	1
6	35444	Filter Hydraulic	1
	35445	Element Filter	1
7	35440	Cylinder Steering	1

1

2



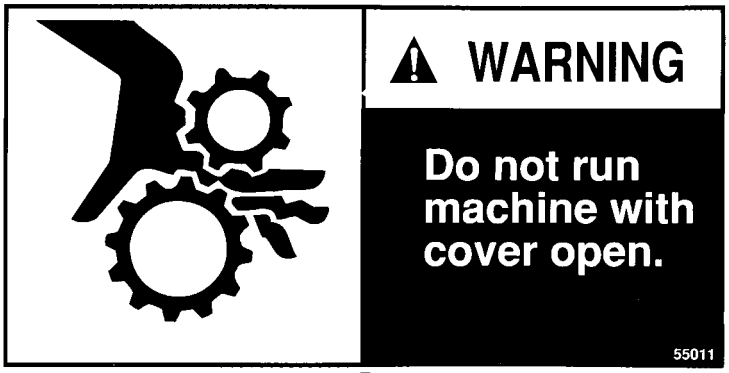
3

NOTICE

CONTACT THE MANUFACTURER IMMEDIATELY AT 1-800-888-9926 IF SAFETY OR HAZARD DECALS OR OWNER'S MANUAL ARE MISSING FROM THIS EQUIPMENT.

P/N 55156

4



5

IDLE ENGINE 5 MINUTES
BEFORE STOPPING
TO IMPROVE SERVICE LIFE

6

ITEM	PART NO.	DESCRIPTION	QTY.
1	55293	Decal Danger Gas	1
2	55422	Decal Hydraulic Fluid Mobil 424	1
3	55115	Decal Cont Box Cover	1
4	55156	Decal Notice	1
5	55011	Decal Cover Open	1
6	55417	Decal Engine Idle	1
7^	55072	Decal Hyd Drive Blk	1
8^	55076	Decal Brake Red	1
9^	55299	Decal Logo Stripe Left	1
10^	55300	Decal Stripe 6 5/8	1
11^	55301	Decal Logo Stripe Right	1
12^	55302	Decal WolfPac 2500 Left	1
13^	55303	Decal WolfPac 2500 Right	1

^ Not Shown

CALIFORNIA PROPOSITION 65 WARNING:
Operation of this equipment and/or engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.

Bred Tough. Technology Born to Work.
The Way It Ought To Be.

Stone Construction Equipment, Inc.
P.O. Box 150, Honeoye, New York 14471
Phone: (800) 888-9926
Fax: 585-229-2363
e-mail: sceny@mcimail.com
www: stone-equip.com

A 100% employee-owned American manufacturer

Printed in U.S.A.

GP1M