



# OPERATOR/SERVICE MANUAL

**MODELS: S-20, S-20A, S-28, S-28A,  
S-38, S-38D, S-38A, S-38DA,  
S-52, S-52D, S-52T, S-66**



**STONE VIBRATORY PLATE**

A 100% employee-owned American manufacturer



# TABLE OF CONTENTS

## OPERATOR/SERVICE MANUAL

### STONE VIBRATORY PLATES

<b>FOREWORD</b> .....	<b>4</b>
<b>LIMITED WARRANTY</b> .....	<b>5</b>
<b>SECTION 1- TECHNICAL DATA</b> .....	<b>7 - 9</b>
1.1 Specifications .....	8
1.2 Vibration Tests .....	8
1.3 Technical Data .....	9
1.4 Machine Sound Level Test .....	9
<b>SECTION 2 - HEALTH &amp; SAFETY - Safety Precautions</b> .....	<b>11 - 17</b>
<b>SECTION 3 - OPERATION</b> .....	<b>19 - 22</b>
3.1 Introduction & Operating Principle .....	20
3.2 Handle Assembly .....	21
3.2.1 Handle Assembly S-20, S-20A .....	21
3.2.2 Handle Assembly S-28A, S-38A, S-52, S-66 .....	21
3.2.3 Handle Assembly S-52T .....	21
3.3 Before Starting .....	21
3.4 Water System .....	21
3.5 To Start .....	21 - 22
3.6 To Stop .....	22
3.7 Using the Compactor .....	22
<b>SECTION 4 - MAINTENANCE</b> .....	<b>23 - 30</b>
4.1 Important Maintenance Information .....	24
4.2 Maintenance .....	25
4.2.1 Engine .....	25
4.2.2 Engine Oil .....	25
4.2.3 Air Filter .....	25
4.2.4 Eccentric Oil .....	25
4.2.4.1 Oil Capacity .....	25
4.3 Hardware .....	25
4.4 Belt Tension .....	25
4.5 Belt Adjustment .....	25 - 26
4.6 Offset Eccentric Sheave .....	26
4.7 Periodic Maintenance Schedule .....	27
4.8 Troubleshooting .....	28 - 30
<b>SECTION 5 - EXPLODED DIAGRAMS AND PARTS LIST</b> .....	<b>31 - 47</b>
5.1 Hardware Key .....	33
5.2 Torque Charts .....	34 - 35
5.3 S-Plate Engine/Plate Parts List (S-20, S-20A) .....	36 - 39
5.4 S-Plate Engine/Plate Parts List (S-28, S-38, S-52) .....	40 - 43
5.5 S-Plate Engine/Plate Parts List (S-66) .....	44 - 45
5.6 Decal Identification .....	46 - 47
<b>CALIFORNIA PROPOSITION 65 WARNING</b> .....	<b>51</b>

# 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 and 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: (716) 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, 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 April 1, 1998.



Stone Construction Equipment, Inc.  
32 East Main Street, P. O. Box 150  
Honeoye, NY 14471-0150

Phone: 1-800-888-9926 • 1-716-229-5141  
Fax: 1-716-229-2363

www.stone-equip.com • e-mail: sceny@mcimail.com

4/98P/N 51018



# **1. TECHNICAL DATA**

# 1. TECHNICAL DATA



## 1.1 Stone Forward Plates – Specifications

MODEL	STONE S20 / S20A	STONE S28	STONE S28A	STONE S38	STONE S38A	STONE S52T	STONE S52	STONE S66
<b>Dimensions</b>								
Operating Weight (kg)	130# (59)	150# (68)	160# (72)	180# (82)	190# (86)	170# (77)	220# (100)	330# (150)
Plate Size - W X L (cm)	13" x 21" (33 x 53.3)	19" x 24" (48 x 61)	19" x 24" (48 x 61)	20 x 24 (51 x 61)	20 x 24 (51 x 61)	14" x 24" (36 x 61)	21" x 24" (53 x 61)	23" x 28" (58 x 71)
<b>Operating System</b>								
Engine Options (kw)	4 hp Honda (3.0)	5 hp Briggs I/P (3.7) 4.6 hp Robin (3.4) 5.5 hp Honda (4.1)	5 hp Briggs I/P (3.7) 4.6 hp Robin (3.4) 5.5 hp Honda (4.1) 4.2 hp Yanmar Diesel (3.1)	5 hp Briggs I/P (3.7) 4.6 hp Robin (3.4) 5.5 hp Honda (4.1) 4.2 hp Yanmar Diesel (3.1)	5 hp Briggs I/P (3.7) 4.6 hp Robin (3.4) 5.5 hp Honda (4.1) 4.2 hp Yanmar Diesel (3.1)	5 hp Briggs I/P (3.7) 4.6 hp Robin (3.4) 5.5 hp Honda (4.1)	5 hp Briggs I/P (3.7) 4.6 hp Robin (3.4) 5 hp Honda (3.7) 4.2 hp Yanmar Diesel (3.1)	7.5 hp Robin (5.6) 11 hp Honda (8.2)
Water System	yes (on S20A)	no	yes	no	yes	no	no	no
Water Tank Cap. (liters)	3.25 qt. (3.1)	-	6 qt. (5.7)	-	6 qt. (5.7)	-	-	-
<b>Performance</b>								
Eccentric Force (Kn)	2000# (8.9)	3000#** (13.35)	3000#** (13.35)	4000#** (17.80)	4000#** (17.80)	5100#** (22.70)	5100#** (22.70)	6900#** (30.70)
Productivity (sq.ft./hr) (sq.m/hr)	3,750 ft. (348)	7,125 ft. (662)	7,125 ft. (662)	10,000 ft. (929)	10,000 ft. (929)	9,100 ft. (845)	13,650 ft. (1268)	15,000 ft. (1394)
Max. Lift (cm)	12" (30.5)	10" (25.4)	10" (25.4)	12" (30.5)	12" (30.5)	14" (35.5)	14" (35.5)	20" (51)
Max. Travel Speed (m/min)	75' / Min. (23)	75' / Min. (23)	75' / Min. (23)	100' / Min. (30.5)	100' / Min. (30.5)	130' / Min. (40)	130' / Min. (40)	90' / Min. (27)
Vibration Frequency (Hz)	5800 (97)	5800 (97)	5800 (97)	5000 (83)	5000 (83)	5400 (90)	5400 (90)	4500 (90)
<b>Features</b>	Lifting Eye, Folding Handle	Lifting Eye	Lifting Eye	Lifting Eye	Lifting Eye	Lifting Eye	Lifting Eye	Lifting Eye
<b>Warranty</b>	1 year 2 year eccentric bearing	1 year 2 year eccentric bearing	1 year 2 year eccentric bearing	1 year plate 2 year eccentric bearing	1 year plate 2 year eccentric bearing	1 year 2 year eccentric bearing	1 year 2 year eccentric bearing	1 year 2 year eccentric bearing

E-Z Transport Wheels for S28 Series, E-Z Transport Cart for S66

\*\*CIMA Rated

## 1.2 VIBRATION TESTS

Values are weighted effective acceleration determined according to ISO 8662 Part 1.

<u>Model</u>	<u>RMS Acceleration m/s<sup>2</sup></u>
S-38	7.67
S-28	4.11
S-52	10.50
S-20A	7.60

Tests conducted by Rochester Institute at Honeoye, New York, USA.

# 1. TECHNICAL DATA

## 1.3 TECHNICAL DATA

Models	S-20, S-20A, S-28, S-28A, S-38, S-38D, S-38A, S-38DA, S-52, S-52D, S-52T, S-66
Engine Types	4.6 HP Robin, 5.5 HP Honda, 5 HP Briggs & Stratton, 4.2 HP Yanmar Diesel
Engine (for S-20 only)	4 HP Honda
Engine (for S-66 only)	11 HP Honda
Engine Speed (Operating)	3400 RPM
Idle Speed	1000 RPM
Recommended Fuel	Unleaded gasoline 87 octane or higher. * Gasohol blends not recommended. Diesel only in S-38D(A) and S-52D.
Fuel Capacity (S-20 only)	.66 Gallon Approximately (2.5 Liters)
Fuel Capacity	1 Gallon Approximately (3.8 Liters)
Oil Type (for eccentric) *	SAE 30 Exxon XD3-30W API Compliance CD, CD11, CE, CF4, CF2, CF, SH <b>For Engine Oil Type - Consult Engine Manual</b>
Spark Plug	Robin - NGK B6H5 Honda - NGK BPR 6ES-11 Briggs & Stratton - Champion RCJ8
Spark Plug Gap	Robin - .025 Inch (.635 mm) Honda - .039 Inch (1 mm) Briggs & Stratton - .030 Inch (.762 mm)
Water Tank Capacity (S-20A only)	3.25 Quarts (3.1 Liters)
Water Tank Capacity	6 Quarts (5.65 Liters)

\* API - American Petroleum Institute

## 1.4 MACHINE SOUND LEVEL TEST

Machine Type:	Vibratory Plate
Sound Level Meter Calibration Date:	December 9, 1994
Meter Type:	Simpson Model 886-2 Type 2
Test Date:	December 16, 1994
Test Conditions	
Temperature:	30° Fahrenheit / -1° Celsius
Ambient Sound:	55 dba Fast Mode
Soil Condition:	Sand and Grit
Moisture Limit:	Approximately 50%
Engine Speed:	3400 RPM / 56.6 Hz
Frequency:	2000VPM / 33.3 Hz
Test Site:	Honeoye, New York USA
Sound Level at Operator Position:	95 dba



## **2. HEALTH & SAFETY**

## **2. HEALTH & SAFETY**

Safety Precautions

---

### **SAFETY USE**

These machines are designed to carry out the function of compacting material of the non-cohesive, bituminous and granular varieties.

If used correctly they will provide an effective and safe means of compaction and meet the appropriate performance standards.

It is essential that the driver/operator of the machine is adequately trained in its safe operation, be authorized to drive it, and have sufficient knowledge of the machine to ensure that it is in full working order, before being put to use.

## 2. HEALTH & SAFETY

### Safety Precautions

#### SAFETY PRECAUTIONS

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.

**▲ 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.



- 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.

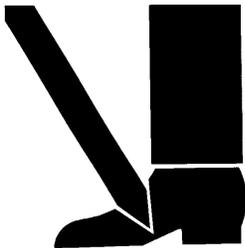
## 2. HEALTH & SAFETY

### Safety Precautions



#### 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.



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



- Ear protection required when operating this equipment.



#### 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

### Safety Precautions



- 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.



- **WARNING:** Make certain that transmission pump bypass valve is in RUN position before starting. Valve is located under the hood. Refer to Operator's Manual for towing instructions.
- 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.

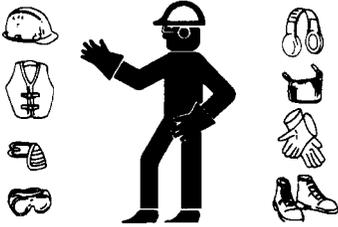


- Pressurized release of fluids from hydraulic system can cause serious burns.
- Shut off engine. Only remove filler cap when cool enough to touch with bare hands. Slowly loosen cap to first stop to relieve pressure before removing completely.

## 2. HEALTH & SAFETY

### Safety Precautions

#### WEAR PROTECTIVE CLOTHING



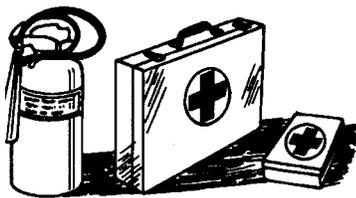
- Wear close fitting clothing and safety equipment appropriate to the job.
- Prolonged exposure to loud noise can cause impairment or loss of hearing.
- Wear a suitable hearing protective device such as earmuffs or earplugs to protect against objectionable or uncomfortable loud noises.
- Operating equipment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

#### 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.

## 2. HEALTH & SAFETY

### Safety Precautions

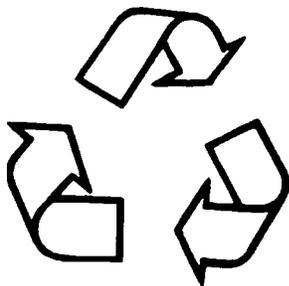


- Starting fluid (ether) is highly flammable, do not use or an explosion or fire may result.



### 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. OPERATION**

# 3. OPERATION

---

## 3.1 INTRODUCTION & OPERATING PRINCIPLE

Congratulations on your purchase of our vibratory plate compactor. This high performance machine has been engineered to provide you with many years of good dependable service.

The engine is equipped with a centrifugal clutch allowing the engine to idle without transmitting rotation to the eccentric.

When the engine runs at operating speed, an eccentric shaft rotates which produces high frequency vibration in the base plate. This frequency is 5800 vibrations per minute on the S-20A, S-28 and S-28A, 5400 vibrations per minute on the S-38, S-38A, S-52, and S-52T compactors, and 4500 vibrations per minute on the S-66. With each rotation of the eccentric, the base plate is lifted, moved forward, and slammed down onto the ground. This vibration and force is transmitted to the underlying material, arranging it into a dense mass.

The eccentric shaft is mounted on two heavy open bearings in the eccentric housing which are an integral part of the base plate. The eccentric shaft has a loose fit with the inner race of the bearing which allows turning of the shaft within the bearing. This is normal and will produce some wear on the shaft and bearings. This does not indicate they need to be replaced. The housing is partially filled with oil. The vibration forces oil droplets to jump when the eccentric hits these droplets, it produces an oil mist which is forced into the bearings. This continually lubricates the bearings and flushes away heat.

Four rubber vibration isolators are mounted between the base plate and the engine deck to isolate the vibration from the engine, giving it long life. Four additional isolators (the same type of isolators are used throughout) are mounted between the engine deck and the guide handle bracket. This further isolates the vibration from the operator.

**Note:** On S-20, S-20A and S-52T models isolators are not needed for handle. On S-66 model, 12 vibration isolators are mounted between the engine deck and the base plate. Additionally, four more are used for the handle.

Due to the high frequency of impacts to the ground, vibratory type compactors are most effective on granular soils such as sand and gravel. To obtain maximum density in the soil to be compacted, an optimum moisture content needs to be present. When the soil is too dry, moisture should be added, when the soil is too wet, let it dry. Soil testing laboratories in your area can tell you what moisture content you have in your soil and if you should add water or let the soil dry. Additionally, they can measure the soil density you are achieving in your compacting.

## 3. OPERATION

### 3.2 HANDLE ASSEMBLY

#### 3.2.1 Models: S-20, S-20A

Compactors are shipped assembled and ready for operation with handle mounted.

#### 3.2.2 Models: S-28A, S-38A, S-52 & S-66

Compactors are shipped assembled and ready for operation with the exception of attaching the guide handle. To attach the handle to the vibration isolators, straddle the engine with the handle and secure the handle mounting plate (plate on end of handle) to the isolators with two 1/2 X 13 X 3/4 hex head bolts and two 1/2" washers on each side. The hardware is packed with the machine.

For illustrations, see the appropriate model's assembly drawing.

### **WARNING**

**CAUTION: DISCONNECT SPARK PLUG WIRES TO PREVENT ACCIDENTAL STARTING BEFORE DOING ANY WORK.**

#### 3.2.3 Model: S-52T

On S-52T, attach handle to the deck weldment and secure through top hole with a hex head cap screw, flat washer and bushing on each side.

### 3.3 BEFORE STARTING

### **WARNING**

**CHECK OIL LEVEL IN ENGINE. ENGINE WARRANTY IS VOID IF RUN WITHOUT OIL. IF OIL IS REQUIRED, USE SAE 30 IF AIR TEMPERATURE IS OVER 40 DEG. F (4 DEG. C) AND SAE 5W-40 IF BELOW 40 DEG. F (4 DEG. C).**

**FILL FUEL TANK WITH CLEAN UNLEADED GASOLINE FROM A SAFETY CAN. NEVER FILL TANK WITH ENGINE RUNNING. DO NOT MIX OIL WITH GASOLINE.**

**CHECK ALL HARDWARE FOR TIGHTNESS. TIGHTEN IF FOUND LOOSE. FOLLOW TORQUE CHART.**

### 3.4 WATER SYSTEM

On models S-20A, S-28A and S-38A, a water system is provided for wetting the bottom surface of the compactor to prevent asphalt from sticking when compacting asphalt. The water tank capacity for the S-20A is 3.25 quarts and for the S-28A and S-38A, 6 quarts. After the bottom plate has warmed up from the asphalt and/or from the oil inside the eccentric housing (these plates have self-heating bases), water is less important.

There is a valve with a strainer located at the bottom of the water tank. The rate of flow can be controlled by it. The water is distributed by the sprinkler tube at the front edge of the compactor. If the holes in the sprinkler tube ever get plugged, they can be easily cleaned by blowing air through it or removing the sprinkler tube and cleaning out the holes with a thin object such as a paper clip.

### 3.5 TO START

### **WARNING**

**NEVER RUN MACHINE WITH OPTIONAL WHEELS ATTACHED.**

Apply choke, set throttle, then pull starter once or twice. Open choke slightly to prevent flooding and repeat pulls as necessary. When engine starts, make sure choke is open or in "run" position and set throttle on idle to let engine idle one or two minutes to warm. Push throttle to set unit in motion.

Engine governor will control engine for optimum speed. Be sure control is used either all the way on or all the way off, as intermediate position may interfere with the governor and burn out the clutch.

## **3. OPERATION**

---

### **WARNING**

**NEVER OPERATE COMPACTOR ON CONCRETE OR NON-YIELDING SURFACES.**

For servicing or demonstration, lay an old automobile tire on the floor. Compactor may then be operated by bridging the tire.

#### **3.6 TO STOP**

Move throttle control to idle position. Actuate stop feature located on engine.

#### **3.7 USING THE COMPACTOR**

With the engine running at full throttle, the unit will move forward in short, rapid jumps. Grasp the handle lightly and let the compactor do the work. Use the handle to guide the direction of the travel around obstructions, holes, etc. Reversible handle may be used to guide the machine in and around corners or up grades. Forward traveling speed of the machine is dependent upon the model used, depth and type of material to be compacted.

# **4. MAINTENANCE**

## 4. MAINTENANCE

---



### 4.1 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.

# 4. MAINTENANCE

## 4.2 MAINTENANCE

### 4.2.1 Engine

All engines operate at 3400 RPM. Thoroughly service engine at least annually. Follow manufacturer's recommendations including: clean carbon from cylinder head, check intake and exhaust valves, clean and adjust carburetor, check ignition cable and daily check for damaged parts and replace. Check for loose fasteners - tighten as per torque chart.

### 4.2.2 Engine Oil

Check engine oil level daily. Consult engine manual included with this unit for specific maintenance instructions.

### 4.2.3 Air Filter

Remove foam pre-cleaner from air filter daily. Wash the foam in liquid detergent and water. Squeeze dry between towels. Oil with one ounce of engine oil and squeeze to distribute oil evenly. Units equipped with Wisconsin Robin engines, use kerosene in place of oil and squeeze excess from foam. Keeping the filter clean prolongs the engine life and decreases fuel consumption.

### 4.2.4 Eccentric Oil

Check eccentric oil monthly. Change oil every 300 hours. Check by removing oil plug at rear of machine. Use a pencil, screwdriver, or some other convenient dip stick, and insert to the bend line on the bottom of the plate. The oil level should be 2" to 2-1/4", (51 mm to 57 mm) up the dip stick, see figure 1. If oil is required, use SAE 30 oil. DO NOT OVERFILL.

On the S-20, check oil by removing oil plug at side of eccentric house. Oil should be leveled with plug hole, see figure 2.

### 4.2.4.1 Oil Capacity

S-20	1.28 quarts	(1.21 liters)
S-28	2.75 quarts	(2.60 liters)
S-38	2.25 quarts	(2.13 liters)
S-52	2.25 quarts	(2.13 liters)
S-66	2.00 quarts	(1.89 liters)

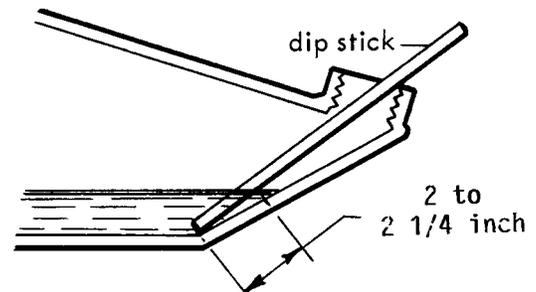


Figure 1

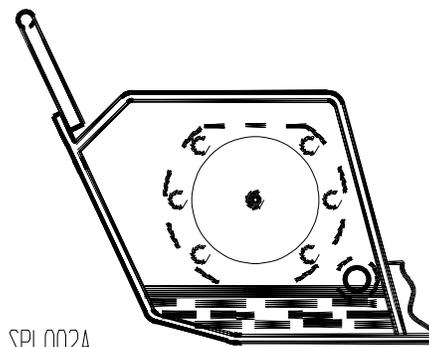


Figure 2

## 4.3 HARDWARE

Check daily for tightness. If required, tighten using torque charts in Exploded Views with Parts Section.

## 4.4 BELT TENSION

Check belt tension weekly.

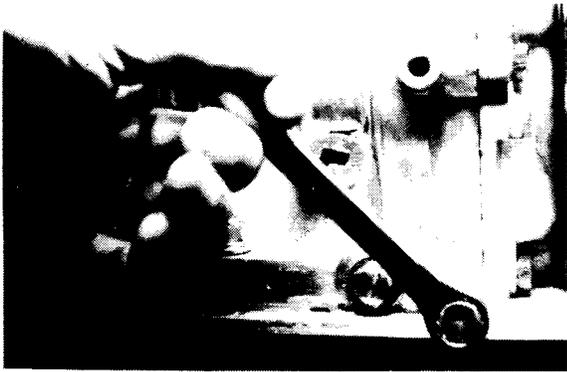
## 4.5 BELT ADJUSTMENT

On the S-20A, the water tank and water tank bracket must be removed before adjusting belt. Belt is adjusted by loosening four engine bolts and adjusting the engine pusher bolt on front of the engine deck, until desired tension is obtained - then

# 4. MAINTENANCE

retighten engine bolts. Adjustment should be made when eccentric is down. Using a straight edge maintains sheave alignment while tightening engine mounting bolts. Proper tension is obtained when a two lb. force is applied midway between the two sheaves and a 1/4" to 1/2" (6.4 mm to 12.7 mm) deflection of the belt is obtained. For best performance and longest belt life, use only Stone specified Kevlar belt.

Adjust belt tension by adjusting engine with pusher bolt. Secure pusher bolt with jam nut. Secure engine nuts.



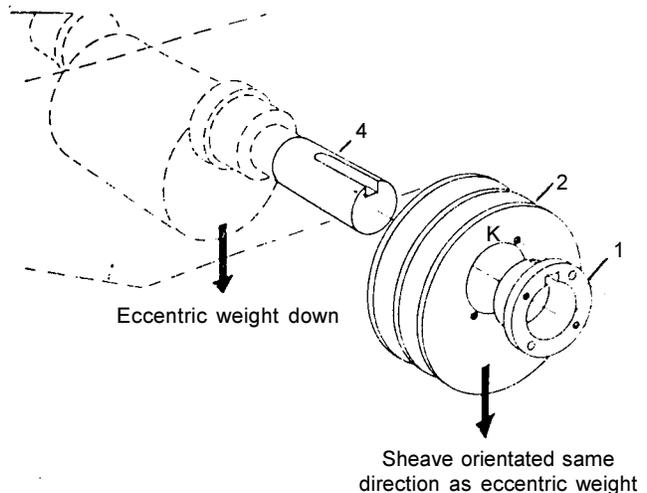
## 4.6 OFFSET ECCENTRIC SHEAVE

In order to ease assembly and ensure the relationship between the eccentric and the off-set sheave is correct, we added a keyway to the eccentric (4) and drilled and tapped the sheave (2) in a specific relationship to the off-set and the mounting holes in the taper lock bushing (1).

**NOTE: Models S-20, S-20A, S-28 & S-28A do not have an offset sheave.**

The "K" stamped on the sheave must be near the key when the hub is installed in the sheave.

The proper alignment is therefore assured during assembly and any subsequent re-assembly during maintenance.



# 4. MAINTENANCE

---

## 4.7 PERIODIC MAINTENANCE SCHEDULE

ITEM	INTERVAL	PART NO.
Air Filter	Check daily. Change per engine manual.	Service instructions inside. Also refer to supplied engine manual.
Engine Oil	Check daily. Change per engine manual.	Service instructions inside. Also refer to supplied engine manual.
Fuel Level	Check daily.	Service instructions inside. Also refer to supplied engine manual.
Eccentric Oil	Check monthly. Replace 300 hours.	Service instructions inside.
Hardware	Check daily for tightness.	Refer to product diagrams inside. Also see torque chart.
Belt Tension	Check weekly.	Service instructions inside.
General Engine Maintenance	Service annually.	See supplied engine manual.

# 4. MAINTENANCE

## 4.8 TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	REMEDY
<b>Engine Will Not Start/or Runs Irregular</b>	Out of gasoline.	Fill gas tank.
	No spark.	Check for broken wires.
	Spark plug fouled.	Replace and set gap to .025 on Robin; .030 on B&S and Honda engines.
	Air cleaner clogged.	Clean air filter. Follow procedure outlined in "Maintenance" section of this manual.
	Carburetor out of adjustment.	Close needle valve. Open 1-1/2 turns. With engine running under full load and compactor on an old tire, close the valve until the engine starts to loose speed. Then open until smooth operation is obtained.  To adjust idle speed, push throttle against idle stop and adjust screw until an idle of 1700 rpm is obtained. If clutch engages, lower idle speed. CLUTCH MUST NOT ENGAGE.
<b>Plate Does Not Vibrate at Full Speed</b>	Too much oil in eccentric housing.	Check oil level as specified in "Maintenance" section of this manual.
S-20, S-28      5800 vpm S-38, S-52      5400 vpm S-66              4500 vpm	Loose belt.	Adjust belt tension as in "Maintenance" section of this manual.

# 4. MAINTENANCE

## 4.8 TROUBLESHOOTING Cont'd.

PROBLEM	POSSIBLE CAUSE	REMEDY
<b>Engine is not at 3400 rpm</b>	Dirt in carburetor.	Clean carburetor and adjust (see "Carburetor out of Adjustment").
	Governor out of adjustment.	Adjust governor.
<b>Clutch is Hot</b>	Foreign object lodged against eccentric sheave.	Clean obstruction.
	Too much oil in eccentric housing.	<b>CAUTION: MAKE SURE UNIT IS SHUT OFF AND SPARK PLUG WIRE DISCONNECTED.</b>  Check oil level as specified in "Maintenance" section of this manual.
	Clutch slipped.	Engine below 3400 rpm. Adjust (see "Carburetor out of Adjustment").
<b>Engine Runs but Plate Does Not Vibrate</b>	Broken belt.	Replace.
	Broken or worn out clutch.	Replace.
	No key on engine shaft.	Assemble key to shaft and clutch hub. See "Maintenance" and "Offset Eccentric Sheave" sections of this manual.
	Eccentric seized.	Check to see if it is free turning. If not, disassemble. Wear on shaft and inner race of bearing is normal.
<b>Unit Vibrates When Throttle is in Idle</b>	Engine idles too fast.	Free up throttle linkage.  Adjust idle speed as in "Carburetor out of Adjustment".
	Defective clutch.	Check for bad parts and replace if necessary.

# 4. MAINTENANCE

---

## 4.8 TROUBLESHOOTING Cont'd.

<b>PROBLEM</b>	<b>POSSIBLE CAUSE</b>	<b>REMEDY</b>
<b>Noisy Unit</b>	Loose or broken part.	Tighten and/or replace.
	Defective eccentric bearing.	Replace.
	Defective clutch.	Replace.
	Engine operating below 3400 rpm.	Consult engine manual for correct RPM. (see "Engine is not at 3400 rpm").
<b>No and/or Insufficient Water Flow</b>	Water tank empty.	Fill tank.
	Sprinkler shut off.	Open valve.
	Plugged parts.	Remove end fittings and sprinkler tube, if necessary, and clean.

# **5. EXPLODED VIEWS WITH PARTS**

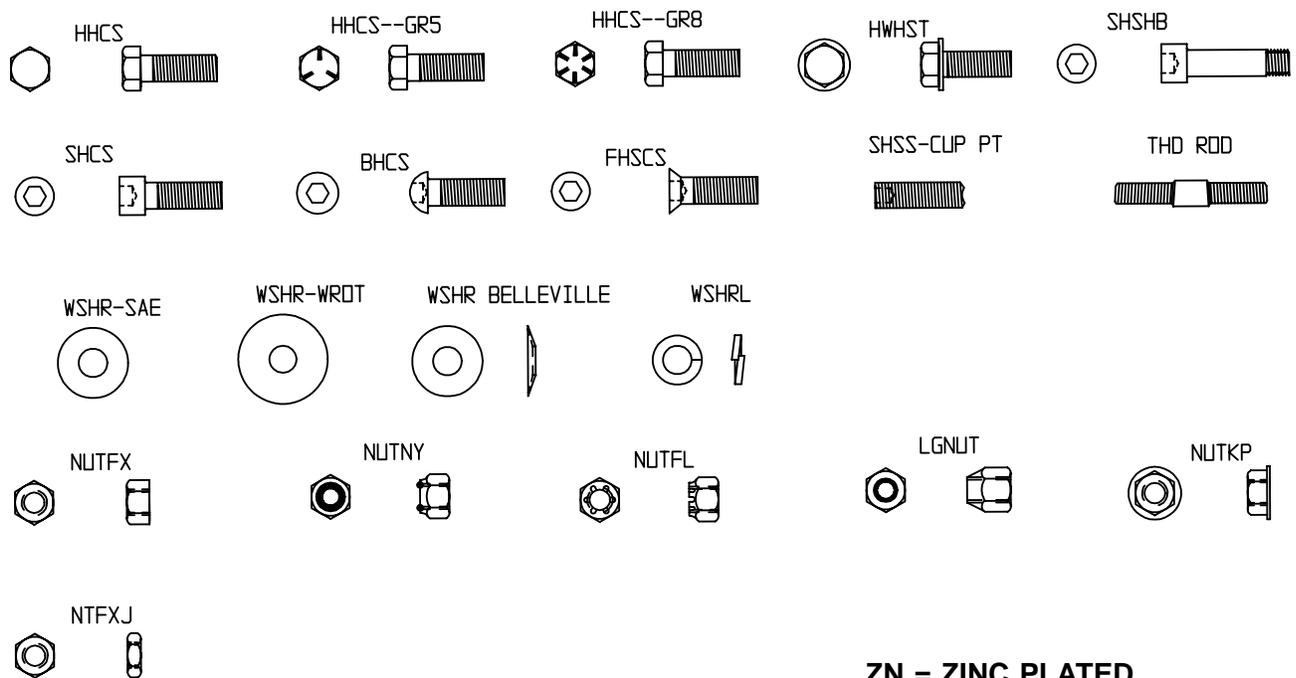


# 5. PARTS LIST

Exploded Views with Parts

5.1	Hardware Key .....	33
5.2	Torque Charts .....	34 - 35
5.3	S-Plate Engine/Plate Parts List (S20, S20A) .....	36 - 39
5.4	S-Plate Engine/Plate Parts List (S28, S38, S52) .....	40 - 43
5.5	S-Plate Engine/Plate Parts List (S66) .....	44 - 45
5.6	Decal Identification .....	46 - 47

## 5.1 HARDWARE KEY



**ZN = ZINC PLATED**  
**BLK = BLACK OXIDE FINISH**

## 5.2 Torque Charts

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

## 5.2 Torque Charts

### Property Class 8.8

ZINC-PLATED

SIZE	Nm	ft. lbs.
M6	9.9	7
M8	24	18
M10	48	35
M12	83	61
M14	132	97
M16	200	148
M20	390	288
M24	675	498

Coarse Thread

SIZE	Nm	ft. lbs.
M6	9.9	7
M8	24	18
M10	48	35
M12	83	61
M14	132	97
M16	200	148
M20	390	288
M24	675	498

Fine Thread

SIZE	Nm	ft. lbs.
M6	10	7
M8	25	18
M10	49	36
M12	88	65
M14	140	103
M16	210	155
M20	425	313
M24	720	531

### Property Class 10.9

ZINC-PLATED

SIZE	Nm	ft. lbs.
M6	14	10
M8	34	25
M10	67	49
M12	117	86
M14	185	136
M16	285	210
M20	550	406
M24	950	701

Coarse Thread

SIZE	Nm	ft. lbs.
M6	14	10
M8	34	25
M10	67	49
M12	117	86
M14	185	136
M16	285	210
M20	550	406
M24	950	701

Fine Thread

SIZE	Nm	ft. lbs.
M6	14	10
M8	35	26
M10	68	50
M12	125	92
M14	192	142
M16	295	218
M20	600	443
M24	1000	738

### Property Class 12.9

ZINC-PLATED

SIZE	Nm	ft. lbs.
M6	16.5	12
M8	40	30
M10	81	60
M12	140	103
M14	220	162
M16	340	251
M20	660	487
M24	1140	841

Coarse Thread

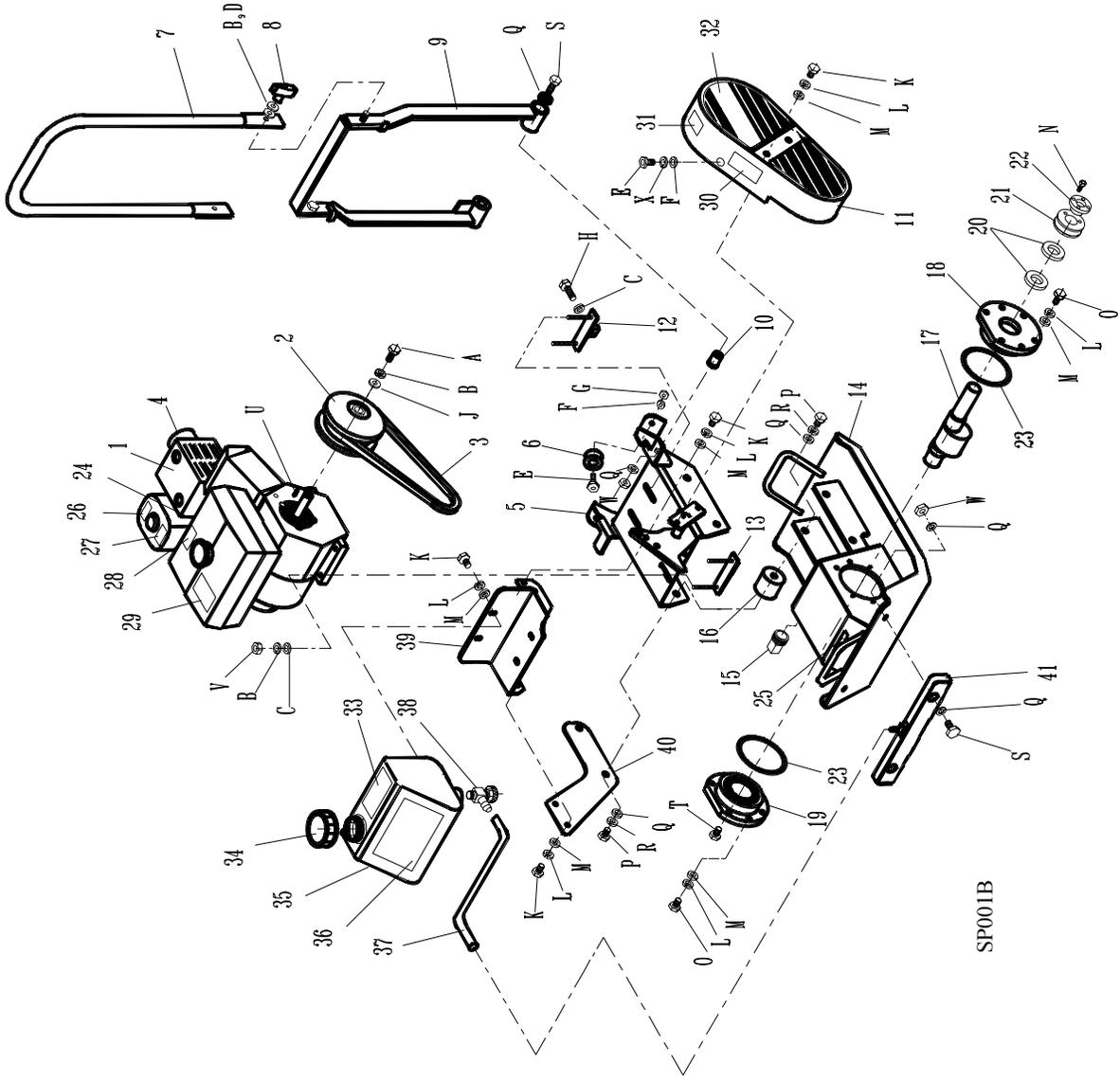
SIZE	Nm	ft. lbs.
M6	16.5	12
M8	40	30
M10	81	60
M12	140	103
M14	220	162
M16	340	251
M20	660	487
M24	1140	841

Fine Thread

SIZE	Nm	ft. lbs.
M6	16.5	12
M8	42	31
M10	82	60
M12	150	111
M14	235	173
M16	350	258
M20	720	531
M24	1200	885

Conversion Factor: 1 ft. lb. = 1.3558 Nm

# 5.3 S-Plate Engine/Plate Parts List (S-20 and S-20A)



SP001B

## 5.3 S-Plate Engine/Plate Parts List (S-20 and S-20A)

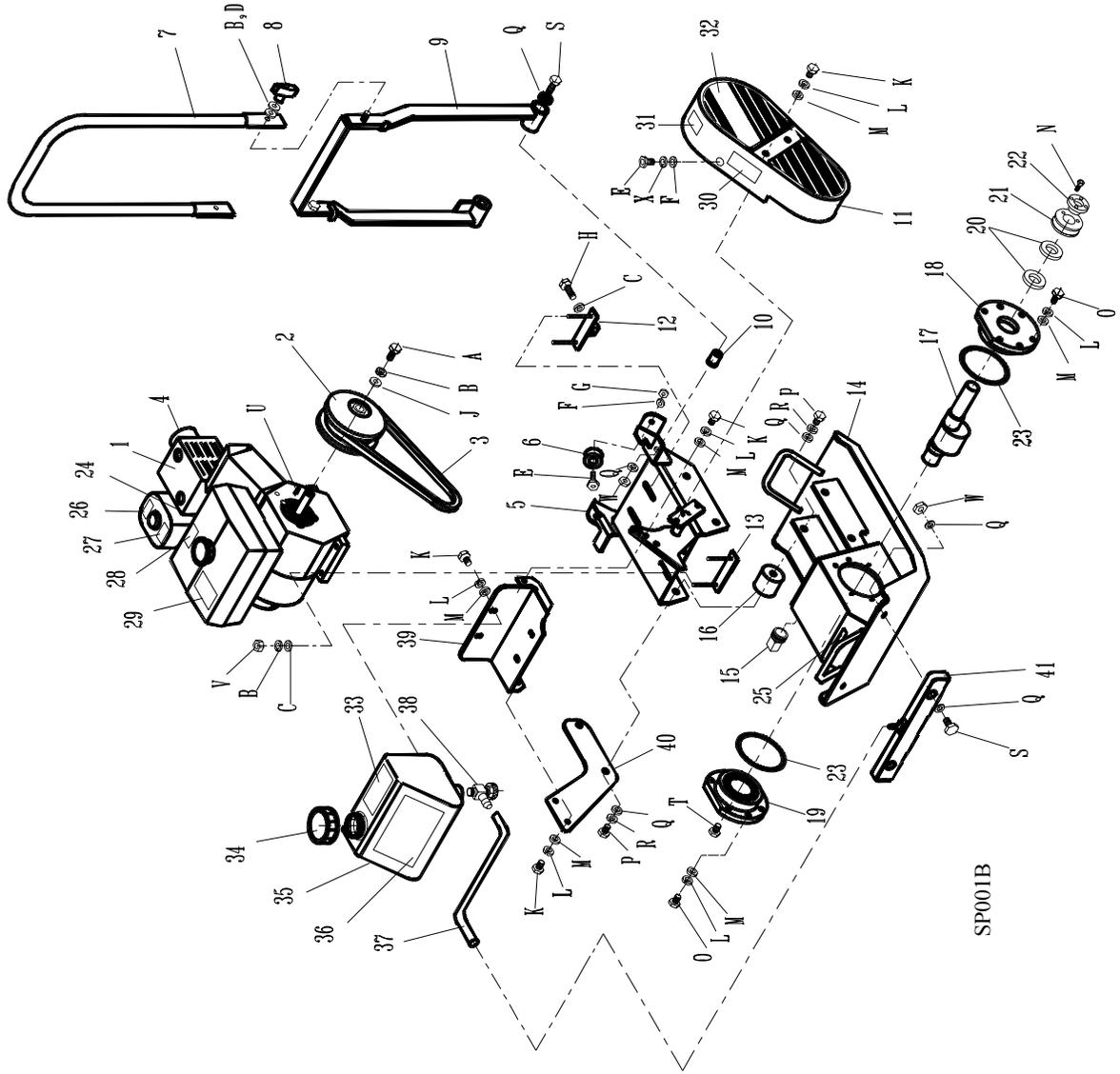
Item	Part No.	Description	Qty.	Item	Part No.	Description	Qty.
1	31235	4.0 HP Honda	1	26	55017	Decal 3400 RPM	1
2	32288	Clutch	1	27	55156	Decal Notice	1
3	39307	V-Belt Kevlar Cord	1	28	55015	Decal Idle Engine	1
4	30166	Exhaust Deflector	1	29	55214	Decal Sta-bil	1
5	43971	Engine Deck	1	30	55331	Decal Warning	1
6	37009	Rubber Bumper	2	31	55149	Decal Ear Protection	1
7	43961-2	Handle Upper	1	32	55330	Decal Belt Guard	1
8	47379	Knob	2	33	55035	Decal Water Tank (S-20A Only)	1
9	43972-2	Handle Lower	1	34	38195	Cap (S-20A Only)	1
10	32040	Urethane Bushing	2	35	47391	Water Tank (S-20A Only)	1
11	43941	Belt Guard	1	36	55141	Decal Front (S-20A Only)	1
12	42702	Engine Bracket Adj. Assy	1	37	47250	Hose Urethane 1/41D (S-20A Only)	1
13	21550	Engine Bracket Adj.	1	38	46009	Valve & Strainer (S-20A Only)	1
14	43959-2	Base Plate Machined	1	39	43973-2	Water Tank Bracket (S-20A Only)	1
15	46113	Plug Pipe	1	40	43958-2	Water Tnk Bikt Bolt On (S-20A Only)	1
16	65080	Shock Mount	4	41	47393	Water Sprinkler (S-20A Only)	1
17	43950	Eccentric Shaft Machined	1		23050	Water Tank Kit	
18	22060	Cap & Bearing Sheave End	1				
19	22061	Cap & Bearing Blind End	1				
20*	32047	Oil Seal	2				
21	34713	Sheave BK32M	1				
22	35328	Bushing Taper Lock	1				
23**	32033	O-Ring	2				
24	43978	Throttle Clip	1				
25	55329	Decal Service	1				

**REMARK:**

\* Included in Item 18

\*\* Included in Item 18 and 19

# 5.3 S-Plate Engine/Plate Parts List (S-20 and S-20A) Cont'd.



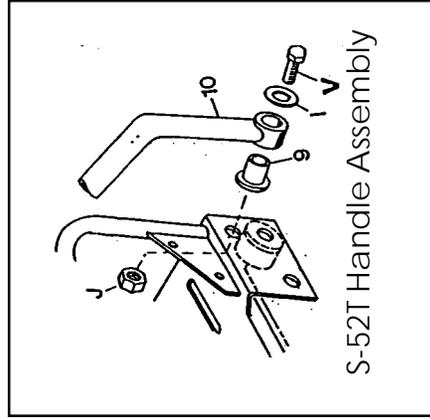
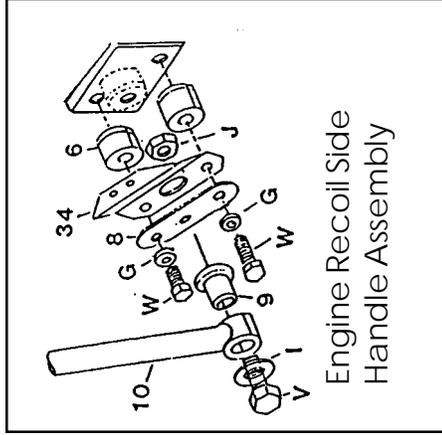
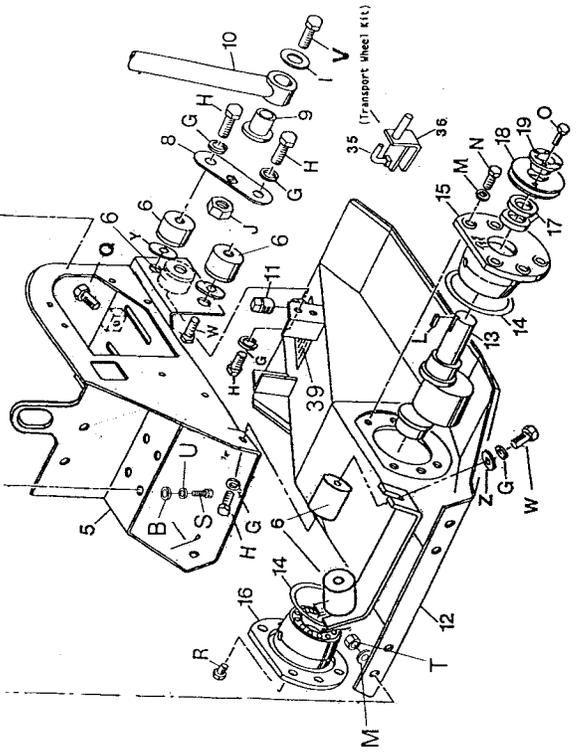
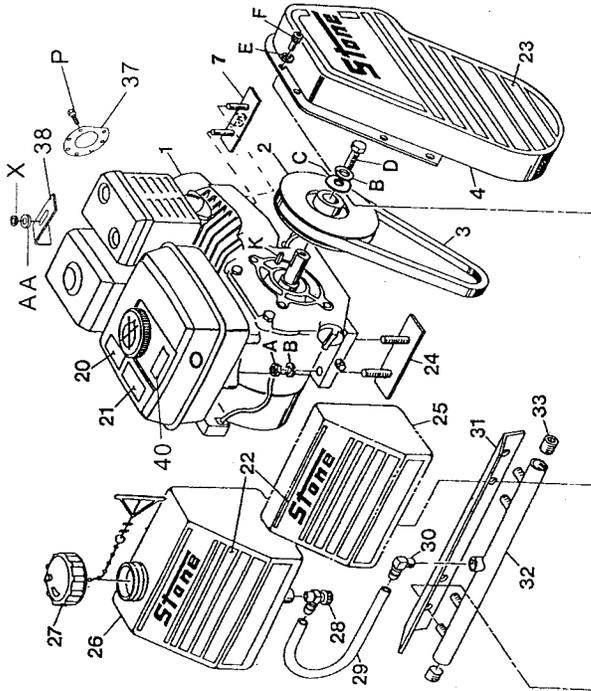
SP001B

## 5.3 S-Plate Engine/Plate Parts List (S-20 and S-20A) Cont'd.

Item	Part No.	Description	Qty.	Torque FT.LBS. (Nm)	Item	Part No.	Description	Qty.	Torque FT.LBS. (Nm)
A	80095	HHCS 5/16-24 X 3/4 GR5	1	26	U	80611	KEY 3/16 X 3/16 X 2	1	
B	80086	WSHR 5/16 MED SPLIT	9		V	80114	NUTNY 5/16 - 18	4	
C	80348	WSHR 5/16 WROT	7		W	80830	NUTNY M12-1.75 (S-20)	2	
D	80347	WSHR 1/4 PL ZN	5			80830	NUTNY M12-1.75 (S-20A)	4	
E	80836	HHCS M6-1 X 16 8.8	3	8.6	X	80860	WSHRL M6 SPLIT	1	
F	80856	WSHR M6 FLAT	3						
G	80851	NUTNY M6-1	2						
H	80743	HHTB 5/16-18 X 4-1/2 GR5	1	23					17
J	39233	WSHR .343 ID X 1.00 OD	1						
K	80406	HHCS M8-1.25 X 20 8.8 (S-20)	2	21					16
	80406	HHCS M8-1.25 X 20 8.8 (S-20A)	10	21					16
L	80812	WSHRL M8 SPLIT (S-20)	14						
	80812	WSHRL M8 SPLIT (S-20A)	20						
M	80857	WSHR M8 FLAT(S-20)	14						
	80857	WSHR M8 FLAT (S-20A)	22						
N	80354	HHCS 1/4-20 X 1 GR5	2	11					8
O	80087	HHCS M8-1.25 X 25 8.8	12	21					15.5
P	80808	HHCS M12-1.75 X 20 8.8 (S-20)	8	72					53
Q	80807	WSHR M12 FLAT (S-20)	12						
	80807	WSHR M12 FLAT (S-20A)	16						
R	80805	WSHRL M12 SPLIT	8						
S	80844	HHCS M12-1.75 X 50 8.8 (S-20)	2	72					53
	80844	HHCS M12-1.75 X 50 8.8 (S-20A)	4	72					53
T	80185	HHCS 3/8-24 X 1/8 GR8	1	47					35

REMARK:

# 5.4 S-Plate Engine/Plate Parts List (S-28, S-38, S-52)



## 5.4 S-Plate Engine/Plate Parts List (S-28, S-38, S-52)

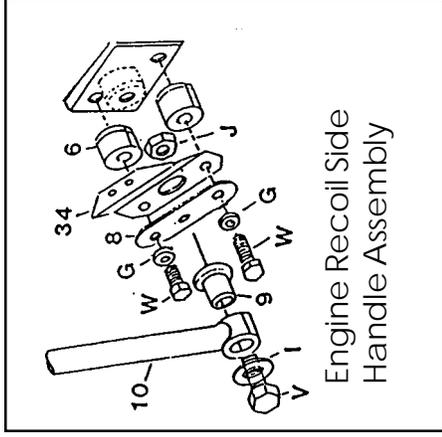
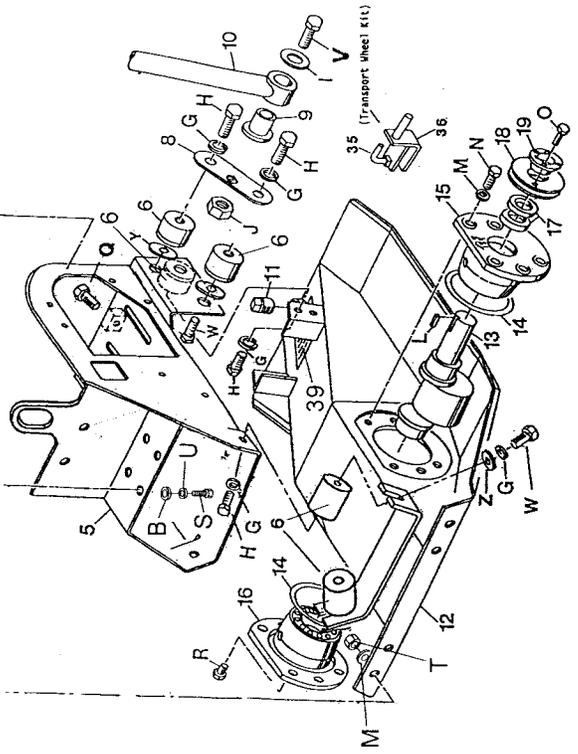
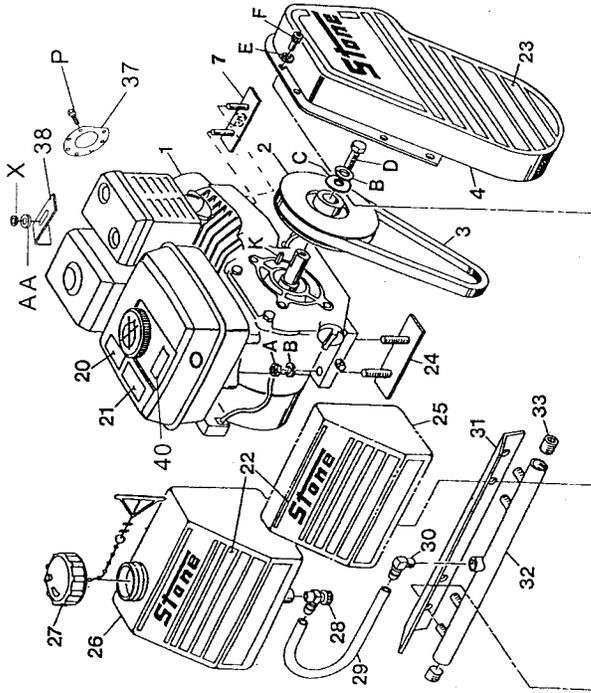
Item	Part No.	Description	Qty.	Item	Part No.	Description	Qty.
1	30265	Engine 4.6 HP Robin	1		21543	Eccentric (S-38's)	1
	30159	Engine 5.5 HP Honda w/Oil Alert	1		21544	Eccentric (S-52)	1
	30587	Engine 5.5 HP B & S Intek Pro	1		42726	Eccentric (S-52T)	1
	30294#	4.2 HP Yanmar (S-38's,S-52)	1	14**	32033	O Ring (S-28's,S-38's)	2
	31236	Muffler Yanmar (S-38's,S-52,S-52D)	1		32111	O Ring (S-52's)	2
	31237	Deflector Yanmar (S-38's,S-52,S-52D)	1	15	22060	Cap & Brg Sheave End (S-28's)	1
2	32288	Clutch	1		22062	Cap & Brg Sheave End (S-38's)	1
3	34711	V-Belt Kevlar Cord	1		22064	Cap & Brg Sheave End (S-52's)	1
	47367	V-Belt (Yanmar)	1	16	22061	Cap & Brg Blind End (S-28's)	1
4	29192	Belt Guard	1		22063	Cap & Brg Blind End (S-38's)	1
5	29720-2	Deck Weld (Gas)	1		22065	Cap & Brg Blind End (S-52's)	1
	42361-2#	Deck Weld (S-38's,S-52) (Diesel)	1	17*	32047	Oil Seal	2
6	47014	Shock Mount	8	18	28314	Offset Sheave (S-38's,S-52's)	1
	47014	Shock Mount (S-52T)	4		34713	Sheave BK32H (S-28's)	1
7	42702	Engine Brkt Adj Assy	1	19	35328	Bushing Taper Lock	1
8	27189-2	Bracket Handle (except S-52T)	2	20	55017	Decal 3400 RPM	1
9	32040	Urethane Bushing	2	21	55015	Decal Idle Engine	1
10	21549-2	Handle	1	22	55141	Decal Front	1
	29382-2	Handle (S-52T)	1	23	55142	Decal Belt GD	1
11	46774	Plug 3/4 Npt Magnetic Sq. Hd.	1	24	21550-2	Bracket Engine	1
12	29726-2	Base Machine (S-28's)	1	25	29107	Plate Trim (S-28, S-38,S-38D,S-52,S-52D)	1
	29725-2	Base Machine (S-38's)	1	26	47214	Water Tank (S-28A,S-38A,S-38DA)	1
	29724-2	Base Machine (S-52's)	1	27	38195	Cap (S-28A,S-38A,S-38DA)	1
13	21542	Eccentric (S-28's)	1	28	46009	Valve & Strainer (S-28A,S-38A,S-38DA)	1

**REMARK:** # Diesel Option (S-38D(A)and S-52D) - All parts are the same as S-38(A)and S-52 except for Items 1 and 5.

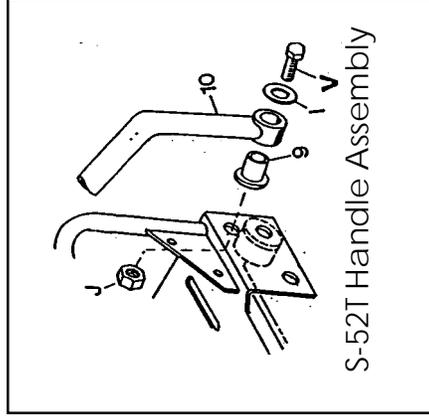
\* Included in Item 15

\*\* Included in Items 15 & 16

# 5.4 S-Plate Engine/Plate Parts List (S-28, S-38, S-52) Cont'd.



Engine Recoil Side Handle Assembly



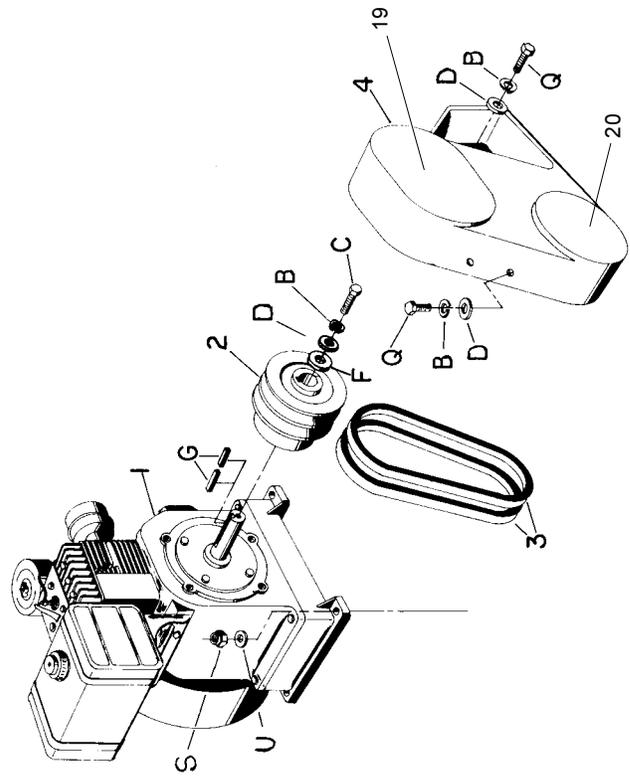
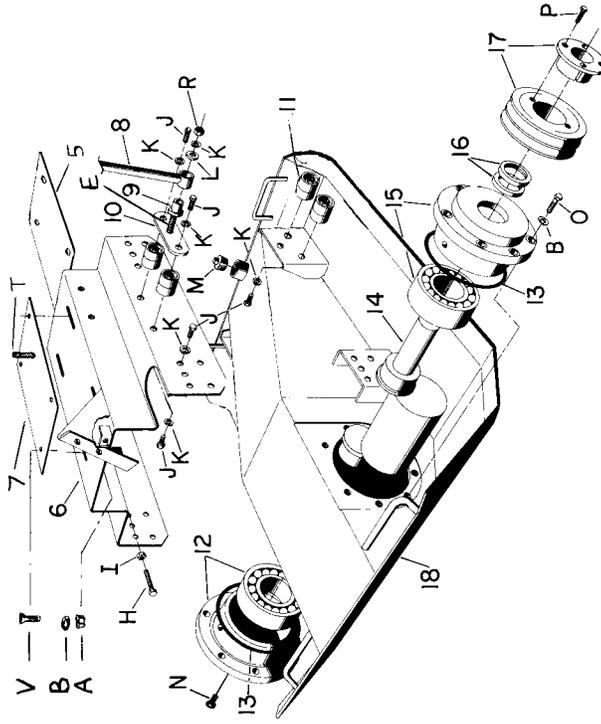
S-52T Handle Assembly

## 5.4 S-Plate Engine/Plate Parts List (S-28, S-38, S-52) Cont'd.

Item	Part No.	Description	Qty.	Item	Part No.	Description	Qty.	Torque FT.LBS. (Nm)
29	47250	Hose Ureth 1/4 ID (S28A,S38A,S38DA)	1	A	80114	NUTNY	4	
30	34486	Elbow 90 Degree (S28A,S38A,S38DA)	1	B*	80086	WSHR 5/16 Med Split (S28A,S38A)	11	
31	27263-2	Sprinkler GD (S28A,S38A,S38DA)	1	C*	80086	WSHR 5/16 Med Split (S28,S38,S52's)	9	
32	22443-2	Sprinkler Tube (S28A,S38A,S38DA)	1	D*	39233	WSHR .343 ID x1.0 OD	1	16 12
33	43281	Orifice Plug 1/4 NPT (S28A,S38A,S38DA)	2	E	80095	HHCS 5/16-24 X 3/4	1	16 12
	* 22580	Water Tank Kit (S28A,S38A,S38DA)	1	F	80116	WSHRL 1/4 Med Split	6	8 6
34	29454-2	Brkt Handle Retainer (except S52)	1	G	80759	SHCS 1/4-20 X 5/8 BLK	6	8 6
35	37820	Fluted Knob	2		80117	WSHRL 1/2 Med Split (Except S52T)	16	
36	29624-2	Transport	2		80117	WSHRL 1/2 Med Split (S52T)	8	
	34213	Wheel 10 x 2.75 (not shown)	2	H	80113	HHCS 1/2-13 X 3/4 (Except S52T)	10	55 40
	22603	Transport Wheel Kit	1		80113	HHCS 1/2-13 X 3/4 (S52T)	6	55 40
37	30166	Deflector Exhaust (Honda)	1	I	80343	WSHR Flat 1/2	2	
38	42790	Clip Throttle (Honda)	1	J	80051	NUTNY 1/2-13	2	
39	55040	Decal Service	1	K	80611	Key 3/16 X 3/16 X 2	1	
40	55214	Decal Sta-Bil	1	L	80061	Key 1/4 X 1/4 X 1-1/2 (S38's, S52's)	1	
				M*	80058	WSHRL 3/8 Med Split (Except S28A, S38A)	12	
				N	80058	WSHRL 3/8 Med Split (S28A, S38A)	16	
				O*	80387	HHCS 3/8-24 X 1-1/4	12	50 37
				P	80354	HHCS 1/4-20 X 1 (S38, S38A, S52, S52T)	2	8 6
				Q	80766	HWH Crimpfitte #8 x 3/8 (Honda)	2	
				R	80743	HHTB 5/16-18 X 4-1/2 GR2	1	11 8
				S	80185	HHCS 3/8-24 X 1/2	1	50 37
				T*	80159	HHCS 5/16-18 X 3/4 (S28A,S38A)	6	11 8
				U	80159	HHCS 5/16-18 X 3/4 (S28,S38,S52's)	4	11 8
				V	80042	NUTFX 3/8-16 (S28A,S38A)	4	
				W	80348	WSHR 5/16 Wrot ZN (Except S28A, S38A)	4	
				X	80348	WSHR 5/16 Wrot ZN (S28A, S38A)	6	75 55
				Y	80194	HHSC 1/2-13 X 2-1/2	2	55 40
				Z	80378	HHCS 1/2-13 X 1 Plain (Except S52T)	6	55 40
				AA	80378	HHCS 1/2-13 X 1 Plain (S52T)	2	55 40
					80346	WSHR #10	1	
					26326	WSHR 9/16 X 1-3/4 X 1/4 (Except S52T)	2	
					80118	WSHR 1/2 Wrot ZN	2	
					80065	WSHRL #10	1	

**REMARK:** C\* Plates equipped with Robin engines, use P/N 80348 washer. D\* Plates equipped with Robin engines, use P/N 80186 - 3/8-24 x 3/4 Gr 5.  
T\* Locitte required O\* For S28, S28A is part of P/N 35328.  
B\*, M Plates equipped with Robin engines, use 1 less of Items B and 1 more of Item M on engine shaft.  
33\* Kit 22580 includes P/Ns: 47214, 38195, 46009, 47250, 34486, 27263-2, 22443-2, and 43281.

# 5.5 S-Plate Engine/Plate Parts List(S-66)



## 5.5 S-Plate Engine/Plate Parts List(S-66)

Item	Part No.	Description	Qty.	Item	Part No.	Description	Qty.	Torque FT.LBS. (Nm)
1	30161	Engine 11 HP Honda	1	A	80325	NUTFL 3/8-16	4	
2	30131	Clutch Centrifugal	1	B	80058	WSHRL 3/8 Med Split	25	
3	34838	V-Belt A-41	2	C	80594	HHCS 7/16-20 X 1 GR 5	1	55 40
4	27503-2	Guard Belt	1	D	80342	WSHR Flat 3/8	5	
5	22247-2	Plate Reinforcement	1	E	80194	HHCS 1/2-13 X 2-1/2	2	75 55
6	21728-2	Motor Base	1	F	26326	WSHR 9/16 X 1-3/4 X 1/4	1	
7	36418-2	Plate Motor Mount	1	G	80061	Key 1/4 X 1/4 X 1-1/2	2	
8	21710-2	Handle	1	H	80164	HHCS 5/16-18 X 1-1/2	1	17 12
9	32040	Urethane Bushing	2	I	80244	NUTFX 5/16-18	1	
10	27189-2	Handle Bracket	2	J	80117	HHCS 1/2-13 X 3/4	32	50 37
11	47014	Shock Mount	18	K	80113	WSHRL 1/2 Med Split	32	
12	27469	Cap & Bearing Blind End	1	L	80343	WSHR Flat 1/2 SAE	2	
13	32046	O-Ring 01-275	2	M	46774	Plug Pipe 3/4	1	
14	21735	Eccentric Shaft	1	N	80185	HHCS 3/8-24 X 1/2	1	50 37
15	27468	Cap & Bearing Sheave End	1	O	80287	HHCS 3/8-24 X 1-1/4 Gr 8	16	50 37
16	32047	Oil Seal National	2	P	80434	HHCS 1/4-20 X 3/4 Gr 5	2	8 6
17	34815	Sheave Offset Gas	1	Q	80102	HHCS 3/8-16 X 1	4	20 15
	35328	Bushing Taperlock	1	R	80051	NUTNY 1/2-13	2	
18	21711-2	Base Plate Mach	1	S	80114	NUTNY 5/16-18	4	
19	55151	Decal S66 Stone	1	T	80035	STUD PEM 5/16-18X2	4	
20	55157	Decal S66 Stripe	1	U	80348	WSHR 5/16 Wrot	4	
*	28683-2	Lift Eye	1	V	80290	FHCS 3/8-16 X 1-1/4	4	

REMARK: \* Not Shown

## 5.6 Decal Identification

**1**

**SERVICE INSTRUCTIONS**

DAILY: WITH ENGINE LEVEL, CHECK OIL ADD OIL AS NECESSARY. OVER 40°F USE SAE 30. UNDER 40°F USE SAE 5W-30 OIL. \* CHECK ECCENTRIC OIL USE SAE 30. SEE INSTRUCTIONS BELOW. \* CLEAN AIR FILTER. CLEAN FILTER PROLONGS ENGINE LIFE AND DECREASES GASOLINE CONSUMPTION. SEE INSTRUCTIONS ON FILTER CAP. \* TIGHTEN ALL FASTENERS.

WEEKLY: \* CHANGE ENGINE OIL. \* CHECK BELT TENSION AND ADJUST AS NECESSARY.

MONTHLY: \* CHANGE ECCENTRIC OIL. USE SAE 30.

**WARNING: ALWAYS STOP ENGINE WHEN FILLING WITH OIL. CHECK OIL OR BURNING OIL MACHINE. KEEP GUARD RELEASED.**

PATENTED: US#4,113,403 CAN#1586121 AND OTHERS PENDING.

ECCENTRIC OIL LEVEL

(MEASURE WITH 2 TO 2-1/4 IN. SHOWING ON A DIPSTICK SUCH AS A PENCIL.)

55640 DO NOT OVERFILL



**3**

**IDLE ENGINE 5 MINUTES  
BEFORE STOPPING  
TO IMPROVE SERVICE LIFE**

P/N 55417

**4**

**ENGINE: Must run at  
full speed (3400 RPM)  
or on idle to ensure  
proper clutch life.** 55017

**5**

**CAUTION**  
USE SAFETY STRAPS  
TO BASE WHEN LIFTING  
MORE THAN TWO FEET  
HIGH 53821

**6**

**ECCENTRIC OIL LEVEL**  
MAINTAIN OIL LEVEL FLUSH WITH  
PLUG HOLE. DO NOT OVERFILL. 55329



**9**

**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

**10**

This engine has been tested with  
fuel treated with  
**STA-BIL®**  
to prevent gum and varnish  
residue in tank.

P/N 55214

## 5.6 Decal Identification

Item	Part No.	Description	Qty.	Item	Part No.	Description	Qty.	Torque FT.LBS. (Nm)
1	55040	Decal Service Inst. White						
2	55432	Decal Water Tank						
3	55417	Decal Idle Engine White						
4	55017	Decal 3400 RPM Black						
5	55021	Decal Caution Safety Blk						
6	55329	Decal Service Inst.						
7	55149	Decal Ear Protection						
8	55331	Decal Warning Belt Guard						
9	55156	Decal Notice						
10	55214	Decal Sta-Bill						

REMARK:



**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: 1-800-888-9926

Fax: 1-716-229-2363

e-mail: [sceny@mcimail.com](mailto:sceny@mcimail.com)

www: [stone-equip.com](http://stone-equip.com)

A 100% employee-owned American manufacturer

© 1996 Stone Construction Equipment, Inc.

Printed in U.S.A.