

***MAULDIN***

**PAVER OPERATION MANUAL**

**MODEL 1500**

Paver Serial Number \_\_\_\_\_

Paver Specification Number \_\_\_\_\_

Engine Serial Number \_\_\_\_\_

**SOLD & SERVICED BY:**

A large, empty rectangular area with rounded corners and a vertical scroll-like shape on the left side, intended for a signature or stamp. The scroll shape has a grey circular end at the top and bottom.

# TABLE OF CONTENTS

<b>SECTION</b>	<b>ITEM</b>	<b>PAGE</b>
1.0	Important Safety Information .....	2
2.0	Service Warning .....	2
3.0	Starting the Paver .....	3
4.0	Screed Operation .....	3
4.1	Screed Heating System .....	3
4.2	Crowning the Screed .....	3
4.3	Setting the Extensions .....	4
4.4	Before you Pave .....	4
4.5	Null your Screed .....	4
4.6	<i>Screed Automation - Option</i> .....	5
5.0	Fluids & Capacities .....	7
5.1	Engine Coolant .....	7
6.0	LUBRICATION & SERVICE PROCEDURES .....	7
6.1	Air Filters .....	7
6.2	Battery .....	8
6.3	Engine & Engine Filters .....	9
6.4	Hydraulic System .....	10
6.5	Conveyor System .....	10
6.6	Troubleshooting Guide .....	11
6.7	Component Removal & Installation .....	13
6.8	Recommended Preventive Maintenance Intervals .....	13
7.0	Warranty .....	15

## **IMPORTANT SAFETY INFORMATION**

Most accidents involving paver maintenance are caused by failure to observe basic safety rules or precautions. An accident can often be avoided by recognizing potentially hazardous situations before an accident occurs.

Read and understand all safety precautions and warnings, before operating or performing lubrication and maintenance on this paver.

**WARNING:** IMPROPER OPERATION, LUBRICATION OR MAINTENANCE OF THIS PAVER CAN BE DANGEROUS AND COULD RESULT IN INJURY OR DEATH.

**WARNING:** DO NOT OPERATE THIS PAVER UNTIL YOU READ AND UNDERSTAND THE INSTRUCTIONS IN THE **OPERATION SECTION** OF THIS MANUAL.

**WARNING:** DO NOT PERFORM ANY LUBRICATION AND MAINTENANCE ON THIS PAVER UNTIL YOU READ AND UNDERSTAND THE INSTRUCTIONS IN THE **MAINTENANCE SECTION** OF THIS MANUAL.

## **SERVICE WARNING**

### **General**

Operating personnel must perform service checks regularly to be sure systems are in good operating condition. If abnormal conditions are detected, inform maintenance personnel immediately.

Check all systems for proper operation. Check chassis and all components for physical damage and security of all fasteners and connectors.

## **PAVER OPERATION SECTION**

Prior to starting the following procedures must be completed.

1. Check engine oil level
2. Check engine coolant level
3. Check hydraulic oil level

### **STARTING THE PAVER**

#### **STARTING**

To start the paver first check to make sure forward and reverse levers are in the neutral position. The paver will not start if all levers are not in the neutral position. Verify the red neutral indicator light is lit, then turn key to start. To increase engine RPM the throttle control is to the left of the key switch.

#### **DRIVING**

The paver will move forward by pushing both levers forward and will move backwards by pulling the levers back. ***HINT - to make driving easy, push both handles forward to desired speed, then use only one handle to fine-tune your direction.***

## **1500 SCREED OPERATION SECTION**

### **SCREED HEATING SYSTEM**

The screed has two main screed burners. The proper way to light the burner system is the following procedure.

1. Make sure all shutoff valves are in the off position and lighting wand is off.
2. Turn on gas at tank.
3. Verify that pressure regulator is 5-10 lbs.
4. Light the lighting wand
5. Turn on gas to the main screed.
6. Quickly light the burners on the main screed.

**Only use burners for ten minutes at any given time. Damage to screed plate will occur.**

### **Setting the Screed to Pave**

#### **CROWNING THE SCREED**

Proper crown adjustment on your screed is necessary to achieve good mat quality. Crown adjustment should be checked before you begin each paving job. Follow this procedure for standard paving results.

1. While the screed is in the raised position, turn the rear turnbuckle until the screed is perfectly straight across the rear bottom surface of the screed. Use a string line to verify.
2. Turn the forward turnbuckle until the screed shows 1/4 - 3/8 " arch at the front leading edge of the screed. Use a string line to verify.
3. Recheck both front and rear with a string line.

## **SETTING YOUR EXTENSION STRIKE-OFF'S**

1. Always set your crown first.
2. Bring your extensions all the way in.
3. Set your screed completely down on a set of starting blocks.
4. Rotate your depth cranks until the screed is laying flat on the starting blocks.
5. Rotate depth crank one full rotations (in the thicker direction). The front edge of the screed should now be raised approximately  $\frac{1}{4}$ " off the starting blocks.
6. Set the strike-offs down to be resting on the starting blocks. Make sure the strike-offs are level with the main screed.
7. Use the end gate mounted strike-off adjusting handle to change the angle on the strike-off to match the angle on the main screed.
8. Tighten down the strike-off's.

(Your trailing edge of the main screed and the trailing edge of your strike-off's should be resting on the starting blocks. The angle of attack on the main screed should match that on the strike-off's. Once you begin paving adjust the angle on the strike off to match your main screed mat.)

## **BEFORE YOU PAVE WITH THE 1500 SCREED**

Screed must be elevated a distance equal to the desired mat depth plus enough extra height to allow for compaction. To achieve this, the most popular methods are; an asphalt pad and starting blocks.

- Starting Blocks – a 2.5" thick starting block is a good starting block for a finished mat of 2 inches
- Compacted Asphalt Pad – a starting block equal to the amount of compaction will be required.
- Non-Compacted Asphalt Pad – just lower the screed fully onto pad, no starting block required.

Starting blocks should be at least as long as the front to rear dimension of the screed plate. They should be placed lengthwise in the direction of travel, directly below the screed depth cranks.

Always fill your screed with asphalt with your conveyor in the manual mode. This will eliminate any overflow up over the back of the screed. Once you have an even head of material in front of your screed turn on the automatic feed system by selecting auto for both conveyor and auger functions. (The auto auger function only works if the feed is set to feed out)

## **Nulling The Screed & Setting Angle of Attack**

This is the adjustment of the screed to the perfectly flat position on either the starting blocks or the asphalt pad. To null the screed follow this procedure:

1. Lower screed **completely** onto starting surface, (blocks or pad).
2. Rotate the cranks until you locate the position of free movement. This is a limited area where the depth cranks will both rotate freely in either direction. This is the nulled position.
3. Rotate thickness screw one full rotation, (in the thicker direction). Start paving and make adjustments as required.

## SCREED AUTOMATION SYSTEM – *OPTIONAL EQUIPMENT*

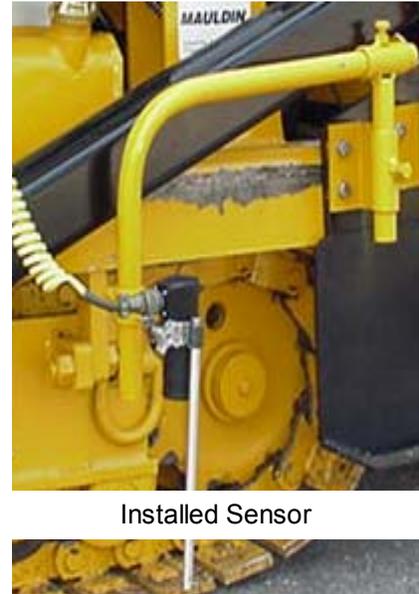
Screed Automation is available for your symphony screed, the base system comprises of one grade sensor, one connecting cable, one hand set, all the required brackets for installation, and a carry case.



Grade Sensor with connecting cable



Handset



Installed Sensor

A single grade system eliminates manual adjustment of the thickness handle on whichever side it is installed.

### System set up as follows:



1. Place the handset into the cradle at the operator's station. Route cable over the resting bolt.
2. Plug into the paver receptacle labeled hand held on side of paver.
3. Mount brackets to screed end gate as shown in picture above. Attach Grade Sensor to mounting bracket. Make sure the sensor has the wire "bale" attached. Plug one end of cable into Grade Sensor, the other end into the paver receptacle labeled Grade Sensor.



At this point the system should be powered up and ready to go. If you have made any mistakes the handset will display the word "S.O.S."

### How to operate:

1. Pulling off an asphalt pad or wood boards. Screed must be at desired thickness level.
  - i. Lower screed to paving position on pad or boards.

- ii. Adjust the Tow Point cylinders to their mid points. The tow point cylinders are controlled by toggle switches at the operator's station, extend or retract cylinders until 5 inches of cylinder rod is exposed, do this on both sides of paver.
- iii. Adjust mounting brackets so that the sensor is properly positioned. Grade Sensor mounted 24" back from the tow point will produce the best smoothness results; use this setting whenever you are not matching a joint. As you position the sensor closer to the screed, reaction time will increase; just in front of the augers is a better position for joint matching.
- iv. Ensure that the path the sensor will travel over is free of large debris; ideally it should be following some form of finished grade, curb, or adjacent asphalt mat.
- v. Null the thickness screw. (*See screed settings if unsure of this procedure*).
- vi. Rotate thickness screw one full rotation, (in the thicker direction).
- vii. Lock thickness screw into position with travel locks.
- viii. Press "CAL" button on the Handset.
- ix. Press "AUTO" button on the Handset.
- x. Check thickness of asphalt mat with probe. Adjust the up ↑ or the down ↓ on the handset as required until screed is paving required depth.

#### How to cancel & resume:

2. Cancel Automatic operation – Be sure to do this before you lift the screed at the end of a pass.
  - i. Press "MAN" at any time to stop the automation.
3. Resume Automatic Operation – with out changing any settings, **[typical for truck change]**
  - i. Press "AUTO" button on handset
4. Resume Automatic Operation – with a change in settings, **[typical for a new pass]**
  - i. Lower screed to paving position on pad or boards.
  - ii. Null the thickness screw. (*See screed settings if unsure of this procedure*).
  - iii. Rotate thickness screw one full rotation, (in the thicker direction).
  - iv. Lock thickness screw into position with travel locks.
  - v. Press "CAL" button on the Handset.
  - vi. Press "AUTO" button on the Handset.
  - vii. Check thickness of asphalt mat with probe. Adjust the up ↑ or the down ↓ as required until screed is paving required depth.

**NOTE:** Many factors can effect changes in mat thickness. For best results:

- **ALWAYS** use the full Automatic material feed system.
- **ALWAYS** keep the paver moving at the same speed, (use Pave/Resume to maintain perfect speed).
- **NEVER** let the screed run out of asphalt.
  
- **ALWAYS** keep the path of the sensor clear. Any asphalt spills that the sensor travels over will cause an erroneous reaction. Crew working with shovels around the sensor can also cause erroneous reactions.

## FLUID CAPACITIES AND RECOMMENDATIONS

<b>FLUID</b>	<b>CAPACITY</b>	<b>RECOMMENDATION</b>
Engine oil	8 U.S. quarts	High quality CC/CD multi-grade lubricating oil. Above 14 deg. F use 15W40 or 20W40.
Hydraulic	15.5 U.S. gal.	High quality anti-wear hydraulic oil (Original equipment, Gulf C-3 torque fluid).
Grease	As required	N.G.L.I. consistency #2, high temperature, anti-friction, bearing lubricating grease.
Engine coolant	2.1 U.S. gal.	High quality Above 14 deg. F
Diesel	12.5 U.S. gal.	Above 40°, (5° C), use No. 2-D. Below 40°, (5° C), use No. 1-D. Power loss up to 4% can be expected due to lower viscosity

## ENGINE COOLANT

All Kubota engines are shipped from the factory without engine coolant. Therefore customers are responsible for filling and maintaining the engine's cooling systems. The use of improper coolant mixtures in diesel engines can result in serious engine damage due to liner erosion and pitting. Refer to the Operator's Manual for information regarding engine coolant (antifreeze), and change interval recommendations.

## LUBRICATION AND SERVICE PROCEDURES

### Air Filters

**IMPORTANT:** Service the engine air filters only when the need is indicated by the air cleaner service indicator, (if equipped), or in accordance with the preventative maintenance decal. Excessive service will cause premature wear.

#### 1. Engine Main Element

- a. Unbuckle clips to remove element container end cap.
- b. Pull gently to remove main element.
- c. Use compressed air with an element-cleaning nozzle

**IMPORTANT:** Main element should be replaced after six cleanings or 500 hours use.

**IMPORTANT:** Do not attempt to clean element using a standard air nozzle. Do not strike element on a hard surface. Either action will damage the element.

## 2. Engine Safety Element

**IMPORTANT:** Do not remove safety element under heavy dust or blowing conditions (in the field). Even slight amounts of dust entering the engine can lead to premature wear.

Inspect safety element for contamination and physical damage.

**IMPORTANT:** When safety element is dirty, it should be replaced. Do not attempt to clean.

## Battery

**CAUTION:** BATTERY ELECTROLYTE IS A CAUSTIC ACID. KEEP IT AWAY FROM SKIN AND EYES. IF CONTACT OCCURS, FLUSH THE AFFECTED AREA WITH LOTS OF WATER.

**CAUTION:** DISCONNECT GROUND CABLE FROM THE NEGATIVE BATTERY POST BEFORE ATTEMPTING TO SERVICE OR REMOVE BATTERY.

### 1. Removal

- a. Remove battery cover, (located below propane tank)
- b. Disconnect ground (negative) cable from battery (-) terminal.
- c. Disconnect positive cable from battery (+) terminal.

### 2. Cleaning

- a. Remove battery, following correct procedures.
- b. Thoroughly clean terminals with a battery-cleaning tool.
- c. Mix a paste solution of baking soda and water and apply to battery and terminals.
- d. Rinse battery and paver area near battery liberally with water.

### 3. Installation

- a. Clean battery, following correct procedures.
- b. Be certain battery area is clean and clear of debris.
- c. Install battery and connect positive (+) cable to terminal.
- d. Install battery cover.

**CAUTION:** DO NOT CONNECT NEGATIVE (GROUND) TERMINAL FIRST. ARCING CAN OCCUR, POSSIBLY CAUSING SEVERE BURNS AND/OR BATTERY EXPLOSION.

- e. Connect negative (-) terminal.

#### 4. Charging

- a. Connect charger leads to proper battery terminals then proceed according to charger manufacturer's instructions.

#### 5. Storage

- a. Remove and clean battery, following correct procedures.
- b. Bring battery to full charge, following charger manufacturer's instructions.
- c. Store in a cool dry place where there is no possibility of freezing.

**NOTE:** Check battery every 30 days during storage and return to full charge if necessary.

### **Engine and Engine Filters**

#### 1. Initial Break-In

Proper break-in procedures are a must to realize maximum engine power output and longest engine life. Engine should show noticeable power gain through the first 30 hours service. Power gain will continue until approximately 200 hours if properly broken-in.

**IMPORTANT:** Do not operate engine above 3/4 throttle, (approximately 2100 RPM), for the first 25 hours.

**IMPORTANT:** Use full throttle only for short intervals during the first 25 hours.

**IMPORTANT:** Do not "lug" engine during the break-in period.

**IMPORTANT:** Replace the original oil and oil filters after the first 20 hours of operation.

#### 2. Fuel Filter / Water Separator

- i. The fuel filter and water separator is a combined unit, **PLEASE NOTE** it is **NOT** disposable.
- ii. There is also a separate in-line fuel pre-filter which is disposable.

**CAUTION:** BOTH DIESEL FUEL AND GASOLINE ARE HIGHLY FLAMMABLE AND EXPLOSIVE UNDER CERTAIN CONDITIONS. DO NOT SMOKE OR ALLOW SPARKS OR OPEN FLAME WHEN HANDLING.

##### a. To Change:

1. Stop engine. Wait 15 minutes for engine and surrounding parts to cool before proceeding.
2. Unscrew and discard fuel and sediment.
3. Clean bowl thoroughly and fill cleaned bowl with clean fuel.
4. Lightly coat the seal ring with oil, then screw on filter/separator until seal meets flange.
5. Tighten an additional 1/2 to 3/4 turns by hand.

**IMPORTANT:** Do not over tighten.

b. Oil and Filter Changing:

1. Stop engine. Wait 15 minutes or engine oil to cool before proceeding.
2. On the hopper side, remove drain plug and position capturing bucket.
3. Drain crankcase.
4. Unscrew and discard existing filters.
5. Fill new elements with fresh oil.
6. Lightly coat the seal rings with oil, and then screw on filters until seals meet flanges.
7. Tighten an additional 1/2 to 3/4 turns by hand.

**IMPORTANT:** Do not over tighten.

8. Fill crankcase to correct level.
9. Start engine and run at low idle. Have an assistant visually check seal areas for leaks.
10. Stop engine. Wait a few minutes, and then check engine oil level once again.

### **Hydraulic System**

1. Hydraulic Fluid Change

- a. Stop engine. Allow system pressure to drop and remove filler cap.
- b. Remove suction hose and drain into appropriate container for disposal.
- c. Remove hydraulic filter. Replace filter element and reinstall.
- d. Replace fluid to approximately 1" from top of reservoir.  
Operate paver and recheck level.
- e. Check visually for oil leaks.

**NOTE:** Each paver should be thoroughly inspected after each use and during maintenance cycle for:

1. Tightness of mounting bolts and attaching hardware on bearings, couplings, frame, etc.
2. Leaks, cracks and loose electrical and fluid fittings.
3. Malfunctioning indicators or controls.
4. Worn or damaged tires.
5. Cleanliness.

### **Conveyor System**

Conveyor drive system should be inspected annually.

1. Check for worn sprockets and chain.
2. Check keys and keyways for wear. Replace keys if needed.
3. Tighten large conveyor chains with slack adjusters mounted to the underside of the conveyor. Tighten until they pull up against the bottom of the assembly. A chain depression of approximately 2" should be possible in the middle of the conveyor. **Do not over tighten.**

## **TROUBLESHOOTING**

### 1. General

Proper troubleshooting begins with an organized approach to the problem at hand. Begin with investigation of the most probable cause, following the guidelines below.

Study the problem thoroughly before taking action:

Did warning signs precede the problem? If so, what were they? What would they indicate?

Is scheduled maintenance current on all parts and systems involved?

Has similar trouble occurred before? What action was taken at that time?

Can engine be operated without further damage?

**CAUTION:** IF RUNNING INSPECTION MUST BE MADE, GET ASSISTANCE. OPERATOR SHOULD REMAIN SEATED ON PAVER THROUGHOUT INSPECTION. SET PAVER TO PAUSE. MAKE SURE TRANSMISSION IS IN NEUTRAL POSITION.

Check the most convenient things first.

Don't begin major work before checking all other possibilities.

Reconsider all known facts and clues before proceeding to more in-depth work.

Correct the basic cause.

Remember, failure of a certain part may be caused by malfunction of another part or system.

### 2. Use of Schematics

This manual incorporates electrical and hydraulic diagrams formatted for ease of use by maintenance and for the training of personnel.

### 3. Troubleshooting chart

The troubleshooting chart lists problems that might be encountered in the operation of the vehicle. The remedies listed may direct the repairman to a possible faulty component.

**WARNING:** THE TROUBLESHOOTING CHART AND PROCEDURES OUTLINED IN THIS SECTION SHOULD NOT BE ATTEMPTED BY OTHER THAN EXPERIENCED MECHANICS OR PERSONNEL UNDER THE DIRECT SUPERVISION OF AN EXPERIENCED MECHANIC. FAILURE TO COMPLY MAY RESULT IN DAMAGE TO EQUIPMENT AND/OR INJURY OR DEATH TO PERSONNEL.

#### A. Engine

For engine troubleshooting see charts indicating faults and recommended repair procedures, refer to Manufacturer's Operation and Maintenance Manual.

If your particular problem is not covered or you are unsure of what steps to take, contact your dealer for assistance.

**B. Transmission**

1. Vehicle fails to move under power.

Inadequate oil level in hydraulic reservoir.  
 Damaged wiring loom to steering station  
 Driveline mechanical failure

2. Vehicle moves in neutral.

Steering levers are actually engaged  
 Steering calibration adjustment required, (must be performed by authorized MAULDIN service technician)

For detailed troubleshooting information on hydrostatic transmission, refer to Trouble Shooting Manual, Rexroth Hydrostatic Transmissions, available from a Rexroth representative or dealer.

**C. Electrical System**

<b>Engine Status</b>	<b>Voltmeter Reading</b>	<b>Indicates</b>	<b>To Correct</b>
Running	13.5 - 14 Volts	Normal Condition	
Running	Less than 13.5 or more than 14 Volts	Alternator or Regulator Malfunction	Contact Dealer
Won't Start	12-12.5 Volts	Weak battery	Charge
Won't Start	Less than 12 Volts	Weak battery or Defective Cell	Charge or Replace
Stopped	Excessive current Draw	Short Circuit System	Inspect

**D. Hydraulic System**

Thoroughly review description of hydraulic system.

Use logical steps to determine cause of malfunction.

Identify the function or functions that require troubleshooting.

If possible, trace malfunction to source; pump, control, motor or cylinder.

Determine pressure operating the function as specified:

## Hydraulic System Pressures

Priority circuit, Eaton triple pump	200 -300 p.s.i.	<b>Neutral Position Relief Pressure</b>
Main circuit, Rexroth tandem pump	300 - 400 p.s.i.	
Main circuit, Rexroth tandem pump	up to 4500 p.s.i.	
Charge circuit, Rexroth tandem pump	300 - 400 p.s.i.	

Problem	Possible Cause	To Correct
No Power or Inadequate Power	Worn or Malfunctioning pump or motor	Repair or replace pump or motor
	Stuck relief valve cartridge.	Repair or replace
	Low system pressure caused by worn pump.	Repair or replace pump.
Surging of hydraulic items	Air in system due to low level of oil, cavitating pump, leaky fittings, pinched hose, etc.	Add oil, tighten fittings, reroute hose

## Removal and Installation of Equipment

### 1. Preparation

**WARNING:** BEFORE PERFORMING INSTALLATION OR REMOVAL PROCEDURES, THE FOLLOWING PRECAUTIONS MUST BE ADHERED TO IN ORDER TO PREVENT POSSIBLE DAMAGE TO EQUIPMENT OR INJURY OR DEATH TO PERSONNEL.

**WARNING:** TURN THE ENGINE OFF BY TURNING THE IGNITION SWITCH TO OFF. DISCONNECT THE BATTERY CABLES BEFORE SERVICING THE ENGINE START OR STOP CIRCUITS. DISCONNECTING BATTERY NEGATIVE GROUND BEFORE REMOVING OR CONNECTING THE POSITIVE BATTERY CABLE CAN PREVENT SHORT CIRCUITING OF THE BATTERY BY TOOLS.

## Recommended Preventive Maintenance Intervals

INTERVAL	ITEM	PROCEDURE
Initial Break-In (After 1 <sup>st</sup> 50 hours)	Hydraulic Filter Engine Oil & Filter Hydraulic Leaks Loose Nuts & Bolts All crank handles	Change Change Inspect & Tighten as required Inspect & Tighten as required <b>DO NOT APPLY GREASE!</b>
Daily or 10 hours	Hydraulic oil level Engine oil level Engine air cleaner system Engine coolant level and system Radiator	Inspect & add as necessary Inspect & add as necessary Check service indicator and/or inspect Inspect & add as necessary Clean and inspect

Fuel system	Drain water from separator Conveyor, Augers, Screed	Clean Asphalt from moving parts
50 hours	All Daily Items Front idler sprocket Top idler roller	As above Grease Grease
250 hours	All 100 hour items Engine air cleaner Engine crankcase Engine oil filter Fuel tank Hydraulic filter Depth Crank Handle Extension Adjusting Handle	As above Replace element Drain and refill* Replace* Drain water and sediment Replace* Grease Grease
500 hours	All 250 hour items Fuel filters Engine	As above Replace Have serviced by authorized Dealer
1000 hours	All 500 hour items Hydraulic system	As above Drain and refill

\*Change after first 20 hours service, every 250 thereafter.

A copy of this schedule is attached to the paver in the form of a decal. It can be seen to the right.

Be sure to follow the Hour interval recommendations whenever the paver is equipped with an engine hour meter. Time intervals are considered not to exceed recommendations.

**NOTE:**

***FAILURE TO PERFORM PROPER SCHEDULED MAINTENANCE WILL ADVERSLY EFFECT THE PERFORMANCE OF THE PAVER, AND MAY VOID YOUR WARRANTY IN PART OR IN ENTIRETY.***



**PREVENTATIVE MAINTENANCE GUIDE**

<u>ITEM</u>	<u>ACTION</u>	<u>INTERVAL</u>
AIR CLEANER	INSPECT	DAILY
	CHANGE	12 MONTHS OR 200 HOURS
IN DUSTY AREA	CHANGE	2 MONTHS OR 75 HOURS
ENGINE OIL LEVEL	INSPECT	DAILY
	CHANGE	12 MONTHS OR 200 HOURS
RADIATOR COOLANT LEVEL	INSPECT	DAILY
	CHANGE	12 MONTHS OR 200 HOURS
HYDRAULIC OIL LEVEL	INSPECT	DAILY
	CHANGE	12 MONTHS OR 200 HOURS
FUEL FILTER	CHANGE	12 MONTHS OR 200 HOURS
ENGINE OIL FILTER	CHANGE	12 MONTHS OR 200 HOURS
HYDRAULIC OIL FILTER	CHANGE	12 MONTHS OR 200 HOURS
GREASE POINTS	APPLY GREASE	3 MONTHS OR 100 HOURS

# ***MAULDIN***<sup>TM</sup>

## **CALDER BROTHERS CORPORATION (LIMITED) PRODUCT WARRANTY**

Calder Brothers Corporation warrants that the Paver under this program will be free from defects in material and workmanship for a period of (12) twelve months from date of installation. Written notice of any claimed defect must be given to Calder Brothers Corporation within the warranty period and within (30) thirty days after such defect is discovered. Liability under this warranty is limited to replacing or repairing, at Calder Brothers Corporation's election, any part or parts deemed defective after examination by Calder Brothers Corporation or an Authorized Service Representative. Any paver or any of its parts returned by customer to Calder Brothers Corporation or an Authorized Service Representative via prepaid transportation and which is found to be defective will be repaired or replaced and returned to the customer via prepaid surface transportation within the continental United States. Should any part be found not defective, Calder Brothers Corporation or an Authorized Service Representative may charge inspection and handling to the customer.

### **EXCLUSIONS:**

This warranty does not apply to routine wearable parts of the Mauldin paver such as seals, points, plugs, hoses or similar items. This warranty does not extend to any paver or part replaced or repaired under this warranty. This warranty does not cover any repair or replacement labor of any part or parts found defective after examination by Calder Brothers Corporation or an Authorized Service Representative. This warranty does not apply to defects caused by casualty or unreasonable use, including faulty repairs by others and failure to provide reasonable and necessary maintenance.

THIS WARRANTY SET FORTH HEREIN IS IN LIEU OF AND EXCLUDES ANY AND ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, ARISING BY OPERATION OF LAW OR OTHERWISE, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, AND CUSTOMER WAIVES ANY OBLIGATION OF LIABILITY OF CALDER BROTHERS CORPORATION ARISING IN TORT OR STRICT LIABILITY IN TORT, OR FOR LOSS OR USE, REVENUE OR PROFIT WITH RESPECT TO MAULDIN PAVER AND/OR PARTS FOR ANY LIABILITY OF CUSTOMER TO ANY THIRD PARTY, OR FOR OTHER DIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES.