MAULDIN

BY CALDER BROTHERS

PAVER OPERATION MANUAL

MODEL 1750-C

Covers serial number range through:

942-N-75TCW5Y2-02942 -

SOLD & SERVICED BY:

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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**

The paver controls for the 1750-C consists of one main control panel and two operators station panels. The photographs below will introduce these switch and display panels as well as familiarize you with the terminology associated with them. You will want to refer back to this page as you read through the manual.

Hydraulic Oil Temperature Warning Light

Hydraulic Oil Restriction Warning Light

Pause/Resume Light

Digital Dash Display

Emergency Stop button

Operator Select Toggle

Steering Control Selector

High Range/ Low Range

Idle/ Operating RPM

Washdown Pump

STARTING THE PAVER

1.0 STARTING

To start the paver first check to make sure **ALL** 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 pause light is flashing (yellow light left of instrument panel), then turn key to start. To increase engine RPM the throttle control is to the left of the instrument panel.

2.0 DRIVING

Select the operator's station to be used by setting the Steering Switch to the left or right. Toggle the Pause/Resume Switch up and the pause light will go out. 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.***

3.0 PAVING RESUME

The best analogy for this feature would be *"cruise control for a paver"*. Start driving the paver as described above. To stop the paver, rather then return your handles to neutral, simply toggle the PAUSE/RESUME switch. The paver will come to a stop and you will notice the pause light is flashing. Toggle the PAUSE/RESUME switch again and the paver will take back off at the same direction and Speed you were at before stopping. *Imagine how convenient this is on longer pulls, OR curves!!!*

4.0 TWO SPEED

CAUTION: INJURY/OR DAMAGE MAY OCCUR: When switching to high range, bring paver to a stop before switching. To engage from low to high flip the High range switch up.

MURPHY
by ENOVATION CONTROLS

PowerView™ Model PV450

Quick Reference Guide

Main Control Panel

Soft Keys

The soft keys correspond to the soft key commands and allow selections to be made accordingly. The Soft Keys are labeled 1 through 6 above. Throughout the remainder of the manual, each individual Soft Key will be identified using the corresponding number. Please use the chart above for reference.

MENU Key

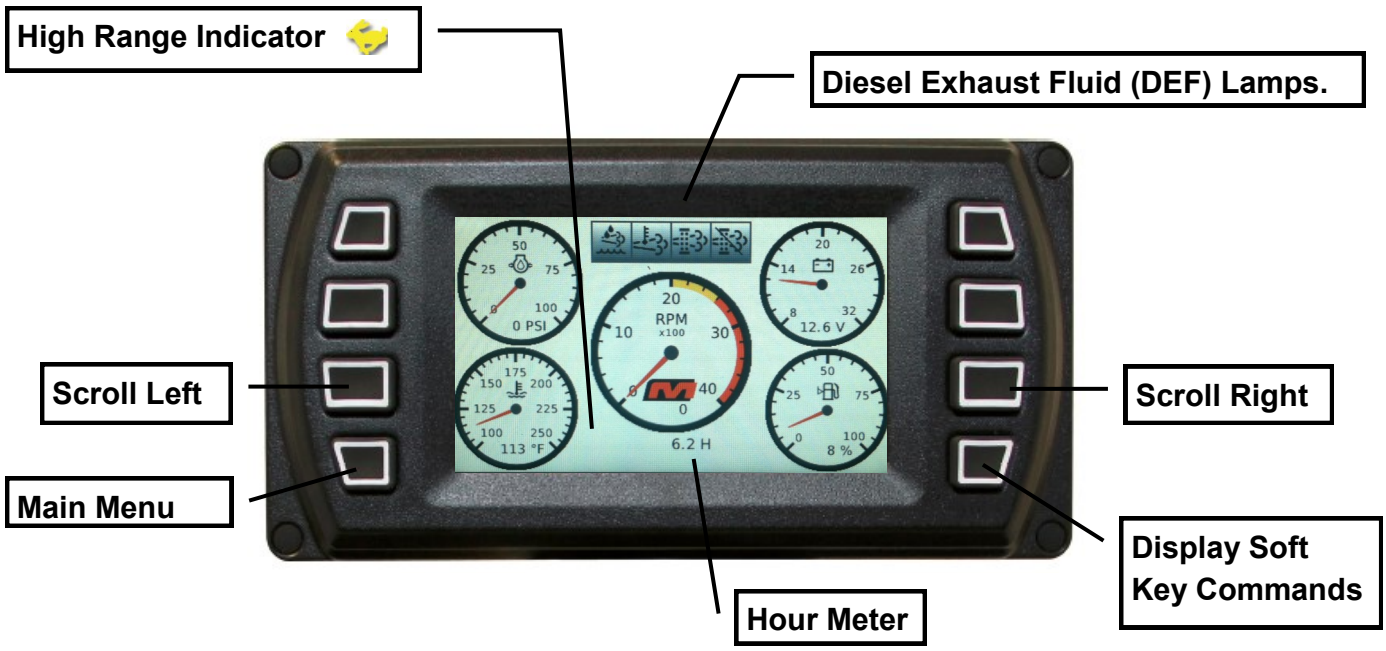
The bottom left key is a soft key reserved in most cases for the Menu. In rare cases, it could be used for other options. Pressing the **MENU** key at any time displays the list of menu options.

ENTER Key

The bottom right key is a soft key reserved in most cases for the **ENTER** key. In rare cases, it could be used for other options. Pressing the **ENTER** key will select the option displayed much like the **ENTER** key on a keyboard.

NAVIGATING THE MAIN CONTROL PANEL

"Gauge Display"



Gauge Display

The Gauge Display screen consists of a predefined layout that contains a combination of analog gauges, digital (text) readouts, and paver function readouts (ex. high range on/off). This screen is displayed upon startup.

To scroll through the various gauge screens, press the **3** and **6** soft keys. This can be repeated until all screens have been viewed. The currently displayed screen will stay active until another key is pressed.

Soft Key Commands

When a Gauge Display screen is active, pressing the **Enter** key will display soft key commands, as shown below. Continuing to press **Enter** will toggle through any additional soft keys, and will eventually remove the soft key commands from the screen.

Soft Key commands provide quick navigation and access to the following features:

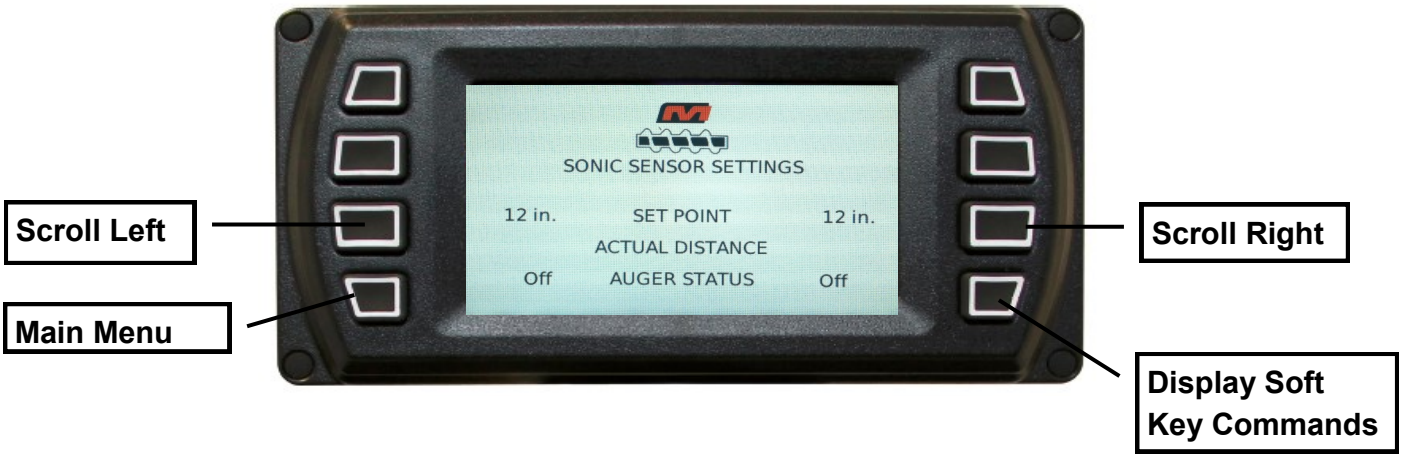
- Home
- Prev. (Scroll Left)
- Day/Night
- Next (Scroll Right)

Diesel Exhaust Fluid (DEF) Lamps

If equipped with a Tier IV engine with Exhaust System Cleaning, these lamps will indicate the status of the DEF. Refer to your Engine's Operation Manual for further information.

NAVIGATING THE MAIN CONTROL PANEL

"Sonic Sensor Settings Display"



Sonic Sensor Settings Display

This page displays information relevant to your Head of Material Control. It includes a combination of readouts and set points. Pressing the **Enter** key will display soft key commands. Continuing to press **Enter** will toggle through any additional soft keys, and will eventually remove the soft key commands from the screen.

Set Point

This is a user-defined setting which is actuated using the "Head of Material" toggle on either control panel. The measurement is a reading of the length between the extension mounted sonic sensor and the height of the material in front of the screed. To increase Head of Material, press up on the toggle switch and the resulting number will decrease (since there is more material in front of the screed, the distance is less). To decrease head of material, press down on the toggle switch and the resulting number will increase. **The recommended setting is 12 in.**

Actual Distance

This is the real-time reading of the distance between the extension-mounted sonic sensor and the material in the screed. If this number is greater than the Set Point, the system will automatically turn on the conveyor and auger to fill up the screed with material until the Actual Distance is equal to the Set Point. **If no figure is displayed, the paver is either paused and/or the feed control is not set to AUTO.**

Auger Status

This shows the current status of the feed control system. It will either read OFF, AUTO, or MAN.

NAVIGATING THE MAIN CONTROL PANEL

"The Main Menu"

Utilities

Access for System Settings, Service Reminders, & Date/Time adjustments.

User Settings

Access this page to adjust display brightness, switch between metric and imperial, change language, and switch between day and night Mode.

Engine Diagnosis

Access this page to scan for engine faults and to scroll through a list of previously stored faults.

Gauge Display

Access this page for Engine Gauges including: Hour Meter, Tachometer, Volt Meter, Fuel Level, Oil Temperature & Pressure.

Viewing this page will also allow you to access Sonic Sensor Settings and readings for head of material control.

NAVIGATING THE MAIN CONTROL PANEL

"Utilities"

Use Soft Key 6 to scroll for additional Menu Options.

Date & Time

Access this page to adjust the Date & Time.

Service Reminders

Access this page to set reminders for oil changes, filter changes, and other service items.

System Settings

Access this page to view Application and OS version information. This page should only be accessed or modified in a service setting.

NAVIGATING THE MAIN CONTROL PANEL

"How To"

Set Service Reminders

- This function is not used on the MAULDIN 1750-C

Adjust Display Brightness

- From the Main Menu, press Soft Key #3 to access USER SETTINGS
- Press Soft Key #3 to scroll down until "Brightness" is highlighted
- Press Soft Key #5 to increase brightness or Soft Key #6 to decrease brightness
- Press Soft Key #4 to save your settings

Run and Engine Diagnosis

- From the Main Menu, press Soft Key #2 to access ENGINE DIAGNOSTICS
- Allow system to receive faults. This should take no longer that 1 minute.
- Press Soft Keys #5 and #6 to scroll through messages
- Refer to the following page for legend

Switch From Imperial to Metric Standard of Units

- From the Main Menu, press Soft Key #3 to access USER SETTINGS
- Press Soft Key #3 to scroll down until "Units" is highlighted
- Press Soft Keys #5 and #6 to scroll through the available options

  Note: Options include USA Standard, Metric Bar, Metric kPa, and British Standard
- Press Soft Key #4 to save your settings

Change Language

- From the Main Menu, press Soft Key #3 to access USER SETTINGS
- Press Soft Key #3 to scroll down until "Language" is highlighted
- Press Soft Keys #5 and #6 to scroll through the available options

  Note: Options include English, French, Spanish, German, Italian, and Chinese
- Press Soft Key #4 to save your settings

Switch from Day to Night Mode

- From the Main Menu, press Soft Key #3 to access USER SETTINGS
- Press Soft Key #5 for DAY MODE and Soft Key #6 for NIGHT MODE
- Press Soft Key #4 to save your settings

  Note: This may also be adjusted in the GAUGE DISPLAY view by pressing the ENTER Key and then Soft Key #4

ADDITIONAL OPERATORS CONTROLS

Each operator's console contains these additional controls:

5.0 PAUSE / PAVE RESUME

When activated, after the ignition switch has been turned to the "ON" position, this switch will engage the Pave Resume feature, (see section 15.0 explaining Pave Resume operation), and the light will stop flashing. When activated again the paver will return to pause mode and the pause light will start flashing. When in pause mode the yellow pause light will flash, confirming that the steering controls are disabled.

If when attempting to come out of "PAUSE" the yellow indicator light illuminates solid, (ie. not flashing), then one or both of the *SELECTED* steering joysticks are not in the centered neutral position. Upon centering the joystick(s) to neutral the yellow light will turn off, the paver is now out of "PAUSE".

Any time that the STEERING SELECTOR is changed between the left position and the right position, the paver will automatically return to the "PAUSE" condition.

6.0 TOW POINT

There are two of these switches at each station. The one to your left will adjust the LH tow point cylinder and the one to your right adjusts the RH tow point cylinder. The tow point cylinders adjust the angle of attack for the screed. Before starting to pave make sure these cylinders are at their midpoints, (only half of the cylinder piston exposed), this should be 5 inches. When operating the screed automation systems, (see section **SCREED AUTOMATION SYSTEM**), these cylinders will be utilized by the automation. When operating with out the automation, these switches may be used in lieu of the manual screed depth cranks.

7.0 REVERSING CONVEYORS

This switch, when activated will reverse the direction of both conveyors for as long as the switch is held. Use this feature to minimize material spillage out the paver feed tunnels whenever the paver is to travel around the work site.

ON-BOARD SHUT DOWN SYSTEM

THE 1750 C IS EQUIPPED WITH THE FOLLOWING SHUTDOWN SYSTEMS.

1. Low Oil Pressure — Engine RPM and oil pressure are continuously monitored by your on-board processing system. If the relationship between engine RPM and oil pressure moves outside of the safe operating range, the engine will shut down. You will see the oil pressure icon illuminated and the STOP light will be flashing. If this should occur, return the throttle control to the idle position and restart. The paver will only operate at idle which will allow you to move the paver to a safe parking location for engine servicing.

2. Temperature — The engine coolant temperature warning icon will flash at 221 degrees, at 232 degrees the STOP light will illuminate, and at 239 degrees the paver will shut down. The paver is unable to be restarted until the engine temperature has cooled down to a safe operating range.

3. Low Fuel — When the last bar of the fuel gage goes off the square green light behind the FUEL LEVEL icon will begin to flash, if the paver continues to operate after the FUEL LEVEL icon began to flash the STOP light will illuminate. After the STOP light has illuminated, the engine will only operate for another 10 minutes and then shut down. You will see the FUEL LEVEL icon flashing and the STOP light will be illuminated. If needed turn the ignition switch to the OFF position and restart. The paver will run another 10 minutes and then shut down. This feature prevents the need to prime injectors in the event the fuel tank is run until empty.

CAUTION: ONLY RESTART THE PAVER WITHOUT RE-FUELING TO MOVE THE PAVER OUT OF A DANGEROUS POSITION.

WARNING: THE PAVER WILL ONLY RESTART AFTER FUEL SHUT DOWN OCCURS A LIMITED NUMBER OF TIMES. **CONTINUOS RESETTING OF THE TEN MINUTE TIMER WILL RESULT IN A MAJOR TIME LOSS**. INJECTOR ACCESS REQUIRES REMOVAL OF THE ENGINE ACCESS DOOR AS WELL AS THE ENGINE COMPARTMENT COVER.

OPERATIONAL CONTROLS

Each operator's station on the 1750-C contains one of these switch panels. They are identical from side to side. To simplify what you are looking at, we break these down into three main sections. There is a Left Hand Material Feed section, a Right Hand Material Feed section, and a Central Function section.

NAVIGATING THE OPERATORS STATION

The operator's stations are divided into 3 main sections, (see photo below).

Left Hand Material Feed

Central Functions

Right Hand Material Feed

The Switches perform the following functions:

1.0 Left Hand Material Feed section

LH AUGER SYSTEM:

AUTO / MAN	Runs LH auger in auto or manual mode.
IN / OUT	Augers material to extensions or center of paver, *(for retracting extensions)*
HEAD of MATERIAL	controls the amount of material in front of the screed, *(left hand side only)*
LH EXTENSION	controls in and out of extension
LH CONVEYOR	run conveyor manually or with the auto augers

2.0 Central Function section

HOPPER	Controls the opening and closing of the hopper sides
SCREED	Raises and lowers screed
VIBRATOR - on/off	Vibrator only runs when paver is moving forward, *(vibrator icon will illuminate on the main control panel signaling that power is enabled to the vibrator).*

3.0 Right Hand Material Feed section

RH AUGER SYSTEM:

AUTO / MAN	Runs RH auger in auto or manual mode.
IN / OUT	Augers material to extensions or center of paver, *(for retracting extensions)*
HEAD of MATERIAL	Controls the amount of material in front of the screed, *(right hand side only)*
RH EXTENSION	Controls in and out of extension
RH CONVEYOR	Runs RH conveyor manually or with the auto augers

MATERIAL FEED OPERATION

The 1750-C allows you to configure the operation of the paver to best match the abilities of your paving crew. The OPERATOR SELECTOR switch at the Main Control panel enables you to set up for either one operator controlling all material feed functions **OR** two operators each controlling the material feed functions for their side of the paver. The paver may be operated in Automatic mode Manual mode or Semi Automatic mode.

AUTOMATIC MATERIAL FEED OPERATION

SETUP A One operator at the **Left Hand Station controls ALL feed systems** for both sides of the paver, the Right Hand Station has control of the Central Functions and LH & RH Extensions.

1.0 Go to the MAIN CONTROL PANEL

2.0 At the Operator Selector Switch select: LEFT ONLY

3.0 Go to the LH OPERATORS STATION

4.0 At the LH AUGER SYSTEM set switches to AUTO & OUT

5.0 Set the LH CONVEYOR to AUTO

6.0 At the Main Control Panel look for the LH Auger Icon to be illuminated

7.0 At the RH AUGER SYSTEM set switches to AUTO & OUT

8.0 Set the RH CONVEYOR to AUTO

9.0 At the Main Control Panel look for the RH Auger Icon to be illuminated

Congratulations, the paver is now set to automatically maintain a consistent Head of Material across the entire width of the screed. If you do not have a satisfactory Head of Material as you start to pave simply adjust the HEAD of MATERIAL setting for more or less asphalt.

IMPORTANT: Adjustments made to the HEAD of MATERIAL switch reset to the default every time the paver is shut down. (See section on Sonic Augers for more information about the default setting)

SETUP B One operator at the **Right Hand Station controls ALL feed systems** for both sides of the paver, the Left Hand Station has control of the Central Functions and LH & RH Extensions.

1.0 Go to the MAIN CONTROL PANEL

2.0 At the Operator Selector Switch select: RIGHT ONLY

3.0 Go to the RH OPERATORS STATION

4.0 Follow same procedure from **SETUP A** starting at Item #4

SETUP C One operator at the **Left Hand Station controls LEFT HAND feed systems** and a second operator at the **Right Hand Station controls Right HAND feed systems**. In this set up both stations can control the Central Functions.

1.0 Go to the MAIN CONTROL PANEL

2.0 At the Operator Selector Switch select: DUAL OPERATORS

3.0 Go to the LH OPERATORS STATION

4.0 At the LH AUGER SYSTEM set switches to AUTO & OUT

5.0 Set the LH CONVEYOR to AUTO

6.0 At the Main Control Panel look for the LH Auger Icon to be illuminated

5.0 Go to the RH OPERATORS STATION

7.0 At the RH AUGER SYSTEM set switches to AUTO & OUT

8.0 Set the RH CONVEYOR to AUTO

9.0 At the Main Control Panel look for the RH Auger Icon to be illuminated

MANUAL MATERIAL FEED OPERATION

The 1750-C material feed system may also be run in manual mode instead of automatic. It is recommended that operators less familiar with automatic feeding controls may want to use the manual mode for the first several hours of operation to become familiar with the other controls and operation.

The setup procedure is nearly identical to the setup for the automatic mode. There are the same three setup choices; LEFT ONLY control, RIGHT ONLY control, or DUAL OPERATORS control.

SETUP A One operator at the **Left Hand Station controls ALL feed systems** for both sides of the paver, the Right Hand Station has control of the Central Functions and LH & RH Extensions..

1.0 Go to the MAIN CONTROL PANEL

2.0 At the Operator Selector Switch select: Left Only

3.0 Go to the LH OPERATORS STATION

4.0 At the LH AUGER SYSTEM set switches to MAN & OUT

5.0 Set the LH CONVEYOR to MAN

[**NOTE** At the Main Control Panel LH Auger Icon will **NOT** be illuminated]

6.0 At the RH AUGER SYSTEM set switches to MAN & OUT

7.0 Set the RH CONVEYOR to MAN

[**NOTE** At the Main Control Panel LH Auger Icon will **NOT** be illuminated]

Congratulations, the paver is now set for manual control of the Head of Material across the entire width of the screed. If you do not have a satisfactory Head of Material as you start to pave simply adjust the CONVEYORS and AUGERS between MAN and OFF, (the center position), for more or less asphalt.

SETUP B One operator at the **Right Hand Station controls ALL feed systems** for both sides of the paver, the Left Hand Station has control of the Central Functions and LH & RH Extensions..

1.0 Go to the MAIN CONTROL PANEL

2.0 At the Operator Selector Switch select: Right Only

3.0 Go to the RH OPERATORS STATION

4.0 Follow same procedure from **SETUP A** starting at Item #4

SETUP C One operator at the **Left Hand Station controls LEFT HAND feed systems** and a second operator at the **Right Hand Station controls Right HAND feed systems**. In this set up both stations can control the Central Functions.

1.0 Go to the MAIN CONTROL PANEL

2.0 At the Operator Selector Switch select: DUAL OPERATORS

3.0 Go to the LH OPERATORS STATION

4.0 At the LH AUGER SYSTEM set switches to MAN & OUT

5.0 Set the LH CONVEYOR to MAN

[**NOTE** At the Main Control Panel LH Auger Icon will **NOT** be illuminated]

6.0 Go to the RH OPERATORS STATION

7.0 At the RH AUGER SYSTEM set switches to AUTO & OUT

8.0 Set the RH CONVEYOR to AUTO

[**NOTE** At the Main Control Panel LH Auger Icon will **NOT** be illuminated]

SEMI AUTOMATIC MATERIAL FEED OPERATION

The 1750-C material feed system also offers a very convenient hybrid between the fully automatic and the fully manual modes, known as the semi automatic mode. In semi automatic mode the operator only needs to adjust the CONVEYOR switch between MAN and OFF, the auger will copy whatever the conveyor is doing. Operators will find this convenient, only one switch to control both conveyor and auger on/off.

To set up the semi automatic mode, follow one of the setups for manual mode, (A, B, or C), as outlined above. The only difference is the LH & RH AUGER SYSTEMS should be set to AUTO & OUT.

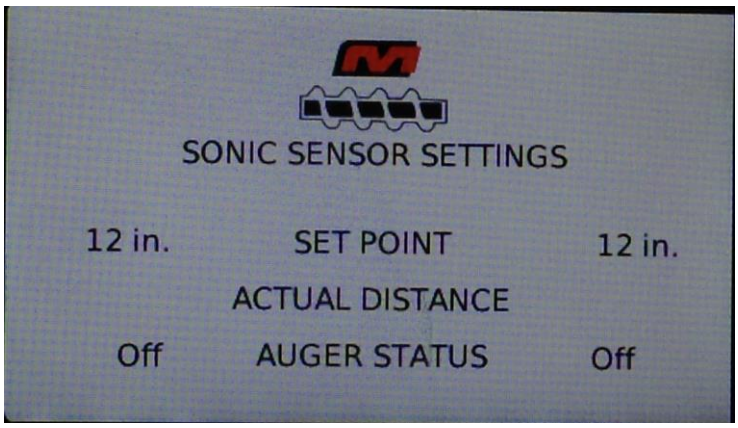
SONIC AUGERS

The automatic material feed system makes use of sonic sensors. The sonic sensor is a ***"non-contacting"*** sensing switch that works by sending sound waves to the ground then sensing the rebound time of the sound wave. The sensor measures distance by the time it takes to receive the rebound. Using sonic sensors you will have great material flow control to the front of the screed. Unlike switches that are either in the mix or physically connected to the mix, sonic sensing will allow you to maintain the amount of material that you prefer on the end of the screed, regardless of adverse paving conditions.

The sonic sensors are silver cylinders and are installed in holders on the screed end gate, they will have a twist on coil cord which runs towards the operators console and hooks into a receptacle labeled "*sonic sensor*". The 1750-C sonic auger system has a built in diagnostic tool located in the main control panel LED readout. Before going any further make sure you have followed one of the Automatic Material Feed Operation setups.

Go to the Main Control Panel and toggle the screen to the "Sonic Sensor Setting". When this is displayed go to an operator's station and locate the "HEAD OF MATERIAL" switch push down and the "Set Point" number will increase and push up and the "Set Point" number will decrease.

IMPORTANT: Whenever the paver key is shut of it will always return to the **"12.0"** default setting.



IMPORTANT: If the sonic sensor bracket has been inadvertently repositioned, the sensor may pick up a reading from the auger flighting, or from the back of the tractor. This will cause the actual distance to read more like 7.0 - 12.0 If this is occurring, remove sensor from bracket, try to identify what is the obstruction, and with a pry bar "tweak" the direction of the bracket away from the obstruction.

NOTE: The operator can change material flow at any time. The readout does not need to be displaying sonic diagnostic information.

Should the display become disabled, ALL PAVING FUNCTIONS continue to operate as normal, minus any readout information.

As an operator the set distances readouts are beneficial in setting the paver up for the specific screed width and the corresponding head of material settings, before paving commences.

CAUTION: BE SURE TO REMOVE SONIC SENSORS FROM THE PAVER EACH NIGHT. STORE WITH THE IGNITION KEY. THESE ARE VALUABLE PARTS TO LEAVE UNATTENDED OVERNIGHT.

ELECTRIC SCREED START UP

- Turn paver ignition on. Paver engine must be running for generator to operate; set engine speed at 1200 rpm.

- Lower the screed onto hot asphalt or 1" from the ground making sure that the extensions are in the closed position. (Heating the screed on a cold surface will increase pre-heat time.)

- Push the "AUTO" button. The heating system will go into pre-heat mode.

- The key pad will flash between "PRE (for pre-heat) and a number. The number is the difference between the screed temperature and the set point. This number will countdown as the screed heats up. When the countdown reaches 0 the screed is at the set point temperature, the heat system will switch to "auto mode" and the display will show the actual screed temperature.

- To adjust the set point use the up/down arrows. By selecting either arrow the display will show the set point. Once the set point is displayed, the arrows will increase or decrease the value. Use the up/down arrows to set your desired temperature. Factory recommended setting 230 degrees. There is only one temperature set point. (If the mat streaks when paving starts, raise the set point 10 degrees at a time until streaking is eliminated)

- There are two-indicator lamps per-zone.
    - The lamps are :
        - Upper: Green, Yellow, Red, or Turned off.
        - Lower: Yellow or Turned off
    - Upper:
        - Green Temperature OK (10 degrees of set point)
        - Green flash Temperature OK (Asphalt has heated screed more than 10 degrees above the set point)
        - Red flash Failure, temperature sensor defect.(Still heating in fault mode)
        - Red Failure, channel stopped (not heating)
        - Turned off Temperature not reached or system in off.
    - Lower:
        - Yellow Heating is on
        - Turned off Heating is off

- The paver will continually monitor the four heat zone temperatures and supply heat to any zone that falls below the pre-set temperature.

- To change the screed temperature push the desired zone then use the arrow up/down to reach the new setting.

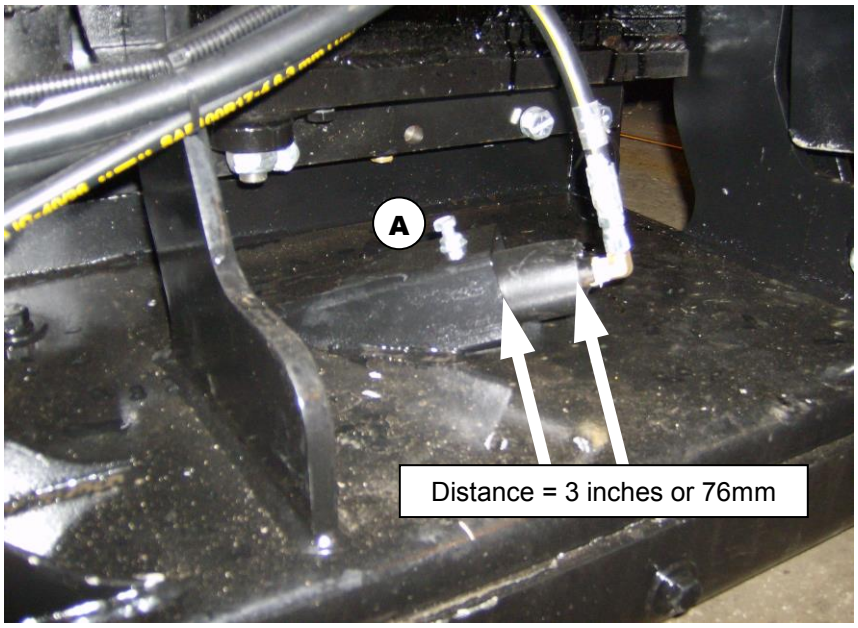
- To turn the heat off in all four zones simply push the "off" button.

SILVER-16 SCREED HEATING SYSTEM

POSITION SETTING FOR THE MAIN SCREED BURNERS

Before attempting to light the propane heating system, first verify that the burners are correctly installed in the screed housings. The body of the burner is secured into the housing via a bolt and jam nut, **A**.

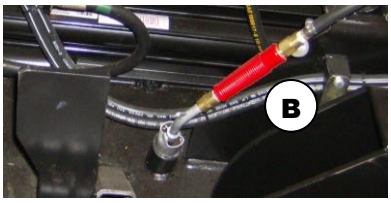
If repositioning is required these will have to be loosened, the burner repositioned and then locked down to prevent movement of the burner within the housing. Proper positioning is illustrated to the right.



LIGHTING PROCEDURE

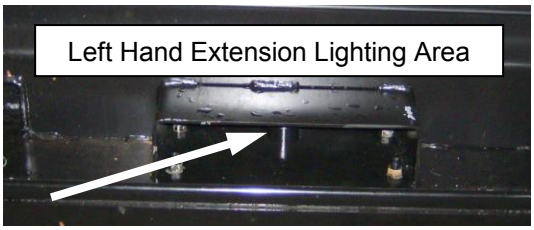
Set Pressure regulator to **4 pounds**, (you may need to open a valve to see the pressure drop).

Remove hand lighting torch, **B**, turn on gas, & light with a safety striker.



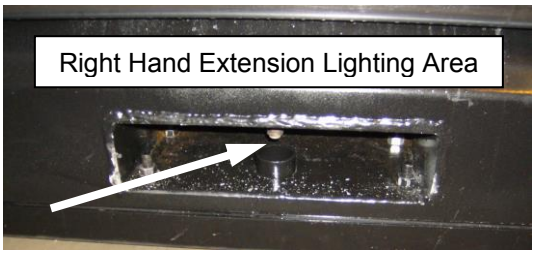
Turn on gas to LH extension and point hand torch at lighting area as shown.

Verify ignition and a clean burn before moving on to next step.



Turn on gas to RH extension and point hand torch at lighting area as shown.

Verify ignition and a clean burn before moving on to next step.



With extension burners operating, turn on gas to main screed burners and point hand lighting torch at the lighting area.

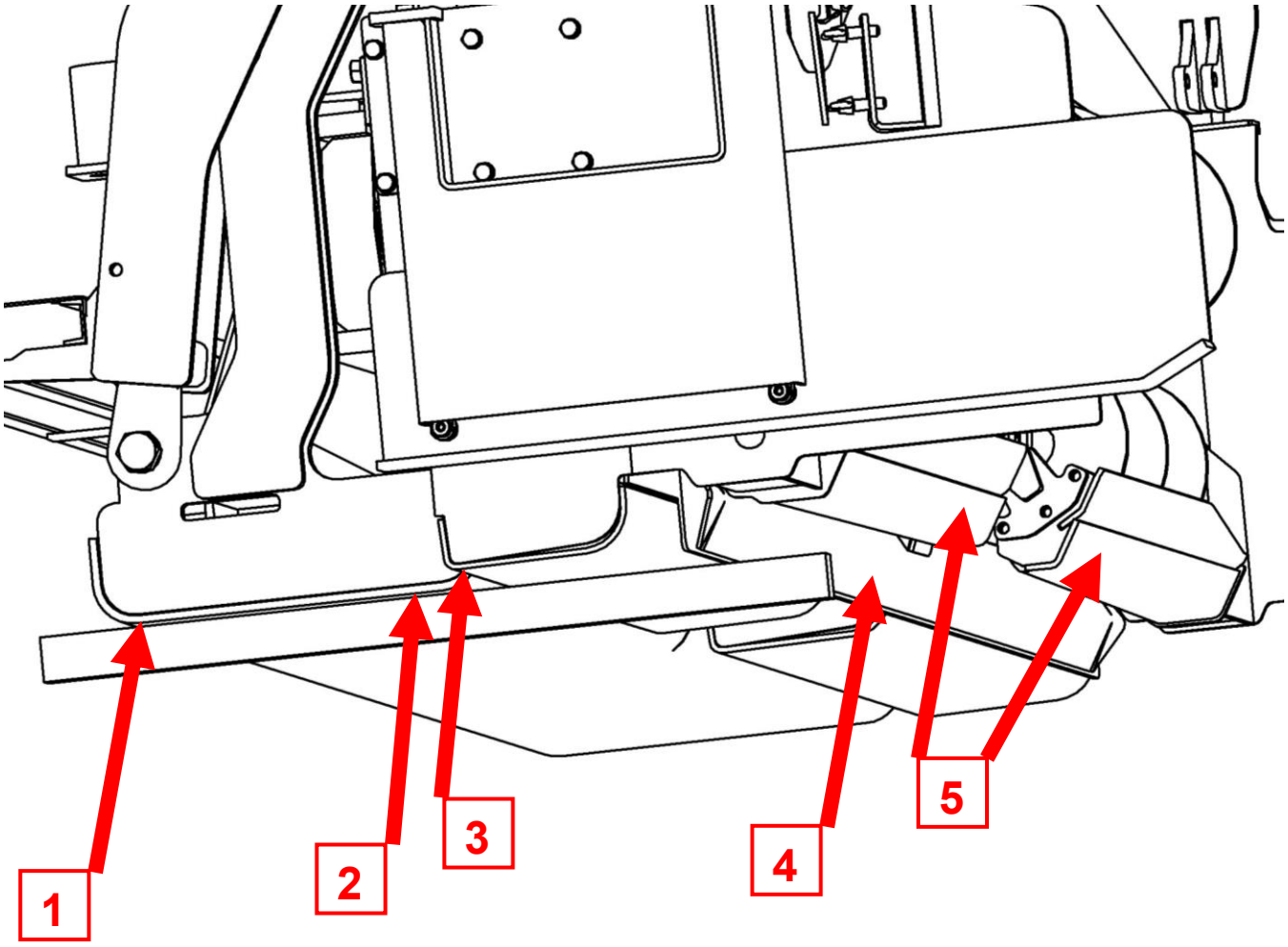
VERY IMPORTANT – First light the inboard burners, then light the outboard burners.

Preheat Screed at the 4 pound setting until screed has established a clean burning flow of air, (this is between 3 – 5 minutes depending on outside air temperature).

After preheat, turn the regulated pressure up to 7 – 9 pounds for approximately ten minutes.

If extended burner operation is required, reset the regulated pressure to 4 pounds.

SILVER-16 SCREED COMPONENTS



1. Main Screed Trailing Edge
2. Main Screed Leading Edge
3. Extension Trailing Edge
4. Pre-Strike Off
5. Auger Feed Tunnels

SILVER-16 SCREED CROWN SETTING

1. Adjust tow point cylinders to a setting that exposes an equal amount of the cylinder rod on each cylinder. Lower screed onto a flat surface, find the null position of the screed depth handles by adjusting them until they are free and not in tension.

2. Raise screed and run a string across the leading edge of the main screed bottom, as close as possible to the bullnose of the screed plate, and adjust the forward ratchet jack until there is a slight gap (approximately 1/16”) between the screed plate and the string.

String MUST be on the flat portion of the screed, not on the radius portion

3. Place the string across the trailing edge of the main screed bottom, near the rear curvature of the screed plate, and adjust the rear ratchet jack until the screed plate just touches the whole length of the string. Pull the string away, at one end, and bring it back to verify that it contacts the entire length at the same time.

String MUST be on the flat portion of the screed, not on the radius portion

4. Place the string across the leading edge and double check the gap between the screed bottom and the string. Re-adjust the forward ratchet jack as necessary to obtain the 1/16” gap between the string and screed plate.

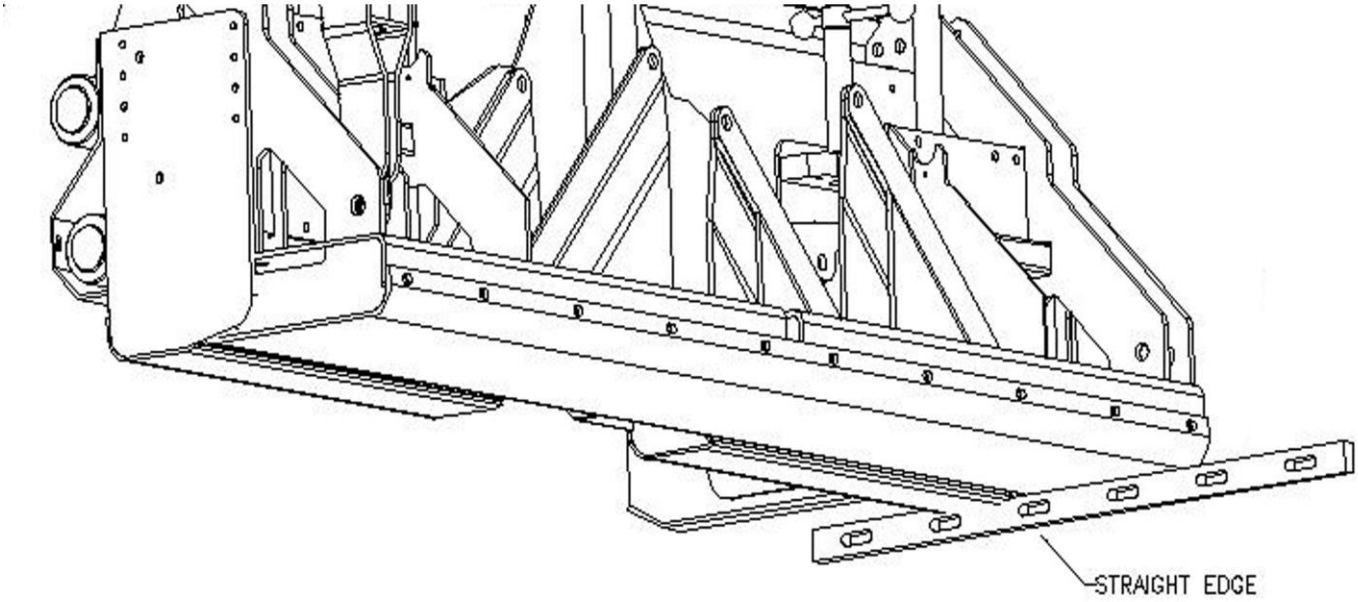
5. Place the string across the trailing edge and double check the gap between the screed bottom and the string. Re-adjust the rear ratchet jack as necessary to verify the screed plate just touches the whole length of the string.

6. Repeat steps 4 and 5 until no adjustments are required.

Crown Definition:

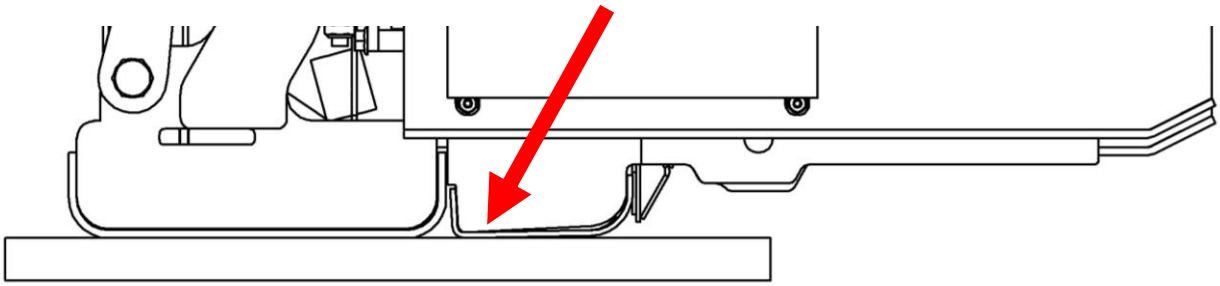
Manipulation of the ratchet jacks to deflect the screed bottom, in order to produce the desired mat texture and profile.

Optimum performance achieved when screed has very minor positive crown.



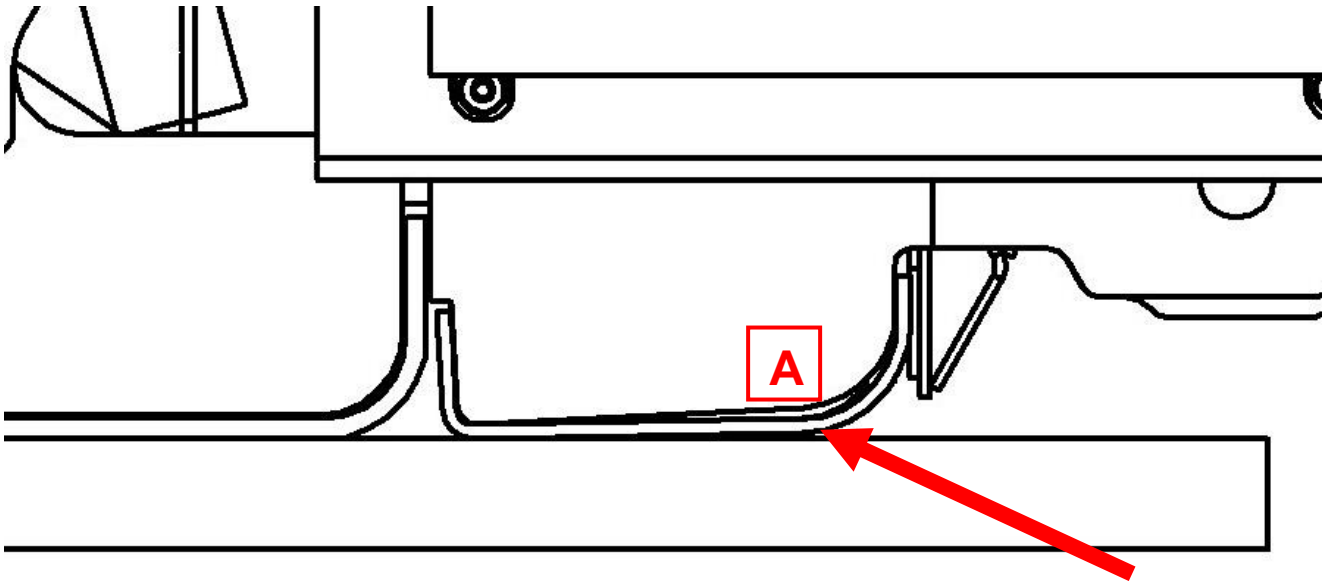
SILVER-16 SCREED EXTENSION SETTING

7. **SET MATCH HEIGHT -** With the extensions completely closed, adjust the screed extension match height setting, until the extension screed plate trailing edge just touches a straight edge held against the main screed bottom at the outside edge, oriented in forward to rearward direction as shown.

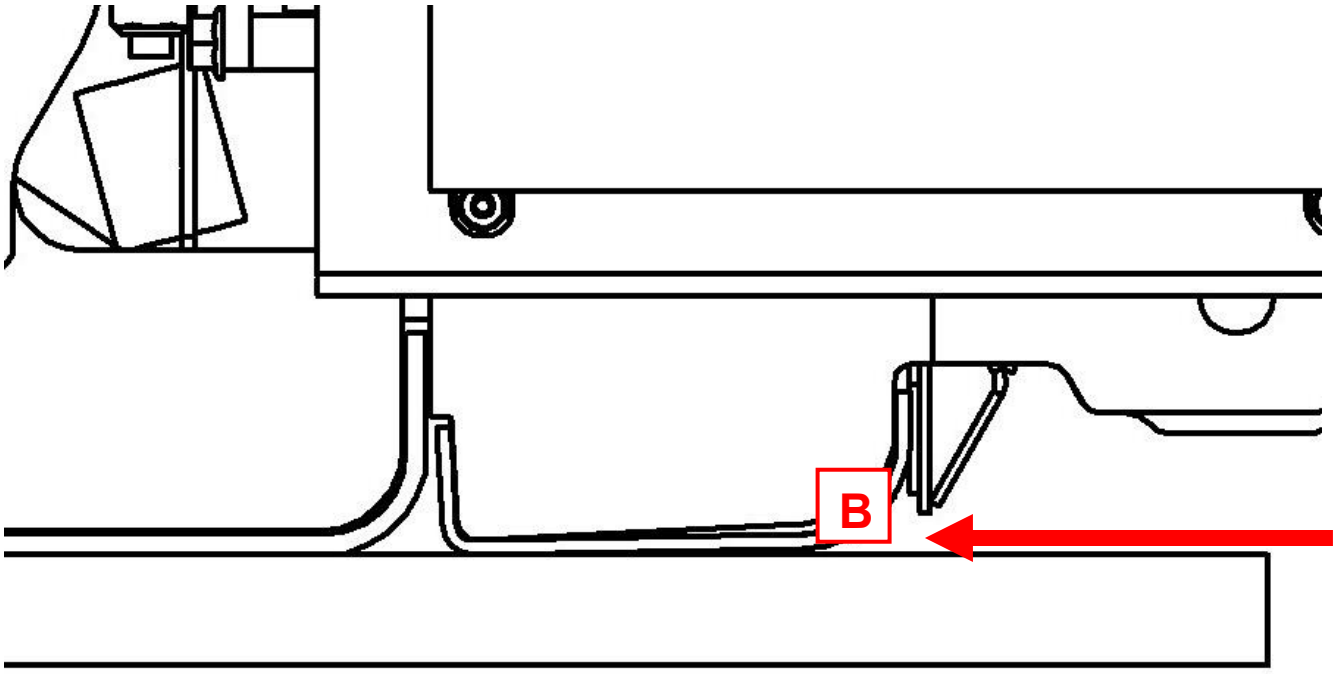


8. **SET EXTENSION SLOPE -** With the extensions completely closed, run a string across the entire trailing edge of the screed extension bottoms. Adjust the slope ratchet style handles until the screed extension bottoms are above the string, both sides, looking at the inboard edge of the extension bottoms. Then, reverse direction on the slope ratchet handle and lower the inboard edges until they are just contacting the string.

9. **SET EXTENSION ANGLE OF ATTACK -** Measure the distance marked "**A**". This is the extension angle of attack measurement and should be originally set at ¼" above the straight edge. Make the first measurement with extension fully retracted, then second measurement with extension fully extended. To adjust angle, fully extend the extension. Two adjusters are located on the top side of extension bottoms, one inboard and one outboard. Release the jam nuts and turn adjusters to desired ¼" setting. Clockwise for increased angle. To decrease angle, adjust counter-clockwise PLUS collapse jam nut to pull bottom upward into new position.



10. **MEASURE PRE-STRIKE OFF –** You **MUST** have completed steps 7 – 9 before attempting to set the Pre-Strike Off! Position Straight edge as shown, 12" from the outer edge of the main screed plate. Measure the distance marked "**B**". Both sides of the Pre-Strike Off are vertically adjustable, so you will need one measurement 12" in from the right hand edge and another measurement 12" in from the left hand edge. The gap between the straight edge and the bottom of the Pre-Strike Off should be ¾" minimum to 1" maximum. For lifts of 5" – 6" this setting may need to be increased.



11. **UNLOAD PRE-STRIKE OFF –** Fully extend both extensions. SLOWLY, lower the screed onto a block that has been placed directly underneath the Pre-Strike Off. From the top side you will be able to see the Pre-Strike Off mount ride up in its slotted mounting on either side of the top walk board. As soon as you see this slotted mount come into view stop the hydraulic lowering of the screed.

12. **ADJUST PRE-STRIKE OFF –** To adjust the Pre-Strike Off raise the center walk board of the screed exposing the cam style adjustment for each side. First loosen the jam nut on the "locator" bolt, then fully remove the "locator" bolt. Second, rotate the "cam" bolt, clockwise to raise the Pre-Strike Off. Reinstall "locator" bolt, tighten jam nut.

From this Initial Factory Setting of the screed you will need to make a match height adjustment in the down direction when you start paving.

SETTING THE SILVER-16 TO PAVE

The procedure on the previous pages was set on your Silver-16 Screed before leaving the factory. It is strongly recommended that before initial start up you follow this procedure and check the settings.

BEFORE YOU PAVE WITH THE SILVER-16

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.

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 two full rotations, (in the thicker direction). Start paving and make adjustments as required.

SCREED AUTOMATION SYSTEM – *OPTIONAL EQUIPMENT*

Screed Automation is available for your 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. A second grade system, or a slope control system can be added. However, only two of these can control the screed at any given time. If you have purchased a grade, grade & slope system, the third sensor may be hooked up in a monitor only mode.

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.

GRADE ONLY - System set up as follows:

IMPORTANT: **Key switch must be off!** Fuse failure is likely if you connect cables to the grade system with the key switch in the "on" position.

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 operator station.
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 "reference bale" attached. Plug one end of cable into ultra-sonic 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 – GRADE ONLY OPERATION:

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. The bottom of the "reference bale" should be 10" – 18" from the measurement surface. 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.

    * *NOT REQUIRED WHEN CONDITIONS OF EACH PASS HAVE THE SAME STARTING POINT AND THE SAME REFERENCE POINT*

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.

GRADE & GRADE OPERATION – Same as above for the other side of screed.

SLOPE ONLY - System set up as follows:

1. Install Slope mounting beam with brackets provided to the two operator control stand bases.
2. Place the handset into the cradle at the operator's station. Route cable over the resting bolt. Plug into the into the paver receptacle labeled hand held on side of operator's consoles.
3. Mount slope sensor to mounting beam with the two bolts provided.
4. Plug connecting cable into the paver receptacle labeled slope sensor on side of operator's consoles. Plug other end into the slope sensor. Use RH plug to match RH operators station, vice versa for LH control.

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 – SLOPE ONLY OPERATION:

1. Pulling off an asphalt pad or wood boards. Screed must be at desired thickness **& slope** levels.
   - i. 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.
   - ii. Ensure that the slope sensor is positioned level on the slope beam.
   - iii. Lower screed onto a level surface with **ZERO %** slope.
   - iv. At the same time press and hold for 3 seconds "MAN" & "AUTO". This will reset the slope sensor to the default/zero position.
   - v. Lower screed to paving position on pad or boards. This screed should be resting in a position that has the screed at both the desired thickness as well as the desired slope.
   - vi. Null the thickness screw. *(See screed settings if unsure of this procedure).*
   - vii. Rotate thickness screw two full rotations, (in the thicker direction).
   - viii. Lock thickness screw into position with travel locks.
   - ix. Press "CAL" button on the Handset. At this point the slope sensor will be reading out the actual slope percentage the screed is resting at. If at the desired slope % you may continue. Otherwise, return to step "v." and correct your asphalt pad.
   - x. Press "AUTO" button on the Handset. The word AUTO will become illuminated.
   - xi. Check the slope of asphalt mat with a measuring device. Adjust the up ⬆ or the down ⬇ on the handset as required until screed is paving required slope.

How to cancel & resume:

2. Cancel Automatic operation – Be sure to do this before you lift the screed at the end of a pass.
    viii. Press “MAN” at any time to stop the automation.

3. Resume Automatic Operation – with out changing any settings, ***[typical for truck change]***
    ix. Press “AUTO” button on handset

4. Resume Automatic Operation – with a change in settings, ***[typical for a new pass]***
    x. Lower screed to paving position on pad or boards.
    xi. Null the thickness screw. *(See screed settings if unsure of this procedure).*
    xii. Rotate thickness screw one full rotation, (in the thicker direction).
    xiii. Lock thickness screw into position with travel locks.
    xiv. Press “CAL” button on the Handset.
    xv. Press “AUTO” button on the Handset.
    xvi. Check the slope of asphalt mat with a measuring device. Adjust the up ⬆ or the down ⬇ on the handset as required until screed is paving required slope.

How to operate – GRADE & SLOPE OPERATION:

When running grade & slope, you must first decide which side of the screed is to control grade, (or thickness), and which side of screed is to maintain a certain slope, given the grade maintained on the opposite side. The following procedure assumes that grade is maintained on the RH side of the screed and slope is maintained on the LH side of the screed.

1. Pulling off an asphalt pad or wood boards. Screed must be resting at desired mat thickness on the RH side, from there the mat should taper, (up or down), to the desired slope percentage on the LH side.
    i. 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.
    ii. Ensure that the slope sensor is positioned level on the slope beam, and equally spaced into the centerline of paving.
    iii. Lower screed onto a level surface with **ZERO %** slope.
    iv. At the LH station use the hand held remote and at the same time press and hold for 3 seconds “MAN” & “AUTO”. This will reset the slope sensor to the default/zero position.
    v. With the grade sensor installed on the RH side, 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.
    vi. 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.
    vii. Lower screed to paving position on pad or boards. This screed should be resting in a position that has the screed at both the desired thickness as well as the desired slope.
    viii. Null the thickness screw. *(See screed settings if unsure of this procedure).*
    ix. Rotate thickness screw one full rotation, (in the thicker direction).
    x. Lock thickness screw into position with travel locks.
    xi. At the RH station use the hand held remote and press “CAL” button on the Handset.
    xii. At the RH station use the hand held remote and press “AUTO” button on the Handset. The word AUTO will become illuminated. The RH station is now in Auto mode to maintain grade.
    xiii. At the LH station use the hand held remote and press “CAL” button on the Handset. At this point the slope sensor will be reading out the actual slope percentage the screed is resting at. If at the desired slope % you may continue. Otherwise, return to step “vii.” and correct your asphalt pad.
    xiv. Press “AUTO” button on the Handset. The word AUTO will become illuminated. The LH station is now in Auto mode to maintain slope.

xv. Check thickness of asphalt mat with probe. Adjust the up ⬆ or the down ⬇ as required until screed is paving required depth.
xvi. Check the slope of asphalt mat with a measuring device. Adjust the up ⬆ or the down ⬇ on the handset as required until screed is paving required slope.

How to cancel & resume:

2. Cancel Automatic operation – Be sure to do this before you lift the screed at the end of a pass.
   xvii. Press "MAN" at any time to stop the automation.

3. Resume Automatic Operation – with out changing any settings, ***[typical for truck change]***
   xviii. Press "AUTO" button on handset

4. Resume Automatic Operation – with a change in settings, ***[typical for a new pass]***
   xix. Lower screed to paving position on pad or boards.
   xx. Null the thickness screw. *(See screed settings if unsure of this procedure).*
   xxi. Rotate thickness screw one full rotation, (in the thicker direction).
   xxii. Lock thickness screw into position with travel locks.
   xxiii. Press "CAL" button on the Handset.
   xxiv. Press "AUTO" button on the Handset.
   xxv. Check the slope of asphalt mat with a measuring device. Adjust the up ⬆ or the down ⬇ on the handset as required until screed is paving required grade or slope, depending on which remote you are using.

GRADE, GRADE & SLOPE OPERATION – Same as above for the other side of screed.

FLUID CAPACITIES AND RECOMMENDATIONS

FLUID	CAPACITY	RECOMMENDATION
Engine oil	9 U.S. quarts	High quality CC/CD multi-grade lubricating oil. Above 14 deg. F use 15W40 or 20W40.
Hydraulic	30 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	32 U.S. quarts	High quality Above 14 deg. F
Diesel	22 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

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.

IMPORTANT: The engine compartment on the 1750-C is designed to capture fluids and drain them to the hopper. Before removing either the oil or fuel filter elements, or draining the oil pan remove the plug on the front side of the hopper, and place a capturing bucket below the opening.

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.

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

Engine Status	Voltmeter Reading	Indicates	To Correct
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.	
Main circuit, Rexroth tandem pump	300 - 400 p.s.i.	***Neutral Position***
Main circuit, Rexroth tandem pump	up to 4500 p.s.i.	***Relief Pressure***
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

TROUBLESHOOTING CHART

PROBLEM	CAUSE	ACTION
Screed Overfeeds with material	1. Head of Material set too high 2. RH sonic sensor is installed on LH side and vice versa. 3. Asphalt is too close to sensor	1. Reset Head of Material to 12" and adjust as needed 2. Move sensors from side to side 3. Remove asphalt away from sensor bottom, clean w/ dry rag if necessary. (This can occur during extension retraction.
Auto Augers Will Not Stop	Sensor is out of range – asphalt is too close to sensor	Turn switch from AUTO to OFF and back to AUTO. *Auger will stop until asphalt level drops back into range*
Vibrator is on but not working	Vibrator only runs during forward travel	Come out of pause and begin forward motion
Extensions are diving	1. Improper screed slope setting 2. Material build-up inside extension	1. Follow screed setting procedure – SEE section **Setting the Screed to Pave.** 2. Clean out material above the extension heating chamber.
Loose or Streaking Mat	1. Screed plate is worn 2. Crown setting is incorrect	1. Change the screed plate 2. Make corrective adjustments in accordance with the section **Screed Crown Control System.**
Engine Stops	1. Smart shut down activated 2. Manual shut down button activated	1. SEE section **On-board Shut-down System**. 2. Twist button to reset
No steering control	1. Pause light is flashing 2. Pause light is solid 3. RH steer is selected and you are trying to operate from LH, and vice versa.	1. Toggle pause switch 2. Position steer sticks in neutral 3. Match selector switch to your needs
Screed Automation will not power up	Cables were connected with key switch on, or paver running - 10 AMP Fuse blown.	Open Main Electrical panel, replace blown fuse.

Recommended Preventive Maintenance Intervals

INTERVAL	ITEM	PROCEDURE
Initial Break-In (After 1st 50 hours)	Hydraulic Filter	Change
	Engine Oil & Filter	Change
	Hydraulic Leaks	Inspect & Tighten as required
	Loose Nuts & Bolts	Inspect & Tighten as required
Daily or 10 hours	Hydraulic oil level	Inspect & add as necessary
	Engine oil level	Inspect & add as necessary
	Engine air cleaner system	Check service indicator and/or inspect
	Engine coolant level and system	Inspect & add as necessary
	Radiator	Clean and inspect
	Fuel system	Drain water from separator
	Conveyor, Augers, Screed	Clean Asphalt from moving parts
50 hours	All Daily Items	As above
	Front idler sprocket	Grease
250 hours	All 100 hour items	As above
	Engine air cleaner	Replace element
	Engine crankcase	Drain and refill*
	Engine oil filter	Replace*
	Fuel tank	Drain water and sediment
	Hydraulic filter	Replace*
	All crank handle bearings	Grease
500 hours	All 250 hour items	As above
	Fuel filters	Replace
	Engine	Have serviced by authorized Dealer
1000 hours	All 500 hour items	As above
	Hydraulic system	Drain and refill

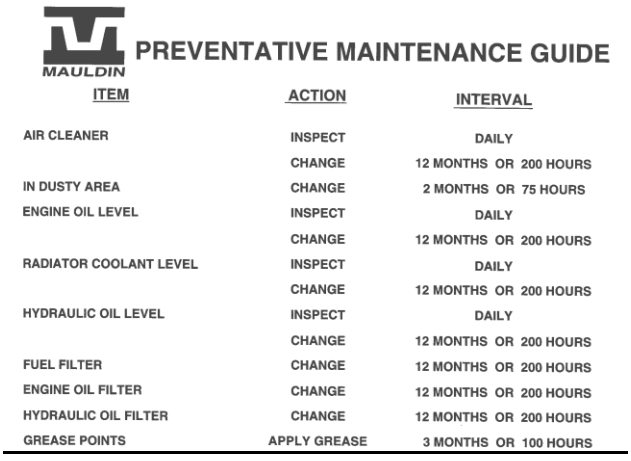
*Change after first 20 hours service, every 250 thereafter.

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 MAINTENACE WILL ADVERSLY EFFECT THE PERFORMANCE OF THE PAVER, AND MAY VOID YOUR WARRANTY IN PART OR IN ENTIRETY.



MAULDIN

PREVENTATIVE MAINTENANCE GUIDE

ITEM	ACTION	INTERVAL
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
PAVING PRODUCTS

CALDER BROTHERS CORPORATION

(LIMITED) PRODUCT WARRANTY

Calder Brothers Corporation warrants that the Paver, Roller, Tank or Grader under this program will be free from defects in material and workmanship for a period of(12) twelve months from the 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 election, any part or parts deemed defective after examination by Calder Brothers Corporation or an Authorized Service Representative via prepaid transportation for which is found to be defective, will be repaired or replaced and returned to the customer via prepaid surface transportation within the United States. Should any part be found not defective, inspection and handling may be charged to the customer by Mauldin or an Authorized Service Representative.

EXCLUSIONS:
This warranty does not apply to routine wearable parts of the Mauldin machine such as seals, points, plugs, hoses or similar items. This warranty does not extend to any machine or part replaced or repaired under this warranty. This warranty does not cover any repair or replacement labor or any part of parts found defective after examination by Mauldin 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 LIABILTY OF MAULDIN ARISING IN TORT OR STRICT LIABILITY IN TORT, OR FOR LOSS OR USE, REVENUE OR PROFIT WITH RESPECT TO MAULDIN MACHINE AND/OR PARTS FOR ANY LIABILTY OF CUSTOMER TO ANY THIRD PARTY, OR FOR OTHER DIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES.

I have read and fully understand the warranty policy above.

_____ _____

Customer Witness

CALDER BROTHERS CORPORATION

Notes:

PAVER OPERATION MANUAL

MODEL 1750-C