

There are two pages 8, 9 & 16. Tab 8, 9 & 16 are for new 4800 Tex Fiber. Tab 18 - 20 are for older 2400 Tex Fiber. There are two sets of pages 4, 12, 13, 14, 15 & 16. Tab 4, 12, 13, 14, 15 & 16 are for new milled blade cutter head. (This was originally 03/12/15 Revision showing 1/4" & 1/2" spacing - it was updated on 09/10/15 Revision on pages 4, 12 & 16 to show 1/4" and 1/4" x 1/2" spacing. Tab 21 - 26 are for old replaceable blade cutter head.

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Safety Information

Be alert when seeing this symbol in this manual.

There is the potential for personal injury

Follow recommended precautions and safe operating practices.

Personnel must be fully qualified to perform procedures in this manual.



Follow Safety Instructions

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

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

Prevent Bypass Starting

Avoid possible injury or death from engine runaway. Do not start machinery by bypassing normal engine circuitry. Not only is it extremely dangerous, it can also VOID your warranty.

Start engine ONLY from operator's platform with pump load switch off.

Prepare for Emergencies

Be prepared if a fire starts.

Keep a first aid kit and fire extinguisher and emergency numbers handy.

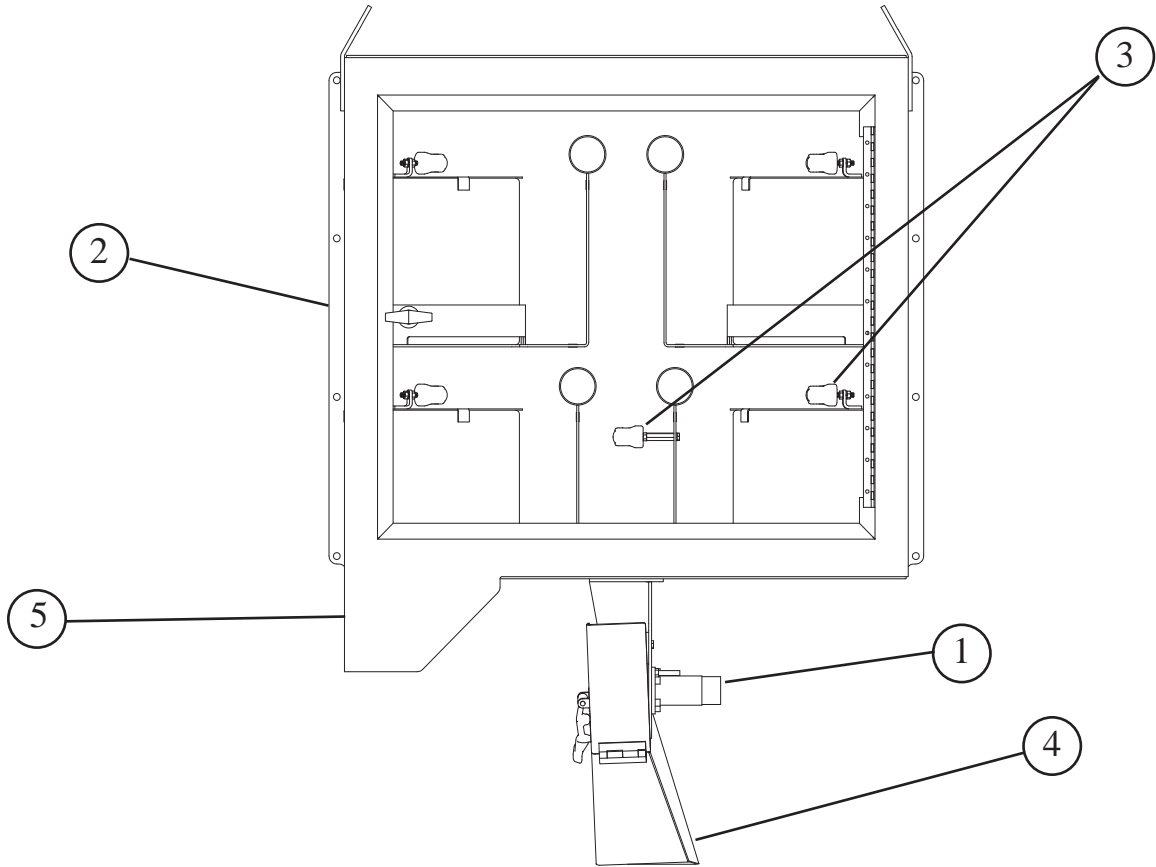
Stay Clear of Rotating Drivelines

Entanglement in rotating driveline can cause serious injury or death.

Keep guards and covers in place at all times when operating machine.

Do not wear loose clothing. Stop engine and be sure drivelines are stopped before making adjustments or performing any type of service on equipment.

Getting To Know The Fiber Injection System



1. Fiber Chopper Head

4. Fiber Chopper Output Chute

2. Fiber Enclosure

5. System Monitoring & Control Panel

3. Fiber Roll Guides and Feed System

Getting To Know The Fiber Injection System (cont'd)

Fiber Additive

Fiber additive comes in spools of roving or yarn and is stored on these spools which are mounted in the enclosure. The fiber is brought out of the enclosure and cut to size by the fiber chopper head. It then feeds into the inlet hopper and pugmill. The fiber chopper head contains a drive wheel (or anvil), an idler wheel and a cutter wheel (or head). The drive wheel engages with both the idler wheel and the cutter wheel and the roving is squeezed between them. When the drive wheel rotates, it will draw the roving between it and the idler wheel where it is then fed between the drive wheel and the cutter wheel. The blades on the cutter wheel then cut the fiber and the speed of the wheels ejects the cut fibers into the fiber chute. The chopper is hydraulically driven and is started when Main Start is engaged, providing the fiber chopper on/off switch is turned on. The rate at which the fiber chopper delivers fiber to the inlet hopper is controlled by the fiber chopper speed control valve.

Fiber Injection System:

The fiber injection system is powered by the main hydraulic circuit. Its oil is supplied through a tee near the inlet of the main start valve. The oil flows to an on/off valve, then through a chopper speed control valve. The on/off valve comes on when Main Start is engaged, providing the "FIBER SYSTEM" switch is on. From the on/off valve the oil flows to a separate "FIBER FLOW CONTROL" valve. This is an adjustable flow control valve that directs the required flow of oil to the fiber chopper motor.

The fiber injection system can cut fibers in lengths of 1/4" (6mm) or 1/4" and 1/2" (6mm and 12mm) long. This is done by the number of blades on the cutter head. The circumference of the cutter is nominally about 9" (230mm). Dividing that by the number of blades gives the fiber length. With 36 blades, it will cut 1/4" (6mm) long fibers and with 27 blades, it will cut alternating 1/4" and 1/2" (6mm and 12mm) long fibers. These lengths are the nominal lengths. The actual lengths are usually slightly longer.

Installation

Before Starting Refer to Drawing No. MB280100

1. Drill 7/16" (11mm) holes to mount chopper assembly to back of fines hopper.
2. Drill holes in dash per drawing for hydraulic quick-disconnect panel.
3. Mount chopper assembly using hardware provided.
4. Mount hydraulic quick-disconnects panel on dash.
5. Connect hydraulic hoses - pressure hose connects to bottom of pressure tee and return hose connects to a return port in the hydraulic reservoir. The pressure hose is connected using the reducer fitting supplied. The return hose tee is installed to the center rear port of reservoir using the fitting supplied.
6. Make electrical connections - a jumper harness is supplied that is inserted between the joystick harness and the main harness. This is located underneath the operator's control station.
7. Cut hole in inlet hopper rubber and install chute for the fiber feed. Bolt the chute to the bottom of the fiber chopper enclosure. Position as required to fit.

Fiber Loading Procedures

1. Open fiber enclosure door.
2. Insert spools of fiberglass into the supports - place spools vertically so that the fiberglass roving will feed from the inside side of the spool. Feed roving through top cover guides while placing cover guides onto roving spools, then feed roving up over the round bar and down through the centering feed eye.
3. Cut the end of the roving cleanly and double it over approx. 1" (25mm) from the end.
4. Feed fiber roving through opening on bottom of enclosure and then through the four (4) holes in the feed plate on the cutter head.
5. Set speed control at slow speed and turn on the chopper by first turning on Fiber Switch and then pulling Main Start trigger (make sure all other material feed functions are off and sequence override valve is set to prevent liquid flow).
6. As soon as fiber roving starts to feed through the chopper, pull Main Start trigger to stop the chopper.
7. An alternative to steps 5 & 6 would be to open chopper head guard and turn blue drive wheel (Anvil) by hand while feeding roving between Idler Bearing wheel, Anvil and Cutting Head.



CAUTION: Do NOT operate chopper with guard open. Cutter blades are sharp and they could cause serious cuts if contact is made while they are operating.



CAUTION: Fiber chopper can generate dust while cutting fiber. Wear appropriate breathing protection such as a dust mask while operating fiber system.

Calibrating The Fiber Injection System

If fiberglass additive is required, the mix design will specify the amount by a percentage of the dry aggregate. This percentage can be converted into a fiber flow rate based upon the aggregate conveyor RPM - see page 9. So, for a known aggregate conveyor speed and aggregate gate setting, we can determine the pounds (or kg.) of aggregate / minute the machine is producing. From this aggregate output rate, we can calculate the fiber flow required:

The fiber injection system is calibrated with three weight tests. A portable scale capable of weighing up to 20 lbs (10 kg) will be necessary for weighing the fiber.

Fiber Calibration

This calibration will develop a number for the Fiber Weight per Count. (The fiber used for calibration must be representative of the fiber to be used on the job.) A sheet is provided to record the calibration data. Fill it out as shown below. A 2,500 count test is the recommended amount. The Fiber Flow display can be switched between RPM and COUNTS by pressing the SEL button and the counts can be reset to '0' by pressing the RST button.

Proceed as in the example that follows:

1. Reach behind the dash panel and move the sequence start/stop override to the calibrate (in) position. This will stop emulsion and water from being pumped into the pugmill. Also, make sure emulsion pump speed control and fines, water & additive switches are off.
2. Load the Fiber Injection System with rolls of fiber.
3. Start the feeding of fiber by turning on Fiber Switch and pulling Main Start trigger, then set fiber feed at 1,250 RPM.
4. Stop the feeding of fiber by pulling Main Start trigger.
5. Reset the fiber feeder counter to read 0 counts.
6. Find a suitable container to place under the fiber chopper discharge hose. Weigh the empty container on the portable scale. Record this weight as the Empty Weight for Trail #1.
7. Press the Main Start trigger to start feeding fiber into the container.

Calibrating The Fiber Injection System (cont'd)

- 8. Press the Main Start trigger again to shut off the flow of fiber when the desired number of counts has been reached. Record this as Fiber Feeder Counts under Trial #1.
- 9. Weigh the full container and record this number as Full Weight under Trail #1.
- 10. Repeat this procedure for trials 2 and 3.

Figure #1: Example of Fiber Injection Calibration with Trial Data and Calculations with 4800 Tex Fiber

UNITS		Trial #1	Trial #2	Trial #3		
Full Weight	lbs (Kg)	28.5	29.5	30		
Empty Weight	lbs (Kg)	4	4	4		
Aggregate Unloaded	lbs (Kg)	24.5	25.5	26		
Head Shaft Revolutions	Rev counts	2505	2497	2510	SUM	Average
Fiber Weight / Rev	lbs/Rev (Kg/Rev)	0.0098	0.0102	0.0104	0.0304	0.010

Equations used in previous table:

Fiber Unloaded = Full Weight - Empty Weight

Fiber / Rev = Fiber Unloaded / Fiber Feeder Counts

Sum = (Fiber / Rev Trial #1) + (Fiber / Rev Trial #2) + (Fiber / Rev Trial #3)

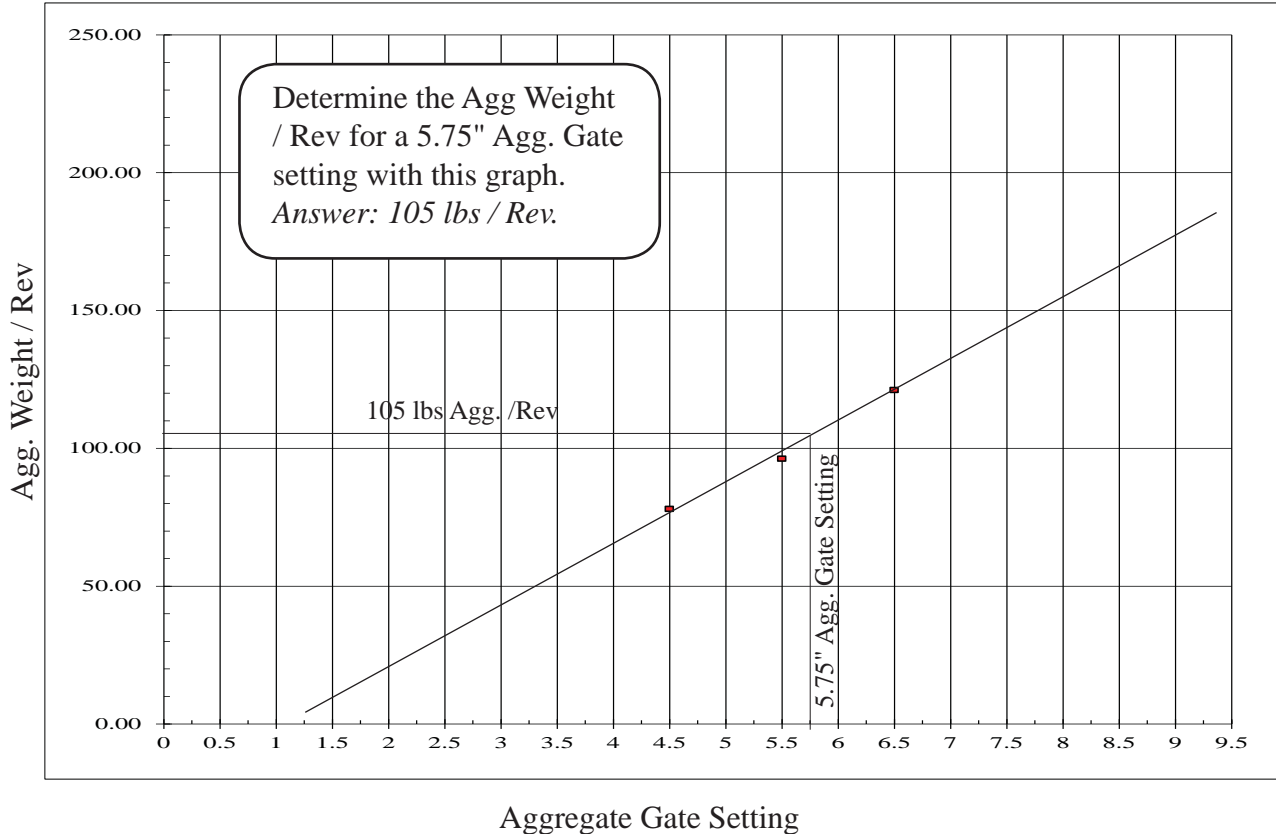
Average = Sum / 3

Fiber to Aggregate Speed Calibration

From the Macropaver calibration the values of aggregate weight per conveyor head shaft revolution versus aggregate gate setting found in figure 1 are plotted on a graph as shown on following page. Enter the graph at the aggregate gate setting determined from the emulsion and aggregate calibration, draw a vertical line up until it intersects the calibration line. Then draw a line to the left from that point to determine the weight of aggregate per revolution. This will be used to calculate the fiber to aggregate speed to match the laboratory design mix.

Calibrating The Fiber Injection System (cont'd)

Example Aggregate Gate Setting versus Weight of Aggregate per Revolution Calibration Graph



At emulsion pump speed of about 450 RPM, the conveyor will be turning about 30 RPM (Conveyor gear-box ratio is 15:1).

At a gate setting of 5.75", the aggregate output is 105 lbs./ rev. x 30 RPM = 3150 lbs./min.

With an fiber requirement of 0.2%, the flow rate required is .002 x 3150 = 6.30 lbs./min.

If the fiber injection system has an output of 0.010 lbs/count it will be putting out 0.010 lbs/min. for every 1 RPM. To achieve 6.30 lbs. min., divide 6.30 by 0.010 = 630 RPM.

For faster or slower conveyor speeds, re-calculate fiber injection system speeds as required.

Fiber Calibration Chart

Job: _____ Date: _____

Machine No: _____ Measured By: _____

Fiber Type: _____

Fiber Calibration

	UNITS	Trial #1	Trial #2	Trial #3		
Full Weight	lbs (Kg)					
Empty Weight	lbs (Kg)					
Fiber Unloaded	lbs (Kg)					
Chopper Shaft Revs	Rev counts				SUM	Average
Fiber / Rev	lbs/Rev (Kg/Rev)					

Operating Fiber Injection System

Once the Fiber System has been calibrated, and settings calculated, you are ready to lay slurry seal using Fiber Injection.

Proceed as follows:

1. Start up the Macropaver as you normally would and position it to begin laying slurry.
2. Turn on fiber switch, along with water, additive and fines switches as required.
3. Set the emulsion pump to 500 - 600 RPM (or desired speed).
4. Shift the Pugmill Control Handle to the full forward position.
5. If you are using an augered box, set the box auger controls as desired.
6. To start mixing material, press Main Start Trigger on the Joystick Control Handle.
 - A. The chopped fiber will flow down into the pugmill.
 - B. Observe the emulsion pump speed and fiber speed meters and adjust if required to maintain the correct ratio.
 - C. Observe the water flow (if being used) and adjust as required.
 - D. The feeding of the fiber from the rolls can be seen by looking through the plexiglass door. While operating, occasionally view to make sure fiber is feeding correctly.
7. To stop, press Main Start Trigger.

CAUTION: While operating, monitoring the flow of fiber into the chute to make sure it is not jamming up. This is especially true when using longer length fibers.

Adjustment and Maintenance

Adjustments

If the roving does not feed properly or is not getting cut cleanly, but the condition of the cutter blades and roller are good it will be necessary to adjust the Roller or Idler Bearing. Access by opening the cover

To adjust Roller, loosen axle bolt and adjust setscrew located on the back end of the mounting plate. After achieving proper adjustment, tighten axle bolt.

To adjust Idler Bearing, loosen axle bolt and push Bearing by hand up against Roller. After achieving proper pressure, tighten axle bolt.

1. Roller should have sufficient squeeze to cut properly. Excessive Roller squeeze or interference will cause excess wear of the Roller, jamming of roving or create starting problems. Insufficient Roller squeeze will result in incomplete cutting of roving.
2. Idler Bearing should be adjusted so there is only slight contact with the Roller. Excessive pressure will overload the shaft and bearings or create starting problems. Insufficient squeeze will cause the roving to not feed properly.

The cut length of the roving fibers may be 1/4" or 1/4" and 1/2" (approx. 6mm or 12mm) depending on the number of blades in the cutting head. The cutting head has a circumference of approx. 9" (230mm) and has either thirty-six (36) blades at 1/4" (6mm) intervals or twenty-seven (27) blades at alternating 1/4" and 1/2" (6mm and 12mm) intervals.

Maintenance

Maintenance consists of regular inspection for and replacement of any parts that may have worn, such as cutter head, roller or idler bearing.

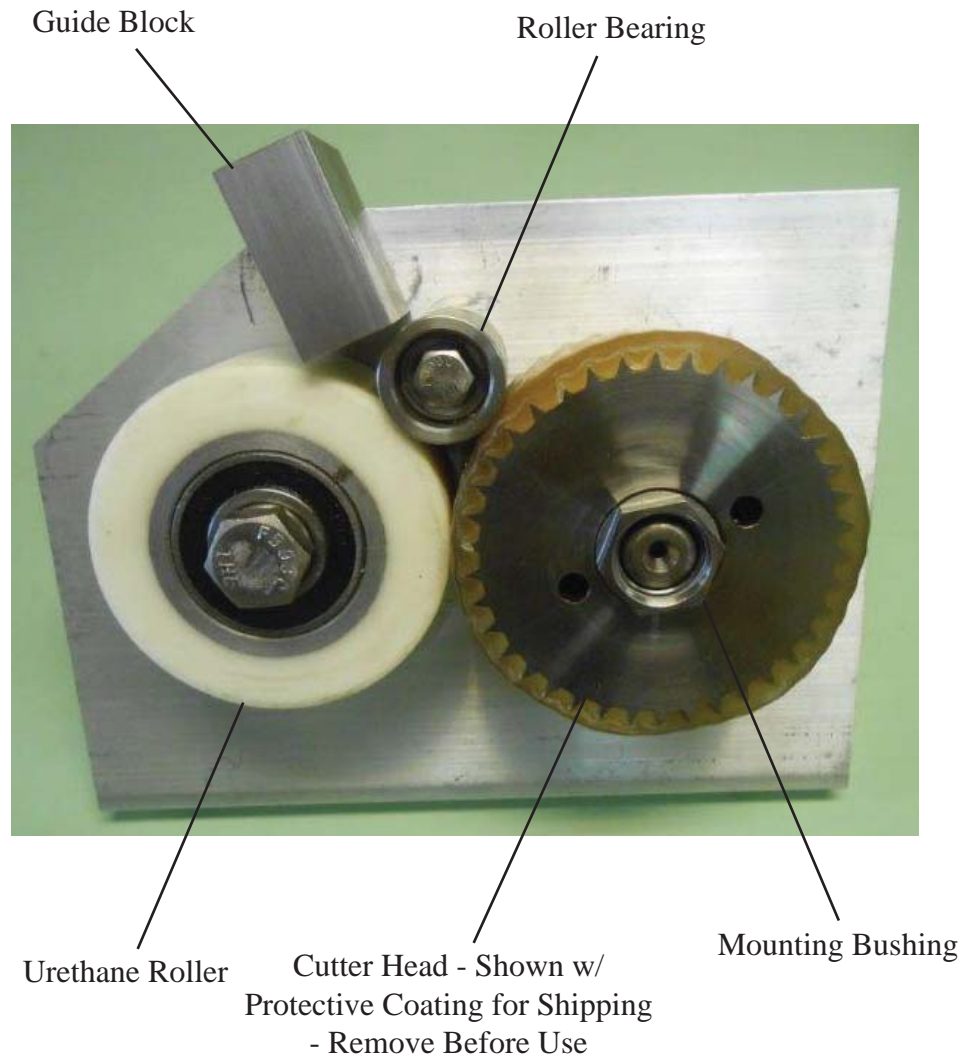
For cutter head replacement - see next page.

The cutter head can be replaced with a new head, or heads with dull blades can be re-sharpened and re-installed - consult factory.

Adjustment and Maintenance (cont'd)

Maintenance (cont'd)

1. To remove cutter head, remove mounted bushing using 7/8" (22 mm) wrench or socket. Rotate counter-clockwise to loosen.
2. Re-install cutter head on motor shaft, tightening bushing. NOTE: Gap between cutter head and mounting plate should be minimal - approx. 1/32 - 1/16" (0.8 - 1.6mm).
3. Check speed sensor - it may be necessary to re-adjust as required when cutter head is changed - see page 15.



WARNING: BLADES ARE EXTREMELY SHARP !!! Use caution to prevent cuts.

Adjustment and Maintenance (cont'd)

Maintenance (cont'd)

If fiber chopper fails to cut properly with a new or sharpened cutter head, the Urethane Roller needs to be replaced as follows:

1. Remove roller axle bolt and disassemble roller from cutter head assembly.
2. Slide or pry off the old roller and install a replacement by pressing it in place.
3. Replace the axle bolt and adjust roller as required..
4. Operate the chopper for minute or so with the cover **IN PLACE**, to run in the new roller. Adjust the roller and idler bearing pressure if required. The chopper should now start and run freely.

Fiber Outlet Chute

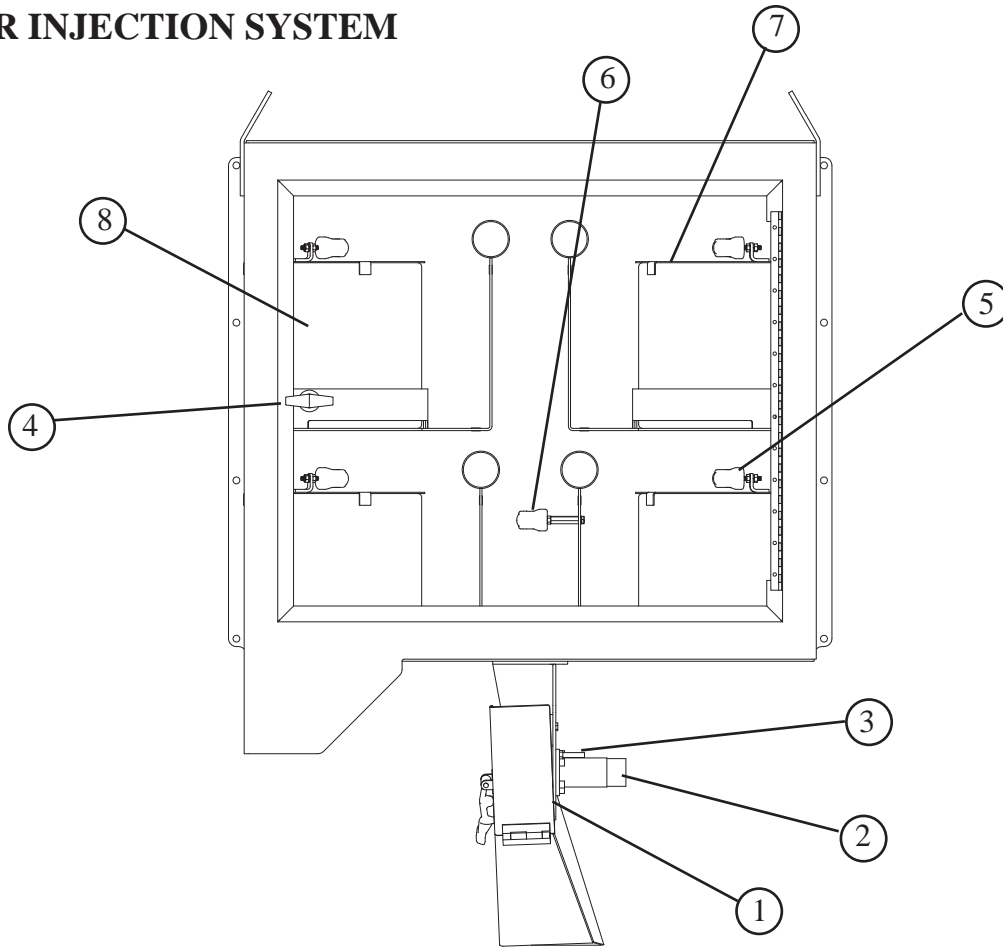
1. As required, periodically clean inside of the fiber outlet chute using solvent to remove any asphalt emulsion build-up.

System Troubleshooting

<u>TROUBLE</u>	<u>POSSIBLE CAUSE</u>
Fiber chopper does not feed or shaft not turning	<ol style="list-style-type: none"> 1. Check adjustment of pressure wheel pressure 2. Check adjustment of cutter head pressure
Fiber chopper feeding material but not cutting it properly	<ol style="list-style-type: none"> 1. Check adjustment of cutter head pressure 2. Blades worn out - change cutter head for new one or one with sharpened blades 3. Rubber anvil wheel worn out - change wheel
Fiber chopper does not operate	<ol style="list-style-type: none"> 1. Check for electrical fault by operating manual override on the on/off valve - to operate, push down on knob, rotate counter-clockwise and allow knob to pop up
Counter/speed meter does not display a speed	<ol style="list-style-type: none"> 1. Check the chopper head to be sure it is turning 2. Be sure light on the sensor is on (The blink rate is too fast to see)
Speed sensor failure	<ol style="list-style-type: none"> 1. Check all connections from the sensor to the meter 2. Check the air gap between sensor and target wheel

The sensor has an air gap between the head of the sensor and the target on the shaft it is monitoring that must be maintained. If the air gap is too large, the sensor will either give intermittent response or none at all. If the air gap is too small, the sensor head could come into contact with the target wheel and damage or destroy the sensor or wheel. To set the air gap, first remove the cord from the sensor and then remove the sensor from the chopper housing. Rotate chopper cutter head until any of the four slots in the back of the cutter head are NOT aligned with the sensor mounting hole. Insert the sensor into the mounting hole and tighten it by hand until the sensor just touches the back of the cutter wheel. Then, back the sensor off by rotating counter-clockwise by 1 turn. Tighten jam nut.

FIBER INJECTION SYSTEM



ITEM	PART NO.	DESCRIPTION	QTY.
1	999-0370.25	Fiber Injection Head w/ 1/4" Cutter Spacing	1
	999-0370.5	Fiber Injection Head w/ 1/4" & 1/2" Cutter Spacing	1
	999-0374.25	Cutter Head, 1/4" Spacing (36 Blades)	1
	999-0374.5	Cutter Head, 1/4" & 1/2" Spacing (27 Blades)	1
	999-0374-6	Cutter Head Mounting Bushing	1
	999-0373	Urethane Roller	1
	999-0370-12	Roller Bearing	1
	999-0370-13	Guide Block	1
2	999-0370-8	Hydraulic Motor, Fiber Injection Head	1
	305-0086-VM	Cutter Head Speed Sensor	1
3	310-0697	Speed Sensor Cable	1
	MB280102-7	Door, Enclosure	1
4	715-0138	Latch, Door	1
	999-0355-1A	Roving Guide - Ceramic	4
6	MB280104	Roving Guide Assembly - Centering	1
7	MB280109	Roving Guide/Cover Assembly	4
8	999-0375	Roving - Slurry-Fil - 4800 Tex	4

PARTS ORDER FORM



To order parts in this manual, please copy this form and FAX or mail to:

VSS Macropaver
P.O. Box 178
Hickman, CA 95323 USA
FAX (209) 874-1174

MY MAILING ADDRESS

MY SHIPPING ADDRESS

SHIP VIA: _____

ATTN: _____

DATE: _____

EQUIP. S/N: _____

Part Number	Part Name	Quantity

ORDERED BY: _____

PAYMENT: CHECK P.O.# _____ COD

Calibrating The Fiber Injection System (cont'd)

- 8. Press the Main Start trigger again to shut off the flow of fiber when the desired number of counts has been reached. Record this as Fiber Feeder Counts under Trial #1.
- 9. Weigh the full container and record this number as Full Weight under Trail #1.
- 10. Repeat this procedure for trials 2 and 3.

Figure #1: Example of Fiber Injection Calibration with Trial Data and Calculations

UNITS		Trial #1	Trial #2	Trial #3		
Full Weight	lbs (Kg)	16.3	16.7	17		
Empty Weight	lbs (Kg)	4	4	4		
Aggregate Unloaded	lbs (Kg)	12.3	12.7	13		
Head Shaft Revolutions	Rev counts	2505	2497	2510	SUM	Average
Fiber Weight / Rev	lbs/Rev (Kg/Rev)	0.0049	0.0051	0.0052	0.0152	0.005

Equations used in previous table:

Fiber Unloaded = Full Weight - Empty Weight

Fiber / Rev = Fiber Unloaded / Fiber Feeder Counts

Sum = (Fiber / Rev Trial #1) + (Fiber / Rev Trial #2) + (Fiber / Rev Trial #3)

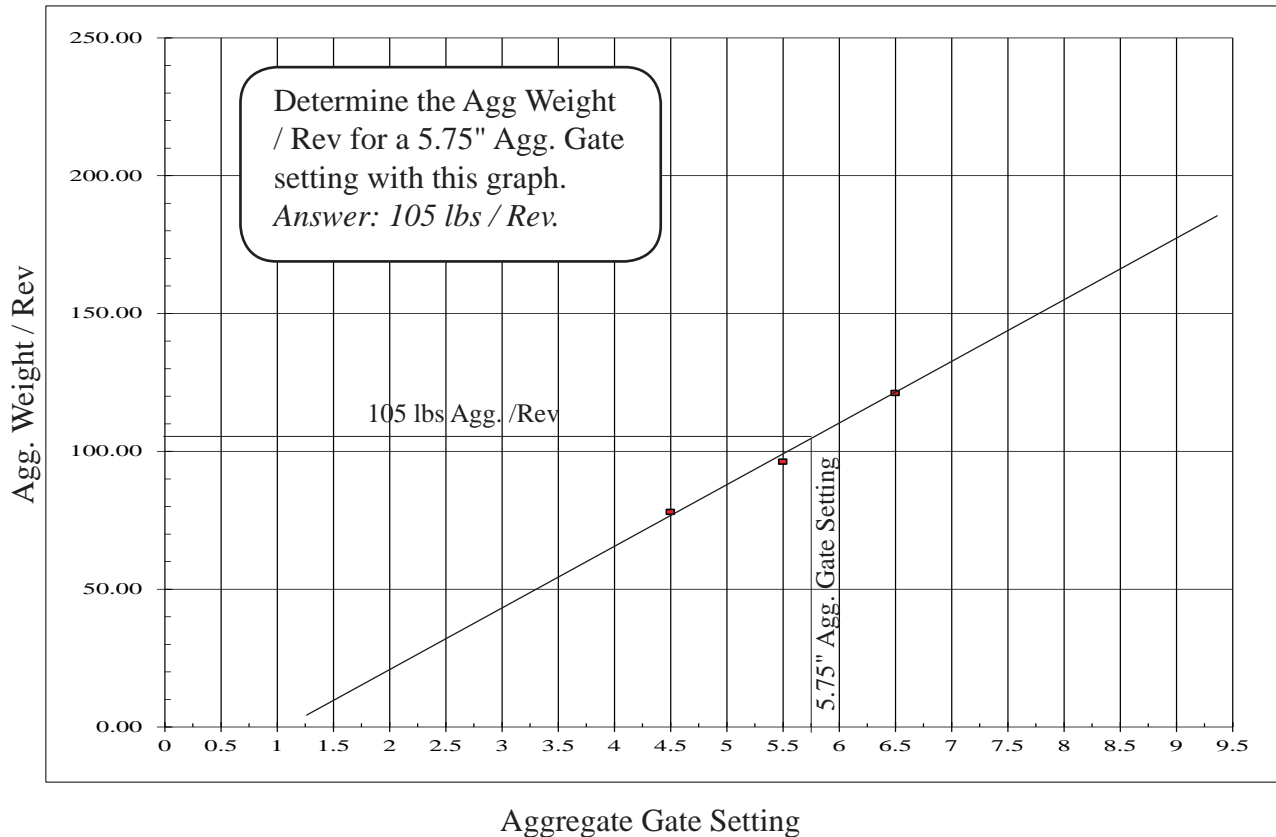
Average = Sum / 3

Fiber to Aggregate Speed Calibration

From the Macropaver calibration the values of aggregate weight per conveyor head shaft revolution versus aggregate gate setting found in figure 1 are plotted on a graph as shown on following page. Enter the graph at the aggregate gate setting determined from the emulsion and aggregate calibration, draw a vertical line up until it intersects the calibration line. Then draw a line to the left from that point to determine the weight of aggregate per revolution. This will be used to calculate the fiber to aggregate speed to match the laboratory design mix.

Calibrating The Fiber Injection System (cont'd)

Example Aggregate Gate Setting versus Weight of Aggregate per Revolution Calibration Graph



At emulsion pump speed of about 450 RPM, the conveyor will be turning about 30 RPM (Conveyor gear-box ratio is 15:1).

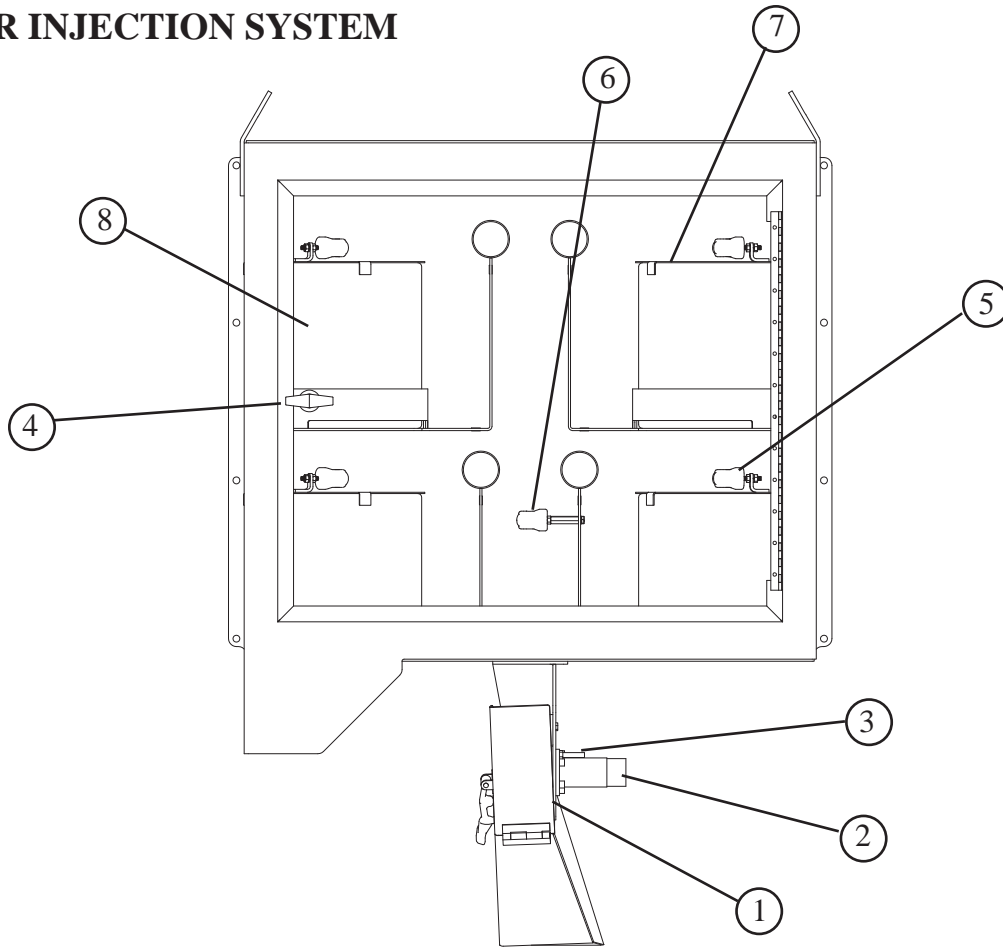
At a gate setting of 5.75", the aggregate output is 105 lbs./ rev. x 30 RPM = 3150 lbs./min.

With an fiber requirement of 0.2%, the flow rate required is $.002 \times 3150 = 6.30$ lbs./min.

If the fiber injection system has an output of 0.005 lbs/count it will be putting out 0.005 lbs/min. for every 1 RPM. To achieve 6.30 lbs. min., divide 6.30 by 0.005 = 1260 RPM.

For faster or slower conveyor speeds, re-calculate fiber injection system speeds as required.

FIBER INJECTION SYSTEM



ITEM	PART NO.	DESCRIPTION	QTY.
1	999-0370	Fiber Injection Head	1
	999-0374	Cutter Head - 36 Blade Capacity	1
	999-0374-7	Cutter Head O-Ring (Blade Retention)	2
	999-0372	Cutter Blades	36
	999-0373	Cutter Head Roller	1
2	999-0370-8	Hydraulic Motor, Fiber Injection Head	1
3	305-0086-VM	Cutter Head Speed Sensor	1
	310-0697	Speed Sensor Cable	1
4	MB280102-7	Door, Enclosure	1
	715-0138	Latch, Door	1
5	999-0355-1A	Roving Guide - Ceramic	4
6	MB280104	Roving Guide Assembly - Centering	1
7	MB280109	Roving Guide/Cover Assembly	4
8	999-0371	Roving - Slurry-Fil	4

Getting To Know The Fiber Injection System (cont'd)

Fiber Additive

Fiber additive comes in spools of roving or yarn and is stored on these spools which are mounted in the enclosure. The fiber is brought out of the enclosure and cut to size by the fiber chopper head. It then feeds into the inlet hopper and pugmill. The fiber chopper head contains a drive wheel (or anvil), an idler wheel and a cutter wheel (or head). The drive wheel engages with both the idler wheel and the cutter wheel and the roving is squeezed between them. When the drive wheel rotates, it will draw the roving between it and the idler wheel where it is then fed between the drive wheel and the cutter wheel. The blades on the cutter wheel then cut the fiber and the speed of the wheels ejects the cut fibers into the fiber chute. The chopper is hydraulically driven and is started when Main Start is engaged, providing the fiber chopper on/off switch is turned on. The rate at which the fiber chopper delivers fiber to the inlet hopper is controlled by the fiber chopper speed control valve.

Fiber Injection System:

The fiber injection system is powered by the main hydraulic circuit. Its oil is supplied through a tee near the inlet of the main start valve. The oil flows to an on/off valve, then through a chopper speed control valve. The on/off valve comes on when Main Start is engaged, providing the "FIBER SYSTEM" switch is on. From the on/off valve the oil flows to a separate "FIBER FLOW CONTROL" valve. This is an adjustable flow control valve that directs the required flow of oil to the fiber chopper motor.

The fiber injection system can be set to cut fibers in lengths from 1/4" (6mm) to 1" (25mm) long. This is done by adjusting the number of blades on the cutter head. The circumference of the cutter is nominally about 9" (230mm). Dividing that by the number of blades gives the fiber length. With 36 blades, it will cut 1/4" (6mm) fibers and with 9 blades, it will cut 1" (25mm) fibers. These lengths are the nominal lengths. The actual lengths are usually slightly longer.

Adjustment and Maintenance

Adjustments

If the roving does not feed properly or is not getting cut cleanly, but the condition of the cutter blades and roller are good it will be necessary to adjust the Roller or Idler Bearing. Access by opening the cover

To adjust Roller, loosen axle bolt and adjust setscrew located on the back end of the mounting plate. After achieving proper adjustment, tighten axle bolt.

To adjust Idler Bearing, loosen axle bolt and push Bearing by hand up against Roller. After achieving proper pressure, tighten axle bolt.

1. Roller should have sufficient squeeze to cut properly. Excessive Roller squeeze or interference will cause excess wear of the Roller, jamming of roving or create starting problems. Insufficient Roller squeeze will result in incomplete cutting of roving.
2. Idler Bearing should be adjusted so there is only slight contact with the Roller. Excessive pressure will overload the shaft and bearings or create starting problems. Insufficient squeeze will cause the roving to not feed properly.

The cut length of the roving fibers may vary from 1/4" to 1" (approx. 6mm to 25mm) depending on the number of blades in the cutting head. The cutting head has a circumference of approx. 9" (230mm) and is divided thirty-six slots at 1/4" (6mm) intervals. Any number of blades can be installed to give length required. If desired, an odd number of blades can be installed to give varying lengths of fiber.

Maintenance

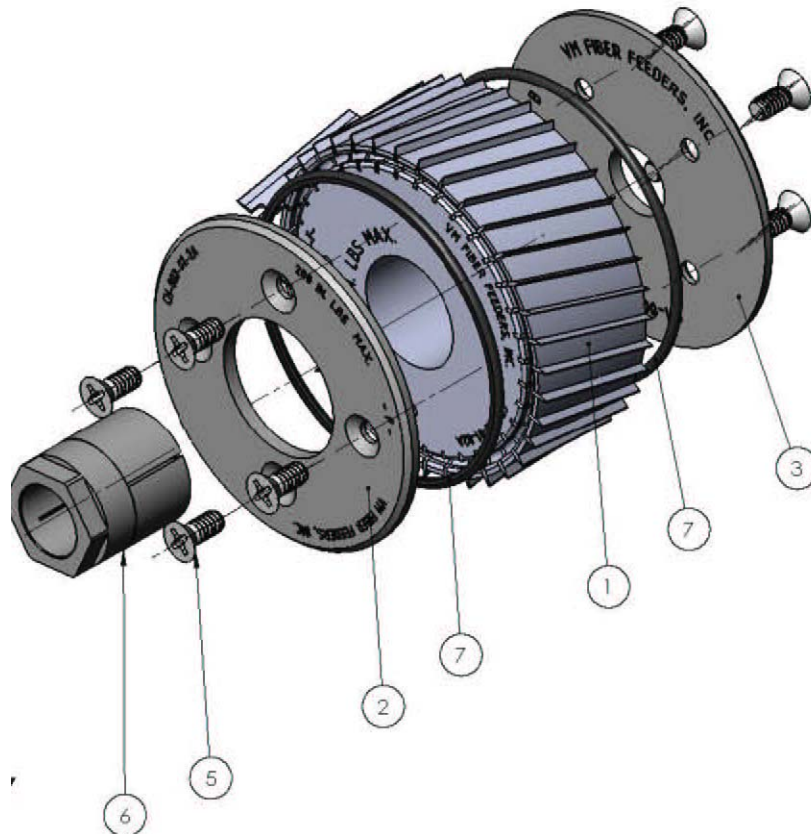
Maintenance consists of regular inspection for and replacement of any parts that may have worn, such as cutter blades, roller or idler bearing.

For blade replacement, first remove cutter head by removing #6 drive bushing - see next page.

Adjustment and Maintenance (cont'd)

Maintenance (cont'd)

1. After removing cutter head, disassemble end plates (Item 2 & 3) by removing screws (Item 5). Remove blade retainer O-Rings (Item 7) and pull blades from slots. Clean slots before replacing blades.
2. To re-insert blades, place in slot, sharp edge out.
3. Next, insert the blade retainer O-rings and re-install the end plates.
4. Re-install cutter head on motor shaft, tightening bushing. NOTE: Gap between cutter head and mounting plate should be minimal.
5. Check speed sensor - it may be necessary to re-adjust as required.



WARNING: BLADES ARE EXTREMELY SHARP !!! Use caution to prevent cuts.

Adjustment and Maintenance (cont'd)

Maintenance (cont'd)

If fiber chopper fails to cut properly with new blades, the Roller needs to be replaced as follows:

1. Remove roller axle bolt and disassemble roller from cutter head assembly.
2. Slide or pry off the old roller and install a replacement by pressing it in place.
3. Replace the axle bolt and adjust roller as required..
4. Operate the chopper for minute or so with the cover **IN PLACE**, to run in the new roller. Adjust the roller and idler bearing pressure if required. The chopper should now start and run freely.

Fiber Outlet Chute

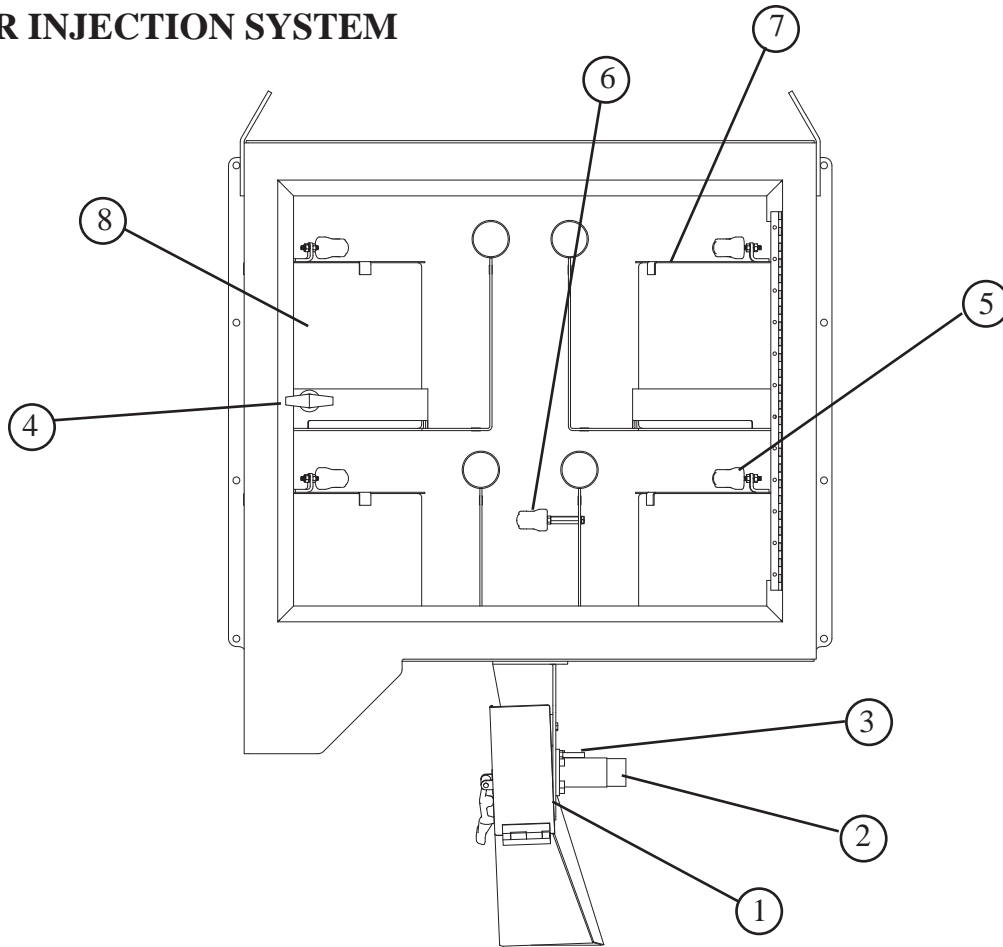
1. As required, periodically clean inside of the fiber outlet chute using solvent to remove any asphalt emulsion build-up.

System Troubleshooting

<u>TROUBLE</u>	<u>POSSIBLE CAUSE</u>
Fiber chopper does not feed or shaft not turning	<ol style="list-style-type: none"> 1. Check adjustment of pressure wheel pressure 2. Check adjustment of cutter head pressure
Fiber chopper feeding material but not cutting it properly	<ol style="list-style-type: none"> 1. Check adjustment of cutter head pressure 2. Blades worn out - change blades 3. Rubber anvil wheel worn out - change wheel
Fiber chopper does not operate	<ol style="list-style-type: none"> 1. Check for electrical fault by operating manual override on the on/off valve - to operate, push down on knob, rotate counter-clockwise and allow knob to pop up
Counter/speed meter does not display a speed	<ol style="list-style-type: none"> 1. Check the chopper head to be sure it is turning 2. Be sure light on the sensor is on (The blink rate is too fast to see)
Speed sensor failure	<ol style="list-style-type: none"> 1. Check all connections from the sensor to the meter 2. Check the air gap between sensor and target wheel

The sensor has an air gap between the head of the sensor and the target on the shaft it is monitoring that must be maintained. If the air gap is too large, the sensor will either give intermittent response or none at all. If the air gap is too small, the sensor head could come into contact with the target wheel and damage or destroy the sensor or wheel. To set the air gap, first remove the cord from the sensor and then remove the sensor from the chopper housing. Rotate chopper cutter head until any of the four slots in the back of the cutter head are NOT aligned with the sensor mounting hole. Insert the sensor into the mounting hole and tighten it by hand until the sensor just touches the back of the cutter wheel. Then, back the sensor off by rotating counter-clockwise by 1 turn. Tighten jam nut.

FIBER INJECTION SYSTEM



ITEM	PART NO.	DESCRIPTION	QTY.
1	999-0370	Fiber Injection Head	1
	999-0374	Cutter Head - 36 Blade Capacity	1
	999-0374-7	Cutter Head O-Ring (Blade Retention)	2
	999-0372	Cutter Blades	36
	999-0373	Cutter Head Roller	1
2	999-0370-8	Hydraulic Motor, Fiber Injection Head	1
3	305-0086-VM	Cutter Head Speed Sensor	1
	310-0697	Speed Sensor Cable	1
4	MB280102-7	Door, Enclosure	1
	715-0138	Latch, Door	1
5	999-0355-1A	Roving Guide - Ceramic	4
6	MB280104	Roving Guide Assembly - Centering	1
7	MB280109	Roving Guide/Cover Assembly	4
8	999-0375	Roving - Slurry-Fil - 4800 Tex	4