Operation & Maintenance Manual

FASTACH 8' SCREEDS

TEREX Cedarapids

(P/N 499992523201) 19373 (08/90)

To the Owner & Operator:

We have tried to provide information that gives our customers a clear understanding of equipment construction, function, capabilities and requirements. This information is based on the knowledge and experience of qualified people at our company and in our field organization. Proper use of this information rewards users of our equipment with high efficiency, maximum service life and low maintenance costs. That is why we strongly recommend that anyone using our equipment be familiar with this manual.

Information presented here should not be considered authoritative in every situation. Users will as a matter of course encounter problems and circumstances that raise questions not anticipated here. Such questions should be directed to their distributor or the factory.

Anyone who uses this equipment for any purpose other than that for which it was intended assumes sole responsibility for dangers encountered and injuries sustained as a result of such misuse.

⚠ DANGER

Federal, state and local safety regulations aim to protect both people and property from accident, injury and harmful exposure. When complied with, such regulations are often effective. Hazards to personnel and property are further reduced when this equipment is used in accordance with all operation and maintenance instructions. Generally:

(1) Read and heed all danger, warning, caution, and notice decals. Know what guards and protective devices are included and see that each is installed and in operational condition. Additional guards and protective devices may be required and must be installed by the user (owner) before operating.

(2) Never attempt to maintain, lubricate or adjust this equipment while it is running. Lock out and tag out all energy sources before doing maintenance, cleaning, adjusting or repairing this equipment. Make it impossible for anyone to start this machine while others are working on it or in it.

(3) Wear personal protective equipment such as hard hats, ear plugs, safety glasses and safety shoes when operating this equipment. Do not wear loose clothing or long hair.

(4) Think safety and act safely. Stay alert at all times. Eliminate or neutralize potential hazards as soon as you spot them. Never allow anyone to engage in horseplay when near this equipment.

⚠ DANGER

Failure to take these precautions will result in death or severe personal injury.

The following warning applies to equipment supplied with lead-acid batteries:

⚠WARNING

Battery posts, terminals and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm.
Wash hands after handling.

The following warning applies to equipment supplied with diesel powered engines:

⚠WARNING

Diesel engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects, and other reproductive harm.

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Section 8
Screed System

Principle of Operation

The screed is a free-floating unit which strikes off and smooths the hot mix after it is spread out by the augers. The screed arms attach to the tractor at floating "pull points". Pull points are rollers that ride up and down a vertical track, allowing screed arms to automatically adjust for changes of grade or for a rough base.

Next to pull points are pull point cylinders which are adjusted by ***Screed Adjust*** switch on paver's front fender. These cylinders allow pull points to ride higher or lower, affecting attack angle of the screed. When attack angle changes, depth of mat changes. Attack angle can also be adjusted by handcranks.

As screed bottom is pulled over asphalt, vibrators on screed iron out voids, preparing mat for rolling.

Burners heat bottom of screed prior to paving. A cold screed bottom will stick to the mat, leaving scuff marks. Once paving has started, the mix keeps the bottom hot enough to prevent asphalt from sticking.

The screed bottom can be flexed to produce a finished mat having a positive or negative crown for water drainage. The crown control flexes the bottom of the screed into a slight "V" shape or into an inverted "V". A turnbuckle joining each pair of crowning arms permits flexing in either direction. A separate adjustment is possible for the leading and trailing edges, so the "lead" crown can be slightly higher than the trailing or "finish" crown. This differential between the crowns increases the surface density and imparts a smooth texture.

Crown adjustment is important. Several mat imperfections can be corrected by changing the lead crown.

End gates and retaining plates keep material in the auger area directly in front of screed.

The strike-off, a vertical plate located just ahead of the screed plate, regulates the amount of material passing under the screed. When properly positioned, it also absorbs wear which would otherwise take place on the leading edge of the screed.

The Fastach is an 8-foot screed. Optional hydraulically extendable strike-offs are available that expand the paving width to 14 feet. Optional power slope controls for the hydraulic strike-offs provide a positive slope at the touch of a button.

Raising & Lowering Screed

Raising and lowering the screed is accomplished by two double-acting hydraulic cylinders that connect the screed and the tractor. The cylinders are controlled by the ***Screed Lift*** switch on the paver console.

When engine is at full throttle and ***Screed Lift*** switch is held in the ***raise*** position, cylinders raise screed to maximum height or until the switch is released. When released it returns to the neutral position. The screed will be hydraulically locked at the existing height. While paving, the switch must be in the ***lower/float*** position. This allows the screed to float over the mix at the preset position.

Supporting Screed for Maintenance

Never rely on the hydraulic lock to keep the screed elevated when personnel are working under or around it. Safety cables and blocks must be used to support its weight.

Supporting Screed for Roading

Safety cables are required for roading. Raise screed to upper limit and hook the safety cables. Then lower until the slack is gone. Bolt screed support plates together for rigidity.

Supporting Screed for Transport

When transporting the paver, support screed solidly on blocks. Hanging screed from safety cables allows screed to sway causing cables undue stress. Blocks should be free of nails or other objects which could scratch the screed bottom.

Never chain down screed or pull arms when transporting. Chain tractor at correct points and allow screed to ride free on blocks. ***(Figure 1)***

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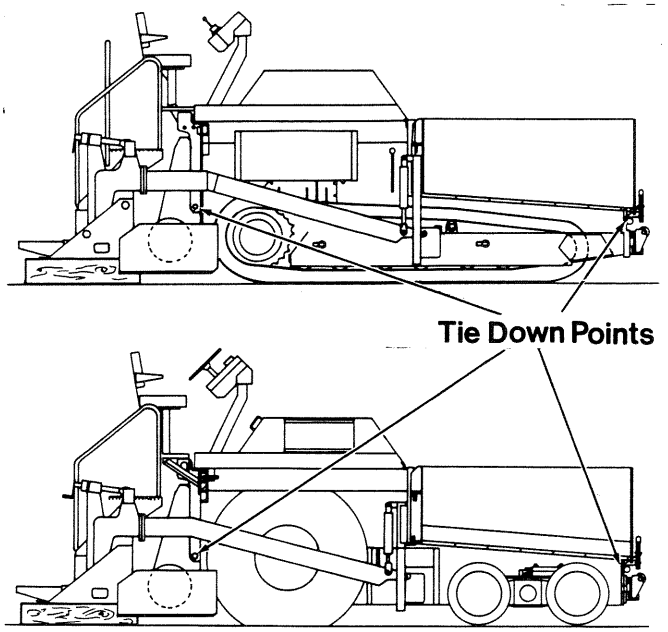

Figure 1

Detaching Screed from Tractor

Bolted connections on each screed pull arm easily detach the screed from the tractor for maintenance. If screed and extensions are wider than the highway width limit, detach screed and transport by truck.

Perform screed detachment **carefully** to avoid damage to the wiring, hydraulic hoses, augers or optional attachments.

(1) Unplug all hoses and cables from tractor.

(2) Plug "open" connectors.

(3) Remove four corner bolts on each pull arm. Move tractor forward.

Mat Thickness Control

Mat thickness is determined by the screed pull points height, screed angle in relation to the pull arm,
material height in the auger chamber and travel speed.

Before paving, adjust the angle of attack to set the rough mat thickness by turning handcranks at each end of screed. The thickness at each end of the screed can be controlled independently so a tapered mat may be laid in order to level or to superelevate a road.

After desired material depth has been established with handcranks, minor changes can be made. Use the handcranks to control material depth or allow the grand or slope controls to vary the pull point cylinders automatically. ***(Figure 2)***

When using the ***Increase/Decrease*** switch to set the pull point height, set the ***Auto/Manual/Set up*** switch to ***manual***. If an increase in depth is needed, push the switch to ***increase*** and watch the indicator on the pull point cylinder. Allow it to move only 1/4 of a number at a time and check the material depth. To obtain a smooth mat, screed adjustments should be made gradually. The screed should travel forward before an additional adjustment is made.

The pull point position and angle of attack should be "balanced" for best results. If one is adjusted too far, the other will have to overcompensate to obtain the correct mat depth.

If using the automatic screed control, the operator makes screed adjustment manually in preparation for the change to automatic. Both pull points should be adjusted the same at the start-up.

Main Screed Strike-Off Plates

The strike-off plates bolted to front of the screed bottoms, regulate the amount of material to the screeds. They also absorb much of the wear which would otherwise take place on the leading edge of

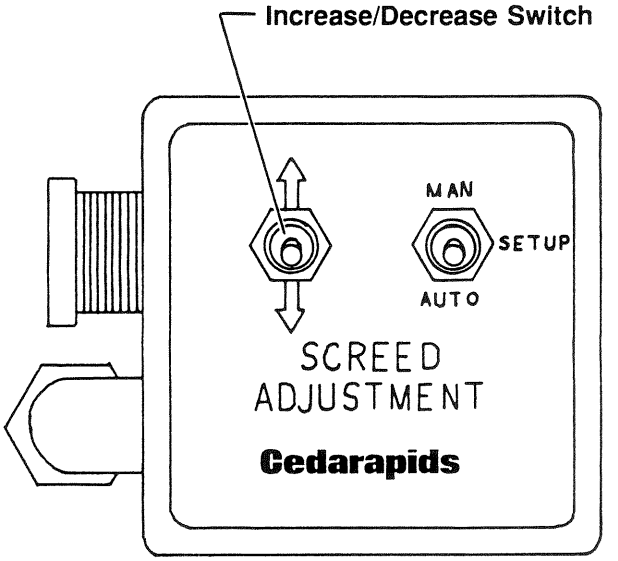

Figure 2

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the screed bottoms. If the strike-offs are not properly adjusted, the bottom may wear unevenly and produce a poor mat texture. Refer to Mat Troubleshooting in the Paving Techniques section for specific examples.

(1) Use a straightedge to check position of strike-off plate in reference to screed bottom. ***(Figure 3)***

(2) Adjust strike-off plate initially to 1/2 inch above screed bottom for normal mixes. For special conditions, the height may vary.

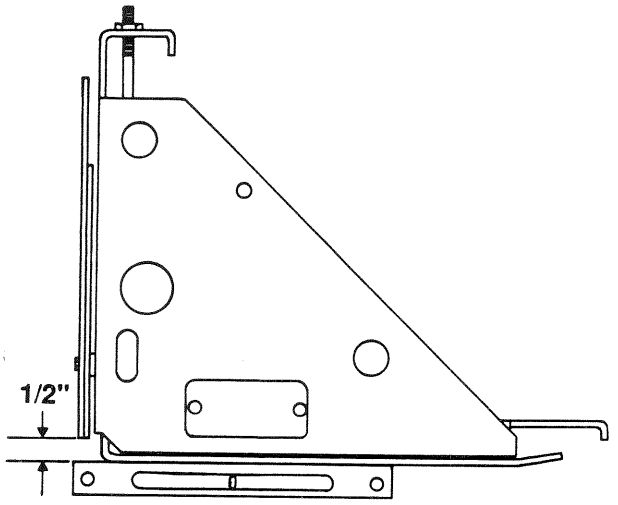

Figure 3

Improper Strike-Off Adjustment

If strike-off plates are not properly adjusted, they can indirectly affect the mat thickness controls.

Strike-Offs Positioned Too Low
(Figure 4)

✓ Insufficient material is metered to the screed. To maintain mat thickness it is necessary to tip the front of the screed up, causing excessive wear on the trailing edge.

✓ Fines will collect at the front edge directly behind the strike-off, causing tears and voids in the mat.

✓ The strike-offs will catch and drag large stones, causing streaks in the mat.

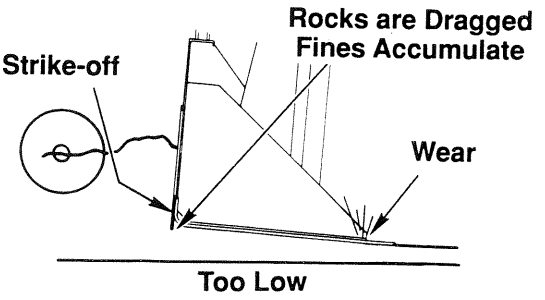

Figure 4

Strike-Offs Positioned Too High
(Figure 5)

✓ Too much material is funneled to screed, causing it to lift. The nose must be pointed down to maintain correct mat thickness. The leading edge of screed will wear rapidly.

✓ Poor mat textures.

✓ Low compaction of mat.

✓ Erratic control of screed when making minor adjustments.

Improper Pull Point Adjustment

Pull Points Positioned Too High
(Figure 6)

When pull points are too high and the front of the screed must be tilted down to maintain correct mat thickness, the following problems will be encountered:

✓ Excessive wear on leading edge of screed and possible deformation of strike-offs.

✓ Bumpy, wavy mat caused by screed riding on leading edge.

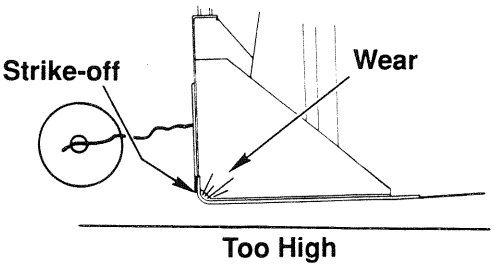

Figure 5

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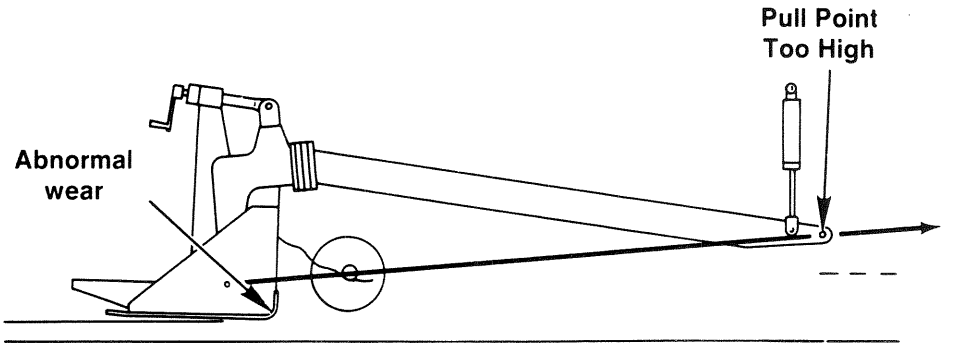


Figure 6

✓Tendency for screed to dip each time paver starts.

✓Mat tears caused by a "digging in" action of leading edge.

✓Loss of compaction due to trailing edge of the screed not in contact with mat. The vibrational force will not be transmitted as efficiently as when the full plate width is being utilized.

✓Mat appearance and texture will change with only a slight movement of the handcranks.

Pull Points Positioned Too Low

(Figure 7)

When pull points are too low and front of the screed must be tilted up to maintain correct mat thickness, the following problems will be encountered:

✓Excessive wear on trailing edge of screed.

✓Tendency for screed to climb each time the paver starts.

✓Mat thickness difficult to control.

✓Good transverse joints difficult to make.

✓Mat tearing caused by excessive ironing effect of screed.

Operating Burners

After screed is ready for paving, warm up the bottom. This enables mix to flow along the screed bottom without sticking. When paving begins, the burners are usually shut off, as the mix will keep the screed hot.

Running the burners for 15 minutes should be long enough to bring the screed up to operating temperature. When screed is hot, turn burner fuel valves off, but leave fans on for at least 5 minutes to dissipate excess heat. **Never heat above 350° F!** Excessive heat causes screed bottom to warp.

To start the burners:

(1) Turn all valves and fans *off*.

(2) Extend any hydraulic extensions. This improves the performance of the main screed burners

(3) Turn the fuel pump switch *on*.

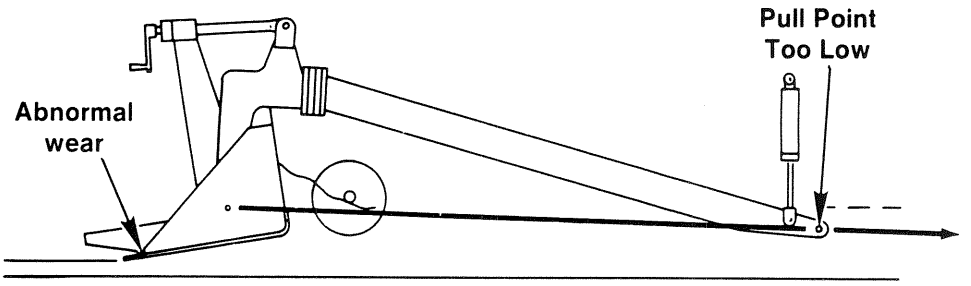


Figure 7

(4) Hold glow plug button *in* for 20 seconds. **More than 30 seconds can damage glow plug element.**

(5) Turn burner fuel valve *on*. **Light only one burner at a time.** Two burners ignited may trip circuit breaker.

(6) When ignition occurs, turn fan *on* and *release* glow plug button.

(7) Visually inspect the flame. Adjust the air damper to obtain the cleanest possible flame. Smoke indicates air damper requires adjustment. White smoke means too much air, black smoke means too little air.

(8) When screed has reached about 300° F, turn fuel valves and the pump *off*. Allow the fans to run for 5 minutes to dissipate hot spots.

Burner Maintenance

The burners do not need regular maintenance. If they fail, there are several courses of action.

Checking Electrical System

(1) Hold glow plug button *on* for about 20 seconds. Touch glow plug. Voltage at the glow plug should be 12 vdc. If heat is felt, the problem may be in the fuel system.

(2) If no heat, make sure key switch is on and circuit breaker has not tripped. If breaker has tripped and cannot be reset, refer to Electrical Troubleshooting section.

(3) Remove glow plug and reattach wire. Hold plug against metal and push glow plug button. If plug does not turn red, replace plug.

Checking Fuel System

(1) Turn fuel pump *on*. Make sure fuel pump shaft is rotating. ***(Figure 8)***

(2) If pump is not operating, check for 12 vdc at motor. If voltage is present, the pump motor is bad.

(3) If there is no voltage, refer to the Electrical Troubleshooting section.

(4) Check fuel pump pressure. The pump must produce 100 psi in the fuel line. Adjust pump if the pressure test is under 100 psi.

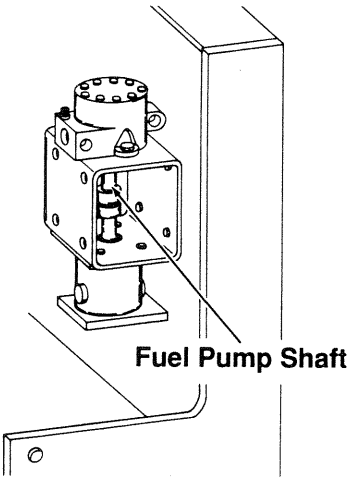


Figure 8

Cleaning Fuel Path

(1) Release spring clamp from burner duct, release latches and position blower so spray pattern can be observed.

(2) Turn fuel pump *on*, open fuel valve on burner control panel and note spray pattern. If fuel has an uneven spray, clean nozzle and flame cone.

(3) If no fuel is present, close fuel valve and remove fuel line at nozzle. If fuel in line, clean nozzle.

(4) If no fuel is in the line, open fuel valve and flush. If line does not flush, check the fuel level and make sure the filter element is not plugged. Remove manifold base and check for fuel on pressure side of manifold. ***(Figure 9)***

(5) If fuel is present at manifold, remove manifold and clean. If no fuel is present, check for fuel at pump.

(6) If fuel is present at pump, the fuel line is plugged between pump and manifold.

(7) If no fuel is present, the fuel pump is bad or fuel line is plugged between tank and pump.

Vibrators

Hydraulic vibrators on screed help with initial compaction and smoothing of mat. They are activated by a toggle switch on the paver console. Vibrators operate only when travel lever is forward. This prevents extra compaction in one place on mat when paver is temporarily stopped.

The frequency of the vibrators can be varied with the vibrator speed knob. The ampltude of vibration can be adjusted by the arrangement of the vibrator weights.

Operating Spraydown System

The screed and paver **must be thoroughly cleaned** at the end of each day's operation. Many problems can be traced to improper cleaning. Clean all equipment thoroughly, even if used a short time.

WARNING

Never operate the spraydown when burners are lit. Be careful spraying around electrical connections. Fuel oil can cause rubber insulation to deteriorate.

To clean, spray diesel fuel on all parts of tractor and screed that come into contact with mix. A spray nozzle with 30 feet of hose is provided.

Operate conveyors during spraydown to be sure chain and all slats are reached. The diesel fuel also lubricates the conveyors.

(1) Fully extend any hydraulically operated extensions.

(2) Attach the hose to the fitting behind burner fuel panel of the Fastach or at filter under right side of the paver's hood. ***(Figure 9)***

(3) Turn main key switch *on.*

(4) *Open* spray-down valve.

(5) Turn fuel pump *on.*

(6) *Squeeze* spray nozzle lever.

Spray and clean screed bottoms, strike-offs, and seal plate area. Check for accumulation of asphalt on the extension moldboard. Asphalt spilled in this area plugs the fans' air inlets and could cause the fan to shut off. Carefully clean the crowning mechanism and the slot for the pull-arm pivot. Solidified material in these areas can bind up the mechanism.

Auto Feed Control

The proportional feed sensors that control material depth at the outboard end of the augers should be mounted as close to outboard end as possible. Normally the sensors are mounted on the auger's bearing support when no extension is used or when the extension is under 4 feet wide. End-gate mounting is used when the extension is over 4 feet wide.

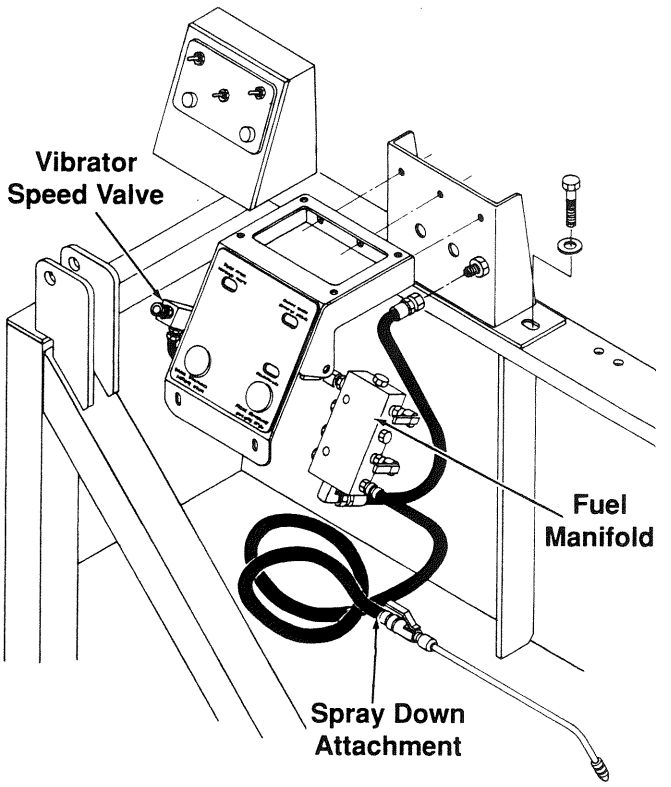


Figure 9

(1) Slide mounting brackets for sensor out (away from augers) for accessibility.

(2) Leave engine running at idle.

(3) Put speed dial at ***zero.***

(4) Put ***Conveyor Speed*** switch in ***low.***

(5) Release brakes.

(6) Put travel lever ***forward.***

(7) Place wand over the sensor shaft and hold at a 45° angle. Leave clamping bolt loose.

(8) Turn shaft with screwdriver until auger just stops. On left side turn shaft clockwise, on right side turn counterclockwise.

(9) Tighten clamping bolt on wand.

(10) Stop augers. Stop engine.

(11) Mount sensor close to outboard end. Length of slip tube on end of wand can be adjusted to control head of material.

Screed Controls

The Fastach has a console containing switches to control the glow plugs, fuel pump, and fans. Below that are fuel valves for right and left burners and spraydown hose.

The hydraulic controls are levers located on either side of the paver.

Setting Up Fastach Screed

Begin with screed neutralized and crown removed. Adjust hydraulic extensions, attach strike-off plates and check vibrators. Install fixed extensions that are to be used. Add end gates, bevel guide plates, retaining plates, cutoff shoes or auto feed control equipment, if necessary.

The following procedures are specific to the Fastach screed.

Neutralizing Screed

(1) Raise screed up, hook safety cables and put blocks under it to support its weight.

(2) Make sure pull points and mat thickness controls are adjusted the same on both sides. Set both pointers at 6 on the scale — the midpoint. If pull points or mat thickness controls are out of balance the screed will twist, making it impossible to adjust the screed.

(3) Using mat thickness controls, set vertical edge of pull arm parallel with mat thickness support.

(4) Check crown setting by laying a straightedge or stringline along screed bottom and checking for flatness on the rear (trailing) and the front (leading) edges. If not perfectly flat, increase or decrease the crown until entire screed bottom is flat. **The rear crown should always be adjusted first.**

(5) Observe the front and rear crown gauges. If not at zero, loosen mounting bolts and zero the gauge(s).

Adjusting Hydraulic Extensions

The Fastach screed can be equipped with hydraulically-operated extensions (hydraulic strike-offs) on either side of the main screed. The hydraulic strike-offs use two types of strike-off plates: the straight strike-off or the screeding strike-off plates. The screeding strike-off assembly is used with some mixes to give a smoother surface to the mat.

Check Height of Main Screed Strike-Off Plates

Before adjusting hydraulic strike-offs, check strike-offs on main screed to make sure they are at the correct height and parallel to the bottom. For adjustment, loosen the bolts holding the strike-off crowning frames to the screed and turn the adjustor rods to raise or lower the plates. ***(Figure 10)*** Initially set height at 1/2 inch.

Friction &Vertical Play Adjustment of Extensions

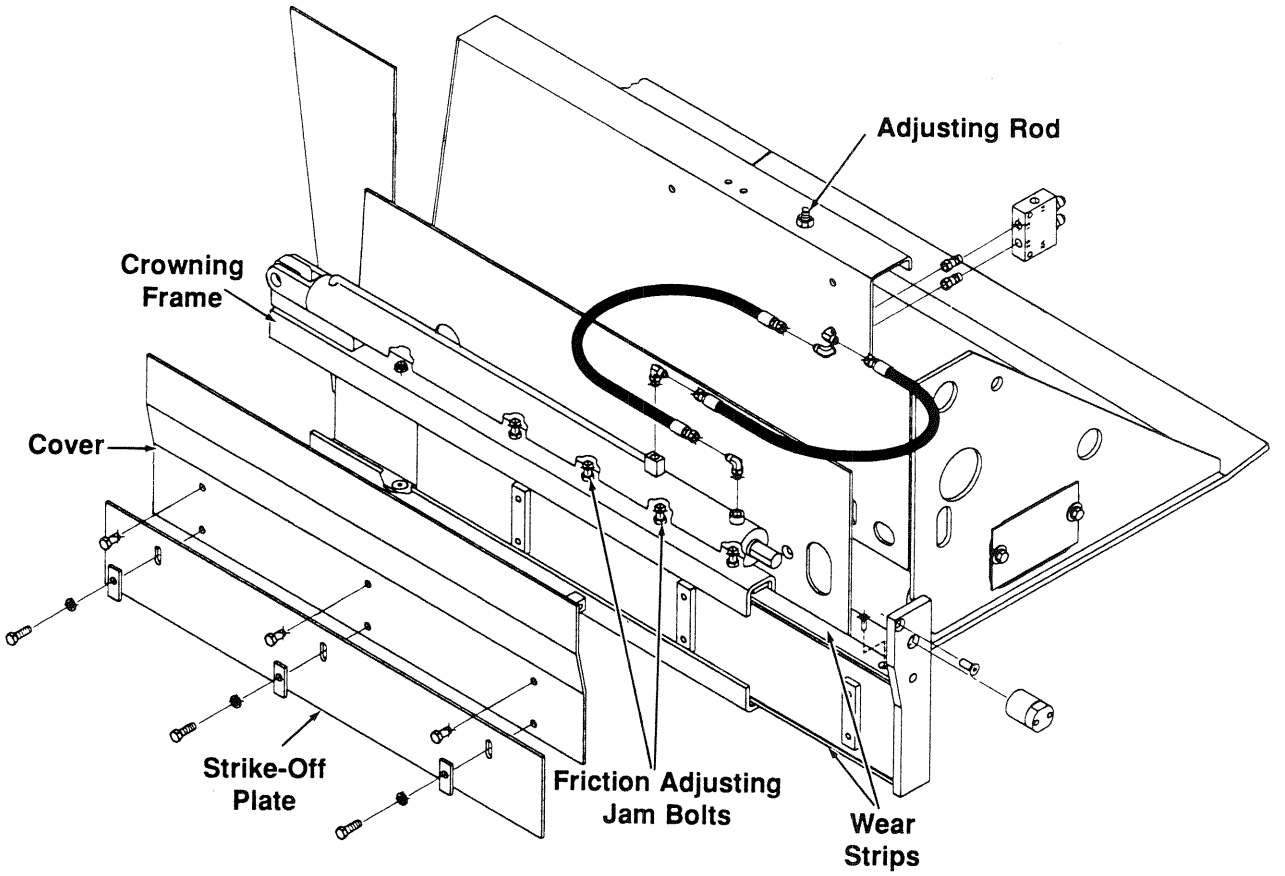
Test hydraulic strike-offs for vertical play. Run strike-offs back and forth and test for friction. If vertical play or friction needs to be adjusted, remove strike-off plate (or screeding assembly) and front cover.

(1) Retract extension. Loosen lock nuts on the friction-adjusting jam bolts.

(2) Turn the friction-adjusting jam bolts until snug.

(3) Run extension back and forth to test friction. Extend all the way and test vertical play.

(4) If there is vertical play at the extended position, wear strips may need replacing or tube may need machining to make it parallel. If tightening adjusting jam bolts moderately does not stop the vertical play without binding up as the hydraulic extension is retracted, replace wear strips or machine the tube.



Hydraulic Extension
Figure 10

Height Adjustment of Extension Strike-Off Plates

(1) Replace front cover.

(2) Replace strike-off or screeding plate assembly. Leave the four capscrews loose enough to adjust height of strike-off. Clean slots if necessary.

(3) Measure strike-off height by placing a level along bottom of screed with one end extending forward, measuring from level to bottom of strike-off plate at both ends of screed. The setting can vary, but the strike-off should **never be below** the level of the main screed bottom.

The setting is based on the compaction (roll down) that occurs behind the extensions. You will not get the same compaction behind the extension as you do behind the main screed. As a general rule you will get approximately 1/4 inch of compaction per 1 inch of mat thickness.

(4) Torque capscrews to 75 ft-lbs.

(5) If using a screeding strike-off plate, measure the angle of attack. If it has worn down to less than 1/16 of an inch, a shim can be installed between the blade support and the trailing edge of the screeding blade bottom.

Reset Lead Crown

(1) To set lead crown, remove pins from rear crown sprocket and increase the crown. The front sprocket will turn independently of the rear crown. ***(Figure 11)***

(2) After the front crown is set at 1/16 to 1/8 inch, reinstall the sprocket pins and recheck the rear crown to make sure the front crown adjustment did not alter the flatness.

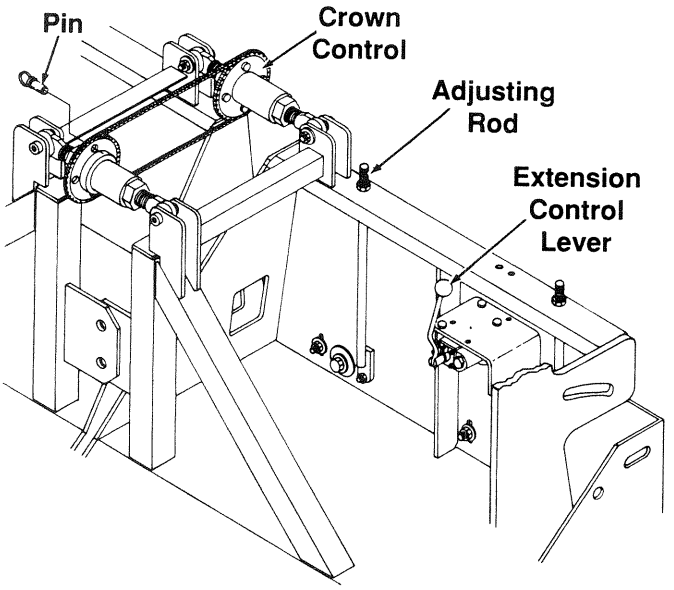


Figure 11

(3) The final crown adjustment is made when the paving has started and the actual mat crown can be accurately checked by a taut string line. The final adjustment is always made after enough mix has been laid to be certain the screed is stabilized. The lead crown can be varied slightly in order to obtain the best mat surface.

For 10-foot wide paving, the maximum positive crown is 3 inches and the maximum negative crown is 1 inch.

WARNING

When adjusting lead crown never invert lead crown in relation to rear crown and never set more than 1/8-inch lead crown over rear crown.

Too much lead crown will bind up the crown mechanism and cause premature wear on the rear center area of the screed bottom.

Vibrators *(Figure 12)*

Vibrations per minute can be varied to produce more or less compaction. The vibrator speed valve is located left of the burner fuel panel. A recommended start-up setting is 3/4 of the range between zero and the highest dial marking.

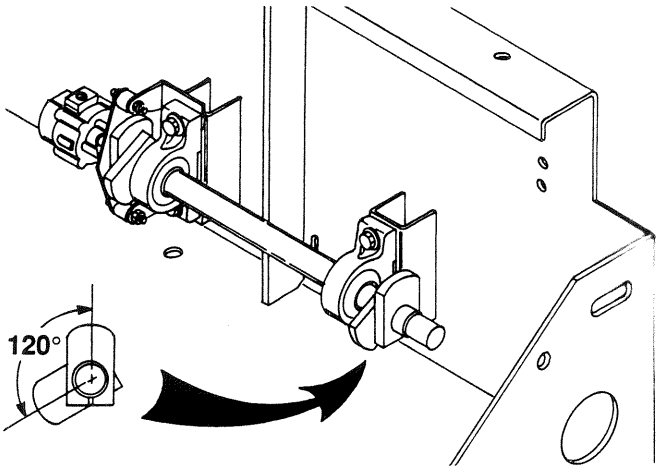
Vibrational force can be varied by changing the relationship of the weights. Aligning the two long ends together produces the most force. The factory setting is 120° between the two. All weights must be aligned the same to obtain the most effective vibrating action.

Vibrator Weight Installation and Alignment

The vibrator weights are simple split clamps. For most mixes, mounting the weights at 120° to each other will provide adequate compaction. Aligning the weights closer together will produce more compaction force. Aligning the weights directly opposite each other provides no compaction force.

To reposition a weight, loosen the setscrew with an Allen wrench and rotate the weight to the desired position. Only one weight will need to be moved. All pairs of weights must be aligned along the length of the shaft to provide a synchronized vibration. This is very important to remember when installing screed extensions equipped with vibrators. Misalignment will reduce the vibrating force across the screed, which will reduce the mat compaction.

If it is necessary to replace a weight, the hydraulic motor must be removed or a U-joint disconnected to slide the weight onto the shaft.



Vibrator Weight Alignment
Figure 12

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WARNING

Align the split in the weight nearest vibrator motor with split in shaft. This helps clamp vibrator shaft to motor shaft at same time it clamps weight to vibrator shaft. Clamp weight farthest from motor at correct angle.
(Figure 13)

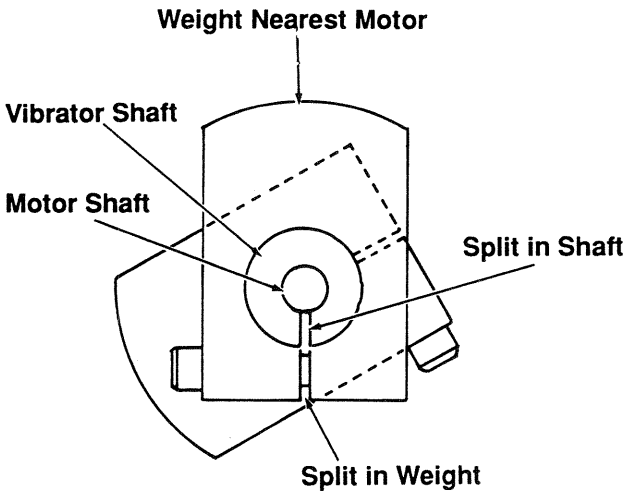

Figure 13

To test the operation of the vibrators:

(1) With the engine running, set the vibrator speed dial to zero.

WARNING

Paver may creep during this procedure. Keep personnel clear.

(2) Turn the vibrator switch on, release the brake switch and move the travel lever(s) forward.

(3) Test the vibrator speed knob by turning it.

(4) After testing, turn the vibrators off, return the travel lever(s) to neutral and engage the brake switch.

WARNING

Do not work on the vibrators with the engine running. Do not operate without guards in place.

Screed Accessories

Fixed Extensions

Fixed extensions can be added to the ends of the Fastach screed to pave greater widths. Quick-attach studs allow installation in a matter of minutes. Normally, when adding a fixed extension, a vibrator shaft extension, end gate and arm support are also installed.

All extensions must be perfectly aligned with the screed bottom to produce a smooth surface without transition lines. The extension's front edge alignment is controlled by the upper front eccentric mount. The extension's rear edge alignment is controlled by the lower rear eccentric mount. The lower front extension mount is fixed. The eccentric mounts also control the slope of the extension.

(1) Remove heat duct cover on each end of screed. ***(Figure 14)***

(2) Install mounting pegs in the right-hand side of the screed. ***(Figure 15)*** Two tapered pegs go in the top and bottom rear holes. The straight peg goes in the bottom front hole. Leave nuts loose enough so pegs can slide back and forth in the slots.

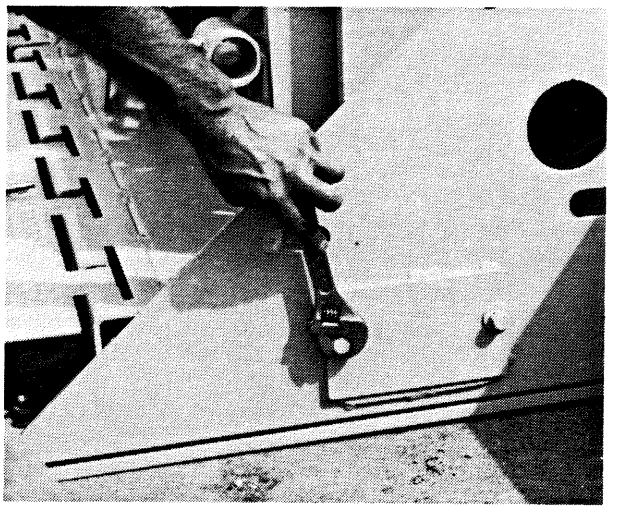

Figure 14

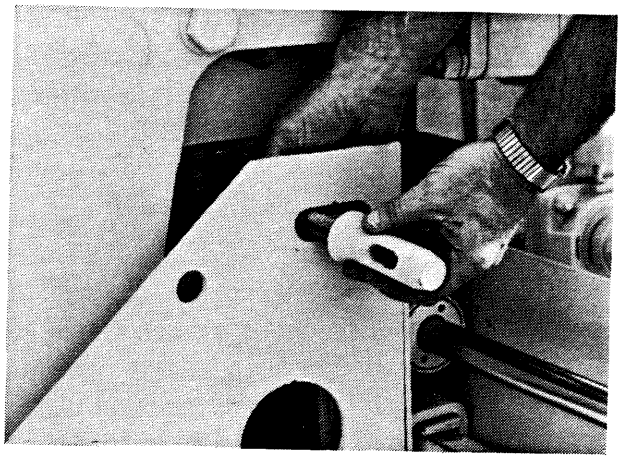

Figure 15

(3) Install alignment eccentrics in the left-hand side of the screed extension and adjust the projections to extend toward the main screed 1/4 to 5/16 inch. ***(Figure 16)***

On the opposite end of the screed, the eccentrics are installed on the main screed and the projections will be toward the extension. Adjust to the same dimensions.

(4) Make sure all mating surfaces are clean of asphalt, dirt, or anything that would prevent these surfaces from fitting snugly together. Pay special attention to the screed bottom, strike-offs and heat duct tube area. ***(Figure 17)***

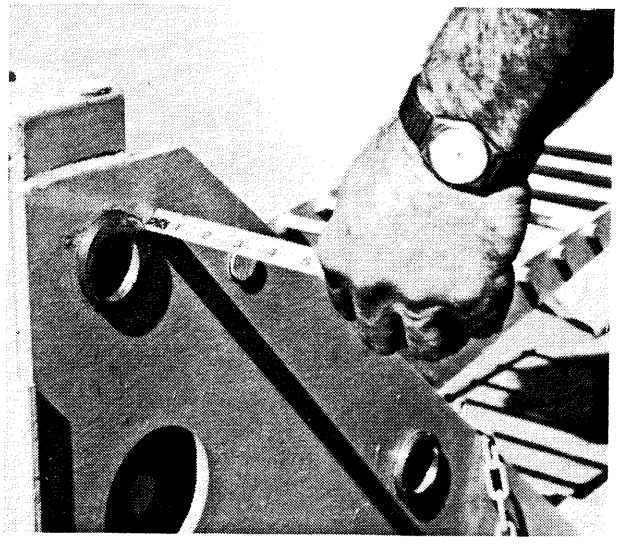

Figure 16

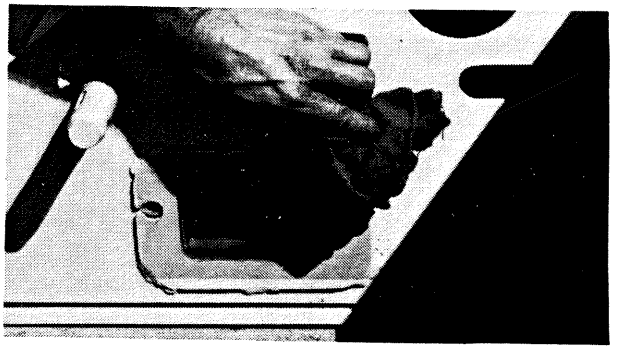

Figure 17

(5) If the screed extension has vibrators, connect the vibrator shaft on the extension to the main vibrator shaft. To connect the shafts, slip the extension shaft on the vibrator shaft. Align the vibrator weights in the extension with the weights in the main screed. ***(Figure 18)***

(6) Slide extension onto the pegs of the main screed. Allow pegs to move in their slots to align themselves with the eccentric. Slip the extension shaft for the vibrator shaft onto the main screed's vibrator shaft. ***(Figure 19)***

Note: Screed extensions are heavy. When installing, lift with a hoist.

(7) Put wedges into the slots in each peg. Tap in lightly, just tight enough to hold the extension in place.

(8) Raise screed and secure with safety cables and blocks underneath.

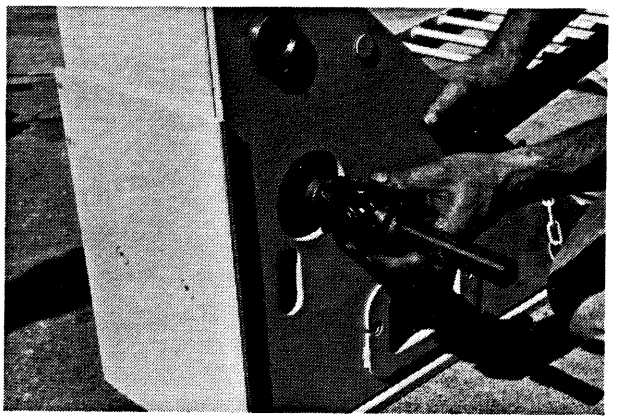

Figure 18

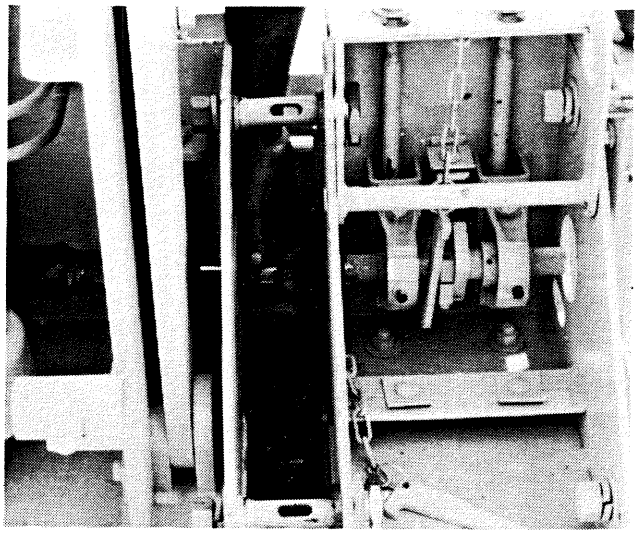

Figure 19

(9) Using special wrench, turn top alignment eccentric to raise or lower the front of the extension screed bottom so it matches the height of the main screed bottom. ***(Figure 20)*** Use a straightedge to make sure the bottoms are flush.

(10) Repeat Step 8 at the rear bottom alignment eccentric until both the front and rear edges of the screed extension match the main screed bottom. ***(Figure 21)***

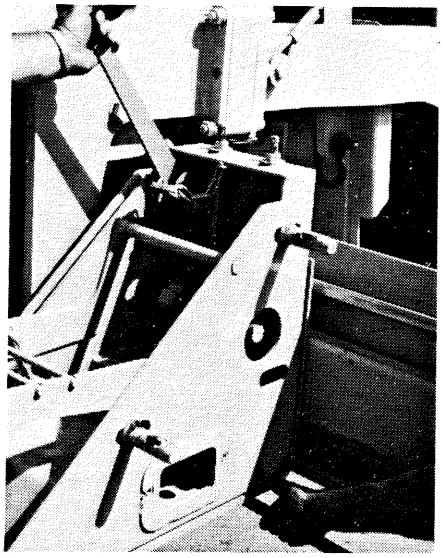

Figure 20

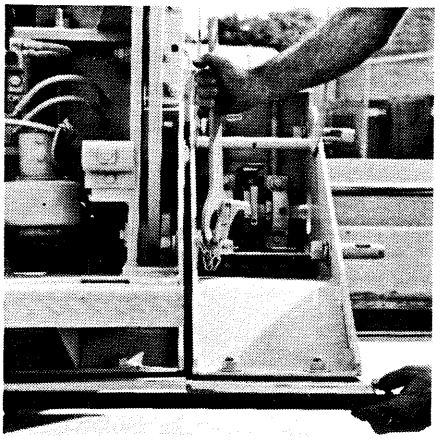

Figure 21

(11) Check the trailing edge of the screed extension. It should line up with the main screed. ***(Figure 22)*** If not, slide the extension forward or back so the trailing edge will line up with the main screed. ***(Figure 23)***

(12) Gently tap wedges in just until they are tight. Then tighten the nuts on the top and bottom rear pegs. If the front bottom peg is loose and the wedge won't tighten it, remove wedge and add a 1-inch washer to the peg. Then replace wedge. ***(Figure 24)***

(13) Next take a straightedge and lay it against the bottom of the main screed and extension screed to see if the extension screed has any positive or

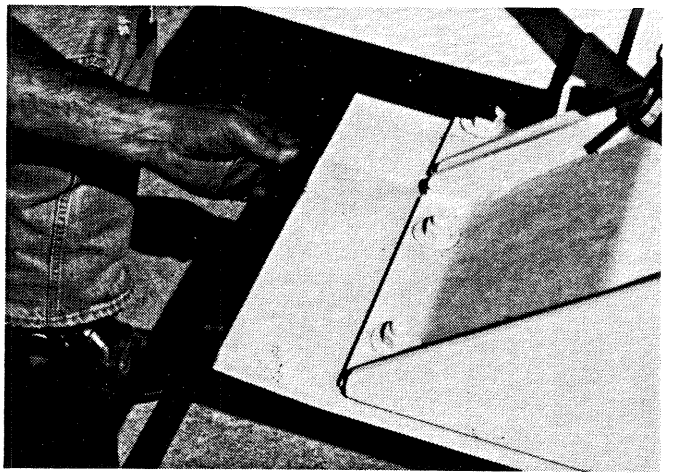

Figure 22

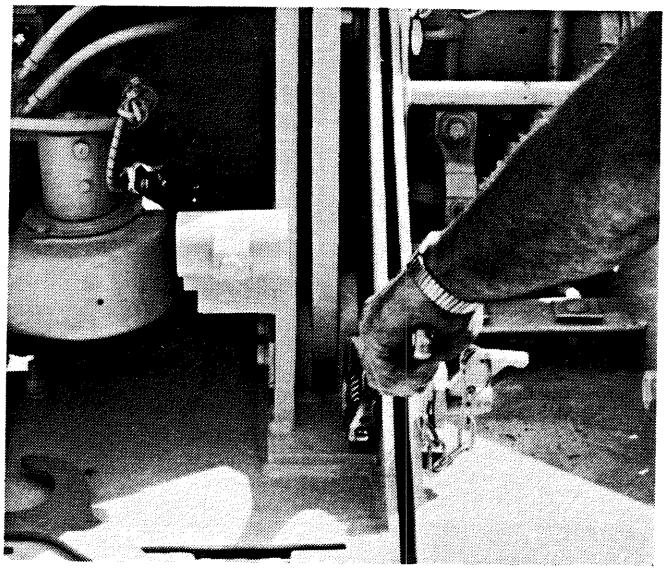

Figure 23

negative slope. *(Figure 25)*

(14) If it does, loosen the peg nut and wedges on the top eccentric and turn the eccentric one full turn. Turning it in will push the outside edge of the extension screed down. Turning it out will raise the outside edge.

(15) Snug the wedge and tighten the peg nut. Recheck with a straightedge.

(16) Once the extension is aligned properly, (bottoms match, trailing edges match and extension isn't sloped), check the strike-off plates. They should be 1/2 inch above the screed bottom.

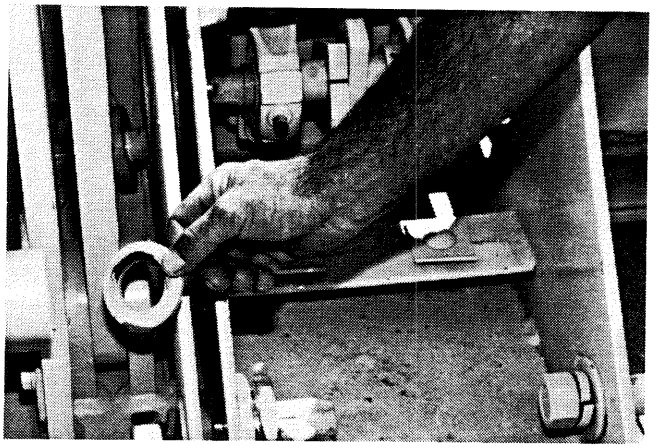

Figure 24

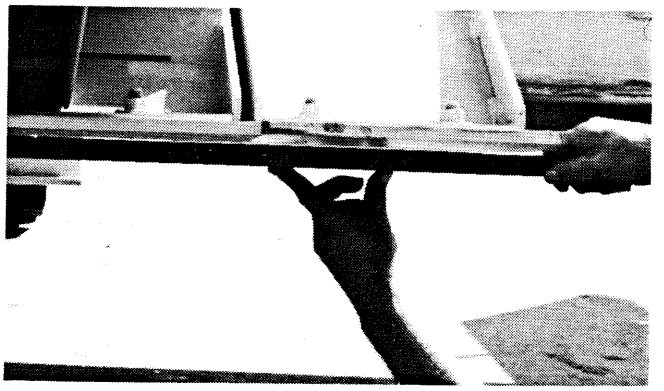

Figure 25

(17) There are two adjusting rods on each strike-off plate. Loosen the top or bottom jam nut on each rod and turn the other nut to raise or lower the strike-offs to the proper height.

(18) If no additional extension is to be added, install the heat duct cover on the end of the extension. Install the guard over the vibrators.

(19) Repeat the procedures for all other extensions.

WARNING

When removing screed extensions, always remove lower wedges first and top wedge last to prevent binding or sudden loss of support. Use a block to support the extension or chain it up to relieve weight on mounting studs.

End Gates

End gates keep mix from spilling out of screed. These plates are bolted to mounting brackets on end of screed.

The position of the end gate is controlled by end-gate jacks on support arm. The jacks raise and lower the chain attached to bottom of end gate.

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Adding Screed End Gates Without Hydraulic Strike-Off
(Figure 26)

(1) Align pegs on mounting bracket with holes on the end of screed.

(2) Insert wedge retainers in slots through the mounting pegs.

(3) Mount support arm to guide peg. Install two bolts to secure the end gate.

Adding Screed End Gates With Hydraulic Strike-off
(Figure 27)

Mount the end gate support arm to the guide peg on the strike-off extending frame. Install bolts to secure the end gate to the strike-off extending frame.

Note: When bleeding material to the outside, raise end gate using crank screws.

Bevel Guide Plates

Bevel guide plates, which bolt to the end gates, produce a 45° beveled edge on the mat. Bevel depths available are 1-1/2 and 3 inches.

Retaining Plates *(Figure 28)*

When extending the width of the augers, retaining plates should be used to prevent forward spillage and keep a uniform material depth all the way out to the ends. Additional supports and bracing are needed when adding a retaining plate 4 feet long or longer. The length of the retaining plates added should match the length of auger extensions.

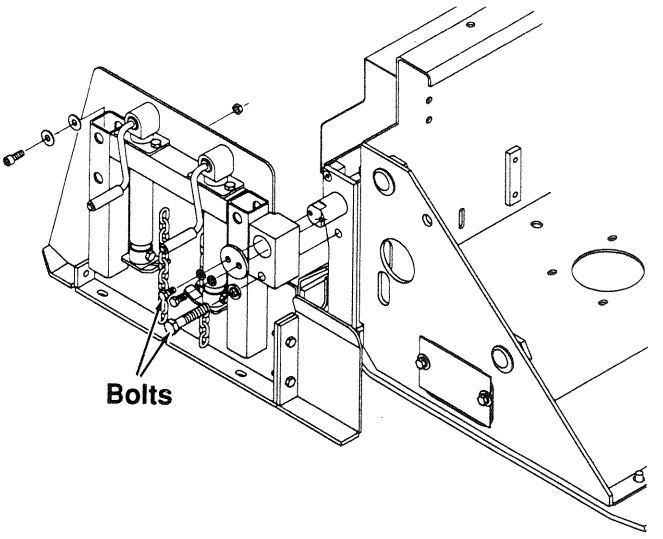


Figure 27

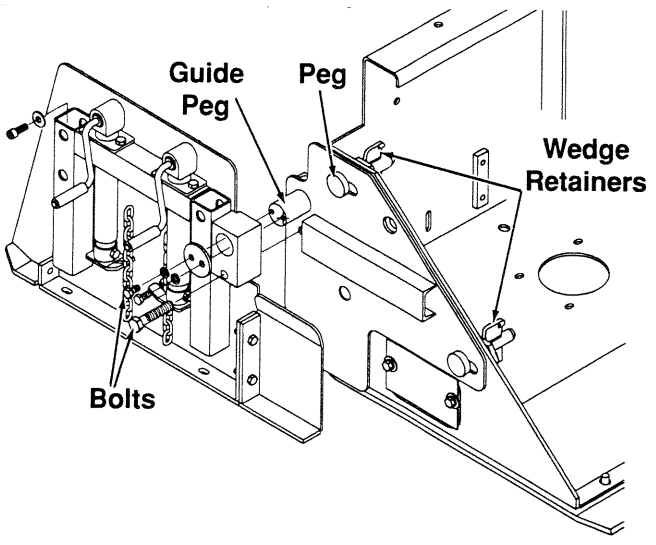
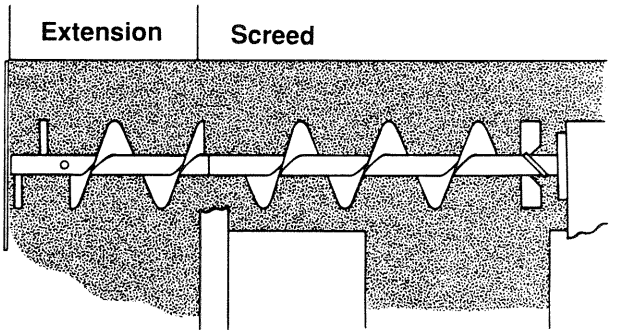
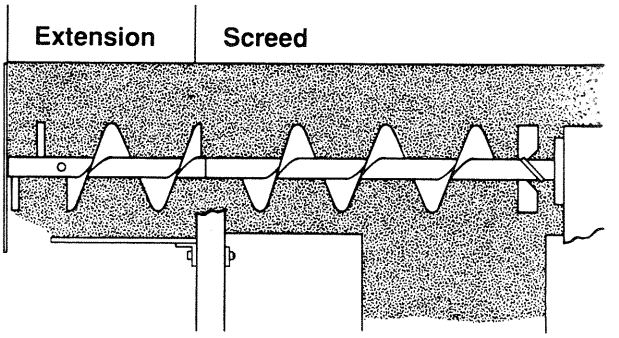


Figure 26



Without retaining plate excess material is required at ends due to forward spillage.



With retaining plate the normal feed to the ends is maintained. Keep plate as close to auger as possible.

Figure 28

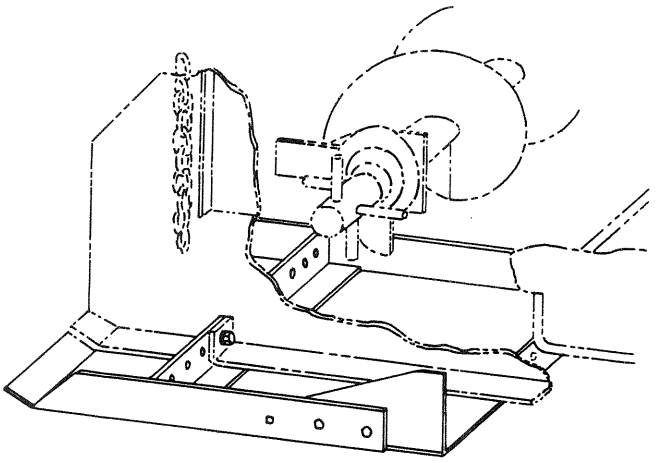


Figure 29

Cutoff Shoes

Standard cutoff shoes can be bolted to the screed end gate for reducing the paving width in 1-1/2 inch increments. ***(Figure 29)***

(1) To install the cutoff shoe, block up the screed to the height of the shoe. Do not block it up so high that the auger will interfere with the shoe.

(2) Raise the side plate and slide the cutoff shoe under the screed.

(3) Bolt the cutoff shoe to the end gate. (The shoe fits either end of the screed.)

Screed Maintenance

For the best performance, the screed must be kept in good condition. Preventative maintenance will keep downtime to a minimum and save money on replacement parts. A well-adjusted machine will also lay a better mat.

Replacing Screed Bottom

The bolts attaching the frame to screed bottom and the pull arms must be kept tight at all times. When these bolts become loose and the screed bottom is no longer rigidly held, waves may appear in the finished mat. Check the bolts frequently.

(1) Position the screed on a flat surface and adjust the crown to zero (front and rear).

(2) Extend any hydraulic extensions and remove the walkway support and tie bars for easier access to the screed bottom.

(3) Secure the crowning arm support plates with bolts to provide rigidity to the screed assembly.

(4) Raise the screed, hook the safety cables and lower the screed until the cables are tight. Block under each end of the screed.

WARNING

Never depend on cables when working around or under the screed. Always use blocks for additional support. Be sure the blocks are free of projections which could scratch or gouge the screed bottom.

(5) Remove the self-locking nuts along the front and rear width of screed.

(6) Slowly raise the screed and slide the screed bottom out.

(7) Remove the shipping braces from the new screed bottom.

(8) Position the new bottom under frame. Take care that nothing gouges or scratches the bottom. Put the spherical washers on the front part of the bottom and the flat washers on the rear.

Note: Make absolutely sure the bolts on the screed bottom are aligned with the bolt holes on the screed frame and the spacer plates and washers are in place on the new screed bottom.

(9) Slowly lower the frame to the bolts on the screed bottom. Recheck the alignment and lower all the way.

(10) Use new washers and locknuts shipped with the screed on all bottom bolts. Before tightening the nuts, push the screed bottom as far forward as possible. Snug the nuts, beginning with rear nuts first, and then front nuts. Finally, torque all nuts to 90 ft-lbs.

(11) Using a level, check screed bottom for flatness, both width and length.

(12) Shim rear stud as necessary.

(13) Install the other parts shipped in the hardware kit.

(14) Remove the bolts from the crowning arm support plates.