



INSTRUCTION MANUEL

Wide Bay Truss SCREED





Table of contents

Assembly	3
1 Section assembly	3
2 Engine assembly	6
3 End frame assembly	8
Operating instructions	9
1 Before operation	9
2 Starting	10
3 Stopping	10
4 Operating	10
5 Cleaning	11
Screed maintenance & service	12
1 A-frame replacement	12
2 Bearing replacement	13
3 Drive belt replacement	13
4 Greasing bearings	14
5 Long storage	14
Torque chart	15
1 Bearing locations	16



Assembly

1 Section assembly

The following describes the assembly procedure of screed sections for both Mechanical and Air Screeds. Most figures shown are of a Mechanical Screed. Section assembly of an Air Screed is identical except where otherwise stated. It is **essential** to follow the proper set-up sequence when assembling the screed for optimum performance.

IMPORTANT!

For steps 1–10, the screed sections must be on a flat surface.

1. Determine the number of sections required to obtain the proper screed length. Arrange the sections so the longer sections are in the middle and the shorter sections are at the ends.
2. For the mechanical screed affix an engine kit to one of the end sections or to the middle section. Refer to **Engine Assembly** for engine kit installation.
3. If an air screed is being used, refer to **Air Drive Assembly** for instruction on assembling air drive and end frames.
4. Assemble end frames and winches to the end sections. Refer to **End Frame Assembly** for installation of end frames.
5. Start assembling sections at one end of the screed. For mechanical screeds place a flex coupling along with two flex coupling collars between the two coupling drivers of adjoining sections. Collars should be slid out to the ends of the flex coupling (see Figure 2).



IMPORTANT !

Check that the two vibrating shaft offsets are in line.

Assemble all sections in this manner. Sight down top tubes of all sections joined and straighten sections if necessary.

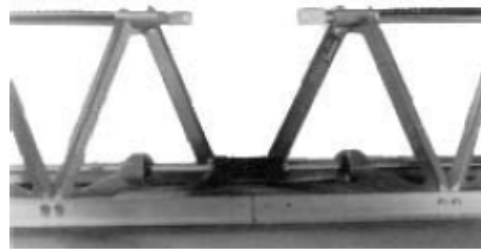


FIGURE 2

For the air screed join the threaded manifold ends with a manifold hose. Use a pipe wrench to prevent the manifold from turning while the hose ends are tightened onto the manifold ends (see Figure 3). Assemble all sections in this manner. Sight down top tubes of all sections joined and straighten sections if necessary.



FIGURE 3

6. Install a two bolt splice plate thru float edging. Install a four hole splice plate on the outside of edging and loosely install four blind nuts (see Figures 4 and 5).



FIGURE 4



FIGURE 5

7. Install a four bolt splice plate thru the strikeoff edging. Install a four hole splice plate on the inside of the edging and loosely install 4 blind nuts (see Figures 6 and 7).



FIGURE 6



FIGURE 7

8. Make sure the bottom of the four edgings are in the same plane. Tighten both splice plates hard.

9. Take a right turnbuckle eye and install a right-hand jam nut about three quarters of the way up the shaft. Now install the eye onto the turnbuckle a little over half way. Do the same with the left turnbuckle eye (see Figure 8).



FIGURE 8

10. Loosely install the turnbuckle assembly directly above the flex coupling to both clevises using a 5/8-18 X 2-1/2 bolt, lockwasher, and a hex nut (see Figure 9). **Install all the turnbuckles in the same direction as you progress down the screed.** There is a notch cut on one end of the turnbuckle to indicate its direction. Remember, do not tighten the turnbuckle hardware yet.

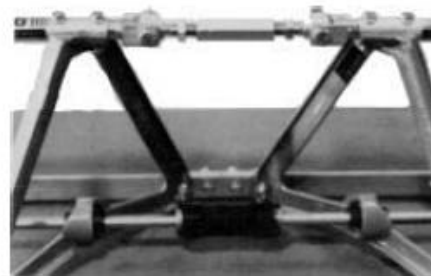


FIGURE 9



After all needed sections are assembled the edging can be trued horizontally.

11. If the pour surface is to be crowned or flat, rotate the turnbuckles so the turnbuckle eyes are pushed away from each other taking out the slack at the clevis connections. If the pour surface is a valley, rotate the turnbuckles so the turnbuckle eyes are drawn towards each other taking out the slack at the clevis connections (see Figure 10). Tighten down the 5/8 bolts going through the clevises and turnbuckle eyes **HARD** once the slack is removed.

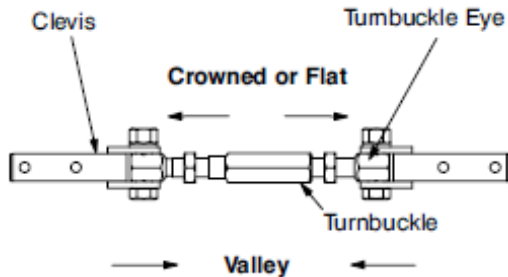


FIGURE 10

12. The screed is now ready for grade adjustment. Place the assembled screed on blocks or forms. String a taut chalk line across the back of the float edge of the screed (see Figure 11). Start with the centermost turnbuckle and adjust it so the bottom edge of the screed moves up or down until it is adjusted to the desired grade (see Figure 12). Adjust each turnbuckle, working out from the center, until the desired grade is achieved. As the turnbuckles are adjusted from the center out, previously adjusted turnbuckles may need to be readjusted to grade. Readjust the centermost turnbuckles and continue adjusting outward. When all adjustments are completed, hold the turnbuckle from further movement and tighten the jam nuts.



FIGURE 11



FIGURE 12

CAUTION!

If there is a significant difference between the ambient temperature at set up and the temperature of the concrete to be screeded, the edgings may warp due to thermal expansion. Recheck the grade of the screed if this is the case.



2 Engine assembly

The engine can be put on any mechanical screed section on the left end where there are bearings in two adjacent A-frames.

1. To install sheave, first remove left coupling driver. Support end of shaft when driving out the spiral pin. Now remove left end A-frame and clevis. Slide #09126 sheave onto main shaft. Also put both V-belts, supplied with engine kit, around main shaft and over top of the top tube (see Figure 13). Reassemble left A-frame, clevis and coupling driver (see Figure 14). Do not install the top tube bolts at this time.

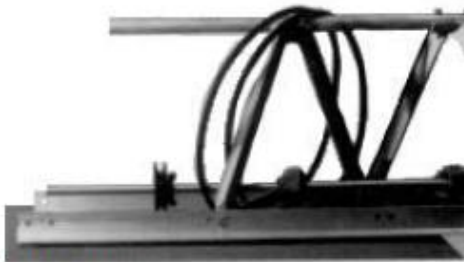


FIGURE 13

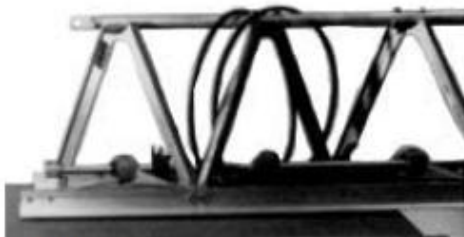


FIGURE 14

2. Remove the two top tube bolts from right A-frame next to left A-frame removed in Step 1. Set #09090 mounting bracket on top tube and align holes up over the two A-frames. Use four 3/8-16 X 2-1/2 bolts to secure mount-

ing bracket thru holes aligned above (See Figure 15). These bolts replace the original 3/8-16 X 2 bolts that were removed earlier.



FIGURE 15

3. Place engine mounting deck (#09787) on top of mounting bracket installed in Step 2. Loosely install engine mounting deck using four whiz-lock bolts and flange nuts thru slots in mounting deck and thru holes in mounting bracket (see Figure 16). The mounting deck should be in its lowest position.

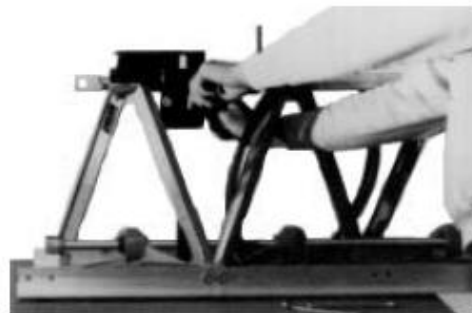


FIGURE 16

4. Bolt engine tight to the mounting deck using four engine mounting bolts, washers and flange nuts (see Figure 17).



FIGURE 17

5. Slip one V-belt over engine clutch. Place V-belt on sheave and align sheave with engine clutch. Secure spare V-belt to an A-frame using tie wraps (see Figure 18).



FIGURE 18



Make sure the shaft is rotated to its lowest position at this time. (set screws in bearings are up).

6. Rotate pulley so the **thick** side of bore is on **top** of the shaft. Tighten sheave onto shaft by tightening the two screws in the tapered bushing of sheave.

7. Adjust belt tension by sliding engine mounting deck upward in slots. Check belt tension by pinching belt between your fingers.

Single Belt – The two sides of the belt should touch or go slightly past each other (see Figure 19).

Dual Belt – A 2" gap should remain between the two sides of both belts.

Tighten the four whiz-lock bolts holding the engine mounting deck to the mounting bracket. **NOTE:** Do not over tighten belt.



FIGURE 19

8. Bolt the belt guard to the mounting bracket using three 5/16-18 X 1/2 screws (see Figure 20).



FIGURE 20



3 End frame assembly

The end frames are symmetrical and can be used on either end. **NOTE:** The end frames for the hydraulic drive are left hand and right hand.

1. Set an end frame on one of the screed ends and align the two bottom holes with the two holes in the edging. Secure with two 3/8-16 X 1 whiz-lock screws and two flange nuts (see Figure 21).
2. Attach eye bolt to clevis and place thru hole in center of cross brace. Square end frame with screed edging by adjusting the two nuts on the eye-bolt and then tightening them securely (see Figure 22).

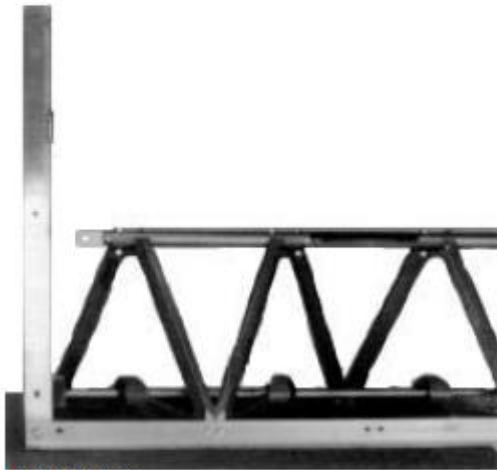


FIGURE 21



FIGURE 22



Operating instructions

1 Before operation

- Check for damage to unit upon initial receipt and startup
- **REMEMBER!** It is the owner's responsibility to communicate information on the safe use and proper operation of this unit to the operators.
- Before operating, review **SAFETY PRECAUTIONS** listed on page NO TAG of this manual.
- Familiarize yourself with the operation of the unit and confirm that all controls function properly **BEFORE** starting engine.
- Know how to **STOP** the unit.
- Make sure hands, feet and clothing are at a safe distance from any moveable parts prior to starting.
- Make sure winches, pulleys and cables move freely and are clean and lightly greased.
- **OIL LEVEL** – Check the oil level in the engine. For more information see **Engine oil** in the engine "Owner's Manual".
- **AIR CLEANER** – Check to ensure element is in good condition and properly installed. Clean filter element if it's clogged. Replace it if it's damaged.
- **FUEL SUPPLY** – The engines on **Paclite** Compaction equipment require a high grade of clean, fresh, unleaded gasoline.
- **FUEL FILTER** – Check to ensure element is in good condition. Replace if it's clogged or damaged.
- **AIR REGULATOR UNIT** – Check to ensure there is an ample supply of Air Tool Oil in the oiler of the regulator unit.



2 Starting



DO NOT START OR RUN THIS MACHINE IN AN ENCLOSED AREA. THE ENGINE PRODUCES CARBON MONOXIDE, A POISONOUS GAS.

Refer to the specific engine's manual for detailed information on starting procedure.

1. Open fuel valve.
2. Move choke control to the closed position. A warm engine may not need to be choked.
3. Set engine throttle to idle position.
4. Turn engine switch to the "ON" position. Pull rewind starter to start engine.
5. After engine starts, open choke and let engine warm up at idle for one or two minutes before operating screed.

3 Stopping



DO NOT STOP THE ENGINE WHEN THE ENGINE IS RUNNING AT HIGH SPEED.

Refer to the specific engine's manual for detailed information on stopping procedure.

1. Move throttle to the "SLOW" position and let engine idle for a couple of minutes.

2. Stop engine by turning engine switch to the "OFF" position.
3. Close fuel valve.



DO NOT CHOKER THE CARBURETOR TO STOP THE ENGINE.

4 Operating

Proper screed operation is dependent upon uniform and accurate concrete placement. The puddlers should rough grade the freshly poured concrete to just above the strikeoff edging. For the mechanical screed effective screeding can be done with the engine set from 2000 to a maximum of 2800 rpm. The operating air pressure range of the air screed is 40 to 60 PSI depending upon the concrete slump. Each vibrator uses 4 CFM.

1. Begin moving screed to strike off rough graded concrete.
2. Puddlers should maintain a uniform rough grade and remove any concrete buildup in front of leading edge (see Figure 25).
3. If screed has to be stopped in the concrete, it is important to do so quickly as this will prevent wash back and ridges.



4. Before starting up again, pick up screed and set it back about a foot, then proceed.



5. If there is a time delay between concrete trucks, the unfinished concrete should be rough graded back and well below screed strike off height. This will prevent a cold joint when screed operation is resumed.

5 Cleaning

1. After using screed for the day, immediately wash the screed down with a water hose or high pressure washer and scrub any hard buildup of concrete with a stiff brush. Do not use wire brush.
2. Grease each bearing of the mechanical screed with one shot of low temperature grease immediately after cleaning. **Do not over grease the bearings!**

Run screed at operating speed for one minute to dissipate and expel excess grease.



DO NOT USE A HAMMER TO REMOVE CONCRETE FROM THE SCREED.



Screen maintenance & service

1 A-frame replacement

REMOVAL (*Mechanical*)

1. Remove coupling driver. Support end of shaft when driving out the spiral pin.
2. Loosen bearing set screws and remove shaft. If there is a drive pulley on the shaft, it must be loosened to remove shaft.
3. Slightly loosen all bottom A-frame whiz-lock screws securing edgings to A-frames.
4. Loosen top tube bolts and remove top tube.
5. Remove the two bottom whiz-lock screws in A-frame to be removed. Remove A-frame.

Make sure offset of coupling driver matches offset of eccentric bearings when installed (thick side of coupling driver matches orientation of thick side of eccentric bearings).

Support end of shaft when driving the spiral pin through. The pin should be driven in so an equal amount of the pin is protruding from the coupling driver on either side.

12. If applicable, tighten drive pulley and align as described in **ENGINE ASSEMBLY**.

INSTALLATION (*Mechanical*)

1. Installation must be done on a flat surface.
2. Loosely install new A-frame into screed with two whiz-lock screws.
3. Loosely install top tube with hardware.
4. Tamp screed on flat surface to ensure it is flat and true.
5. Tighten all whiz-lock screws securing A-frames to screed edgings.
6. Tighten top tube bolts.
7. Turn and align bearings so the set screws are **all facing up**.
8. Insert shaft into screed bearings. If a drive pulley was removed, loosely place in on shaft under engine. Also ensure shaft is threaded through drive belt.
9. Align set screw marks in shaft with set screws in bearings. This will ensure shaft is properly centered in screed. There should be an offset of 1-7/16" from the end of the shaft to the end of the screed edgings.
10. Tighten bearing set screws ensuring they are all in the same orientation.
11. Align and install coupling driver.



2 Bearing replacement

1. Remove A-frame (Refer to section on **A-FRAME REPLACEMENT**).
2. Knock out or press out old bearing out of A-frame.
3. Press new bearing into A-frame.
4. Install A-frame into screed (refer to **A-FRAME REPLACEMENT**).

3 Drive belt replacement

There should always be two drive belts on the screed. One for driving and one for emergency replacement. It is assumed the engine kit is installed on the left side of screed for this procedure.

1. Remove left coupling driver. Support end of shaft when driving spiral pin out.
2. Loosen set screws in left most A-frame bearing.
3. Remove the two bolts from the top tube at left end of screed and remove clevis.
4. Remove blind nut from bottom screw in left A-frame and back screw out so it clears edging surface.
5. Remove whiz-lock screw holding the other leg of A-frame to edging and slide A-frame off shaft.
6. Slip on a new drive belt over clutch and drive pulley. Secure, using tie wraps, an extra drive belt to an A-frame next to drive pulley. Make sure extra drive belt is threaded over top tube and under shaft. For HD Dual belt system, Secure two belts to A-frame and use two on clutch.
7. Assemble A-frame, clevis and coupling driver removed earlier. The eccentric bearing offsets have to all be orientated in the same direction. **Make sure offset of coupling driver matches offset of eccentric bearings when installed (thick side of coupling driver matches orientation of thick side of eccentric bearing)**. Remember to support shaft when installing coupling driver. Tighten associated hardware and bearing set screws.
8. Loosen engine deck mounting bolts. Adjust drive belt so it can be pinched together to touch with finger pressure (refer to Figure 19 page 14). For HD drive, Belts should be tightend so that their is a 2" gap when squeezed together. Tighten engine deck mounting bolts keeping engine level.



4 Greasing bearings

Bearings come prelubed from the factory and do not need to be greased for their initial use. Bearings need to be greased after screed has been washed down after a days usage and for long storage. It is recommended to use a low temperature grease. Refer to sections on **OPERATION** and **LONG STORAGE** in this manual for additional information. Only one shot of grease is needed for each bearing. Over greasing will result in excess drag on the shaft.

5 Long storage

Before storing screed for an extended period of time:

1. Grease bearings with one shot of low temperature grease after final usage before storing. Run screed at operating speed for one minute after greasing all bearings.
2. Refer to engine's **OPERATORS MANUAL** for instructions on storage procedure for engine.

Torque chart

<u>TIGHTENING TORQUE</u>			<u>CONVERSIONS</u>
SIZE	GRADE 2	GRADE5	
10-24	32 in-lb	40 in-lb	in lbs x 0.083 = ft-lbs
10-32	32 in-lb	32 in-lb	
1/4-20	70 in-lb	115 in-lb	ft lbs x 12 = in-lbs
1/4-28	85 in-lb	140 in-lb	
5/16-18	150 in-lb	250 in-lb	ft lbs x 0.1383 = kg-m
5/16-24	165 in-lb	270 in-lb	
3/8-16	260 in-lb	35 ft-lb	ft lbs x 1.3558 = N•m
3/8-24	300 in-lb	40 ft-lb	
7/16-14	35 ft-lb	55 ft-lb	
7/16-20	45 ft-lb	75 ft-lb	
1/2-13	50 ft-lb	80 ft-lb	
1/2-20	70 ft-lb	105 ft-lb	



1 Bearing locations

The eccentric bearings are located in the screed A-frames as shown below.

