Factory Install

It takes two consecutive days to install a VLF Trendsetter Autoloader shipped new from the factory.

[To perform a retrofit, see the Field upgrade page.]

Note: These procedures are designed only as a guide to assist field engineers. It is assumed that any person installing a VLF Trendsetter AL has completed CreoScitex training on the product.

Day 1 | Day 2 | Printed Documents | Tools

Day 1 Procedures

1. Check the site preparation
2. Unpack & position
3. Install the base VLF Trendsetter
4. Install the track and picker
5. Install the Single Cassette Unit (SCU) **or** Install the Multiple Cassette Unit (MCU)
6. Install the Slipsheet Removal System (SSR)
7. Install the straight conveyor **or** Install the L-Conveyor
8. Install the imaging head. See the Thermal Head installation page.
9. Install skins, rear access guards, and guard rail
10. Clean up

Day 2 Procedures

1. Install the Workstation
2. Test the system (not yet available)
3. Align the head. See the Head Installation procedure(doc #77-0074A)
4. Configure the system.
5. Complete the Installation Test Procedure (ITP): for Print Console (38 KB)

6. Train the operator. See the Operator checklist (18 KB).

Procedure Checklist (Excel file) (99 KB): a summary of the procedures for installing a VLF Trendsetter AL.

Note: This checklist must only be used as a reference sheet for those who are fully trained and experienced with installation of the VLF TS AL system.

Tools

VLF Trendsetter AL Installation Tools and Fixtures (6 KB) (BOM for part #04-0018A)
Tools: Description of installation tools and jigs, with photos

Printed Documents

The following documents are in pdf format so that you can print the text out for reference.
To view the photographs and drawings, please use the procedure online or on your service CD.

- All Factory Install Procedures (297 KB)
- Procedure Checklist (19 KB)

- Installation Test Procedure for Print Console (38 KB)

- Site Preparations & Requirements
- Operator Checklist (18 KB)
- Installing Plate Alignment Labels (32 KB)
- Assembling the Floor Plate (22 KB)
- Assembling MCU Skins (93 KB)

Field Upgrade

It takes two consecutive days to upgrade a VLF Trendsetter to an Autoloader in the field.

[To install a new VLF TS AL from the factory, see the Factory Install page.]

Note: These procedures are designed only as a guide to assist field engineers. It is assumed that any person upgrading a VLF Trendsetter to an AL has completed CreoScitex training on the product.

Day 1 | Day 2 | Printed Documents | Tools

Day 1 Procedures

1. Check the site preparation
2. Unpack & position
3. Upgrade the base VLF Trendsetter

Day 2 Procedures

1. Install the track and picker
2. Install the Single Cassette Unit (SCU) **or** Install the Multiple Cassette Unit (MCU)
3. Install the Slipsheet Removal System (SSR)
4. Install the straight conveyor **or** Install the L-Conveyor
5. Install skins, rear access guards, and guard rail
6. Clean up
7. Test the system (not yet available)
8. Configure the system.
9. Complete the Installation Test Procedure (ITP): for Print Console (38 KB)
10. Train the operator. See the Operator checklist (18 KB).

Procedure Checklist (Excel file) (99 KB): a summary of the procedures for upgrading to a VLF Trendsetter AL.

Note: This checklist must only be used as a reference sheet for those who are fully trained and experienced with installation of the VLF TS AL system.

Tools

VLF Trendsetter AL Installation Tools and Fixtures (6 KB) (BOM for part #04-0018A)
Tools: Description of installation tools and jigs, with photos

Printed Documents

The following documents are in pdf format so that you can print the text out for reference.
To view the photographs and drawings, please use the procedure online or on your service CD.

- All Field Upgrade Procedures (331 KB)
- Procedure Checklist (19 KB)

- Installation Test Procedure for Print Console (38 KB)

- Site Preparations & Requirements
- Operator Checklist (18 KB)
- Installing Plate Alignment Labels (32 KB)
- Assembling the Floor Plate (22 KB)
- Assembling MCU Skins (93 KB)

Check the Site Preparation

Before unpacking the crates, walk through the site to ensure that all the necessary preparations have been made.

1. ☐ Check that the site layout meets all the requirements of the Site Preparation Checklist (Appendix A of the Site Preparations & Requirements document 73-3319A).

    - plant air supply
    - dedicated phone line for workstation communications
    - network connection
    - AC power
    - floor flatness
    - environmental conditions
    - location of the VLF Trendsetter AL: is there enough space? are the air/power/telephone lines easily accessible?
    - service access clearance around the entire VLF Trendsetter AL system
    - location of workstation
    - area for plate storage
    - location of processor, and clearances
    - area for plate stacker or plate puncher, if applicable

2. ☐ Verify the system configuration with the customer (SCU or MCU, conveyor type, system orientation, etc).
3. ☐ Verify the size and type of plates that the customer will be imaging, and the type of processor.
4. ☐ Check that the shipping crates have not been unpacked.

5. ☐ Explain to the company supervisor and the riggers how to properly move

the VLF Trendsetter. The customer is responsible for rigging and placement of the system. Make sure that an operator is available, and that the forklift meets the criteria in the Site Preparation Checklist (Appendix A of the Site Preparations & Requirements document 73-3319A):

- for the Single Cassette Unit: 1800 kg (4000 lb) minimum capacity
- for the Multiple Cassette Unit: 2300 kg (5000 lb) minimum capacity
- fork width not exceeding 6" (15cm)
- lateral fork movement capability is recommended

6. ☐ Walk the path from the loading dock to the permanent location of the VLF Trendsetter AL, checking that there is adequate clearance along pathways and through doors, with no obstructions.
7. ☐ Gather the necessary documents, hand tools, special fixtures, and heavy moving equipment required for the installation. The number of tools needed may vary depending on the size of the crew. Most of the hand tools and all of the special fixtures are in the VLF Trendsetter AL Toolkit, #04-0018A (6 KB), sent to the site from the regional office.

Supplied by Customer

The following heavy moving equipment must be arranged with the customer:

- forklift (1800 kg (4000 lb) for the SCU; 2300 kg (5000 lb) for the MCU) with operator
  -- to move the VLF Trendsetter, the Cassette Unit, individual cassettes, and the conveyor
- dollies -- to move the track
- pallet jack -- to move the garage

Two lifting bars and an adjustable foot wrench will be shipped with the VLF Trendsetter.

The customer must also supply a floor layout diagram (from Site Preparations & Requirements document 73-3319A).

Supplied by Creo CSE

- Two or three 1/2" sockets with handles (for opening crates) **or** a cordless drill with 1/2" socket
- Completed site preparation checklist (from Appendix A of Site Preparations & Requirements document 73-3319A).
- Thermal Head Installation Procedure 77-0074A
- Service Engineer's toolkit 90-1005A (including multimeter, grounding wrist strap, etc)

Unpacking the crates

1. ☐ Inspect all delivered crates and boxes. These will normally be located in the customer's loading dock area.

   - Check that all the shipped crates have been received.
   - Check that the toolkit crate is still locked.
   - Check any shock watches on the outside of crates. They should be white, not red.
   - Look for signs of damage from moisture, improper packing, tipping, dropping, stacking, etc. of crates, or any sign of mishandling.

2. ☐ Record any problems immediately on the Installation Report form and report them to both CreoScitex and the Delivery Company.
3. ☐ If space is tight, consider the best sequence in which to install the components before starting to unpack the crates.

   Note: Do not clutter the workspace.

4. ☐ Unpack the conveyor first.

   ### Straight Conveyor

   a. Remove the crate top and sides.



Straight conveyor

   b. Remove the wooden supports.
   c. Have the forklift operator remove the conveyor from the crate. It can either be placed on the floor for rolling, or be moved by

forklift directly to its permanent location.

d. Leave the foam pad covering the plate deck in place. Small items from the other crates can be stored on it.

L-Conveyor

tbd

Rotating Conveyor

tbd

5. ☐ SCU only - Unpack the cassette cart (part of the SCU).

   a. Remove the crate top and one side only.
   b. Cut the tie straps holding the cart to the crate.
   c. Have the forklift operator remove the cart from the crate. It can either be placed on the floor for rolling, or be moved by forklift directly to its permanent location.
   d. Leave the foam pad covering the plate deck in place. Small items from the other crates can be stored on it.

6. ☐ MCU only - Unpack the MCU and cassettes.

   a. Remove the MCU crate top and sides.



MCU crate

   b. Have the forklift operator remove the MCU from the crate base - lift from the rear of the MCU. Place the MCU on the floor ready to be rolled into position.

c. Remove the cassettes crate top and all the sides. Leave the cassettes on the base until you are ready to install them into the MCU.



MCU cassettes crate

d. Leave any loose packaged items on the cassette top until you need them.

7. ☐ Unpack the VLF Trendsetter.

a. Open the crate to allow access to the front and rear of the machine.

b. Remove all packages from the crate and put most of them on the conveyor's foam pad or in a cassette (if ordered):

- adjustable foot wrench
- fasteners
- floor plate (SCU only)
- guard rail assemblies (2) including base plates and struts
- lifting bars
- picker with skins
- rear access guards (3 rear and 2 sides)
- track skins (3)

c. Do not remove the temporary table supports yet. These supports can be removed once the TS has been put into its final position.



TVLF rendsetter crate

d. Remove the front center panel and both rear panels.
e. Raise the hose cage to gain access to the forklift rails.

WARNING! Moving the VLF Trendsetter by forklift when its front and rear panels are still on will damage the machine. Be careful not to damage the plastic cable channels directly under the forklift's arms.

f. Have the forklift operator remove the VLF Trendsetter from the crate. Lift it carefully as one side is heavier than the other. The machine can either be placed on the floor for rolling on its castors, or be moved by forklift directly to its permanent location.
g. Remove the lift bars from the bottom of the crate.



Lift bars location

8. ☐ Unpack the track.

a. Remove the crate top, but do **not** remove the track from its crate.
b. Discard any excess packing material.
c. Lift the crate by hand onto dollies and roll it to its permanent location.

Note: Do not unpack the track until you are ready to install

it.

9. ☐ Unpack the garage (part of the Single Cassette Unit).

   a. Remove the crate top and sides.
   b. Remove all packing material.
   c. Remove the temporary fasteners securing the garage plate to the bottom of the crate.
   d. Leaving the garage on the crate bottom, move it to its permanent location using a pallet jack.

   Note: Do not take the garage off the crate bottom until you are ready to install it.

10. ☐ Unpack the Slipsheet Removal Unit.

    a. Remove the crate top and sides. One side will be hinged to roll the SSR out of the crate - lower it.
    b. Remove the side wooden supports.
    c. Lift the SSR up slightly to remove the wooden support blocks underneath it.
    d. Roll the SSR off the crate ramp.



SSR crate

11. ☐ Unpack the workstation.

    Move the workstation components to their permanent location using a dolly or pallet jack.

Note: Do not unpack the workstation until you are ready to install it.

12. ☐ Unpack the imaging head.
    Leaving the head in its crate, move it to its permanent location using a dolly.

    Note: Do not unpack the imaging head until you are ready to install it.

13. ☐ Unpack the Autoloader toolkit (#04-0018A).
    Roll the toolkit box to the location of the installation on its castors.

Base VLF Trendsetter

Objectives:

- To set the system centerline, using a laser, so that the VLF Trendsetter AL aligns with the customer's processor. The system centerline will be the reference point for all future adjustments and alignments.
- To position and lower the machine.

1. ☐ Determine the system centerline.
   Using the floor layout drawing and a measuring tape, mark the floor at each end of the autoloader system.
2. ☐ Position the centerline laser plane (#90-1120) outside the work area.
   Note: The laser will maintain the centerline throughout the installation. Do not move the laser at any time during installation.
   a. Set the tripod at 1.5m elevation above the floor.
   b. Assemble the laser plane for vertical plane operation.
   c. Mount the laser plane to the tripod.
   d. Level the laser plane using the bubble level.
   e. Turn the laser on.

   WARNING! Do not look directly into the laser beam.

   f. Adjust the position of the tripod and the rotation of the laser plane until the reference marks on the floor are met ±1mm. The laser plane will now be displaying the plane that marks the autoloader system centerline.
   g. Point the laser to the floor under the tripod and mark the position for reference.
3. ☐ Position the VLF Trendsetter in its approximate location according to the floor layout (±12mm).
   a. Using a measuring tape, check the distance to the processor (if it's

there) or to a nearby wall or post.

b. Roll the machine into the correct position.

c. Verify the distance on the floor layout diagram.

4. ☐ Remove all seven side panels from the machine.
   This will give access to the engine, fan box and power box. Place the panels in a safe location.
5. ☐ Remove all internal packing material - do a thorough search of the machine for any bits of protective foam that will prevent correct operation of moving parts; particularly under the LEC flap. Remove the counterweight restraining bracket shown below - it is the aluminum angle bracket that holds the counterweight in place during shipping:

VAL_counterweight_b
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Counterweight restraining bracket

6. ☐ Open the electronics card cage and check that all circuit boards are properly seated.
7. ☐ Install the table bumpers that were removed for shipping.
   The table bumpers on some VLF Trendsetters rest on the front panels. For those machines, you must replace the panels after installing the bumpers. For other machines, the bumpers rest on the top frame.

For SCU installation, proceed to step 8; For MCU installation, proceed to step 9.

8. ☐ Attach the table fixture (#92-0369) to the table edge on the cassette side, then level the fixture.
   See the drawing: Superjig table fixture (40 KB)

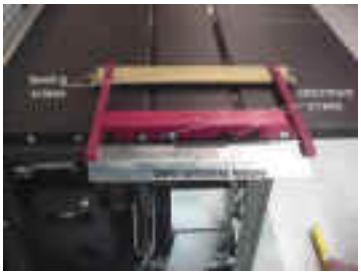


Table fixture (attached to pick side of table)

a. Check that the table is down.
b. Place the table fixture on top of the table.
c. Set the height of the fixture's pivot:
   For a Table Left Side pick, rotate the pivot fully clockwise.
   For a Table Right Side pick, rotate the pivot fully counter-clockwise.
d. Place the retainer below the table (the retainer is required if the table does not have permanent nuts installed).
e. Loosely fasten the screws through the table edge. You may want to open the p-door and raise the table to make this task easier.
f. To adjust the table fixture level:
   - lower the table
   - calibrate the digital level
     - turn it on and let the display settle
     - Press the Calibration button. 'cal1' will appear on the display.
     - Wait a few seconds till the display has settled again.
     - Turn the level around 180° and press the Calibration button again. 'cal2' will appear on the display.
     - Wait a few seconds till the display has settled

again.

- place the calibrated digital level on the side bar of the fixture, then across the front and rear bars simultaneously
- rotate the leveling screws to adjust the level in both axes to 0° ±0.1°.



Leveling the table fixture

g. Tighten the retaining screws.

9. ☐ Align the VLF Trendsetter to the system centerline laser.
   a. Turn on the laser plane. Recheck that the laser is still in position, and is level.
   b. Check the centerline reference marks on the table fixture.
   c. Roll the machine until the laser touches both edges of the centerline marks (one on the table edge and one on the table fixture).
   d. Turn off the laser plane.

10. ☐ Set the coarse VLF Trendsetter height using the 3 adjustable feet. Lay on the floor, reach under the machine and rotate each adjustable foot down from the fully 'up' position - three full turns for an SCU and two full turns for a MCU. Use the adjustable foot wrench as required.

    Note: The position of the VLF Trendsetter will probably shift slightly when the castors are removed. It will need to be

realigned.

11. ☐ Position the floor plate (**SCU installations only**).

    Note: If the floor plate has been shipped in pieces, re-assemble it by following the instructions in Assembling the Floor Plate (22 KB).

    a. Slide the floor plate under the VLF Trendsetter.
    b. Attach the floor plate alignment fixture (#92-0371) to the table fixture.

       See the drawing: Superjig floor fixture (36 KB)
    c. Suspend the plumb-bobs (#90-1125) from the floor plate fixture so they hang just above the floor plate.
    d. Align the holes in the floor plate under each of the plumb-bob tips. Use a mallet, if needed, to bump the floor plate into position. Placement doesn't have to be exact as further adjustments will be made after the castors are removed.



Positioning the floor plate

12. ☐ Position the 4 lifting jacks (#92-0084).
    a. Place the lifting bars (#56-3266) through the square holes in the engine casting.
    b. Check that the hose tray is up out of the way of the lifting bars.
    c. Slide the lifting jacks into the tube ends. Make sure the jacks go in all the way.
    d. Place 2 white plastic slide plates (#57-8573) under each jack.

13. ☐ Raise the VLF Trendsetter and remove the castors.
    a. Carefully raise the jacks until the bars are bearing against the top of the engine casting holes at all 4 points.
    b. Place a wood block (#59-3808) under each corner of the VLF Trendsetter for safety.
    c. Raise the jacks, alternating between the 4 jacks so that the machine is kept level.

       WARNING! Do not let any of the lifting points get significantly higher or lower than the others, as this could twist the frame or cause instability.
    d. Stop lifting when the castors are off the ground and there is room to remove the castor screws.
    e. Check that the wood blocks are still positioned correctly under the corners of the machine.
    f. Remove the 4 screws holding each castor to the VLF Trendsetter frame. Save the castors and screws at the site in case the machine has to be moved again in the future.



Using jacks to raise and lower the VLF Trendsetter

14. ☐ Lower the VLF Trendsetter.
    a. Check the position of the floor plate (**SCU installations only).**
    b. Make sure that the power box and fan box pucks (pod feet) are fully up. If they are resting on the ground, raise the VLF Trendsetter using the jacks and rotate the adjustable feet down (1 full rotation = 7 mm height).
    c. Lower the jacks evenly until the lifting bars are no longer touching

the engine casting.

Note: Do not remove the jacks and lifting bars yet.

15. ☐ Check that the engine is level.
    a. Place the calibrated digital level (#90-1150) along the casting under the drum and take a reading. It should be 0° ± 0.1°.
    b. Rotate it 90° and place it on a motor plate beside the drum. You may need to open the hood to place the level. Be careful of the p-door. Take a reading. It should be 0° ± 0.1°.
    c. ➡ To adjust the engine level:
        - Using the adjustable foot wrench, rotate the appropriate adjustable foot in the direction of least deflection
        - Recheck the engine level
16. ☐ Recheck the centerline position. For SCU installations only, also recheck the floor plate position.

    ➡ To adjust the alignment of the VLF Trendsetter:
    - Lift the VLF Trendsetter evenly, using the jacks, until the adjustable feet are all 3 mm off the floor.
    - Push, pull or bump the VLF Trendsetter and/or the jacks until the position is correct.

      Sit on the floor an kick on the corner of the base frame. Don't push or pull on the table or the fixtures. The machine will slide on the white plastic plates.
    - Lower the jacks evenly until they are loose.
    - Recheck the centerline position. For SCU installations only, recheck the floor plate position.
    - Recheck the distance from the edge of the table to the conveyor and to the processor.
    - Repeat the adjustment if needed.

17. Check that the table is level at both ends. It should be 0° ± 0.5°.
    Press gently on the table while reading the calibrated digital level.
    Table levelness is most important at the cassette end, where the pick happens.
    Adjust the table to 0° on the pick side. If the conveyor side of the table is more than ±0.5°, then adjust the whole table until the conveyor side is ±0.5°.

    WARNING! Tilt the p-door out of the way before lifting the table. Failure to do this will bend and damage the table and/or p-door.

    To adjust the table level:

    - Adjust the four bumpers underneath the table.
    - If the table still isn't level, use the adjustable foot wrench to rotate the front center foot and tilt the front of the VLF Trendsetter up or down slightly, to 0.4° maximum, front to rear.

      WARNING! Do not tilt the VLF Trendsetter from side to side.

18. ☐ Remove the plumb-bobs and the floor plate fixture (**SCU installations only**).
19. Attach the table fixture now if you are installing an MCU - see step 8.
20. ☐ Recheck that the table fixture is level (0° ±0.1°).
21. ☐ Adjust the power box and fan box pucks (pod feet).
    Rotate the pucks down by hand until they are just touching the ground, then rotate them down a half turn more.

    WARNING! Do not lower the pucks further or the frame will

twist.

22. ☐ Remove the jacks, sliding plates, and lifting bars.
    If you are installing a SCU, remove and store the lifting bars onsite for future use - usually in the back of the machine. If you are installing a MCU, leave the lifting bars in place until you need them for the MCU installation.
23. ☐ Lower the hose tray to its lowest position.
24. ☐ Check the shop air system pressure, using the air supply gauge (#92-0373A).
    See the *Air Supply Qualification Procedure* in Section 6.1 of the VLF Trendsetter AL site preparations & requirements.
25. ☐ Install an air fitting onto the VLF Trendsetter.
    a. Check that the Autoloader shut-off valve, in the supply line after the regulator, is OFF.
    b. Connect the shop airline.
    c. Set the VLF Trendsetter internal pressure regulator in the fan box to 80 psi. You may need to remove an access panel.
    d. Replace the access panel if it was removed.

Track and Picker

Objectives:

- To mount and level the track and picker
- To locate the picker centerline and the picker 'safe' zone. [For installation, the safe zone is an area at the cassette end of the machine where the picker can sit with its push side flush with the table edge.]

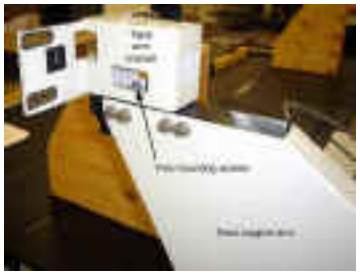
Before the track and picker assemblies are installed:

- The base VLF Trendsetter must be correctly installed and aligned. See the Base VLF Trendsetter installation procedure.
- The track support arms must be installed with cables (they should arrive from the factory already installed).
- The shop airline must be connected properly.

Refer to the drawing: Track assembly (75 KB)

1. ☐ Prepare the VLF Trendsetter for track mounting.

    a. Place the 2 track support fixtures (#92-0198B) on the table, one at each end.
    b. Undo the cable ties that secure the cables to the track support arms and move the cables out of the way in preparation of installing the track onto the support arms.
    c. Attach the track arm brackets to the support arms with five bolts on each side (the long screw goes in the middle).



Track support arm brackets

2. ☐ Lift the track onto the fixtures.

   a. With a helper, lift or roll the track crate and place it in front of the VLF Trendsetter.

      Tip: Place the track mounting screws on the hood so that they are accessible when mounting the track.

   b. Lift the track out of the crate and place it on the fixtures. Position the track and fixtures close to the support arms.

      Warning: Check that the drive belt is not being pinched on the fixtures.

   c. Route the cable and hose from the track into the support arm.



Track mounted on jigs

3. ☐ Move the track onto the support arms and fasten.

   a. With a helper, lift the track from the fixtures onto the support arms.

   b. Install all fasteners securely.

   c. Connect the hose to the supply fitting near the bottom of the VLF Trendsetter frame at the rear.

   d. Connect the cables at the top of the support arms.

e. Remove the tie strap attached to the drive belt.
f. Loosen the tension on the idler gear.

Note: Leave the foam in place on the track ends. It is there for your safety



Cabling from support arm at motor end of track



Cabling from support arm at conveyor end of track

4. ☐ Install the drive motor. See photo above.

   a. Connect the motor ground cable using a star washer.
   b. Tension the belt lightly with the idler gear. The belt should be one half inch from the bottom of the middle of the track. **Tip:** This is easier to do if you remove the track end-plate.
      Note: The idler gear has a bearing inside. Do not over tighten it.
   c. Tighten all fasteners.
   d. Connect the motor cable and sensor cables - feed the cables through the brackets where possible.

5. ☐ Remove the track support fixtures.
6. ☐ Prepare the picker for mounting.

   a. Check that the protective foam pad is still attached to the bottom of the picker.
   b. Place the picker on the table, near the center. Open the drop-leaf

gate for better access.

c. Carefully remove the two picker skins.

d. Remove the 4mm pin that secures the picker carriage to the track.

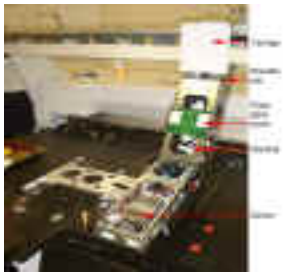
e. Slide the picker carriage close to the picker.

f. Insert the cable and hoses into the picker arm.

g. Connect the two hoses to the two manifold hoses. Temporarily remove the picker lights board to get access to the manifold.

h. Connect the cable to the Genine board - J24 SCON2. Connect the ground wire to the genine's corner mounting screw.

i. Route the cables and hoses in the arm so that they do not interfere with any connections.



Picker components

8. ☐ Lift the picker into position.

a. Lift the picker up to the picker carriage.
Note: Handle the picker with care!

b. Securely tighten the two shoulder bolts that attach the picker to the carriage (this will require an imperial Allen key).

c. On the left side of the Trendsetter, temporarily plug the air supply fitting that is for the garage or MCU.

d. Turn the AL air supply shut-off valve ON. The p-cup arm and the pusher fingers will lift up.

WARNING! To move the picker by hand, never push or pull the picker body or arm. Push or pull on the picker carriage or the drive belt.

g. Remove the protective foam pad from the bottom of the picker.

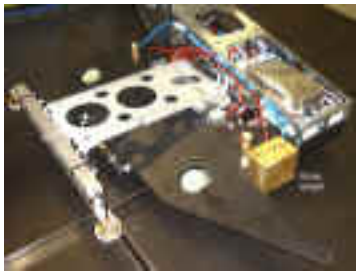
9. ☐ Set the picker 'safe' position.

a. Lift the picker up and over the table jig and move it to the left edge of the table where the table jig is attached.
b. Lock the carriage by placing a 4mm pin (hex key) through the hole in the picker carriage and into the hole in the track.
c. Check that the pusher edge of the picker body is within the marks on the picker fixture.
See the drawing: Superjig table fixture (40 KB)
d. To adjust the picker 'safe' position:

- Loosen the track support arm flange-to-track fasteners, 4 on each side.
- Slide the track in the appropriate direction by hitting the support arm with a soft, heavy (dead-blow) hammer in the opposite direction. Don't hit the track itself.
- Tighten all 8 fasteners.
- Recheck the picker 'safe' position.

10. ☐ Check the levelness of the picker. It should be 0° ±0.1°.

a. Attach the brass weight to the picker to simulate the weight of the picker skins.


Brass weight

- Place the calibrated digital spirit level across the top of the lift arm bracket on the picker body and take a reading.
- To adjust the picker level:
    - Loosen the five fasteners that hold the left track support arm to the Trendsetter.
    - Rotate the adjustment screws until the angle is correct (located on the underside of the support arm).
    - Tighten the track support arm fasteners.
    - Recheck the picker 'safe' position. See Step 9.

11. ☐ Check the picker height.

    a. Check that the bottom edge of the 'push' side of the picker body shows through the "window" formed by the two tabs on the picker fixture.
    b. To adjust the picker height:
        - Loosen the track support arm fasteners.
        - Rotate the vertical adjustment screws.
        - Tighten the support arm fasteners.

12. ☐ Check the picker alignment to the system centerline.

    a. Check that the system centerline laser fixture is aligned to the

reference marks. The laser should touch both edges of the picker body centerline holes.

b. To adjust the picker centerline alignment:

- Loosen the track support arm fasteners.
- Rotate the horizontal adjustment screw until the picker is aligned.
- Tighten the support arm fasteners.

13. ☐ Move the picker to the conveyor side.

a. Remove the 4mm pin from the picker carriage.
b. Lift the picker over the table jig and move it to the right side table edge. Make sure the picker body is over the table, and the 'push' side is flush with the table edge.

14. ☐ Check the levelness of the picker and adjust the track support arm as needed. It should be 0° ±0.1°.
See Step 10.
15. ☐ Recheck the picker alignment to the system centerline.
See Step 12.
16. ☐ Check that the track is level to 0° ±0.2°.

a. Place the calibrated digital spirit level along the top of the track at two locations and take readings.
b. To adjust the track level:
   - Loosen the track support arm fasteners (conveyor side only).
   - Rotate the vertical adjustment screws.
   - Tighten the track support arm fasteners.

17. ☐ Move the picker back to the cassette side.
18. ☐ Recheck the levelness of the picker. It should be 0° ±0.1°.
    See Step 10.
19. ☐ Recheck the picker alignment to the system centerline.
    See Step 11.
20. Check that all the fasteners (track support arms, track adjustment screws, picker-to-carriage, picker arm cover) are securely tightened.

Single Cassette Unit (SCU)

MCU Installation

Objectives:

- To position and level the Single Cassette Unit (SCU). The SCU option consists of a garage, docking station, garage plate (bolted to the garage) and cassette cart
- To align the plenum of the SCU with the picker and with the cassette.

Before installing the SCU:

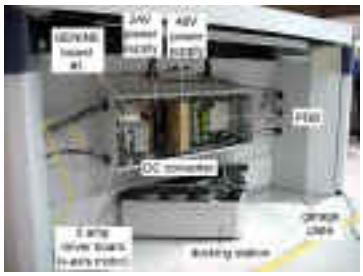
- the VLF Trendsetter must be correctly installed and aligned. See the Base VLF Trendsetter installation procedure.
- the track and picker must be correctly installed and aligned. See the Track/Picker Installation procedure.

1. ☐ Park the picker in the middle of the table.
2. ☐ Check that the table fixture (#92-0369) is attached and level. (See Step 7 of Base VLF Trendsetter installation.)
3. ☐ Remove both side panels from the garage.
4. ☐ Move the garage into position.

    a. Roll the garage on dollies near its permanent location.
    b. With a helper, lift one end of the garage off the crate bottom at a time. Slide it off the edge and onto the floor.
    c. Slide the garage towards the VLF Trendsetter.
    d. Put a 1" wood block under each arm of the floor plate to lift it up.
    e. Slide the garage plate under the floor plate.
    f. Remove the wood blocks.
    g. Align the holes in the garage plate with the holes in the floor plate
    h. Install the fasteners loosely.



Garage components



Garage power box

5. ☐ Level the garage.

    a. Use a calibrated digital spirit level to check that the garage face is level (plumb) to 90° ±0.2°.

    b. ➡ To adjust the garage level:

        - Rotate the adjustable garage feet until the desired angle is achieved.
        - Tighten the fasteners.

6. ☐ Check the distance from the plenum to the table edge at the front and back. It should be 660mm ±5mm.

    ➡ To adjust the plenum-to-table distance

        - Bump the garage until the distance at the front of the machine and the back are more or less equal.
          Note: Don't push the garage from the top. Sit down and kick the bottom to move the garage into place.

7. ☐ Check that the plenum is aligned to the system centerline laser.

    a. Turn the laser plane ON.

    b. Check that the laser plane is aligned to the reference marks. The

laser should touch both edges of the plenum centerline feature.

c. To adjust the plenum centerline

- Bump the garage until the laser is within the plenum centerline feature.

  Note: Don't push the garage from the top. Sit down and kick the bottom to move the garage into place.

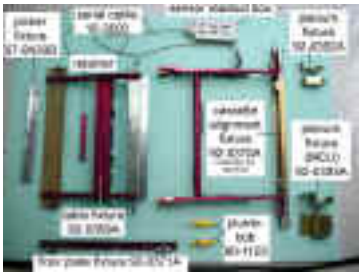
8. ☐ Prepare for cassette alignment.

a. Turn the AL air supply OFF.
b. Remove the kick panels from the VLF Trendsetter.
c. Remove the plug from the garage air supply fitting.
d. Connect the airline from the garage to the VLF Trendsetter.
e. Connect the electrical cables from the garage to the VLF Trendsetter.
f. Turn the AL air supply ON.
g. Remove the docking station cover.
h. Open the cassette and picker doors manually. Prop them open with a foam pad at each end of the plenum.
i. Check that the adjustable cart stops on the cassette cart (just above the front wheels) are loose.
j. Roll the cassette cart into position inside the garage.
k. Check that the cassette centerline is aligned with the system centerline laser. Use the center of the strip of black tape that runs along the cassette bottom as a reference point.
l. Attach the two plenum fixtures (#92-0392) by slipping them onto the front rail of the cassette cart, one at each end, and sliding them over the plenum. The fixtures should hold the cassette tightly to the plenum.

m. Insert the sensor end of the cassette alignment fixture (#92-0370) through the garage doors and place it onto the cassette, being careful not to damage the sensors.
n. Place the other end against the table fixture and align the brackets.
o. Insert both quick-release pins.
p. Connect the sensor readout box to the cassette alignment fixture via the serial cable (#16-3500).



SCU alignment fixtures



Fixture detail

9. ☐ Check the distance from the table edge to the inside edge of the cassette.

a. Turn ON the sensor readout.
b. Check that both Plate Edge sensors are green.
c. ➡ To adjust the distance between the table edge and the inside edge of the cassette:

- Bump the garage either away from the table or toward it, as required, until both lights are green.
  Note: Don't push the garage from the top. Sit down and kick the bottom to move the garage into place.
- Recheck the centerline alignment.

d. Securely tighten the garage plate to the floor plate.
e. Recheck the plenum distance (Step 6) and the centerline

alignment (Step 7).

10. ☐ Check the height from the plenum to the picker.

    a. Move the picker into the pick position (carriage at the end of the track, picker head inside the garage).
    b. Check that both Pick Height sensor readouts are green.
    c. ➡ To adjust the height from the plenum to the picker:

        - Loosen the screws inside the garage side pods, at the bottom.
        - Rotate the 4 vertical adjustment screws until both Pick Height sensor readouts are green.

    d. Recheck that the Plate Edge sensor readouts are still green.
    e. Tighten all the fasteners inside both garage side pods.

11. ☐ Check the height from the cassette to the picker.

    a. Check that both Cass Bott sensor readouts are green.
    b. ➡ To adjust the height from the cassette to the picker:

        - Loosen the large lock nuts on top of the adjustable cassette castors (the two closest to the garage)
        - Rotate the adjustable cassette castors until both Cass Bott sensor readouts are green.
        - Retighten both large lock nuts.

    c. Recheck that the Plate Edge and Pick Height sensor readouts are still green.

12. ☐ Check that the cart is level along the center beam. It should be 0° ±0.2°.

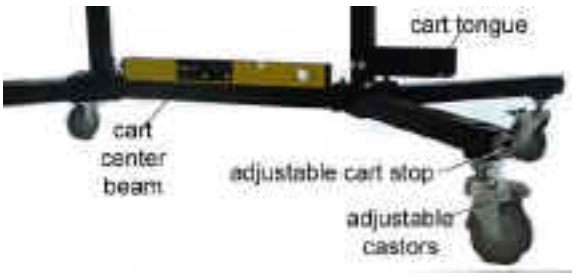
a. Place the calibrated digital spirit level along the cart's center beam. Take a reading.

b. To adjust the cart level:

- Loosen the large lock nuts on top of the adjustable cassette castors (the two furthest from the garage)
- Rotate the adjustable cassette castors until the cart is level.
- Retighten both large lock nuts.



Cassette and cart



Cart detail

13. ☐ Align the docking station to the cassette cart.

a. Slide the docking station into the "V" of the cart rails. The cart rails should contact at least one wheel on each side of the docking station.

b. Place a 6mm hex key on top of the docking station, directly under the cart tongue (the bar that extends past the front frame of the cart).

c. Lower the cart tongue evenly onto the hex key.

d. Tighten the cart tongue fasteners.

e. Remove the 6mm hex key

f. Activate the "cass lock" actuator in the side of the garage.

The cart rails should still be contacting the wheels on the docking station.

g. Tighten the docking station to the garage plate.
h. Rotate the adjustable cart stops out until they contact the docking station.
i. Deactivate the "cass lock" actuator.
j. Remove the two cassette-to-plenum fixtures.
k. Reactivate the "cass lock" actuator in the side of the garage. Check that the sensor readouts are still green. Adjust if needed.
l. Deactivate the "cass lock" actuator.



Aligning docking station to cart

14. ☐ Adjust the cart stops.

a. Move the picker over the table.
b. Remove the cassette alignment fixture.
c. Remove the foam pads propping the garage doors open.
d. Remove the table fixture.
e. Roll the cassette cart out of the garage.
f. Rotate the adjustable cart stops out 1/4 of a rotation.
g. Securely tighten the lock nuts.
h. Clean the cassette before loading plates.

13. ☐ Connect the garage power cable to the AC power.

WARNING! Make sure that both power switches on the SCU are OFF.

Check the AC power at the customer-supplied receptacle. It must be correctly wired and on the same AC panel as the AC receptacle for the workstation. See the Site Preparations & Requirements document for more information.

14. ☐ Install both side covers on the garage.

Multiple Cassette Unit (MCU)

SCU Installation

Before installing the MCU:

- the VLF Trendsetter must be correctly installed and aligned. See the Base VLF Trendsetter installation procedure.
- the track and picker must be correctly installed and aligned. See the Track/Picker Installation procedure.
- the picker must be safely parked over the table.
- the table fixture must be attached and aligned.

1. ☐ Roll the MCU into its final position.
2. ☐ Check that the plenum of the MCU is aligned to the system centerline laser.

    a. Turn ON the laser plane
    b. Check that the laser plane is aligned to the reference marks. The laser should touch both edges of the plenum centerline feature.
    c. ➡ To adjust the alignment of the MCU:

        - roll the MCU until the plenum feature is aligned to the system centerline laser.

3. ☐ Check the distance from the table edge to the plenum.

    a. Open the picker door manually and use foam blocks to keep it open.
    b. Measure from the inside edge of the plenum to the edge of the table, using a measuring tape. Check the distance at two points on the table, front and rear. The distance should be 660mm at

each point.

c. Roll the MCU until the distance is 660 mm at both points.

d. Recheck the system centerline alignment.

4. ☐ Remove the castors.

a. Carefully slide the chariot until it is fully open. You must support the chariot as you open it, as the wheels will not touch the ground.

b. Remove the large rear access panel and place it safely out of the way.

c. Attach the two rear lifting fixtures (#92-0376A) to the lower rear frame.



Rear lifting fixtures

d. Attach the two front lifting fixtures (#92-0377A) to the front cross member.

e. Place the longer front fixture (#92-0374A) between the side frames.

f. Slide the lifting bars (#56-3266A) through the front lifting fixtures and into the other front fixture.

g. Insert the four lifting jacks (#92-0084A) into the 4 lifting fixtures.



Front lifting fixtures

h. Place two white plastic slide plates (#57-8573A) under each jack.
i. Carefully raise the jacks until all four are loaded. Continue to raise the jacks until the castors are 20mm above the floor.
j. Place wood safety blocks (#59-3808) under each corner of the MCU.
k. Remove the four screws holding the castors onto the MCU, using a ratchet handle, 450mm (18") extension and a 8mm hex key socket.
   - Lay on the floor beside the MCU and reach underneath to remove the castors.
   - Keep the castors and fasteners on site for future moves.

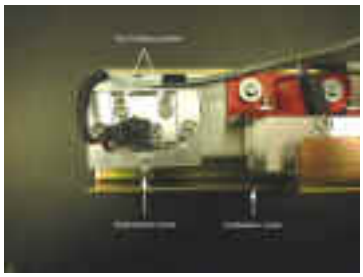
l. Lower the MCU until it rests on the four outside feet.
m. Do not remove the lifting jacks yet.

5. ☐ Check that the base of the MCU is level to 0° ± 0.2°.

   a. With the chariot open, crawl inside the MCU.
   b. Place a calibrated digital level along the rear cross member and then the side frame rails.
   c. Place the level on the inside edge of the plenum. It is important that the plenum and the side frame have the same reading.
   d. To adjust the levelness of the MCU:
      - rotate the adjustable feet until the desired angle is achieved.

6. ☐ Attach the two plenum fixtures (#92-0393A) to the plenum (put tape on the plenum to prevent scratching the surface). The distance from the outside edge of the cassette door opening to the outer edge of each fixture is ± 320 mm (12.5").
7. ☐ Attach the cassette alignment fixture (#92-0370A).
   a. Check the calibration of the six sensors.

- Connect the sensor tester.
- Turn the power ON. All lights should be green. To adjust any sensors, loosen the two screws holding the sensor in place and use the adjusting screw to make any adjustments. Tighten the screws when done.



Calibrating the sensors

- Remove the calibration cover (the front brass cover).

b. Place the sensor end of the fixture through the cassette door opening and rest the fixture on the plenum.
c. Depress the sensors to allow the fixture to fit into position.
d. Connect the cassette fixture to the table fixture, using the two quick release pins.
e. Turn on the sensor readout.

9. ☐ Check the position of the MCU.
   a. Check the alignment to the system centerline. (See Step 2 for instructions.)
   b. Check the distance from the plenum to the table. Both sensors #1 and #2 should be green.
   c. ➡ To adjust the position of the MCU:
      - raise the lifting jacks evenly until the four MCU feet are 2 mm above the floor.
      - push, pull or bump the MCU until the desired position is achieved.
      - lower the lifting jacks.

10. ☐ Check the height from the plenum to the picker.
    a. Move the picker into position over the plenum fixture. Both sensors #3 and #4 should be green.
    b. ➡ To adjust the height of the plenum:
        - raise the MCU by rotating the four adjustable feet
        - adjust the feet evenly until the sensor readouts are green
        - check that the MCU is still level
    c. Check that the #1 and #2 sensors are still green. Repeat steps 9 and 10 if necessary (to repeat step 9 you must lift and move the picker away from the table fixture).
    d. Lift and move the picker to the middle of the table.

11. ☐ Remove the following items and pack them back into the installation toolbox:
    - cassette alignment fixture
    - plenum fixtures
    - table fixture
    - lifting jacks, bars, fixtures and slide plates
    - wooden safety blocks

12. ☐ Remove the foam pads from the cassette door opening.
13. ☐ Lower the other two MCU feet inside the MCU.
14. ☐ Check the operation of the chariot. It should roll easily and should engage the MCU easily.

    ➡ To adjust the chariot ride height:

    - rotate the adjustment screws until the desired height is achieved.
15. ☐ Re-install the black safety guard in the MCU.
16. ☐ Connect the air and power lines.

a. Turn the power switches on the MCU to OFF.
b. Turn the AL air shutoff valve to OFF.
c. Connect the umbilical cables from the MCU to the lower frame of the VLF Trendsetter.
d. Remove the plug from the air fitting in the lower frame.
e. Route and install the airline from the MCU lower frame to the Trendsetter.
f. Connect the VLF Trendsetter AC power cable to the receptacle from the MCU.
g. Connect the MCU power to the wall outlet.

Do not install the cassettes yet! Complete the rest of the Autoloader installation before loading the cassettes into the MCU.

Install the guard rail

Install the L-Conveyor or Straight Conveyor

Install the SSR

When the Autoloader is fully installed, follow these steps to install each cassette:

17. ☐ Installing the cassettes.

a. Turn the compressed air and power ON.
b. Open the chariot until it stops.
c. With 3 helpers, lift one cassette over the chariot.
d. Lower the rear edge of the cassette into the MCU until the front edge clears the chariot body.
e. Position the cassette on the rollers.
f. Push the cassette into the MCU until the latch engages (an audible double-latch).
g. Manually raise or lower the cassette until the next bay is in position. Turn the manual override switch to the left and use the

up and down buttons to position the cassette bays.



MCU manual operation

h. Repeat the procedure for the other cassettes.

i. Close the chariot door.

Slipsheet Removal (SSR) System

Before installing the Slipsheet Removal System:

- the VLF Trendsetter must be correctly installed and aligned. See the Base VLF Trendsetter installation procedure.
- the track and SSR picker must be correctly installed and aligned. See the Track/Picker Installation procedure.
- the Single Cassette Unit or Multiple Cassette Unit must be correctly installed and aligned. See the Single Cassette Unit Installation procedure.
- The picker must be safely parked over the table.
- The side panel of the VLF Trendsetter must be in place.
- If the guard rail is installed, remove the end of the guard rail that obscures where the SSR unit will be installed.

1. ☐ Install the roller bracket on the MCU/SCU.
   This bracket may have already been mounted on the MCU/SCU. If not:

   a. Position the roller bracket so that the angled edge is facing downward and use five M5 screws to secure the bracket against the side of the MCU/SCU. Use the forward set of holes on the bracket as shown below.



Installing the cassette side roller bracket

2. ☐ Before installing the roller bracket assembly on the VLF Trendsetter, the safety interlock switch cable may need to be rerouted so that it is not

damaged by the roller bracket assembly in step 3.

a. If the cable is routed inside the channel marked 'A' in the photo below, disconnect the cable from channel 'A', reroute it down channel 'B', along channel 'C', and up to the safety interlock switch (remove all cable ties from channel 'A'.)



Routing the safety interlock switch cable

3. ☐ Install the roller bracket on the VLF Trendsetter.

a. This bracket consists of two parts that are 'clamped' together around the VLF TS frame: The lower bracket and the upper bracket.



Trendsetter side roller brackets

b. Slide the longer edge of the lower bracket in under the frame of the VLF TS.



Installing the Trendsetter side roller brackets

c. The 'U' shaped part of the upper bracket fits over the VLF TS

frame and rests on the lower bracket - the wide opening faces forward to receive the SSR roller.

d. Insert the five M6x12 screws and Bellville washers holding the two brackets together but do not tighten them - the bracket assembly must be able to slide for adjustment (when the two brackets are pulled together they are held in place by sandwiching the frame of the VLF TS.)
e. Push the roller bracket as far back as possible. Do not tighten the screws yet.

4. ☐ Installing the SSR ramp brackets for MCU configurations.
To prevent the SSRs wheels from damaging cables and hoses that are connected to the left side of the VLF TS, a ramp is installed that lifts the SSR up so as to miss the cables and hoses.

a. Attach the small bracket shown below to the front lower corner of the MCU facing the VLF TS. The bracket is held in place by two screws on the underside of the MCU - loosen, do not remove, the two screws and slide the bracket in place.



Installing the lower ramp brackets

b. Tighten the two screws.
c. Attach the large part of the ramp assembly to the bracket just installed. The three bolts protruding from the side go through the three slots seen above.
d. The last, detachable part of the ramp hooks into place at the

front of the VLF TS by the tongues and grooves provided on the ramp parts.



Installing the upper part of the ramp

5. ☐ Installing the SSR unit

   Remove all packaging material from the SSR including the wooden blocks and the compactor strap.

   a. From the front of the machine, align the SSR unit rollers with the brackets just installed. Roll the SSR onto the ramp until the rear rollers are running on the brackets. The photo below shows the VLF TS-side roller.



Rolling the SSR onto the roller brackets

   b. On the MCU/SCU side of the SSR there is a guide screw, M6, that must be guided into the guide hole in the MCU/SCU bracket - See photo in step 1. Use a T-handle Allen key to align the guide screw while pushing the SSR unit into place.



Guiding the guide screw into its hole

c. Push the SSR until the rear VLF TS-side roller actually rolls off the end of the bracket - the SSR will now be supported by two rollers on the MCU/SCU side and one roller on the VLF TS side. The SSR should stop against the roller brackets (make sure that it does not stop against the VLF TS side bracket before the MCU/SCU bracket.) The SSR is in the correct position when the center screw on the top of the SSR and the screw on the MCU/SCU are aligned. Check the alignment using the laser beam on the center screw



Correct SSR alignment

d. Slide the VLF TS side roller bracket forwards until it touches the SSR. This will help to align the SSR if it is removed and installed again.

e. Tighten the five screws of the roller bracket assembly.

6. ☐ Connect umbilical to the SSR

a. Connect the umbilical cable between the MCU/SCU and the SSR. To lock the plug in place, pull the lever backwards (away from the SSR.) The umbilical supplies both power and air to the SSR.





Connecting the umbilical cable

7. ☐ Install the slip sheet bag in the SSR.
8. ☐ Remove the detachable ramp and store it at the back of the SSR on the floor.



Storing the SSR ramp

Straight (S) Conveyor

Objectives:

- To position and level the straight conveyor.
- To install the interface panels.

The conveyor is connected to the machine so that it may be easily moved for service access or for manual operation of the VLF Trendsetter. The interface is a top plate that can be removed without tools.

Before installing the S-conveyor:

- the VLF Trendsetter must be correctly installed and aligned. See the Base VLF Trendsetter installation procedure.
- the track and picker must be correctly installed and aligned. See the Track/Picker Installation procedure.

1. ☐ Move the picker to its 'safe' zone near the cassette.
2. ☐ Check that both the VLF Trendsetter main power and the autoloader power are turned OFF.
3. ☐ Remove both end panels from the conveyor.
4. ☐ Install the frame interface panel.

    a. Place the panel on top of the frame rail.
    b. Align the panel centerline hole with the system centerline laser.
    c. Install both sets of fasteners.
    d. Tighten all fasteners.
    e. Connect the cable from inside the VLF Trendsetter to the interface sensor.

The sensor is on the bottom of the interface panel. If the switch has four terminals, it should be connected to the two center terminals only.



Interface sensors



Frame interface panel installed

5. ☐ Install the S-conveyor.

   a. Carefully roll the conveyor to a position 2mm away from the VLF Trendsetter. To protect the frame interface panel, hook hex keys over its edge so that they hang in the gap.

      WARNING! Do not overlap the conveyor flange with the frame interface panel. The sensors on the bottom of the panels will be damaged.

   b. Align the conveyor flange with the frame interface panel. The top surfaces should be flush.

   c. ➡ To adjust the conveyor-panel alignment:

      - Loosen the large lock nuts on top of the two adjustable conveyor castors closest to the VLF Trendsetter.
      - Have a helper take the weight off the castors by using the lever (90-1093A) to lift the conveyor slightly.
      - Rotate the adjustable conveyor castors.
      - Retighten both large lock nuts.

d. Align the conveyor centerline to the system centerline laser.

6. ☐ Install the conveyor interface plate.

   a. Place the conveyor interface plate on top of the frame interface panel and the conveyor flange.
   b. Fit the alignment pins into the holes.
   c. Press down firmly at both ends to secure.
   d. Adjust the two adjustable conveyor castors furthest from the VLF Trendsetter until the conveyor is level.
   e. Connect the cable from the VLF Trendsetter to the S-conveyor.



Cable connected to S-conveyor

7. ☐ Align the S-conveyor to the processor.

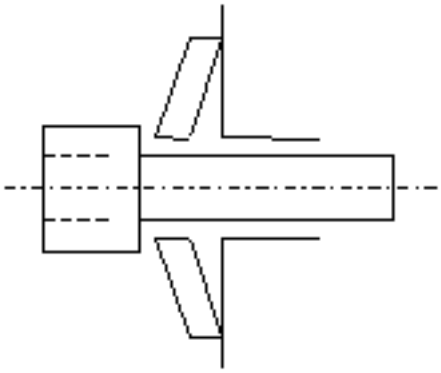
   The conveyor belts should be slightly higher than the processor.

   ➡ To adjust the conveyor-processor height:

      - Rotate both adjustable turnbuckles until the desired alignment is achieved.

8. ☐ Install both end panels on the S-conveyor.
9. ☐ Clean the surface of the S-conveyor.

L-Conveyor Installation



Put Belleville washers on screws and bolts as shown in the illustration.

Before installing the L-conveyor:

- the VLF Trendsetter must be correctly installed and aligned. See the Base VLF Trendsetter installation procedure.
- the track and picker must be correctly installed and aligned. See the Track/Picker Installation procedure.
- the picker must be safely parked over the table.
- the VLF Trendsetter and Autoloader power must be turned OFF.
- the laser plane must be turned ON and be aligned to the reference marks.
- All the end panels must be removed from the L-conveyor.

The L-conveyor is shipped in three pieces: the frame unit, the table, and the skins.

1. ☐ Install the frame interface panel.
   Use torque wrench wherever possible to achieve proper tightness.

   a. Place the panel on top of the VLF Trendsetter frame rail.
   b. Align the panel centerline hole with the system centerline laser.
   c. Install both sets of fasteners.
   d. Tighten all fasteners.
   e. Connect the cable from the inside of the VLF Trendsetter to

the interface sensor.

The sensor is on the bottom of the panel, and connects to the two center terminals only (if the switch has four terminals).

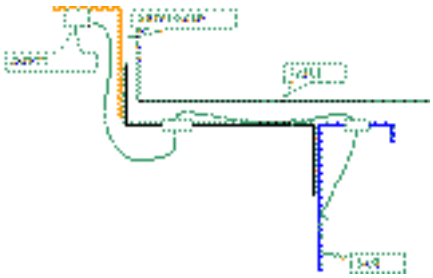
2. ☐ Assemble the L-conveyor.

All fasteners for this assembly are in marked bags.

a. Assemble the black table shrouds; assemble the long side shrouds first and then the end ones (two helpers are needed). To overcome any alignment problems, partially put all screws in the holes before doing the final tightening. Add the four small corner braces.
b. Slide the two guide pins into their spherical bearings on top of the base.
c. Put four hard pieces of foam (from crates, appr. 130-150 mm high) at each corner of the shrouded base to keep the table raised for easy access underneath the table.
d. Using six or eight (preferred) helpers, orient the table correctly and lift it over the shrouded base and lower it down onto the foam blocks. Center the table horizontally with shroud edges.
e. Underneath the table: Attach the guide pins. Attach the table down sensor tabs (4) to the black nut plates of the table height adjustment screws at the bottom of the table. It is correctly orientated when, with the table down, it brings the tab about 10mm in front of the optical sensor (there is only one way to do this).
f. Outside the conveyor: Screw in the four black table height adjustment screws (the ones with large sockets) at the

cylinders - they might be a little tough to turn because of supporting plastic blocks inside the table. Most of the turning can be done from the top of the table by first removing the plastic plugs and using a heavy flat screwdriver and adjustable wrench as torque arm. Space the screws evenly and leave about a 20mm gap between the nut plate nut and the back of the screw socket.

g. Underneath the table: Slide the Y-axis tubes and cables (in the flex track) through the opening up to the Y-axis channel - have a helper above the table pulling and making sure the cables and tubes do not get scratched. Attach the flex track bracket. Route and attach the X-axis cables (also in the flex track) to the X-axis box terminal; the cable connectors are marked. Route and attach the safety loop cable:



h. Underneath the table: Before lowering the table, check that there are no tools or debris left between the shrouds, base, and table. With six to eight helpers, lift the table slightly from the foam blocks (so that guide pins don't come off bearings), and remove the foam blocks (keep your head down in case your helpers lose grip and drop the table). Lower the table slowly onto the four rubber stops, the person underneath must check that the guide pins stay on the bearings.

i. Above the table: Connect the Y-axis cables and tubes (all are marked) and put the Y-axis covers on. Fasten the Y-axis push bar to the two tabs (screws into the tabs).

j. Outside the conveyor: Attach the X-axis box safety plate with the bent edge inwards.

k. Attach the in-feed ramp bracket to the four studs on the side of the shroud at a level so that the bridge plate, which is added later, will be flush with table top.

l. Attach the plate exit ramp to match the processor height.

m. Attach the side backing panels (plain aluminum) to the table sides. The longest panel has two possible positions (two sets of screw holes). Attach it so that the end is flush with the table end facing the processor. Other end of the panel protrudes by approximately 30mm.

n. Attach the decorative panels to the backing panels:

Longest panel to the table side

Combined panel (curved and straight together) to the end opposite the processor

Shortest panel flanks the combined panel

Second shortest panel goes to the side facing the Trendsetter, at the processor end.

o. Adjusting the assembled conveyor:

Conveyor to TS: First level the conveyor table using the digital level. Adjust the casters (3mm/turn) until the conveyor table height is approximately 5-10mm lower than the TS table height. Adjustment is easier if the conveyer is temporarily raised on blocks to take the weight off of the casters. Use the conveyor lifting lever, #90-1093A, and another wooden safety block to lift the conveyor to insert the temporary blocks.

Conveyor to Processor: This can only be adjusted after the power and air have been turned on and the conveyer is

functional. This is done in step 5.

3. ☐ Install the conveyor.

    a. Roll the conveyor into position beside the VLF Trendsetter. Maintain a 2mm gap between the conveyor flange and the frame panel.

    Warning! The sensors on the bottom of the panel will be damaged if the flange and panel overlap.

    b. Align the conveyor centerline to the system centerline laser.

    c. Align the conveyor flange with the frame interface panel.

4. ☐ Install the conveyor interface plate.

    a. Place the plate on top of the frame interface panel and the conveyor flange.

    b. Fit the alignment pins into the holes.

    c. Press down firmly at both ends to secure the plate.

    d. Connect the airline to the VLF Trendsetter and the conveyor.

    e. Make the correct electrical connections for the machine orientation. There are two sets of wires; one for a L-R orientation and one for a R-L orientation.

5. ☐ Align the conveyor to the processor.

The conveyor table should be slightly higher than the processor.

➡ To adjust the conveyor/processor height:

- Put the conveyor table in the 'up' position.
- Remove the plastic plugs and adjust the table height adjustment screws from the top of the table. Use a heavy flat screwdriver and an adjustable wrench - the rate is 2.3mm/turn (5/8"-11 UNC thread).

Note: Because the current firmware does not allow zero lift, the table

must have a minimum lift of approximately 10mm to trigger the sensor.

- Align the safety plate at the processor end of the conveyor table with the top surface of the conveyor table (in the 'up' position).

6. ☐ Install the outer panels of the conveyor: Curved panels in the front and back and straight panel on the sides.
7. ☐ Clean the surface of the conveyor.

Skins, Rear Access Guards, Guard Rail

Before installing the skins, rear access guards, and guard rail:

- The VLF Trendsetter must be correctly installed and aligned. See the Base VLF Trendsetter installation procedure.
- The track and picker must be correctly installed and aligned. See the Track/Picker Installation procedure.
- The Single Cassette Unit or Multiple Cassette Unit must be attached and aligned. See the Single Cassette Unit Installation procedure or the Multiple Cassette Unit Installation procedure.
- The conveyor must be installed and aligned. See the Straight (S) Conveyor Installation procedure or the L-Conveyor Installation procedure.

1. ☐ Move the picker to a position in the middle of the table.
2. ☐ Check that the AC power is OFF.
3. ☐ Complete the picker assembly.

    a. Remove the brass weight from the picker.
    b. Install the main picker skin.
    Rotate the top in first, then swing the bottom in until the skin falls into place.

    WARNING! Be careful not to jolt or make contact with any picker components.

    c. Install the small top picker skin - there are two clips on the back of the picker that hold it in place.

4. ☐ Complete the track assembly.

    a. Connect the track light inside the end skin.
    b. Maneuver the end skin over the end track flange.
    Lower the outside end first so that the plastic lip fits in under the track.
    c. Install the 6 fasteners loosely.
    d. Repeat (a) to (c) for the other end skin.
    e. Place the center skin on the track and end skins.
    f. Snap the front edge of the center skin over the end skins.
    g. Install the 4 fasteners loosely.
    h. Tighten all 10 skin fasteners.

5. ☐ Check the movement of the picker.

    a. Move the picker along the entire length of the track by pulling or pushing the drive belt.

Movement should be smooth and easy, with no mechanical contact or interference.

6. ☐ Install the table finger guard. This component may already be installed.

   The plastic table finger guard is installed on the side of the table on the conveyor side only.

   a. Position the finger guard on the side of the table so that the front edge is level with the front edge of the table with the horizontal side at the top.
   b. Place plastic washers over the existing table hex-screws and use a nut driver to push the push-nuts onto the hex-screws.

      The finger guard top surface should be slightly lower than the table surface. Even with all the push-nuts in place, the finger guard can be moved around to attain the desired position.



Finger guard push-nuts

7. ☐ Install the guard rail.

   a. Open the p-door and raise the table.
   b. Remove the two front panels from the VLF Trendsetter.
   c. Slide the lower support panels under the front bottom edge of the machine until the vertical stops butt up against the machine. (When the front panels are replaced, their pressure will hold the plate firmly in place.)



Lower support panel in position

   d. Assemble the guard rails. **Note:** Your guard rails may already be partially assembled.
      - Lay the rails upside down on bubble plastic.
      - Attach the support arms to the inside of the rails using four screws. Do not tighten them yet.



Attaching the support arms

      - Attach the emergency stop switches to the rails using the same screws as for the support arms.

        The switch with the two plugs goes on the right hand side of the machine.

- Tighten the screws holding the support arms and emergency switches in place.
- Attach the support struts to each support arm.



Attaching the support struts and emergency stop switches

e. With a helper, hold each guard rail assembly in place.

f. Position the struts onto the locating pins on the bottom plate.

g. Fasten the support arms on the top of the VLF TS.

h. Connect the two cables from the right-hand guard rail assembly to the receptacle on the top surface of the VLF TS. Use cable ties to attach the cables to the underside of the support arm (pay attention to where the guard rail gate slides open so that the cables will not be damaged by the gate).



Emergency stop switch to VLF TS receptacles

i. Connect the cable from the left emergency stop switch to the connector located near the filter regulator assembly. Use cable ties to hold the cable to underside of the support arm and route the cable through the hole in the top of the VLF TS.

j. Install the cover bracket and the cover plate over the cables.

k. Align the sliding gate with the rail.

l. To adjust the gate-rail height:

- Rotate the bottom support rods until the sliding gate and rail are aligned - clockwise goes up and anti-clockwise goes down.

m. Install the front guards.

There are two guards that cover the openings between the table and guard rails - one on each side of the guard rail gate.

- Remove the protective cover from the guard.
- Lay the guard on top of the guard rail support arms so that the contours match.
- Hold a bracket on the underside of a support arm and insert the screws with plastic washers from the top (there are two brackets per guard).

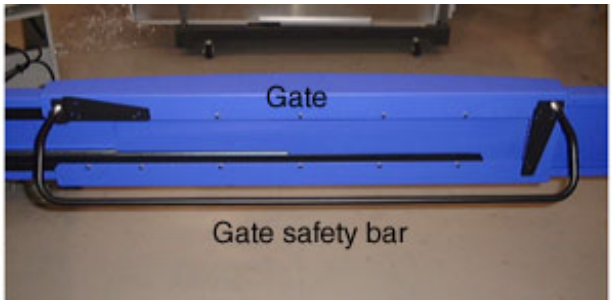


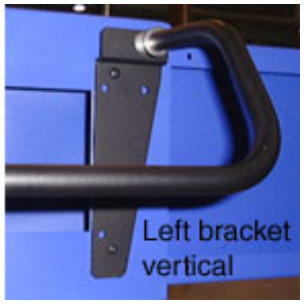
Front safety guard

- Repeat to attach the guard on the other side.

n. Install the gate safety bar. **Note:** The gate safety bar may already be mounted to the gate. The gate safety bar mounts to the back of the guard rail gate with the bend pointing downwards.
   - Remove two screws on each end of the gate to mount the gate safety bar brackets. Viewed from the front, the right side bracket mounts horizontally and the left side bracket mounts vertically (the picture below is viewed from behind).
   - Attach the gate safety bar and tighten the screws.







o. Insert the four retaining pins.
p. Tighten all fasteners.
q. Lower the table.
r. Close the p-door.
s. Close the guard rail gate.

Drawing: Installed rail assembly (40 KB)

7. ☐ Install all the VLF Trendsetter outer panels.

8. ☐ If slipsheet removal is not being installed, install the plate deck.

a. Position the plate deck between the machine and the garage.
   The wide end sits on the bracket on the face of the garage. The narrow end sits on the top frame of the VLF Trendsetter. (There are no screws or fasteners.)



Installing the plate deck

9. ☐ Install the rear access panels.

a. Lower the hood.
b. Clean the hood, track support arms, and the MCU or SCU.
c. Install the hood access guards. **Note:** The retaining pads and screws may already be mounted on the hood. Mount the hood access guards with the upright toward the front of the VLF TS.
   - Remove the protective covering from the 3 hood guards.
   - Install the 6 retaining pads, spacers and screws onto the hood guards.
   - Position the 3 guards along the top of the hood, 10mm back from the front edge and 9mm in from the sides. Leave a 9mm gap between each guard.



Installing the hood guards

   - Mark their positions with a pencil.
   - Lift up one guard at a time. Remove the backing from the adhesive tape on the mounting pads and press into position.

d. Install the side access guards. **Note:** The side access guards may already be assembled.
   - Install the 2 retaining brackets onto each side guard.
     Use plastic washers on both sides of the guard.
   - Position the side guard on the support arm. Align the vertical panel with the hood guard.



Installing the side guards

   - Install and tighten the retaining screw in each of the 4 brackets.

Warning! Before opening the hood, remove both side access guards and the hood access guard that is directly behind the picker.

Install the Thermal Imaging Head. See the Head Install procedure (doc #77-0074A).

Clean up

Clean the VLF Trendsetter AL and its surroundings before leaving the site for the day.

1. ☐ Wipe down all external surfaces of the VLF Trendsetter AL, using a glass cleaner or mild detergent. Take particular care in wiping the table, which needs to be kept very clean.
2. ☐ Vacuum the inside of the VLF Trendsetter.
3. ☐ Vacuum the floor.
4. ☐ Deposit garbage in receptacles.
5. ☐ Pick up all tools and replace them in the toolbox.

Workstation

1. ☐ Assemble the workstation following the manufacturer's instructions.

2. ☐ Check that the customer AC receptacle is wired correctly, and on the same AC panel as the AC receptacle for the VLF Trendsetter.

3. ☐ Plug the UPS into the AC main and connect the workstation to the UPS.

4. ☐ Connect the workstation to the network and phone line..

5. ☐ Power up the workstation.
6. ☐ Log into Windows NT under the Administrator account.
7. ☐ Create a new directory called E:\Service. You will store Notepad text files here to log service calls, firmware upgrades, workstation upgrades and NVS backups.
8. ☐ Set the present time for the local time zone.
9. ☐ Dial the modem number from another phone, or use RAS from a laptop and another line, to check that the phone connection and modem work.
10. ☐ Start the Diagnostic Interface serial communications program (e.g., Terminal).
11. ☐ Run the setup utility to set the correct baud rate, port, etc.
12. ☐ Power down the workstation.
13. ☐ Connect the serial cables from the workstation to the Computer Serial Interface and Diagnostic sports on the VLF Trendsetter.
14. ☐ Connect the differential SCSI cable from the workstation to the VLF Trendsetter.
15. ☐ Make sure all cables are secure at both ends.

Configure the system

1. ☐ Power up the VLF Trendsetter and the Autoloader.
2. ☐ Power up the workstation.
3. ☐ Verify that the network is configured and the connection is working.

   Note: If the network is not responding, contact the applications specialist.

4. ☐ Configure the media following the Setting Up New Thermal Media instructions.
5. ☐ Configure the workstation following the applicable Workstation Software User Guide.
6. ☐ Install the Plate Alignment Labels on the load table. See Plate Alignment Label Placement (32 KB).