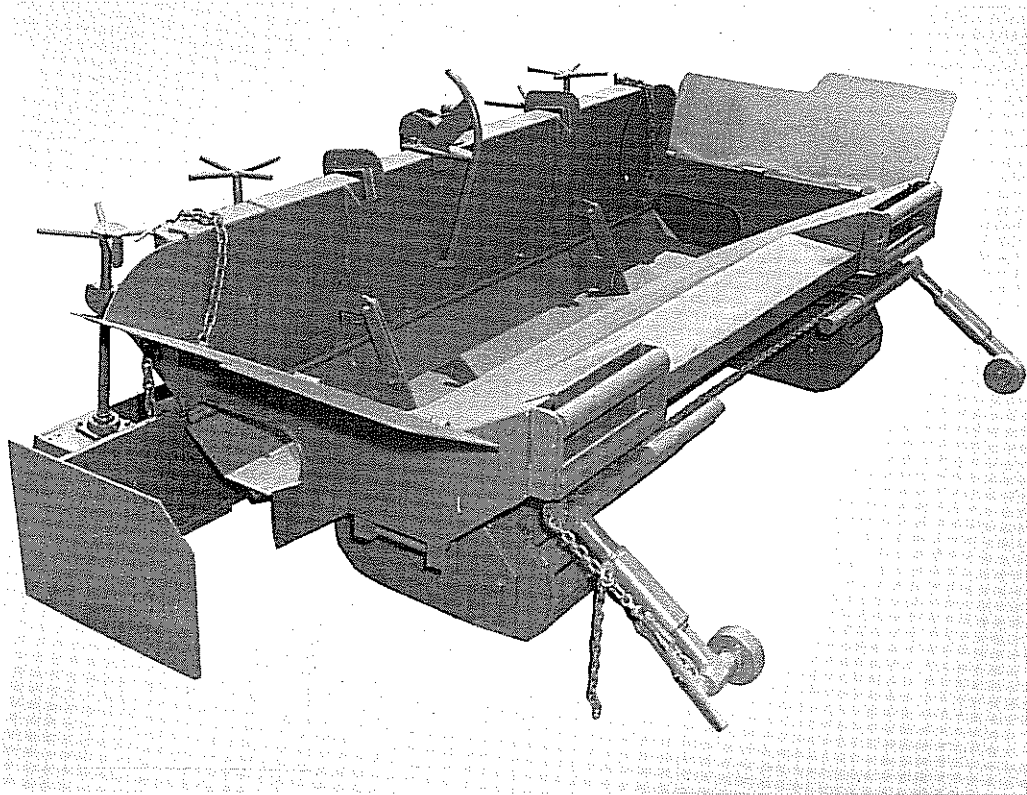


Operations Manual

For The Layton Track Paver Model S-100

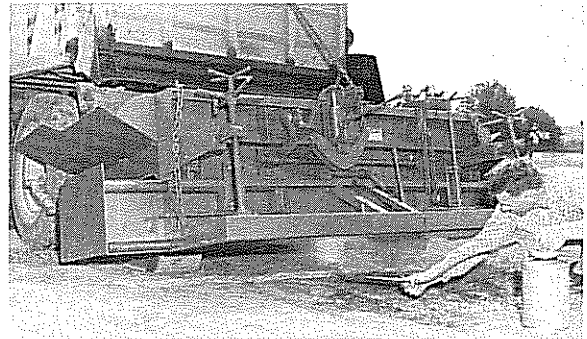


Congratulations! You have just purchased the most modern machine in paving equipment.

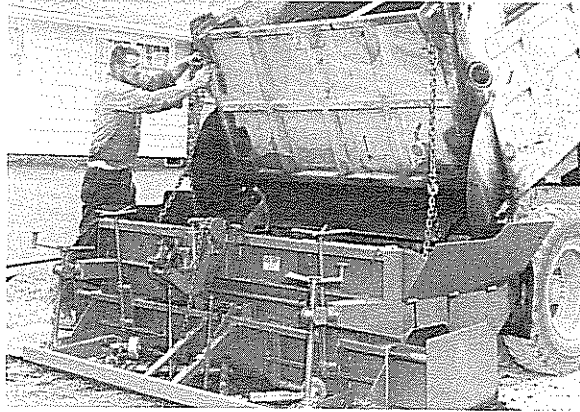
Like all other machines, this paving machine has its uses and limitations. This manual is given to you with this machine in order that you may reap the full benefit from your investment.

1. It is necessary for the machine to be **sprayed, washed, or swabbed** with diesel oil in all places where the steel will come in contact with asphalt. It is of paramount importance that the **screed be well dieselled** as well as the **tracks and bumper rollers** on the front of the machine.

2. Be sure to sight the leading edge of the screed for level. In order to do this, the screed must be **off the ground**. It does **not** suffice to sight the trailing edge of the screed because this will not give a true indication of the levelness of the rake-off edge. The screed should be sighted prior to each operation including when the machine is first used even though the screed is level when it leaves our factory. It is often crowned or valleyed in showing the machine prior to delivery to you. Often where various crews may use the machine, it is not always known what the adjustment was on the last job. So we are summarizing and say **be sure to sight in the leading edge** of the screed for level.



3. In order to pack-up the machine to carry it to the job site, have the truck **back** into the front side of the machine and stop when the tailgate is about **centered over the hopper** **bridal chain**. Remove the two grab hooks usually kept on the screed and hang over the tailgate of the truck, one on each side and each hook far to the outside as they will go. Elevate the dump bed of the truck until it is about 45°. This is only an approximate and on the larger beds it is not necessary to go as high as it is with the short beds. Take the **two short carrying chains** which go with your machine and fasten the hook of each into the hopper bridal chain which is welded inside the hopper and each end of the paver. Then forward the balance of the chain into the grab of the tailgate of the truck, removing all the slack. Make sure that the **same number of links** are dropped on each side or the paver will not hang level. Lower the dump bed of the truck making sure that the front part of the chain, which is permanently welded to the hopper, feeds under the apron of the dump bed. As the bed comes down the paver will hang freely in the air. It is vitally important that the paver **does not touch the truck wheels or tires in any way**. It is possible that the paver may hang against the frame of the truck. In the event that the paver does not hang, or adequately clear the ground or rubs the tires, the bed should be elevated and the chain hookup be checked to correct this condition before the truck is moved. After the paver hangs freely, in the air, the folding wings on each side are brought to a vertical position and **locked in place**. This eliminates any side sway when moving down the highway.



In the event that the truck bed is of light weight aluminum or possibly is not heavy enough on a small truck to lift the paver, this can easily be overcome by two men adding their weight to the dump bed. Once the bed is down on a good hydraulic, the truck is free to move and the bed will not lift by itself unless desired. Upon arrival at the job site the paver should be put in place by elevating the dump bed and when the chains are slack, it can easily be unhooked. Be sure that the **folding wings** on each side of the hopper are **let down slightly** in order to clear exceptionally wide dump beds or aprons that might be on the dump beds.

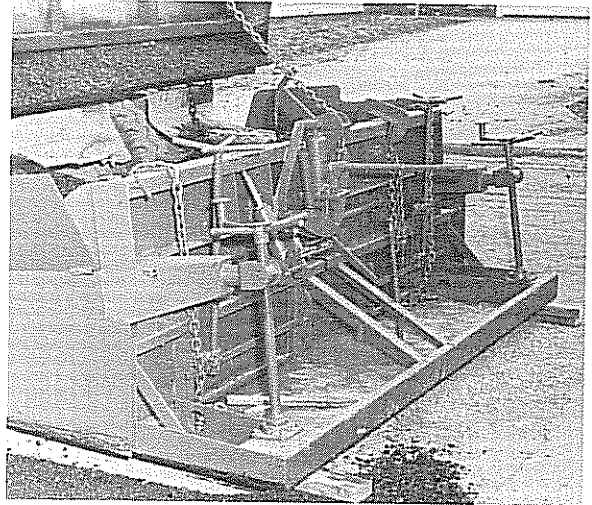
4. **Hooking the paver to the truck:** First operation in hooking the paver to the truck requires the removal of the two hookup arms which are usually carried on the screed and insertion of these arms in the two pipes for this purpose on the front of the paver and located directly under the two bumper rolls of each side. It is customary but not manda-



tory that the **tow arm with the chain is on the left side** or driver's side of the machine and tow arm with the chain binder is on the right side or blind side of the truck. After the arms are inserted, the ¼ inch chain is passed through the four brackets which hold the pipe until the arms are inserted. The arms should be inserted in the machine and the chain passed through before the truck backs into the machine. The truck should back into the front of the machine until the **tires are very near touching the bumper rolls on each side**. The two arms are lifted from the ground and the wheel on each is inserted into the rim of the rear tire of the truck or trailer as the case may be. The chain is then pulled tight and locked with the chain binder: **IMPORTANT: The binder should be so tight that the tires are slightly compressed and there is**

no slack or play in the tow arms. This is especially true if the rims of the truck are tapered. The only exception to this is on certain models of truck wheels. This is a slanted shoulder. If this is the case the wheel of the tow arm should ride against the flat portion of the rim and no effort should be made to have the wheel ride on top of the shoulder.

5. **Starting position of paver.** The screed should be **placed on blocks** approximating the required depth before dumping into the paver. For instance if the required depth is 2 inches, 2 short 2x4's are very adequate to approximate this depth. At this point the **depth screws** on the screed **should be adjusted.** This is done by turning screws either up or down until the screws turn freely with a slack area usually about 180°. The screw should be **turned against the up side of the slack space.** The folding wing on each side should be placed in the desired position usually opening them about 45° which helps to funnel the material into the paver and helps control spillage over the ends. The extensions should be wound out to the desired width. See separate paragraph for recommendations.



6. **Adjustments to variable width.** This Layton Track Paver is the only such paving machine which will **pave from 8 feet to 12 feet wide or any portion thereof.** This is done by winding out the extension on the machine on each side to a maximum of 2 feet. The paver is **most efficient from 8 to 10 feet** in width and widths wider than 10 feet should be avoided, when possible. In paving larger areas where widths are not important until the final pass, it is recommended that on the first pull the machine be so placed as to **start out approximately 1 foot from the edge of the pavement.** This will allow a greater latitude for adjustment in the event the truck driver should not be able to follow the edge of the pavement. **IMPORTANT: All paving should be done from the left side in order that every opportunity be given the truck driver to maintain an accurate edge of the pavement.** On the **right side,** where width is not of vital importance, the **extension should be out approximately 2 or 3 inches.** This will assist the machine in raking its joint on the next pass.

7. **Dumping in the machine.** Prior to release of the tail-gate of the truck, we recommend that the **tail gate chains** be attached in as **wide an open position as possible,** yet the gate **should not swing back** and hit the back of the paver. It is recommended that the paver be **dumped reasonably full** prior to paving and best results are obtained when a fair amount of material is maintained in the hopper at all times **except at the end of the pass.** The truck should be in its **lowest possible gear** and should **move forward as slowly** as possible until such time the truck driver and operator become proficient. The truck driver should be instructed ahead of time that he should move forward 4 or 5 feet and stop. This is done for two reasons. At this point final adjustments are made in the depth. The depth of the material should be measured by laying a board or similar piece of material on the asphalt and measuring vertically to the baserock. Bear in mind that the **depth as laid** by this paver **is not compacted** and **adjustments** must be made for any **predetermined thickness required.** It is not necessary that the paver operator understand the mechanics of what causes the machine to lay a thicker mat. He should only be told that turning the thickness adjustment screw as indicated by the word up and the arrow, which is in a clockwise direction will cause the machine to lay a thicker layer of asphalt. In other words, **up means thicker.** The second reason for stopping the truck on the first take-off is that it **gives the screed an opportunity to become hot.** This is necessary because by this time the original diesel oil has worn off the screed and the screed will not clean or give a smooth appearance.

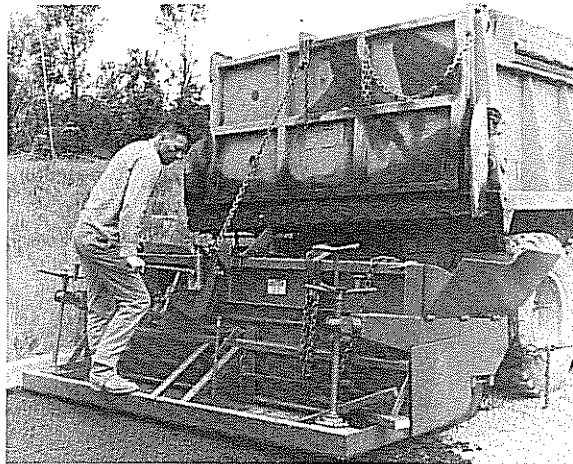
8. **Problems in paving.** The most **common problem** is in **keeping the hopper full.** In the event that the hopper should not have adequate material to lay a full width mat, the

truck should be stopped and the bed elevated so that more material spills into the hopper. **IMPORTANT: The paving operator on the left hand side of the machine should have pre-arranged signals either by voice or hand.** Full cooperation between the truck driver and the paving crew is a must.

In the event there is any spillage in front of the truck or if for any other reason the truck does not follow the base by reason of a manhole or other obstruction, the paving operator should be alerted to make necessary adjustments as the machine climbs onto the obstacle in order that a uniform thickness may be maintained.

9. **Automatic raking of the joints.** We offer **no guarantee** that this machine adequately rake its own joints. **However, we have found that in over 90% of the cases where a good quality mix is used no hand raking of the joints is required.** On the second and **subsequent passes** the machine should be **placed within 2 or 3 inches of the previous mat.** The **extension** should be **wound out to cover the previous mat at least 2 inches,** as the paver proceeds it will be noted that the machine is spilling a little surplus of material over the previous mat. Usually on first sight, it may appear that there is too much material on the joint, however, **before any decision is made to hand rake or otherwise spread this material, we recommend that you roll at least 20 feet of this material and you will notice that the slight berm has been compacted into the material and that the joint is packed tighter and better than it would have been had it been hand raked.**

10. **Procedure at the end of any given pass.** After **reaching the end of any given pass** it is much handier if the **hopper is almost empty.** The paver should be stopped on or about 3 feet from the edge of the pavement. At this time the small screw on the base of the hydraulic jack should be tightened to its full position and the jack should be raised as far as it will go. **IMPORTANT: In some cases where there is surplus of material and it is difficult to raise the jack, it is advisable that the truck be inched forward to allow a little material to spill out of the box.** As the jack is raised, the paver should be pulled forward until there is no more material being dispensed. At this point **one** of the two **grab hooks** should be placed in the **center of the tailgate.** The chain which is attached to the screed hoist should be attached to the grab hook. On exceptionally high trucks or semi-trailers it is sometimes necessary to splice with one of the short carrying chains. This chain should be hooked up as tightly as possible in order to expedite lifting the screed. Make sure the valve on the screed hoist jack is closed. Then jack until the **screed is elevated about 10" off the ground.** **IMPORTANT: It is not necessary to hook it up so close nor to raise the screed so high that the tracks come off the ground.** This operation may shortcut immediately by elevating the bed of the truck, hooking up the screed hoist chain and lowering the bed of the truck. Thus the screed is lifted by the truck alone. We would like to point out that it is **not necessary to clean the apron of the truck nor to latch the gate shut.** The truck and paver are now free to move in any direction. **IMPORTANT: Be sure that any flaps on the truck are removed from between the wheels and bumper rolls before the truck backs up.**



11. **Starting the second and subsequent passes.** The truck should be backed into position so that the paver is within a few inches of the previous pass. The screed should be blocked as formerly, or wherever possible, it may be set down on asphalt which is already laid. The bed should be raised until the **screed hoist chain is slack, unhooked, and the grab hook removed from the tailgate of the truck.** **IMPORTANT: The shut-off gate jack should be released allowing the shut-off gate to open freely.** **IMPORTANT: It is impossible to pave with the shut-off gate closed.** **IMPORTANT: Take care that no binder material is allowed to get on the screed.**

12. **Unhooking when the truck is empty.** The arms are then taken out of each wheel and allowed to rest on the ground making sure that there is **adequate clearance for the next truck to back in**. On the last load, the arms should be **removed completely and laid on the screed** for transportation back to the plant.

13. **Lapping.** It is possible to lap with the Layton Track Paver for widths narrower than 8'. This is done by backing the paver upon the previous mat and placing it at the desired width. The thickness screws as mentioned in paragraph #7 were different, due to the fact that **one screw will be set at the depth required**, while the **other will be no thickness at all**. It is possible to thus twist a paver for 4", but **greater differences than this are not recommended**. In paving irregular shaped areas it is possible to back in over previous passes and as the truck goes out over its previous tracks any marks in the asphalt will be erased or filled in as the paver follows the truck. No hand raking of this operation is required.

14. **Skin Patching.** This asphalt paver is ideally adapted to this type of operation because it is able to maintain a preset grade, even successfully spreading as thin as 1/4". **IMPORTANT: Do not try to spread thinner than the largest rock in the mix.** It is recommended that nothing but fine mix be used for skin patching.

15. **Laying Base Rock.** This machine is especially adaptable for laying base rock and in most states will meet specifications for county and state highway roads. It is possible to lay up to 10" of rock in 1 lift but we have found that greater tonnage is achieved in lifts of 4" to 6".

16. **Level height adjustments for the tracks.** On each end of the machine is a pin with four possible holes. When the machine is delivered, the pin is in the top hole. Upon **rare occasions** it has been necessary to run one track at a **different level** than the other, such as in paving a **narrow highway shoulder** or in **lapping**. If the difference in level is greater than 4" or is for any extended distance, it is recommended that this adjustment should be up. Also in the event that thickness is greater than 5" both tracks should be lowered. This is done by lifting the weight off the paver, generally by **lifting with the tailgate**. The **pin or pins are removed and reinserted** in the desired opening. Each opening is **one full inch of adjustment**. No special wrench or equipment of any kind is needed.

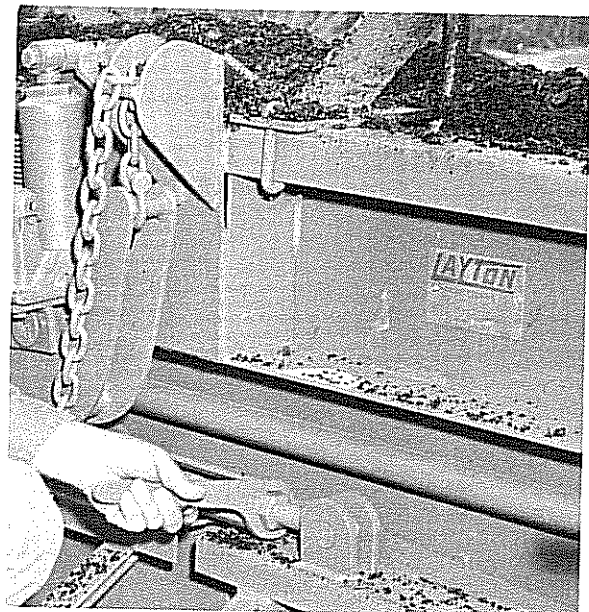
17. **Crown or Valley.** On the back of the machine just above the screed is a turnbuckle with a built-in wrench. It will also be noticed that the front side and trailing edge of the screed are split. This allows the turnbuckle to put a crown or valley in any given pass by presetting. Should a crown be desired, the wrench should be moved over the turnbuckle and when positioned **down the screed will valley**. As the wrench is **lifted the screed will crown**.

18. Care and Maintenance.

A. The entire machine should be **sprayed with diesel oil immediately upon completion of any job**. **IMPORTANT: No asphalt should be allowed to build up on the tracks or bumper rolls.**

B. **Lubrication.** There are 22 Zerk fittings on this machine. Under **normal conditions** in laying asphalt, it is adequate if the machine is **greased weekly**. Dusty or abnormal conditions such as laying base, it is better to lubricate more often. **Notice: To grease hitch arm side rollers the 1/8" plug must be removed and Zerk fittings inserted.**

C. **Tracks.** Tracks are of all welded construction and comparatively trouble free. Should



the tracks require tightening, the 3/4" bolts on each side of each track on the rear shaft should be loosened and then they can be pried to tighten the track and the bolts in turn tighten in place. **IMPORTANT: The machine operates much better with loose tracks.** Do not overtighten. In each track there will be noticed 1 small Allen set screw. If this screw is removed a master pin can be taken out and the track will be completely removed. **The greatest problem with tracks is preventing build-up of asphalt.** If kept well dieseled, this is **no problem.**

D. **Extensions.** Occasionally it will be noticed that the extensions **will be hard** to move in or out, especially on a **new machine.** It should be noted that bolts in the bottom bearings are tight. After operation, one can easily see the bearings moving as much as 1/4". Tightening these 2 bolts will correct this condition. Occasionally a small rock may get between the gear and rack or will become bound in the sleeves which hold the pipes carrying the extension. If this is the case, they will readily come out if the extension is wound to its extreme limit. **Oiling the machine is imperative.**

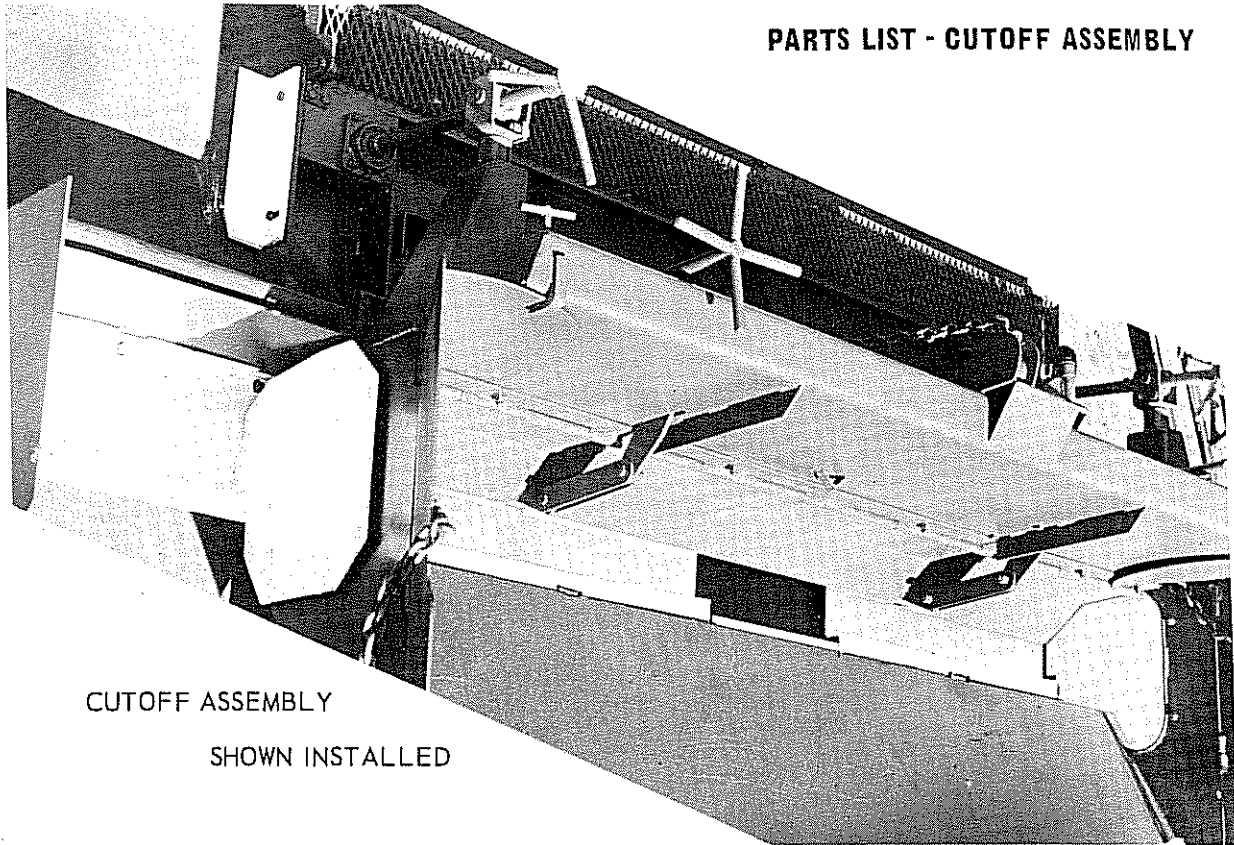
Layton Manufacturing Co.

3505 Portland Rd. N.E.

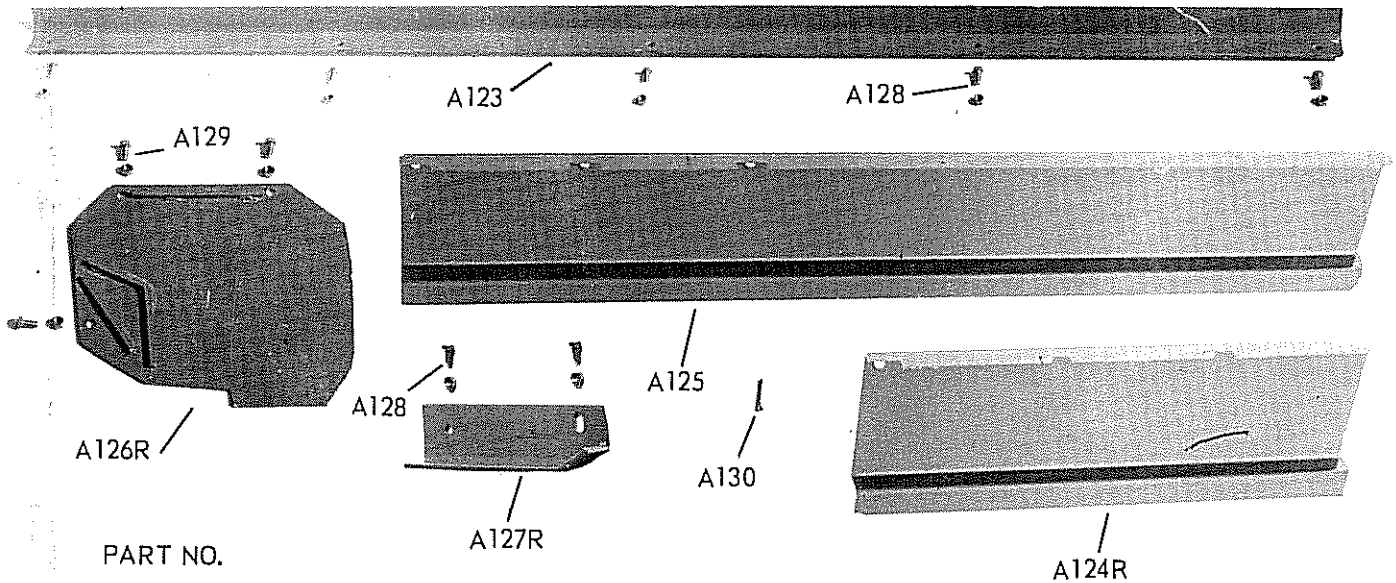
Salem, Ore.

Layton Track Paver Model S-100

PARTS LIST - CUTOFF ASSEMBLY



CUTOFF ASSEMBLY
SHOWN INSTALLED



- PART NO.
- A123 Angle
 - A124L Cutoff Plate (Not Shown)
 - A124R Cutoff Plate
 - A125 Cutoff Plate (Long)
 - A126R Side Plate
 - A126L Side Plate (Not Shown)
 - A127R Shoe
 - A127L Shoe (Not Shown)
 - A128 Bolts
 - A129 Bolts
 - A130 Cotter Pins

WHEN ORDERING PARTS, PLEASE SHOW SERIAL NUMBER OF PAVER, NAME AND NUMBER OF PART, AND DATE PURCHASED. (GIVE NAME OF DEALER IF POSSIBLE).