

Operator's Manual

for the

Model 192

Pik Rite

Tomato Harvester

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GENERAL OPERATORS MAINTENANCE

HEADER, CUTTING DISKS, AND GATHERING CHAINS

Keep grass and vines from wrapping on drive sprockets.

Clean out build up at the pinch points.

Check bolts on lap splices of header conveyor and gathering chains. These bolts are dragged through the dirt and rocks and sometimes wear off prematurely.

Adjust top and bottom disk scrapers to eliminate dirt build up.

Lube roller chains daily. (Conklin Lub Oil is recommended)

Grease bearings once a week.

If harvesting in rocky fields, adjust header chain nose rollers down or disks up. In other words, increase clearance between the bottom of the disks and top of header chain. This allows rocks to pass around the nose rollers without pinching the header chain and disks.

When harvesting on elevated beds, gathering chain lap splices should be 2 pitch over lap. When harvesting straight over lap 5 pitches. The nose cones of the gathering chains should not plow dirt. In elevated beds, the noses need to extend down into the furrows and help lift the vine. Tightening gathering chains
Cutting disks measure 34" in diameter when new. Install a new pair when they wear to 33" diameter. Life of disks differ greatly with soil types and operating RPM's.

PRIMARY SHAKER

Keep shaker drum clean. In some ground conditions dirt builds up between shaker tines groups on the drum. This build up should not exceed 1" thick. Also dirt builds on the side of the shaker chamber. If not removed, it will wear flat spots on the outside shaker tines

Once a week, use a heavy hammer to drive the tines into the rubber holders. This is especially important when operating the shaker weights at high RPM's. Always replace broken tines as soon as possible. The shaker loses efficiency when tines are broken.

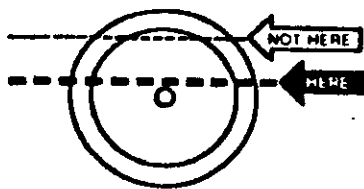
How to remove broken shaker tines: When installing orange plastic coated tines, clamp a vice grip or clamping tool onto the tine to prevent the plastic coating from sliding into the rubber holder without the inner fiberglass rod.

The primary shaker is adjustable forwards and backwards from the header chain. If harvesting in rocky fields, the gap should be widened to help avoid broken shaker tines. However, if the gap is widened to much, some plant varieties tend to fall down in front of the shaker and escape the separating action.

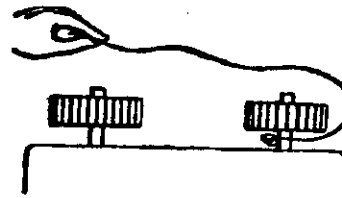
Adjust shaker hood to 1" clearance above shaker tines

Daily check the bolts on the rubber shaker drive at the motor.

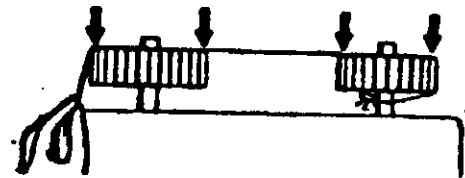
Once a week, grease shaker bearings, check tension on drive belts, and watch for loose set collars or bolts. (See shaker timing belt alignment diagram)



INSTALL BELT



Do not pry or otherwise force the belt onto the sprockets, as this can result in permanent damage to the belt.



Either remove the sprocket's outside flange or reduce the center distance between the sprockets so that the belt can be easily installed.

Warning: Do not over tighten weight motor drive belt.

BELT TENSIONING-GENERAL METHOD

This method of tensioning Synchronous belt should satisfy most drive requirements.

Step 1. Reduce the center distance so that the belt can be placed onto the sprockets without forcing or prying it over the flanges.

Step 2. Increase the belt tension until the belt feels snug or taut. Avoid over tensioning the belt.

Step 3. Start the drive and apply the most severe load condition.

This may be either the motor starting torque or during the work cycle. A belt that is too loose will "jump teeth" under the most severe load conditions. When this occurs, gradually increase the belt tension until satisfactory operation is achieved.

SECONDARY SHAKER

Once a week, grease shaker bearings and check tension on drive belts. Look for loose set collars and bolts. (See shaker tines and belt alignment diagram above.)

Shaker tines on the secondary shaker do not see the abuse the primary shaker gives. They last much longer and rarely get broken. The foam wrappings between time groups should be kept clean.

Daily check for loose bolts on the rubber shaker drive at the motor.

DEBRIS ELIMINATION SYSTEM

Daily check for tomatoes or dirt inside and at the bottom of the fan housing. Keep the housing and defuser clean and smooth for peak efficiency. A periodic wash out with water is suggested.

Watch out for build up on the fan paddle assembly.

Check the pip roller and scraper on top of the fan for dirt build up.

Check the large debris roller to rotate freely.

Check the top deflector hood for dirt build up.

PRESORT BELT

Clean and scrape dirt build up from surface of belt often.

Check inside slider belt drive rolls, especially observe the V-guide which is on the center - inside of presort belt, and groves in the drive rolls.

The belt must be adjusted and aligned properly on the V-guides or irreparable damage will be done to the belt. Do not overtighten presort belt or it will cause tearing at the joint.

This belt must run smoothly and freely at approximately 160 feet per minute. This is equal to 27 belt R.P.M.'s. Place a white mark on the belt and count 27 belt revolutions in one minute.

HAND SORT BELT

Adjust the tail and drive pulleys to run the belt in the center of the bed. Running slightly to one side is acceptable, provided it isn't wearing into the slider bed sides. The tail pulley is designed to clean itself. However, earlier

models must be cleaned out periodically.

Check the belt lacer. It is advisable to replace it before each season start up. The belt is made up long enough to do this once a year for 6 years.

GENERAL KNOWLEDGE

Keep hydraulic oil level within 10" of the top of reservoir.

Change hydraulic oil filters each season. Check for water in oil by removing magnetic plug at bottom of reservoir. Also check for wear metals.

Grease the 5 grease fittings on the suspension, and P.T.O. slider tube and U-joints every week.

Check air compressor oil daily. Make certain no dirt enters while pulling out the dip stick. Change air compressor oil every 200 hours. Refill with #30 non detergent.

Keep the cooling fins clean on the air compressor. Dust build up may cause overheating.

Check air compressor air filter daily.

Keep oil cooler fins clean. Check weekly.

Hydraulic oil temperature should operate at 150 degrees, maximum temperature.

Replace air dryer filter every 800 hours.

Lub roller chain daily. We have found Conklin lub oil to work very well in protecting roller chains in dirty conditions. It can be purchased from Pik Rite or your local Conklin dealer.

The leveling axle has three pin settings. It can be adjusted to your row spacing. The leveling hydraulic cylinder remains in the same position for all three pin settings.

Watch for dirt which may stop the rollers causing flat spots on the rollers. Watch for stones or debris build up which may cause misalignment or stoppage. In general, always be watching and train your crew to be watching for potential problems. Preventative maintenance is better than emergency repairs.

COLOR SORTER

The color sorter instructions are covered in separate manual, but here are a few important details:

Belt speed = 160 ft. per minute. This is equal to 27 belt R.P.M.. (Place a white mark on the belt and count 27 belt revelations in one minute.

Check polarity at plug on electronic sorter.

White wire = A = Positive-with red probe.

Black wire = B = Negative-with black probe.

With tractor running at 1800 RPMs, check voltages: must be + 12.5 to 14.5 V.D.C..

AC volts .05 V.A.C. max.

anything over .05 alternator must be changed. This condition indicates that the alternator is soon to fail which is also detrimental to the **Odenburg Electronic Box**.

The power supply wire must be connected at the battery. The battery acts as a filter for harmful voltage spikes.

Air pressure should be 45 PSI.

Oiler should deliver 6 drops of oil per minute and is adjusted on top of oiler.

Any direct sunlight shining on the tomatoes at the point where the electric eye focuses must be blocked. Example in early morning or late afternoon when sun is shining in from the side.

OPERATOR'S RESPONSIBILITIES

DISK PICKUP HEADER

The **Disk Pickup Header** is to skim the ground just under the tomato plants. Each gathering disk is independently controlled and thus the header flexes from side to side controlling the depth of each disk independently. The operator must watch closely and control both the right and left gathering disks.

Warning

The header on your machine has been designed to flex for better operations. However flexing the head in excess will cause premature damage and stress on your machine. The maximum difference from side to side should not exceed 6 inches. Always rest the header on the ground when parking the machine to avoid unnecessary stress.

POWERED DIRT VIBRATOR

As the vines and tomatoes travel up the header chain, they go through the dirt vibrator tunnel. Field conditions will vary as to how fast to operate the vibrator. Overspeeding the vibrator will cause excessive wear to the header chain and vibrator rollers. Some conditions require little or no vibration. Maximum speed depends on the amount of vine mass traveling over the vibrator. Heavy vines will allow higher vibrator speeds while in thin vines speed may be decreased. If the vines roll back and do not pass over the vibrator the speed must be decreased. The operator must prevent rollback or bunching of the vines. Bunching of vines causes inefficiency and fruit loss while it passes through the harvester.

SHAKER SYSTEM

The **Pik Rite Harvester** is designed to allow the operator to observe both sides of the **Primary and Secondary Shaker** from the tractor seat. There are two points of control on these shakers, 1. Weight speed 2. Rotation speed. The weight speed controls the intensity of the shake, more RPM = more vigorous shake. Rotation speed controls the rotation speed of the entire shaker drum, thus controlling the time period vines remain on the shaker. Slower rotation speeds mean the tomato vines take longer to ride over and out of the shaker.

PRIMARY SHAKER ADJUSTMENT HINTS

Slow the shaker rotation in viney weed conditions, i.e. morning glory. If the shaker rotation speed is too high it will drag fruit out the back of the machine.

Generally the secondary shaker weight speed is greater than the primary shaker weight speed.

Increase the primary shaker rotation speed in heavy tomato vines, thus keeping a thinner layer of vines on the shaker.

Conditions vary drastically from field to field and day to day and variety of tomato plants. By keenly observing the shaker and outflow of vines, the operator will learn very quickly how and when to make minor adjustments.

PRIMARY SHAKER HOOD

Generally the hood must be very close (1/2" to 1") to the shaker tines, some conditions require it to be lifted 3 to 4 inches higher. Never allow the hood to operate touching the tines. This will wear both the tines and hood prematurely.

TRANSFER AND CROSS CONVEYER

These conveyers are hard to see from the tractor seat but generally require little or no attention. However there is a pipe roller under the drive end of both of these conveyer. These rollers sometimes stop and eventually cause a buildup of debris. It is wise to appoint one of the crew to check them periodically to make sure they are turning. If they do become stopped up it is not required to clean them out immediately, but it should be done at the end of the row.

DEBRIS FAN

Operate the **debris fan** at a speed which satisfactorily removes the vines and debris. Do not overspeed or damage may occur. The operator can see from the tractor seat if all is well with the debris removal system and should regularly observe it as he travels down the row.

ELEVATION CONVEYER AND PRESORT BELT

Observation of the fruit as it is being delivered from the **elevation conveyer** to the **presort belt** is very important. The operator levels the machine hydraulically by observing the fruit at this point. This is a good place to make sure the **debris fan** is doing it's job also. By observing this point the operator

determines the ground speed. At this point the tomatoes should be spread evenly across the entire conveyer. If they are crowded to one side the machine must be leveled. Stacking or crowding the tomatoes as they pass through the **electronic sort** will result in loss of fruit. The presort belt must be full and one layer deep. If it is half full the **electronic sort** becomes inefficient. The operator can also observe the tomatoes when they pass through the electronic sorter and drop onto the hand sort belt. There should be an even steady flow of fruit at this point also.

ELECTRONIC SORT

The details of **electronic sort** are covered in detail in the **Odenberg Sorter Manual**. The operator must keep special **Odenberg** oil in the oiler cup at all times.

HAND SORT BELT

Operate the belt fast enough to keep the tomatoes from stacking. Some operators allow the crew to determine belt speed. However, it is preferred that the operator do this because he has a better observation point of the entire machine and may deem it necessary to speed up in heavy fruit.

DISCHARGE CONVEYER

The operator must pay close attention to the truck being pulled along side the harvester. The **discharge conveyer** can be bent and rendered useless in a very short time if it is left unattended. These are three parts that describe the **discharge conveyer**: The outer link, the lower link (adjusted up and down with a hydraulic cylinder.) and the basket (the bottom part where the tomatoes drop into from the hand sort belt.

In heavy tomatoes the **lower link** should be as close to the truck or as low as possible to prevent fruit rollback and bouncing out over the side. The **lower link** has several position adjustments that allow for a straighter position. The **basket** can be used to retain tomatoes until a truck can be positioned under the conveyer. A crew member should be trained to start and stop the conveyer by using the **flow control valve** mounted at the end of the **sorting table**. By turning the **discharge conveyer** off the operator can save time because he doesn't need to empty the machine at the end of each row and can begin harvesting the next row while the truck is being positioned properly.

AIR COMPRESSOR AND PRESSURE GAUGE

In addition to controlling the above mentioned the operator must listen for the **air dryer** to unload at regular intervals (identified by a loud hiss). The **air dryer** back flushes each time the **air reservoir** reaches peak pressure. At the same time the **air compressor** head closes and stops pumping air until the pressure drop in the reservoir calls for more pressure. If the **air dryer** does not unload it means that the air pressure is not reaching peak pressure. This may mean a compressor problem or an air leak. This in turn may affect the electronic sorter's efficiency.

HYDRAULIC SYSTEM

The operator must listen for any high pitched squeals that may indicate a relief valve in the hydraulic system opening because a conveyer or other component has stalled out. By observing the **pressure gauges** at the **hydraulic pump** and by using the process of elimination it can be determined which component is the problem. It is wise to periodically observe the normal running pressures of the hydraulic pumps as you go down the row. This is a good indicator of any conveyer not functioning properly or being plugged with mud or vines. The motors require more power in a jam-up thus the **pressure gauges** register more pressure. The operator must, in addition to controlling all the harvester functions steer the tractor to keep the **header** in the center of the row as well as watch the tractor temperature and oil gauges.

Operating the **Pik Rite Harvester** requires much attention to detail. The operator must remain attentive to avoid injury to the crew or damage to his machine. Maximum efficiency of the machine is determined largely by the expertise and alertness of the operator.

Safety in Operating the Pik Rite Tomato Harvester

CAUTION!

Idle the tractor down to engage the P.T.O. If the PTO is engaged at high RPMs it may damage the Hydraulic Pump.

Operate tractor engine RPMs at approximately 1500 RPM. The Pik Rite Harvester may be operated at a maximum speed of 2100 engine RPMs (1000 PTO RPM) or a minimum of 1200 RPM (600 PTO RPM).

All of the hydraulic motors are controlled by speed control valves. These valves control speed by metering the amount of oil that is allowed to pass through the motor. The unused oil is passed around the motor. Both the bypassed oil and the oil that has passed through the motor flows together down line to the next flow control valve where the process is repeated.

There are four pump sections hence there are four hydraulic circuits. Each circuit has three to five motors running in series.

The pump is a constant displacement pump which means when the PTO is engaged each section is pumping 15 or 20 GPM depending on the gear width. It pumps the same amount of oil whether at high or low pressures. Consequently the pumped oil must always have a channel to return to the reservoir because it is constantly moving through the circuit.

Each of the four circuits empty into the oil cooler (mounted on top of the machine) and is cooled and sent through the filter back to the oil reservoir.

Because all motors are controlled by flow control valves, operating the tractor at higher R.P.M. speeds will not result in faster operating of the harvester. Higher operating speed is obtained by setting the flow control lever to a higher number.

Ideally the operator should set the flow controls to the desired speed and then match the tractor RPMs to the amount of oil required. Any higher engine speed only causes more oil to bypass the motor thus wasting energy and creating more heat in the system and more wear.

Always check the following prior to starting to harvest:

27 belt RPM = 160 ft. per minute

Check polarity at plug on electronic sorter

White wire = A = Positive-with red probe

Black wire = B = Negative-with black probe

With tractor running at 1800 RPMs and before plugging into box!

Should read +14.2VDC

Switch probes should read 14.2vdc

AC volts .05 max.

Make of tester preferred: A flute has been found to be the only tester accurate enough to test AC stray voltage.

Anything over .05 alternator must be changed. This condition indicates that the alternator is soon to fail which is also detrimental to the **Odenburg Electronic Box**.

Check with lights on also.

TIMING THE SHAKER WEIGHTS

Both the **Primary and Secondary Shaker** weights must be synchronized. If a shaker is out of time it will not work properly and may cause damage. Both shakers can be synchronized using the same procedure.

When the shaker is properly timed, the shaker weights will oppose each other. When one weight is faced away from the center of the box the other must face away also. Turn weights 90 degrees and one weight will point up and the other down. Continue turning another 90 degrees, now both weights face in toward each other. Again turn 90 degrees and one weight will point up and the other down. These positions must be precisely opposing each other within 1/8 inch. Measure the distance from the flat spots on each weight, or, later model machines have a place to insert an 3/8" bolt in each weight and center that bolt with the slot on the box.

Adjustment is made by jumping teeth on the timing belt. Fine tune adjustment is made on the weight cap. The cap has two grade 8 cap screws and is keyed to the shaft. Thus loosening one cap screw and tightening the other will rotate the weight in indefinite increments. Fine adjusting both weights may not be necessary if enough adjustment is available in one weight.

CAUTION:

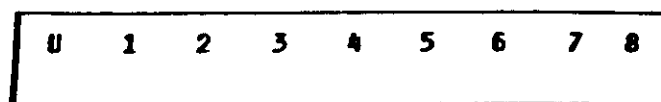
Weight caps will bind on the bolts if travel exceeds clearance. This may cause the mechanic to think the bolt is tightened down when in fact it may be binding.

When using 3/8" gauge bolts in the box slots and doing the fine adjusting, be sure the 3/8" bolts are not opposing each other and bottoming out. If they are, tightening the cap bolts may tear the belts.

INSTALLATION INSTRUCTIONS FOR ELEC/HYD CONTROL

WHEN STANDARD CONTROL IS IN PLACE

- * POWER CABLE MUST BE CONNECTED TO POWER SOURCE ON HARVESTER.
- * SEPARATE HOSES ON HARVESTER AT HYDRAULIC JUNCTION POINT (JUST BEHIND MAIN HYDRAULIC PUMP ON HEADER SIDE) ARE JOINED TOGETHER WITH 3/8" PIPE COUPLERS.
- * BOLT UP ELEC/HYD VALVE BODY AND ATTACH HOSES.
- * DIAGRAM OF VALVE WORK SECTIONS WITH ALL OPTIONS IN PLACE:



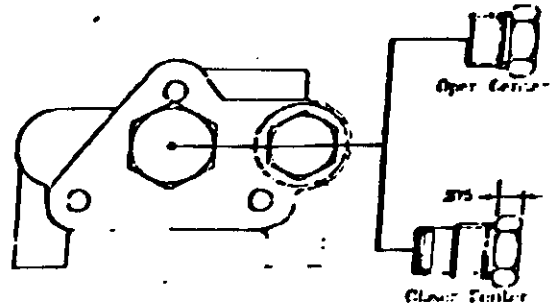
U = UNLOAD SECTION
REAR OF MACHINE
INLET PORT
OUTLET PORT

1. HEADER LIFT CYLINDER (OUTSIDE)
2. HEADER LIFT CYLINDER (INSIDE)
3. MACHINE LEVELER
4. DISCHARGE (RAISE-LOWER)
5. DISCHARGE (OUTER LINK FOLD)
6. SLIDING HITCH
7. GAUGE WHEEL (OUTSIDE)
8. GAUGE WHEEL (INSIDE)

- * IF AND OPEN CENTER SYSTEM IS BEING USED (IH OR FORD) THE BLUE SCREW NEEDS TO BE INSERTED IN THE UNLOAD SECTION OF THE VALVE BODY. IN A CLOSED CENTER SYSTEM (DEERE) INSERT THE RED SCREW.
- * AFTER ATTACHING THE TWO FEED HOSE TO THE TRACTOR QUICK COUPLERS TIE BACK THE HYDRAULIC CONTROL LEVER ON THE TRACTOR TO KEEP THE OIL FLOWING THROUGH THE HARVESTER VALVE BODY (ON OPEN CENTER SYSTEM). NORMALLY ONE CAN HEAR THE TRACTOR LABORING A BIT IF THE OIL IS NOT FLOWING FREELY. IF THIS IS THE CASE THE TRACTOR HYDRAULIC SYSTEM MAY OVERHEAT.
- * WHEN USING A JOHN DEERE TRACTOR SLOW THE SPEED OF THE HYDRAULIC OIL TO THE "TURTLE" SYMBOL. IF A SQUEALING SOUND IS HEARD THE RELIEF VALVE MAY BE SET TOO LOW. SET HIGHER UNTIL THE SOUND STOPS.
- * IF THE DIRECTION OF OIL FLOW IS REVERSED THE CYLINDERS WILL NOT WORK IN BOTH DIRECTIONS. IN CASE THIS HAPPENS REVERSE THE DIRECTION BY CHANGING THE LEVER OR CHANGE THE HOSES IN THE TRACTOR OUTLETS.

PRINCIPLES OF OPERATION FOR MANUAL HYDRAULIC CONTROL VALVE

WHEN OPERATING THIS VALVE WITH AN OPEN CENTER SYSTEM TRACTOR THE OPEN CENTER PLUG MUST BE IN PLACE. OTHERWISE THE TRACTOR HYDRAULIC OIL MAY OVERHEAT. WHEN OPERATING THE VALVE WITH A CLOSED CENTER SYSTEM, INSTALL THE CLOSED CENTER PLUG.



WHEN OPERATING THE OPEN CENTER PLUG THE OIL IS CIRCULATING FREELY THROUGH THE VALVE BODY.

WHEN THE OPERATOR PULLS A LEVER TO OPERATE A CYLINDER THE OIL IS STOPPED AND DIVERTED TO OR FROM THE CYLINDER.

IN	1	2	3	4	5	6	7	8	OUT
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1. HEADER LIFT CYLINDER (OUTSIDE)
2. HEADER LIFT CYLINDER (INSIDE)
3. MACHINE LEVELER
4. DISCHARGE (RAISE-LOWER)
5. DISCHARGE (OUTER LINK FOLD)
6. SLIDING HITCH
7. GAUGE WHEEL (OUTSIDE)
8. GAUGE WHEEL (INSIDE)

WHEN OPERATING WITH A CLOSED CENTER PLUG, OIL IS UNDER PRESSURE AT THE VALVE BODY. WHEN THE OPERATOR PULLS A LEVER TO MOVE A CYLINDER, OIL IS ALLOWED TO ESCAPE THE VALVE PORT AND PERFORM THE CYLINDER FUNCTION.

PRINCIPLES OF OPERATION FOR ELEC/HYD VALVE

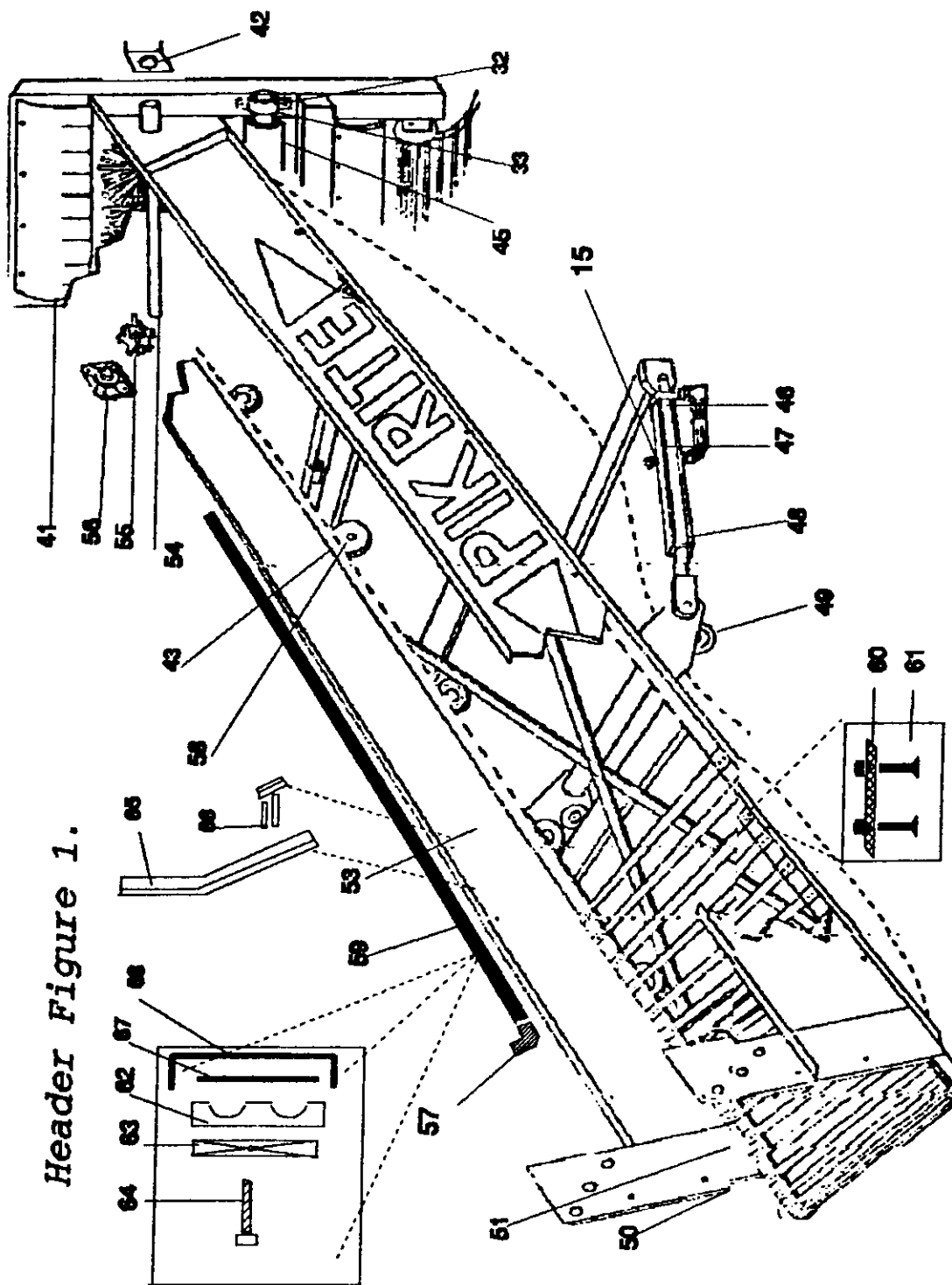
IN A CLOSED CENTER APPLICATION, TRACTOR HYDRAULIC OIL IS UNDER PRESSURE AT THE HARVESTER VALVE BODY. WHEN THE ELECTRIC SWITCH IS ACTIVATED AN ELECTRIC COIL OPENS A SPOOL VALVE SENDING OIL TO THE HYDRAULIC CYLINDERS.

IN AN OPEN CENTER APPLICATION, TRACTOR HYDRAULIC OIL IS FREE FLOWING THROUGH THE HARVESTER VALVE BODY. WHEN THE ELECTRIC SWITCH IS ACTIVATED AN ELECTRIC COIL OPENS THE SPOOL TO SEND OIL TO THE HYDRAULIC CYLINDER. HOWEVER THE OIL IS STILL FLOWING FREELY. CONSEQUENTLY THE UNLOAD COIL MUST BE EMPLOYED AT THE SAME TIME TO TEMPORARILY STOP THE FREE FLOWING OIL TO BUILD UP PRESSURE TO MOVE THE CYLINDER. WHEN THE ELECTRIC SWITCH IS ACTIVATED AND DEACTIVATED THE UNLOAD COIL IS ALSO. THERE ARE ELECTRICAL DIODES IN THE CONTROL BOX PREVENTING ELECTRICAL FEEDBACK THROUGH TO OTHER INACTIVATED FUNCTIONS.

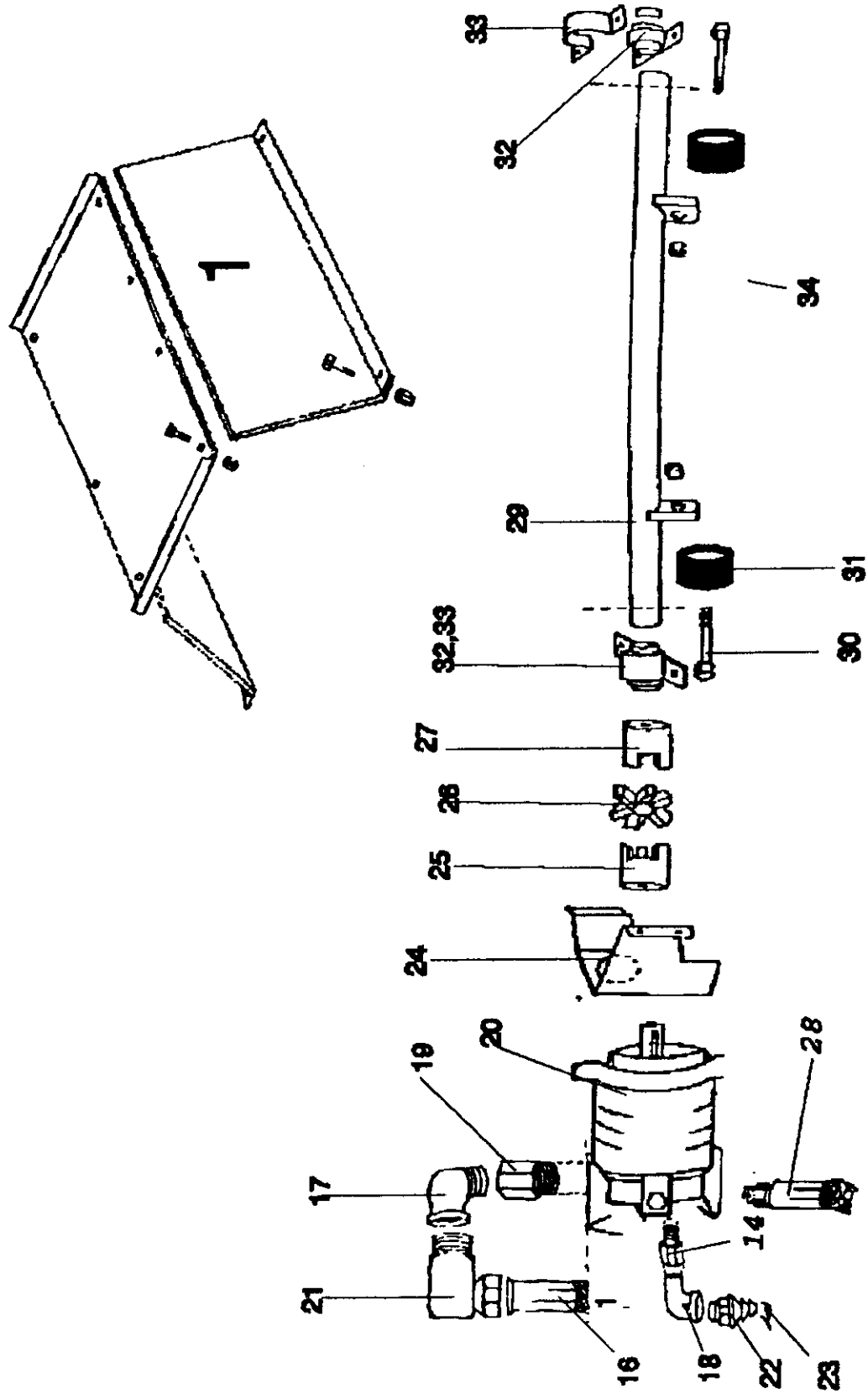
WHEN THE RED SCREW IS INSERTED IN THE UNLOAD COIL IT MANUALLY STOPS THE FLOW OF OIL THROUGH THE VALVE BODY (THE RED SCREW HAS A PIN ON THE END).

WHEN THE BLUE SCREW IS INSERTED IT ALLOWS THE ELECTRIC COIL TO OPEN AND CLOSE THE UNLOAD SECTION.

Header Figure 1.

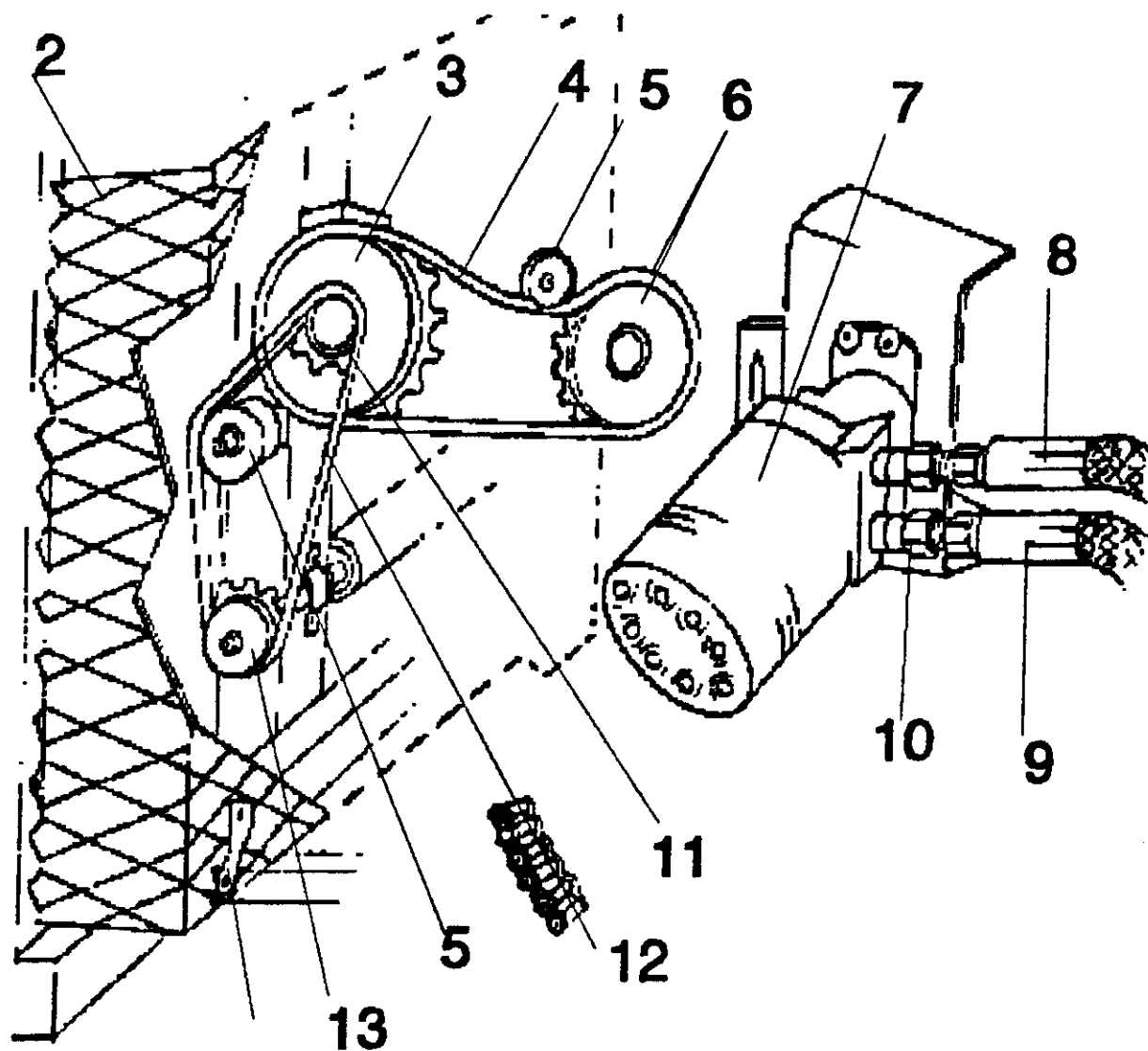


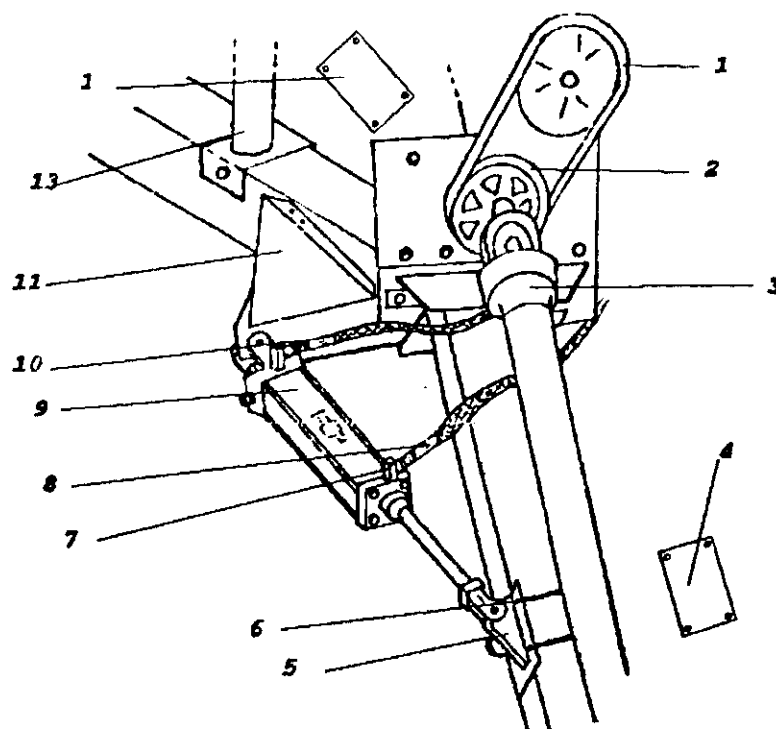
Header Fig.2



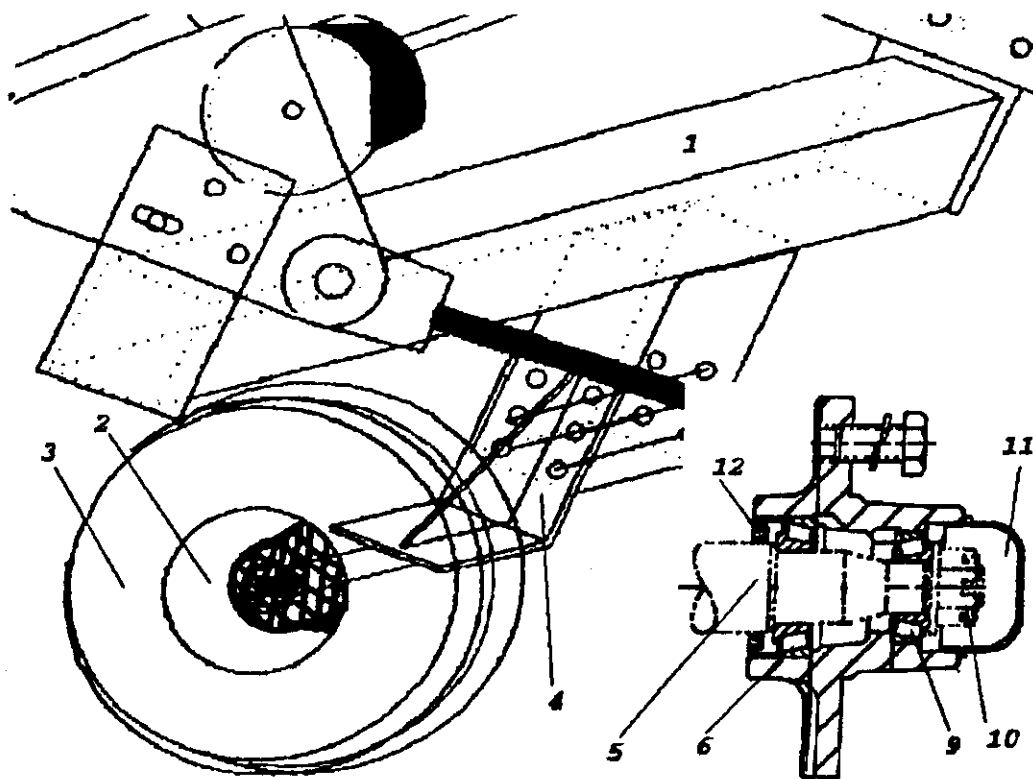
<u>Ref #</u>	<u>Part #</u>	<u>Description</u>
1	191-137	Vibrator cover
2	191-1142	Shaker shield-expanded metal
3	191-148	Sprocket, Header Drive (driven)
4	191-117	Header drive chain # 60 49 links w/master & off
5	110-134	Idler, roller chain tightener
6	192-147	Sprocket, Header chain drive motor
7	192-118	Hydraulic Motor, Disk drive
8	192-1c	3/4 in hose 3/4 x 1/2 x 50 in long
9	192-1b	3/4 in hose 3/4 x 3/4 x 50 in long
10	191-034	7/8 x 14 ORB male to 3/4 NPT female, SWIVEL (st
11	110-115	Sprocket, Feeder roll drive #50B16 1 3/4 bore
12	110-135	Chain, #50 roller drive chain, 41 links
13	191-124	Sprocket, 16 tooth #50 1 1/4 in bore
14	191-02-2	1/2 - 20 X 1/8 FP
15	191-7c	1/4 in hose 3/8 x 3/8 x 202 in long
16	191-3e	1/2 in. hose 1/2 x 1/2 x 30 in long
17	191-07-3	3/4 NPT ST. ELL
18	191-09-3	1/8 NPT St Elbow
19	192-02	1 5/16 x 12 ORB male to 1/2 FPT female, solid (
20	191-412	Hydraulic motor, Cross 50NH19
21	191-12	3/4 NPT male to 3/4 NPT female swivel (90)
22	191-7j	1/4 male pipe thread to 1/4 push-loc
23	191-6	1/4 in push-loc hose per ft
24	191-138	Vibrator motor mount
25	110-7081	Coupler, 7/8 bore
26	110-6055	Coupler, Heavy duty urethane
27	110-6052	Coupler, 1 1/4in. bore
28	192-1r	1/2 in hose 3/4 x 1/2 x 24 in long
31	192-165	Smooth Rubber Vibrator rollers
32	110-203b	Bearing, 1 1/4 Fafnir tri-seal
33	191-203b	Stamped Bearing Housing for 110-203b
34	191-136	Vibrator shaft
41	191-119	Splash guard, belting
42	191-106	Header, frame pivot mounting brackets
43	110-122a	Standoff, Support roller
45	110-125	Roller, Feeder
46	191-28	3/4 x 16 ORB to 3/8 NPT Female swivel 90
47	110-102	Hydraulic cylinder 2 1/2 x 24
48	110-103	Hydraulic cylinder vents
49	110-120	Roller, 5" flange 3 1/2 in diameter
50	192-156	Roller, Flange Nose
51	110-110	Header chains, 11 mm bar 42 mm pitch 265 links
53	191-101	Header Frame
54	110-112	Shaft, Drive
55	110-111	Sprocket, 12T Drive #4212 1 3/4 bore
56	110-405	Bearing, Complete w/ 4 bolt flange, Tri Ply
56	110-405a	Bearing, Fafnir 1 3/4 Triple seal
56	110-405H	RCJ Bearing Carrier

59	191-P3	Pipe, 3/4 x 150 in.
60	191-694	Belt, Bolts & Nuts, 10/32 X 1 in
61	191-693	Belt, Rivet backing plates 32mm
62	191-1051	Hyd, Clamp Halves
63	191-1052	Hyd, Cover Plate
64	191-1054	Hyd. Hex Bolt
65	191-108	Header slide guide bar
66	192-107	Header slide guide
67	192-1053	Pipe Bracket Pad
68	192-1055	Header pipe bracket





<u>Ref #</u>	<u>Part #</u>	<u>Description</u>
1	110-1505	Air Compressor Belts
2	191-1507	Pulley, Air compressor drive
3	191-1002	PTO Shaft
4	192-1126c	Sliding Hitch backing plate
4	192-1126d	Sliding Hitch backing plate, Frame
5	192-1126b	Sliding Hitch tongue mount
7	191-20-2	3/8 NPT male x 3/8 NPT female swivel (90)
9	192-1130	Hydraulic Cylinder
11	192-1126a	Sliding Hitch frame mount
13	191-1510	Air filter mount
15	192-1126	Sliding Hitch Assembly
810	191-7a	1/4 in hose 3/8 x 3/8 x 180 in long



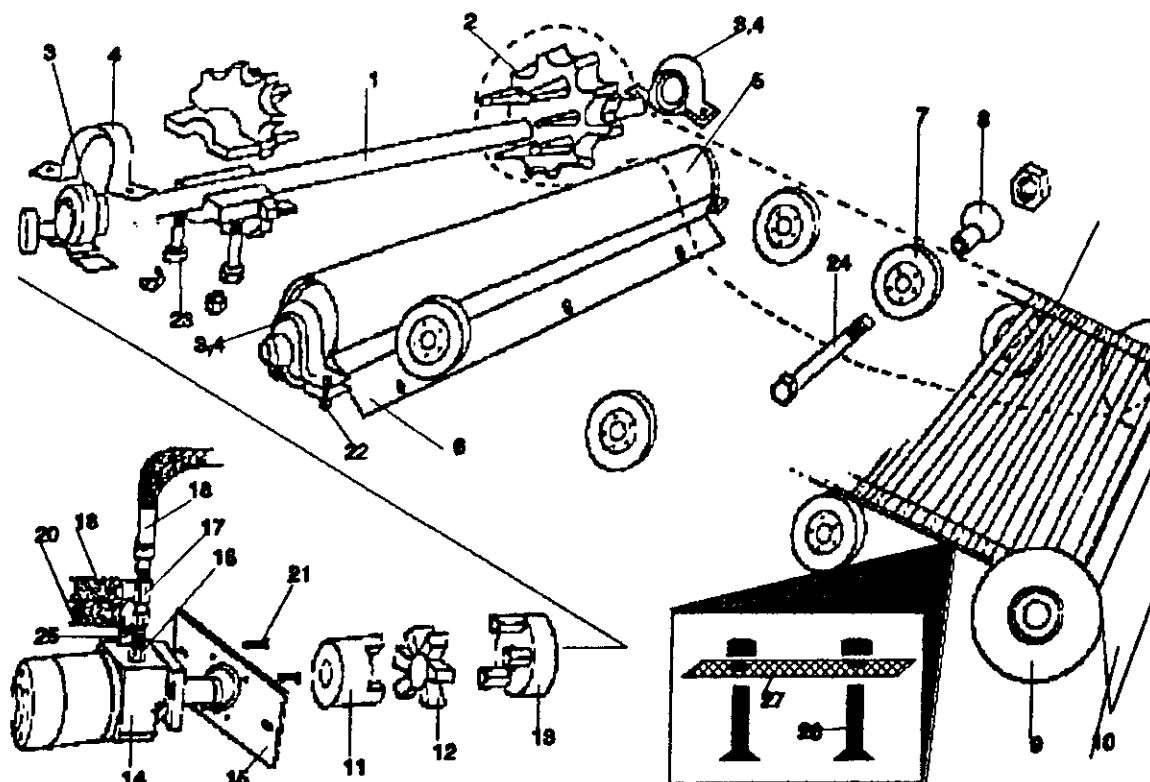
<u>Ref #</u>	<u>Part #</u>	<u>Description</u>
2	192-197	Header Wheel Rim
3	192-198	Header Wheel Tire
5	192-199	Header Wheel Hub & Spindle
6	192-199c	Inner Bearing
9	192-199d	Outer Bearing
10	192-199e	Spindle Nut
11	192-199g	Hub cap
12	192-199f	Seal
2,3	192-196	Header Wheel Rim & Tire
1,2,3,4	192-180	Header Wheel Assmbly

DISKHEAD ASSEMBLY

Ref #	Part #	Description	Parts/assbly	Pts/ma
0	191-130	Disk header Frame	1	1
1	191-118	Hydraulic Motor, Disk drive & Header	2	3
2	191-1b	3/4 in. hose 27 1/2 in. 3/4 x 3/4	2	2
3	191-116	Sprocket, Hydraulic motor drive 60B14 1 1/4 b	2	2
6	191-133a	Sprocket, Bushing SK x 2" for 191-133	2	2
7	191-133	Disk shaft Sprocket	2	2
10	191-141	Shield, Slotted poly shield	2	2
12	191-05	7/8 14 ORB x 3/4 FP Swivel 90	4	12
13	191-12	3/4 NPT male to 3/4 NPT female swivel (90)	2	2
14	191-034	7/8 x 14 ORB male to 3/4 NPT female, SWIVEL	10	10
18	110-134	Idler, endless belt drive chain tightener	2	1
23	191-108R	Header, Motor mount right	1	1
23	191-108L	Header, Motor mount left	1	1
26	191-1h	3/4 in. hose 73 in. 3/4 x 3/4	1	1
27	191-1j	3/4 in. hose 43 3/4 x 3/4	1	1
28	191-1201	Halogen Lights	5	5
28	191-1201A	Bulbs, Halogen Lights	5	5
29	191-139	Cover, Shield	1	1
30	191-131	Disk Shafts	2	2
31	110-132a	insert for disk drive bearing, 2 in	4	4
31	110-132	Bearings, Disk Shaft	4	4
32	191-142	Lower Disk Scraper	2	2
33	191-172	Disk cylinder half (no gathering chain option	4	4
34	191-143	Chain, Roller 65 links #60 w/master & offset	2	2
35	191-173	Cylinder scraper	2	2
36	110-140-4	Header disk, 1/4" notched hard	2	2
36	110-140-5	Header disk, 5/16" notched hard	2	2
36	110-140	Header, disks	2	2
38	191-171L	Left inset (no gathering chain option)	1	1
38	191-171R	Right inset (no gathering chain option)	1	1

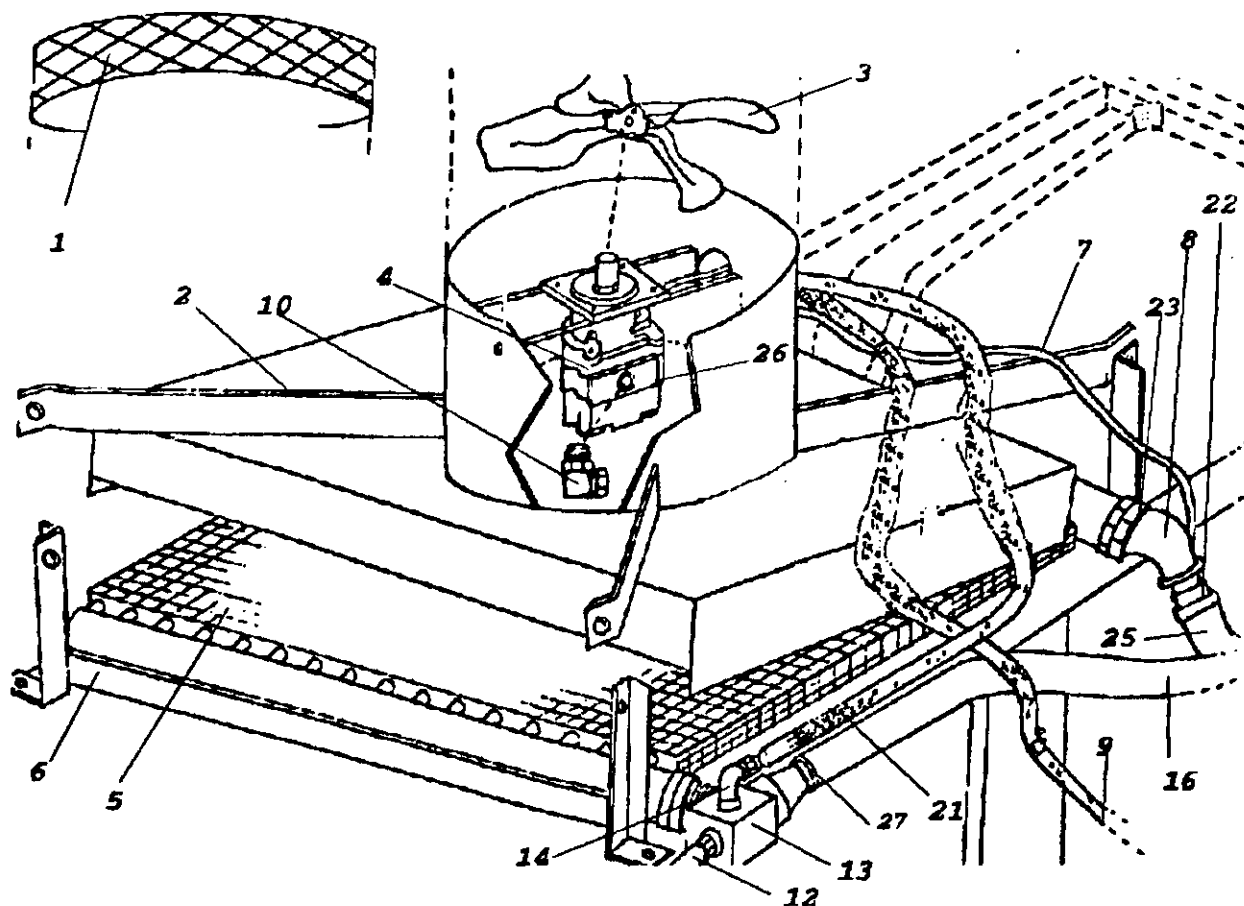
GATHERING CHAIN OPTION

3	191-231	Coupler, sprocket	2	2
4	110-6055	Coupler, Medium duty urethane	1	8
5	110-6052	Coupler, Shaft side 1 1/4in. bore	2	9
8	191-155	Shaft, 1 1/4 in	2	2
9	191-203b	Bearings, Stamped steel housing	4	26
9	110-203a	Bearings, 1 1/4 triple seal	4	26
11	191-602	Sprockets, Belted chain drive	2	12
15	191-182	LH Gathering chain frame	1	1
15	191-183	RH Gathering chain frame	1	1
16	191-694	Belt, Bolts & Nuts	8	48
17	191-692	Belt, Rivet backing plates 20mm	4	8
20	110-122	Rollers, Idler #812R	4	66
21	191-171	Scraper, disk	2	2
22	191-161	Belt, Gathering chain	2	2
24	191-153	LH Nose tightener assembly	1	1
24	191-154	RH nose tightener assembly	1	1
25	110-120	Rollers, Nose, #924	4	4
39	191-213	Spacers, steel tubing	4	2

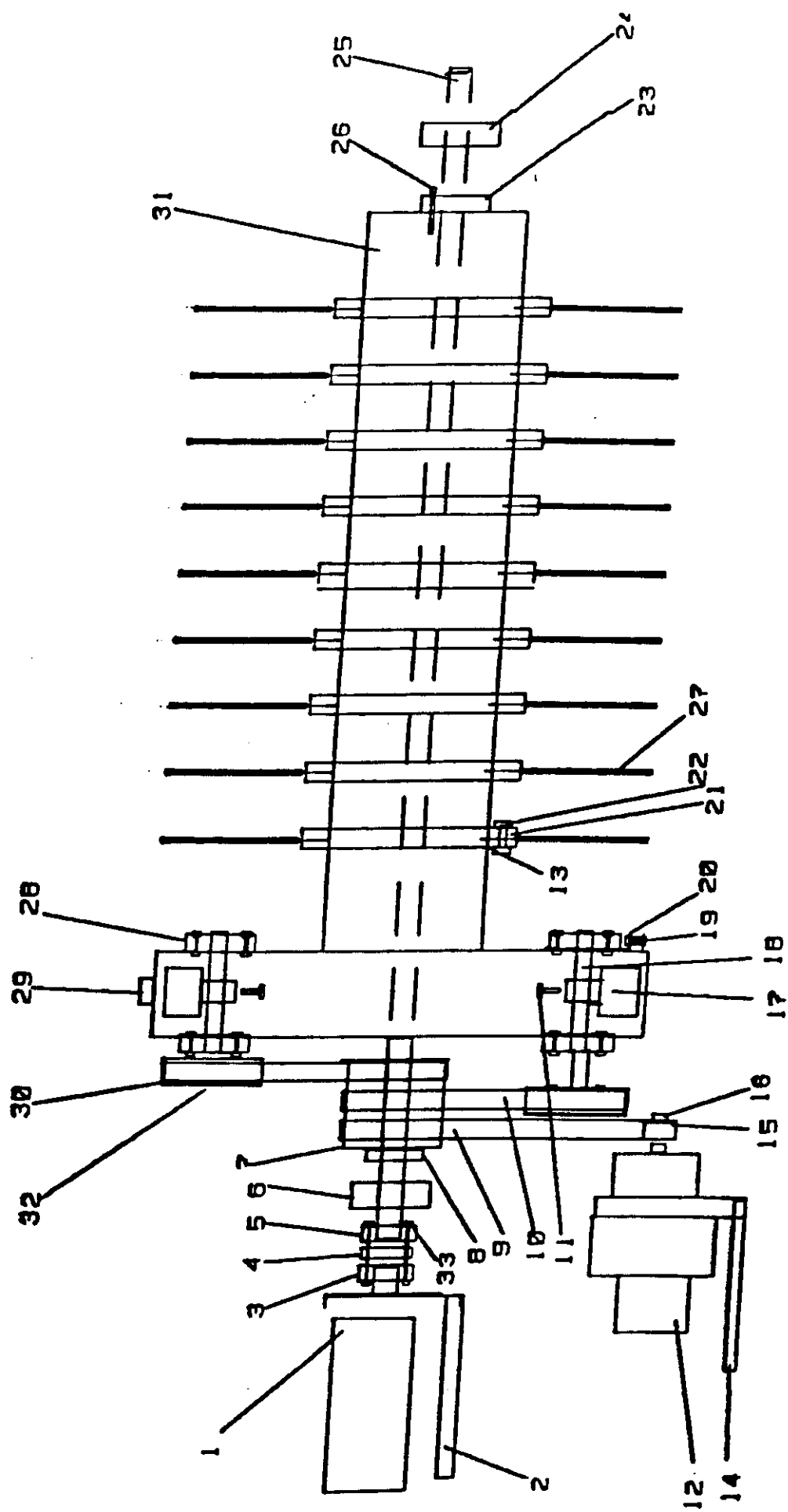


TRANSFER CHAIN ASSEMBLY #3

<u>Part #</u>	<u>Description</u>	<u>Pts/Assby</u>	<u>Pts/Ma</u>
1	110-202 Shaft, Fruit chain drive shaft	1	1
2	191-602 Sprocket, drive	2	12
3	110-203a Bearing, 1 1/4 Fafnir tri-seal	4	26
4	191-203b Stamped Bearing Housing for 110-203b	4	26
5	110-209 Roller, Fruit chain support cleaner	1	1
6	110-211 Scraper, Support cleaner roller	1	1
7	110-122 Roller, Fruit chain support	6	66
8	110-122a Standoff, support roller spacer	6	66
9	110-120w Roller, Wide flanged flat (PVC Rubber type) 8	2	4
10	191-210 Belting, shield	2	1
11	110-6051 Coupler, Motor 1"bore	1	1
12	110-6055 Coupler, Spider urethane	1	8
13	110-6052 Coupler, 1 1/4"	1	9
14	110-204 Motor, Drive	1	1
16	191-03 Nipple, 7/8 16 x 1/2 " NPT	24	24
16	191-212 Mount, Motor	1	1
17	191-27 1/2 NPT female swivel (TEE)	12	12
18	191-4i 1/2 in. hose 56 in. 1/2 x 1/2	2	2
19	110-201 Chain, Fruit rod chain	1	1
20	191-4h 1/2 in. hose 75 in. 1/2 x 1/2	1	1
21	3/8 x 1" Bolt and Nuts	4	
22	3/8 x 1 1/2" Bolts and Nuts	8	
23	1/2 x 3" Bolts and Nuts	4	
24	1/2 x 3" Bolts and Nuts	6	
25	191-16 7/8 x 14 ORB male to 1/2 NPT female swivel 90	15	15
26	191-694 Belt, Bolts & Nuts	8	48
27	191-693 Belt, Rivet backing plates 32mm	4	16



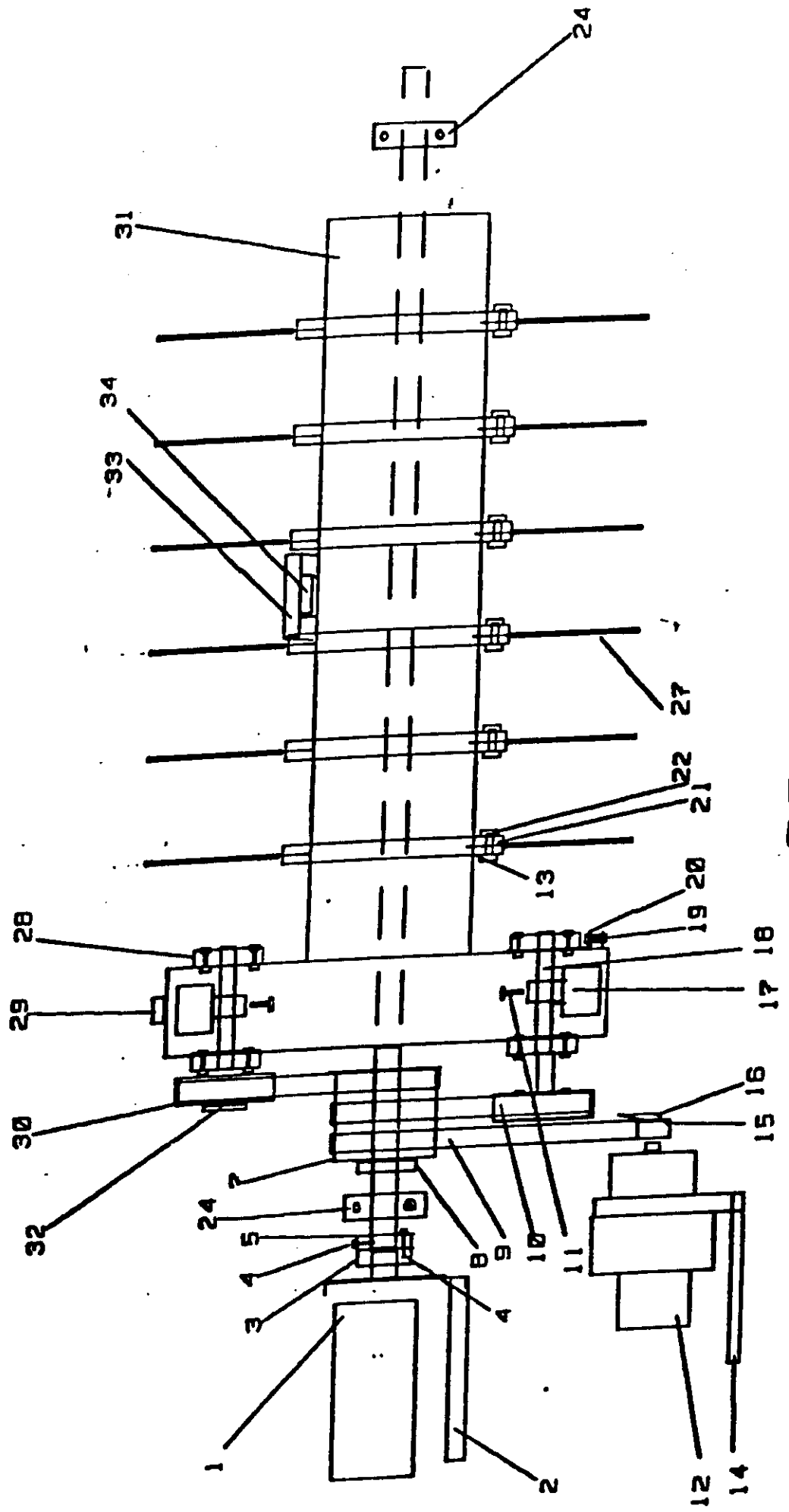
<u>Ref #</u>	<u>Part #</u>	<u>Description</u>
1	191-1082	Cooling Fan Cover
2	110-1016	Hydraulic, Oil cooler shroud
3	110-1019	Hydraulic, Oil cooler fan
4	191-1020	Cooling Fan Motor
5	110-1015	Hydraulic, Oil cooler radiator
6	110-1017	Mount, Oil cooler support brackets
8	191-07-9	1 1/2 ST ELL
9	192-3a	1/2 in hose 1/2 x 1/2 x 88 in long
10	191-16	7/8 x 14 ORB male to 1/2 IPT female swivel (90)
12	191-2c	3/4 in. hose 3/4 x 3/4 x 70 in long
13	192-1021	Hydraulic, Oil cooler manifold #2
14	191-07-2	1/2 NPT ST ELL
16	191-5r	1 1/2 in Return hose 91 in. 1 1/2 x 1 1/2
21	191-4i	1/2 in. hose 1/2 x 1/2 x 56 in long
22	191-45	1 1/2 NPT to 1 1/2 hose barb adaptor
23	191-11-9	2 x 1 1/2 bushing
26	191-7j	1/4 male pipe thread to 1/4 push-loc
27	110-1029	Hydraulic, Hose clamp



PRIMARY SHAKER

PRIMARY SHAKER ASSEMBLY

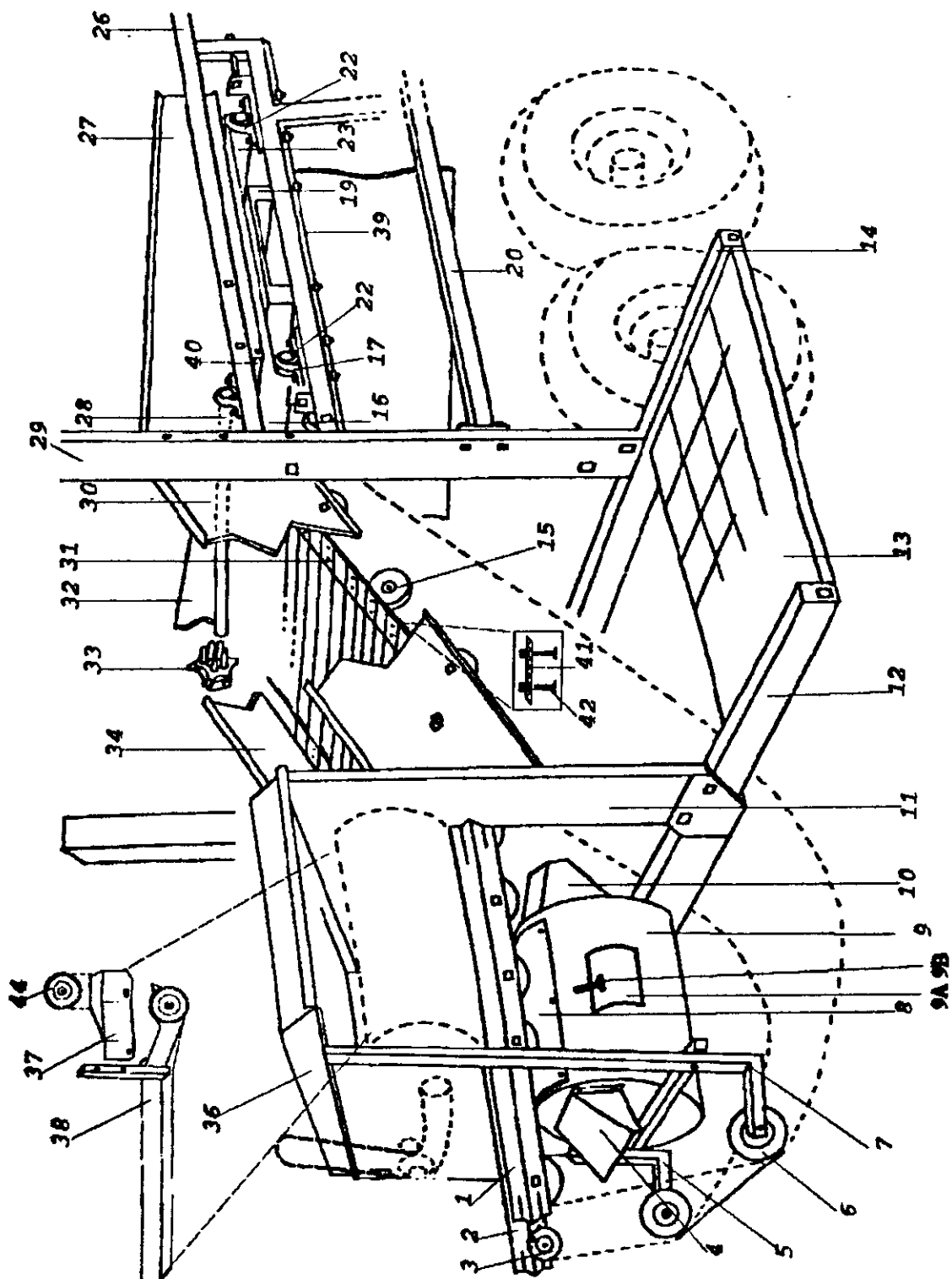
	<u>Part #</u>	<u>Description</u>	<u>Pts/Assmbly</u>	<u>Pts/Ma</u>
1	110-204	Motor, Shaker drive	1	7
2	191-416	Motor mount, rotation	1	1
3	191-422a	Coupler, Motor half	1	1
4	191-422	Coupler, Shaker drive rubber	1	1
5	191-422b	Coupler Shaker Half	1	1
7	110-409	Pulley, Center timing belt	1	1
8	110-410	Bearing, Center sprocket	1	4
9	110-408	Belt, Center pulley drive	1	2
10	191-407	Belt, Weight drive	2	2
11	191-402B	Bolt, Grade 8 (1/2 x 3)	4	4
12	191-412	Motor, Primary Shaker Weight	1	2
13	191-432	Tine holder flanges	18	30
13	191-432a	Half flanges		
14	110-415	Mount, Weight Motor bracket	1	2
15	110-414	Sprocket, Weight motor	1	2
16	110-414H	Hub for 110-414	1	2
16	110-414B	Bolt for 110-414H	3	6
17	191-402	Shaker weights and caps	2	2
18	191-404	Shaft, Shaker weights	2	4
19	191-433a	Bolt for 191-433	4	8
20	191-433	Belt adjust flange	8	8
21	191-431	Tine holders, rubber	9	15
22	110-433	Bolt, Tine holder	180	300
23	191-406a	Bushings for shaft	2	2
24	110-420	Bearing, Shaker main	2	4
25	191-400	Shaker main Shaft	1	1
26	191-406b	special bolts for shaker box 5/16x1 1/2 full	3	3
27	191-430	Shaker tines with plastic covers	180	300
28	110-405	Bearing, Weight shaft	4	4
28	110-405c	Bearing, Fafnir 1 3/4 tri seal	4	10
28	110-405i	Bearing, 1 3/4 Insert (single seal)	4	10
29	191-403	Shaker, Weight guards	2	2
30	191-406	Pulley, Weight timing belt	2	2
31	191-401	Shaker box and drum assembly	1	1
33	191-422c	Bolts for coupler/ 5/16 x 1 1/2	3	6
	191-402A	Keystock 3/8 x 2		2
	191-416a	Shims for above (specify 1/4, 3/8, 1/2)	1	1



SECONDARY SHAKER

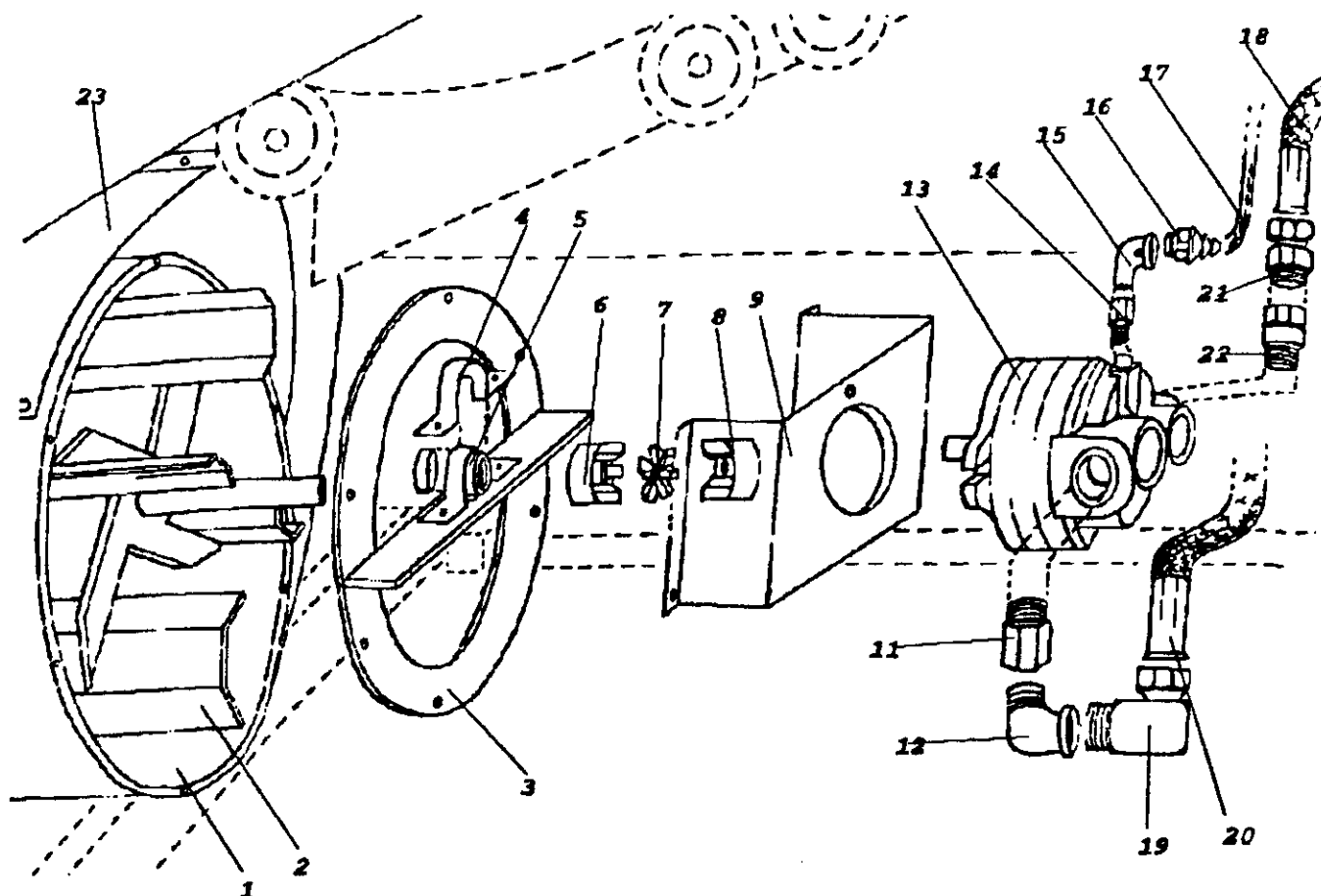
SECONDARY SHAKER ASSEMBLY

<u>Ref #</u>	<u>Part #</u>	<u>Description</u>	<u>Parts/assbly</u>	<u>Pts/ma</u>
1	110-204	Motor, Shaker drive	1	7
2	191-516	Motor mount, rotation	1	7
4	100-422b	Bolts, 5/16 x 1 1/4 Socket head	6	6
5	110-422	Coupler, Shaker drive rubber	1	1
7	192-409	Pulley, Center timing belt	1	1
8	110-410	Bearings, Center pulley	1	4
9	192-408	Belt, Center drive belt	1	2
10	192-508	Belt, Weight drive	2	4
11		Bolt, Weight cap 1/2" x 3"	4	4
12	110-412	Motor, Weight drive	1	2
13	191-432	Tine holder flanges	12	30
14	110-515	Mount, Weight motor bracket	1	2
15	192-414	Pulley, weight motor	1	2
17	110-502	Shaker weights and caps	2	2
18	110-404	Shaft, Shaker weight	2	4
19	191-433a	Bolt for 191-433	4	8
20	191-433	Belt adjust flange	8	8
21	192-431	Rubber tine holders	6	15
22	110-433	Bolts, Tine holder	120	300
24	110-420	Bearing, Shaker main	2	4
27	191-430	Shaker tines with plastic covers	120	300
28	110-405	Bearings, Weight shaft	4	10
29	191-503	Shaker weight guards	2	2
30	192-406	Pulley, Weight timing belt drive	1	2
31	110-501	Shaker box and drum assembly	1	1
33	110-536	Foam, Outer wrappings (thin) 1/2 in.	5	5
34	110-535	Foam, Inner wrappings (thick)	5	5
	110-412r	Seal, Shaker weight motor seal	1 R	
	110-537	Glue (gallon)	1	1
	191-421	Spacer block, mount for 110-420 on inside	2	2
	191-516a	Shims for above (specify 1/4, 3/8, 1/2)		



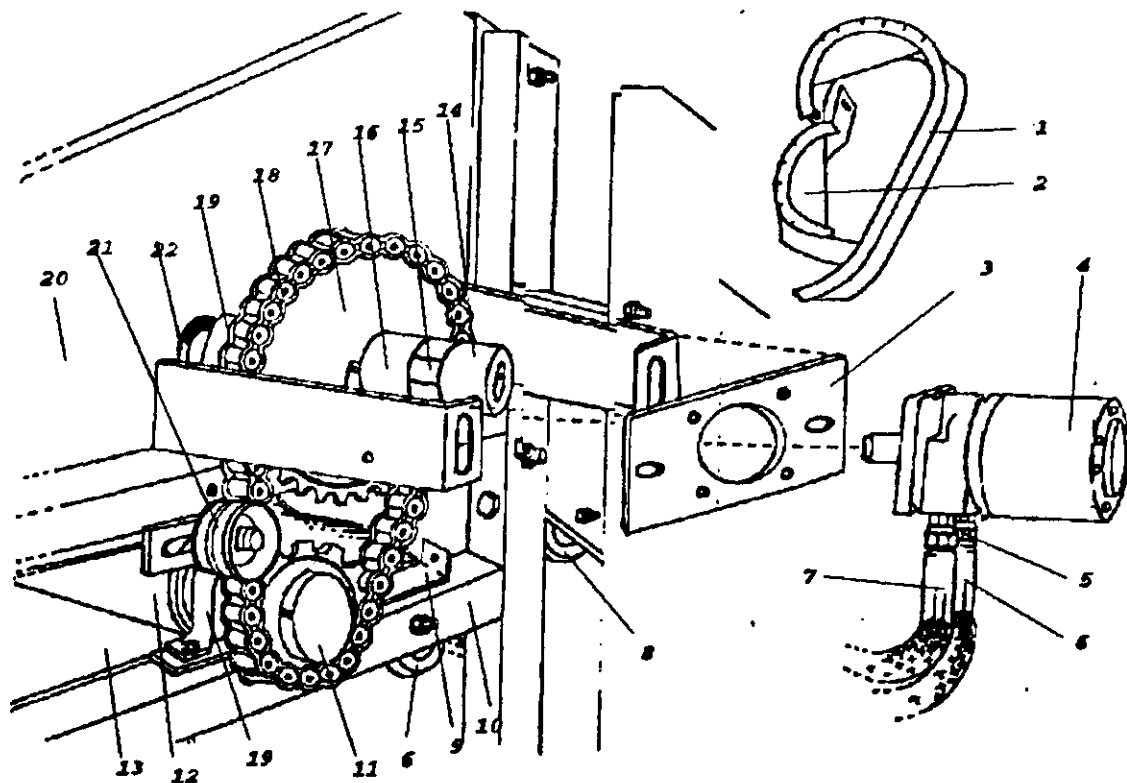
ELECTRONIC SORT ELEVATOR

<u>Ref #</u>	<u>Part #</u>	<u>Description</u>	<u>Parts/assbly</u>	<u>Pts/ma</u>
1	191-738	Roller support (outer)	1	1
2	191-737	Roller support (inner)	1	1
3	110-120	Roller, Elevation Chain rear roller	2	2
4	191-733	Fan dirt guard (rear)	1	1
5	191-736	Support, rear debris fan	1	1
8	191-732	Fan housing cover	1	1
9	191-701	Fan Housing & diffuser	1	1
10	191-734	Fan dirt guard (motor side)	1	1
11	191-1137	Debris fan front mount	1	1
12	191-1401	Deck Slide rear	1	1
13	191-1403	Deck, Outer elevation	1	1
14	191-1402	Deck Slide front	1	1
15	110-122	Roller, rod chain support	13	66
15	110-122a	Standoff, Support roller	13	66
16	191-1551	Presort Belt	1	1
17	110-1522	Pulley, flat conveyer belt, drive	1	1
19	191-1520	Slider, Endless belt slider bed	1	1
20	191-843	Crossbar	1	1
22	110-203a	Bearings, 1 1/4 triple seal	6	26
22	191-203b	Bearings, Stamped steel housing	6	26
23	110-1523	Pulley, endless belt, nose	1	1
26	110-1526	Frame, Presort (outer)	1	1
26	110-1525	Frame, Presort (inner)	1	1
27	191-1553	Presort side panel (right)	1	1
28	110-603	Shaft, rod chain drive	1	1
29	191-1138	Rear roof support	1	1
30	191-741	Elevation side panel (outer)	1	1
31	110-1530	Belt, electronic elevating rod chain	1	1
32	191-1554	Presort side panel (left)	1	1
33	191-602	Sprocket, rod chain drive	2	12
34	191-740	Elevation side panel (inner)	1	1
36	191-726	Air deflector hood	1	1
37	191-1544	Roller guard inner	1	1
38	191-1545	Roller guard outer	1	1
39	191-1546	Endless belt scraper	1	1
40	191-1556	tomato guard bar	1	1
41	191-693	Belt, Rivet backing plates 32mm	4	16
42	191-694	Belt, Bolts & Nuts	8	48
43	191-739	Bracket, Panel support	1	1
44	110-904	Roller, Lower rod chain support	2	17
	191-1518	Belting, side (not shown)	1	1
	191-743	Debris chute (outer, not shown)	1	1
	191-744	Debris chute (rock guard, not shown)	1	1
	191-742	Debris chute (inner, not shown)	1	1



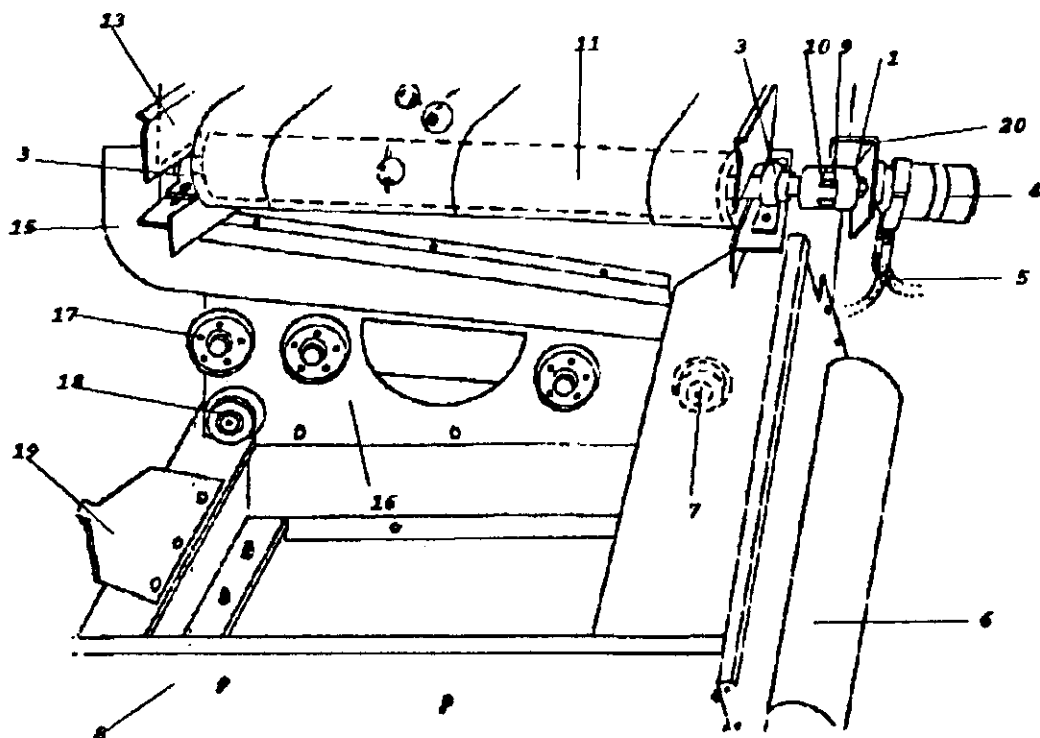
FAN PARTS

Ref #	Part #	Description	Parts/assbly		Pts/ma
1	191-701	Fan Housing & diffuser	1	1	
2	191-702	Fan & paddle assembly	1	1	
3	191-701a	Access Panel	1	1	
4	191-203b	Stamped Bearing Housing for 110-203	4	26	
5	110-203a	Bearing, 1 1/4 Fafnir tri-seal	4	26	
6	110-6052	Coupler, Shaft side 1 1/4in. bore	1	9	
7	110-6055	Coupler, Medium duty urethane	1	8	
8	110-7081	Coupler, Motor side 7/8 bore	1	2	
9	191-704	Mount, Fan Motor	1	1	
11	191-02	1 5/16 x 12 ORB male to 3/4 NPT fem	8	8	
12	191-07-3	3/4 NPT ST. ELL	4	4	
13	110-412	Motor, Fan drive	1	1	
14	191-02-2	1/2 - 20 X 1/8 FP			
14	191-7j	1/4 male pipe thread to 1/4 push-lo	7	7	
15	191-09-3	1/8 NPT St Elbow			
17	191-2p	1/4 in hose 150 in. push-loc	1	1	
19	191-12	3/4 NPT male to 3/4 NPT female swiv	2	2	
20	191-2d	3/4 in. hose 76 in. 3/4 x 1/2	1	1	
21	191-2c	3/4 in. hose 64 in. 3/4 x 3/4	1	1	
22	191-01	3/4 NPT male to 3/4 NPT female swiv	3	3	



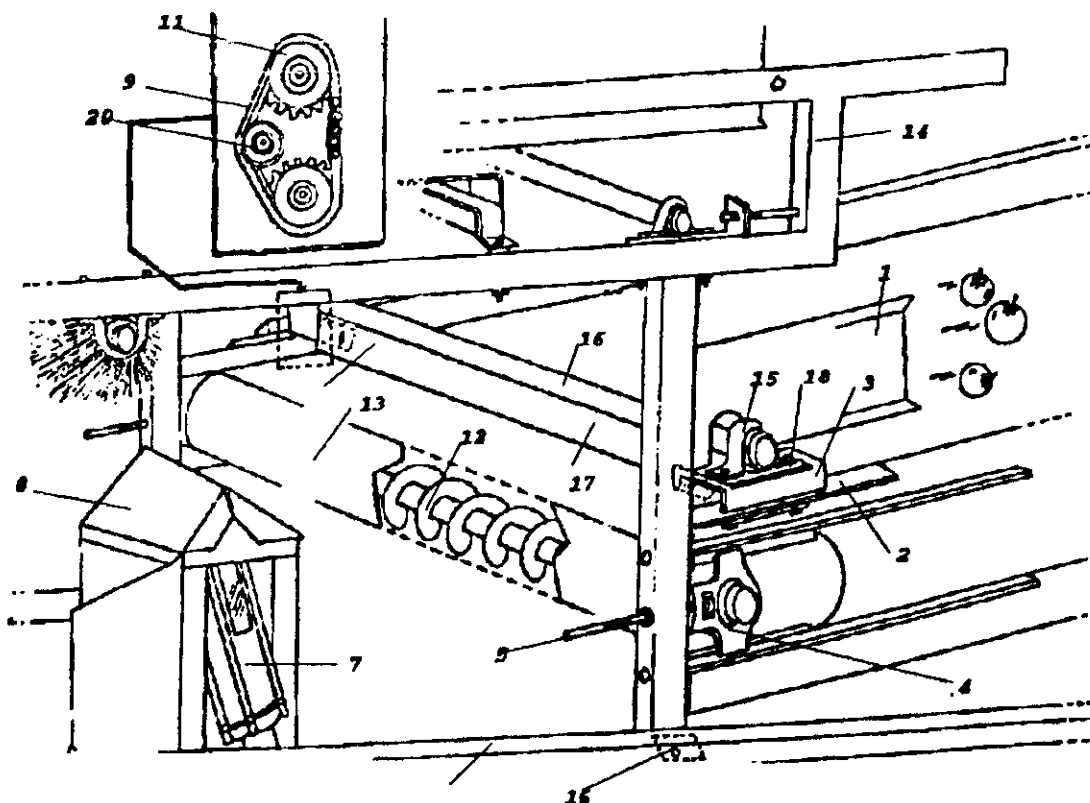
PRESORT MOTOR ASSEMBLY

<u>Ref #</u>	<u>Part #</u>	<u>Description</u>	<u>Parts/assbly</u>	<u>Pts/ma</u>
1	110-1533	Shield, Drive chain	1	1
2	110-1533a	Shield, Drive chain	1	1
3	191-614	Motor Mount	1	1
4	110-204	Motor, Hydraulic	1	1
5	191-15	7/8 x 14 ORB male to 1/2 IPT female	2	21
6	191-3i	1/2 in. hose 64 in. 1/2 x 1/2	1	1
7	191-3j	1/2 in. hose 62 in. 1/2 x 1/2	1	1
8	110-122	Roller, rod chain support	13	66
9		Bearing tightener bracket	1	1
10	110-1525	Frame, Presort (inner)	1	1
11	110-124	Sprocket, endless belt drive chain	1	1
12	110-1522	Pulley, flat conveyer belt, drive	1	1
13	191-1551	Presort Belt	1	1
17	191-1531	Sprocket, Pre-sort belt drive	1	1
18	110-1532	Chain, endless belt drive 45 links	1	1
19	191-203b	Bearings, Stamped steel housing	6	26
19	110-203a	Bearings, 1 1/4 triple seal	6	26
20	191-1554	Presort side panel (left)	1	1
21	110-134	Idler, belt drive chain tightener	1	1
22	110-603	Shaft, rod chain drive	1	1



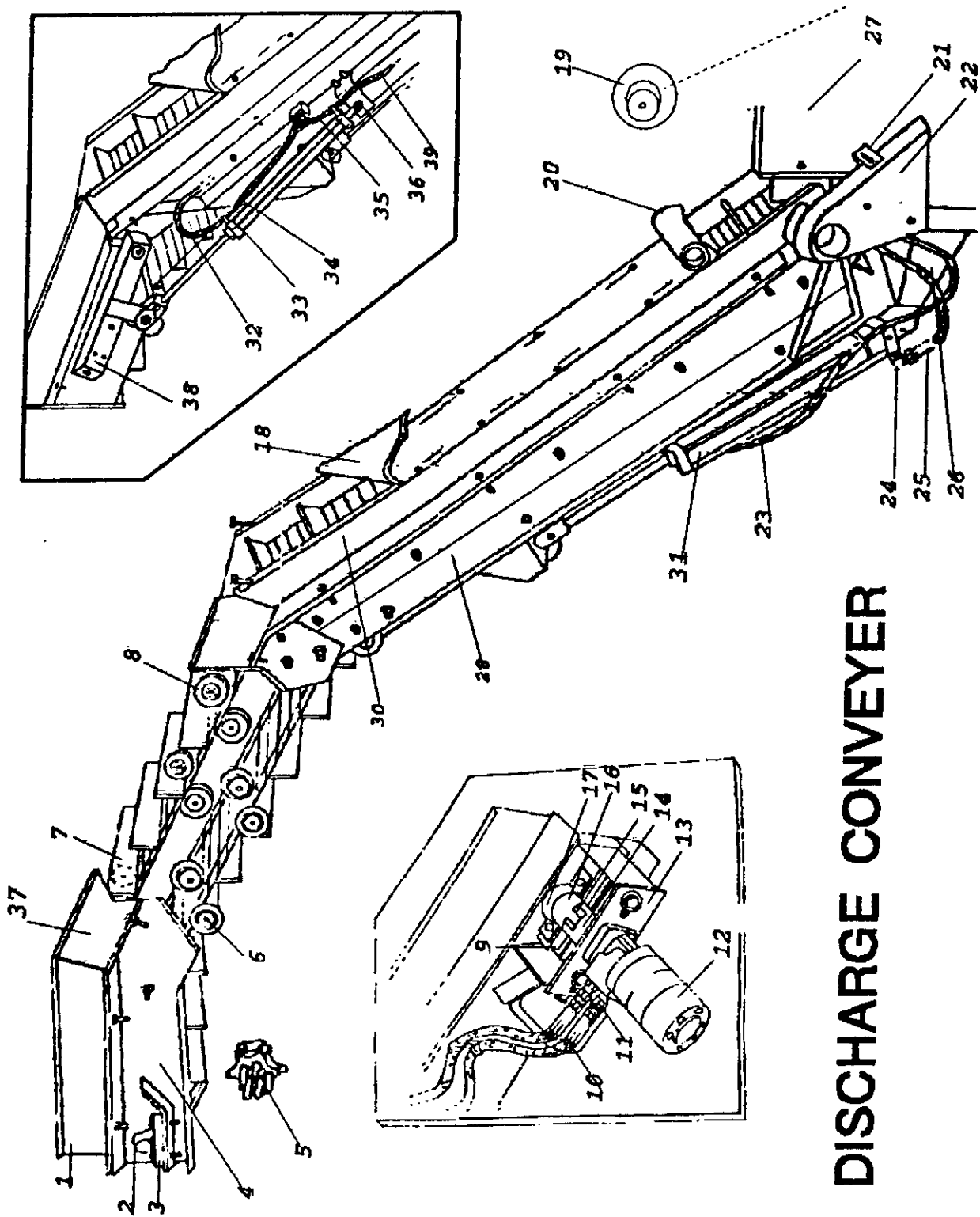
SORT TABLE FORWARD

<u>Ref #</u>	<u>Part #</u>	<u>Description</u>	<u>Parts/assbly</u>	<u>Pts/ma</u>
1	110-6051	Coupler, Motor side 1in. bore	1	5
3	110-203a	Bearing, 1 1/4 Fafnir tri-seal	4	26
3	191-203b	Stamped Bearing Housing for 110-203	4	26
4	110-204	Motor, Drive	1	1
5	191-3e	1/2 in. hose 30 in. 1/2 x 1/2	1	2
6	191-925	Back panel / fruit valve	1	1
7	110-120	Roller, Nose cone rollers (at botto	2	2
8	191-920	Front Discharge panel	1	1
9	110-6055	Coupler, Medium duty urethane	1	8
10	110-6052	Coupler, Shaft side 1 1/4in. bore	1	9
11	110-808	Pulley, Sorting belt drive	1	1
13	191-800	Sorting table	1	1
15	191-937	Discharge, Tomato guard rear	1	1
16	191-921	Rear discharge panel	1	1
	110-122a	Standoff, Support roller	24	66
17	110-122	Roller, Upper rod chain support	9	66
18	110-904	Roller, Lower rod chain support	16	17
19	191-917	Hydraulic cylinder lower bracket	1	1
20	191-806	Mount motor	1	1
NS	191-936	Discharge, Tomato guard forward	1	1

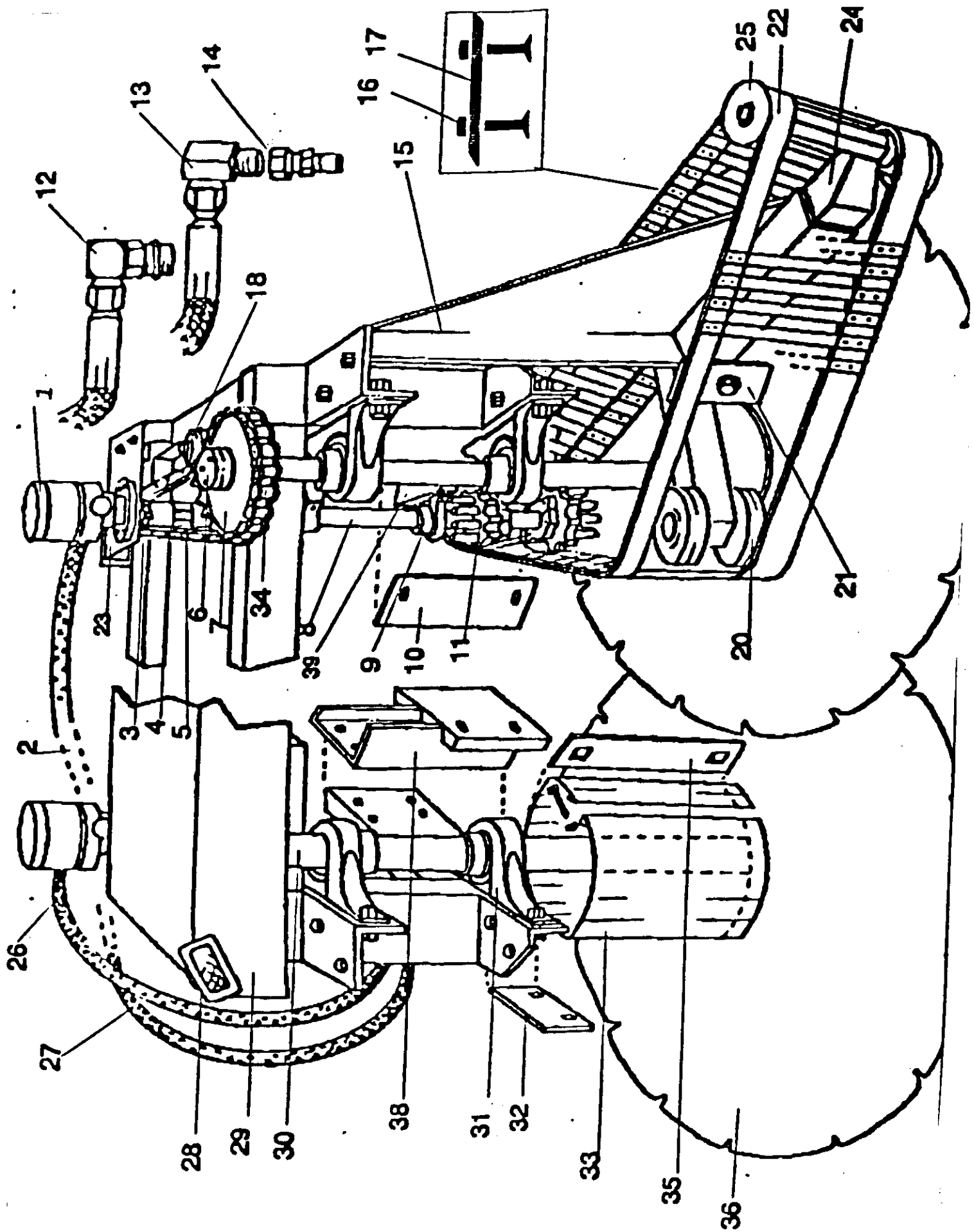


SORT TABLE REAR

<u>Ref #</u>	<u>Part #</u>	<u>Description</u>	<u>Parts/assbly</u>	<u>Pts/ma</u>
1	191-846	Left tomato guard (sort)	1	1
NS	191-847	Right tomato guard (sort)	1	1
2	191-805	Tapped bracket (2 hole)	2	2
2	191-134b	Tapped retainer block	1	1
3	191-851	Spacer, tubing	1	1
4	110-1525	Frame, Presort (inner)	1	1
4	110-805	Bearings, Sorting table tail pulley	2	2
5	110-807	Sorting table bearing adjustment	2	2
6	191-843	Cross bar (over wheel well)	1	1
7	191-1130	Hydraulic Cylinder, Frame Leveling	1	1
8	191-1131	Level cylinder cover	1	1
9	191-135	Feeder roll chain #50 37 links	1	1
11	191-124	Rolling guard sprocket	2	2
12	191-804	Sorting table tail pulley (auger type)	1	1
13	191-801	Sorting belt 20ft x 32in w/lacer	1	1
15	191-203b	Stamped Bearing Housing for 110-203	6	26
15	110-203a	Bearing, 1 1/4 Fafnir tri-seal	6	26
16	191-843a	spacer block	1	1
16	191-848	Rolling Guard	1	1
17	191-849	Rolling guard scraper	1	1
18	191-850	Rolling guard scraper bracket	2	2
20	110-134	Chain tightner	1	6
NS	191-128	Sorting table debris chute(outside)	1	1
NS	110-803	Sorting table belt lacer pin	1	1
NS	110-802	Belt, Sorting table belt lacer	2	1
NS	191-127	Sorting table debris chute	1	1

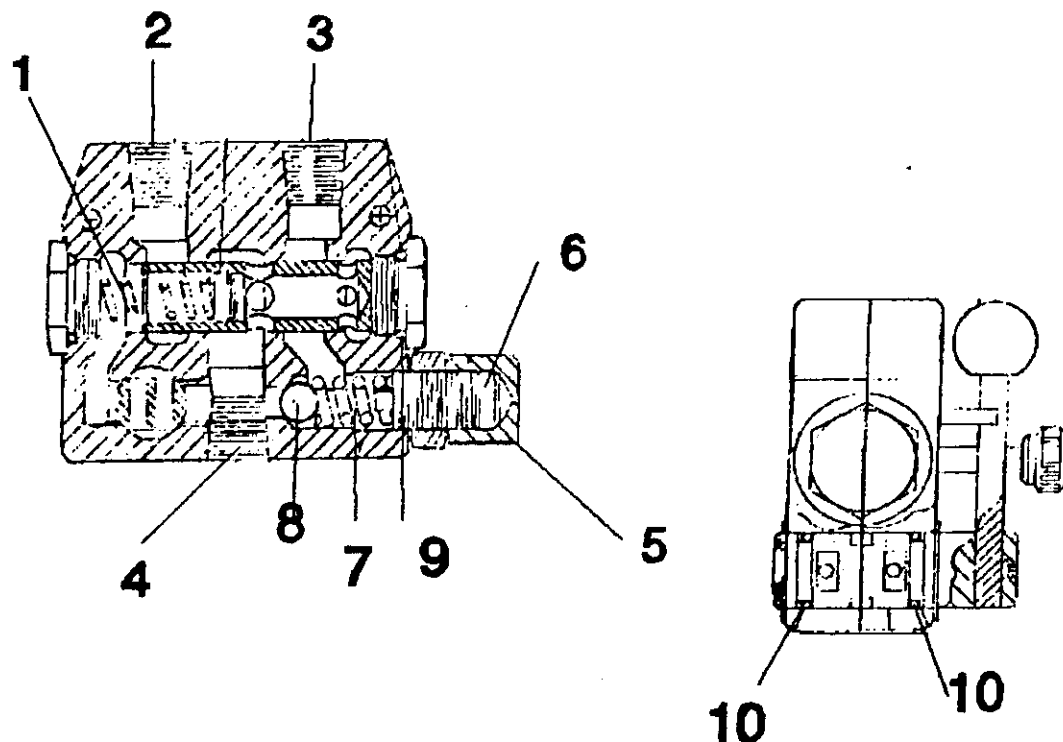


DISCHARGE CONVEYER



DISCHARGE CONVEYOR

<u>Ref #</u>	<u>Part #</u>	<u>Description</u>
1	191-909-2	Top extention, forward
1	191-910-2	Top extention, rear
2	110-911	Shaft, Drive shaft
2	191-203b	Stamped Bearing Housing for 110-203b
4	192-902-1	Frame, Outer boom, forward
4	192-902-2	Frame, Outer boom, rear
4	192-902-5	Crossbar
5	191-602	Sprocket, drive HS-3612 1 1/4 bore
6	110-904	Roller, Lower rod chain support
7	192-903	Discharge chain with flights (9mm bars 20in wid
7	191-903b	Chain, Rubber flights
8	110-122	Roller, 4" support Roller
9	191-940	Bearing Block
10	191-3b	1/2 in. hose 1/2 x 1/2 x 252 in long
11	191-15	7/8 x 14 ORB male to 1/2 IPT female swivel (str
12	110-204	Motor, Drive
13	191-915	Mount, Drive motor bracket
14	110-6051	Coupler, 1 in bore
15	110-6055	Coupler, Heavy duty urethane
16	110-6052	Coupler, 1 1/4in. bore
17	110-203b	Bearing, 1 1/4 Fafnir tri-seal
18	191-938	Tarp cover
19	110-120	Roller, 5" flange 3 1/2 in diameter
21	191-928	Bracket for front panel-elevator mount
22	191-926	Front discharge elevator mount
22	191-927	Rear discharge elevator mount
23	191-7h	Hydraulic, Upper port cylinder hose
25	191-7g	Hydraulic, Lower port cylinder hose
26	191-917	Hydraulic cylinder lower bracket
27	191-920	Front Discharge panel
28	192-901	Frame, Main with cylinder mount
30	191-907	Shield, extention lower level
31	110-916	Hydraulic lift cylinder 2 1/2 in x 30 in
32	192-9a	1/4 in hose 3/8 x 3/8 x 187 in long
33	192-102	Hydraulic cylinder 2 x 24
34	192-9c	1/4 in hose 3/8 x 3/8 x 70 in long
35	192-9d	1/4 in hose 3/8 x 3/8 x 38 in long
36	192-907	Lower cylinder mount
37	191-909-1	Mid-extention, forward
37	191-910-1	Mid-extention, rear
38	192-905	Cylinder mount, forward
38	192-906	Cylinder mount, rear
39	192-9b	1/4 in hose 3/8 x 3/8 x 160 in long



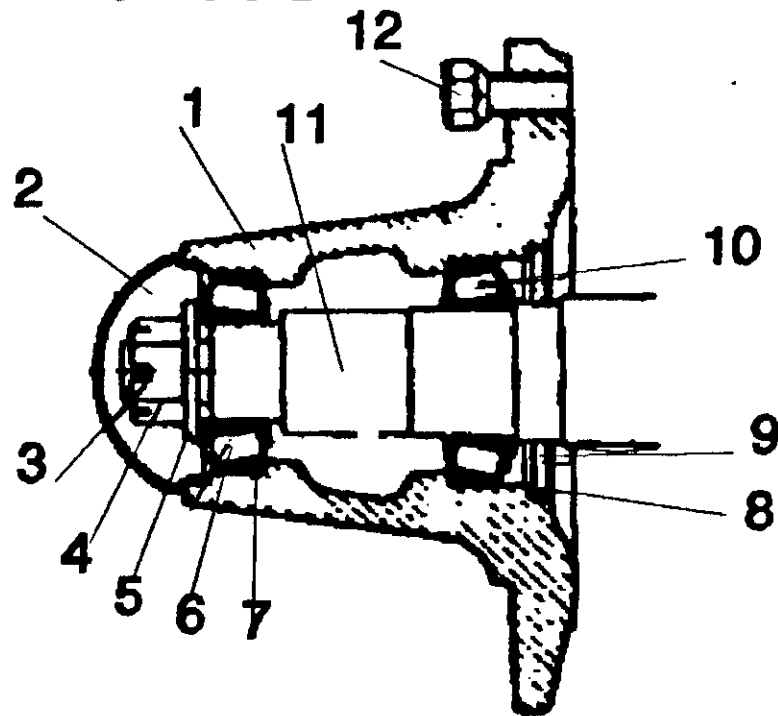
FLOW & RELIEF VALVE MAINTAINENCE

<u>Ref #</u>	<u>Part #</u>	<u>Description</u>	<u>Parts/assbly</u>	<u>Pts/ma</u>
1	191-1030rk	(Items 1,7,8,9 and 10 make up following repair kit.) Repair kit for 1030/1040 Flo-con valve		
7				
8				
9				
10				
2	Controlled Flow Port			
3	Excess Flow Port			
4	In Port			

To increase flow turn the handle to a higher increment.

To increase pressure remove cap (5) and expose hex head adjustment screw (6). With an allen wrench turn the adjustment screw clockwise to increase pressure or counterclockwise to decrease. To check for a broken spring remove the screw and check the spring (7) for any breakage. Use caution so that you do not loose the ball (8) when you do this.

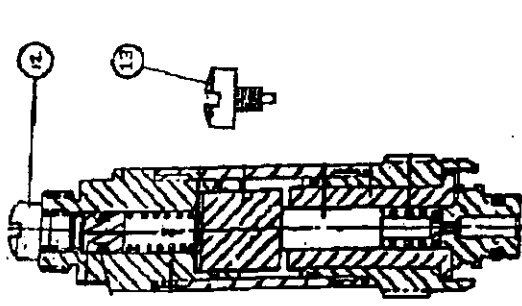
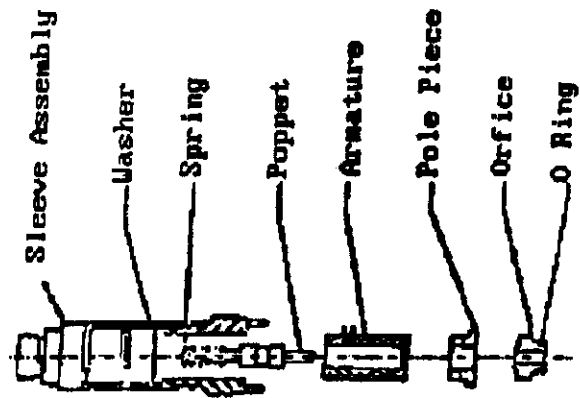
W-778



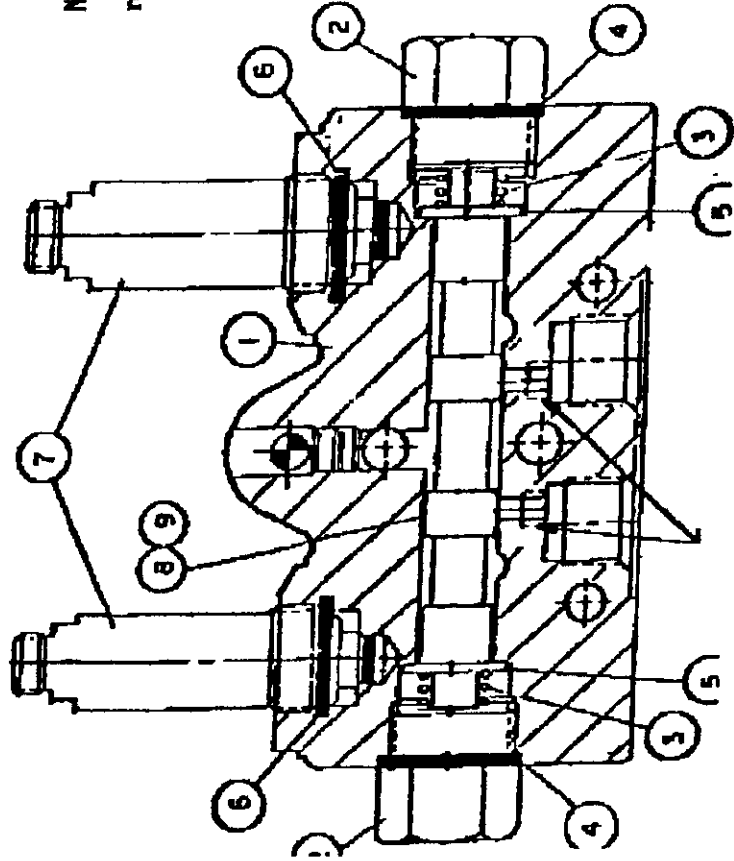
W H E E L A S S E M B L Y

<u>Ref #</u> <u>Part #</u>	<u>Description</u>	<u>Parts/assbly</u>	<u>Pts/ma</u>
1	110-1107 Wheel, Eight lug hubs w/ bearings	4	4
2	110-1107E Cap	4	4
3	Cotter key	4	4
4	110-1107D Nut	4	4
5	110-1107H Shim	4	4
6	110-1107C Outside Bearing	4	4
7	110-1107G Outer cup	4	4
8	110-1107F Inner cup	4	4
9	110-1107A Seal	4	4
10	110-1107B Inside Bearing	4	4
11	110-1108 Frame, Spindle	4	4
12	110-1105 Wheel, Lug bolts	32	32

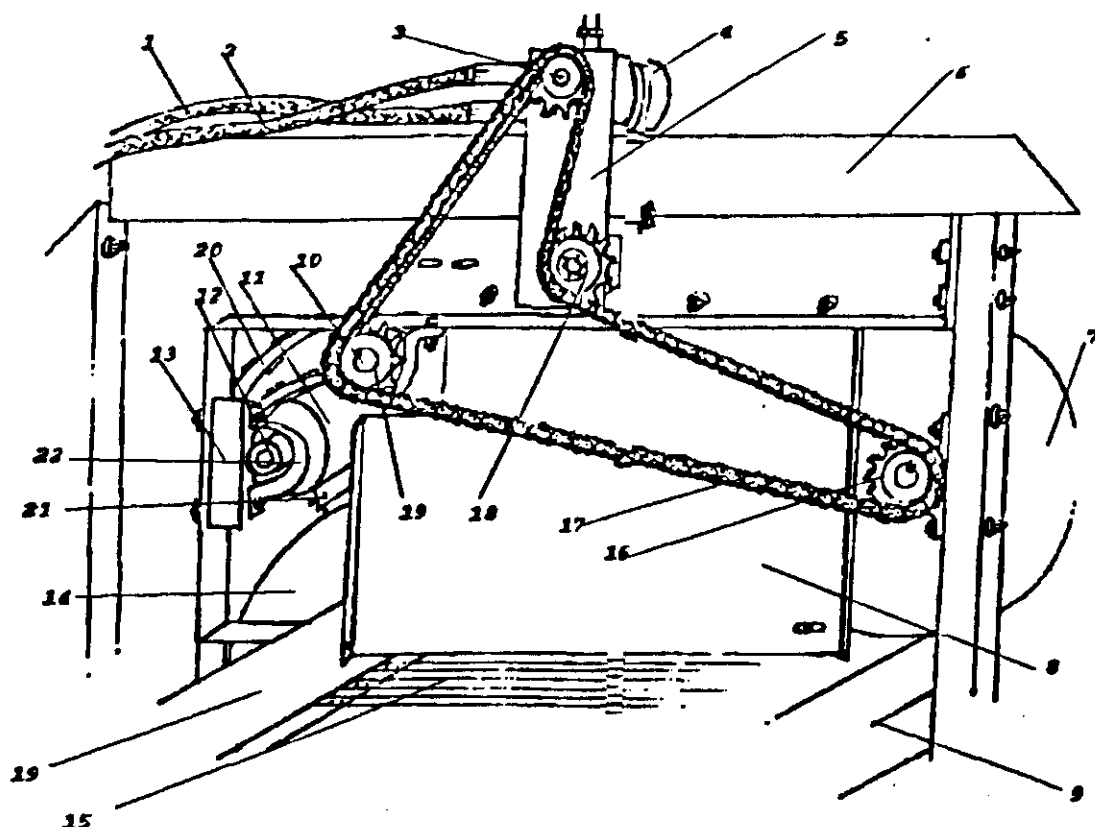
Electric over hydraulic Components



Note: To Convert to fixed closed replace item 12 with item 13

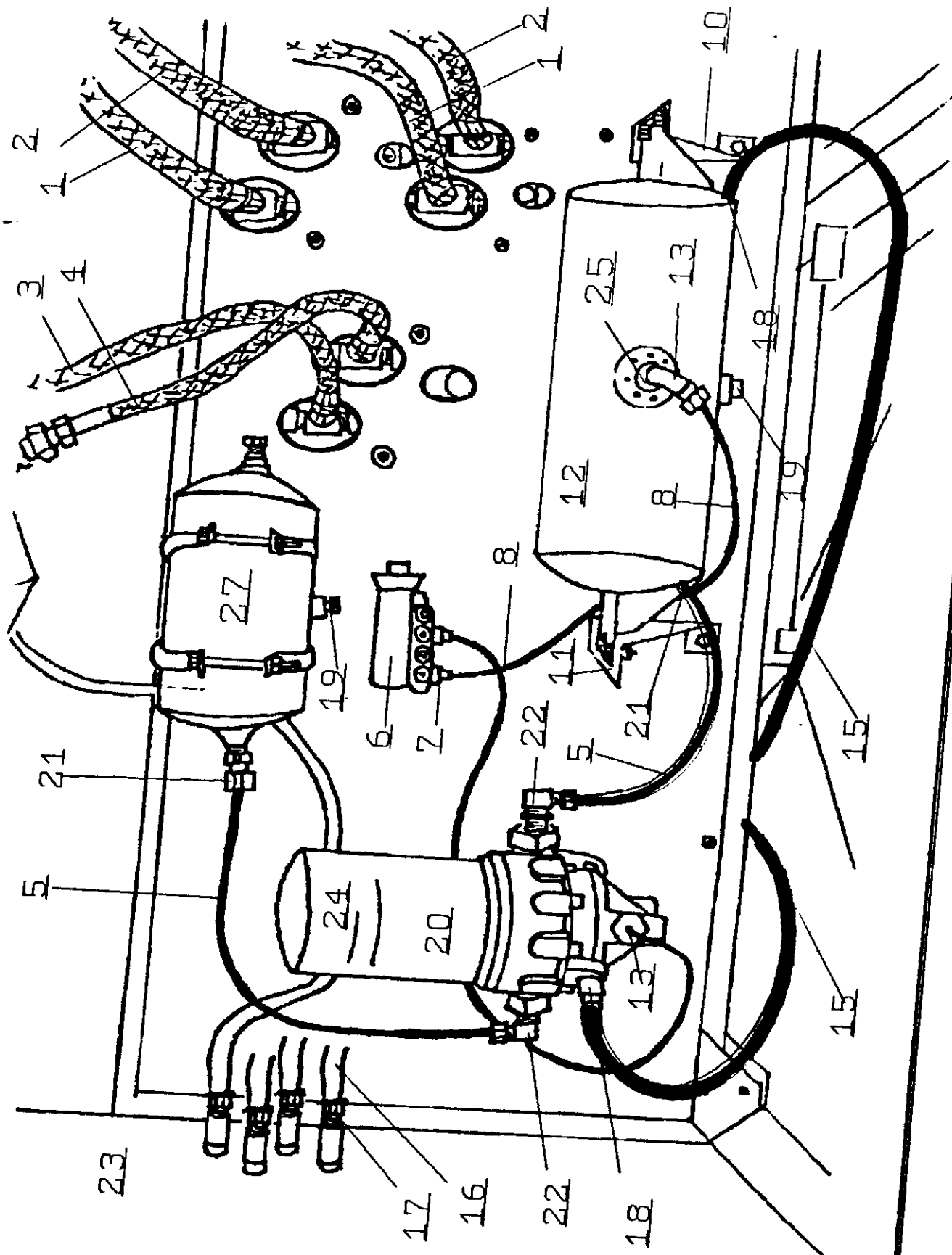


1. Body
2. End Cap
3. Spring
4. O Ring
5. Spring Retainer
6. O Ring
7. N.C. Pilot
8. Spool
9. Spool

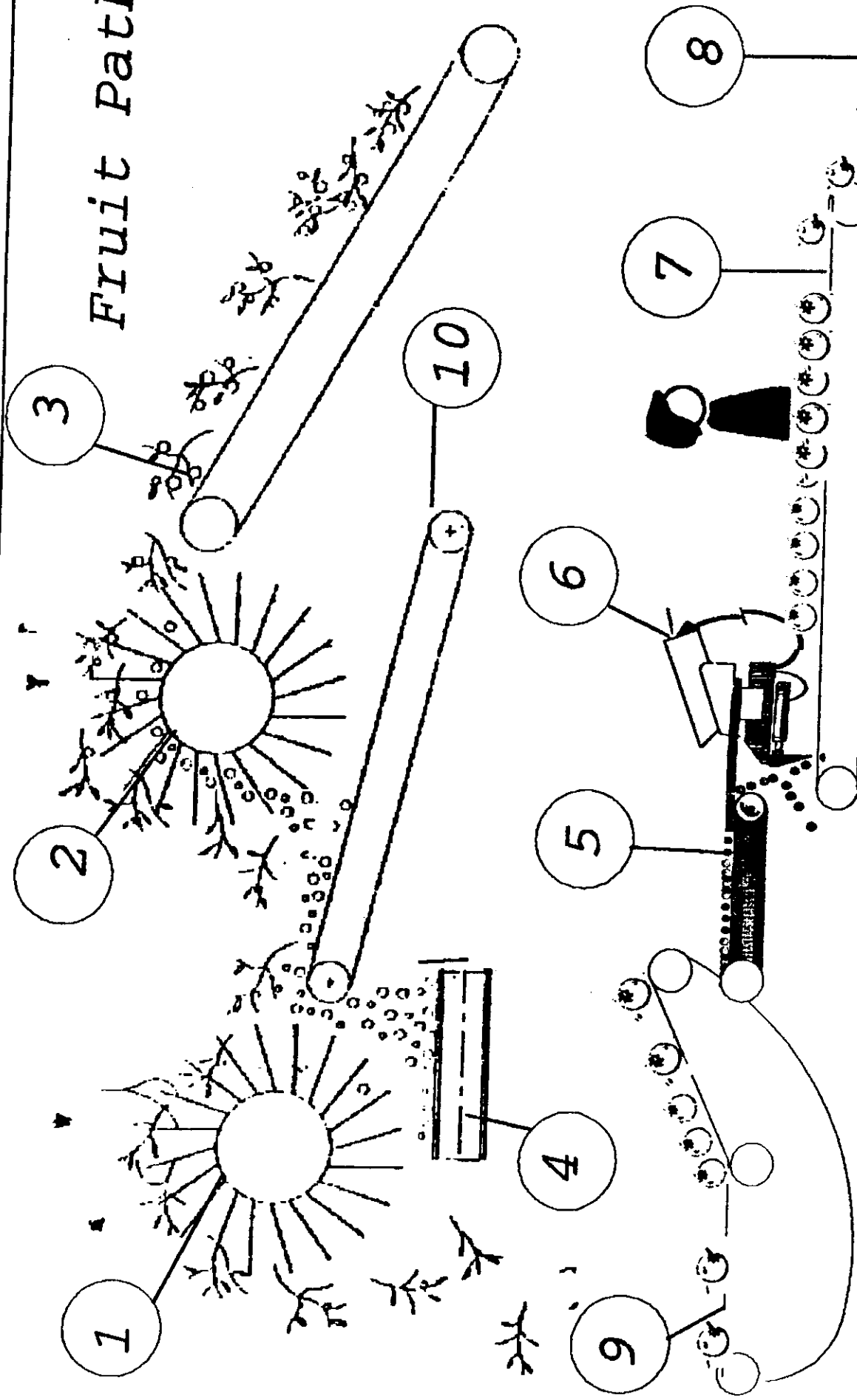


REF #	PART #	DESCRIPTION
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1	191-4H	1/2 IN. HOSE 1/2 X 1/2 X 75 IN LONG
2	191-46	1/2 IN. HOSE 1/2 X 1/2 X 94 IN LONG
3	192-124	SPROCKET, 16 TOOTH #50 1 IN BORE
4	110-204	MOTOR, DRIVE
5	192-614	MOUNT, MOTOR
6	191-726	AIR DEFLECTOR HOOD
7	191-745	DEBRIS DRUM
8	191-730	REAR CLOSURE
9	191-738	ROLLER SUPPORT (OUTER)
10	110-603	SHAFT, DRIVE
11	110-610	ROLLER, CROSS CONVEYER SUPPORT -CLEANER ROLLER
12	110-203B	BEARING, 1 1/4 FAFNR TRI-SEAL
13	191-611	SPACER BLOCKS FOR BEARING
14	191-701	FAW HOUSING & DIFFUSER
15	110-1530	ELECTRONIC ELEVATION CHAIN
16	191-124	SPROCKET, 16 TOOTH #50 1 1/4 IN BORE
17	191-723	CHAIN, DEBRIS DRUM DRIVE, #50 141 LINKS W/MASTER
18	192-134	IDLER #50 CHAIN
19	191-737	ROLLER SUPPORT (INNER)
20	110-601	CROSS CONVEYER CHAIN, 9MM BARS 32IN WIDE 133 LINK
21	110-611	SCRAPER, ROLLER
22	191-203B	STAMPED BEARING HOUSING FOR 110-203B

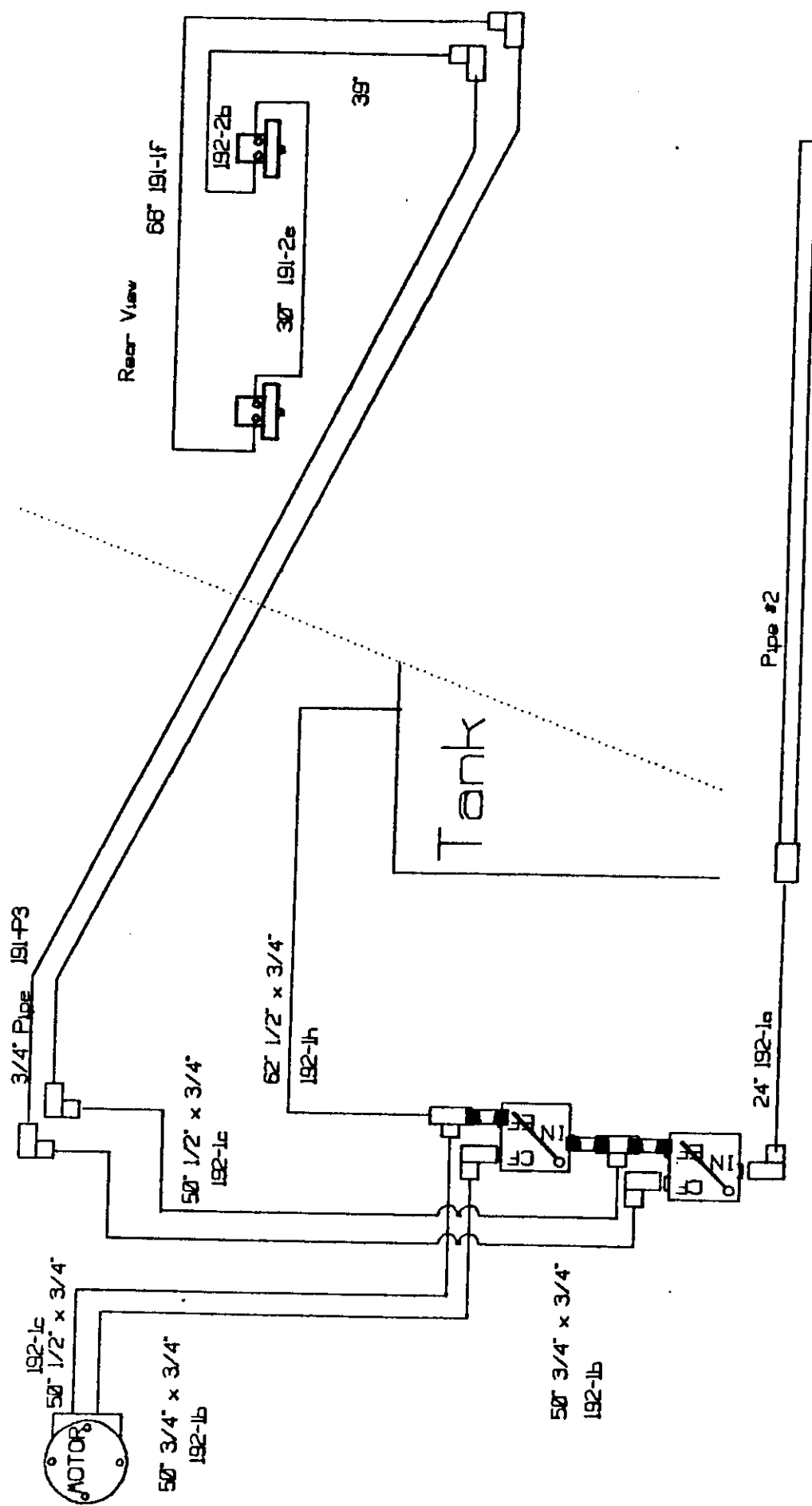


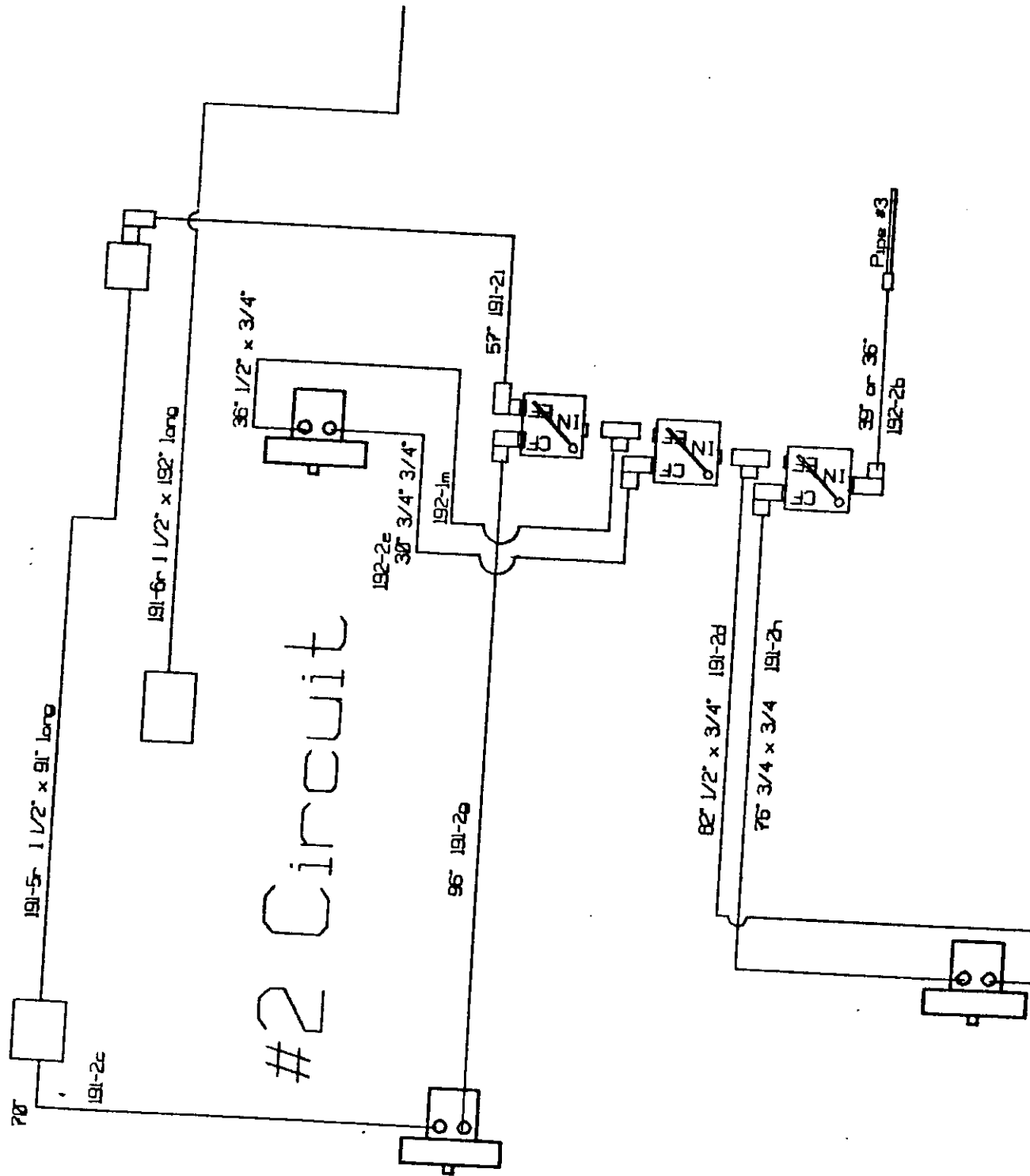
Fruit Path



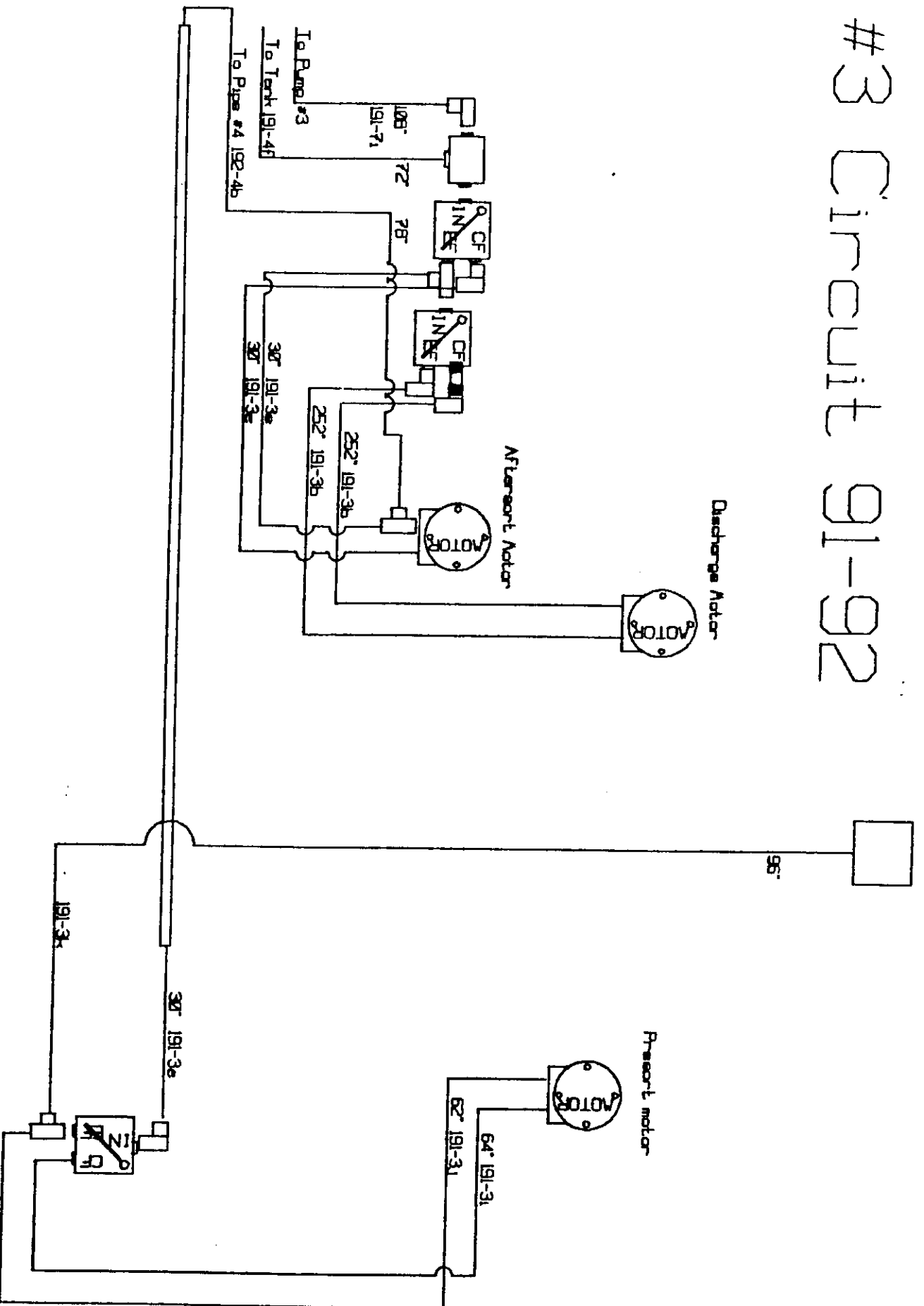
1. Secondary Shaker
2. Primary Shaker
3. Header Conveyor
4. Cross Conveyor
5. Presort Belt
6. Odenberg Color Sorter
7. After-sort Table
8. Discharge Conveyor
9. Presort Elevation Conveyor
10. Transfer Conveyor

#1 Circuit 92-93

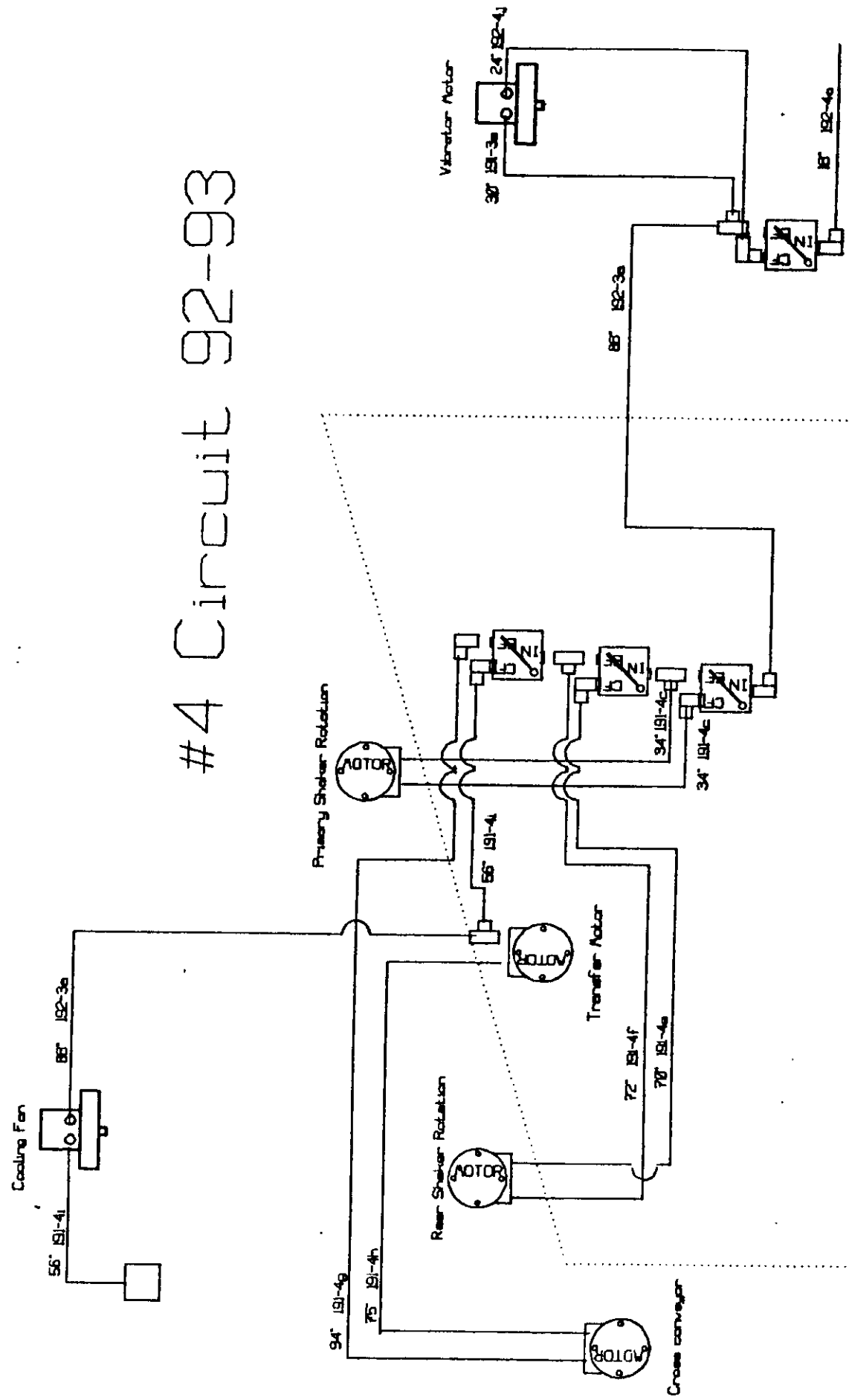




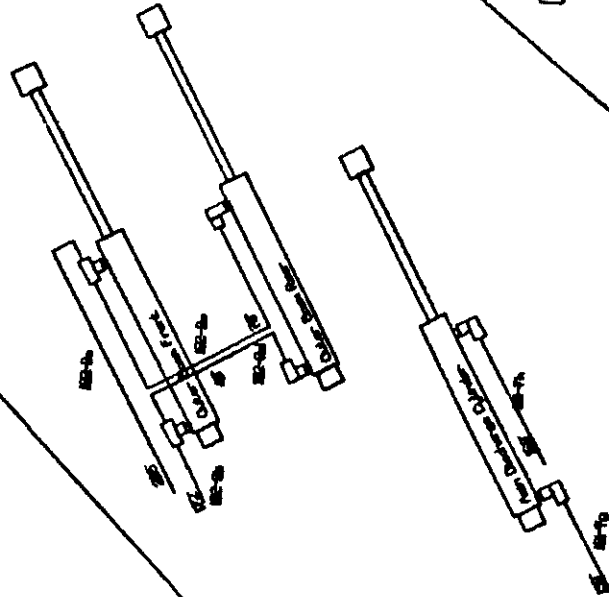
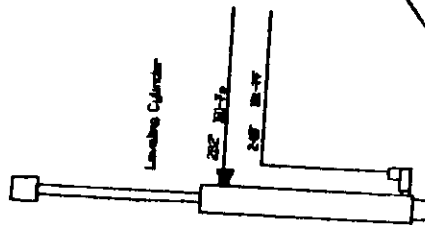
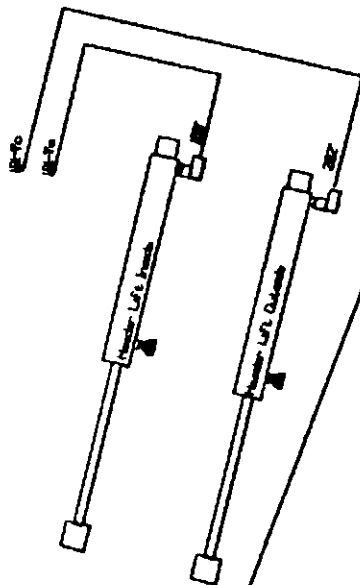
#3 Circuit 91-92



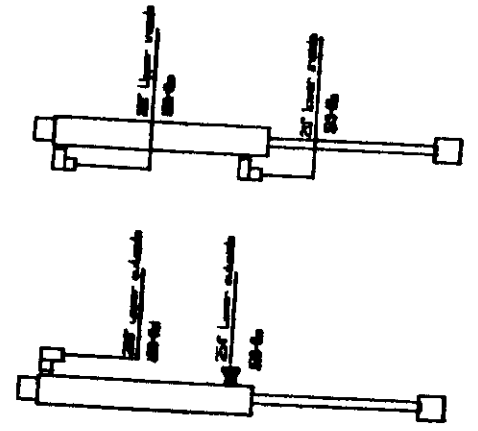
#4 Circuit 92-93



See notes on bracket 257



GAUGE WHEELS



AIR COMPRESSOR MAINTENANCE AND TROUBLE SHOOTING

A. COMPRESSOR "NOT MAKING ENOUGH AIR"

1. Drain air tank and measure pump up time. Compare with proper time for compressor model (see factory guide). If time is O.K., compressor may be too small for application. Increasing operating pressure will exaggerate the problem.
2. Test for leaks in air lines, tank, or compressor fittings. Soap suds solution works well.
3. Clogged filter element — remove, clean or replace. Intake air must be free of contamination such as paint mist.
4. Hot air blows out of intake. Intake valves not sealing. Remove and clean. Polish disc on fine emery cloth (#400). Replace worn parts. A complete valve plate assembly can be obtained as a factory exchange at low cost.
5. Check valve or discharge tubing clogged. Clean or replace.

D. EXCESSIVE OIL CONSUMPTION (Measure oil consumed per hour of operation.)

1. Clogged air intake filter. Clean or replace.
2. Inferior or dirty oil — see recommendations in instructions.
4. Piston rings worn or sticking. Remove rings, clean grooves. Check ring wear by pushing ring into cylinder bore. New ring end gap is approximately .007 to .017 inches. (Operation is O.K. to .060.) Stagger ring gaps when installing.
5. Deep scratch on cylinder wall. Caused by lack of oil or dirt in oil. Hone (.015 max. on diameter) or replace.
6. Oil in discharge air. Some oil is always present. Clean accumulation in air lines and tank. Add air line filter or clean element.
7. Head or valve plate gasket leaking between cylinders. Remove head and check.
8. Compressor with constant running control unloaded more than 60% of the time. Consider start-stop or dual control.

E. MILKY OIL IN RESERVOIR

1. Normal result of water mixing with oil in tank or possibly in crankcase. Change oil and/or drain tank. Move compressor or pipe intake to lower humidity source or cooler area. Increase intake pipe one size for every 3 feet - keep short.
2. Water is a normal by-product when compressing moist air. A compressor does not "make water". Cooler & dryer intake air or use of aftercooler/dryer devices on discharge air will reduce "water".

F. NOISE, KNOCK OR VIBRATION

1. Assembly-vibrating. See mounting instruction.
2. Flywheel wobbles. Cracked flywheel or bent shaft. Replace.
3. Flywheel or pulley loose. Remove, apply loctite on shaft. Re-install with new key.
4. Loose or worn connecting rod or piston pin. Tighten or replace.
5. Pressure switch or magnetic starter chatter. Adjust switch for greater differential or replace.
6. Loose vee belt. Adjust tension on slotted platform.
7. Foreign matter (carbon, dirt, piece of gasket) on top of piston. Remove cylinder head and check. To increase head clearance, add crankcase gaskets . . . not head gaskets.

G. RUNS HOT (Head and discharge line normally are hot enough to burn if touched.)

1. Compressor operating in excess of rated discharge pressure. Reset pressure control.
2. Poor ventilation. Provide cooler location. Allow minimum 6" flywheel clearance.
3. Incorrect rotation. Check flywheel arrow. Reverse motor.
4. Discharge valve or head gasket leak. Remove and clean valve. Replace. (Head bolt 22/25 ft. lb. torque)
5. Restriction in discharge line or checkvalve. Clean or replace.
6. Low oil. Check!!!

H. COMPRESSOR "SLOWDOWN" OR "FROZE UP"

1. Check that supply voltage matches motor, i.e., 115 volt supply with motor connected for 230 volts or 208 supply with 230 volt motor.
2. Measure actual voltage at the motor while the compressor is under load (starting up or at high pressure). If voltage is more than 10% below motor nameplate rating, relocate compressor closer to main switch panel and/or provide heavier wiring. Check with electric power company.
3. Vee belt slipping. Adjust tension by moving motor. Clean oil from belt.
4. Operating pressure set higher than design pressure. Reset control.
5. If flywheel cannot be turned by hand (drain tank to eliminate back pressure), check oil level. If "frozen condition exists after cooling down and adding oil, disassemble compressor and replace damaged components. After compressor "run in" period, freezing is caused by lack of adequate clean lubrication.
6. Gas Engine Driven Compressors: If engine stalls during acceleration, increase engine idle speed. On engines equipped with a clutch, maintain idle speed below clutch engagement speed, (approx. 1900 RPM).

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