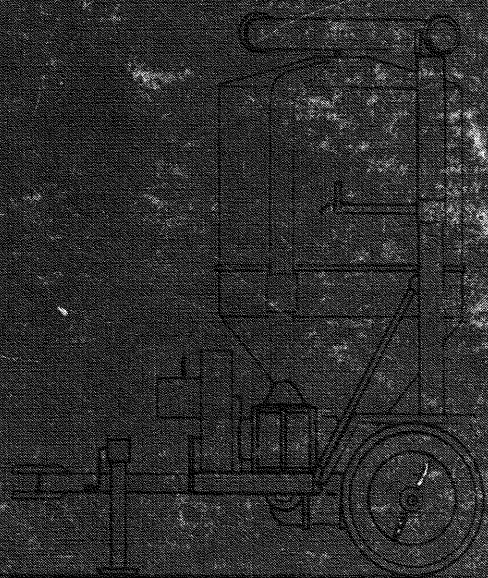


WALINGA

Agri-Vac



The Green Machine!

OPERATOR'S SERVICE MANUAL AND PARTS LIST
MODELS: MT506, MT506G, MT510, MT510G, MT MT614

THIS MANUAL CONTAINS IMPORTANT OPERATING,
SAFETY AND MAINTENANCE INSTRUCTIONS.

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I. FOREWORD

The operator's manual is published as a guide and reference to assist you, the owner of a WALINGA Mobile Transfer Unit (AGRI-VAC) in obtaining satisfactory operating performance.

In order to obtain optimum performance, it is necessary that the unit be treated with reasonable care and that inspection, operating and maintenance procedures be closely followed.

In order to get the **BEST RESULTS** at **REDUCED COSTS**, we recommend that you discuss with your dealer your operating set-up. You, the owner should request your dealer to make recommendations relative to optional equipment that will protect your unit and extend its life. All service and maintenance must be performed by authorized and qualified service personnel.

Walinga Body and Coach reserves the right to make changes in design and specifications without notice and/or to make additions to or improvements in its product without imposing any obligation upon itself to install them on products previously manufactured.

II. MODIFICATIONS

There may be slight modifications in the design of the unit as dictated by the field experience or a desire by the manufacturer to improve the AGRI-VAC; or changes of material may become necessary due to inavailability. Such changes will be, whenever possible, such that the new parts or assemblies will be interchangeable with the original.

III. DESCRIPTION

The WALINGA AGRI-VAC units, MT506, MT510 and MT614 are supplied in various types for use in moving bulk materials for farmers, feed mills and commercial operators. When a unit is modified for various adoptions with a particular combination of accessories, it is designated by a separate model and type number, such as MT510 G. This is done so it may be readily identified in determining service parts requirements or any additional accessories.

The heart of the system is the positive displacement blower which creates a vacuum pull to suck the product (e.g. grain) into the receiver cyclone. The receiver cyclone is the large drum mounted above the cone. It has an inlet with a coupling for hooking up the suction line. As the grain enters the receiver cyclone it is separated from the air flow. The air is routed through the top elbow to the blower. The grain is dropped into the airlock and is transferred by the pressurized air flow (push) from the blower to the discharge cyclone.

By lifting off the top of the receiver cyclone, the unit converts easily into a push-only system. The material can thus readily be dropped into the airlock, using the bottom cone or an optional low-contoured hopper. The blower is to be protected by either using an optional blower intake with a silencer, or the receiver cyclone with the filter installed and swung away from the hopper.

The self contained AGRI-VAC units are supplied with their own power unit, using a diesel, gasoline or propane engine or an electric motor. However the principle of transferring materials will remain the same.

IV. OPERATING INSTRUCTIONS

a. VACUUM OPERATION

1. Preparation of a new unit:

Make sure that the screen is supplied with the unit (where applicable).

Make sure that all standard accessories are with the unit.

2. Pre-starting instructions:

Park the tractor and the MT unit in the proper position as illustrated below.

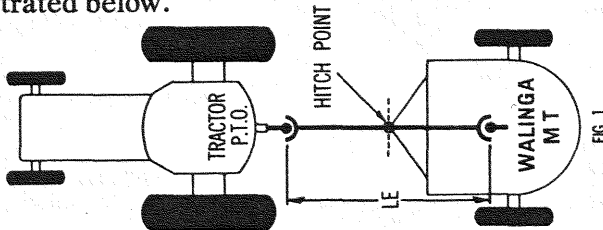


Illustration 1: Proper Position - Before Operation

Hook up the PTO shaft as illustrated on previous page.
Check blower for proper lubrication. See section 8, page 11.
Check belt drive for proper tension, refer to page 9, section 7a., illustration "belt tension".
Check both pulleys for alignment and make sure they are lined up properly.
Hook up the hydraulic lines.
Hook up the discharge line to either the truck loading kit with the long elbow or to the piping system, with a straight hook-up of the lines into the airlock hook-up.
Hook up the vacuum line, but leave the nozzle out of the grain.

3. Starting instructions:

- engage the PTO at low speed, and gradually rev up to 1,000 rpm (or 540 rpm)
- start the airlock, make sure that the direction of rotation is correct
- place the nozzle in the grain, having the airslide completely open

4. Blowing the grain:

- adjust the opening of the airslide required to eliminate the surging of the suction lines.
- find the optimum airlock speed by experimental method. Increase the airlock speed gradually (by moving the control arm on the speed control) starting at zero (0) speed till the flow of material going through the airlock is balanced with the intake or suction flow. At that point you can see that the material is moving, looking through the sight glass.
- when blowing materials over long distances you will find that as you increase the airlock speed, the pressure relief valve (located between the blower and the airlock), will start to "pop" (i.e. open up). At that point decrease the airlock speed slightly to prevent plugging
- the installation of a pressure gage is recommended for blow only application.

NOTE: For continuous operation, the pressure is not the exceed 10psi. The pressure relief valve is set at 15 psi. Ensure that your AGRI-VAC is working at optimum capacity, etc. It

should be noted that an occasional “pop” of the pressure relief valve will not hurt the performance.

- the following table lists the airlock speeds generally recommended:

Table 1: Airlock speeds (rpm)

MATERIAL	4''	5''	6''	
Barley	55-65	65-75	75-	
Wheat	40-50	55-60	60-	
Corn	40-50	50-60	60-	
used on:	506 (510)	510 (614)	614	normal operation clean up only

However it should be noted that the airlock speed depends a lot on line and material conditions and conveying distance.

In order to increase the intake capacity, close the slide somewhat on the intake nozzle. Try a few settings and find the optimum open position; if the suction line surges, increase the opening of the airslide on the intake nozzle till the surging is eliminated.

Whenever the blower heats up, more air **MUST** be provided by opening the airslide. The blower must have air to perform. If overheating persists, check the filter (if used) inside the receiving cyclone, and clean it if required.

5. Emergency shut-down:

In case of an emergency shut-down, (i.e. plugging of lines) use the following procedure:

- i) pull nozzle out of grain
- ii) stop airlock
- iii) decrease and increase tractor rpm to unplug the lines

- iv) if that does not help, decrease rpm and disengage the PTO
 - v) in order to unplug the line, reverse the line and suck it clean using the vacuum
 - vi) if above fails, unplug the lines manually. Restart the airlock and continue transferring grain.
6. Stopping instructions:
- i) Disconnect the air and material intake
 - ii) Decrease blower rpm, allow the remaining grain to be blown out of the unit
 - iii) disengage the PTO; engage the PTO to blow off the drop offs from the filter in the receiver cyclone; disengage the PTO again.
 - iv) Stop the airlock
 - v) disconnect the outlet
 - vi) place plugs in intake and outlet.
7. MT in transport:
- i) place boom in the cradle and tie it down with the strap
 - ii) place all accessories on the unit and lock them in place
 - iii) the hoses can be carried on the hose carrier supplied with the unit.
8. Preparation for storage:
- i) clean out the airlock
 - ii) inject some lubrication oil inside the blower and the airlock to prevent rusting and binding
 - iii) make sure that the plugs are placed in the couplings
 - iv) apply some "never seize" or grease to the PTO input shaft, the shaft on the hydraulic ram, and the control arm of the speed control.

b. BLOW ONLY OPERATION

Since most of the instructions are the same with Vacuum operation, refer to IVa. The following instructions are specifically for the "blow only" operation.

1. Preparation instructions:
- i) Remove the top of the receiving cyclone. Use the bottom cone as a hopper.
 - ii) When blowing only, make sure to have a screen on the blower air-intake. One could use the top of the vacuum

tank by lifting up and turning it to the side (leaving the line hooked up).

- iii) Refer to instructions 1 and 2 from section IVa, Operating Instructions.
2. Starting instructions:
 - i) Fill the hopper with grain
 - ii) engage the PTO at low speed, and gradually rev up to maximum speed (either 540 or 100 rpm)
 - iii) start the airlock
 - iv) provide for a continuous flow of grain into the hopper.
 3. Blowing of grain:
 - i) Find optimum airlock speed by the experimental method. Start slow and increase the airlock speed gradually (by moving the control arm on the speed control from 0 upward) until the systems air pressure builds up to a maximum of 10 psi.
 - ii) Refer to the section IVa of the Vacuum Operation, section 4(i), for approximate airlock speeds. If you are not out to get the maximum capacity from your unit, drop the blower speed and determine the airlock speed accordingly.
 - iii) If the dust created by the blow back of air through the airlock (just before the rotor picks up more material) and install a vent line into the hopper. See Diagram 8, page 40.
 - iv) If the hopper height is a problem, a low contour hopper is available with a vent line kit.

V. RECOMMENDATIONS

1. Always engage and disengage the PTO carefully and gently at idling speed. This will prevent the stripping of gears in the PTO, the transmission and the blower.
2. Increase the engine speed gradually when starting the unit.
3. Do not speed your AGRI-VAC unit, use either 540 or 1000 rpm maximum.
4. The airlock will meter an amount of grain into the pressure system. The speed requirement will vary with the materials handled.
5. The absolute minimum recommended diameter of the discharge and pick up hose for the MT506 and MT510 is 4" and

for the MT614 is 5". These are often used in clean up operations. Normally the MT510 is supplied with a 5" diameter hose, and the MT614 with a 6" diameter hose. This is to ensure maximum performance.

6. Check the condition of the intake and discharge lines. Ensure that there are no leaks in it. Old flexible hoses can greatly reduce the suction and blowing capacity. We recommend the use of solid tubing for long distance conveying.
7. Minimize the number of elbows. Use elbows of large radius where possible.
8. Pellets and similar materials can be conveyed pneumatically. However, we do not recommend the AGRI-VAC for the suction of prepared feed unless certain conditions are met.
9. The pressure (push) side of the unit should be used for continuous operations where possible. Push the product instead of pulling it.

VI. PRECAUTIONS

a. BLOWER TEMPERATURE

1. When the blower heats up, more air must be provided by opening the air slide on the intake nozzle.
2. Check the screen (if used) regularly and clean if dirty. Failure to do so can cause severe damage to the blower.
3. Use 5" diameter lines instead of 4" diameter on the MT510, except during cleanup.
Use 6" diameter lines instead of 5" diameter on the MT614, except during cleanup.

b. OIL TEMPERATURE

When the oil is overheating, stop the machine and let the oil cool down.

1. If using a John Deere Tractor, check the setting of the hydraulic oilflow. If set at 30 GPM, reduce it to half.
2. Check oil level on the tractor.
3. Check quality of oil. Make sure that good quality hydraulic oil is being used!

4. Check the airlock, make sure that it rotates freely.
5. Check all hydraulic hoses and couplings. Be sure that there is no obstruction in any of them.
6. Check the speed control valve. Make sure it operates properly. When the lever is set at zero, no oil (or perhaps a trickle) should come out of the controlled port (CF). If much oil comes out, repair or replace the valve.

c. DUST SCREEN

For continuous use, the screen in the receiver cyclone, must be checked every half hour. Clean it initially by shaking. Pressure wash to clean it if necessary.

d. RELIEF VALVES

1. Test pressure relief valve by plugging the airlock outlet.
2. Test vacuum relief valve by plugging the receiver intake.
3. **DO NOT** tamper with the valves!

VII MAINTENANCE SCHEDULE

a. DAILY

1. Check the oil in the blower daily. Do not operate the blower without sufficient lubrication. Do not overfill. See the decal attached to the unit.
2. Make sure that the V-belts are properly tensioned. Caution: overtightening of the belts will damage the belts, the bearings, and the blower shaft.
3. Lubricate yokes on PTO shaft.
4. Note the illustration on the following page.

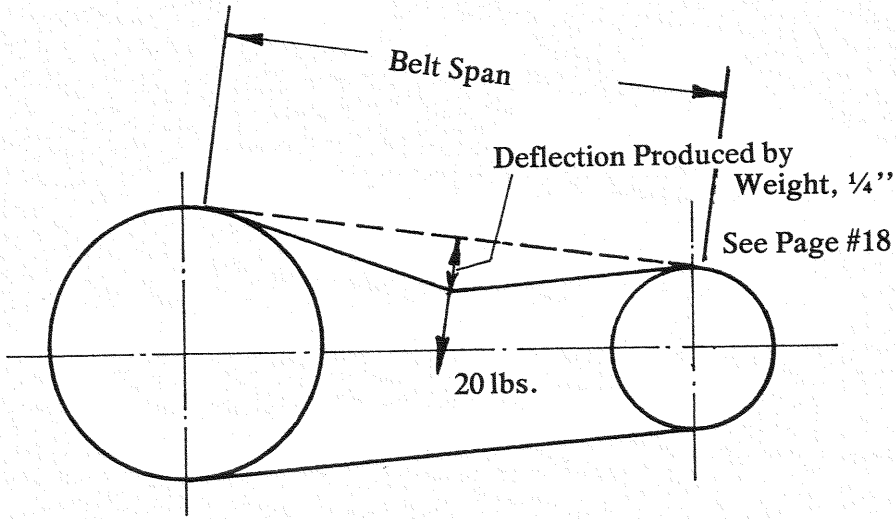
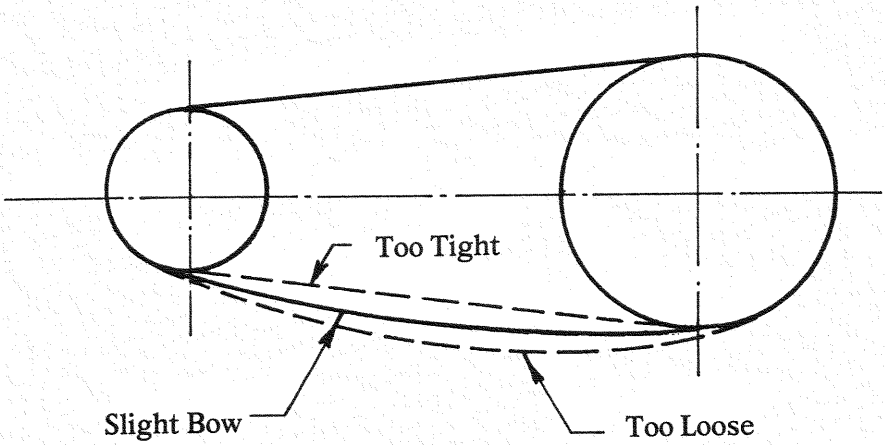


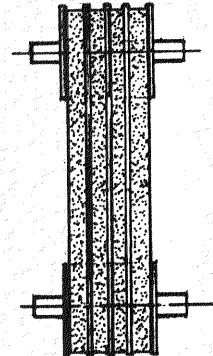
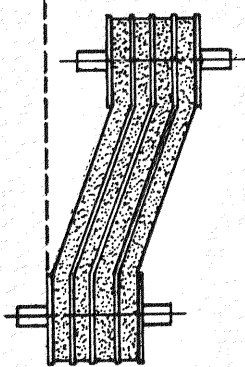
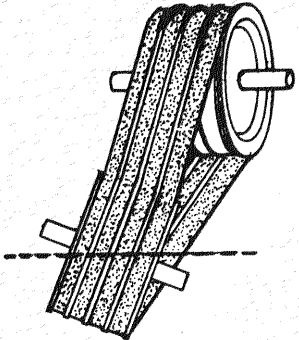
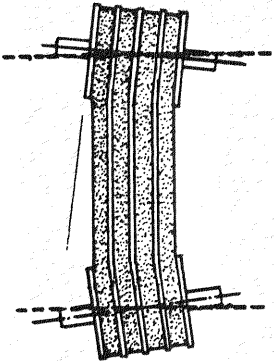
Illustration 2 - Belt Tension

4. Correct installation both shafts and pulleys are parallel and in alignment

3. Shafts are parallel and in alignment but pulleys are not in alignment.

2. Shafts are not in correct alignment although they appear parallel when seen from above.

1. Shafts are not parallel to one another.



End view of the above

The dotted lines emphasise the faults by indicating the correct position.

IMPORTANT: Be sure that the blower and support-bearings are secured **BEFORE** the belts are tightened.

Illustration 3 - Shaft and Pulley Alignment

b. EVERY 20 HOURS OF OPERATION

Lubricate and service as specified for "Daily" and preform the additional operations:

1. Adjust the V-belt if required.
2. Pressure clean the filter, if product is "caked" to it.
3. Lubricate inner sleeve of the PTO shaft.
4. Check wear-liner in the cyclone - replace if necessary.

c. EVERY 40 HOURS OF OPERATION

1. Lubricate the exposed rod end of the jack (with never seize).
2. Lubricate the splined shaft.
3. Lubricate the lubrication point of the "swivel assembly" of the truck loading kit.
4. Lubricate the outboard bearing on the blower shaft.

d. EVERY 150 HOURS OF OPERATION (or every month, whichever comes first)

1. Drain the gear case of the blower and refill with the recommended grade of oil.
2. Check vacuum and pressure relief valves. Determine whether spring loaded seat can be lifted.

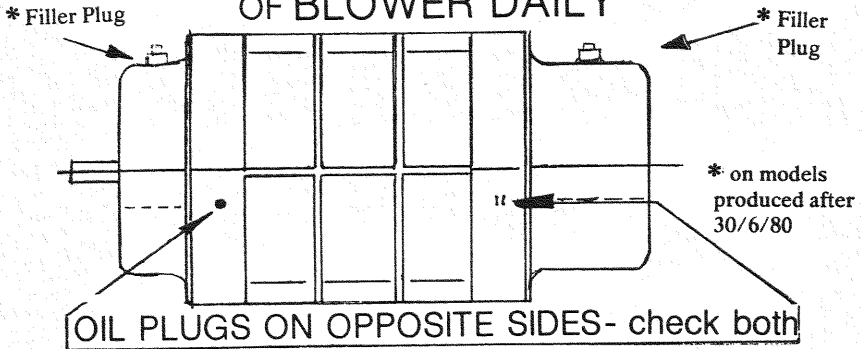
VIII. BLOWER

1. Check oil level in front and rear of blower daily. Remember that the blower when operating becomes quite hot - and that heat causes condensation. That condensation, being water, will settle at the bottom of the oil reservoir (front and rear of the blower), since water is heavier than oil. **Thus the oil level may seem high enough and nothing is wrong. BUT the water will ruin the blower.** Therefore be sure to drain it.
2. **DO NOT** operate the blower without sufficient lubrication. The filler and oil level plug are illustrated below - Remove the oil fill plug from the fill hole at the top of the oil pan, and the oil level plug located at the side of the gear housing. Fill accordingly.
3. **DO NOT OVERFILL.** When overfilling the oil reservoirs the excess oil will be vented to the outside through the

breathers.

4. When draining the oil, remove the plug in the bottom of the blower located in the head plate. Drain and flush the cases. Refill as per item #2.

CHECK OIL LEVEL IN FRONT AND REAR OF BLOWER DAILY



USE: XH 10W40 MOTOR OIL
FOR BLOWER

Illustration 4 - blower Lubrication

5. Use IMPERIAL 10W40 HD Motor Oil or Equivalent.
6. Blower Start-up

The following start-up procedure should be followed after any shut-down period. It is suggested that the steps be followed in sequence:

- Check the unit and all piping for foreign material and clean if required.
- Check the level and alignment of the drive. See illustration 3, page 10. Misaligned V-belts will result in severe belt and pulley wear and can cause the blower impellers to rub against the headplates and cause damage and reduction in volumetric efficiency of the unit. Misaligned sheaves can ruin bearings.
- Check the unit for proper lubrication. Proper oil level cannot be overemphasized. Too little oil will ruin bearings and gears. Too much oil will cause overheating and can ruin bearings, gears, seals and cause other damage!
- Turn the unit over by hand to be certain that it does not bind.
- "Jog" the unit with the engine a few times to check rota-

tion and to be certain that it turns freely and smoothly.

- Apply the load and observe the operation of the unit frequently.

- If malfunctions occur, do not continue to operate. Minor problems, such as knocking impellers, can cause serious damage if the unit is operated without correction.

IX. AIRLOCK

1. Do not operate the airlock continuously in reversed rotation. Use the reversed rotation only in case of an emergency (i.e. stalling). Prolonged reversed rotation may result in damage to the airlock and increased breakage of the material since the wiper blade is then ineffective.
2. Check for wear on rotor tips. Close tolerance must be maintained (0.003 to 0.005 inches) between the tips and the housing.
3. Check the rubber blade at the top inlet. This blade serves to clean off the tips as the rotor rotates. Replace it, if worn.
4. Airlock bearing are lubricated for life.

NOTE: Make sure that you keep your hands out of the airlock. If you have to get inside, be sure to disconnect the hydraulic lines from the tractor.

5. Check the conditions of the rotor tips, they must be straight and undamaged.
6. Instructions for the field installation of blades on the airlock:
 - Disconnect the hydraulic hoses or remove the hydraulic motor.
 - Remove the airlock from unit and remove stainless steel (or carbon steel or brass) blades from the rotor vanes. Also remove the wiper blade. Take the replacement blades and file or grind their ends until these is approximately .004" clearance on each end of the blade when it is held in place from 1 to 10. Mark the rotor vanes in the same manner. Take blade #1 and place it in the airlock on vane #1 and make the holes in the blade while holding the blade in place. The very same procedure must be done to all blades while keeping the blade and vane numbers identical. Centre punch all blades where the holes are marked and drill 5/16 inch holes. Hold blade #1 onto vane #1 in the airlock and place all bolts in holes and put nuts on loosely. Hold the blade tight against

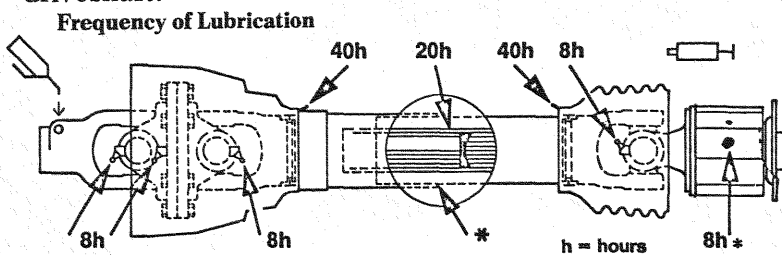
the airlock shell, then tighten the centre bolt first, followed by the remaining bolts. Rotate the rotor a complete turn to make sure that the blade is not too tight. The blade may only slightly touch the airlock shell. Install all blades in the same manner, making sure to turn the rotor completely after each installation.

- Use old wiper blade to mark off the holes on the new blade and drill holes. Secure the wiper blade back in place, making sure that it touches the rotor blades lightly. Mount the airlock on the unit again.

- Connect the hydraulic lines. Pour half a gallon of Varsoil into the airlock, start the (tractor) engine and put the airlock into forward motion. Throw a handful of grinding dust or fine sand into the airlock as it is turning. Let it run to 20 min. and thoroughly clean it.

X. P.T.O. SHAFT

1. Illustration to indicate the frequency of lubrication of the driveshaft:



When used in winter the outer tube must be greased to prevent freezing solid!

*where applicable

Illustration 5 - Frequency of Lubrication of the P.T.O. Shaft.

2. When used in the winter the outer tube must be greased to prevent freezing solid.
3. When the shear bolt is broken replace it with an identical part only. i.e., if the shaft has two shear bolts, use two **grade 2** bolts; if the shaft has one shear bolt, use one **grade 5** bolt. Both bolts should be tightened and then backed off a quarter turn.

NOTE: The shear bolt is a safety item.

It protects the blower.

When it **BREAKS**, something has gone **WRONG**.

Be sure to find out what caused the failure before your machine is started up again. After replacing the shear bolt, turn the shaft by hand, to find out whether the blower turns freely. Also make sure that the machine and hoses are not plugged with grain or other material. Rapid engagement and disengagement of the clutch will cause breakage of the shear bolt.

ENGAGE PTO AT LOW IDLE!

XI. TROUBLE SHOOTING

a. MOBILE TRANSFER UNIT

1. Slow pick up of gain:
 - i) Check the filter screen; if it is installed, clean it if required.
 - ii) Check for leaks in the unit. The receiver cyclone must be clamped down properly. The inspection doors must close tightly.
 - iii) Check all piping and hoses very thoroughly for leaks and repair leaks or replace the hose or couplings.
 - iv) Test the pressure relief valve while the machine is operating. Place a plug in the airlock discharge. Run the tractor at normal speed. The valve should “pop”. If it does not, stop the machine. Check whether the valve is functioning by removing it. Push the spring loaded valve head up and down with a screw driver. If the head is stuck, clean and lubricate it, or replace the valve.
 - v) Check the vacuum relief valve by placing the plug inside the intake of the receiver cyclone and have the unit running at normal speed. The valve should “pop” in less than 10 seconds. If it does not, stop the machine, and repeat the test check as described above in (iv).

<p>NOTE: both the pressure and vacuum relief valves are factory set and sealed. When that seal is broken there is absolutely no warranty on your unit and we are not liable for any injury or damage.</p>

- vi) Check the airlock for clearance between the rotor and the casing. The proper clearance is approximately 0.004”

(0.01mm) about the thickness of this paper.

vii) Check the blower for wear. Excessive clearance between the lobes and the casing will decrease suction. Consult your dealer.

2. Pulsation:

i) Provide for more air intake by opening the slide on the suction nozzle.

ii) Slow down the blower speed or increase the suction line size, for example from four to five inches in diameter on a model 510.

3. Overheating of the Blower:

i) Provide more air by opening the air slide on the vacuum nozzle. Remember, **THE BLOWER NEEDS AIR** in order to perform.

ii) When overheating persists, check the optional filter screen and clean it if required.

<p>NOTE: Whenever possible, push the product instead of pulling it.</p>
--

4. Breakage:

i) Check the wearliners in the discharge cyclone. Replace if worn.

ii) Eliminate poor connections.

iii) Eliminate as many elbows as you can. Make sure that the absolutely necessary bends are as smooth and as large in radius as possible.

iv) The air speed may be too great and can be reduced by slowing down the blower and by using a large diameter line size.

5. Overheating of Hydraulics:

Stop the machine and allow the oil to cool down.

i) Check the oil level of the tractor or in the tank on self contained unit.

ii) Make sure that the oil used is of the best quality.

iii) Check all the hydraulic hoses and couplings. Make sure that there is no obstruction in any of them.

iv) Check the airlock. Make sure that it is operating freely.

- v) Check the speed control valve. When the lever is set at zero, no oil or perhaps a trickle is allowed to come out of the controlled port. If much oil comes out of it, the valve will need repair or replacement.
- vi) If you are using a John Deere tractor, check the setting of the hydraulic oil flow on your tractor. If it is set at 30 GPM, reduce it to half.

b. AIRLOCK

1. Noise:

- i) This is the result of not enough clearance between the rotor blades and the casing. Add some grinding compound to increase the clearance. Let the airlock run for a few minutes till the noise is gone. Then blow it out.

2. Stalling:

- i) Foreign object in the product. Reverse the airlock for a couple of seconds, return to the correct rotation, and try it again.

- ii) If that fails, disconnect the hydraulic hoses. Remove the discharge elbow. Remove the foreign object through the discharge end of the airlock, or through the inspection door on the bottom cone. **NOTE: MAKE SURE TO DISCONNECT THE HYDRAULIC HOSES. It might just save your finger!**

- iii) No hydraulic power supply from your tractor or power unit, check the couplings.

- iv) Reversed rotation over a long period of time may stall and damage the rotor and the product being conveyed.

- v) The blades are too tight. Loosen the bolts. See instructions regarding field installation. (Item IX.6 on page 13).

3. Excessive Air Loss Through the Airlock:

- i) Too much clearance between the blades and the casing in the airlock. **NOTE: This will reduce your performance.**

4. Breakage of Airlock Blades:

- i) Caused by prolonged reversed rotation. Use the reversed rotation only when the airlock stalls due to a large foreign object being jammed in the airlock.

- ii) Hydraulic pressure relief setting too high, reduce to 1500 psi.

c. BLOWER

1. Low Volume:

- i) Speed too low. Check and compare with required speed. Check belt drive for tension and slipping.
- ii) Obstruction in piping. Check piping, valves, silencer, filter screen, etc., for clear air flow.
- iii) Excessive pressure rise. Check inlet vacuum and discharge pressure and compare these with recommended operating conditions.
- iv) Worn components. Check clearance and replace worn components.

2. Overheating:

- i) Inadequate lubrication. Refer to blower section VIII.5, page 12.
- ii) Excessive lubrication. Check oil level and correct.
- iii) Excessive pressure rise. For continuous blowing, the max. pressure is 10 psi.
- iv) Coupling misalignment. Check and realign carefully.
- v) Excessive belt tension. Correct tension.

3. Engine (or motor) Overloading:

- i) Speed too high. Check and compare with rating.
- ii) Pressure too high. See above.
- iii) Impellers rubbing. Check case and headplate for hot-spots. Look for impeller contact at these spots. Realign blower and relieve mounting or connecting pipe strain.

4. Vibration:

- i) Misalignment of the pulleys.
- ii) Impellers rubbing.
- iii) Worn bearings or gears. Check gear backlash and condition of bearings by rotating the blower shaft by hand.
- iv) Unbalanced or rubbing impellers. Remove build-up of material.

5. Loss of Oil

- i) Headplate vents are plugged. Clean vents.
- ii) Worn or leaking seals. Replace seals.

d. V-BELT DRIVE

1. Loss in driven speed:

- i) Check for slip. Shut down and test temperature of the

sheave. BE CAREFUL, do not burn your fingers. A slipping belt will heat the sheave excessively.

- ii) Check for proper tension.
 - 2. Localized wear of belts. Check cross-section dimensions.
 - i) If narrow - pulley is spinning.
 - ii) If swollen - internal breakdown has occurred causing belt swell.
 - 3. Unequal Stretch:
 - i) Unequal co-efficient of friction. Internal breaks. Broken belt strand members.
 - 4. Excessive Elongation:
 - i) Check for overload, internal breaks, amount of take-up since initial installation.
 - 5. Separation:
 - i) Check for excessive tension. Belt can be pulled apart.
 - 6. Opening of Envelope Seams:
 - i) Check for oil or rubber solvent. Keep oil away from belts.
 - 7. Abnormal Envelope Wear:
 - i) Check for worn sheave, improper sheave angle, slip, heat, chemical fumes, obstructive or abrasive conditions.
 - 8. Belt Softening or Swelling:
 - i) Check for oil or rubber solvent.
 - 9. Belt Envelope hardening and cracking:
 - i) Check for excessive heat and chemical fumes.
- Replace worn or damaged belts immediately.

e. PTO DRIVE SHAFT

- 1. Failure of shear pin
 - i) Turn shaft by hand to determine whether blower turns freely.
 - ii) Check if machine and hoses are plugged.

**NOTE: THE SHEARBOLT IS A SAFETY ITEM.
WHEN IT BREAKS SOMETHING IS WRONG.**

- replace it with an original part only

i.e. two shearbolts, use two Grade 2 bolts or one shearbolt, use one Grade 5 bolt only.

- bolts should be tightened and then backed off a quarter turn

CAUTION: DO NOT INCREASE THE SHEAR BOLT CAPACITY, FOR IN SO DOING YOU WILL VOID ALL WARRANTY.

XII. ORDERING OF PARTS

a) Instructions

The drawings in this operators manual are intended to show the owner the various parts and constructions of the unit, and to assist him in the ordering of parts. Orders for parts should be placed with the nearest authorized dealer. Authorized dealers are in possession of complete parts information and can in most instances promptly fill your parts requirements from their inventory. If you do not know the location of your nearest WALINGA dealer or distributor, a request addressed to

**WALINGA BODY AND COACH LIMITED
R.R.#5
GUELPH, ONTARIO, CANADA
N1H 6J2**

will bring you his name and address promptly.

In ordering parts, it is most important to identify the unit properly. Always mention the model, type and serial number.

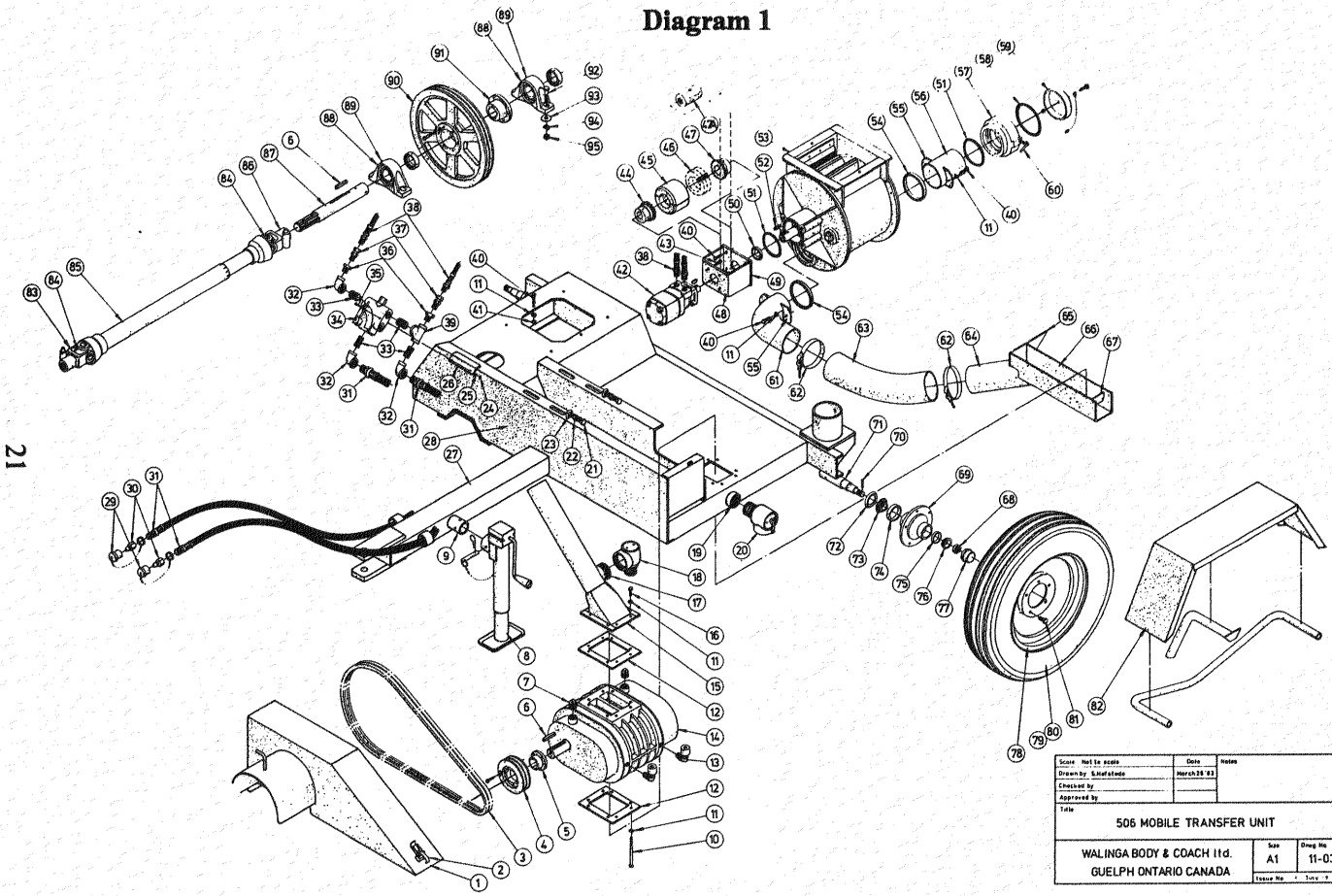
Example:

**Model 506
Type: G (540 rpm)
Serial #: 82 12 002**

This information is stamped in the identification plate on the front of the belt cover. This information should be mentioned in all parts orders or communications.

Also give the parts description and the WALINGA part number.

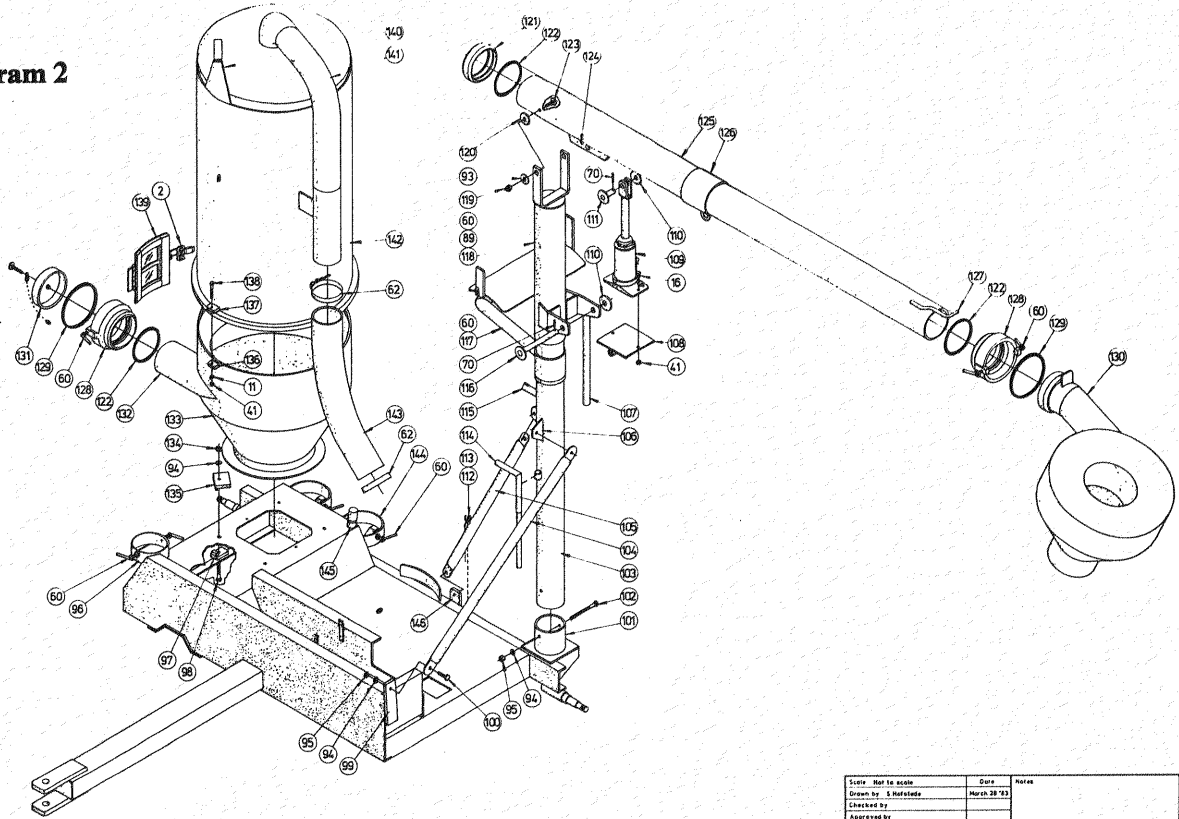
Diagram 1



21

Scale: Not to scale	Date: March 28 83	Notes:
Drawn by: S. Barthelemy		
Checked by:		
Approved by:		
Title		
506 MOBILE TRANSFER UNIT		
WALINGA BODY & COACH LTD. GUELPH ONTARIO CANADA	Size A1	Draw No. 11-0320
	Issue No.	Rev. # 1

Diagram 2



22

Scale: Not to scale	Date	Notes
Drawn by: S. Hofstede	March 28 '83	
Checked by:		
Approved by:		
1 of 2		
506 MOBILE TRANSFER UNIT		
WALINGA BODY & COACH LTD. GUELPH ONTARIO CANADA		Size: A1 Draw No: 11-0321 Scale No:

Reference to Diagram 1 & 2

Ref.#	Part Description	Walinga Part No.	Ref.#	Part Description	Walinga Part No.
1	V-belt cover	11-09165-5	30	Male coupling #5060-4	57-04182-6
2	Latch #2183	28-03728-6	31	Hydraulic hose assembly ¾ NPT x 8 FT	57-09186-5
3	V-belts 5V x 750 Matched set of 2	11-08738-6	32	Elbow ¾ NPT x 90°	58-01183-6
4	Small V-belt pulley	11-08739-6	33	Close nipple ¾ NPT	58-01125-6
5	Bushing for small pulley	11-08740-6	34	Control valve FCR 51-¾ NPT	59-03776-6
6	Key ¾ x ¾ x 2½	40-03955-4	35	Hex bolt ½-20x2½	94-04270-6
7	Plug ¾ NPT	58-01170-6	36	Reducing bushing ¾ x ½ NPT	58-01208-6
8	Ram jack	11-03632-6	37	Male swivel elbow ½ NPT x 45°	57-03881-6
9	Jack tube mount	11-04017-6	38	Hydraulic hose assembly ½ NPT x 22"	57-09120-5
10	Hex bolt ¾-16x5	94-04300-6	39	Tee ¾ NPT	58-01148-6
11	Lockwasher ¾	94-04285-6	40	Hex bolt ¾-16x1¼	94-04290-6
12	Blower gasket 506	96-09183-4	41	Hex nut ¾-16	94-04286-6
13	Blower vent assembly	40-03983-5	42	Hydraulic motor RS AP1 (chain coupling)	62-00732-6
14	Blower assembly 506	44-08742-6	42a	Hydraulic motor RS AP6 (splined coupling)	62-08923-6
15	Blower inlet	11-09175-5	43	Hex bolt ¾-16 x ¾	94-04288-6
16	Hex bolt ¾-16x1	94-04289-6	44	Sprocket 5016 1" Dia. x ¼" KW	97-04695-6
17	Half nipple 2 NPT x 2	58-03975-4	45	Chain cover 5016	97-04697-6
18	Vacuum relief valve	39-08724-6	46	Chain 5016	97-03745-6
19	Half coupling 1½ NPT	58-09184-4	47	Sprocket 5016 1¼ dia. x 5/16 kw	97-04696-6
20	Pressure relief valve	39-08723-6	47a	Splined Coupling (6B)	97-09236-6
21	Hex bolt ¾-11x3	94-03777-6	48	Motorbracket for RS AP1	30-04530-4
22	Jam nut ¾-11	94-03781-6	49	1300 sealplate w/ seal CR 12384	30-04531-5
23	Square nut ¾-11	94-03782-6	50	Seal CR 12384	96-01026-6
24	Hex nut ¼-20	94-04260-6	51	O-ring 345 B46	96-01013-6
25	Lockwasher ¼	94-04259-6	52	Key 5/16 x 5/16 x 1¼	30-07993-4
26	Valve mounting plate	11-05588-4	53	Airlock assembly AL 1310-4 Brass RS AP1	30-09028-5
27	Tongue	11-07816-5	54	Gasket 10-6-4J	96-03146-6
28	Frame assembly	11-09138-5	55	Dogear 4 dia.	40-04528-4
29	Rubber cap #5209-4	57-04616-6	56	Airlock outlet assembly w/ DF4 & DC4	30-09261-5

Reference to Diagram 1 & 2

Ref.#	Part Description	Walinga Part No.	Ref.#	Part Description	Walinga Part No.
57	DF4 coupling assembly	38-07237-5	85	PTO-shaft	45-08725-6
58	O-ring 428 B46	96-03851-6	86	Implement end yoke 1 $\frac{3}{8}$ - 6B spline	45-03998-6
59	DC4 assembly w/ chain	38-04465-5	87	Midship shaft	11-03848-6
60	Tailbolt SS $\frac{1}{2}$ x 1 $\frac{1}{4}$	94-09185-5	88	Pillowblock bearing 1 $\frac{3}{4}$ dia.	96-03623-6
61	Airlock inlet elbow	51-03965-6	89	Grease fitting $\frac{1}{4}$ straight	57-00625-6
62	T-bolt clamp 310-1-75-450	28-03823-6	90	Large V-belt pulley	11-08737-6
63	Hose type 81A 4 dia. x 20	73-03821-6	91	Bushing for large pulley	11-08740-6
64	Blower outlet tube	11-09230-4	92	Hex bolt $\frac{1}{2}$ -13x2	94-04317-6
65	Blower outlet endplate	11-09204-4	93	Platwasher $\frac{1}{2}$	94-04304-6
66	Blower outlet channel	11-09260-0	94	Lockwasher $\frac{1}{2}$	94-04305-6
67	Air deflector plate	11-09164-4	95	Hex nut $\frac{1}{2}$ -13	94-04306-6
68	Castellated axle nut $\frac{3}{4}$ -10	11-04008-6	96	Holder for DM4	11-04026-5
69	Hub assembly #OL 547 - A7	11-03627-6	97	Airlock lug	40-03756-5
70	Cotterpin $\frac{1}{8}$ x 2	94-05605-6	98	Hex bolt (grade 8) $\frac{1}{2}$ -20x2 $\frac{3}{4}$	94-05366-6
71	Spindle #OL 615A	11-03625-6	99	Brace pickup	11-07829-4
72	Grease seal #OL547-8A	96-04011-6	100	Hex bolt $\frac{1}{2}$ -13x1 $\frac{1}{2}$	94-04311-6
73	Bearing cone #LM 48548	96-04012-6	101	Vertical holder	11-04532-5
74	Bearing cup #LM 48510	96-04013-6	102	Hex bolt $\frac{1}{2}$ -13x5	94-04323-6
75	Bearing cup #LM 11910	96-04015-6	103	Support pipe assembly	11-04052-5
76	Bearing cone #LM 11949	96-04014-6	104	Side brace 42"	11-04050-4
77	Dustcap #OL 487-2	11-04010-6	105	Rear brace 37"	11-04051-4
78	Rim #OL 418A	11-03626-6	106	Brace pickup	11-05589-4
79	Tub # GVH 51	11-03629-6	107	Turn lever	11-07104-5
80	Implement tire 6.70-15	11-03628-6	108	Jack mount plate	11-04057-5
81	Wheelbolt #OL 184-2	11-04009-6	109	Hydraulic jack assembly	11-07797-5
82	Fender assembly	11-07885-5	110	Platwasher $\frac{3}{4}$	94-04233-6
83	Tractor end yoke 1 $\frac{3}{8}$ - 21 spline	45-08586-6	111	Short hinge pin	11-04061-5
84	U-joint cross kit	45-04000-6	112	Tie-down chain hook	11-07646-4

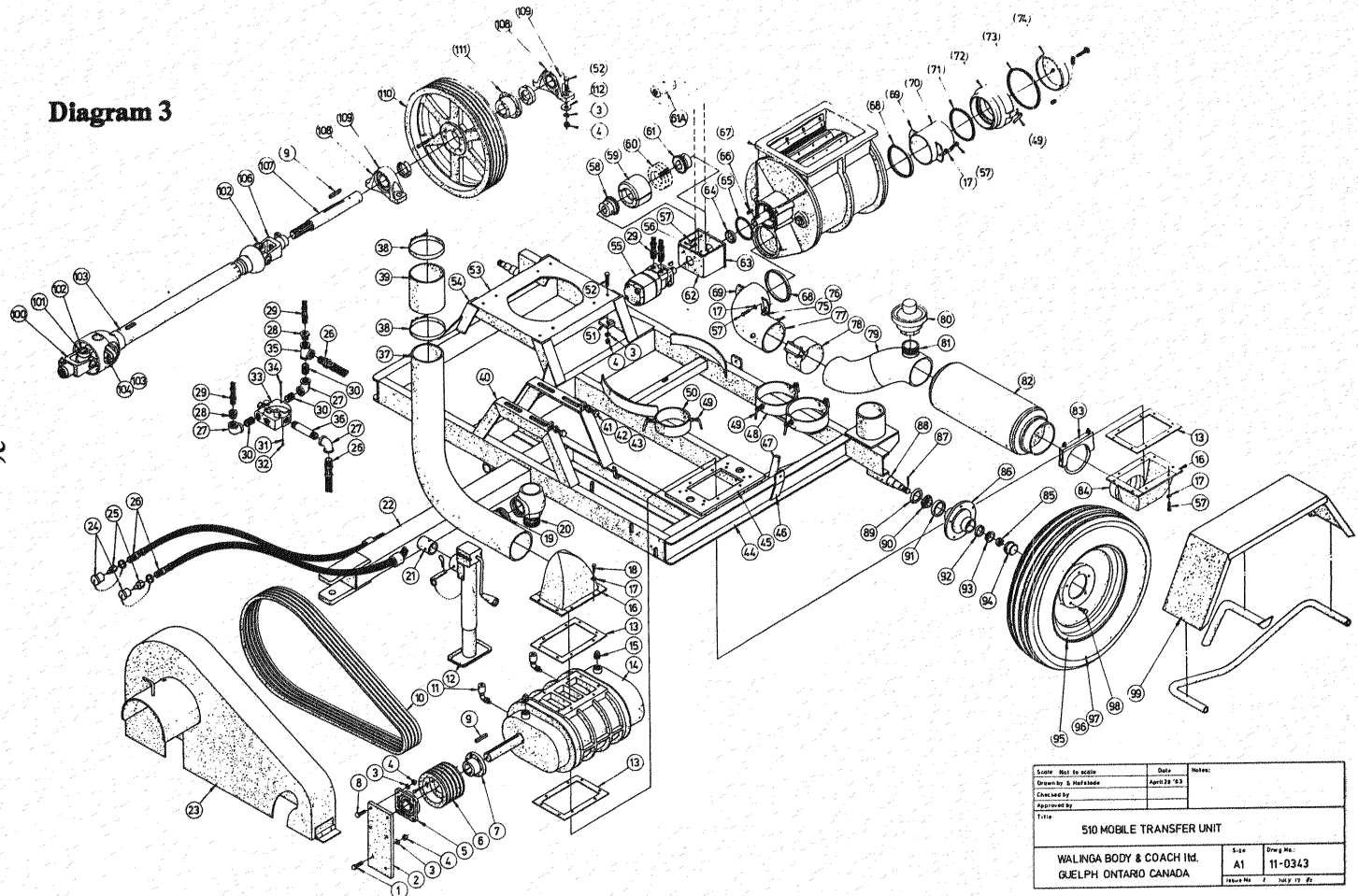
Reference to Diagram 1 & 2

Ref.#	Part Description	Walinga Part No.
113	Tie-down chain 48"	11-04074-4
114	Jack handle	11-04054-5
115	PTO shaft mount top	11-07398-5
116	Long hinge pin	11-04053-5
117	Hose carrier assembly	11-09203-5
118	Boom swivel assembly	11-03634-5
119	Locknut ½-13	94-04307-6
120	Platewasher 11/16 dia.	94-04231-6
121	DM5 coupling assembly	38-03755-5
122	O-ring 429 B46	96-03852-6
123	Carriage bolt ½-13x1½	94-05165-6
124	Jack lug	11-07228-4
125	Boom assembly w/ couplings 4 dia.-4x5 adaptor	11-09264-5
126	Sliding tank lifter 4 dia.	11-09266-5
127	Cyclone support	11-05591-4
128	DF5 coupling assembly	38-03638-5
129	O-ring 436 B46	96-03735-6
130	Cyclone 19 dia.	38-03644-5
131	DC5 assembly w/ chain	38-04466-5
132	Intake	11-09199-4
133	Receiver assembly	11-09187-5
134	Hex nut (grade 8) ½-20	94-05397-6
135	Receiver lug	11-04044-5
136	Turn lever lug	11-06000-4
137	Drum hold-down lug	11-09188-4
138	Hex bolt ¾-16x2¼	94-04294-6
139	Cleanout door	11-03727-5
140	Boom saddle	11-09200-5

Ref.#	Part Description	Walinga Part No.
141	Top elbow assembly	11-09229-5
142	Drum assembly	11-09168-5
143	Hose type 81A 4 dia. x 24	73-03821-6
144	Holder for DM5	11-09191-5
145	PTO shaft mount bottom	11-09190-4
146	Brace bracket	11-05587-4

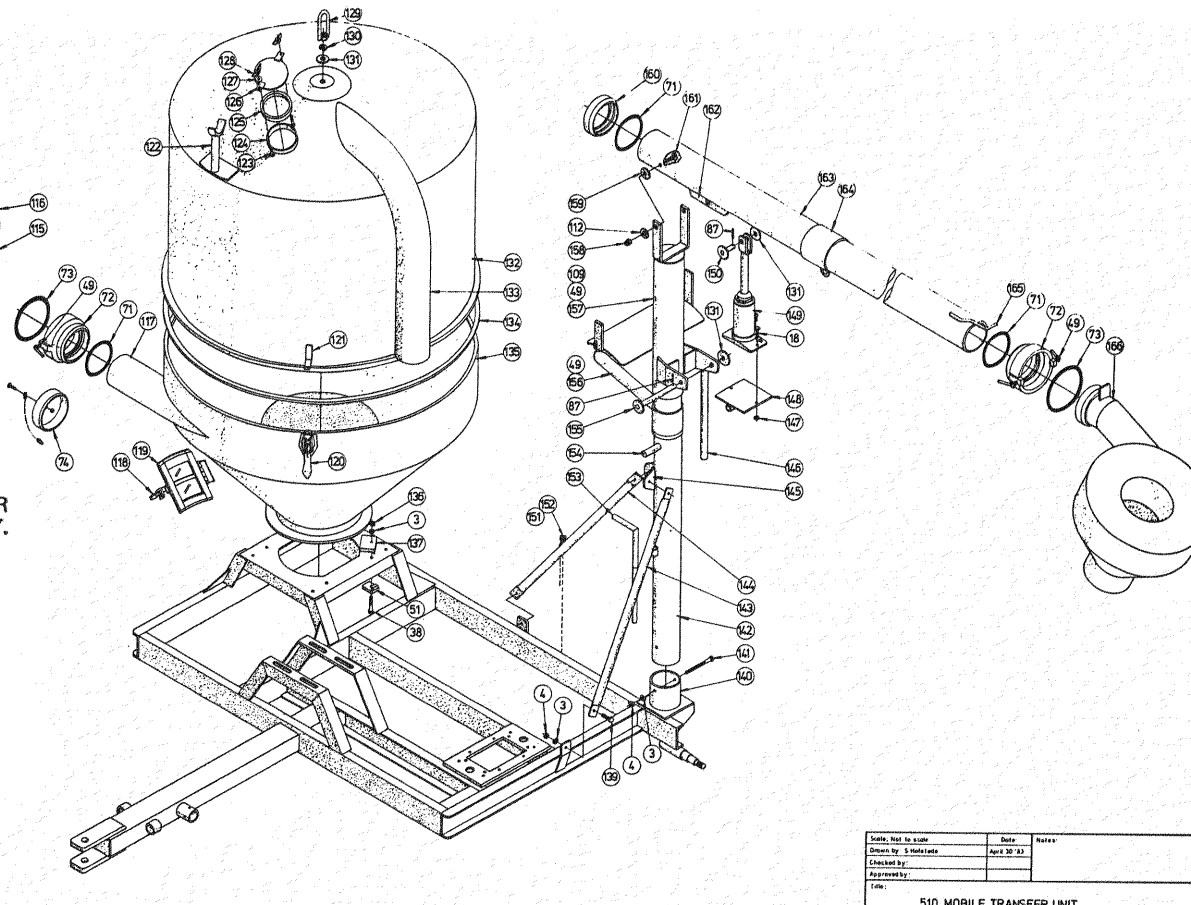
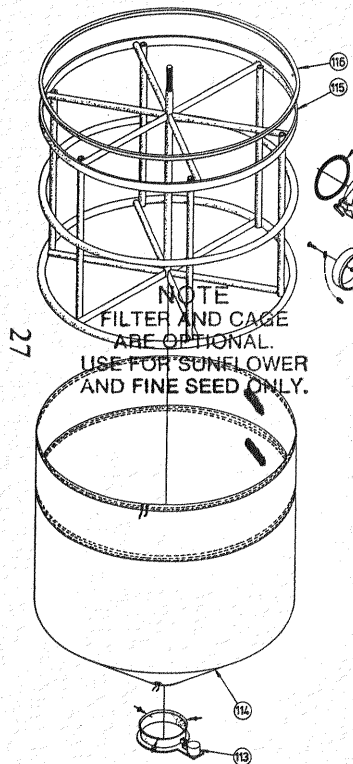
Diagram 3

26



Scale	Nil to scale	Date	
Drawn by	G. Hall/Stein	Part No.	11-0343
Checked by		Approved by	
Title			
510 MOBILE TRANSFER UNIT			
WALINGA BODY & COACH Ltd. GUELPH ONTARIO CANADA		Size	Drawn No.
		A1	11-0343
		Issue No.	July 17 89

Diagram 4



Scale: Not to Scale	Date:	Notes:
Drawn by: S. Malvern	April 20, 52	
Checked by:		
Approved by:		
Title:		
510 MOBILE TRANSFER UNIT		
WALINGA BODY & COACH LTD. GUELPH ONTARIO CANADA	Size: A1	Drawg. No.: 11-0344
Issue No.:	1-PPA-1-1-52	

Reference to Diagram 3 & 4

Ref.#	Part Description	Walinga Part NO.	Ref.#	Part Description	Walinga Part No.
1	Hex bolt (grade 5) 1/2-13 x 1 1/2	94-05314-6	28	Reducing bushing 3/4 x 1/2 NPT	58-01208-6
2	Bearing plate	11-09095-4	29	Hydraulic hose assembly 1/2 NPT x 24"	57-03977-5
3	Lockwasher 1/2	94-04305-6	30	Close nipple 3/4 NPT	58-01125-6
4	Hex nut 1/2-13	94-04306-6	31	Lockwasher 1/4	94-04259-6
5	Flange bearing 1 3/8 dia.	96-08760-6	32	Hex nut 1/4-20	94-04260-6
6	Small V-belt pulley	11-08751-6	33	Control Valve FCR51-3/4 NPT	59-03776-6
6a	X-small V-belt pulley	11-08932-6	34	Hex bolt 1/4-20 x 2 1/2	94-04270-6
7	Bushing for small pulley	11-03618-6	35	Tee 3/4 NPT	58-01148-6
8	Hex bolt 1/2-13 x 1 3/4	94-05266-6	36	Nipple 3/4 NPT x 5	58-01130-6
9	Key 3/8 x 3/8 x 2 1/2	40-03955-4	37	Elbow with nipple	11-07686-5
10	V-belts B88 Matched set of 5	11-03619-6	38	T-bolt clamp 410-1-75-544	28-08091-6
11	Blower vent assembly	40-03983-5	39	Connecting hose 5 dia. x 6	11-07852-4
12	Jack	11-03632-6	40	Sheave support	11-03622-5
13	Blower gasket 510	96-00535-6	41	Hex bolt 5/8-11 x 3	94-03777-6
14	Blower assembly 510	43-00142-6	42	Jam nut 5/8-11	94-03781-6
15	Plug 3/4 NPT	58-01170-6	43	Square nut 5/8-11	94-03782-6
16	Blower outlet 510-5 dia.	38-07605-5	44	Frame assembly	11-03630-5
17	Lockwasher 3/8	94-04285-6	45	Blower plate 510	40-07447-4
18	Hex bolt 3/8-16 x 1	94-04289-6	46	Brace bracket	11-05587-4
19	Half nipple 2 1/2 NPT x 2	58-04115-4	47	PTO shaft mount bottom	11-07399-5
20	Vacuum relief valve	39-00725-6	48	Storage assembly 2 x DM5	11-07329-5
21	Jack tube mount	11-04017-6	49	Tailbolt SS 1/2 x 1 1/4	94-09185-5
22	Tongue	11-03631-5	50	Holder for DM4	11-04026-5
23	V-belt cover	11-03632-5	51	Airlock lug	40-03756-5
24	Rubber cap #5209-4	57-04616-6	52	Hex bolt 1/2-13 x 2	94-04317-6
25	Male coupling #5060-4	57-04182-6	53	Airlock base	11-04023-4
26	Hydraulic hose assembly 3/4 NPT x 12 FT	57-04703-5	54	Base leg	11-04160-4
27	Elbow 3/4 NPT x 90°	58-01183-6	55	Hydraulic motor RS AP1 (chain coupling)	62-00732-6

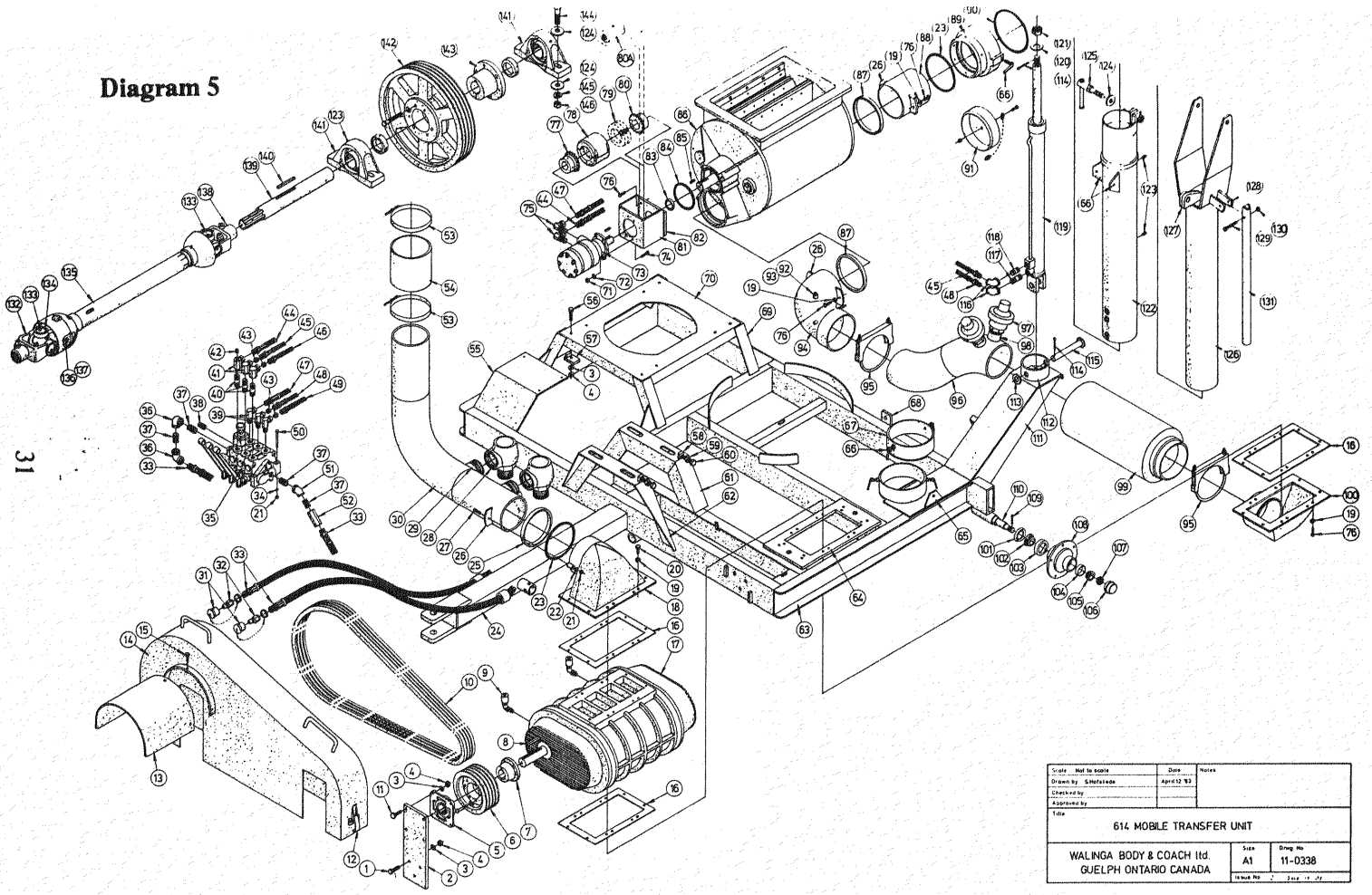
Reference to Diagram 3 & 4

Ref. #	Part Description	Walinga Part No.	Ref. #	Part Description	Walinga Part No.
55a	Hydraulic motor RS AP6 (splined coupling)	62-08923-6	81	Half nipple 2 NPT x 2	58-03975-4
56	Hex bolt 3/8-16 x 3/4	94-04288-6	82	Muffler 5 dia.	51-08093-6
57	Hex bolt 3/8-16 x 1 1/4	94-04290-6	83	Saddle clamp 5 dia.	28-04675-6
58	Sprocket 5016 1 dia. - 1/4 kw	97-04695-6	84	Expanded tube 5 dia. x 2 3/8	11-09182-4
59	Chain cover 5016	97-04697-6	85	Castellated axle nut 3/4-10	11-04008-6
60	Chain 5016	97-03745-6	86	Hub assembly #OL 547 - A7	11-03627-6
61	Sprocket 5016 1 1/4 dia. - 5/16 kw	97-04696-6	87	Cotterpin 1/8 x 2	94-05605-6
61a	Splined coupling (6B)	97-09236-6	88	Spindle #OL 615A	11-03625-6
62	Motorbracket for RS AP1	30-04530-4	89	Grease seal #OL 547-8A	96-04011-6
63	1300 Sealplate w/ seal CR 12384	30-04531-5	90	Bearing cone #LM 48548	96-04012-6
64	Seal CR 12384	96-01026-6	91	Bearing cup #LM 48510	96-04013-6
65	O-ring 345 B46	96-01013-6	93	Bearing cup #LM 11910	96-04015-6
66	Key 5/16 x 5/16 x 1 1/4	30-07993-4	93	Bearing cone #LM 11949	96-04014-6
67	Airlock assembly Al 1314-5A ss RS AP1	30-07700-5	94	Dustcap #OL 487-2	11-04010-6
68	Gasket 10-6-5G	96-05978-6	95	Rim #OL 418A	11-03626-6
69	Dog ear 5 dia.	40-09115-4	96	Tube #GVH 51	11-03629-6
70	Airlock outlet assembly w/ DF5 & DC5	30-07813-5	97	Implement tire 6.70-15	11-03628-6
71	O-ring 429 B46	96-03852-6	98	Wheelbolt #OL 184-2	11-04009-6
72	DF5 coupling assembly	38-03638-5	99	Fender assembly	11-07885-5
73	O-ring 436 B46	96-03735-6	100	Tractor end yoke 1 3/8-21 spline	45-03997-6
74	DC5 assembly w/ chain	38-04466-5	101	Shearpin yoke	45-04001-6
75	Half coupling 1/4 NPT	58-08815-6	102	U-joint cross kit	45-04000-6
76	Plug 1/4 NPT	58-01163-6	103	PTO shaft	45-03621-6
77	Elbow/checkvalve assembly 5 dia.	11-09114-5	104	Shear locknut 5/16-18 #11N85	45-04005-6
78	Butt clamp 5 dia. #268-2450	28-08094-6	105	Shearbolt 5/16-18 x 2 #11B541	45-04004-6
79	Double elbow 5 dia.	51-07354-6	106	Implement end yoke 1 3/8-21 spline	45-03998-8
80	Pressure relief valve	39-00724-6	107	Midship shaft 1 3/8 - 6B spline	11-03848-6
			108	Pillowblock bearing 1 3/4 dia.	96-03623-6

Reference to Diagram 3 & 4

Ref.#	Part Description	Walinga Part No.	Ref.#	Part Description	Walinga Part No.
109	Grease fitting ¼ straight	57-00625-6	138	Hex bolt (grade 8) ½-20 x 2¾	94-05366-6
110	Large V-belt pulley	11-03615-6	139	Hex bolt ½-13 x 1½	94-04311-6
111	Bushing for large pulley	11-03617-6	140	Vertical holder	11-04532-5
112	Platwasher ½	94-04304-6	141	Hex bolt ½-13 x 5	94-04323-6
113	Dustflap	11-07753-5	142	Support pipe assembly	11-04052-5
114	Filterbag	11-04200-6	143	Side brace 37"	11-04051-4
115	Filtercage	11-03723-5	144	Rear brace 42"	11-04050-4
116	Seal for filtercage	11-07151-4	145	Brace pickup	11-05589-4
117	Intake	11-06002-4	146	Turn lever	11-07104-5
118	Latch #2183	28-03728-6	147	Hex nut ¾-16	94-04286-6
119	Cleanout door	11-03727-5	148	Jack mount plate	11-04057-5
120	Latch	11-04070-4	149	Hydraulic jack assembly	11-07797-5
121	Latch hook	11-07644-4	150	Short hinge pin	11-04061-5
122	Boom saddle	11-04071-5	151	Tie-down chain 48"	11-04074-4
123	Hex bolt ¾-16 x 1¾	94-04292-6	152	Tie-down chain hook	11-07646-4
124	Cleanout port	11-07259-4	153	Jack handle	11-04054-5
125	Seal for cleanout lid	11-09214-4	154	PTO shaft mount top	11-07398-5
126	Cleanout lid	11-05997-5	155	Long hinge pin	11-04053-5
127	Platwasher ¾	94-04284-6	156	Hose carrier assembly	11-03635-5
128	Wingnut ¾-16	94-05177-6	157	Boom swivel assembly	11-03634-5
129	Lifting eye ¾-10	11-03981-5	158	Locknut ½-13	94-04307-6
130	Lockwasher ¾	94-04234-6	159	Platwasher 11/16	94-04231-6
131	Platwasher ¾	94-04233-6	160	DM5 coupling assembly	38-03755-5
132	Drum assembly	11-07261-5	161	Carriage bolt ½-13 x 1½	94-05165-6
133	Top elbow	51-07458-6	162	Jack lug	11-07228-4
134	Drum seal	11-07946-4	163	Boom assembly w/ couplings 5 dia.	11-03636-5
135	Receiver assembly	11-03640-5	164	Sliding tank lifter 5 dia.	11-05919-5
136	Hex nut (grade 8) ½-20	94-05397-6	165	Cyclone support	11-05591-4
137	Receiver lug	11-04044-5	166	Cyclone 19 dia.	38-03644-5

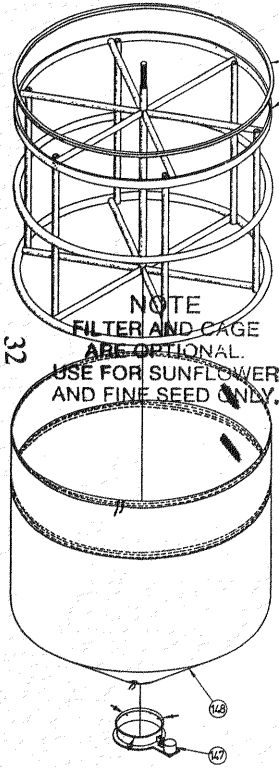
Diagram 5



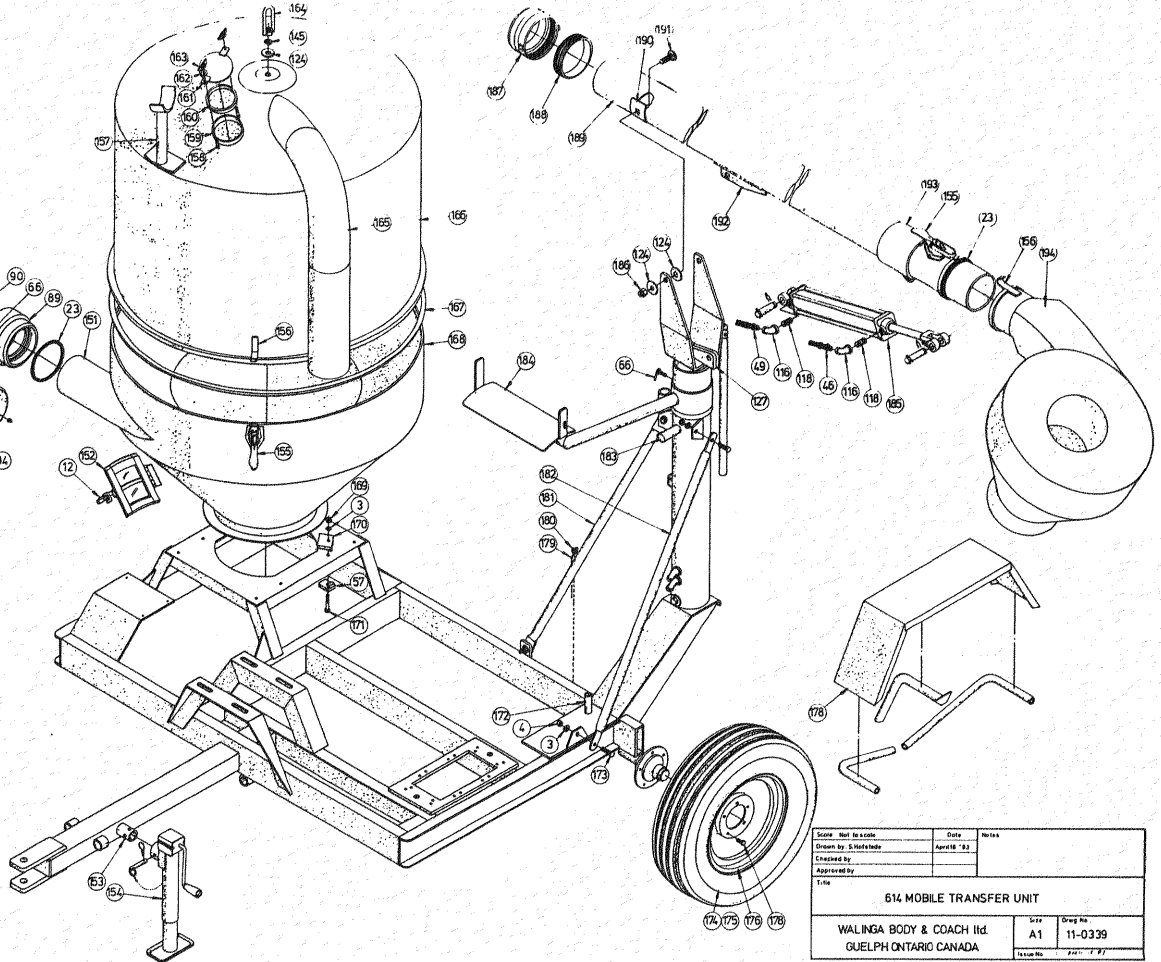
31

Scale: Not to scale	Date:	Notes:
Drawn by: S. Holstede	Approved by:	
Checked by:	Approved by:	
Title: 614 MOBILE TRANSFER UNIT		
WALINGA BODY & COACH Ltd. GUELPH ONTARIO CANADA	Size: A1	Draw No: 11-0338
Sheet No: 2	Date: 11-72	

Diagram 6



NOTE
 FILTER AND CAGE
 ARE OPTIONAL.
 USE FOR SUNFLOWER
 AND FINE SEED ONLY.



Scale: 1/8" = 1" scale	Date: _____	Notes: _____
Designed by: S. H. H. H.	Part No: 614	
Checked by: _____		
Approved by: _____		
Title: 614 MOBILE TRANSFER UNIT		
WALINGA BODY & COACH Ltd. GUELPH ONTARIO CANADA	A1	Drawn by: 11-0339
Issue No: _____	Part: 1 of 1	

Reference to Diagram 5 & 6

Ref.#	Part Description	Walinga Part No.	Ref.#	Part Description	Walinga Part No.
1	Hex bolt (grade 5) 1/2-13 x 1 1/2	94-05314-6	29	Half nipple 2 1/2 NPT x 2	58-04115-4
2	Bearing plate	11-07828-4	30	Elbow w/ nipple	11-09242-5
3	Lockwasher 1/2	94-04305-6	31	Rubber cap #5209-4	57-04616-6
4	Hex nut 1/2-13	94-04306-6	32	Male coupling #5060-4	57-04182-6
5	Flange bearing 1 9/16 dia.	96-08520-6	33	Hydraulic hose assembly 3/4 NPT x 11 FT 6"	57-09119-5
6	Small V-belt pulley	11-08529-6	34	Lockwasher 5/16	94-04241-6
7	Bushing for small pulley	11-08531-6	35	Hydraulic control assembly	59-09245-5
8	Key 3/8 x 3/8 x 2 1/2	40-03955-4	36	Elbow 3/4 NPT x 90°	56-01183-6
9	Blower vent assembly	40-03983-5	37	Close nipple 3/4 NPT	58-01125-6
10	V-belts 5V x 950 Matched set of 5	11-08550-6	38	Plug 3/4 NPT	58-01170-6
11	Hex bolt 1/2-13 x 1 1/2	94-04311-6	39	Male swivelelbow 1/2 NPT x 90°	57-00858-6
12	Latch #2183	28-03728-6	40	Nipple 1/2 NPT x 2 1/2	58-01118-6
13	Cover cap	11-09136-4	41	Female swivelelbow 1/2 NPT x 90°	57-03698-6
14	V-belt cover	11-07812-5	42	Hex socket plug 1/4 NPT	58-00167-6
15	Hex bolt 5/16 -18 x 3/4	94-04244-6	43	Hex socket plug 1/4 NPT with 5/64 dia. hole	58-00167-6
16	Blower gasket 614	96-09117-4	44	Hydraulic hose assembly 1/2 NPT x 29"	57-09121-5
17	Blower assembly 614	50-07777-5	45	Hydraulic hose assembly 3/8 NPT x 11 FT 3"	57-09123-5
18	Blower inlet	11-09244-5	46	Hydraulic hose assembly 3/8 NPT x 18 FT 6"	57-09123-5
19	Lockwasher 3/8	94-04285-6	47	Hydraulic hose assembly 1/2 NPT x 22"	57-09120-5
20	Hex bolt 3/8-16 x 1	94-04289-6	48	Hydraulic hose assembly 3/8 NPT x 11 FT	57-09122-5
21	Hex nut 5/16-18	94-04242-6	49	Hydraulic hose assembly 3/8 NPT x 17 FT	57-09124-5
22	Lockwasher 5/16	94-04241-6	50	Hex bolt 5/16-18 x 3	94-04251-6
23	O-ring 437 B46	96-08521-6	51	Elbow 3/4 NPT x 45°	58-01188-6
24	Tongue	11-07816-5	52	Flow restrictor EDC 35B	59-08559-6
25	Seal press ring 6 dia.	11-09240-4	53	T-bolt/clamp 410-1-75-644	28-08918-6
26	Dogear	40-09115-4	54	Connecting hose 6 dia. x 6	11-09246-4
27	Hex bolt 5/16-18 x 2 1/2	94-04249-6	55	Control platform	11-09231-4
28	Vacuum relief valve	39-00725-6			

Reference to Diagram 5 & 6

Ref.#	Part Description	Walinga Part No.	Ref.#	Part Description	Walinga Part No.
56	Hex bolt 1/2-13 x 1 1/2	94-04311-6	81	Motor bracket for RE 88-4	30-07766-4
57	Airlock lug	40-03756-5	82	1600 Sealplate w/ seal CR 13534	30-05108-5
58	Square nut 5/8-11	94-03782-6	83	Seal CR 13534	96-05815-6
59	Jam nut 5/8-11	94-03781-6	84	O-ring 345 B46	96-01013-6
60	Hex bolt 5/8-11 x 3	94-03777-6	85	Key 5/16 x 5/16 x 1 1/4	30-07993-4
61	Rear sheave support	11-07826-5	86	Airlock assembly AL 1618-6A SS RE 88-4	30-09006-5
62	Front sheave support	11-07825-5	87	Gasket 10-6-6J	96-08491-6
63	Frame assembly	11-07773-5	88	Airlock outlet assembly w/ DF6 & DC6	30-09268-5
64	Blower plate 614	50-07776-4	89	DF6 coupling assembly	38-07799-5
65	Brace pickup	11-05589-4	90	O-ring (fabricated)	96-08527-4
66	Tailbolt SS 1/2 x 1 1/4	94-09185-5	91	DC6 assy w/ chain	38-07796-5
67	Holder for DM6	11-09219-5	92	Half coupling 1/4 NPT	58-08815-6
68	Brace pickup	11-07829-4	93	Plug 1/4 NPT	58-01163-6
69	Base leg	11-07827-4	94	Elbow/checkvalve assembly 6 dia.	11-09251-5
70	Airlock base 1618	11-09269-4	95	Saddle clamp 6 dia.	28-08698-6
71	Hex nut 7/16-18	94-04224-6	96	Double elbow 6 dia.	51-07763-5
72	Lockwasher 7/16	94-04223-6	97	Pressure relief valve	39-00724-6
73	Hydraulic motor RE 88-4 (chain coupling)	62-08493-6	98	Half nipple 2 NPT x 2	58-03975-4
73a	Hydraulic motor RE 87-4 (splined coupling)	62-08699-6	99	Muffler 6 dia.	51-08681-6
74	Hex bolt (grade 8) 7/16-14 x 1 1/2	94-05331-6	100	Blower outlet	11-09222-5
75	Male swivel elbow SAE 7/8 x 1/2 x 90°	57-03699-6	101	Grease seal #OL 547-8A	96-04011-6
76	Hex bolt 3/8-16 x 1 1/4	94-04290-6	102	Bearing cone #LM 48548	96-04012-6
77	Sprocket 5016 1 1/4 dia. x 5/16 kw	97-04696-6	103	Bearing cup #LM 48510	96-04013-6
78	Chain cover 5016	97-04697-6	104	Bearing cup #LM 11910	96-04015-6
79	Chain 5016	97-03745-6	105	Bearing cone #LM 11949	96-04014-6
80	Sprocket 5016 1 3/8 dia. x 5/16 kw	57-08417-6	106	Dustcap #OL 487-2	11-04010-6
80a	Splined coupling (14)	97-09273-5	107	Castellated axle nut 3/4-10	11-04008-6
			108	Hub assembly #OL 547	11-03627-6

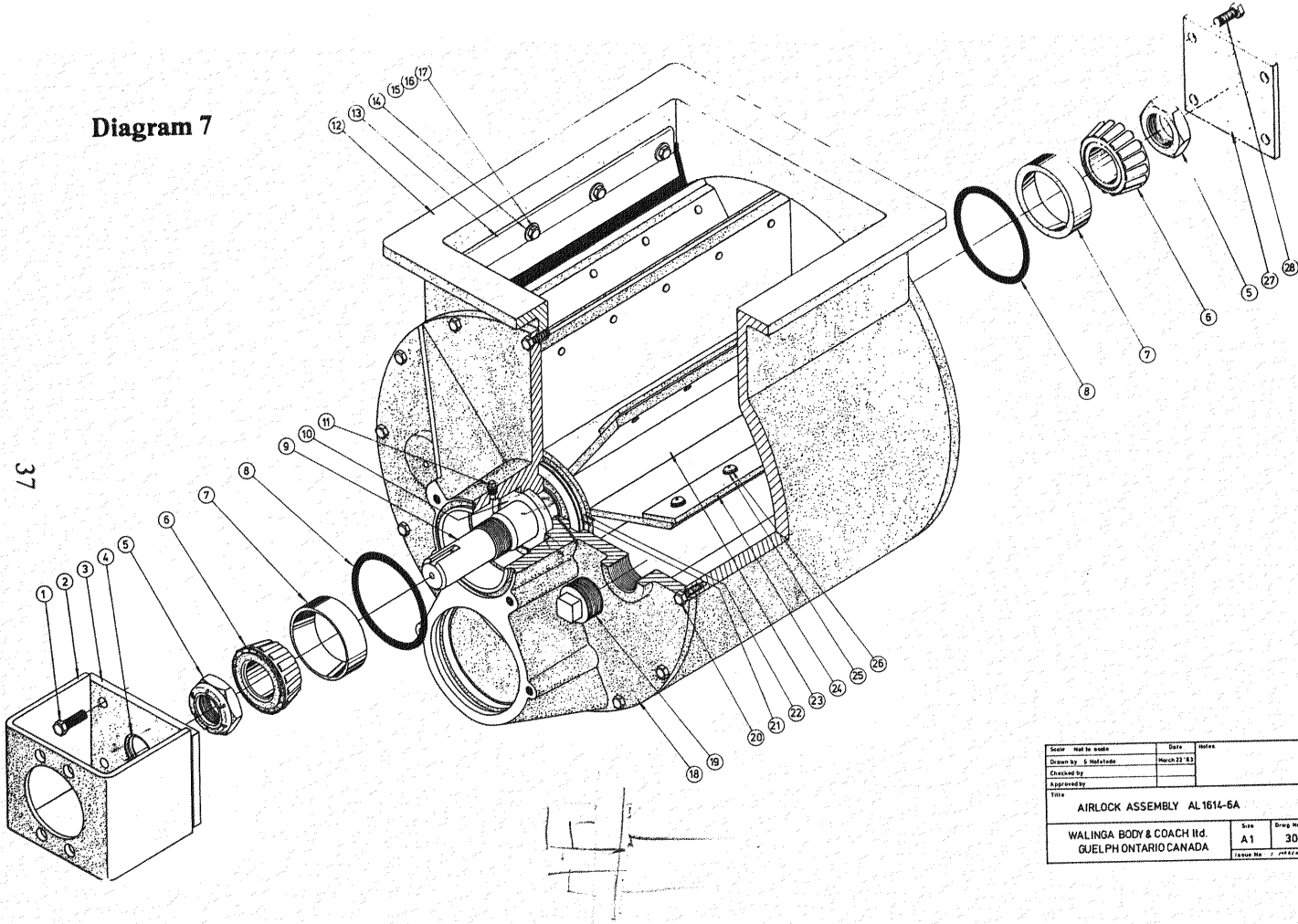
Reference to Diagram 5 & 6

Ref. #	Part Description	Walinga Part No.	Ref. #	Part Description	Walinga Part No.
109	Cotterpin 1/8 x 2	94-05605-6	137	Shear locknut (grade 5) 5/16 #11N85	45-04005-6
110	Spindle #OL 615A	11-03625-6	138	Implement end yoke 1 3/4 - 6 spline	45-08489-6
111	Offset	11-07805-5	139	Midship shaft	11-07746-6
112	Seat	11-07836-4	140	Key 1/2 x 1/2 x 4	11-09126-4
113	Platwasher 7/8 drilled to 1 dia.	94-04235-6	141	Pillowblock bearing 2 1/4 dia.	96-08519-6
114	Cotterpin 3/16 x 2	94-05609-6	142	Large V-belt pulley	11-08530-6
115	Retaining pin	11-07837-5	143	Bushing F 2 1/4 x 1/2 kw	11-08532-6
116	Reducing elbow 1/2 x 3/8 NPT x 90°	58-01194-6	144	Hex bolt (grade 8) 3/4-10 x 3	94-08505-6
117	Nipple 1/2 NPT x 2	58-01117-6	145	Lockwasher 3/4	94-04234-6
118	Nipple 1/2 NPT x 1 1/2	58-01116-6	146	Hex nut 3/4-10	94-07090-6
119	Hydraulic cylinder for upright	11-08552-6	147	Dustflap	11-07753-5
120	Platwasher 1 dia.	94-08898-6	148	Filterbag	11-04200-6
121	Castellated axle nut 1-8	94-08661-6	149	Filtercage	11-03723-5
122	Upright	11-07835-4	150	Seal for filtercage	11-07151-4
123	Grease fitting 1/4 straight	57-00625-6	151	Intake	11-07821-4
124	Platwasher 3/4	94-04233-6	152	Cleanout door	11-03727-5
125	Lockhandle	11-07841-5	153	Jack tube mount	11-04017-6
126	Boom swivel assembly	11-07846-5	154	Ram jack	11-03632-6
127	Lower cylinder mount	11-07846-5	155	Latch	11-04070-4
128	Turn level lug	11-07942-4	156	Latch hook	11-07644-4
129	Hex bolt 3/8 x 2 1/2	94-04295-6	157	Boom saddle	11-07853-5
130	Locknut 3/8-16	94-04287-6	158	Hex bolt 3/8-16 x 1 3/4	94-04292-6
131	Turn lever assembly	11-07941-5	159	Cleanout port	11-07259-4
132	Tractor end yoke 1 3/8 - 21 spline	45-08490-6	160	Seal for cleanout lid	11-09214-4
133	U-joint cross kit	45-04000-6	161	Cleanout lid	11-05997-5
134	Shearpin yoke	45-04001-6	162	Platwasher 3/8	94-04284-6
135	PTO shaft	45-08388-6	163	Wingnut 3/8-16	94-05177-6
136	Shearbolt (grade 5) 5/16 x 2 #11B54-1	45-04004-6	164	Lifting eye 3/4-10	11-03981-5

Reference to Diagram 5 & 6

Ref.#	Part Description	Walinga Part No.	Ref.#	Part Description	Walinga Part No.
165	Top elbow assembly	51-07761-5	193	Sliding tank lifter	11-07834-5
166	Drum assembly	11-09252-5	194	Cyclone 24 dia.	38-07895-5
167	Drum seal	11-07946-4			
168	Receiver assembly	11-07946-5			
169	Hex nut (grade 8) ½-20	94-05397-6			
170	Receiver lug	11-04044-5			
171	Hex bolt (grade 8) ½-20 x 2¾	94-05366-6			
172	PTO shaft mount bottom	11-07844-4			
173	Hex bolt ½-13 x 1½	94-04311-6			
174	Implement tire 7.60-15	11-08679-6			
175	Tube #GVH 51	11-03629-6			
176	Rim #OL 418-A	11-03626-6			
177	Wheelbolt #OL 184-2	11-04009-6			
178	Fender assembly	11-07885-5			
179	Tie-down chain 48"	11-04074-4			
180	Tie-down chain hook	11-07646-4			
181	Rear brace 45½"	11-07839-4			
182	Side brace 48"	11-07838-4			
183	PTO shaft mount bottom	11-07843-5			
184	Hose carrier assembly	11-07940-5			
185	Hydraulic cylinder for boom	11-08551-6			
186	Locknut ¾-10	94-08536-6			
187	Evertite male coupling 6 dia.	38-08533-6			
188	Half close nipple 6 dia.	58-08596-6			
189	Boom assembly w/ coupling 6 dia.	11-07862-5			
190	Pivot reinforcement	11-07848-4			
191	Carriage bolt ¾-10 x 2	94-08535-6			
192	Boom cylinder mount	11-07849-5			

Diagram 7



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Scale	Not to scale	Date	March 22 '83	Notes
Drawn by	S. McElside	Checked by		
Approved by		Title	AIRLOCK ASSEMBLY AL 1614-6A	
WALINGA BODY & COACH Ltd.		Size	A1	Draw No. 30-0335
GUELPH ONTARIO CANADA		Issue No.	1 of 1	

Reference to Diagram 7

1300 series airlock assemblies w/ motor

1	Hex bolt 5/16 x 1 1/4	94-04290-6
2	Motor bracket for RS AP1	30-04530-6
3	1300 sealplate w/ seal CR12384	30-04531-5
4	Seal CR 12384	96-01026-6
5	Locknut 1 1/2-12	94-05110-6
6	Bearing cone #3876	96-01034-6
7	Bearing cup #3820	96-01032-6
8	O-ring #345 B46	96-01013-6
9	Shaft	
10	Seal CR 521728	96-00890-6
11	Plug 1/8 NPT	58-01162-6
12	Casing machined	
13	Tipwiper	
14	Platwasher 1/4	94-04258-6
15	Hex bolt 5/16-18 x 1 1/4	94-04246-6
16	Lockwasher 5/16	94-04241-6
17	Hex nut 5/16-18	94-04242-6
18	Endplate machined	
19	Plug 1/4 NPT	58-01173-6
20	Hex bolt (grade 8) 5/16-18 x 1	94-05284-6
21	Urethane seal	96-02027-6
22	Platwasher 1/4 large	94-00361-6
23	Rotor assembly	
24	Replacement tip	
25	Brass washer 5/16	94-08782-6
26	Nylok butt. hd. capscrew 5/16-18 x 5/8	94-08781-6
27	Dustplate w/ holes	30-09035-4
28	Hex bolt grade 2 3/8-16 x 1	94-04289-6

AL1310-4 Brass RS AP1

		Std.
		Std.
		Std.
		Std.
		Std.
		Std.
		Std.
		Std.
19 3/4"	30-09068-4	
		Std.
		Std.
CA1310	30-09225-5	
8 3/4"	30-09067-5	
		Std.
		Std.
		Std.
		Std.
		Std.
EP1300-4	30-09020-4	
		Std.
		Std.
		Std.
		Std.
		Std.
RA1310	Brass-10	
		Std.
Brass 10"	30-09255-4	
		Std.
		Std.
		Std.
		Std.
		Std.

AL 1314-5SS RS AP1

		Std.
		Std.
		Std.
		Std.
		Std.
		Std.
		Std.
		Std.
24 3/4"	30-04674-4	
		Std.
		Std.
CA1314-A	30-09024-4	
13 1/4"	30-03901-5	
		Std.
		Std.
		Std.
		Std.
		Std.
EP1300-5	30-08620-4	
		Std.
		Std.
		Std.
		Std.
		Std.
RA1314	SS-10	
		Std.
SS14 1/2"	30-04106-4	
		Std.
		Std.
		Std.
		Std.
		Std.

AL1314-5ASS RS AP1

		Std.
		Std.
		Std.
		Std.
		Std.
		Std.
		Std.
		Std.
24 3/4"	30-04674-4	
		Std.
		Std.
CA1314-B	30-07979-4	
13 1/4"	30-03901-5	
		Std.
		Std.
		Std.
		Std.
		Std.
EP1300-5A	30-09021-4	
		Std.
		Std.
		Std.
		Std.
		Std.
RA1314	SS-10	
		Std.
SS14 1/2"	30-04106-6	
		Std.
		Std.
		Std.
		Std.
		Std.

Reference to Diagram 7

1600 series airlock assemblies w/ motor

1	Hex bolt 3/8-16 x 1 1/4	94-04290-6
2	Motor bracket for RE88 4	30-07766-4
3	1600 sealplate w/ seal CR 13534	30-05108-5
4	Seal CR 13534	96-05815-6
5	Locknut 1 1/2-12	94-05110-6
6	Bearing cone #3877	96-05097-6
7	Bearing cup #3820	96-01032-6
8	O-ring #345 B46	96-01013-6
9	Shaft	
10	Seal CR 16254	96-05776-6
11	Plug 1/8 NPT	58-01162-6
12	Casing machined	
13	Tip wiper	
14	Platwasher 1/4"	94-04258-6
15	Hex bolt 5/16-18 x 1 1/4	94-04246-6
16	Lockwasher 5/16	94-04241-6
17	Hex nut 5/16-18	94-04242-6
18	Endplate machined	
19	Plug 1 1/4 NPT	58-01175-6
20	Hex bolt (grade 8) 5/16-18 x 1	94-05284-6
21	Urethane seal	96-02027-6
22	Platwasher	
23	Rotor assembly	
24	Replacement tip SS	
25	Brass washer 5/16	94-08749-6
26	Nylok butt. hd. capscrew 5/16-18 x 3/4	94-08781-6
27	Dustplate w/ holes	30-09035-4
28	Hex bolt 3/8-16 x 1	94-04289-6

AL1614-5x6SS RE88 4

		Std.
		Std.
		Std.
		Std.
		Std.
		Std.
		Std.
		Std.
		Std.
24 3/4"	30-04674-4	
		Std.
		Std.
CA1614	30-09025-4	
13 1/4"	30-03901-5	
		Std.
		Std.
		Std.
		Std.
		Std.
EP1600-5	30-09022-4	
EP1600-6	30-09030-4	
		Std.
		Std.
		Std.
		Std.
		Std.
RA1614SS-10		
	30-05113-5	
14 1/2"	30-04106-4	
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		Std.
		Std.
		Std.
		Std.

AL1614-6ASS RE88 4

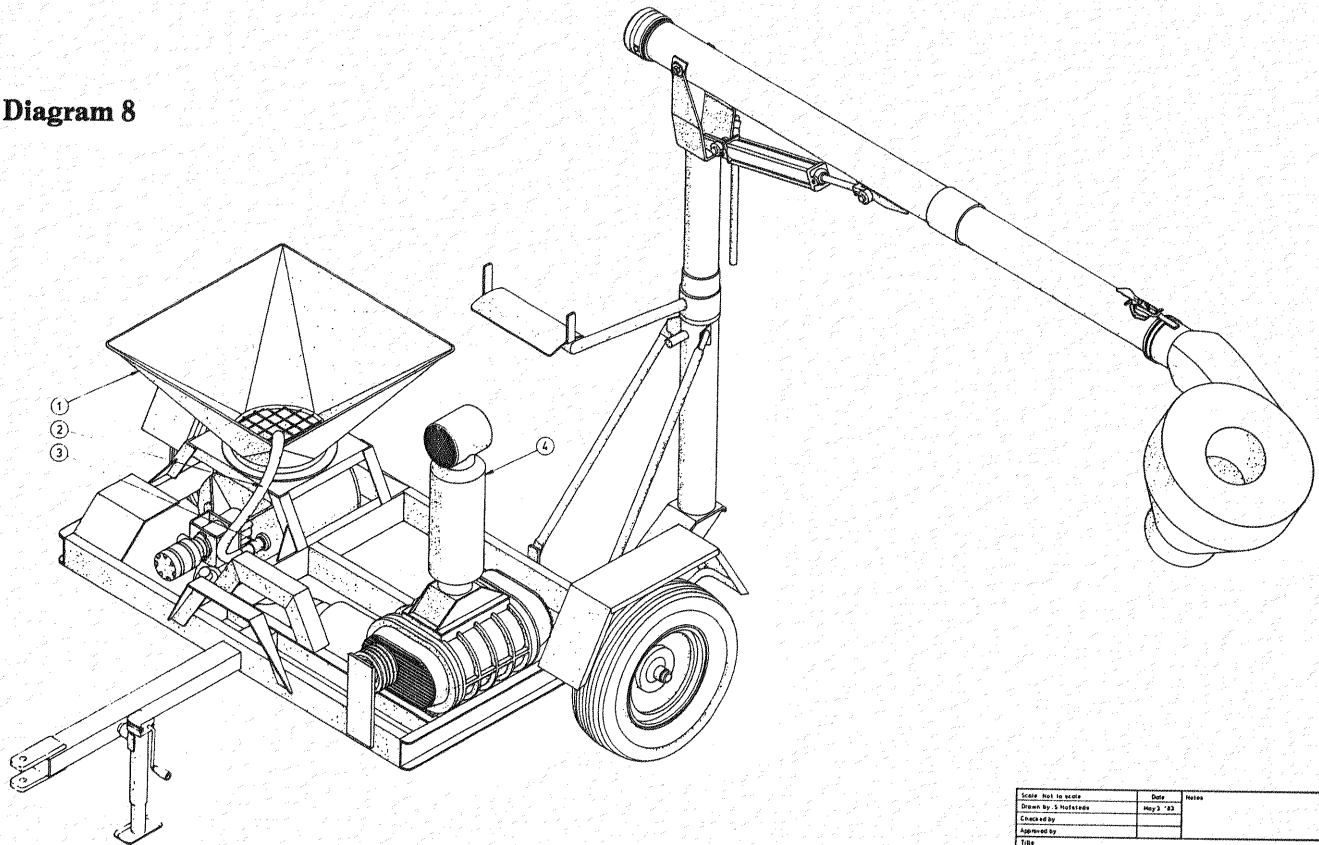
		Std.
		Std.
		Std.
		Std.
		Std.
		Std.
		Std.
		Std.
		Std.
24 3/4"	30-04674-4	
		Std.
		Std.
CA1614	30-09025-4	
13 1/4"	30-03901-5	
		Std.
		Std.
		Std.
		Std.
		Std.
EP1600-6A	30-09023-4	
		Std.
		Std.
		Std.
		Std.
		Std.
RA 1614SS-10		
	30-05113-5	
14 1/2"	30-04106-4	
		Std.
		Std.
		Std.
		Std.
		Std.

AL1618-6ASS RE88 4

		Std.
		Std.
		Std.
		Std.
		Std.
		Std.
		Std.
		Std.
		Std.
29"	30-09101-4	
		Std.
		Std.
CA1618	30-09027-5	
17 3/4"	30-09181-5	
		Std.
		Std.
		Std.
		Std.
		Std.
EP1600-6A	30-09023-4	
		Std.
		Std.
		Std.
		Std.
		Std.
RA1618SS-10		
	30-09017-5	
18 1/4"	30-09106-4	
		Std.
		Std.
		Std.
		Std.
		Std.

Diagram 8

40

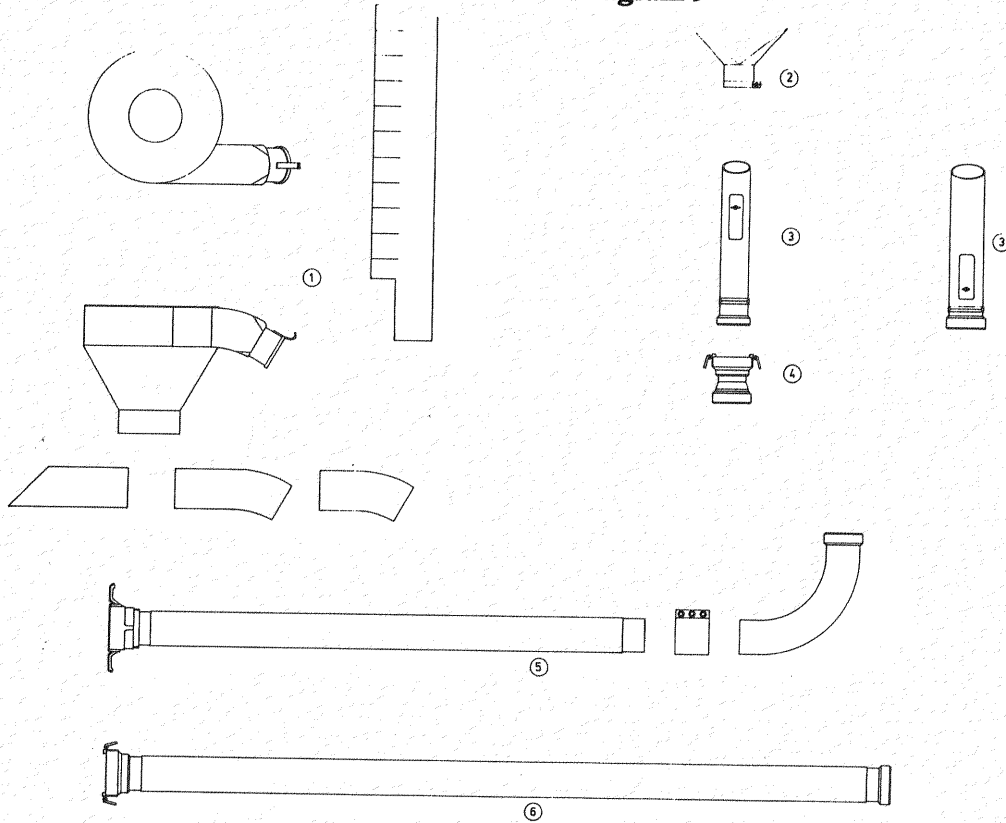


Scale: Not in scale	Date: May 3 '93	Notes:
Drawn by: J. Hoffmeyer		
Checked by:		
Approved by:		
Title: 614 PUSHPACK OPTION		
WALINGA BODY & COACH Ltd. GUELPH ONTARIO CANADA		Rev: A1 Draw No.: 11-0345 Issue No.: 1 of 1

Reference to Diagram 8

		510MT	614 MT
Blow only kit			
510 blow only	38-07983-5	x	
614 blow only	38-09143-5		X
1 Hopper			
510 hopper	38-07786-5	X	
614 hopper	38-09016-5		X
2 Vent hose 1½ dia. - 60 long		X	X
3 Airlock vent fitting		X	X
4 Air intake w/ muffler			
510 air intake	38-07982-5	X	
614 air intake	38-09015-5		X
5 Blower gaskets			
510 blower gasket	96-00535-6	X	
614 blower gasket	96-09117-4		X

Diagram 9



42

Scale Not to scale	Date	Name
Drawn by: S. Hattala	May 4 - 83	
Checked by:		
Approved by:		
Title:		
614 ACCESSORIES		
WALINGA BODY & COACH Ltd. GUELPH ONTARIO CANADA		Rev A1 Draw No. 11-0346
Issue No.	Part - 2	

Wearlines

kit 11-09451-61+

11-09447-510

Reference to Diagram 9

43

		506 MT	510 MT	614 MT		
1 Cyclones					Coupling assemblies (w/ O-rings & tailbolts where applicable, screws extra)	
24 dia.	38-07795			X	DM 4	38-00397-5
19 dia.	38-03644-5	X	X		DF 4	38-07237-5
					DM 5	38-03755-5
2 Cleanup attachments w/ wheels					DF 5	38-03638-5
4 dia. - 12 wide	3807627-5	X	X		DM 6	38-07798-5
5 dia. - 12 wide	38-07634-5		X	X	DF 6	38-07799-5
5 dia. - 18 wide	38-07632-5			X	Endplug assemblies (w/ chain)	
3 Suction nozzles					DC 4	38-04465-5
4 dia. - 34 long	38-03737-5	X	X		DC 5	38-04466-5
5 dia. - 24 long	38-04104-5		X		DC 6	38-07796-5
5 dia. - 32 long	38-07996-5			X	Evertite coupling	
6 dia. - 32 long	38-07858-5			X	6 dia. male part A	38-08533-6
4 Adaptors					6 dia. female part D	38-08534-6
DM 5 x DF 4	11-03733-5		X		6 dia. O-ring for part D	38-08650-6
DM 6 x DF 5	11-07823-5			X	O-rings for Daffin couplings	
5 Hoses w/ elbow for boom hookup					345 B46 small for DM 4 & DF 4	96-01013-6
4 dia. - 8' long	36-09211-5	X			428 B46 large for DF 4	96-03851-6
5 dia. - 8' long	36-04100-5		X		429 B46 small for DM 5 & DF 5	96-03852-6
6 dia. - 9' long	36-09258-5			X	436 B46 large for DF 5	96-03735-6
6 Delivery hoses					437 B46 small for DM 6	96-08521-6
4 dia. - 12' long	36-03149-5	X			Fabr. large for DF 6	96-08527-4
5 dia. - 12' long	36-05498-5		X		Morris couplings	
6 dia. - 12' long	36-07889-5			X	4 dia. 3½ - 2C	38-00633-6
					5 dia. 4½-2C	38-05641-6
					6 dia. 5½-3C	38-08523-6

XIII. DEFINITIONS

Air

The happy medium we breathe - if the smog has lifted.

Airlock

or "rotary airlock feeder" a device to meter the materials into an air stream

Blower

Air pump that forces air through the lines

Positive Displacement

air pump that displaces a specific volume of air, per rpm
It does not compress air internally

Relief Valves

Safety devices to protect the blower. It will open when maximum pressure or vacuum is reached

Air Volume (CFM)

The capacity of the blower to move a certain amount of air at a specific speed and pressure.

Air Speed

Rate of travel of the air at which it conveys material

Filter/Screen

Optional Protective device to keep large particles from entering the blower.

Power

the power to turn the blower is directly related to the blower speed (volume) times the pressure difference.

Pressure

Equals the resistance in the system (lines, elbows, etc.) to move the material

Vacuum

Or Negative pressure, present at the intake side of the blower.

Cyclone

Round and tapered device to slow down the speed of the material. It helps to prevent breaking and broad-casting of the material.

XIV. WARRANTY

Walinga Body & Coach Ltd. (the seller) warrants the articles and units sold to be free from defects in material and workmanship and to conform to applicable specifications. These express warranties are the sole warranties of seller and any other warranties, express, implied in law or implied in fact, are hereby specifically excluded.

Seller's sole obligations under its warranties shall be, at its option, to repair or replace any article or part thereof which is proved to be other than warranted.

For Farm Use Only, all warranties shall expire 12 months from the date the article or unit is placed in service or 12 months from the date the article or unit is delivered by seller, whichever period first expires;

For Commercial use all warranties shall expire 90 days from the date the article or unit is placed into service, or 90 days from the date the article or unit is delivered by seller, whichever period first expires; notice of claimed breach of warranty must be given within the applicable period.

NO ALLOWANCES SHALL BE MADE TO BUYER FOR ANY TRANSPORTATION, LABOUR CHARGES OR PARTS, ADJUSTMENTS OR REPAIRS, OR ANY OTHER WORK, UNLESS SUCH CHARGES ARE AUTHORIZED IN ADVANCE BY THE SELLER.

Seller shall in no event be liable for special or consequential damages. If an article is claimed to be defective in material or workmanship or not to conform to specifications, seller, upon notice promptly given, will either examine the article or unit at its site, or issue shipping instructions for return to the seller. The warranties shall not extend to any articles or units or parts thereof which have been installed, used or serviced, otherwise than in conformity with sellers applicable specifications, manuals, bulletins, or instructions or, if none, which shall have been subjected to improper installation, misuse or neg-

lect. The warranties shall not apply to any articles or units or parts thereof furnished by buyer or required from others at buyers request and/or buyers specifications. The foregoing limitations on sellers liability in the event of breach of warranty shall also be the absolute limit to sellers liability in the event of the sellers negligence in manufacture, installation or otherwise, with regards to the articles and units covered hereby, and at the expiration of the period as above stated with regard to warranties, all of such liabilities will terminate.

All claims for Warranty must first be directed to your Dealer or Distributor.

CAUTION: Whenever remounting the blower **BE SURE THAT:**

1. The support lugs 'C' are removed;
2. The blower input shaft 'A' and the midship shaft 'B' are and remain parallel;
3. The blower mounting bolts are properly tightened;
4. The bolts for the support plate fit through holes 'F' easily. **CAUTION: DO NOT FORCE these bolts in the holes. Forcing these bolts will upset the alignment of the bearings of Shaft 'A', and will result in Shaft breakage!** Use a file if necessary to clean out the holes 'F', then tighten the bolts securely (to 90 ft. lbs. of torque).
5. The support lugs 'C' are tight against the bearing support plate and weld them to the frame.
6. Then tighten the belts turning the hex bolt 'E'. Make sure both shafts 'A' and 'B' remain parallel and that both pulleys are parallel. See illustration 3, page 10. Lock the bolt securely with the jam nut.

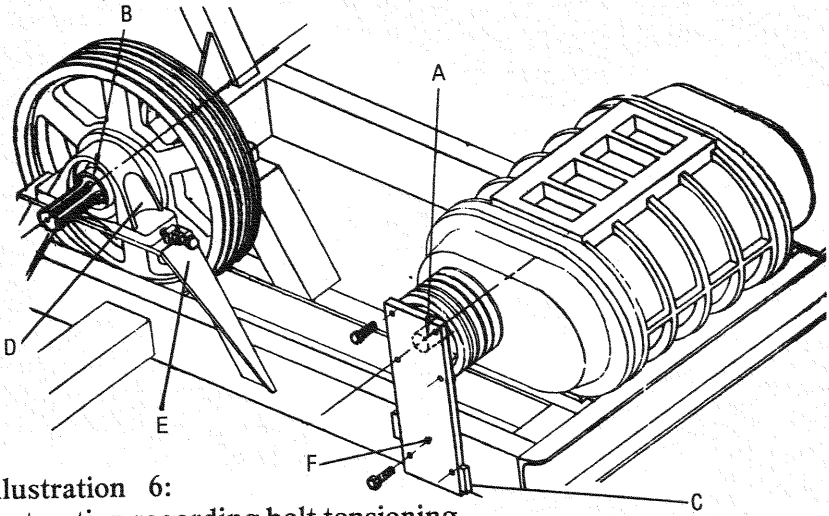
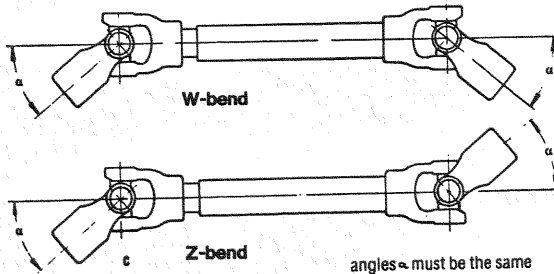


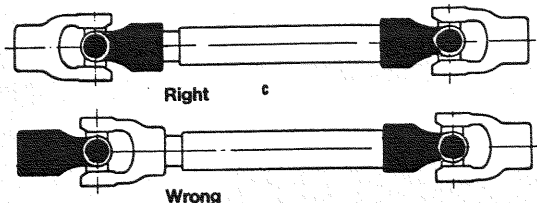
Illustration 6:
Instruction regarding belt tensioning

GENERAL INFORMATION



**P.T.O. drive shaft
arrangement
for uniform
transmission**

angles α must be the same



Position of joint planes

Illustration 7: Drive Shaft and U-Joints

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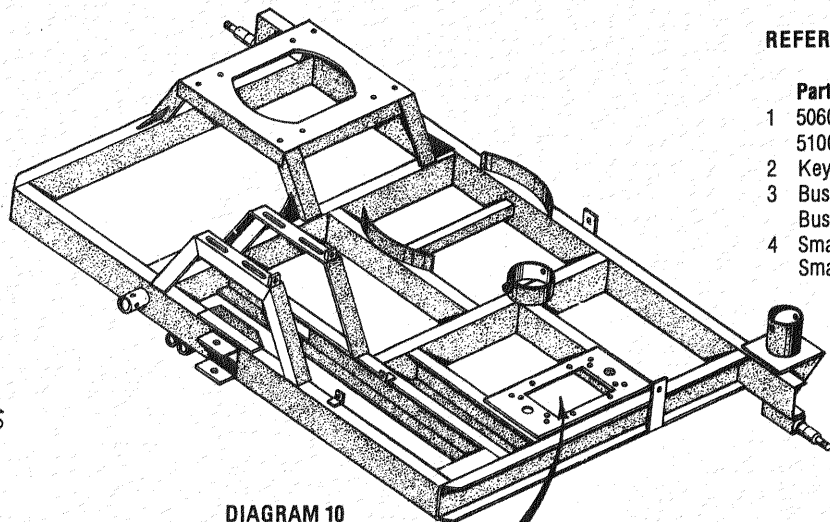
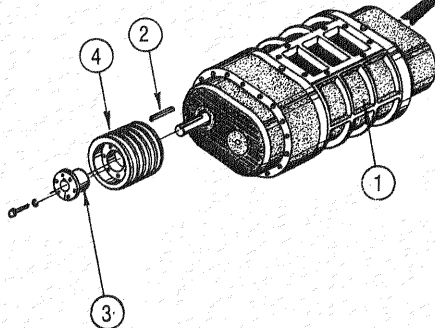


DIAGRAM 10



REFERENCE TO DIAGRAM #10

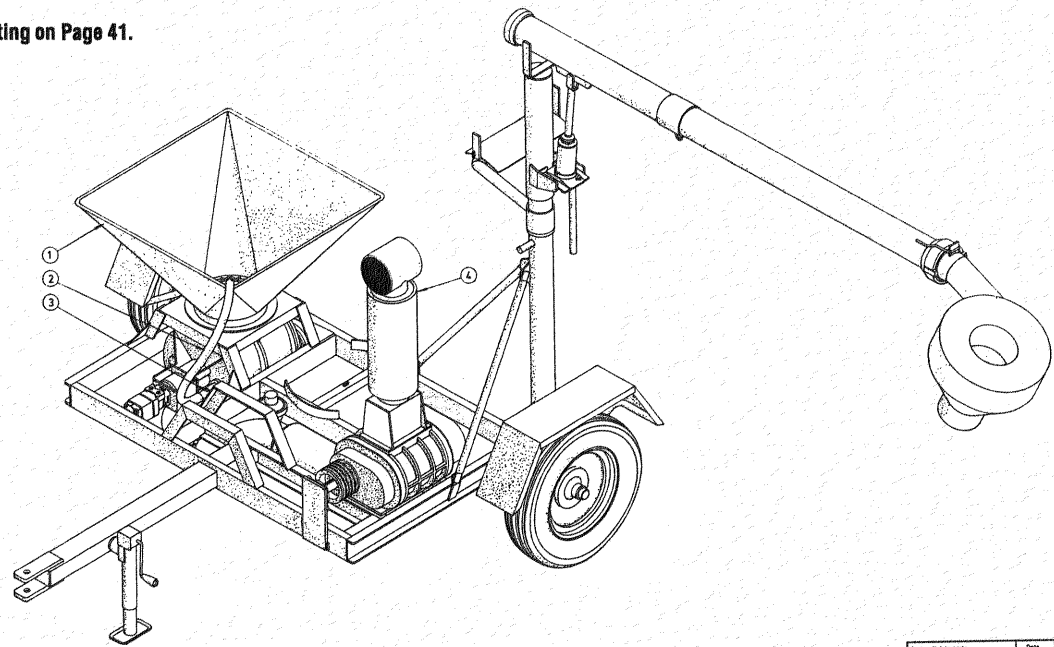
Part Description

- 1 506G Blower
510G Blower
- 2 Key $\frac{3}{8}$ " - $\frac{3}{8}$ " x $2\frac{1}{2}$ "
- 3 Bushing (506G)
Bushing (510G)
- 4 Small Pulley (506G)
Small Pulley (510G)

Walinga Part

- 43-09324-5
- 43-04077-5
- 40-03955-4
- 11†-08900-6
- 11-03970-6
- 11-08899-6
- 11-03616-6

DIAGRAM 11
510 PUSH ONLY
 Refer to Parts Listing on Page 41.



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Scale: Not to scale	Date:	Notes:
Drawn by: S. Whitehead	Rev: 1 03	
Checked by:		
Approved by:		
Title:		
510 PUSHPACK OPTION		
WALINGA BODY & COACH Ltd.		Size: A1
GUELPH ONTARIO CANADA		Drawn by: 11-0407
		Table No.: 11-07 03