TABLE OF CONTENTS

2015

OPERATING INSTRUCTIONS **3**

BEFORE OPERATION CHECKLIST	3, 4
TANK MIXING TIPS FOR PESTICIDE USE	5
SPRAYING TECHNIQUE	6
AFTER OPERATION PROCEDURE	6
MACHINE WINTERIZING	7

SERVICE & MAINTENANCE INSTRUCTIONS **7**

PRESSURE RELIEF VALVE	8
AR 70, AR115 PUMPS	8
AGITATOR & GLAND PACKING	9
CONTRA-ROTATING GEAR BOX	9
CHAIN BOX	9
FAN TELESCOPIC DRIVE SHAFT	9, 10
AXLE ADJUSTMENT	10
MAINTENANCE INSTRUCTIONS FOR ALL PUMPS	11

SPRAYER LUBRICATION **12**

REQUIRED GREASE POINTS	12
REQUIRED LUBRICATION POINTS	13
SERVICE & LUBRICATION CHART	14

TROUBLE SHOOTING **15**

INCORRECT NOZZLE OUTPUT	15
PRESSURE DROP WITH VARIATION OF SPRAY OUTPUT	15
AR PUMPS, POSSIBLE TROUBLES, THEIR CAUSES & REMEDIES	15

SPRAYER CALIBRATION **16**

CALIBRATION FORMULA, STEP BY STEP	16
NOZZLE ARRANGEMENT	17
PARTS SECTION, ORDERING & RETURNING GOODS, YOUR SPRAYER INFORMATION	18

TABLE OF CONTENTS (Cont.)

PUMP DRIVES, AGITATOR CHAIN DRIVES	21
CHAIN BOX, PTO ASSEMBLY	22, 23
PUMP DRIVES, AGITATOR BELT DRIVES	24
FAN CASE, GEAR BOX ASSEMBLY	26, 27
NOZZLE & SPRAYER ACCESSORIES	28
TANK, AGITATOR, POWER TUBE ASSEMBLY	30, 31
400 GALLON FRAME, AXLES HITCH	32, 33
500 GALLON FRAME, AXLES, HITCH	34, 35
VICTAIR 400 GALLON PLUMBING, 400 GALLON FILTRATION & PUMP ASSEMBLY	36
HYDRAULIC COMPONENTS, REGULATOR & SPRAYER BOOM ASSEMBLY	37
PART NUMBERS FOR FIGURES: 5,6,7,8	38
VICTAIR 400 GALLON BOOM ASSEMBLY	39
DIAPHRAGM PRESSURE RELIEF/REGULATING VALVES	40
PARTS LIST FOR AR 70 PUMP	41, 42
PARTS LIST FOR AR 115	43, 44
KITS PARTS LIST	45
WARRANTY	46

The specifications in this manual were in effect at the time this manual was printed. H.F. Hauff Company, Inc. reserves the right to make changes and improvements in products at any time without motive or obligation.

OPERATING INSTRUCTIONS

BEFORE OPERATION CHECKLIST

Proper & Thorough Maintenance:

1. Proper lubrication of your sprayer must be maintained. Check to see that all fittings have been properly greased. Inspect oil view plugs on front chain box, rear gear box and diaphragm pump. Top with proper oils if necessary. Oil all chains, moving and sliding parts. For additional information, refer to the section on Sprayer Lubrication.
2. Ensure that the tank is clean of all foreign material. Make sure fans are clean of build up deposits of dirt, grass, debris, etc.
3. Remove and clean suction strainer.
4. Replace drain plugs and inspect for loose bolts, tire pressure, and other faults a thorough inspection will show.

Accurate Calibration of the Spray Output:

The spray output is dependent on the following:

a. Pressure gauge setting controlled by the pressure relief valve.
b. Nozzle disc size and type of back plate.
c. Number of nozzles in use.

Variations in outputs are obtained by altering either one or a combination of these factors. The greater the pressure reading the more gallons per minute flow obtained. Warn Nozzles will waist spray.

For proper calibration of the Victair Mistifier refer to the section on Sprayer Calibration.

Tractor Speed, Horse Power Requirement & PTO Usage:

The tractor speed must be properly calibrated prior to selecting nozzles sizes. Determine the tractor speed with the PTO turning at 540 RPM. ***UNDER NO CIRCUMSTANCES SHOULD THE PTO SPEED EXCEED 540 RPM.*** The tractor speed in MPH can be found by dividing the distance (feet) traveled in one minute by 88. ***NOTE: Tractor speedometers vary from actual ground speed due to different tire sizes, ground slippage, etc.***

To use available horsepower of various tractors, 20-23 tooth sprockets are available. These sprockets may be substituted in the chain box to change the fan RPM to accommodate a lower horsepower tractor. Air dividers placed on the rear outlets will also lower the horsepower requirement to some extent.

There is a limit to the power, which can be derived reasonably and safely from the PTO of standard tractors used in orchards and vineyards. Likewise, there is a corresponding limit to the volume and speed of air that can be discharged from any fan driven from the PTO shaft. If large volumes of air are to be moved, the air speed will be reduced. Conversely, if air speed is the prime consideration, the

The most desirable combination is that which will enable the grower to spray even in adverse conditions, but any attempt to exceed the power available at the PTO will result in an immediate drop in engine speed and undue strain on the tractor. The Victair Mistifier is designed to operate within the bounds of the tractor PTO power.

The PTO shaft must be centered equal-distance on the tractor hitch pin to avoid binding when turning and possible damage to gear box when going over rough terrain. Adjustment can be made by removing sprayer hitch pin and adjusting hitch so that it is equal distance between the male and female ends of the PTO when hooked up.

Slowly engage the PTO shaft clutch as quick engagements place an undue strain on the sprayer mechanical system, resulting in rapid wear and costly replacements. ***When making sharp turns, the PTO clutch must be disengaged. In many of todays orchard and vineyard plantings it would be advisable to travel every other row or every 3rd. Row to deal with proper turning radiuses.***

Chemical Mix Instructions:

1. Read the *chemicals manufacturers' instructions* prior to the mixing of spray materials and ***follow*** their directions accordingly.
2. ***Under no circumstances should raw chemical be put into an empty tank.*** Always put water into the tank before slowly adding chemical. Follow Label Directions.
3. Engage the tractor PTO to operate the agitator mixing the chemical.

SAFETY FIRST: While mixing, beware of chemical splash and wear protective clothing.



TANK MIXING TIPS FOR PESTICIDE USE

Farmers are now mixing more and more pesticides to control a broader spectrum of weeds, insects and diseases, and to improve application efficiency.

Tank mixes are becoming more popular. Farm operations can save time, money, labor and fuel by simply mixing compatible pesticides and making one application. Some farm operations like to go one step further by applying pesticides in a mixture with liquid fertilizer."

If pesticides are not tank mixed properly, clogged tanks and lines, and uneven, deficient or excessive rates of application may result. This can cause crop injury, poor pest control and residue problems, in addition to the expense and disposal involved with mixtures that can't be used. It's essential for growers to follow pesticide label instructions closely."

The following are tank mixing tips and reminders:

- ◊ Do a small-scale "jar" test to check compatibility. Place one pint of carrier-water or fluid fertilizer in a quart jar. Add each pesticide or pre-mix of pesticide in water, one at a time, shake well with each addition. Use each product in the same proportion to carrier as it will be in the actual tank mix.

Unless labels indicate otherwise, then inspect the mixture immediately and after standing quietly for 30 minutes. If a uniform mix cannot be made or if non-dispersible oil, sludge or clumps of solids form, the mixture is incompatible and should not be used. Minor separation after 30 minutes, without sludge or clumps and which remixes readily with 10 jar inversions, is tolerable if field spray tank agitation is good and keeps the combination mixed. Adding a spray adjuvant in testing compatibility of mixes can avoid many problems. An adjuvant helps keep the mixture emulsified.

- ◊ When tank mixing in volume, put two-thirds of the carrier in the tank first. Then add pesticides one by one, with wettable powders first. Agitate for thorough mixing after each addition, before pouring in the next. Finish filling the tank with carrier, Martin said.
- ◊ Keep agitation going at all times on the way to the field, during application and during stops for any reason. Empty the tank, preferably on the day of mixing. Do not allow mixture to stand overnight without agitation. Check labels for temperature and humidity data as they affect mixing or delay in use.
- ◊ With any new combination, test the tank mixture on small areas, at varying rates and conditions of use before large scale use. Check your state college or extension agent for test date and on variations in local water supply that may affect performance.
- ◊ Use exact dosage rates for registered tank mixes. Changes may cause crop injury or poor performance on weeds or pests.

SPRAYING TECHNIQUE

Contra-Rotating Fans

The Victair Mistifier is equipped with dual contra-rotating fans. These fans insure that when spraying double-sided, the spray pattern on both row sides is identical. The fan cases may be adjusted for single -sided spraying of large trees or for wide plantings in adverse weather conditions.

Wind Considerations

The operator should carefully consider the direction of the wind, not only to obtain the best results by making full use of the natural air movement, but also for his own comfort. Watch out for drift and follow your local guild lines for spray applications

Head & Tail Winds

When a sprayer is being driven nearly head-on into the wind and if the wind is of moderate strength, the wind will turn the spray-laden air backwards before this has displaced the air in the center of the tree and poor coverage will result. If the sprayer is being driven in the opposite direction the same mistakes will be made but in this case the operator is vulnerable to spray drift.

Cross Winds

The Victair Mistifier moving across the wind should have the outlet pointing in the direction of the wind; not directed into the tree but slightly upwards as if to mist the tree. The downdraft of the wind will then cause the spray to cover the tree. The outlet pointing into the wind should be directed at a lower angle to make full use of the uplift that the wind will impart to the air stream. ***The wind may be used to an advantage by turning or changing the fan outlet settings and allowing the natural air currents to help carry the spray-laden mist.*** This method should result in better coverage in moderate wind conditions. ***Spraying in calm weather is recommended. Check Max. wind speed regulations.***

Check Spray Coverage

If there is any doubt as to whether complete coverage is being obtained, glass slides, bottles, photographic paper, black light dyes, or paper cards can be placed in the parts of the tree which are usually difficult to spray and will give a good indication of the coverage being obtained.

AFTER OPERATION PROCEDURE

Drain & Clean Sprayer

Drain all remaining spray solution from the tank by re-spraying borders. Never dump out the spray. Once all the spray has been used from the tank — flush the tank out with water.
Fill the tank with approximately 50 gallons of clean water. Use the hand gun outlet with the PTO engaged and ***wash the spray booms, outlets, fans, and inside of the tank, plus any other areas where the chemical deposit has built up. Check with your chemical consultant for the proper cleaning solutions.*** Run the sprayer slowly to pump the water through the system cleaning the lines of the chemical deposits. Fan efficiency is lost if spray deposits are allowed to build up on fan blades. Keep deposits from building up on the fan blades.

The sprayer will be easy to clean if it has a light coat of diesel fuel applied where chemical build-up is expected. Particular care must be taken in washing out the system if weed killer or concentrate chemicals have been used. Traces of these chemicals can cause damage to crops subsequently sprayed with the machine. When switching from herbicides to pesticides a chemical neutralizing agent must be used. Most operations maintain separate sprayers for each operation so that no weed spray mix could possibly contaminate foliar sprays.

Concentrate Chemical Cleaning

If the sprayer is being used extensively with concentrate solutions, it is advisable to use a chemical cleaning solution to thoroughly wash out the pump and plumbing. Your local chemical supplier will be able to assist you with the most suitable solution to use; as cleaning solutions vary according to the chemical used.

Nozzle Care

Rinse nozzle caps and discs in clean water and then coat with light machine oil. Coat the o-rings on the nozzle body with a light coat of grease.

Fans

The fans should be cleaned as often as is necessary to prevent the inside of the blades from becoming plugged with debris. This especially applies when spraying in grass orchards where mowing has just been completed. To clean the fans remove the inlet guards; the foreign matter can then be removed from the stationary fans by hand. The vanes should not be scraped with a screwdriver or similar object as damage to the coating will result causing corrosion of the fan blades. To replace the guards slide them back into position and replace the locking screw.

MACHINE WINTERIZING

It is important during cold weather (32ºF and below) that the TANK, PUMP, and CHEMICAL LINES are thoroughly DRAINED of all spray solution, thus preventing breakage due to freezing. Drain the sprayer by spraying it empty and then thoroughly rinse with water, referring to the "Drain and Clean Sprayer" section above.

Using approved antifreeze; circulate it continuously through the entire spray system for 10 minutes, insuring complete mixing of water and antifreeze. Booms should be manually drained or filled with antifreeze solution to prevent frost damage.

SERVICE AND MAINTENANCE INSTRUCTIONS

Before undertaking any service work make sure that you are familiar with what is to be done. Thoroughly read about the item in question before attempting to start work.

Carefully re-assembly of parts under clean conditions will result in longer life. Care should be taken to prevent dirt or grit from falling on machine surfaces, gaskets, or into the oil which is being used for re-assembly. All grease nipples and grease gun fittings should be clean before greasing the machine.

PRESSURE RELIEF VALVE

1. Remove the four cap screws and separate the body casting from the cap casting.
2. Remove the wing nut and spring assembly.
3. Slip the control stem out of the body casting.
4. Check the control stem for wear and replace if necessary.
5. Check the o-ring and Teflon bushing for wear and/or tearing. Replace if necessary.
6. Remove the flex-lock-nut from the valve stem to replace the valve. If the valve or valve plate is worn or rough, replace one or both pieces. ***Be sure to replace the flex-lock-nut and small o-ring if removed from the valve stem***.
7. To reassemble, slide the new o-ring over the stem and add the Teflon bushing, spring guides, spring and nut. Make sure the control stem has free movement and that it has been lightly oiled.

HYPRO AR-70 & AR-115

Before Running the Pump Ensure That:

1. Oil is halfway up the oil viewer. If necessary, top up to correct level with 20W or 30W motor oil.
2. The suction line is tightly screwed to the suction union and that the filter is always in place. Any air suction will lower the working efficiency of the pump.
3. Check air in compression cylinder. The ideal pressure in the top of the dome is one fifth that of the working pressure.
4. Open the pressure regulating valve, completely releasing all pressure. Run the pump for one to two minutes at zero pressure to ensure complete evacuation of air.
5. To adjust the working pressure, screw regulator in until desired pressure is reached.
6. It is important that the pump does not exceed 550 RPM. Above this speed no advantage in pressure or output is obtained and unnecessary wear and damage will result. Should the pump be used at higher speed than the above-mentioned one, the manufacturer declines all responsibility for it.

Maintenance:

1. After use, clean out the pump by running it through for a few minutes with clean water. This will prevent the formation of chemicals that could interfere with normal working. End with the suction line out of the water to ensure a complete emptying of the pump.
2. Owing to the particular acid-resisting material employed for valves and diaphragms and the full oil baths for every moving part, these pumps require no maintenance at all. From time to time check oil level and top up to correct level, if necessary.
3. ***Lubrication of the pump is essential!*** Change oil every season or twice a season for heavy use machines. To drain, turn the pump upside down, first removing the oil filler cap. Rotate the shaft by hand until oil stops flowing. Refill with approximately one quart 20W/30W motor oil. To ensure complete evacuation of air from the pump body, rotate the shaft by hand and slowly introduce the oil.
4. ***Examine diaphragms at the end of each season. Examine check valve springs at the end of each season.***
5. For winter storage drain pump completely, particularly the pipelines of the lower half compression cylinder and heads.

AGITATOR & GLAND PACKING

1. Replace the packing only when the liquid leak is excessive. A slight weep past the packing is desirable to lubricate and cool the gland. If there is a definite leak, the packing may be adjusted by tightening the gland bushing. ***Do not over-tighten these bushings as this causes over-heating of the packings.***
2. Before inserting the new packing, clean out any grease or dirt that may be present in the stuffing box.
3. When reassembling the packing, grease the packing material before replacing them.

SAFETY FIRST: Spray fumes are dangerous. Do not enter the tank for work on the agitator shaft without first making sure that plenty of ventilation is available. Use fans blowing air or an air compressor releasing air into the tank. A protective mask and a second man are desirable when work inside a spray tank is required.

CONTRA-ROTATING GEAR BOX

This gear box is designed to provide long trouble fee service. Qualified personnel should do any servicing work. Check and change the oil regularly.

CHAIN BOX

Initially the driving chain inside the gear box tends to stretch and thus may require adjusting after a few hours of "breaking in". The adjustment is made by varying the sprocket centers. The driving shaft flange housing has three slots in it with bolts holding it in place. The bottom bolt slot has an adjusting screw that will vertically raise or lower the sprocket. ***Loosen the three bolts and with the adjusting screw adjust the chain tension by checking the backlash in the chain.*** The chain would have only 1/8" of lateral motion.

FAN TELESCOPIC DRIVE SHAFT (POWER TUBE)

The parts most likely show signs of wear after long usage are bearing cap assemblies and cross blocks. Should looseness in the fit, load marking or distortion be observed, these parts should be replaced with a new cross block kit.

In the rare event of wear having taken place in the yoke cross holes, the holes will most certainly be oval, and the yokes must be replaced by a complete assembly.

The other parts likely to show signs of wear are the splined sleeve yoke, or splined stub. A total of .004" circumferential movement, measured on the outside diameter of the spline, should not be exceeded. If this limited is exceeded, a new complete power tube will be required.

Continued on Next Page

Disassembly

a) Remove all snap rings by pinching ears together with a pair of pliers & prying with a screw driver. If ring does not snap out of groove readily, tap end of bearing race to relieve the pressure against the ring. Support the shaft and with the yoke lug on top, tap yoke arms lightly.
b) Top bearing should begin to emerge, turn shaft over and remove with fingers. If necessary, tap bearing race from inside with small bar taking care not to damage bearing race. Repeat operation for opposite bearing.
c) The yoke can now be removed. Tap yoke with hammer to remove the two remaining bearing races. Wash all parts in cleaning solvent.

FAN TELESCOPIC DRIVE SHAFT (POWER TUBE)

Re-Assembly:

a) Insert cross block in yoke holes and using a drift, tap the bearing into position. Repeat operation for the other three bearings.
b) Replace snap rings. If cross block appears to bind, tap lightly. This will relieve any pressure of the bearings on the cross block.
c) When replacing a sliding splined sleeve yoke on the tube, ***be sure that the journals in sliding and fixed yoke are in line***. This can be checked by observing that arrows marked on splined sleeve yoke and splined stub shaft are in line.

AXLE ADJUSTMENT

The axle adjustment can be made very easily by removing the single bolt holding the wheel hub to the frame. By rotating the hub assembly 90^{o} turns, weight can be shifted forward or back, height; up or down. There are also axle options if you need something different please talk with your dealer or call us here at VICTAIR—HF HAUFF Company Inc. direct.

Maintenance Instructions for All Pumps

Maintenance

1. **After use, flush the pump with clean water.**
2. Hypro diaphragm pumps come with oil in the crankcase. **It is recommended that oil be changed after 40 hours of break-in operation and every three months or 500 hours, which ever comes first.**
   To drain oil from the pump, remove the oil drain plug, and rotate the shaft until the oil stops flowing out. To fill the pump with oil, slowly pour the oil into sight tube while turning the pump shaft. Turning the pump shaft purges all the air out of the crankcase. Always change oil when replacing diaphragms.
3. For winter storage or if a freezing condition will be encountered, flush pump with a 50/50 mixture of water and antifreeze.

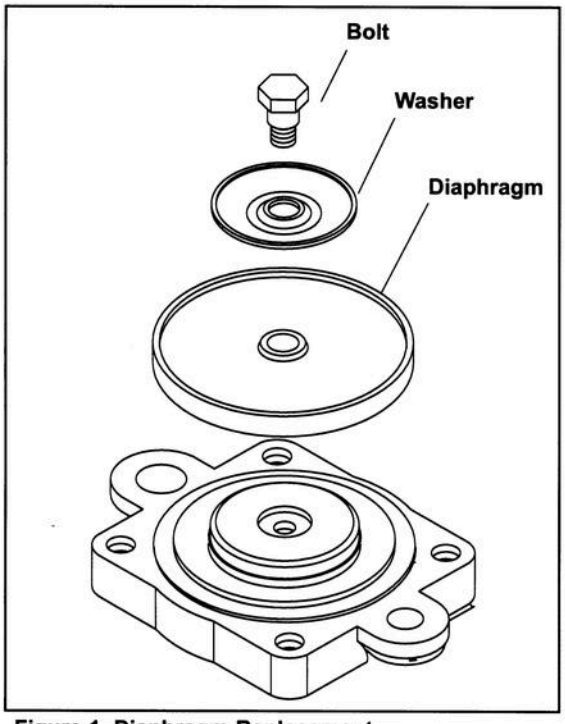


Figure 1. Diaphragm Replacement

Diaphragm and Valve Replacement

Valve & O-Ring Replacement:

1. Occasionally debris can cause the valves to not seat properly or damage the o-rings. To check for this problem, follow these steps.
2. Remove the pump manifold. Use a 17 mm box wrench (or adjustable wrench) to remove manifold nuts. With manifold removed, valves can readily be removed and checked for debris or wear.

Diaphragm Replacement:

Hypro recommends changing diaphragms every 500 hours or three months, whichever comes first.

1. Drain the oil from the pump by removing drain plug. Rotate the shaft to remove excess oil.
2. Remove the pump manifold according to Step 2 above.
3. Use a 19 mm box wrench (or adjustable wrench) to remove the diaphragm retaining bolt, support washer and diaphragm. To replace the diaphragms, order the appropriate repair kit.
4. Turn the crankshaft to bring the piston to its upstroke to replace the diaphragm. Use the down stroke to seat the new diaphragm into the sleeve groove. Install retaining washer and tighten nut.
5. Replace the pulsation dampener diaphragm by first bleeding the air from the dampener. Use a 13 mm box wrench to remove the bolts holding the dampener assembly together, then replace diaphragm. Recharge dampener to 20% of operation pressure.
6. Refill crankcase with oil. Rotate the shaft slowly forward and reverse to distribute oil, and fill to the proper level.

SPRAYER LUBRICATION

The importance of correct machine lubrication cannot be overstressed, particularly with the use of more concentrated chemical solutions. Follow the instructions below to obtain maximum machine life and efficiency.

Keep all oil clean and free of contaminates such as dirt and grit before using. All grease fittings should be clean prior to use.

The following are recommended lubricants:

Grease:	(lithium-base multipurpose-type) Use for agitator, power tube, wheel bearings, PTO shaft, jack shaft, and fan case hubs.
Oil:	(SAE 20W or 30W, Services CC, SE) Use for chain box, roller chains, valves, and AR Pumps.
Gear Oil:	(HD 80-90 Multipurpose, API-GL-5 Series) Use for contra-rotating gear box.

REQUIRED GREASE POINTS

1. **Hypro Pump**
   Grease one fitting on the crankpin bearing.

2. **Wheel Hub Bearings**
   Grease and repack at the beginning of each spray season.

3. **Fan Case Bearing Hubs**
   One fitting in each hub.

   IMPORTANT: After greasing, the ***fan cases must be rotated*** from side to side to insure even distribution of the grease. ***Repeat operation.***

4. **Fan Telescopic Drive Shaft (Power Tube)**
   Grease three fittings, one at each knuckle and one at the splined sleeve.

5. **Agitator Packing Gland**
   Grease one fitting at each end of the agitator shaft.

6. **PTO Shaft**
   Smear sliding telescopic sleeves with grease. Grease two fittings, one at each knuckle.

REQUIRED LUBRICATION POINTS

1. **Pumps**

   Make sure oil is at least halfway up on the fill glass. Change oil every 30 hours. Drain plug is located on the bottom of the pump. Fill with SAE 20W or 30W motor oil. Refer to the "Service & Maintenance" section on the AR pumps.

2. **Chain Box**

   Check to make sure oil is visible through the transparent oil viewer plug. Fill to the top of the viewer plug if necessary with 30W motor oil. (Oil capacity is approximately two quarts) Change oil every three months by removing the drain plug bolt in the base of the chain box. Replace with fresh oil by removing the oil breather and filling through the breather hole.

3. **Contra-Rotating Gear Box**

   Check to make sure oil is visible through the transparent oil viewer plug. Fill to the top of the viewer plug if necessary with HD 80-90 GL-5 gear oil. (Oil capacity is approximately one quart) Change oil every three months (middle of the season if used a lot) by draining through the drain plug and filling through the oil breather hole.

SERVICE & LUBRICATION CHART

CLEAN FANS OFTEN DURING A SPRAY SESSION.

Flush with water while at idle.

FAN CASE—Drain plug in bottom. Fill at breather

Fill to top of glass with SAE 90 wt. oil.

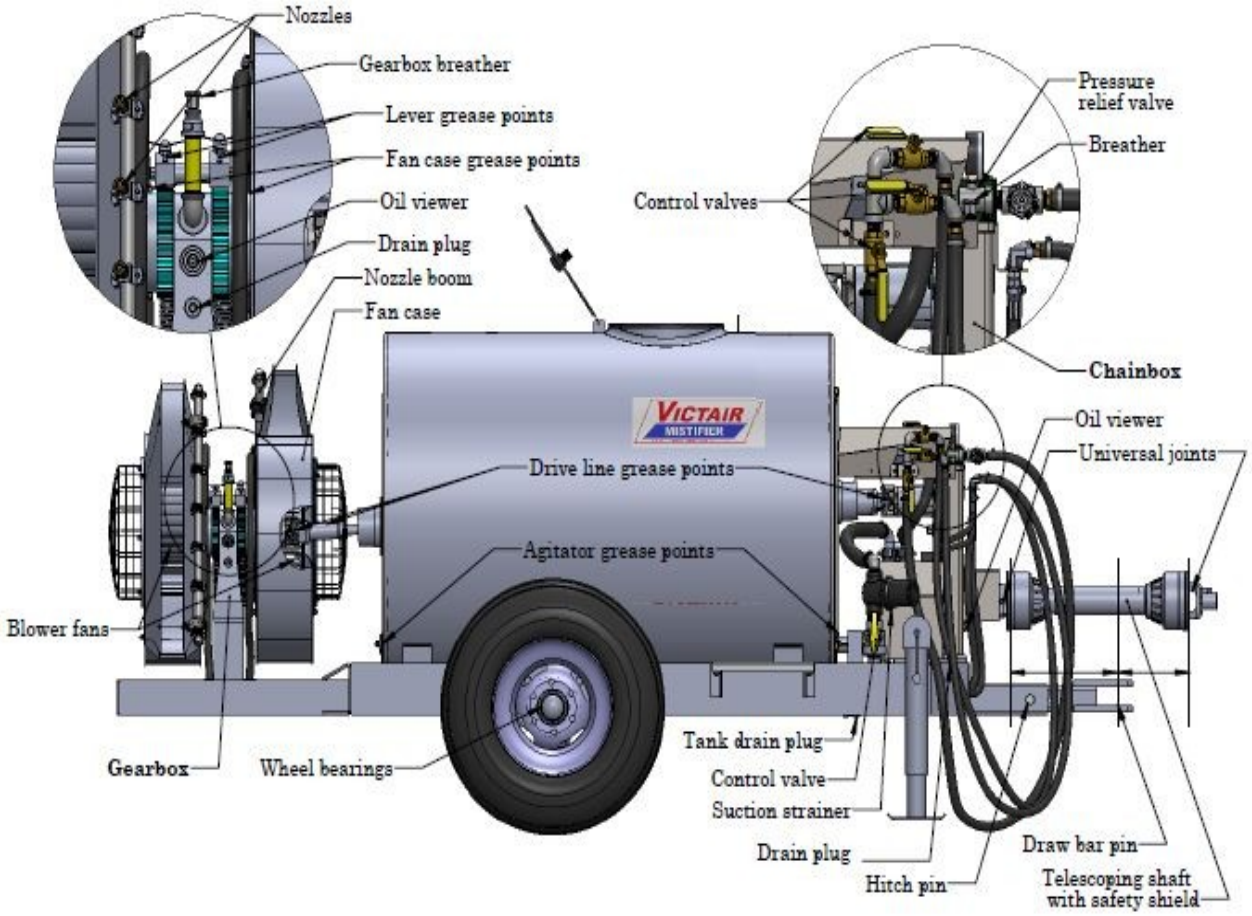
FAN CASE BEARING HUBS –Grease and rotate daily

DRIVELINE & U JOINTS—Grease daily

AGITATOR SHAFT –Lightly grease daily

PRESURE RELIEF VALVE– Oil control and wing nut often. Check for wear.

CHAIN BOX—Drain plug on bottom, fill oil through breather. Fill to top of glass. Use 30 wt. oil



PUMPS: Use SAE 20 or 30 Normal maintenance to change oil once per season. Heavy Use—2 times/year.

PTO SHAFT—U Joints and Slide of shaft should be greased daily along with the shaft safety cover.

ADJUST THE HITCH POINT to maintain equal distance from the hitch pin to the tractor and to the sprayer.

WINTERIZING THE SPRAYER

Drain the tank and suction strainer; add 1-2 gallons of antifreeze to the tank and circulate through the System for a few minutes spraying out of the booms. Leave the boom valve controls in open .

TROUBLE SHOOTING

INCORRECT NOZZLE OUTPUT

1. Output too high; worn nozzle discs, replace.
2. Output too low, nozzles blocked, clean pressure system and booms.
3. Output too high or low; incorrect tractor speed, relief valve setting, nozzle discs, or incorrect pressure setting.
4. Obstruction in delivery hose or spray boom; disconnect and clean out.
5. Suction strainer partially plugged.

PRESSURE DROP WITH VARIATION OF SPRAY OUTPUT

1. Pressure regulator setting wrong; gauge may be faulty.
2. Tank valve closed or partly closed; or tank empty.
3. Suction strainer plugged; remove and clean strainer screen.
4. Clogged suction system; remove plugs and flush water through pipes.
5. Air leak in suction line; check all suction hose, pipe and fittings.
6. Agitator paddle directly over tank sump; move paddle to one side of sump opening.
7. Pressure relief valve sticking; check out according to service instructions on pages 4-5.
8. Using over-sized nozzle discs; the total GPM capacity of nozzles must not exceed the GPM pump capacity.
9. Worn Nozzle discs; replace.

AR PUMP TROUBLESHOOTING

Symptom	Probable Cause(s)	Corrective Action
The Pump does not draw water.	One or more valves are seating improperly. Suction line is plugged or collapsed. Clogged strainer.	Remove valve and check for debris. Examine suction line. Clean strainer.
The liquid flow is irregular.	The charge in the pulsation damper is incorrect. One or more valves are seating improperly.	Check pressure in pulsation dampener (20% working pressure). Remove valve and check for debris. Examine the valve settings and clean them.
Output drops and the pump is noisy.	Oil level is too low.	Add oil to correct level (halfway up the sight tube).
Oil comes out of the discharge port or oil is a milky color.	One or more diaphragms split.	Remove manifold and heads. Drain oil and clean crankcase of water. Replace diaphragms, heads and manifold. Refill with oil.

SPRAYER CALIBRATION

USA

Gallons/Acre X MPH X Row Width in Feet / 500 = Gallons per Minute For Both Sides _____

Gallons/Minute (both sides) X 500 / Miles/Hour X Row Width in Feet = Gallons per Acre _____

Number of Feet Traveled in 1 Minute / 88 = 1 Mile per Hour

Metric

Liters/hectare X KM/H X Row Width in Meters / 700 = Liters per Minute For Both Sides _____

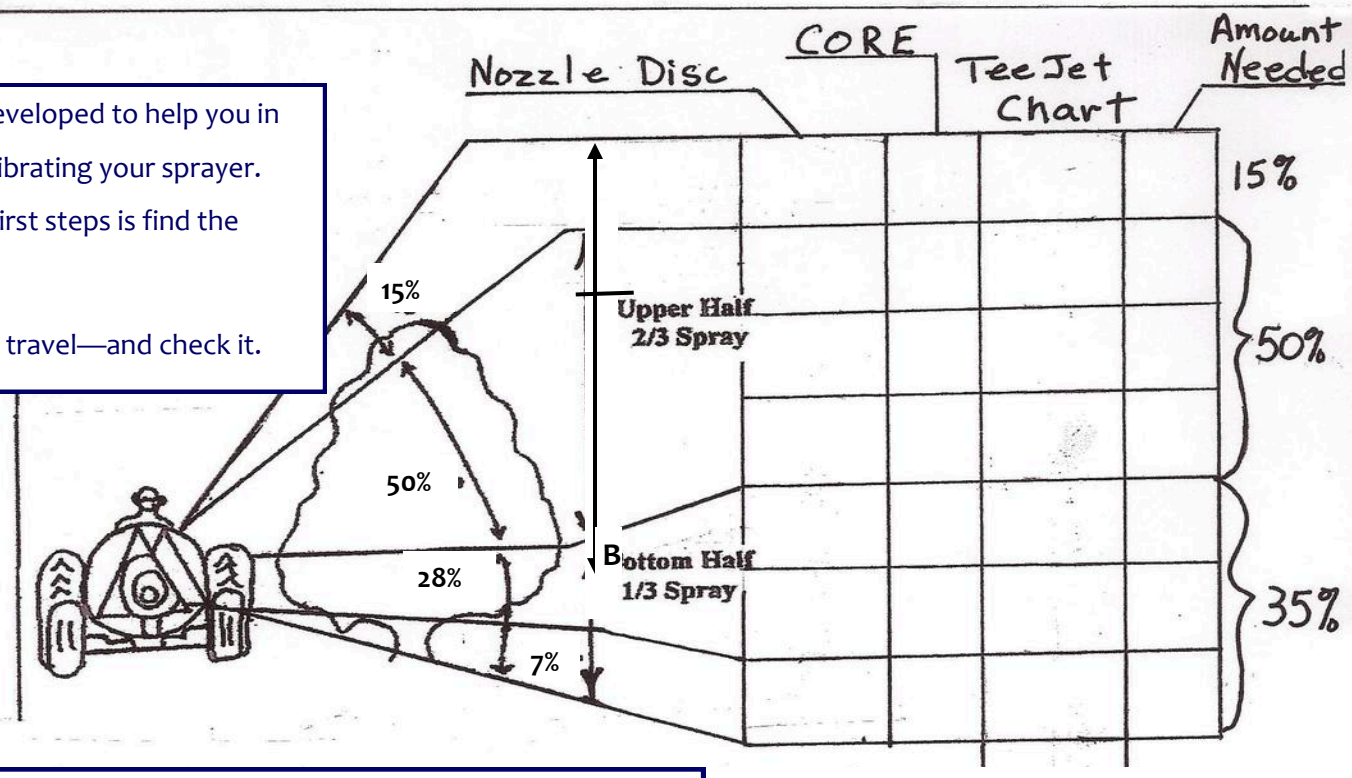
Liters/Minute (both sides) X 700 / KM/Hour X Row Width In Meters = Liters/Hectare _____

Number of Meters Traveled in 1 Minute / 16.66 = 1 KM per Hour

Total _____ /Minute Needed-----> _____ -:- 2 = _____ Per Side

This page developed to help you in properly calibrating your sprayer. One of the first steps is find the speed

you want to travel—and check it.



By using the Nozzle Chart on the next page you will be able to pick out the nozzle that best fits the needed amount of spray per position. Divide the total number of gpm per side by 50% -:- 3 will give you the approx. amount per nozzle in the middle section. Do the same for the top and bottom. Then closely match that amount with the amount per nozzle in the same pressure column. If you come out to 5% different or less it's good. Change nozzle size as needed to match closely the Tee Jet Chart.

PRESSURE_____

PERCENT DIFFERENT_____

Nozzle Arrangement

In calibrating a sprayer. The calibration is made with all the nozzles in play. If not all the nozzles are needed to cover smaller plants then nozzles may be plugged off and not used. This reduces the actual amount of gallons per acre used. However, for

the purpose of calibration -all nozzles should be used. For certain spray applications only part of the tree or vines may be sprayed

and any combination of nozzles may be used to suit the application. If the calibration is significantly off, tractor speed is usually the largest factor. Double check this, check of proper pressure and check for leaks. Nozzles may be selected from the chart

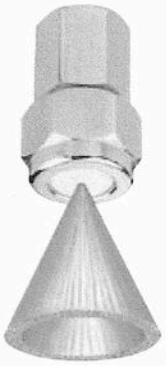
Typical Assembly with Ceramic Disc and Core



TeeJet Nozzle Body | 4514-NY Slotted Strainer* | Core | Disc | CP20230 TeeJet Cap

*Use CP20229-NY gasket when 4514-NY Nylon slotted strainer is not used.

Hollow Cone Spray Pattern
Produced by Cores #13, 23, 25, 45 & 46



Hollow Cone Type Spray Tips

			GPM												
			10 PSI	20 PSI	30 PSI	40 PSI	60 PSI	80 PSI	100 PSI	150 PSI	200 PSI	300 PSI	20 PSI	40 PSI	80 PSI
D1	DC13	.031"	—	—	.059	.066	.078	.088	.097	.115	.128	.152	—	51°	62°
D1.5	DC13	.036"	—	.057	.067	.075	.088	.098	.110	.127	.142	.167	38°	55°	66°
D2	DC13	.041"	—	.064	.075	.08	.10	.11	.12	.14	.16	.18	49°	67°	72°
D3	DC13	.047"	—	.071	.08	.09	.11	.12	.13	.16	.18	.20	53°	70°	75°
D4	DC13	.063"	.070	.09	.11	.12	.14	.16	.17	.20	.23	.27	69°	79°	83°
D1	DC23	.031"	—	—	.064	.072	.080	.096	.107	.124	.139	.164	—	47°	58°
D1.5	DC23	.036"	—	.064	.076	.086	.103	.117	.130	.155	.175	.210	34°	51°	62°
D2	DC23	.041"	—	.078	.092	.10	.13	.14	.16	.19	.21	.25	51°	63°	70°
D3	DC23	.047"	.065	.087	.10	.12	.14	.16	.18	.21	.24	.28	58°	69°	75°
D4	DC23	.063"	.082	.113	.14	.15	.19	.21	.23	.28	.32	.38	68°	82°	87°
D5	DC23	.078"	.095	.13	.16	.18	.22	.25	.28	.34	.38	.46	79°	89°	94°
D6	DC23	.094"	.112	.15	.19	.21	.26	.29	.32	.39	.45	.54	84°	93°	98°
D1	DC25	.031"	—	—	.088	.101	.122	.138	.156	.185	.210	.255	—	27°	43°
D1.5	DC25	.036"	—	—	.118	.135	.162	.185	.205	.245	.280	.33	—	38°	49°
D2	DC25	.041"	—	.12	.14	.16	.19	.22	.25	.29	.34	.41	39°	51°	58°
D3	DC25	.047"	.10	.14	.17	.19	.23	.26	.29	.35	.40	.48	52°	61°	67°
D4	DC25	.063"	.15	.21	.25	.29	.35	.40	.45	.54	.62	.75	67°	74°	80°
D5	DC25	.078"	.18	.25	.30	.35	.42	.48	.54	.65	.75	.90	73°	79°	84°
D6	DC25	.094"	.23	.32	.39	.44	.54	.62	.70	.85	.97	1.19	79°	85°	89°
D7	DC25	.109"	.26	.37	.45	.52	.63	.73	.81	.98	1.18	1.37	85°	91°	93°
D8	DC25	.125"	.31	.43	.53	.61	.75	.89	.97	1.19	1.36	1.68	91°	96°	97°
D10	DC25	.156"	.38	.54	.65	.76	.93	1.07	1.21	1.48	1.71	2.1	97°	102°	103°
D12	DC25	.188"	.46	.61	.80	.93	1.15	1.32	1.47	1.81	2.09	2.55	103°	109°	112°
D14	DC25	.219"	.51	.72	.88	1.03	1.26	1.47	1.65	2.02	2.34	2.89	108°	113°	114°
D1	DC45	.031"	—	—	—	.125	.148	.170	.190	.225	.257	.310	—	22°	34°
D1.5	DC45	.036"	—	—	.14	.16	.20	.23	.25	.31	.35	.43	—	33°	44°
D2	DC45	.041"	—	.14	.18	.20	.25	.28	.32	.38	.44	.53	32°	46°	55°
D3	DC45	.047"	—	.17	.20	.23	.28	.33	.36	.44	.51	.62	40°	53°	60°
D4	DC45	.063"	.18	.25	.31	.36	.43	.50	.56	.68	.78	.95	62°	69°	72°
D5	DC45	.078"	.23	.32	.39	.45	.55	.64	.71	.86	.99	1.22	67°	73°	76°
D6	DC45	.094"	.29	.41	.50	.58	.72	.83	.93	1.15	1.33	1.64	73°	79°	81°
D7	DC45	.109"	.33	.48	.59	.68	.84	.97	1.11	1.35	1.57	1.94	81°	86°	87°
D8	DC45	.125"	.41	.59	.72	.84	1.04	1.21	1.35	1.68	1.94	2.40	86°	90°	90°
D10	DC45	.156"	.54	.77	.94	1.10	1.35	1.57	1.77	2.18	2.50	3.10	90°	93°	93°
D12	DC45	.188"	.67	.95	1.17	1.36	1.68	1.95	2.20	2.69	3.11	3.80	97°	100°	102°
D14	DC45	.218"	.75	1.07	1.32	1.53	1.89	2.19	2.45	3.00	3.49	4.30	101°	104°	105°
D16	DC45	.250"	.86	1.25	1.54	1.79	2.20	2.57	2.89	3.54	4.11	5.20	108°	111°	112°
D1	DC46	.031"	—	—	—	.145	.178	.205	.23	.28	.32	.39	—	13°	15°
D1.5	DC46	.036"	—	—	—	.213	.260	.300	.33	.41	.46	.56	—	15°	17°
D2	DC46	.041"	—	—	.24	.27	.33	.37	.42	.50	.57	.68	—	18°	21°
D3	DC46	.047"	—	.23	.28	.32	.39	.45	.51	.61	.70	.86	14°	20°	24°
D4	DC46	.063"	.28	.39	.48	.56	.68	.78	.88	1.07	1.23	1.52	23°	29°	33°
D5	DC46	.078"	.38	.54	.66	.77	.94	1.10	1.25	1.50	1.73	2.13	33°	39°	42°
D6	DC46	.094"	.55	.78	.95	1.10	1.35	1.58	1.73	2.16	2.50	3.06	42°	48°	50°
D7	DC46	.109"	—	.98	1.22	1.39	1.72	1.97	2.22	2.73	3.15	3.85	48°	53°	56°
D8	DC46	.125"	—	—	1.59	1.84	2.25	2.62	2.93	3.60	4.17	5.05	—	60°	62°
D10	DC46	.156"	—	—	2.15	2.48	3.05	3.53	3.96	4.83	5.59	6.80	—	66°	68°

Note: Always double check your application rates. Tabulations are based on spraying water at 70°F (21°C).



CP26277-1-NY
Quick TeeJet® Cap
For ceramic disc and core.
See page 63 for ordering information.

How to order:
To order orifice disc only, specify disc number and material.

Examples:

DCER-2	–	Ceramic
D2	–	Hardened Stainless Steel
DE-2	–	Stainless Steel
DVP-2	–	Polymer

To order core only, specify core number and material.

Examples:

DC13-CER	–	Ceramic
DC13-HSS	–	Hardened Stainless Steel
DC13-AL	–	Aluminum
DC13	–	Brass
DC13-NY	–	Nylon

STRAINER NOTE: For nozzles using orifice disc numbers 1, 1.5 and 2, or core numbers 31 and 33, slotted strainer number 4514-20 equivalent to 25 mesh screen size is required. For all other larger capacity discs and cores, slotted strainer number 4514-32 equivalent to 16 mesh screen size is required.

PARTS SECTION

PARTS ORDERING

Your Victair dealer will carry the service parts required for your machine. However, in the event that certain parts are not available, all orders will receive prompt handling and errors will be reduced to a minimum by observing the following suggestions:

1. Print or type orders.
2. Date orders.
3. Give full name and address of party ordering parts.
4. Give full name and address of party receiving goods, if a direct shipment.
5. Specify shipping instructions; i.e. via freight, bus, UPS, parcel post, etc.
6. Indicate the quantity of the item desired.
7. State part number, followed by the complete part name.
8. Assign one purchase order number to an order. (Separate shipments, separate orders)
9. Sign the order.

RETURN GOODS

No equipment may be returned without the written permission from a factory representative. Goods returned for replacement or credit must be with the transportation prepaid and accompanied by a copy of the written permission from the factory representative with the following information:

1. Reason for returning.
2. Factory sales order, invoice number, and date.
3. Model and serial number.

ABOUT YOUR SPRAYER

Date of Sale	
Serial Number	
Tank Size	
Agitator Shaft Length	
Pump Size	
Tire Size	
Hub	
Type of Agitation	
Pressure Regulator	

Pump Drives & Agitator Chain Drive



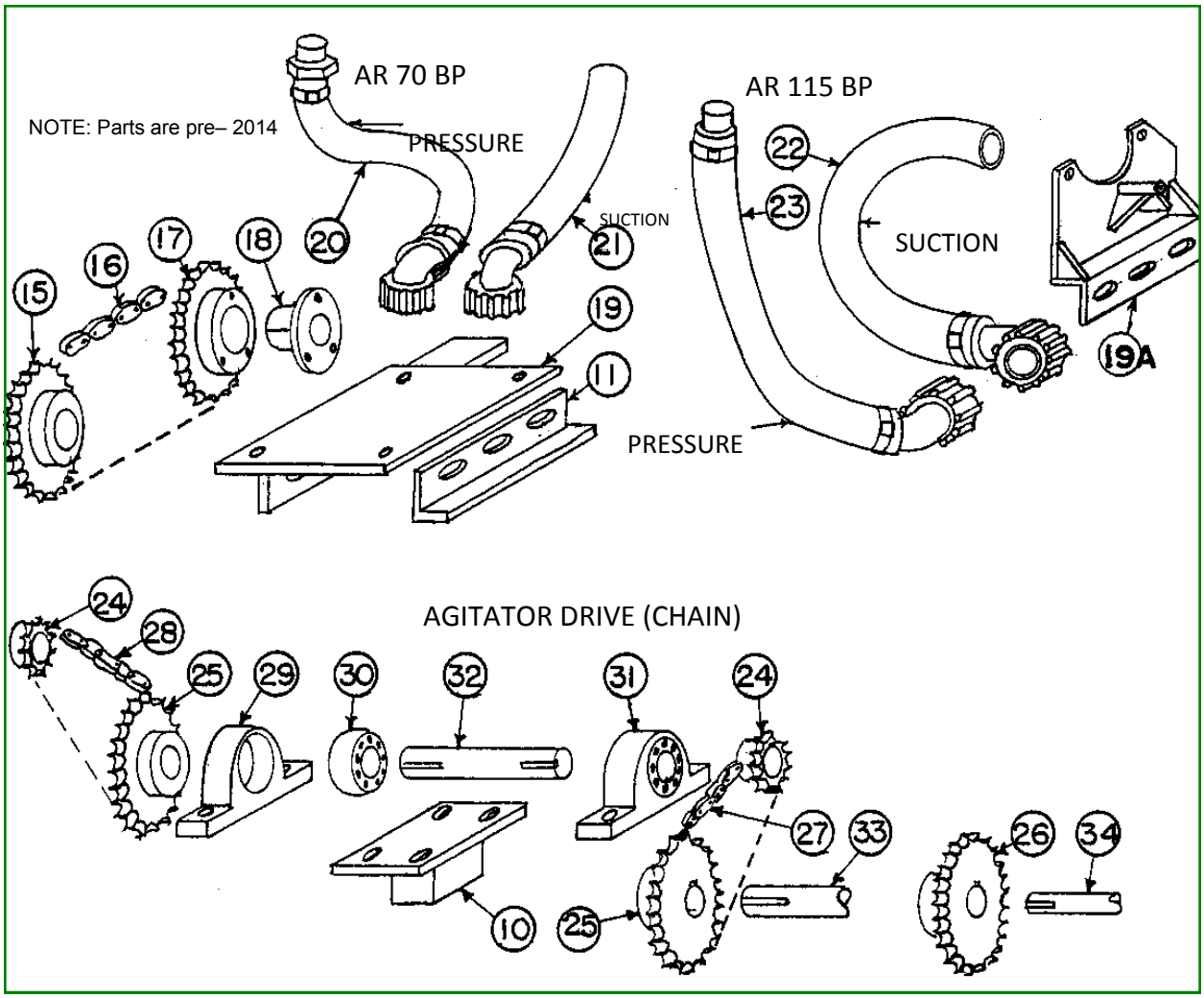
AR 70 PUMP



AR 115 PUMP

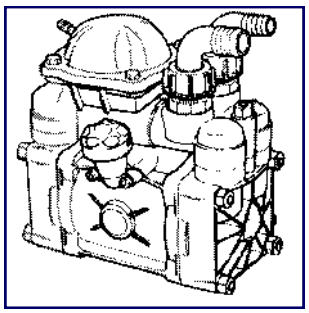
#	PART #	REQ	DESCRIPTION
1	16001	1	PRESSURE HOSE PM-90
2	16002	1	SUCTION HOSE PM-90
3	15081C	2	SPROCKET 18T/1"
4	15088	1	CHAIN PM-90
5	15086C	1	CHAIN HYPRO
6	16003	1	PRESSURE HOSE HYPRO
7	16004	1	PRESSURE PLUMBING HYPRO
8	3375-3	1	SURGE TANK
9	16005	1	SUCTION HOSE HYPRO
10	15095	1	AGITATOR DRIVE PEDESTAL (CHAIN)
11	15092	1	PUMP MOUNT BRACKET
12	131032	1	PM-90 SHAFT
13	15080	1	PUMP PLATE PM-90
14	15083	1	PUMP MOUNT HYPRO
15	15049	1	SPORCKET 24T AR PUMP
16	15048	1	CHAIN AR PUMP
17	15047	1	SPROCKET 24TL
18	15046	1	TAPER LOCK P-1
19	15096	1	PLATE AR PUMP
19A	15096A	1	PLATE AR PUMP
20	16006	1	PRESSURE HOSE AR-70
21	16007	1	SUCTION HOSE AR-70
22	16008	1	SUCTION HOSE AR-115
23	16009	1	PRESSURE HOSE AR-115
24	15082	2	SPROCKET 12T/1"
25	15081	2/1	SPROCKET 24T/1"
26	15085	1	SPROCKET 24T/3/4"
27	15089A	1	CHAIN CST
28	15087A	1	CHAIN CECS
29	15090	2	BEARING HOUSING
30	15091	2	BEARING INSERT
31	15094	2	BEARING
32	15084	1	SHAFT
33	15056	1	AGITATOR SHAFT 1"
34	15057	1	AGITATOR SHAFT 3/4" SS

Pump Drives & Agitator Chain Drive

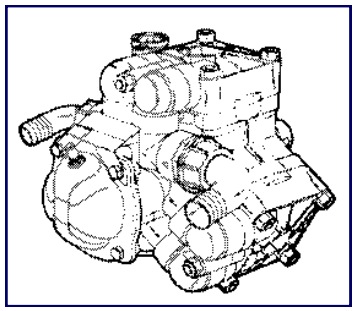


VICTAIR MISTIFIER
PARTS CHART

2921 Sutherland Drive
Yakima, Washington 98903
Phone: 509-248-0318
Fax: 509-248-0914
E-mail: hfhauff@gmail.com



AR 70 PUMP



AR 115 PUMP

For Part Descriptions on this page refer back to previous page

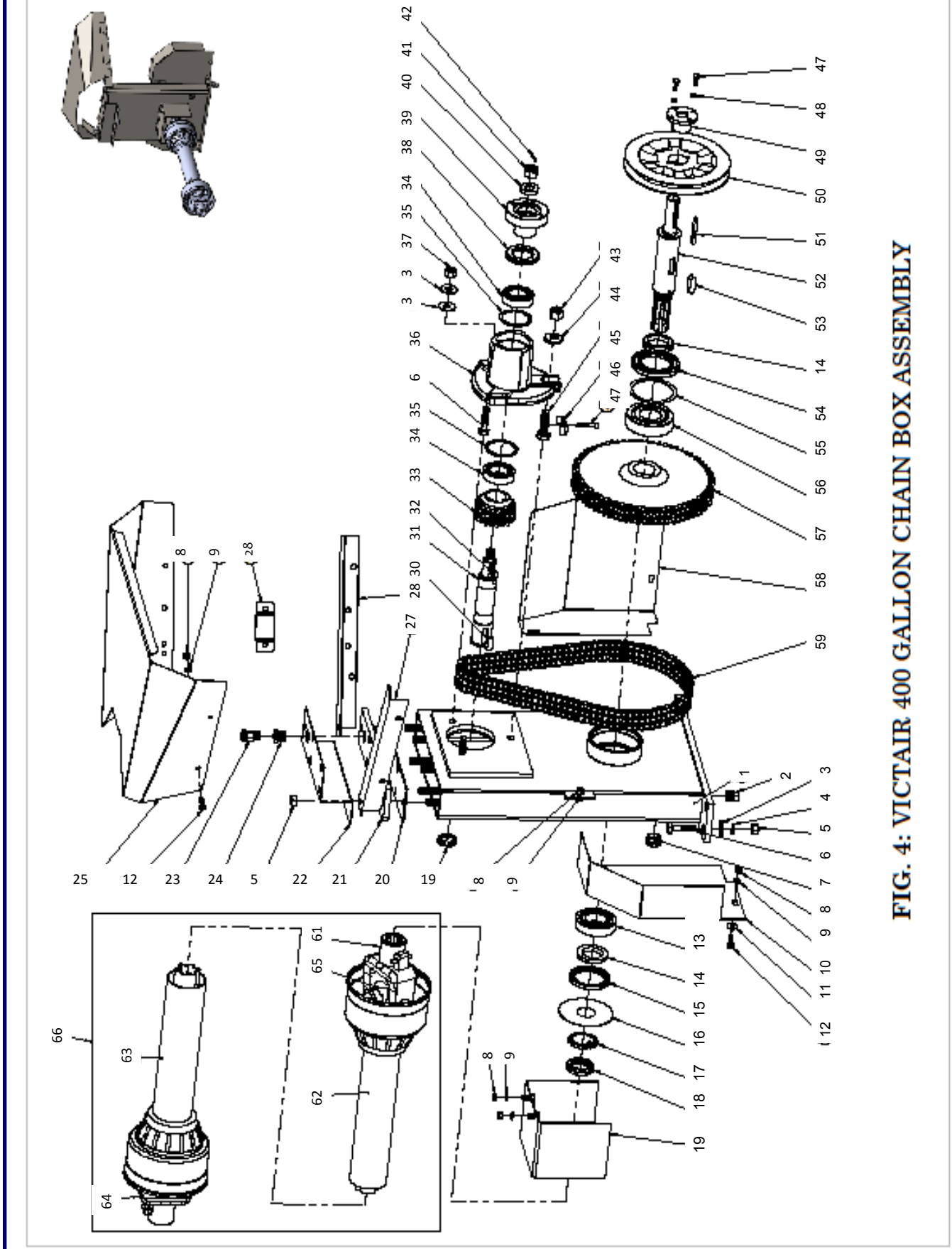
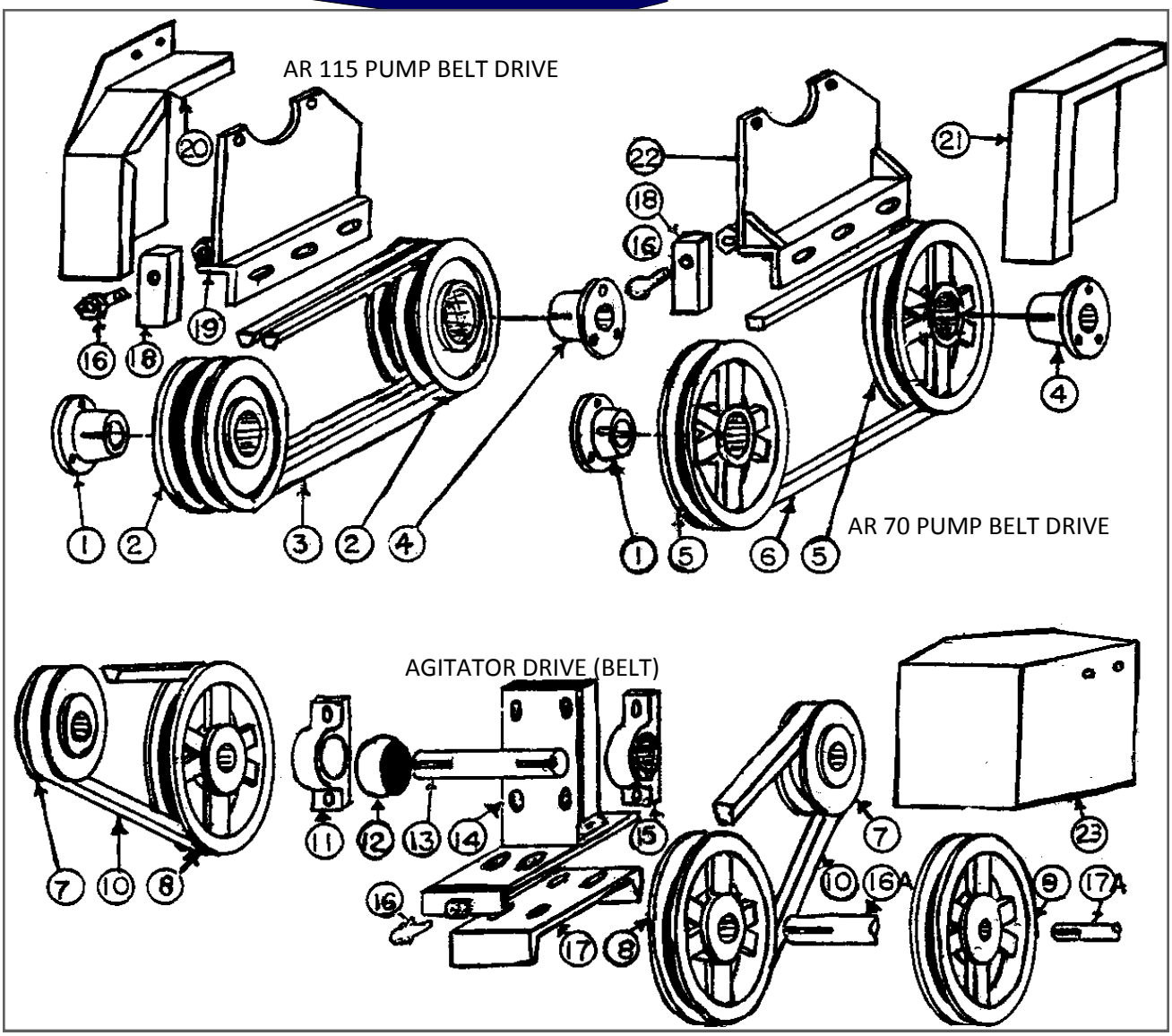


FIG. 4: VICTAIR 400 GALLON CHAIN BOX ASSEMBLY

CHAIN BOX PARTS & DESCRIPTIONS

ITEM #	PART #	DESCRIPTION	QTY		ITEM #	PART #	DESCRIPTION	QTY
1	14574	CHAIN BOX	1		35	14560	SNAP RING	2
2	16020A	PLUG 1/2 NPT	1		36	14542	BEARING HOUSING	1
3	FW-12	FLAT WASHER 1/2	8		37	N-NL-12-13	NYLOCK NUT 1/2	2
4	LW-12	LOCK WASH 1/2	4		38	14564	SEAL	1
5	N-12-13	NUT 1/2	10		39	14553	DRIVE FLANGE	1
6	B-122-13	BOLT 1/2x2.00	6		40	14561	WASHER	1
7	14595	OIL VIEWER	1		41	N-NC-5/8-18	CASTLE NUT 5/8	1
8	N-516-18	NUT 5/16	10		42	14611	COTTER PIN	1
9	LW-516	LOCK WASHER 5/16	10		43	N-NL-58	NYLOCK NUT 5/8	1
10	15002	PUMP GUARD	1		44	FW-58	FLAT WASHER 5/8	1
11	FW-516	FLAT WASHER 5/16	4		45	14562	BOLT 5/8x2 W/ 1/4	1
12	B-51634-18	BOLT 5/16x3/4	10		46	14543	BRACKET	1
13	14565	BEARING	1		47	SCR-14-15-28	SCREW 1/4x1.5	1
14	14567	SEAL RUNNER	2		48	B-1434-20	BOLT 1/4x3/4	2
15	14568	SEAL	1		49	LW-14	LOCK WASHER 1/4	2
16	14600	DUST PLATE	1		50	15046	TAPER LOCK P-1	1
17	13461	TAB WASHER	1		51	15156	SHEAVE	1
18	13460	LOCK NUT	1		52	72S820	KEY 1/4x2.25	1
19	14585	PTO GUARD	1		53	14731	BOTTOM SHAFT	1
20	14602	INSPECTION CAP	1		54	72S12/16	KEY 0.5x0.385x1.00	1
21	14606	GASKET	1		55	14741	SEAL	1
22	14742	TOP PLATE	1		56	12481	SNAP RING	1
23	14744	HOSE HOLDER	1		57	14597	BEARING	1
24	116S6/42	BUSHING	1		58	13110	SPROCKET 72T	1
25	13207	BREATHER	1		59	15001	CHAIN GUARD	1
26	16004	PUMP COVER	1		60	13754A	TRIPLE CHAIN	1
27	15003L	COVER MOUNT L	11		60	13754B	CONNECTING LINK	
28	15003R	COUVER MOUNT R	1					
29	15093	FENDER BRACKET	1					
30	72S14/12	KEY 7/16x1.06	1					
31	14554	TOP SHAFT	1					
32	72S8/9	KEY 1/4x1.00	1					
33	13108	SPROCKET 20T	1					
34	14559		2					

PUMP—AGITATOR BELT DRIVE



#	PART #	REQ	DESCRIPTION
1	15150	1	TAPER BUSHING
2	15153	2	SHEAVE
3	15160A	2	MATCHED BOLTS
4	15151	1	TAPER BUSHING
5	15158	1	SHEAVE
6	15161	1	BELT
7	15155	2	SHEAVE
8	15156	2	SHEAVE
9	15157	1	SHEAVE
10	15160	2	BELT
11	15090	2	BEARING HOUSING
12	15091	2	BEARING INSERT
13	15084	1	SHAFT

#	PART #	REQ	DESCRIPTION
14	15095A	1	BELT BEARING BRACKET
15	15094	2	BEARING COMPLETE
16	15018	2	BELT TIGHTENER
16A	15056	1	SHAFT 1" SS
17	15019	1	BRACKET BASE
17A	15057	1	SHAFT 3/4" SS
18	15005	1	TIGHTENER BRACKET
19	15096C	1	AR-100 PUMP BRACKET; BELT
20	15002A	1	AR-100 BELT BUARD
21	15002B	1	AR-60 BELT GUARD
22	15096B	1	AR-60 PUMP BRACKET; BELT
23	15002C	1	AGITATOR BELT COVER

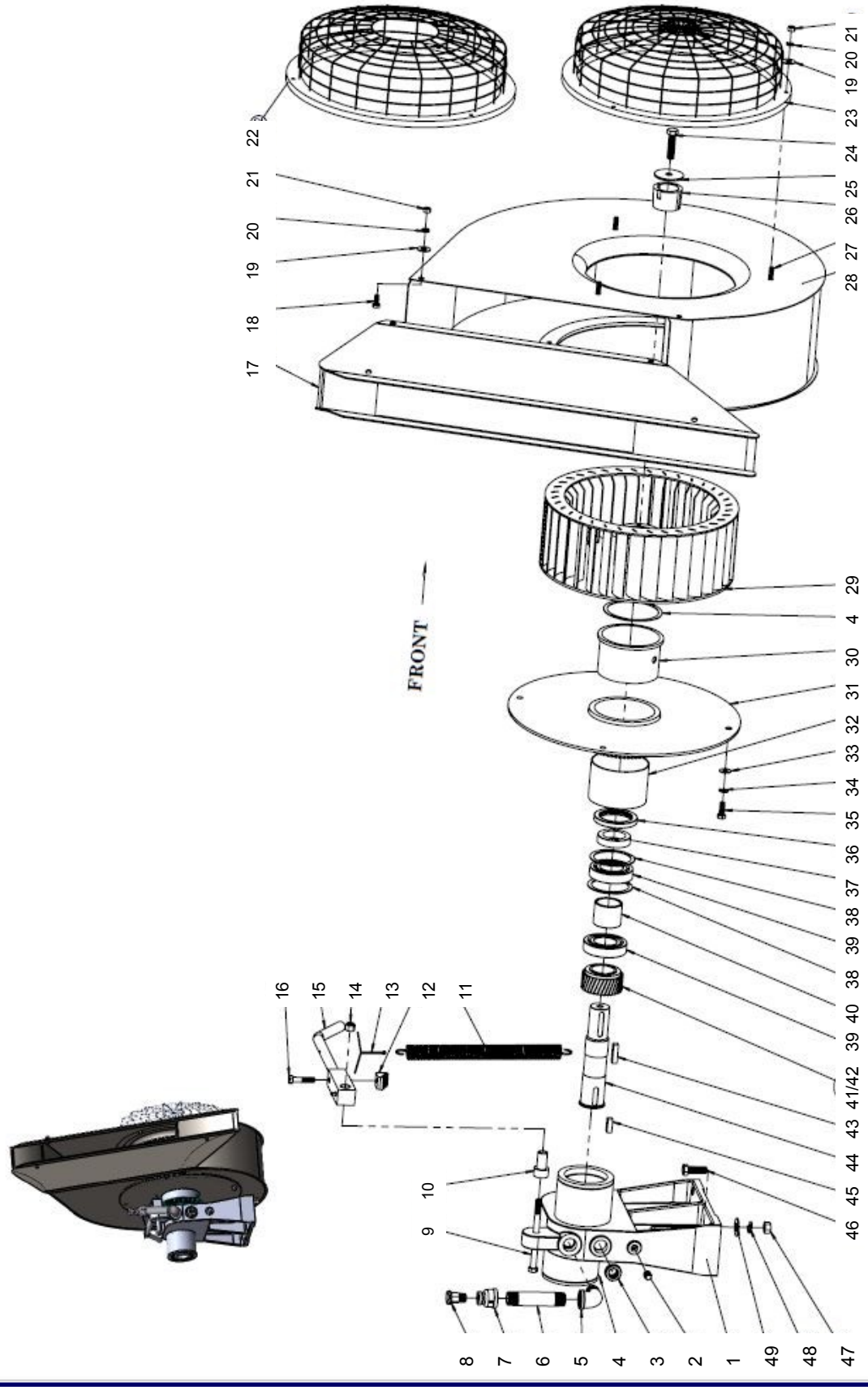


FIG. 3: VICTAIR 400 GALLON GEARBOX ASSEMBLY

FAN GEARBOX ASSEMBLY

ITEM #	PART #	DESCRIPTION	QTY		ITEM #	PART #	DESCRIPTION	QTY
1	14552	GEAR HOUSING	1		26	13905	TAPER LOCK	2
2	110SAZ	DRAIN PLUG	1		27	B-5161-18	BOLT 5/16"-x1"	6
3	14595	OIL VIEWER	1		28	14649	FAN HOUSING	2
4	14570	SNAP RING	2		29	13847	IMPELLER	2
5	P-34-90-SE	ELL	1		30	15038	BUSHING	2
6	P-34-412-NP	RISER PIPE	1		31	14573	HUB PLATE	2
7	P-34-38-BR	REDUCER	1		32	15037	SLEEVE	2
8	13207	BREATHER	1		33	FW516	FLAT WASHER 5/16	8
9	26S3W38CA	BOLT 7/16"-20x5 1/2"	1		34	LW-38	LOCK WASHER 3/8	8
10	14738	ARM BUSHING	2		35	B-381-16	BOLT 3/8"x1	8
11	14609	SPRING	2		36	14568	SEAL	2
12	14737	GEAR COG	2		37	14567	SEAL RUNNER	2
13	14610	COTTER PIN	2		38	14569	SNAP RING	4
14	N-NL-716-20	NYLOCK NUT 7/16"	1		39	14565	BEARING	4
15	14736	ARM	2		40	14566	SPACER	2
16	B-38134-16	BOLT 3/8"x1 3/4"	2		41	13843A	GEAR LH	1
17	14808	AIR OUTLET	2		42	1384B	GEAR RH	1
18	B-51634-18	BOLT 5/16x3/4	8		43	72S9/11	KEY 3/8" x 1 1/2"	2
19	FW-38	FLAT WASHER 3/8	14		44	13844	SHAFT	2
20	LW-516	LOCK WASHER 5/16	14		45	72S9/10	KEY 3/8"x1 1/16"	2
21	N-516-18	NUT 5/16	14		46	B-12112-13	BOLT 1/2"x1 1/2"	4
22	14621A	FRONT SCREEN	1		47	N-12-13	NUT 1/2	4
23	B-122-20	REAR SCREEN	1		48	LW-12	LOCK WASHER 1/2	4
24	40S8F10CA	BOLT 1/2"x2	2		49	FW-12	FLAT WASHER 1/2	4
25	10046	SPACER WASHER	2					

#	PART#	REQ	DESCRIPTION
1	2201-1	14	NOZZLE BLANK
2	SS-CP1325		NOZZLE CAP BRASS
3	SN-D6HSS		#6 NOZZLE DISC HSS
3	SN-D8HSS	14	#8 NOZZLE DISC HSS
4	SN-DC45	14	CORE #45 NY
5	SN-4514-NY-10	2	SLOTTED STRAINER NY
6	16019	2	7 NOZZLE BOOM PVC 1/2"
6	16019A	1	7 NOZLE BOOM PVC 3/4"
6	16019B	2	2 BOOM SET W/NOZZLE
6	16019C	4	BOOM W / NOZZLE HOLDER
7	16020	4	PLUG 3/8" NPT
7	16020A	4	PLUG 1/2" NPT
8	15031A	4	BOOM BRACKET
9	15032	4	BOOM CLAMP
10	36977	14	EYELET NOZZLE BODY 1/2" ASSY
10	37052-2	14	SEAL NOZZLE BODY
11	16018	2	3 WAY VALVE
12	70103	2	BALL VALVE
13	16015	1	3 WAY CONTROL
14	16016	1	2 WAY CONTROL
15	15093	1	FENDER BRACKET
16	33782-41	2	BARB 1/8" NPT X 1/4" HOSE
16	33782-22	2	BARB 1/2" NPT X 3/8" HOSE
16	33782-19B	2	BARB 1/2" NPT X 1/2" HOSE
16	33782-26	2	BARB 1/2" NPT X 5/8" HOSE
16	33782-37	2	BARB 1/2" NPT X 3/4" HOSE
16	33782-20	2	BARB 3/4" NPT X 3/4" HOSE
17	111002A	1	GUAGE 300 PSI
17	111002B	1	LIQUID GUAGE 200 PSI
17	111002C	1	LIQUID GUAGE 500 PSI
18	3350-0050	1	INLINE STRAINER
19	1700-1	1	GASKET BUENA-N 1 1/4"
20	3800-0031	1	20 MESH SS



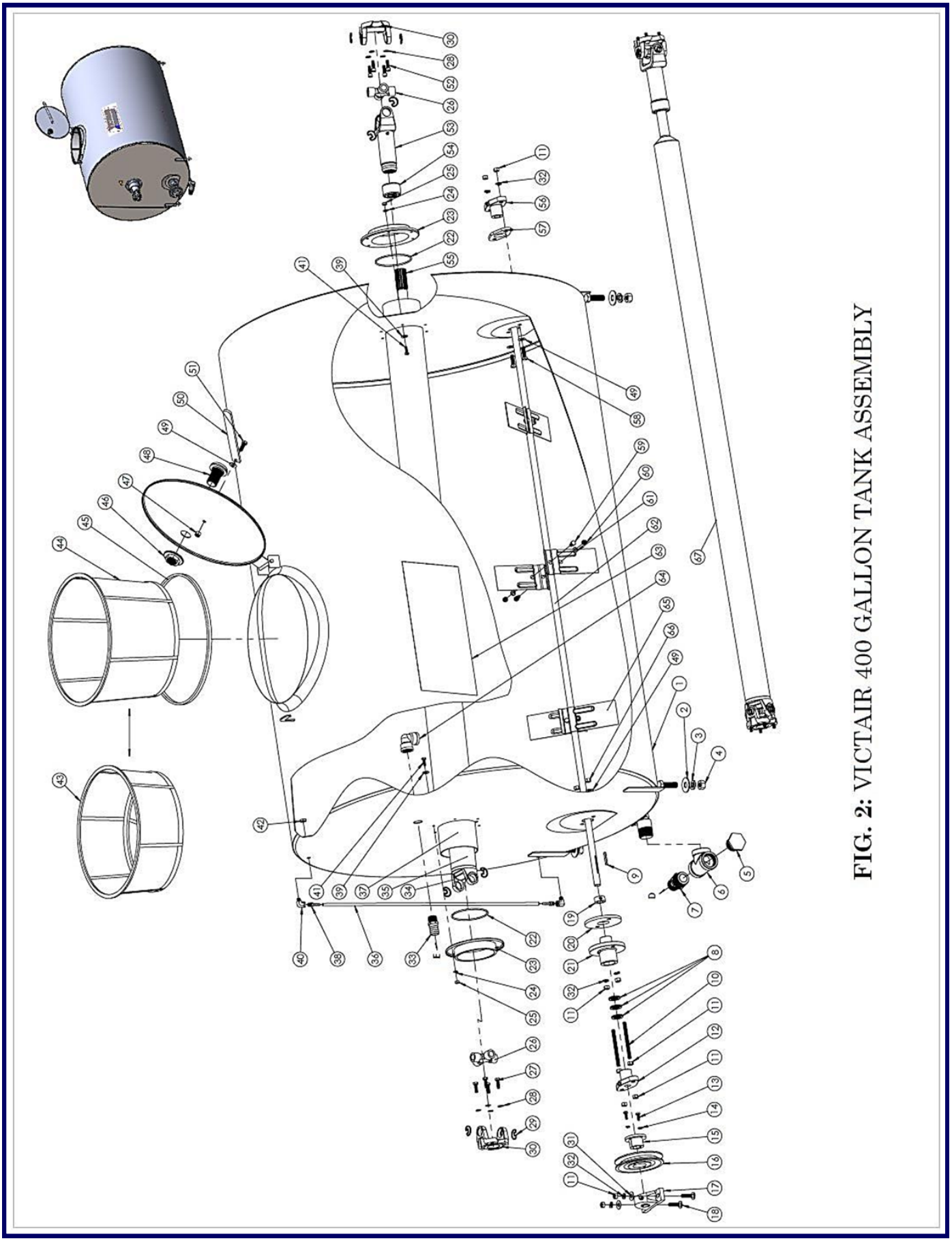


FIG. 2: VICTAIR 400 GALLON TANK ASSEMBLY

Victair Tank Assembly 400 Gallon—Other Tank Sizes Similar

Item #	Part Number	Description	QTY		Item#	Part Number	Description	QTY
1	15605	Tank 400 Gallon	1		35	K13GB18	Yoke Tube Assy. w/34,53,54,55	1
2	FW-58	Flat Washer 5/8	4		36	15077	Sight Tubing 400 gal.&other sizes	1
3	LW-5/8	Lock Washer 5/8	4		37	15065	Tunnel Tube	1
4	N-58-11	Nut 5/8-11	4		38	16010	Barb Fitting 1/8" NPT	2
5	17304	Poly Plug 1 1/4 NPT	1		39	FW-SS-14	SS Flat Washer	12
6	17200	Poly Tee 1 1/4 Tee	1		40	16012	Elbow 1/8"NPT	2
7	17290	Poly Barb 1 1/4 x 1 1/4	1		41	B-SS-1434-20	SS Bolt 1/4" x 3/4" x 20	12
8	15053	Bearing Packing 3/4"	3		42	16013	1/8"NPT	2
9	73S719	Key 3/16"x 1 1/2"	1		43	15051	Shallow Strainer	1
10	B-SS-38-114	SS Bolt 3/8"x1 1/4"	2		44	15051A	Filler Strainer	1
11	N-38-16	Nut 3/8x16	10		45	15051B	Filler Seal	1
12	15110	Packing Gland 3/4"	1		46	15141	Lid and Flange Nut	1
13	B-1434-20	Bolt 1/4"x1 1/2" x 20	2		47	N-NL-38-24	SS Nylock Nut 3/8-24	1
14	LW-14	Lock Washer 1/4"	2		48	15142	Breather Vent	1
15	15046	Taper Lock P1	1		49	FW-SS-38	SS Flat Washer 3/8"	5
16	15154	Sheave	1		50	15143	Lid Handle	1
17	15094	Bearing	1		51	B-SS-381-24	SS Bolt 3/8"x1 x 24	1
18	40S8F10CAB	Carriage Bolt 3/8"x1 1/2"x16	2		52	15110	Allen Hd Cap Screw 5/16"x1"x 18	4
19	15064	SS Set Collar 3/4"	1		53	K1GB10	Drive Line Tube	1
20	15107	Packing Bearing Gasket	1		54	K1DCAP	Drive Line Crease Cap	1
21	15102	Packing Bearing	1		55	See #53	Spline Shaft for Driveline	1
22	1562	O-Ring	2		56	15104	End Bearing 3/4"	1
23	15061	Flange	2		57	15108	End Bearing Gasket	1
24	LW-14	Lock Washer 1/4"	12		58	B-SS-38114-16	SS Bolt 3/8"x1 1/4 "x 16	2
25	N-14-20	Nut 1/4" x 20	12		59	B-SS-51634-18	SS Bolt 5/16"x 3/4" x 18	6
26	K5LGB80	Cross Block Kit w/33	2		60	N-SS-516	SS Nut 5/16"	6
27	B-5161-18	Bolt 5/16"x1"x20	4		61	LW-SS-516	SS Lock Washers 5/16"	6
28	15111	Star Washer 5/16"	8		62	15057	Agitator Shaft 3/4"	1
29	K5LGB80S	Snap Ring for Cross	8		63	15020	Mistifier Decal	2
30	14553	Drive Flange for Yoke	2		64	PF-P-34x34E	Elbow 3/4"x 3/4"	1
31	FW-38	Flat Washer 3/8"	2		65	15060	Paddle for 3/4" shaft	4-6
32	LW-38	Lock Washer 3/8"	6		66	N-SS-38-16	SS Nut 3/8" x 16	2
33	PF-HB-B-34-1	Barb 3/4 NPT x 1" Hose	1		68	15619	Driveline Complete Assy.	1
34	K18WY40	Welded Yoke w/35,53,54,55	1		69			

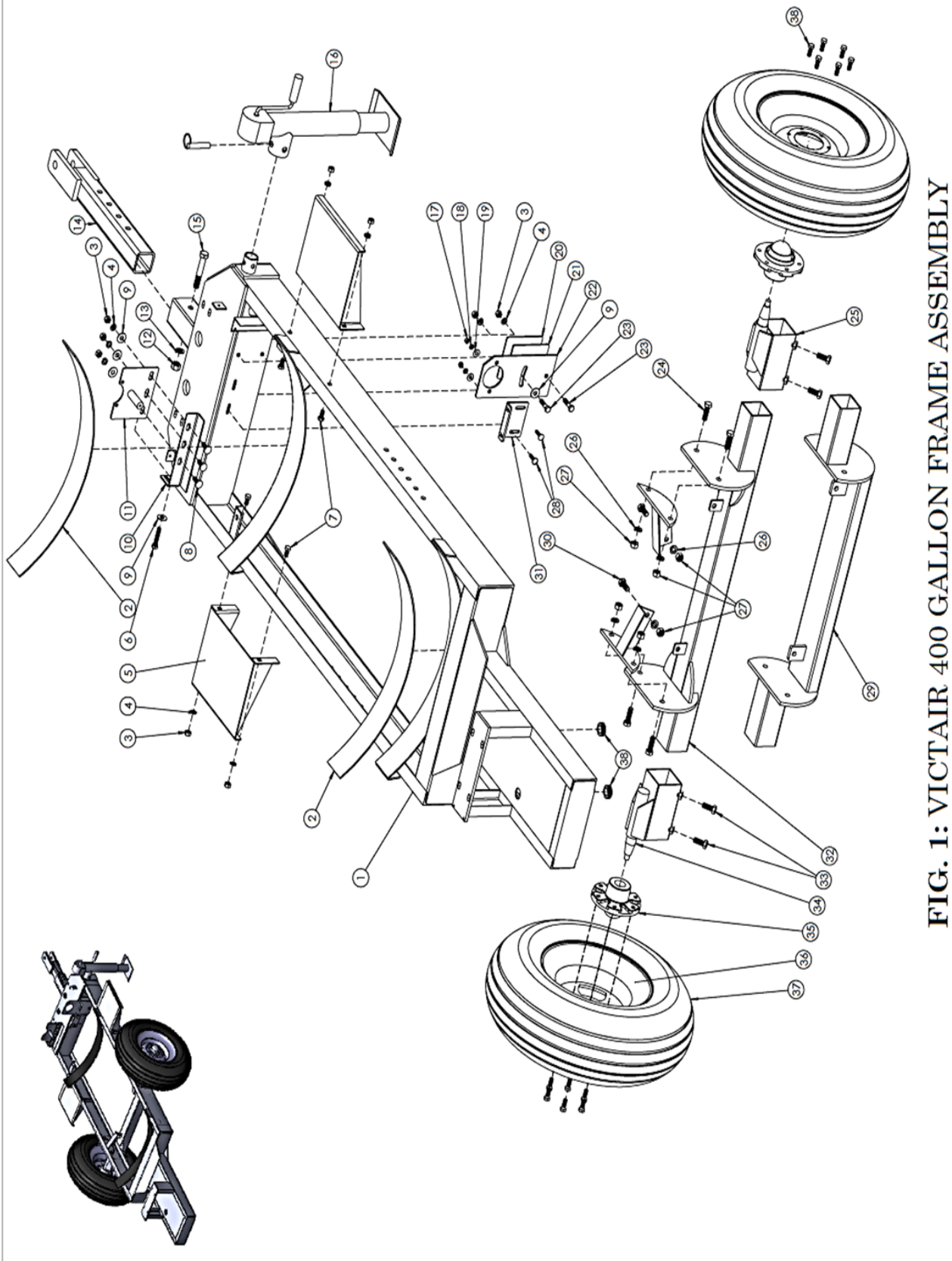


FIG. 1: VICTAIR 400 GALLON FRAME ASSEMBLY

400 GALLON FRAME ASSEMBLY

ITEM #	PART #	DESCRIPTION	QTY		ITEM #	PART #	DESCRIPTION	QTY
1	15010A	MAIN FRAME 400	1		20	14380	OFFSET SPACER 1/4	1
2	15017	SADDLE PAD	2		21	15220	HYD. MOTOR BKT.	1
3	N-12-13	NUT 1/2 - 13	9		22	B-122-13	BOLT 1/2 - 13 X 2.00	2
4	LW-12	LOCK WASHER 1/2	9		23	B-582-11	BOLT 5/8 - 11X2.00	4
5	15006	FOOT STEP	2		24	0613718R	RIGHT SPINDLE ASSY	2
6	B-12212-13	BOLT 1/2 - 13X2.50	1		25	LW-58	LOCK WASHER 5/8	6
7	B-121-13	BOLT 1/20-13X1.00	4		26	N-58-11	NUT 5/8 - 11	6
8	B-CB-1215-13	CAR. BOLT 1/2 - 13 X 1.50	3		27	B-CB-3815-16	CAR. BOLT 3/8 - 16X1.5	2
9	FW-12	FLAT WASHER 1/2	5		28	15230	DROP AXLE	1
10	15210	AR70 PUMP BKT	1		29	B-5815-11	BOLT 5/8 - 11X1.5	2
11	N-34-10	NUT 3/4 -10	1		30	15215	BEARING BRKT	1
12	LW-34	LOCK WASHER 3/4	1		31	15231	STRAIGHT AXLE	1
13	15550	HITCH	1		32	B-5815-18	BOLT 5/8 -18X1.50	4
14	60F8S10CA	BOLT 3/4 - 10X4.50	1		33	0613718L	LEFT SPINDLE ASSEMBLY	2
15	15022	JACK	1		34	Q719	HUB COMPLETE	2
16	N-38-16	NUT 3/8 16	2		35	013010	WHEEL 15 INCH	2
17	LW-38	LOCK WASHER 3/8	2		36	T11L X 15	TIRE 11L - 15SL	2
18	FW-38	FLAT WASHER 3/8	2		37	15410	HOSE GROMMET	2
19	14351	OFFSET SPACER 179	1		38	0613717	LUG BOLT	12

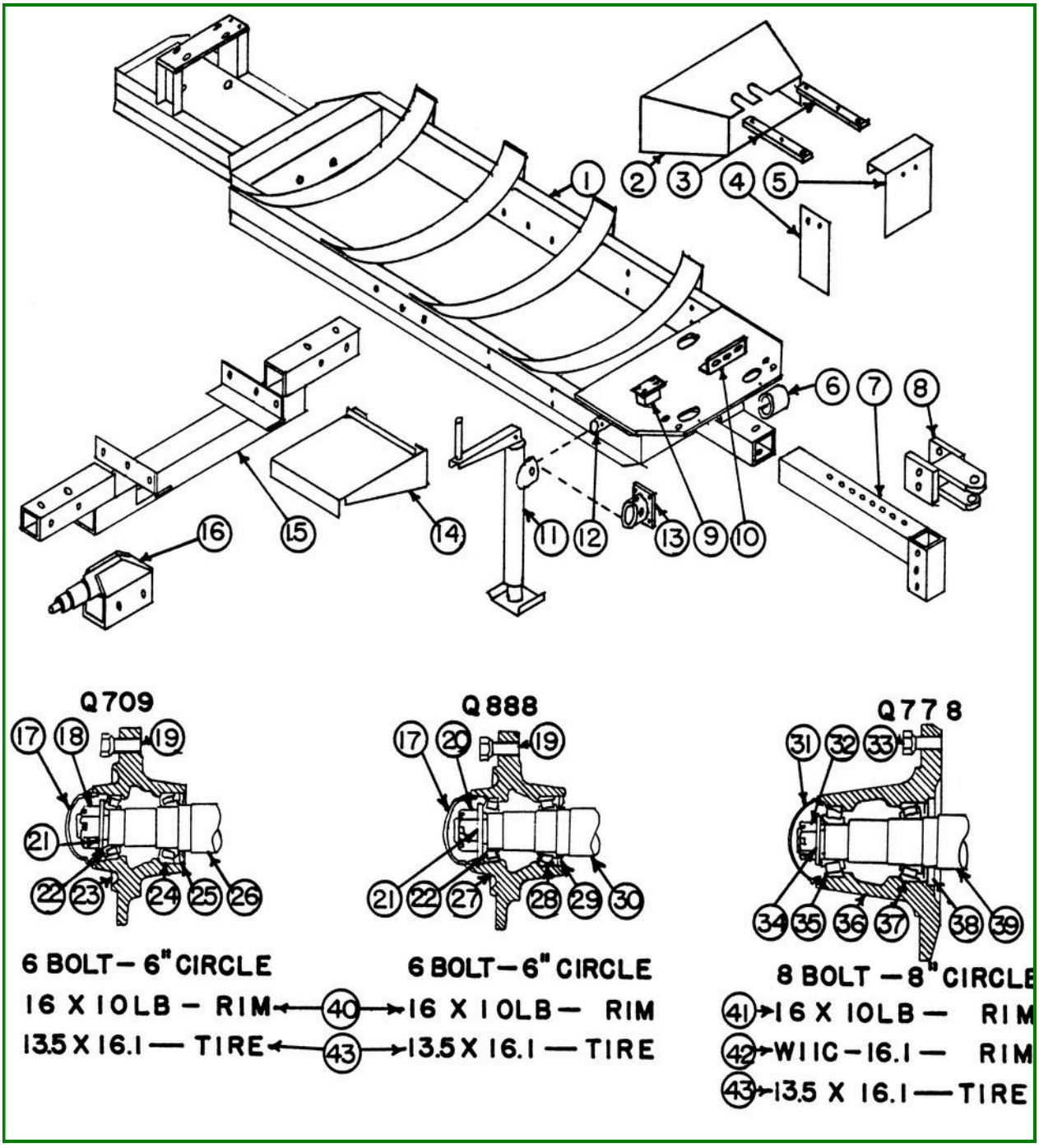
Other Tank Sizes May Have the Same or Similar Parts

Your Local VICTAIR Dealer can help

All Victair Sprayers are built with many of the same parts

VICTAIR MISTIFIER

500 GALLON FRAME, AXLES, HITCH



500 GALLON FRAME, AXLES, HITCH

#	PART#	REQ	DESCRIPTION
1	15128	1	MAIN FRAME 500 GAL
2	16004	1	PUMP COVER
3	15003	2	COVER STRIPS
4	15001	1	CHAIN GUARD
5	15002	1	PUMP GUARD
6	15021	2	HOSE PROTECTOR
7	15151	1	HITCH SLIDE for 500 & 600
8	15552	1	HITCH CLEVIS for Side Hitch
9	15095	1	PEDESTAL
10	15092	1	PUMP MOUNT
11	15022	1	JACK
12	15023	1	JACK BRACKET WELD ON
13	15024	1	JACK BRACKET BOLT ON
14	15006	2	FOOT STEP
15	15127	1	AXLE
15	608723	16	WHEEL BOLT, AG-WB1250Z
15	602092	2	WASHER 7/8" ID
16	15007B	2	Valve Control Bkt. WELD ASSY Z709
16	15007C	2	AXEL WELD ASSY Q888
16	15007D	2	AXEL WELD ASSY Q778
17	61216	2	DUST CAP
18	15129	2	CASTLE NUT 7/8 - 14
19	613945	10	WHEEL BOLT

#	PART#	REQ	DESCRIPTION
20	15129	2	CASTLE NUT 7/8 - 14
21	602002	2	WASHER 7/8 IO
23	LM67010	2	OUTER CAP RACE
23	LM7048	2	OUTER CONE BEARING
23	Q719	2	HUB ASSY COMPLETE
24	LM48510	2	INNER CUP RACE
24	LM48548	2	INNER CONE BEARING
25	20358	2	SEAL AG-GS-Z6271500SL
25	613718	2	SPINDLE
27	Q888	2	HUB ASSY COMPLETE AG-H88866002ZHA
28	JL69310	2	INNER CUP
28	JL69349	2	INNER CONE
29	205275	22	SEAL AG-GS-25661625SL
30	317855	2	SPINDLE
31	615216	2	DUST CAP
32	15129	2	CASTLE NUT 7/8 -14
35	LM67010	2	OUTER CUP
35	LM67048	2	OUTER CONE
36	Q778	2	HUB ASSY COMPLETE
37	25520	2	INNER CUP
37	25590	2	INNER CONE
38	205436	2	SEAL AG-GS-36282000SL
39	314830	2	SPINDLE

VICTAIR Sprayers have many different options for wheels and tires.

It's possible to change tire sizing and also axles for different size Sprayers. Your local dealer can assist you with this

PART NUMBERS: FIGURES 5, 6, 7, & 8

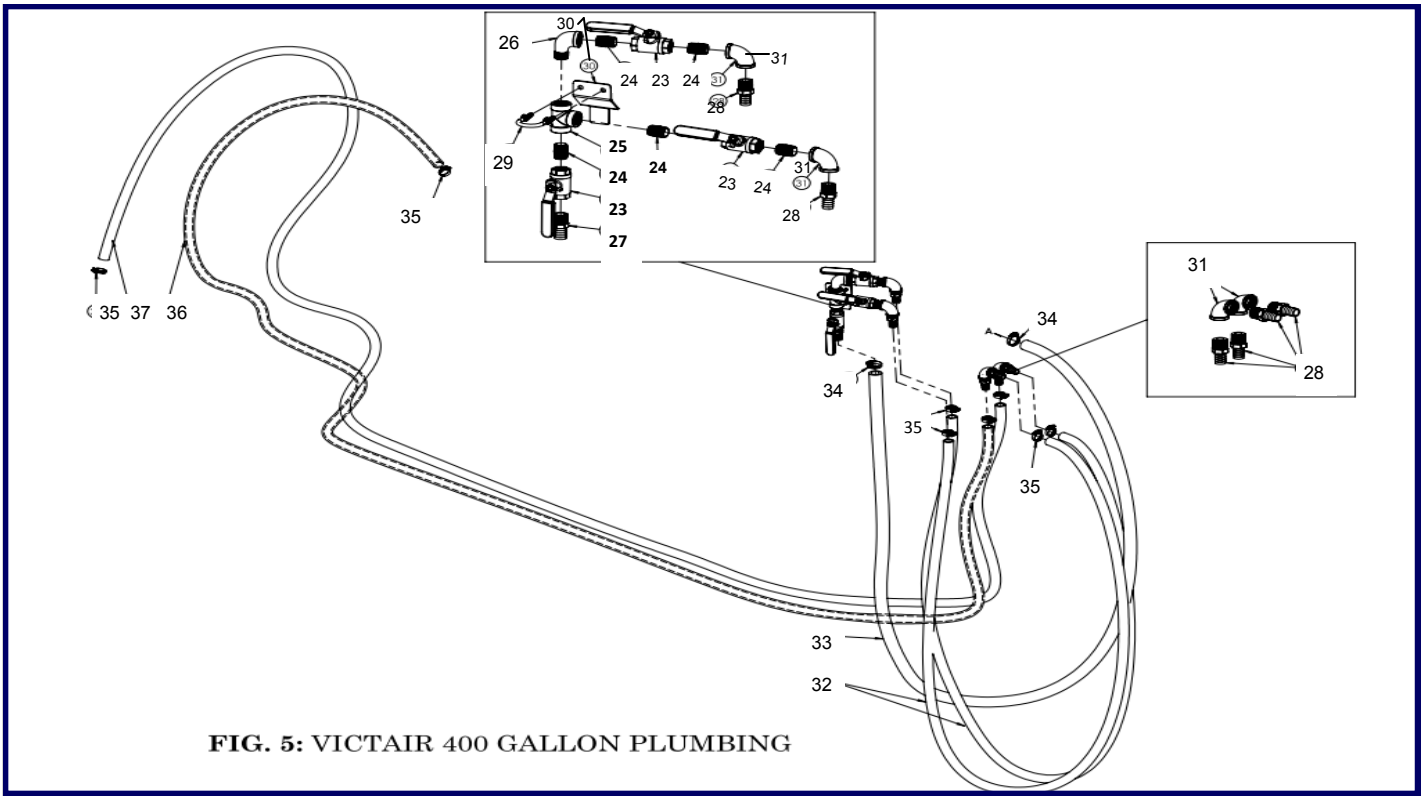


FIG. 5: VICTAIR 400 GALLON PLUMBING

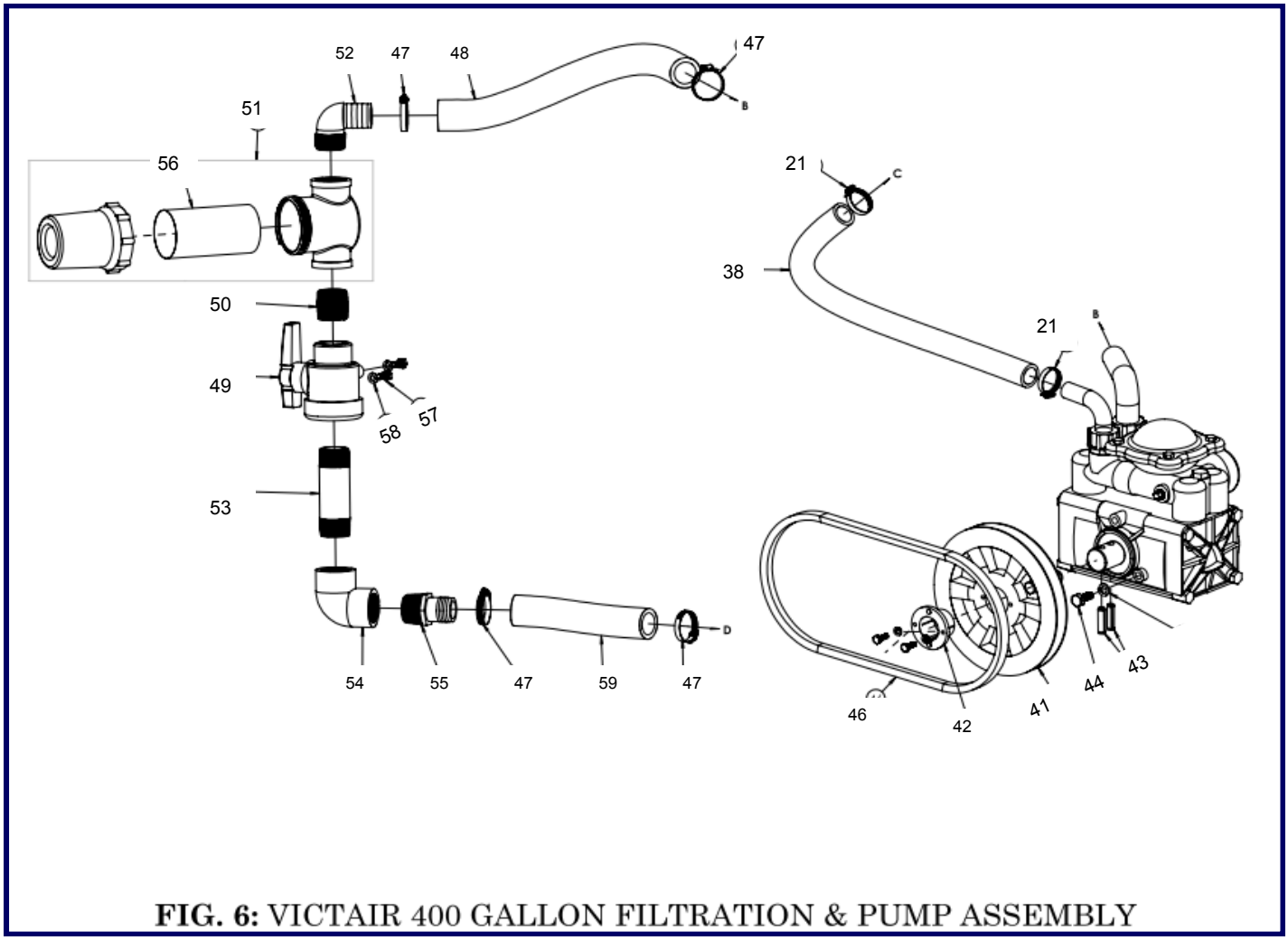


FIG. 6: VICTAIR 400 GALLON FILTRATION & PUMP ASSEMBLY

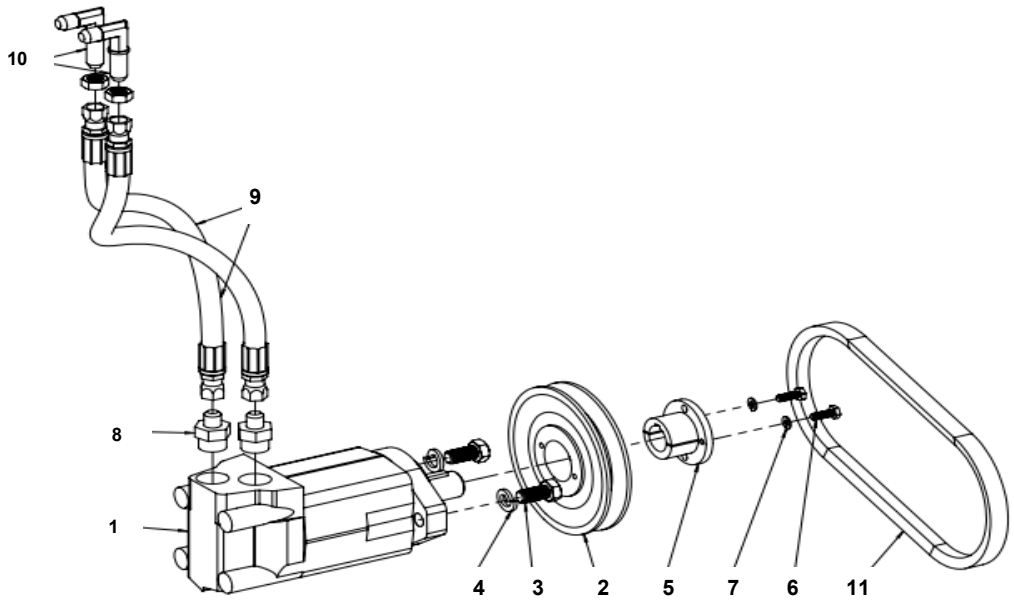


FIG. 7: VICTAIR 400 GALLON HYDRAULIC COMPONENTS

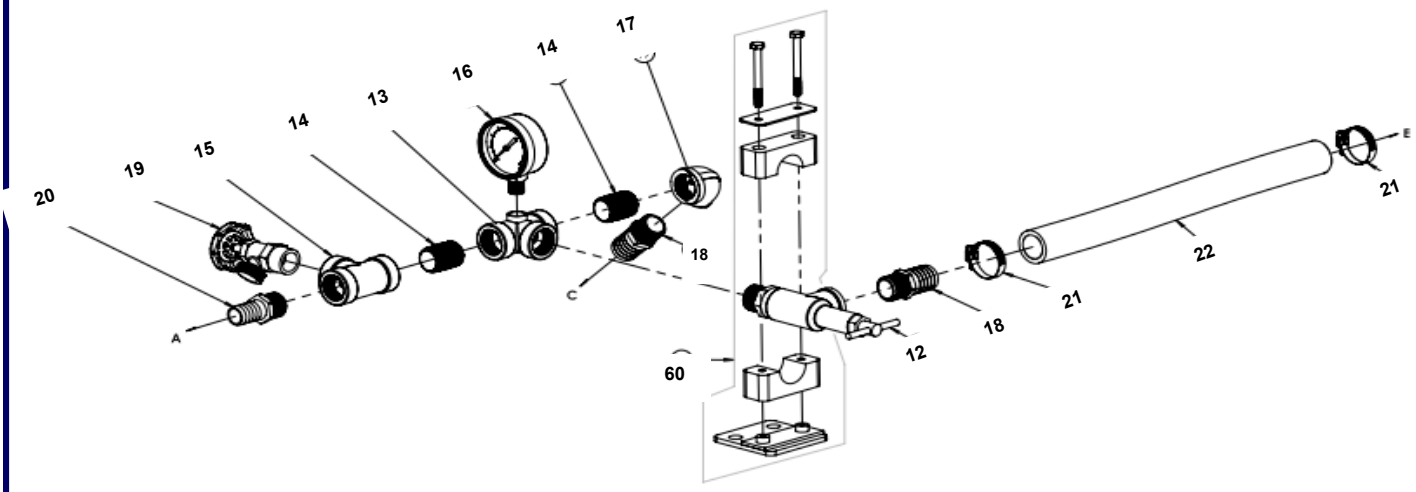


FIG. 8: VICTAIR 400 GALLON REGULATOR & SPRAYER BOOM ASSEMBLY

PART NUMBERS: FIGURES 5, 6, 7, & 8

ITEM #	PART #	DESCRIPTION	QTY		ITEM #	PART #	DESCRIPTION	QTY
1	HA17125	HYDRAULIC MOTOR	1		31	PF-G-12-90E	PIPE ELBOW 1/2 NPT	4
2	15154	SHEAVE	1		32	SH-58-300	HOSE 5/8" 2-PLY / FT 300 PSI	1
3	B-121-13	BOLT 1/2x1.00	2		33	SH-34-250	HOSE 3/4" 2-PLY / FT 225 PSI	1
4	LW-12	LOCK WASHER 1/2	2		34	HC-K20S	#20 HOSE CLAMP	2
5	15046	TAPER LOCK P-1	1		35	HC-K16S	#16 HOSE CLAMP	8
6	B-1434-20	BOLT 1/4 X3/4	4		36	SH-58-300	HOSE 5/8" 2-PLY / FT 300 PSI	1
7	LW-14	Lock washer 1/4	4		37	SH-58-300	HOSE 5/8" 2-PLY / FT 300 PSI	1
8	HA17050	REDUCER FLARE FIT-TING	2		38	SH-1-200	HOSE 1" 2-PLY / FT 150 PSI	1
9	HA17060	HYD. HOSE W/ENDS	2		39	P-9910-102070	AR 70 PUMP	1
10	HA17070	HYD. FLARED ELBOW	2		40	110SAZ	DRAIN PLUG	1
11	DB-30	BELT	1		41	15156	SHEAVE	1
12	SN-8460-1/2	PRESSURE REGULATOR	1		42	15046	TAPER LOCK P-1	1
13	PF-SS-T-34-14Port	PRESSURE GUAGE TEE 3/4	1		43	14615	ROLL PIN	2
14	PF-SS-N-34X112	PIPE NIPPLE 3/4 NPT	2		44	B-M10-35	BOLT M10-1.5 x25	2
15	PF-SS-T-34	PIPE TEE 3/4 NPT	1		45	LW-M10	LOCK WASHER M10	2
16	LG-G-0300	LIQUID GUAGE 300 PSI	1		46	DB-41	BELT	1
17	PF-SS-E-34	PIPE ELBOW 3/4 NPT	1		47	HC-114134T	#28 HOSE CLAMP	4
18	PF-HB-B-134NPT	BARB 3/4 NPT x HOSE	2		48	SH-R114	HOSE 1 1/4" 2 PLY / FT 150 PSI	1
19	PR-90FMB34	SPIGOT 3/4 NPT	1		49	PR-454135N	BALL VALVE 1 1/4	1
20	PF-HB-B-34x34	BARB 3/4 NPT x 3/4 HOSE	1		50	PF-P-M114-N	PIPE NIPPLE 1 1/4 NPT x5.00	1
21	HC-K24-SB	#24 HOSE CLAMP	4		51	3350-0071A	IN LINE STRAINER	1
22	SH-1-200	BYPASS HOSE 1	1		52	PF-114M114-EL	BARB ELBOW 1 1/4 x1 1/4	1
23	PF-BV-12FPT	BALL VALVE 2/2 NPT	3		53	PF-P-M114-N	PIPE NIPPLE 1 1/4 NPT x5.00	1
24	PF-G-1215-N	PIPE NIPPLE 1/2 NPT x 1.50	5		54	PF-P-EL-114FPT	PIPE ELBOW 1 1/4	1
25	PF-G-12-TEE	PIPE TEE 1/2 NPT	1		55	PF-P-114M114H-HB	BARB 1 1/4 X 1 1/4	1
26	PF-G-12-SE	STREET ELBOW 1./2 NPT	1		56	3800-0031	20 MESH SS	1
27	33782-37B	BARB 1/2 NPT x 3/4 HOSE	1		57	B-51634-18	BOLT 5/16 -18 x375	2
28	33782-26B	BARB 1/2 NPT x 5/8 HOSE	4		58	LW-516	LOCK WASHER 5/16	2
29	B-UBC-1412	U-BOLT W/NUTS	1		59	SH-R114	INLET HOSE 1 1/4	1
30	16102	CONTROL VALVE HOOK	1		60	15033	REGULATOR BRACKET ASMBLY	1

TABLE 1: NOZZLE SELECTION BASED ON APPLICATION			
ITEM NO.	POLYMER	HSS	CERAMIC
3	DC(13-46)	DC(13-46)-HSS	DC(13-46)-CER
4	DVP(2-16)	D(2-16)	DCER-(2-16)
6	CP1325	CP1325	CP20230

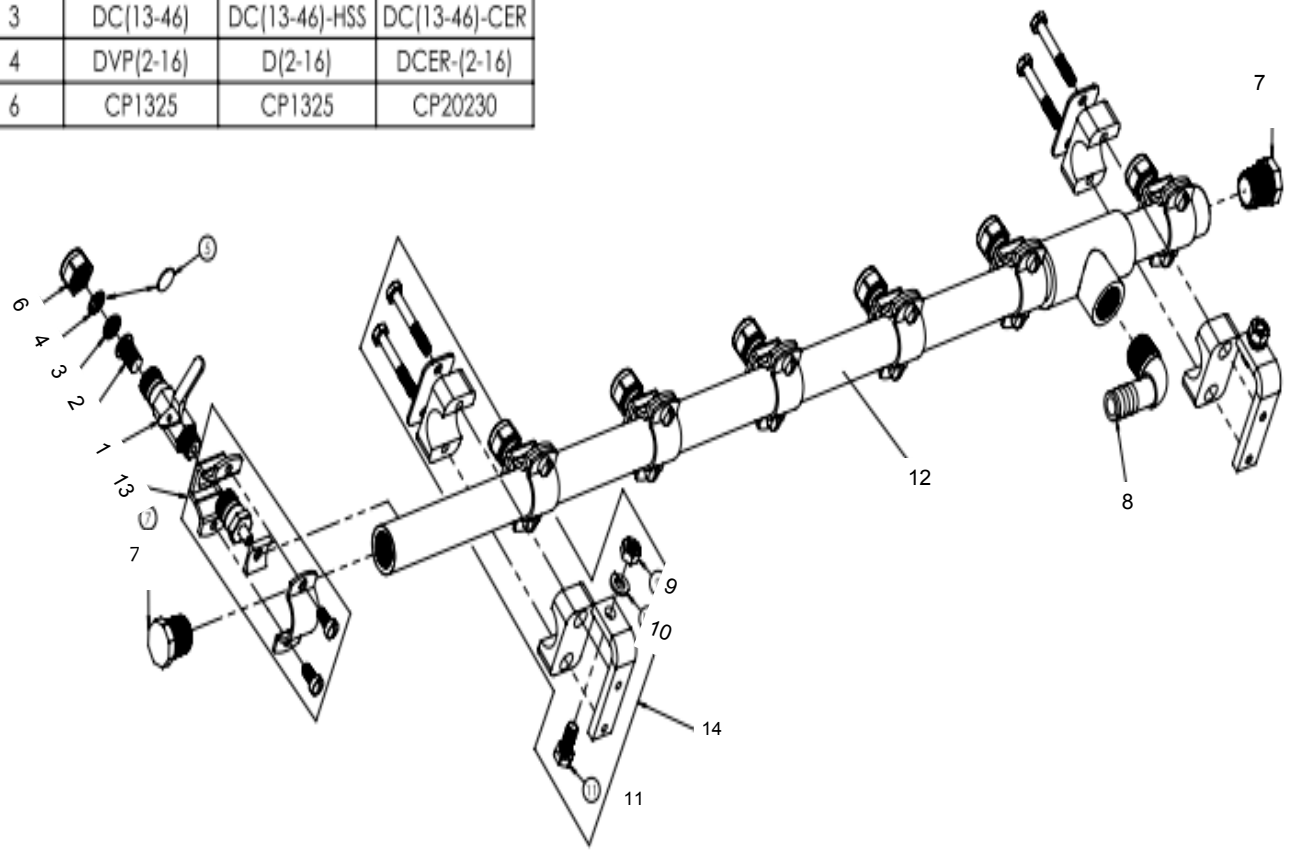
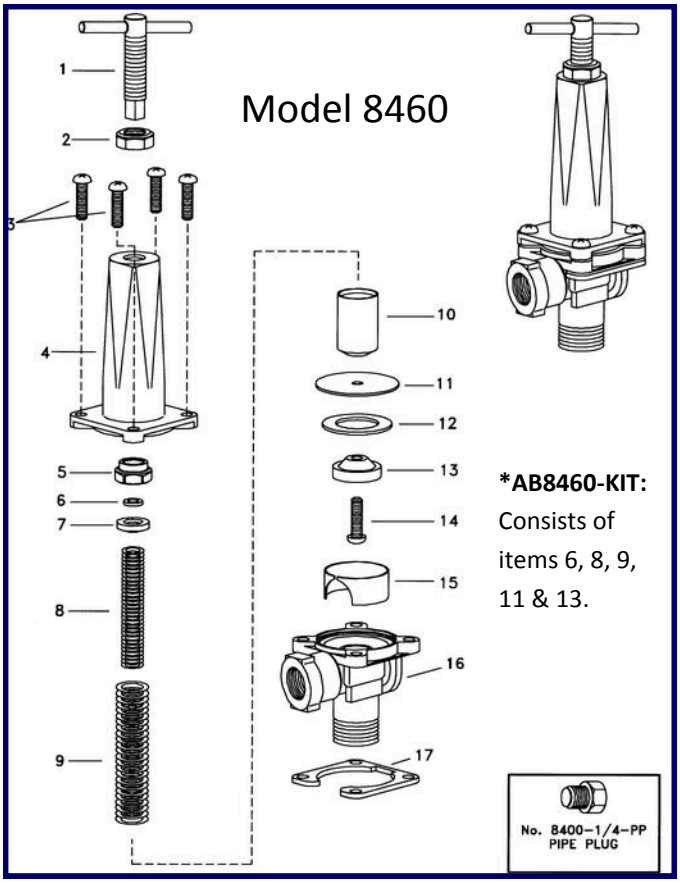


FIG. 9: VICTAIR 400 GALLON BOOM ASSEMBLY

ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	BV-91900156	BALL VALVE, Optional	TBD
2	SN-4514	STRAINER	14
3	SEE TABLE 1	SEE TABLE 1	TBD
4	SEE TABLE 1	SEE TABLE 1	TBD
5	2201-1	NOZZLE BLANK	TBD
6	SEE TABLE 1	SEE TABLE 1	TBD
7	16021	PLUG 1/2 NPT	4

ITEM NO.	PART NO.	DESCRIPTION	QTY.
8	16022	BARB ELBOW 1/2 NPT	2
9	N-516-18	NUT 5/16-18	4
10	10100	LOCK WASHER 5/16	4
11	**B-51634-18**	BOLT 5/16-18 X .75	4
12	16019A	NOZZLE BOOM PVC 3/4	2
13	36977	EYELET NOZZLE BODY	2
14	15031A	BOOM BRACKET ASMBLY	4

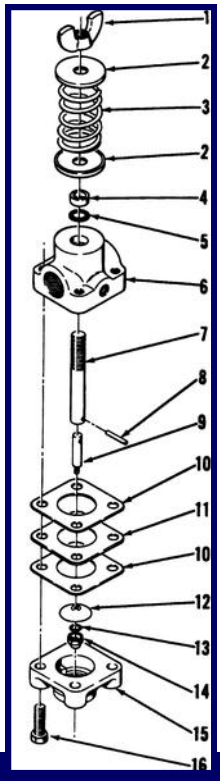


***AB8460-KIT:** Consists of items 6, 8, 9, 11 & 13.

Item	Part #	Description
1	CP5896-ALSS	Adjusting Screw
2	CP5898-AL	Lock Nut
3	CP13093-7/8-IZP	Screw (4 Req)
4	CP8362-AL	Bonnet
5	CP8368-SS	Adjusting Nut
*6	CP8369-NYB	Washer
7	CP8371-AL	Spring Retainer
*8	CP8374-I	Inside Spring
*9	CP8373-1 CP13128-302SS	Outside Spring Outside Spring SS
10	CP8367-AL	Guide Sleeve
*11	CP8366-FA	Diaphragm
12	CP8365-304SS	Stop Ring
*13	CP8364-NYB	Back-Up Seat
14	CP13093-5/8 SS	Screw
15	CP8389-304SS	Chamber Insert
16	CP8361-1/2-NYB	Body Nylon ½
17	CP9017-IZP	Clamp Plate

Item #	Part #	Description	Req
1	A1407	Wing Nut	1
2	A1304	Spring Guide	2
3	A1405	Spring	1
*4	A1511C	Busying	1
*5	A1510	O-Ring	1
6	A1401	Body Casting	1
7	A1403	Control Stem	1
*8	A1607	Spring Pin	1
9	A1404	Valve Stem	1
*10	A1406	Gasket	2
*11	A1604	Valve Plate	1
*12	A0128	Valve	1
*13	A1041	O-Ring(-008)	1
*14	A1042	Flex Loc Nut	1
15	A1402	Cap Casting	1
16	A1061	Cap Screw	4

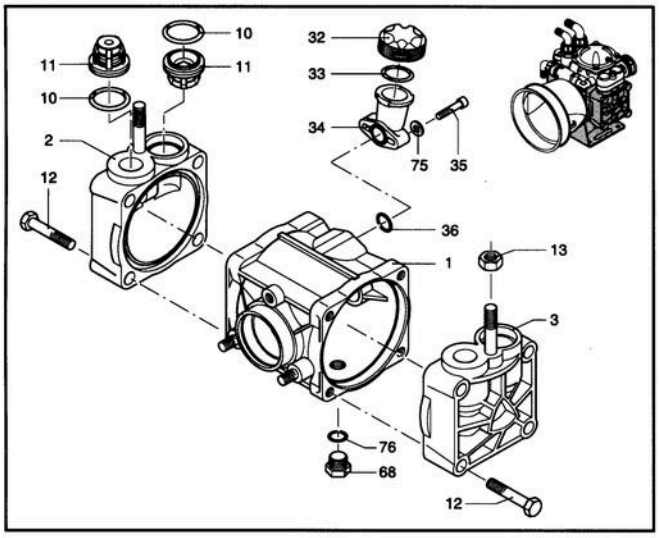
Model A14

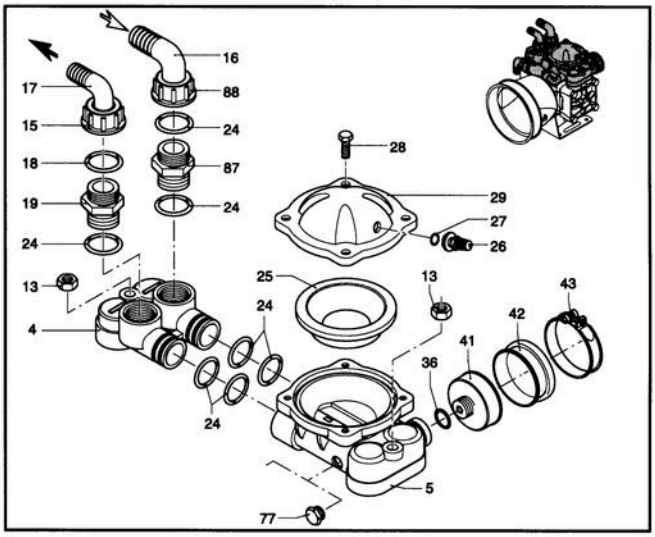


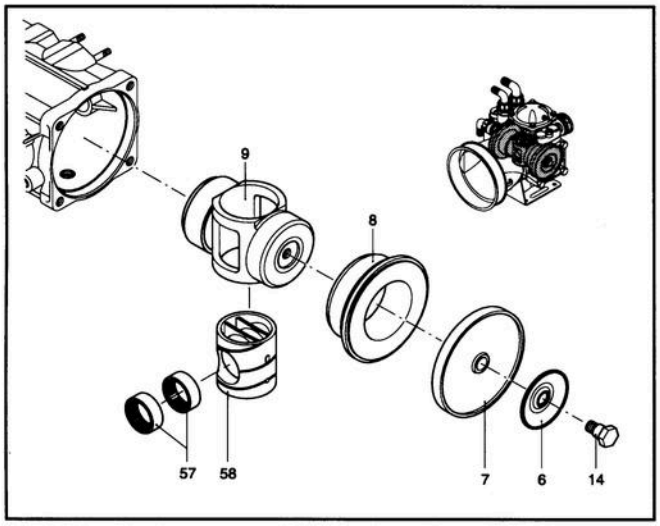
***ITEM # 17A:** REPAIR KIT A1450; consists of items 4, 5, 8, 10 (2), 11, 12, 13, & 14

Parts Illustrations for Models 9910-D70 and 9910-D70GR

Figure 6. Parts Illustrations for Model 9910-D70







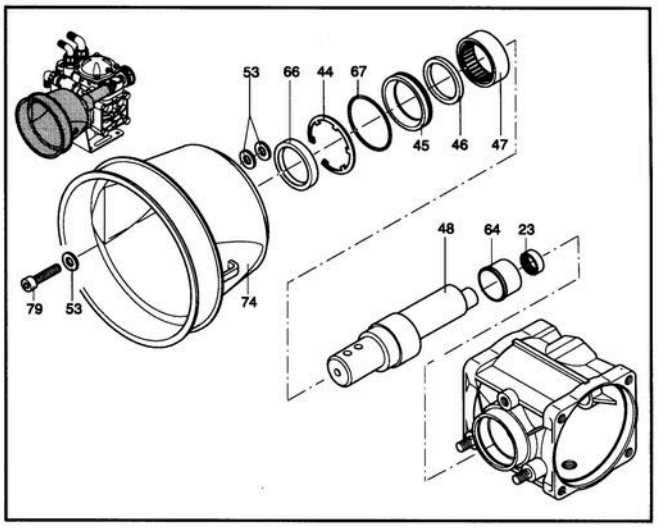
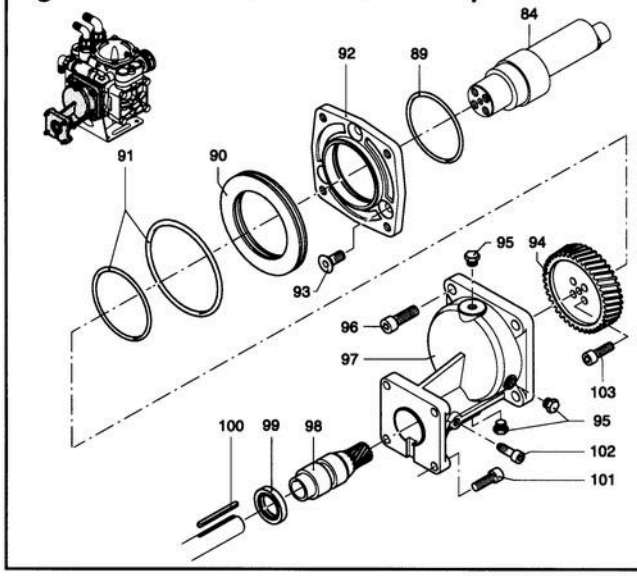


Figure 7. 9910-D70GR Gear Box Components



Parts List for 9910-D70GR Gear Box Components

REF. NO.	PART NUMBER	DESCRIPTION	QTY. REQ'D
84	9910-550175	Shaft	1
89	9910-580230	O-ring	1
90	9910-621440	O-ring retainer	1
91	9910-620561	O-ring	2
92	9910-550920	Flange	1
93	9910-550950	Bolt	3
94	9910-550940	Gear	1
95	9910-620301	Plug	3
96	9910-160671	Bolt	4
97	9910-621810	Gear housing	1
98	9910-621820	Pinion shaft	1
99	9910-480820	Seal	1
100	9910-881090	Key	1
101	9910-651000	Bolt	4
102	9910-800800	Bolt	1
103	9910-540290	Bolt	4

AR 70 PUMP

Parts List for Models 9910-D70 and 9910-D70GR

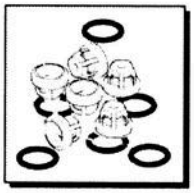
REF. NO.	PART NUMBER	DESCRIPTION	QTY. REQ'D
1	9910-550011	Pump Body with bolts	1
2	9910-550101	Right head DX	1
3	9910-550102	Left head SX	1
4	9910-550150	Manifold	1
5	9910-559200	Accumulator manifold	1
6	9910-580370	Plate	2
7	9910-550080	Diaphragm (Buna) Optional	2
7a	9910-550085	Diaphragm (Desmopan) Standard	2
8	9910-550110	Sleeve	2
9	9910-550120	Piston	1
10	9910-320030	O-ring	4
11	9910-759051	Complete valve assembly	4
12	9910-551040	Bolt	8
13	9910-180152	Nut	4
14	9910-580360	Diaphragm bolt	2
15	9910-550880	Ring nut	1
16	9910-580040	Elbow 1-1/4"	1
17	9910-550370	Elbow 1"	1
18	9910-550350	O-ring	1
19	9910-550340	Threaded adapter	1
23	9910-550310	Roller bearing	1
24	9910-390290	O-ring	7
25	9910-550190	Accumulator diaphragm	1
26	9910-550300	Air valve	1
27	9910-650542	O-ring	1
28	9910-550680	Bolt	4
29	9910-559204	Upper air chamber	1
32	9910-550057	Sight glass cap	1
33	9910-550040	O-ring	1
34	9910-550030	Oil sight glass	2
36	9910-180101	O-ring	2
41	9910-650660	Diaphragm holder	1
42	9910-650670	Diaphragm	1
43	9910-650690	Clamp	1
44	9910-200391	Retainer ring	1
45	9910-550470	Seal ring	1
46	9910-550070	Spacer ring	1
47	9910-550060	Roller bushing	1
48	9910-550170	Shaft	1
52	9910-200233	Washer	2
53	9910-320621	Washer	5
57	9910-550280	Bearing	2
58	9910-550140	Cylinder	1
64	9910-550160	Spacer	1
66	9910-550491	Seal ring	1
67	9910-650920	O-ring	1
68	2406-0023	Oil drain plug	1
74	9910-1500350	Shield	1
75	9910-550332	Washer	2
76	9910-740290	O-ring	1
77	9910-330173	Plug	1
79	9910-620472	Bolt	1
87	9910-450120	Threaded adapter	1
88	9910-550870	Ring nut	1

Ref. No.	Description	Tightening Torque	
		In. Lbs.	Nm
12	Bolt	350.0	39.2
13	Nut	350.0	39.2
14	Diaphragm Bolt	262.5	29.4
28	Bolt	171.4	19.6
35	Nut	87.5	9.8
77	Plug	171.4	19.6



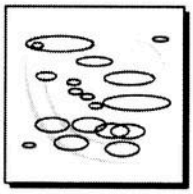
9910-KIT1720 Diaphragm Kit Desmopan

REF. NO.	QTY.
7a	2
10	4
25	1



9910-KIT2364 Valve Kit

REF. NO.	QTY.
10	4
11	4



9910-KIT2365 O-Ring Kit

REF. NO.	QTY.
10	4
18	1
24	7
27	1
33	1
36	1
67	1
76	1

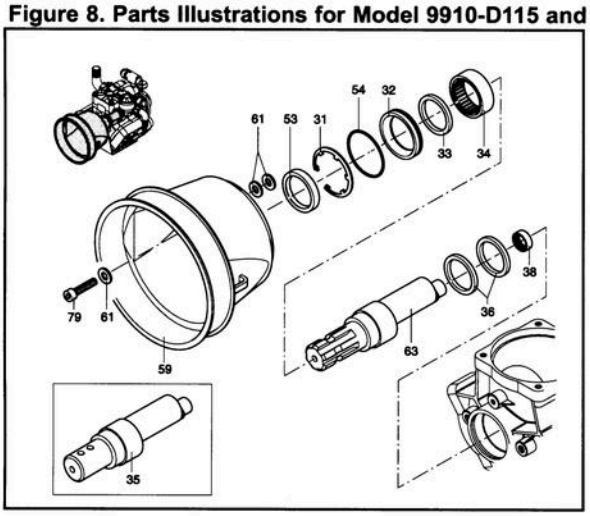
NOTE: When ordering parts, give QUANTITY, PART NUMBER, DESCRIPTION, and COMPLETE PUMP MODEL NUMBER. Reference numbers are used ONLY to identify parts in the drawing and are NOT to be used as order numbers.

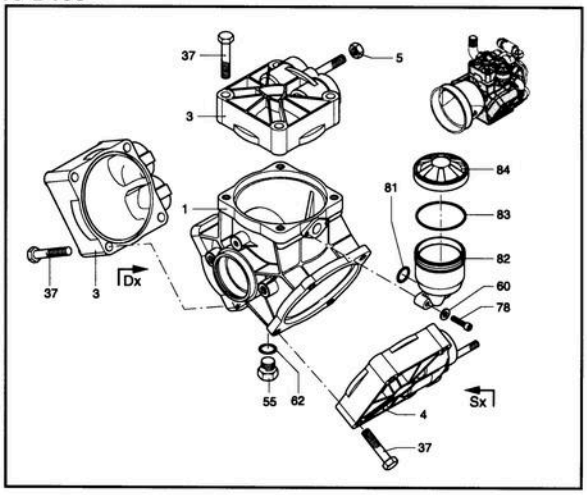
Torques for D70 Gearbox Components

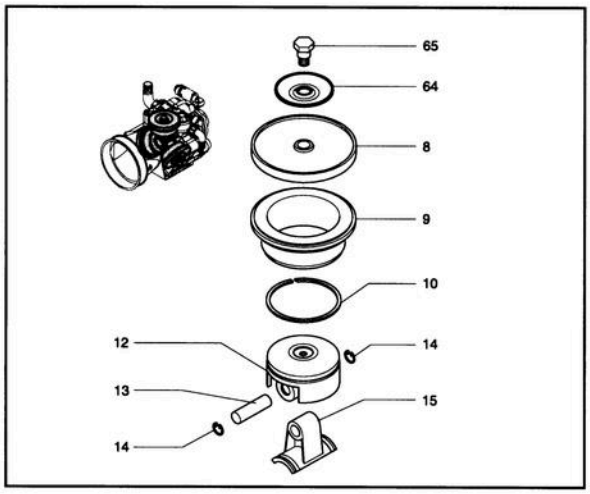
Ref. No.	Description	Tightening Torque	
		In. Lbs.	Nm
93	Bolt	171.4	19.6
95	Plug	87.5	9.8
96	Bolt	218.7	24.5
101	Bolt	218.7	24.5
102	Bolt	87.5	9.8
103	Bolt	218.7	24.5

Parts Illustrations for Models 9910-D115, 9910-D115GR34 and 9910-D135

Figure 8. Parts Illustrations for Model 9910-D115 and 9910-D135







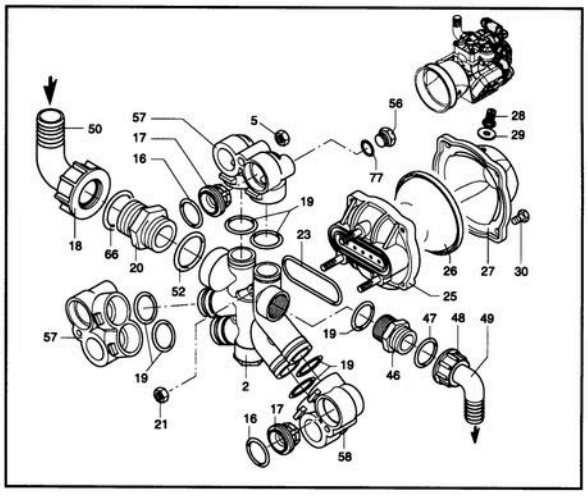
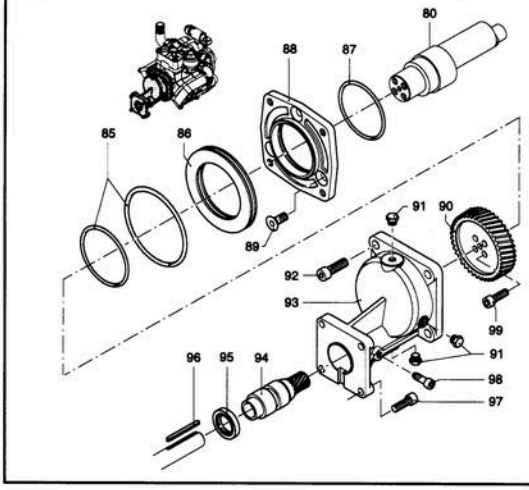


Figure 9. 9910-D115GR34 Gear Box Components



Parts List for 9910-D115GR34 Gear Box Components

REF. NO.	PART NUMBER	DESCRIPTION	QTY. REQ'D
80	9910-550175	Shaft	1
85	9910-620561	O-ring	2
86	9910-621440	O-ring retainer	1
87	9910-580230	O-ring	1
88	9910-550920	Flange	1
89	9910-550950	Bolt	3
90	9910-550940	Gear	1
91	9910-620301	Plug	3
92	9910-160671	Bolt	4
93	9910-621810	Gear housing	1
94	9910-621820	Pinion shaft	1
95	9910-480820	Seal	1
96	9910-881090	Key	1
97	9910-651000	Bolt	4
98	9910-800800	Bolt	1
99	9910-540290	Bolt	4

AR 115 PUMP

Parts List for Models 9910-D115, 9910-D115GR34 and 9910-D135

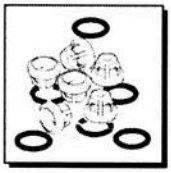
REF. NO.	PART NUMBER	DESCRIPTION	QTY. REQ'D
1	9910-580013	Pump body with bolts	1
2	9910-580150	Manifold	1
3	9910-550101	DX Right head	2
4	9910-550102	SX Left head	1
5	9910-180152	Nut	3
8	9910-550080	Diaphragm (Buna) Optional	3
8	9910-550085	Diaphragm (Desmopan) Standard	3
9	9910-580110	Sleeve (D115)	3
9	9910-580350	Sleeve (D135)	3
10	9910-500260	Piston ring	3
12	9910-580120	Piston	3
13	9910-380300	Pin	3
14	9910-380080	Pin ring	6
15	9910-580140	Connecting rod	3
16	9910-320030	O-ring	6
17	9910-759051	Complete valve	6
18	9910-540541	Ring nut	1
19	9910-390291	O-ring	7
20	9910-540530	Threaded adapter	1
21	9910-390271	Nut	3
23	9910-580050	Gasket	1
25	9910-580180	Accumulator manifold	1
26	9910-550190	Accumulator diaphragm	1
27	9910-559204	Accumulator head	1
28	9910-550300	Air valve	1
29	9910-650542	O-ring	1
30	9910-550680	Bolt	4
31	9910-200391	Retainer ring	1
32	9910-550470	Gasket retainer	1
33	9910-550070	Spacer ring	1
34	9910-550060	Roller bearing	1
35	9910-550170	Shaft (D115)	1
36	9910-580470	Connecting rod ring	2
37	9910-551040	Bolt	12
38	9910-550310	Roller bushing	1
46	9910-550340	Threaded adapter	1
47	9910-550350	O-ring	1
48	9910-550242	Ring nut	1
49	9910-550370	Elbow 1"	1
50	9910-540550	Elbow 1-1/2"	1
52	9910-250310	O-ring	1
53	9910-550491	Seal ring	1
54	9910-650920	O-ring	1
55	2406-0023	Oil drain plug	1
56	9910-330173	Plug	1
57	9910-589200	DX Right valve retainer w/plug/o-ring	2
58	9910-580072	SX Left valve retainer	1
59	9910-1500350	Shield	1
60	9910-550332	Washer	2
61	9910-320621	Washer	5
62	9910-740290	O-ring	1
63	9910-580330	Shaft (D135)	1
64	9910-580370	Plate	3
65	9910-580360	Diaphragm bolt	3
66	9910-250310	O-ring	1
69	9910-200233	Washer	2
77	9910-180101	O-ring	1
78	9910-850851	Bolt	2
79	9910-620472	Bolt	3
81	9910-390180	O-ring	1
82	9910-1040310	Oil sight glass	1
83	9910-650920	O-ring	1
84	9910-1040322	Black oil tank cap	1

Ref. No.	Description	Tightening Torque	
		In. Lbs.	Nm
5	Nut	350.0	39.2
21	Nut	171.4	19.6
30	Bolt	171.4	19.6
55	Plug	171.4	19.6
65	Diaphragm Bolt	262.5	29.4
78	Bolt	87.5	9.8
79	Bolt	350.0	39.2



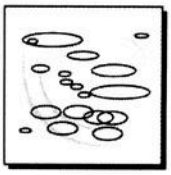
9910-KIT1721 Diaphragm Kit Desmopan

REF. NO.	QTY.
8	3
16	6
26	1



9910-KIT2370 Valve Kit

REF. NO.	QTY.
16	6
17	6



9910-KIT2026 O-Ring Kit

REF. NO.	QTY.
16	6
19	7
29	1
47	1
52	1
54	1
62	1
66	1
81	1
83	1

NOTE: When ordering parts, give QUANTITY, PART NUMBER, DESCRIPTION, and COMPLETE PUMP MODEL NUMBER. Reference numbers are used ONLY to identify parts in the drawing and are NOT to be used as order numbers.

Torques for D115GR3/4 Gearbox Components

Ref. No.	Description	Tightening Torque	
		In. Lbs.	Nm
89	Bolt	171.4	19.6
91	Plug	87.5	9.8
92	Bolt	218.7	24.5
97	Bolt	218.7	24.5
98	Bolt	87.5	9.8
99	Bolt	218.7	24.5

Parts List for 9910-KIT1708, 9910-KIT1710 and 9910-KIT1711

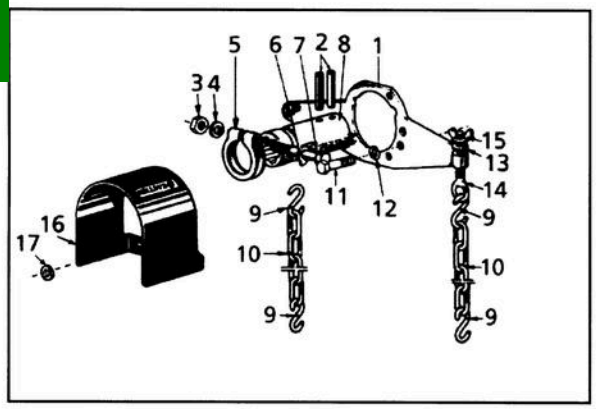


Figure 2. Coupler Kit 9910-KIT1708 Installation
9910-KIT1708: 1-3/8" Female PTO Adapter, Safety Shield, Torque Arm and Chains

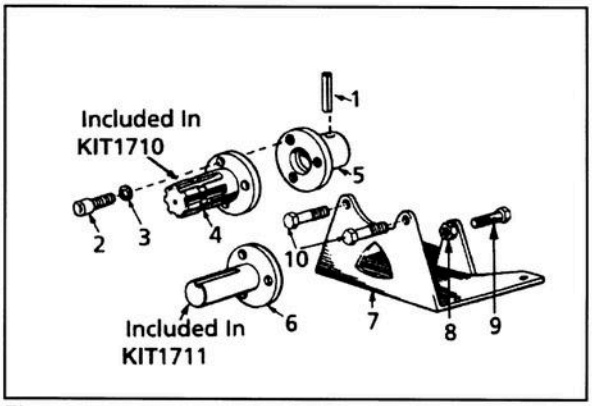


Figure 3. Coupler Kit 9910-KIT1710 Installation
9910-KIT1710: 1-3/8" Male PTO Shaft and Base Kit
9910-KIT1711: 1" Solid Shaft and Base Kit

Parts List for 9910-KIT1708

REF. NO.	PART NUMBER	DESCRIPTION	QTY. REQ'D
1	9910-380271	Torque Arm	1
2	9910-550290	Roll Pin	2
3	9910-320130	Nut	1
4	9910-320131	Washer	1
5	9910-500160	Collar	1
6	9910-500171	Lock Retaining Washer	1
7	9910-320170	Bolt (12MAx75)	1
8	9910-550250	Female Splined Shaft	1
9	9910-320650	Chain 'S' Hook	4
10	9910-320640	Chain	2
11	9910-620472	Bolt	2
12	9910-200231	Washer	5
13	9910-320620	Washer	1
14	9910-320630	Eye Bolt	1
15	9910-320610	Wing Nut	1
16	2840-0028	Safety Shield (with KIT1708)	1
17	2270-0004	Washer	4

Parts List for 9910-KIT1710 & 1711 Shaft Kit

REF. NO.	PART NUMBER	DESCRIPTION	QTY. REQ'D
1	9910-550290	Roll Pin	2
2	9910-620470	Bolts	3
3	9910-200231	Washer	3
4	9910-620240	1-3/8" Male 6 Spline PTO Shaft	1
5	9910-550510	Adapter	1
6	9910-621600	1" Solid Shaft	1
7	9910-580080	Base	1
8	9910-580190	Nut	1
9	9910-540300	Bolt (10MAx30)	1
10	9910-620472	Bolt	2

Shaft Adapter Kit Installation

Order appropriate shaft kit according to chart on page 2.

Female Splined Coupler Kit 9910-KIT1708 (see Fig. 2).
To install the 1-3/8" female splined shaft coupler:

1. Place the torque bracket (Ref. 1) onto pump and secure with bolts (Ref. 11).
2. Slide female coupler (Ref. 8) onto pump shaft. Align holes in coupler with holes in pump shaft and press in pins (Ref. 2).
3. Make sure clamp (Ref. 5) is over groove in the coupler. Slide the pump onto the PTO shaft of power source and tighten clamp.
4. Attach chains (Ref. 10) to tractor to prevent rotation of the pump.

Solid Shaft Kit 9910-KIT1711, Male Splined Shaft Kit 9910-KIT1710 (see Fig. 3).
To install the 1-3/8" male splined shaft coupler:

1. Slide shaft adapter flange (Ref. 5) over pump shaft. Align adapter hole with hole on the pump shaft and press in pin (Ref. 1).
2. Bolt shaft adapter (Ref. 4 or 6) onto flange with three bolts (Ref. 2) and washers (Ref. 3).
3. Place base (Ref. 7) on pump, and secure with bolts and washers. Secure opposite side of base with bolt (Ref. 9) and nut (Ref. 8).

WARRANTY:

H.F. Hauff Company, Inc. warrants products manufactured by it to be free from defects in material and workmanship only under normal use and with proper servicing for a period of 90 days from date of delivery. In the event of a breach of this warranty the company's obligation shall be limited to repairing, or at our option, replacing at our factory and part or parts where of which, within 90 days after delivery of such product to the original purchaser from us or from our distributor, shall be returned to us transportation charges prepaid and which our examination shall disclose to our satisfaction to have been defective. All return shipments by us to such purchaser shall be FOB our factory. Corrosion or chemical resistance failure of parts is expressly not covered by this warranty. This warranty shall not apply to any parts or accessories sold by us which have been repaired, altered or rebuilt. Parts furnished to H.F. Hauff Company, Inc. by other manufacturers for resale or assembly by the company is subject to the warranty of that manufacturer.

DISCLAIMER OF WARRANTY:

THE WARRANTY AS SET FORTH HEREIN IS EXPRESSED IN LIEU OF ALL OTHER WARRANTIES EXPRESSED OR IMPLEIED BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE AND ANY AND ALL OTHER OBLIGATIONS OR LIABILITIES IMPOSED BY LAW. H.F. HAUFF COMPANY, INC. NEITHER ASSUMES RESPONSIBILITY NOR AUTHORIZES ANY OTHER PERSON TO ASSUME FOR H.F. HAUFF COMPANY, INC. PRODUCTS. No claim for labor delay, or consequential damage will be allowed, and we will not be liable for damage to persons or property which may result from failure of said goods.