AllJetVac

Service Manual

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PISTON PUMP PRESSURE SETTING

PURPOSE: To properly set ALL pressure relief devices in a piston pump system.

BACKGROUND: A piston pump will always attempt to maintain its preset pressure. You must insure that separate pressure reliefs on the other controls (Ex: hose reel, tailgate, boom) are set above the pressure settings on the pump. If not, the pump will run wide open all the time, cook the hydraulic oil and ruin the pump.

PROCEDURE: Set individual pressure reliefs to maximum pressure by screwing in the adjustment set screw.

- Set piston pump pressure to a 2300 PSI reading on the hydraulic pressure gauge by loosening the pump jam nut and adjusting the hex nut in or out to give you the correct setting. This is best done with someone watching the gauge and another person turning the hex nut.

- Start with the farthest relief from pump, typically at the hose reel, and back out the relief adjustment screw until pressure drops below 2300 PSI by getting the relief to begin bypassing. You can detect the valve bypassing by either: listening for the chatter of the relief popping open/closed, feeling the vibration of the valve chatter with your hand, or watching the pressure gauge needle fluctuate. Once the relief point is found, turn the adjustment screw back ONLY enough to stop the bypassing and then lock down the jam nut.

- Move to the next farthest relief and adjust to 2200 PSI by using the above method. Lock down jam nut.

- Continue the above process until all adjustable reliefs have been set above 2100 PSI.

- Reset pump to 2000 PSI and lock down the jam nut.

This will insure that the piston pump is able to deadhead and allows separate pressure reliefs to act as safety valves.

NOTE: If your unit has a rear mounted hose reel these pressures will need to increase by 200 PSI.

CHASSIS ENGINE

Engine Access

Before attempting to raise the chassis hood, tilt the hose reel forward and position the boom away from the chassis.

NOTE: Depending on the model AllJetVac *you are operating, the hose reel is tilted with either a manual jack or via a hydraulic power pack. After checking or servicing the engine, always return the hose reel and boom to their stowed positions.*

Hydraulic Extend

- Using the joystick mounted on the front of the hose reel, extend the hose reel to its far forward position.
- Engage the hydraulics.
- Using the joystick mounted on the hose reel, raise the boom from its stowed position and set away from the chassis.

Engine Oil

While the AllJetVac is parked on level ground and the engine is off, check the engine oil level with the supplied dipstick. Oil level should be up to full mark. If the oil level is low, add the proper grade oil to the full mark. Check engine oil level daily. Add the proper oil as required to maintain the proper oil level. Also, inspect engine and components for leaks. Change the oil approximately every 150 hours.

Lube Oil Filter

Change filter every 150 hours or everytime engine oil is changed.

Engine Coolant

When the engine is cool, check the radiator water level. If the coolant is low, fill to proper level with soft water or antifreeze. Do not overfill. If coolant is repeatedly low, check for the source of coolant loss. Periodic topping of the engine radiator with water will eventually dilute the antifreeze mixture. maintain proper antifreeze/water ratio according to local weather conditions. Check coolant level daily. If coolant is repeatedly low, check for leaks. Flush and clean cooling system every 1000 hours. Refill with soft water and a high quality antifreeze.

Power Steering Fluid

Check power steering drive pump for proper fluid level. If the fluid level is low, add the proper fluid level to full mark (see chassis owner's manual). If the fluid is repeatedly low, check the power steering pump for the source of fluid loss.

Air Cleaner Filter

Check the filter gauge located on the filter housing for condition of air cleaner. Remove the element and clean with compressed air at a low pressure. If needed, change air filter as directed in chassis owner's manual. Replace annually or more often, if needed.

Battery

Check liquid level on 12 volt battery. If level is low, add distilled water or battery acid as needed. Maintain proper fluid level.

Engine Belts

Check all belts for proper tension and inspect condition of belts for cracks and fraying. Change belts as needed.

Windshield Washer Fluid

Maintain proper fluid level in the washer fluid reservoir.

Automatic Transmission Fluid

While the engine is running, check the transmission fluid level with supplied dipstick. Fluid level should be up to full mark. If the fluid level is low, add the proper grade transmission fluid to the full mark (see chassis owner's manual). If the fluid level is repeatedly low, check the transmission for the source of fluid loss. Change transmission fluid every 1,500 hours as recommended in owner's manual.

Fuel Tank

Keep fuel tank filled to reduce condensation. Use only recommended grade diesel fuel (see chassis owner's manual).

Fuel Filter

The location of the fuel filter will depend on the chassis make you are operating. Locate the fuel filter and check for filter condition. Change filter every 300 hours or anytime the fuel system becomes contaminated.

POWER MODULE

Hydraulic Oil

Check the hydraulic oil level sight glass on the reservoir located directly behind the chassis cab. Hydraulic oil level should be between the black full-level mark and the red low-level mark. I the oil level is low, add proper grade hydraulic oil. VacAll Industries, Inc. recommends HYD AW68. Change **semi-annually** to ensure the long life of all hydraulic components. Change the hydraulic oil **anytime it becomes contaminated.**

Hydraulic Return Filter

Replace filter semi-annually or anytime hydraulic oil is changed.

Hydraulic System

Inspect all hoses, fittings, central valves and cylinders for cracks, damage or leaks. Repair or replace as required.

Transfer Case Oil

When cool, check the transfer case oil level with the dipstick provided at the transfer case. The level should be to the full mark on the dipstick.

Over-the-road service: initial flush and oil change after **1,000** miles of service, but not to exceed **4,000** miles of service.

Scheduled flush and oil change every **20,000** miles of service after initial oil change.

Vacuum Pump Oil

Check the oil level sight glasses on the blower. Normally, there are two on the drive end of the blower and one on the gear en. Make sure all blower sight glass levels are at the minimum half full, but no more the ¾ full. Check level daily. Maintain oil level in center of all sight glasses. If oil level is repeatedly low, consult you vacuum pump manual. Use only recommended lubricants in the vacuum pump. Consult lube chart. Change vacuum pump oil every **1500** hours under normal service or more frequently, if needed.

Water Pump Oil

After first **30** hours of operation, drain oil from gear case (preferable drain at operating temperature), replace plug and refill crankcase with new oil. Change oil every 300 hours thereafter. Check oil level daily and add oil as needed. Oil cleanliness is very critical to precision machined parts and seals. Clean oil can prolong power and parts' life and it is the most inexpensive maintenance.

Water Pump Oil

After first 30 hours of operation, drain oil from gearcase (preferable drain at operating temperature), replace plug and refill crankcase with new oil . Change oil every 300 hours thereafter. Check oil level daily and add oil as needed. Oil cleanliness is very critical to precision machined parts and seals. Clean oil can prolong power and parts' life and it is the most inexpensive maintenance.

Water Pump Strainer Assembly

On the suction side of the water pump, remove the hand nut on the strainer assembly and remove the basket screen. Clean as necessary with water.

Hose Reel Power Pack Fluid

Check the dipstick on the hose reel power pack fluid reservoir. The power pack is located under the chassis wheel well. *NOTE: Depending on the chassis make of your unit, the power pack may be located on either the passenger or driver's side of the chassis.*

Poly-Chain Drive Belts

Inspect the belts that drive both the water pump and vacuum pump for proper tension. Also inspect for wear, cracks or fraying. Check sheave and bushing bolt for tightness. Inspect the guide rings on sheaves and make sure they are not loose or bent. Check pulleys for proper alignment.

Grease Fittings

Grease all fittings as indicated on grease point drawing.

FILTER BODY

Debris Body

Clean and inspect for cracking, leaks or wear. Repair as required

Dump Body Hinge

Grease the body hinge at the rear of the unit at all the grease fittings. Visually inspect the hinges and pins for damage or wear. Repair or replace as required..

Tailgate Latches and Hinges

Lubricate the tailgate latches at the grease fittings and visually inspect the hinges and lock areas for wear or other mechanical problems. Repair or replace as needed.

Tailgate Oval Gasket

Inspect the tailgate gasket for any cuts or nicks. It is important to keep the tailgate gasket clean and free of all debris. Operating the system with worn tailgate gasket may cause load leakage or loss of vacuum.

Air Water Cyclonic Separator

Check the air water cyclonic separator for any carryover from the debris tank. To clean, open the clean-out door and wash thoroughly with a garden hose.
Clean and inspect the separator for cracks, leaks or wear. Check the seals for leaks and check the clamps on the doors to make sure they close tightly.

Clean Out Doors

Clean and inspect the separator doors for gasket damage. Check the door latches and hinges for wear or damage. Check the door adjustment to ensure proper sealing to the body. Repair or replace as required.

Float Ball

Inspect the float ball in the main collection body and remove any debris build-up. Ensure the float ball can move freely in the float ball cage and can seal properly.

Vacuum Relief Valves

Check relief valves weekly by inserting a hammer handle into the opening at the bottom of the valves. Use inward pressure on the spring to ensure valves open and close without sticking or binding. Twice a year, remove, disassemble and clean the relief valves. See manufacturer's recommendation in the parts section of the manual. Anytime the relief valves have been assembled, they have to be recalibrated.

NOTE: On 27" HG. machines there are no relief valves provided.

Hoist Cylinder

Keep the exposed stroke on the hoist cylinder from weathering by hand greasing daily or as required. Grease the body hoist cylinder pivot points at the grease fittings. Visually inspect the pivot points for cracks or wear and the cylinder, itself, for seal leakage or physical damage.

Boom Cannon

Clean and inspect for cracking, leaks or wear. Repair or replace as required. Hand Grease Bi-Weekly to prevent rusting and insure a smooth operation.

Boom Bearing

Grease at all grease fittings. Inspect for any damage or mechanical problems. Repair or replace as required.

Boom Lift

Inspect the boom lift mechanism and hydraulic cylinders for damage or mechanical problems. Repair or replace as required.

Electric System

Visually inspect all wires, timers, relays, fuses and connections for burns, cracks, damage or corrosion. Clean thoroughly and replace any damaged parts.

Shift-Tower Indicator Lights

Inside the cab, check the operation of blower mode, rodder mode and hydraulic indicator lights located on the shift tower. *NOTE: Failure to maintain these lights in working order could result in operator error.*

If indicator light failure occurs, investigate possible cause.

ROOTS-DRESSER VACUUM PUMP

Note: Refer to the vacuum pump section of the manual for further information relating to the pump.

Lubrication

It is recommended that the oil be changed every 500 hours for normal operating.

Do not overfill with oil. A high oil level can cause as muck damage as a low oil level.

When changing oils, wipe with a clean cloth around any plus before removing.

Cleanliness is essential, as any ingress of dirt or grit into the oil chambers may cause failure to occur.

VacAll Industries, Inc. uses Mobil gear 630 in all ALLJETVAC blowers.

Note: The vacuum pump oil level should be checked daily. The oil level should never be allowed to fall below the oil level gauge ring when blower is stationary and on level ground. It may rise on the gauge during operation, depending on oil temperature and blower speed, but should not be allowed to rise above the oil level ring.

Vacuum pump grease bearings would be greased with lithium base grease #3.

Spicer Transfer Case

Note: To ensure proper lubrication and operating temperatures in your Spicer Transfer Case, it is very important that the specified lubricants be used and that the correct oil levels be maintained. The lubricants listed below are recommended in order of preference for use in all Spicer mechanical transfer cases.

DO NOT USE EXTREME PRESSURE ADDITIVES such as found in multipurpose or rear axle type lubricants. These additives are not required in Spicer transfer cases. Multipurpose oils, as a group, have relatively poor oxidation stability, a high rate of sludge formation, and a greater tendency to reach on or corrode the steel and bronze parts.

TEMPERATURE	GRADE	TYPE
above 0 degrees F	SAE50	Heavy-duty engine oil meeting MIL-L-2104C
below 0 degrees F	SAE30	(Note: Oils meeting MIL-L-2104B or MIL-L-45199 are also acceptable)
above 0 degrees F	FSAE90	straight mineral gear oil - R&O type
below 0 degrees F	FSAE80	

Oil Changes

Over-the-road service: initial flush and oil change after 1,000 miles of service, but not to exceed 4,000 miles of service.

Scheduled flush and oil change every 20,000 miles of service after initial oil change.

Check oil level 2,000 miles of service. Off-the-road service: initial flush and oil change after 24 hours of service, but not to exceed 100 hours of service. Scheduled flush and oil change every 30 days after initial oil change.

Check oil every 24 hours of service.

Prolonged low RPM or stationary operation: for cases of prolonged low RPM (below 1,000 RPM input to transfer case) or prolonged stationary operation, a lube pump is recommended.

These lube pumps are available on all models of the Spicer transfer cases.

Refill

First remove all dirt around the filter plug. Refill with new oil of recommended grade for the existing season and prevailing service., Fill to the bottom of the plug hose on the side or front of the transfer case.

Overfilling

Do not overfill the transfer case. Overfilling usually results in oil breakdown due to excessive heart and aeration from the churning action of the gears. Early breakdown of the oil will result in heavy varnish and sludge deposits that plug up oil ports and build up on splines and bearings.

Myers Water Pump

Note: Refer to the Myers pump instruction and service manual for further information relating to the pump.

Lubrication

Fill gear case with Mobilgear 630 or equal and additive to capacity. Maintain oil level at mark on oil dipstick.

Mobilgear 630 equivalent:

Amoco: Permagear EP220 or Amogear EP220
Chevron: NL Gear Compound 220
Exxon: Spartan EP220
Kendall: NSMP 80w-90
Shell: Omala 220
Standard/Sohio Boron: Gearep 80w-90
Texaco: Meropa 220

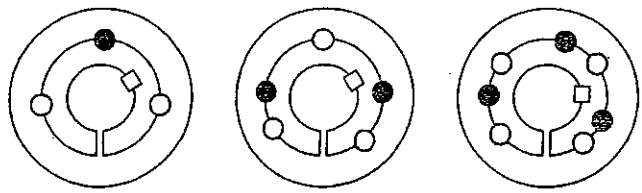
Note: After first 30 hours of operation, drain oil from gearcase (preferable drain at operating temperature), replace plug and refill crankcase with new oil as above. Change oil every 300 hours thereafter. Check oil level daily and add oil as needed. Oil cleanliness is very critical to precision machined parts and seals. Clean oil can prolong power and parts' life and it is the most inexpensive maintenance.

Additives for Crankcase Oil

Use of Molybdenum Disulfide (MoS2) is highly recommended by Myers as an additive to the gear case oil in back geared pumps manufactured by Myers. The additive is compatible with all known oils. It is so effective in reducing wear and friction that power train life may be doubled between overhauls. The chart below gives volume of MoS2 concentrate required.

65 or 80 GPM Pump	Gear Case Capacity Oil	Volume MoS2 Concentrate or Dispersion "M" for 5%	Volume MoS2 Concentrate or Dispersion "M" for 10%
DP Series	4 1/2	7 fl oz	14 fl oz
D Series	4 1/2	7 fl oz	14 fl oz

Taper-Lock Type Sprocket Installation and Removal



1008 to 3020 | 3525 to 6050 | 7060

To Install TAPER-LOCK Type Bushings

1. Clean the shaft, bore of bushing, outside of bushing and the sprocket hub bore of all oil, paint and dirt. File away any burrs.

   Note: The use of lubricants can cause sprocket breakage. USE NO LUBRICANTS IN THIS INSTALLATION.
2. Insert the bushing into the sprocket hub. Match the hole pattern, not threaded holes (each complete hole will be threaded on one side only).
3. LIGHTLY oil the set screws and thread them into those half-threaded holes indicated by on the diagram above.

   Note: Do not lubricate the bushing taper, hub taper, bushing bore, or the shaft. Doing so could result in sprocket breakage.
4. With the key in the shaft keyway, position the assembly onto the shaft allowing for small axial movement of the sprocket which will occur during the tightening process.

   Note: When mounting sprockets on a vertical shaft, precautions must be taken to positively prevent the sprocket and/or bushing from falling during installation.
5. Alternately torque the set screws until the sprocket and bushing tapers are completely seated together (at approximately half of the recommended torque; see table below).

   Note: Do not use worn hex key wrenches. Doing so may result in a loose assembly or may damage screws.
6. Check the alignment and sprocket axial runout (wobble), and correct as necessary.
7. Continue alternate tightening of the cap screws to the recommended torque values specified in the table below.
8. To increase the bushing gripping force, hammer the face of the bushing using a drift or sleeve (Do Not Hit The Bushing Directly With The Hammer).
9. Re-torque the bushing screws after hammering.
10. Recheck all screw torque values after the initial drive run-in, and periodically thereafter. Repeat steps 5 through 9 if loose.

To Remove

1. Loosen and remove all mounting screws.
2. Insert screws into all jack screw holes indicated by "●" (see figure above).
3. Loosen the bushing by alternately tightening the screws in small but equal increments until the tapered sprocket and bushing surfaces disengage.

Sprocket Installation

Bushing Style	Bolts		Torque Wrench	
	Qty.	Size	lb-ft	lb-in
1008	2	1/4-20 x 1/2	4.6	55
1108	2	1/4-20 x 1/2	4.6	55
1210	2	3/8-16 x 5/8	14.6	175
1610	2	3/8-16 x 5/8	14.6	175
1615	2	3/8-16 x 5/8	14.6	175
2012	2	7/16-14 x 7/8	23.3	280
2517	2	1/2-13 x 1	35.8	430
3020	2	5/8-11 x 1 1/4	66.7	800
3525	3	1/2-13 x 1 1/2	83.3	1000
3535	3	1/2-13 x 1 1/2	83.3	1000
4030	3	5/8-11 x 1 3/4	142	1700
4040	3	5/8-11 x 1 3/4	142	1700
4535	3	3/4-10 x 2	204	2450
4545	3	3/4-10 x 2	204	2450
5040	3	7/8-9 x 2 1/4	258	3100
6050	3	1 1/4-7 x 3 1/2	652	7820
7060	4	1 1/4-7 x 3 1/2	652	7820

Caution: Excessive bolt torque can cause sprocket and/or bushing breakage.
Note: To insure proper bushing/sprocket performance, full bushing contact on the shaft is recommended.

Troubleshooting

Symptom	Diagnosis	Possible Remedy
Unusual noise	Misaligned drive	Correct alignment
	Too low or high belt tension	Adjust tension to recommended value
	Backside idler	Use inside idler
	Worn sprocket	Replace sprocket
	Bent guide flange	Replace sprocket/flange
	Belt speed too high	Redesign drive
	Incorrect belt profile for the sprocket (i.e., HTD® etc.)	Use proper Gates Poly Chain® GT®2 belt/sprocket
	Subminimal diameter	Redesign drive using larger diameters
	Excess load	Redesign drive for increased capacity
Tension loss	Weak support structure	Reinforce the structure
	Excessive sprocket wear	Use alternate sprocket material
	Fixed (nonadjustable) centers	Use inside idler for belt adjustment
	Excessive debris	Protect drive
	Excessive load	Redesign drive for increased capacity
	Subminimal diameter	Redesign drive using larger diameters
	Belt, sprockets or shafts running too hot	Check for conductive heat transfer from prime mover
	Unusual belt degradation, such as softening or melting	Reduce ambient drive temperature to 180°F maximum
Belt tracking	Belt running partly off unflanged sprocket	Correct alignment
	Centers exceed 8 times small sprocket	Correct parallel alignment to set belt to track on both sprockets
	Excessive belt edge wear	Correct alignment
Flange failure	Belt forcing flanges off	Correct alignment or properly secure flange to sprocket
Excessive belt edge wear	Damage due to handling	Follow proper handling instructions
	Flange damage	Repair flange or replace sprocket
	Belt too wide	Use proper width sprocket
	Belt tension too low	Adjust tension to recommended value
	Rough flange surface finish	Replace or repair flange (to eliminate abrasive surface)
	Improper tracking	
	Belt hitting drive guard or bracketry	Correct alignment
		Remove obstruction or use inside idler
Premature tooth wear	Too low or high belt tension	Adjust tension to recommended value
	Belt running partly off unflanged sprocket	Correct alignment
	Misaligned drive	Correct alignment
	Incorrect belt profile for the sprocket (i.e., HTD, etc.)	Use proper Gates Poly Chain GT2 belt/sprocket
	Worn sprocket	Replace sprocket
	Rough sprocket teeth	Replace sprocket
	Damaged sprocket	Replace sprocket
	Sprocket not to dimensional specification	Replace sprocket
	Belt hitting drive bracketry or other structure	Remove obstruction or use inside idler
	Excessive load	Redesign drive for increased capacity
	Insufficient hardness of sprocket material	Use a more wear resistant material
	Excessive debris	Protect belt
	Cocked bushing/sprocket assembly	Install bushing per instructions

Troubleshooting

Symptom	Diagnosis	Possible Remedy
Tooth shear	Excessive shock loads	Redesign drive for increased capacity
	Less than 6 teeth-in-mesh	Redesign drive
	Extreme sprocket runout	Replace sprocket
	Worn sprocket	Replace sprocket
	Backside idler	Use inside idler
	Incorrect belt profile for the sprocket (i.e., HTD®, etc.)	Use proper Gates Poly Chain® GT®2 belt/sprocket
	Misaligned drive	Correct alignment
	Belt undertensioned	Adjust tension to recommended value
Tensile break	Excessive shock load	Redesign drive for increased capacity
	Subminimal diameter	Redesign drive using larger diameters
	Improper belt handling and storage prior to installation	Follow proper handling and storage procedures
	Debris or foreign object in drive	Protect drive
	Extreme sprocket runout	Replace sprocket
	Sprocket has too little wear resistance (i.e., plastic, aluminum, softer metals)	Use alternate sprocket material
		Unusual sprocket wear
Belt cracking	Backside idler	Use inside idler
	Extreme low temperature startup	Preheat drive environment
	Extended exposure to harsh chemicals	Protect drive
	Cocked bushing/sprocket assembly	Install bushing per instructions
	Misaligned drive	Correct alignment
	Too low or too high belt tension	Adjust tension to recommended value
Excessive temperature (belt, bearing, housing, shafts, etc.)	Incorrect belt profile (i.e. HTD, etc.)	Use proper Gates Poly Chain GT2 belt/sprocket
	Incorrect belt profile for the sprocket (i.e. HTD, etc.)	Use proper Gates Poly Chain GT2 belt/sprocket
Vibration	Too low or too high belt tension	Adjust tension to recommended value
	Bushing or key loose	Check and reinstall per instructions

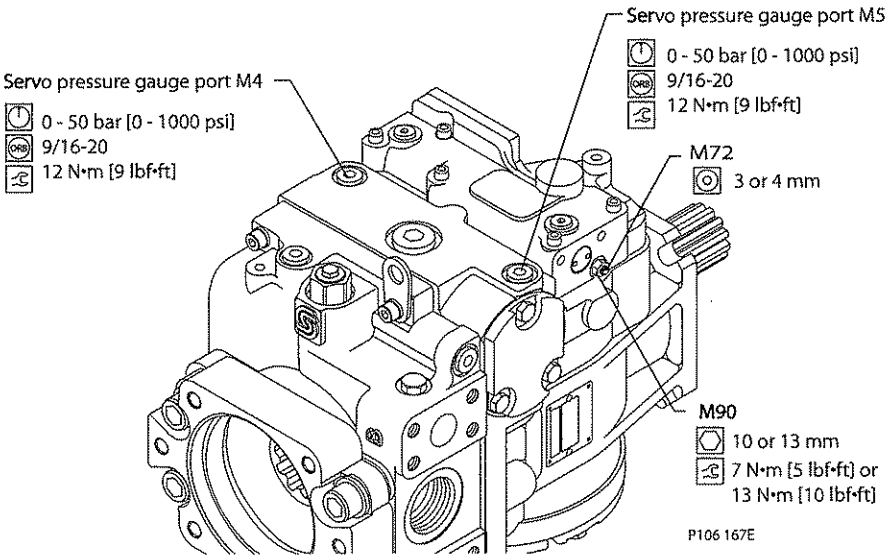
HYDRAULIC DISPLACEMENT CONTROL (HDC) AND ELECTRIC DISPLACEMENT CONTROL (EDC) ADJUSTMENT

The neutral adjustment is the only adjustment that can be made on hydraulic and electric displacement controls. All other functions are preset at the factory.

Make this adjustment on a test stand or on the vehicle/machine with the prime mover operating. ⚠

⚠ Warning
The following procedure may require the vehicle/machine to be disabled (wheels raised off the ground, work function disconnected, etc.) while performing the procedure in order to prevent injury to the technician and bystanders. Take necessary safety precautions before moving the vehicle/machine.

HDC and EDC neutral adjustment



1. Install a 50 bar [1000 psi] gauge in each of the two displacement control cylinder gauge ports (M4 and M5). Disconnect the external control input (hydraulic or electronic) from the control. Start the prime mover and operate at normal speed.

2. Loosen the lock nut (M90) with a 10 mm or 13 mm hex wrench.

3. Using a 3 mm or 4 mm internal hex wrench, rotate the adjusting screw (M72) clockwise until the pressure increases in one of the pressure gauges. Note the angular position of the wrench. Rotate the neutral adjusting screw counterclockwise until the pressure increases by an equal amount on the other gauge. Again note the angular position of the wrench.

4. Rotate the adjusting screw clockwise half the distance between the locations noted above. The gauges should read the same pressure (case pressure), indicating that the control is in its neutral position.

5. Hold the neutral adjusting screw stationary. Tighten the neutral adjusting screw lock nut to 7 N•m [62 lbf•in] for the 6 mm screw or 13.5 N•m [120 lbf•in] for the 8 mm screw. Do not overtorque the nut.

6. Once the neutral position is set, stop the prime mover, remove the gauges, and install the gauge port plugs. Reconnect the external control input.

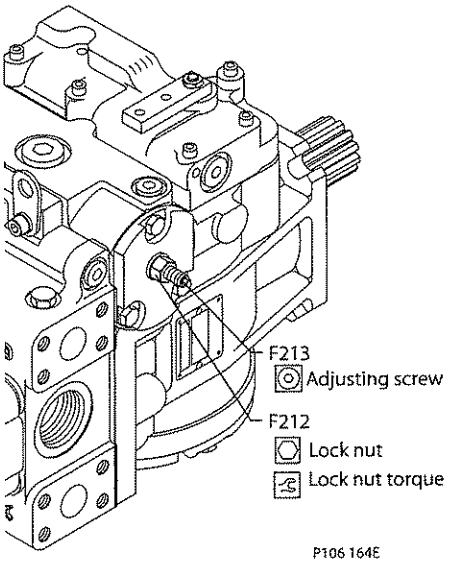
DISPLACEMENT LIMITER ADJUSTMENT

You can limit the maximum displacement in either direction.

1. Loosen the lock nut (F212) while holding the adjusting screw (F213) steady.
2. Rotate the adjusting screw some amount (using information in the following table). ❶ Rotating the adjusting screw clockwise decreases the maximum displacement of the pump while rotating the adjusting screw counterclockwise increases the maximum displacement.
3. One turn of the adjusting screw changes the maximum displacement as shown in table below
4. After establishing the desired maximum displacement setting, torque the lock nut to the torque shown in table below.

❶ Caution
Take care in adjusting displacement limiters to avoid undesirable flow or speed conditions. Re-torque lock nut (F212) after every adjustment to prevent an unexpected change in operating conditions and to prevent external leakage during unit operation.

Displacement limiter adjustment



Frame size	Lock nut wrench size and torque	Adjusting screw size	Approximate displacement change per revolution of adjusting screw
030	13 mm 24 N•m [18 lbf•ft]	4 mm	2.8 cm³/(rev) [0.17 in³/rev]
042	13 mm 24 N•m [18 lbf•ft]	4 mm	3.5 cm³/(rev) [0.21 in³/rev]
055	13 mm 24 N•m [18 lbf•ft]	4 mm	4.2 cm³/rev [0.26 in³/rev]
075	13 mm 24 N•m [18 lbf•ft]	4 mm	5.1 cm³/rev [0.31 in³/rev]
100	13 mm 24 N•m [18 lbf•ft]	4 mm	6.2 cm³/rev [0.38 in³/rev]
130	17 mm 48 N•m [35 lbf•ft]	5 mm	8.8 cm³/rev [0.53 in³/rev]
180	19 mm 125 N•m [92 lbf•ft]	6 mm	12.5 cm³/rev [0.76 in³/rev]
250	19 mm 125 N•m [92 lbf•ft]	6 mm	17.3 cm³/rev [1.06 in³/rev]

STANDARD MANUAL DISPLACEMENT CONTROL (MDC) ADJUSTMENT

There are no adjustable elements in the manual displacement control. Centering springs and washers on each end of the control spool hold it in its neutral position. Since there is no centering spring on the control input shaft, the shaft automatically assumes the appropriate position when the control is installed on the pump.

VacAll Industries, Inc.

Operator Training

DATE:_____
SERIAL NO._____

This training form covers the following unit.
ALLJETVAC Combination Machine.

Answer the following questions by circling the appropriate answer. If you have any questions on proper operation of any component on your ALLJETVAC, please contact VacAll Industries, Inc. Service Department at 1-800-382-8302.

FILTRATION/AIRFLOW:

A. I understand that the cyclonic ring or deflector plate is the first stage of material separation.
☐YES ☐NO

B. I understand that the air/water cyclonic separator is the second stage of filtration.
☐YES ☐NO

C. I understand the basics of the blower and how it produces airflow through-out the unit.
☐YES ☐NO

D. I understand that airflow is discharged through the vacuum pump silencer and why it is used to quiet the vacuum pump.
☐YES ☐NO

TAILGATE:

A. I know how to open and close the tailgate.
☐YES ☐NO

B. I know to clean the tailgate gasket after each dump in order to prevent damage to the tailgate gasket and prevent leaks.
☐YES ☐NO

C. I know how and when to properly use the tailgate pin.
☐YES ☐NO

D. I understand the functions of the check valves on the tailgate.
☐YES ☐NO

FLOAT BALL:

A. I understand the function of the float ball and how it operates.
☐YES ☐NO

K. Hoist control lever – raises and lowers the debris body.
L. Tank flush – flushes debris from the debris tank.
M. Decant valve – removes excess liquid from the collection body.

BLOWER:

A. I understand how to properly engage and disengage the blower.
☐YES ☐NO

WATER PUMP:

A. I understand how to properly engage and disengage the water pump.
☐YES ☐NO

B. I understand how to properly utilize the water pressure safety relief valve.
☐YES ☐NO

SLIDE GATE:

A. I understand how to operate the slide gate valve for underwater operation.
☐YES ☐NO

PENDANT CONTROL:

A. I understand that the hand held pendant controls all boom functions including the slide gate valve.
☐YES ☐NO

DAILY CHECK:
I understand how to check and maintain the following items:

D. Engine Oil	☐YES	☐NO
E. Cooling system	☐YES	☐NO
F. Battery	☐YES	☐NO
G. Drive belts	☐YES	☐NO
H. Air cleaner	☐YES	☐NO
I. Lube oil filter	☐YES	☐NO
J. Fuel	☐YES	☐NO
K. Vacuum pump oil	☐YES	☐NO
L. Water pump oil	☐YES	☐NO
M. Hydraulic oil	☐YES	☐NO
N. Hydraulic return/suction filter	☐YES	☐NO
O. All grease fittings	☐YES	☐NO
P. Float system	☐YES	☐NO
Q. Knuckle relief valve	☐YES	☐NO
R. Air dry/heater	☐YES	☐NO
S. Transfer case oil	☐YES	☐NO
T. Drive line lubrication	☐YES	☐NO
U. Shift tower lights	☐YES	☐NO

Notes on trainee:

Trainer’s Signature: Trainee’s Signature:

Company Name: Location:

Phone: Contact