

The JAGUAR Mx2 ETM/Portable

6/2019

PLEASE READ BEFORE OPERATION OF EQUIPMENT. DO NOT CALL US WITHOUT READING THIS FIRST!! We can not add anymore information than what is offered below:

Building of your equipment: Each system is custom hand built by experienced engineers. Every component has been pre-tested at the factory prior to installation. Then, the entire system is tested a second time at our distribution center prior to release and shipment. Therefore, your machine tested and ran perfectly. However, once you receive your machine, if for any reason during shipment something is or seems a little wrong, do not jump to conclusions- normally it can be easily adjusted without a problem. Remember, even though we take all the precautions we can, once it leaves our premises, we are NOT the shipping company!

Once shipment arrives: We hand package every item and do our very best to make sure that the outer boxes help protect the inner products. That is the only purpose of a carton/box. If, however, a box arrives torn from the shipping company, do not jump to conclusions and get upset, but rather check your product which is protected inside. Always make mention of any shipment condition/damage at time of arrival/pick up, to the shipper and have them sign & record your complaint just in case. Remember, cardboard boxes are only there to protect what is inside; not to be reused! **WINTER ARRIVALS:** Allow machine to warm for 24 hrs before start up. !

Real Purpose of your Industrial System: You are a part of the Professional Carpet Cleaning Industry and have purchased this system to work for you, *and not against you*. It is an industrial ETM/Portable which you will be able to depend on, day in and day out. Work it, respect it, and it will quickly become your most reliable partner in your business. However, never forget that you must learn and educate yourself on how to operate this equipment and take care of it. Continually refer to this manual and do not necessarily depend on others; Again, educate yourself! If however, you realize that you are not mechanically inclined, or speak a different language (from a different country outside the USA) please ask someone more knowledgeable, locally to describe and “show you” how to run this system.

Assembly items on arrival: (1) **Vacuum recovery tank Lid:** Position with “Airflow Separator” hole *toward rear!* Never reverse toward the machine vacuum 2” inlet barb! (2) **Front Swivel wheels:** Carefully mount & screw into base *without overtightening!* (3) Install rear 10” / ridged wheels by carefully slipping on metal sleeve with hex set screw. (Hex tool included) Position wheel extended hub toward gray machine base over metal axle.

When your Machine is: “NEW”: Your Industrial piston pump ,along with your Regulator, may require a wear-in time before it smooths out in terms of sound when turned on. This may also be true with vacuum motors however, less so. There are however, no exact hours, days, months.

Labels: Please note that the decal labels *are only temporary* and may eventually lose their adhesiveness because of the poly material they were affixed to. Remember; black toggles are vacuum motors/Red toggles are pumps.

Description of components

Front of gray base of machine: (1) **Toggle Switches:** OFF = up / ON = down. (2) **RED** toggles = Pumps { 800 psi piston pump—left side & pump out on-demand pump---right side) (3) **BLACK** toggles

= Vacuum motors. (4) **Pump out port** with garden hose cap located directly below right side toggles. Hook up any garden hose being careful *not to twist* to tight! (5) Directly below that feature is the **Hour Meter**. This registers time plugged into an outlet/power. (6) Bottom recessed center is located the **GREEN Circuit Sensor**. This will not light if you are plugged into the same circuit; thus potentially tripping a breaker. It will light when you are plugged into two separate circuits. When it is lit, start machine! (7) **Pressure Gauge**: This is a Liquid filled gauge displaying 0 – 1500 psi. You adjust the amount of pressure you desire by turning the brass knob located directly to the left side; referred to as the (8) **Regulator valve**. *Never adjust the needle on the gauge higher than 800 on the dial* or you have potential to blow out the gauge liquid, trip a circuit, and/or and ruin the pump. **Set the Pressure gauge needle** on the specific working pressure you require and start cleaning. You will note a pressure drop on your gauge, *needle lowering close to zero*. This is completely natural because you are transferring your required psi original setting to your cleaning tool! Your tool spray jets will further determine the amount of drop based on how small or how large orifice is.

Rear of machine: (1) Two, **Electrical outlet** plug in recessed ports on gray base {120v units only}. Use proper sized extension commercial cords (12-3, or 10/3), Operator purchases locally which depends on your set up.

Bottom of gray base: Both vacuum motors exhaust out bottom. Never set base flat on floor without wheels attached or burn out will occur.

Solution tank: (1) The lower back of this tank features the **auto-water inlet feed system** with a garden hose cap. Never screw on the cap, or garden hose by twisting hard!! This will move the interior white float toward the inside, thus putting it out of commission by not automatically engaging! Twisting will also cause a potential water leak. If this happens, re-install this component by using a rubber silicone caulk on float flange. Only snug tighten cap! **REMEMBER:** Before hooking a garden hose to the plastic in-let feed area, use the Brass Dual Swivel adapter! (2) Inside tank features **two color coded hoses**; one **yellow** {return re-circulating hose} ; one **blue** { draw hose to pump}. Normally both hoses will stay together, however, The yellow hose can be used separately when pumping out the remaining water in the solution tank. Or used for rinsing the recovery tank and its pump out tower filter, etc.... *Never kink the yellow hose* or it will quickly cause the regulator to leak and stop functioning. You can also by-pass the JAGUAR solution tank by putting both hoses into a pail or aux tank next to the machine, pulling from that source either for pre-spraying or the cleaning of carpets/furniture. However, *never run solvents through* or it will quickly ruin your pump valves (reducing pressure, priming, etc) and ruin interior of wand valves, hose, etc!!!! Always check chemical ingredients! Note: this would not be covered by any warranties.

Recovery tank: (1) Two black vacuum suction **stack pipes** with lint filters on top. Clean filters to maintain suction performance at optimum levels and not cause vac motors to burn out prematurely. (2) There are two Stack pipe 180 degree Floats with discs which should be installed and positioned toward each other toward center. Never twist on/off. Instead, wiggle on and off! (2) **Tower pump-out filter** located at bottom **should be rinsed off at least at end of each day of machine use**. *Never take off or unscrew!!!!* This would allow debris to enter pump out pump and clog valves! Therefore, pump would not move water, or very slowly! **NOTE:** This pump-out pump is not designed for higher flows where a special flood pumper may be required for flood damage extraction, or, higher flow wands such as a "Spinner". Always jet down!! (3) Front of tank features a **2" hose barb**. If you use a 1 ½" vacuum hose, most hose cuffs will fit inside this 2" fitting. (4) **Dump valve**: you will note that this is designed and positioned approx. 1 ½" above the bottom of the interior tank thus not allowing tank to fully drain. The reason for this is strictly to prevent lint from being vacuumed onto your stack pipe filters thus slowing down suction performance! Lint, debris, and dust will be trapped in the recovered water for removal via flushing/rinsing out the side black rubber cap at end of day. Further, this helps with "in-door air quality". Further, this helps longevity of dump valve O-ring from getting grit within causing excessive pre-mature wear/leakage.

NOTE: If only running one vacuum motor, realize that you would be drawing outside air through the other unused stack pipe thus reducing vacuum substantially similar to leaving your dump valve open while cleaning! Always use both vacuum motors if possible.

Another "No-Brainer": Again: Never twist any item/feature on your system or you will cause a potential leak of that item. Always "Wiggle-On & Off" hoses, Tower &/or vac. filter floats, garden hoses, garden hose caps, etc.

NO BRAINERS:

Note: When trying to find a solution to a particular situation, before it becomes a problem, think clearly and logically. Do not jump to conclusions; take your time. Solving your problems, yourself will help you in the future!

PRESSURE PUMP

1. **Loss of pressure:** (a) **Quick disconnects do not match up (foreign copies).**—Purchase exact replacements. (b) Use of solvents in solutions running through pump---1. replace pump valves; and/or, 2. Replace piston. (c) After hours & hours of use, pressure eventually seems lower---Replace pump valves. (d) Pump Motor cam bearing (located at end of motor shaft) jammed or broken from usage or non-grease (silicone grease only!)----Replace. (e) Kinked pump feed hose under solution tank from replacement-----Re-position by hand to avoid unnecessary kinks. (f) Broken brass hose fitting sucking in air, attached to the solution tank, and blue psi hose leading to pump----Replace. (g) Clogged spray jets on tool---Clean. (h) Dislodged O-ring in tool control valve—Replace.
2. **Dripping water:** (a) Pump head cracked from freezing---Replace. (b) Piston leaking---Replace.
3. **Loud Noise:** (a) Inspect Cam Bearing : 1. Replace. 2. Grease (silicone grease only!) (3) no water in pump head; running dry—clogged inlet; bad valves.
4. **Pump not running:** (a) Tripped circuit breaker on job. ---select different outlet. (b) Extension cords no sized properly or internal cord wire break---Replace. (c) Burned out motor—Replace. (d) disconnected wire within base---Inspect.
5. **DO NOT ALLOW TO FREEZE!**
6. **PUMP RUNNING BUT NO WATER COMING OUT:** Your blue solution tank hose end above water sucking in air? Prime pump: Use a male (QD) connector ONLY, and attach it to the front of the Female QD on machine. Start pump and see if water shoots out. You can also in addition, help pull it thru using your vacuum hose over the connection.
7. **DO NOT RUN HIGHER THAN 500 psi when new! Allow pump and direct (regulator hoses, etc) fittings to mold itself in for a period of several days.**

Note: If you are running a business you are dependent on, it is advisable to purchase an extra pump valve kit to have in stock----"just in case!"

Remember: *The higher the psi setting;* the longer it takes to dry a carpet. However, it probably is thoroughly flushed out and will dry "cleaner" void of soil. *The lower the psi,* the shorter the drying time. However, this is cosmetic cleaning and the fibers will not be thoroughly flushed out. "Normal operating pressure": 300-350 needle setting on the gauge dial.

PUMP-OUT PUMP:

- (a) This component will continue to run once it is engaged. (b) It will automatically shut down if discharge hose is ever kinked, or, (c) it will continue to run but not pump any water out if the discharge line is clogged with

debris; or, if the recovery tank Tower Filter is clogged. (d) It will also run but not pump out if pump valves are clogged with debris! Never take off Tower Filter because it will clog the pump! Note: **This pump was designed to normally keep up to your extraction cleaning process and will not keep up to flood extraction or a higher volume floor tool** unless operator relieves intake of water occasionally. { pump rated at approx 3.5. gpm) A high volume flood pump should be an option in this situation.

- (b) **TOWER FILTER:** Keep clean by Back Flushing by using the brass Garden Hose double swivel adapter attached to your garden hose. This connection is located on the top side of the Recovery Tank above the rubber cap clean out port. Turn on water supply and this will back flush the lint/debris build up on the outside of the screening. Further, you can also turn on your pump-out pump to also flush out the internals with clean clear water.

VACUUM MOTORS

Note: These are sealed and do not require maintenance of any kind. DO NOT allow water or debris to be vacuumed through them or it will destroy this component! Learn when to use a defoamer/anti-foam to avoid foam in your recovery tank! Remember that these industrial motors are rated at longer hours than normal and if they prematurely go out, then it becomes an operating or operators' problem than he/she may want to solve.

1. **Loud vacuum motor:** Normally after hours of usage----Replace.
2. **Water blowing out exhaust:** Excessive foam recovery in vacuum tank. Use a defoamer! Empty tank more often. Remember: Foam is light weight and floats on top of water!

IMPORTANT Relative Specifications:

- Approx. Weight: 105 lbs. / 48Kg. empty
- Dimensions: 34"h x 30" L x 18" w (86cm x 76cm x 46cm)

Motor specifications as per manufacturer. (6-12-2017)

Components:

Line #1:

1. **VACUUM MOTOR:** 8.4 x 2 stage / 632 Air Watts / 14.2 max amp draw-"Running Freely" / Low as: 7.6 "closed off"-under load- /134.1 CFM / 141.8 " lift. CONCLUSION: To keep amps lower USE the machine by putting wand to floor and start cleaning!

2. **PUMP:** 1/2 HP x 1725 rpm x 60/50 HZ x Dual Capacitor / Amp draw: 2.6 - 5.2 max.- determined by psi setting / 0-800 psi x 2.2 gpm (open flow rating)

>**Note:** In reference to your JAGUAR Mx2 please note that line #1 - @ Max Amp draw @ 19.4 amps (PUMP & VAC) it must be plugged into a full **20 amp** circuit not shared by any other component(s) —ex: refrigerator, etc...----. when vac motor is on, start cleaning carpets to help lower amp draw; never leave it to run freely because it will draw max amps and may trip home breaker if outlet/circuit does not supply adequate energy!

Line #2:

1. **VACUUM MOTOR:** 8.4 x 2 stage / 673 Air Watts / Internal Over-Load Protection** / 13.7 max amp draw / 141.5 CFM / 146.6 " lift

2. **Pump-out:** On-Demand style / 3.5 gpm; open flow / approx 1.3 amp draw

>Note: In reference to Line #2 - Max Amp draw (approx) **15.5 amps.**

It must be plugged into a full 15 amp circuit not shared by any other component(s)-[down line] or your Vacuum motor internal over-load will eventually kick in and shut down.

Extension cord requirement: Please size accordingly. Min: 12-3 gauge required.

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- Note: the higher the pressure setting the higher the amp draw, and visa versa. Therefore, remember this if energy is at a minimum level; turn down.
- ***If using a GENERATOR: Purchase at least a 5500w running x 6000w Surge, or more, for longevity. Please note that it is advised that the operator uses the 30amp x 120v outlet on a generator for Line #1 Vac & Pump since the generic 20 amp outlet on some generators will not carry #1 Load. Thus, sometimes this will over test the internal vac shut-off over-load component and burn it out.

RECOMMENDED OPERATING PRESSURES:

Normal Carpet Cleaning: Set needle at: 200 psi-300 psi

Normal Furniture Cln: Set needle at: 100 psi

Remember: the above suggested psi depends on tool jet sizes used!

IMPORTANT SITUATIONS:

You see, even tho the GREEN "go" lite is on, this only indicates that you are plugged into --2--- separate outlets; 2 separate circuits/legs in the home. It can not tell if you are plugged into a 15 amp outlet; or a 20 amp outlet, or if another item is also drawing off that same leg.

However, line # 1 can draw the most amps depending on what you the Operator demands of machine because it not only incorporates the Vacuum motor, but also, the large 800 psi pump. The pump (motor) can draw as little as approx 2.6 amp, or up to approx 5.2 amps depending on your **-psi gauge setting-**.

>>>>The lower the setting; *the lower the amp draw* required to run it. The higher the psi setting, the higher the amp draw required to run it.

Further to this, whenever you plug into an outlet in a home (ex: such as in my own home) some circuits are connected down line and other in-home components (such as a Refrigerator; etc...)

may be sharing some of those amps thus reducing the required amount to run the 800 psi pump and Vacuum motor on line #1.

CONCLUSION: 1. Try to Make sure you plug both cords into separate 20 amp outlets/circuits.
2. Not knowing what psi gauge setting you set the needle at, I would suggest lowering this, thus, lowering the amp draw.

Remember, you are in the learning stage and actually, this can be a terrific advantage to you in the end for "on-the-job" trouble shooting.

SAFETY CONSIDERATIONS:

1. Always use a grounded 120v. outlet.
2. Always position machine on level floor. Make sure it is secure.
3. **Never allow CHILDREN around or near machine during or after its usage! Never leave unattended.**
4. During usage always make sure machine is positioned where it will not harm anything or items around it.
5. Always educate users on the operation and monitor.
6. NEVER allow machine to freeze! Freezing will damage all components.
7. Always check local laws, codes, and/or insurance for any restrictions, etc.
8. Always unplug machine if performing maintenance.
9. Always use two people to carry machine upstairs if necessary. Never use grab handles.
10. DO NOT stand in water or on a wet surface when operating this machine!

