



M1X WITH OSC

GENESIS

RESCUE SYSTEMS

M1X USER GUIDE

THIS GUIDE COVERS THE FOLLOWING PART NUMBERS.

**ART.593.511.3 | ART.593.513.1 | ART.593.512.1 | ART.593.197.5F
| ART.593.292.0F | ART.593.265.3F | ART.593.197.5 |
ART.593.292.0 | ART.593.265.3**

Thank you for choosing equipment from **American Rescue Technology**. We strive to give our customers the latest technology available in rescue products; from the newest lightweight alloys, to the most innovative designs in the industry. We continually update and refine our products in order to offer the highest quality equipment at a reasonable price. **The M1X Power Unit** is third party tested, **ISO 9001 Quality Assurance Certified and NFPA 1936 Compliant**. At **American Rescue Technology** we feel we offer the highest quality rescue equipment available; so do our customers! Thank you again for choosing **American Rescue Technology**.

Read Before Operating

Read and follow this manual and safety regulations prior to operation.

- Only trained and qualified personnel are authorized to use this power unit.
- Operator must wear protective clothing, helmet, eye protection and gloves.
- No modifications in shape or performance is allowed. Changing the pressure relief valve of the hydraulic power unit is not allowed.
- This power unit is designed for the use described in this manual. Other applications are not permitted.
- Before operating the power unit, all by-standers must be removed from area.
- This power unit should never be connected or disconnected to hydraulic hoses if pressure is present in the hoses.

Applications

This power unit is designed to operate rescue tools with a “maximum operating pressure” of 10,000 psi or higher and use mineral base hydraulic fluid.

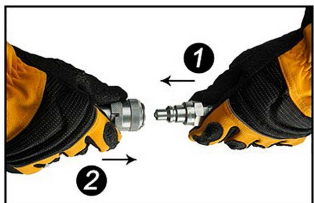
Connecting the Hoses

Remove the protective caps from the male (1) and female (2) coupler.

Connecting

Grasp the male coupling in one hand and with the other grasp the female coupler and draw back the sleeve, be sure the pin and slot are aligned. Bring the ends together and press. Release and turn the sleeve to ensure couplers are connected.

STANDARD



OSC

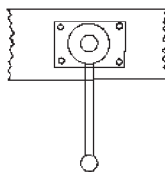


Disconnecting

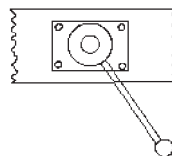
Grasp the coupler pair and draw back on the sleeve of the female coupler. Make sure the pin and slot are aligned and the coupler will disconnect. A few drops of fluid may be expelled. This is normal.

Operating Power Unit

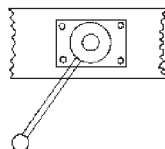
It is very important to read and understand how the pump valve works. This will prevent future problems. The following diagrams show the different positions of the pump control valve.



Neutral Position: Used when starting or stopping the engine, or when changing tools.



Right Tool: Allows operation of the tool connected to the right hose.



Left Tool: Allows operation of the tool connected to the left hose.

Starting the Pump

1. Check for adequate hydraulic fluid level.
2. Put pump valves in neutral position.
3. Start engine. (According to Engine Manual) Hoses can be connected before or after starting engine.

Changing Tools While Pump is Operating

Tools can be changed while the pump is operating. Move the pump lever to the neutral position and disconnect the tool. Attach different tool and move lever to “on” position. Tool will be ready to use.

When Finished Using Power Unit

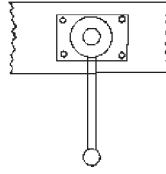
When finished using the tools, they should be in the retracted or closed position. Move pump valve levers to the neutral position and shut off engine. Store the unit with the valves in the neutral position.

Set-Up Procedure

The following is a step-by-step set-up procedure for the M1X power unit. Please read and understand all of the steps before proceeding.

1. Remove power unit from box.
2. Remove any packing material from power unit and clean.
3. Fill hydraulic reservoir with hydraulic fluid provided. Use of phosphate ester or ethylene glycol based hydraulic fluids will void warranty and ruin the hydraulic pump assembly.
4. Add engine oil. (If applicable) See Engine Manual.
5. Add clean unleaded gasoline to fuel tank. (If applicable)
6. Attach plug to units with electric motors. Turn switch to "OFF" position and plug into 220 VAC circuit.
7. Attach hoses to pump and connect ends together.

8. Put pump valves in "NEUTRAL" position. (See diagram)

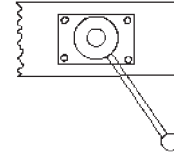


**NEUTRAL
POSITION**

9. Start engine. (Read engine manual before starting)

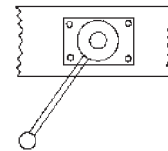
10. Switch pump valve to the right tool position.

This will circulate hydraulic fluid through the right hose



**RIGHT
TOOL
POSITION**

and removes any air. Do the same for the left side.



**LEFT
TOOL
POSITION**

Add hydraulic fluid to the reservoir as needed. Do not allow hydraulic fluid level to get too low. Allow fluid to circulate for about two minutes. **Note: A 100' hose will need approximately 1 gallon of hydraulic fluid.**

11. Switch pump valves back to "NEUTRAL" position.

12. Shut off engine. Pump and hoses are ready for use.

Specifications

	Honda	Electric
Length (in/mm)	18/457	16.3/414
Width (in/mm)	13/330	11.5/293
Height (in/mm)	18.5/470	16.8/427
Weight (lbs/kg)	51/23.1	42/19
Voltage (VAC)	NA	220
Amperage (No Load)	NA	3.7
Amperage (Full Load)	NA	5.0
Hyd. Fluid Cap. (gal/litre)	.5/2	.5/2
Op. Press. (max. psi/bar)	10,500/720	10,500/720
Fuel Capacity (gal/litre)	.3/1.1	NA
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General Maintenance

Following are the recommended service intervals for your new rescue equipment. By following these guidelines you will be assured many years of reliable service.

After Each Use

- Wipe down all equipment to remove debris
- Clean male and female couplers
- Check hydraulic fluid level
- Check engine fluid levels (See Engine Manual)

Weekly Inspection & Maintenance

We recommend running the power unit weekly and doing the following checks.

- Check all couplers and fittings for tightness
- Run each tool and build full pressure
- Check handles and guards, tighten if necessary
- Check tightness of reservoir bolts

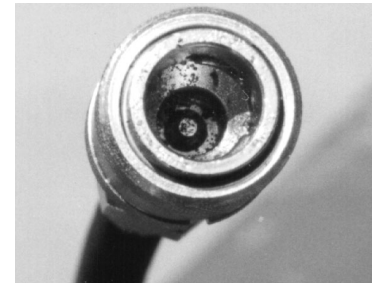
Yearly Maintenance

We recommend having a yearly inspection and service done by a qualified American Rescue Technology technician.

- Cleaning and inspection of power unit
- Change hydraulic fluid and pressure test
- Adjust pressure if necessary
- Service engine or motor according to manual
- Replace any damaged parts

Cleaning the Couplers

Below is a photo of a dirty female coupler. Dirty couplers allow dirt to get into the hydraulic system, requiring more frequent fluid changes. Dirty couplers are difficult to connect and lead to further complications. To clean a coupler, we recommend immersing it in hydraulic fluid and agitating it until the dirt is removed. Petroleum based penetrating oil will also work. (WD-40) These are available in sprays and are well suited for field use.

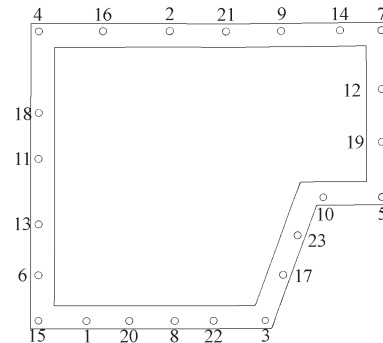


Clean dirty couplers with hydraulic fluid or a light penetrating oil like WD-40.

Tightening Reservoir Bolts

Tighten reservoir bolts to **65-70 in-lbs.** in the pattern below. Insert bolts and hand tighten. Use a torque wrench for final tightening. Uneven tightening could cause warpage on the reservoir bolt flange.

RESERVIOR BOLT PATTERN MAY VARY



Troubleshooting

Problem	Possible Cause	Action
Power unit fails to build pressure	External leak in system. Internal leak in pump or valve. Internal leak in system component.	Check all connections and components. Contact dealer or American Rescue Technology. Repair or replace leaking component.
Rescue tool will not open or close.	Valve not in pressure position. Load exceeds tool rating. Flow blocked by loose coupler connection. Fluid level too low. Filter screens clogged. Pump or valve failure	Move valve lever into pressure position. Decrease load or use higher capacity tool. Release pressure and check coupler connections. Fill reservoir to proper level. Remove reservoir. Clean or replace filter screens. Contact dealer or American Rescue Technology.
Rescue tool opens and closes erratically.	Air in fluid. External hydraulic leak Relief valve failure Pump worn or damaged Sequencing valve failure	Tighten connections. Purge air from system. Repair or replace damaged components. Purge air. Contact dealer or American Rescue Technology. Contact dealer or American

Parts and service are available through your local dealer.
Before disassembling the power unit contact your local dealer.