

Mach III Mini Simo

P/N: ART.059.991.3H

Technical Report Number

014-10058660/1



Specifications

| | |
|----------------------------------|------------|
| Length (in/mm) | 17/432 |
| Width (in/mm) | 13.5/343 |
| Depth (in/mm) | 20/508 |
| Weight (lbs/kgs) | 64/29 |
| Operating Pressure (psi/bar) | 10,500/720 |
| Hydraulic Fluid Type | Mineral |
| Hydraulic Fluid Capacity (gal/l) | 1/4 |
| Engine Type | 4 HP Honda |
| NFPA Compliant | Yes |

Features

- **Two Tool Connection-Two Tool Simultaneous Use**
- **Two Separate Pumps That Operate Independently**
- **World Patented Overdrive Feature Allows One tool To be Operated At Twice The Speed**
- **Optional Engines: Honda 5.5 hp, Honda 6.5 hp**
- **Easy To Read Fluid Sight Glass**
- **Lightweight and Dependable**

**Independently Tested
and Certified to
NFPA 1936 by:**



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The Added Value of NFPA 1936 Compliance

When purchasing a new rescue tool system you are making a ten year commitment to your department. The system you choose will be in use for at least ten years. Certainly our tools will last much longer than ten years, but after this period of time new advances make these tools obsolete. Over this ten year period you will use your rescue system hundreds, if not thousands of times. Each time you go out on a call you need to know your rescue tool system is going to perform as well as it did when it was first purchased.

The Intent of NFPA 1936

After seven years of work, on August 13, 1999, the NFPA issued *NFPA 1936 Standard on Powered Rescue Tool Systems, 1999 Edition*. This standard was designed to ensure fire & rescue departments a better way to compare rescue tool systems and to guarantee the quality of compliant systems. To be compliant a tool must undergo rigorous testing. The following are a few of the tests our power units had to endure to receive NFPA 1936 compliance.

Impact Resistance Test

This test was devised to test the integrity of the roll cage and mounting system. The power unit is suspended upright over a one inch thick piece of solid steel plate. The power unit is then dropped from a height of two feet. Afterward the power unit is connected to a tool and operated through five complete operational cycles. If the rated system pressure is achieved during all five of the operational cycles then the power unit passes the test.

Endurance Test

This test is designed to prove the integrity of the power unit. The power unit is subjected to 100 cycles. A cycle is defined as the power unit generating the rated system pressure, then holding that pressure for twenty seconds. Then the power unit is relieved of the system pressure for twenty seconds. The power unit is then observed for leaks or other malfunctions to determine pass or fail.

Incline Operational Test

This test checks the design and proper fluid capacity for the power unit. The power unit is tested using the tool with the largest oil volume differential that is capable of being used with the system. The power unit is inclined to a 15 degree angle in one of the four horizontal axial directions. The power unit shall then operate the tool through one operational cycle to the tools rated pressure. Then the same is done through the other three horizontal axial directions. If the tool operates properly and the power unit reaches full pressure, then it passes the test.

Power Unit Pressure Test

To ensure user safety and proof of proper design, the power unit is put through a high pressure test. This test is done on a level surface and the system pressure is monitored by a gauge. The power unit is operated at the system pressure for one minute. During the one minute test the gauge is monitored to check for pressure fluctuations. Fluctuations greater than +/- 5 percent constitute failure.

Power Unit Dump Valve Test

This test is designed to prove the integrity and longevity of the dump valve. In this test the power unit is set on a level surface with a supply hose connected to the tool. Then the supply hose is pressurized. While the dump valve of the power unit is activated (i.e., open), the hose to the tool is disconnected. The system is then pressurized and dumped again. The hose is then reconnected to the tool. This disconnection and reconnection of the hose is evaluated. If it cannot be done the power unit fails the test.

Directional Valve Endurance Test

The directional valve endurance test insures the power unit valves will have a long and trouble-free life. The directional valves are put through a 5000 cycle endurance test. After the 5000 cycles are completed, the valves are pressurized to 110 percent of the rated system pressure and checked for leaks or other malfunctions. If none are found the power unit passes.

It is a requirement of NFPA 1936 that the manufacturer publish the performance specifications of each tool in accordance with the standard, therefore if you're considering purchasing new rescue tools be sure to request the NFPA performance specifications of each tool. If they cannot supply you this information rest assured those tools are not NFPA compliant. You should require all rescue tool companies to give detailed performance specifications, printed by the manufacturer, that conform to NFPA 1936. If their tools are not compliant ask why. NFPA 1936 was issued to stop companies from providing misleading performance figures, and help departments purchasing rescue equipment to get a high quality rescue system that performs as specified, from the first day it is put into service until the day it is replaced. This standard was written for you, use it and feel assured that you have purchased a high quality rescue tool system.



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