**Sheffield Lake Fire Department**

**Battery Powered Extrication Tool**

**Bid Specs**

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**All bids are due on Monday December 3, 2018 at 12:00 PM**

**Mail or deliver to: 609 Harris Rd, Sheffield Lake, OH 44054**

**Or email to: slfdchief@hotmail.com**

**SPECIFICATIONS FOR BATTERY OPERATED RESCUE TOOLS**

**SCOPE**

This specification covers a new, commercially produced hydraulic rescue tool system. Any system bid in response to these specifications shall be designed to allow upgrading and interchangeability with other components of the same manufacturer.

**APPLICABLE DOCUMENTS**

Any manufacturer or vendor responding to this bid shall enclose in their proposal, at the time of bid, any documents required in these specifications. It is the responsibility of the vendor to be sure that the proposal submitted meets all the requirements of these specifications. Bids which fail to comply with these specifications shall not be considered for award.

**MATERIALS**

The hydraulic rescue tools delivered under these specifications shall be standard commercial products, which meet or exceed the requirements of this specification. The components and optional items shall be represented in the manufacturer’s current sales and technical data. The supplier shall provide total standardization and interchangeability between similar tools and components, items, and accessories of the manufacturer specified in the proposal.

Materials used in the construction of the rescue tools shall be new and not less than the quality conforming to current engineering and manufacturing practices. Materials shall be free of defects and suitable for the service intended.

**EXCEPTIONS TO THE SPECIFICATIONS**

It is not the intent of these specifications to restrict or prevent any vendor from submitting a proposal on his/her product. Due to the fact that the equipment specified is to be used under emergency and hazardous conditions, where human life may be at risk, the following must apply. Any exceptions to these specifications indicated herein must be clearly pointed out; otherwise it will be considered that items offered are in strict compliance with these specifications and the successful bidder will be held responsible for delivering a rescue tool system meeting these specifications. Any exceptions taken shall be listed and noted on the exception sheet found at the end of these specifications.

**INFORMATION AND DESCRIPTIVE LITERATURE**

Bidders must furnish all information requested and in the space provided on the bid form. In addition, vendors shall supply at least two (2) sets of literature covering the products offered. Bids not meeting this requirement will be rejected without further explanation.

**ANTI-COLLUSION STATEMENTS**

By signing this bid the bidder agrees that this proposal is made without any misunderstanding, agreement, or connection with any other person, firm, or corporation making a bid for the same purpose, and that the bid is in all respects fair and without collusion or fraud.

Sign in ink in the space provided below. Unsigned bids will be considered as incomplete and will be rejected without further explanation.

It is agreed by the undersigned bidder that the signing and delivery of this bid represents the bidder’s acceptance of the terms and conditions of the foregoing specifications and provisions; and if awarded the contract by this agency, will represent the agreement between the parties.

**Name of Firm: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Signed by (in ink): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Title: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Brand of Rescue Tool:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Delivery will be made in \_\_\_\_\_\_\_ days,**

**SPECIAL NOTE:**

Variances or exceptions must be noted and numbered on the following pages and explained in full detail on the last pages of this specification. Vendors whose bid fails to comply with this requirement will not be accepted.

**GENERAL CONDITIONS**

The following is a description of the rescue tool system that will meet the minimum requirements of this specification. These specifications are to be considered as minimum, and are expressed as such. If the rescue tool (s) and component parts delivered under this contract do not comply with these specifications, the tool (s) will not be accepted. Any vendor failing to meet his/her obligations required as part of this contract may be forced to pay liquidated damages to this agency. Such damages shall not exceed an amount in acquiring a replacement product or tool meeting the requirements of this specification.

**Comply \_\_\_\_ Exception \_\_\_\_**

**HYDRAULIC RAM – 21”/36” Battery Powered Ram**

As a major component of this specified rescue tool system, this ram shall be designed in accordance with modern manufacturing techniques, and shall use materials of high strength and light weight. Since this system is to be operated primarily by a single rescuer, the weight of the ram is a major consideration of these specifications. Bidders responding to this bid shall take this information into consideration when bidding this component.

Since both men and women rescuers may be required to utilize this tool at any given time, the hydraulic ram tool shall weigh no more than 35.7lbs / 16.2 kgs.

**Comply \_\_\_\_ Exception \_\_\_\_**

**RAM CONTROL MECHANISM**

This control valve shall have a finger lever “deadman” control characteristics which is located on the handle itself for ease of operating tool with index finger and thumb while maintaining full grip of control handle. That is to say that the finger control shall be spring loaded in such a way to allow the control valve to return to the “stop” position when the control valve is released. Return spring shall be an internal type, and not exposed to be damaged. No “star knob” control will be considered.

**Comply \_\_\_\_ Exception \_\_\_\_**

**BATTERY AND MOTOR HOUSING**

This tool shall be equipped with an over-pressurization relief valve. Motor housing must be fully enclosed with no vents not to allow any moisture to effect electrical components. Housing must allow rear battery attachment to housing with no obstruction to read battery life displayed by LED on battery. Battery must be a 28v Lith-Ion battery designed for optimum performance.

**NOTE:**

Battery must be a commercially available for ease of purchasing at any local authorized distributor. Battery warranty must cover 3 years from date of purchase from any manufacture defect.

**Comply \_\_\_\_ Exception \_\_\_\_**

This component shall be as small and compact as possible. The ram tool shall not exceed 21.3 inches / 542 mm in length, not more than 11.4 inches / 289 mm in width.

**Comply \_\_\_\_ Exception \_\_\_\_**

To prevent corrosion, the spreader shall have an anodized/powder coat finish.

**Comply \_\_\_\_ Exception \_\_\_\_**

A manual extension option (3) shall be offered with the ram at lengths of 7, 10, 12 inches / 175, 250, 320 mm. This extension shall attach to the bottom of cylinder and secured with a pin to secure a proper fit.

**Comply \_\_\_\_ Exception \_\_\_\_**

When fully extended the ram shall open to 35.8 inches / 910 mm length without use of the extension.

**Comply \_\_\_\_ Exception \_\_\_\_**

The ram shall have a maximum spreading force of at least 24,953 lbf / 111 kn (NFPA HSF, or Highest Spreading Force).

**Comply \_\_\_\_ Exception \_\_\_\_**

The telescopic ram must be third party tested and certified to NFPA 1936 (latest edition). The manufacturer must provide documentation of this certification to the end-user.

**Comply \_\_\_\_ Exception \_\_\_\_**

**HYDRAULIC CUTTING TOOL –**

The hydraulic cutting tool with this system shall be designed in accordance with modern manufacturing techniques, and shall use materials of high strength and lightweight. When used as a component of this system, the cutting tool is to be operated primarily by a single rescuer. Therefore, the size and weight of the hydraulic cutting tool is a major consideration of these specifications. Bidders responding to these specifications shall take this information into consideration when bidding this component.

**Comply \_\_\_\_ Exception \_\_\_\_**

The cutting tool as specified in this specification is to function as a “stand alone” component of the rescue tool system. Any system bid that requires the cutter to operate as part of the spreader tool will not be acceptable.

**Comply \_\_\_\_ Exception \_\_\_\_**

The cutter shall come equipped with a blade lubrication system to facilitate “field” lubrication of the cutting blades, and prolong the life of the cutter blades.

**Comply \_\_\_\_ Exception \_\_\_\_**

The blade lubrication system must consist of a recessed grease zerk fitting to interface with a grease gun at one end of the tool’s center bolt, a grease groove on the center bolt running the length of the cutting surfaces, as well as a grease passageway to connect the grease zerk coupling with the grease groove in the center bolt.

**Comply \_\_\_\_ Exception \_\_\_\_**

Each Face side of each cutter blade must have a minimum of three grooves that interface with the grease groove to allow effective distribution of grease from the blade lubrication system onto the friction surfaces of the cutter blades.

**Comply \_\_\_\_ Exception \_\_\_\_**

To prevent corrosion, the cutter shall have an anodized finish.

**Comply \_\_\_\_ Exception \_\_\_\_**

**CUTTING TOOL DIMENSIONS AND WEIGHT**

The hydraulic cutting tool shall weigh no more than 51.8 pounds. This shall be a “wet” weight, and shall include the cutter and battery.

**Comply \_\_\_\_ Exception \_\_\_\_**

This component shall be as small and compact as possible. The cutting tool shall not exceed 37.5 inches / 953 mm in length, 10.6 inches / 269 mm in width, and 8.5 inches / 217 mm in depth, the width dimension shall include any handles or extensions.

**Comply \_\_\_\_ Exception \_\_\_\_**

**CUTTING TOOL PERFORMANCE CRITERIA**

This tool will be used in rescue situations where operating area is minimal, and where maximum cutting force is necessary. The following performance criteria will be considered as minimum. The hydraulic cutting tool shall have a maximum blade opening of at least 7.9 inches / 200 mm.

**Comply \_\_\_\_ Exception \_\_\_\_**

The hydraulic cutting tool shall provide a maximum cutting force of at least 236,250 lbf / 1050 kn. These forces are deemed necessary to affect the cutting of UHSS (Ultra High Strength Steel) found in modern automobiles. Thinner metal found in newer cars demand that a cutter is capable of cutting these extrication objects. Cutters unable to perform these functions, or providing less cutting force are not acceptable.

**Comply \_\_\_\_ Exception \_\_\_\_**

The hydraulic cutting tool shall be third party tested and certified to NFPA 1936 (latest edition). The manufacturer must provide documentation of this certification to the end-user.

**Comply \_\_\_\_ Exception \_\_\_\_**

The hydraulic cutting tool shall have a minimum NFPA 1936 rating of: A8/B9/C7/D9/E9.

**Comply \_\_\_\_ Exception \_\_\_\_**

Public documentation from the manufacturer must be submitted with the bid for the tool being proposed that includes all NFPA 3rd party performance data (NFPA Cutter Rating). In addition to manufacturer logo, this documentation must include name or logo of testing company. Bids not including this documentation will be considered non-responsive.

**Comply \_\_\_\_ Exception \_\_\_\_**

**CUTTER BLADE CONSTRUCTION**

The cutter tool blades shall be made from a high quality, shock resistant tool steel. Because of the tremendous forces exerted on the cutter blades, each cutter blade shall cut a round stock bar to insure the integrity of the blade. The blades will also have an area specifically designed to cut round stock. The “round stock” cutter will be capable of cutting round pieces of metal without hazard of propelling the cut object. This is useful for cutting steering wheel rings, brake pedals, shifting handles etc. Blades shall have a removable center insert that allows no “rolling of blade edge” to maintain a clean sharp cutting surface.

**Comply \_\_\_\_ Exception \_\_\_\_**

The cutter blades must be forged, to ensure longer life of the blades. Non-forged cutter blades (example machined blades and heat treated) are not acceptable, since they do not last as long as forged blades.

**Comply \_\_\_\_ Exception \_\_\_\_**

**CUTTER TOOL CONTROL MECHANISM**

This control valve shall have a finger lever “deadman” control characteristics which is located on the handle itself for ease of operating tool with index finger and thumb while maintaining full grip of control handle. That is to say that the finger control shall be spring loaded in such a way to allow the control valve to return to the “stop” position when the control valve is released. Return spring shall be an internal type, and not exposed to be damaged. No “star knob” controls will be considered.

**Comply \_\_\_\_ Exception \_\_\_\_**

**BATTERY AND MOTOR HOUSING**

This tool shall be equipped with an over-pressurization relief valve. Motor housing must be fully enclosed with no vents not to allow any moisture to effect electrical components. Housing must allow rear battery attachment to housing with no obstruction to read battery life displayed by LED on battery. Battery must be a 28v Lith-Ion battery designed for optimum performance.

**NOTE:**

Battery must be a commercially available for ease of purchasing at any local authorized distributor. Battery warranty must cover 3 years from date of purchase from any manufacture defect.

**Comply \_\_\_\_ Exception \_\_\_\_**

To maintain operator familiarity with this rescue system, the operating controls of the cutting tool shall be designed and operate as those found on the spreading tool. Therefore, the cutting tool control mechanism shall meet all requirements as found in the spreader control mechanism.

**Comply \_\_\_\_ Exception \_\_\_\_**

**CUTTING TOOL HANDLE**

In addition to the rear-mounted control, an additional adjustable “D” type handle shall be provided to ease positioning and movement when operating the cutter. This “D” handle shall be adjustable 360-degrees and field removable. Handle shall have a star knob to tighten for a fixed handle or loosen for a rotatable handle. This handle shall be made of steel and machined to provide a non-slip surface.

**Comply \_\_\_\_ Exception \_\_\_\_\_**

**HYDRAULIC SPREADING TOOL –**

As a major component of this specified rescue tool system, this hydraulic spreader shall be designed in accordance with modern manufacturing techniques, and shall use materials of high strength and lightweight. Since this system is to be operated primarily by a single rescuer, the weight of the spreader tool is a major consideration of these specifications. Bidders responding to this bid shall take this information into consideration when bidding this component.

Since both men and women rescuers may be required to utilize this tool at any given time, the hydraulic spreading tool shall weigh no more than 37.9 pounds / 17.2 kg. This shall be a “wet” weight, and shall include the complete spreader and battery.

**Comply \_\_\_\_ Exception \_\_\_\_**

This component shall be as small and compact as possible. The spreading tool shall not exceed 34.1 inches in length, not more than nine and 9.8 inches in width. The width dimension is that taken when the tool is in the fully closed position and including handle.

**Comply \_\_\_\_ Exception \_\_\_\_**

To prevent corrosion, the spreader shall have an anodized finish.

**Comply \_\_\_\_ Exception \_\_\_\_**

**SPREADER TOOL PERFORMANCE CRITERIA**

As this tool is to be used in situations where maximum spreading force is necessary, the following performance specifications are considered minimum. The spreading tool shall have an open distance of at least 24 inches / 620 mm.

**Comply \_\_\_\_ Exception \_\_\_\_**

The spreader shall be third party tested and certified to NFPA 1936 (latest edition). The manufacturer must provide documentation of this certification to the end-user.

**Comply \_\_\_\_ Exception \_\_\_\_**

The spreader shall have at least 29,674 lbf / 132 kn of force when measured at the base of the spreading tips with the arms 99% open.

 **Comply \_\_\_\_ Exception \_\_\_\_**

The spreader tool shall have a minimum NFPA Lowest Spreading Force (LSF) of 16,875 lbf / 50 kn of force per third party testing and in compliance with NFPA 1936.

**Comply \_\_\_\_ Exception \_\_\_\_**

The spreader tool shall have a minimum NFPA Highest Spreading Force (HSF) of 33,975 lbf / 59.8 kn of force per third party testing and in compliance with NFPA 1936.

**Comply \_\_\_\_ Exception \_\_\_\_**

The spreader tool shall have a minimum NFPA Lowest Pulling Force (LPF) of 6,750 lbf / 39.5 kn of force per third party testing and in compliance with NFPA 1936.

**Comply \_\_\_\_ Exception \_\_\_\_**

The spreader tool shall have a minimum NFPA Highest Pulling Force (HPF) of 9,900 lbf / 48.6 kn of force per third party testing and in compliance with NFPA 1936.

**Comply \_\_\_\_ Exception \_\_\_\_**

Public documentation from the manufacturer must be submitted with the bid for the tool being proposed, and must include all NFPA 3rd party performance data (HSF, LSF, HPF, LPF, etc). In addition to manufacturer logo, this documentation must include name or logo of testing company. Bids not including this documentation will be considered non-responsive.

**Comply \_\_\_\_ Exception \_\_\_\_**

**SPREADING CONTROL MECHANISM**

This control valve shall have a finger lever “deadman” control characteristics which is located on the handle itself for ease of operating tool with index finger and thumb while maintaining full grip of control handle. That is to say that the finger control shall be spring loaded in such a way to allow the control valve to return to the “stop” position when the control valve is released. Return spring shall be an internal type, and not exposed to be damaged. No “star knob” controls will be considered.

**Comply \_\_\_\_ Exception \_\_\_\_**

**BATTERY AND MOTOR HOUSING**

This tool shall be equipped with an over-pressurization relief valve. Motor housing must be fully enclosed with no vents not to allow any moisture to effect electrical components. Housing must allow rear battery attachment to housing with no obstruction to read battery life displayed by LED on battery. Battery must be a 28v Lith-Ion battery designed for optimum performance.

**NOTE:**

Battery must be a commercially available for ease of purchasing at any local authorized distributor. Battery warranty must cover 3 years from date of purchase from any manufacture defect.

**Comply \_\_\_\_ Exception \_\_\_\_**

To maintain operator familiarity with this rescue system, the operating controls of the spreading tool shall be designed and operate as those found on the cutting tool. Therefore, the spreading tool control mechanism shall meet all requirements as found in the cutter control mechanism.

**Comply \_\_\_\_ Exception \_\_\_\_**

**SPREADER TOOL HANDLES**

There shall be at least One (1) handle shall extend horizontally across the base of the spreader’s arms and be fixed as the top handle of spreader.

**Comply \_\_\_\_ Exception \_\_\_\_**

Any spreading tool requiring the use of both hands to operate the control valve will not be accepted.

**Comply \_\_\_\_ Exception \_\_\_\_**

**WARRANTY**

The rescue system bid in response to these specifications shall carry a lifetime warranty (10 year). The warranty shall protect the original owner so long as necessary warranty papers are supplied when service is required. **NO EXCEPTIONS**.

This warranty shall cover all defects in material and workmanship, with the following exceptions:

1. Damage caused by an accident, unreasonable use or neglect (including the lack of reasonable and necessary maintenance).

**Comply \_\_\_\_ Exception \_\_\_\_**

1. Damage to or deterioration of any accessory, other than the manufacturer’s bid recommended products and accessories.

**Comply \_\_\_\_ Exception \_\_\_\_**

1. Damage from failure to follow manufacturer’s instructions or owner’s manual.

**Comply \_\_\_\_ Exception \_\_\_\_**

As a part of this bid, the vendor responding shall submit a sample warranty of the system bid. Bids failing to meet this requirement will not be considered.

**Comply \_\_\_\_ Exception \_\_\_\_**

**Exception Sheet**

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