

We at Peterborough Fire/Rescue have appeared before the Selectman on several occasions on behalf the citizens we serve and we appreciate the continued support.

We have been asked today to justify the replacement of an ensemble of tools known informally as the “Jaws of life” or more formally as a Powered Rescue Tool System. Several excellent questions have been raised and we will answer them all in the next few minutes.

### **Background:**

PFR is the second busiest department in the 79 town mutual aid district, with only the full-time Keene Fire/Rescue answering more calls for help. Last year PFR answered over 1050 calls and this year we are on target to answer 1200 calls. That’s 3.28 calls per day, 365 days per year!

Peterborough Fire/Rescue operates with a staff of 45 on call members ***who ALL have careers in other professions***. PFR is clearly a microcosm of Peterborough, with full representation of blue collar workers to PhDs, executives and homemakers. In addition 15 young adults assist us as Fire/Rescue Explorers.

With two major highways, thousands of vehicles traverse Peterborough each day. Route 101 and 202 both have 55 MPH speeds limits in town. Accidents at those speeds frequently involve multiple vehicles at very high closure rates, some times exceeding 120 MPH.

As a result, each year, PFR responds to approximately 50 accidents, many with catastrophic damage, multiple vehicles and disentanglement challenges.

### **What is a Powered Rescue tool set?**

Powered rescue tools are a **BASIC TOOL** PFR has utilized since 1980. This is not a new concept – it is a set of tools that have been used time and time again under extreme circumstances. And like any other tool, they have come to the end of the service life.

### **Some have questioned the need for Jaws of Life here in Peterborough. To answer this we will review history:**

Powered Rescue Tools were developed in the early 1970s to deal with situations where accident victims were trapped for very long periods of time, frequently expiring before they could be removed to hospital.

The standard of the day was for Fire/Rescue to utilize a combination of hack saws, chisels, chains, come-alongs and hammers to remove the victim from the entrapment. Vehicle construction at the time allowed for the use of such hand tools; however the time and manpower required to get the job done frequently

exceeded the time victims had to wait. But ultimately hydraulic tools were developed because the hand tools were not good enough.

Powered rescue tools are **NOT A LUXURY**...have never been a luxury.

Firefighters in Peterborough faced the same tough situations, and the community recognized the need for Peterborough Fire/Rescue to obtain a powered rescue tool set. In 1980, Peterborough became the second department in the area (after Keene) to place the tools in service.

***The current set is only in partial service, due to a break down late last year after the close of budget process and due to lack of funds has not been replaced.***

In fact as part of the bid process, we have asked the successful bidder to supply a loaner tool by December 31, hopefully prior to any "need".

*We are sure all would agree with the safety experts at the PFR, that Peterborough has had a long standing history of providing the highest level of technical auto extrication and disentanglement capability and that continuing to provide such level of service has a positive effect on the quality of life.*

**Has PFR has evaluated the feasibility of repairing the current tool set?**

Currently there are no new repair parts available AND Certified Repair facilities tell us that due to liability issues they will not repair the current unit, and that even if they could affect a repair it would not be cost effective on a 23 year old unit.

**Why are the "Jaws of Life" medically necessary? Deputy Chief Julie Thibault will read a letter from Dr. Lauer the Medical Director at Monadnock Hospital ER.**

**Some have questioned the need to replace the entire compliment of tools in one year. To answer this question, we will address today's vehicles:**

Today's Vehicles are constructed of much lighter, but STRONGER materials, than in the 1970s when our Jaws of Life were designed. In fact, around 25% of the vehicles on the road today are manufactured with materials which exceed the operational capacity of Peterborough's tool set. Peterborough Fire/Rescue does not have the capacity to execute a rescue and extrication from most recent Fords, GMs, Saturns, Volvos, Saabs, BMW's, Toyotas, Hondas, Nissans and certain Chrysler products. High boron steel and micro alloys will be used in most new vehicles produced during the 2004 Model year. If Fire/Rescue were to use the current tools on such steel, the tool would in fact destruct before the auto.

Vehicle rescue and extrication is becoming a science and we have to reference this guide before we do any disentanglement to insure compliance with safety

systems and vehicle construction. (Show book) This ensures our safety as well as guides us to the most rapid and efficient disentanglement techniques.

*We are sure we would all agree on the facts: current vehicles surpass the operational capacity of PFR's tool set and that a current technology tool set is required to get the victim to **definitive care - a trauma hospital** in the "golden period".*

**Some have said "Call Mutual Aid".**

Mutual Aid is established for aid to towns faced with **EXTRAORDINARY** events – mutual aid is not for every emergency – and an auto accident unfortunately is a very regular event. Tragically we deal with many serious accidents each year. These are not the situations to wait around for help.

Dealing with auto accidents is a **BASIC FUNCTION** of PFR, just like plowing the roads is a basic function of the public works department. We don't ask Jaffrey, Keene or Milford to assist in plowing the roads.

Our citizen's expectations are that PFR can provide the skill and have the tools available to manage the event to the best possible outcome. All those involved in emergency medicine, from EMT to Surgeon agree the "Jaws of Life" have indeed lived up to their name.

*There is no doubt the time delay for mutual aid response is not in the citizen's best interest.*

**Conclusion:**


A complete replacement power rescue tool system will allow PFR to refill our partially empty tool box and give the citizens the level of service they expect.

As the second busiest Fire/Rescue in the 79 town mutual aid district, PFR is asking for permission to purchase a replacement set of "Jaws of Life"

For the average taxpayer this purchase equates to approximately \$15.00 *well spent, in the spirit our founding fathers intended for government expenditures.*

Thank you,

Jonathan M Hampson, Peterborough Fire/Rescue



**Monadnock  
Community Hospital**  
Emergency Medical Services

Dr. Craig Lauer  
Medical Director

Gary E. Zirpolo, EMT-Paramedic  
Coordinator

December 16, 2003

Peterborough Board of Selectman  
Town House  
1 Grove Street  
Peterborough, NH 03458

Dear Peterborough Board of Selectman,

According to a study performed by the National Transportation Safety Board of the 42,000 crash deaths each year, nearly 20,000 victims die at the scene. Of the 22,000 crash deaths that are taken to a hospital, many die because they arrive too late to be saved. Thousands of crash deaths occur each year in which the victim did not arrive at a hospital – much less at a trauma center – within the Golden Hour."

What is the "golden hour"? Patients injured as a result of a trauma, must be in surgery within one hour from the time of injury (not the time EMS arrives) to maximize chances of recovery and survival.

The topic of timely definitive care has been the recipient of much attention and numerous studies over the past decade. The findings have all been conclusive and consistent: that in order for a trauma victim's chances for survival and recovery to be maximized, definitive care must not be delayed.

As a result of these studies, and the importance placed on timely delivery of a trauma patient to the hospital, a nation-wide standard has been established that calls for trauma victims to be transported within ten minutes of the ambulance's arrival on scene (this is known as the platinum 10 minutes). Further, the goal is for the trauma victim to receive "definitive care" provided by a facility able to provide stabilization, surgical intervention and specialty care 24 hours a day.

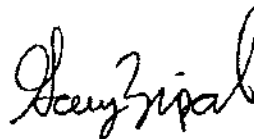
For the seriously injured patient, definitive care often means transfer to another hospital, either by ground or air. This travel time must also be considered when applying the principle of the "Golden Hour" and the "Platinum 10 minutes).

Timely arrival at definitive care, of which rapid extrication is the critical first step, is essential to ensuring the best possible outcomes for trauma victims of automobile accidents.

Respectfully,



Craig Lauer, M.D.  
Medical Director – EMS  
Monadnock Community Hospital



Gary Zirpolo, EMT-Paramedic  
Coordinator – EMS  
Monadnock Community Hospital

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Examples of the various components of a hydraulic rescue tool system.



Spreader



Cutter



Power Pac



Ram





Testing and Evaluation