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TASK FORCE TIPS

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TASK FORCE TIPS
www.tft.com

Fire Streams to the MAX, also Means FIRE FLOWS TO THE MAX.

Confronted with a huge volume of fire upon arrival, any good fireground commander will start requesting resources with the goal of establishing and maintaining a fire flow adequate to suppress the fire. Though the initial attack may move very quickly from the interior to a more defensive exterior operation, providing the necessary flows to achieve final suppression becomes increasingly important as additional streams are put into service.

Rarely are water supply officers or pump operators hampered with too much water, and, all too often, in areas with great flowing hydrants, the equipment or procedures used by the department may actually restrict the ability to get the water out of the ground and on to the fire. Over the years, in an effort to improve our ability to get the *"wet stuff on the red stuff,"* we've seen a trend toward the use of higher flowing 4" and 5" large diameter hose supply lines. As departments work to achieve flows that match the capacity of their pumping apparatus, often 1250 gpm, it is critical to have the larger hose to move the needed flow. This is especially true if water has to be moved any distance, as the friction loss associated with smaller lines becomes an insurmountable obstacle.

With more 1750 gpm and 2000 gpm pumping apparatus being built and delivered, the same problems encountered years ago when the supply lines of choice meant *"dropping twin threes"* (two 3" supply lines) are being encountered today. To adequately supply a 2000 gpm apparatus and achieve maximum rated flows, the crew is going to have to "drop twin fives." That means also that it will become necessary to use multiple intakes to the pump, which will require the flexibility to gate both incoming flows independently. Though higher flowing 6" hose is commercially available, and we at TFT have designed and developed all of our JUMBO hardware to accept 6" Storz couplings, tradition…even one as new as 5" large diameter hose... will be hard to overcome.

Fire streams management is about making the right nozzle or appliance choice, and **Fire Streams to the MAX** is about pumping lines to achieve maximum flows. Finally, if you're going to practice **Fire Flows to the MAX**, having the right hose, intake valves, jumbo wyes, adapters, and elbows to provide these flows is absolutely crucial. Whether you work from a hydrant system, draft from a pond, or will be supplied by a tanker shuttle, the equipment and training necessary to achieve **Fire Flows to the MAX** are all readily available from Task Force Tips.

Ball Intake Valve

IN THIS ISSUE

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WELCOME

There is an issue that I would like to discuss in this column. Doesn't it seem a bit ironic to attend a trade show and see 20-year-old nozzles that have been moved from an old apparatus to a brand new $300,000 engine? With as much grant money that has been made available to improve the protective encapsulation of the firefighter and to provide breathing apparatus with integrated circuitry, alarms, and heads-up displays, little or no consideration has been given to improving or updating the third key element of a firefighter's personal protective equipment.

The third, and equally important, part of the personal protective trinity is the water delivery system. The "system" includes the nozzle, attack hose, and an operational procedure that provides adequate flow and pressure for fire suppression and firefighter protection. From the protective fog pattern to the nozzle's ability to create a stream that cools, suppresses, or absorbs heat within the fire environment, this part of a firefighter's protective ensemble is often taken for granted or completely overlooked. Certainly, protective clothing and the newer SCBAs are capable of withstanding a flashover or dealing with superheated atmospheres, but wouldn't it be better to also have a protective fog pattern that your crew can count on? Above all, putting the fire out quickly tends to solve many of the issues that stress a firefighter's personal protective equipment and his long-term well-being.

As departments work toward improving the safety and survivability of their crews and purchase new state-of-the-art protective clothing and self-contained breathing systems, consideration should be given toward upgrading the technology in their nozzles and water delivery systems as well. With the advent of the low-pressure nozzle, dual-pressure automatics, and break-apart combination tips, today's nozzle technology offers your crews so many more options. Make your water delivery system an integral part of your department's personal protective equipment plan.

Knowing and understanding the latest technology and the capabilities of our most current models become a key part of your fire streams decision-making process. If you have questions about your fire streams needs or would like a hands-on demonstration of the newest technology, just let us know.

Regards,

Stewart McMillan
President

UPCOMING SHOWS

TFT® TASK FORCE TIPS

Northwest Fire and Rescue Expo
May 9-10
Eugene, OR

Stop by and visit with Doug O'Donnell, TFT's Northwestern Regional Manager. Doug will be showing TFT's complete line of dual pressure automatic handlines.

Pennsylvania Fire Expo
May 16-18
Harrisburg, PA

Cottrell Associates and TFT will both be in attendance with show specials and dealer promotional programs. Stop by and see the 100-500gpm Max-Force handline, there is nothing else like it.

Nebraska Fire School
May 16-18
Grand Island, NE

Ken Kendrick, TFT's North Central Regional Manager, will be in attendance with local dealers showing the new Blitzfire and Blitzfire OSC personal portable monitors. Look for show specials.

National Fire Protection Association Spring Show
May 19-21
Dallas, TX

Representatives from TFT headquarters will be in attendance with their complete line of NFPA compliant nozzles. TFT offers more NFPA compliant nozzles than any other manufacturer.

North Dakota Fireman's Convention
June 5-7
Fargo, ND

Ken Kendrick, TFT's North Central Regional Manager, will be displaying his completely outfitted training and demonstration vehicle. Stop by and take a look at the safest portable monitors in the business. From 500-1250 gpm, TFT provides the largest selection of equipment for Fire Streams to the MAX.

New York Chiefs FIRE 2003
June 12-14
Syracuse, NY

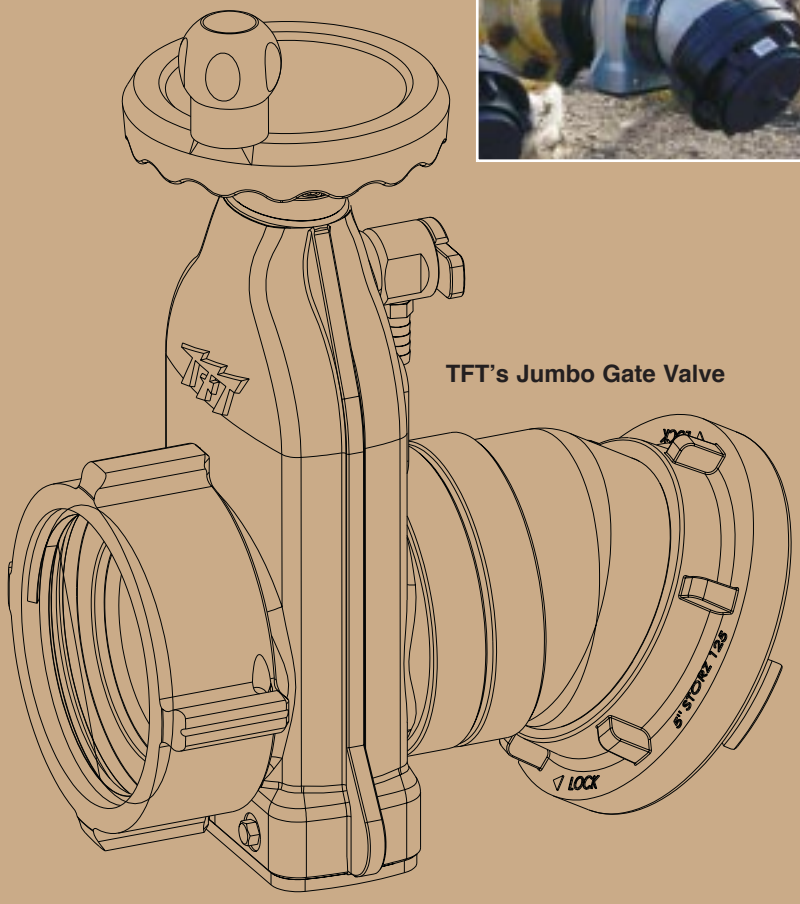
Representatives from Cottrell Associates and staff from TFT headquarters will be in attendance with several demonstration and training vehicles and our complete large-diameter hose hardware product line. Stop by Building #1 for a complete overview of our new high volume products.

Illinois Fire District Show
June 19-22
Springfield, IL

Visit with Ron Prast, Midwestern Regional Manager, and take a look at TFT's complete line of dual pressure automatic nozzles. From 70-500 gpm, Ron will show you how to maximize your fire stream performance

Ultra Hydrants

When Too Little Flow is NOT an Option



TFT's Jumbo Gate Valve

Industrial fire planning, training, and operations are often singularly focused on supplying maximum flows for exposure protection, cooling, or fire suppression. Though the costs of these pre-suppression activities and the equipment required to provide maximum fire flows may seem enormous, the dollar losses associated with damage from an actual incident, combined with the interruption and loss of production, is of a far greater concern.

One tactic that is gaining widespread acceptance in this high flowing segment of the firefighting market is the construction and strategic installation of the "ULTRA-HYDRANT." Designed to supply mobile apparatus with multiple 5" or 6" supply lines from a single monster hydrant header, these custom-designed installations can take full advantage of a facility's firewater flow capabilities.

A key part of the functionality of the "ULTRA-HYDRANT" is the integration of flow control valves for each discharge port, allowing supply lines to be independently controlled. An integral part of the "ULTRA-HYDRANT" distribution design is the new Task Force Tips Jumbo Gate Valve. This new gate valve is the clear choice for just some of the following reasons;

- **The Jumbo Gate Valve's large unobstructed waterway will provide flows well over 2000 gpm with less than 10 psi loss.**
- **The Jumbo Gate Valve's swiveling outlet elbow reduces the possibility of flow restricting kinks.**
- **TFT's unique three-part corrosion protection process and stainless valve components provide longer life in harsh industrial environments.**

For additional information on TFT's full line of Jumbo Gate Valves and Jumbo Wye and Siamese appliances, contact customer service at 800-348-2686 and request the new LDH hardware video. For more information on how to maximize your industrial fire flows, visit www.tft.com

Blue Outside & Red Inside...


Dual-Force 50-250 gpm


Max-Force 100-500 gpm


Max-Force Handline 100-500 gpm


Mid-Force 70-200 gpm

Blue High Pressure Setting for Maximum Reach and Penetration.

Red Low Pressure Setting for Maximum Flow.

It seems fire ground hydraulics and sound fire streams management practices have taken a back seat to emergency medical support, specialized rescue, bio-terrorism response, and a hundred other first-responder demands. Realizing this trend, the importance of making a wise nozzle choice is a higher priority now that actual fire suppression calls have become a smaller percentage of what we do.

One of the most unique developments in nozzle design in the last few years has been the invention and wide acceptance of the dual-pressure automatic nozzle. Initially created to help solve the challenges associated with high-rise applications, the dual-pressure switch on the front of the nozzle provides the crew with the ability to manually adjust the nozzle from the standard 100 psi operating pressure down to 55 psi. This immediately solves the problem of providing needed fire flows when the nozzle team is working from a standpipe or some other low-pressure water supply.

Operating much the same as your thumb does on the end of a garden hose, the nozzle's **BLUE** high-pressure setting (your thumb squeezed down on the open hose) increases backpressure and exit velocity (speed). This allows you to have enough velocity to clean the leaves out of your gutter at a distance. When you take your thumb off a little, increasing the size of the orifice (changing to the **RED** low-pressure setting on the nozzle), you allow maximum flow at the expense of reach and penetration. Following are just a few of the benefits you will find when using a dual-pressure automatic nozzle.

- **Even with no direct communication to the pump operator, the nozzle crew can switch the nozzle to low pressure, and dramatically increase flow as interior conditions dictate.**
- **Using the low-pressure setting (55 psi) will allow increased flexibility when applying foam through an eductor.**
- **The 100 psi or BLUE setting will provide maximum reach and penetration and the RED low-pressure setting will provide maximum flow, allowing the crew total nozzleman flow control.**

With four models and an overall flow range of 70 gpm up to 500 gpm, there is a model to fit any initial attack operation. For additional information on all of Task Force Tip's Dual-Pressure automatic nozzles, contact customer service for a full line of videos and training materials.

THIS SUCKS

There just aren't many things on the fireground that are more frustrating than having to fight to get two Storz couplings to connect and lock: whether it's those bulky leather gloves, cold hands, or no spanner wrenches to help when you need to make the connection.

It seems that something designed and sold as being "quick" would certainly work better. Whether it is connecting up a 5" supply line or attaching a 6" hard suction line to draft, establishing a water supply is a critical function on the fireground. So, why do so many companies have problems making the connection?

Let's explore one possibility for potential problems when trying to mate up Storz connections. Here is an excerpt on gaskets for the NFPA Standard.

NFPA #1963
Fire Hose Connections

"Pressure gaskets shall be designed to withstand the pressure requirements of Sections 2-6 and 2-10 without leakage. They shall be black in color."

"Suction gaskets shall be designed to allow couplings equipped with the gasket to meet the requirements of Section 2-11. They shall be gray in color."

If you've received a new BIV (ball intake valve) from us and opened the box, you may have been puzzled when you found a plastic sleeve with another Storz gasket inside. This lighter gray "suction" gasket is included for customers that will be using the BIV (or other TFT hardware) for drafting or suction operations. The BIV comes standard with a black "pressure" gasket. These factory-installed gaskets are to be used for pressure service only. If used with a piece of hard suction hose that may also have a "pressure" gasket installed, the potential for air to be drawn into the stream exists. That will normally mean a possible loss of prime.

The gray "suction" gasket can be used for either pressure or suction service. Please keep in mind though, that when the "suction" gasket is in place, it will require between 10-30 times more force to connect and disconnect than the "pressure" gasket. A spanner wrench must be used. If you have a situation where two Storz couplings both with "suction" gaskets installed are trying to be connected, the force required making the connection might be substantial.

- **"pressure" to "pressure" = good for pressure service – easy to put together**
- **"suction" to "pressure" = good for pressure or suction service – a little more force required to lock the connection**
- **"suction" to "suction" = OK for pressure or suction service – a great deal of force required to lock the connection**

LDH Pressure Gasket Cross Section

LDH Suction Gasket Cross Section

Also, be aware that the TFT Storz "pressure" and "suction" gaskets are designed specifically for TFT equipment and are not interchangeable with other competitive brands. And finally, as part of your department's regular apparatus maintenance program, apply a small amount of high-quality silicone-based lubricant to the rubber gasket material. Avoid large gobs of grease, as all it does is attract road grime, dirt, and debris and replace any gasket that has visible damage.

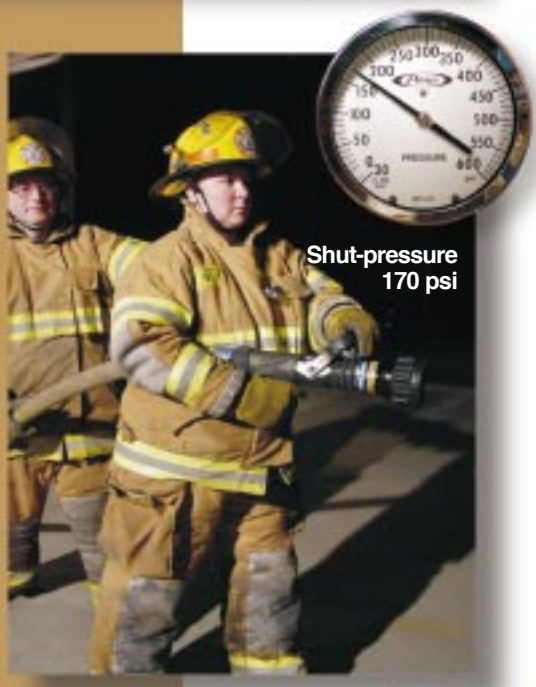
For additional information on Large Diameter Hose and Hardware gaskets and how to improve your connections refer to;

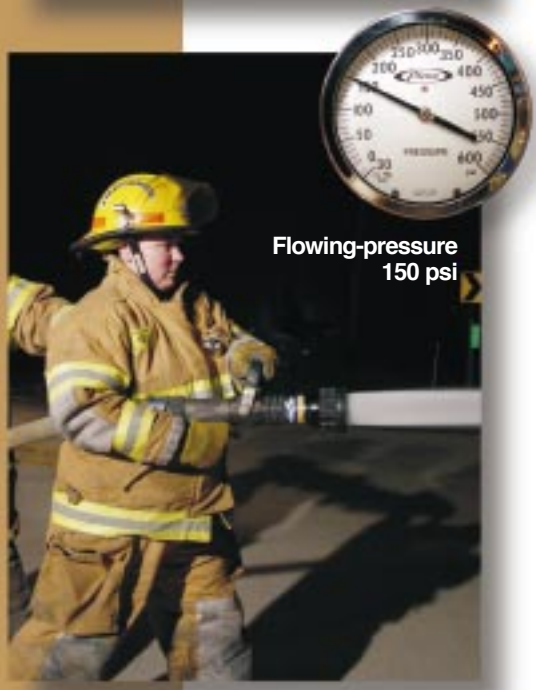
National Fire Protection Association, NFPA 1963 – Fire Hose Connections

Task Force Tips LDH Hardware Operations Manuals

www.tft.com

SET IT AND FORGET IT.





The term "hydraulically impaired" often comes up when instructors get together and swap stories about their most recent pump operations or fire streams class. It's not that the attention paid to fire streams management issues has lessened over the years, but as emergency responders, we are called upon to do so many other functions that require training activities. So, what tips and techniques can be used to simplify establishing fire flows from that first due engine company?

If you aren't lucky enough to have one of the new electronically controlled flow or pressure governors and have to take matters into your own hands when you arrive on scene, consider "Shut Pressure Operations."

"Shut Pressure Operation" is a slightly different way of pre-determining the pump pressures you will need upon arrival. The process may seem backward at first, but once accomplished, it can really simplify your initial attack operations and prevent the pump operator from "chasing" the nozzle crew as he increases or decreases the throttle trying to match their flow and pressure needs. For this process, you will only need a flow meter(s) to be placed in your initial attack line(s). TFT's Show-Flow flow indicator is ideal for this procedure. You will also need to determine the target fire flow you want to achieve during your initial attack activities. Use TFT's Pump Discharge Pressure Chart – LTT-011 to help determine your needed fire flows.

- **Establish your normal water supply (tank, hydrant, drafting, or relay). Charge your primary pre-connected line, and bring up the pressure with the nozzle fully open, to your desired initial attack fire flow. (Example 150 gpm on the flow meter)**
- **Note the engine pressure with the line flowing. Now, close the nozzle and note the new engine pressure. (Example – while flowing 150 gpm, the pump pressure was 150 psi – when the nozzle was shut it came up to 170 psi)**

In the above scenario, your Shut Pressure Operation is 170 psi on the pump discharge for your primary preconnect. The pump operator can immediately go to that pressure knowing the hose crew will have a maximum of 150 gpm available for firefighting. The inside crew can gate down if necessary, and the pump operator will not have to "chase" the changing hose line pressure. This Shut Pressure Operation can also be expanded to include additional lines depending on your department's initial attack procedures. To do two pre-connects: follow the same procedure, flowing both lines at their targeted flows, and when they are both shut, the pump discharge pressure will move up. That becomes your Shut Pressure Operation for your two primary attack lines.

Shut Pressure Operations can greatly simplify first-in company pump operations, and are ideally suited to departments that use automatic nozzles. Taking it one step further, TFT's unique slide valve will also allow for total firefighter flow control, providing a penetrating straight stream even when the nozzle is gated down.

For additional information on how to simplify your pumping operations, improve your fire flows, or choose the correct nozzle for your operations, contact Task Force Tips customer service group and request the Guide to Nozzles work book.

Suppression Strategies for Tire Fires

Scrap Tire Fire
East Chicago, IN

One of the biggest challenges any fire department can face is a smoldering mountain of scrap tires. Historically, these fires quickly consume both human and financial resources, as they burn uncontrolled for long periods of time. It isn't unusual to find that overtime costs, equipment maintenance and rentals, and clean-up costs can place a huge financial burden on a small jurisdiction.

Typically, over 242 million tires are discarded every year, and of the over 3 billion tires being stored, only a little over 25% will ever be recycled. It is easy to recognize that the storage and processing of scrap tires is a growing threat to all suppression agencies. When establishing a departmental Standard Operating Guideline for tire fires consider the following Incident Decision Levels.

Prevention – identification of storage locations, review and implementation of local, state, and federal codes, code enforcement

Pre-fire Planning – locations of piles, scope of operations, size and make-up of pile, on-site suppression resources, mutual aid resources, hazards on-site, exposures, utilities on-site, and access and contacts

Strategic Suppresion Activities – establishing an incident command structure, provide for personnel safety and accountability, provide for the health and safety of the general public, determine size and extent of fire, determine potential fire load and possible exposures

Tactical suppression activities – determine suppression plan – allow it to burn, drown it, or bury it

Environmental Considerations – air pollution and groundwater contamination issues, run off and containment issues, working relationships with state, local, and federal environmental agencies

Firefighter Safety Concerns – exposure to toxic smoke and run off, potential for collapse of stacked tires, working around heavy equipment, and general long-term fatigue, medical sector responsibilities

If your prevention activities do fail and there is a fire, though it may be overwhelming, there are several key elements that have been followed in the majority of successfully fought tire and dump fires.

- **Good Identification and Pre-Planning**
- **Proper Size Up and Resource Commitment**
- **A Unified Incident Command Structure**
- **A Solid On-Site Safety Plan**

One of the best tools currently available, if you take a "Drown It" suppression strategy, is Class A Foam enhancement to your streams. The use of foaming agents has shown the greatest potential for rapid suppression of deep-seated tire fires. Though water is still the extinguishing agent of choice for heat absorption, its inherently high-surface tension works against you as the water tends to bead up and roll away.

Foam not only reduces the surface tension of the water for quicker and deeper penetration into the pile, but also when expanded into finished foam, the bubbles will coat, cling, and stick to burning tires. This ability to smother the fire is the greatest benefit water additives and foams provide. Foam enhancement allows water to work on several sides of the fire tetrahedron simultaneously, ultimately reducing run-off, clean up, and total overall costs. Though there is a cost to using foam in a "Drown It" suppression strategy, the cost of the prolonged fire can be substantially worse.

For additional information on tire fires, tactics and strategies contact the following;

Contact Task Force Tips for a copy of our "Suppression Strategies for Tire Fires" Workbook

- **FEMA for "Scrap and Shredded Tire Fires – Special Report" and "Report on Tire Fires"**
- **The Scrap Tire Management Council – Washington DC**
- **NFPA Standard 231D**

ASK THE EXPERT

Mike Grcich
Service Manager
800-348-2686

Q: We have a great mechanic on the department. Can he order parts directly to fix TFT nozzles or do they have to go back to the factory for repair?

A: Though the vast majority of TFT customers prefer to use our 24-hour factory repair program, we do offer all parts and repair kits for sale directly to our customers. The repair kits can be referenced in the TFT Price and Specification book or can be referenced on-line at www.tft.com. Repair kits come with all parts necessary and complete instructions. Customer Service is also available 24/7.

NEW TASK FORCE TIPS EXCLUSIVE!!!

All TFT Kits and Repair Parts Can Now Be Ordered Directly On-line.

- Go to www.tft.com - if you have not yet registered to the site, you must do that to purchase on-line.
- Go to Customer Service – Customer Service Main Page
- Go to ON-LINE Product Search
- Put in either the Model number, Description, or Serial Number of your nozzle
- Click on the Model Number of the nozzle you have.
- Choose the part(s) you need, add it to your on-line shopping cart, and follow the checkout procedure.

IT'S THAT SIMPLE!

Register for Your Copy of the Task Force Tips Newsletter On-line at www.tft.com

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