PTI®

Filters *for* Hydraulic & Lubrication Systems

- ***Filter Elements***
- ***High Pressure Filters***
- ***Medium Pressure Filters***
- ***Low Pressure Filters***
- ***Spin-on Filters***
- ***Specialty Filters***

Purification Through Innovation ...
... It's OUR TRADITION!

With almost 100 years of experience, PTI ranks among the top ten fluid filtration manufacturers worldwide, occupying a unique position to create an infinite range of advanced filtration and flow solutions.

From simple filter elements to complex hydraulic control manifolds, PTI produces hundreds of products for a broad spectrum of markets:

- Agriculture
- Automotive Manufacturing
- Chemical & Petrochemical Production
- Commercial and Military Air, Sea and Land-based Vehicles and Equipment
- Construction & Off-highway Vehicles
- Lumber Production
- Machine Tool Manufacturing
- Metal Manufacturing
- Mining
- Nuclear and Hazardous Waste Disposal
- Oil and Gas Production
- Petroleum Production
- Power Generation
- Pulp and Paper Manufacturing

Visit our website to find your local authorized PTI industrial distributor

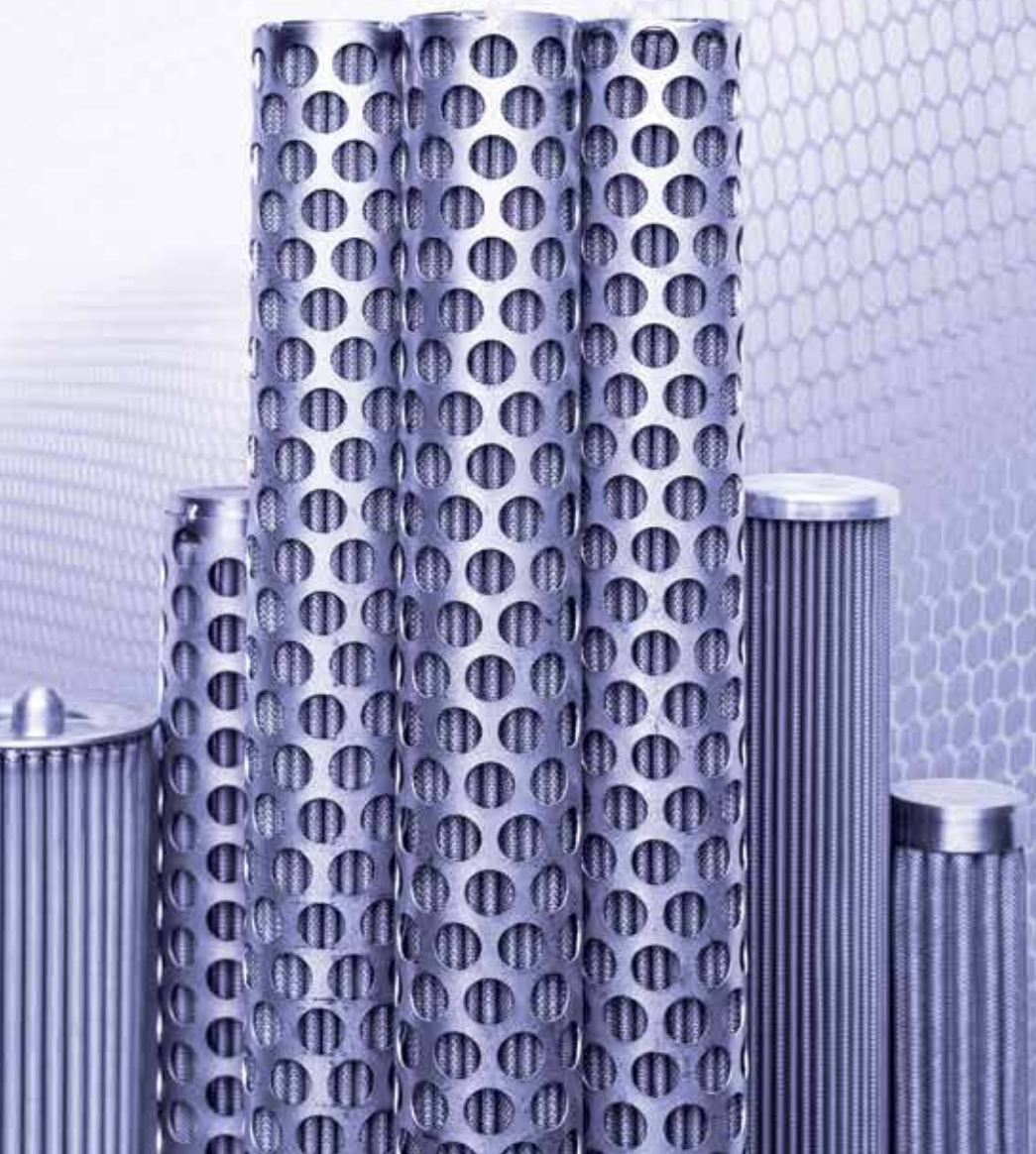
PTI Technologies Inc., 501 Del Norte Boulevard, Oxnard, California 93030
800-331-2701 • 805-604-3700 • www.ptitechnologies.com
email: fluidpower@ptitechnologies.com

PTI Technologies Inc. is certified to ISO standards

PTI

Specialty Filters

PTI's expert R&D, engineering, design, manufacturing and testing capabilities uniquely equip us to translate any filtration concept into a performance product.



PTI 421®
The Ideal Filter Media

Purification Through Innovation

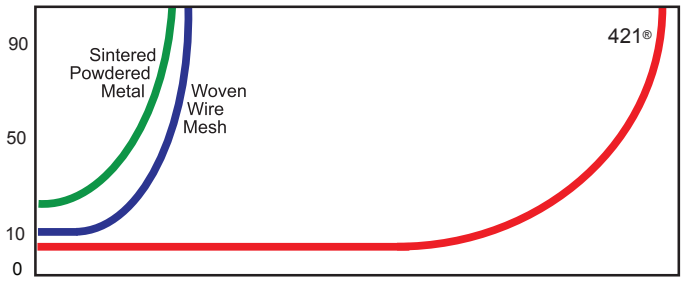
Why You Should Select 421®

PTI Technologies' propriatary random fiber filter media is the highest performance media on the market today. It will give you higher purity end product, lower pressure drop, and a higher contaminant retention capacity than either woven metallic wire cloth or sintered powder metal. 421® elements are ideal for filtration of highly viscous, high temperature, cryogenic and corrosive chemicals.

The Best Value for You & the Environment

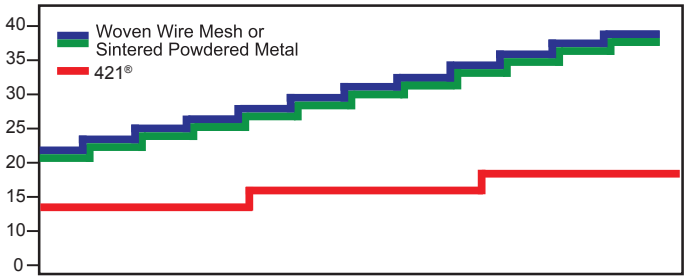
The exceptionally long-life between cleanings and replacements makes 421® filter cartridges the most economical type of filter elements available. In addition, 421® elements are easily cleanable with chemical solvents, organic solvents, backflushing or some combination of these.

Pressure Drop (psi differential)



Contaminant Capacity
½ ▲ P with 421® up to 6 times more on stream life

Operating Cost ($)



Life (Hours of Operation)

PTI's proprietary 421® material can be used as a drop in replacement for any standard fiberglass filter element

Handles Challenging Process Requirements

421® products provide high-performance, economical filtration at temperatures above 600°F, and differential pressures exceeding 3000 psid for highly viscous fluids. In addition, the 421® media is suitable for many corrosive environments.

Increased Retention Capacity

The foundation of PTI Technologies filters is the patented 421® random fiber, soft sintered media, made of 316L stainless steel. It is also available in other metals such as Carpenter 20 Cb-3 and Hastelloy R.

The depth matrix of fine, yet durable metallic fibers creates a stable pore structure that is virtually unchangeable for the life of the filter. PTI Technologies' 421® captures more contaminants at a given pressure drop than either woven wire cloth or sintered powder metal media. This is a result of the larger number of particle trapping pores formed by the many close intersections of the random stainless steel fibers. The resulting open pore structure gives 421® media a retention capacity four or more times as great as other competitive media. At the same time, the high porosity of the media offers less resistance to fluid flow.

Low Pressure Drop

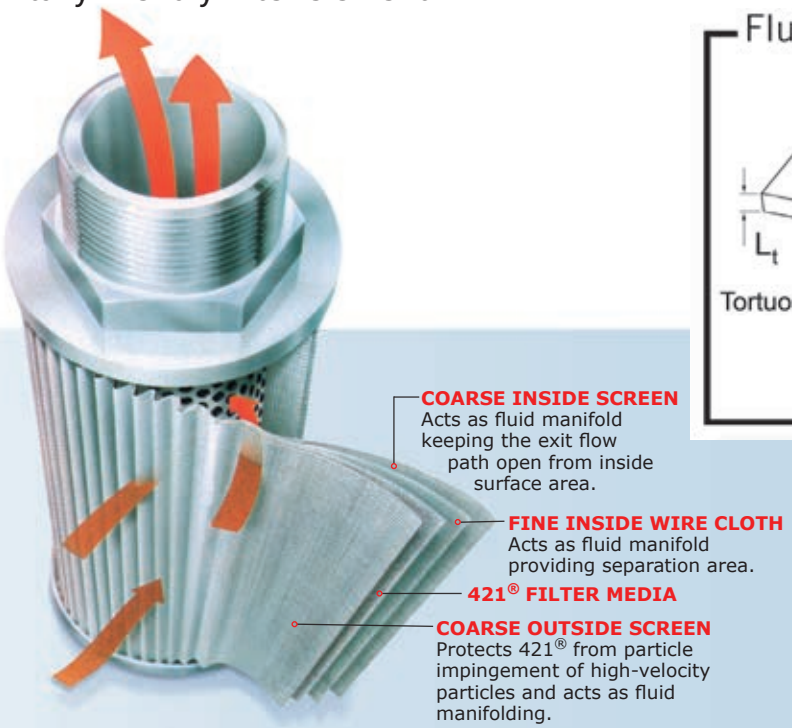
The low resistance to flow exhibited by 421® elements is a direct result of the media's high-porosity, and also its low-fluid tortuosity. Fluid tortuosity is the ratio of the length of the fluid flow path to the thickness of the filter medium. Low-fluid tortuosity minimizes pressure drop, by minimizing changes in the direction of flow. The 421® media also features variable media thickness, controlled pore size, and the lowest shear versus flow rate ratio of any filter media similarly classed.

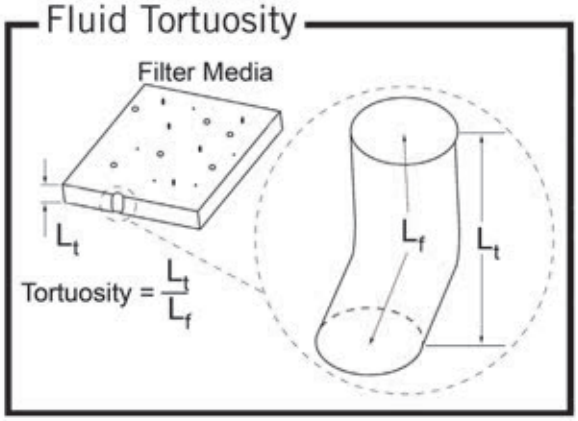
Standard Features

The 421® depth matrix is reinforced on both sides with woven wire screen. These screens protect the 421® media from particle impingement and provide media support under the rigors of temperature, pressure, and directional flow changes. To maximize surface area, the layered medium is pleated into a cylinder and wrapped onto a stainless steel core. Each 421® cartridge is completed by welding the stainless steel fitting, end cap and pleated cylinder into a single unit. 421® media elements are available from 0.5 to 80 micron absolute ratings. Woven wire screen covers the coarser range up to 250 micron.

Typical Applications

PTI Technologies' proprietary 421® filters provide our customers with state-of-the-art products used in Nuclear power plant operation, manufacturing of magnetic tapes, synthetic films, textile fibers, resins, and virtually all types of specialty thermoplastics. 421® filters dramatically enhance the quality of the end products produced by reducing gelatinous fragments as well as particulate contamination. 421® elements reduce downtime and scrap, improving product yields, and ultimately contributing to your bottom line. 421® filters can also be used as a drop-in replacement for hydraulic and lube oil application, offering a cleanable and environmentally friendly filter element.





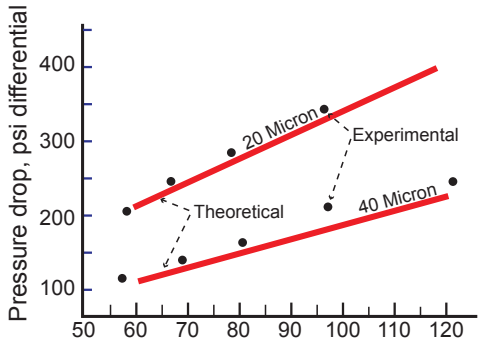
√ **Expertise**
√ **Innovation**
√ **Quality**

PTI Technologies Continues to Improve Filter Media Performance

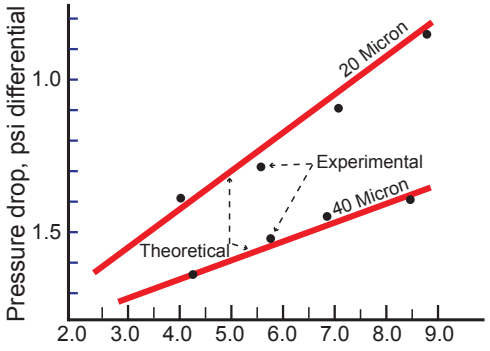
As industry demands higher levels of efficiency and economy in filtration design, PTI applies finely tuned, high technology to our testing methods and element designs. Our in-house R & D laboratory employs the most advanced test techniques. At PTI Technologies, standard operating procedure includes detailed dirt-holding capacity and efficiency tests on all media. Complete testing allows PTI to continually optimize filtration performance.

Computer Models

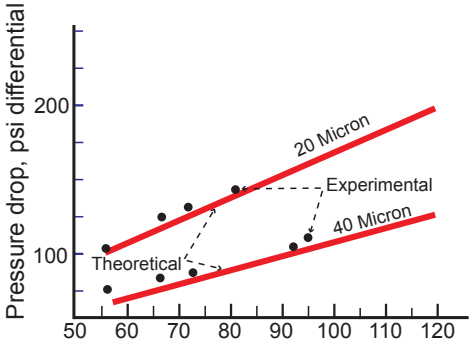
PTI Technologies revolutionized chemical process filtration with the first computerized pressure drop model designed to predict clean pressure drops for both Newtonian and non-Newtonian fluids across fiber media. Individual process conditions of each application are programmed into the computer which calculates clean pressure drop. In cases where clean pressure drops are excessive, PTI makes the necessary design changes to assure proper filtering while lowering the pressure drop. This allows PTI to provide the proper filter and predict its performance in each client's process before installation. We can also assist you in retrofit design, so maximum performance can be obtained with your present system.



Flux density lbs/hr/ft²
b. VFR5620A polyester at 290°C



Flux density lbs/hr/ft² X 10³
a. MIL-H-5606 hydraulic oil at 100°F



Flux density lbs/hr/ft²
b. VFR5442C polyester at 290°C

For more info email: Chemicalprocessing@ptitechnologies.com
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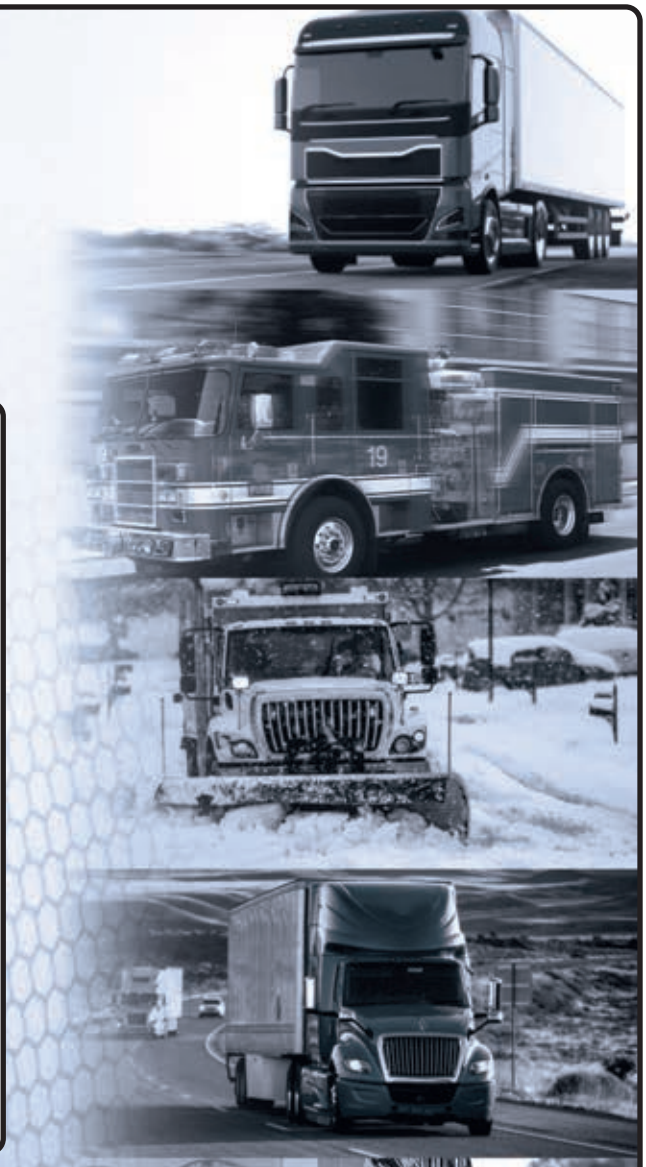
Allison Transmission® Replacement Lube & Suction Filters



Genuine Performance at Aftermarket Prices

Aftermarket Comparison Testing

- Does the product fit within the required envelope?
  A. Dimensional Inspection
- Does the product hold up to TranSynd® for the required time and temperature?
  A. Fluid Compatibility
- Does the product capture the required total amount of contaminant?
  A. Contaminant Capacity
- Does the product capture the right size of contaminant at the right efficiency?
  A. Multipass
- Does the product hold up to the required pressure rating?
  A. Collapse Pressure

Allison 5800 Series
Extended-life lube filters
Short: 7603322
Long: 7603323
Suction Filter Kits
ASM00324-XX
-01 includes Element/Housing Assembly & Face Seal
-02 includes Element/Housing Assembly, Face Seal, Gasket & Screws(3)
-03 includes Element/Housing Assembly, Face Seal & Gasket
-04 includes Element/ Housing Assembly, Face Seal & Screws(3)

Aftermarket Comparison Testing

Proper transmission maintenance is essential to ensure the performance you expect from your Allison Transmission®. We know you have many choices in the aftermarket, so we put the leading five suppliers to the test. Using our 25 years of experience developing, building and delivering the Allison Transmission® 5800 series elements we conducted side-by-side tests against the requirements that matter to you.

Competitor Test Comparisons

Four specific tests were performed for the following:

Manufacturer	Element Type	Fluid Compatibility	Dirt Holding Capacity	Multipass Test	Collapse Pressure
PTI	***SHORT***	***Pass***	***Pass***	***Pass***	***Pass***
	LONG		***Pass***	***Pass***	***Pass***
Competitor A	SHORT	**Fail**	**Fail**	Pass	**Fail**
	LONG		Pass	Pass	Pass
Competitor B	SHORT	**Fail**	**Fail**	Pass	Pass
	LONG		Pass	Pass	Pass
Competitor C	SHORT	**Fail**	**Fail**	Pass	Pass
	LONG		**Fail**	Pass	Pass
Competitor D	SHORT	**Fail**	**Fail**	Pass	Pass
	LONG		**Fail**	Pass	Pass
Competitor E	SHORT	**Fail**	Pass	Pass	**Fail**
	LONG		Pass	Pass	**Fail**

Conclusions

The data clearly shows PTI's line of Allison® aftermarket elements, which exceed all Allison® performance specifications, are superior to competing products in keeping your transmition clean and performing effeciantly.

PTI's 25-year history of transmission element manufacturing at its Oxnard, California factory and an on-going product improvement program insure protection for your transmission now and for miles down the highway.

For more info email: fluidpower@ptitechnologies.com
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PTI

Request for Quote

Request for Quote

Element
Request For Quote

Flow Rate:	_____	specify units ____gpm ____lpm ____scfm
Operating Pressure:	_____	specify units ____psi ____bar
Max Operating Temp:	_____	specify units ____ Cº ____Fº
Min Operating Temp:	_____	specify units ____ Cº ____Fº
Filtration Requirements:		
Absolute Rating:	_____	μm
Nominal Rating:	_____	% _____μm
Initial Clean ΔP At Rated Flow:	_____	specify units ____psi ____bar
Maximum "End of Life" ΔP:	_____	specify units ____psi ____bar
Dirt-Holding Capacity:	_____	grams
Is Element Subjected To Reverse Flow?	_____	yes _____ no
If Yes What Is ΔP?	_____	specify units ____psi ____bar

Please e-mail to fluidpower@ptitechnologies.com

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email: fluidpower@ptitechnologies.com

Housing
Request For Quote

Flow Rate:	_____	specify units	____ gpm	____ lpm ____ scfm
Operating Pressure:	_____	specify units	____ psi	____ bar
Normal Operating Temp:	_____	specify units	____ Cº	____ Fº
Min Operating Temp:	_____	specify units	____ Cº	____ Fº
Line Size:	Inlet: ____ inch		____ mm	
	Outlet: ____ inch		____ mm	
Is Housing Subjected To Impulse?	_____ yes	_____ no	If yes see below	
Peak Pressure:	_____	specify units	____ psi	____ bar
Is Bypass Valve Required?	_____ yes	_____ no	If yes see below	
Cracking ΔP	_____	specify units	____ psi	____ bar
Reseat	_____	specify units	____ psi	____ bar
Max. ΔP Through Valve	_____	specify units	____ psi	____ bar
Is Shutoff Valve Required?	_____ yes	_____ no	If yes see below	
Pressure Rating:	_____	specify units	____ psi	____ bar
Is Check Valve Required?	_____ yes	_____ no		
Is ΔP Indicator Required?	_____ yes	_____ no	If yes see below	
Indicating Pressure:	_____	specify units	____ psi	____ bar

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Almost 100 Years of Innovation in Fluid Management and Filtration

- 1924 - First Filter Canister (Automotive Industry)
- 1926 - First Disposable Oil Filter (Automotive Industry)
- 1932 - First Pleated Filter Element
- 1958 - Differential Pressure Indicator Line
- 1964 - Integrated Filter Module (Lockheed S-3)
- 1979 - 1st Commercial Multi-Circuit Hydraulic Manifold (757-767)
- 1989 - Launched Deep Pleat High-Capacity Elements
- 1994 - Awarded Allison WT Transmission Filter
- 1997 - MD-90 Hydraulic Filtration Upgrade (Boeing 717)
- 1999 - Repak® Replaceable Pleat Pack Elements
- 1999 - Awarded Embraer 170/190 Hydraulic Filter Program
- 2000 - JSF Lube Filter Module
- 2001 - Released Spinpak® Proprietary OEM Products
- 2002 - Dassault Falcon 7X Multi-Module Hydraulic Filter Program
- 2004 - KHI P-X/C-X Multi-Module Hydraulic Filter Program
- 2005 - Released RH83 Replaceable Pleat Pack Elements
- 2006 - Awarded 787 Coolant Filter Module Filter Program
- 2008 - Awarded A350 Multi-Module Hydraulic Program
- 2010 – Developed All Composite Liquid Cooling System (LCS) Filter Assembly
- 2012 – Awarded Dassault 5X Hydraulic System Filter Manifolds
- 2013 – Awarded Embraer E-Jet E2 Hydraulic System Filter Manifolds
- 2015 – Awarded Embraer E-Jet E2 Fuel Tank Inerting Filter Kit
- 2017 – First to offer products qualified to new Army M8815 specification for Apache, Blackhawk and Auxillary Ground Power Units
- 2019 – Awarded Fuel Filter Assemblies for The Spaceship Company (Virgin Galactic) Mothership Two Launch Aircraft
- 2020 – Awarded Boom XB-1 Supersonic Aircraft Fuel and Hydraulic Filter Element Kits

Contact PTI for Prompt Assistance with Your Filtration Application Call Toll Free: 800-331-2701

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