MiniKrimp™
Crimping Machine Technical Manual
Bulletin 4660-MKD

aerospace
climate control
electromechanical
filtration
fluid & gas handling
hydraulics
pneumatics
process control
sealing & shielding

ENGINEERING YOUR SUCCESS.
When operating this machine, always exercise basic safety precautions to minimize the possibility of injury, including the following:

1. When using a power unit, use only Parker recommended power units to hydraulically operate Parker crimpers.
2. When using a power unit, connect the power unit to a grounded, properly rated, protected and sized power-supply circuit to prevent electrical shock and to avoid electrical overload.
3. DO NOT OPERATE MINIKRIMP™ OVER MAXIMUM RATED WORKING PRESSURE OF 10,000 PSI.
4. Wear safety glasses. Make sure that the valve connecting the hose or tube assembly and other components are protected from any external source of damage, such as: excessive heat, flame, moving machine parts, sharp edges, falling objects, corrosive chemicals, dropping the crimper and other hazards.

Failure or improper selection or improper use of the products and / or systems described herein or related items can cause death, personal injury and property damage.

Before selecting or using any Parker hose or fittings or related accessories, it is important that you read and follow Parker Safety Guide for Selecting and Using Hose, Fittings, and Related Accessories (Parker Publication No. 4400-B.1)

This document and other information from Parker Hannifin Corporation, its subsidiaries and authorized distributors provide product and/or system options for further investigation by users having technical expertise. It is important that you analyze all aspects of your application and review the information concerning the product or system in the current product catalog. Due to the variety of operating conditions and applications for these products or systems, the user, through its own analysis and testing, is solely responsible for making the final selection of the products and systems and assuring that all performance, safety and warning requirements of the application are met.

The products described herein including without limitation, product features, specifications, designs, availability and pricing, are subject to change by Parker Hannifin Corporation and subsidiaries at any time without notice.

Offer of Sale
The items described in this document are hereby offered for sale by Parker Hannifin Corporation, its subsidiaries or its authorized distributors. This offer and its acceptance are governed by the provisions in the "Offer of Sale."

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Help us help you . . .

Read this guide carefully before using.

This Technical Manual is designed to help you operate and maintain your MiniKrimp™. If you need more information or further assistance, please contact us:

Call: Technical Services Department
Parker Hannifin Corporation
Parflex Division
Phone: (330) 298-4066 or (330) 296-2871
Fax: (330) 296-8433

Receiving Instructions:
UNPACKING — Carefully remove all documents and components from shipping containers.
INSPECTION— Visually inspect all components for shipping damage. If any shipping damage is found, notify the carrier at once. The carrier is responsible for all repair and replacement costs resulting from such damage. Shipping damage is not covered by the Parker warranty.
MiniKrimp™ - Hand Pump Model

Overview - MiniKrimp™ Crimping Machine

The Parker Hannifin MiniKrimp™ is the best portable crimper on the market. By utilizing a one-piece high strength cast aluminum frame, the MiniKrimp™ is light, robust, and highly corrosion resistant.

Features of the MiniKrimp with Hand Pump

- Lightweight, portable, compact all-in-one unit
- Unit with pump weighs only 41 lbs.
- 10,000 psi and 30+ tons of force
- Removable pusher design for easy die change
- Hand pump easily removed for use with jumper hose for bench mounted units (part number - 015309)
- No additional power source required for operation
- Capable of crimping a majority of thermoplastic, rubber, PTFE and specialty hoses up to 3/4” ID.

Reference CrimpSource Online or appropriate catalog (4660 or 4400) of the Parker division that supplies the hose for detailed crimp specifications as exceptions do occur based on the particular hose type, size, and fitting material.

www.parker.com/crimpsource

Air Over Hydraulic Model

Overview - MiniKrimp™ Crimping Machine

The Parker Hannifin MiniKrimp™ is the best portable crimper on the market. By utilizing a one-piece high strength cast aluminum frame, the MiniKrimp™ is light, robust, and highly corrosion resistant.

Features of the MiniKrimp with Air over Hydraulic Pump

- Lightweight, portable, compact all-in-one unit
- Unit with pump weighs only 45 lbs.
- 10,000 psi and 30+ tons of force
- Removable pusher design for easy die change
- Air Pump utilizes a rugged activation and release lever for greater durability
- Can operate with as little as 60 psi air pressure (60-100 psi, 9 CFM recommended)
- Capable of crimping a majority of thermoplastic, rubber, PTFE and specialty hoses up to 3/4” ID.

Reference CrimpSource Online or appropriate catalog (4660 or 4400) of the Parker division that supplies the hose for detailed crimp specifications as exceptions do occur based on the particular hose type, size, and fitting material.

www.parker.com/crimpsource

### Specifications

<table>
<thead>
<tr>
<th>Approximate Size (with pump)</th>
<th>6” Deep, 13” Wide, 15” High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight (w/o die set)</td>
<td>42 lbs. with hand pump</td>
</tr>
<tr>
<td>Rating</td>
<td>30 tons force @ 10,000 psi maximum</td>
</tr>
<tr>
<td>Full Cycle Time</td>
<td>approximately 30 seconds</td>
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### Standard Equipment

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<thead>
<tr>
<th>Part Description</th>
<th>Part Number</th>
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<tr>
<td>MiniKrimp™ Portable Crimping Machine</td>
<td>94C-080-PFD</td>
</tr>
<tr>
<td>Hand Pump</td>
<td>015309</td>
</tr>
<tr>
<td>Die Ring – Color Coded Silver</td>
<td>82C-R01-PFD</td>
</tr>
</tbody>
</table>

### Specifications

<table>
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<tr>
<th>Approximate Size (with pump)</th>
<th>6” Deep, 12” Wide, 15” High</th>
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</thead>
<tbody>
<tr>
<td>Weight (w/o die set)</td>
<td>42 lbs. air/hydraulic pump</td>
</tr>
<tr>
<td>Rating</td>
<td>30 tons force @ 10,000 psi maximum</td>
</tr>
<tr>
<td>Full Cycle Time</td>
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</table>

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<tr>
<th>Part Description</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>MiniKrimp™ Portable Crimping Machine</td>
<td>94C-080-PFD</td>
</tr>
<tr>
<td>Air Over Hydraulic Pump (Includes tubing and adapters)</td>
<td>025399</td>
</tr>
<tr>
<td>Die Ring – Color Coded Silver</td>
<td>82C-R01-PFD</td>
</tr>
</tbody>
</table>
Accessories
MiniKrimp™ Crimping Machine

Part # 015307
Upright Vise Mount
- Machined and bent from 1/4" thick 1018 steel
- Mount connects to the bottom of the MiniKrimp™ using four 3/8-16 bolts (not included)
- Once connected, MiniKrimp™ can be clamped into a vise for operation

Part # 015306
Table Mount
- Machined and bent from 1/4” thick 1018 steel
- Mount connects to the bottom of the MiniKrimp™ using four 3/8-16 bolts (not included)
- MiniKrimp™ can then be mounted to a table using the four 3/8” clearance holes on the other side of the plate (bolts not included)

Part # 015308
Replacement Connector
- Replacement stainless steel bent tube rigid connector
- For use with 94C-001-PFD (MiniKrimp™ Hand Pump Model)

Part # 015309
High Pressure Hose Assembly
- Parker 10,000 psi, 1/4 inch ID hose with 3/8 inch female JIC connections on both ends
- Hose is 6 feet long
- Hose is used when a flexible connection is required between the MiniKrimp™ and a hydraulic pressure source

Part # 025349
Replacement Connector
- Replacement stainless steel bent tube rigid connector
- For use with 94C-002-PFD (MiniKrimp™ Air Over Hydraulic Model)

Part # 045234
High Pressure Hose Assembly
- Parker 10,000 psi, 1/4 inch ID hose with quick coupler
- Hose is designed to be used when mounting a hand pump to the 94C-MKS MiniKrimp™ stand’s base (see picture at right)

Part # 94C-MKS
Folding Stand
- Lightweight folding stand designed exclusively for the MiniKrimp™ portable crimper (works for all versions)
- When not in use, the stand folds up closely to the MiniKrimp™ for storage
- Mounting hardware and safety instructions are included
- See pictures below for configuration examples.
- Patent Pending

Note: The hydraulic connectors shown on page 4 are designed exclusively for use with the MiniKrimp™. No other connectors are approved for use with the MiniKrimp™ without expressed written consent from Parker Parflex Division’s technical support. Any worn connectors should be replaced immediately.
Assembly Detail & Parts List
MiniKrimp™ Hand Pump Model

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
<th>Qty.</th>
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<tbody>
<tr>
<td>015301</td>
<td>2 Speed Light Weight Hand Pump</td>
<td>1</td>
</tr>
<tr>
<td>015302</td>
<td>Hardened Steel Sleeve</td>
<td>1</td>
</tr>
<tr>
<td>015303</td>
<td>Custom Cylinder</td>
<td>1</td>
</tr>
<tr>
<td>015304</td>
<td>Aluminum Frame</td>
<td>1</td>
</tr>
<tr>
<td>015305</td>
<td>Cup Pusher</td>
<td>1</td>
</tr>
<tr>
<td>015308</td>
<td>Bent Tube Assembly</td>
<td>1</td>
</tr>
<tr>
<td>015310</td>
<td>3/8” x 3/8” Shoulder Bolt</td>
<td>1</td>
</tr>
<tr>
<td>015415</td>
<td>Spring Plunger</td>
<td>1</td>
</tr>
<tr>
<td>6 CTX-S</td>
<td>3/8”-37° to 1/4” NPT Elbow</td>
<td>1</td>
</tr>
<tr>
<td>6-6 CTX-S</td>
<td>3/8”-37° to 3/8” NPT Elbow</td>
<td>1</td>
</tr>
<tr>
<td>822011</td>
<td>Die Separator</td>
<td>1</td>
</tr>
<tr>
<td>822012</td>
<td>Spring</td>
<td>1</td>
</tr>
<tr>
<td>822031</td>
<td>Retention Ring</td>
<td>1</td>
</tr>
<tr>
<td>82C-R01</td>
<td>Silver Die Ring</td>
<td>1</td>
</tr>
<tr>
<td>015411</td>
<td>3/8-16-18-8 SS SHCS 2.5” Long</td>
<td>2</td>
</tr>
<tr>
<td>015413</td>
<td>1/4-20-18-8 SS Lock Washer</td>
<td>2</td>
</tr>
<tr>
<td>015414</td>
<td>1/4-20-18-8 SS Flat Washer</td>
<td>2</td>
</tr>
<tr>
<td>015412</td>
<td>1/4-20-18-8 SS SHCS .75” Long</td>
<td>4</td>
</tr>
</tbody>
</table>

Assembly Detail & Parts List
MiniKrimp™ Air Over Hydraulic Model

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
<th>Qty.</th>
</tr>
</thead>
<tbody>
<tr>
<td>015302</td>
<td>Hardened Steel Sleeve</td>
<td>1</td>
</tr>
<tr>
<td>015303</td>
<td>Custom Cylinder</td>
<td>1</td>
</tr>
<tr>
<td>015304</td>
<td>Aluminum Frame</td>
<td>1</td>
</tr>
<tr>
<td>015305</td>
<td>Cup Pusher</td>
<td>1</td>
</tr>
<tr>
<td>015310</td>
<td>3/8” x 3/8” Shoulder Bolt</td>
<td>1</td>
</tr>
<tr>
<td>015415</td>
<td>Spring Plunger</td>
<td>1</td>
</tr>
<tr>
<td>6-2 CTX-S</td>
<td>3/8”-37° to 1/8” NPT Elbow</td>
<td>1</td>
</tr>
<tr>
<td>6-6 CTX-S</td>
<td>3/8”-37° to 3/8” NPT Elbow</td>
<td>1</td>
</tr>
<tr>
<td>822011</td>
<td>Die Separator</td>
<td>1</td>
</tr>
<tr>
<td>822012</td>
<td>Spring</td>
<td>1</td>
</tr>
<tr>
<td>822031</td>
<td>Retention Ring</td>
<td>1</td>
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<td>Silver Die Ring</td>
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<td>3/8-16-18-8 SS SHCS 2.5” Long</td>
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<td>015413</td>
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</tr>
<tr>
<td>015414</td>
<td>1/4-20-18-8 SS Flat Washer</td>
<td>2</td>
</tr>
<tr>
<td>015412</td>
<td>1/4-20-18-8 SS SHCS .75” Long</td>
<td>4</td>
</tr>
<tr>
<td>025349</td>
<td>Bent Tube Assembly</td>
<td>1</td>
</tr>
<tr>
<td>025399</td>
<td>Air Powered Pump</td>
<td>1</td>
</tr>
</tbody>
</table>
**Crimping Instructions**

**MiniKrimp™ Crimping Machine**

1. Place the hose next to the fitting and align it with the knurl marks on the fitting shell. Mark the length on the hose. Push hose into the fitting until the mark on the hose is even with the end of the fitting shell (lubricate hose*, if necessary).

2. Select proper die set.

3a. Using a molybdenum disulfide type grease, apply a thin layer of grease to the die bowl.

3b. Place unitized die set into die bowl.

4. Place proper die ring on top of the selected die.

5. Slide pusher into place onto shoulder bolt.

6. Position the hose and fitting in dies from below.

7. Rest bottom of fitting on die step using PARKALIGN® feature.

8. While holding hose and fitting into position on die step, begin pumping hand pump until die ring contacts base plate.

9. Release pressure, remove finished assembly. Check crimp diameter.

10. Measure crimp diameter of each fitting at the top, middle and bottom of the shell. Take measurements at a minimum of three places around the shell circumference. Verify crimp diameter is within tolerances.

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**Assembling the MiniKrimp™ Air Over Hydraulic Pump Upgrade Kit, Part #025411**

1. (IF APPLICABLE) Relieve pressure from attached pump. Remove the hand pump and bent tube assembly from the body of the crimper. Do not remove the adapter (6-6 CTX-S) from the cylinder. This adapter will be used, with an orientation change, with the Air Over Hydraulic Pump.

2. Screw (or reorient) the 6-6 CTX-S adapter into the cylinder port and tighten until the fitting is facing in the upward direction. Do not loosen the adapter to reach the correct orientation as this may cause leakage.

3. Screw the 6-2 CTX-S adapter into the pump and tighten until the fitting is facing the direction of the fill cap.

4. Mount the pump to the right side of the crimper as shown in the image to the left using two 1/4" bolt holes on the top of the crimper. Note that only the top two bolt holes are used.

5. Attach the 025399 bent tube assembly to the two adapters. The longer of the two ends of the tube will attach to the pump. Tighten the nuts of the bent tube to a minimum of 21 ft.-lbs.

Now that steps 1-5 are complete the MiniKrimp™ is ready for operation. Reference the Enerpac pump manual for operating instructions.

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Note: 1) Hose assemblies must be inspected for cleanliness and should be free of all foreign particles.

2) Parker Hannifin will not accept responsibility for the operation of, or provide warranty coverage for, a crimper that is operated by a power unit other than equipment supplied by Parker Hannifin for the express purpose of operating that crimper.

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*Do not use water-based or synthetic lubricants
If you have a problem with your MiniKrimp™ Portable Crimping Machine:

First, check that the proper tooling, hose and fitting combinations are being used.

Then check the following recommendations. If the following suggestions do not remedy the problem, call the Parflex Technical Service Department (330) 298-4666 or (330) 296-2871.

Refer to Parker hose manufacturer’s catalog and/or CrimpSource Online. www.parker.com/crimpsource.

Lubricate die cavity with Factran EP-2 lithium grease, Dow Corning GN assembly paste, or equivalent to prevent dies from sticking in bowl. Bottom out the pusher on the die ring completely. Also check for proper bottoming by placing a piece of paper between die ring and base plate. If properly bottomed, you should not be able to remove paper.

Call a qualified electrician.

Refill oil reservoir to 1/2” to top of opening with ENERPAC recommended oil. Do not overfill.

Visually inspect all wear surfaces for raised metal dents or gouges. Replace damaged or worn die sets and die rings.

Lubricate the die cavity in the base plate frequently with Factran EP-2 lithium grease, Dow Corning GN assembly paste, or equivalent to prevent wear.

If all crimp diameters are out of specification by the same amount, the die cavity in the base plate may be out of specification. Contact Parflex Technical Service Dept. (330) 298-4666 or (330) 296-2871 for repair.

If pump does not operate properly, it may have lost its prime. Follow the procedure below to prime your pump, if necessary.

1. Fill pump with ENERPAC hydraulic oil, if necessary.
2. Place pump on horizontal surface.
3. Set air supply pressure to 30 – 40 psi (2.1 – 2.7 bar)
4. Move pump treadle to RELEASE position.
5. Depress the button under the treadle to activate the pump. Operate pump in RELEASE position momentarily several times to allow oil to flow back into pump and fill passage ways.
6. To verify that pump is primed, operate as normal with cylinder attached. If cylinder does not advance, repeat step 5.

If pump does not deliver oil, contact Parflex Technical Services Department.

Contact: Technical Services Department, Parker Hannifin Corporation, Parflex Division at (330) 298-4666 or (330) 296-2871. The fax number is (330) 296-8433.
ENERPAC Warranty Policy

For those ENERPAC items sold as part of the Parker Parflex Division product offering, the following warranty applies:

ENERPAC products are warranted to be free of defects in materials and workmanship under normal use for as long as they are owned by the original purchaser, subject to the exclusions and limitations described below. This warranty does not cover normal wear and tear, alterations, or damages (including repairs or attempted repairs by parties other than ENERPAC or its authorized service representatives), improper use, wear which is not intended or use which is contrary to instructions for the products.

This WARRANTY IS LIMITED TO NEW PRODUCTS SOLD THROUGH ENERPAC AUTHORIZED DISTRIBUTORS, ORIGINAL EQUIPMENT MANUFACTURERS OR OTHER DESIGNATED DISTRIBUTORS OF FINISHED GOODS. NO DIVISION, EMPLOYEE, REPRESENTATIVE OR OTHER REAL PARTY OF ENERPAC HAS THE AUTHORITY TO IN ANY WAY AMEND OR CHANGE THIS WARRANTY. Electronic products and components are warranted against defects in material and workmanship for a period of two years from the date of purchase. The following items are warranted against defects in material and workmanship for a period of two years from the date of shipment:

1. Terms and Conditions of Sale: All descriptions, quotations, proposals, offers, acknowledgments, acceptance and sales of ENERPAC products are subject to and shall be governed exclusively by the terms and conditions stated herein. Buyer’s acceptance of any offer to sell is limited to those terms and conditions. Any terms or conditions in Buyer’s purchase orders or in any other communications with Seller in connection with the sale of ENERPAC products are hereby rejected in entirety and are void. The agreement to buy and sell is subject to these terms and conditions and no modifications or additions shall be binding on either party unless made in writing and signed by authorized representatives of both parties.

2. Payment: The payment terms are net 30 days from the date of delivery. Buyer shall not be entitled to delay payment for any reason.

3. Invasion of Privacy: The items described in this document and other documents or descriptions provided by Parker Hannifin Corporation, its subsidiaries and its authorized distributors are hereby offered for sale at prices to be established by Parker Hannifin Corporation, its subsidiaries and its authorized distributors. This Offer and the acceptance by any customer (“Buyer”) shall be governed by all of the following Terms and Conditions. Buyer’s acceptance of any offer to purchase by Buyer is subject to all of the following Terms and Conditions, when communicated to Parker Hannifin Corporation, its subsidiaries or an authorized distributor (“Seller”) verbally or in writing, shall constitute acceptance of this offer.

Offer of Sale

MiniKrimp™ Crimping Machine and Accessories

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If you need more information or further assistance, please contact:

Technical Services Department, Parker Parflex Division
Phone: (330) 298-4066 or (330) 296-2871, Fax: (330) 296-2871

All other MINIKRIMP™ components can be purchased directly from Parflex. Contact the Parflex Division at www.parker.com/parflex, or phone 1.330.296.2871.
1.0 GENERAL INSTRUCTIONS

1.1 Scope: This safety guide provides instructions for selecting and using (including spotting, inspecting, and maintaining) these Products. For convenience, all radar- and thermoplastic products commonly called "hose" or "tubing" are called "hose" in this safety guide. All assemblies made with hose are called "hose assemblies." All products commonly called "fitting," "couplings," or "adapters" are called "fitting," "couplings," or "adapters" respectively. (Including crimping and swaging machines and tools) are called "Related Accessories." This safety guide is a supplement to and is to be used with the specific Parker publications for the hose system, Fittings and Related Accessories that are being considered for use. Parker publications are available at www.parker.com. SAE J2530 (www.sae.org) and ISO 17165-2 (www.iso.org) also provide relevant practices for hardware, Fittings, and Assemblies.

1.2 Fail-Safe: Hose, Hose Assemblies and Fittings can and do fail without warning at unexpected pressures, due to design parameters and equipment in a fail-safe mode, so that the failure of the Hose, Hose Assembly or Fitting will not endanger persons or property.

1.3 Distribution: Provide a copy of this safety guide to each person responsible for selecting, purchasing, installing and using these Products. Do not select any Parker Hose or Fittings without thoroughly reading this safety guide as well as the specific Parker publications for the Products.

1.4 Use Frequency: A wide variety of operating conditions and applications for Hose and Fittings, Parker does not warrant or repair any particular Hose or Fitting is suitable for any specific end use system. It is the user’s responsibility to analyze all technical parameters that must be considered in selecting a product. The user, through its own analysis, selection, and application, will be responsible for the safety and reliability of the hose system.

1.5 Making the final selection of the Products. The user is responsible for all initial applications and should notify this guide to prevent personal safety or health hazards.

1.6 Products, which must be consistent with all applicable government and industry standards.

1.7 Additional Questions: Call the appropriate Parker technical service department at 800-368-1194 (toll free), or return the reply card or request any additional information. See the Parker publication for the Products being considered or used, or call 1-800-CPI-HELP, or go to www.parker.com, for telephone numbers of the appropriate Parker publications for the hose system, Fittings and Assemblies. Thoroughly read this publication before proceeding. For Parker CNG applications, a supplemental publication is available at www.parker.com, for telephone numbers of the appropriate publications for the hose system, Fittings and Assemblies.

2.0 HOSE AND FITTINGS SELECTION INSTRUCTIONS

2.1 Electrical Conductivity: Certain applications require that the hose be nonconductive to prevent electrical current flow. Other applications require that the hose be electrically conductive. Conductive hose fittings are configured to prevent or contain electrostatic effects. The electrical conductivity or nonconductivity of Hose and Fittings is determined by the manufacturer, and is necessary for safety considerations. In general, the electrical conductivity or nonconductivity of a product is determined by testing. The electrical conductivity or nonconductivity of Hose and Fittings is dependent upon many factors and may be susceptible to change. These factors include but are not limited to the various materials used to make the hose, and the Fitting, Fittings, hose and fittings are configured to conduct or to drain off static electricity. Extra care must be exercised when selecting SAE Hose and Fittings for hose and fittings and other applications in which electrical conductivity is a factor.

The electrical conductivity or nonconductivity of Hose and Fittings is dependent upon many factors and may be susceptible to change. These factors include but are not limited to the various materials used to make the hose, and the Fitting, Fittings, hose and fittings are configured to conduct or to drain off static electricity. Extra care must be exercised when selecting Hose and Fittings for hose and fittings and other applications in which electrical conductivity is a factor.

2.2 Pressure: Hose selection must be made so that the published maximum working pressure of the Hose and Fittings is equal to or greater than the maximum pressure intended for the application.

2.3 Temperature: Hose selection must be made so that the hose is capable of withstanding the vacuum and pressure of the Hose and Fittings for these or any other applications in which temperature is dependent upon many factors and may be susceptible to change. Temperatures below and above the recommended limit can degrade the hose. Parker CNG Hose is intended for dispenser and vehicle use at a maximum temperature of 180°F (82°C). Parker CNG Hose should not be used in confined spaces or unventilated areas or exposed emergency. Extreme care must be exercised when selecting Hose and Fittings for hose and fittings and other applications in which electrical conductivity is a factor.

2.4 Flow: Hose selection must be made so that the published maximum working pressure of the Hose and Fittings is equal to or greater than the maximum pressure intended for the application.

2.5 Fluid Compatibility: Hose Assembly selection must assure compatibility of the Hose, Fittings, and Related Accessories with the fluid medium used. See the fluid compatibility chart in the Parker publications for the hose system, Fittings and Assemblies. This information is offered only as a guide. Actual service life can only be determined by the end user through actual test results and other analyses. Hose is chosen or selected to be compatible with a particular fluid that must be assembled using fittings and adapters containing likewise compatible materials.

2.6 Permeation: Permeation (that is, seepage through the hose) may occur from inside to outside when Hose is used with gases, liquid gases, and refrigerants (including but not limited to helium, nitrogen, argon, or LPG). This information may result in high concentrations of chemicals which are potentially flammable, explosive, or toxic, in gas or liquid flow. Flammable gases, fire, and other hazards can result when using the wrong Hose for such applications. The system designer must take into account the fact that a permeation will take place and must not use Hose if this permeation could be hazardous. The system designer must also take into account any other special regulations which govern the use of flammable and/or toxic gases. Never use a Hose even though the fluid compatibility is acceptable without considering the potential hazards that may result from permeation through the Hose Assembly. The permeation of minimum from inside the Hose to inside the Hose system will occur in Hose assemblies, regardless of internal pressure. If this minimum permeation would have detrimental effects (particularly in hazardous environments), it may cause death, personal injury and property damage. Possible consequences of failure or improper selection or improper use of these Hose Assembly are:

- Injections by high-pressure fluid discharge.
- Electrocution from high voltage electric power lines.
- High velocity fluid discharge.
- Fittings thrown off at high speed.
- Flammable liquids.
- Fire or explosion.
- Other adverse effects on persons and property.

Therefore, the Parker Safe Guide is a supplement to and is to be used with the specific Parker publications for the hose system, Fittings and Related Accessories that are being considered for use. Parker publications are available at www.parker.com. SAE J2530 (www.sae.org) and ISO 17165-2 (ISO 17165-2) also provide relevant practices for hardware, Fittings, and Assemblies.

3.0 CARE AND MAINTENANCE: Hose and Fittings selection must assure compatibility of the Hose, Fittings, and Related Accessories with the fluid medium used. See the fluid compatibility chart in the Parker publications for the hose system, Fittings and Assemblies. This information is offered only as a guide. Actual service life can only be determined by the end user through actual test results and other analyses.

3.1 Propane End Fittings: Hose manufacturers recommend that Hose End Fittings be replaced when the hose is replaced to maintain electrical isolation. For applications that require electrically conductive Hose, Parker recommends purchasing replacement parts from Parker or Parker approved suppliers.

3.2 Hose Analysis: Information contained herein is intended to provide guidance for hose and fitting selection. The user, through its own analysis, selection, and application, will be responsible for the safety and reliability of the hose, Fittings, and Related Accessories. Parker products and publications are available at www.parker.com, for telephone numbers of the appropriate publications for the hose system, Fittings and Assemblies.

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3.7 Hose Analysis: Information contained herein is intended to provide guidance for hose and fitting selection. The user, through its own analysis, selection, and application, will be responsible for the safety and reliability of the hose, Fittings, and Related Accessories. Parker products and publications are available at www.parker.com, for telephone numbers of the appropriate publications for the hose system, Fittings and Assemblies.

3.8 Hose Analysis: Information contained herein is intended to provide guidance for hose and fitting selection. The user, through its own analysis, selection, and application, will be responsible for the safety and reliability of the hose, Fittings, and Related Accessories. Parker products and publications are available at www.parker.com, for telephone numbers of the appropriate publications for the hose system, Fittings and Assemblies.
2.14 Specifications and Standards: When selecting Hose and Fittings, proper assembly and recommendations must be reviewed and followed as applicable.  

2.15 Hose Cleanliness: When selecting Hose and Fittings, the user is solely responsible for the selection of the proper Fitting and sealing surfaces for burrs, nicks, corrosion or other imperfections. Do NOT use any component that displays any signs of nonconformance. The only Hose and Fittings that may be installed, use a Ground Fault Equipment Protection Device. 

2.16 Fire Resistant Fluids: In many applications, it may be necessary to restrain, protect, or guide the Hose to protect it from damage by unnecessary abrasion, thread damage or damage to sealing surfaces are corrected. Perform a Pre-Sale Inspection. 

2.17 Installation Instructions: Proper Installation is not complete without following the Parker published instructions for assembling a Parker Fitting catalog for the specific Parker Fitting being used, or by calling 1-800-CRIMP4, or to your parker dealer. A hose assembly that displays any signs of nonconformance.  

2.18 Hose Storage: Stored Hose and Hose Assemblies must not be subjected to contact with hot surfaces, open flame or other sources of ignition shall not be used for Hose inspection.  

3.0 HOSE AND FITTINGS ASSEMBLY AND INSTALLATION INSTRUCTIONS 

3.1 Selection: It is critical that a careful examination of the Hose and Fittings for damage and improper assembly.  

3.2 Hose and Fitting Assembly: Do not assemble a Parker Fitting on another manufacturer’s Hose or a Parker Hose on another manufacturer’s Fitting unless authorized by the user and, at minimum, must include Parker Crimping or swaged with a Parker crimp or swage machine.  

3.3 Visual Inspection Hose/Fitting: Any of the following conditions indicating damage and improper assembly of the Hose Assembly that has failed. Consult the nearest Parker distributor or the appropriate Parker division for Hose Assembly replacement information. 

4.0 HOSE AND FITTING MAINTENANCE AND REPLACEMENT INSTRUCTIONS  

4.1 Hose Inspection and Failure: Do not assemble Fittings to any previously used hydraulic Hose. The wrong Hose may fail after a very short service.  

4.2 Visual Inspection Hose/Fitting: Examine all mating parts, in accordance with Parker published instructions, unless authorized in writing by the engineering manager or chief engineer of the appropriate Parker division.  

4.3 Related Accessories: Do not repair or crimp any Parker Hose or Fitting with any but the lined or crimping machine and dies in accordance with Parker published instructions or by utilizing high pressure fluids to transfer energy and do work.  

4.4 Functional Test: The recommended procedure is to pressurize the Hose and check for possible malfunctions and leaks. 

4.5 Replacement Intervals: Hose assemblies and elastomeric seals will eventually age, harden, wear and deteriorate under thermal cycling and compression set. Hoe Assemblies should be inspected. 

4.6 Hose Inspection and Failure: Do not use any component that displays any signs of nonconformance.  

4.7 Elastomeric Seals: Elastomeric seals will eventually age, harden, wear and deteriorate under thermal cycling and compression set. 

5.0 HOSE STORAGE  

5.1 Age Control: Hose and Fittings must be stored in a manner that will facilitate proper aging of the Hose and Fittings.  

5.2 Storage: Hose and Fittings must not be subjected to damage that would reduce their expected service life and be placed in a cool, dark and dry area with the ends capped. Stored Hose and Fittings must not be exposed to extremes of temperature, ultra violet rays, abrasion, sand, rust, moisture or other corrosive materials. 

Material Safety Data Sheets (MSDS) are available upon request. Federal OSHA regulation 29 CFR 1910.1200 requires us to maintain material Safety Data Sheets (MSDS) upon request. Use by an employee in SC 28-39 who has not received them, you are required to obtain them from us and provide the information to employees as directed in Section 6 of the regulation. Please contact the Puritan Technical Service Department at 1-800-286-3485 (PSS) or 1-800-286-3485 (CPL).