



Cylinder Maintenance Evaluation Report





Prepared for: XYZ Company

Date: October 14, 2020

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1.0 Service Description

Cylinder Maintenance

Attention: Mr. Customer

Company: XYZ Company

Prepared by:

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1.1 Service Description

The cylinder maintenance will consist of Customer sending CVF cylinders in batches with the intent of CVF visually evaluating them for any deformities and then performing a hydrostatic or pneumatic leak test for 10 minutes to ensure they do not leak. Fluid System Components Not all valves and fittings are Swagelok stainless and/or SilcoNert coated. All NPT or ISO tapered connections will be made with PTFE tape. Initial assessment indicates mix match of components with different unidentified manufacturers.

1.2 Exceptions to Customer P&ID, BOM, and/or Specifications

- Any non-Swagelok component will be replaced with Swagelok components
- Any visual deformities that Swagelok identifies will be replaced with new valves, fittings or cylinders
- Any non-cleaned cylinders will be rejected
- All Propylene cylinders will require a decontamination sheet as well as an MSDS sheet to accompany them
- All other cylinders will require a de-contamination sheet to accompany them as well as an MSDS sheet
- If Customer would like Calgary Valve to clean non-Propylene cylinders, they will provide the cleaning procedure as well as the MSDS sheets. If this documentation is not provided, the cylinders will be rejected



2.0 Maintenance Procedures

The maintenance procedures are defined as follows:

2.1 Receiving

- Check that the cylinder tags match description
- Check that the quantity of cylinders matches what the customer sent
- Review of Swagelok SF-07-130 Process Material Cert.
- Ensure de-contamination and cleaning is done prior to receiving. If any cylinders are not cleaned, they will be rejected.

2.2 Maintenance

- Perform a visual inspection of the valves
- Check for wrench marks on the valve handle
- Check if the valve cycles normally
- Check for any nicks in the valve body
- Check that the part number is visible
- Check for cylinder deformation
- Assess the cylinder for deformation (measure the length of the cylinder, measure the circumference of the cylinder at two ends and middle)
- Check for nicks in the outer body of the cylinder
- Inspect threads (if able) and if tape was visible on the valves

2.3 Testing

- Leak testing or hydrotesting performed in accordance with customer specifications.
- The cylinders shall be tagged with the testing date and a unique cylinder number for traceability.
- Paper work attached with pass/fail
- Use Crystal nVision pressure recorder to create leak report
- Note: No snoop to be used



3.0 Observation, Evaluation, & Recommendation

3.1 Cylinder Tag # 500-SST-DOT-1800-PROPYLENE



Cylinder Tag	500-SST-DOT-1800-PROPYLENE	
Parts	Observation	Recommendation
Fitting 1	- Threads are damaged. (See 3.1)	- Replace all damaged threaded fittings. Possible thread galling on reinstallation.
Fitting 2	- Threads are damaged. (See 3.2)	- Swagelok cannot ensure leak points on reused fittings.
Fitting 3	- Threads are acceptable. (See 3.3)	- Swagelok cannot ensure leak points on reused fittings.
SS-43GXF4-12457	- Threads are acceptable. Body has wrench marks. Handle is worn. (See 3.4)	- Swagelok cannot ensure leak points or integrity of internal valve components. Valve may leak during hydrotest.
SS-14DKM4-12457	- Threads are acceptable. Body has wrench marks. Handle is worn. (See 3.5)	- Swagelok cannot ensure leak points or integrity of internal valve components. Valve may leak during hydrotest.
SS-DTM4-F4-104-12457	- Threads are acceptable inner and outer (See 3.6)	- Outage tube could be reused. Customer to advice.
SS-16DKM4-F4-1-12457	- Threads are acceptable. Body has wrench marks. Handle is in excellent condition. Cannot verify condition of rupture disk. (See 3.7)	- Unknown if rupture disk is blown. As per customer, all rupture disk valves to be replaced.
NON-SWAGELOK CYLINDER	- Threads are acceptable. Rust on tips of outer cylinder. (See 3.8)	- Replace all rusted cylinders. Unable to determine structural integrity of holding pressure.



Cylinder Tag		500-SST-DOT-1800-PROPYLENE	
Tag			
3.1			
3.2			
3.3			
3.4			
3.5			

3.6			
3.7			
3.8			

O.D Measurement of Cylinder	Location:	Measurement	O.A.L
(Yellow Sticker Facing Operator)	Side Middle End	1.999 2.000 1.998	13.75"



4.0 Customer Signature

Customer Approval

Please review this Cylinder Maintenance Evaluation Report, any catalog data sheet(s), accompanying drawing(s), specification(s), or Bill of Material(s) incorporated herein by reference, (collectively "Documentation"). Please verify the accuracy of the information provided.

By signing below, Customer accepts and authorizes assembly in accordance with the Cylinder Maintenance Evaluation Report. This Quotation and your order are subject to the Custom Solutions Terms and Conditions, and incorporated by reference, unless otherwise specified in writing by Swagelok Calgary. Responsibility for certifying the installation and readiness for operation is the responsibility of the customer.

***** All final material and product selection is by the customer.**

Customer Name (print): _____

Customer Signature: _____

Date: _____



5.0 Terms & Conditions

1.0 SCOPE

- 1.1 In addition to the requirements contained in the corresponding Purchase Order, this document defines the terms and conditions of the Purchase Orders placed by Southern Alberta Fluid System Technologies Inc. ("Buyer"). The purchase order to which these terms and conditions correspond is hereinafter referred to as the "Purchase Order." The order of precedence shall be first, any other written agreement between the parties relating to the subject matter hereto, second the Purchase Order and third these terms and conditions in the case of any conflicting terms. Seller's products and services are hereinafter referred to as "Products."

2.0 TERMS AND CONDITIONS

- 2.1 **ACKNOWLEDGMENT.** Unless this Purchase Order is immediately rejected, it will be deemed accepted. A Seller's rejection of this Purchase Order must be in writing.
- 2.2 **PRICES AND TAXES.** Prices include all previously agreed upon costs, charges and reimbursements to be paid to Seller by Buyer. Any Purchase Order issued by Buyer without a price is not valid. If the sale is specified as "Taxable" on the Purchase Order but the amount of the applicable sales or comparable tax is not specified, Seller will be entitled to charge Buyer separately for such amount. Seller warrants compliance with all applicable tax laws. Any other charge not included in Product price must be agreed to in writing by Buyer and billed as a separate item on Seller's invoice.
- 2.3 **SHIPMENTS.** As specified on the corresponding Purchase Order, shipping terms are defined using INCOTERMS 2000 as published by the International Chamber of Commerce. Transfer of title will coincide with the transfer of risk in accordance with the shipping terms in the Purchase Order. The original bill of lading or a comparable document will accompany each shipment. If the Products are not delivered in the quantities and at the times specified, time being of the essence, Buyer reserves the right without liability and in addition to its other rights and remedies to (A) direct expedited routing of the Products to Buyer, with the extra cost to be paid by Seller, and/or (B) cancel all or part of the Purchase Order and purchase substitute goods or services without further obligation to the Seller. Products are subject to our inspection and acceptance within a reasonable time after delivery. Buyer's inspection and acceptance shall not be deemed a waiver of any of Buyer's rights under these Terms and Conditions or any applicable law.
- 2.4 **PAYMENTS.** Buyer will have no obligation to pay for any Product until a correct invoice for the Product is received at the "bill to" address specified by Buyer. Unless noted on the Purchase Order or any other written agreement, Payment terms commence upon the later of the Product's delivery, inspection and acceptance or Buyer's receipt of a correct invoice.
- 2.5 **CHANGES AND ASSIGNMENTS.** Buyer shall have the right at any time to make changes in the Product specifications, delivery terms or other provisions of its order hereunder. If any such change causes a material increase in the cost of or time required for Seller's performance, Seller shall immediately notify Buyer of such increase and the parties shall agree on revised pricing or time for performance, if any. Any change to or assignment of the Purchase Order by Seller will be void without Buyer's written consent.
- 2.6 **SELLER'S WARRANTIES.** Seller represents warrants and covenants to Buyer the following:
- a. **Products.** Each Product delivered to Buyer hereunder will be: (i) free from defects in design (except to the extent the design is provided to Seller by Buyer), materials and workmanship, (ii) of merchantable quality, (iii) will conform with the samples, models, drawings, designs, and specifications provided or approved by Buyer and with any representations, affirmations or promises made by Seller or its agents whether or not made in writing; (iv) will be free from any security interest or other adverse claim against title; (v) will not infringe any Canadian, U.S. or other patent, copyright, trade secret, trademark or other proprietary right of a third party except to the extent such products are manufactured or designed pursuant to Buyer's specifications; and (vi) Any services provided by Seller will be performed in a good and workmanlike manner.
- b. **Legal Requirements.** The Products will be manufactured, sold and delivered to Buyer in compliance with all applicable laws, rules and regulations, including without limitation, Canadian import and export laws and regulations if Products are to be delivered to Canada.
- c. **No WARRANTY, LIABILITY OR INDEMNIFICATION OBLIGATION OF SELLER HEREUNDER, NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY BY SELLER RELATING TO THIS ORDER, WILL BE DEEMED TO BE DISCLAIMED, EXCLUDED, LIMITED OR WAIVED UNLESS EVIDENCED BY A SPECIFIC, WRITTEN AMENDMENT TO THIS ORDER SIGNED BY BUYER.**
- 2.7 **BUYER'S REMEDIES.** If any Product does not conform to Seller's representations, warranties, and covenants, Buyer, at its option, may return the Product to Seller at Seller's expense and risk or may hold the Product pending receipt of Seller's instructions. At Buyer's election as requested to Seller, Seller shall immediately replace the Product with a conforming Product, repair the Product or return any related payments made to Seller by Buyer. Buyer will be under no duty to inspect any Product prior to its use or resale, and neither Buyer's inspection or testing, failure to inspect or test, payment for or possession or use of any nonconforming Product will be deemed to be a waiver of release of Seller's warranties and obligations hereunder, which will survive all such events. Seller's representations, warranties, covenants and obligations hereunder will extend to and be enforceable by Buyer's customers and any other subsequent owners of the Products. Buyer reserves the right to reject and return at Seller's expense all materials or Products in excess of quantity ordered.
- 2.8 **INDEMNITY AND ASSURANCES.** Seller agrees to indemnify, defend and hold harmless Buyer and each of Buyer's affiliates and each of their officers, directors, employees, agents, subcontractors, distributors and customers against and from any claims, damages, losses, liabilities and expenses (including attorneys' fees) incurred by such entity or person as a result of any (i) breach by Seller of its representations, warranties, covenants or obligations hereunder, (ii) any defects in the Products (or the design thereof to the extent the Products are manufactured to Seller's design) supplied by Seller (iii) Seller's negligence or violation of any law or governmental rule or regulation, and (iv) any third party claims relating to the Products to the extent caused by acts or omissions of Seller. Buyer reserves the right to require from Seller, at any time, satisfactory assurance of performance of Seller's indemnity and other obligations to Buyer, including evidence of appropriate insurance coverage. Seller's refusal or failure to promptly furnish such assurance will be a breach by Seller entitling Buyer to suspend or cancel further Product deliveries hereunder. In the event of an infringement claim of proprietary rights of the Products, Seller shall indemnify, defend, and hold harmless Buyer, its affiliates, officers, directors, employees and agents from and against any such claims and to reimburse Buyer for any expenses, including attorney's fees, related to such claims.
- 2.9 **BUYER'S PROPERTY USED BY SELLER.** Any items used by Seller in the design, production or delivery of the Products, will be Buyer's property if the price to be paid by Buyer for any Products is specifically stated to include the costs of such items or if they otherwise are paid for or provided to Seller by Buyer. While any such "Buyer Property" is in Seller's possession, such property will at Seller's expense be stored and kept in good condition by Seller and Seller will replace any such property which is damaged or destroyed or reimburse Buyer for any property which is damaged or destroyed or reimburse Buyer for any damage to or loss of such property. Seller shall not allow any liens or encumbrances to be taken against such Buyer Property. No such Buyer Property will be used in the production or design of any articles other than the Products, nor will Products made using such items be furnished or quoted to any party other than Buyer, without Buyer's written consent. At the completion or termination of the Purchase Order, such Buyer Property will be delivered or disposed of as Buyer directs.
- 2.10 **CANCELLATION.** Seller's uncured breach of any of its representations, warranties, covenants, or obligations hereunder will, in addition to Buyer's other rights and remedies, entitle Buyer to suspend or cancel further Product deliveries or performances of services to Buyer without penalty or liability to Buyer. In addition, Buyer reserves the right to cancel further Product deliveries at any time by written notice to Seller, and Seller will thereupon cease work hereunder and hold all the completed and partially completed Products and any materials acquired specifically to produce the Products subject to Buyer's instructions. In the latter case, as Buyer's sole obligation for such cancellation, Buyer will at Buyer's expense and risk remove such Products and materials from Seller's facility and will purchase such items from Seller for cash payments equal to the following amounts: (A) the prices stipulated in this order for the completed Products that have been inspected and accepted by Buyer; and (B) Seller's cost, including a reasonable overhead allocation, which will be determined in accordance with generally accepted accounting principles and together will not exceed the contract price, for each uncompleted Product or item of such materials. If there is any such cancellation or suspension under this paragraph of further Product deliveries, Seller's representations, warranties and covenants hereunder will continue to apply to all previously delivered Products.
- 2.11 **CONFIDENTIALITY AND INTELLECTUAL PROPERTY.** In addition to Seller's obligation under any Non-Disclosure Agreement with Buyer, Seller shall be responsible for the safeguarding of all secret, confidential, or restricted information that may be disclosed to Seller by Buyer or that may be developed in connection with the Purchase Order. If there is any conflict between the confidentiality obligations herein and the non-disclosure agreement, the non-disclosure agreement takes precedence. In the event the Seller conceives, through Buyer participation or contribution, of any design changes or design completions that constitute improvements on the subject matter of the Purchase Order, such improvements shall belong solely to Buyer. Seller may not manufacture or sell to any party other than Buyer, Products designed by Buyer or Products containing features designed by Buyer.
- 2.12 **OTHER PROVISIONS.** The Purchase Order and these terms and conditions, and any claims or disputes related to the Purchase Order and these terms and conditions, will be governed by the laws of the Province (in case of Canadian Buyers) or jurisdiction in which the Buyer's facility that issued the Purchase Order is located. Such laws will exclude conflict of law provisions and the U.N. Convention on Contracts for the International Sale of Goods. All actions or proceedings under or relating to the Purchase Order will be resolved in a court, or a comparable forum, located in the jurisdiction in which the Buyer's facility that issued the Purchase Order is located; provided, however, that in Buyer's discretion such an action may be heard in some other place designated by it if necessary to acquire jurisdiction over third persons so that the dispute can be resolved in one action. Seller hereby agrees to appear in any such action, consents to the jurisdiction of such courts and waives any objections it might have as to venue in any such court. In the event that either party institutes voluntary proceedings relating to bankruptcy or insolvency or there is an appointment of a receiver or trustee for the benefit of creditors, or in the event that such proceedings are initiated against either party that is not dismissed within 60 days, or the Seller is not able to perform its required functions hereunder, then the other party may cancel the Purchase Order by written notice. If any provision of this document or the Purchase Order is held invalid, such invalidity shall not affect any other provision herein or therein. Seller acknowledges and agrees that time is of the essence.
- 2.13 **Exclusive terms and conditions.** The provisions of this agreement cannot be changed or modified, except by a written document signed by buyer. The purchase order and this document contain the entire and the only agreement between the parties with respect to the sale of the products or provision of the services covered hereby and any related services. Any response to or confirmation of these terms by seller which states different or additional terms will operate as an acceptance of these terms, but such different or additional terms are hereby rejected unless specifically agreed to in writing by buyer. Notwithstanding any different or additional terms or conditions contained in seller's quotation, acknowledgement, invoice or other communication, any offer of seller is accepted only on the condition that seller assents to the terms and conditions contained herein. Buyer's failure to object to provisions contained in any communication from seller will not be deemed a waiver of the provisions contained herein. Under no circumstances shall buyer be liable to seller for any consequential or incidental damages related to this order.