



SERVICE INSTRUCTION MANUAL FOR KATES PRESSURE REGULATOR, MODEL FR23 & FR28

SERVICE INSTRUCTIONS

CAUTION: MAKE SURE THAT THE REGULATOR IS RELIEVED OF PRESSURE BEFORE ATTEMPTING TO SERVICE OR CLEAN.

TO CLEAN REGULATOR

1. It is not necessary to remove the regulator from the line to clean. Shut off supply and relieve pressure. Arrange a clean area where internal parts can be placed and kept free of dirt. See the assembly drawing.
2. Remove regulator cap using a 17mm socket wrench, and place in clean area.
3. Carefully pry out regulator diaphragm using a pick or similar tool, then remove regulator actuator, and place both in clean area.
4. Remove the regulator seat using Kates seat installation tool, part # FR23-06T, or a similar tool, and place in clean area.
5. Remove regulator poppet and spring, and place in the clean area. CAUTION: be very careful not to scratch, nick or mark the radius portion of the poppet.
6. Carefully pry out regulator gasket using a pick or similar tool, and place in clean area.
7. Thoroughly clean all parts that have been removed from the regulator by immersing them in a suitable solvent. Clean and flush inside of regulator body with the solvent, and drain. Wipe all parts and surfaces dry with a clean, lint-free cloth.
8. Replace the regulator spring, poppet, and gasket.
9. Install regulator seat by threading into body using Kates seat installation tool, part # FR23-06T, or a similar tool, until it bottoms out.
10. Replace regulator actuator and diaphragm, making sure the Super VITON woven fabric side is facing up after installation. The PTFE side (white), must face the process side.
11. Using a 17 mm socket wrench, install the regulator cap making sure the Super VITON O-ring is properly seated in the groove. Torque to 30 in-lbs.

LIMITED PRODUCT WARRANTY

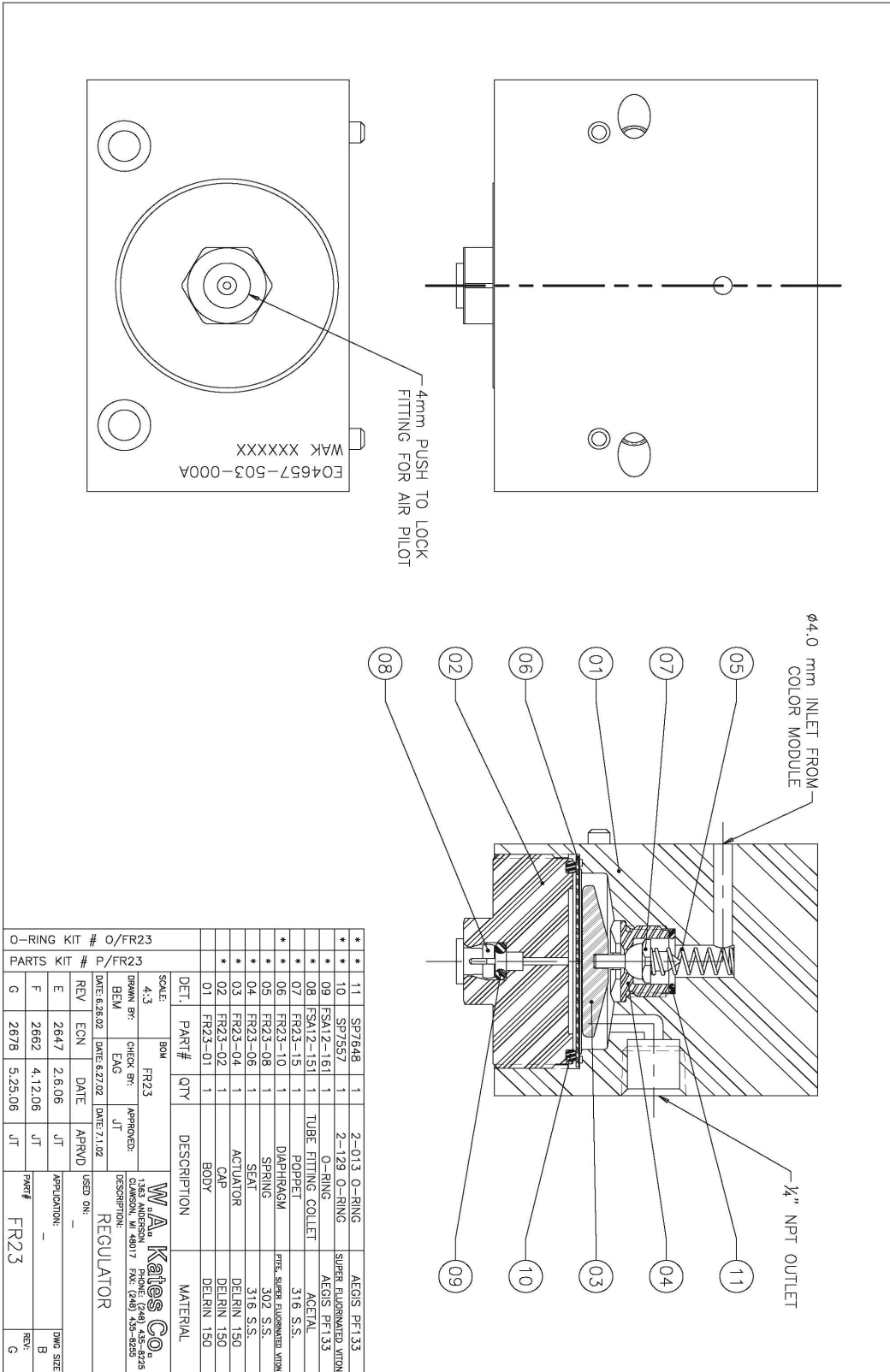
Custom Valve Concepts guarantees every product manufactured to be inspected and free from defects in workmanship or material when shipped from its factory. No warranty of corrosion resistance of any parts or assembly is expressed or implied.

This guarantee is valid for one year from the date of shipment from its plant. Within that time, Custom Valve Concepts will replace free of charge any product returned with shipping charges prepaid, found to have been defective at the time of shipment.

This warranty does not apply to; a) damage resulting from misuse or improper handling; or b) damage resulting from continued use after defect is apparent; or c) any other damage, loss or liability; or d) any product that has been changed or modified or altered in any way after it leaves the factory; or e) damage resulting from inadequate filtration or particle contamination; or f) damage resulting from corrosion due to improperly specified materials (i.e.; corrosion resistance).

The liability of Custom Valve Concepts shall be limited to the replacement, F.O.B. our factory, of any product found to have been defective at the time of shipment with duplicate or similar product of equal performance rating, but such liability shall in no event exceed the contract price for said product.

Susan R. Taube
President/Owner
Custom Valve Concepts



O-RING KIT # O/FR23		SCALE: 4:3		BOM		FR23		DRAWN BY: BEM		CHECK BY: JT		APPROVED: JT		DATE: 6/26/02		DATE: 6/27/02		DATE: 7/1/02	
PARTS KIT # P/FR23		REV		ECN		DATE		APRVD		USED ON:		APPLICATION:		DWG SIZE:		REV		G	
G		2678		5/25/06		JT		FR23		-		B		G					
11		SP7648		1		2-013 O-RING		AEGIS PF133											
* 10		SP7557		1		2-129 O-RING		SUPER ELUOMERATED NYLON											
* 09		FSA12-161		1		O-RING		AEGIS PF133											
* 08		FSA12-151		1		TUBE FITTING COLLET		ACEVAL											
* 07		FR23-15		1		POPPER		316 S.S.											
* 06		FR23-10		1		DIAPHRAGM		PREP. SUPER ELUOMERATED NYLON											
* 05		FR23-08		1		SPRING		302 S.S.											
* 04		FR23-06		1		SEAT		316 S.S.											
* 03		FR23-04		1		ACTUATOR		DELRIN 150											
* 02		FR23-02		1		CAP		DELRIN 150											
* 01		FR23-01		1		BODY		DELRIN 150											
DET.		PART #		QTY		DESCRIPTION		MATERIAL											

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