



Control Valve Report

Data			
Customer Name	Customer	Actuator MFG	
WO Number	001	Actuator Model	
MPS #		Actuator S/N	
PID	TCV-2720A	Actuator Size	
Valve OEM	Copes-Vulcan	Actuator Fail Position	
Valve Size		Actuator Bench Set	
Pressure Class		Gear Box MFG	
Body Material/Ends		Gear Box Model	
Bonnet Type		Service Type	Field Repair
Valve Model# / Type		Date	5/12/2023
Valve S/N	8610-92328-1-3	PO Number	7654321

Visual Inspection			
Part	Make New	Repair Type	Technician
Seat ring seating surface		Machine,Fail,Weld Repair	Todd Johnson
Seat ring gasket surface		Machine,Fail,Weld Repair	Todd Johnson
Stem	Yes	Fail,Manufacture New	Todd Johnson
Plug		Machine	Todd Johnson
Cage bore		N/A	Todd Johnson
Cage hole		N/A	Todd Johnson
Cage gasket surface		N/A	Todd Johnson
Guide Bore		N/A	Todd Johnson
Body gasket surface		Machine,Fail,Weld Repair	Todd Johnson
Body		Clean	Todd Johnson
Body seat ring landing		Machine,Fail,Weld Repair	Todd Johnson
Bonnet seal ring sealing surface		N/A	Todd Johnson
Bonnet gasket surface		Machine,Fail,Weld Repair	Todd Johnson
Bonnet stuffing box		Machine,Weld Repair	Todd Johnson
Bonnet nut bearing surface		N/A	Todd Johnson
Bonnet fasteners		Machine,Broken	Todd Johnson
Flange gasket surface		Machine,Fail,Weld Repair	Todd Johnson
Packing pusher I.D. / O.D.	Yes	Fail,Manufacture New	Todd Johnson
Coupling Block	Yes	Purchase New	Todd Johnson
Diaphragm leak test		Fail	Todd Johnson
Bench set		Fail	Todd Johnson
Pre-test 4 to 20 Ma		Fail,N/A	Todd Johnson
Bonnet bolt(s)	Yes	Purchase New	Todd Johnson
Actuator stroke		Fail	Todd Johnson
Packing Eye Bolts	Yes	Purchase New	Todd Johnson

Comments



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Upon incoming inspection and disassembly we discovered valve is beyond repair. We recommend replacing whole valve and actuator with new.

In order to return this valve we need to do the following at minimum.

Weld repair threads on bonnet

Weld repair bonnet/desuperheater gasket area

Weld and machine packing box

Drill and tap broken studs in bonnet

Machine flange faces

Make custom brackets for actuator



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Inspection Measurements			
Criteria	Clearance		Technician
Packing pusher I.D.	0.768	Max Allowed	Todd Johnson
Stem OD dimension	0.746		
Total Clearance =	0.022		
Stuffing box I.D.	1.263	Max Allowed	Todd Johnson
Packing pusher O.D.	1.174		
Total Clearance =	0.089		
Guide bore dimension	1.000	Max Allowed	Todd Johnson
Plug O.D. dimension	0.995		
Total Clearance =	0.005		
Cage bore dimension	1.000	Max Allowed	Todd Johnson
Plug O.D. dimension	0.995		
Total Clearance =	0.005		
Stem TIR	10.0000000000		Todd Johnson
Seal ring bore dimension	0		Todd Johnson
Seal ring OD	0		Todd Johnson
Seal ring ID	0		Todd Johnson
Seal ring height	0		Todd Johnson
Seal ring angle	0		Todd Johnson
Bonnet angle	0		Todd Johnson
Body to bonnet gap 3	0		Todd Johnson
Body to bonnet gap 6	0		Todd Johnson
Body to bonnet gap 9	0		Todd Johnson
Body to bonnet gap 12	0		Todd Johnson
Bonnet bolt size	7/8		Todd Johnson
Piston ring / Balance Seal type	Metal (4)		Todd Johnson
Balance seal position	N/A		Todd Johnson
Orientation of Valve Flow	N/A		Todd Johnson

Comments

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Replacement Parts	
Description	Quantity
Diaphragm V185989	1
Gasket V26200	1
Desuperheater gasket V264259Q	1
Seal V187058	1
Seal V187031	1
1-1/2" gasket FLG3400-1.500	1
Body gasket	1
Packing follower (MPS)	1
Stem clamp (MPS)	1
7/8-9x6-1/2 b7 stud	8



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3/8-16x1-1/4 hex head cap screws	10
Actuator shaft (custom MPS)	1
3/8-16x1-1/4 b7 stud	2
1-8 2H nuts	8
Gasket FG34600-3.000	1
Packing flange (MPS)	1
3/6-16 nuts	10
Stem (valve) (MPS)	1
7/8-9 2H nuts	16
3/8-16 wh nuts	2
1-8x6 b7 studs	4
Yoke nut/star nut (MPS)	1

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Repair Performed		
Part	Work Done	Technician
Seat ring seating surface		
Seat ring gasket surface		
Stem		
Plug		
Cage bore		
Cage hole		
Cage gasket surface		
Guide Bore		
Body gasket surface		
Body		
Body seat ring landing		
Bonnet seal ring sealing surface		
Bonnet gasket surface		
Bonnet stuffing box		
Bonnet nut bearing surface		
Bonnet fasteners		
Flange gasket surface		
Packing pusher I.D. / O.D.		
Coupling Block		
Diaphragm leak test		
Bench set		
Pre-test 4 to 20 Ma		
Bonnet bolt(s)		
Actuator stroke		
Packing Eye Bolts		

Comments

Quality / Field Supervisor: Date:



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As Assembled Measurements			
Criteria	Clearance		Technician
Packing pusher I.D.		Max Allowed	
Stem OD dimension			
Total Clearance =			
Stuffing box I.D.		Max Allowed	
Packing pusher O.D.			
Total Clearance =			
Guide bore dimension		Max Allowed	
Plug O.D. dimension			
Total Clearance =			
Cage bore dimension		Max Allowed	
Plug O.D. dimension			
Total Clearance =			
Stem TIR			
Seal ring bore dimension			
Seal ring OD			
Seal ring ID			
Seal ring height			
Seal ring angle			
Bonnet angle			
Body to bonnet gap 3			
Body to bonnet gap 6			
Body to bonnet gap 9			
Body to bonnet gap 12			
Bonnet bolt size			
Piston ring / Balance Seal type			
Balance seal position			
Orientation of Valve Flow			

Comments

Quality / Field Supervisor: Date:

Comments



Control Valve Report

Final Assembly		
Part	Result	Technician
Overall internal body condition		
Seal ring bore condition		
Blue check seat prior to Assembly		
Seal ring blue check		
Body gasket surface condition		
Bonnet gasket surface condition		
Body bonnet gap before torque		
Body bonnet gap after torque		
Gasket compression		
Stuffing box condition		
Bonnet stud torque		
Packing type		
Packing sizes		
Packing stud torque		
Draw plate to bonnet gap		
Valve Fail position		
Valve stroke length		
Valve stroking smooth		

Quality / Field Supervisor: Date:

Testing			
Criteria	Measured	Criteria	Pass
100% Open		Visual Inspection	
75% Open		Directional Test	
50% Open		Operational Range	
25% Open		Trap Test (if Applicable)	
Closed			
Measure gap between flange and valve body (4 positions) Ensure gaskets are properly installed	3		
	6		
	9		
	12		

Type of Test(s):	Hydrostatic Shell Testing	Seat Testing
Test Pressure (PSI)		
Test Gauge I.D.		
Test Duration		
Test Operator		
Witness		

Comments

Quality / Field Supervisor: Date:



Control Valve Report

Images

Data



As Found Assembly



As Found Assembly



As Found Assembly

Visual Inspection



As Found Part



As Found Part



As Found Part



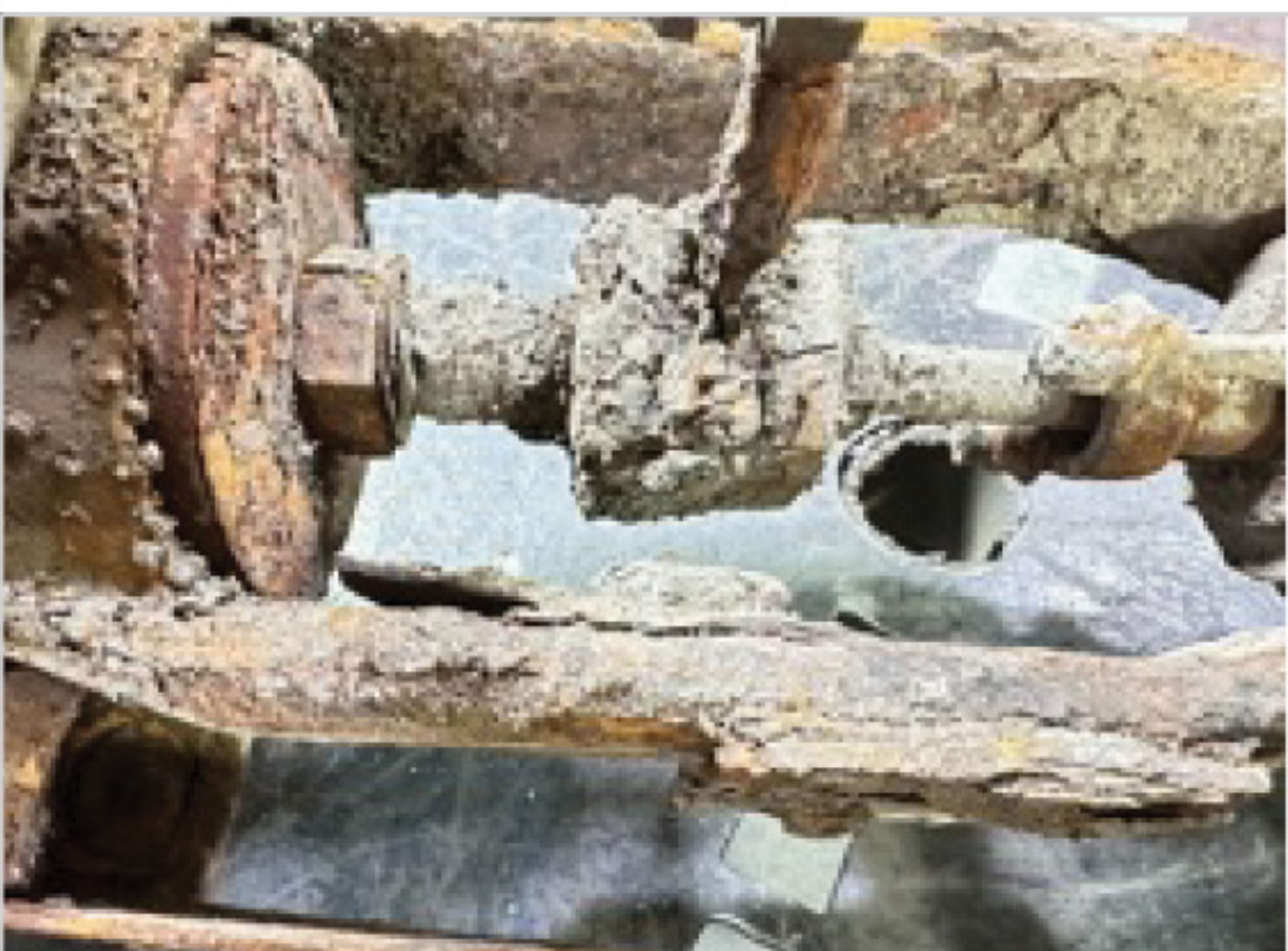
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As Found Part



Control Valve Report

Visual Inspection



As Found Part



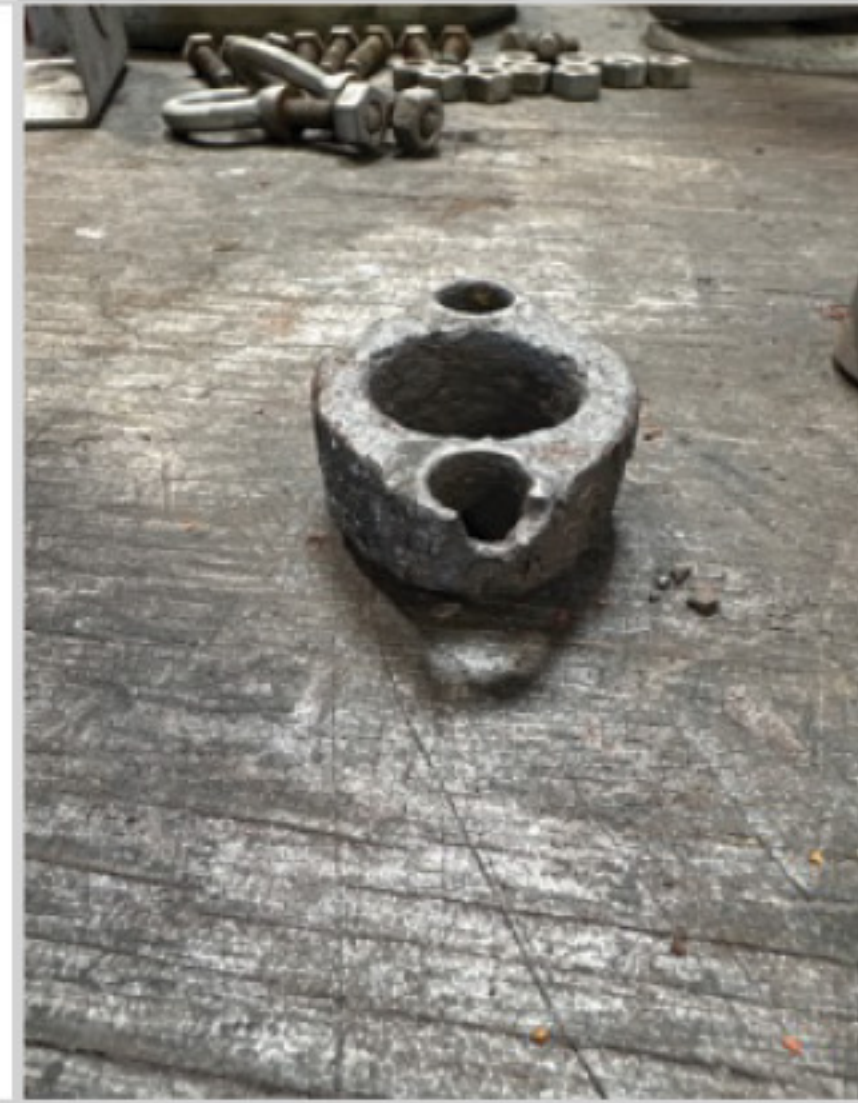
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Control Valve Report

Visual Inspection



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