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**INSTALLATION AND MAINTENANCE  
INSTRUCTIONAL MANUAL**

**10M CWP H-JWA  
ADJUSTABLE CHOKE  
WITH PNEUMATIC DIAPHRAGM ACTUATOR**

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	<b>Drawing PN: 203104371 for Reference Only</b>	

## I. OPERATION

Your H-JWA adjustable choke uses the needle and seat principle to provide fully adjustable flow. The assembly is outfitted with a diaphragm type pneumatic actuator and optional positioner if required.

## II. INSTALATION

Install your choke in the line with the path of fluid coming in at the inlet connection and making a 90 degree turn and going through the orifice. Your choke can be mounted in any orientation without affecting the performance, as long as the flow enters the choke at the inlet and exits through the outlet.

## III. MAINTENANCE

Inspect your choke regularly for excessive wear. Parts normally replaced at service intervals are choke seat, stem packing, bonnet O-ring, and stem. Be sure to lubricate stem threads, O-ring groove, and the stem packing inside diameter.

## IV. DISASSEMBLY OF ADJUSTABLE CHOKE (ACTUATOR REMOVED)

1. With choke in open position bleed all pressure from system.
2. Loosen bonnet nut by striking lugs with a hammer.



**CAUTION:** If an excessive amount of pressure escapes between the bonnet and bonnet nut, stop disassembly procedure and ensure that system pressure is off the choke.

3. Remove the bonnet nut (7) from the body by turning counter clockwise (1), lift bonnet top-works assembly from the body.
4. Remove seat (6) from choke body (1) using seat wrench PN:1050.
5. Inspect seat threads and the threads inside the body, replace if necessary.

## **Disassembly of Bonnet Top-Works**

1. Remove three hex nuts (13) from the studs (12) on packing flange (11).
2. Remove packing flange (11), felt wiper from stem, and packing follower (15).
3. Gently push stem (4) out of the bonnet (2) toward pressure end (may use plastic or rubber mallet if required).
4. Remove upper packing (16) lantern ring (17), lower packing (16), and packing box ring (18) with Teflon wiper (19).
5. Remove bonnet O-ring (20).
6. Inspect and clean all parts for reassembly.

## **V. ASSEMBLE ADJUSTABLE CHOKE & BONNET ASSEMBLY**

**Note: Lubricate packing box of bonnet with grease and apply anti-seize thread compound to all threads prior to assembly.**

1. Place lower Teflon wiper (19) into packing box ring (18) and apply grease to keep parts contained. With the open end of the packing box ring facing toward the pressure end, insert wiper/packing box ring into packing gland of the bonnet with flat side of packing ring facing upward. Install set of rings of lower packing (16) into bonnet with open end of packing rings facing pressure end of bonnet. Then, insert lantern ring (17) onto the stack of the lower packing. Insert top packing set with open end of rings facing the top of bonnet. Note: Lower packing rings are to have open end of rings facing pressure end of bonnet and the upper packing set has the open end of rings facing top of bonnet when properly installed (this prevents entrapment of pressure).
2. Install three studs (12) on top of bonnet. Position packing stem, then place packing flange (11) over the studs and in contact with tapered end of packing follower (15).
3. Loosely thread hex nuts (13) onto studs.
4. Lubricate packing area of stem, insert top of stem (4) into the pressure end of the bonnet (2), thread stem thru packing and packing flange (11). Pull the stem outward to its full open position. Note: If the stem is difficult to move, loosen the hex nuts to decrease force on the packing set.
5. Assemble new O-ring (20) on bonnet and apply an ample amount of grease.

6. Secure assembled bonnet in vise and slide the stem all the way down and back up to ensure free movement. \*Loosen hex nuts if necessary to achieve this.
7. Apply anti-seize compound to choke seat (6) threads, then install into the body (1) with choke wrench PN:1050 (not pictured). While holding the seat hex with the wrench, turn the wrench clockwise (75- 125 ft. lbs.) to tighten the seat into position. Remove the seat wrench.
8. Bonnet assembly is now ready to install into the choke body.
9. Apply anti-seize compound to the threads of the hammer nut (7) and body. Thread hammer union nut to the body and tighten firmly by striking lugs with hammer.
10. Push stem towards the closed position, until it gently contacts the seat.
11. Install pneumatic actuator (8) by assembling yoke on the bonnet top- works with lock nut (9), then connect both actuator and choke stems using the stem connector (10).
12. Adjust choke stem travel, calibrate, and bench test.

## VI. RECOMMENDED SPARE PARTS FOR TWO YEARS SERVICE

Part No.	Description	Quantity
6305	Stem 17-4 PH, 410SS w/ or w/out TC	2
1574	Seat, 17-4 PH, 410SS w/ or w/out TC	2
6352	Stud Set 7/16"-14 X 2 1/2" Long	1
6352NT	Hex Nuts 7/16" -14 Heavy Hex	1
6348	Packing Set Teflon	4
6351	Lower Wiper	2
6350	Packing Box Ring	2
1205	Bonnet O-ring	4

**Note:** When in severe and critical service, with highly abrasive flow medium, above items will require more frequent inspection and replacement.

## **VII. DISCLAIMER**

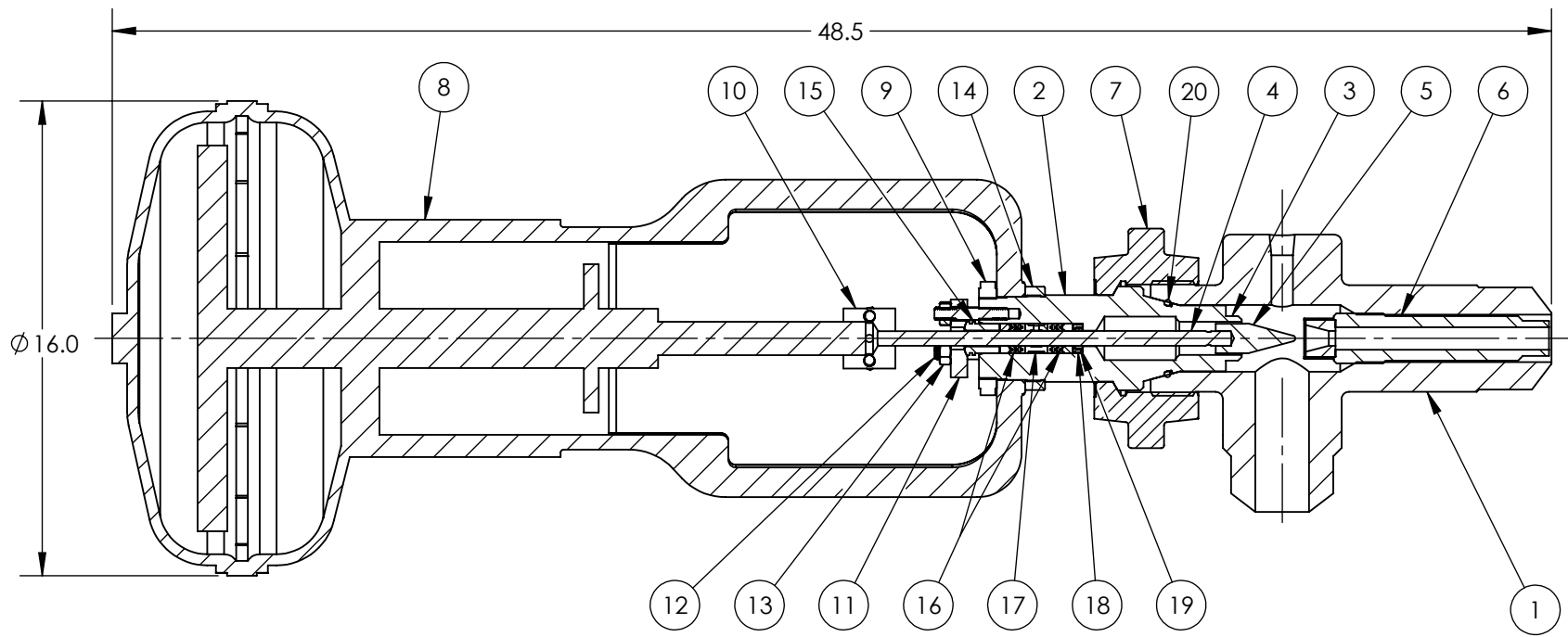
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REVISIONS			
REV	DESCRIPTION	DATE	BY



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PARTS LIST				
ITEM	QTY	PART NAME/DESCRIPTION	MATERIAL	PART NO
1	1	BODY BW	4130 75K	6362
2	1	BONNET	4130 75K	6340
3	1	GUIDE BUSHING	316 SS	6341
4	1	STEM	17-4 PH	6305
5	1	PLUG	TUNSTEN CARBIDE	6305P
6	1	SEAT	17-4 PH/TC	1032
7	1	HAMMER NUT	4130 75K	1072
8	1	ACTUATOR, 667-45	BOM	6342
9	1	ACTUATOR LOCK NUT	ALLOY	2293
10	1	STEM CONNECTOR	1040	6344
11	1	PACKING FLANGE	4130 75K	6345
12	3	STUD 7/16-14 X 2-1/2 LONG	A193 GR. B8 (18-8)	6352
13	3	NUT 7/16-14 HEAVY HEX	A194 GR. 8 (18-8)	6352NT
14	1	ACTUATOR LANDING RING	4130 75K	6346
15	1	PACKING FOLLOWER	316 SS	6347
16	2	PACKING	PTFE 30% GLASS	6348
17	1	LANTERN RING	STAINLESS STEEL	6349
18	1	PACKING BOX RING	316 SS	6350
19	1	LOWER WIPER	PTFE 30% GLASS	6351
20	1	O-RING OR-329	VITON	1205

UNLESS OTHERWISE SPECIFIED:		NAME	DATE
DIMENSIONS ARE IN INCHES	DRAWN	WWW	3-21-2019
TOLERANCES:	CHECKED	TB	3-21-2019
FRACTIONAL ± 1/32	ENG APPR.	TB	3-21-2019
ANGULAR: MACH ± 0.5° BEND ± 1.0°	MFG APPR.	TB	3-21-2019
TWO PLACE DECIMAL ± .010	Q.A.	TB	3-21-2019
THREE PLACE DECIMAL ± .005			
MATERIAL			
BOM			
DO NOT SCALE DRAWING	JOB 630		



**HOUSTON OILFIELD EQUIPMENT, INC.**  
HOUSTON, TEXAS

**TITLE:**  
10M HJWA ADJ. CHOKE  
ASSY W/SIZE 45 TYPE 667  
PNEUMATIC ACTUATOR & 3/4"  
SSTC TRIM SIZE 2" XXH BW ENDS

<b>SIZE</b>	<b>DWG. NO.</b>	<b>REV</b>
<b>A</b>	203104371	0

**WEIGHT:**

2

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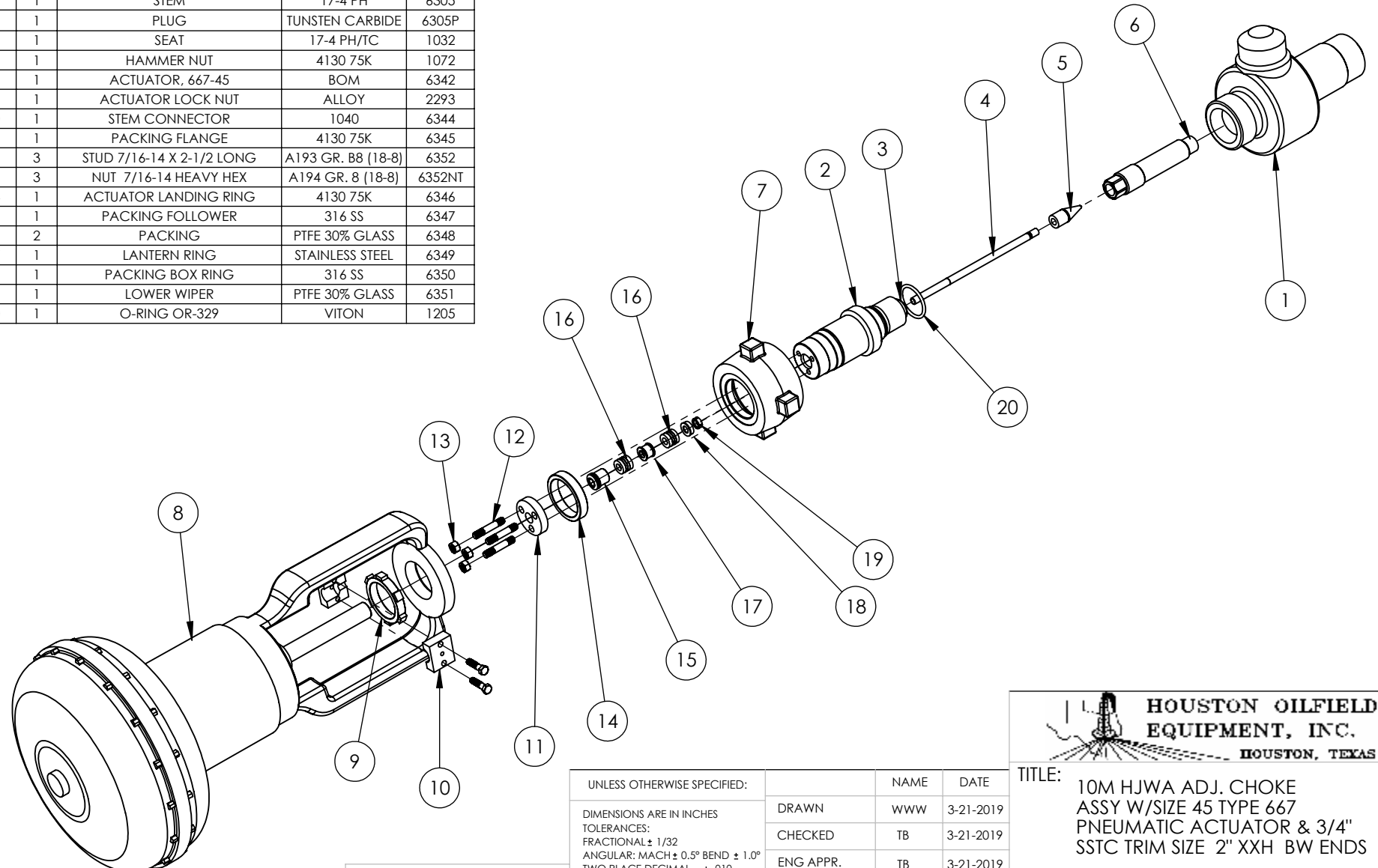
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REVISIONS			
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