



HOUSTON OILFIELD EQUIPMENT

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INSTALLATION AND MAINTENANCE INSTRUCTIONAL

HJWA ADJUSTABLE STEAM CHOKE API 5000 # CWP / ANSI 1500# CWP

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	Drawing PN: 2035055121ANS for Reference Only	

I. OPERATION

Your Choke uses the needle and seat principle to provide fully adjustable flow. Varying the size of the calibrated orifice is achieved by rotating the hand wheel to obtain the desired flow rate, or downstream pressure. The orifice size is read from the indicator which is calibrated in 64ths of an inch and is lined up with a V-notch machined into the top of the bonnet.

II. INSTALLATION

Install your choke in the line with the path of fluid coming in at the inlet connection and making a 90 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 metal seal, and stem. Be sure to lubricate stem threads, seat threads, and the inside diameter of bonnet where stem packing is installed.

IV. DISSASSEMBLY OF ADJUSTABLE CHOKE & BONNET ASSY

1. With choke in the partially open position, bleed all pressure from system.
2. Loosen bonnet nut by striking the lugs with hammer and rotating counterclockwise (Note that bonnet nut is to be removed later in dis- assembly)



Caution: If an excessive amount of pressure escapes between the bonnet and bonnet hammer nut, stop disassembly procedure and ensure that system pressure is off the choke. If necessary bleed any pressure from the flowline which may be present. Do not proceed with disassembly if pressure is present.

3. Remove caps screws from stem clamp assembly #12
4. Disengage the two halves and remove clamp assembly
5. Remove Fisher Lock Nut #7 securing operator yoke to bonnet #5
6. Lift operator yoke assembly w/upper bonnet from lower bonnet #5 and set aside. Loosen set screw on indicator #17
7. Unscrew bonnet hammer nut #3 from body #1
8. Remove lower bonnet assembly and seal ring #6 from body #1

9. Unscrew packing gland #11 from bonnet #5
10. Remove lower stem #9 by grasping lower end of stem and pulling while rotating counterclockwise until stem is free
11. Pull packing set #10 out of lower bonnet
12. Remove seat #2 from body with choke wrench 1-3/8" Hex socket size

Assemble Bonnet Assembly with New Packing

1. Lubricate packing box area and install new packing set #10 with packing box bushing #20 on each end of packing.
2. Lubricate threads on lower stem #9 and gently thread thru packing. Then push stem remaining distance. (Pushing too hard will cause packing to exit other end of bonnet).
3. Install packing gland #11 loosely in order to prevent packing set from exiting end of bonnet.
4. Place metal seal ring #5 on end of bonnet and apply anti seize compound all contact areas and threads.
5. Place metal seal on bonnet end and set bonnet assembly on body. Next install bonnet hammer nut #3 to body and tighten by rotating clockwise striking lugs with hammer.
6. Place upper operator yoke assembly on top of bonnet and secure with hex lock nut #7.

Note: Upper stem will slide over lower stem during this procedure

7. Turn hand wheel clockwise until lower stem contacts seat and then set indicator #17 to close position by aligning "0" with notch in upper bonnet.
8. Install stem clamp assembly and rotate stem to check for fluid movement by opening and closing the choke. Lower stem should move freely in linear motion as upper stem is rotated.
9. Tighten packing gland #11 (Do Not Overtighten).
10. Choke is now ready for service.

Note: New seat may be installed or inspected for wear any time bonnet assembly is pulled from choke. Always lubricate threads of seat and stems with a good quality anti seize compound to reduce friction and galling prior to their assembly.

Packing Adjustment

It is not uncommon for packing in your steam choke to eventually show signs of leakage due to the high operating temperatures and normal wear. Your steam choke features an externally adjustable packing gland that is easy to access. Should leakage occur simply adjust the packing gland #11 by turning it clockwise until the leakage stops.

V. RECOMMENDED SPARE PARTS FOR TWO YEAR SERVICE

Part No.	Description	Quantity
2401	Graphoil Packing Set w/ Packing Box Bushings	1 Set
1553	Seat	1
TBA	Lower Stem	1
2405	Upper Stem	1
2398	Bonnet Seal Ring	1
1529	Thumb Screw	1
1004S	Stem Lock Plug	1
6115	Indicator	1
1023	Washer	1
1024	Hex Nut	1
2431	Retaining Ring	1

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

VI. DISCLAIMER

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