

Disassembly

1. Bleed off any pressure from the choke assembly.
2. Loosen the thumbscrew (9) and turn the handwheel (3) counter-clockwise to disengage the tip of the stem (17) from the seat (20).
3. Loosen the wingnut (8) and disconnect the bonnet assembly (18) from the choke tee assembly (19).
4. Remove the seat (20) from the choke tee assembly (19) using an appropriate choke wrench for the seat type.
5. Remove the handwheel (3) by removing the hex nut (1) and flat washer (2).
6. Loosen the setscrew in the indicator (4) and slide the indicator off the stem (17).
7. Remove the stem (17) by grasping it by the carbide-tipped end and rotating counter-clockwise until the threads disengage.
8. Using snap-ring pliers, remove the snap-ring (16). Then remove the packing retainer (15), packing (14), and stem guide (13).
9. **As needed:** The thread bushing (7) may be removed for inspection or replacement by removing the two socket-head stay bolts (5) and the bonnet extension (6). Unscrew the thread bushing (7) counter-clockwise.
10. **As needed:** Remove the thumbscrew (9) so that the wingnut (8) may be removed if necessary.
11. Degrease and clean all parts.

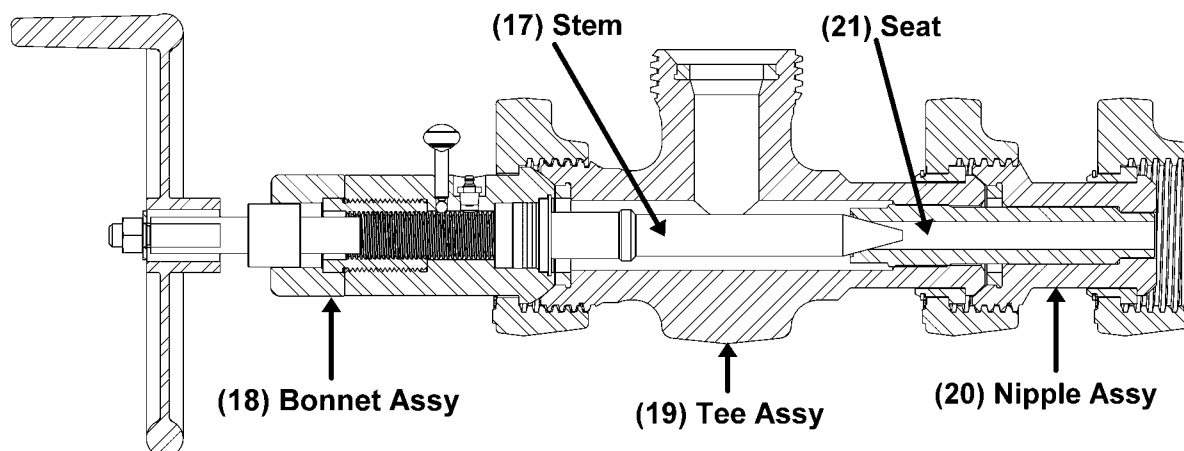
Inspection and Repair

1. After degreasing the parts, visually inspect for wear, corrosion, or any other physical damage.
2. Inspect the threads, packing area, shaft and carbide tip of the stem (17) and replace as necessary. The cone of the carbide tip should be smooth and without grooves or cracks.
3. Inspect the threads and the carbide liner of the seat (20) and replace as necessary. The entry bevel of the carbide liner should be smooth and without grooves or cracks. Look down the orifice for washouts in the mid-section of the liner.
4. Inspect the packing gland of the bonnet (12). Damage to the seal surfaces or excessive pitting are cause for replacement.
5. Inspect the packing retainer (15) and stem guide (13) for damage.
6. Always discard the packing (14) when removed from the bonnet.
7. Replace the wingnut if the lugs are excessively mushroomed.

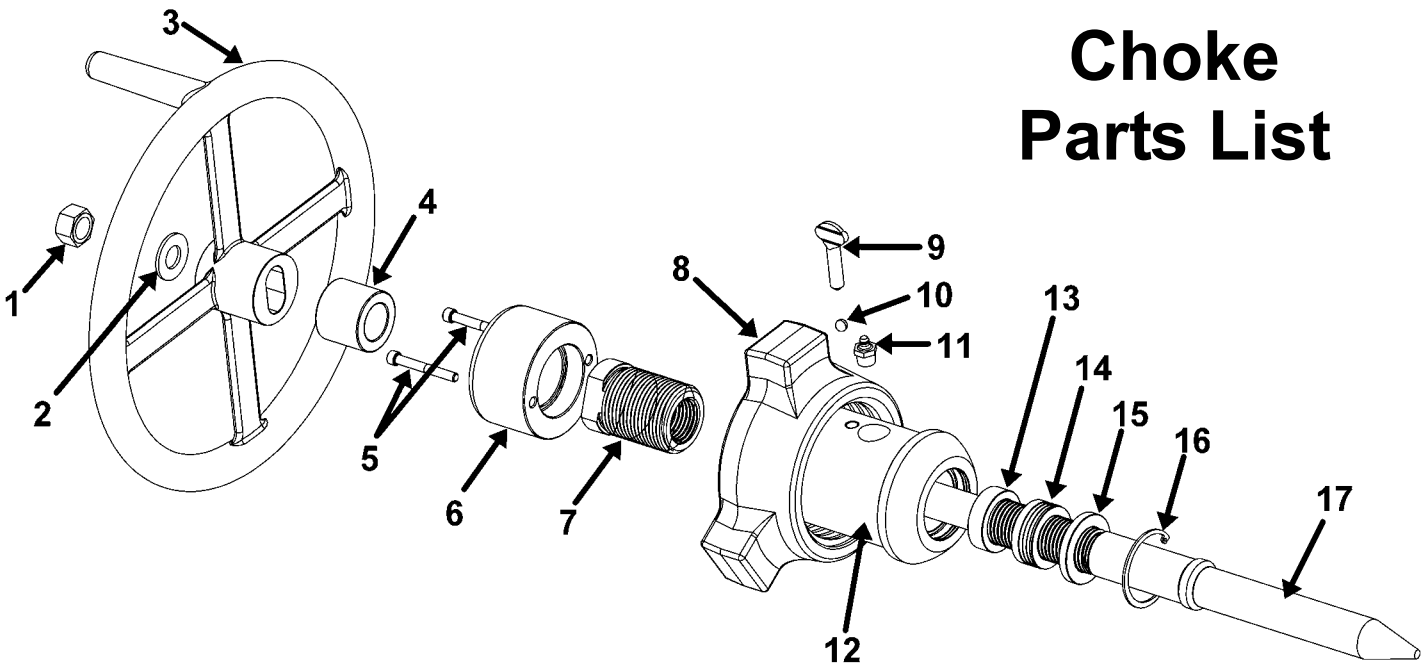
Assembly

Note - Always use high quality graphite grease or anti-seize during assembly. Lubricate all parts thoroughly, especially threads.

1. **If previously removed:** Screw the thread bushing (7) clock-wise into the bonnet (12) and snug it up with a wrench. Attach the bonnet extension (6) using the two socket-head stay bolts (5).
2. **If previously removed:** Slide the wingnut (8) onto the bonnet body, insert the brass ball (10) and re-attached the thumbscrew (9).
3. Apply anti-seize in the packing gland of the bonnet (12) and install the following in order:
 - a. Stem guide (13)
 - b. Packing set (14). The "V" of the chevron segments should face outward.
 - c. Packing retainer (15)
 - d. Snap ring (16). Use snap-ring pliers to install.
 - e. Apply anti-seize to the inside of the packing (14)
4. Apply anti-seize to the threads and sealing area of the stem (17). Insert the end of the stem, opposite the carbide, into the packing and carefully push straight in until the threads of the stem meet and engage the threads of the bonnet. Turn the stem clockwise until the raised ring below the sealing area of the stem bumps against the packing retainer (15).
5. Slide the choke indicator (4) onto the stem with the "zero" end away from the bonnet (12) and do not tighten yet.
6. Attach the handwheel (3), washer (2), and hex nut (1) onto the stem.
7. Mount the bonnet assembly to the choke tee assembly with a good choke seat and make up the union properly. Crank the handwheel clockwise to the full closed position, until the stem bottoms out firmly into the choke seat.
8. Line up the "zero" calibration of the indicator (4) with the indicator groove on the end of the bonnet extension (6) and tighten the socket setscrew. *Note-This step is required whenever the bonnet assembly (18) has been disengaged from the tee assembly (19).*
9. Grease the bonnet using the grease fitting (11) on the side of the bonnet (12).
10. Back the stem off the choke seat and tighten the thumbscrew (9) for transport.



Choke Parts List



NO	DESCRIPTION	QTY	Standard Svc			H2S (Sour) Svc		
			2"1502	WS20	3"1502	2"1502	WS20	3"1502
1	HEX NUT	1	HC0012	HC0012	HC0012	HC0012	HC0012	HC0012
2	FLAT WASHER	1	HC0014	HC0014	HC0014	HC0014	HC0014	HC0014
3	HAND WHEEL	1	CC0014	CC0014	CC0008	CC0014	CC0014	CC0008
4	INDICATOR (3/4"MAX) (2"MAX)	1	CC0013	CC0013	CC0034	CC0013	CC0013	CC0034
5	SOCKET HEAD STAY BOLTS	2	HC0176	HC0176	HC0203	HC0176	HC0176	HC0203
6	BONNET EXTENSION	1	CC0278	CC0278	CC0286	CC0278	CC0278	CC0286
7	BONNET THREAD BUSHING	1	CC0281	CC0281	CC0285	CC0281	CC0281	CC0285
8	WINGNUT OR NUT MEMBER	1	UC0002	UC0118	UC0009	UC0131	UC0118	UC0005
9	THUMB SCREW	1	HC0013	HC0013	HC0013	HC0013	HC0013	HC0013
10	STEM STAY BALL	1	HC0177	HC0177	HC0177	HC0177	HC0177	HC0177
11	GREASE FITTING	1	HC0199	HC0199	HC0199	HC0199	HC0199	HC0199
12	BONNET	1	CC0016	CC0063	CC0284	CC0016	CC0063	CC0006
13	STEM GUIDE	1	CC0029	CC0029	N/A	CC0029	CC0029	N/A
14	PACKING	1	CC0028	CC0028	CC0027	CC0028	CC0028	CC0027
15	PACKING RETAINER	1	CC0030	CC0030	N/A	CC0030	CC0030	N/A
16	SNAP RING	1	CC0044	CC0065	N/A	CC0044	CC0065	N/A
17	STEM	1	CC0022	CC0022	CC0059	CC0022	CC0022	CC0059
18	CHOKE BONNET ASSY	1	CA0176	CA0174	CA0180	CA0040	CA0058	CA0065
19	CHOKE TEE ASSY	1	CA0014	CC0191	CA0131	CA0015	CC0184	CA0190
20	CHOKE NIPPLE ASSY	1	CA0009	CA0137	N/A	CA0012	CA0123	N/A
21	SEAT	1	CC0037	CC0037	CC0007	CC0037	CC0037	CC0007
	POSITIVE CHK CAP (NOT SHOWN)	1	UA0234	UA0258	UA0257	UA0251	UA0258	UA0257
	BONNET O-RING	1	N/A	N/A	OC0023	N/A	N/A	OC0023
	PAR-BACK	1	N/A	N/A	OC0024	N/A	N/A	OC0024



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