



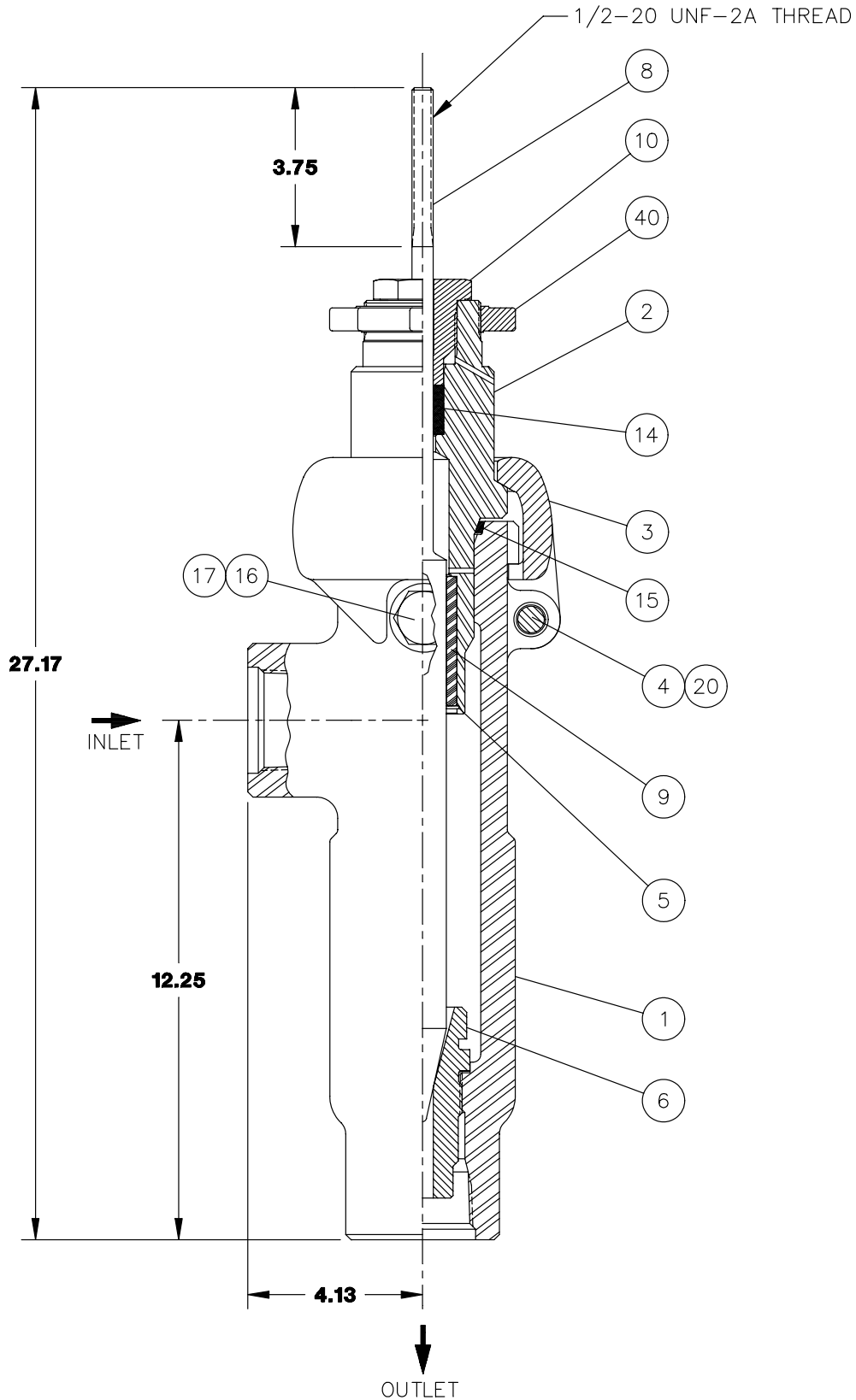
SUBMITTAL DATA SHEETS
THORNHILL-CRAVER CHOKES

T-1
07-16-99

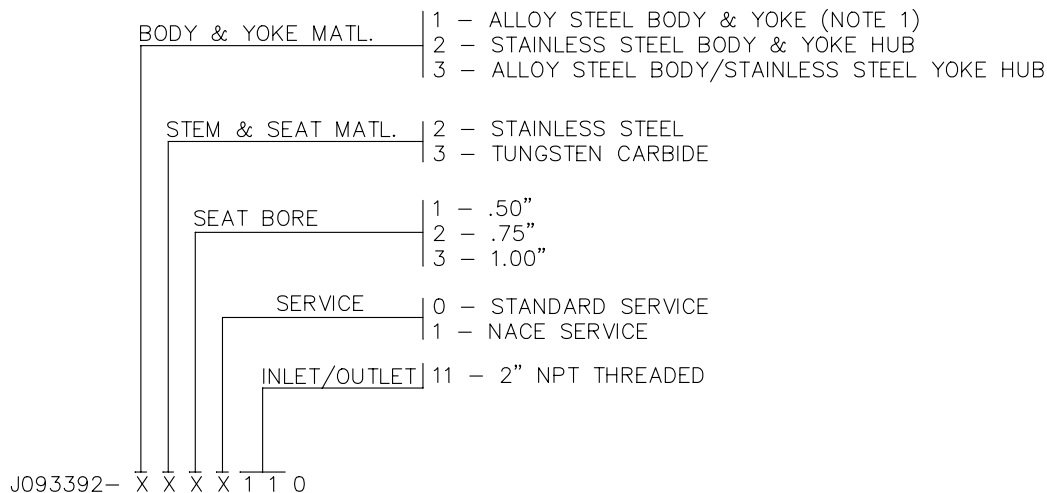
ADJUSTABLE HEATER CHOKES f/FISHER ACTUATOR

2" 6500 UNIBOLT CHOKE - 2" NPT INLET & OUTLET.....	T-151	07-16-99
- UNIBOLT INLET & OUTLET	T-152	07-16-99
2" 10M UNIBOLT CHOKE - UNIBOLT INLET & OUTLET	T-153	07-16-99
2" 15M UNIBOLT CHOKE - API FLANGED INLET & UNIBOLT OUTLET.....	T-154	07-16-99
- UNIBOLT INLET & OUTLET	T-155	07-16-99

**THORNHILL CRAVER
2" UNIBOLT ADJUSTABLE
HEATER CHOKE WITH TAPER TYPE SEAL
FOR FISHER SIZE 45 DIAPHRAGM ACTUATOR
2" NPT INLET & OUTLET
6500 CWP MAX.**



ASSEMBLY PART NUMBER



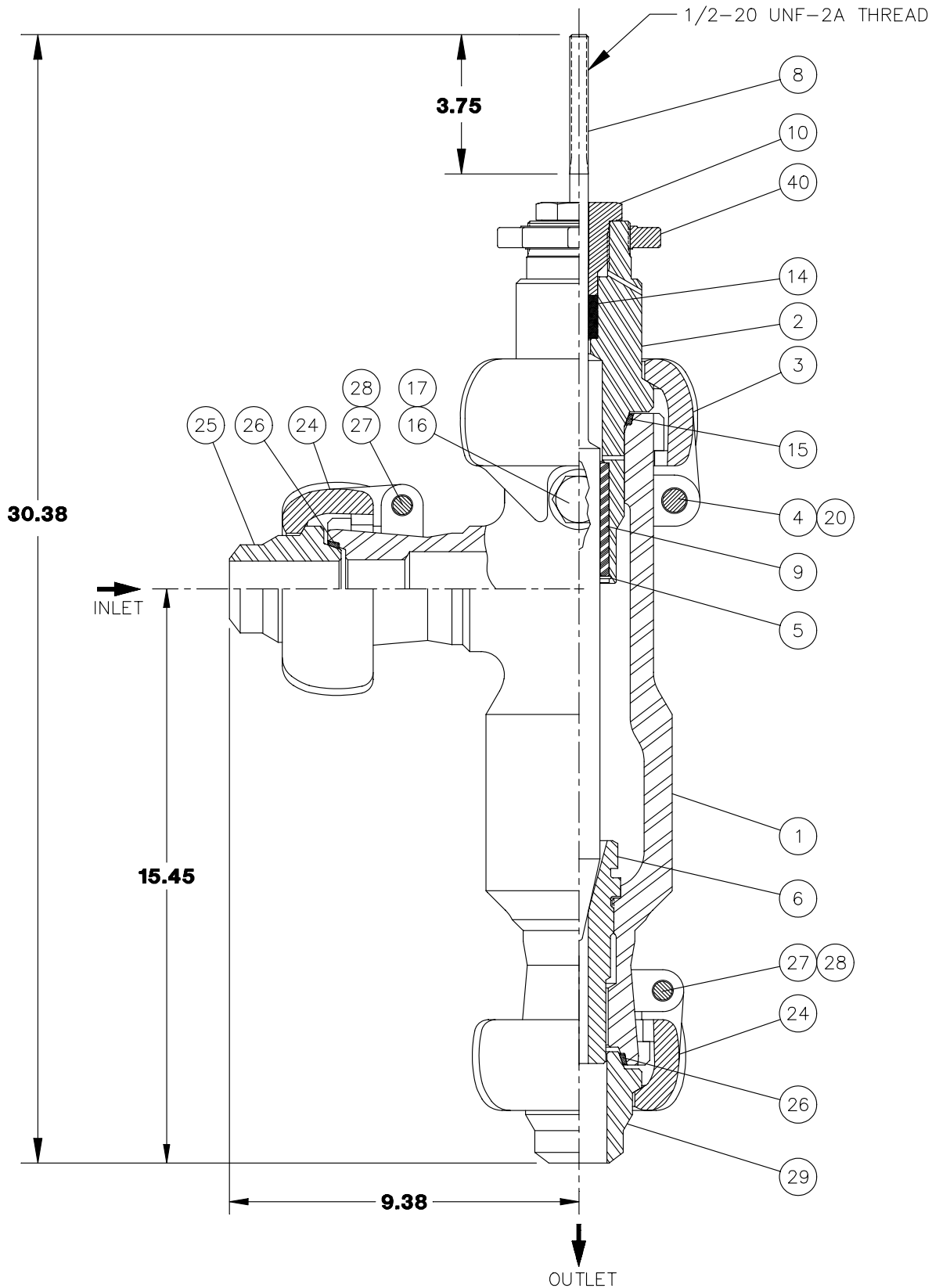
PARTS LIST

INDEX	REQD	DESCRIPTION	PART NO.	MATERIAL
		ASSEMBLY BASE NUMBER	J093392	
1	1	BODY - 2" NPT THREADED	J090184-X0X	-001 ALLOY STEEL (STANDARD SERVICE) -101 ALLOY STEEL (NACE SERVICE) -002 STAINLESS STEEL (STANDARD SERVICE) -102 STAINLESS STEEL (NACE SERVICE)
2	1	YOKE HUB	J092097-X0X	-001 ALLOY STEEL (STANDARD SERVICE) -101 ALLOY STEEL (NACE SERVICE) -002 STAINLESS STEEL (STANDARD SERVICE) -102 STAINLESS STEEL (NACE SERVICE)
3	1	NUT MEMBER	2139268-01	ALLOY STEEL
4	1	T-HEAD BOLT	J090064-32068	STEEL
5	1	RETAINER RING	J090066-162	STAINLESS STEEL
6	1	SEAT - .50" BORE	J090010-002	STAINLESS STEEL
		- .75" BORE	J090011-002	
		- 1.00" BORE	J090012-002	
		SEAT - .50" BORE	J090013	TUNGSTEN CARBIDE (SEE NOTE 2.)
		- .75" BORE	J090014	
		- 1.00" BORE	J090015	
8	1	STEM	J090881-002	STAINLESS STEEL
			J090882	TUNGSTEN CARBIDE (SEE NOTE 2.)
9	1	STEM BEARING	J090912-002	FIBER FILLED RYTON
10	1	PACKING GLAND	J090940	STAINLESS STEEL
14	1	PACKING SET	J090904	COTTON/NYLON/TFE IMPREGNATED
15	1	SEAL RING	J090168-00X	-001 BRONZE, -002 STAINLESS STEEL
16	1	BLEEDER PLUG - STD. - NACE	J090017	STAINLESS STEEL
			J090764	STAINLESS STEEL
17	1	GASKET - BLEEDER PLUG	J090018	MONEL
20	1	NUT - T-HEAD BOLT	2709000-07-01	STEEL
40	1	RETAINER NUT - FISHER ACTUATOR	J092534	STEEL

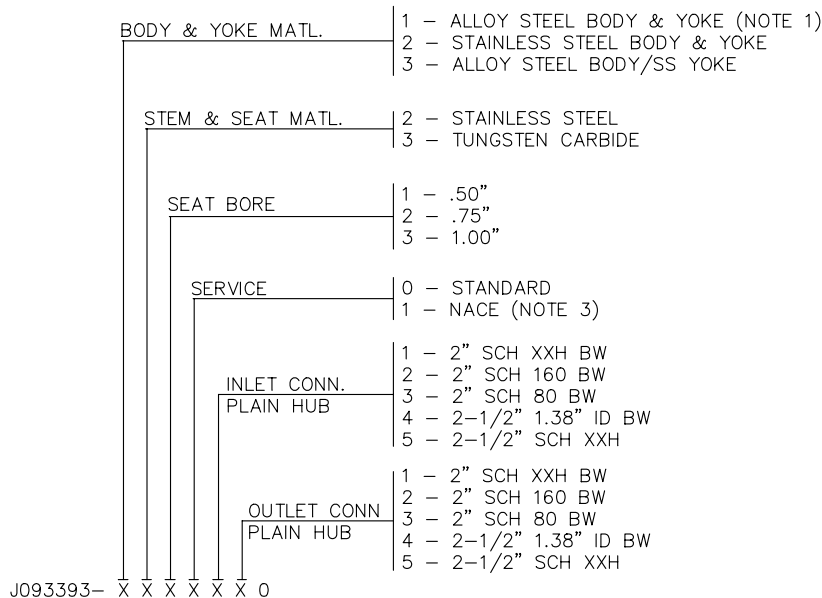
NOTE:

1. Stainless Steel Yoke Hub recommended with Stainless Steel Stem & Seat (Body & Yoke Hub - Option 3).
2. Tungsten Carbide Stem & Seat required for NACE Service.

**THORNHILL CRAVER
2" UNIBOLT ADJUSTABLE
HEATER CHOKE WITH TAPER TYPE SEAL
FOR FISHER SIZE 45 DIAPHRAGM ACTUATOR
UNIBOLT INLET & OUTLET
6500 CWP MAX.**



ASSEMBLY PART NUMBER



PARTS LIST

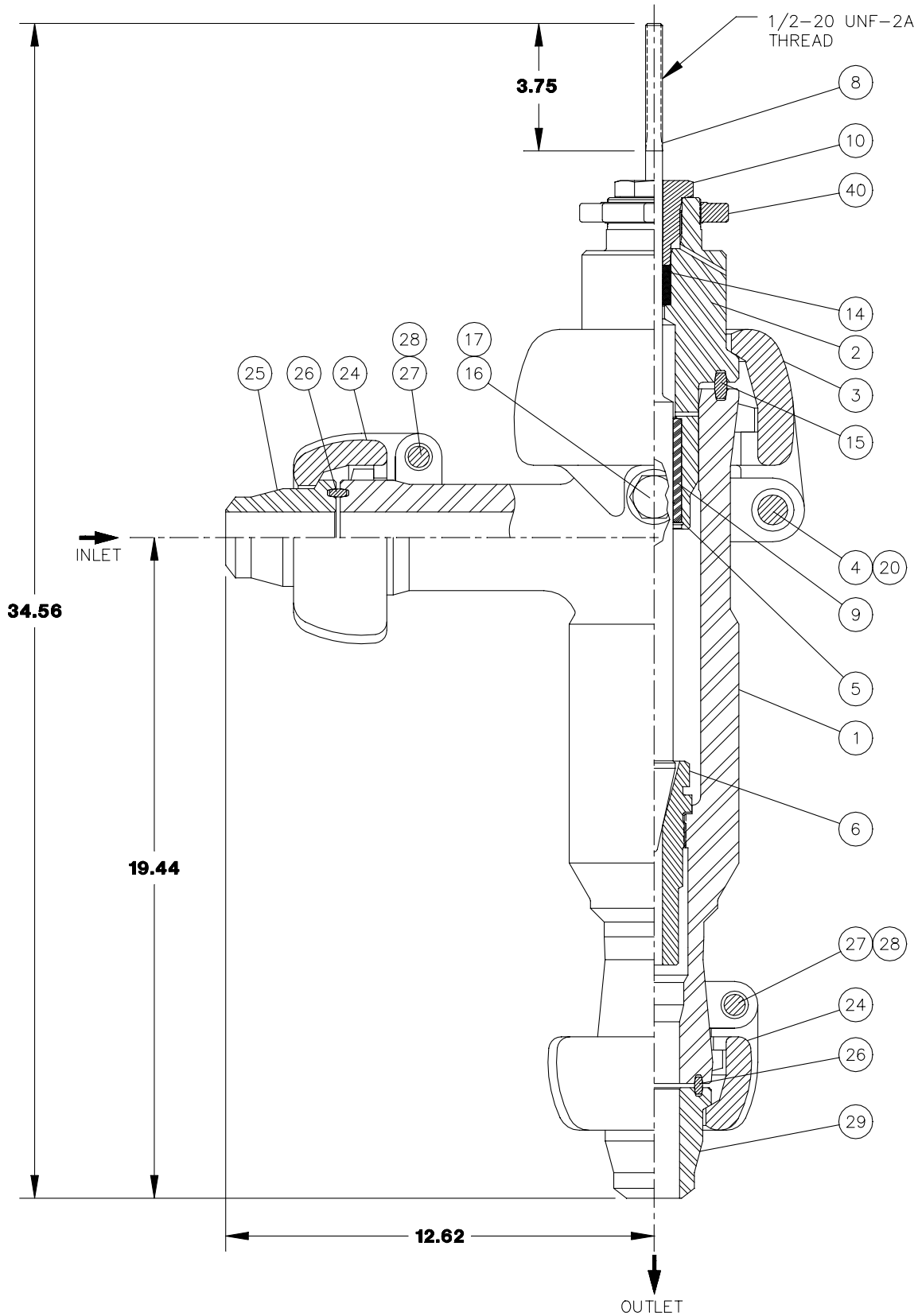
INDEX	REQD	DESCRIPTION	PART NO.	MATERIAL
		ASSEMBLY BASE NUMBER	J093393	
1	1	BODY	J090359-X0X	-001 ALLOY STEEL (STANDARD SERVICE) -101 ALLOY STEEL (NACE SERVICE) -002 STAINLESS STEEL (STANDARD SERVICE) -102 STAINLESS STEEL (NACE SERVICE)
2	1	YOKE HUB	J092097-X0X	-001 ALLOY STEEL (STANDARD SERVICE) -101 ALLOY STEEL (NACE SERVICE) -002 STAINLESS STEEL (STANDARD SERVICE) -102 STAINLESS STEEL (NACE SERVICE)
3	1	NUT MEMBER	2139268-01	ALLOY STEEL
4	1	T-HEAD BOLT	J090064-32068	STEEL
5	1	RETAINER RING	J090066-162	STAINLESS STEEL
6	1	SEAT - .50" BORE	J090137-002	STAINLESS STEEL
		- .75" BORE	J090138-002	
		- 1.00" BORE	J090139-002	
		SEAT - .50" BORE	J090143	TUNGSTEN CARBIDE (SEE NOTE 3.)
		- .75" BORE	J090144	
		- 1.00" BORE	J090145	
8	1	STEM	J090881-002	STAINLESS STEEL
			J090882	TUNGSTEN CARBIDE (SEE NOTE 3.)
9	1	STEM BEARING	J090912-002	FIBER FILLED RYTON
10	1	PACKING GLAND	J090940	STAINLESS STEEL
14	1	PACKING SET	J090904	COTTON/NYLON/TFE IMPREGNATED
15	1	SEAL RING	J090168-00X	-001 BRONZE, -002 STAINLESS STEEL
16	1	BLEEDER PLUG - STD.	J090017	STAINLESS STEEL
		- NACE	J090764	
17	1	GASKET - BLEEDER PLUG	J090018	MONEL
20	1	NUT - T-HEAD BOLT	2709000-07-01	STEEL
24	2	NUT MEMBER - INLET/OUTLET	2139269-01	STEEL
25	1	PLAIN HUB - INLET - 2" SCH XXH BW	J090363	STEEL
		- 2" SCH 160 BW	J090364	
		- 2" SCH 80 BW	J090365	
		- 2-1/2" 1.38 ID BW	J090847-001	
		- 2-1/2" SCH XXH BW	J090846-001	
26	2	SEAL RING - INLET/OUTLET	J090167-00X	-001 BRONZE, -002 STAINLESS STEEL
27	2	T-HEAD BOLT - INLET/OUTLET	J090064-28060	STEEL
28	2	NUT - INLET/OUTLET	2709000-05-01	STEEL
29	1	PLAIN HUB - OUTLET - 2" SCH XXH BW	J090363	STEEL
		- 2" SCH 160 BW	J090364	
		- 2" SCH 80 BW	J090365	
		- 2-1/2" 1.38 ID BW	J090847-001	
		- 2-1/2" SCH XXH BW	J090846-001	
40	1	RETIANER NUT - FISHER ACTUATOR	J092534	STEEL

NOTE:

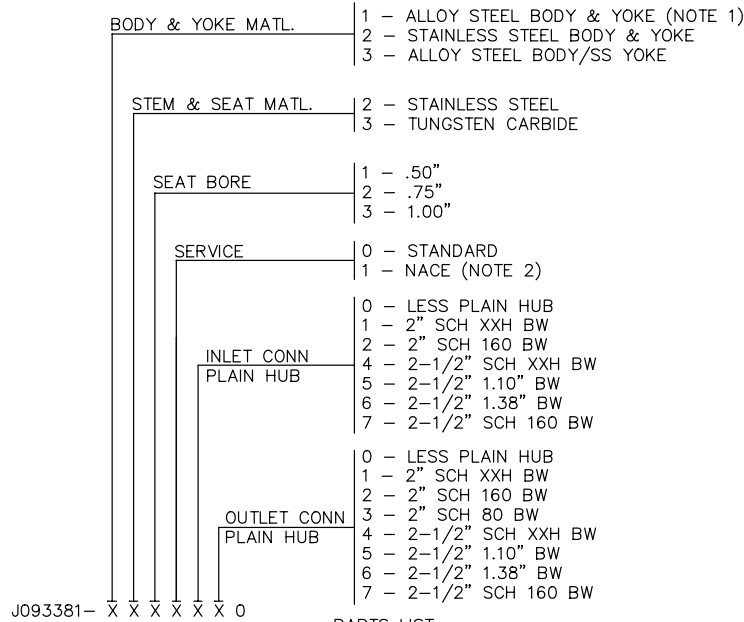
1. Stainless Steel Yoke Hub recommended with Stainless Steel Stem & Seat (Body & Yoke Hub - Option 3).
2. Tungsten Carbide Stem & Seat required for NACE Service.

**THORNHILL CRAVER
2" UNIBOLT ADJUSTABLE
HEATER CHOKE**

**FOR FISHER SIZE 45 DIAPHRAGM ACTUATOR
UNIBOLT INLET & OUTLET
10,000 CWP MAX.**



ASSEMBLY PART NUMBER



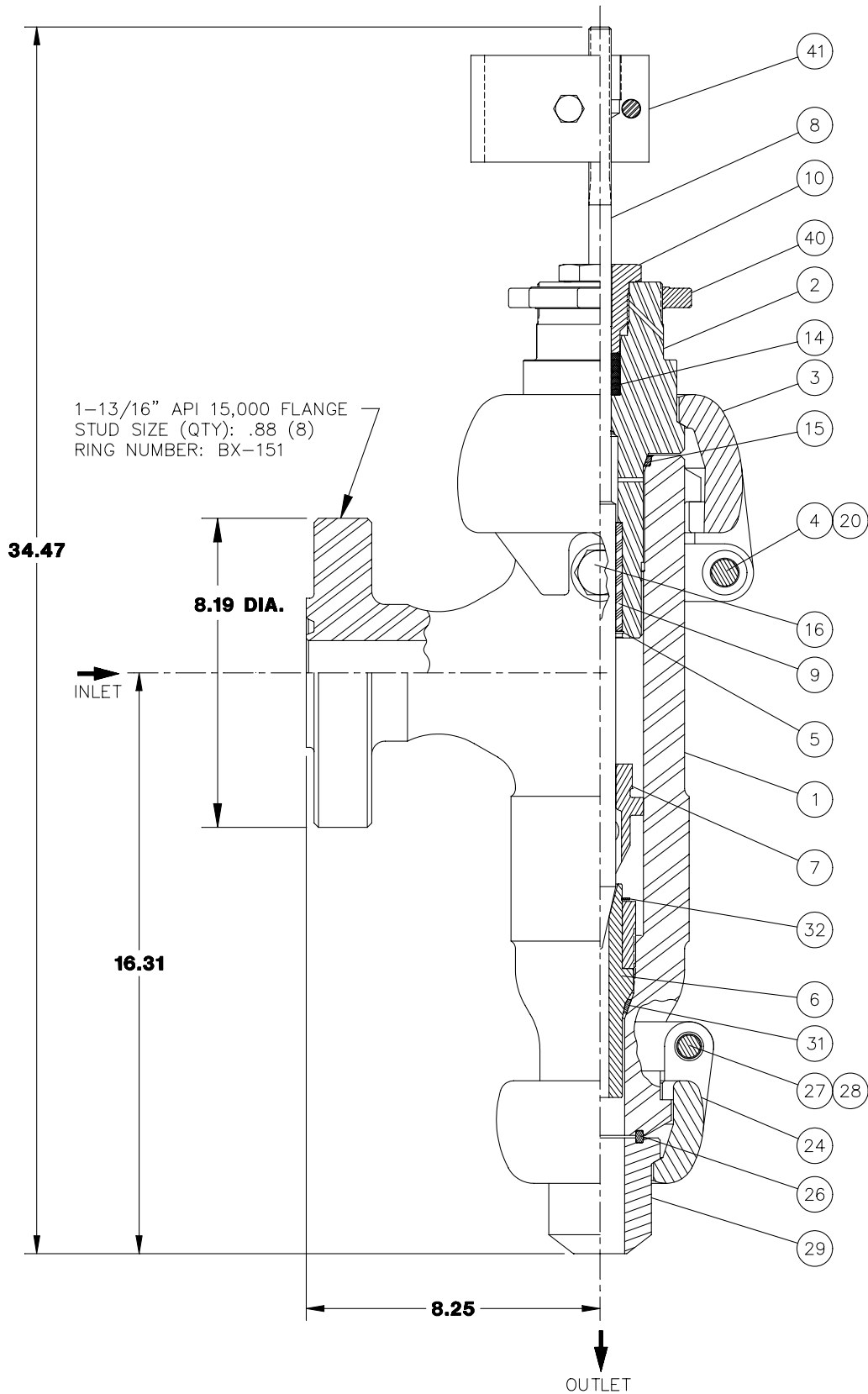
PARTS LIST

INDEX	REQD	DESCRIPTION	PART NO.	MATERIAL
		ASSEMBLY BASE NUMBER	J093381	
1	1	BODY	J090114-X0X	-001 ALLOY STEEL (STANDARD SERVICE) -101 ALLOY STEEL (NACE SERVICE) -002 STAINLESS STEEL (STANDARD SERVICE) -102 STAINLESS STEEL (NACE SERVICE)
2	1	YOKE HUB	J092088-X0X	-001 ALLOY STEEL (STANDARD SERVICE) -101 ALLOY STEEL (NACE SERVICE) -002 STAINLESS STEEL (STANDARD SERVICE) -102 STAINLESS STEEL (NACE SERVICE)
3	1	NUT MEMBER	J090125	ALLOY STEEL
4	1	T-HEAD BOLT	J090064-36096	STEEL
5	1	RETAINER RING	J090066-162	STAINLESS STEEL
6	1	SEAT - .50" BORE	J090137-002	STAINLESS STEEL
		- .75" BORE	J090138-002	
		- 1.00" BORE	J090139-002	
		SEAT - .50" BORE	J090143	TUNGSTEN CARBIDE (SEE NOTE 2.)
		- .75" BORE	J090144	
		- 1.00" BORE	J090145	
8	1	STEM	J090881-002	STAINLESS STEEL
			J090882	TUNGSTEN CARBIDE (SEE NOTE 2.)
9	1	STEM BEARING	J090912-002	FIBER FILLED RYTON
10	1	PACKING GLAND	J090940	STAINLESS STEEL
14	1	PACKING SET	J090904	COTTON/NYLON/TFE IMPREGNATED
15	1	SEAL RING	J090131-00X	-001 BRONZE, -002 STAINLESS STEEL
16	1	BLEEDER PLUG - STD.	J090017	STAINLESS STEEL
		- NACE	J090764	STAINLESS STEEL
17	1	GASKET - BLEEDER PLUG	J090018	MONEL
20	1	NUT - T-HEAD BOLT	2709000-09-01	STEEL
24	2	NUT MEMBER - INLET/OUTLET	J090123	ALLOY STEEL
25	1	PLAIN HUB - INLET - 2" SCH XXH BW	J090149-001	STEEL
		- 2" SCH 160 BW	J090150-001	
		- 2-1/2" SCH XXH BW	J090152-001	
		- 2-1/2" 1.10" BW	J090153-001	
		- 2-1/2" 1.38" BW	J090154-001	
		- 2-1/2" SCH 160 BW	J090155-001	
26	2	SEAL RING - INLET/OUTLET	J090129-00X	-001 BRONZE, -002 STAINLESS STEEL
27	2	T-HEAD BOLT - INLET/OUTLET	J090064-32068	STEEL
28	2	NUT	2709000-07-01	STEEL
29	1	PLAIN HUB - OUTLET - 2" SCH XXH BW	J090149-001	STEEL
		- 2" SCH 160 BW	J090150-001	
		- 2" SCH 80 BW	J090151-001	
		- 2-1/2" SCH 160 BW	J090152-001	
		- 2-1/2" 1.10" BW	J090153-001	
		- 2-1/2" 1.38" BW	J090154-001	
		- 2-1/2" SCH 160 BW	J090155-001	
40	1	RETAINER NUT - FISHER ACTUATOR	J092534	STEEL

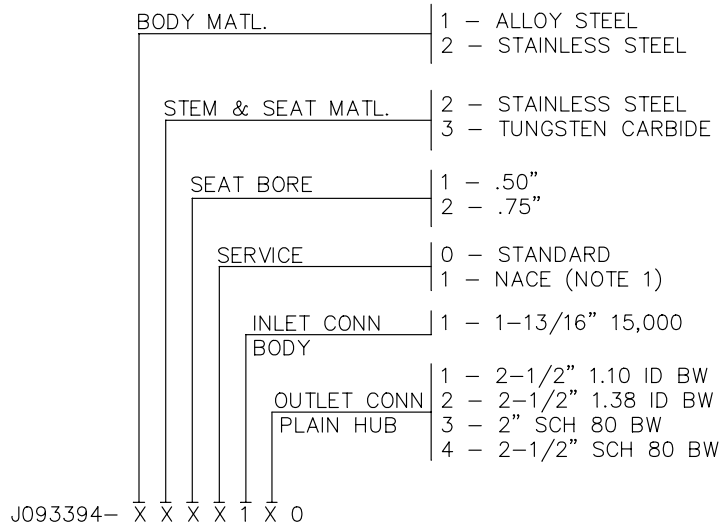
NOTE:

1. Stainless Steel Yoke Hub recommended with Stainless Steel Stem & Seat (Body & Yoke Hub - Option 3).
2. Tungsten Carbide Stem & Seat required for NACE Service.

**THORNHILL CRAVER
2" UNIBOLT ADJUSTABLE
HEATER CHOKE WITH TAPER TYPE SEAL
FOR FISHER SIZE 70 DIAPHRAGM ACTUATOR
15,000 API FLANGED INLET & UNIBOLT OUTLET**



ASSEMBLY PART NUMBER



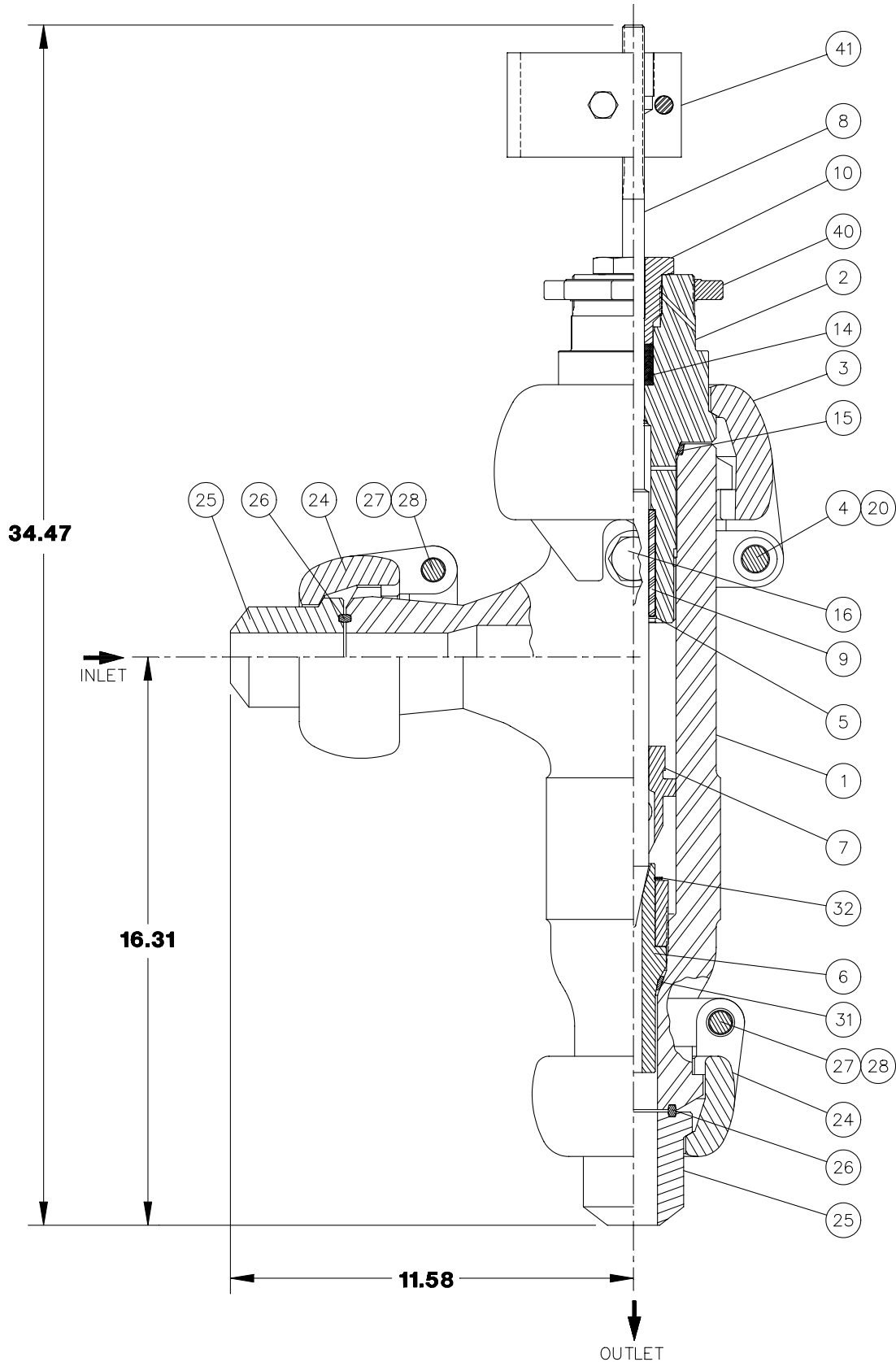
PARTS LIST

INDEX	REQD	DESCRIPTION	PART NO.	MATERIAL
		ASSEMBLY BASE NUMBER	J093394	
1	1	BODY - 1-13/16" 15,000	J090338-X0X	-001 ALLOY STEEL (STANDARD SERVICE) -101 ALLOY STEEL (NACE SERVICE) -002 STAINLESS STEEL (STANDARD SERVICE) -102 STAINLESS STEEL (NACE SERVICE)
2	1	YOKE HUB	J090872-002	STAINLESS STEEL
3	1	NUT MEMBER	J090275	ALLOY STEEL
4	1	T-HEAD BOLT	J090064-34092	STEEL
5	1	RETAINER RING	J090066-137	STAINLESS STEEL
6	1	SEAT - .50" BORE	J090346-002	STAINLESS STEEL
		- .75" BORE	J090347-002	
		SEAT - .50" BORE	J090348	TUNGSTEN CARBIDE (SEE NOTE 1.)
		- .75" BORE	J090349	
7	1	SEAT RETAINER NUT	J090353	STAINLESS STEEL
8	1	STEM	J090883-002	STAINLESS STEEL
			J090884	TUNGSTEN CARBIDE (SEE NOTE 1.)
9	1	STEM BEARING	J090911-002	FIBER FILLED RYTON
10	1	PACKING GLAND	J090941	STAINLESS STEEL
14	1	PACKING SET	J090905	COTTON/NYLON/TFE IMPREGNATED
15	1	SEAL RING	J090168-002	STAINLESS STEEL
16	1	BLEEDER PLUG w/GASKET	J090294	STAINLESS STEEL/MONEL
20	1	NUT - T-HEAD BOLT	2709000-08-01	STEEL
24	1	NUT MEMBER - OUTLET	J090340	ALLOY STEEL
26	1	SEAL RING - OUTLET	J090356-002	STAINLESS STEEL
27	1	T-HEAD BOLT - OUTLET	J090064-32060	STEEL
28	1	NUT - OUTLET	2709000-07-01	STEEL
29	1	PLAIN HUB - 2-1/2" 1.10 ID BW	J090345	STEEL
		- 2-1/2" 1.38 ID BW	J090342	
		- 2" SCH 80 BW	J090343	
		- 2-1/2" SCH 80 BW	J090344	
31	1	SEAL RING - SEAT	J090352-002	STAINLESS STEEL
32	1	RETAINER RING - SEAT	J090336-125	STAINLESS STEEL
40	1	RETAINER NUT - FISHER ACTUATOR	J092538	STEEL
41	1	STEM ADAPTER - FISHER ACTUATOR	J092519	STEEL

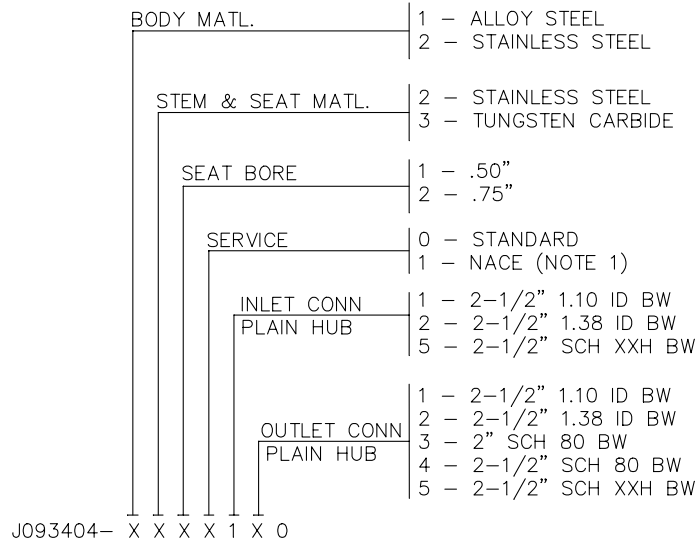
NOTE:

1. Tungsten Carbide Stem & Seat required for NACE Service.

**THORNHILL CRAVER
2" UNIBOLT ADJUSTABLE
HEATER CHOKE WITH TAPER TYPE SEAL
FOR FISHER SIZE 70 DIAPHRAGM ACTUATOR
UNIBOLT INLET & OUTLET
15,000 CWP MAX.**



ASSEMBLY PART NUMBER



PARTS LIST

INDEX	REQD	DESCRIPTION	PART NO.	MATERIAL
		ASSEMBLY BASE NUMBER	J093404	
1	1	BODY - UNIBOLT INLET/OUTLET	J090779-X0X	-001 ALLOY STEEL (STANDARD SERVICE) -101 ALLOY STEEL (NACE SERVICE) -002 STAINLESS STEEL (STANDARD SERVICE) -102 STAINLESS STEEL (NACE SERVICE)
2	1	YOKE HUB	J090872-002	STAINLESS STEEL
3	1	NUT MEMBER	J090275	ALLOY STEEL
4	1	T-HEAD BOLT	J090064-34092	STEEL
5	1	RETAINER RING	J090066-125	STAINLESS STEEL
6	1	SEAT - .50" BORE	J090346-002	STAINLESS STEEL
		- .75" BORE	J090347-002	
		SEAT - .50" BORE	J090348	TUNGSTEN CARBIDE (SEE NOTE 1.)
		- .75" BORE	J090349	
7	1	SEAT RETAINER NUT	J090353	STAINLESS STEEL
8	1	STEM	J090883-002	STAINLESS STEEL
			J090884	TUNGSTEN CARBIDE (SEE NOTE 1.)
9	1	STEM BEARING	J090911-002	FIBER FILLED RYTON
10	1	PACKING GLAND	J090941	STAINLESS STEEL
14	1	PACKING SET	J090905	COTTON/NYLON/TFE IMPREGNATED
15	1	SEAL RING	J090168-002	STAINLESS STEEL
16	1	BLEEDER PLUG w/GASKET	J090294	STAINLESS STEEL/MONEL
20	1	NUT - T-HEAD BOLT	2709000-08-01	STEEL
24	2	NUT MEMBER - INLET/OUTLET	J090340	ALLOY STEEL
25	1	PLAIN HUB - INLET - 2-1/2" 1.10 ID BW - 2-1/2" 1.38 ID BW - 2-1/2" SCH XXH BW	J090345	STEEL
			J090342	
			J093401	
26	2	SEAL RING - INLET/OUTLET	J090356-002	STAINLESS STEEL
27	2	T-HEAD BOLT - INLET/OUTLET	J090064-32060	STEEL
28	2	NUT - INLET/OUTLET	2709000-07-01	STEEL
29	1	PLAIN HUB - OUTLET - 2-1/2" 1.10 ID BW - 2-1/2" 1.38 ID BW - 2" SCH 80 BW - 2-1/2" SCH 80 BW - 2-1/2" SCH XXH BW	J090345	STEEL
			J090342	
			J090343	
			J090344	
			J093401	
31	1	SEAL RING - SEAT	J090352-002	STAINLESS STEEL
32	1	RETAINER RING - SEAT	J090336-125	STAINLESS STEEL
40	1	RETAINER NUT - FISHER ACTUATOR	J092538	STEEL
41	1	STEM ADAPTER - FISHER ACTUATOR	J092519	STEEL

NOTE:

1. Tungsten Carbide Stem & Seat required for NACE Service.