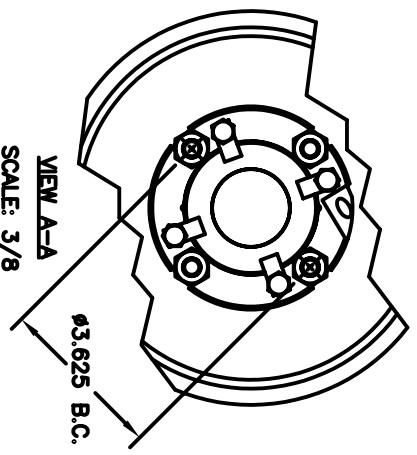
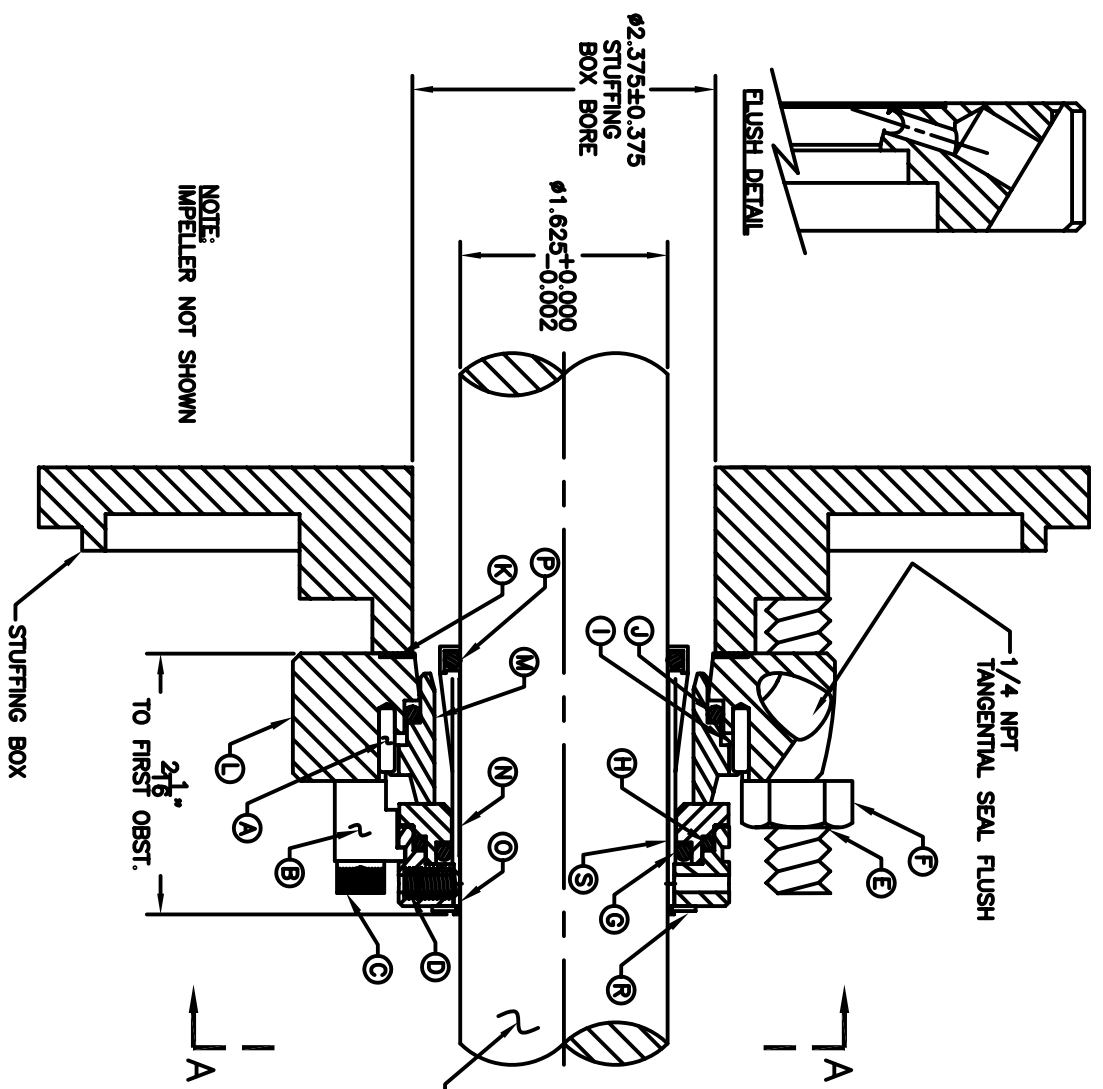
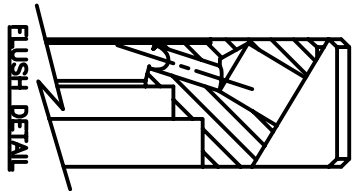


SEAL SIZE -- 1 5/8

TYPE -- ZNS

BILL OF MATERIAL

NO	QTY	DESCRIPTION	LENGTH	MATERIAL	DRAWING #	SHEET #
ASSY	1	ZN CARTRIDGE SEAL ASSEMBLY	---	---	ZNS1625R1	1
A	2	DOWEL PIN 1/8 X 1/2	1/2	---	---	1
B	4	ZN CLIP	---	BRASS	ZNCLP4	1
C	4	SHCS 1/4--20 UNC	1	316 S.S.	---	1
D	4	SETSCREW 1/4--28 UNF	7/16	316 S.S.	---	1
E	4	STUD 3/8--16 UNC	3"	316 S.S.	---	1
F	4	HEX NUT 3/8--16 UNC	---	316 S.S.	---	1
G	1	ROTARY O--RING	---	VITON	--224	1
H	1	ROTARY MOUNT O--RING	---	VITON	--139	1
I	1	WAVE SPRING	---	17--7 PH	WS1625ZA/N	1
J	1	STATIONARY O--RING	---	VITON	--228	1
K	1	2--1/4x2--7/8x1/16 GASKET	---	TEFLON	GT1625ZNGLD	1
L	1	ZN R1 GLAND	---	316L	ZN1625G1	3
M	1	STATIONARY	---	SIC	ZA1625BR2	5
N	1	ROTARY INSERT	---	SIC	ZNS1625AR4	6
O	1	ROTARY COLLAR	---	316L	ZNS1625A1R4	4
P	1	SLEEVE O--RING	---	VITON	--223	1
R	1	RETAINING RING	---	302SS	RR1625ZND	1
S	1	SEAL SLEEVE	---	316L	ZNS1625S	8



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TITLE: ZNS CARTRIDGE SEAL ASSEMBLY		REV	
DATE: 4/6/04	GLAND STYLE: FLUSH	DRAWN BY: RE	DWG #: ZNS1625R1
SHEET #: 1 OF 9		APPROVED: RE	
Date: 10/07/05			

SEAL SIZE - 1 5/8	TYPE - ZNS
-------------------	------------

BILL OF MATERIAL						
NO	QTY	DESCRIPTION	LENGTH	MATERIAL	DRAWING #	SHEET #
ASSTY	1	ZN CARTRIDGE SEAL ASSEMBLY	---	---	ZNS1625R1	1
A	2	DOWEL PIN 1/8 X 1/2	1/2	---	---	1
B	4	ZN CLIP	---	BRASS	ZNCLP4	1
C	4	SHCS 1/4-20 UNC	1	316 S.S.	---	1
D	4	SETSCREW 1/4-28 UNF	7/16	316 S.S.	---	1
E	4	STUD 3/8-16 UNC	3"	316 S.S.	---	1
F	4	HEX NUT 3/8-16 UNC	---	316 S.S.	---	1
G	1	ROTARY O-RING	---	VTON	-224	1
H	1	ROTARY MOUNT O-RING	---	VTON	-139	1
I	1	WAVE SPRING	---	17-7 PH	WS1625ZAVN	1
J	1	STATIONARY O-RING	---	VTON	-228	1
K	1	2-1/4x2-7/8x1/16 GASKET	---	TEFLON	GT1625ZNGLD	1
L	1	ZN R1 GLAND	---	316L	ZN1625G1	3
M	1	STATIONARY	---	SIC	ZA1625BR2	5
N	1	ROTARY INSERT	---	SIC	ZNS1625BR4	6
O	1	ROTARY COLLAR	---	316L	ZNS1625A1R4	4
P	1	SLEEVE O-RING	---	VTON	-225	1
R	1	RETAINING RING	---	302SS	RR1625ZND	1
S	1	SEAL SLEEVE	---	316L	ZNS1625S	8

SEAL KIT CONSISTS OF: B, C, G, H, I, J, K, M, N, O, P, R, S
 REPAIR KIT CONSISTS OF: B, C, G, H, I, J, K, M, N, P, R

STUD/BOLT SIZE	3/8	1/2
MIN. BOLT CIRCLE	3-1/2	3-5/8

REV	DESCRIPTION	BY	DATE
-----	-------------	----	------

SEAL SIZE - 1 3/4

TYPE - ZNS

BILL OF MATERIAL

NO	QTY	DESCRIPTION	LENGTH	MATERIAL	DRAWING #	SHEET #
ASSY	1	ZN CARTRIDGE SEAL ASSEMBLY	---	---	ZNS1750R1	1
A	2	DOWEL PIN 3/16 X 1/2	1/2	---	---	1
B	4	ZN CLIP	---	BRASS	ZNCLP4	1
C	4	SHCS 1/4-20 UNC	1	316 S.S.	---	1
D	4	SETSCREW 1/4-28 UNF	1/2	316 S.S.	---	1
E	4	STUD 1/2-13 UNC	3"	316 S.S.	---	1
F	4	HEX NUT 1/2-13 UNC	---	316 S.S.	---	1
G	1	ROTARY O-RING	---	VITON	-225	1
H	1	ROTARY MOUNT O-RING	---	VITON	-141	1
I	1	WAVE SPRING	---	17-7 PH	WS1750ZA/N	1
J	1	STATIONARY RETAINER O-RING	---	VITON	-229	1
K	1	2-3/8X3 GLAND GASKET	---	TEFLON	GTZN1750GLD	1
L	1	ZN R1 GLAND	---	316L	ZN1750GR1	3
M	1	STATIONARY RETAINER	---	316L	ZA1750B1R4	5
N	1	ROTARY INSERT	---	SIC	ZNS1750AR4	6
O	1	ROTARY COLLAR	---	316L	ZNS1750A1R4	4
P	1	STATIONARY MOUNT O-RING	---	VITON	-143	1
R	1	STATIONARY INSERT	---	SIC	ZA1750BR4	7
S	1	SLEEVE O-RING	---	VITON	-224	1
T	1	RETAINING RING	---	302SS	RR1750ZND	1
U	1	SEAL SLEEVE	---	SIC	ZNS1750S	9

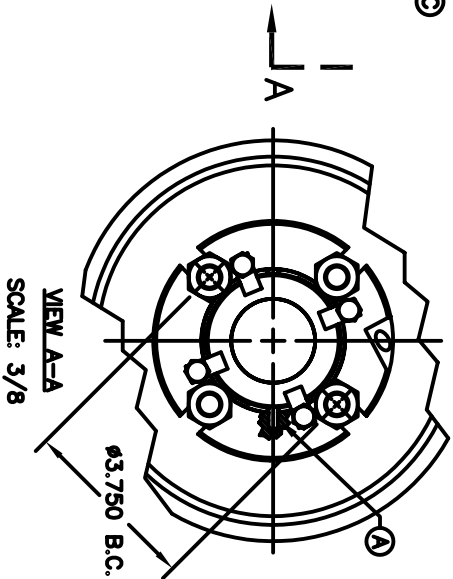
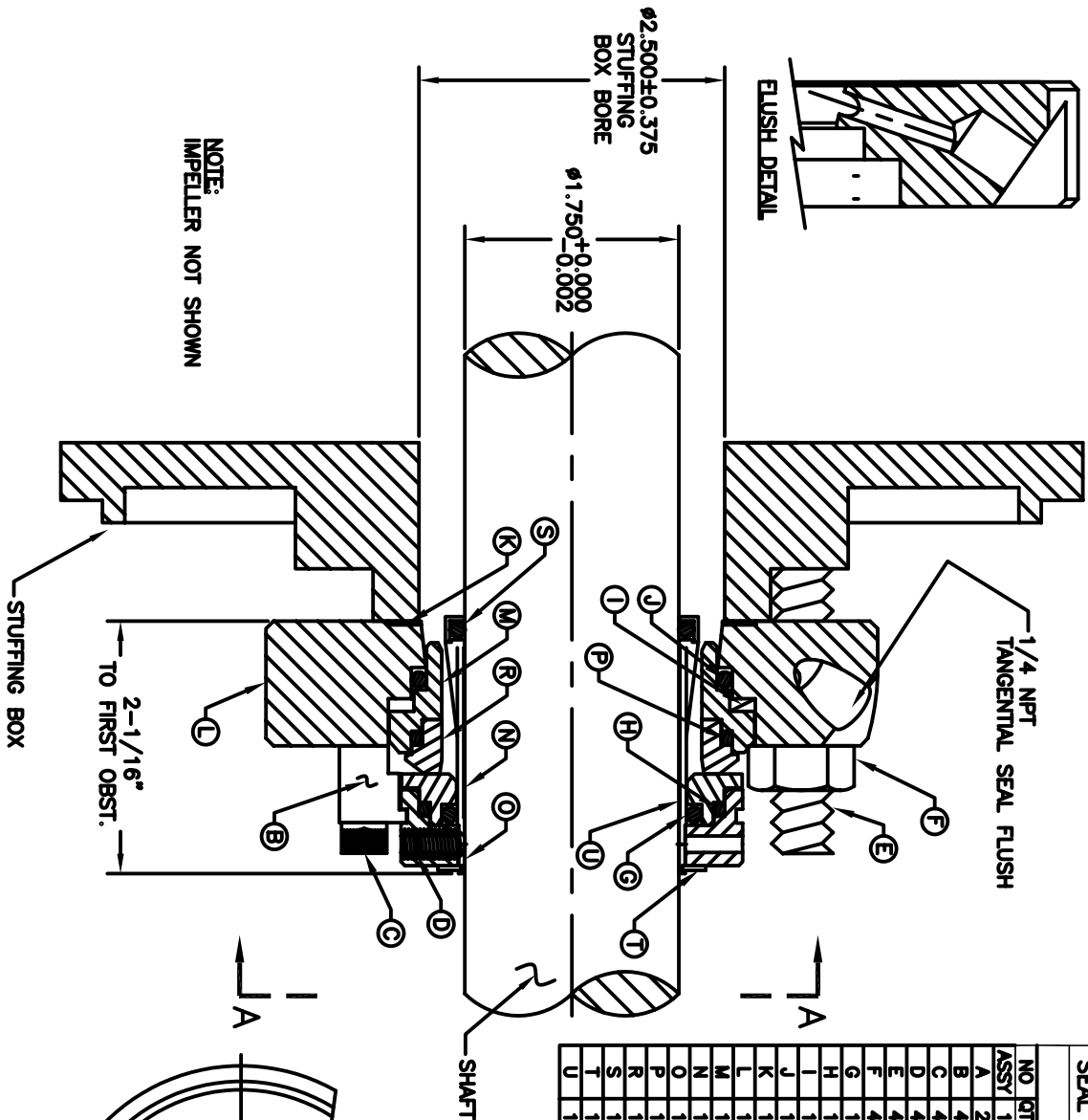
SEAL SIZE -- 1 3/4

TYPE -- ZNS

BILL OF MATERIAL

NO	QTY	DESCRIPTION	LENGTH	MATERIAL	DRAWING #	SHEET #
ASST	1	ZN CARTRIDGE SEAL ASSEMBLY	---	---	ZNS1750R1	1
A	2	DOWEL PIN 3/16 X 1/2	1/2	---	---	1
B	4	ZN CLIP	---	BRASS	ZNCLP4	1
C	4	SHCS 1/4-20 UNC	1	316 S.S.	---	1
D	4	SETScrew 1/4-28 UNF	1/2	316 S.S.	---	1
E	4	STUD 1/2-13 UNC	3"	316 S.S.	---	1
F	4	HEX NUT 1/2-13 UNC	---	316 S.S.	---	1
G	1	ROTAry O-RING	---	VTN	-225	1
H	1	ROTAry MOUNT O-RING	---	VTN	-141	1
I	1	WAVE SPRING	---	17-7 PH	WS1750Z/N	1
J	1	STATIONARY RETAINER O-RING	---	VTN	-229	1
K	1	2-3/8X3 GLAND GASKET	---	TEFLON	GTZNI1750GLD	1
L	1	ZN R1 GLAND	---	316L	ZNI1750GR1	3
M	1	STATIONARY RETAINER	---	316L	ZAI1750B1R4	5
N	1	ROTAry INSERT	---	SIC	ZNS1750AR4	6
O	1	ROTAry COLLAR	---	316L	ZNS1750A1R4	4
P	1	STATIONARY MOUNT O-RING	---	VTN	-143	1
R	1	STATIONARY INSERT	---	SIC	ZAI1750BR4	7
S	1	SLEEVE O-RING	---	VTN	-224	1
T	1	RETAINING RING	---	302SS	RR1750ZND	1
U	1	SEAL SLEEVE	---	SIC	ZNS1750S	9

SEAL KIT CONSISTS OF: B, C, G, H, I, J, K, M, N, O, P, R, S, T
 REPAIR KIT CONSISTS OF: B, C, G, H, I, J, K, M, N, R, S, T



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STUD/BOLT SIZE	3/8	1/2
MIN. BOLT CIRCLE	3-5/8	3-3/4

TITLE: ZNS CARTRIDGE SEAL ASSEMBLY
 DATE: 4/6/04
 GLAND STYLE: FLUSH
 DRAWN BY: RE
 DWG #: ZNS1750R1
 SHEET #: 1 OF 9
 APPROVED: RE
 Date: 10/07/05

REV: _____ BY: _____ DATE: _____
 DESCRIPTION: _____

SEAL SIZE - 2"

TYPE - ZNS

BILL OF MATERIAL

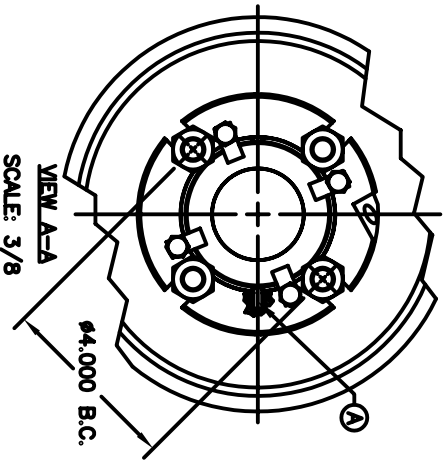
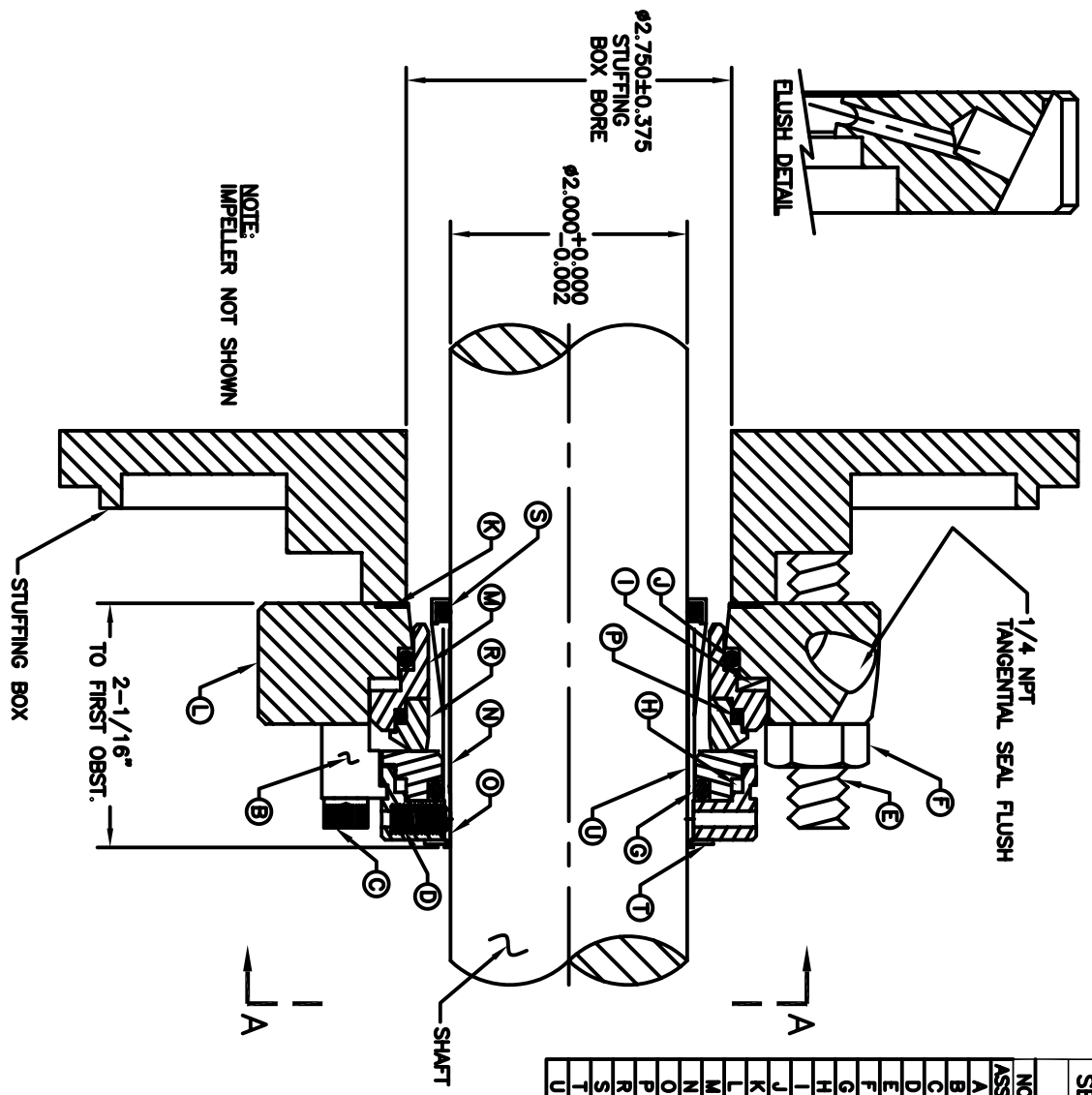
NO	QTY	DESCRIPTION	LENGTH	MATERIAL	DRAWING #	SHEET #
ASSY	1	ZN CARTRIDGE SEAL ASSEMBLY	---	---	ZNS2000R1	1
A	2	DOWEL PIN 3/16 X 1/2	1/2	---	---	1
B	4	ZN CLIP	---	BRASS	ZNCLP4	1
C	4	SHCS 1/4-20 UNC	1	316 S.S.	---	1
D	4	SETSCREW 1/4-28 UNF	1/2	316 S.S.	---	1
E	4	HEX BOLT 1/2-13 UNC	3"	316 S.S.	---	1
F	4	HEX NUT 1/2-13 UNC	---	316 S.S.	---	1
G	1	ROTARY O-RING	---	VITON	-227	1
H	1	ROTARY MOUNT O-RING	---	VITON	-148	1
I	1	WAVE SPRING	---	17-7 PH	WS2000ZA/N	1
J	1	STATIONARY RETAINER O-RING	---	VITON	-231	1
K	1	2-5/8x3-1/4 GLAND GASKET	---	TEFLON	GTZN2000GLD	1
L	1	ZN R1 GLAND	---	316L	ZN2000GR1	3
M	1	STATIONARY RETAINER	---	316L	ZA2000B1R4	5
N	1	ROTARY INSERT	---	SIC	ZNS2000AR4	6
O	1	ROTARY COLLAR	---	316L	ZNS2000A1R4	4
P	1	STATIONARY MOUNT O-RING	---	VITON	-148	1
R	1	STATIONARY INSERT	---	SIC	ZA2000BR4	7
S	1	SLEEVE O-RING	---	VITON	-226	1
T	1	RETAINING RING	---	302SS	RR2000ZND	1
U	1	SEAL SLEEVE	---	316L	ZNS2000S	9

SEAL SIZE -- 2" TYPE -- ZNS

BILL OF MATERIAL

NO	QTY	DESCRIPTION	LENGTH	MATERIAL	DRAWING #	SHEET #
ASSTY	1	ZN CARTRIDGE SEAL ASSEMBLY	---	---	ZNS2000R1	1
A	2	DOWEL PIN 3/16 X 1/2	1/2	---	---	1
B	4	ZN CLIP	---	BRASS	ZNC1P4	1
C	4	SHCS 1/4-20 UNC	1	316 S.S.	---	1
D	4	SETSCREW 1/4-28 UNF	1/2	316 S.S.	---	1
E	4	HEX BOLT 1/2-13 UNC	3"	316 S.S.	---	1
F	4	HEX NUT 1/2-13 UNC	---	316 S.S.	---	1
G	1	ROTAARY O-RING	---	VITON	-227	1
H	1	ROTAARY MOUNT O-RING	---	VITON	-148	1
I	1	WAVE SPRING	---	17-7 PH	WS2000ZA/N	1
J	1	STATIONARY RETAINER O-RING	---	VITON	-231	1
K	1	2-5/8x3-1/4 GLAND GASKET	---	TEFLON	GTN2000GLD	1
L	1	ZN R1 GLAND	---	316L	ZN2000GR1	3
M	1	STATIONARY RETAINER	---	316L	ZA2000BTR4	5
N	1	ROTAARY INSERT	---	SIC	ZNS2000AR4	6
O	1	ROTAARY COLLAR	---	316L	ZNS2000A1R4	4
P	1	STATIONARY MOUNT O-RING	---	VITON	-148	1
R	1	STATIONARY INSERT	---	SIC	ZA2000BR4	7
S	1	SLEEVE O-RING	---	VITON	-226	1
T	1	RETAINING RING	---	302SS	RR2000ZND	1
U	1	SEAL SLEEVE	---	316L	ZNS2000S	9

SEAL KIT CONSISTS OF: B, C, G, H, I, J, K, M, N, O, P, R, S, T
 REPAIR KIT CONSISTS OF: B, C, G, H, I, J, K, M, N, R, S, T



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DATE: 3/9/04		DRAWN BY: RE		DWG #: ZNS2000R1		SHEET #: 1 OF 9		APPROVED: RE		Date: 10/07/05	
TITLE: ZNS CARTRIDGE SEAL ASSEMBLY		REV		REV		REV		REV		REV	

STUD/BOLT SIZE	3/8	1/2
MIN. BOLT CIRCLE	3.875	4.000

REV	DESCRIPTION	BY	DATE

SEAL SIZE - 2-1/2

TYPE - ZNS

BILL OF MATERIAL

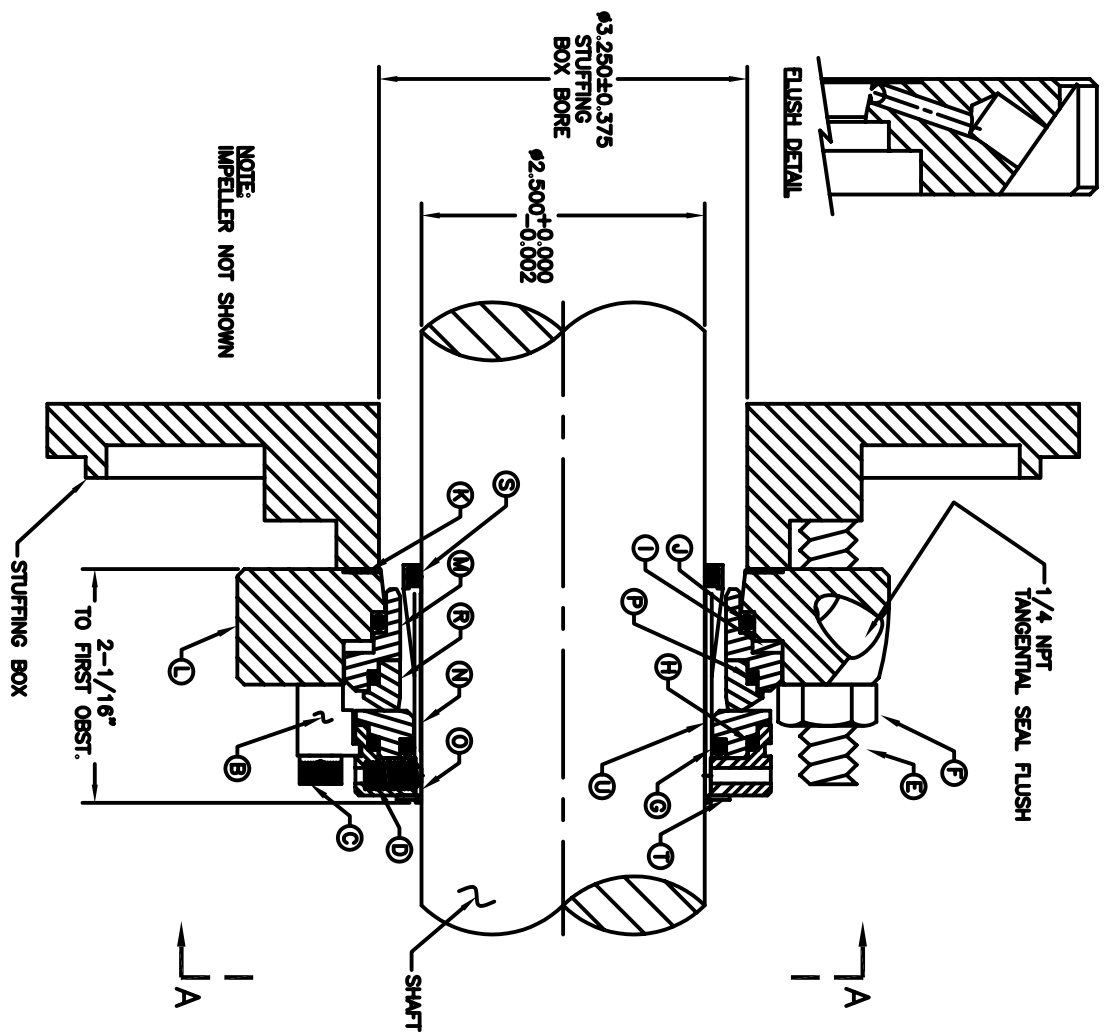
NO	QTY	DESCRIPTION	LENGTH	MATERIAL	DRAWING #	SHEET #
ASSY	1	ZN CARTRIDGE SEAL ASSEMBLY	---	---	ZNS2500R1	1
A	2	DOWEL PIN 3/16 X 1/2	1/2	---	---	1
B	4	ZN CLIP	---	BRASS	ZNCLP4	1
C	4	SHCS 1/4-20 UNC	1	316 S.S.	---	1
D	4	SETSCREW 1/4-28 UNF	1/2	316 S.S.	---	1
E	4	STUD 5/8-11 UNC	3"	316 S.S.	---	1
F	4	HEX NUT 5/8-11 UNC	---	316 S.S.	---	1
G	1	ROTARY O-RING	---	VITON	-231	1
H	1	ROTARY MOUNT O-RING	---	VITON	-152	1
I	1	WAVE SPRING	---	17-7 PH	WS2500ZA/N	1
J	1	STATIONARY RETAINER O-RING	---	VITON	-235	1
K	1	3-1/8X4-3/4 GLAND GASKET	---	TEFLON	GTZN2500GLD	1
L	1	ZN R1 GLAND	---	316L	ZN2500GR1	3
M	1	STATIONARY RETAINER	---	316L	ZA2500B1R4	5
N	1	ROTARY INSERT	---	SIC	ZNS2500AR4	6
O	1	ROTARY COLLAR	---	316L	ZNS2500A1R4	4
P	1	STATIONARY MOUNT O-RING	---	VITON	-152	1
R	1	STATIONARY INSERT	---	SIC	ZA2500BR4	7
S	1	SLEEVE O-RING	---	VITON	-230	1
T	1	RETAINING RING	---	316SS	RR2500ZND	1
U	1	SEAL SLEEVE	---	316L	ZNS2500S	9

SEAL SIZE -- 2-1/2 TYPE -- ZNS

BILL OF MATERIAL

NO	QTY	DESCRIPTION	LENGTH	MATERIAL	DRAWING #	SHEET #
ASST	1	ZN CARTRIDGE SEAL ASSEMBLY	---	---	ZNS2500R1	1
A	2	DOWEL PIN 3/16 X 1/2	1/2	---	---	1
B	4	ZN CLIP	---	BRASS	ZNC1P4	1
C	4	SHCS 1/4-20 UNC	1	316 S.S.	---	1
D	4	SETScrew 1/4-28 UNF	1/2	316 S.S.	---	1
E	4	STUD 5/8-11 UNC	3"	316 S.S.	---	1
F	4	HEX NUT 5/8-11 UNC	---	316 S.S.	---	1
G	1	ROTARY O-RING	---	VITON	-231	1
H	1	ROTARY MOUNT O-RING	---	VITON	-152	1
I	1	WAVE SPRING	---	17-7 PH	WS2500ZA/N	1
J	1	STATIONARY RETAINER O-RING	---	VITON	-235	1
K	1	3-1/8X4-3/4 GLAND GASKET	---	TEFLON	GZN2500GLD	1
L	1	ZN R1 GLAND	---	316L	ZN2500GR1	3
M	1	STATIONARY RETAINER	---	316L	ZN2500BTR4	5
N	1	ROTARY INSERT	---	SIC	ZNS2500AR4	6
O	1	ROTARY COLLAR	---	316L	ZNS2500AIR4	4
P	1	STATIONARY MOUNT O-RING	---	VITON	-152	1
R	1	STATIONARY INSERT	---	SIC	ZN2500BR4	7
S	1	SLEEVE O-RING	---	VITON	-230	1
T	1	RETAINING RING	---	316SS	RR2500ZND	1
U	1	SEAL SLEEVE	---	316L	ZNS2500S	9

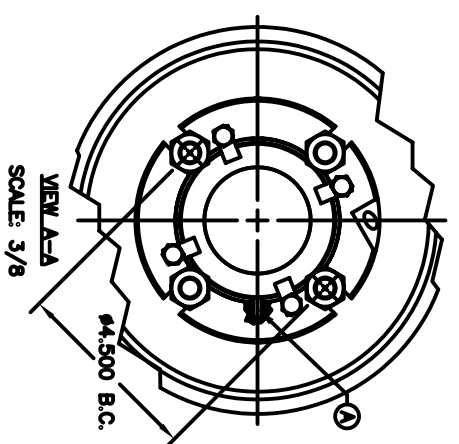
SEAL KIT CONSISTS OF: B, C, G, H, I, J, K, M, N, O, P, R, S, T
 REPAIR KIT CONSISTS OF: B, C, G, H, I, J, K, M, N, R, S, T



NOTE: IMPELLER NOT SHOWN

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STUD/BOLT SIZE	3/8	1/2
MIN. BOLT CIRCLE	4-3/8	4-1/2

DATE: 4/10/04	GLAND STYLE: FLUSH	DRAWN BY: RE	DWG #: ZNS2500R1	SHEET #: 1 OF 9	APPROVED: RE	Date: 10/07/05
TITLE: ZNS CARTRIDGE SEAL ASSEMBLY			REV: ---	REV: ---		

REV	DESCRIPTION	BY	DATE

SEAL SIZE -- 3

TYPE -- ZNS

BILL OF MATERIAL

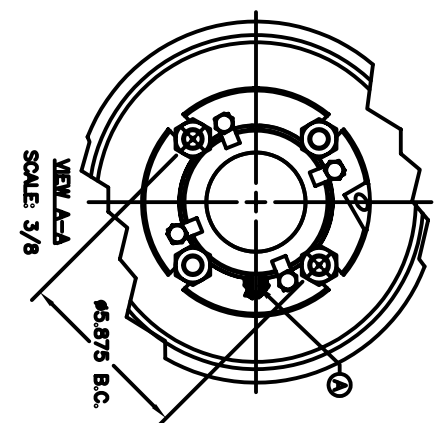
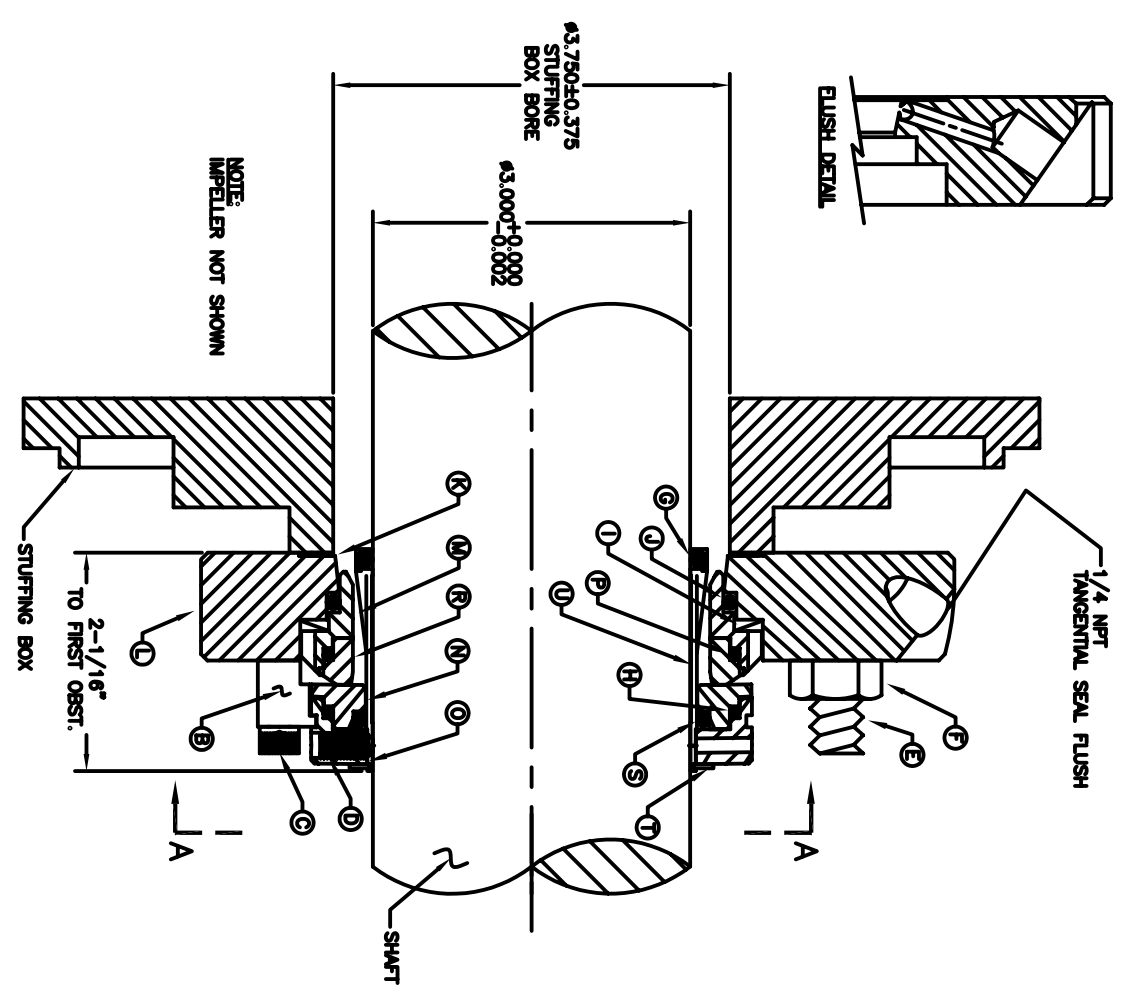
NO	QTY	DESCRIPTION	LENGTH	MATERIAL	DRAWING #	SHEET #
ASSY	1	ZN CARTRIDGE SEAL ASSEMBLY	---	---	ZNS3000R1	1
A	2	DOWEL PIN 3/16 X 1/2	1/2	---	---	1
B	4	ZN CLIP	---	BRASS	ZNCLP4	1
C	4	SHCS 1/4-20 UNC	1	316 S.S.	---	1
D	4	SETSCREW 1/4-28 UNF	1/2	316 S.S.	---	1
E	4	STUD 5/8-11 UNC	3"	316 S.S.	---	1
F	4	HEX NUT 5/8-11 UNC	---	316 S.S.	---	1
G	1	ROTARY O-RING	---	VITON	-234	1
H	1	ROTARY MOUNT O-RING	---	VITON	-154	1
I	1	WAVE SPRING	---	17-7 PH	WS3000ZA/N	1
J	1	STATIONARY RETAINER O-RING	---	VITON	-239	1
K	1	3-3/4X4-3/8 GLAND GASKET	---	TEFLON	GTZN3000GLD	1
L	1	ZN R1 GLAND	---	316L	ZN3000GR1	3
M	1	STATIONARY RETAINER	---	316L	ZA3000B1R4	5
N	1	ROTARY INSERT	---	SIC	ZNS3000AR4	6
O	1	ROTARY COLLAR	---	316L	ZNS3000A1R4	4
P	1	STATIONARY MOUNT O-RING	---	VITON	-154	1
R	1	STATIONARY INSERT	---	SIC	ZA3000BR4	7
S	1	SLEEVE O-RING	---	VITON	-234	1
T	1	RETAINING RING	---	316SS	RR3000ZND	1
U	1	SEAL SLEEVE	---	316L	ZNS3000S	9

SEAL SIZE -- 3 TYPE -- ZNS

BILL OF MATERIAL

NO	QTY	DESCRIPTION	LENGTH	MATERIAL	DRAWING #	SHEET #
1	1	ZN CARTRIDGE SEAL ASSEMBLY	---	---	ZNS300R1	1
2	2	DOWEL PIN 3/16 X 1/2	1/2	---	---	1
3	1	ZN CLIP	---	BRASS	ZNCLP4	1
4	4	SCKS 1/4-20 UNC	---	316 S.S.	---	1
4	4	SETSCREW 1/4-28 UNF	1/2	316 S.S.	---	1
4	4	STUD 5/8-11 UNC	3"	316 S.S.	---	1
4	4	HEX NUT 5/8-11 UNC	---	316 S.S.	---	1
1	1	ROTA O-RING	---	VITON	-234	1
1	1	ROTA MOUNT O-RING	---	VITON	-154	1
1	1	WAVE SPRING	---	17-7 PH	WSS0002A/N	1
1	1	STATIONARY RETAINER O-RING	---	VITON	-239	1
1	1	3-3/4x4-3/8 GLAND GASKET	---	TEFLON	G7ZNS000GD	1
1	1	ZN R1 GLAND	---	316L	ZNS000GR1	3
1	1	ROTA INSERT	---	SIC	ZNS300AR4	5
1	1	ROTA COLLAR	---	316L	ZNS300AIR4	4
1	1	STATIONARY MOUNT O-RING	---	VITON	-154	1
1	1	STATIONARY INSERT	---	SIC	ZNS300IR4	7
1	1	SLEEVE O-RING	---	VITON	-234	1
1	1	RETAINING RING	---	316SS	RR3000ZND	1
1	1	SEAL SLEEVE	---	316L	ZNS300OS	9

SEAL KIT CONSISTS OF: B, C, G, H, L, J, K, M, N, O, P, R, S, T
 REPAIR KIT CONSISTS OF: B, C, G, H, L, J, K, M, N, O, S, T



STUD/BOLT SIZE	1/2	5/8
MIN. BOLT CIRCLE	5-3/4	5-7/8

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TITLE:	ZNS CARTRIDGE SEAL ASSEMBLY												
REV	---												

REV	DESCRIPTION	BY	DATE
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