



Company: NGCS
 Order #: 56620 (AP021543)
 Case 1:

Ariel Compressor Balancing Record

Customer: H & H Technical, LLC
 Inquiry:
 Project: Job 877 SDK Cemara LPG Plant



Operating RPM: 1200.0
 Stroke, in: 4.50

Balance By: **KEN EISEL**
 Completed: 8/19/2011
 Frame: **JGH/4** Frame S/N: **F36294**

	Throw #1		Throw #2		Throw #3		Throw #4	
	SN: C125344	8.000ET	SN: C125345	17.250ET	SN: C125346	13.000ET	SN: C125347	17.250ET
	P/N	LB	P/N	LB	P/N	LB	P/N	LB
Parts Group	AD-0683	83.18	AD-0683	82.80	AD-0683	83.16	AD-0683	82.84
Connecting Rod with Bushing, bolts and bearing shells								
Piston(s) with rings, rod, collar & nut or stub shaft	C-0800	90.30	C-1742	151.52	C-2736	126.72	C-1742	151.70
	C-0603		C-0604		C-0604		C-0604	
Crosshead with bushings	D-0928	106.94	D-0927	76.04	D-0927	76.20	D-0927	76.00
Crosshead nut with setscrews	B-1574	41.76	B-0781	10.16	B-1325	34.84	B-0781	10.16
Total Recip Weight Max: 470.80	322.18		320.52		320.92		320.70	
Imbalance Max: 2.50	1.66				0.22			



Company: NGCS
 Order #: 56620 (AP021543)
 Case 1:

Ariel Lubrication Sheet

Customer: H & H Technical, LLC
 Inquiry:
 Project: Job 877 SDK Cemara LPG Plant

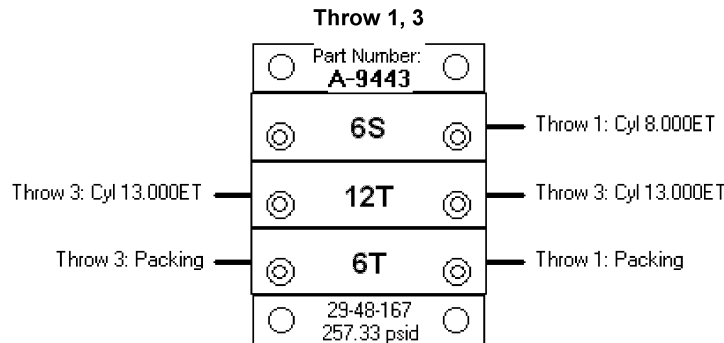


Frame: JGH/4 Stroke, in: 4.50 Rod Dia, in: 2.000 Frame S/N: F36294
 Gas Stream: Natural Gas (Water Saturated and Carbon Dioxide > 2% to 10%)

Throw	Cylinder Model	MAWP psig	Service	Stage #	Suct Press psia	Disch Press psia	Serial No.
1	8.000ET	800.0	Service 1	3	207.74	473.96	C125344
3	13.000ET	300.0	Service 1	2	83.53	212.74	C125346

Applied Speed, RPM	1200
Cycle Time at Applied Speed, sec	10.0 (see chart, lower right)
Break-In Cycle Time, sec	6.0 (For period of 200 hours)
Recommended lubricant (mineral oil) for application and pressures	<u>SAE 40-50 wt (ISO 150-220)</u>

Rupture Disc	Purple 3250.00 psig, 0.250 in hole dia.
Lubricator Pump Diameter	3/8" (0.3750 in)
Qty of Pumps feeding this block	1
Recommended base feed rate	0.40 Pints/day/in of bore diameter



Lube Point Description	Base Rate Multiplier	Recommended Pints/day	Delivered Pints/day	Del/Rec
Throw 1: Cylinder 8.000ET	1.25	4.00	3.59	90%
Throw 3: Cylinder 13.000ET	1.25	3.25	3.59	110%
Throw 3: Cylinder 13.000ET	1.25	3.25	3.59	110%
Throw 3: Packing	1.25	2.00	1.80	90%
Throw 1: Packing	1.25	2.00	1.80	90%

RPM	Cycle Time, sec		Pints/day	
	Normal	Break-In	Normal	Break-In
1200	10.0	6.0	14.4	23.9
1100	10.9	6.5	13.2	21.9
1000	12.0	7.2	12.0	19.9
900	13.3	8.0	10.8	17.9
800	15.0	9.0	9.6	15.9
700	17.1	10.3	8.4	13.9
600	20.0	12.0	7.2	11.9

****NOTE:** Ariel suggests that delivered/recommended amount for cylinders and packings be within 90 - 125%. These recommendations are general guidelines. If the lubricants or flow rates do not appear to work adequately, flow rates and/or lubricant types may need to be changed. Please contact the lubricant supplier for specific lubricant recommendations. See Section 6.0 of the Ariel Packager Standards for more information.



Company: NGCS
 Order #: 56620 (AP021543)
 Case 1:

Ariel Lubrication Sheet

Customer: H & H Technical, LLC
 Inquiry:
 Project: Job 877 SDK Cemara LPG Plant

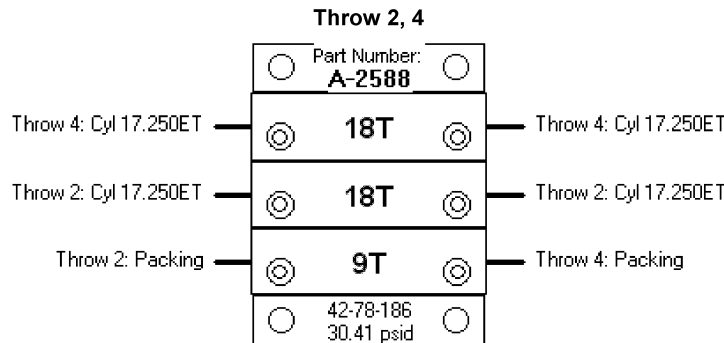


Frame: JGH/4 Stroke, in: 4.50 Rod Dia, in: 2.000 Frame S/N: F36294
 Gas Stream: Natural Gas (Water Saturated and Carbon Dioxide > 2% to 10%)

Throw	Cylinder Model	MAWP psig	Service	Stage #	Suct Press psia	Disch Press psia	Serial No.
2	17.250ET	230.0	Service 1	1	24.67	85.50	C125345
4	17.250ET	230.0	Service 1	1	24.67	85.50	C125347

Applied Speed, RPM	1200
Cycle Time at Applied Speed, sec	13.0 (see chart, lower right)
Break-In Cycle Time, sec	7.0 (For period of 200 hours)
Recommended lubricant (mineral oil) for application and pressures	<u>SAE 40-50 wt (ISO 150-220)</u>

Rupture Disc	Purple 3250.00 psig, 0.250 in hole dia.
Lubricator Pump Diameter	3/8" (0.3750 in)
Qty of Pumps feeding this block	1
Recommended base feed rate	0.40 Pints/day/in of bore diameter



Lube Point Description	Base Rate Multiplier	Recommended Pints/day	Delivered Pints/day	Del/Rec
Throw 4: Cylinder 17.250ET	1.25	4.31	4.14	96%
Throw 4: Cylinder 17.250ET	1.25	4.31	4.14	96%
Throw 2: Cylinder 17.250ET	1.25	4.31	4.14	96%
Throw 2: Cylinder 17.250ET	1.25	4.31	4.14	96%
Throw 2: Packing	1.25	2.00	2.07	104%
Throw 4: Packing	1.25	2.00	2.07	104%

RPM	Cycle Time, sec		Pints/day	
	Normal	Break-In	Normal	Break-In
1200	13.0	7.0	20.7	38.5
1100	14.2	7.6	19.0	35.3
1000	15.6	8.4	17.3	32.1
900	17.3	9.3	15.5	28.9
800	19.5	10.5	13.8	25.7
700	22.3	12.0	12.1	22.5
600	26.0	14.0	10.4	19.3

****NOTE:** Ariel suggests that delivered/recommended amount for cylinders and packings be within 90 - 125%. These recommendations are general guidelines. If the lubricants or flow rates do not appear to work adequately, flow rates and/or lubricant types may need to be changed. Please contact the lubricant supplier for specific lubricant recommendations. See Section 6.0 of the Ariel Packager Standards for more information.



ARIEL CORPORATION
Recommended Spares Start-Up

Mon Aug 22 08:47:18 EDT 2011

F36294

C125344, C125346, C125347, C125345

U85395, U85397, U85398, U85396

Project:

QTY	Part Number	Description	Your Price	Net Amount
JGH-JGE-JGK-JGT FRAME CLASS				
1	C-5655	GSKT,RET,77-5/8 X20-3/8X1/32	\$0.0000	\$0.00
4	B-0832	GSKT,RET,15-5/16X10-13/16X1/32	\$0.0000	\$0.00
4	B-0834	GSKT,RET,10-13/16X7-3/4X1/32	\$0.0000	\$0.00
3	A-0661	LO FILTER ELEMENT,SPIN-ON	\$0.0000	\$0.00
8	A-0124	BLOW-OUT DISC,3250 PSIG,PURPLE	\$0.0000	\$0.00
2	A-3689	CHECK VALVE,1/8M X 1/8F,PPT,SS	\$0.0000	\$0.00
			Sub Total	\$0.00
CYL ASSY, 8 ET-HP 800				
2	A-0586	STL GASKET, 8.813 X 8.500 X 60	\$0.0000	\$0.00
2	A-0145	THUMB SCREW,NYLON,1/4-20 X 3/4	\$0.0000	\$0.00
2	A-0141	STL GASKET, 4.320 X 4.125 X 30	\$0.0000	\$0.00
2	A-0041	O-RING,VT, 4.395 O.D. X .210	\$0.0000	\$0.00
1	B-4732-CC	DIS VLV, 98CRE,MTX	\$0.0000	\$0.00
1	B-4928-T	SUC VLV, 98CRE,NYX	\$0.0000	\$0.00
			Sub Total	\$0.00
VVCP, 8 R:RJ:RJ-HP:ET				
1	A-0586	STL GASKET, 8.813 X 8.500 X 60	\$0.0000	\$0.00
1	A-0687	O-RING,VT, 7.895 O.D. X .210	\$0.0000	\$0.00
			Sub Total	\$0.00
CYL ASSY,13 ET,STD 300				
2	A-2695	THUMB SCREW,NYLON,1/4-20 X 1	\$0.0000	\$0.00
2	A-0655	STL GASKET, 6.448 X 6.147 X30	\$0.0000	\$0.00
2	A-0031	O-RING,VT, 6.395 O.D. X .210	\$0.0000	\$0.00
1	B-2373-CC	DIS VLV,147CT, MTX	\$0.0000	\$0.00
1	B-2372-S	SUC VLV,147CT,NYX	\$0.0000	\$0.00
			Sub Total	\$0.00
VVCP,13 R:RJ:ET 300				
1	A-0654	STL GASKET,13.938 X 13.625 X60	\$0.0000	\$0.00
			Sub Total	\$0.00
CYL ASSY,17-1/4ET,STD 230				
3	A-0145	THUMB SCREW,NYLON,1/4-20 X 3/4	\$0.0000	\$0.00
4	A-0655	STL GASKET, 6.448 X 6.147 X30	\$0.0000	\$0.00
4	A-0031	O-RING,VT, 6.395 O.D. X .210	\$0.0000	\$0.00
2	B-2373-CC	DIS VLV,147CT, MTX	\$0.0000	\$0.00

2	B-2372-U	SUC VLV,147CT,NYX	\$0.0000	\$0.00
			Sub Total	\$0.00
VVCP,17-1/4R:RJ:ET				
1	A-3600	STL GASKET,17.750 X 17.375 X60	\$0.0000	\$0.00
			Sub Total	\$0.00
COMP FLG, ,SUC NOZ,FOR ORIF				
1	A-0724	O-RING,VT, 6.645 O.D. X .210	\$0.0000	\$0.00
			Sub Total	\$0.00
COMP FLG, ,DIS NOZ,FOR ORIF				
1	A-0724	O-RING,VT, 6.645 O.D. X .210	\$0.0000	\$0.00
			Sub Total	\$0.00
CYL ASSY,17-1/4ET,STD 230				
3	A-0145	THUMB SCREW,NYLON,1/4-20 X 3/4	\$0.0000	\$0.00
4	A-0655	STL GASKET, 6.448 X 6.147 X30	\$0.0000	\$0.00
4	A-0031	O-RING,VT, 6.395 O.D. X .210	\$0.0000	\$0.00
2	B-2373-CC	DIS VLV,147CT, MTX	\$0.0000	\$0.00
2	B-2372-U	SUC VLV,147CT,NYX	\$0.0000	\$0.00
			Sub Total	\$0.00
VVCP,17-1/4R:RJ:ET				
1	A-3600	STL GASKET,17.750 X 17.375 X60	\$0.0000	\$0.00
			Sub Total	\$0.00
COMP FLG, ,SUC NOZ,FOR ORIF				
1	A-0724	O-RING,VT, 6.645 O.D. X .210	\$0.0000	\$0.00
			Sub Total	\$0.00
COMP FLG, ,DIS NOZ,FOR ORIF				
1	A-0724	O-RING,VT, 6.645 O.D. X .210	\$0.0000	\$0.00
			Sub Total	\$0.00
			Start-Up Grand Total	\$0.00



ARIEL CORPORATION
Recommended Spares Consumables

Mon Aug 22 08:47:18 EDT 2011

F36294

C125344, C125346, C125347, C125345

U85395, U85397, U85398, U85396

Project:

QTY	Part Number	Description	Your Price	Net Amount
JGH-JGE-JGK-JGT FRAME CLASS				
1	C-5655	GSKT,RET,77-5/8 X20-3/8X1/32	\$0.0000	\$0.00
8	B-0832	GSKT,RET,15-5/16X10-13/16X1/32	\$0.0000	\$0.00
8	B-0834	GSKT,RET,10-13/16X7-3/4X1/32	\$0.0000	\$0.00
4	A-3780	CHK.VLV,DOU.BALL SOFT SEAT SS	\$0.0000	\$0.00
1	A-8723-K	FILTER KIT, LUBRICATOR 150 MIC	\$0.0000	\$0.00
2	A-9478	FF LUBR PUMP 3/8 PREMIER	\$0.0000	\$0.00
6	A-0661	LO FILTER ELEMENT,SPIN-ON	\$0.0000	\$0.00
8	A-0124	BLOW-OUT DISC,3250 PSIG,PURPLE	\$0.0000	\$0.00
2	A-0080	BLOW-OUT ASSY,SPECIFY DISC.	\$0.0000	\$0.00
6	A-3689	CHECK VALVE,1/8M X 1/8F,PPT,SS	\$0.0000	\$0.00
			Sub Total	\$0.00
CYL ASSY, 8 ET-HP 800				
2	A-0586	STL GASKET, 8.813 X 8.500 X 60	\$0.0000	\$0.00
2	A-3780	CHK.VLV,DOU.BALL SOFT SEAT SS	\$0.0000	\$0.00
1	B-1584-K	RBLD KIT,PIST ROD PKG,2,000	\$0.0000	\$0.00
3	A-3460	RIDER RING, 8 H:E:ET	\$0.0000	\$0.00
1	B-1687-K	RBLD KIT,WIPER PKG,2,000,WAT	\$0.0000	\$0.00
4	A-11959	GUIDE RING,117CRO.,.220 THK	\$0.0000	\$0.00
1	A-14439-A	DIS VLV SEAT ASSY, 98CRE	\$0.0000	\$0.00
4	KB-4732-CC	KIT,VLV, 98CRE,MTX	\$0.0000	\$0.00
8	A-1368	LOCKNUT, DRAKE 1/2-20	\$0.0000	\$0.00
4	A-14437	GUIDE RING,98CRE,.226 THK	\$0.0000	\$0.00
1	A-14436	SUC VLV SEAT, 98CRE	\$0.0000	\$0.00
4	KB-4928-T	KIT,VLV, 98CRE,NYX	\$0.0000	\$0.00
			Sub Total	\$0.00
VVCP, 8 R:RJ:RJ-HP:ET				
1	A-0586	STL GASKET, 8.813 X 8.500 X 60	\$0.0000	\$0.00
1	A-0687	O-RING,VT, 7.895 O.D. X .210	\$0.0000	\$0.00
			Sub Total	\$0.00
CYL ASSY,13 ET,STD 300				
4	A-3780	CHK.VLV,DOU.BALL SOFT SEAT SS	\$0.0000	\$0.00
1	B-1582-K	RBLD KIT,PIST ROD PKG,2,000	\$0.0000	\$0.00
2	A-3415	RIDER RING,13 R:H:E:ET	\$0.0000	\$0.00
1	B-1687-K	RBLD KIT,WIPER PKG,2,000,WAT	\$0.0000	\$0.00

1	A-2860-A	DIS VLV SEAT ASSY,147CHT	\$0.0000	\$0.00
4	KB-2373-CC	KIT,VLV,147CHT,MTX	\$0.0000	\$0.00
8	A-1462	LOCKNUT, DRAKE,3/4-16	\$0.0000	\$0.00
4	A-2855	CNTR BOLT,3/4-16	\$0.0000	\$0.00
8	A-2859	GUIDE RING,147CHT, 338 THK	\$0.0000	\$0.00
1	A-2853	SUC VLV SEAT,147CHT	\$0.0000	\$0.00
4	KB-2372-S	KIT,VLV,147CT,NYX	\$0.0000	\$0.00
8	A-2858	WAFER PLATE.147CHT	\$0.0000	\$0.00
			Sub Total	\$0.00
VVCP,13 R:RJ:ET 300				
1	A-0654	STL GASKET,13.938 X 13.625 X60	\$0.0000	\$0.00
			Sub Total	\$0.00
CYL ASSY,17-1/4ET,STD 230				
4	A-3780	CHK.VLV,DOU.BALL SOFT SEAT SS	\$0.0000	\$0.00
1	B-1582-K	RBLD KIT,PIST ROD PKG,2.000	\$0.0000	\$0.00
1	A-3449	RIDER RING,17-1/4R:H:E:ET	\$0.0000	\$0.00
1	B-1687-K	RBLD KIT,WIPER PKG,2.000,WAT	\$0.0000	\$0.00
2	A-2860-A	DIS VLV SEAT ASSY,147CHT	\$0.0000	\$0.00
6	KB-2373-CC	KIT,VLV,147CHT,MTX	\$0.0000	\$0.00
12	A-1462	LOCKNUT, DRAKE,3/4-16	\$0.0000	\$0.00
6	A-2855	CNTR BOLT,3/4-16	\$0.0000	\$0.00
12	A-2859	GUIDE RING,147CHT, 338 THK	\$0.0000	\$0.00
2	A-2853	SUC VLV SEAT,147CHT	\$0.0000	\$0.00
6	KB-2372-U	KIT,VLV,147CT,NYX	\$0.0000	\$0.00
12	A-2858	WAFER PLATE.147CHT	\$0.0000	\$0.00
			Sub Total	\$0.00
VVCP,17-1/4R:RJ:ET				
1	A-3600	STL GASKET,17.750 X 17.375 X60	\$0.0000	\$0.00
			Sub Total	\$0.00
COMP FLG, ,SUC NOZ,FOR ORIF				
4	A-0724	O-RING,VT, 6.645 O.D. X .210	\$0.0000	\$0.00
			Sub Total	\$0.00
COMP FLG, ,DIS NOZ,FOR ORIF				
4	A-0724	O-RING,VT, 6.645 O.D. X .210	\$0.0000	\$0.00
			Sub Total	\$0.00
CYL ASSY,17-1/4ET,STD 230				
4	A-3780	CHK.VLV,DOU.BALL SOFT SEAT SS	\$0.0000	\$0.00
1	B-1582-K	RBLD KIT,PIST ROD PKG,2.000	\$0.0000	\$0.00
1	A-3449	RIDER RING,17-1/4R:H:E:ET	\$0.0000	\$0.00
1	B-1687-K	RBLD KIT,WIPER PKG,2.000,WAT	\$0.0000	\$0.00
2	A-2860-A	DIS VLV SEAT ASSY,147CHT	\$0.0000	\$0.00
6	KB-2373-CC	KIT,VLV,147CHT,MTX	\$0.0000	\$0.00
12	A-1462	LOCKNUT, DRAKE,3/4-16	\$0.0000	\$0.00
6	A-2855	CNTR BOLT,3/4-16	\$0.0000	\$0.00
12	A-2859	GUIDE RING,147CHT, 338 THK	\$0.0000	\$0.00
2	A-2853	SUC VLV SEAT,147CHT	\$0.0000	\$0.00
6	KB-2372-U	KIT,VLV,147CT,NYX	\$0.0000	\$0.00
12	A-2858	WAFER PLATE.147CHT	\$0.0000	\$0.00
			Sub Total	\$0.00
VVCP,17-1/4R:RJ:ET				

1	A-3600	STL GASKET,17.750 X 17.375 X60	\$0.0000	\$0.00
			Sub Total	\$0.00
COMP FLG, ,SUC NOZ,FOR ORIF				
4	A-0724	O-RING,VT, 6.645 O.D. X .210	\$0.0000	\$0.00
			Sub Total	\$0.00
COMP FLG, ,DIS NOZ,FOR ORIF				
4	A-0724	O-RING,VT, 6.645 O.D. X .210	\$0.0000	\$0.00
			Sub Total	\$0.00
			Consumables Grand Total	\$0.00



ARIEL CORPORATION
Recommended Spares Insurance

Mon Aug 22 08:47:18 EDT 2011

F36294

C125344, C125346, C125347, C125345

U85395, U85397, U85398, U85396

Project:

QTY	Part Number	Description	Your Price	Net Amount
JGH-JGE-JGK-JGT FRAME CLASS				
4	FP0500FE	DOWEL PIN, 1/4 X 3/4 +.0002	\$0.0000	\$0.00
1	A-3884	CHAIN,40-1 X 114	\$0.0000	\$0.00
1	FW0500GA	FLAT WASHER, 1/2 SAE	\$0.0000	\$0.00
4	B-0772	BUSHING,BZ,ROD,H:E:K:T	\$0.0000	\$0.00
8	B-2082	SLEEVE BRG,H/S,ROD,H:E:K:T	\$0.0000	\$0.00
1	A-3875	GSKT,RND,12-13/16, X 1/32	\$0.0000	\$0.00
2	B-0844	GSKT,RET,23-1/2X20-5/16X1/32	\$0.0000	\$0.00
1	C-5655	GSKT,RET,77-5/8 X20-3/8X1/32	\$0.0000	\$0.00
2	FP0512EF	THD.TAPER PIN,#4 X 1"LG	\$0.0000	\$0.00
2	FP0512FH	THD.TAPER PIN,#5 X 1-1/2LG	\$0.0000	\$0.00
2	FP0512FJ	THD.TAPER PIN,#5 X 2"LG	\$0.0000	\$0.00
1	A-0245-B	DUST SEAL,TFE,JGH:E:K:T,J/6	\$0.0000	\$0.00
2	B-0776	THRUST PLATE,BZ,JGH:E:K:T	\$0.0000	\$0.00
8	B-0770	SLEEVE BRG,H/S,MAIN,H:E:K:T	\$0.0000	\$0.00
4	B-5290	BUSHING,BZ,XHD,EKT ELP	\$0.0000	\$0.00
4	A-3869	12 PT, 1/2-20 X 10 G8	\$0.0000	\$0.00
4	FN0461GA	SELF-LOCK NUT,ESNA,1/2-20	\$0.0000	\$0.00
1	B-0773	CROSSHEAD PIN,JGH:E:K:T	\$0.0000	\$0.00
4	A-3507	O-RING,VT, 2.012 O.D. X .139	\$0.0000	\$0.00
6	A-3508	O-RING,VT, 2.762 O.D. X .139	\$0.0000	\$0.00
24	A-3512	O-RING,VT, 1.318 O.D. X .103	\$0.0000	\$0.00
2	A-3763	CHK VLV,1/8MX1/8F,SS,PPT/14PSI	\$0.0000	\$0.00
1	A-5375	GSKT,RND,2-1/4,X 1/32,INNER	\$0.0000	\$0.00
1	A-5376	GSKT,RND,2-1/4 X 1/8,OUTER	\$0.0000	\$0.00
1	A-5374	SIGHT GLASS,2-1/4"LENS	\$0.0000	\$0.00
1	A-0745	O-RING,VT, 2.756 O.D. X .103	\$0.0000	\$0.00
1	A-9870	O-RING,VT, 2.254 O.D. X .070	\$0.0000	\$0.00
1	A-5641	SIGHT GLASS,3/4" NPT	\$0.0000	\$0.00
2	A-9478	FF LUBR PUMP 3/8 PREMIER	\$0.0000	\$0.00
2	B-0779	GSKT,SQ,5-15/16X5-15/16X1/32	\$0.0000	\$0.00
2	A-0261	GAUGE,100PSI,1/4NPT,BOTT MOUNT	\$0.0000	\$0.00
2	A-10754	FF.S/D,DNFT,PS,TRAB,DC PRG	\$0.0000	\$0.00
2	A-8727	GAUGE, 3000 PSI, BACK MOUNT	\$0.0000	\$0.00
1	A-9649	O-RING,VT, FPE	\$0.0000	\$0.00
1	A-9650	ELEMENT,THERM.VLV,1.5",170,FPE	\$0.0000	\$0.00

1	A-9651	LIP SEAL-TEFLON,1.5"VALVE, FPE	\$0.0000	\$0.00
1	A-2588	18T-18T-9T	\$0.0000	\$0.00
1	A-9443	12T-6S-6T	\$0.0000	\$0.00
			Sub Total	\$0.00
CYL ASSY, 8 ET-HP 800				
2	B-3515	GSKT,RND,16, X 1/64, 16 HOLES	\$0.0000	\$0.00
2	FW0550ID	STAT-O-SEAL,VT,75DUR. 3/4 DIA	\$0.0000	\$0.00
1	B-0846	PISTON COLLAR,JGH:E:ET	\$0.0000	\$0.00
1	B-0847	PISTON NUT,JGH:E:ET	\$0.0000	\$0.00
1	C-0603	P ROD, 4.50STK/33.952LG	\$0.0000	\$0.00
8	A-0145	THUMB SCREW,NYLON,1/4-20 X 3/4	\$0.0000	\$0.00
8	A-0141	STL GASKET, 4.320 X 4.125 X 30	\$0.0000	\$0.00
8	A-0041	O-RING,VT, 4.395 O.D. X .210	\$0.0000	\$0.00
4	B-4732-CC	DIS VLV, 98CRE,MTX	\$0.0000	\$0.00
4	B-4928-T	SUC VLV, 98CRE,NYX	\$0.0000	\$0.00
			Sub Total	\$0.00
VVCP, 8 R:RJ:RJ-HP:ET				
1	A-0641	BELLOWS, UNL.THREAD PROTECTOR	\$0.0000	\$0.00
1	A-0687	O-RING,VT, 7.895 O.D. X .210	\$0.0000	\$0.00
1	A-0639	V PACKING, UNL	\$0.0000	\$0.00
1	A-0688	UNL.PISTON RING, 6-1/2 O.D.	\$0.0000	\$0.00
			Sub Total	\$0.00
CYL ASSY,13 ET,STD 300				
2	B-3515	GSKT,RND,16, X 1/64, 16 HOLES	\$0.0000	\$0.00
2	A-0653	O-RING,VT,12.395 O.D. X .210	\$0.0000	\$0.00
2	FW0550ID	STAT-O-SEAL,VT,75DUR. 3/4 DIA	\$0.0000	\$0.00
1	B-0846	PISTON COLLAR,JGH:E:ET	\$0.0000	\$0.00
1	B-0847	PISTON NUT,JGH:E:ET	\$0.0000	\$0.00
1	C-0604	P ROD, 4.50STK/37.698LG	\$0.0000	\$0.00
8	A-2695	THUMB SCREW,NYLON,1/4-20 X 1	\$0.0000	\$0.00
8	A-0655	STL GASKET, 6.448 X 6.147 X30	\$0.0000	\$0.00
8	A-0031	O-RING,VT, 6.395 O.D. X .210	\$0.0000	\$0.00
4	B-2373-CC	DIS VLV,147CT, MTX	\$0.0000	\$0.00
4	B-2372-S	SUC VLV,147CT,NYX	\$0.0000	\$0.00
			Sub Total	\$0.00
VVCP,13 R:RJ:ET 300				
1	A-0641	BELLOWS, UNL.THREAD PROTECTOR	\$0.0000	\$0.00
1	A-0469	O-RING,VT,13.395 O.D. X .210	\$0.0000	\$0.00
1	A-0639	V PACKING, UNL	\$0.0000	\$0.00
1	A-0700	UNL.PISTON RING,11-1/4 O.D.	\$0.0000	\$0.00
			Sub Total	\$0.00
CYL ASSY,17-1/4ET,STD 230				
2	B-3515	GSKT,RND,16, X 1/64, 16 HOLES	\$0.0000	\$0.00
2	A-0799	O-RING,VT,16.375 O.D. X .210	\$0.0000	\$0.00
1	B-0846	PISTON COLLAR,JGH:E:ET	\$0.0000	\$0.00
1	B-0847	PISTON NUT,JGH:E:ET	\$0.0000	\$0.00
1	C-0604	P ROD, 4.50STK/37.698LG	\$0.0000	\$0.00
12	A-0145	THUMB SCREW,NYLON,1/4-20 X 3/4	\$0.0000	\$0.00
12	A-0655	STL GASKET, 6.448 X 6.147 X30	\$0.0000	\$0.00
12	A-0031	O-RING,VT, 6.395 O.D. X .210	\$0.0000	\$0.00
6	B-2373-CC	DIS VLV,147CT, MTX	\$0.0000	\$0.00

6	B-2372-U	SUC VLV,147CT,NYX	\$0.0000	\$0.00
			Sub Total	\$0.00
VVCP,17-1/4R:RJ:ET				
1	A-0641	BELLOWS, UNL.THREAD PROTECTOR	\$0.0000	\$0.00
1	A-0799	O-RING,VT,16.375 O.D. X .210	\$0.0000	\$0.00
1	A-0639	V PACKING, UNL	\$0.0000	\$0.00
1	A-3403	UNL.PISTON RING,15-1/4 O.D.	\$0.0000	\$0.00
			Sub Total	\$0.00
COMP FLG, ,SUC NOZ,FOR ORIF				
4	A-0724	O-RING,VT, 6.645 O.D. X .210	\$0.0000	\$0.00
			Sub Total	\$0.00
COMP FLG, ,DIS NOZ,FOR ORIF				
4	A-0724	O-RING,VT, 6.645 O.D. X .210	\$0.0000	\$0.00
			Sub Total	\$0.00
CYL ASSY,17-1/4ET,STD 230				
2	B-3515	GSKT,RND,16, X 1/64, 16 HOLES	\$0.0000	\$0.00
2	A-0799	O-RING,VT,16.375 O.D. X .210	\$0.0000	\$0.00
1	B-0846	PISTON COLLAR,JGH:E:ET	\$0.0000	\$0.00
1	B-0847	PISTON NUT,JGH:E:ET	\$0.0000	\$0.00
1	C-0604	P ROD, 4.50STK/37.698LG	\$0.0000	\$0.00
12	A-0145	THUMB SCREW,NYLON,1/4-20 X 3/4	\$0.0000	\$0.00
12	A-0655	STL GASKET, 6.448 X 6.147 X30	\$0.0000	\$0.00
12	A-0031	O-RING,VT, 6.395 O.D. X .210	\$0.0000	\$0.00
6	B-2373-CC	DIS VLV,147CT, MTX	\$0.0000	\$0.00
6	B-2372-U	SUC VLV,147CT,NYX	\$0.0000	\$0.00
			Sub Total	\$0.00
VVCP,17-1/4R:RJ:ET				
1	A-0641	BELLOWS, UNL.THREAD PROTECTOR	\$0.0000	\$0.00
1	A-0799	O-RING,VT,16.375 O.D. X .210	\$0.0000	\$0.00
1	A-0639	V PACKING, UNL	\$0.0000	\$0.00
1	A-3403	UNL.PISTON RING,15-1/4 O.D.	\$0.0000	\$0.00
			Sub Total	\$0.00
COMP FLG, ,SUC NOZ,FOR ORIF				
4	A-0724	O-RING,VT, 6.645 O.D. X .210	\$0.0000	\$0.00
			Sub Total	\$0.00
COMP FLG, ,DIS NOZ,FOR ORIF				
4	A-0724	O-RING,VT, 6.645 O.D. X .210	\$0.0000	\$0.00
			Sub Total	\$0.00
			Insurance Grand Total	\$0.00

All amounts are in US dollars and price is subject to change at any time.

ARIEL CORPORATION, 35 BLACKJACK ROAD, MOUNT VERNON, OHIO 43050 USA
 PHONE: 740-397-0311 FAX: 740-397-3856

Printed: Mon Aug 22 08:47:19 EDT 2011
 © 2011 ARIEL CORPORATION

8/09/11

ARIEL CORPORATION
SALES ORDER COVER SHEET

C/N: 001

RHCOVP02

SERIAL #: F36294

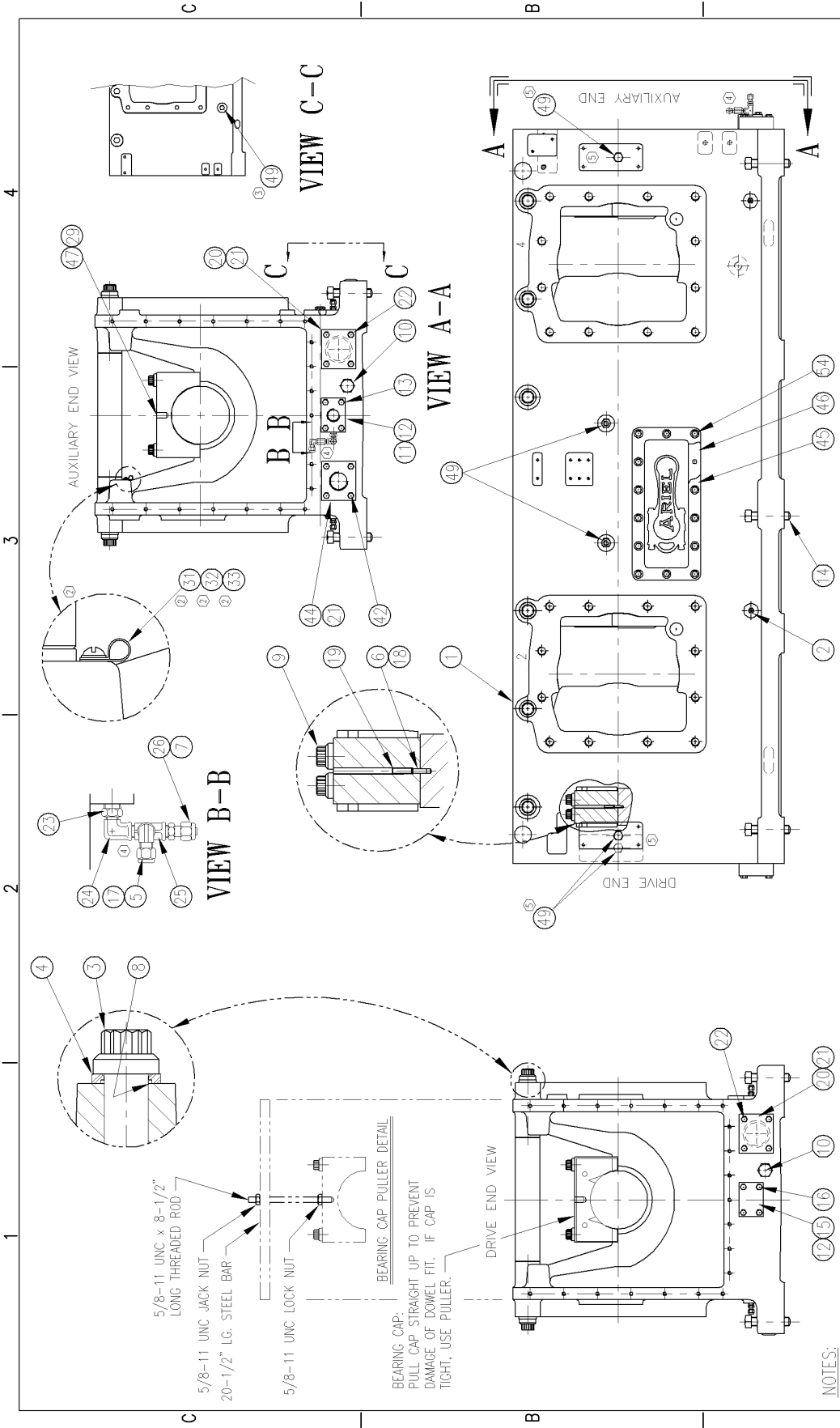
PART: JGH:E:K CLASS DESCRIPTION: JGH-JGE-JGK-JGT FRAME CLASS

PART NUMBER	QTY	DESCRIPTION	DRAWING NO.
G-13196	1	FRAME ASSY,JGH:E:K:T/4,STD	A-8554
G-13803	1	CRANKSHAFT ASSY,JGH/4,STD	A-11864
G-16751	4	GUIDE ASSY,H:E,STD	A-16381
G-2659	4	CROSSHEAD GUIDE SUPPORT ASSEMBLY, JGH:E:ET, JGH:E:K:T BALANCE GUIDE	A-3622
G-5117	4	CONN ROD ASSY,DI,JGH,NEW BRG	A-3985
G-16962	4	X-HEAD ASSY,JGH,STD	A-16656
A-2588	1	18T-18T-9T	
A-9443	1	12T-6S-6T	N.A.
B-0781	2	XHD NUT,10.0#,RND, H:E:K	B-0781
D-0927	3	CROSSHEAD, LGT, CI, 77.8#, JGH	D-0927
D-0928	1	CROSSHEAD, MED, CI, 106.6#, JGH	D-0928
G-0978	1	DRIVE END COVER,JGH:E:K:T/2:4	A-6330
G-1068	1	AUX.END COVER ASSY,HEKT/4	A-6328
G-0986	1	LO LEVEL GLASS,J6>,STD	A-4068
G-16830	1	LO PUMP,HEKT/4, FOR THERM.VLV	A-16484
G-2246	1	PR PUMP ASSY,HEKT/2:4,CD/2,STD	D-1341
G-2449	1	FF LUBR,3/8,3/8,HEKT2/4	D-1107
G-5299	1	DST.BLK.MTG.SINGL,JKCBR/4:6	N.A.
G-2708	2	RUPTURE DISC ASSY, 3250 PSI	N.A.
G-2930	1	FF TUBING,JGH:E/4	N.A.
G-2935	3	FORCE FEED TUBING, BOTTOM LUBE, JG:A:M:P:N:Q:R:W:J:H:E:K:T, EACH CYLINDER, STD	N.A.
G-7982	1	CHAIN ASSY,HEKT/2:4 STD OR R/R	A-9639
G-16946	1	TOP COVER ASSY,JGH/4	A-16598
G-7624	2	FORCE FEED GAUGE ASSEMBLY, 3000 PSI LUBE BLOCK	A-9020

8/09/11

SALES ORDER COVER SHEET

PART NUMBER	QTY	DESCRIPTION	DRAWING NO.
G-4830	2	FF S/D,DIGITAL NO FLOW,DC,PRG	A-6423
G-8087	1	THRM VLV,1-1/2"MTD,HEKT/4:CD/2	A-9645
G-16338	1	TOOL KIT ASSY, JGH:E:K:T	N.A.



NOTES:

1. LOOSEN OR TIGHTEN ALL FASTENERS PER RECOMMENDED PROCEDURES AND TORQUE VALUES IN MANUAL.
2. THIS ASSEMBLY DRAWING IS FOR ILLUSTRATION PURPOSES ONLY AND MAY NOT NECESSARILY REPRESENT THE EXACT CONFIGURATION PERTAINING TO THE UNIT ORDERED. REFER TO THE ACCOMPANYING PARTS LIST FOR ITEMS (AND QUANTITIES OF EACH) REQUIRED FOR THIS PARTICULAR ASSEMBLY.

5	(B-2 & B-4) ADDED VIBRATION BOSSES AND ITEMS #49 TO VIEW.	KSL	01/11/08
4	(C2 AND C3 REVISED VIEW B-B, TO SHOW PROPER POSITION OF ITEMS #5 & #7.	RWR	8/2/05
REV	DESCRIPTION	INIT/DATE	

5	14732	1	7726	ECN	REV	3
4	12984	0	7640	ECN	REV	3

THIS DOCUMENT AND CONTENTS THEREIN ARE PROPRIETARY TO ARIEL CORPORATION. ONLY BY WRITTEN CONSENT AND AGREED TERMS BY ARIEL CORPORATION WILL ANY INFORMATION CONTAINED HEREIN BE DISCLOSED OR USED IN PART OR IN WHOLE INFORMATION CONTAINED IN DOCUMENT.

3	10797	3	10797	ECN	REV	3
2	10115	2	10115	ECN	REV	3
1	7726	1	7726	ECN	REV	3
0	7640	0	7640	ECN	REV	3

DRAWN: **MLB** 1/1/01
 CHECKED: **SM** 6/27/09
 APPROVER: **VJA**
 SCALE: **VJA**

ARIEL CORPORATION
 35 BLACKJACK ROAD
 MOUNT VERNON, OHIO 43050
 ASSEMBLY DWG. NO. **A-8554**

8/09/11

PARTS LIST

FRAME, SPACER BARS AND MAIN BEARING CAPS PART NO. G-13196
JGH/4, JGE/4, JGK/4 AND JGT/4 REF DRAWING A-8554

ITEM	PART NUMBER	QTY	DESCRIPTION
1	D-4447	1	FRAME,JGH:E:K/4
2	A-0827	4	MALE CONNECTOR, STL, 1/4 TUBE X 1/4 NPT
3	FC0125LY	12	12-POINT CAPSCREW, 1-1/8-12 X 7, G8
4	A-3887	12	WASHER,SPACER BAR,FRAME/GUIDE
5	A-3763	1	CHK VLV,1/8MX1/8F,SS,PPT/14PSI
6	FP0500FE	0	DOWEL PIN, 1/4 OD X 3/4 LONG, +.0002
7	A-0918	1	PLUG,TUBE FITTING,STL, 1/4TUBE
8	A-3512	12	O-RING, VT, 1.318 OD X .103, 75/85 DUROMETER
9	FC0120JY	16	12-POINT CAPSCREW, 7/8-9 X 7, G8
10	PP0810KB	2	PIPE PLUG,1"NPT,HEX HD,STL
11	A-3871	1	END PLATE, OIL GALLERY, JGH:E:K/2/4/6
12	A-3507	2	O-RING, VT, 2.012 OD X .139, 75/85 DUROMETER
13	FC0102EL	4	HEX HEAD CAPSCREW, 3/8-16 X 2-1/4, G5
14	FS0420JS	6	SET SCREW, SQUARE HEAD, OVAL POINT, 7/8-9 X 4
15	A-3877	1	END PLATE, JGH:E:K/2/4
16	FC0102EI	4	HEX HEAD CAPSCREW, 3/8-16 X 1-1/2, G5
17	A-0815	1	MALE ELBOW, STL, 1/4 TUBE X 1/8 NPT
18	FP0500GE	0	DOWEL PIN, 5/16 OD X 3/4 LONG, +.0002
19	FS0400EG	0	SET SCREW, CUP POINT, 3/8-16 X 1"
20	A-3876	2	END PLATE, HEATER MOUNTING, JGH:E:K/2/4
21	A-3508	3	O-RING, VT, 2.762 OD X .139, 75/85 DUROMETER
22	FC0102EH	8	HEX HEAD CAPSCREW, 3/8-16 X 1-1/4, G5
23	A-0811	1	HEX REDUCING BUSHING, 1/4 NPT (MALE) X 1/8 NPT (FEMALE), STL

WHEN A ZERO APPEARS IN THE QUANTITY COLUMN IT
DOES NOT REPRESENT THE QUANTITY REQUIRED.

*** ALWAYS PROVIDE SERIAL NUMBER WHEN ORDERING SPARE PARTS. ***

8/09/11

PARTS LIST

24	A-0804	1	STREET ELBOW, 90°, 1/8 NPT, STL
25	A-15556	1	STREET TEE, STL, 1/8P
26	A-0830	1	MALE CONNECTOR, STL, 1/4 TUBE X 1/8 NPT
29	PP0810CB	4	PIPE PLUG, 1/4NPT, HEX HD, STL
42	FC0102EJ	4	HEX HEAD CAPSCREW, 3/8-16 X 1-3/4, G5
44	A-3929	1	ADAPTER FLANGE, OIL STRAINER, JGH:E:K:T:C:D
45	C-0641	2	COVER, FRAME SIDE, JGH:E:K
46	C-0642	2	GSKT, RET, 15-5/8 X 7 X 1/32
47	FS0450HC	4	SET SCREW, CUP POINT, NYLON PATCH, 5/8-11 X 1/2
49	PP0810GB	8	PIPE PLUG, HEX HEAD, 1/2 NPT, STL
54	A-10201	28	SEMS BOLT, 3/8-16 X 1-1/2, G5

WHEN A ZERO APPEARS IN THE QUANTITY COLUMN IT
DOES NOT REPRESENT THE QUANTITY REQUIRED.

*** ALWAYS PROVIDE SERIAL NUMBER WHEN ORDERING SPARE PARTS. ***

THIS ASSEMBLY DRAWING IS FOR ILLUSTRATION PURPOSES ONLY AND MAY NOT NECESSARILY REPRESENT THE EXACT ITEMS PERTAINING TO THE UNIT ORDERED. REFER TO PARTS LIST FOR ITEMS AND QUANTITIES OF EACH REQUIRED FOR YOUR PARTICULAR ASSEMBLY.

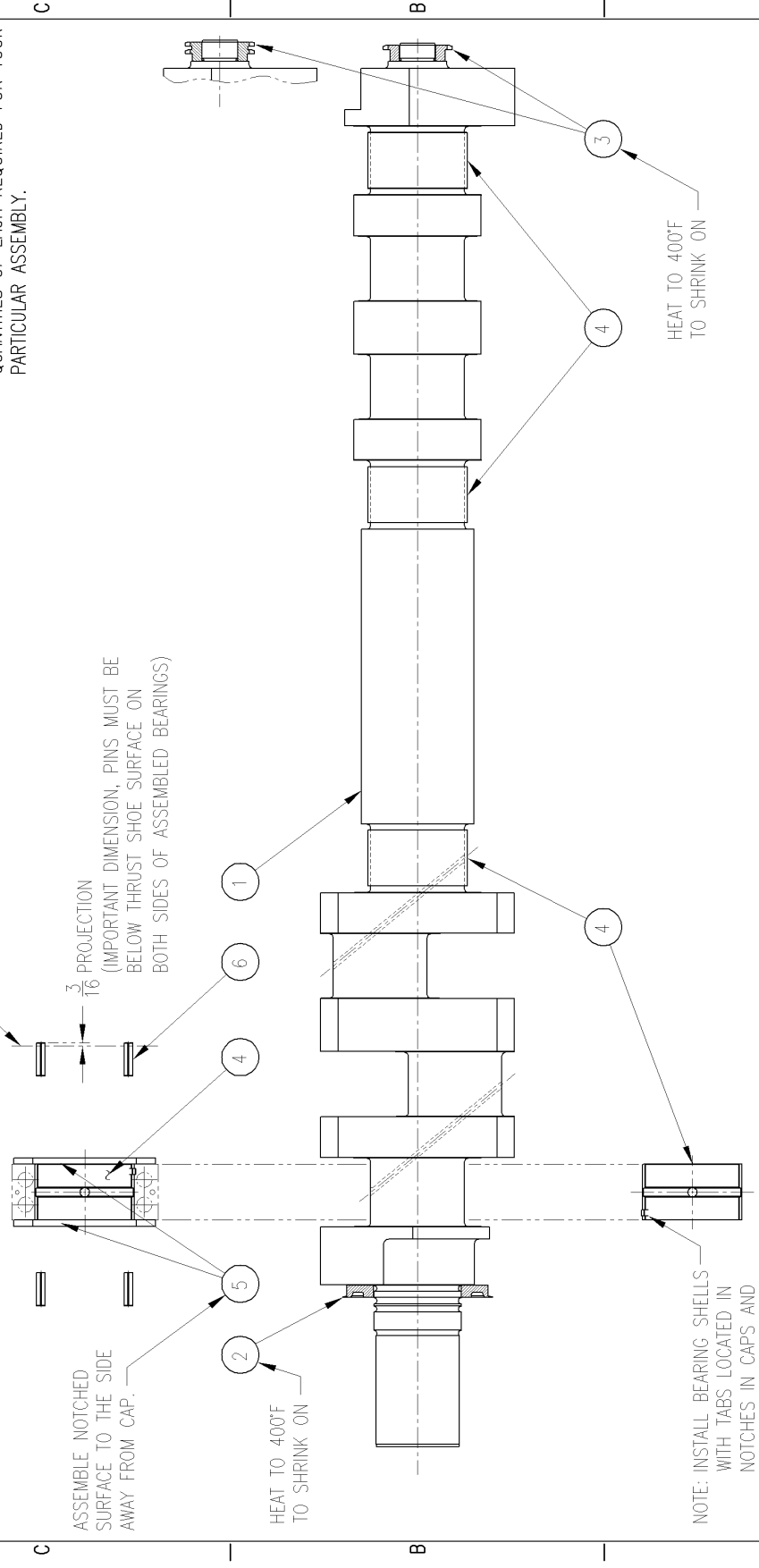
EDGE OF CAP

PROJECTION
(IMPORTANT DIMENSION, PINS MUST BE BELOW THRUST SHOE SURFACE ON BOTH SIDES OF ASSEMBLED BEARINGS)

ASSEMBLE NOTCHED SURFACE TO THE SIDE AWAY FROM CAP.

HEAT TO 400°F TO SHRINK ON

NOTE: INSTALL BEARING SHELLS WITH TABS LOCATED IN NOTCHES IN CAPS AND CRANKCASE



ARIEL CORPORATION
 35 BLACKJACK ROAD
 MOUNT VERNON, OHIO 43050

ASSEMBLY DWG. NO. **A-11864**

APPROVED:	SCALE: NONE
DATE: 01/13/03	
DRAWN: NEE	CHECKED: NEH
NO. 0	REV
10200	ECN

THIS DOCUMENT AND CONTENTS THEREIN ARE PROPRIETARY TO ARIEL CORPORATION. ONLY BY WRITTEN CONSENT AND AGREED TERMS BY ARIEL CORPORATION WILL ANY PART OF THIS DOCUMENT OR INFORMATION CONTAINED IN DOCUMENT.

REV	DESCRIPTION	INIT/DATE

8/09/11

PARTS LIST

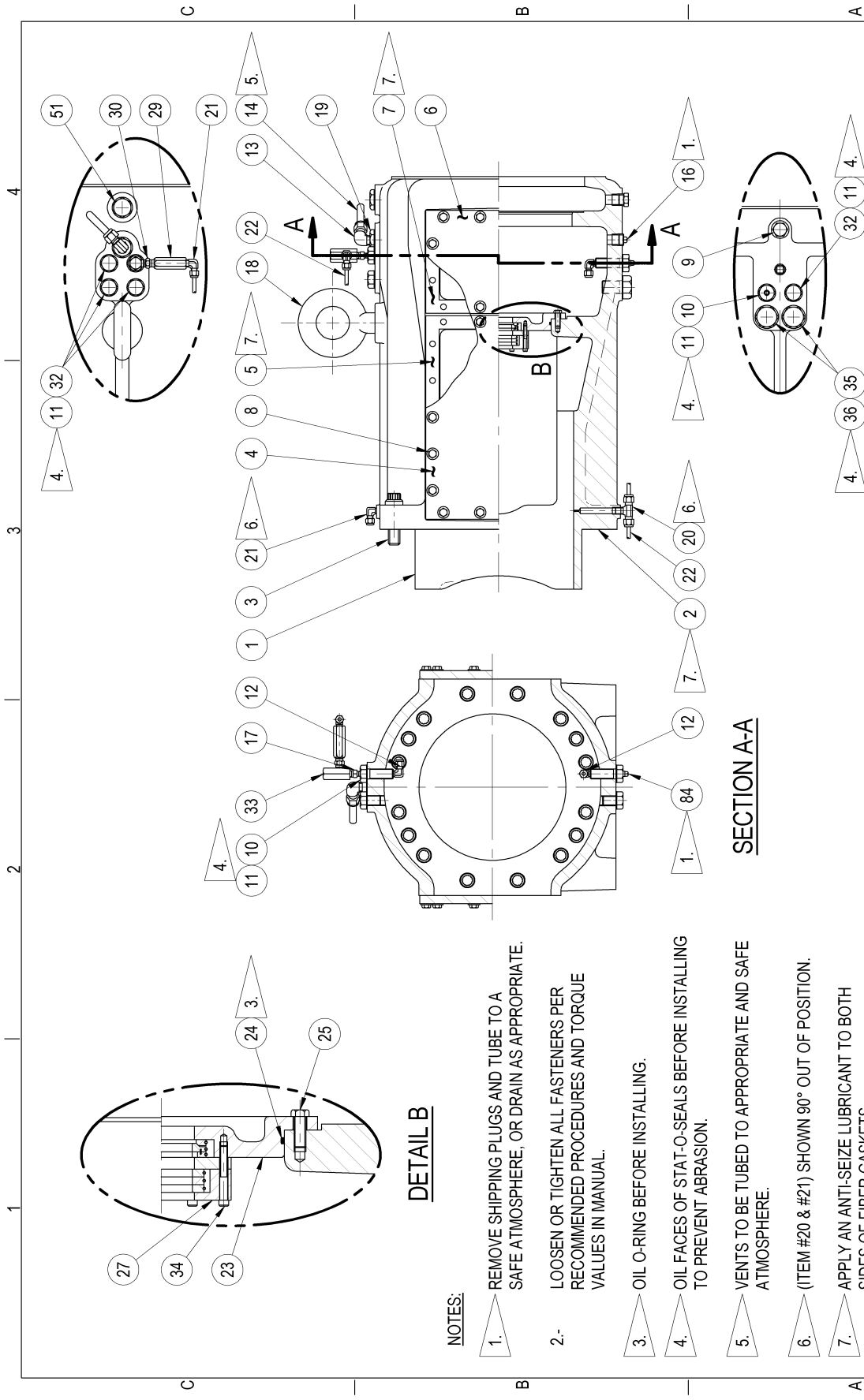
CRANKSHAFT AND MAIN BEARINGS
JGH/4, 4-1/2" STROKE

PART NO. G-13803
REF DRAWING A-11864

ITEM	PART NUMBER	QTY	DESCRIPTION
1	AD-4648	1	CRANK ASSY,FS,JGH/4
2	B-0778	0	OIL SLINGER,JGH:E:K & JGJ/6
3	A-3872	0	SPKT,40-1 X 24T
4	B-0770	8	SLEEVE BEARING, HALF SHELL, MAIN, JGH:E:K:T
5	B-0776	2	THRUST PLATE, BZ, JGH:E:K:T
6	FP0505JK	4	ROLL PIN, 1/2 OD X 2 LONG
99	AD-4648-C	0	JGH/4 CRANK W/CRATE

WHEN A ZERO APPEARS IN THE QUANTITY COLUMN IT
DOES NOT REPRESENT THE QUANTITY REQUIRED.

*** ALWAYS PROVIDE SERIAL NUMBER WHEN ORDERING SPARE PARTS. ***



DETAIL B

NOTES:

1. REMOVE SHIPPING PLUGS AND TUBE TO A SAFE ATMOSPHERE, OR DRAIN AS APPROPRIATE.
- 2.- LOOSEN OR TIGHTEN ALL FASTENERS PER RECOMMENDED PROCEDURES AND TORQUE VALUES IN MANUAL.
3. OIL O-RING BEFORE INSTALLING.
4. OIL FACES OF STAT-O-SEALS BEFORE INSTALLING TO PREVENT ABRASION.
5. VENTS TO BE TUBED TO APPROPRIATE AND SAFE ATMOSPHERE.
6. (ITEM #20 & #21) SHOWN 90° OUT OF POSITION.
7. APPLY AN ANTI-SEIZE LUBRICANT TO BOTH SIDES OF FIBER GASKETS.

SECTION A-A

ARIEL CORPORATION
 35 BLACKJACK ROAD
 MOUNT VERNON, OHIO 43050



ASSEMBLY
 DWG. NO. **A-16381**
 SHT 1 OF 1

REV	DESCRIPTION	INITIATE

REV	EON	REV	EON	REV	EON
0	15694	0	15694	0	15694

REV	DESCRIPTION	INITIATE

REV	DESCRIPTION	INITIATE

SCALE: NONE

CHECKED: CPM 08/06/09

DRAWN: CPM 08/06/09

SCALE: NONE

ASSEMBLY DWG. NO. A-16381

SHT 1 OF 1

8/09/11

PARTS LIST

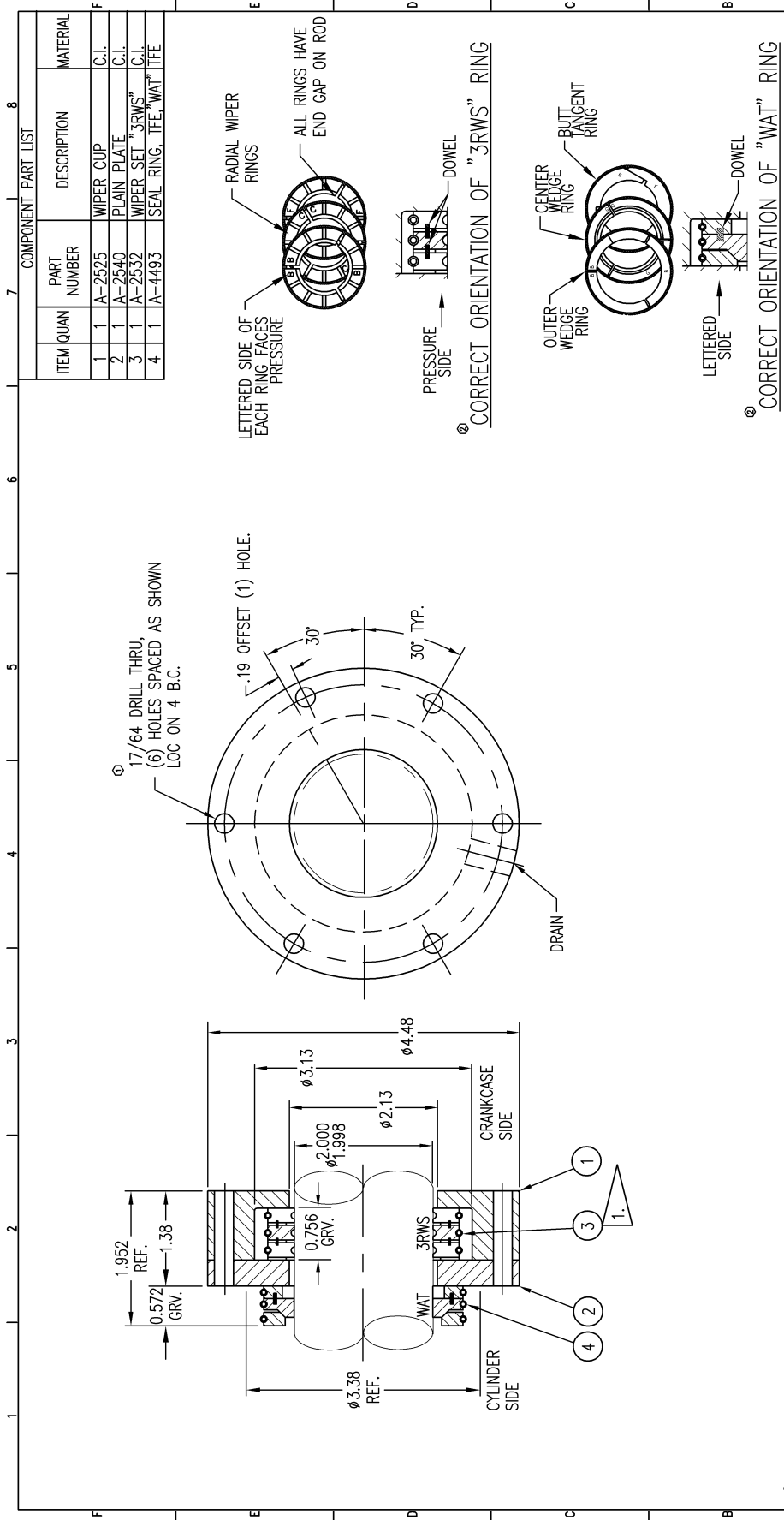
JGH:E CROSSHEAD GUIDE

PART NO. G-16751
REF DRAWING A-16381

ITEM	PART NUMBER	QTY	DESCRIPTION
1	D-3533	1	X-HD GUIDE,STD/S2,JGH:E
2	B-0835	1	GSKT,NST,17-3/4 X15-7/8X1/64
3	FC0120JO	12	12-POINT CAPSCREW, 7/8-9 X 3, G8
4	B-1834	2	COVER, GUIDE, CASTING, JGH:E:ET:K:T
5	B-0832	2	GSKT,RET,15-5/16X10-13/16X1/32
6	B-1859	2	COVER, GUIDE, CASTING, JGH:E
7	B-0834	2	GSKT,RET,10-13/16X7-3/4X1/32
8	A-6830	60	SEMS BOLT, 3/8-16 X 1-1/4, G5
9	PP0810GB	1	PIPE PLUG, HEX HEAD, 1/2 NPT, STL
10	A-0415	2	LUBE FITTING, 3/4-10 X 2
11	FW0550IA	6	STAT-O-SEAL, 3/4 DIA., NITRILE
12	A-0815	2	MALE ELBOW, STL, 1/4 TUBE X 1/8 NPT
13	A-9099	1	MALE ELBOW,STL, 3/4T X 3/4P
14	A-15517	1	SS GUIDE VENT TUBE
16	A-15683	1	PIPE PLUG,1/2NPT,DRILLED
17	A-8725	1	OMNI OIL TRAP,STEM,SS,1/8NPT
18	A-2206	1	EYEBOLT,1-1/2-6 UNC, SHORT
19	A-0863	1	HEX RED BUSH,STL,1M X 3/4F
20	A-0808	1	MALE BRANCH T,STL, 1/4T X 1/4P
21	A-0800	2	MALE ELBOW,STL, 1/4T X 1/4P
22	PT0200CB	60."	TUBING, SS, 1/4 OD X .035 WALL
23	B-1686	1	X-HD GUIDE,WIPER GLAND,H:E:K:T
24	A-3509	1	O-RING, VT, 7.762 OD X .139, 75/85 DUROMETER

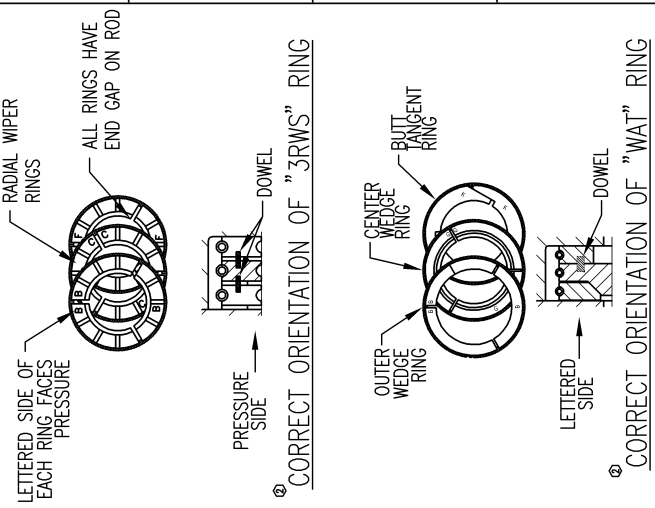
WHEN A ZERO APPEARS IN THE QUANTITY COLUMN IT
DOES NOT REPRESENT THE QUANTITY REQUIRED.

*** ALWAYS PROVIDE SERIAL NUMBER WHEN ORDERING SPARE PARTS. ***



1. INSTALL (ITEM#3) WITH GROOVES FACING THE CYLINDER (FLAT SIDE TO CRANKCASE).

COMPONENT PART LIST			
ITEM QUAN	PART NUMBER	DESCRIPTION	MATERIAL
1	A-2525	WIPER CUP	C.I.
2	A-2540	PLAIN PLATE	C.I.
3	A-2532	WIPER SET "3RWS"	C.I.
4	A-4493	SEAL RING, TFE, "WAT"	TFE



		ARIEL CORPORATION 35 BLACKJACK ROAD MOUNT VERNON, OHIO 43050		TITLE: PACKING (DIST. PIECE DIAPHRAM GLAND) WIPER/SEAL 2" ROD	
THIS DOCUMENT AND CONTENTS THEREIN ARE PROPRIETARY TO ARIEL CORPORATION AND ARE NOT TO BE REPRODUCED, COPIED, OR DISCLOSED IN ANY MANNER WITHOUT THE WRITTEN PERMISSION OF ARIEL CORPORATION. DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED.		DRAWN: C.H. 4/18/94 CHECKED: D.B. 4/25/94 APPROVED:		P.E.S. No.: PART No.: B-1687 DWR. No.: B-1687	
THIRD ANGLE PROJECTION		SEE COMPONENT PART LIST		SCALE: NONE	
2 15332		1 5616		0 5130	
B-1687 COMPLETE PACKING		B-1687-K COMPLETE RING SET		REV EON	
PART NUMBER		DESCRIPTION		REV	
17/64 DRILL THRU DIM WAS 9/32		DESCRIPTION		INT/DATE	
10/14/2008		04/25/1995		10/14/2008	
17/64 DRILL THRU DIM WAS 9/32		17/64 DRILL THRU DIM WAS 9/32		17/64 DRILL THRU DIM WAS 9/32	

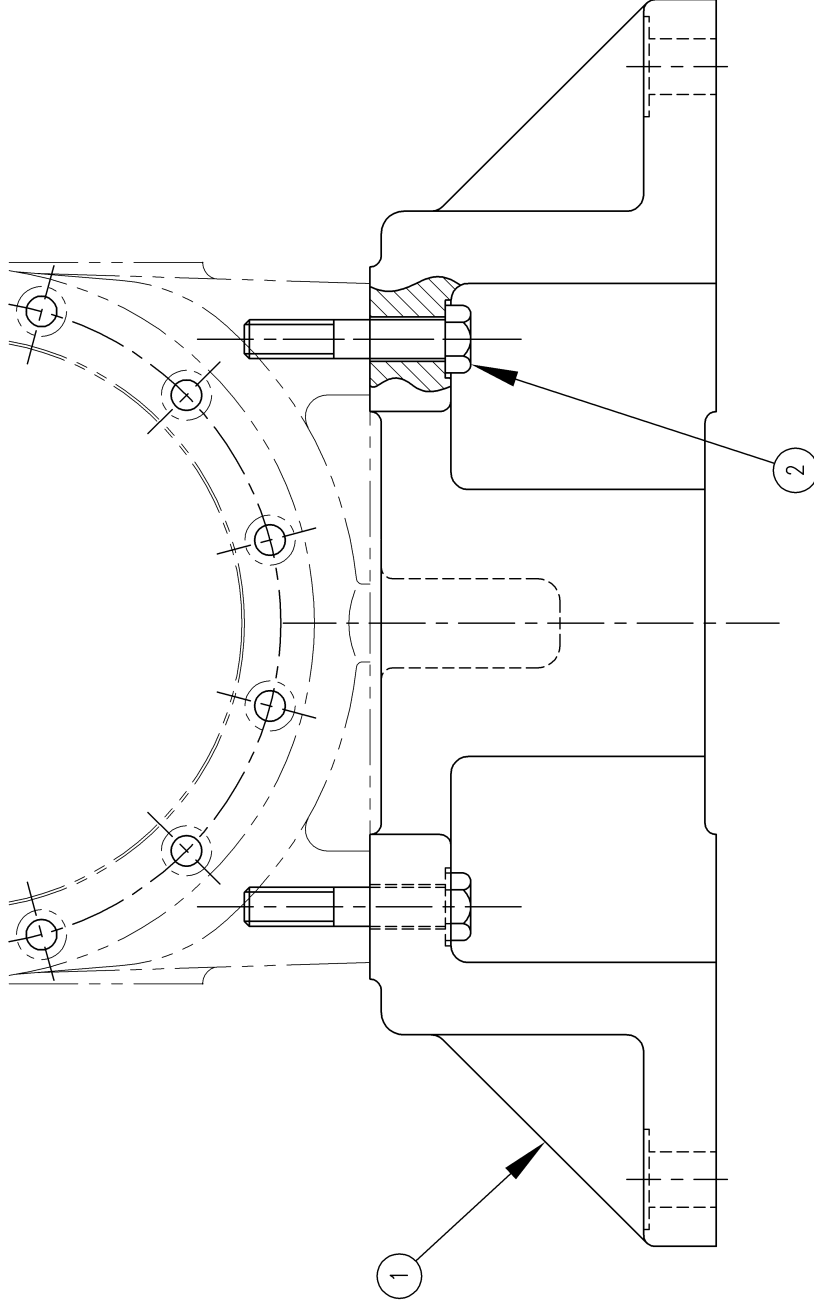
8/09/11

PARTS LIST

25	FC0102EG	3	HEX HEAD CAPSCREW, 3/8-16 X 1", G5
27	B-1687	1	PKG,2.0, OIL WIPER,WAT
29	A-3780	1	CHECK VALVE, POPPET, DOUBLE BALL, SOFT SEAT, SS, 1/4 NPTF INLET X 1/4 NPTF OUTLET
30	A-3529	1	HEX PIPE NIPPLE,STL,1/4 X 1/4
32	FC0103IK	4	HEX HEAD CAPSCREW, 3/4-10 X 2, G2
33	A-8724	1	OMNI OIL TRAP,BODY,SS,1/4NPTF
34	FC0160CJ	6	SOCKET HEAD CAPSCREW, 1/4-20 X 1-3/4, NYLOK
35	FC0102KI	2	HEX HEAD CAPSCREW, 1-8 X 1-1/2, G5
36	FW0550KA	2	STAT-O-SEAL, 1"DIA., BLACK
51	PP0810KB	1	PIPE PLUG,1"NPT,HEX HD,STL
84	A-15842	1	PIPE PLUG,1/8NPT,DRILLED

WHEN A ZERO APPEARS IN THE QUANTITY COLUMN IT
DOES NOT REPRESENT THE QUANTITY REQUIRED.

*** ALWAYS PROVIDE SERIAL NUMBER WHEN ORDERING SPARE PARTS. ***



04614

ARIEL CORPORATION
35 BLACKJACK ROAD
MOUNT VERNON, OHIO 43050



ASSEMBLY
DWG. No. **A-3622**

8/09/11

PARTS LIST

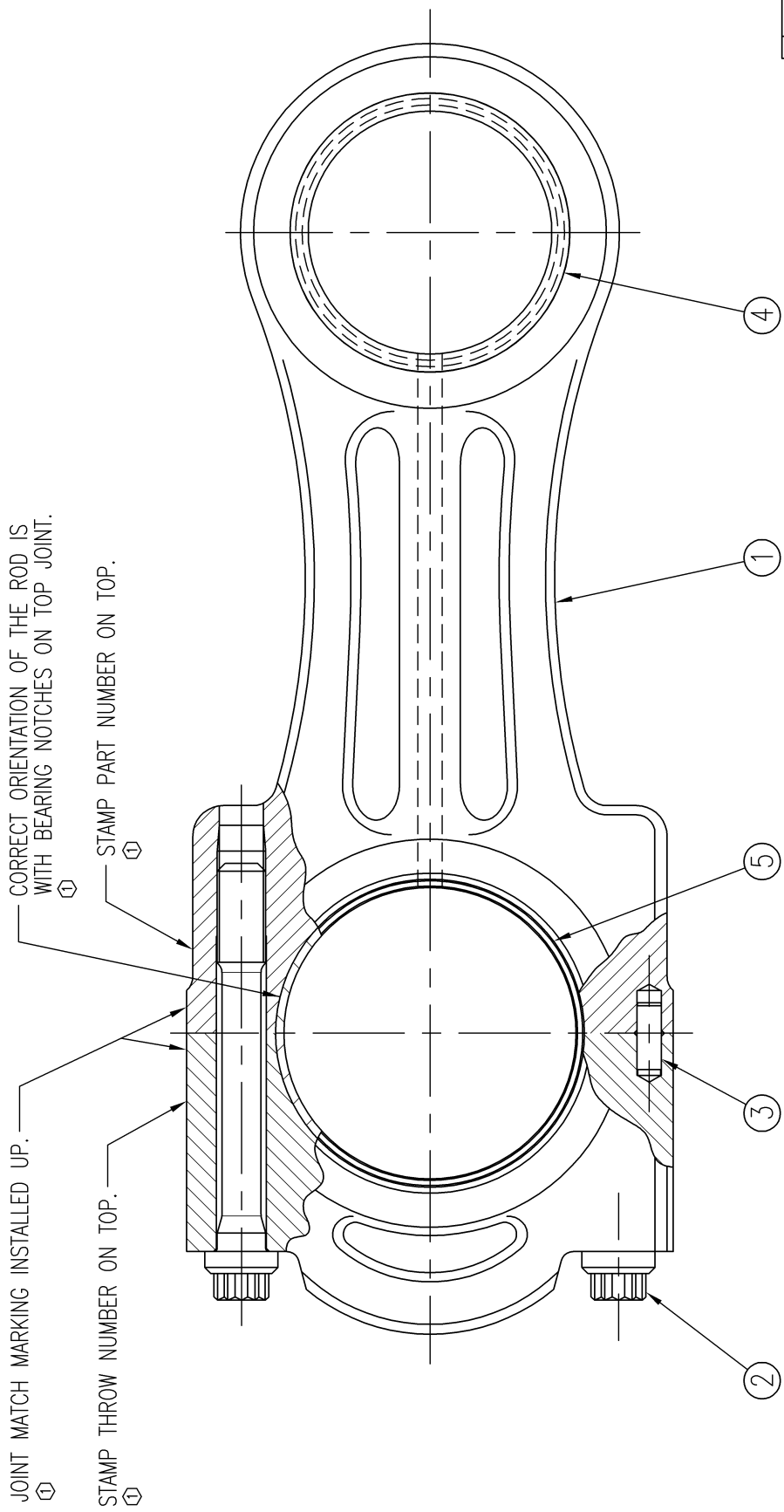
CROSSHEAD GUIDE SUPPORT, JGH:JGE;ET PART NO. G-2659
BALANCING GUIDE SUPPORT, JGH:E:K:T REF DRAWING A-3622

ITEM	PART NUMBER	QTY	DESCRIPTION
1	D-1524	1	CROSSHEAD GUIDE SUPPORT, JGH:E
2	FC0100JT	2	HEX HEAD CAPSCREW, 7/8-9 X 4-1/2, G9

WHEN A ZERO APPEARS IN THE QUANTITY COLUMN IT
DOES NOT REPRESENT THE QUANTITY REQUIRED.
*** ALWAYS PROVIDE SERIAL NUMBER WHEN ORDERING SPARE PARTS. ***

NOTES

1. LOOSEN OR TIGHTEN ALL FASTENERS PER RECOMMENDED PROCEDURES AND TORQUE VALUES IN MANUAL.
2. PRESS BRONZE BUSHING IN WHILE MAINTAINING ALIGNMENT OF OIL HOLE TO OIL PASSAGE IN ROD.
3. INSTALL BEARING SHELLS WITH TABS LOCATED IN NOTCHES IN ROD AND ROD CAP.



116756
04734

ARIEL CORPORATION
35 BLACKJACK ROAD
MOUNT VERNON, OHIO 43050

ASSEMBLY
DWG. No. **A-3985**

ADDED NOTES: "JOINT MATCH MARKING INSTALLED UP", "STAMP THROW NUMBER ON TOP", "STAMP PART NUMBER ON TOP", AND "CORRECT ORIENTATION OF THE ROD IS WITH BEARING NOTCHES ON TOP JOINT".

REV	DESCRIPTION
1	

8/09/11

PARTS LIST

CONNECTING ROD, DUCTILE IRON PART NO. G-5117
JGH WITH NEW STYLE BEARING HALF SHELL. REF DRAWING A-3985

ITEM	PART NUMBER	QTY	DESCRIPTION
1	AD-0683	1	CONNECTING ROD ASSEMBLY, DI, JGH
2	A-3817	0	12-POINT CAPSCREW, 7/8-14 X 7, G8
3	FP0500GG	0	DOWEL PIN, 5/16 OD X 1" LONG, +.0002
4	B-0772	0	BUSHING, CONNECTING ROD, BZ, JGH:E:K:T
5	B-2082	2	SLEEVE BEARING, HALF SHELL, CONNECTING ROD, JGH:E:K:T

WHEN A ZERO APPEARS IN THE QUANTITY COLUMN IT
DOES NOT REPRESENT THE QUANTITY REQUIRED.

*** ALWAYS PROVIDE SERIAL NUMBER WHEN ORDERING SPARE PARTS. ***

8/09/11

PARTS LIST

CROSSHEAD, PIN AND BALANCE NUT
JGH FRAME

PART NO. G-16962
REF DRAWING A-16656

ITEM	PART NUMBER	QTY	DESCRIPTION
1	CROSSHEAD	0	FOR PART NO. SEE COVER SHEET
1	D-0927	0	CROSSHEAD, LGT, CI, 77.8#, JGH
1	D-0928	0	CROSSHEAD, MED, CI, 106.6#, JGH
1	D-0929	0	CROSSHEAD, MED, CI, 135.8#, JGH
1	D-0930	0	CROSSHEAD, HVY, CI, 155.2#, JGH
1	D-5517	0	CROSSHEAD, XHVY, BZ, 189.4#, JGH:E:K:T, ELP
1	D-5581	0	CROSSHEAD, XLGT, ADI, 57#, JGH:E:K:T, ELP
1	D-5638	0	CROSSHEAD, BALANCE, CI, 198.0#, JGH:E:K:T, ELP
1	D-5639	0	CROSSHEAD, BALANCE, CI, 237.0#, JGH:E:K:T, ELP
1	D-5640	0	CROSSHEAD, BALANCE, CI, 276.0#, JGH:E:K:T, ELP
1	D-5641	0	CROSSHEAD, BALANCE, CI, 336.0#, JGH:E:K:T, ELP
1	D-5642	0	CROSSHEAD, BALANCE, CI, 426.0#, JGH:E:K:T, ELP
2	B-0773	1	CROSSHEAD PIN, JGH:E:K:T
3	A-3870	2	END PLATE, CROSSHEAD PIN, H:E:K
4	A-3869	1	12-POINT CAPSCREW, 1/2-20 X 10, G8
5	FN0461GA	1	SELF-LOCK NUT, ESNA, 1/2-20
6	FP0505FE	2	ROLL PIN, 1/4 OD X 3/4 LONG
7	B-0781	0	XHD NUT, 10.0#, RND, H:E:K
7	B-0782	0	XHD NUT, 14.0#, RND, H:E:K
7	B-0783	0	XHD NUT, 18.0#, RND, H:E:K
7	B-0784	0	XHD NUT, 22.0#, RND, H:E:K
7	B-0785	0	XHD NUT, 26.0#, RND, H:E:K
7	B-0786	0	XHD NUT, 30.0#, RND, H:E:K

WHEN A ZERO APPEARS IN THE QUANTITY COLUMN IT
DOES NOT REPRESENT THE QUANTITY REQUIRED.

*** ALWAYS PROVIDE SERIAL NUMBER WHEN ORDERING SPARE PARTS. ***

8/09/11

PARTS LIST

7	B-1325	0	XHD NUT,34.0#,RND, H:E:K
7	B-1573	0	XHD NUT,38.0#,RND, H:E:K
7	B-1574	0	XHD NUT,42.0#,RND, H:E:K
7	B-1575	0	XHD NUT,46.0#,RND, H:E:K
7	B-1576	0	XHD NUT,50.0#,RND, H:E:K
7	B-1577	0	XHD NUT,54.0#,RND, H:E:K
7	CROSSHEAD NUT	0	FOR PART NO. SEE COVER SHEET
8	FS0455EK	2	SET SCREW, CUP POINT, NYLON PATCH, 3/8-24 X 2
9	B-5290	0	BUSHING, CROSSHEAD, BZ, JGE:K:T, ELP

WHEN A ZERO APPEARS IN THE QUANTITY COLUMN IT
DOES NOT REPRESENT THE QUANTITY REQUIRED.

*** ALWAYS PROVIDE SERIAL NUMBER WHEN ORDERING SPARE PARTS. ***

8/09/11

PARTS LIST

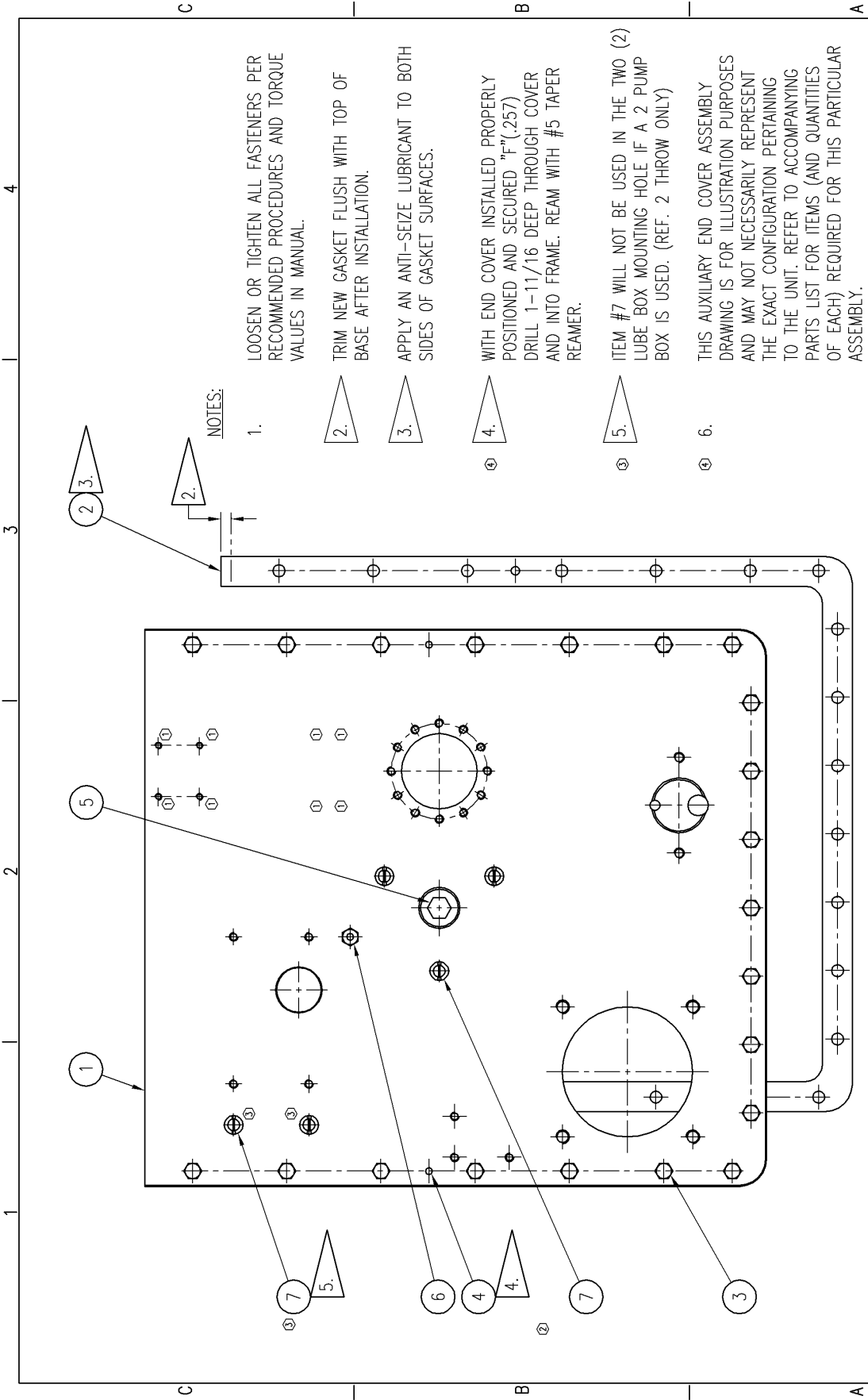
DRIVE END COVER
JGH, JGE, JGK AND JGT, 2 AND 4 THROWS.

PART NO. G-0978
REF DRAWING A-6330

ITEM	PART NUMBER	QTY	DESCRIPTION
1	C-0587	1	COVER, DRIVE END, JGH:E:K:T
2	B-0844	1	GSKT,RET,23-1/2X20-5/16X1/32
3	FC0102EK	21	HEX HEAD CAPSCREW, 3/8-16 X 2, G5
4	C-0594	1	SHAFT SEAL HOUSING, JGH:E:K
5	A-3875	1	GSKT,RND,12-13/16, X 1/32
6	A-10186	16	SEMS BOLT, 5/16-18 X 1-1/4, G5
8	FP0512EF	2	THREADED TAPER PIN, #4 X 1" LONG
9	A-0245-B	1	DUST SEAL,TFE,JGH:E:K:T,J/6
10	FP0512FJ	2	THREADED TAPER PIN, #5 X 2 LONG

WHEN A ZERO APPEARS IN THE QUANTITY COLUMN IT
DOES NOT REPRESENT THE QUANTITY REQUIRED.

*** ALWAYS PROVIDE SERIAL NUMBER WHEN ORDERING SPARE PARTS. ***



NOTES:

1. LOOSEN OR TIGHTEN ALL FASTENERS PER RECOMMENDED PROCEDURES AND TORQUE VALUES IN MANUAL.
2. TRIM NEW GASKET FLUSH WITH TOP OF BASE AFTER INSTALLATION.
3. APPLY AN ANTI-SEIZE LUBRICANT TO BOTH SIDES OF GASKET SURFACES.
4. WITH END COVER INSTALLED PROPERLY POSITIONED AND SECURED "F"(,257) DRILL 1-11/16 DEEP THROUGH COVER AND INTO FRAME. REAM WITH #5 TAPER REAMER.
5. ITEM #7 WILL NOT BE USED IN THE TWO (2) LUBE BOX MOUNTING HOLE IF A 2 PUMP BOX IS USED. (REF. 2 THROW ONLY)
6. THIS AUXILIARY END COVER ASSEMBLY DRAWING IS FOR ILLUSTRATION PURPOSES AND MAY NOT NECESSARILY REPRESENT THE EXACT CONFIGURATION PERTAINING TO THE UNIT. REFER TO ACCOMPANYING PARTS LIST FOR ITEMS (AND QUANTITIES OF EACH) REQUIRED FOR THIS PARTICULAR ASSEMBLY.

4	③A3: ADDED NOTE #6. ③B3: FLAG NOTE #4 WAS "F"(,257) DRILL 1-11/16 DEEP (THROUGH COVER AND 11/16 IN FRAME). REAM WITH #5 TAPER REAMER - UPDATED TO CURRENT DRAFTING STANDARDS.	JBY 01/22/2007
3	③ ZONE B3 ADDED NOTE #5 ITEM #7 WILL NOT BE USED IN THE TWO (2) LUBE BOX MOUNTING HOLE. ③ ZONE C1 ADDED TWO MORE ITEMS #7 AND FLAG #5.	DPD 10/18/00
REV	DESCRIPTION	INIT/DATE

3	8457	3	8457	ECN	REV	ECN	REV	ECN	REV
2	7842	2	7842	ECN	REV	ECN	REV	ECN	REV
1	7323	1	7323	ECN	REV	ECN	REV	ECN	REV
4	141140	4	141140	ECN	REV	ECN	REV	ECN	REV

ARIEL CORPORATION
 35 BLACKJACK ROAD
 MOUNT VERNON, OHIO 43050

APPROVER: _____
 DRAWN: CAH 5/13/96
 CHECKED: NH 7/12/96
 SCALE: NONE

ASSEMBLY DWS. NO. **A-6328**

THIS DOCUMENT AND CONTENTS THEREIN ARE PROPRIETARY TO ARIEL CORPORATION. ONLY BY WRITTEN CONSENT AND AGREED TERMS BY ARIEL CORPORATION WILL ANY PART BE REPRODUCED OR USED IN WHOLE OR IN PART OR IN ANY MANNER WITHOUT THE PRIOR DISCLOSURE OF INFORMATION CONTAINED IN DOCUMENT.

8/09/11

PARTS LIST

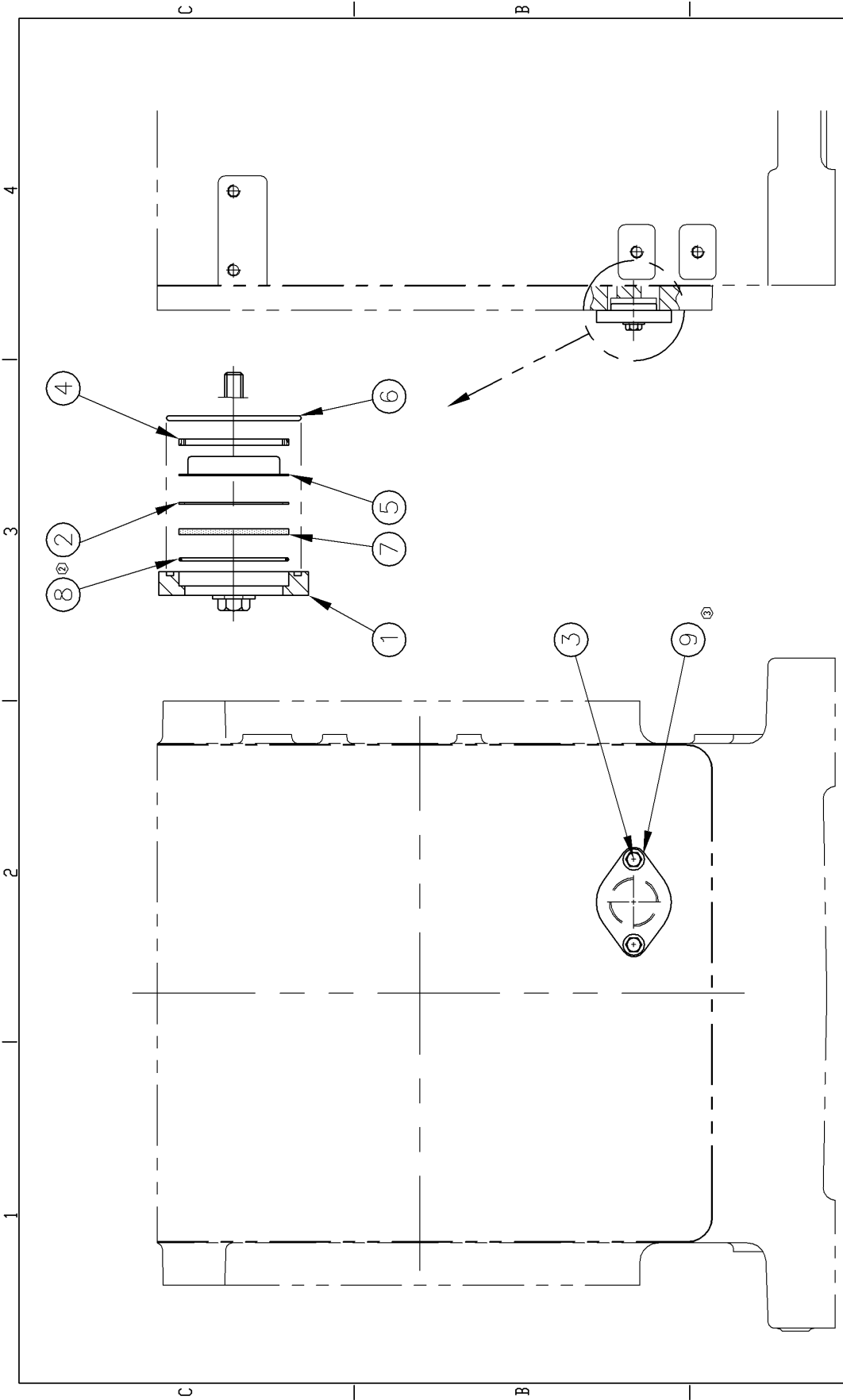
AUXILIARY END COVER
JGH/4, JGE/4, JGK/4 AND JGT/4

PART NO. G-1068
REF DRAWING A-6328

ITEM	PART NUMBER	QTY	DESCRIPTION
1	C-2593	1	COVER, AUXILIARY END, JGH:E:K:T/4
2	B-0844	1	GSKT,RET,23-1/2X20-5/16X1/32
3	FC0102EI	21	HEX HEAD CAPSCREW, 3/8-16 X 1-1/2, G5
4	FP0512FH	2	THREADED TAPER PIN, #5 X 1-1/2 LONG
5	PP0850MB	1	PIPE PLUG,1-1/4NPTF,HEXSOC,STL
6	A-0827	1	MALE CONNECTOR, STL, 1/4 TUBE X 1/4 NPT
7	A-0490	3	PUSH IN PLUG,PL, 5/16,YELLOW

WHEN A ZERO APPEARS IN THE QUANTITY COLUMN IT
DOES NOT REPRESENT THE QUANTITY REQUIRED.

*** ALWAYS PROVIDE SERIAL NUMBER WHEN ORDERING SPARE PARTS. ***



NOTES:

1. LOOSEN OR TIGHTEN ALL FASTENERS PER RECOMMENDED PROCEDURES AND TORQUE VALUES IN MANUAL.

3	10940	REV	DESCRIPTION	INIT/DATE
2	8067			
1	8001			
0	4837			

ADDED TWO FLAT WASHERS. ● BS, ADDED ITEM #9.

CHANGED OUTER GASKET TO AN O-RING. REMOVED (1) ITEM #2 AND ADDED (1) ITEM #8.

3	10940	REV	ECN
2	8067		
1	8001		
0	4837		

DRW: DB 5/25/93

CHECKED: 6/8/93

ARIEL CORPORATION
 35 BLACKJACK ROAD
 MOUNT VERNON, OHIO 43050

ARIEL

APPROVER: _____
 SCALE: NONE

ASSEMBLY DWG. NO. **A-4068**

THIS DOCUMENT AND CONTENTS THEREIN ARE PROPRIETARY TO ARIEL CORPORATION. ONLY BY WRITTEN CONSENT AND AGREED TERMS BY ARIEL CORPORATION WILL ANY PART OF THIS DOCUMENT BE DISCLOSED OR NOT GRANT THE RIGHT TO DISCLOSE OR USE IN PART OR IN WHOLE INFORMATION CONTAINED IN DOCUMENT.

8/09/11

PARTS LIST

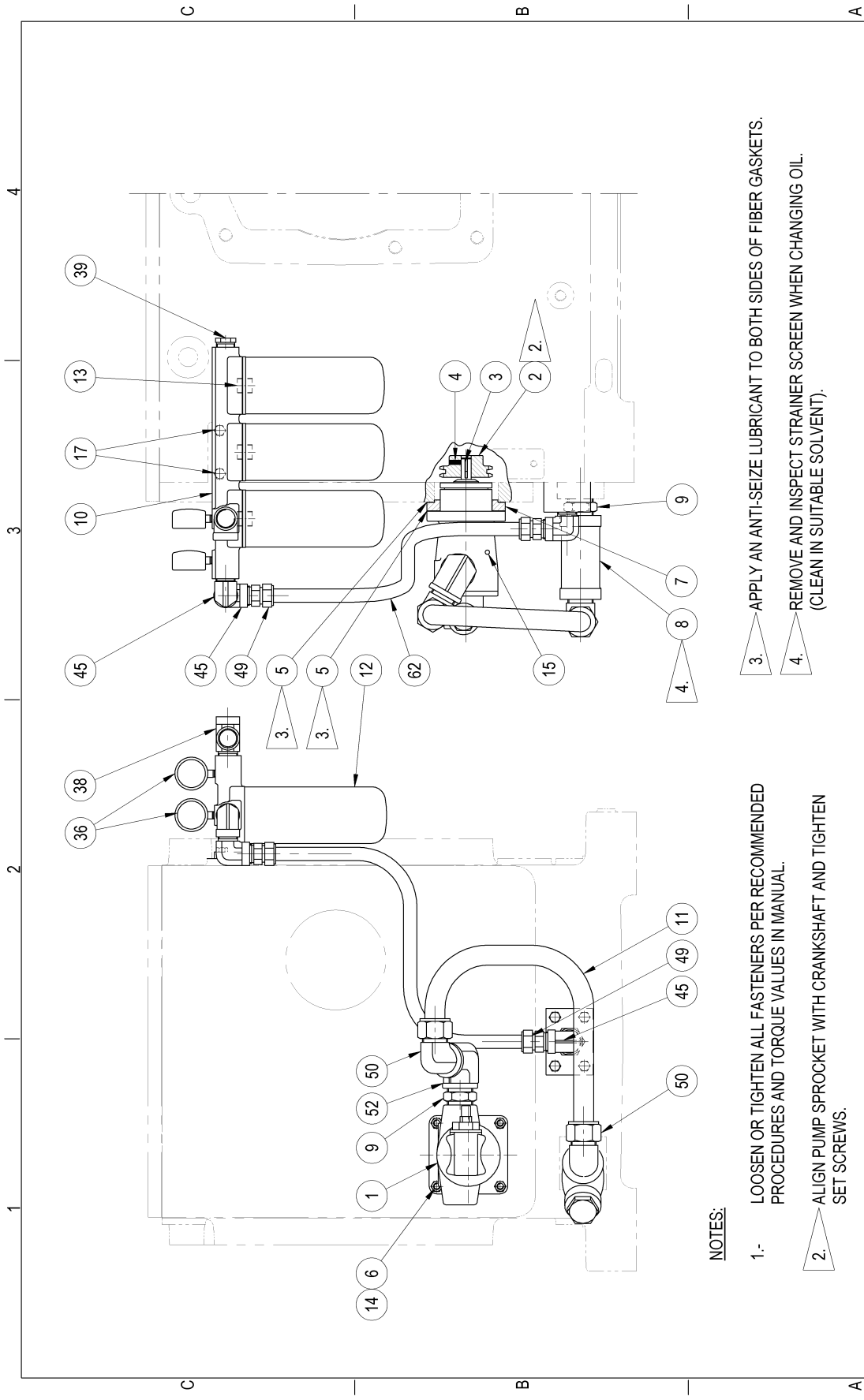
SIGHT GLASS ASSEMBLY STD
JGE:K:T, JGC:D, JGB:V, & JGJ/6

PART NO. G-0986
REF DRAWING A-4068

ITEM	PART NUMBER	QTY	DESCRIPTION
1	B-3322	1	FLANGE,SIGHT GLASS,HEKT:CD:BV
2	A-5375	1	GSKT,RND,2-1/4,X 1/32,INNER
3	FC0102EG	2	HEX HEAD CAPSCREW, 3/8-16 X 1", G5
4	A-5376	1	GSKT,RND,2-1/4 X 1/8,OUTER
5	A-5378	1	REFLECTOR,SIGHT GLASS,2"
6	A-0745	1	O-RING, VT, 2.756 OD X .103, 75/85 DUROMETER
7	A-5374	1	SIGHT GLASS,2-1/4"LENS
8	A-9870	1	O-RING, VT, 2.254 OD X .070, 75/85 DUROMETER
9	FW0501DA	2	FLAT WASHER, 3/8 ID PLAIN

WHEN A ZERO APPEARS IN THE QUANTITY COLUMN IT
DOES NOT REPRESENT THE QUANTITY REQUIRED.

*** ALWAYS PROVIDE SERIAL NUMBER WHEN ORDERING SPARE PARTS. ***



NOTES:

- 1.- LOOSEN OR TIGHTEN ALL FASTENERS PER RECOMMENDED PROCEDURES AND TORQUE VALUES IN MANUAL.
- 2. ALIGN PUMP SPROCKET WITH CRANKSHAFT AND TIGHTEN SET SCREWS.
- 3. APPLY AN ANTI-SEIZE LUBRICANT TO BOTH SIDES OF FIBER GASKETS.
- 4. REMOVE AND INSPECT STRAINER SCREEN WHEN CHANGING OIL. (CLEAN IN SUITABLE SOLVENT).

ARIEL CORPORATION
 35 BLACKJACK ROAD
 MOUNT VERNON, OHIO 43050



ASSEMBLY
 DWG. NO. **A-16484**
 SHT 1 OF 1

REV	DESCRIPTION	INITIATE
0	15694	CPM 08/14/09
REV	EON	MLB 08/14/09
REV	EON	NONE

THIS DOCUMENT AND CONTENTS THEREIN ARE PROPRIETARY TO ARIEL CORPORATION. ONLY BY WRITTEN CONSENT AND AGREED TERMS BY ARIEL CORPORATION GIVES THE RIGHT TO REPRODUCE OR TRANSMIT IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM. USE IN PART OR IN WHOLE INFORMATION CONTAINED IN DOCUMENT.

REV	DESCRIPTION	INITIATE
0	15694	CPM 08/14/09
REV	EON	MLB 08/14/09
REV	EON	NONE

8/09/11

PARTS LIST

LUBE OIL PUMP, STRAINER, FILTER
JGH:E:K:T/4 FOR THERMOSTATIC VALVE

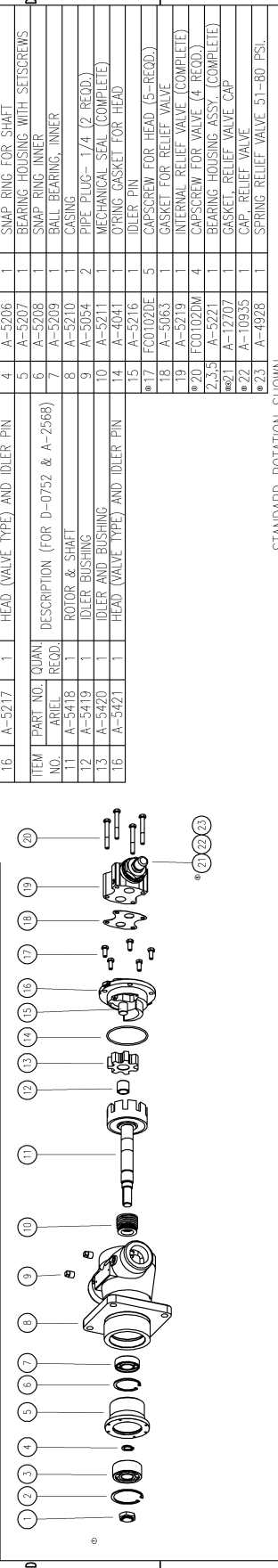
PART NO. G-16830
REF DRAWING A-16484

ITEM	PART NUMBER	QTY	DESCRIPTION
1	D-0752	1	L O PUMP,VIKING,HEKT/4,JGC:D/2
2	A-3918	1	SPKT,40-1 X 21T
3	FK0361EG	1	SQUARE KEY, 3/16 X 1" LONG
4	FS0455DG	2	SET SCREW, CUP POINT, NYLON PATCH, 5/16-24 X 1"
5	B-0779	2	GSKT,SQ,5-15/16X5-15/16X1/32
6	FD0212GDI	4	1/2 DOG PT.STUD,1/2-13 X 3-1/2
7	B-0777	1	ADAPTER, LUBE OIL PUMP, VIKING, JGJ/6 & JGH:E:K:T
8	A-8249	1	LO STRAINER, 1-1/2"NPT
9	A-0965	2	HEX PIPE NIPPLE,1-1/2P
10	D-0744	1	LUBE OIL FILTER HEAD, 3 ELEMENT
11	A-3938	1	TUBE,PREF,LO,SUC,H/4:C/2
12	A-0661	3	SPIN-ON FILTER, LUBE OIL
13	A-0660	0	STUD, LUBE OIL SPIN-ON FILTER
14	FN0460GA	4	SELF-LOCK NUT,ESNA,1/2-13
15	A-5257	1	DRIVE PLUG, VIKING WEEPHOLE
17	FC0102GH	2	HEX HEAD CAPSCREW, 1/2-13 X 1-1/4, G5
36	A-0261	2	GAUGE,100PSI,1/4NPT,BOTT MOUNT
38	A-0972	1	STREET TEE,STL, 1"P
39	PP0810KB	1	PIPE PLUG,1"NPT,HEX HD,STL
45	A-0847	3	STREET ELBOW,STL,1"NPT
49	A-0967	2	MALE CONN,STL, 1T X 1P
50	A-0964	2	MALE ELBOW,STL,1-1/2T X 1-1/2P
52	A-0968	1	FEMALE ELBOW,STL,1-1/2P

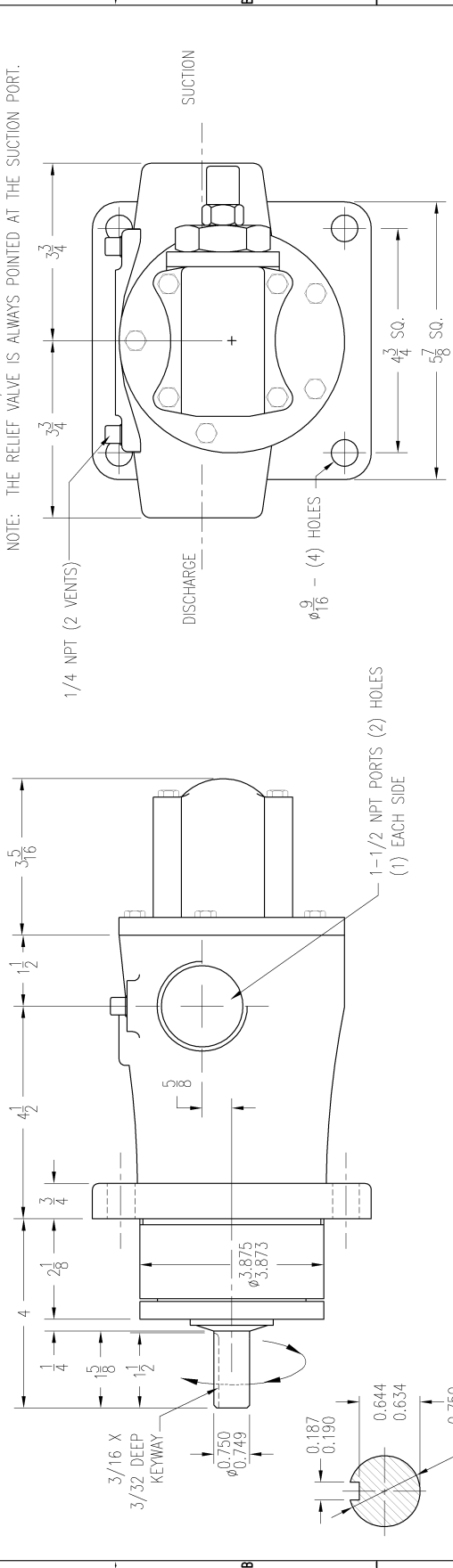
WHEN A ZERO APPEARS IN THE QUANTITY COLUMN IT
DOES NOT REPRESENT THE QUANTITY REQUIRED.

*** ALWAYS PROVIDE SERIAL NUMBER WHEN ORDERING SPARE PARTS. ***

ARIEL PART NUMBER	ROTATION	MODEL No.	GPR	PUMP CAPACITY	DESCRIPTION (FOR D-0292 & A-4441)	ITEM NO.	ARIEL P/N	QUAN. RECD.	DESCRIPTION (COMMON PARTS)
D-0292	STANDARD	HL495	.01328	PUMP CAPACITY IS APPROX. 15.5 GPM (ACTUAL) AT 1285 RPM (PUMP SPEED) AT 100 SSU VISCOSITY. (REF. VIKING CURVE No. 144-11)	ROTOR & SHAFT	1	A-5203	1	LOCKNUT
A-4441	REVERSE	HL495	.01898	PUMP CAPACITY IS APPROX. 21 GPM (ACTUAL) AT 1130 RPM (PUMP SPEED) AT 100 SSU VISCOSITY. (REF. VIKING CURVE No. 144-19)	IDLER BUSHING	2	A-5204	1	SNAP RING - OUTER
D-0752	STANDARD	HL495	.01898	PUMP CAPACITY IS APPROX. 21 GPM (ACTUAL) AT 1130 RPM (PUMP SPEED) AT 100 SSU VISCOSITY. (REF. VIKING CURVE No. 144-19)	IDLER AND BUSHING	3	A-5205	1	BALL BEARING - OUTER
A-2588	REVERSE	HL495	.01898	PUMP CAPACITY IS APPROX. 21 GPM (ACTUAL) AT 1130 RPM (PUMP SPEED) AT 100 SSU VISCOSITY. (REF. VIKING CURVE No. 144-19)	HEAD (VALVE TYPE) AND IDLER PIN	4	A-5206	1	SNAP RING FOR SHAFT
					HEAD (VALVE TYPE) AND IDLER PIN	5	A-5207	1	BEARING HOUSING WITH SETSCREWS
					DESCRIPTION (FOR D-0752 & A-2568)	6	A-5208	1	SNAP RING INNER
					ROTOR & SHAFT	7	A-5209	1	BALL BEARING - INNER
					IDLER BUSHING	8	A-5210	1	CASING
					IDLER AND BUSHING	9	A-5054	2	PIPE PLUG - 1/4" (2 REED.)
					MECHANICAL SEAL (COMPLETE)	10	A-5211	1	MECHANICAL SEAL (COMPLETE)
					ORING GASKET FOR HEAD	14	A-6041	1	ORING GASKET FOR HEAD
					HEAD (VALVE TYPE) AND IDLER PIN	15	A-5216	1	IDLER PIN
					CAPSCREW FOR HEAD (5-REED.)	17	FC0102DE	5	CAPSCREW FOR HEAD (5-REED.)
					GASKET FOR RELIEF VALVE	18	A-5063	1	GASKET FOR RELIEF VALVE
					INTERNAL RELIEF VALVE (COMPLETE)	19	A-5219	1	INTERNAL RELIEF VALVE (COMPLETE)
					CAPSCREW FOR VALVE (4 REED.)	20	FC0102DM	4	CAPSCREW FOR VALVE (4 REED.)
					BEARING HOUSING ASSY. (COMPLETE)	23.5	A-5221	1	BEARING HOUSING ASSY. (COMPLETE)
					GASKET RELIEF VALVE CAP	27	A-12707	1	GASKET RELIEF VALVE CAP
					CAP RELIEF VALVE	22	A-10935	1	CAP RELIEF VALVE
					SPRING RELIEF VALVE 51-80 PSI.	23	A-4928	1	SPRING RELIEF VALVE 51-80 PSI.



STANDARD ROTATION SHOWN.
TO REVERSE ROTATION, REMOVE AND REMOUNT RELIEF VALVE 180°
NOTE: THE RELIEF VALVE IS ALWAYS POINTED AT THE SUCTION PORT.



MANUFACTURER: VIKING PUMP
RELIEF VALVE SET AT 75 PSIG.
C.I. BODY & ROTOR; STL. SHAFT
MAX. OPERATING TEMP. 225°F

NOTES:
* 1.- GALLONS PER REVOLUTION (GPR) IS THEORETICAL DISPLACEMENT FOR DESIGN PURPOSES. REFER TO MANUFACTURERS PERFORMANCE CHARTS.

5	10314	1	10314	1	10314	1	10314	1	10314
4	15391	1	15391	1	15391	1	15391	1	15391
3	4984	1	4984	1	4984	1	4984	1	4984
8	12535	2	12535	2	12535	2	12535	2	12535
7	12132	1	12132	1	12132	1	12132	1	12132
6	1247	0	1247	0	1247	0	1247	0	1247

ARIEL CORPORATION
35 BLACKJACK ROAD
MOUNT VERNON, OHIO 43050

DATE: 3/28/79
A.H. 11/19/79

PROCESSED BY: NONE

WORK ORDER NO.: D-0292

FIG. NO.: D-0292

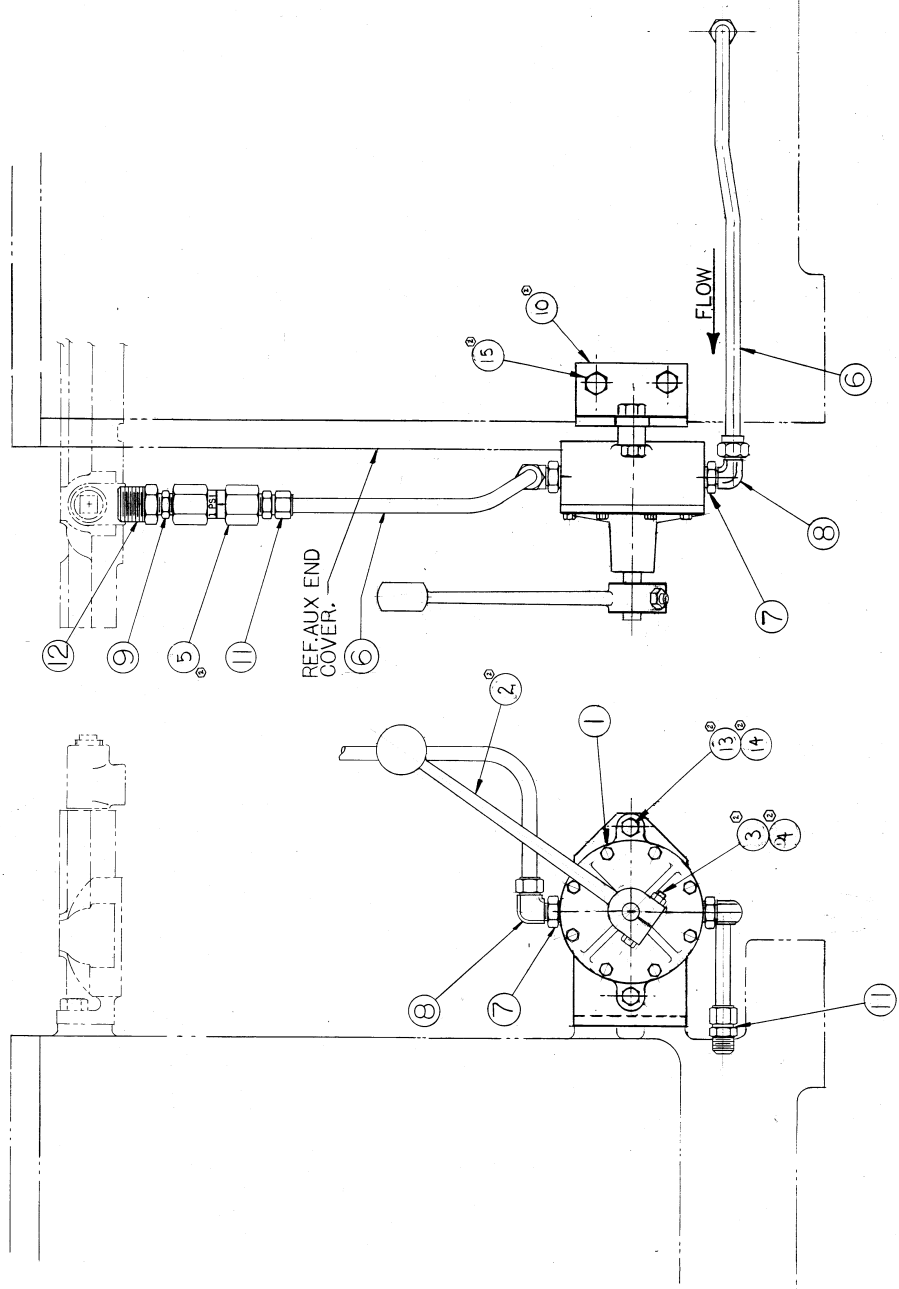
8/09/11

PARTS LIST

62 PT0200JD 40." SS,TUBING, 1" OD X .065 WALL

WHEN A ZERO APPEARS IN THE QUANTITY COLUMN IT
DOES NOT REPRESENT THE QUANTITY REQUIRED.

*** ALWAYS PROVIDE SERIAL NUMBER WHEN ORDERING SPARE PARTS. ***



REF AUX END COVER.

FLOW

218001
 14862
 012500
 ARIEL CORPORATION
 MOUNT VERNON, OHIO
 ASSY DWG No D-1341

THIS DOCUMENT AND CONTENTS
 HEREIN ARE UNCLASSIFIED
 DATE 05-08-2014 BY 60322
 UNLESS INDICATED OTHERWISE
 THIS DOCUMENT IS IN THE PUBLIC
 DOMAIN AND IS NOT TO BE
 REPRODUCED OR TRANSMITTED
 IN ANY FORM OR BY ANY
 MEANS, ELECTRONIC OR
 MECHANICAL, INCLUDING
 PHOTOCOPYING, RECORDING,
 OR BY ANY INFORMATION
 STORAGE AND RETRIEVAL
 SYSTEM.

8/09/11

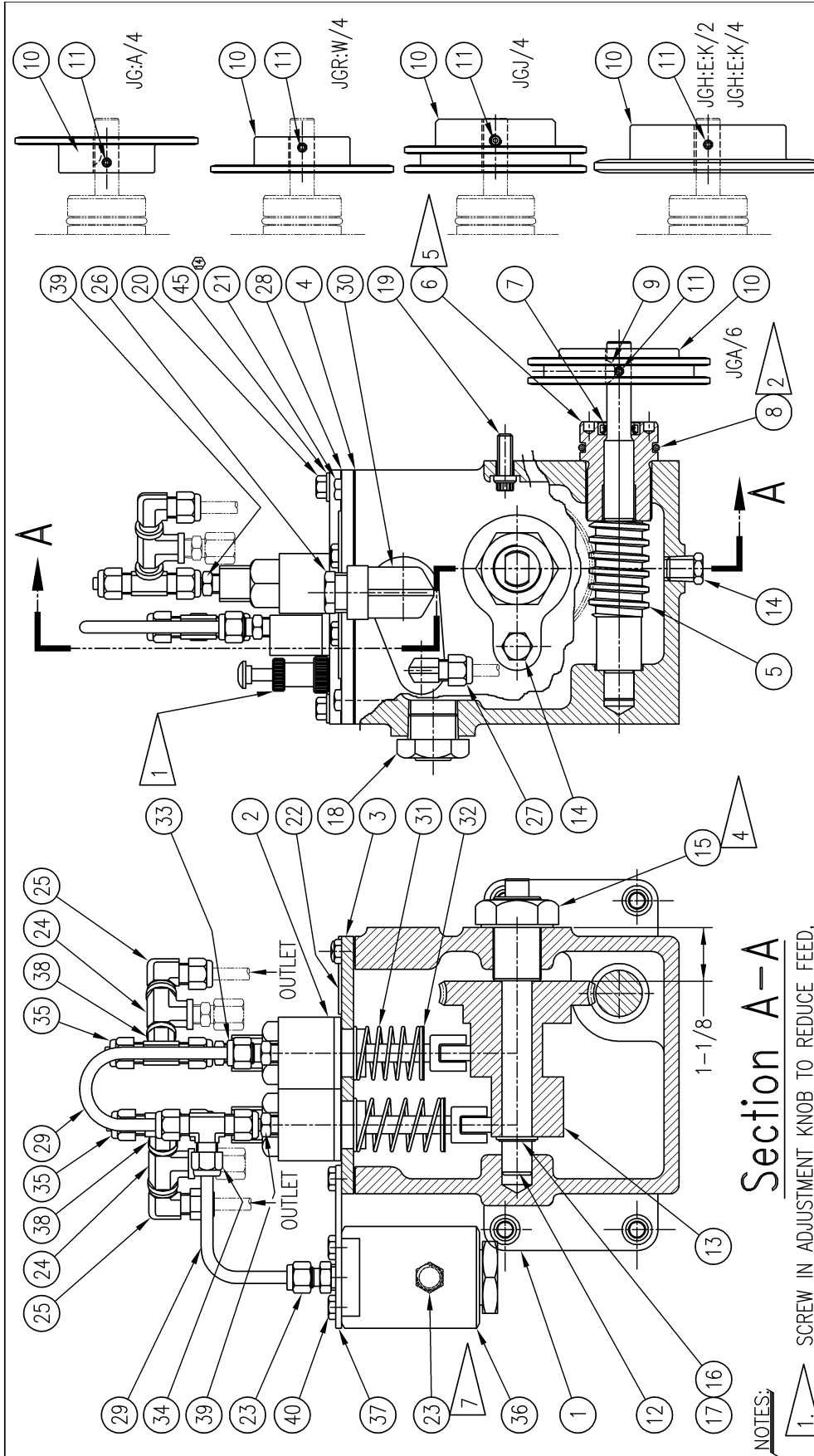
PARTS LIST

LUBE OIL PRIMING PUMP, MOUNTED, STANDARD, PART NO. G-2246
JGH:E:K:T/2:4, JGC:D/2 REF DRAWING D-1341

ITEM	PART NUMBER	QTY	DESCRIPTION
1	B-0425	1	MANUAL PRIMING PUMP
2	B-1473	0	PRIMING PUMP HANDLE, CLAMP TYPE
3	FC0125DK	0	12-POINT CAPSCREW, 5/16-24 X 2, G8
4	FN0461DA	0	SELF-LOCK NUT, ESNA, 5/16-24
5	A-2370	1	CHECK VALVE, POPETT, 1 PSI CRACKING PRESSURE, 1/2FNPT
6	PT0200FB	57."	SS, TUBING, 1/2 OD X .035 WALL
7	A-0844	2	HEX RED BUSH, STL, 3/4M X 1/2F
8	A-0901	2	MALE ELBOW, STL, 1/2T X 1/2P
9	A-0849	1	HEX PIPE NIPPLE, 1/2P, STL
10	B-0817	1	BRACKET, PRIMING PUMP, JGR:W:J:K
11	A-0857	2	MALE CONN, STL, 1/2T X 1/2P
12	A-0888	1	HEX RED BUSH, STL, 1M X 1/2F
13	FC0100EI	2	HEX HEAD CAPSCREW, 3/8-16 X 1-1/2, G9
14	FN0450EB	2	HEX NUT, STL, Z/PL, 3/8-16
15	FC0102GG	2	HEX HEAD CAPSCREW, 1/2-13 X 1", G5

WHEN A ZERO APPEARS IN THE QUANTITY COLUMN IT
DOES NOT REPRESENT THE QUANTITY REQUIRED.

*** ALWAYS PROVIDE SERIAL NUMBER WHEN ORDERING SPARE PARTS. ***



Section A-A

- NOTES:**
1. SCREW IN ADJUSTMENT KNOB TO REDUCE FEED.
 2. SCREW ADJUSTMENT KNOB OUT TO INCREASE FEED.
 3. OIL O-RING BEFORE INSTALLING.
 4. SEE CYLINDER LUBRICATION SHEET FOR CORRECT PUMP SETTING (DISTRIBUTION BLOCK CYCLE INDICATOR TIMING).
 5. TORQUE TO 75 FT/LB.
 6. TORQUE TO 70 FT/LB.

6. LOOSEN OR TIGHTEN ALL FASTENERS PER RECOMMENDED PROCEDURES AND TORQUE VALUES IN MANUAL.
7. OIL INLET ON BACK SIDE OF FILTER.

REV	DESCRIPTION	ECN	REV	ECN	REV	ECN	REV	ECN	REV	ECN	REV	ECN	REV	ECN	APPROVED:	SCALE:	ASSEMBLY DWG. NO.:
14	ADDED ITEM #45.														BH	2/20/89	D-1107
		REV	ECN	REV	ECN	REV	ECN	REV	ECN	REV	ECN	REV	ECN	REV	2/20/89	NONE	
		11	7704	7	5895	3	4297										
		14	8001	10	6487	6	5561	2	4159								
		13	7908	9	6443	5	4752	1	3882								
		12	7839	8	6416	4	4428	0	3739								

ARIEL CORPORATION
 35 BLACKJACK ROAD
 MOUNT VERNON, OHIO 43050

THIS DOCUMENT AND CONTENTS THEREIN ARE PROPRIETARY TO ARIEL CORPORATION. ONLY BY WRITTEN CONSENT AND PARTIAL DISCLOSURE TO ARIEL CORPORATION CAN THE RIGHT TO MANUFACTURE, BUT DOES NOT GRANT THE RIGHT TO DISCLOSE OR USE IN PART OR IN WHOLE INFORMATION CONTAINED IN THIS DOCUMENT.

8/09/11

PARTS LIST

FORCE FEED LUBRICATOR
TWIN 3/8" DIA. PUMPS
JGH:E:K:T 2/4

PART NO. G-2449
REF DRAWING D-1107

ITEM	PART NUMBER	QTY	DESCRIPTION
1	D-2001	1	FF LUBR,2 PUMP TANK ASSY
2	A-9478	2	FF LUBR PUMP 3/8 PREMIER
3	A-2347	0	TOP CVR DOUBLE FF LUBE BOX
4	A-2349	0	GSKT,ARL DBL LUBE BOX CVR,1/32
5	A-2360	0	WORM SHAFT,FF LUBR 1/2D E
6	A-5638	0	HSG BRG FF LUBE BOX LH
7	A-3911	0	SHAFT OIL SEAL
8	A-0030	0	O-RING, VT, 1.637 OD X .139, 75/85 DUROMETER
9	FK0360AA	1	WOODRUFF KEY, #204, 1/2 OD X 1/16 WIDE
10	A-3873	1	SPKT,40-1 X 28T,.500"BORE
11	FS0455DH	1	SET SCREW, CUP POINT, NYLON PATCH, 5/16-24 X 1-1/4
12	A-2353	0	ADJ SHAFT-DOUBLE LUBE BOX
13	B-1177	0	CAM/WORM GEAR,2-PUMP FF LUBR
14	PP0810CB	2	PIPE PLUG,1/4NPT,HEX HD,STL
15	FN0457KA	0	HEX NUT,JAM,STL,1"-14
16	A-2359	0	SNAP RING,STL,RADIAL ASSYO.625
17	A-2358	0	FLAT WASHER,SUPPORT,5/8,HARD
18	A-5641	0	SIGHT GLASS,3/4" NPT
19	FC0120DF	4	12-POINT CAPSCREW, 5/16-18 X 7/8, G8
20	FC0102CG	0	HEX HEAD CAPSCREW, 1/4-20 X 1", G5
21	FC0102CE	0	HEX HEAD CAPSCREW, 1/4-20 X 3/4, G5
22	A-16622	1	DATA PLATE,1 & 2 PUMP FF LUBR

WHEN A ZERO APPEARS IN THE QUANTITY COLUMN IT
DOES NOT REPRESENT THE QUANTITY REQUIRED.

*** ALWAYS PROVIDE SERIAL NUMBER WHEN ORDERING SPARE PARTS. ***

8/09/11

PARTS LIST

23	A-0827	2	MALE CONNECTOR, STL, 1/4 TUBE X 1/4 NPT
24	A-15556	2	STREET TEE, STL, 1/8P
25	A-0815	2	MALE ELBOW, STL, 1/4 TUBE X 1/8 NPT
26	PP0810GB	1	PIPE PLUG, HEX HEAD, 1/2 NPT, STL
27	A-0800	1	MALE ELBOW, STL, 1/4T X 1/4P
28	A-16762	0	FF LUB PUMP GSKT, 1/16 X DC100
29	PT0200CB	28."	TUBING, SS, 1/4 OD X .035 WALL
30	A-0843	1	STREET ELBOW, STL, 1/2P, 90
31	A-9619	0	SPRING, FF PUMP, PREMIER
32	A-9618	0	SPRING RETAINER, FF PUMP, PREM
33	A-0830	1	MALE CONNECTOR, STL, 1/4 TUBE X 1/8 NPT
34	A-0807	1	UNION TEE, STL, 1/4T
35	A-0918	2	PLUG, TUBE FITTING, STL, 1/4TUBE
36	A-8723	1	FF LUBR FILTER, 150 MIC
37	A-8729	1	BRKT, FF INLET FILTER
38	A-8824	2	FEMALE BRANCH TEE STL1/4TX1/8P
39	A-8828	3	MALE ADAPTR, STL, 1/4T X 1/8P
40	FC0102CC	2	HEX HEAD CAPSCREW, 1/4-20 X 1/2, G5
45	FW0500CA	0	WASHER, 1/4" I.D., SAE
99	A-8723-K	0	FILTER KIT, LUBRICATOR 150 MIC
99	AD-2878	0	FF LUBR, 3/8, 3/8 1/2S

WHEN A ZERO APPEARS IN THE QUANTITY COLUMN IT
DOES NOT REPRESENT THE QUANTITY REQUIRED.

*** ALWAYS PROVIDE SERIAL NUMBER WHEN ORDERING SPARE PARTS. ***

8/09/11

PARTS LIST

DISTRIBUTION BLOCK, MOUNTING BOLTS PART NO. G-5299
JGA:H:E:K:T:C:D:B:V/4:6, SINGLE BLOCK REF DRAWING N.A.

ITEM	PART NUMBER	QTY	DESCRIPTION
1	FC0102CI	8	HEX HEAD CAPSCREW, 1/4-20 X 1-1/2, G5

WHEN A ZERO APPEARS IN THE QUANTITY COLUMN IT
DOES NOT REPRESENT THE QUANTITY REQUIRED.
*** ALWAYS PROVIDE SERIAL NUMBER WHEN ORDERING SPARE PARTS. ***

8/09/11

PARTS LIST

RUPTURE DISC ASSEMBLY
3250 PSI

PART NO. G-2708
REF DRAWING N.A.

ITEM	PART NUMBER	QTY	DESCRIPTION
1	A-0080	1	BLOW-OUT ASSY, SPECIFY DISC.
2	A-0124	0	RUPTURE DISC, 3250 PSIG, PURPLE
3	A-2570	1	PLUG PLASTIC, 7 X RED

WHEN A ZERO APPEARS IN THE QUANTITY COLUMN IT
DOES NOT REPRESENT THE QUANTITY REQUIRED.

*** ALWAYS PROVIDE SERIAL NUMBER WHEN ORDERING SPARE PARTS. ***

8/09/11

PARTS LIST

FORCE FEED LUBRICATION TUBING
JGH/4 AND JGE/4

PART NO. G-2930
REF DRAWING N.A.

ITEM	PART NUMBER	QTY	DESCRIPTION
1	PT0200CB	450."	TUBING, SS, 1/4 OD X .035 WALL
2	A-0886	4	BULKHEAD UNION, STL, 1/4 TUBE
3	A-0401	4	BRACKET, BULKHEAD UNION
4	FC0134CC	4	BUTTON HEAD CAPSCREW, 1/4-20 X 1/2, 316SS
5	A-0831	4	TUBING CLAMP, 1/4 TUBE
6	FM0400BC	4	MACHINE SCREW, SLOTTED, #10-24 X 1/2
7	FW0500AA	4	FLAT WASHER, #8 SAE

WHEN A ZERO APPEARS IN THE QUANTITY COLUMN IT
DOES NOT REPRESENT THE QUANTITY REQUIRED.

*** ALWAYS PROVIDE SERIAL NUMBER WHEN ORDERING SPARE PARTS. ***

8/09/11

PARTS LIST

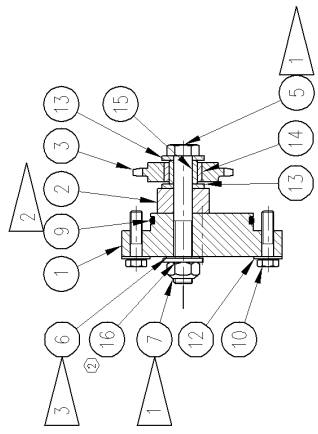
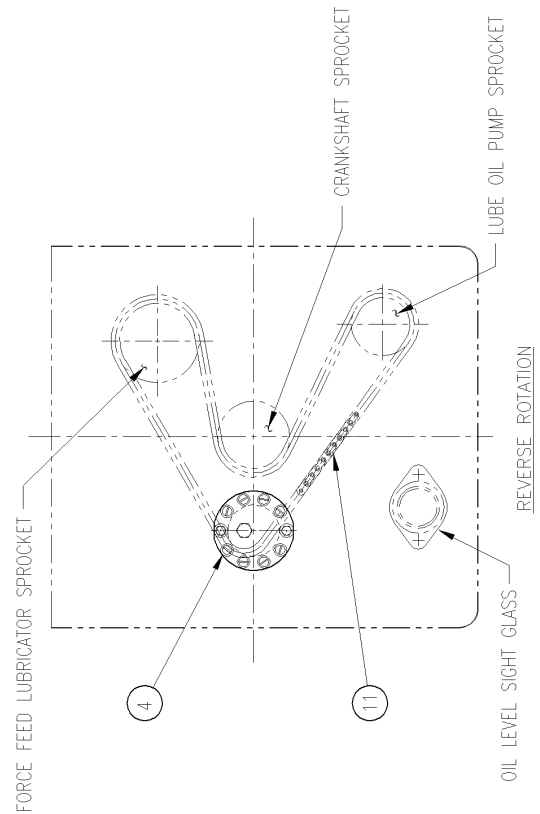
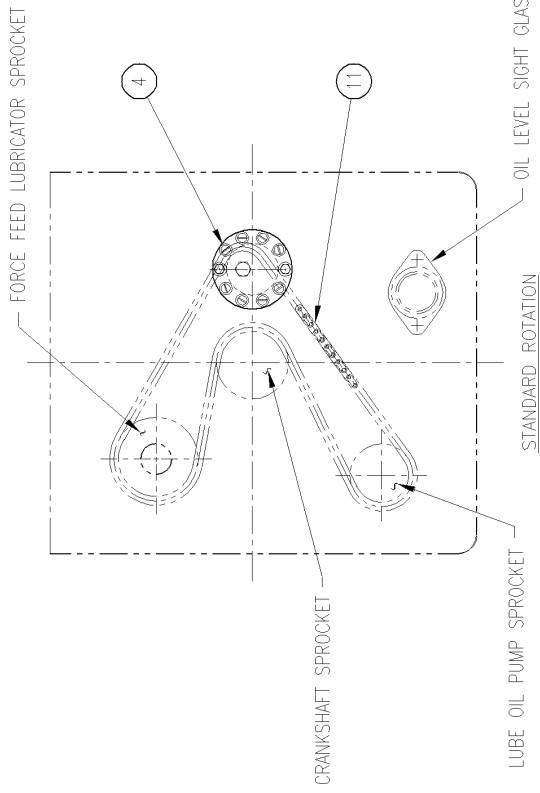
FORCE FEED LUBRICATION TUBING
BOTTOM LUBE - EACH CYLINDER
JG:A:M:P:N:Q:R:W:J:H:E:K:T

PART NO. G-2935
REF DRAWING N.A.

ITEM	PART NUMBER	QTY	DESCRIPTION
1	PT0200CB	90."	TUBING, SS, 1/4 OD X .035 WALL
2	A-0886	1	BULKHEAD UNION, STL, 1/4 TUBE
3	A-0401	1	BRACKET, BULKHEAD UNION
4	FC0134CC	1	BUTTON HEAD CAPSCREW, 1/4-20 X 1/2, 316SS
5	A-0831	1	TUBING CLAMP, 1/4 TUBE
6	FM0400BC	1	MACHINE SCREW, SLOTTED, #10-24 X 1/2
7	FW0500AA	1	FLAT WASHER, #8 SAE

WHEN A ZERO APPEARS IN THE QUANTITY COLUMN IT
DOES NOT REPRESENT THE QUANTITY REQUIRED.

*** ALWAYS PROVIDE SERIAL NUMBER WHEN ORDERING SPARE PARTS. ***



NOTES:

- 1 REPLACE NUT (ITEM 7) AND CAPSCREW (ITEM 5) WITH NEW PARTS WHEN REPLACING IDLER SPROCKET (ITEM 3).
- 2 OIL O-RING (ITEM 9) BEFORE INSTALLING.
- 3 OIL FACES BEFORE INSTALLING TO PREVENT ABRASION TO STATO-SEAL (ITEM 6).
- 4 FOR CHAIN TIGHTENING REFER TO ER-74.

REV	DESCRIPTION	INIT/DATE
3	REVISED CHAIN TIGHTENING NOTE.	RWP 8/26/04

THIS DOCUMENT AND CONTENTS THEREIN ARE PROPRIETARY TO ARIEL CORPORATION. ONLY BY WRITTEN CONSENT AND AGREED TERMS BY ARIEL CORPORATION DOES THE RIGHT TO MANUFACTURE, BUY, USE OR USE IN PART OR IN WHOLE INFORMATION CONTAINED IN DOCUMENT.

3	11872	ARIEL CORPORATION 35 BLACKJACK ROAD MOUNT VERNON, OHIO 43050
2	8434	ARIEL
1	8281	ARIEL
0	8060	ARIEL
REV	ECN	ASSEMBLY DWG. NO.
3		MLA 1/20/00
		DAH 1/24/00
		SCALE: NONE
		A-9639

8/09/11

PARTS LIST

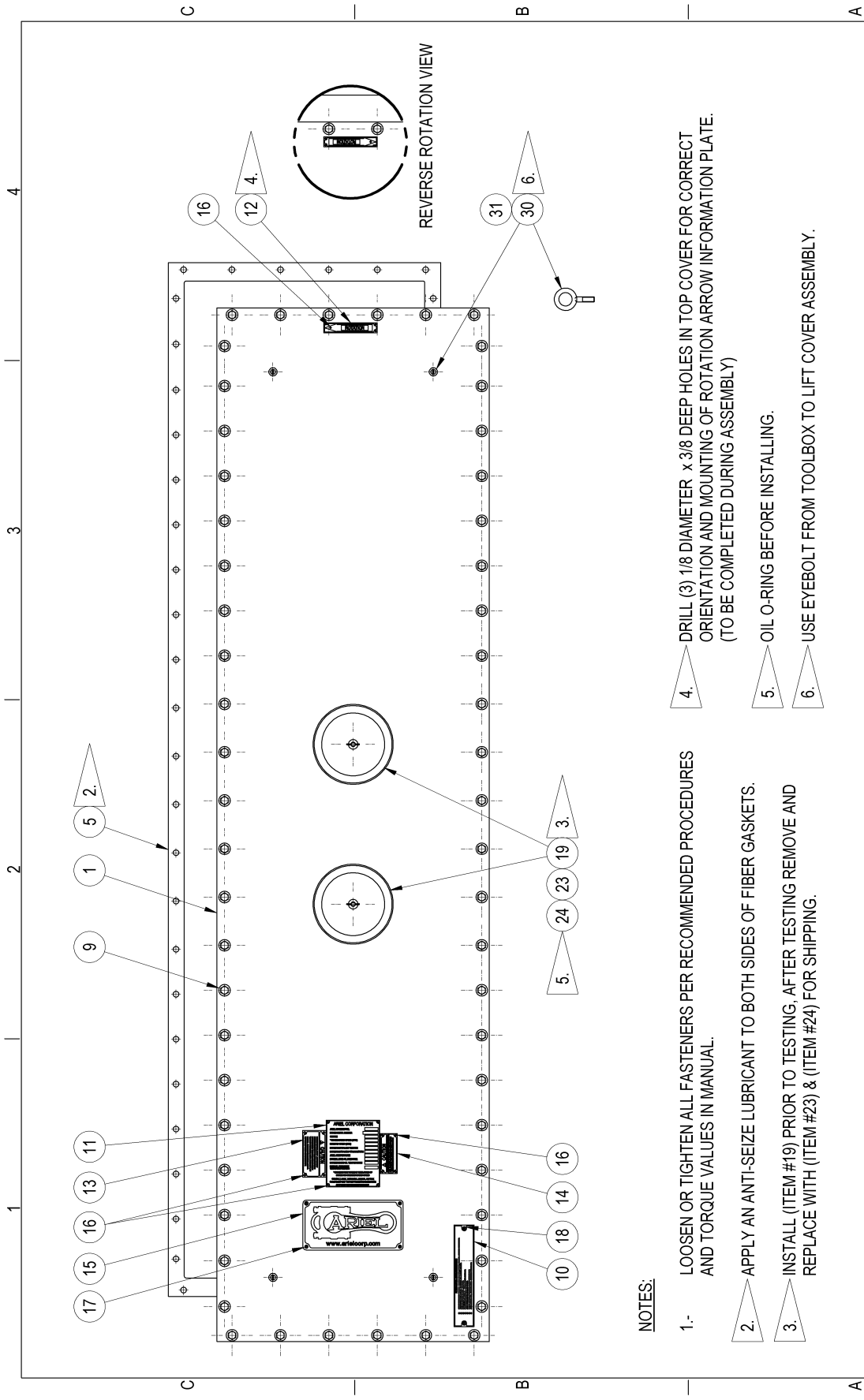
CHAIN DRIVE ASSY, STANDARD OR REVERSE
ROTATION. JGH:E:K:T/2;4 THROW UNITS

PART NO. G-7982
REF DRAWING A-9639

ITEM	PART NUMBER	QTY	DESCRIPTION
1	B-0030	1	ECC VERNIER CAP
2	A-9598	1	IDLER SPACER, K/2:4
3	A-9599	1	SPKT, 40-1 X 15T, ASSY, BZ
4	A-0109	8	MACHINE SCREW PLUG, PLASTIC, 7/16-14
5	FC0107GQ	1	HEX HEAD CAPSCREW, 1/2-20 X 3-1/2, G5
6	FW0550GA	1	STAT-O-SEAL, 1/2 DIA., BLACK
7	FN0468GA	1	HEX NUT, STOVER TYPE C, 1/2-20
9	A-0010	1	O-RING, VT, 2.637 O.D. X .139
10	FC0100DH	2	HEX HEAD CAPSCREW, 5/16-18 X 1-1/4, G9
11	A-3884	1	CHAIN, 40-1 X 114
12	FW0501CA	2	FLAT WASHER, 5/16 I.D. PLAIN
13	FW0502HA	2	WASHER, 1/2 STEEL
14	A-9600	0	SLEEVE BUSHING, BZ, 1/2 LONG
15	A-9601	1	BUSHING, 5/8 LONG, STL
16	FW0500GA	1	FLAT WASHER, 1/2 SAE

WHEN A ZERO APPEARS IN THE QUANTITY COLUMN IT
DOES NOT REPRESENT THE QUANTITY REQUIRED.

*** ALWAYS PROVIDE SERIAL NUMBER WHEN ORDERING SPARE PARTS. ***



NOTES:

- 1.- LOOSEN OR TIGHTEN ALL FASTENERS PER RECOMMENDED PROCEDURES AND TORQUE VALUES IN MANUAL.
- 2. APPLY AN ANTI-SEIZE LUBRICANT TO BOTH SIDES OF FIBER GASKETS.
- 3. INSTALL (ITEM #19) PRIOR TO TESTING, AFTER TESTING REMOVE AND REPLACE WITH (ITEM #23) & (ITEM #24) FOR SHIPPING.
- 4. DRILL (3) 1/8 DIAMETER x 3/8 DEEP HOLES IN TOP COVER FOR CORRECT ORIENTATION AND MOUNTING OF ROTATION ARROW INFORMATION PLATE. (TO BE COMPLETED DURING ASSEMBLY)
- 5. OIL O-RING BEFORE INSTALLING.
- 6. USE EYEBOLT FROM TOOLBOX TO LIFT COVER ASSEMBLY.

ARIEL CORPORATION
 35 BLACKJACK ROAD
 MOUNT VERNON, OHIO 43050



ASSEMBLY
 DWG. NO. **A-16598**

DRAWN
 CPM 09/15/09

CHECKED
 ARW 09/16/09

SCALE
 NONE

THIS DOCUMENT AND CONTENTS THEREIN ARE PROPRIETARY TO ARIEL CORPORATION. ONLY BY WRITTEN CONSENT AND AGREED TERMS BY ARIEL CORPORATION GIVES THE RIGHT TO DISCLOSE OR USE IN PART OR IN WHOLE INFORMATION CONTAINED IN DOCUMENT.

REV	DESCRIPTION	INITIALS	DATE

8/09/11

PARTS LIST

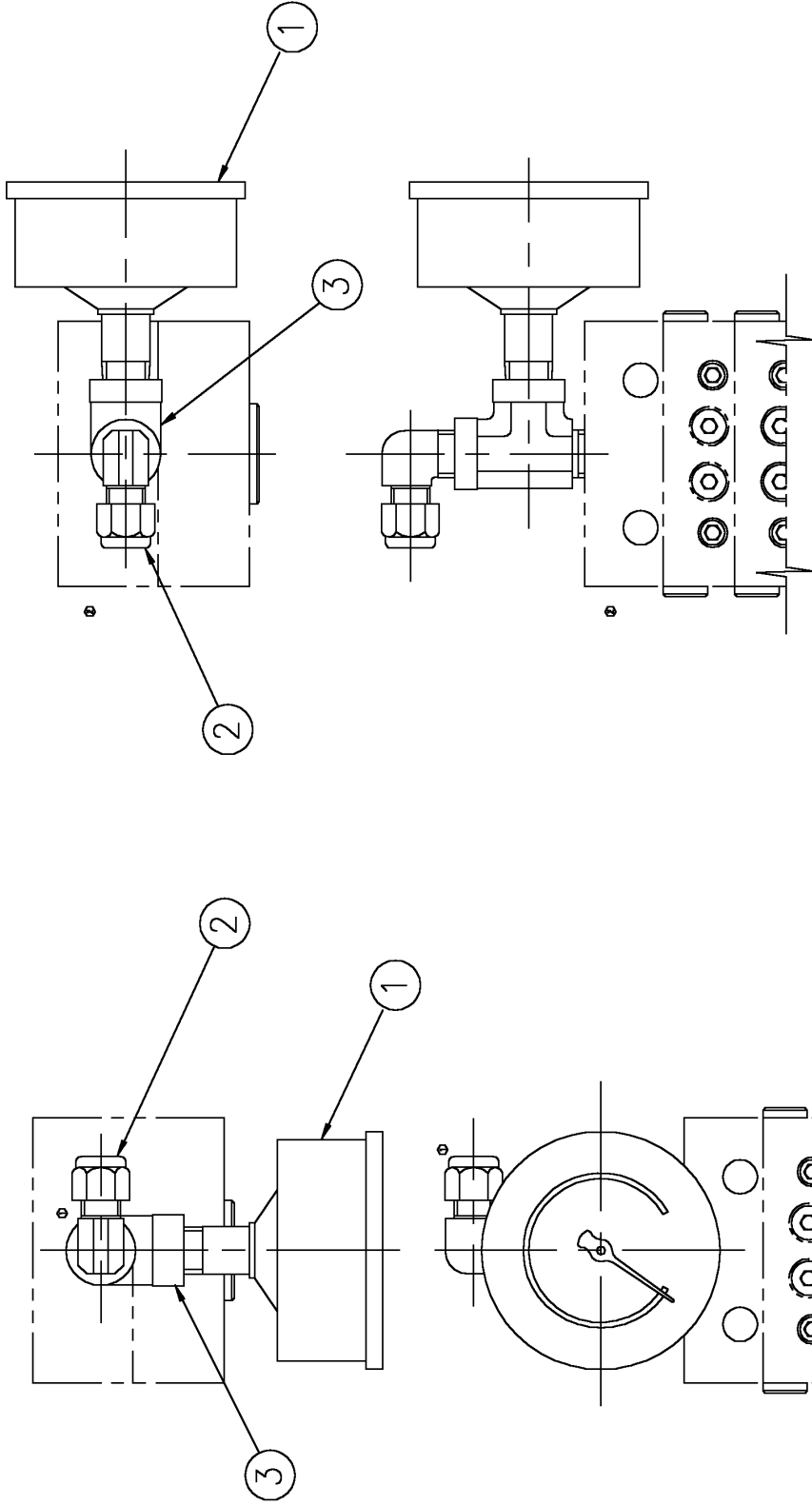
TOP COVER, BREATHER
JGH/4 FRAME

PART NO. G-16946
REF DRAWING A-16598

ITEM	PART NUMBER	QTY	DESCRIPTION
1	C-5731	1	COVER, TOP, JGH:E:K:T/4
5	C-5655	1	GSKT,RET,77-5/8 X20-3/8X1/32
9	A-6830	56	SEMS BOLT, 3/8-16 X 1-1/4, G5
10	A-0713	1	INFO PLATE,L O FILTER,SPIN-ON
11	A-14766	1	DATA PLATE,FRAME SPECIFICATION
12	A-0719	1	INFO PLATE,ROTATION ARROW
13	A-0463	1	CAUTION PLATE, CYLINDER VENTING
14	A-0464	1	CAUTION PLATE, COMPRESSOR VALVE
15	A-0138	1	NAME PLATE, ARIEL LOGO
16	FR0571CC	15	DRIVE SCREW, TYPE U, SS, #6 X 1/4
17	FC0134BC	4	BUTTON HEAD CAPSCREW, #10-24 X 1/2, 316SS
18	FC0134BB	2	BUTTON HEAD CAPSCREW, #10-24 X 3/8, 316SS
19	B-4798	2	BREATHER, 1" NPT, FRAME
23	A-7655	2	PIPE PLUG,1"NPT,SLOTTED HEAD
24	A-0009	2	O-RING, VT, 1.387 OD X .139, 75/85 DUROMETER
30	FE0300EA	0	EYEBOLT,3/8-16 UNC
31	A-0467	4	PUSH IN PLUG,PL, 3/8,YELLOW

WHEN A ZERO APPEARS IN THE QUANTITY COLUMN IT
DOES NOT REPRESENT THE QUANTITY REQUIRED.

*** ALWAYS PROVIDE SERIAL NUMBER WHEN ORDERING SPARE PARTS. ***



• USE FOR JGM:P:N:Q-GK

NOTES:

1. LOOSEN OR TIGHTEN ALL FASTENERS PER RECOMMENDED PROCEDURES AND TORQUE VALUES IN MANUAL.

②	REVISED DWG. ADDED RIGHTSIDE VIEWS. USE FOR JGM:P:N:Q-GK
①	REMOVED 1/4 NPT ELBOW (WAS ITEM 2), RENUMBERED OTHER ITEMS.
REV	DESCRIPTION

2	8014				
1	7908				
0	7704	DRAWN: WSH 7/28/99	APPROVED:	ASSEMBLY DWG. NO. A-9020	
REV	ECN	CHECKED: NEH 07/31/99	SCALE: NONE		



ARIEL CORPORATION
 35 BLACKJACK ROAD
 MOUNT VERNON, OHIO 43050

8/09/11

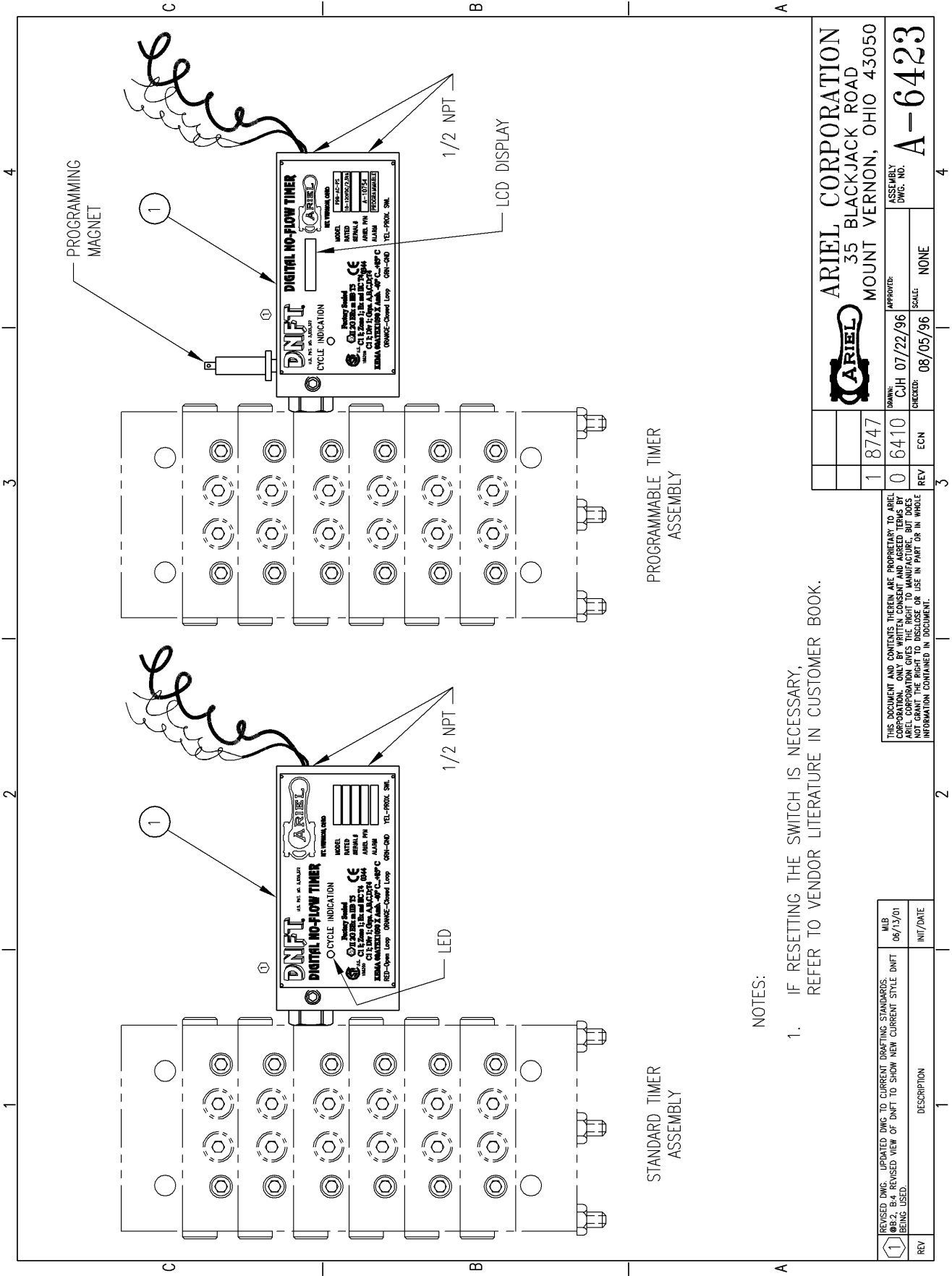
PARTS LIST

FORCE FEED PRESSURE GAUGE
3000 PSI, PER BLK.IJGRJHEKTCDZUBV

PART NO. G-7624
REF DRAWING A-9020

ITEM	PART NUMBER	QTY	DESCRIPTION
1	A-8727	1	PRESSURE GAUGE, 3000 PSI, BACK MOUNT
2	A-0800	1	MALE ELBOW,STL, 1/4T X 1/4P
3	A-15557	1	STREET TEE,STL,1/4P

WHEN A ZERO APPEARS IN THE QUANTITY COLUMN IT
DOES NOT REPRESENT THE QUANTITY REQUIRED.
*** ALWAYS PROVIDE SERIAL NUMBER WHEN ORDERING SPARE PARTS. ***



STANDARD TIMER ASSEMBLY

PROGRAMMABLE TIMER ASSEMBLY

NOTES:

1. IF RESETTING THE SWITCH IS NECESSARY, REFER TO VENDOR LITERATURE IN CUSTOMER BOOK.

		ARIEL CORPORATION 35 BLACKJACK ROAD MOUNT VERNON, OHIO 43050	
1	8747	APPROVER:	NONE
0	6410	DRAWN:	CJH 07/22/96
REV	ECN	CHECKED:	08/05/96
3	3	SCALE:	NONE
		ASSEMBLY DWG. NO. A-6423	

THIS DOCUMENT AND COMMENTS THEREIN ARE PROPRIETARY TO ARIEL CORPORATION. ONLY BY WRITTEN CONSENT AND AGREED TERMS BY ARIEL CORPORATION WILL ANY PART OF THIS DOCUMENT BE LOANED, REPRODUCED, COPIED, OR IN ANY MANNER NOT GRANT THE RIGHT TO DISCLOSE OR USE IN PART OR IN WHOLE INFORMATION CONTAINED IN DOCUMENT.

1	REVISED DWG. UPDATED DWG TO CURRENT DRAFTING STANDARDS.	MIB	06/15/01
2	REVISED DWG. B4 REVISED VIEW OF DNFT TO SHOW NEW CURRENT STYLE DNFT BEING USED.		
REV	DESCRIPTION	INIT/DATE	

8/09/11

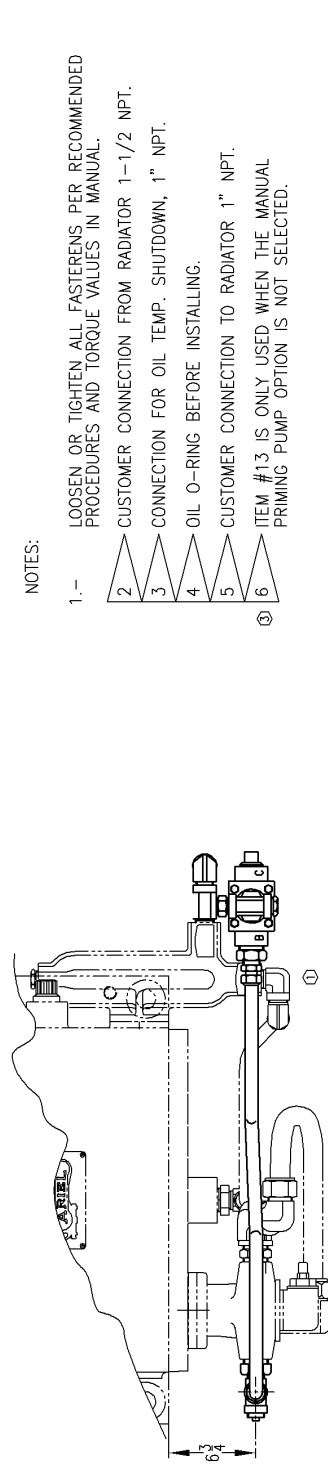
PARTS LIST

FORCE FEED LUBRICATOR PROGRAMMABLE PART NO. G-4830
DIGITAL NO FLOW TIMER WITH PROXIMITY REF DRAWING A-6423
SWITCH FOR TRABON DISTRIBUTION BLOCKS

ITEM	PART NUMBER	QTY	DESCRIPTION
1	A-10754	1	FORCE FEED SHUTDOWN, DNFT, W/ PROXIMITY SWITCH, TRABON, BATTERY POWERED, PROGRAMMABLE
99	A-6506	0	DNFT MAGNET ASSY, TRAB, 7/16-20

WHEN A ZERO APPEARS IN THE QUANTITY COLUMN IT
DOES NOT REPRESENT THE QUANTITY REQUIRED.
*** ALWAYS PROVIDE SERIAL NUMBER WHEN ORDERING SPARE PARTS. ***

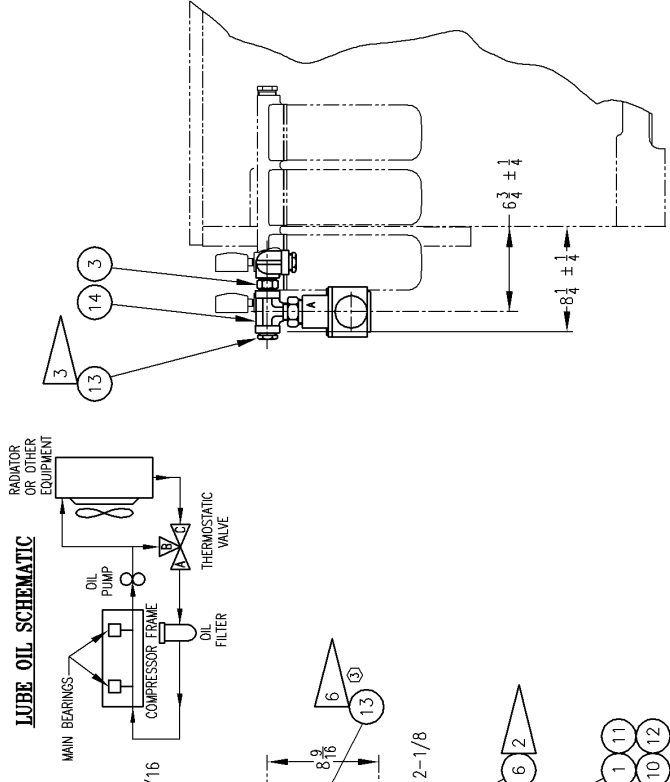
1 2 3 4



NOTES:

- 1.- LOOSEN OR TIGHTEN ALL FASTENERS PER RECOMMENDED PROCEDURES AND TORQUE VALUES IN MANUAL.
- 2 CUSTOMER CONNECTION FROM RADIATOR 1-1/2 NPT.
- 3 CONNECTION FOR OIL TEMP. SHUTDOWN, 1" NPT.
- 4 OIL O-RING BEFORE INSTALLING.
- 5 CUSTOMER CONNECTION TO RADIATOR 1" NPT.
- 6 ITEM #13 IS ONLY USED WHEN THE MANUAL PRIMING PUMP OPTION IS NOT SELECTED.

LUBE OIL SCHEMATIC



3	11355		
2	10797		
1	8132		
0	8113	DRN: MLA 1/28/00	
		CHK: CAH 2/4/00	
REV	ECN	APPROV:	SCALE: NONE

ARIEL CORPORATION
 35 BLACKJACK ROAD
 MOUNT VERNON, OHIO 43050

ASSEMBLY DNG. NO. **A-9645**

THIS DOCUMENT AND CONTENTS THEREIN ARE PROPRIETARY TO ARIEL CORPORATION. ONLY BY WRITTEN CONSENT AND AGREED TERMS BY ARIEL CORPORATION WILL THE PROJECT BE DISCLOSED OR USE IN PART OR IN WHOLE INFORMATION CONTAINED IN DOCUMENT.

3	AT C2, REMOVED AUXILIARY VIEW OF FITTING ARRANGEMENT AT B3, DIM 05/02/03	
2	CS3 ADDED VIEW OF FITTING ARRANGEMENT WHEN MANUAL PRIMING PUMP IS NOT USED. ADDED FLAG PUMP IS NOT USED. ADDED (1) ITEM #13 (PIPE PLUG). ADDED FLAG NOTE #6.	
		INIT/DATE
		11/27/02

C B A

8/09/11

PARTS LIST

LUBE OIL THERMOSTATIC VALVE, 1-1/2"FNPT
MOUNTED ON JGC:D/2,HEKT/4

PART NO. G-8087
REF DRAWING A-9645

ITEM	PART NUMBER	QTY	DESCRIPTION
1	B-2722	1	THERMOSTATIC VALVE, 1-1/2", 170øF, FPE
2	A-0969	3	HEX RED BUSH,STL,1-1/2M X 1F
3	A-0832	1	HEX PIPE NIPPLE 1"P
4	A-0847	1	STREET ELBOW,STL,1"NPT
5	A-0972	1	STREET TEE,STL, 1"P
6	A-15685	1	PIPE PLUG,1-1/2NPT,DRILLED
7	A-15845	1	PIPE PLUG,1NPT,DRILLED
8	A-0967	2	MALE CONN,STL, 1T X 1P
9	A-10259	1	TUBE,PREF,THERMO,HEK/4,CD/2,SS
10	A-9649	0	O-RING, VT, FPE, THERMOSTATIC VALVE
11	A-9650	0	ELEMENT,THERM.VLV,1.5",170,FPE
12	A-9651	0	LIP SEAL-TEFLON,1.5"VALVE, FPE
13	PP0810KB	2	PIPE PLUG,1"NPT,HEX HD,STL
14	A-6971	1	MALE BRANCH TEE,STL, 1"P

WHEN A ZERO APPEARS IN THE QUANTITY COLUMN IT
DOES NOT REPRESENT THE QUANTITY REQUIRED.

*** ALWAYS PROVIDE SERIAL NUMBER WHEN ORDERING SPARE PARTS. ***

8/09/11

PARTS LIST

SPECIAL TOOLS
JGE, JGK & JGT

PART NO. G-16338
REF DRAWING N.A.

ITEM	PART NUMBER	QTY	DESCRIPTION
1	A-0798	1	TOOL BOX
2	A-0135	1	VALVE PULLER, 5/16 X 1/2 UNF
3	A-0409	1	VALVE PULLER, 1/4 X 3/8 UNF
4	A-0626	1	VLV PULLER, 5/8 X 3/4 UNF
5	A-2289	1	VLV PULLER TOOL FOR 'CT' VALVE
6	A-1858	1	CROSSHD INSTALL.TOOL,JGH:E:K
7	ER-63	1	TORQUE CHART, ALL UNITS
8	A-4996	1	PEG WRENCH,1-3/8"
9	B-1240	1	PISTON TURNING TOOL SUPT. ASSY
10	B-1410	1	PISTON NUT SPANNER, JGH:E:K
11	B-1495	1	TURN INDICATOR,JGH:E:K:T
13	FE0300EA	6	EYEBOLT,3/8-16 UNC
14	FE0300GA	2	EYEBOLT,1/2-13 UNC
15	TA0100GA	5	ALLEN WRENCH, 5/32 SHORT ARM
16	TA0100HA	5	ALLEN WRENCH, 3/16 SHORT ARM
17	TA0100LA	1	ALLEN WRENCH, 3/8 SHORT ARM
18	TA0100NB	2	ALLEN WRENCH, 1/2 LONG ARM
19	TA0100QB	1	ALLEN WRENCH, 3/4 LONG ARM
20	A-6393	1	CYL. BOLT TORQUE ADAPTER
21	C-2106	1	CONN.ROD CAP REMOVAL TOOL, HEK
22	B-1989	1	X-HD/PIN ALIGN. TOOL,JGH:E:K
23	FC0102CG	6	HEX HEAD CAPSCREW, 1/4-20 X 1", G5
24	A-8158	0	BRG HSG SPANNER WRENCH

WHEN A ZERO APPEARS IN THE QUANTITY COLUMN IT
DOES NOT REPRESENT THE QUANTITY REQUIRED.

*** ALWAYS PROVIDE SERIAL NUMBER WHEN ORDERING SPARE PARTS. ***

8/09/11

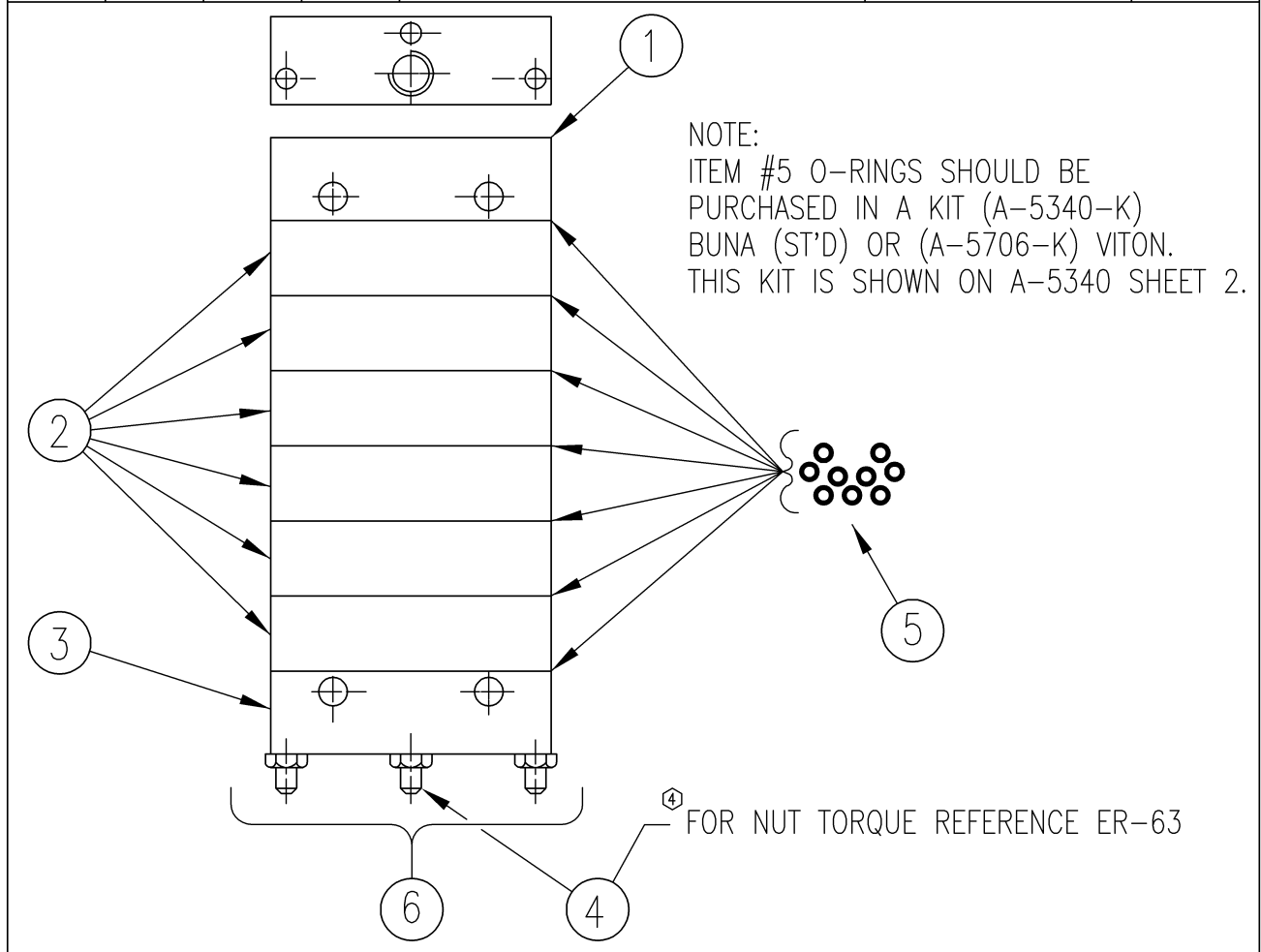
PARTS LIST



25	A-14787	1	PISTON ROD ENTERING SLEEVE, 3PC, JGH:E:K:T
26	FE0300HA	2	EYEBOLT, 5/8-11 UNC
27	A-15236	1	THREAD GAUGE

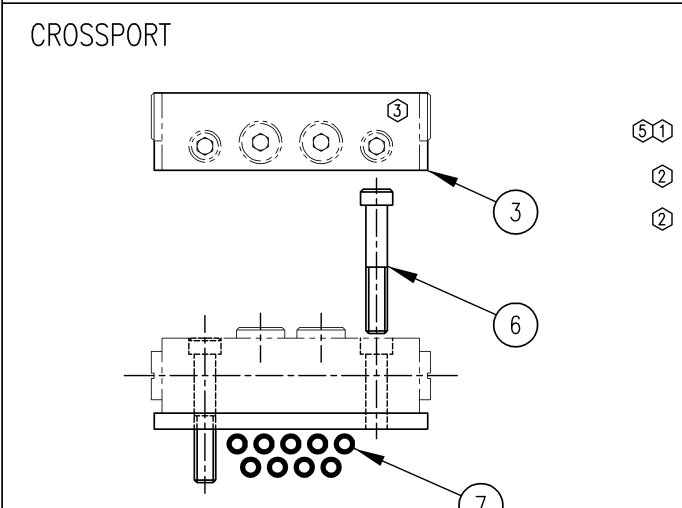
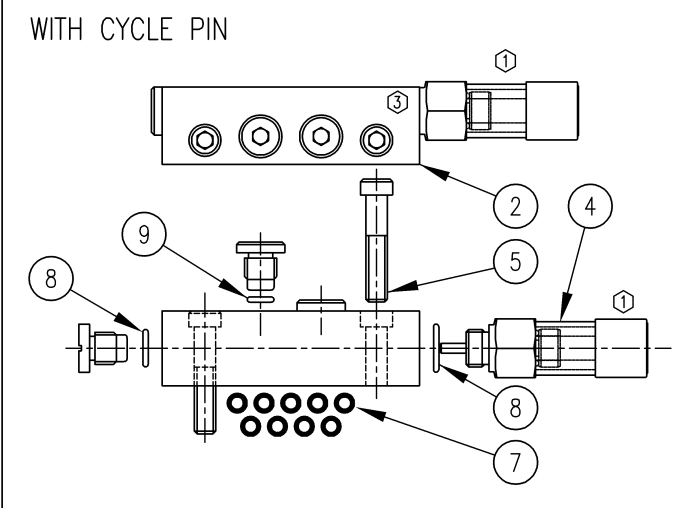
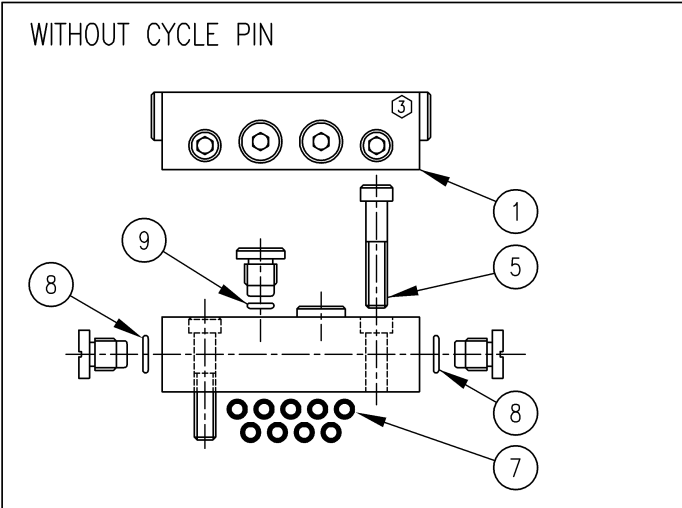
WHEN A ZERO APPEARS IN THE QUANTITY COLUMN IT
DOES NOT REPRESENT THE QUANTITY REQUIRED.

*** ALWAYS PROVIDE SERIAL NUMBER WHEN ORDERING SPARE PARTS. ***

NUMBER OF BASE PLATES SECTIONS				DESCRIPTION	ARIEL PART No.	ITEM
3	4	5	6			
1	1	1	1	INLET SECTION	A-5537	1
3	4	5	6	INTERMEDIATE SECTION	A-5531	2
1	1	1	1	END SECTION	A-5538	3
3				TIE ROD W/NUT	A-5539	4
	3			TIE ROD W/NUT	A-5540	
		3		TIE ROD W/NUT	A-5541	
			3	TIE ROD W/NUT	A-5542	
36	45	54	63	O-RING, BUNA STANDARD	A-5570	5
36	45	54	63	O-RING, VITON	A-5703	
A-5533	A-5534	A-5535	A-5536	COMPLETE BASE PLATE ASSEMBLY		6



5 14799		3 10737		 ARIEL CORPORATION 35 BLACKJACK ROAD MOUNT VERNON, OHIO 43050	TITLE: DISTRIBUTION BLOCK VALVE  DRAWING No. A-5340 SHT 1 OF 2
4 12506		2 8200			
ON SHEET #1: IN TITLE BLOCK, REMOVED VENDOR NAME. ON SHEET #2: IN TITLE BLOCK, REMOVED VENDOR NAME. ITEM #4, PART NUMBER A-14282 WAS A-9787.		DIJ 02/07/2008 1 8175 0 5695			
REV	DESCRIPTION	INT/DATE	REV	ECN	



ITEM	ARIEL PART	QUAN	DESCRIPTION	
1	A-5543	1	DIVIDER VALVE, 6T	
	A-5545	1	DIVIDER VALVE, 6S	
	A-5547	1	DIVIDER VALVE, 9T	
	A-5549	1	DIVIDER VALVE, 9S	
	A-5551	1	DIVIDER VALVE, 12T	
	A-5553	1	DIVIDER VALVE, 12S	
	A-5555	1	DIVIDER VALVE, 18T	
	A-5557	1	DIVIDER VALVE, 18S	
	A-5559	1	DIVIDER VALVE, 24T	
	A-5561	1	DIVIDER VALVE, 24S	
	A-5563	1	DIVIDER VALVE, 30T	
	A-5565	1	DIVIDER VALVE, 30S	
2	A-5544	1	DIVIDER VALVE, 6T W/CIP	
	A-5546	1	DIVIDER VALVE, 6S W/CIP	
	A-5548	1	DIVIDER VALVE, 9T W/CIP	
	A-5550	1	DIVIDER VALVE, 9S W/CIP	
	A-5552	1	DIVIDER VALVE, 12T W/CIP	
	A-5554	1	DIVIDER VALVE, 12S W/CIP	
	A-5556	1	DIVIDER VALVE, 18T W/CIP	
	A-5558	1	DIVIDER VALVE, 18S W/CIP	
3	A-5560	1	DIVIDER VALVE, 24T W/CIP	
	A-5562	1	DIVIDER VALVE, 24S W/CIP	
	A-5564	1	DIVIDER VALVE, 30T W/CIP	
	A-5566	1	DIVIDER VALVE, 30S W/CIP	
4	A-5567	1	CROSSPORT BAR, RIGHT	
	A-5568	1	CROSSPORT BAR, LEFT	
	A-5569	1	CROSSPORT BAR, BOTH	
5	A-14282	1	CYCLE INDICATOR	
6	FC0115CH	2	SOC. CAP. 1/4-28 X 1-1/4	
6	FC0115CI	2	SOC. CAP. 1/4-28 X 1-1/2	
7	A-5570	20	O-RING, INTERFACE, BUNA	
	A-5703	20	O-RING, INTERFACE, VITON	
	8	A-5696	4	O-RING, ENCLOSURE, BUNA
		A-5704	4	O-RING, ENCLOSURE, VITON
9	A-5695	4	O-RING, OUTLET, BUNA	
	A-5705	4	O-RING, OUTLET, VITON	

NOTE:
O-RINGS SHOULD BE PURCHASED IN A KIT (A-5340-K) BUNA (ST'D) OR (A-5706-K) VITON. THE KITS CONTAIN THE FOLLOWING O-RINGS:

7	A-5570	20	O-RING, INTERFACE, BUNA
	A-5703	20	O-RING, INTERFACE, VITON
8	A-5696	4	O-RING, ENCLOSURE, BUNA
	A-5704	4	O-RING, ENCLOSURE, VITON
9	A-5695	4	O-RING, OUTLET, BUNA
	A-5705	4	O-RING, OUTLET, VITON

5	14799
4	12506
3	10737
2	8200
1	8175
0	5695

5	SEE SHEET #1 FOR REVISIONS.	DLI 02/07/2008
4	SEE SHEET #1.	RWR 01/17/03
REV	DESCRIPTION	INT/DATE

ARIEL CORPORATION
35 BLACKJACK ROAD
MOUNT VERNON, OHIO 43050

TITLE: DISTRIBUTION BLOCK VALVE ⑤

DRAWING No. **A-5340** SHT 2 OF 2

8/09/11

ARIEL CORPORATION
SALES ORDER COVER SHEET

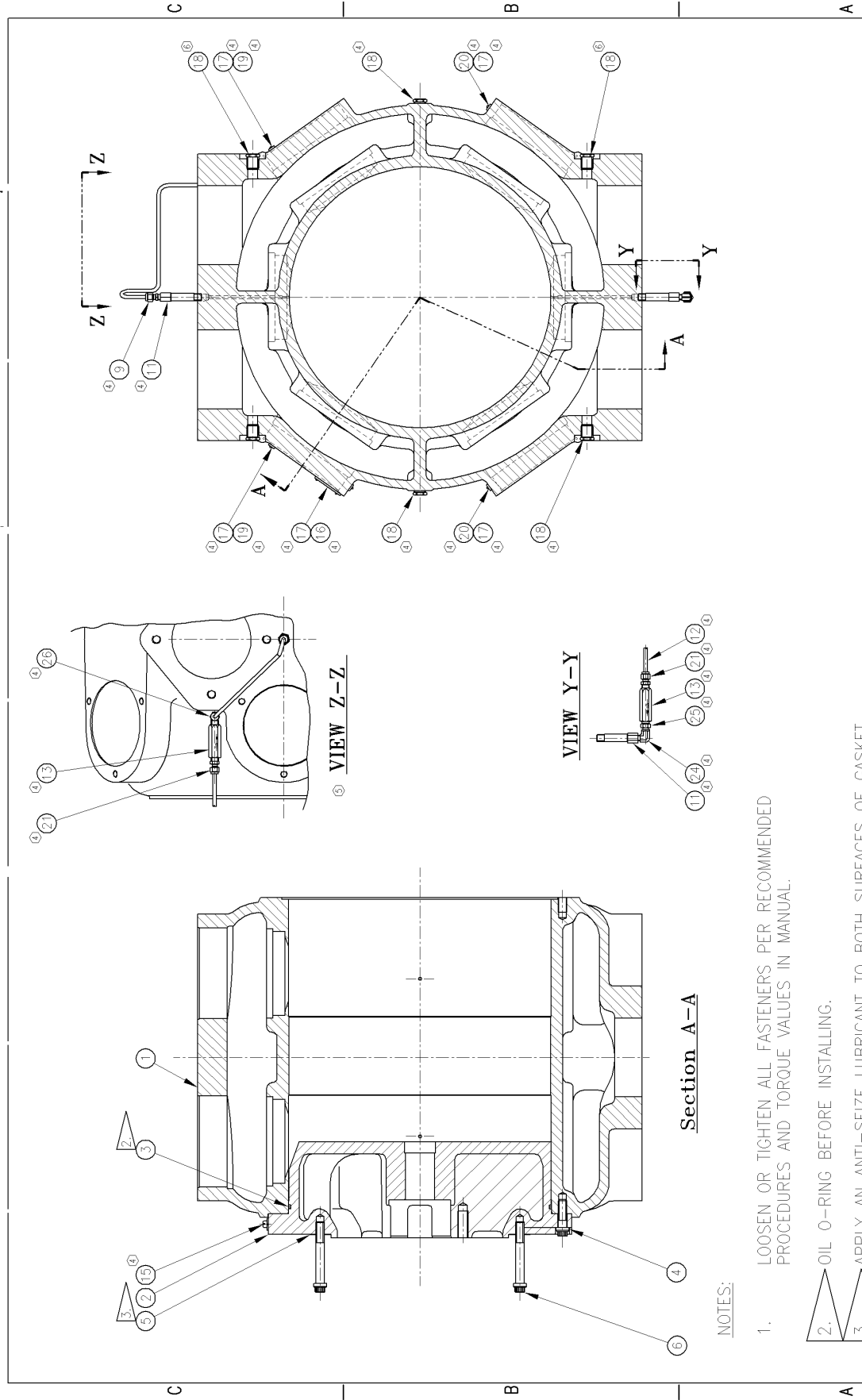
C/N: 001

RHCOVP02

SERIAL #: C125345 & 47

PART: 17-1/4ET CLASS DESCRIPTION: 17-1/4" ET CYLINDER CLASS

PART NUMBER	QTY	DESCRIPTION	DRAWING NO.
G-10529	1	CYL ASSY,17-1/4ET,STD 230	A-4475
G-10553	1	CYLINDER MOUNTING, 12 BOLT, JGH:E	N.A.
G-0893	4	SUC VLV ASY17-1/4R:RJ:ET(SIDE)	A-3395
G-0900	2	SUC VLV ASSY,17-1/4R:RJ:ET(TOP	A-3395
G-2485	4	DIS VLV ASY,17-1/4R:RJ:ET(SIDE	A-3395
G-2486	2	DIS VLV ASY,17-1/4R:RJ:ET(BOTT	A-3395
PISTON ASSY	1	PISTON ASSY 17.250 ET	A-17925 2 SHT
B-2372-U	6	SUC VLV,147CT,NYX	A-9275
B-2373-CC	6	DIS VLV,147CT, MTX	A-9276
G-5130	1	COMP FLG, ,SUC NOZ,FOR ORIF	A-6286
G-5131	1	COMP FLG, ,DIS NOZ,FOR ORIF	A-6286



		ARIEL CORPORATION 35 BLACKJACK ROAD MOUNT VERNON, OHIO 43050		ASSEMBLY DWG. NO. A-4475	
DRAWN: WRB 01/11/96 CHECKED: 03/03/95		APPROVER: NONE SCALE: NONE		3 1 4	
REV	DESCRIPTION	ECN	REV	ECN	REV
6	AT BA, C4 REVISED SECTION VIEW TO SHOW TOP AND BOTTOM THERMOWELL CONNECTIONS ON ALL (4) NOZZLES. ADDED (2) ITEM 18'S (1/2" PIPE PLUG).	7966	3	7966	3
5		8396	1	6083	5
4		8001	0	5457	4
6		12310	2	6282	6

THIS DOCUMENT AND CONTENTS, THEREIN ARE PROPRIETARY TO ARIEL CORPORATION. ONLY BY WRITTEN CONSENT AND AGREED TERMS BY ARIEL CORPORATION GIVES THE RIGHT TO MANUFACTURE, BUT DOES NOT CONSTITUTE AN ENDORSEMENT OR A GUARANTEE OF ANY KIND. INFORMATION CONTAINED IN DOCUMENT.

NOTES:

1. LOOSEN OR TIGHTEN ALL FASTENERS PER RECOMMENDED PROCEDURES AND TORQUE VALUES IN MANUAL.
2. OIL O-RING BEFORE INSTALLING.
3. APPLY AN ANTI-SEIZE LUBRICANT TO BOTH SURFACES OF GASKET.
4. TUBING FOR BOTH NOZZLES MAY BE DONE AS IN VIEW Z-Z.

8/09/11

PARTS LIST

17-1/4" ET CYLINDER BODY,
TOP & BOTTOM LUBE.
RDP 205#, MAWP 230#

PART NO. G-10529
REF DRAWING A-4475

ITEM	PART NUMBER	QTY	DESCRIPTION
1	D-1632	0	CYL,17-1/4R:RJ:H:E:ET 230
2	C-3633	0	CRANK END HEAD, 17-1/4ET
3	A-0799	1	O-RING, VT, 16.375 OD X .210, 75/85 DUROMETER
4	FC0120HK	12	12-POINT CAPSCREW, 5/8-11 X 2, G8
5	B-3515	1	GSKT,RND,16, X 1/64, 16 HOLES
6	FC0120HT	0	12-POINT CAPSCREW, 5/8-11 X 4-1/2, G8
9	A-0830	1	MALE CONNECTOR, STL, 1/4 TUBE X 1/8 NPT
11	A-3800-A	2	LUBEFTG,17-1/4,19-1/2R,20-1/8K
12	PT0200CB	90."	TUBING, SS, 1/4 OD X .035 WALL
13	A-3780	2	CHECK VALVE, POPPET, DOUBLE BALL, SOFT SEAT, SS, 1/4 NPTF INLET X 1/4 NPTF OUTLET
15	A-0256	1	MACHINE SCREW PLUG, PLASTIC, 1/2-13
16	A-0465	1	DATA PLATE, CYLINDER SPECIFICATION, 3-1/2 X 2-1/4
17	FR0571CC	12	DRIVE SCREW, TYPE U, SS, #6 X 1/4
18	PP0810GB	8	PIPE PLUG, HEX HEAD, 1/2 NPT, STL
19	A-0640-A	2	INFORMATION PLATE, SUCTION
20	A-0640-B	2	INFORMATION PLATE, DISCHARGE
21	A-0827	2	MALE CONNECTOR, STL, 1/4 TUBE X 1/4 NPT
24	A-0804	1	STREET ELBOW, 90°, 1/8 NPT, STL
25	A-2114	1	HEX REDUCING NIPPLE, 1/4 NPT (MALE) X 1/8 NPT (MALE), STL
26	A-0800	1	MALE ELBOW,STL, 1/4T X 1/4P
100	HD-3595	1	CYL ASSY,17-1/4ET

WHEN A ZERO APPEARS IN THE QUANTITY COLUMN IT
DOES NOT REPRESENT THE QUANTITY REQUIRED.

*** ALWAYS PROVIDE SERIAL NUMBER WHEN ORDERING SPARE PARTS. ***

8/09/11

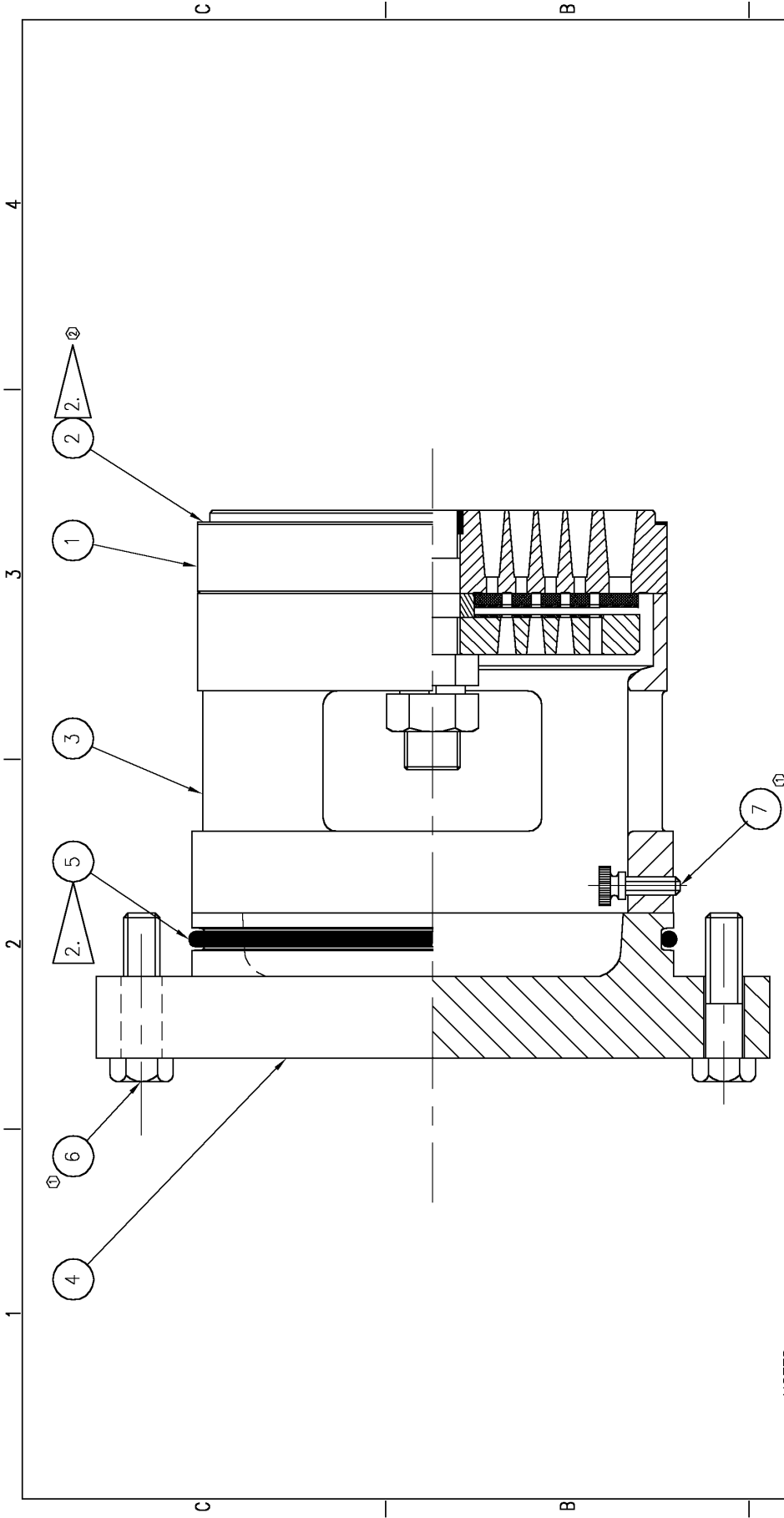
PARTS LIST

MOUNTING BOLTS (12) FOR ET CYLINDER TO PART NO. G-10553
JGH:E GUIDE FOR JGH OR JGE FRAME. REF DRAWING N.A.

ITEM	PART NUMBER	QTY	DESCRIPTION
6	FC0120HT	12	12-POINT CAPSCREW, 5/8-11 X 4-1/2, G8

WHEN A ZERO APPEARS IN THE QUANTITY COLUMN IT
DOES NOT REPRESENT THE QUANTITY REQUIRED.

*** ALWAYS PROVIDE SERIAL NUMBER WHEN ORDERING SPARE PARTS. ***



NOTES:

- 1.- LOOSEN OR TIGHTEN ALL FASTENERS PER RECOMMENDED PROCEDURES AND TORQUE VALUES IN MANUAL.
- 2. OIL O-RING (ITEM #5) BEFORE INSTALLING.
- 3. APPLY AN ANTI-SEIZE LUBRICANT TO GASKET SURFACES (ITEM 2)

4.- THIS VALVE ASSEMBLY DRAWING IS FOR ILLUSTRATION PURPOSES ONLY AND MAY NOT NECESSARILY REPRESENT THE EXACT CONFIGURATION PERTAINING TO THE UNIT ORDERED. REFER TO ACCOMPANYING PARTS LIST FOR ITEMS (AND QUANTITIES OF EACH) REQUIRED FOR THIS PARTICULAR ASSEMBLY.

②	• D6 ADDED FLAG TO ITEM 2. ADDED NOTES #3 & #4. REPLACED BOARDER.	JLS 02/20/01
①	RENUMBERED ITEMS MARKED	XXX XX/XX/XXXX
REV	DESCRIPTION	INIT/DATE

THIS DOCUMENT AND CONTENTS THEREIN ARE PROPRIETARY TO ARIEL CORPORATION. ONLY BY WRITTEN CONSENT AND AGREED TERMS BY ARIEL CORPORATION GIVES THE RIGHT TO MANUFACTURE, BUT DOES NOT GRANT THE RIGHT TO DISCLOSE OR USE IN PART OR IN WHOLE INFORMATION CONTAINED IN DOCUMENT.

2	8412	REV	ECN
1	8001	REV	ECN
0	4510	CH	6/4/92
		DESIGNED	7/13/92
		APPROVED:	NONE
		SCALE:	NONE



ARIEL CORPORATION
 35 BLACKJACK ROAD
 MOUNT VERNON, OHIO 43050

ASSEMBLY DWG. NO. **A-3395**

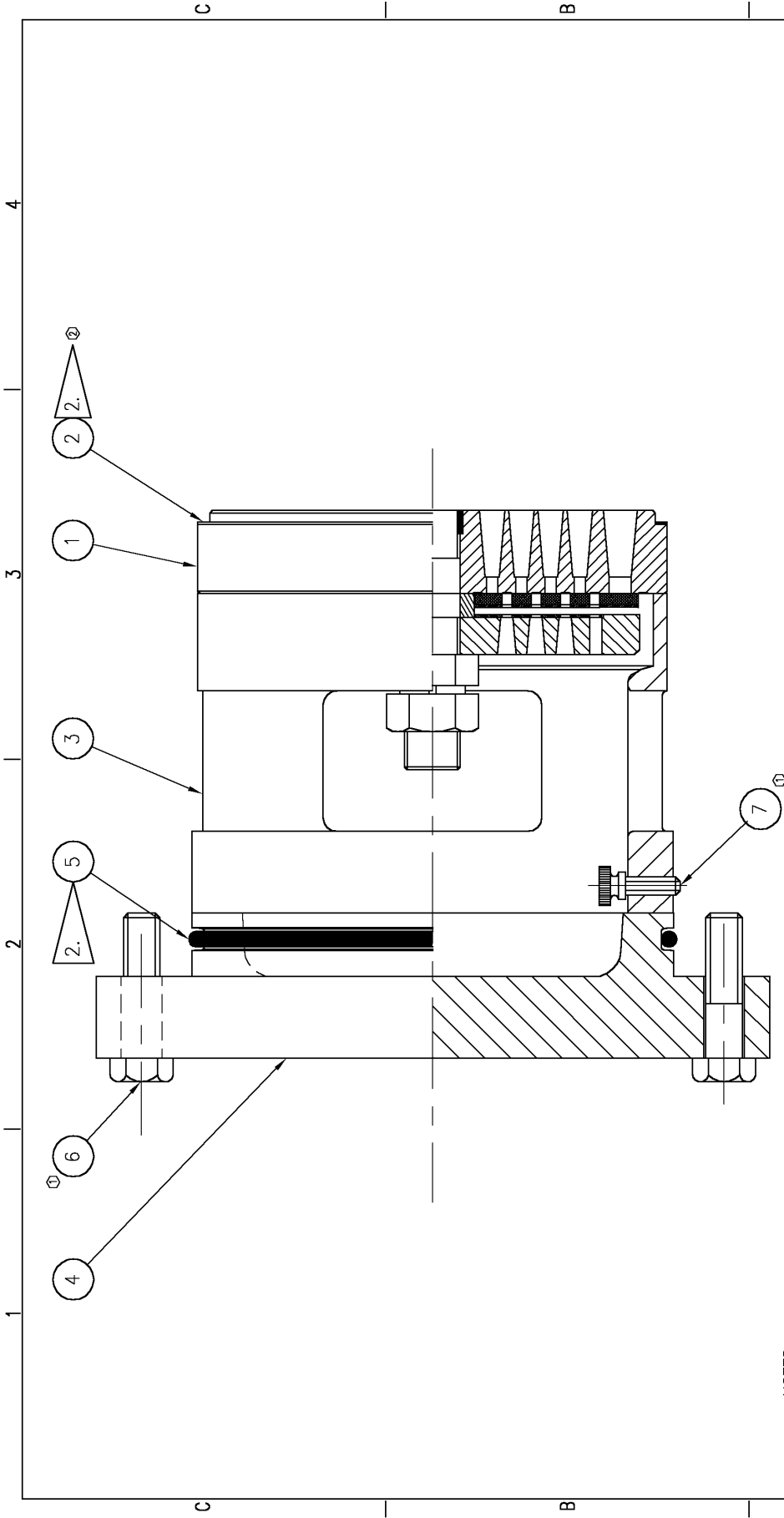
8/09/11

PARTS LIST

SUCTION VALVE, RETAINER AND CAP PART NO. G-0893
17-1/4"JGR, JGH, RJ & JGE CYLINDER CLASS REF DRAWING A-3395
(PARTS LIST FOR SIDE POCKETS ONLY)

ITEM	PART NUMBER	QTY	DESCRIPTION
1	SUCTION VALVE	0	FOR VALVE PART NUMBER, SEE COVER SHEET
2	A-0655	1	STEEL GASKET, 06.448 OD X 06.147 ID X .030, VALVE
3	B-0535	1	VLV RET,SUC,13=17-1/4R:RJ:ET
4	B-0643	0	VALVE CAP, SIDE, 17-1/4R:RJ:RJ PRC:H:E:ET
5	A-0031	1	O-RING, VT, 6.395 OD X .210, 75/85 DUROMETER
6	FC0171CED	3	12-POINT CAPSCREW, 1/2-13 X 2 X 9/16, G8

WHEN A ZERO APPEARS IN THE QUANTITY COLUMN IT
DOES NOT REPRESENT THE QUANTITY REQUIRED.
*** ALWAYS PROVIDE SERIAL NUMBER WHEN ORDERING SPARE PARTS. ***



NOTES:

- 1.- LOOSEN OR TIGHTEN ALL FASTENERS PER RECOMMENDED PROCEDURES AND TORQUE VALUES IN MANUAL.
2. OIL O-RING (ITEM #5) BEFORE INSTALLING.
3. APPLY AN ANTI-SEIZE LUBRICANT TO GASKET SURFACES (ITEM 2)

4.- THIS VALVE ASSEMBLY DRAWING IS FOR ILLUSTRATION PURPOSES ONLY AND MAY NOT NECESSARILY REPRESENT THE EXACT CONFIGURATION PERTAINING TO THE UNIT ORDERED. REFER TO ACCOMPANYING PARTS LIST FOR ITEMS (AND QUANTITIES OF EACH) REQUIRED FOR THIS PARTICULAR ASSEMBLY.

②	• D6 ADDED FLAG TO ITEM 2. ADDED NOTES #3 & #4. REPLACED BOARDER.	JLS 02/20/01	1
①	RENUMBERED ITEMS MARKED	XXX XX/XX/XXXX	2
REV	DESCRIPTION	INIT/DATE	3

2	8412	APPROVED:	ASSEMBLY DWG. NO.	4
1	8001	CH 6/4/92	SCALE: NONE	
0	4510	7/13/92		
REV	ECN			



ARIEL CORPORATION
35 BLACKJACK ROAD
MOUNT VERNON, OHIO 43050

A-3395

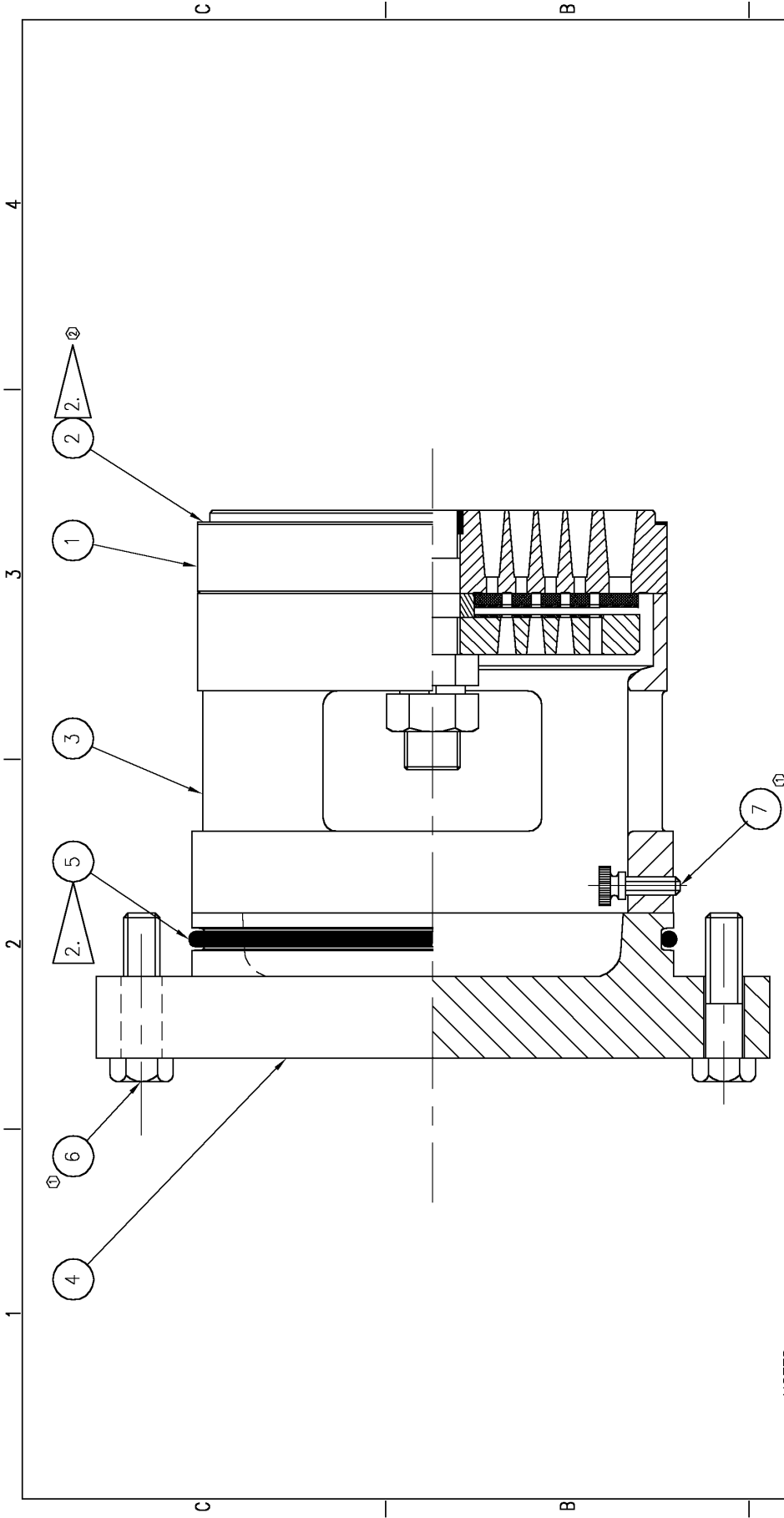
8/09/11

PARTS LIST

SUCTION VALVE, RETAINER AND CAP PART NO. G-0900
17-1/4"JGR, JGH, RJ & JGE CYLINDER CLASS REF DRAWING A-3395
(PARTS LIST FOR TOP POCKETS ONLY)

ITEM	PART NUMBER	QTY	DESCRIPTION
1	SUCTION VALVE	0	FOR VALVE PART NUMBER, SEE COVER SHEET
2	A-0655	1	STEEL GASKET, 06.448 OD X 06.147 ID X .030, VALVE
3	B-0535	1	VLV RET,SUC,13=17-1/4R:RJ:ET
4	B-0642	0	VALVE CAP, NOZZLE, 17-1/4R:RJ:RJ PRC:H:E:ET
5	A-0031	1	O-RING, VT, 6.395 OD X .210, 75/85 DUROMETER
6	FC0171CED	3	12-POINT CAPSCREW, 1/2-13 X 2 X 9/16, G8

WHEN A ZERO APPEARS IN THE QUANTITY COLUMN IT
DOES NOT REPRESENT THE QUANTITY REQUIRED.
*** ALWAYS PROVIDE SERIAL NUMBER WHEN ORDERING SPARE PARTS. ***



NOTES:

- 1.- LOOSEN OR TIGHTEN ALL FASTENERS PER RECOMMENDED PROCEDURES AND TORQUE VALUES IN MANUAL.
- 2. OIL O-RING (ITEM #5) BEFORE INSTALLING.
- 3. APPLY AN ANTI-SEIZE LUBRICANT TO GASKET SURFACES (ITEM 2)
- 4.- THIS VALVE ASSEMBLY DRAWING IS FOR ILLUSTRATION PURPOSES ONLY AND MAY NOT NECESSARILY REPRESENT THE EXACT CONFIGURATION PERTAINING TO THE UNIT ORDERED. REFER TO ACCOMPANYING PARTS LIST FOR ITEMS (AND QUANTITIES OF EACH) REQUIRED FOR THIS PARTICULAR ASSEMBLY.

②	• D6 ADDED FLAG TO ITEM 2. ADDED NOTES #3 & #4. REPLACED BOARDER.	JLS 02/20/01
①	RENUMBERED ITEMS MARKED	XXX XX/XX/XXXX
REV	DESCRIPTION	INIT/DATE

THIS DOCUMENT AND CONTENTS THEREIN ARE PROPRIETARY TO ARIEL CORPORATION. ONLY BY WRITTEN CONSENT AND AGREED TERMS BY ARIEL CORPORATION GIVES THE RIGHT TO MANUFACTURE, BUT DOES NOT GRANT THE RIGHT TO DISCLOSE OR USE IN PART OR IN WHOLE INFORMATION CONTAINED IN DOCUMENT.

2	8412	APPROVED:	ASSEMBLY DWG. NO.
1	8001	CH 6/4/92	SCALE: NONE
0	4510	7/13/92	
REV	ECN		



ARIEL CORPORATION
35 BLACKJACK ROAD
MOUNT VERNON, OHIO 43050

A-3395

8/09/11

PARTS LIST

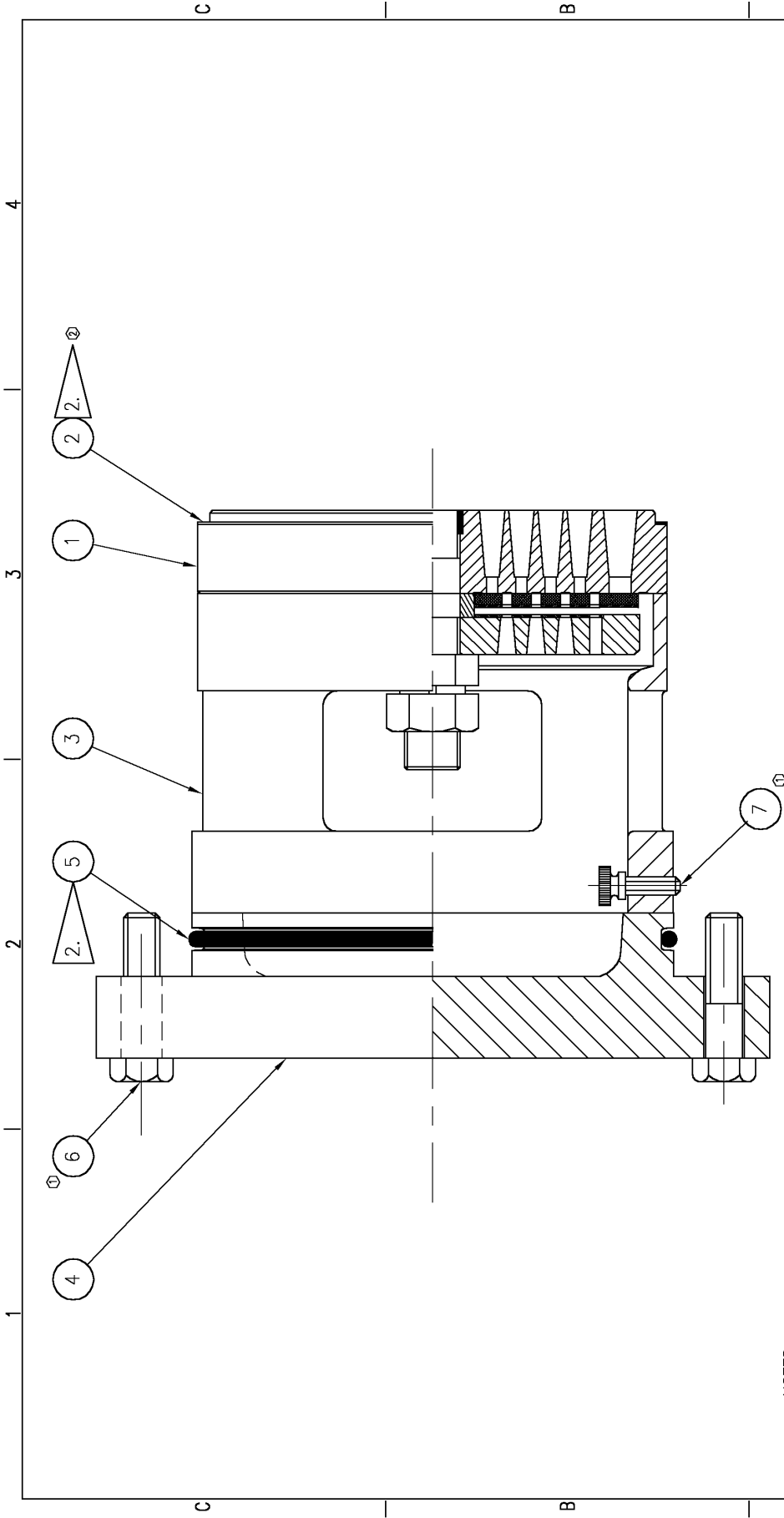
DISCHARGE VALVE, RETAINER AND CAP
17-1/4" R:RJ:E CYLINDER CLASS
(PARTS LIST FOR SIDE POCKETS ONLY)

PART NO. G-2485
REF DRAWING A-3395

ITEM	PART NUMBER	QTY	DESCRIPTION
1	DISCHARGE VALV	0	FOR VALVE PART NUMBER, SEE COVER SHEET
2	A-0655	1	STEEL GASKET, 06.448 OD X 06.147 ID X .030, VALVE
3	B-1370	1	VLV RET,DIS,13.5,17-1/4R:RJ:ET
4	B-0643	0	VALVE CAP, SIDE, 17-1/4R:RJ:RJ PRC:H:E:ET
5	A-0031	1	O-RING, VT, 6.395 OD X .210, 75/85 DUROMETER
6	FC0171CED	3	12-POINT CAPSCREW, 1/2-13 X 2 X 9/16, G8
7	A-0145	2	THUMB SCREW, NYLON, 1/4-20 X 3/4

WHEN A ZERO APPEARS IN THE QUANTITY COLUMN IT
DOES NOT REPRESENT THE QUANTITY REQUIRED.

*** ALWAYS PROVIDE SERIAL NUMBER WHEN ORDERING SPARE PARTS. ***



NOTES:

- 1.- LOOSEN OR TIGHTEN ALL FASTENERS PER RECOMMENDED PROCEDURES AND TORQUE VALUES IN MANUAL.
- 2. OIL O-RING (ITEM #5) BEFORE INSTALLING.
- 3. APPLY AN ANTI-SEIZE LUBRICANT TO GASKET SURFACES (ITEM 2)
- 4.- THIS VALVE ASSEMBLY DRAWING IS FOR ILLUSTRATION PURPOSES ONLY AND MAY NOT NECESSARILY REPRESENT THE EXACT CONFIGURATION PERTAINING TO THE UNIT ORDERED. REFER TO ACCOMPANYING PARTS LIST FOR ITEMS (AND QUANTITIES OF EACH) REQUIRED FOR THIS PARTICULAR ASSEMBLY.

②	• D6 ADDED FLAG TO ITEM 2. ADDED NOTES #3 & #4. REPLACED BOARDER.	JLS 02/20/01
①	RENUMBERED ITEMS MARKED	XXX XX/XX/XXXX
REV	DESCRIPTION	INIT/DATE

THIS DOCUMENT AND CONTENTS THEREIN ARE PROPRIETARY TO ARIEL CORPORATION. ONLY BY WRITTEN CONSENT AND AGREED TERMS BY ARIEL CORPORATION GIVES THE RIGHT TO MANUFACTURE, BUT DOES NOT GRANT THE RIGHT TO DISCLOSE OR USE IN PART OR IN WHOLE INFORMATION CONTAINED IN DOCUMENT.

2	8412	REV	ECN
1	8001	REV	ECN
0	4510	CH	6/4/92
		DESIGNED	7/13/92
		APPROVED:	NONE
		SCALE:	NONE

ARIEL CORPORATION
 35 BLACKJACK ROAD
 MOUNT VERNON, OHIO 43050

ARIEL

ASSEMBLY DWG. NO. **A-3395**

8/09/11

PARTS LIST

DISCHARGE VALVE, RETAINER AND CAP
17-1/4" R:RJ:E CYLINDER CLASS
(PARTS LIST FOR BOTTOM POCKETS ONLY)

PART NO. G-2486
REF DRAWING A-3395

ITEM	PART NUMBER	QTY	DESCRIPTION
1	DISCHARGE VALV	0	FOR VALVE PART NUMBER, SEE COVER SHEET
2	A-0655	1	STEEL GASKET, 06.448 OD X 06.147 ID X .030, VALVE
3	B-1370	1	VLV RET,DIS,13.5,17-1/4R:RJ:ET
4	B-0642	0	VALVE CAP, NOZZLE, 17-1/4R:RJ:RJ PRC:H:E:ET
5	A-0031	1	O-RING, VT, 6.395 OD X .210, 75/85 DUROMETER
6	FC0171CED	3	12-POINT CAPSCREW, 1/2-13 X 2 X 9/16, G8
7	A-0145	2	THUMB SCREW, NYLON, 1/4-20 X 3/4

WHEN A ZERO APPEARS IN THE QUANTITY COLUMN IT
DOES NOT REPRESENT THE QUANTITY REQUIRED.

*** ALWAYS PROVIDE SERIAL NUMBER WHEN ORDERING SPARE PARTS. ***

8/09/11

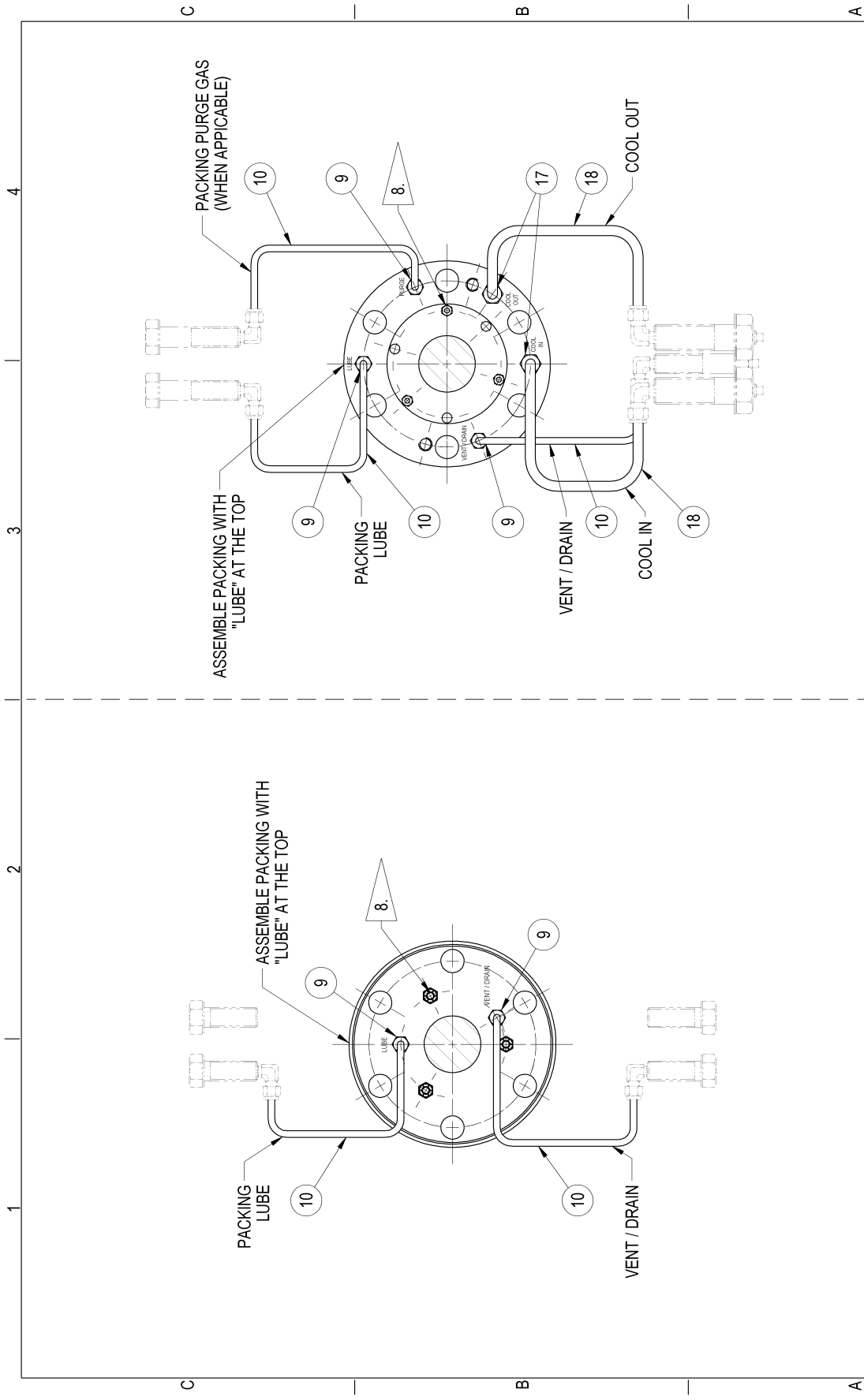
PARTS LIST

17.250 ET PISTON ASSEMBLY; 04.500 STROKE. PART NO. PISTON ASSY
G-SHEETS USED: G-18425, G-18798, G-18236, G-18945, REF DRAWING A-17925 2 SHT
G-18250.

ITEM	PART NUMBER	QTY	DESCRIPTION
1	C-1742	1	PIST,RR ,17-1/4H:E:ET,2PC
2	A-3449	1	RIDER RING,17-1/4R:H:E:ET
3	C-0604	1	P ROD, 4.50STK/37.698LG
4	B-0846	1	PISTON COLLAR, 3-1/2 OD, JGH:E:ET
5	B-0847	1	PISTON NUT, 3-1/2 OD, JGH:E:ET
6	FS0405DG	2	SET SCREW, CUP POINT, 5/16-24 X 1"
7	B-1582	1	PACKING CASE, 2.000 ROD, VAC-350 PSI, STD, BTR
8	FC0120IW	4	12-POINT CAPSCREW, 3/4-10 X 6, G8
9	A-0827	0	MALE CONNECTOR, STL, 1/4 TUBE X 1/4 NPT
10	PT0200CB	30."	TUBING, SS, 1/4 OD X .035 WALL
11	SC-1515	0	PIST,RR ,17-1/4ET,CE/PC
12	SC-1516	0	PIST,RR ,17-1/4ET,HE/PC
13	A-6291	0	O-RING, VT, 14.640 OD X .070, 75 DUROMETER
14	FP0505GE	0	ROLL PIN, 5/16 OD X 3/4 LONG
99	B-1582-K	0	REBUILD KIT, 2.000 PISTON ROD PACKING
99	B-1687-K	0	REBUILD KIT, 2.000 OIL WIPER PACKING, WAT

WHEN A ZERO APPEARS IN THE QUANTITY COLUMN IT
DOES NOT REPRESENT THE QUANTITY REQUIRED.

*** ALWAYS PROVIDE SERIAL NUMBER WHEN ORDERING SPARE PARTS. ***



ARIEL CORPORATION
 35 BLACKJACK ROAD
 MOUNT VERNON, OHIO 43050



ASSEMBLY
 DWG. NO. **A-17925**
 SHT 2 OF 2

REV	DESCRIPTION	INITIALS	DATE
0	16824	CPM 01/31/11	DLI 02/23/11
REV	EON	SCALE	NONE

THIS DOCUMENT AND CONTENTS THEREIN ARE PROPRIETARY TO
 ARIEL CORPORATION. ONLY BY WRITTEN CONSENT AND AGREED
 TERMS BY ARIEL CORPORATION GIVES THE RIGHT TO DISCLOSE OR
 USE IN PART OR IN WHOLE INFORMATION CONTAINED IN DOCUMENT.

REV	DESCRIPTION	INITIALS	DATE
0	16824	CPM 01/31/11	DLI 02/23/11
REV	EON	SCALE	NONE

8/09/11

PARTS LIST

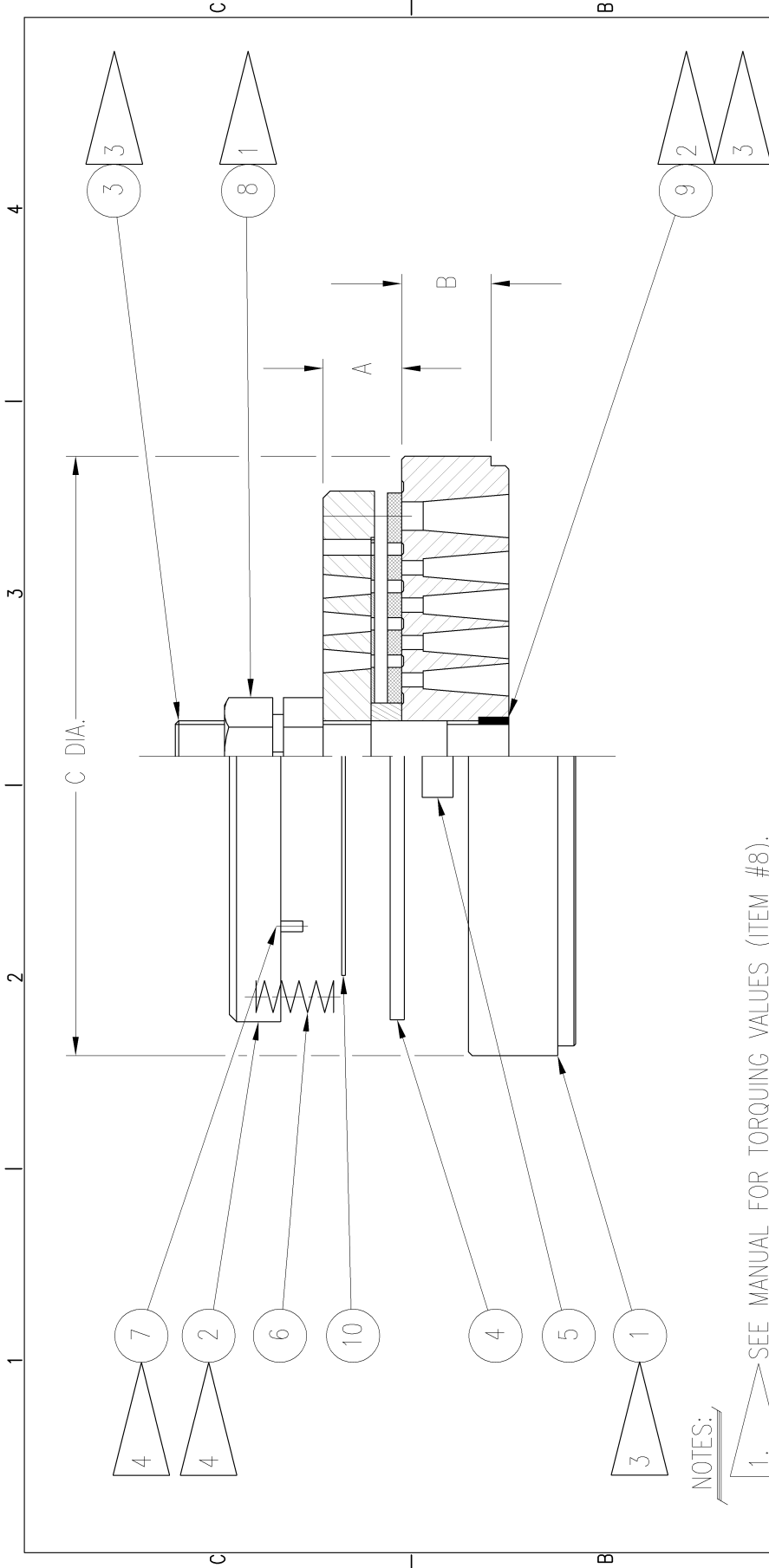
0.9410=A
0.5120=B
6.4760=C
0.1020=LFT

PART NO. B-2372-U
REF DRAWING A-9275

ITEM	PART NUMBER	QTY	DESCRIPTION
1	A-2853	1	SUC VLV SEAT,147CHT
2	A-2854-A	1	SUC VLV GUARD ASSY,147CHT
3	A-2855	1	CNTR BOLT,3/4-16
4	A-8904	1	VLV PLT,147CT.197THK,NYX
5	A-2859	1	GUIDE RING,147CHT,.338 THK
6	A-1343	16	SPRING(.354/.276DX.630 WHITE)
7	A-2039	2	SPIROL PIN,.118D X .591L
8	A-1462	1	LOCKNUT, DRAKE,3/4-16
9	A-1481	1	DOWEL PIN,.150D X .323L
10	A-2858	1	WAFER PLATE.147CHT
99	KB-2372-U	0	KIT,VLV,147CT,NYX

WHEN A ZERO APPEARS IN THE QUANTITY COLUMN IT
DOES NOT REPRESENT THE QUANTITY REQUIRED.

*** ALWAYS PROVIDE SERIAL NUMBER WHEN ORDERING SPARE PARTS. ***



NOTES:

1. SEE MANUAL FOR TORQUING VALUES (ITEM #8).
2. INSTALL PER ER-52.
3. VALVE SEAT ASSEMBLY (ITEM #1) CONSISTS OF VALVE SEAT, CENTER STUD (ITEM #3) AND DOWEL PIN (ITEM #9).
4. VALVE GUARD ASSEMBLY (ITEM #2) CONSISTS OF VALVE GUARD AND SPIROL PIN (ITEM #7).

ARIEL CORPORATION
 35 BLACKJACK ROAD
 MOUNT VERNON, OHIO 43050

TITLE: ① DISCHARGE VALVE, CT		MATERIAL: PROCURED	
DRAWN: IG 9/27/99		R.S. No.	
CHECKED: ED 10/4/99		PART NO.	
SCALE: NONE		DWG. No. A-9276	
REV	DESCRIPTION	REV	ECN
1	UPDATED BORDER. IN TITLE BLOCK: DISCHARGE VALVE, CT WAS DISCHARGE VALVE, CHT.	05/21/10	MLB
			INIT/DATE
THIS DOCUMENT AND CONTENTS THEREIN ARE PROPRIETARY TO ARIEL CORPORATION. ONLY BY WRITTEN CONSENT AND AGREED TERMS BY ARIEL CORPORATION GIVES THE RIGHT TO MANUFACTURE, BUT DOES NOT GRANT THE RIGHT TO DISCLOSE OR USE IN PART OR IN WHOLE INFORMATION CONTAINED IN DOCUMENT.		DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED.	
----- DO NOT SCALE DRAWING -----			

8/09/11

PARTS LIST

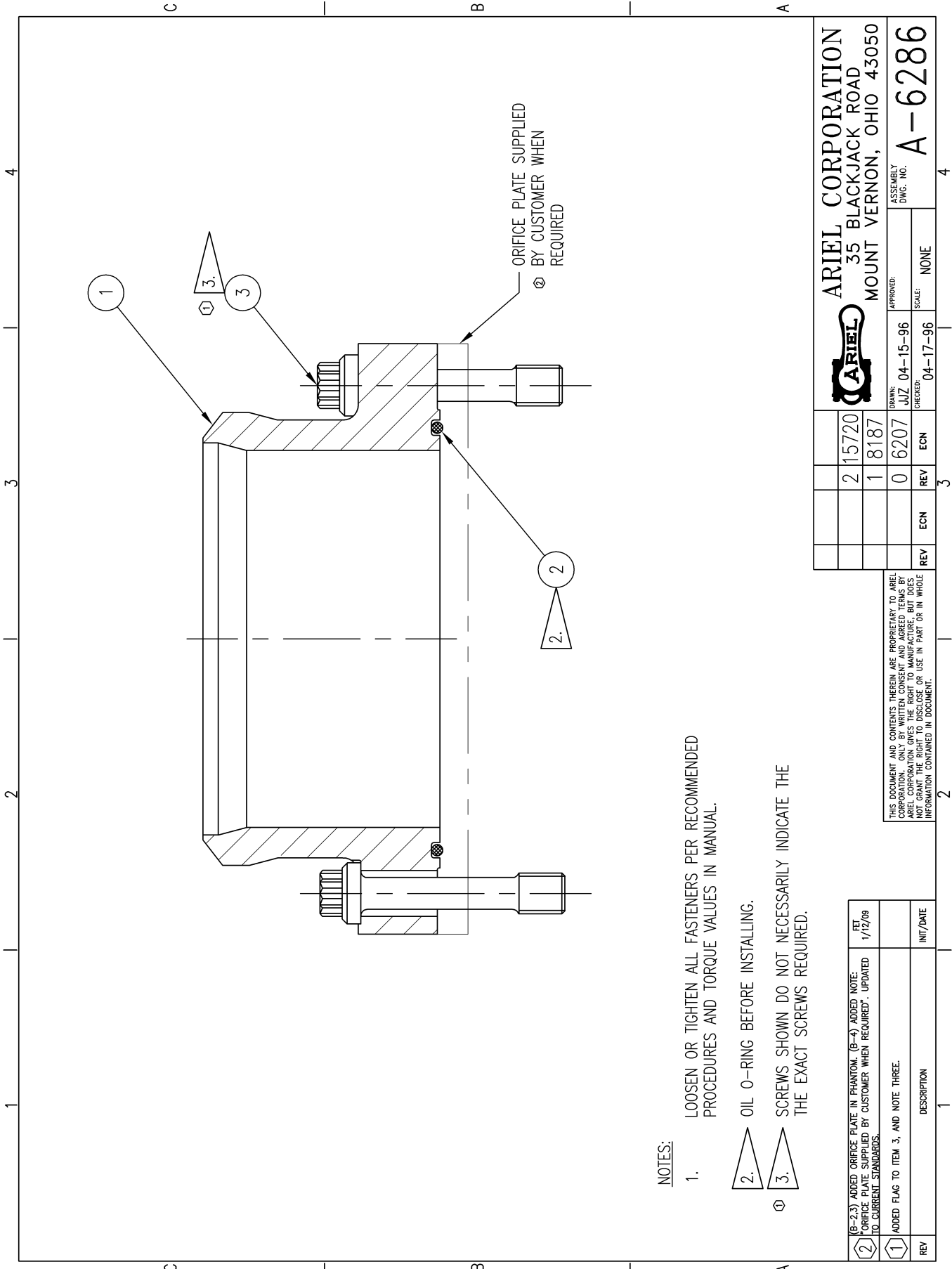
0.8900=A
0.4720=B
6.4530=C
0.1020=LFT

PART NO. B-2373-CC
REF DRAWING A-9276

ITEM	PART NUMBER	QTY	DESCRIPTION
1	A-2860-A	1	DIS VLV SEAT ASSY,147CHT
2	A-2862-A	1	DIS VLV GUARD ASSY,147CHT
3	A-2861	1	CNTR STUD, 3/4-16
4	A-9592	1	VLV PLT,147CT.197THK,MTX
5	A-2859	1	GUIDE RING,147CHT,.338 THK
6	A-1343	32	SPRING(.354/.276DX.630 WHITE)
7	A-2039	2	SPIROL PIN,.118D X .591L
8	A-1462	1	LOCKNUT, DRAKE,3/4-16
9	A-1481	1	DOWEL PIN,.150D X .323L
10	A-2858	1	WAFER PLATE.147CHT
99	KB-2373-CC	0	KIT,VLV,147CHT,MTX

WHEN A ZERO APPEARS IN THE QUANTITY COLUMN IT
DOES NOT REPRESENT THE QUANTITY REQUIRED.

*** ALWAYS PROVIDE SERIAL NUMBER WHEN ORDERING SPARE PARTS. ***



NOTES:

1. LOOSEN OR TIGHTEN ALL FASTENERS PER RECOMMENDED PROCEDURES AND TORQUE VALUES IN MANUAL.
2. OIL O-RING BEFORE INSTALLING.
3. SCREWS SHOWN DO NOT NECESSARILY INDICATE THE EXACT SCREWS REQUIRED.

②	(6-23) ADDED ORIFICE PLATE IN PHANTOM. (6-4) ADDED NOTE: "ORIFICE PLATE SUPPLIED BY CUSTOMER WHEN REQUIRED". UPDATED TO CURRENT STANDARDS.	RET	1/12/09
①	ADDED FLAG TO ITEM 3. AND NOTE THREE.		
REV	DESCRIPTION	INIT/DATE	

THIS DOCUMENT AND CONTENTS THEREIN ARE PROPRIETARY TO ARIEL CORPORATION. ONLY BY WRITTEN CONSENT AND AGREED TERMS BY ARIEL CORPORATION GIVES THE RIGHT TO MANUFACTURE, BUT DOES NOT GRANT THE RIGHT TO DISCLOSE OR USE IN PART OR IN WHOLE INFORMATION CONTAINED IN DOCUMENT.

ARIEL CORPORATION
 35 BLACKJACK ROAD
 MOUNT VERNON, OHIO 43050

BRAND:	JUZ 04-15-96	APPROVED:	
CHECKED:	04-17-96	SCALE:	NONE
ASSEMBLY DWG. NO.:	A-6286		

REV	ECN	REV	ECN
0	6207	1	8187
2	15720		

1 2 3 4

C B A

8/09/11

ARIEL CORPORATION
SALES ORDER COVER SHEET

C/N: 001

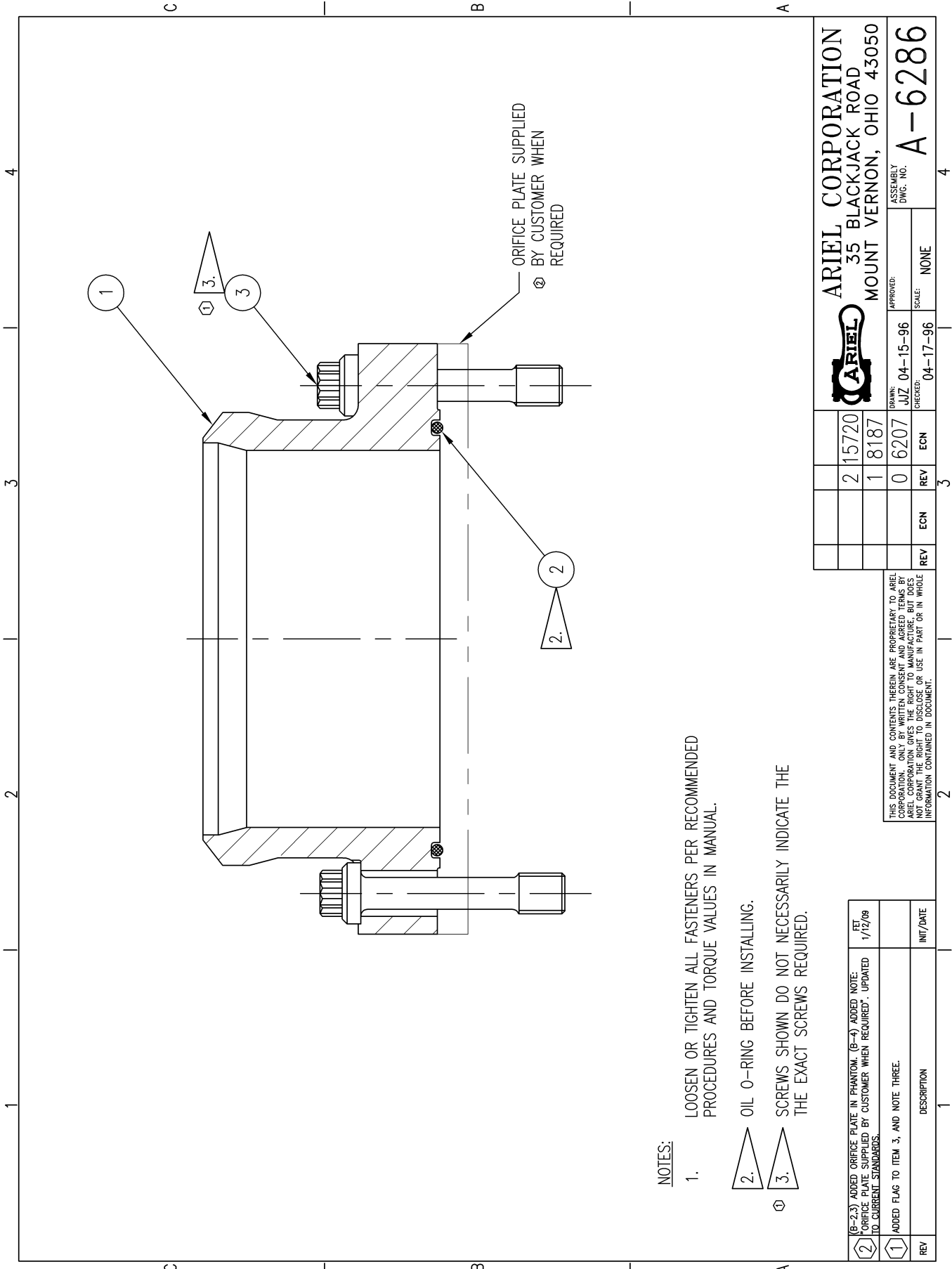
RHCOVP02

SALES ORDER NUMBER: 56620 LINE#: 20

PART: G-5130 DESCRIPTION: COMP FLG, ,SUC NOZ, FOR ORIF

COMPANION FLANGE ASSEMBLY, PART NO. G-5130
SUCTION NOZZLE, (FOR ORIFICE PLATE). REF DRAWING A-6286

ITEM	PART NUMBER	QTY	DESCRIPTION
1	B-1068	2	COMP FLG, 6" PIPE, 17.25/19.5R
2	A-0724	4	O-RING, VT, 6.645 OD X .210, 75/85 DUROMETER
3	FC0173EHG	8	12-POINT CAPSCREW, 5/8-11 X 2-3/4 X 3/4, G8



NOTES:

1. LOOSEN OR TIGHTEN ALL FASTENERS PER RECOMMENDED PROCEDURES AND TORQUE VALUES IN MANUAL.
2. OIL O-RING BEFORE INSTALLING.
3. SCREWS SHOWN DO NOT NECESSARILY INDICATE THE EXACT SCREWS REQUIRED.

②	(6-23) ADDED ORIFICE PLATE IN PHANTOM. (6-4) ADDED NOTE: "ORIFICE PLATE SUPPLIED BY CUSTOMER WHEN REQUIRED". UPDATED TO CURRENT STANDARDS.	RET	1/12/09
①	ADDED FLAG TO ITEM 3. AND NOTE THREE.		
REV	DESCRIPTION	INIT/DATE	

THIS DOCUMENT AND CONTENTS THEREIN ARE PROPRIETARY TO ARIEL CORPORATION. ONLY BY WRITTEN CONSENT AND AGREED TERMS BY ARIEL CORPORATION GIVES THE RIGHT TO MANUFACTURE, BUT DOES NOT GRANT THE RIGHT TO DISCLOSE OR USE IN PART OR IN WHOLE INFORMATION CONTAINED IN DOCUMENT.

ARIEL CORPORATION
 35 BLACKJACK ROAD
 MOUNT VERNON, OHIO 43050



APPROVED: **A-6286**
 ASSEMBLY DWG. NO.

BRAND: JJZ 04-15-96
 CHECKED: 04-17-96
 SCALE: NONE

2	15720	ECN	REV	3
1	8187	ECN	REV	3
0	6207	ECN	REV	3

1 2 3 4

C B A

8/09/11

ARIEL CORPORATION
SALES ORDER COVER SHEET

C/N: 001

RHCOVP02

SALES ORDER NUMBER: 56620 LINE#: 21

PART: G-5131 DESCRIPTION: COMP FLG, ,DIS NOZ, FOR ORIF

COMPANION FLANGE ASSEMBLY PART NO. G-5131
DISCHARGE NOZZLE (FOR ORIFICE PLATE). REF DRAWING A-6286

ITEM	PART NUMBER	QTY	DESCRIPTION
1	B-1068	2	COMP FLG, 6" PIPE, 17.25/19.5R
2	A-0724	4	O-RING, VT, 6.645 OD X .210, 75/85 DUROMETER
3	FC0173EHG	8	12-POINT CAPSCREW, 5/8-11 X 2-3/4 X 3/4, G8

8/09/11

ARIEL CORPORATION
SALES ORDER COVER SHEET

C/N: 001

RHCOVP02

SERIAL #: U85396 & 98

PART: G-11345 DESCRIPTION: VVCP,17-1/4R:RJ:ET

17-1/4" JGR:RJ:ET UNLOADER ASSEMBLY, PART NO. G-11345
STAINLESS STEEL TUBING AND FITTINGS. REF DRAWING A-8598

ITEM	PART NUMBER	QTY	DESCRIPTION
1	C-0472	1	UNL.HEAD,17-1/4RU
2	D-2952	1	ADAPTER, HEAD END UNLOADER, 17-1/4R
3	D-0610	0	UNL PIST,17-1/4R
4	C-3704	0	UNL.STEM,10-3/8=22-1/2RU TPR/H
5	A-0799	1	O-RING, VT, 16.375 OD X .210, 75/85 DUROMETER
6	A-3600	1	STEEL GASKET, 17.750 OD X 17.375 ID X .060, HEAD
7	A-3403	1	UNL.PISTON RING,15-1/4 O.D.
8	C-0369	1	UNLOADER LOCKING HANDLE, 2"-8 THREAD
9	B-0640	1	UNL PKG RETAINER
10	A-0643	1	BACK-UP RING, PACKING
11	A-0629	1	COMPRESSION SPRING, UNL.
12	A-0639	1	V PACKING, UNL
13	FC0120HO	12	12-POINT CAPSCREW, 5/8-11 X 3, G8
14	A-2389	0	SELF-LOCK NUT, ESNA, THIN, 1-3/8-12
15	FC0110DF	4	SOCKET HEAD CAPSCREW, 5/16-18 X 7/8, G8
16	FC0110EG	4	SOCKET HEAD CAPSCREW, 3/8-16 X 1", G8
17	A-0500	1	GREASE FITTING CAP, PLASTIC
18	A-0938	1	MALE CONNECTOR, SS, 1/4 TUBE X 1/4 NPT
19	PZ0230BA	1	GREASE FITTING, STRAIGHT, 1/4-18
20	A-0641	1	BELLOWS, THREAD PROTECTOR, UNLOADER
21	A-0642	1	BACK-UP RING, BELLOWS
22	FC0134CC	3	BUTTON HEAD CAPSCREW, 1/4-20 X 1/2, 316SS

8/09/11

SALES ORDER COVER SHEET

23	PT0201CD	5."	TUBING, 316 SS, 1/4 OD X .065
24	C-0982	0	UNLOADER HANDLE, 3 PRONG
25	A-0256	1	MACHINE SCREW PLUG, PLASTIC, 1/2-13
26	A-0755	1	DATA PLATE, UNLOADER HEAD SPECIFICATION
27	FR0571CC	4	DRIVE SCREW, TYPE U, SS, #6 X 1/4
28	AC-3710	1	UNL PIST ASSY,17-1/4R:RJ:H:E
32	A-12927	1	DATA PLATE, UNLOADER ADAPTER SPECIFICATION

VARIABLE VOLUME CLEARANCE POCKET (Headend Unloader) DATA SHEET

17-1/4ET Class Cylinder

Stroke: 4.50 in 114 mm

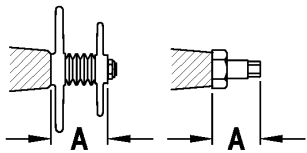
Bore: 17.250 in 438 mm

MAWP: 230 psig 15.9 bar(g) 1586 kPa(g) 16.2 kg/cm2(g)

General Data for VVCP (independent of cylinder):

*Note: If VVCP services another cylinder, it may have a higher MAWP than the above

MAWP*:	230	15.9 barg	1586 kPa(g)
VVCP piston diameter:	15.25 in	387 mm	
Stem thread lead (pitch):	0.125 in	3 mm	
Total travel:	2.7 in	6.8 cm	
Number of turns from closed to fully open:		21	



A distance - see diagram

- closed:	5 in	12.7 cm
- open:	7-5/8 in	19.5 cm

Minimum added fixed clearance:	11.7 in3	191.6 cm3
Additional added clearance when fully open:	491 in3	8046 cm3
Total added clearance when fully open:	502.7 in3	8237.6 cm3
Clearance volume change per turn:	22.8 in3	374.3 cm3
Clearance volume change per change in travel:	182.7 in3/in	1178.9 cm3/cm

Clearance Data for VVCP alone, in percent of swept volume of above cylinder:

Minimum added fixed clearance:	1.1%
Additional added clearance when fully open:	46.7%
Total added clearance when fully open:	47.8%
Head end clearance change per turn:	2.2%
Head end clearance change per change in travel:	17.4% /in 6.8% /cm

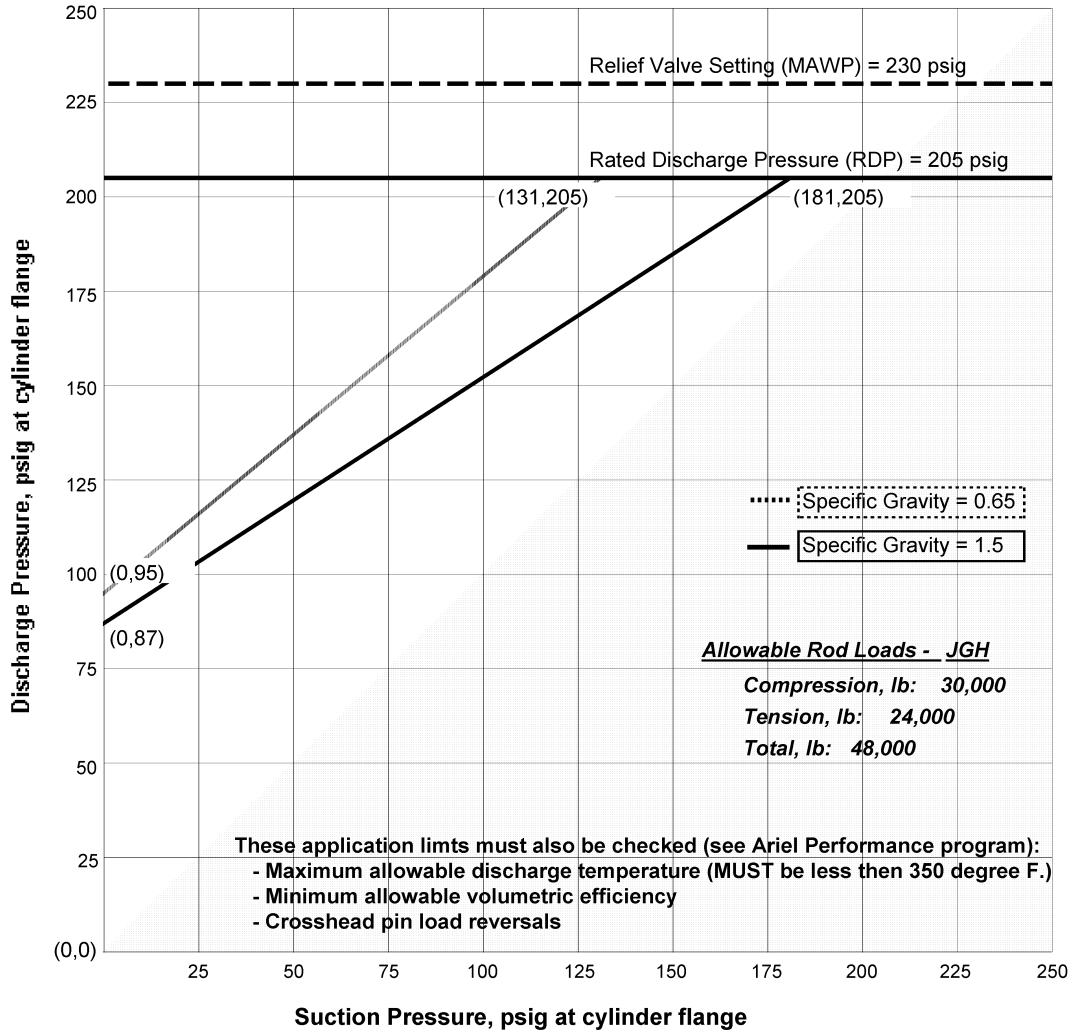
Clearance Data with VVCP installed on above cylinder with standard valves, in percent of swept volume:

Minimum fixed head end clearance:	13.8%
Total head end clearance when fully open:	60.4%

PLEASE NOTE: It is important to understand that the percent clearance figures for the variable volume clearance pocket above include the cylinder headend clearance. However, any valve spacers or other non-standard added clearances on the unit must be accounted for.

Estimated Gas Rod Load and Pressure Limits for 4.5 inch stroke at 1200 RPM

Cylinder Class: 17-1/4ET Bore, inches: 17.250
Cylinder Serial Number: C-125345 & 47



This chart defines allowable operating limits for gas rod loads and standard working pressures. Pressure combinations falling above the line for the applicable Specific Gravity of the gas being compressed will exceed the Rod Load limitations of the equipment.

Calculations are based on 80 degrees Fahrenheit hydrocarbon gas at 1500 ft. elevation.

8/09/11

ARIEL CORPORATION
SALES ORDER COVER SHEET

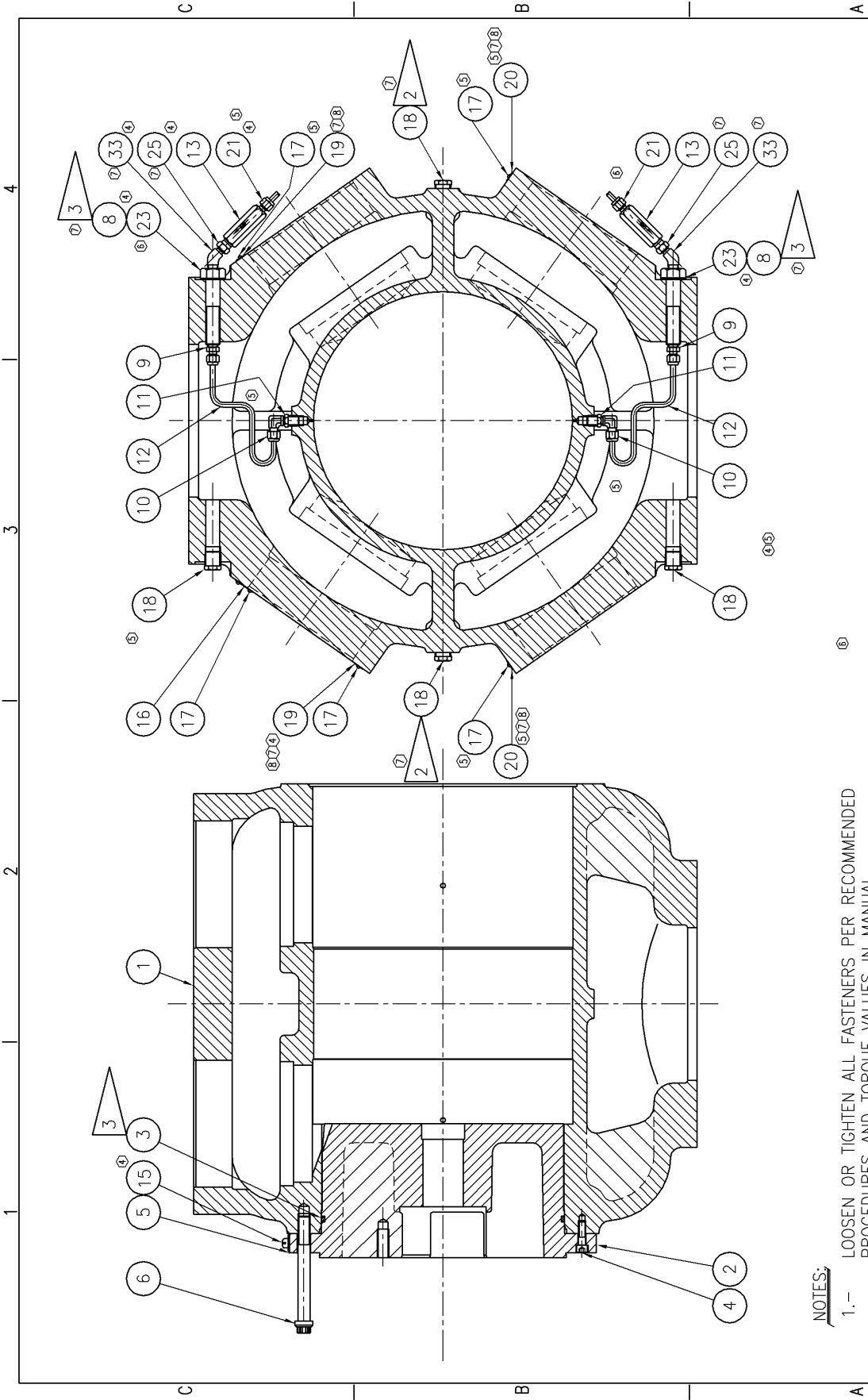
C/N: 001

RHCOVP02

SERIAL #: C125346

PART: 13-1/2ET CLASS DESCRIPTION: 13-1/2" ET CYLINDER CLASS

PART NUMBER	QTY	DESCRIPTION	DRAWING NO.
G-10536	1	CYL ASSY,13 ET,STD 300	A-4896
G-10555	1	CYL MTG,11.5=13.5, H:E (12)	N.A.
G-0733	4	SUC VLV ASSY,13-1/2R:H:E:RJ:ET	D-0476
G-2332	4	DIS VLV ASSY,13-1/2R:RJ:E:ET	D-0477
PISTON ASSY	1	PISTON ASSY 13.000 ET	A-17925 2 SHT
B-2372-S	4	SUC VLV,147CT,NYX	A-9275
B-2373-CC	4	DIS VLV,147CT, MTX	A-9276



NOTES:

- 1.- LOOSEN OR TIGHTEN ALL FASTENERS PER RECOMMENDED PROCEDURES AND TORQUE VALUES IN MANUAL.
- 2 USED TO PLUG INDICATOR PASSAGES WHERE APPLICABLE.
- 3 OIL O-RING AND STAT-O-SEALS BEFORE INSTALLING.

REV	DESCRIPTION		CS 7/23/02		INIT/DATE	
			ITEMS #20 & ITEMS #20 WERE #19.			
8						
THIS DOCUMENT AND CONTENTS THEREIN ARE PROPRIETARY TO ARIEL CORPORATION. ONLY BY WRITTEN CONSENT AND AGREED TERMS BY ARIEL CORPORATION WILL ANY INFORMATION BE DISCLOSED OR NOT GRANT THE RIGHT TO DISCLOSE OR USE IN PART OR IN WHOLE INFORMATION CONTAINED IN DOCUMENT.			8 10604		8	
			5 7510 1 6282		3	
			4 8001 0 5428		3	
DRAWN: WRB 1/3/95			ECN		REV	
CHECKED: 1/5/95			ECN		REV	
APPROVER: NONE			ECN		REV	
SCALE: NONE			ECN		REV	
ASSEMBLY DWG. NO. A-4896			ECN		REV	
35 BLACKJACK ROAD			ECN		REV	
MOUNT VERNON, OHIO 43050			ECN		REV	
ARIEL CORPORATION			ECN		REV	
7 8213 3 7704			ECN		REV	
6 8295 2 6953			ECN		REV	

8/09/11

PARTS LIST

13"ET CYLINDER BODY AND
TOP AND BOTTOM LUBE
RDP 275#, MAWP 300#

PART NO. G-10536
REF DRAWING A-4896

ITEM	PART NUMBER	QTY	DESCRIPTION
1	D-3598	0	CYL,13 ET 300
2	C-3632	0	CRANK END HEAD, 13-1/2ET
3	A-0653	1	O-RING, VT, 12.395 OD X .210, 75/85 DUROMETER
4	FC0110GH	2	SOCKET HEAD CAPSCREW, 1/2-13 X 1-1/4, G8
5	B-3515	1	GSKT,RND,16, X 1/64, 16 HOLES
6	FC0120HV	0	12-POINT CAPSCREW, 5/8-11 X 5-1/2, G8
8	FW0550ID	2	STAT-O-SEAL, VT, 75 DUROMETER, 3/4 ID
9	A-0830	2	MALE CONNECTOR, STL, 1/4 TUBE X 1/8 NPT
10	A-0815	2	MALE ELBOW, STL, 1/4 TUBE X 1/8 NPT
11	A-0811	2	HEX REDUCING BUSHING, 1/4 NPT (MALE) X 1/8 NPT (FEMALE), STL
12	PT0200CB	90."	TUBING, SS, 1/4 OD X .035 WALL
13	A-3780	2	CHECK VALVE, POPPET, DOUBLE BALL, SOFT SEAT, SS, 1/4 NPTF INLET X 1/4 NPTF OUTLET
15	A-0256	1	MACHINE SCREW PLUG, PLASTIC, 1/2-13
16	A-0465	1	DATA PLATE, CYLINDER SPECIFICATION, 3-1/2 X 2-1/4
17	FR0571CC	12	DRIVE SCREW, TYPE U, SS, #6 X 1/4
18	PP0810GB	6	PIPE PLUG, HEX HEAD, 1/2 NPT, STL
19	A-0640-A	2	INFORMATION PLATE, SUCTION
20	A-0640-B	2	INFORMATION PLATE, DISCHARGE
21	A-0827	2	MALE CONNECTOR, STL, 1/4 TUBE X 1/4 NPT
23	A-0583	2	LUBE FITTING, 3/4-10 X 3-1/2
25	A-2114	2	HEX REDUCING NIPPLE, 1/4 NPT (MALE) X 1/8 NPT (MALE), STL

WHEN A ZERO APPEARS IN THE QUANTITY COLUMN IT
DOES NOT REPRESENT THE QUANTITY REQUIRED.

*** ALWAYS PROVIDE SERIAL NUMBER WHEN ORDERING SPARE PARTS. ***

8/09/11

PARTS LIST

33	A-3989	2	STREET ELBOW, 45°, 1/8 NPT, STL
100	HD-3598	1	CYL ASSY,13 ET

WHEN A ZERO APPEARS IN THE QUANTITY COLUMN IT
DOES NOT REPRESENT THE QUANTITY REQUIRED.

*** ALWAYS PROVIDE SERIAL NUMBER WHEN ORDERING SPARE PARTS. ***

8/09/11

PARTS LIST

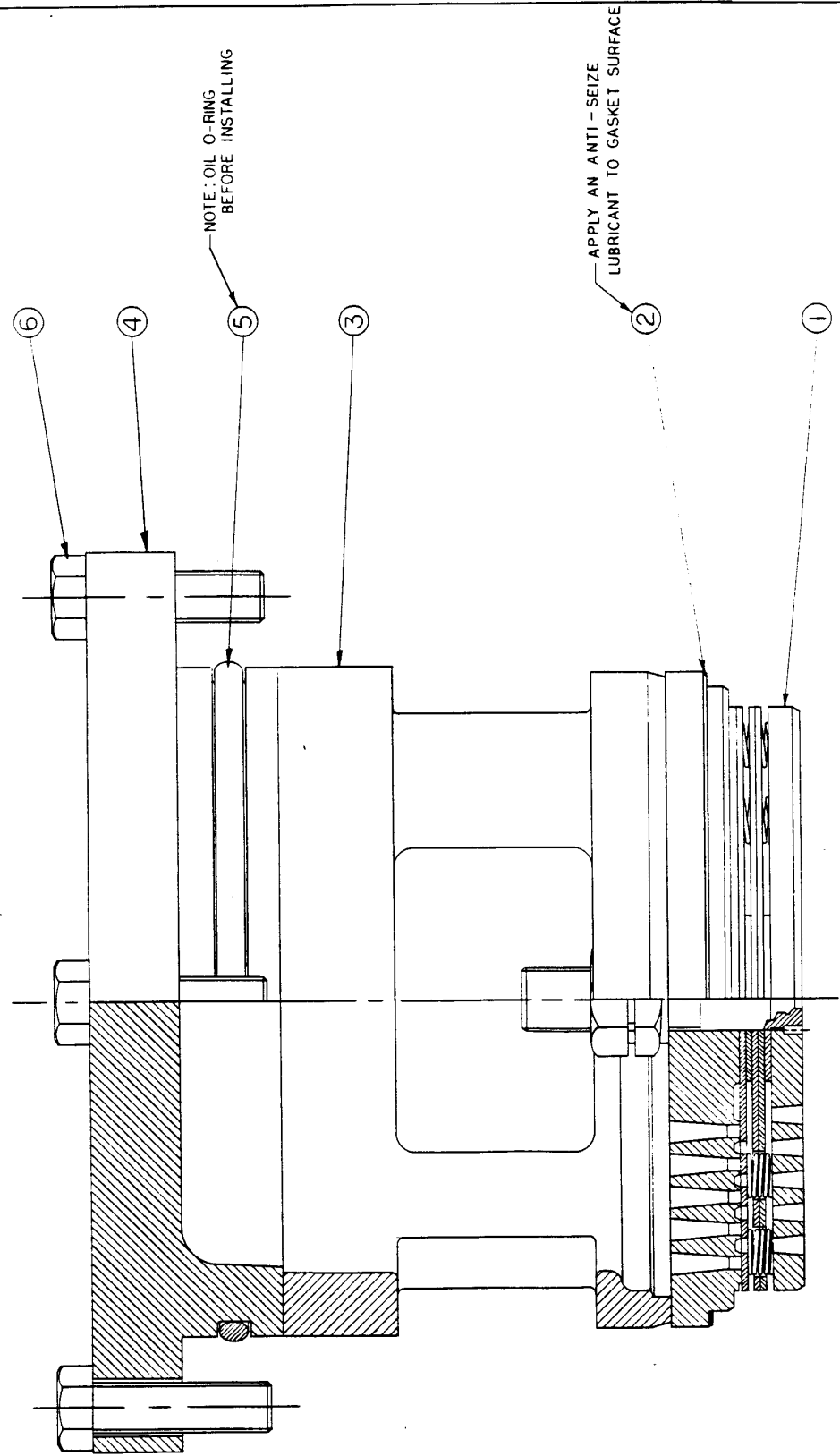
MOUNTING BOLTS (12) FOR 11-1/2, 12-1/4 PART NO. G-10555
OR 13-1/2ET CYLINDER TO JGH:E GUIDE REF DRAWING N.A.
FOR JGH OR JGE FRAME.

ITEM	PART NUMBER	QTY	DESCRIPTION
6	FC0120HV	12	12-POINT CAPSCREW, 5/8-11 X 5-1/2, G8

WHEN A ZERO APPEARS IN THE QUANTITY COLUMN IT
DOES NOT REPRESENT THE QUANTITY REQUIRED.
*** ALWAYS PROVIDE SERIAL NUMBER WHEN ORDERING SPARE PARTS. ***

G-733
G-733-2

NOTE: LOOSEN OR TIGHTEN ALL BOLTS PER RECOMMENDED PROCEDURES AND TORQUE VALUES



THIS DRAWING AND COVER TO THIS DRAWING ARE HEREBY TO BE RELEASED TO THE PUBLIC IN FULL ON THE DATE INDICATED BELOW. THIS RELEASE IS SUBJECT TO THE PROVISIONS OF THE NATIONAL ARCHIVES AND RECORDS ADMINISTRATION ACT OF 1950 AND THE NATIONAL ARCHIVES AND RECORDS ADMINISTRATION ACT OF 1967.

ASSY. DWG. NO.
D-476

8/09/11

PARTS LIST

SUCTION VALVE, RETAINER AND CAP PART NO. G-0733
13-1/2" JGR,JGH,JGE & RJ CLASS CYLINDER REF DRAWING D-0476

ITEM	PART NUMBER	QTY	DESCRIPTION
1	SUCTION VALVE	0	FOR VALVE PART NUMBER, SEE COVER SHEET
2	A-0655	1	STEEL GASKET, 06.448 OD X 06.147 ID X .030, VALVE
3	B-0535	1	VLV RET,SUC,13=17-1/4R:RJ:ET
4	B-0534	0	VALVE CAP, 13-1/2R:RJ:RJ PRC:H:E:ET
5	A-0031	1	O-RING, VT, 6.395 OD X .210, 75/85 DUROMETER
6	FC0171CDD	4	12-POINT CAPSCREW, 1/2-13 X 1-3/4 X 9/16, G8

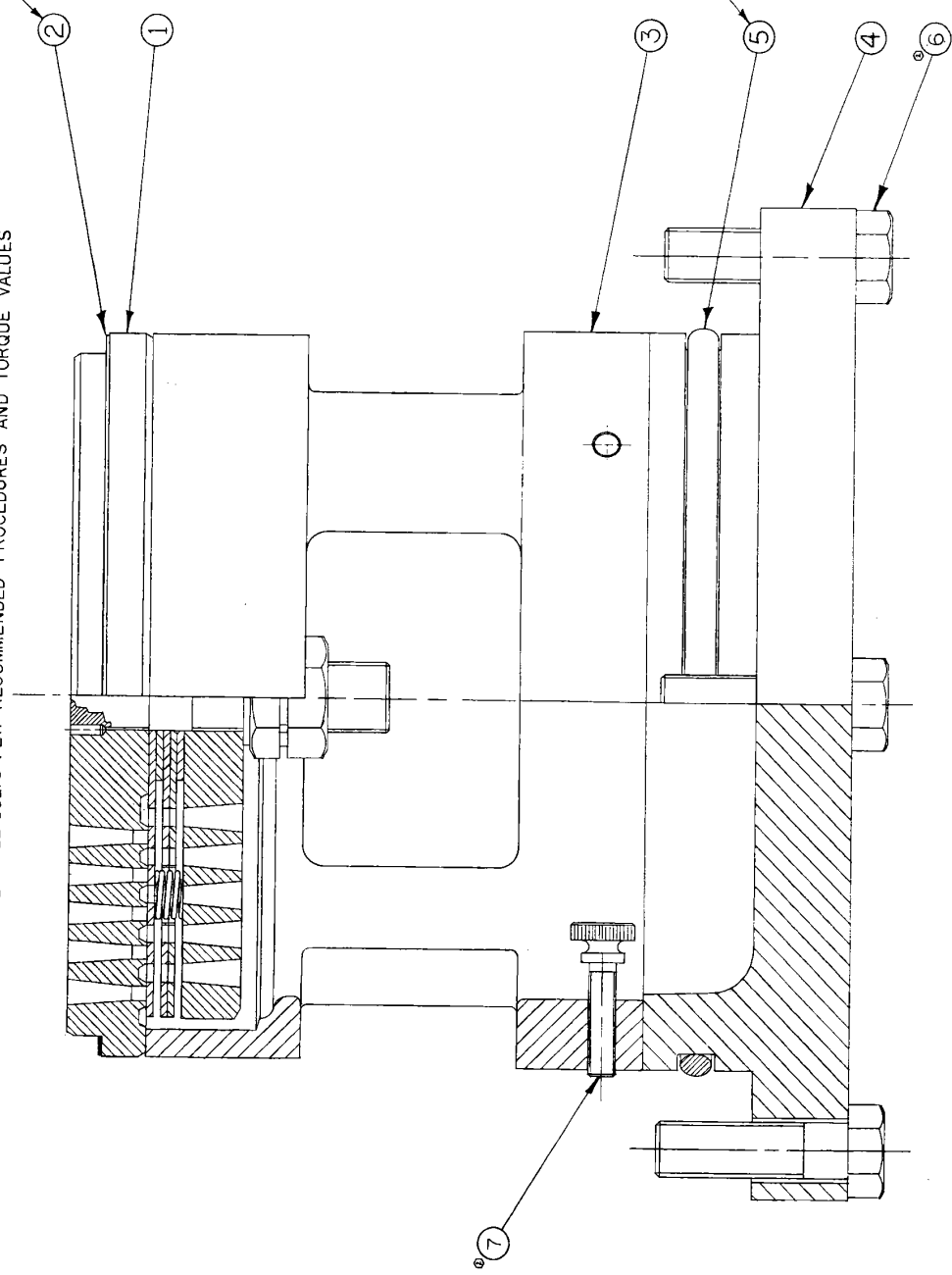
WHEN A ZERO APPEARS IN THE QUANTITY COLUMN IT
DOES NOT REPRESENT THE QUANTITY REQUIRED.

*** ALWAYS PROVIDE SERIAL NUMBER WHEN ORDERING SPARE PARTS. ***

NOTE: LOOSEN OR TIGHTEN ALL BOLTS PER RECOMMENDED PROCEDURES AND TORQUE VALUES

APPLY AN ANTI-SEIZE LUBRICANT TO GASKET SURFACES

NOTE: OIL O-RING BEFORE INSTALLING



ASSY. DWG. NO.
D-477

THIS DRAWING IS THE PROPERTY OF THE COMPANY AND IS NOT TO BE REPRODUCED OR COPIED IN ANY MANNER WITHOUT THE WRITTEN CONSENT OF THE COMPANY. THE COMPANY ASSUMES NO LIABILITY FOR DAMAGE TO PROPERTY OR PERSONS ARISING FROM THE USE OF THIS DRAWING. THE COMPANY IS NOT RESPONSIBLE FOR THE CONSTRUCTION OF THE DRAWING.

DISCHARGE VALVE 1 1/2 J&R

REVISIONS

8/09/11

PARTS LIST

DISCHARGE VALVE, RETAINER AND CAP
13-1/2" JGE:RJ:R CLASS CYLINDER

PART NO. G-2332
REF DRAWING D-0477

ITEM	PART NUMBER	QTY	DESCRIPTION
1	DISCHARGE VALV	0	FOR VALVE PART NUMBER, SEE COVER SHEET
2	A-0655	1	STEEL GASKET, 06.448 OD X 06.147 ID X .030, VALVE
3	B-1370	1	VLV RET,DIS,13.5,17-1/4R:RJ:ET
4	B-0534	0	VALVE CAP, 13-1/2R:RJ:RJ PRC:H:E:ET
5	A-0031	1	O-RING, VT, 6.395 OD X .210, 75/85 DUROMETER
6	FC0171CDD	4	12-POINT CAPSCREW, 1/2-13 X 1-3/4 X 9/16, G8
7	A-2695	2	THUMB SCREW, NYLON, 1/4-20 X 1"

WHEN A ZERO APPEARS IN THE QUANTITY COLUMN IT
DOES NOT REPRESENT THE QUANTITY REQUIRED.

*** ALWAYS PROVIDE SERIAL NUMBER WHEN ORDERING SPARE PARTS. ***

8/09/11

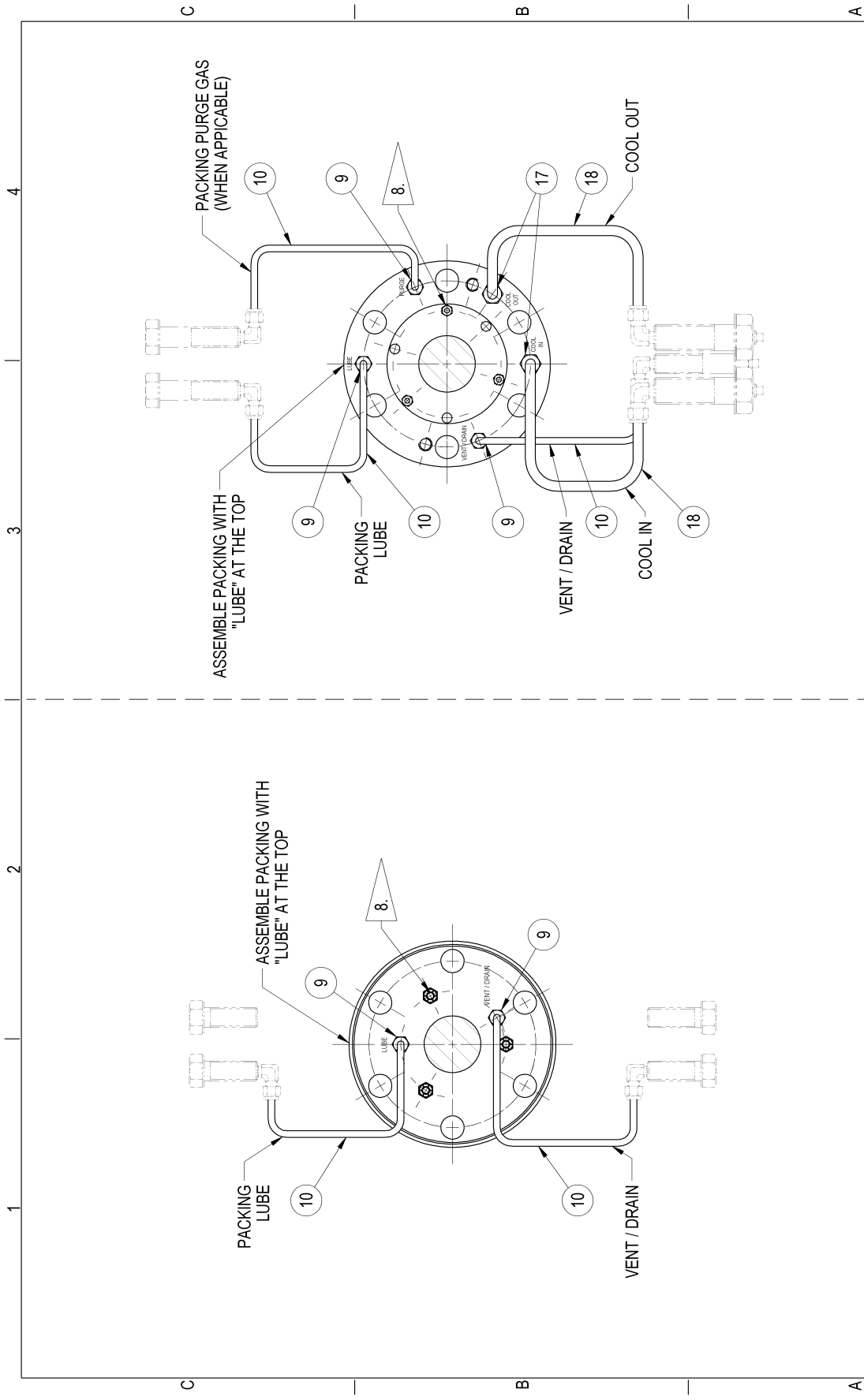
PARTS LIST

13.000 ET PISTON ASSEMBLY; 04.500 STROKE. PART NO. PISTON ASSY
G-SHEETS USED: G-18387, G-18798, G-18236, G-18945, REF DRAWING A-17925 2 SHT
G-18250.

ITEM	PART NUMBER	QTY	DESCRIPTION
1	C-2736	1	PIST,RR ,13 H:E:ET,2PC
2	A-3415	2	RIDER RING,13 R:H:E:ET
3	C-0604	1	P ROD, 4.50STK/37.698LG
4	B-0846	1	PISTON COLLAR, 3-1/2 OD, JGH:E:ET
5	B-0847	1	PISTON NUT, 3-1/2 OD, JGH:E:ET
6	FS0405DG	2	SET SCREW, CUP POINT, 5/16-24 X 1"
7	B-1582	1	PACKING CASE, 2.000 ROD, VAC-350 PSI, STD, BTR
8	FC0120IW	4	12-POINT CAPSCREW, 3/4-10 X 6, G8
9	A-0827	0	MALE CONNECTOR, STL, 1/4 TUBE X 1/4 NPT
10	PT0200CB	30."	TUBING, SS, 1/4 OD X .035 WALL
11	SC-2734	0	PIST,RR ,13 H:E:ET,CE/PC
12	SC-2735	0	PIST,RR ,13 H:E:ET,HE/PC
13	A-8220	0	O-RING, VT, 11.140 OD X .070, 75 DUROMETER
14	FP0505FD	0	ROLL PIN, 1/4 OD X 5/8 LONG
99	B-1582-K	0	REBUILD KIT, 2.000 PISTON ROD PACKING
99	B-1687-K	0	REBUILD KIT, 2.000 OIL WIPER PACKING, WAT

WHEN A ZERO APPEARS IN THE QUANTITY COLUMN IT
DOES NOT REPRESENT THE QUANTITY REQUIRED.

*** ALWAYS PROVIDE SERIAL NUMBER WHEN ORDERING SPARE PARTS. ***



ARIEL CORPORATION
 35 BLACKJACK ROAD
 MOUNT VERNON, OHIO 43050

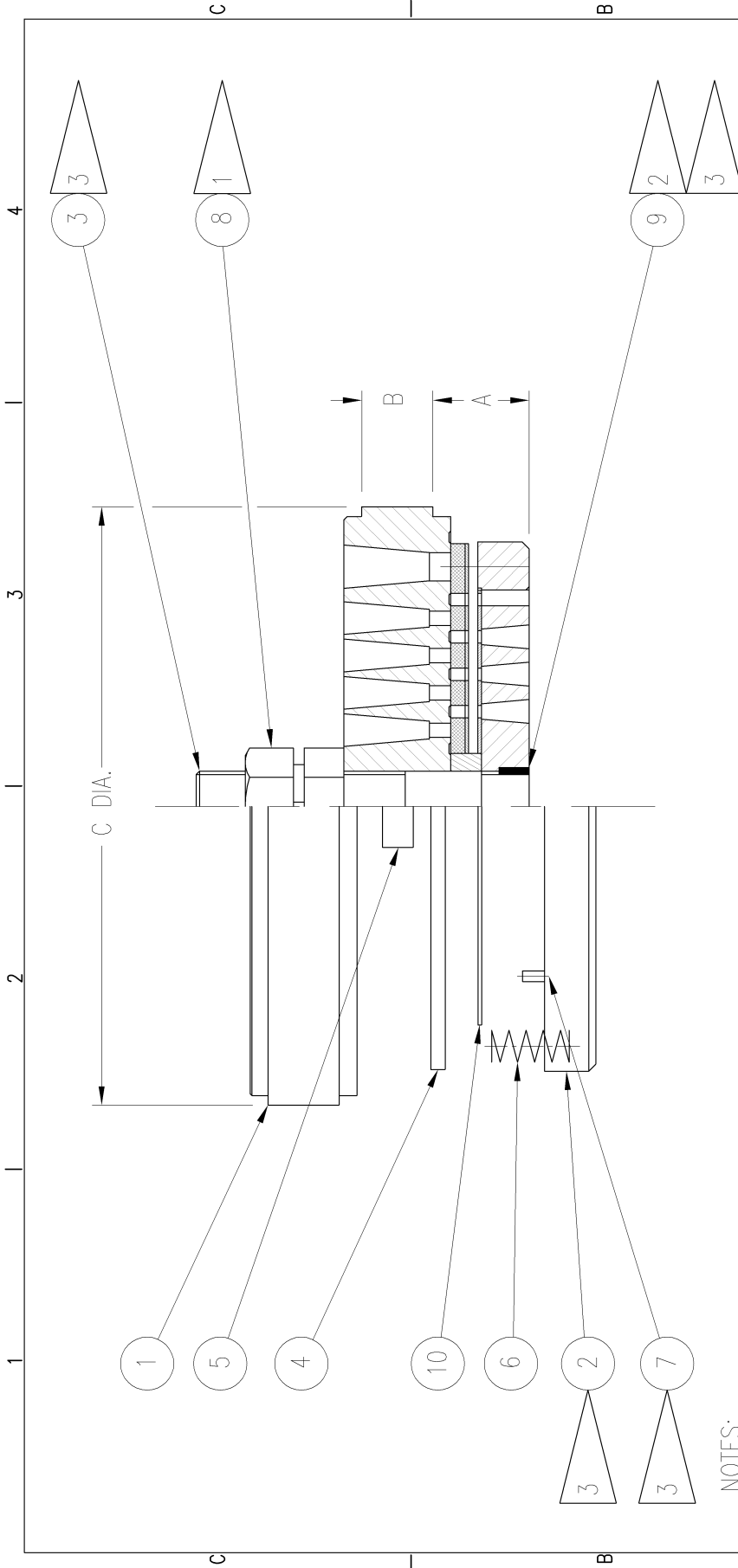


ASSEMBLY
 DWG. NO. **A-17925**
 SHT 2 OF 2

REV	DESCRIPTION	INITIALS	DATE
0	16824	CPM 01/31/11	DLI 02/23/11
REV	EON	SCALE	NONE

THIS DOCUMENT AND CONTENTS THEREIN ARE PROPRIETARY TO
 ARIEL CORPORATION. ONLY BY WRITTEN CONSENT AND AGREED
 TERMS BY ARIEL CORPORATION GIVES THE RIGHT TO DISCLOSE OR
 USE IN PART OR IN WHOLE INFORMATION CONTAINED IN DOCUMENT.

REV	DESCRIPTION	INITIALS	DATE
0	16824	CPM 01/31/11	DLI 02/23/11
REV	EON	SCALE	NONE



NOTES:

1. SEE MANUAL FOR TORQUING VALUES (ITEM #8).
2. INSTALL PER ER-52.
3. VALVE GUARD ASSEMBLY (ITEM #2) CONSISTS OF VALVE GUARD, CENTER BOLT (ITEM #3), SPIROL PIN (ITEM #7) AND DOWEL PIN (ITEM #9).

ARIEL CORPORATION
 35 BLACKJACK ROAD
 MOUNT VERNON, OHIO 43050

TITLE:	① SUCTION VALVE, CT
MATERIAL:	PROCURED
DRAWN:	IG 9/27/99
R.S. No.:	
CHECKED:	ED 10/1/99
PART NO.:	
SCALE:	NONE
DWG. No.:	A-9275

THIS DOCUMENT AND CONTENTS THEREIN ARE PROPRIETARY TO ARIEL CORPORATION. ONLY BY WRITTEN CONSENT AND AGREED TERMS BY ARIEL CORPORATION GIVES THE RIGHT TO MANUFACTURE, BUT DOES NOT GRANT THE RIGHT TO DISCLOSE OR USE IN PART OR IN WHOLE INFORMATION CONTAINED IN DOCUMENT.
 DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED.
 ----- DO NOT SCALE DRAWING -----

①	UPDATED BORDER: IN TITLE BLOCK: SUCTION VALVE, CT WAS SUCTION VALVE, CHT.	MLB 05/21/10
REV	DESCRIPTION	INIT/DATE

8/09/11

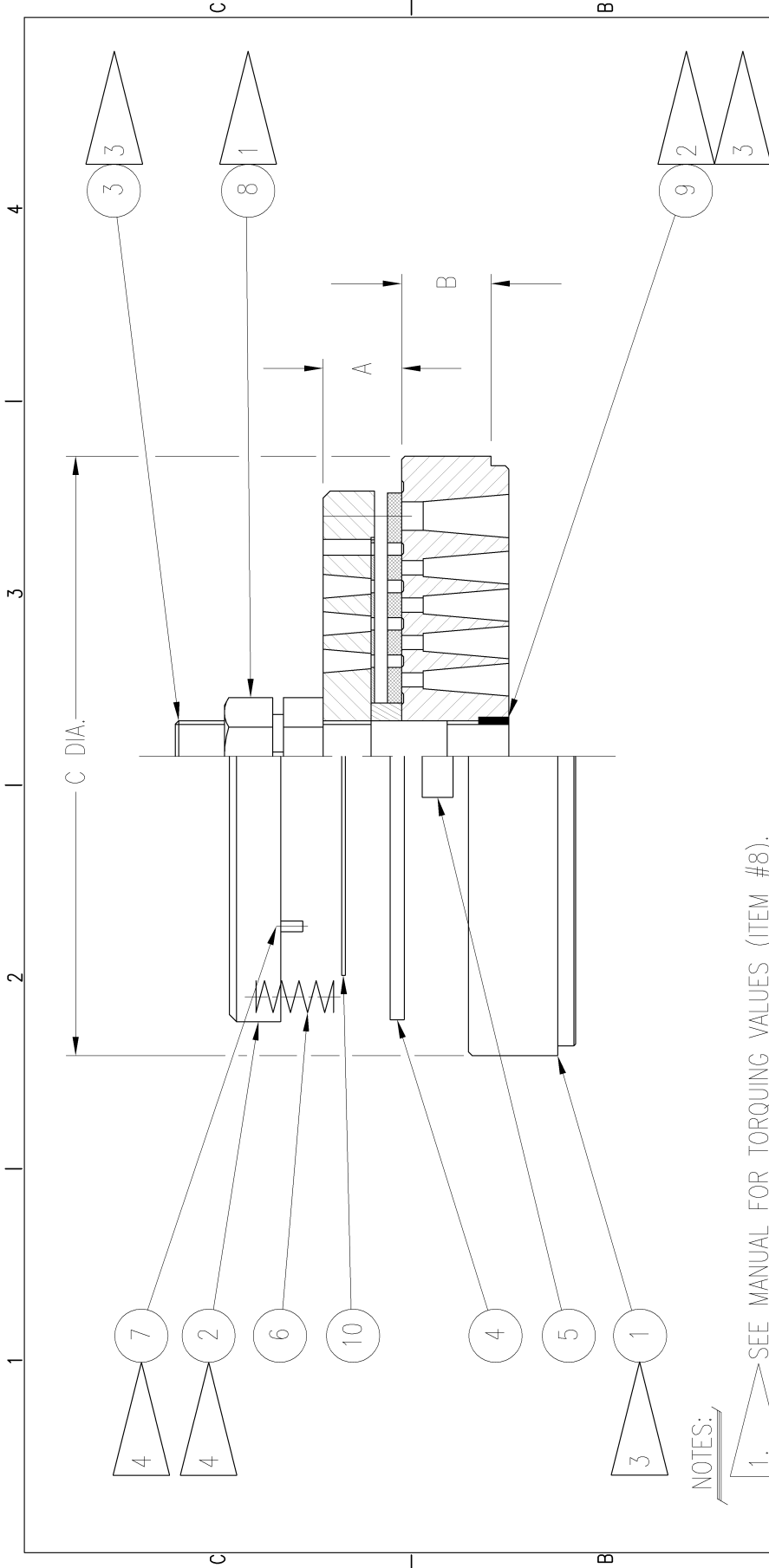
PARTS LIST

0.9410=A
0.5120=B
6.4760=C
0.1020=LFT

PART NO. B-2372-S
REF DRAWING A-9275

ITEM	PART NUMBER	QTY	DESCRIPTION
1	A-2853	1	SUC VLV SEAT,147CHT
2	A-2854-A	1	SUC VLV GUARD ASSY,147CHT
3	A-2855	1	CNTR BOLT,3/4-16
4	A-8904	1	VLV PLT,147CT.197THK,NYX
5	A-2859	1	GUIDE RING,147CHT,.338 THK
6	A-1345	16	SPRING(.354/.276DX.630YELLOW)
7	A-2039	2	SPIROL PIN,.118D X .591L
8	A-1462	1	LOCKNUT, DRAKE,3/4-16
9	A-1481	1	DOWEL PIN,.150D X .323L
10	A-2858	1	WAFER PLATE.147CHT
99	KB-2372-S	0	KIT,VLV,147CT,NYX

WHEN A ZERO APPEARS IN THE QUANTITY COLUMN IT
DOES NOT REPRESENT THE QUANTITY REQUIRED.
*** ALWAYS PROVIDE SERIAL NUMBER WHEN ORDERING SPARE PARTS. ***



NOTES:

1. SEE MANUAL FOR TORQUING VALUES (ITEM #8).
2. INSTALL PER ER-52.
3. VALVE SEAT ASSEMBLY (ITEM #1) CONSISTS OF VALVE SEAT, CENTER STUD (ITEM #3) AND DOWEL PIN (ITEM #9).
4. VALVE GUARD ASSEMBLY (ITEM #2) CONSISTS OF VALVE GUARD AND SPIRAL PIN (ITEM #7).

ARIEL CORPORATION
 35 BLACKJACK ROAD
 MOUNT VERNON, OHIO 43050

TITLE: ① DISCHARGE VALVE, CT		MATERIAL: PROCURED	
DRAWN: IG 9/27/99		R.S. No.	
CHECKED: ED 10/4/99		PART NO.	
SCALE: NONE		DWG. No: A-9276	
REV	ECN	REV	ECN
1		3	
DESCRIPTION		INIT/DATE	
① UPDATED BORDER. IN TITLE BLOCK: DISCHARGE VALVE, CT WAS DISCHARGE VALVE, CHT.		MLB 05/21/10	
THIS DOCUMENT AND CONTENTS THEREIN ARE PROPRIETARY TO ARIEL CORPORATION. ONLY BY WRITTEN CONSENT AND AGREED TERMS BY ARIEL CORPORATION GIVES THE RIGHT TO MANUFACTURE, BUT DOES NOT GRANT THE RIGHT TO DISCLOSE OR USE IN PART OR IN WHOLE INFORMATION CONTAINED IN DOCUMENT. DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED. ----- DO NOT SCALE DRAWING -----			

8/09/11

PARTS LIST

0.8900=A
0.4720=B
6.4530=C
0.1020=LFT

PART NO. B-2373-CC
REF DRAWING A-9276

ITEM	PART NUMBER	QTY	DESCRIPTION
1	A-2860-A	1	DIS VLV SEAT ASSY,147CHT
2	A-2862-A	1	DIS VLV GUARD ASSY,147CHT
3	A-2861	1	CNTR STUD, 3/4-16
4	A-9592	1	VLV PLT,147CT.197THK,MTX
5	A-2859	1	GUIDE RING,147CHT,.338 THK
6	A-1343	32	SPRING(.354/.276DX.630 WHITE)
7	A-2039	2	SPIROL PIN,.118D X .591L
8	A-1462	1	LOCKNUT, DRAKE,3/4-16
9	A-1481	1	DOWEL PIN,.150D X .323L
10	A-2858	1	WAFER PLATE.147CHT
99	KB-2373-CC	0	KIT,VLV,147CHT,MTX

WHEN A ZERO APPEARS IN THE QUANTITY COLUMN IT
DOES NOT REPRESENT THE QUANTITY REQUIRED.
*** ALWAYS PROVIDE SERIAL NUMBER WHEN ORDERING SPARE PARTS. ***

8/09/11

ARIEL CORPORATION
SALES ORDER COVER SHEET

C/N: 001

RHCOVP02

SERIAL #: U85397

PART: G-11334 DESCRIPTION: VVCP,13 R:RJ:ET 300

13" JGR:RJ:ET UNLOADER ASSEMBLY, PART NO. G-11334
STAINLESS STEEL TUBING AND FITTINGS. REF DRAWING A-8598

ITEM	PART NUMBER	QTY	DESCRIPTION
1	C-0407	1	UNLOADER HEAD, 13 R
2	D-0502	1	ADAPTER, HEAD END UNLOADER, 13-1/2R
3	C-0408	0	UNL PIST,13-1/2R CLASS
4	C-3704	0	UNL.STEM,10-3/8=22-1/2RU TPR/H
5	A-0469	1	O-RING, VT, 13.395 OD X .210, 75/85 DUROMETER
6	A-0654	1	STEEL GASKET, 13.938 OD X 13.625 ID X .060, HEAD
7	A-0700	1	UNLOADER PISTON RING, 11-1/4 OD
8	C-0369	1	UNLOADER LOCKING HANDLE, 2"-8 THREAD
9	B-0523	1	UNLOADER PACKING RETAINER, 6 THROUGH 15-3/4R:RJ:ET
10	A-0643	1	BACK-UP RING, PACKING
11	A-0629	1	COMPRESSION SPRING, UNL.
12	A-0639	1	V PACKING, UNL
13	FC0120HQ	12	12-POINT CAPSCREW, 5/8-11 X 3-1/2, G8
14	A-2389	0	SELF-LOCK NUT, ESNA, THIN, 1-3/8-12
15	FC0110DF	4	SOCKET HEAD CAPSCREW, 5/16-18 X 7/8, G8
16	FC0110EH	2	SOCKET HEAD CAPSCREW, 3/8-16 X 1-1/4, G8
17	A-0500	1	GREASE FITTING CAP, PLASTIC
18	A-0938	1	MALE CONNECTOR, SS, 1/4 TUBE X 1/4 NPT
19	PZ0230BA	1	GREASE FITTING, STRAIGHT, 1/4-18
20	A-0641	1	BELLOWS, THREAD PROTECTOR, UNLOADER
21	A-0642	1	BACK-UP RING, BELLOWS
22	FC0134CC	3	BUTTON HEAD CAPSCREW, 1/4-20 X 1/2, 316SS

8/09/11

SALES ORDER COVER SHEET

23	PT0201CD	5."	TUBING, 316 SS, 1/4 OD X .065
24	C-0982	0	UNLOADER HANDLE, 3 PRONG
25	A-0256	1	MACHINE SCREW PLUG, PLASTIC, 1/2-13
26	A-0755	1	DATA PLATE, UNLOADER HEAD SPECIFICATION
27	FR0571CC	4	DRIVE SCREW, TYPE U, SS, #6 X 1/4
28	AC-3705	1	UNL PIST ASSY,13-1/2R:RJ:H:E
32	A-12927	1	DATA PLATE, UNLOADER ADAPTER SPECIFICATION

VARIABLE VOLUME CLEARANCE POCKET (Headend Unloader) DATA SHEET

13-1/2ET Class Cylinder

Stroke: 4.50 in 114 mm

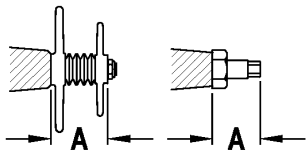
Bore: 13.000 in 330 mm

MAWP: 300 psig 20.7 bar(g) 2068 kPa(g) 21.1 kg/cm2(g)

General Data for VVCP (independent of cylinder):

*Note: If VVCP services another cylinder, it may have a higher MAWP than the above

MAWP*:	300	20.7 barg	2068 kPa(g)
VVCP piston diameter:	11.25 in	286 mm	
Stem thread lead (pitch):	0.125 in	3 mm	
Total travel:	2.9 in	7.5 cm	
Number of turns from closed to fully open:	23		



A distance - see diagram

- closed:	4-3/4 in	12.1 cm
- open:	7-5/8 in	19.5 cm

Minimum added fixed clearance:	6.5 in3	107.3 cm3
Additional added clearance when fully open:	292 in3	4785 cm3
Total added clearance when fully open:	298.5 in3	4892.3 cm3
Clearance volume change per turn:	12.4 in3	203.7 cm3
Clearance volume change per change in travel:	99.4 in3/in	641.4 cm3/cm

Clearance Data for VVCP alone, in percent of swept volume of above cylinder:

Minimum added fixed clearance:	1.1%
Additional added clearance when fully open:	48.9%
Total added clearance when fully open:	50.0%
Head end clearance change per turn:	2.1%
Head end clearance change per change in travel:	16.6% /in 6.6% /cm

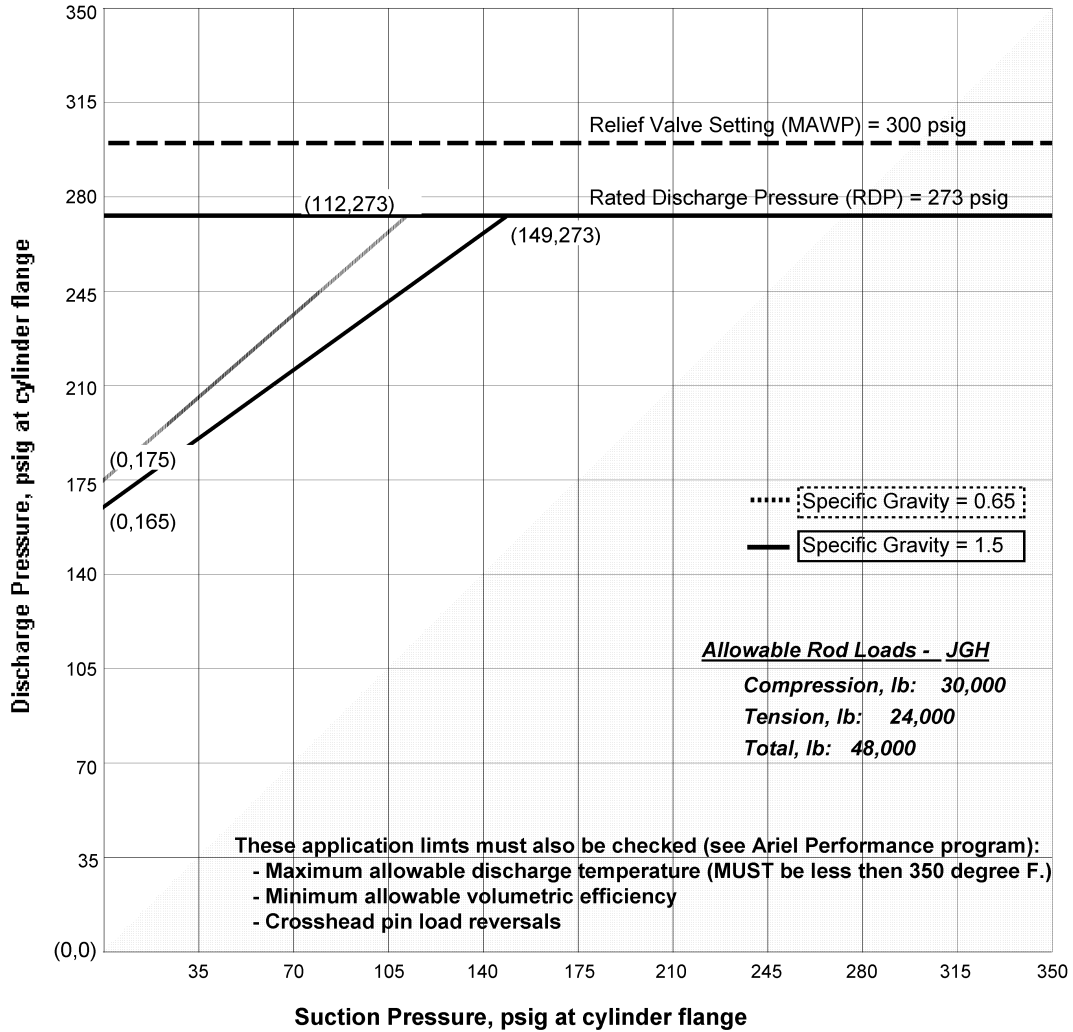
Clearance Data with VVCP installed on above cylinder with standard valves, in percent of swept volume:

Minimum fixed head end clearance:	17.8%
Total head end clearance when fully open:	66.7%

PLEASE NOTE: It is important to understand that the percent clearance figures for the variable volume clearance pocket above include the cylinder headend clearance. However, any valve spacers or other non-standard added clearances on the unit must be accounted for.

Estimated Gas Rod Load and Pressure Limits for 4.5 inch stroke at 1200 RPM

Cylinder Class: 13-1/2ET Bore, inches: 13.000
Cylinder Serial Number: C-125346



This chart defines allowable operating limits for gas rod loads and standard working pressures. Pressure combinations falling above the line for the applicable Specific Gravity of the gas being compressed will exceed the Rod Load limitations of the equipment.

Calculations are based on 80 degrees Fahrenheit hydrocarbon gas at 1500 ft. elevation.

8/09/11

ARIEL CORPORATION
SALES ORDER COVER SHEET

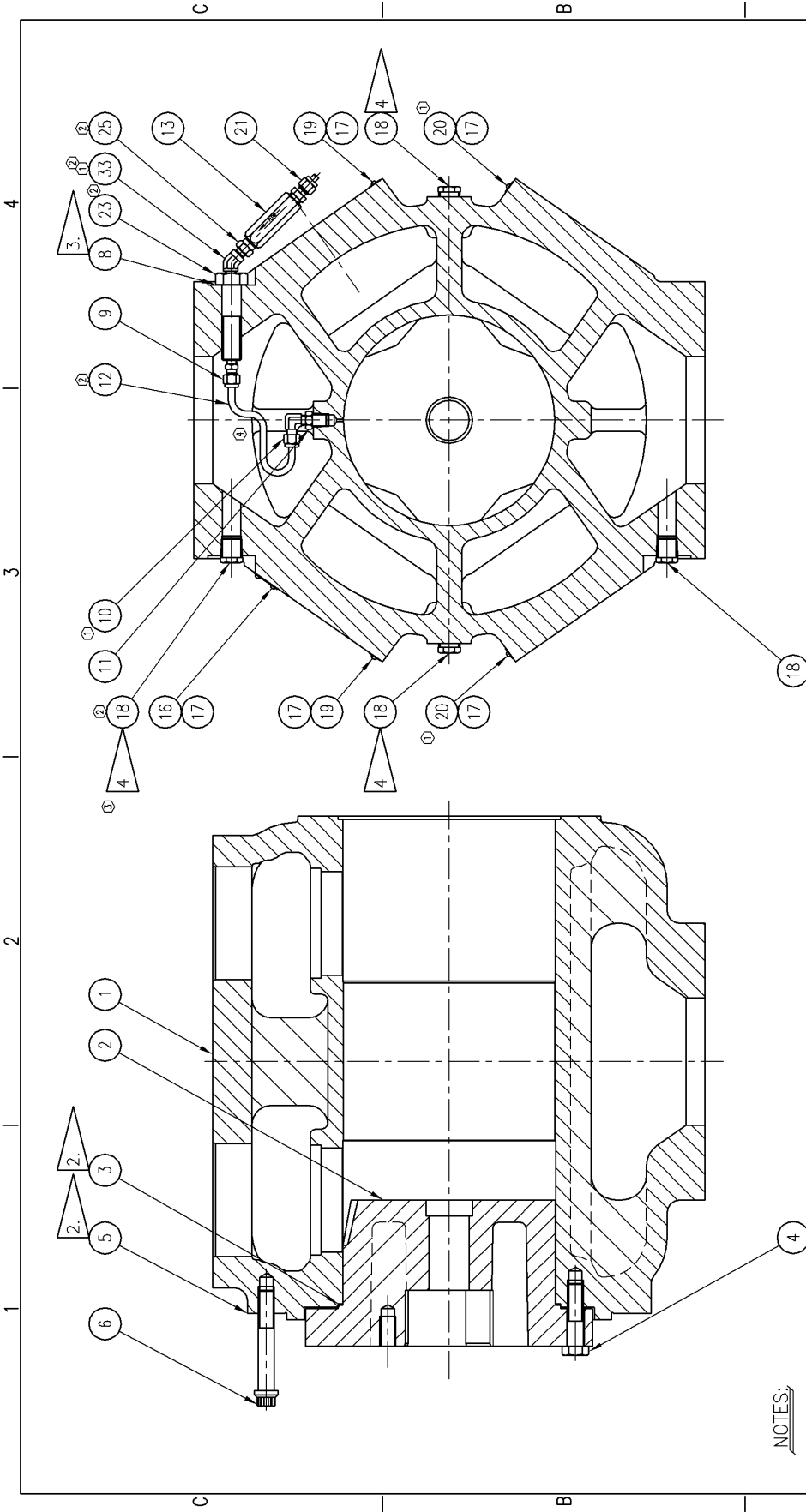
C/N: 001

RHCOVP02

SERIAL #: C125344

PART: 8-3/8ET HP DESCRIPTION: 8-3/8" ET-HP CYLINDER CLASS

PART NUMBER	QTY	DESCRIPTION	DRAWING NO.
G-10618	1	CYL ASSY, 8 ET-HP 800	A-6869
G-10553	1	CYLINDER MOUNTING, 12 BOLT, JGH:E	N.A.
G-2380	4	SUC VLV ASSY, 8-3/8RJER:R-CE	A-6056
G-1206	4	DIS VLV ASSY, 8-3/8HRJER(RH)CE	A-6057
PISTON ASSY	1	PISTON ASSY 08.000 ET	A-17925 2 SHT
B-4928-T	4	SUC VLV, 98CRE,NYX	A-9278
B-4732-CC	4	DIS VLV, 98CRE,MTX	A-9279



NOTES:

- 1.- LOOSEN OR TIGHTEN ALL BOLTS PER RECOMMENDED PROCEDURES AND TORQUE VALUES IN MANUAL.
- 2. APPLY AN ANTI-SEIZE LUBRICANT TO GASKET SURFACES.
- 3. OIL FACES OF STATO-SEAL (ITEM #8) BEFORE INSTALLING TO PREVENT ABRASION.
- 4. USED TO PLUG INDICATOR PASSAGES WHERE APPLICABLE.

REV	DESCRIPTION	INIT/DATE	MIP
4	REVISED LUBE TUBING CONFIGURATION TO PROVIDE CLEARANCE FOR THERMOWELL	02/22/02	

THIS DOCUMENT AND CONTENTS THEREIN ARE PROPRIETARY TO ARIEL CORPORATION. ONLY BY WRITTEN CONSENT AND AGREED TERMS BY ARIEL CORPORATION WILL ANY INFORMATION CONTAINED HEREIN BE DISCLOSED OR USED IN PART OR IN WHOLE IN INFORMATION CONTAINED IN DOCUMENT.

3	8369	3	8369	REV	ECN	REV	ECN
2	7510	2	7510	REV	ECN	REV	ECN
1	8001	1	8001	REV	ECN	REV	ECN
4	104380	4	104380	REV	ECN	REV	ECN

ARIEL CORPORATION
 35 BLACKJACK ROAD
 MOUNT VERNON, OHIO 43050

APPROVER: JIJ 4/21/97
 CHECKER: JIJ 4/22/97
 SCALE: NONE

ASSEMBLY
 DWG. NO. **A-6869**

8/09/11

PARTS LIST

8" JGET CYLINDER BODY
WITH HIGH PRESSURE 5"-400# NOZZLES
RDP 727#, MAWP 800#

PART NO. G-10618
REF DRAWING A-6869

ITEM	PART NUMBER	QTY	DESCRIPTION
1	D-3582	0	CYL, 8 (RJ:ET)-HP 800
2	C-0617	0	CRANK END HEAD, 8H:E:ET
3	A-0586	1	STEEL GASKET, 08.813 OD X 08.500 ID X .060, HEAD
4	FC0100HM	12	HEX HEAD CAPSCREW, 5/8-11 X 2-1/2, G9
5	B-3515	1	GSKT,RND,16, X 1/64, 16 HOLES
6	FC0120HT	0	12-POINT CAPSCREW, 5/8-11 X 4-1/2, G8
8	FW0550ID	1	STAT-O-SEAL, VT, 75 DUROMETER, 3/4 ID
9	A-0830	1	MALE CONNECTOR, STL, 1/4 TUBE X 1/8 NPT
10	A-0815	1	MALE ELBOW, STL, 1/4 TUBE X 1/8 NPT
11	A-0811	1	HEX REDUCING BUSHING, 1/4 NPT (MALE) X 1/8 NPT (FEMALE), STL
12	PT0200CB	45."	TUBING, SS, 1/4 OD X .035 WALL
13	A-3780	1	CHECK VALVE, POPPET, DOUBLE BALL, SOFT SEAT, SS, 1/4 NPTF INLET X 1/4 NPTF OUTLET
16	A-0465	1	DATA PLATE, CYLINDER SPECIFICATION, 3-1/2 X 2-1/4
17	FR0571CC	12	DRIVE SCREW, TYPE U, SS, #6 X 1/4
18	PP0810GB	6	PIPE PLUG, HEX HEAD, 1/2 NPT, STL
19	A-0640-A	2	INFORMATION PLATE, SUCTION
20	A-0640-B	2	INFORMATION PLATE, DISCHARGE
21	A-0827	1	MALE CONNECTOR, STL, 1/4 TUBE X 1/4 NPT
23	A-0158	1	LUBE FITTING, 3/4-10 X 3
25	A-2114	1	HEX REDUCING NIPPLE, 1/4 NPT (MALE) X 1/8 NPT (MALE), STL
33	A-3989	1	STREET ELBOW, 45ø, 1/8 NPT, STL

WHEN A ZERO APPEARS IN THE QUANTITY COLUMN IT
DOES NOT REPRESENT THE QUANTITY REQUIRED.

*** ALWAYS PROVIDE SERIAL NUMBER WHEN ORDERING SPARE PARTS. ***

8/09/11

PARTS LIST

100	HD-3582	1	CYL ASSY, 8	ET-HP
-----	---------	---	-------------	-------

WHEN A ZERO APPEARS IN THE QUANTITY COLUMN IT
DOES NOT REPRESENT THE QUANTITY REQUIRED.
*** ALWAYS PROVIDE SERIAL NUMBER WHEN ORDERING SPARE PARTS. ***

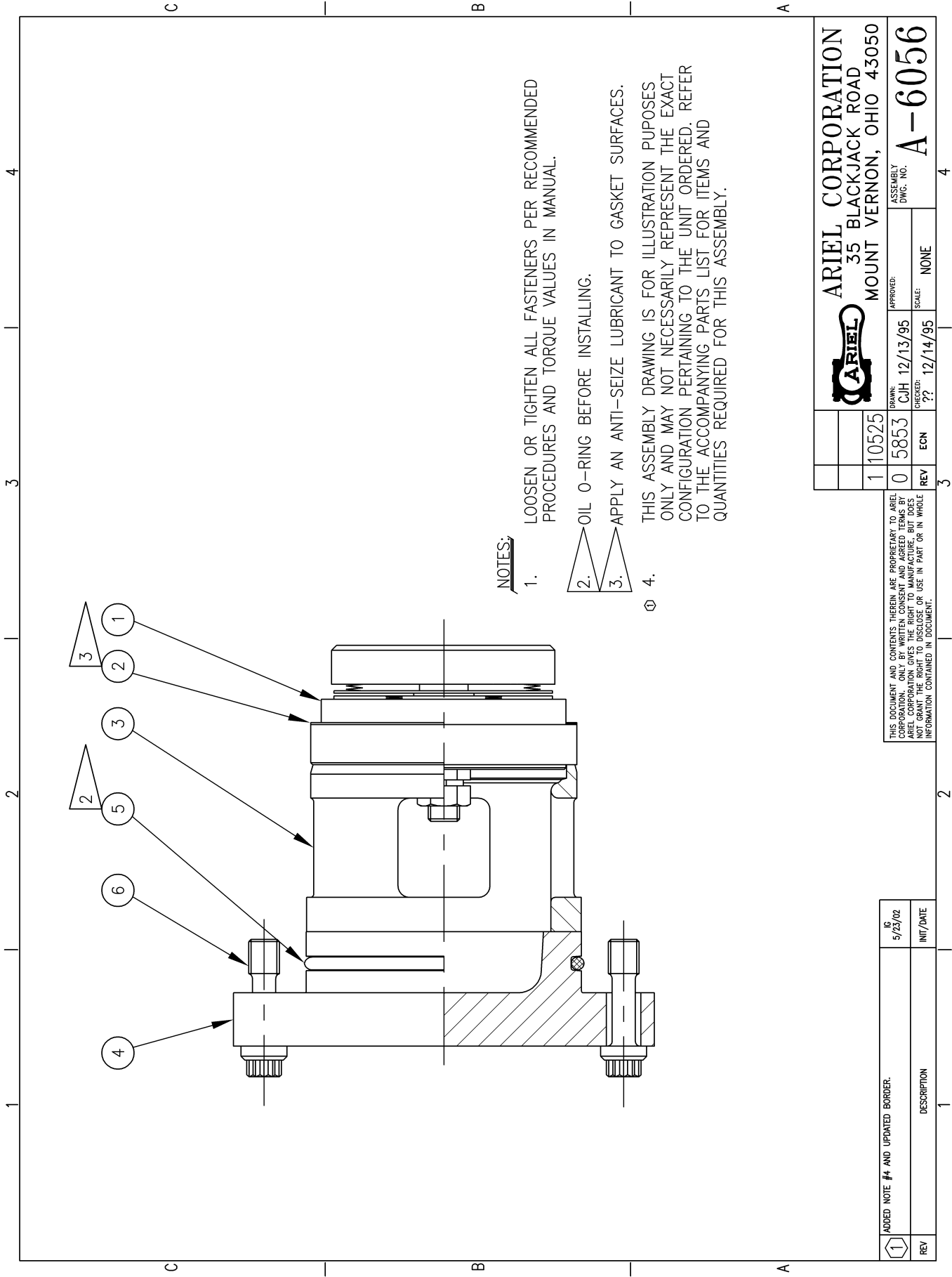
8/09/11

PARTS LIST

MOUNTING BOLTS (12) FOR ET CYLINDER TO PART NO. G-10553
JGH:E GUIDE FOR JGH OR JGE FRAME. REF DRAWING N.A.

ITEM	PART NUMBER	QTY	DESCRIPTION
6	FC0120HT	12	12-POINT CAPSCREW, 5/8-11 X 4-1/2, G8

WHEN A ZERO APPEARS IN THE QUANTITY COLUMN IT
DOES NOT REPRESENT THE QUANTITY REQUIRED.
*** ALWAYS PROVIDE SERIAL NUMBER WHEN ORDERING SPARE PARTS. ***



NOTES:

1. LOOSEN OR TIGHTEN ALL FASTENERS PER RECOMMENDED PROCEDURES AND TORQUE VALUES IN MANUAL.
2. OIL O-RING BEFORE INSTALLING.
3. APPLY AN ANTI-SEIZE LUBRICANT TO GASKET SURFACES.
4. THIS ASSEMBLY DRAWING IS FOR ILLUSTRATION PURPOSES ONLY AND MAY NOT NECESSARILY REPRESENT THE EXACT CONFIGURATION PERTAINING TO THE UNIT ORDERED. REFER TO THE ACCOMPANYING PARTS LIST FOR ITEMS AND QUANTITIES REQUIRED FOR THIS ASSEMBLY.

ARIEL CORPORATION
 35 BLACKJACK ROAD
 MOUNT VERNON, OHIO 43050

1	10525
0	5853

DRWNG. NO.	ASSEMBLY
12/13/95	CJH
12/14/95	??
SCALE:	NONE

THIS DOCUMENT AND CONTENTS THEREIN ARE PROPRIETARY TO ARIEL CORPORATION. ONLY BY WRITTEN CONSENT AND AGREED TERMS BY ARIEL CORPORATION CAN THESE BE REPRODUCED, COPIED, OR USED IN ANY MANNER WITHOUT THE WRITTEN PERMISSION OF ARIEL CORPORATION. DISCLOSURE OR USE IN PART OR IN WHOLE INFORMATION CONTAINED IN DOCUMENT.

ADDED NOTE #1 AND UPDATED BORDER.	5/23/02
DESCRIPTION	INTI/DATE

REV	1
-----	---

8/09/11

PARTS LIST

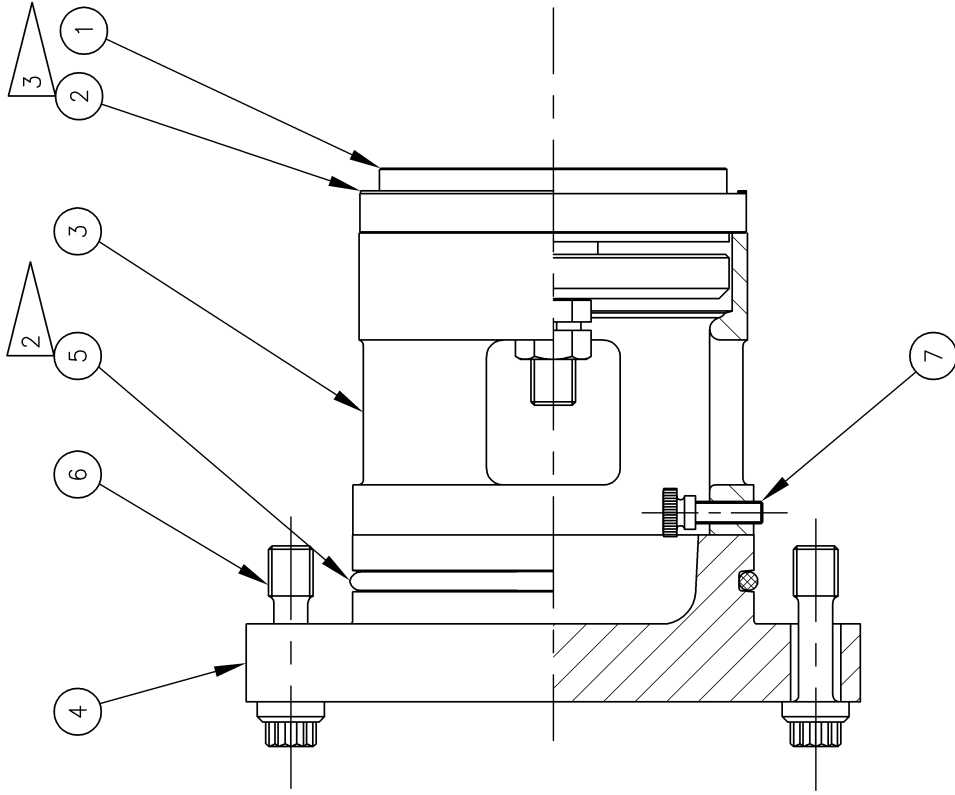
SUCTION VALVE, RETAINER AND CAP
8-3/8" RJ:R:E:R-CE CLASS

PART NO. G-2380
REF DRAWING A-6056


ITEM	PART NUMBER	QTY	DESCRIPTION
1	SUCTION VALVE	0	FOR VALVE PART NUMBER, SEE COVER SHEET
2	A-0141	1	STEEL GASKET, 04.320 OD X 04.125 ID X .030, VALVE
3	B-1397	1	VLV RET,SUC, 8-3/8RJ,RJ-HP PRC
4	B-0457	0	VALVE CAP, 8-3/8R:R-CE:RJ:RJ PRC:RJ HP:H:H-CE:E:ET:ET HP
5	A-0041	1	O-RING, VT, 4.395 OD X .210, 75/85 DUROMETER
6	FC0171CDD	4	12-POINT CAPSCREW, 1/2-13 X 1-3/4 X 9/16, G8

WHEN A ZERO APPEARS IN THE QUANTITY COLUMN IT
DOES NOT REPRESENT THE QUANTITY REQUIRED.

*** ALWAYS PROVIDE SERIAL NUMBER WHEN ORDERING SPARE PARTS. ***



NOTES:

1. LOOSEN OR TIGHTEN ALL FASTENERS PER RECOMMENDED PROCEDURES AND TORQUE VALUES IN MANUAL.
2.  OIL O-RING BEFORE INSTALLING.
3.  APPLY AN ANTI-SEIZE LUBRICANT TO GASKET SURFACES.

105853
 **ARIEL CORPORATION**
 35 BLACKJACK ROAD
 MOUNT VERNON, OHIO 43050

ASSEMBLY
 DWG. No. **A-6057**

REV	DESCRIPTION

8/09/11

PARTS LIST

DISCHARGE VALVE, RETAINER, CAP PART NO. G-1206
8-3/8" RJ:H:E:R:R & H-CE CLASS CYLINDERS REF DRAWING A-6057

ITEM	PART NUMBER	QTY	DESCRIPTION
1	DISCHARGE VALV	0	FOR VALVE PART NUMBER, SEE COVER SHEET
2	A-0141	1	STEEL GASKET, 04.320 OD X 04.125 ID X .030, VALVE
3	B-0899	1	VLV RET,DIS, 8-3/8R:RJ:ET
4	B-0457	0	VALVE CAP, 8-3/8R:R-CE:RJ:RJ PRC:RJ HP:H:H-CE:E:ET:ET HP
5	A-0041	1	O-RING, VT, 4.395 OD X .210, 75/85 DUROMETER
6	FC0171CDD	4	12-POINT CAPSCREW, 1/2-13 X 1-3/4 X 9/16, G8
7	A-0145	2	THUMB SCREW, NYLON, 1/4-20 X 3/4

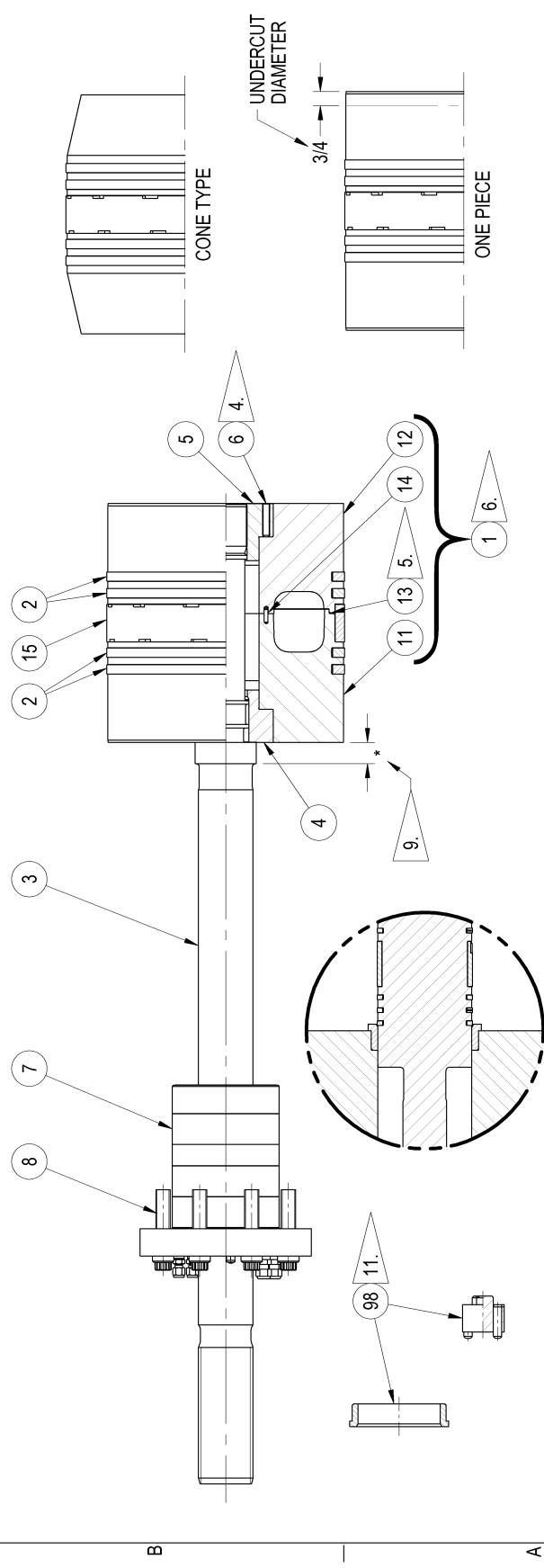
WHEN A ZERO APPEARS IN THE QUANTITY COLUMN IT
DOES NOT REPRESENT THE QUANTITY REQUIRED.

*** ALWAYS PROVIDE SERIAL NUMBER WHEN ORDERING SPARE PARTS. ***

1 2 3 4

NOTES:

- 1.- THIS PISTON ASSEMBLY IS FOR ILLUSTRATION PURPOSES ONLY AND MAY NOT NECESSARILY REPRESENT THE EXACT CONFIGURATION PERTAINING TO THE UNIT ORDERED. REFER TO ACCOMPANYING PARTS LIST FOR ITEMS (AND QUANTITIES OF EACH) REQUIRED FOR THIS PARTICULAR ASSEMBLY.
- 2.- REFER TO TECHNICAL MANUAL FOR RECOMMENDED PROCEDURES AND TORQUE VALUES FOR ASSEMBLY OR REASSEMBLY OF THIS UNIT.
- 3.- REFER TO SHEET #2 FOR PACKING TUBE LINE CONFIGURATIONS.
- 4. PRICK PUNCH TO RETAIN SET SCREWS (ITEM #6).
- 5. LIGHTLY OIL O-RING BEFORE INSTALLING.
- 6. (ITEMS #11, #12, #13 & #14) APPLY TO (2) PIECE PISTONS ONLY.
- 7.- ASSEMBLE FITTINGS BEFORE INSTALLING PACKING.
- 8. RETIGHTEN TIE STUD NUTS AFTER PACKING CASE (ITEM #7) IS BOLTED TO CYLINDER.
- 9. REMOVE C.E. SUCTION VALVE TO ADJUST C.E. PISTON CLEARANCE. (SEE CYLINDER SPECIFICATIONS DATA PLATE OR THE TECHNICAL MANUAL). **DO NOT USE STRAP WRENCH ON PISTON ROD - USE TURNING TOOL WHICH FITS TURNING HOLES IN PISTON NUT.**
- 10.- PISTON MAY BE ONE OR TWO PIECE, CONE OR STRAIGHT.
- 11. PISTON / PISTON ROD SPANNER & PISTON ENTERING TOOL (ITEM #88) ARE SHIPPED IN TOOL BOX WHEN REQUIRED. DETAIL VIEW SHOWS PISTON ENTERING TOOL USED DURING INSTALLATION OF PISTON.



DETAIL VIEW OF PISTON ENTERING TOOL

ARIEL CORPORATION
 35 BLACKJACK ROAD
 MOUNT VERNON, OHIO 43050



ASSEMBLY DWG. NO.	A-17925		
SCALE	NONE		
DRAWN	CPM 01/31/11	CHECKED	DLI 02/23/11
REV	EON	REV	EON
0	16824	REV	EON

THIS DOCUMENT AND CONTENTS THEREIN ARE PROPRIETARY TO ARIEL CORPORATION. ONLY BY WRITTEN CONSENT AND AGREED TERMS BY ARIEL CORPORATION GIVES THE RIGHT TO DISCLOSE OR USE IN PART OR IN WHOLE INFORMATION CONTAINED IN DOCUMENT.

REV	DESCRIPTION	INITIALS	DATE

8/09/11

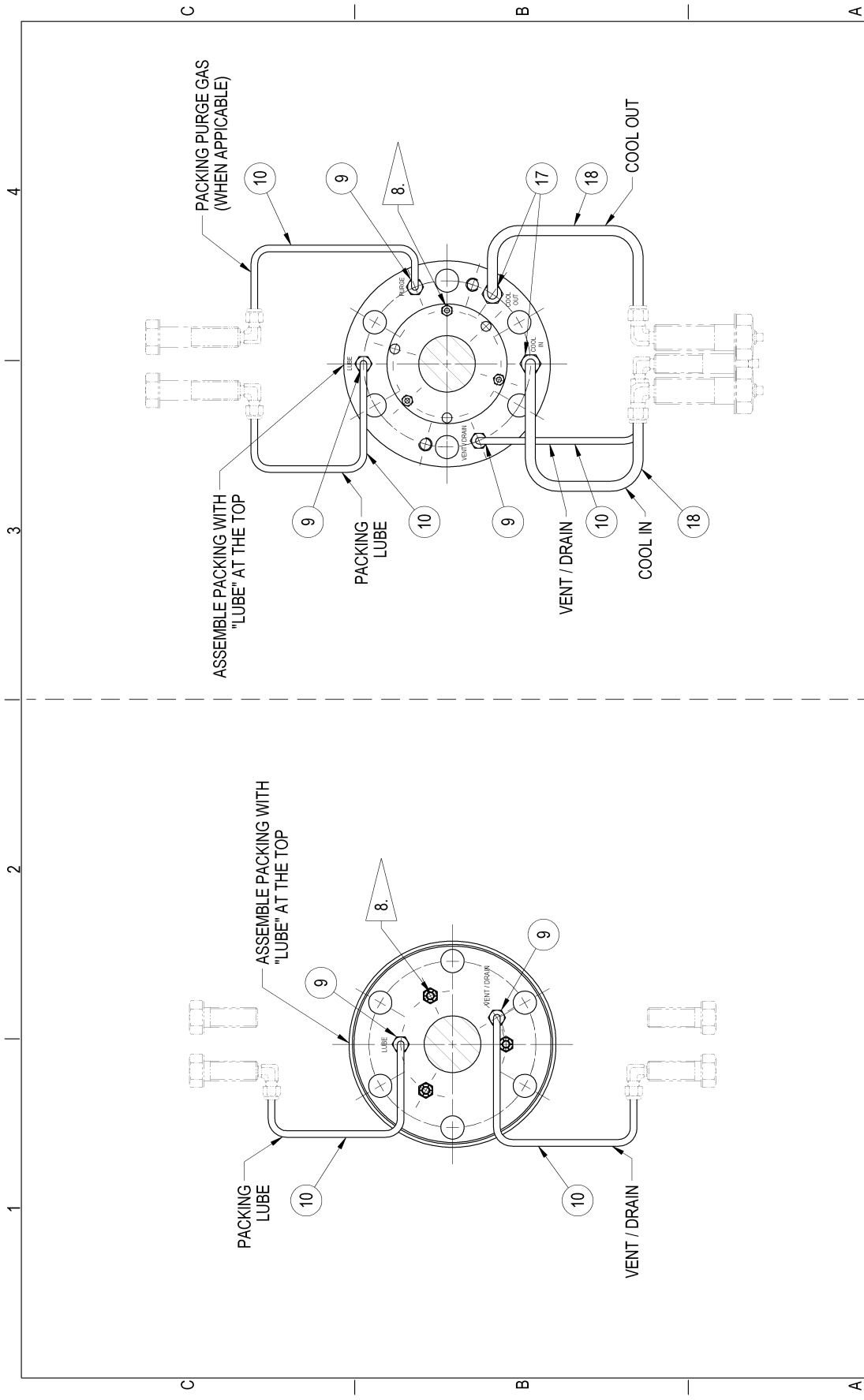
PARTS LIST

08.000 ET PISTON ASSEMBLY; 04.500 STROKE. PART NO. PISTON ASSY
G-SHEETS USED: G-18597, G-18797, G-18238, G-18945, REF DRAWING A-17925 2 SHT
G-18253.

ITEM	PART NUMBER	QTY	DESCRIPTION
1	C-0800	1	PIST,RR , 8 H:E:ET
2	A-3460	3	RIDER RING, 8 H:E:ET
3	C-0603	1	P ROD, 4.50STK/33.952LG
4	B-0846	1	PISTON COLLAR, 3-1/2 OD, JGH:E:ET
5	B-0847	1	PISTON NUT, 3-1/2 OD, JGH:E:ET
6	FS0405DG	2	SET SCREW, CUP POINT, 5/16-24 X 1"
7	B-1584	1	PKG,2.0,1500,STD,BTR
8	FC0120IT	4	12-POINT CAPSCREW, 3/4-10 X 4-1/2, G8
9	A-0827	0	MALE CONNECTOR, STL, 1/4 TUBE X 1/4 NPT
10	PT0200CB	30."	TUBING, SS, 1/4 OD X .035 WALL
99	B-1584-K	0	REBUILD KIT, 2.000 PISTON ROD PACKING
99	B-1687-K	0	REBUILD KIT, 2.000 OIL WIPER PACKING, WAT

WHEN A ZERO APPEARS IN THE QUANTITY COLUMN IT
DOES NOT REPRESENT THE QUANTITY REQUIRED.

*** ALWAYS PROVIDE SERIAL NUMBER WHEN ORDERING SPARE PARTS. ***



ARIEL CORPORATION
 35 BLACKJACK ROAD
 MOUNT VERNON, OHIO 43050

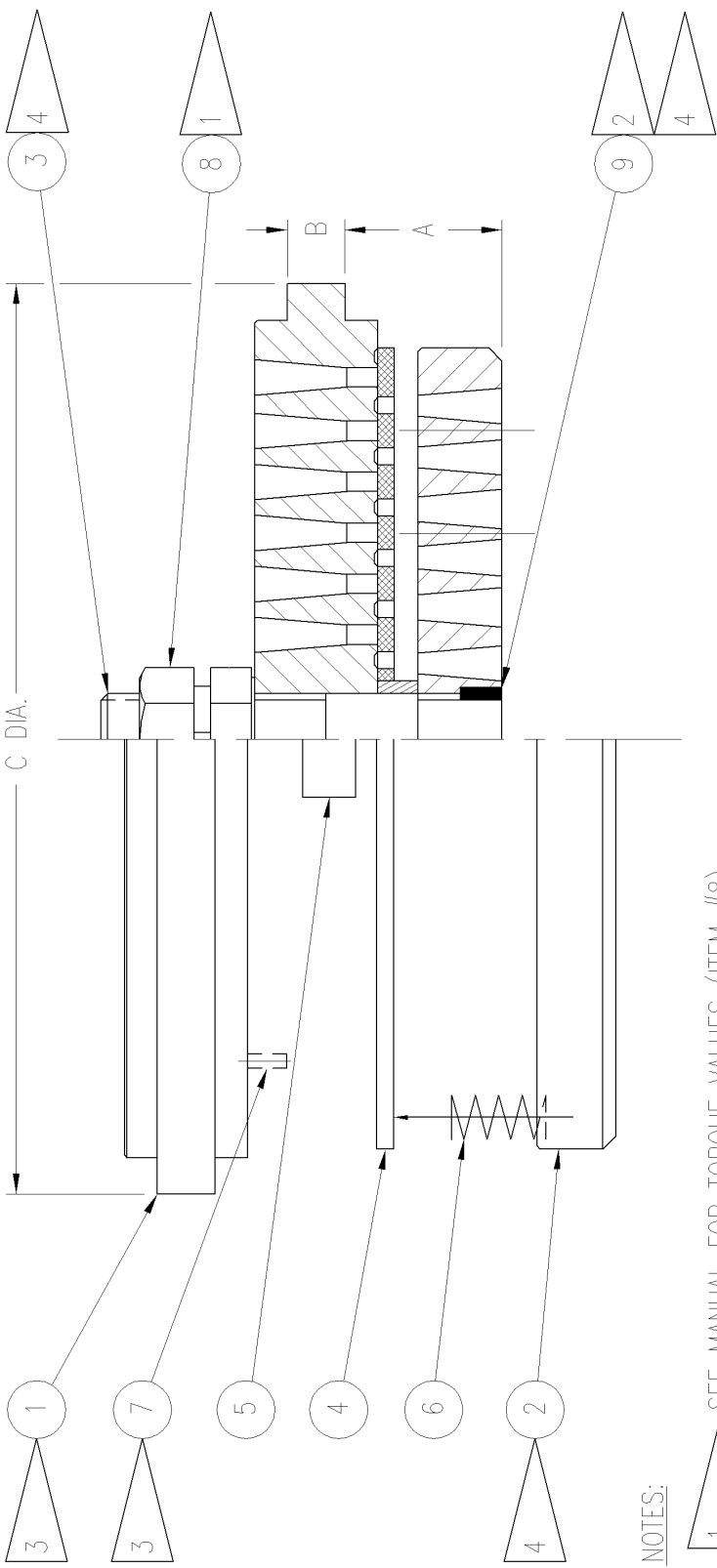


ASSEMBLY
 DWG. NO. **A-17925**
 SHT 2 OF 2

REV	DESCRIPTION	INITIALS	DATE
0	16824	CPM 01/31/11	DLI 02/23/11
REV	EON	SCALE	NONE

THIS DOCUMENT AND CONTENTS THEREIN ARE PROPRIETARY TO
 ARIEL CORPORATION. ONLY BY WRITTEN CONSENT AND AGREED
 TERMS BY ARIEL CORPORATION GIVES THE RIGHT TO DISCLOSE OR
 USE IN PART OR IN WHOLE INFORMATION CONTAINED IN DOCUMENT.

REV	DESCRIPTION	INITIALS	DATE
0	16824	CPM 01/31/11	DLI 02/23/11
REV	EON	SCALE	NONE



NOTES:

1. SEE MANUAL FOR TORQUE VALUES (ITEM #8).
2. INSTALL PER ER-52.
3. VALVE SEAT ASSEMBLY (ITEM #1) CONSISTS OF VALVE SEAT AND SPIROL PINS (ITEM #7).
4. VALVE GUARD ASSEMBLY (ITEM #2) CONSISTS OF VALVE GUARD, CENTER STUD (ITEM #3), AND DOWEL PIN (ITEM #9).

ARIEL CORPORATION
 35 BLACKJACK ROAD
 MOUNT VERNON, OHIO 43050

TITLE:	SUCTION VALVE, CRO/CRE
MATERIAL:	PROCURED
DRAWN:	IG 9/27/99
CHECKED:	ED 10/4/99
SCALE:	NONE
R.S. No.	
PART NO.	
DWG. No.	A-9278

THIS DOCUMENT AND CONTENTS THEREIN ARE PROPRIETARY TO ARIEL CORPORATION. ONLY BY WRITTEN CONSENT AND AGREED TERMS BY ARIEL CORPORATION GIVES THE RIGHT TO MANUFACTURE, BUT DOES NOT GRANT THE RIGHT TO DISCLOSE OR USE IN PART OR IN WHOLE INFORMATION CONTAINED IN DOCUMENT.

REV	DESCRIPTION	INIT/DATE
1	(A-4) IN TITLE BLOCK, TITLE "SUCTION VALVE, CRO/CRE" WAS "SUCTION VALVE, CRO". UPDATED TO CURRENT STANDARDS.	KSL 12/13/07
2		
3		

8/09/11

PARTS LIST

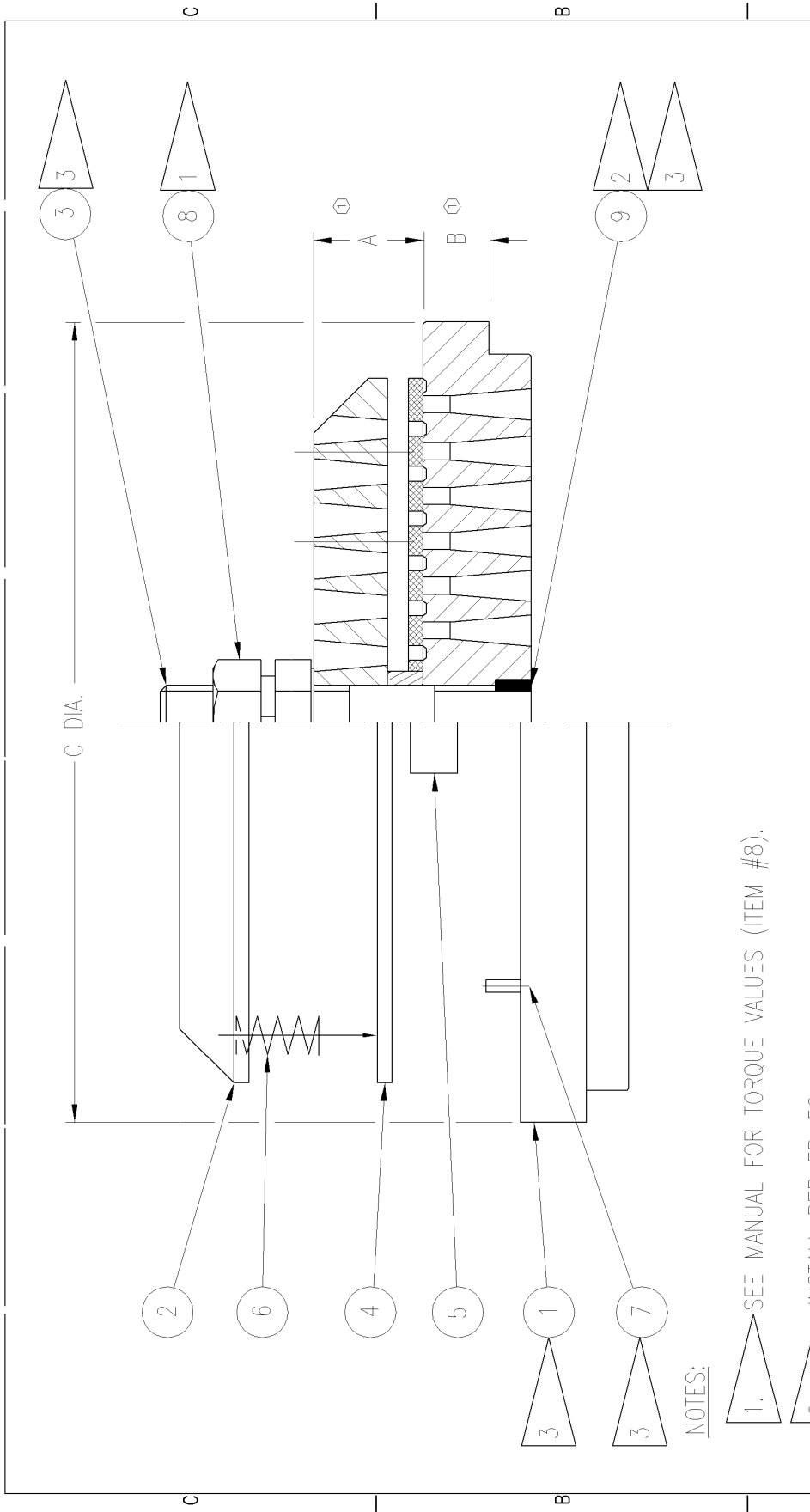
0.8310=A
0.6570=B
4.3530=C
0.0710=LFT

PART NO. B-4928-T
REF DRAWING A-9278

ITEM	PART NUMBER	QTY	DESCRIPTION
1	A-14436	1	SUC VLV SEAT, 98CRE
2	A-15177-A	1	SUC VLV GUARD ASSY, 98CRE
3	A-1360	1	CNTR STUD,1/2-20X2.913 STL
4	A-14466	1	VLV PLT, 98CRE.156THK,NYX
5	A-14437	1	GUIDE RING,98CRE,.226 THK
6	A-8908	12	SPRING(.197DX.413 RED)
7	A-1023	2	SPIROL PIN,.091D X .433L
8	A-1368	1	LOCKNUT, DRAKE 1/2-20
9	A-1442	1	DOWEL PIN,.118D X .241L
99	KB-4928-T	0	KIT,VLV, 98CRE,NYX

WHEN A ZERO APPEARS IN THE QUANTITY COLUMN IT
DOES NOT REPRESENT THE QUANTITY REQUIRED.

*** ALWAYS PROVIDE SERIAL NUMBER WHEN ORDERING SPARE PARTS. ***



NOTES:

1. SEE MANUAL FOR TORQUE VALUES (ITEM #8).
2. INSTALL PER ER-52.
3. VALVE SEAT ASSEMBLY (ITEM #1) CONSISTS OF VALVE SEAT, CENTER STUD (ITEM #3), SPIROL PIN (ITEM #7) AND DOWEL PIN (ITEM #9).

ARIEL CORPORATION
 35 BLACKJACK ROAD
 MOUNT VERNON, OHIO 43050

TITLE: DISCHARGE VALVE, CRO/CRE	
MATERIAL: PROCURED	
DRAWN: IC 9/27/99	R.S. No.
CHECKED: ED 10/4/99	PART NO.
SCALE: NONE	DWG. No: A-9279

REV	ECN	DESCRIPTION	INIT/DATE	KSL
2	14968	(A-4) IN TITLE BLOCK, "DISCHARGE VALVE, CRO/CRE" WAS "DISCHARGE VALVE, CRO".	12/13/07	
1	12882	@C4 WAS B. @B4 WAS A.	6/01/05	
0	7799			

THIS DOCUMENT AND CONTENTS THEREIN ARE PROPRIETARY TO ARIEL CORPORATION. ONLY BY WRITTEN CONSENT AND AGREED TERMS BY ARIEL CORPORATION GIVES THE RIGHT TO MANUFACTURE, BUT DOES NOT GRANT THE RIGHT TO DISCLOSE OR USE IN PART OR IN WHOLE INFORMATION CONTAINED IN DOCUMENT.

8/09/11

PARTS LIST

0.7720=A
0.3930=B
4.3280=C
0.0630=LFT

PART NO. B-4732-CC
REF DRAWING A-9279

ITEM	PART NUMBER	QTY	DESCRIPTION
1	A-14439-A	1	DIS VLV SEAT ASSY, 98CRE
2	A-14440-A	1	DIS VLV GUARD ASSY, 98CRE
3	A-2654	1	CNTR STUD,1/2-20
4	A-14529	1	VLV PLT,98CRE.156THK,MTX
5	A-11959	1	GUIDE RING,117CRO,.220 THK
6	A-8897	15	SPRING(.197DX.413 WHITE) .026
7	A-1023	2	SPIROL PIN,.091D X .433L
8	A-1368	1	LOCKNUT, DRAKE 1/2-20
9	A-1442	1	DOWEL PIN,.118D X .241L
99	KB-4732-CC	0	KIT,VLV, 98CRE,MTX

WHEN A ZERO APPEARS IN THE QUANTITY COLUMN IT
DOES NOT REPRESENT THE QUANTITY REQUIRED.
*** ALWAYS PROVIDE SERIAL NUMBER WHEN ORDERING SPARE PARTS. ***

8/09/11

ARIEL CORPORATION
SALES ORDER COVER SHEET

C/N: 001

RHCOVP02

SERIAL #: U85395

PART: G-11330 DESCRIPTION: VVCP, 8 R:RJ:RJ-HP:ET

8" JGR:RJ:RJ-HP:ET UNLOADER ASSEMBLY, PART NO. G-11330
 STAINLESS STEEL TUBING AND FITTINGS. REF DRAWING A-8598

ITEM	PART NUMBER	QTY	DESCRIPTION
1	C-0405	1	UNL.HEAD, 8 RU
2	D-2949	1	ADAPTER, HEAD END UNLOADER, 8-3/8R
3	B-0575	0	UNL PIST, 8-3/8R
4	C-3712	0	UNL.STEM,8-3/8,9-3/4RU CL.TP/H
5	A-0687	1	O-RING, VT, 7.895 OD X .210, 75/85 DUROMETER
6	A-0586	1	STEEL GASKET, 08.813 OD X 08.500 ID X .060, HEAD
7	A-0688	1	UNL.PISTON RING, 6-1/2 O.D.
8	C-0369	1	UNLOADER LOCKING HANDLE, 2"-8 THREAD
9	B-0523	1	UNLOADER PACKING RETAINER, 6 THROUGH 15-3/4R:RJ:ET
10	A-0643	1	BACK-UP RING, PACKING
11	A-0629	1	COMPRESSION SPRING, UNL.
12	A-0639	1	V PACKING, UNL
13	FC0120HR	12	12-POINT CAPSCREW, 5/8-11 X 3-3/4, G8
14	A-2389	0	SELF-LOCK NUT, ESNA, THIN, 1-3/8-12
15	FC0110DF	4	SOCKET HEAD CAPSCREW, 5/16-18 X 7/8, G8
16	FC0110EH	2	SOCKET HEAD CAPSCREW, 3/8-16 X 1-1/4, G8
17	A-0500	1	GREASE FITTING CAP, PLASTIC
18	A-0938	1	MALE CONNECTOR, SS, 1/4 TUBE X 1/4 NPT
19	PZ0230BA	1	GREASE FITTING, STRAIGHT, 1/4-18
20	A-0641	1	BELLOWS, THREAD PROTECTOR, UNLOADER
21	A-0642	1	BACK-UP RING, BELLOWS
22	FC0134CC	3	BUTTON HEAD CAPSCREW, 1/4-20 X 1/2, 316SS

8/09/11

SALES ORDER COVER SHEET

23	PT0201CD	5."	TUBING, 316 SS, 1/4 OD X .065
24	C-0982	0	UNLOADER HANDLE, 3 PRONG
25	A-0256	1	MACHINE SCREW PLUG, PLASTIC, 1/2-13
26	A-0755	1	DATA PLATE, UNLOADER HEAD SPECIFICATION
27	FR0571CC	4	DRIVE SCREW, TYPE U, SS, #6 X 1/4
28	AC-3713	1	UNL PIST ASSY, 8-3/8R:RJ:H:E
32	A-12927	1	DATA PLATE, UNLOADER ADAPTER SPECIFICATION

VARIABLE VOLUME CLEARANCE POCKET (Headend Unloader) DATA SHEET

8-3/8ET Class Cylinder

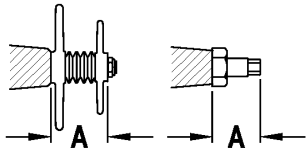
Stroke: 4.50 in 114 mm

Bore: 8.000 in 203 mm

MAWP: 800 psig 55.2 bar(g) 5516 kPa(g) 56.2 kg/cm2(g)

General Data for VVCP (independent of cylinder):

MAWP*:	800	55.2 barg	5516 kPa(g)	*Note: If VVCP services another cylinder, it may have a higher MAWP than the above
VVCP piston diameter:	6.5 in	165 mm		
Stem thread lead (pitch):	0.125 in	3 mm		
Total travel:	3.3 in	8.3 cm		
Number of turns from closed to fully open:			26	



A distance - see diagram

- closed:	4-1/2 in	11.4 cm
- open:	7-3/4 in	19.7 cm

Minimum added fixed clearance:	2.1 in3	34.1 cm3
Additional added clearance when fully open:	108 in3	1770 cm3
Total added clearance when fully open:	110.1 in3	1803.8 cm3
Clearance volume change per turn:	4.2 in3	68.1 cm3
Clearance volume change per change in travel:	33.2 in3/in	214.4 cm3/cm

Clearance Data for VVCP alone, in percent of swept volume of above cylinder:

Minimum added fixed clearance:	0.9%
Additional added clearance when fully open:	47.7%
Total added clearance when fully open:	48.7%
Head end clearance change per turn:	1.8%
Head end clearance change per change in travel:	14.7% /in 5.8% /cm

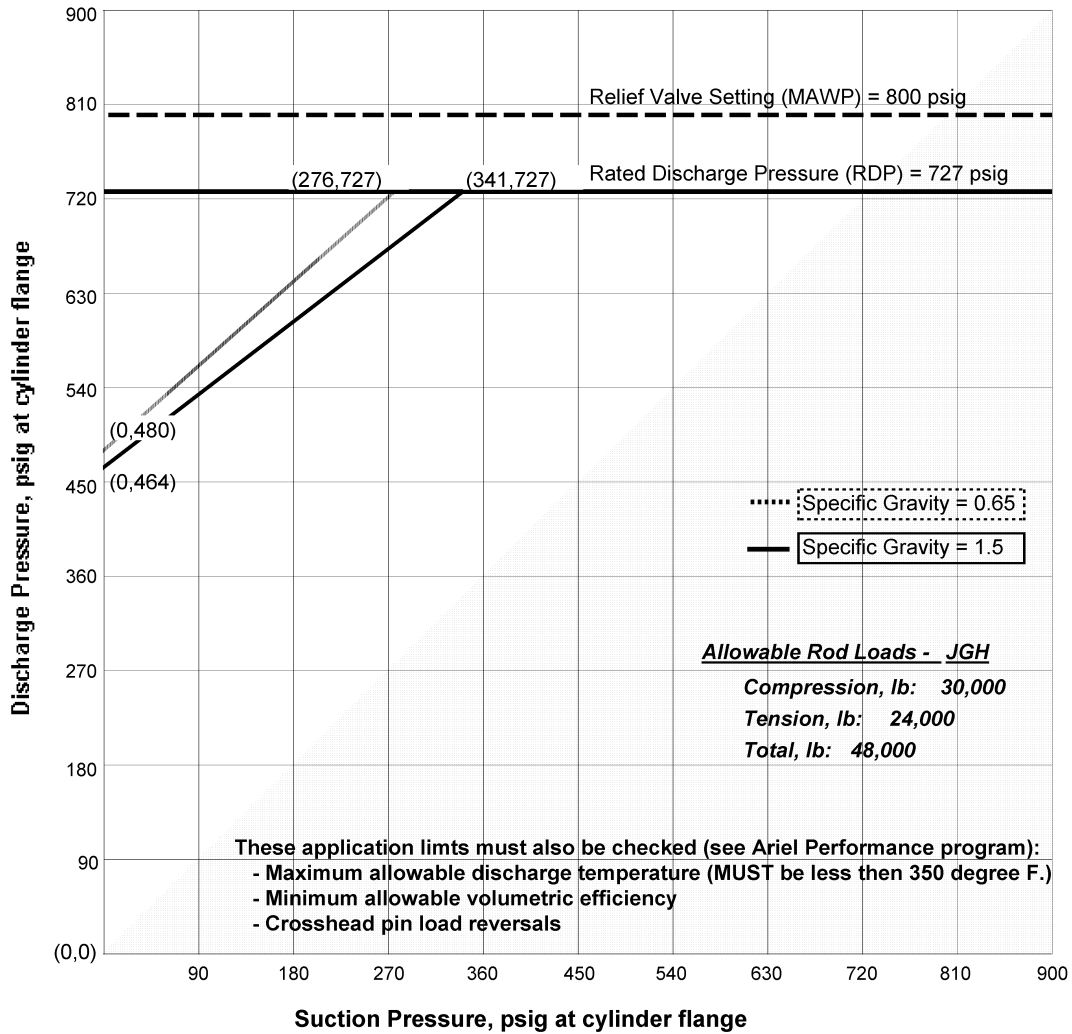
Clearance Data with VVCP installed on above cylinder with standard valves, in percent of swept volume:

Minimum fixed head end clearance:	18.0%
Total head end clearance when fully open:	65.8%

PLEASE NOTE: It is important to understand that the percent clearance figures for the variable volume clearance pocket above include the cylinder headend clearance. However, any valve spacers or other non-standard added clearances on the unit must be accounted for.

Estimated Gas Rod Load and Pressure Limits for 4.5 inch stroke at 1200 RPM

Cylinder Class: 8-3/8ET Bore, inches: 8.000
Cylinder Serial Number: C-125344



This chart defines allowable operating limits for gas rod loads and standard working pressures. Pressure combinations falling above the line for the applicable Specific Gravity of the gas being compressed will exceed the Rod Load limitations of the equipment.

Calculations are based on 80 degrees Fahrenheit hydrocarbon gas at 1500 ft. elevation.