

12/07/07

ARIEL CORP. - BLACKJACK DIV. C/N: 001  
SALES ORDER COVER SHEET

RHCOVP02

SERIAL NUMBER: F-28585

PART: JGJ CLASS DESCRIPTION: JGJ FRAME CLASS

PART NUMBER	QUANTITY	DESCRIPTION	DRAWING NO.
A-3703	1	BLANK DST BLOCK ASSY,3 BLOCK	N.A.
G-2445	1	FRAME ASSY,JGR:W:J/2	A-4263
G-10810	1	CRANKSHAFT ASSY,JGJ/2 -GK	A-12041
G-0555	2	GUIDE ASSY,R:RJ:HJ:8-7/8W,STD	A-6791
G-5183	2	CONN ROD ASSY,FS,JGJ,NEW BRG	A-3985
G-0600	2	X-HEAD ASSY,JGR:JGJ	A-6873
D-0239	1	CROSSHEAD,LGT,DI, 32.3#,JGR:J	D-0239
D-0240	1	CROSSHEAD,MED,DI, 46.2#,JGR:J	D-0240
G-0438	1	DRIVE END COVER ASSY,R:W:J/2/4	A-6314
G-12682	1	AUX.END COVER ASSY,RWJ/2 -GK	A-12040
G-3220	1	1"SIGHT GLASS,JGAMP:RWJ/2&ACF	N.A.
G-14134	1	LO PUMP ASSY,JGR:W:J/2 -GK	D-1227
G-1766	1	FF LUBR,1/4,JGR:W:J/2	D-1106
G-0568	1	DST.BLK.MTG.SINGL,RWJHEKTCD/2	N.A.
G-2708	1	RUPTURE DISC ASSY, 3250 PSI	N.A.
G-1085	1	FF TUBING,RWJ/2:ACF, D.A. CYLS	N.A.
G-8076	1	CHAIN ASY,RWJ:ACF/2,STD OR R/R	A-9719
G-4966	1	TOP COVER, JGR:W:J/2	A-6582
G-7624	1	FF GAGE,3000PSI/BLK	A-9020
G-0763-1	1	LO COOLER,THERM.IMPJGRWJHEKTCD	N.A.
G-0877	2	GUIDE COVER,SHIP,JGR:JGRJ	D-0569
G-0603	1	TOOL KIT ASSY, JGR:W:J	N.A.

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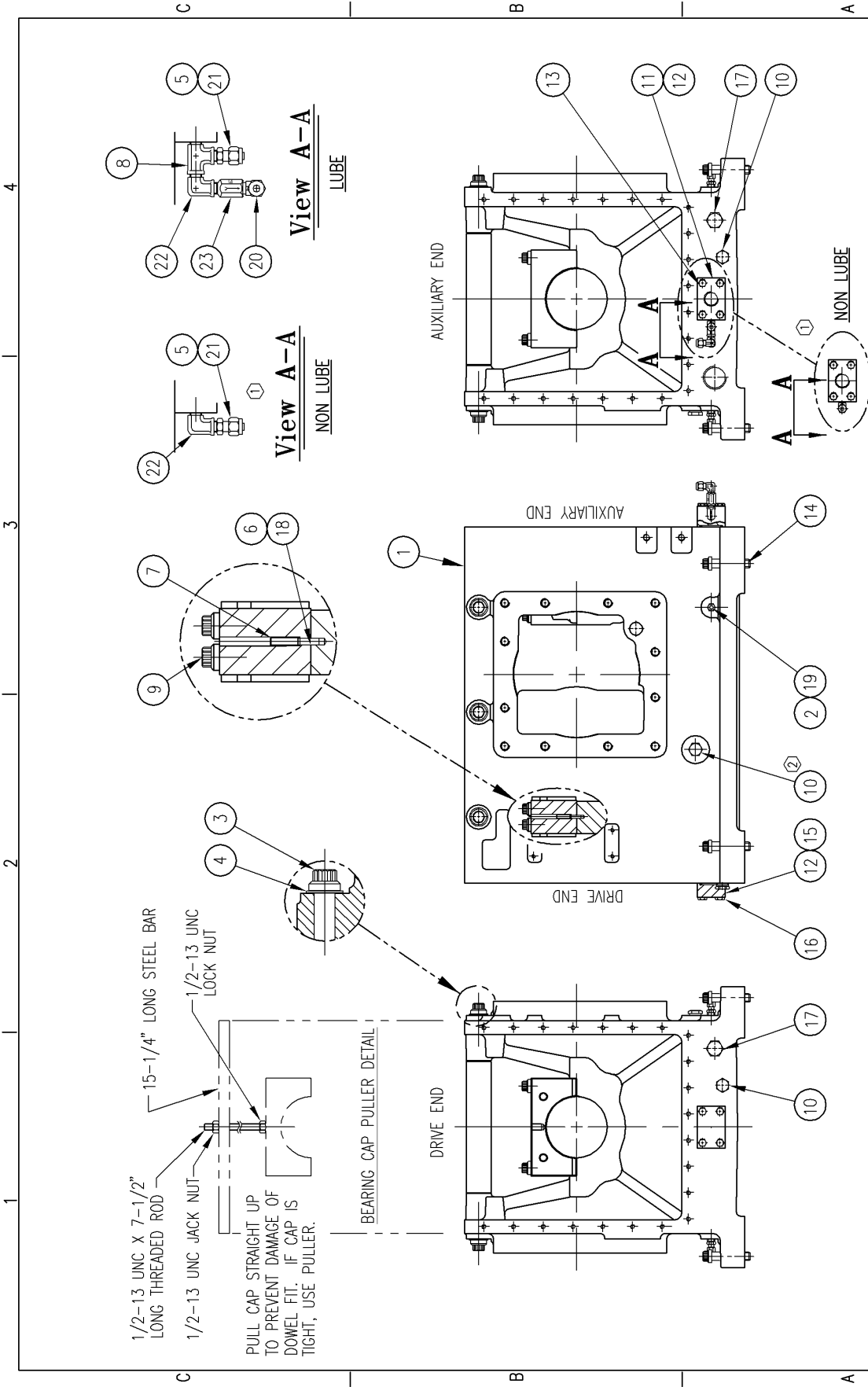
PARTS LIST

A-3703  
BLANK DISTRIBUTION BLOCK ASSY  
3 BLOCK BASEBLATE

PART NO. A-3703  
REF DRAWING N.A.

ITEM NUMBER	PART NUMBER	QUANTITY	DESCRIPTION
1	CA-3703	1	BLANK DST BLOCK ASSY,3 BLOCK
2	A-5613	1	GSKT,NO DIST BLOCK,3 TRABON
3	A-5618	1	COVER PLT,3 DIST BLOCK TRABON
4	FC0107CC	4	HEX HD CAP,1/4-28 X 1/2 G5
5	A-4400	1	INFO PLATE,BLANK DIST BLOCK

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



<b>ARIEL CORPORATION</b> 35 BLACKJACK ROAD MOUNT VERNON, OHIO 43050		DRAWN: DB 07-22-93 CHECKED: 07-22-93 APPROVED:		ASSEMBLY DWG. NO. <b>A-4263</b>	
2 10797	1 8719	0 4675	ECN	REV	3
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REV	2	REVISIONS	DESCRIPTION	INIT/DATE	1
REVISED DWG: 0042 ADDED ITEM 10 (PP0810GB 1/2NPT PIPE PLUG) MJB 11/08/02					

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PARTS LIST

FRAME, SPACERS AND BEARING CAPS  
JGR/2, JGW/2 AND JGJ/2

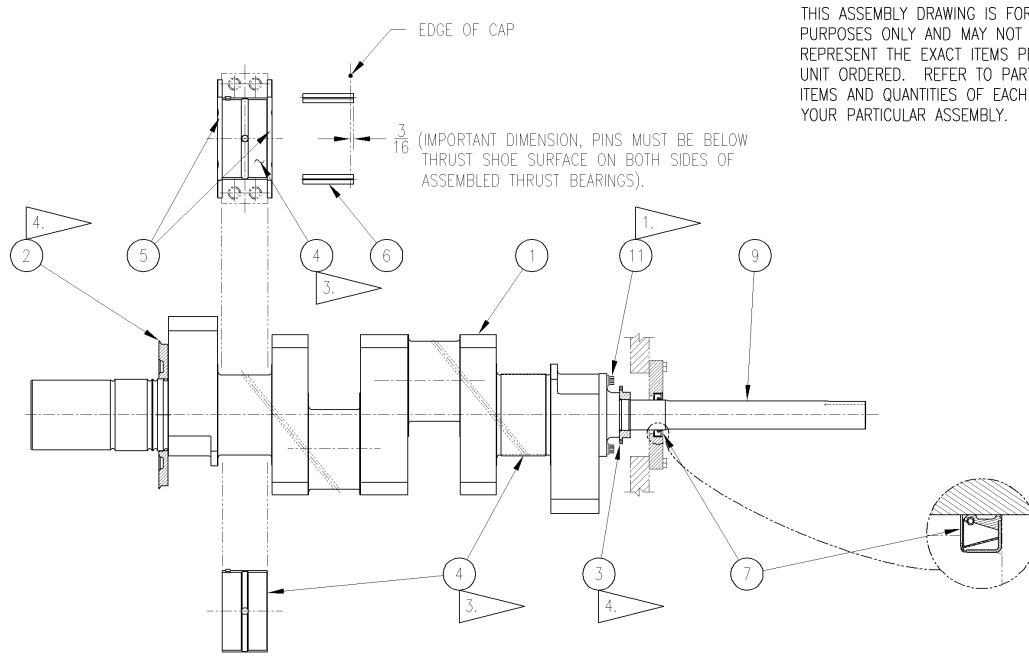
PART NO. G-2445  
REF DRAWING A-4263

ITEM NUMBER	PART NUMBER	QUANTITY	DESCRIPTION
1	D-1389	1	FRAME,JGR:W:J/2
2	A-0827	2	MALE CONN,STL, 1/4T X 1/4P
3	FC0125IT	6	12 PT,3/4-16 X 4-1/2 G8
4	FW0550IA	6	STAT-O-SEAL, 3/4 DIA., NITRILE
5	A-0918	1	PLUG,TUBE FIT,FEMALE,STL,1/4T
6	FP0500FE	0	DOWEL PIN, 1/4 X 3/4 +.0002
7	FS0400DG	0	CUP PT.SET-SCREW,5/16-18 X 1
8	A-0882#02	1	STREET TEE,STL,1/8P
9	FC0120HU	8	12 PT,5/8-11 X 5 G8
10	PP0810GB	3	PIPE PLUG,1/2NPT,HEX HD,STL
11	A-0397	1	END PLT,OIL GALLERY,R:W:J
12	A-0030	2	O-RING,VT, 1.637 O.D. X .139
13	FC0102DK	4	HEX HD CAP,5/16-18 X 2 G5
14	FC0120HN	4	12 PT,5/8-11 X 2-3/4 G8
15	A-0396	1	END PLT,R:W:J
16	FC0102DI	4	HEX HD CAP,5/16-18 X 1-1/2 G5
17	PP0810KB	2	PIPE PLUG,1"NPT,HEX HD,STL
18	FP0500EE	0	DOWEL PIN,3/16 X 3/4 +.0002
19	PT0200CB	90.	" SS TUBING, 1/4 OD X .035 WALL
20	A-0815	1	MALE ELBOW,STL, 1/4T X 1/8P
21	A-0830	1	MALE CONN,STL, 1/4T X 1/8P
22	A-0804	1	STREET ELBOW,STL, 1/8P, 90
23	A-3763	1	CHK VLV,1/8MX1/8F,SS,PPT/14PSI

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

11 2 3 4

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.



NOTES:

1. TORQUE TO 25 FT/LBS.
2. LOOSEN OR TIGHTEN ALL FASTENERS PER RECOMMENDED PROCEDURES AND TORQUE VALUES IN MANUAL.
3. INSTALL BEARING SHELLS WITH TABS LOCATED IN NOTCHES IN CAPS AND CRANKCASE.
4. HEAT TO 400° TO SHRINK ON.
5. THE CRANKSHAFT, SLINGER AND SPROCKET ARE INCLUDED IN ITEM #50

1	WHAT ADDED NOTE #5, THE CRANKSHAFT, SLINGER AND SPROCKET ARE INCLUDED IN ITEM #50.	RWR 7/10/03
REV	DESCRIPTION	INIT/DATE

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111460		<b>ARIEL CORPORATION</b> 35 BLACKJACK ROAD MOUNT VERNON, OHIO 43050	
111382		ASSEMBLY DWG. NO. <b>A-12041</b>	

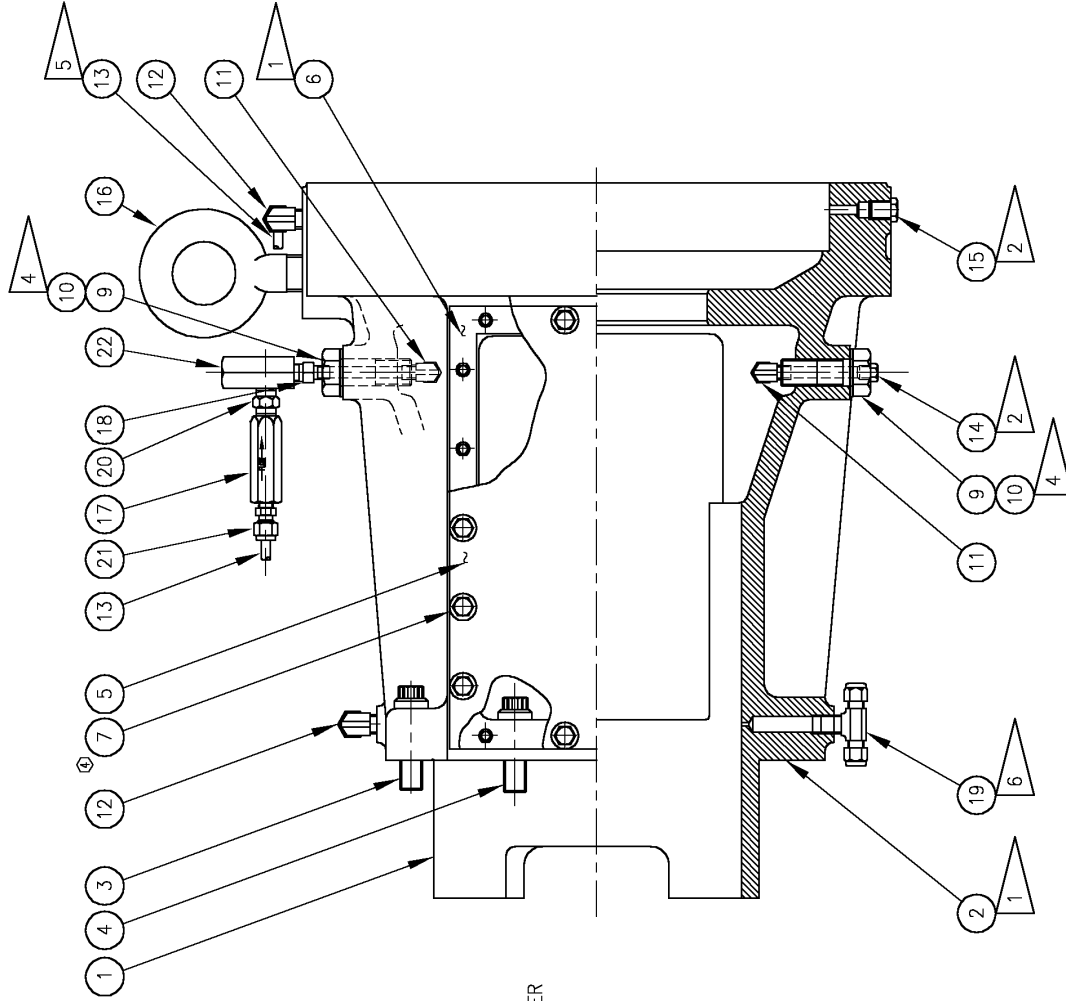
12/07/07

PARTS LIST

CRANKSHAFT, MAIN BEARINGS, THRUST PLATES      PART NO. G-10810  
JGJ/2-GK, 3-1/2" STROKE      REF DRAWING A-12041

ITEM NUMBER	PART NUMBER	QUANTITY	DESCRIPTION
1	AD-3680	1	CRANK ASSY,FS,JGJ/2, -GK
2	B-0248	0	OIL SLINGER,JGR:W:J/2/4,A/6
3	A-0003	0	SPKT,35-1 X 24T
4	B-0245	4	SLEEVE BRG,H/S,MAIN,R:W:J:ACF
5	B-0304	2	THRUST PLATE,BZ,JGR:W:J
6	FP0510JN	2	SPIROL PIN,1/2 X 2-3/4
7	A-12036	1	SEAL,DUST/OIL,1.625 SHAFT DIA
9	C-3678	0	SHAFT,AUX DRIVE,J/2 -GK,W/SPKT
11	FC0125EM	0	12 PT,3/8-24 X 2-1/2 G8
50	SD-3680	0	CRANK SUBASSY,FS,JGJ/2 -GK

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



# NOTES:

- 1 △ APPLY AN ANTI-SEIZE LUBRICANT TO GASKET SURFACES.
- 2 △ REMOVE SHIPPING PLUGS AND TUBE TO A SAFE ATMOSPHERE, OR DRAIN AS APPROPRIATE.
3. — LOOSEN OR TIGHTEN ALL FASTENERS PER RECOMMENDED PROCEDURES AND TORQUE VALUES IN MANUAL.
- 4 △ OIL FACES OF STATO-SEAL BEFORE INSTALLING TO PREVENT ABRASION.
- 5 △ VENTS TO BE TUBED TO APPROPRIATE AND SAFE ATMOSPHERE
- 6 △ SHOWN ROTATED 90° OUT OF TRUE POSITION.

REMOVED ITEM #18 (5/16 FLAT WASHER) ITEM #7 (5/16-18 x 1 SEMS BOLT) WAS 1/8-18 x 1 HEX HD. CAP.

REV	DESCRIPTION

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3 7704		ARIEL CORPORATION		35 BLACKJACK ROAD		MOUNT VERNON, OHIO 43050		ASSEMBLY DWG. NO. A-6791	
2 7576		CAH 04/18/97		JHJ 02/14/97		NONE		NONE	
1 7462		0 6766		0 6766		0 6766		0 6766	
4 8330		REV		ECN		REV		ECN	

12/07/07

PARTS LIST

JGR CROSSHEAD GUIDE                      PART NO. G-0555  
JGR:RJ:HJ & 8-7/8 JGW CLASS CYLINDERS      REF DRAWING A-6791

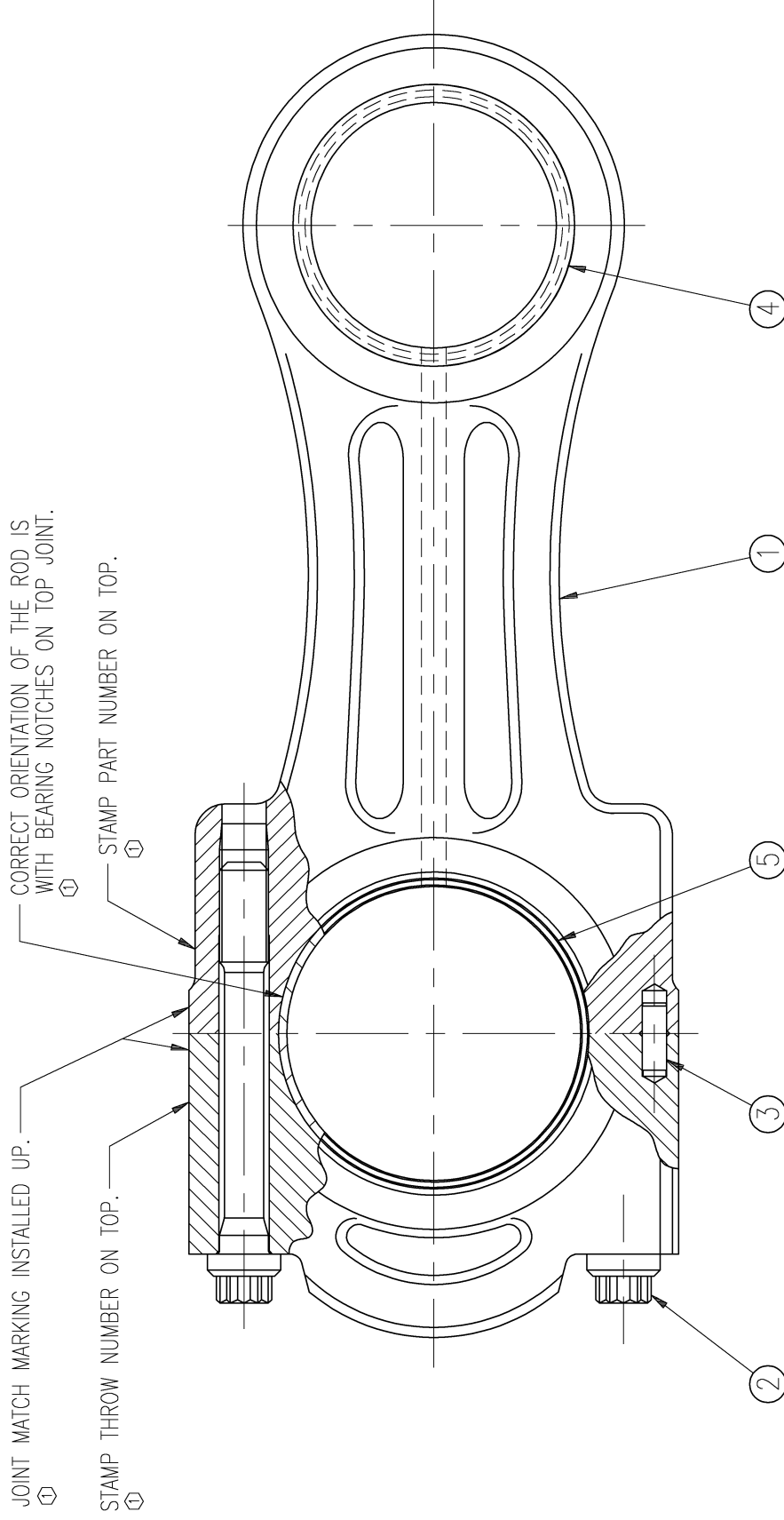
ITEM NUMBER	PART NUMBER	QUANTITY	DESCRIPTION
1	D-0223	1	X-HD GUIDE,STD,JGR:RJ
2	B-0299	1	GSKT,RET,12-1/4 X 12 X 1/64
3	FC0120HL	8	12 PT,5/8-11 X 2-1/4                      G8
4	FC0120HK	4	12 PT,5/8-11 X 2                      G8
5	B-0418	2	GUIDE COVER,JGR
6	B-0419	2	GSKT,RET,12-1/4 X 8-1/8X1/32
7	A-10185	36	SEMS BOLT, 5/16-18 X 1
9	A-0415	2	LUBE FITTING, 3/4-10 X 2
10	FW0550IA	2	STAT-O-SEAL, 3/4 DIA., NITRILE
11	A-0815	2	MALE ELBOW,STL, 1/4T X 1/8P
12	A-0800	2	MALE ELBOW,STL, 1/4T X 1/4P
13	PT0200CB	48.	" SS TUBING, 1/4 OD X .035 WALL
14	PP0802RD	1	PIPE PLUG,1/8NPT,SQ HD,PLASTIC
15	PP0802CD	1	PIPE PLUG,1/4NPT,SQ HD,PLASTIC
16	A-2205	1	EYEBOLT,1-8 UNC, SHORT
17	A-3780	1	CHK.VLV,DOU.BALL SOFT SEAT SS
18	A-8725	1	OMNI OIL TRAP,STEM,SS,1/8NPT
19	A-0808	1	MALE BRANCH T,STL, 1/4T X 1/4P
20	A-3529	1	HEX PIPE NIPPLE,STL,1/4 X 1/4
21	A-0827	1	MALE CONN,STL, 1/4T X 1/4P
22	A-8724	1	OMNI OIL TRAP,BODY,SS,1/4NPTF

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DOES NOT REPRESENT THE QUANTITY REQUIRED.



## 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.



JOINT MATCH MARKING INSTALLED UP. ①

CORRECT ORIENTATION OF THE ROD IS WITH BEARING NOTCHES ON TOP JOINT. ①

STAMP THROW NUMBER ON TOP. ①

STAMP PART NUMBER ON TOP. ①

②

③

⑤

①

④

16756  
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

12/07/07

PARTS LIST

CONNECTING ROD, FORGED STEEL  
JGJ CLASS, WITH NEW BEARING

PART NO. G-5183  
REF DRAWING A-3985

ITEM

NUMBER	PART NUMBER	QUANTITY	DESCRIPTION
1	AD-1152	1	CONN ROD ASSY,FS,JGJ
2	A-2461	0	12 PT, 3/4-16 X 5-5/8 G8
3	FP0500FE	0	DOWEL PIN, 1/4 X 3/4 +.0002
4	B-0300	0	SLEEVE BRG,BZ,ROD,JGR:W:J:ACF
5	B-2112	2	SLEEVE BRG,H/S,ROD,R:W:J:ACF

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



12/07/07

PARTS LIST

CROSSHEAD, PIN, END PLATES AND  
BALANCE NUT JGR & JGJ

PART NO. G-0600  
REF DRAWING A-6873

ITEM NUMBER	PART NUMBER	QUANTITY	DESCRIPTION
1	CROSSHEAD	0	FOR PART NO. SEE COVER SHEET
1	D-0239	0	CROSSHEAD,LGT,DI, 32.3#,JGR:J
1	D-0240	0	CROSSHEAD,MED,DI, 46.2#,JGR:J
1	D-0241	0	CROSSHEAD,HVY,DI, 54.3#,JGR:J
1	D-0458	0	CROSSHEAD,HVY,BZ, 65.0#JGR:W:J
1	D-0650	0	CROSSHEAD,BAL,BZ,146.0#JGR:W:J
1	D-0651	0	CROSSHEAD,BAL,CI,119.0#JGR:W:J
1	D-0652	0	CROSSHEAD,BAL,CI,103.0#JGR:W:J
1	D-0653	0	CROSSHEAD,BAL,CI, 87.0#JGR:W:J
1	D-0654	0	CROSSHEAD,BAL,CI, 71.0#JGR:W:J
1	D-0658	0	CROSSHEAD,BAL,BZ,130.0#JGR:W:J
1	D-3985	0	CROSSHEAD,XLT,ADI,22.4#,R:J
2	B-0332	1	CROSSHEAD PIN,JGR:W:J
3	A-0431	2	END PLATE,CROSSHD PIN, R:W:J
4	A-0419	1	12 PT, 7/16-20 X 7 LG
5	FN0467FA	1	SELF-LOCK NUT,FLEXLOC,7/16-20
6	FP0505EE	2	ROLL PIN,3/16 X 3/4
7	B-0314	0	CROSSHEAD NUT, 2.4#HEX,JGR:W:J
7	B-0315	0	CROSSHEAD NUT, 6.4#RND,JGR:W:J
7	B-0316	0	CROSSHEAD NUT,10.4#RND,JGR:W:J
7	B-0317-A	0	CROSSHEAD NUT,14.4#RND,JGR:W:J
7	B-0422	0	CROSSHEAD NUT, 8.4#RND,JGR:W:J
7	B-0423	0	CROSSHEAD NUT,12.4#RND,JGR:W:J

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

12/07/07

PARTS LIST

7	B-0468	0	CROSSHEAD NUT, 16.4#RND, JGR:W:J
7	B-0497	0	CROSSHEAD NUT, 4.4#RND, JGR:W:J
7	B-0686	0	CROSSHEAD NUT, 24.4#RND, JGR:W:J
7	B-0688	0	CROSSHEAD NUT, 26.4#RND, JGR:W:J
7	B-0689	0	CROSSHEAD NUT, 28.4#RND, JGR:W:J
7	B-0690	0	CROSSHEAD NUT, 22.4#RND, JGR:W:J
7	B-0990	0	CROSSHEAD NUT, 20.4#RND, JGR:W:J
7	B-0991	0	CROSSHEAD NUT, 18.4#RND, JGR:W:J
7	CROSSHEAD NUT	0	FOR PART NO. SEE COVER SHEET
8	FS0455DI	0	CUP PT.S-SCRW, NY, 5/16-24X1-1/2
9	B-0301	0	SLEEVE BEARING, BZ, X-HD, R:J:ACF

WHEN A ZERO APPEARS IN THE QUANTITY COLUMN IT  
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12/07/07

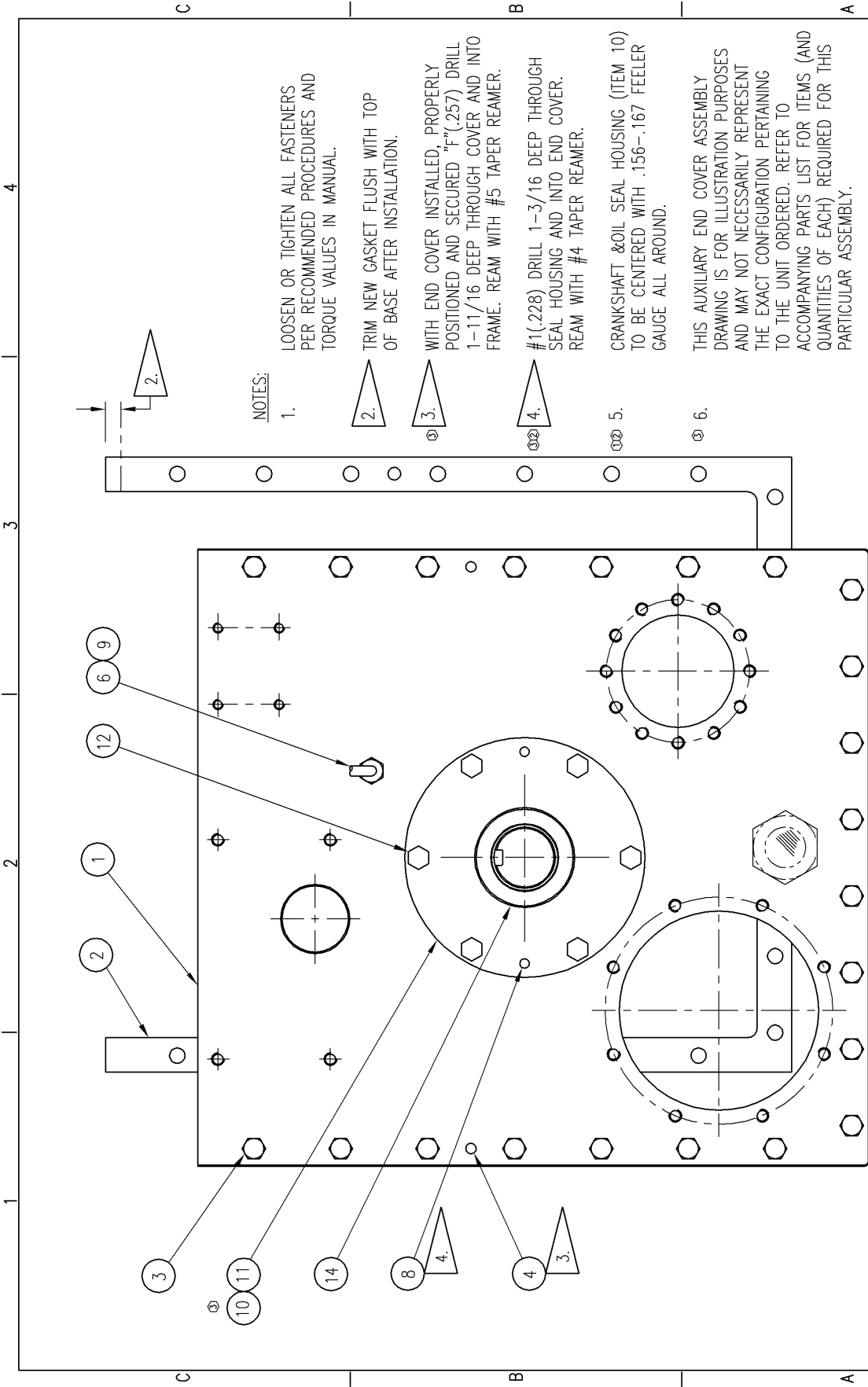
PARTS LIST

DRIVE END COVER  
JGW/2, JGR/2, JGW/4, JGR/4, JGJ/2, JGJ/4

PART NO. G-0438  
REF DRAWING A-6314

ITEM NUMBER	PART NUMBER	QUANTITY	DESCRIPTION
1	C-0140	1	DRIVE END COVER, JGW:R:J/2:4
2	B-0298	1	GASKET,RET,16-25/32X15-1/16X32
3	FC0102DI	22	HEX HD CAP,5/16-18 X 1-1/2 G5
4	C-0141	1	SHAFT SEAL HOUSING,JGR:W:J
5	A-0412	1	GSKT,RND,7-3/4X1/32
6	A-10186	8	SEMS BOLT, 5/16-18 X 1-1/4
8	FP0512EF	2	THD.TAPER PIN,#4 X 1"LG
9	A-0245-A	1	DUST SEAL,TFE,JGW:R:J
10	FP0512FH	2	THD.TAPER PIN,#5 X 1-1/2LG

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



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. 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.
4. #1(228) DRILL 1-3/16 DEEP THROUGH SEAL HOUSING AND INTO END COVER. REAM WITH #4 TAPER REAMER.
5. CRANKSHAFT & OIL SEAL HOUSING (ITEM 10) TO BE CENTERED WITH .156-.167 FEELER GAUGE ALL AROUND.
6. THIS AUXILIARY END COVER ASSEMBLY DRAWING IS FOR ILLUSTRATION PURPOSES 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.

3	14114	ARIEL CORPORATION
2	12082	35 BLACKJACK ROAD
1	11938	MOUNT VERNON, OHIO 43050
0	11382	ASSEMBLY
0	11382	DWG. NO. A-12040
REV	ECN	APPROVED:
REV	ECN	SCALE: NONE
REV	ECN	CHECKED: DAH 06/10/03
REV	ECN	DATE: 06/09/03

REV	DESCRIPTION	INIT/DATE
3	0A3: ADDED NOTE #5. 0B3: NOTE #3 WAS "F"(257) DRILL 1-11/16 DEEP (THROUGH COVER AND 11/16 IN FRAME), REAM WITH #5 TAPER REAMER. 0A5: NOTE #4 WAS 15/64 DRILL 1-3/16 DEEP (THROUGH SEAL RETAINER AND 9/16 IN COVER), REAM WITH #4 TAPER REAMER. 0C1: REMOVED FLAG #5. UPDATED TO CURRENT DRAFTING STANDARDS.	JRY 01/16/2007



12/07/07

PARTS LIST

AUXILIARY END COVER, JGW:R:J/2  
FOR STUB SHAFT.

PART NO. G-12682  
REF DRAWING A-12040

ITEM NUMBER	PART NUMBER	QUANTITY	DESCRIPTION
1	C-4366	1	AUX END COVER, JGR:W:J/2 -GK
2	B-0298	1	GASKET,RET,16-25/32X15-1/16X32
3	FC0102DI	22	HEX HD CAP,5/16-18 X 1-1/2 G5
4	FP0512FH	2	THD.TAPER PIN,#5 X 1-1/2LG
6	A-0827	1	MALE CONN,STL, 1/4T X 1/4P
8	FP0512EF	2	THD.TAPER PIN,#4 X 1"LG
9	PT0200CB	18. "	SS TUBING, 1/4 OD X .035 WALL
10	A-12037	1	SEAL RETAINER,J/2 -GK
11	A-12038	1	GASKET,SEAL RETAINER,J/2 -GK
12	FC0102DH	6	HEX HD CAP,5/16-18 X 1-1/4 G5
14	A-12036	0	SEAL,DUST/OIL,1.625 SHAFT DIA

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12/07/07

PARTS LIST

CRANKCASE LUBE OIL LEVEL SIGHT GLASS      PART NO. G-3220  
JG:A, JGM:P, JGR:W & JGJ/2      REF DRAWING N.A.

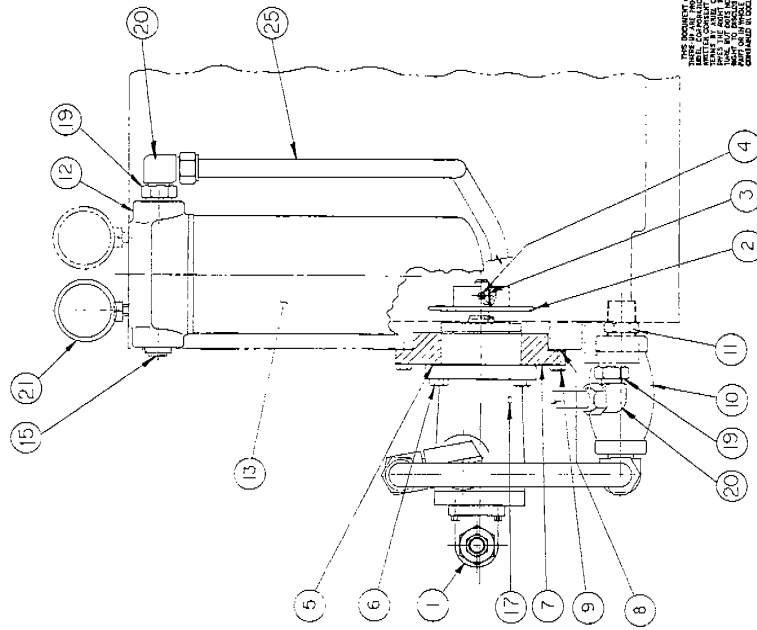
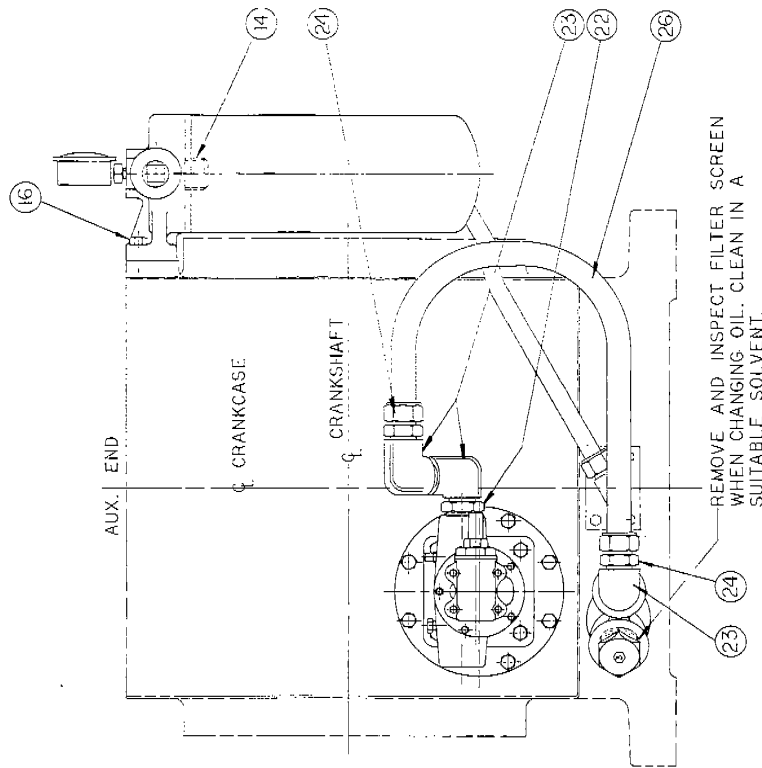
ITEM

NUMBER	PART NUMBER	QUANTITY	DESCRIPTION
1	A-0077	1	SIGHT GLASS,1" NPT

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

G-830-1  
G-2275

NOTE: LOOSEN OR TIGHTEN ALL BOLTS PER RECOMMENDED PROCEDURES AND TORQUE VALUES IN MANUAL.  
APPLY AN ANTI SEIZE LUBRICANT TO GASKET SURFACES.



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AND RETRIEVAL SYSTEM, WITHOUT  
PERMISSION IN WRITING FROM  
ARIEL CORPORATION.

ARIEL CORPORATION  
MT. VERNON, OHIO

ASSY. DWG. NUMBER  
D-1227

USE FOR: ENGINE & POWER EQUIPMENT  
Serial & Model No. 1227

REVISIONS  
DATE  
BY  
APPROVED  
DATE  
BY

12/07/07

PARTS LIST

LUBE OIL PUMP, STRAINER, FILTER                      PART NO. G-14134  
JGW/2,JGR/2,JGJ/2.FOR STUB SHAFT UNITS!!              REF DRAWING D-1227

ITEM NUMBER	PART NUMBER	QUANTITY	DESCRIPTION
1	C-0058	1	L O PUMP,VIKING,JG4,RWJ/2,JGS
2	A-0765	1	SPKT,35-1 X 30T
3	FK0360AA	1	WOODRUFF KEY,#204,1/2D X 1/16
4	FS0455CE	1	CUP PT.S-SCRW,NY, 1/4-28 X 3/4
5	A-0115	1	GSKT,SQR,4 X 4 X 1/32
6	FC0107EG	4	HEX HD CAP,3/8-24 X 1              G5
7	B-0249	1	L O PUMP ADPTR,VIK,JGR:W:J/2
8	A-0411	1	GSKT,RND,L O PUMP,RWJ/2,1/32
9	FC0102DF	8	HEX HD CAP,5/16-18 X 7/8              G5
10	A-8247	1	L O STRAINER, 3/4"NPT
11	A-0850	1	HEX PIPE NIPPLE,3/4P,STL
12	C-0394	1	L O FILTER HEAD,SINGLE L/R
13	A-0661	1	LO FILTER ELEMENT,SPIN-ON
14	A-0660	0	STUD,SPIN-ON L O FILTER
15	PP0802ID	1	PIPE PLUG,3/4NPT,SQ HD,PLASTIC
16	FC0102EG	2	HEX HD CAP,3/8-16 X 1              G5
17	A-5257	1	DRIVE PLUG, VIKING WEEPHOLE
19	A-0844	2	HEX RED BUSH,STL,3/4M X 1/2F
20	A-0860	2	MALE ELBOW,STL, 5/8T X 1/2P
21	A-0261	2	L.O.PSI GAUGE,ASHCROFT,1/4 NPT
22	A-0863	1	HEX RED BUSH,STL,1M X 3/4F
23	A-0861	3	STREET ELBOW,STL, 3/4P 90
24	A-0862	2	MALE CONN,STL, 7/8T X 3/4P

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

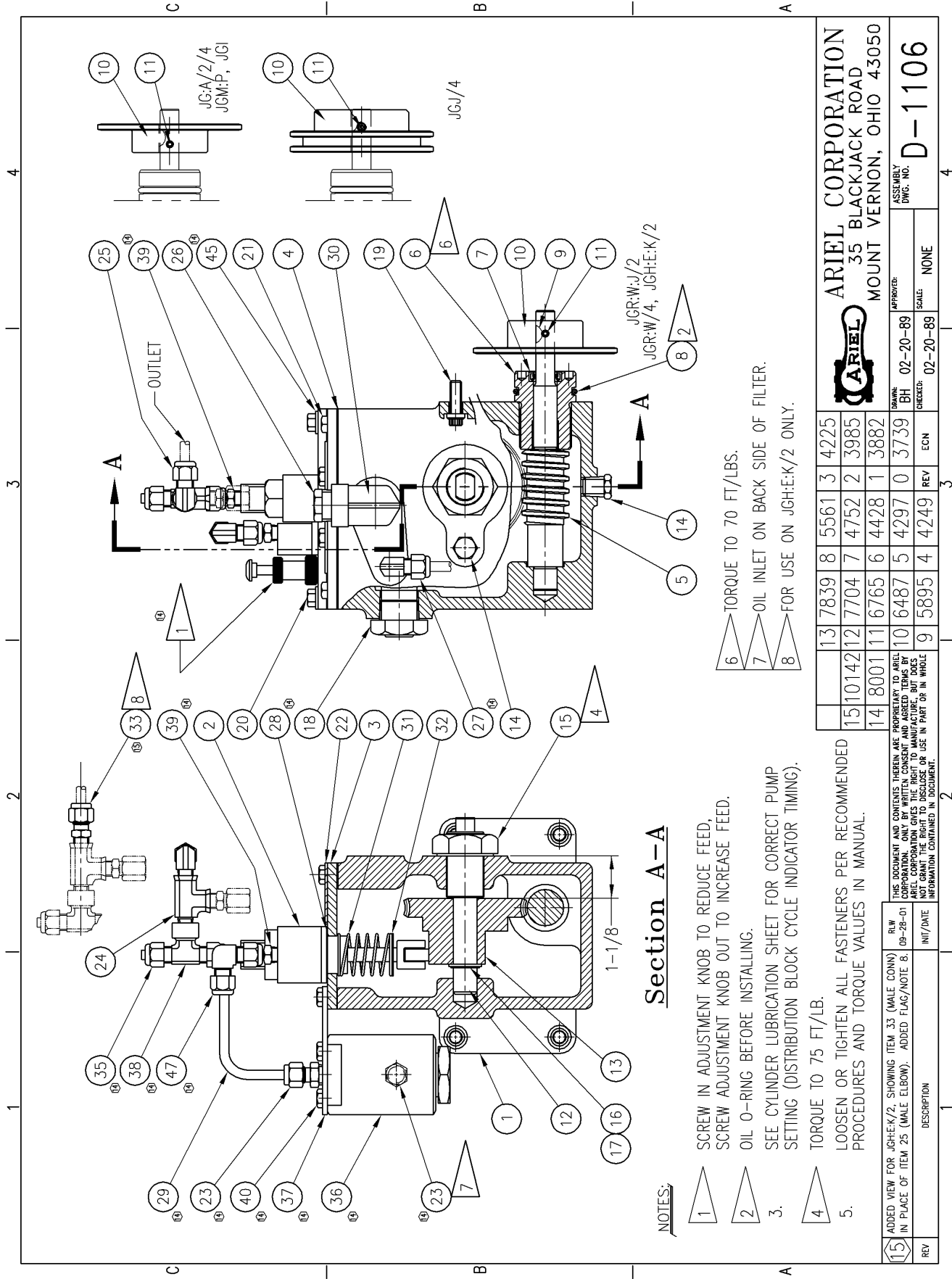


12/07/07

PARTS LIST

25	PT0200GC	45. "	SS,TUBING, 5/8 OD X .049 WALL
26	PT0200IC	60. "	SS,TUBING, 7/8 OD X .049 WALL
27	PP0802KD	1	PIPE PLUG,1"NPT,SQ HD,PLASTIC

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



**Section A-A**

NOTES:

- 1 SCREW IN ADJUSTMENT KNOB TO REDUCE FEED,  
SCREW ADJUSTMENT KNOB OUT TO INCREASE FEED.
- 2 OIL O-RING BEFORE INSTALLING.
- 3 SEE CYLINDER LUBRICATION SHEET FOR CORRECT PUMP  
SETTING (DISTRIBUTION BLOCK CYCLE INDICATOR TIMING).
- 4 TORQUE TO 75 FT/LB.
- 5 LOOSEN OR TIGHTEN ALL FASTENERS PER RECOMMENDED  
PROCEDURES AND TORQUE VALUES IN MANUAL.

- 6 TORQUE TO 70 FT/LBS.
- 7 OIL INLET ON BACK SIDE OF FILTER.
- 8 FOR USE ON JGH:E-K/2 ONLY.

<b>ARIEL CORPORATION</b> 35 BLACKJACK ROAD MOUNT VERNON, OHIO 43050		APPROVED: _____ SCALE: NONE ASSEMBLY NO. <b>D-1106</b>	
REV	DESCRIPTION	INIT/DATE	ECN
15	ADDED VIEW FOR JGH:E-K/2, SHOWING ITEM 33 (MALE CONN) IN PLACE OF ITEM 25 (MALE ELBOW). ADDED FLAG/NOTE 8.	R/W 09-28-01	3739
14	8001 11 6765 6 4428 1 3882	10 6487 5 4297 0	4249
13	7839 8 5561 3 4225	15 10142 12 7704 7 4752 2 3985	4249
12	7704 7 4752 2 3985	14 8001 11 6765 6 4428 1 3882	4249
11	6765 6 4428 1 3882	13 7839 8 5561 3 4225	4249
10	6487 5 4297 0	12 7704 7 4752 2 3985	4249
9	5895 4 4249	11 6765 6 4428 1 3882	4249
8	5561 3 4225	10 6487 5 4297 0	4249
7	4752 2 3985	9 5895 4 4249	4249
6	4428 1 3882	8 5561 3 4225	4249
5	4297 0	7 4752 2 3985	4249
4	4249	6 4428 1 3882	4249
3	4225	5 4297 0	4249
2	3985	4 4249	4249
1	3882	3 4225	4249
0	3882	2 3985	4249
0	3882	1 3882	4249

12/07/07

PARTS LIST

FORCE FEED LUBRICATOR  
1/4" DIA. PUMP JGW/2, JGR/2, JGJ/2

PART NO. G-1766  
REF DRAWING D-1106

ITEM NUMBER	PART NUMBER	QUANTITY	DESCRIPTION
1	D-2000	1	FF LUBR,1, LH,PUMP TANK ASSY
2	A-9477	1	FF LUBR PUMP 1/4 PREMIER
3	A-2346	0	TOP CVR SINGLE FF LUBE BOX
4	A-2348	0	GSKT,ARL SNGL LUB 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 O.D. X .139
9	FK0360AA	1	WOODRUFF KEY,#204,1/2D X 1/16
10	A-0106	1	SPKT,35-1 X 30T
11	FS0455CE	1	CUP PT.S-SCRW,NY, 1/4-28 X 3/4
12	A-2352	0	ADJ SHAFT-SINGLE LUBE BOX
13	B-1176	0	CAM/WORM GEAR,1-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,518,HARD
18	A-5641	0	SIGHT GLASS,3/4" NPT
19	FC0120DF	4	12 PT CAP,5/16-18 X 7/8 G8
20	FC0102CG	0	HEX HD CAP,1/4-20 X 1 G5
21	FC0102CE	0	HEX HD CAP,1/4-20 X 3/4 G5
22	A-3854	1	DATA PLATE,1 PUMP FF LUBR
23	A-0827	2	MALE CONN,STL, 1/4T X 1/4P

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



12/07/07

PARTS LIST

24	A-0882#02	1	STREET TEE,STL,1/8P
25	A-0815	1	MALE ELBOW,STL, 1/4T X 1/8P
26	PP0810GB	1	PIPE PLUG,1/2NPT,HEX HD,STL
27	A-0800	1	MALE ELBOW,STL, 1/4T X 1/4P
28	A-14355	0	FF LUB PUMP GSKT,1/16 X DC100
29	PT0200CB	20.	" SS TUBING, 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
35	A-0918	1	PLUG,TUBE FIT,FEMALE,STL,1/4T
36	A-8723	1	FF LUBR FILTER, 150 MIC
37	A-8729	1	BRKT, FF INLET FILTER
38	A-8824	1	FEMALE BRANCH TEE STL1/4TX1/8P
39	A-8828	2	MALE ADAPTR,STL, 1/4T X 1/8P
40	FC0102CC	2	HEX HD CAP,1/4-20 X 1/2 G5
45	FW0500CA	0	WASHER, 1/4" I.D., SAE
47	A-0805	1	UNION ELBOW-TUBE,STL 1/4T
99	A-8723-K	0	FILTER KIT, LUBRICATOR 150 MIC
99	AD-2868	0	FF LUBR, 1/4 1/2S

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

12/07/07

PARTS LIST

DISTRIBUTION BLOCK, MOUNTING BOLTS                      PART NO. G-0568  
JGR:W:J:H:E:K:T:C:D/2, SINGLE BLOCK                      REF DRAWING N.A.

ITEM

NUMBER	PART NUMBER	QUANTITY	DESCRIPTION
1	A-5853	1	BRKT,DIST BLK,3-7
2	FC0102CI	4	HEX HD CAP,1/4-20 X 1-1/2 G5
3	FC0110DF	4	SOC HD CAP,5/16-18 X 7/8 G8

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

12/07/07

PARTS LIST

RUPTURE DISC ASSEMBLY  
3250 PSI

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

ITEM NUMBER	PART NUMBER	QUANTITY	DESCRIPTION
1	A-0080	1	BLOW-OUT ASSY,SPECIFY DISC.
2	A-0124	0	BLOW-OUT 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.

12/07/07

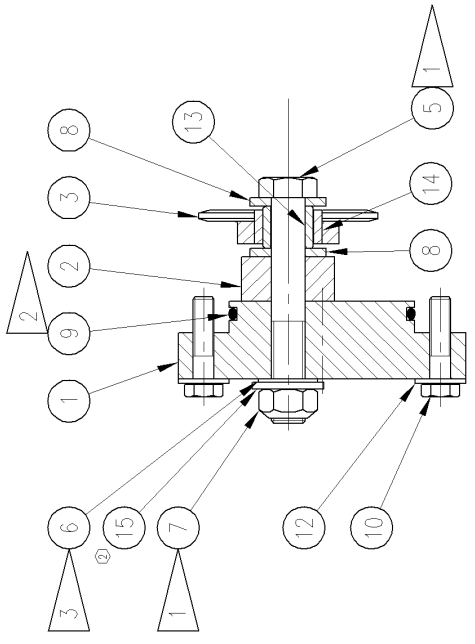
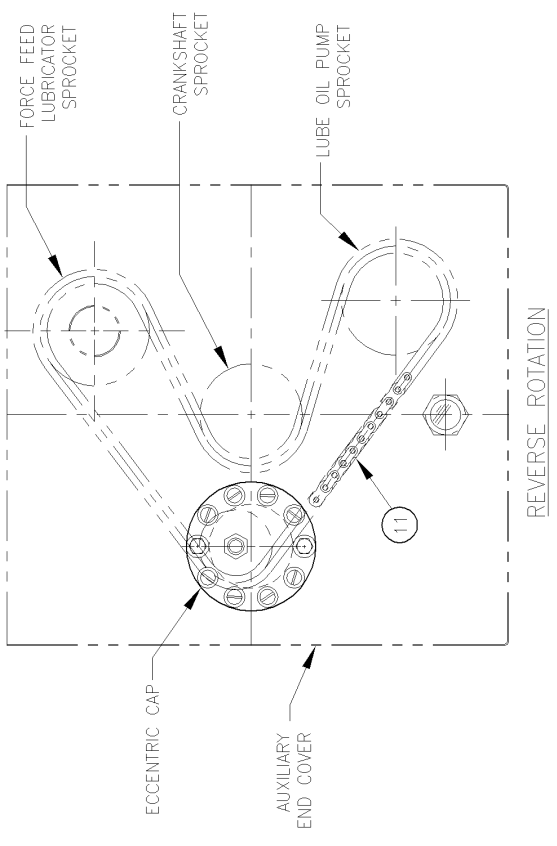
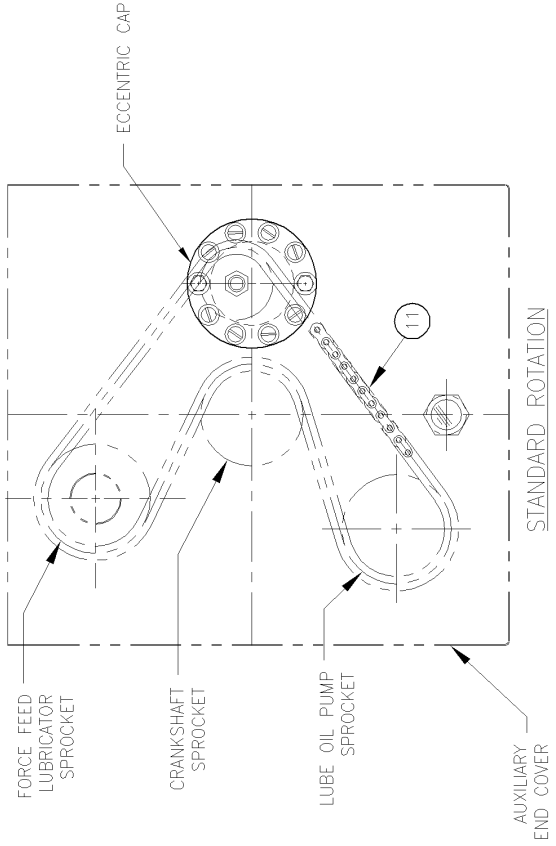
PARTS LIST

FORCE FEED LUBRICATION TUBING FOR                      PART NO. G-1085  
RWJ/2 & ACF WITH DOUBLE ACTING CYLINDERS              REF DRAWING N.A.

ITEM

NUMBER	PART NUMBER	QUANTITY	DESCRIPTION
1	PT0200CB	350.	" SS TUBING, 1/4 OD X .035 WALL
2	A-0401	2	BRACKET,BULKHEAD UNION
3	A-0886	2	BULK.UNION,STL,        1/4T X 1/4T
4	FC0134CC	2	BUT HD CAP,1/4-20 X 1/2   316SS

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



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 OF WASHER BEFORE INSTALLING TO PREVENT ABRASION TO STATO-SEAL (ITEM 6).
- 4 FOR CHAIN TIGHTENING REFER TO ER-74.

3	8524	ARIEL CORPORATION
2	8434	35 BLACKJACK ROAD
4	11872	MOUNT VERNON, OHIO 43050
1	8060	
0	8139	
ECN	DAH 2/15/00	
PTV	DAH 2/15/00	
3		

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REV	DESCRIPTION	INIT/DATE
4	REVISOR CHAIN TIGHTENING NOTE.	RMP 8/26/04

ARIEL CORPORATION	ASSEMBLY
35 BLACKJACK ROAD	DWG. NO.
MOUNT VERNON, OHIO 43050	A-9719

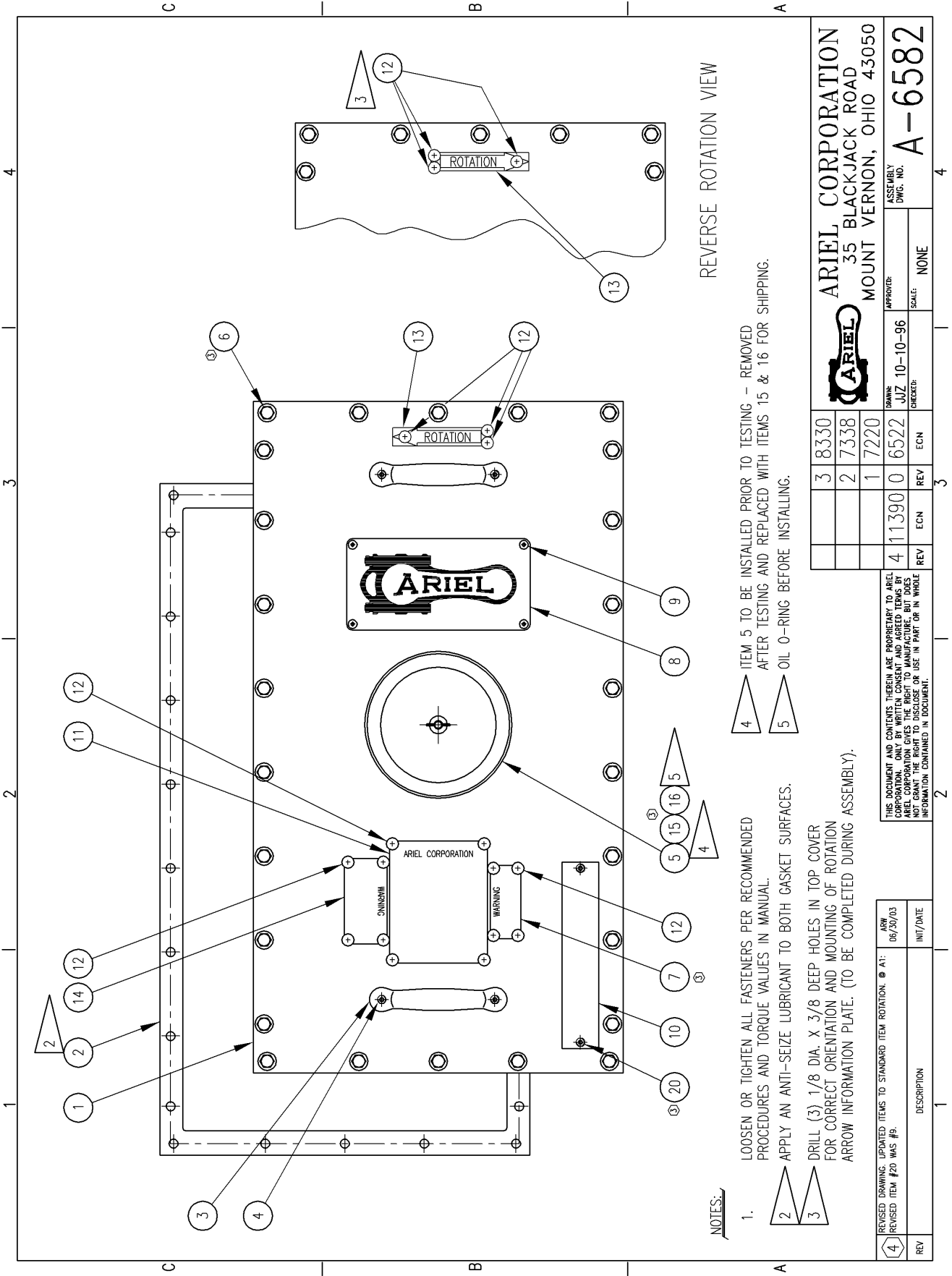
12/07/07

PARTS LIST

CHAIN DRIVE, STANDARD OR REVERSE ROTATION. PART NO. G-8076  
JGR:W:J:ACF/2 REF DRAWING A-9719


ITEM NUMBER	PART NUMBER	QUANTITY	DESCRIPTION
1	B-0030	1	ECC VERNIER CAP
2	A-9706	1	IDLER SPACER, R2
3	A-9704	1	SPKT, 35-1 X 20T, ASSY, BZ
4	A-0109	8	MACHINE SCREW PLUG, PL, 7/16-14
5	FC0107GP	1	HEX HD CAP, 1/2-20 X 3-1/4 G5
6	FW0550GA	1	STAT-O-SEAL, 1/2 DIA., BLACK
7	FN0468GA	1	HEX NUT, STOVER TYPE C, 1/2-20
8	FW0502HA	2	WASHER, 1/2 STEEL
9	A-0010	1	O-RING, VT, 2.625 O.D. X .139
10	FC0100DH	2	HEX HD CAP, 5/16-18 X 1-1/4 G9
11	A-0421	1	CHAIN, 35-1 X 122
12	FW0501CA	2	FLAT WASHER, 5/16 I.D. PLAIN
13	A-9601	1	SLEEVE BEARING, STL, 5/8 LG
14	A-9600	0	SLEEVE BUSHING, BZ, 1/2 LG
15	FW0500GA	1	FLAT WASHER, 1/2 SAE

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



NOTES:

- 1. LOOSEN OR TIGHTEN ALL FASTENERS PER RECOMMENDED PROCEDURES AND TORQUE VALUES IN MANUAL.
- 2. APPLY AN ANTI-SEIZE LUBRICANT TO BOTH GASKET SURFACES.
- 3. DRILL (3) 1/8 DIA. X 3/8 DEEP HOLES IN TOP COVER FOR CORRECT ORIENTATION AND MOUNTING OF ROTATION ARROW INFORMATION PLATE. (TO BE COMPLETED DURING ASSEMBLY).
- 4. ITEM 5 TO BE INSTALLED PRIOR TO TESTING -- REMOVED AFTER TESTING AND REPLACED WITH ITEMS 15 & 16 FOR SHIPPING.
- 5. OIL O-RING BEFORE INSTALLING.



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

REV	DESCRIPTION	INIT/DATE	ASW 06/30/03
4	REVISED ITEM #20 WAS #9.		

3	8330	2	7338	1	7220	4	11390	0	6522	SWANN JUZ 10-10-96	APPROVED:	SCALE:	NONE
										CHECKED:			

**A-6582**  
ASSEMBLY  
DWG. NO.

12/07/07

PARTS LIST

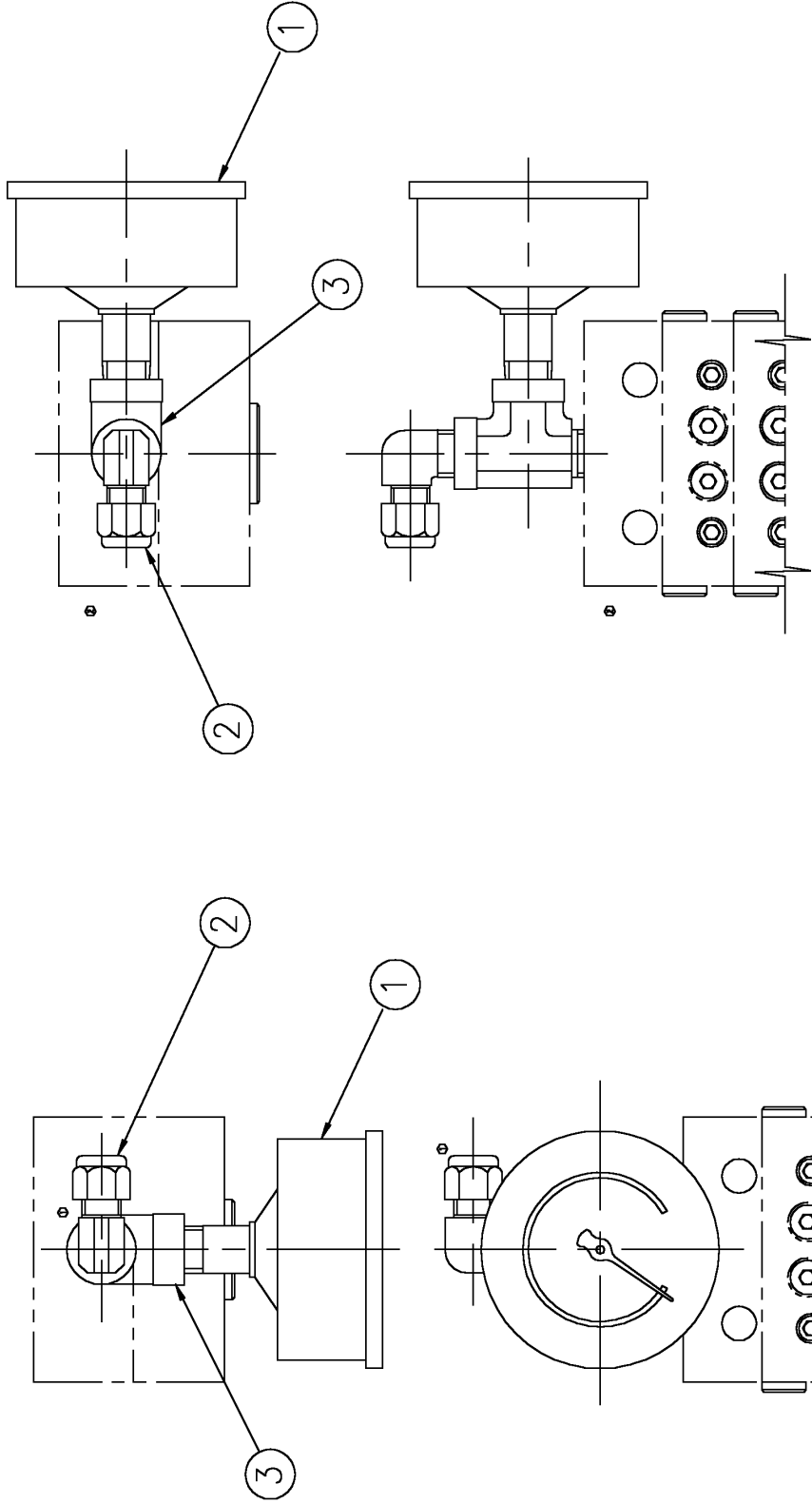
TOP COVER AND BREATHER  
JGW/2, JGR/2,  
STANDARD OR REVERSE ROTATION

PART NO. G-4966  
REF DRAWING A-6582

ITEM NUMBER	PART NUMBER	QUANTITY	DESCRIPTION
1	C-0142	1	TOP COVER,JGR:W:J/2
2	C-0159	1	GSKT,RET,27-1/2 X15-1/8X1/32
3	A-2958	2	HANDLE, TOP / SIDE COVER
4	FC0134CD	4	BUT HD CAP,1/4-20 X 5/8 316SS
5	B-4798	1	BREATHER,1"NPT,FRAME
6	A-10186	26	SEMS BOLT, 5/16-18 X 1-1/4
7	A-0464	1	CAUTION PLT,COMPRESSOR VLV
8	A-0138	1	NAME PLATE,ARIEL LOGO
9	FC0134BC	4	BUT HD CAP,10-24 X 1/2 316SS
10	A-0713	1	INFO PLATE,L O FILTER,SPIN-ON
11	A-14766	1	DATA PLATE,FRAME SPECIFICATION
12	FR0570CC	15	DRIVE SCREW, #6 X 1/4 U-TYPE
13	A-0719	1	INFO PLATE,ROTATION ARROW
14	A-0463	1	CAUTION PLATE,CYLINDER VENTING
15	A-7655	1	PIPE PLUG,1"NPT,SLOTTED HEAD
16	A-0009	1	O-RING,VT, 1.375 O.D. X .139
20	FC0134BB	2	BUT HD CAP,10-24 X 3/8 316SS

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





• 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	ARIEL CORPORATION 35 BLACKJACK ROAD MOUNT VERNON, OHIO 43050
1	7908	ASSEMBLY DWG. NO.
0	7704	APPROVED: WSH 7/28/99
REV	ECN	CREATED: NEH 07/31/99
		SCALE: NONE

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A-9020

12/07/07

PARTS LIST

FORCE FEED PRESSURE GAUGE                      PART NO. G-7624  
3000 PSI, PER BLK.IJGRJHEKTCZUBV              REF DRAWING A-9020

ITEM

NUMBER	PART NUMBER	QUANTITY	DESCRIPTION
1	A-8727	1	GAUGE, 3000 PSI, BACK MOUNT
2	A-0800	1	MALE ELBOW,STL, 1/4T X 1/4P
3	A-0882#03	1	STREET TEE,STL,1/4P

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

12/07/07

PARTS LIST

LUBE OIL COOLER, UNMOUNTED  
SHELL & TUBES  
JGR:W:J/4 AND JGH:E:K:T/2

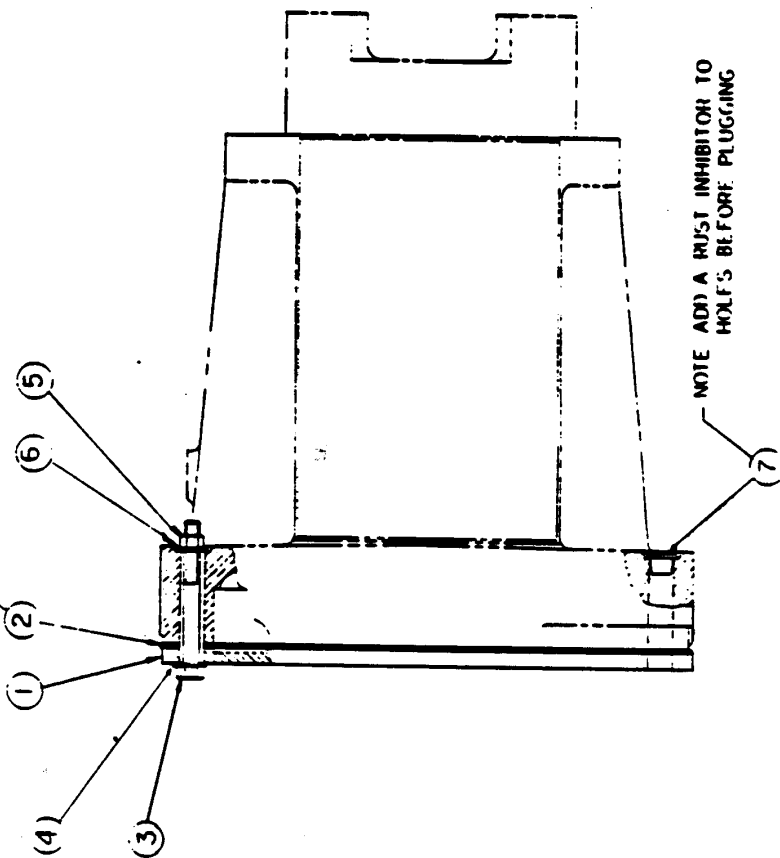
PART NO. G-0763-1  
REF DRAWING N.A.

ITEM

NUMBER	PART NUMBER	QUANTITY	DESCRIPTION
1	B-1962	1	L O COOLER, SHELL & TUBES

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

**NOTE COAT SURFACES, WITH AN ANTI-SEIZE LUBRICANT BEFORE ASSEMBLY**



**NOTE ADD A MUST INHIBITOR TO  
HOLFS BEFORE PLUGGING**

2	4049
0	3.4

ASSY DWG NO

D-569

12/07/07

PARTS LIST

JGR CROSSHEAD GUIDE COVER                      PART NO. G-0877  
JGR UNITS SHIPPING WITHOUT CYLINDERS.        REF DRAWING D-0569  
FOR TRANSIT AND STORAGE USE ONLY

ITEM NUMBER	PART NUMBER	QUANTITY	DESCRIPTION
1	B-0582	1	X-HEAD GUIDE COVER,JGR:H:E
2	B-0630	1	GSKT,RND,16-1/2 X 3/32
3	FC0103GT	6	HEX HD CAP,1/2-13 X 4-1/2    G2
4	FW0501GA	6	FLAT WASHER, 9/16 I.D. PLAIN
5	FN0450GB	6	HEX NUT,STL,Z/PL,1/2-13
6	FW0500GA	6	FLAT WASHER, 1/2 SAE
7	A-2564	6	PLUG PLASTIC 8X11/16", RED

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

12/07/07

PARTS LIST

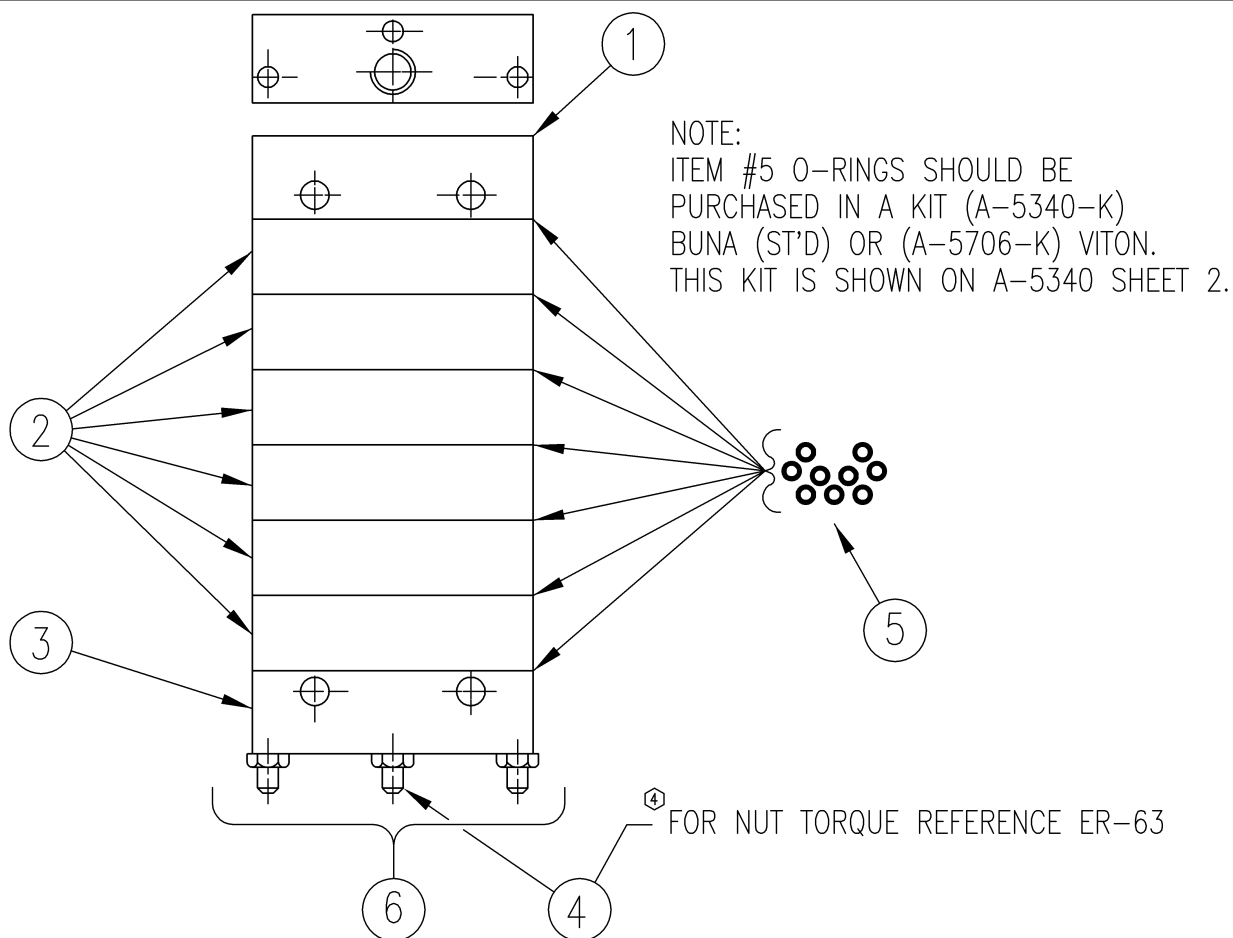
SPECIAL TOOLS  
JGR, JGW, JGJ


PART NO. G-0603  
REF DRAWING N.A.

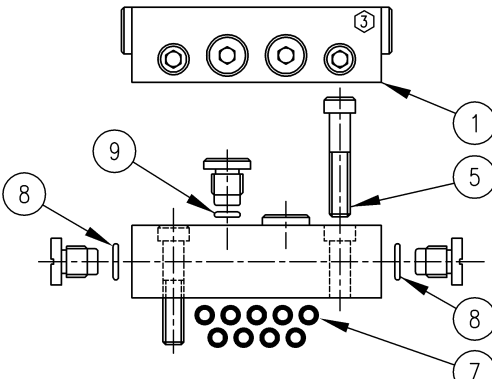
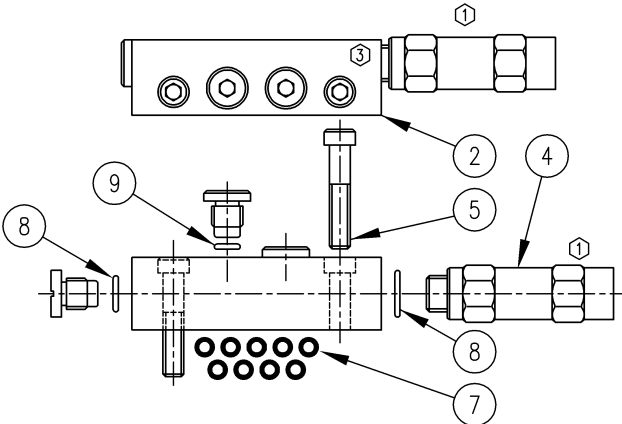
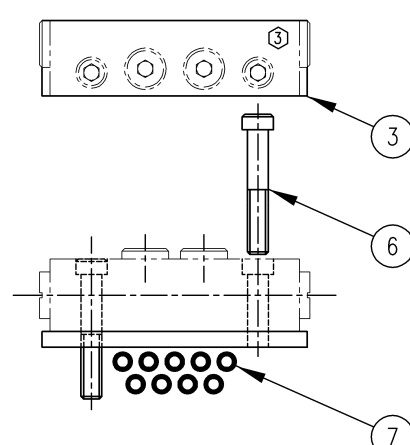
ITEM NUMBER	PART NUMBER	QUANTITY	DESCRIPTION
1	A-0798	1	TOOL BOX
2	TA0100GA	6	ALLEN WRENCH, 5/32 SHORT ARM
3	TA0100EA	12	ALLEN WRENCH, 1/8 SHORT ARM
4	TA0100HA	4	ALLEN WRENCH, 3/16 SHORT ARM
5	TA0100JA	4	ALLEN WRENCH, 1/4 SHORT ARM
6	C-0195	1	CROSSHEAD NUT WRENCH, 3 INCH
7	B-0324	1	PEG WRENCH,1"
8	A-0424	1	PISTON NUT SPANNER, JGR:W:J
9	A-0626	1	VLV PULLER, 5/8 X 3/4 UNF
10	A-0409	1	VALVE PULLER, 1/4 X 3/8 UNF
11	A-0135	1	VALVE PULLER, 5/16 X 1/2 UNF
12	B-1240	1	PISTON TURNING TOOL SUPT. ASSY
13	ER-63	1	TORQUE CHART, ALL UNITS
14	A-2289	1	VLV PULLER TOOL FOR 'CT' VALVE
15	A-8158	0	BRG HSG SPANNER WRENCH
16	A-8560	1	PIST RD ENTER SLEEVE, RWJ


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

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



<div style="border: 1px solid black; padding: 2px; display: inline-block;">4</div> © ITEM #4 FOR NUT TORQUE REFERENCE ER-63 WAS TORQUE NUT TO 72 IN/LBS.		3	10737	 <b>ARIEL CORPORATION</b> 35 BLACKJACK ROAD MOUNT VERNON, OHIO 43050	TITLE: DISTRIBUTION BLOCK VALVE (SLOAN BROS.)	DRAWING No. <b>A-5340</b> SHT 1 OF 2
		2	8200			
		1	8175			
		0	5695			
REV	DESCRIPTION	REV	ECN			

WITHOUT CYCLE PIN																																																																																																																																				
WITH CYCLE PIN																																																																																																																																				
CROSSPORT																																																																																																																																				
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ARIEL CORPORATION

35 BLACKJACK ROAD

MOUNT VERNON, OHIO 43050

TITLE: DISTRIBUTION BLOCK VALVE (SLOAN BROS.)

DRAWING No. A-5340

SHT 2 OF 2



6/23/10

ARIEL CORPORATION  
SALES ORDER COVER SHEET

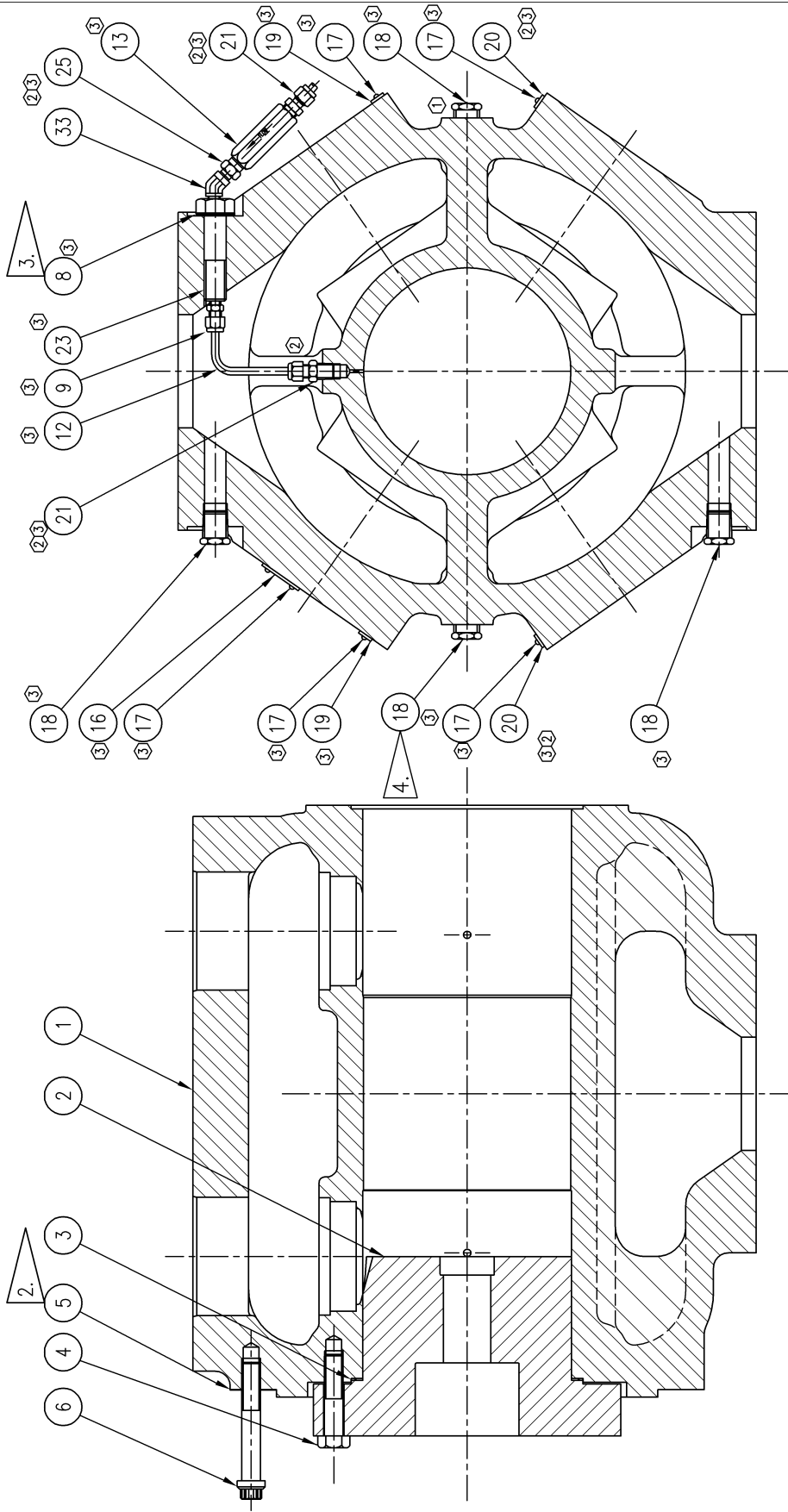
C/N: 001

RHCOVP02

SERIAL #: C116875

PART: 7-3/8RJ CLASS DESCRIPTION: 7-3/8" RJ CYLINDER CLASS

PART NUMBER	QTY	DESCRIPTION	DRAWING NO.
A-11295	1	FF.S/D,PRO-FLO,TRAB,SB	A-11295
A-16622	1	DATA PLATE,1 & 2 PUMP FF LUBR	A-16622
A-5559	1	24T DIVIDER VLV	A-5340
A-5561	1	24S DIVIDER VLV	A-5340
A-5565	1	30S DIVIDER VLV	A-5340
A-9478	1	FF LUBR PUMP 3/8 PREMIER	A-9979
B-0314	1	XHD NUT, 2.4#HEX,JGR:W:J	B-0314
G-17070	1	CYLINDER ASSY, 7-3/8R:RJ,SF 845 MAWP	A-4808
G-4114	1	SHIP LOOSE CYL.STD LUBE,STL	N.A.
G-2712	4	SUC VLV ASSY, 7-3/8RJ:E:RJ-CE	D-0439
G-1065	4	DIS VLV ASSY7-3/8RETRJ:R&RJ-CE	D-0440
G-2367	1	PIST. 7-3/8RJ,STD	A-2957
B-5404-N	4	SUCTION VALVE, 88CRE, PKX	A-9254
B-5401-N	4	DISCHARGE VALVE, 88CRE, PKX	A-9255



NOTES:

1. LOOSEN OR TIGHTEN ALL FASTENERS PER RECOMMENDED PROCEDURES AND TORQUE VALUES IN MANUAL.
2. APPLY AN ANTI-SEIZE LUBRICANT TO GASKET SURFACES.
3. OIL FACES OF STATO-SEAL (ITEM #15) BEFORE INSTALLING TO PREVENT ABRASION.
4. USED TO PLUG INDICATOR PASSAGES WHERE APPLICABLE.

3	ADDED 1/2" NPT PLUG ITEM 18. CHANGED ITEM NOS.
2	REMOVED BUSHING #19, IT. #19 WAS 20, IT. #18 WAS 7. IT. #10 WAS 18, IT. #7 WAS 16.
1	ADDED INDICATOR TAPPED HOLES AND PLUGS TO OTHER SIDE.
REV	DESCRIPTION

37510
27475
16282
06302

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

ASSEMBLY  
DWG. No.

A-4808

6/23/10

PARTS LIST

7-3/8" JGR:RJ CYLINDER BODY  
RDP 770#, MAWP 845#

PART NO. G-17070  
REF DRAWING A-4808

ITEM	PART NUMBER	QTY	DESCRIPTION
1	D-3802	0	CYL, 7-3/8R:RJ:ET 845
2	C-5718	0	CE HEAD, 7-3/8(R:RJ)&-CE
3	A-0614	1	STEEL GASKET, 07.813 OD X 07.500 ID X .060, HEAD
4	FC0100HN	12	HEX HD CAP, 5/8-11 X 2-3/4 G9
5	B-3515	1	GSKT,RND,16, X 1/64, 16 HOLES
6	FC0120HS	12	12 PT,5/8-11 X 4 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
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 NPT(FEMALE) X 1/4 NPS(FEMALE)
16	A-0465	1	DATA PLATE, CYLINDER SPECIFICATIONS, 3-1/2 X 2-1/4
17	FR0570CC	12	DRIVE SCREW, TYPE U, #6 X 1/4
18	PP0810GB	6	HEX HEAD PIPE PLUG, STL, 1/2 NPT
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-2074	1	LUBE FITTING, 1/8 NPT, 3/4-10 X 4
25	A-2114	1	HEX REDUCING NIPPLE, STL, 1/4 NPT(MALE) X 1/8 NPT(MALE)
33	A-3989	1	STREET ELBOW, 45°, STL, 1/8 NPT
100	HD-5657	1	CYL ASSY, 7-3/8R:RJ

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

6/23/10

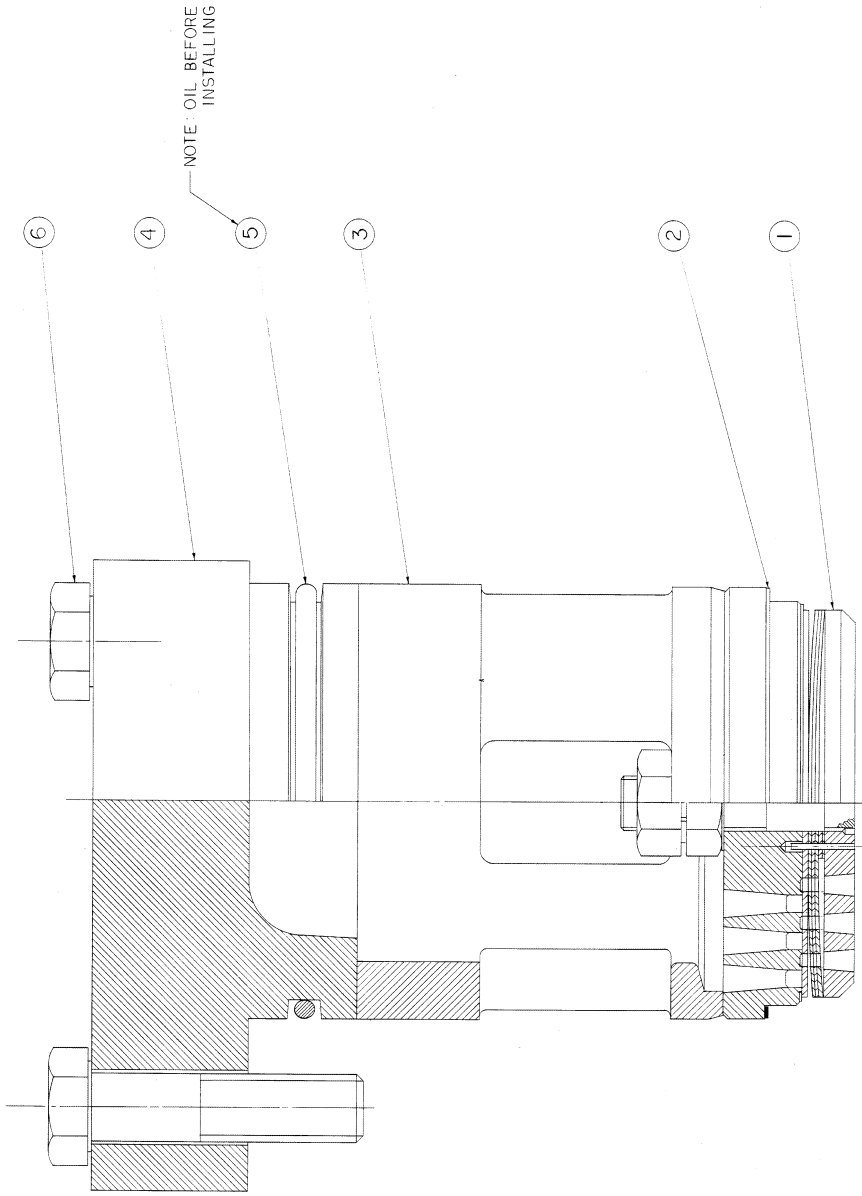
PARTS LIST

CYLINDER TO BE SHIPPED LOOSE	PART NO. G-4114
WITH STANDARD LUBE	REF DRAWING N.A.
AND STANDARD TUBING AND FITTINGS	

ITEM	PART NUMBER	QTY	DESCRIPTION
1	A-0886	1	BULKHEAD UNION, STL, 1/4 TUBE
2	A-0815	2	MALE ELBOW, STL, 1/4 TUBE X 1/8 NPT

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



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IN WRITING FROM  
ARIEL CORPORATION.

ARIEL CORPORATION  
MT. VERNON, OHIO

ASSY. DRWG. NO. D-439

6/23/10

PARTS LIST

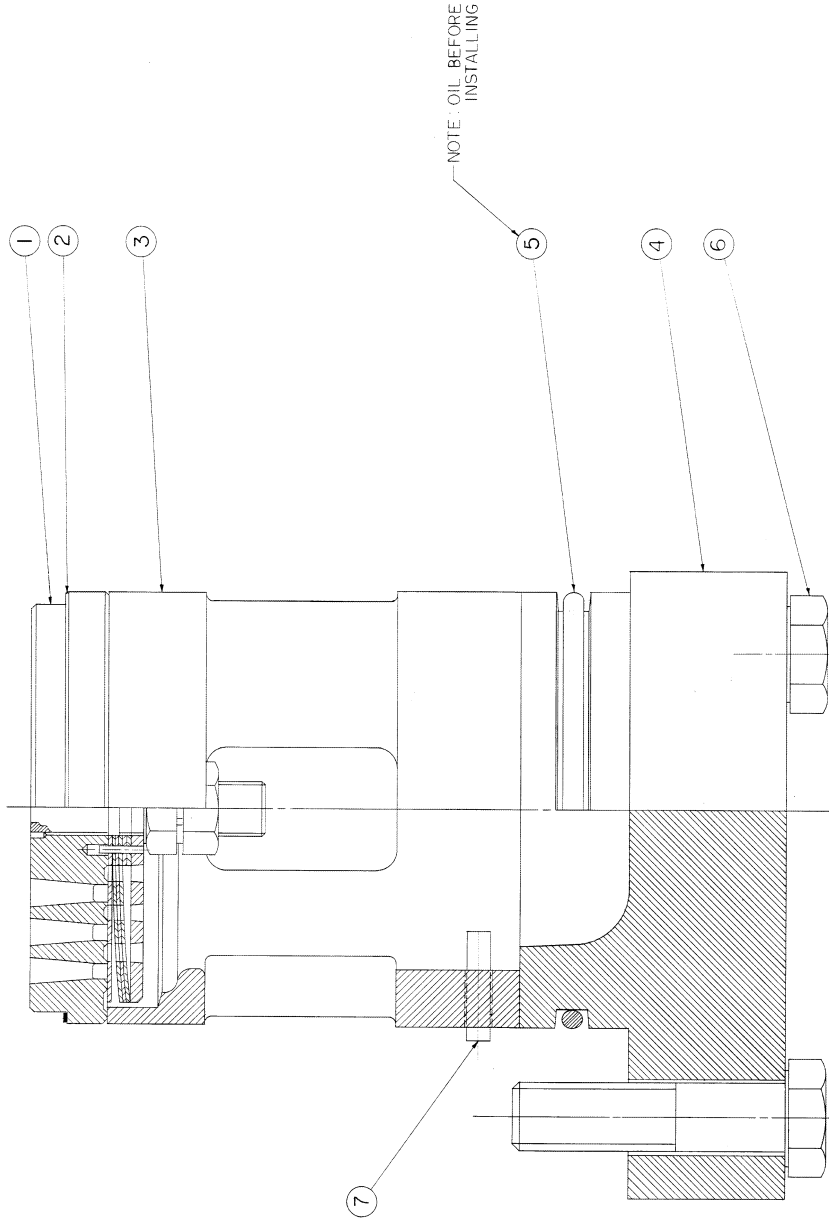
SUCTION VALVE, RETAINER AND CAP  
7-3/8" RJ:E:RJ-CE CYLINDER CLASS

PART NO. G-2712  
REF DRAWING D-0439

ITEM	PART NUMBER	QTY	DESCRIPTION
1	SUCTION VALVE	0	FOR VALVE PART NUMBER, SEE COVER SHEET
2	A-0617	1	STEEL GASKET, 03.930 OD X 03.734 ID X .030, VALVE
3	B-1557	1	VLV RET,SUC, 7-3/8R:RJ:ET
4	B-0502	0	VLV CAP, 7-3/8R:RJ:E:RJ-CE:ET
5	A-0026	1	O-RING,VT, 3.895 OD X .210, 75 DUROMETER
6	FC0171EGG	3	12 PT,5/8-11 X 2-1/2 X 3/4 G8

WHEN A ZERO APPEARS IN THE QUANTITY COLUMN IT  
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\*\*\* ALWAYS PROVIDE SERIAL NUMBER WHEN ORDERING SPARE PARTS. \*\*\*

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



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WORK DONE WITHOUT THE  
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CONTAINED IN THIS DOCUMENT.

ARIEL CORPORATION MT. VERNON, OHIO
ASSY.
DRWG. NO. D-440

6/23/10

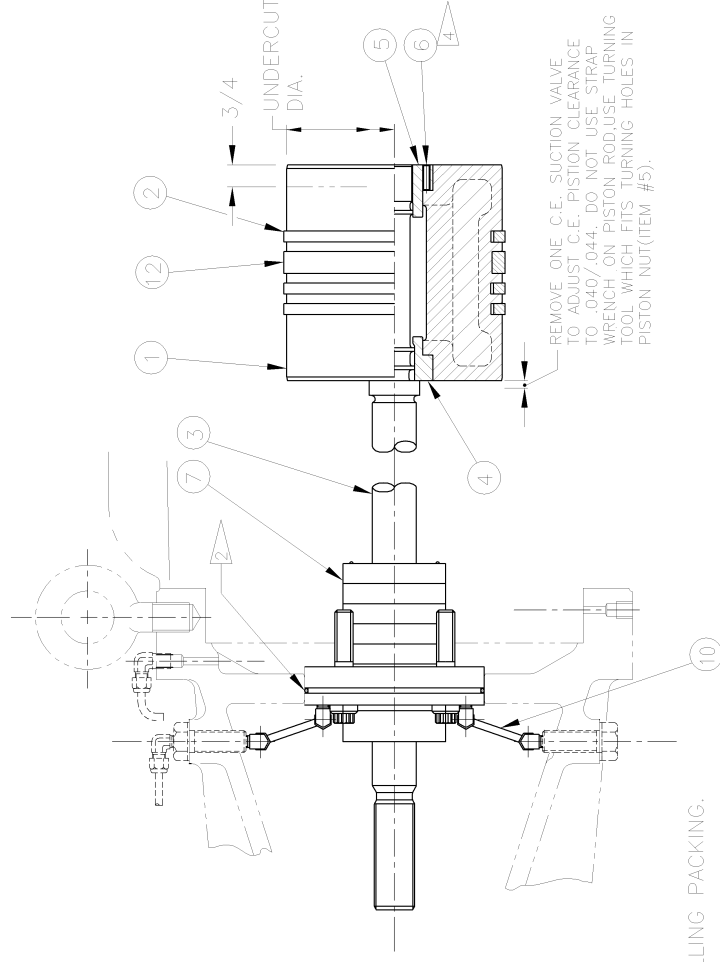
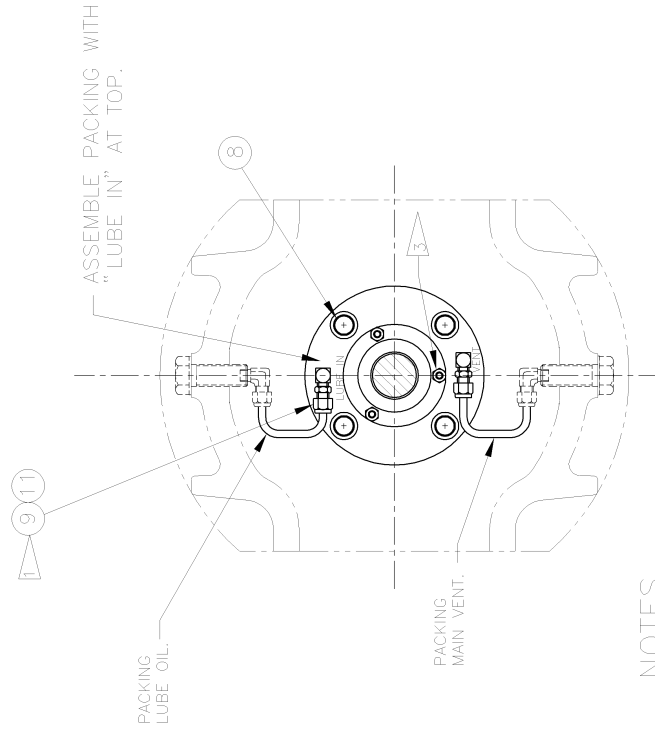
PARTS LIST

DISCHARGE VALVE, RETAINER, CAP                      PART NO. G-1065  
7-3/8" H,RJ,E,RJ-CE,H-CE CYLINDER CLASS              REF DRAWING D-0440

ITEM	PART NUMBER	QTY	DESCRIPTION
1	DISCHARGE VALV	0	FOR VALVE PART NUMBER, SEE COVER SHEET
2	A-0617	1	STEEL GASKET, 03.930 OD X 03.734 ID X .030, VALVE
3	B-0905	1	VLV RET,DIS, 7-3/8H:E:RJ-CE
4	B-0502	0	VLV CAP, 7-3/8R:RJ:E:RJ-CE:ET
5	A-0026	1	O-RING,VT, 3.895 OD X .210, 75 DUROMETER
6	FC0171EGG	3	12 PT,5/8-11 X 2-1/2 X 3/4 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. ASSEMBLE FITTINGS (ITEMS #9 & #11) BEFORE INSTALLING PACKING.
2. OIL O-RING BEFORE INSTALLING.
3. RETIGHTEN TIE STUD NUTS AFTER CASE (ITEM#7) IS BOLTED INTO CYLINDER.
4. PRICK PUNCH TO RETAIN SETSCREW (ITEM#6).
5. LOOSEN OR TIGHTEN ALL FASTENERS PER RECOMMENDED PROCEDURES AND TORQUE VALUES IN MANUAL.

6/23/10

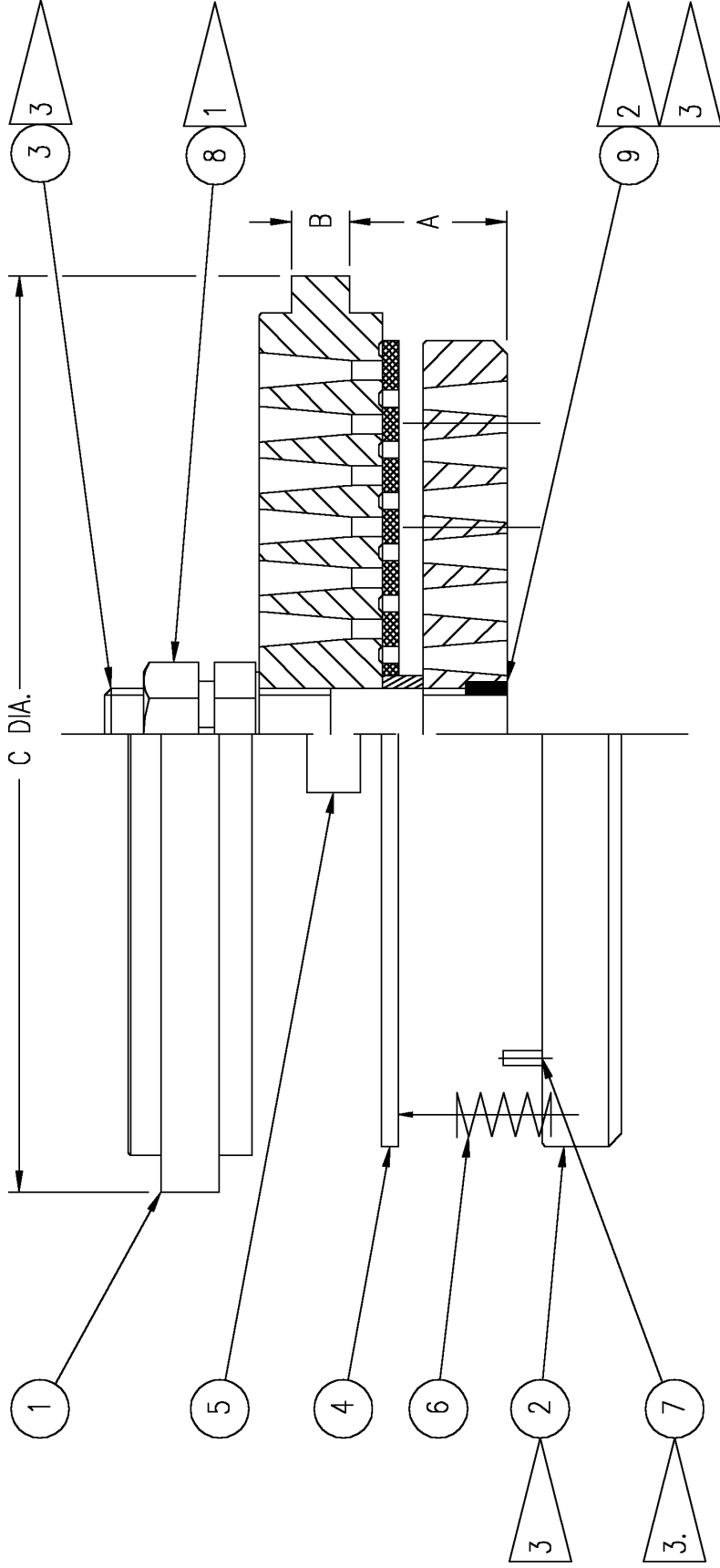
PARTS LIST

7-3/8" JGRJ PISTON, TFE RINGS, TFE WEAR      PART NO. G-2367  
BAND, TFE/CI PACKING      REF DRAWING A-2957

ITEM	PART NUMBER	QTY	DESCRIPTION
1	C-1199	1	PIST,WB , 7-3/8RJ
2	A-0616	3	PISTON RING, 7-3/8R:H:RJ:RJ-CE
3	C-1177	1	P ROD, 3.50STK/25.512LG
4	B-1261	1	PISTON COLLAR, J:RJ:HJ:RJ-CE
5	B-1260	1	PISTON NUT,2-5/8 OD,JGJ:RJ:HJ:RJ-HE
6	FS0405CF	2	CUP PT.SET-SCREW, 1/4-28 X 7/8
7	B-1683	1	PKG,1.5,1440,BTR,PU
8	FC0120HQ	4	12 PT,5/8-11 X 3-1/2 G8
9	A-0884	0	STREET ELBOW,STL,1/8 NPT SHORT
10	PT0200CB	18."	TUBING, SS, 1/4 OD X .035 WALL
11	A-0830	0	MALE CONNECTOR, STL, 1/4 TUBE X 1/8 NPT
12	A-3000	1	WEAR BAND, 7-3/8RJ:RJ-CE,.75W
99	B-1683-K	0	RBLD KIT,PIST ROD PKG,1.500

WHEN A ZERO APPEARS IN THE QUANTITY COLUMN IT  
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\*\*\* ALWAYS PROVIDE SERIAL NUMBER WHEN ORDERING SPARE PARTS. \*\*\*





NOTES:

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

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

TITLE: SUCTION VALVE, CRO	
MATERIAL: PROCURED	
DRAWN: IG 9/24/99	R.S. No.
CHECKED: ED 10/4/99	PART NO.
SCALE: NONE	DWG. No: A-9254

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 ---- DO NOT SCALE DRAWING ----

DIMENSIONING AND TOLERANCING PER ARIEL SPECIFICATION ER-17.0.1 UNLESS OTHERWISE SPECIFIED.

REV	DESCRIPTION
0	7799
REV	ECN

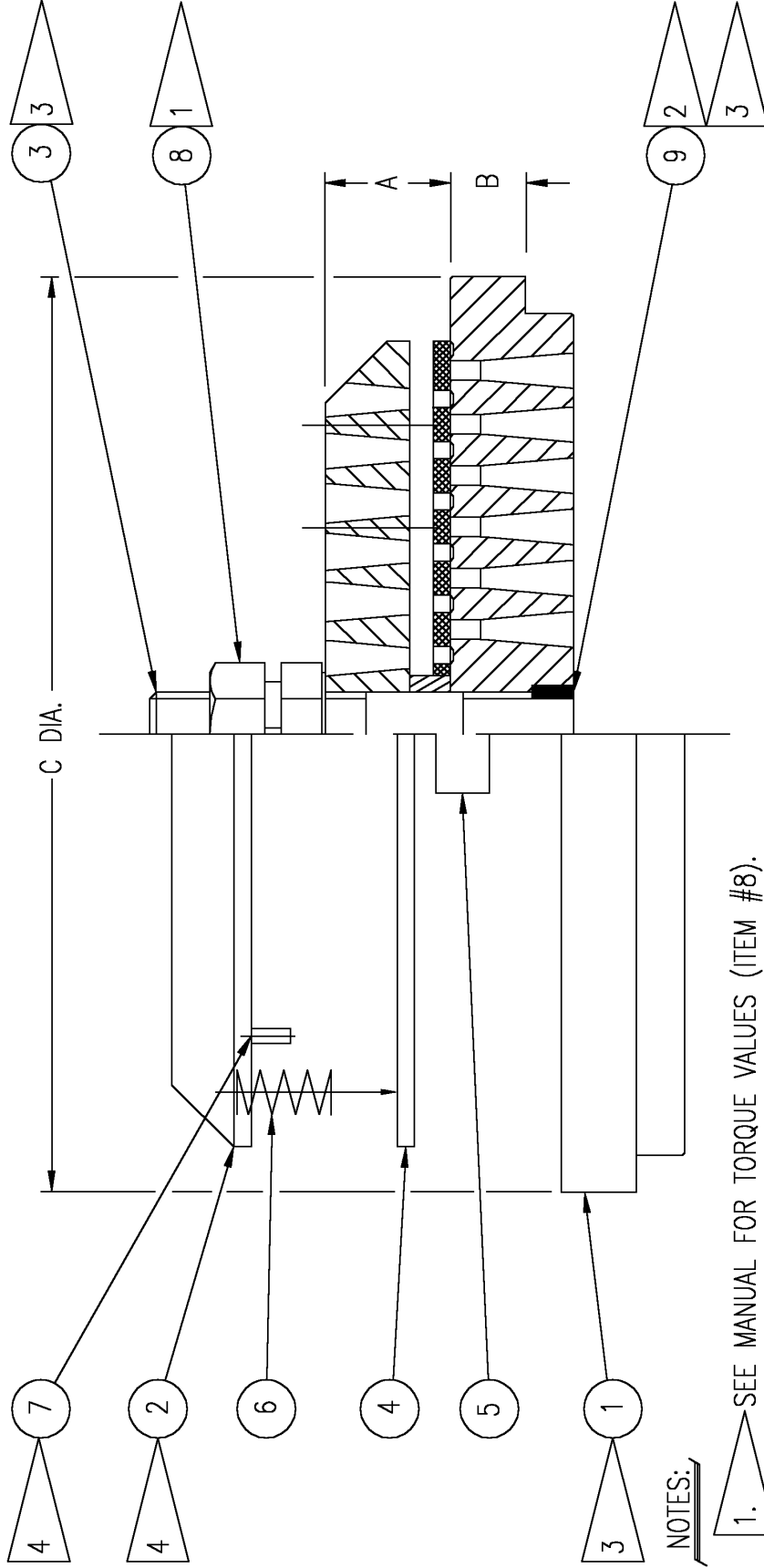
6/23/10

PARTS LIST

0.7990=A	PART NO. B-5404-N
0.5870=B	REF DRAWING A-9254
3.9590=C	
0.0550=LFT	

ITEM	PART NUMBER	QTY	DESCRIPTION
1	A-15474	1	SUC VLV SEAT, 88CRE
2	A-16539-A	1	SUC VLV GUARD ASSY, 88CRE
3	A-15473	1	CNTR STUD,1/2-20X2.64
4	A-17173	1	VLV PLT, 88CRE.118THK,PKX
5	A-15475	1	GUIDE RING,88CRE,.173 THK
6	A-8898	16	SPRING(.196DX.413 BLUE)
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-5404-N	0	KIT,VLV, 88CRE,PKX

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), AND DOWEL PIN (ITEM #9).
4. VALVE GUARD ASSEMBLY (ITEM #2) CONSISTS OF VALVE GUARD, AND SPIROL PINS (ITEM #7).

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

TITLE:		DISCHARGE VALVE, CRO	
MATERIAL:		PROCURED	
DRAWN:		IG 9/24/99	R.S. No.
CHECKED:		ED 10/4/99	PART NO.
SCALE:		NONE	DWG. No.
			A-9255

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DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED.  
 ---- DO NOT SCALE DRAWING ----

DIMENSIONING AND TOLERANCING PER ARIEL SPECIFICATION ER-17.0.1 UNLESS OTHERWISE SPECIFIED.

REV	DESCRIPTION
0	7799
REV	ECN

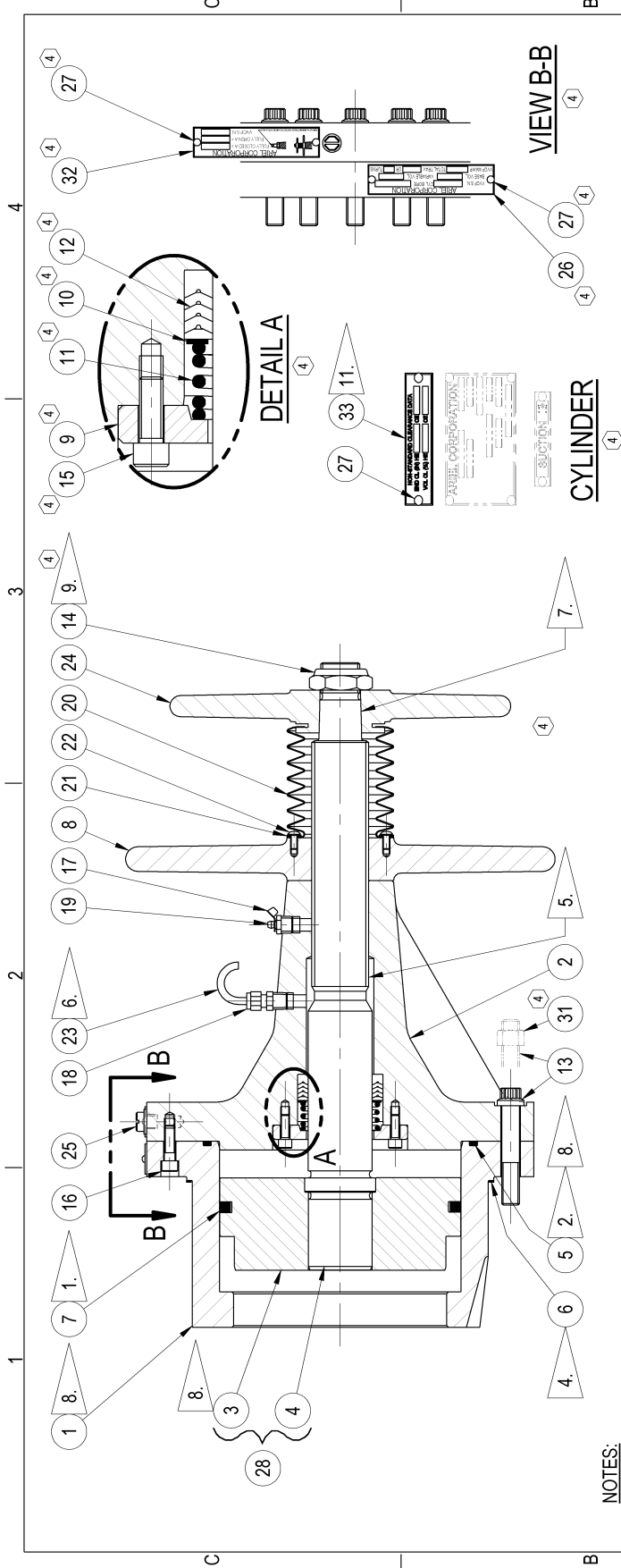
6/23/10

PARTS LIST

0.7240=A	PART NO. B-5401-N
0.3700=B	REF DRAWING A-9255
3.9340=C	
0.0550=LFT	

ITEM	PART NUMBER	QTY	DESCRIPTION
1	A-15469-A	1	DIS VLV SEAT ASSY, 88CRE
2	A-15532-A	1	DIS VLV GUARD ASSY, 88CRE
3	A-1303	1	CNTR STUD,1/2-20X2.756
4	A-17173	1	VLV PLT, 88CRE.118THK,PKX
5	A-15475	1	GUIDE RING,88CRE,.173 THK
6	A-8898	20	SPRING(.196DX.413 BLUE)
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-5401-N	0	KIT,VLV, 88CRE, PKX

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. LIGHTLY OIL BORE AND RING BEFORE INSTALLING.
- 2. OIL O-RING BEFORE INSTALLING.
- 3. LOOSEN OR TIGHTEN ALL FASTENERS PER RECOMMENDED PROCEDURES AND TORQUE VALUES IN MANUAL.
- 4. APPLY AN ANTI-SEIZE LUBRICANT TO GASKET SURFACES.
- 5. APPLY AN ANTI-SEIZE LUBRICANT TO STEM THREADS BEFORE ASSEMBLING.
- 6. VENT TUBE TO BE POINTED DOWN.
- 7. ACCEPTANCE OF TAPER FIT WILL BE DETERMINED AT THE ASSEMBLY OF COMPONENTS. HANDLE TO STEM FIT MUST BE TIGHT.
- 8. CAUTION: FOR NON-LUBE APPLICATIONS REFER TO TECHNICAL MANUAL FOR SPECIAL PROCEDURES FOR THESE ITEMS.
- 9. TIGHTEN NUT UNTIL UNLOADER HANDLE IS FULLY SEATED.
- 10. THIS ASSEMBLY DRAWING IS FOR ILLUSTRATION PURPOSE ONLY AND MAY NOT NECESSARILY REPRESENT THE EXACT ITEMS PERTAINING TO THE UNIT ORDERED. REFER TO THE PARTS LIST FOR ITEMS (AND QUANTITIES OF EACH) REQUIRED FOR YOUR PARTICULAR ASSEMBLY.
- 11. WHERE APPLICABLE, MOUNT ADDED FIXED CLEARANCE TAG AS CLOSE TO CYLINDER DATA TAG AS POSSIBLE.

REDRAWN TO SOLID EDGE. @B4: ADDED VIEW B-B; RELOCATED ITEMS #28 & #27 FROM C2. @C4: REMOVED TABLE. @C4: ADDED ITEMS #27, #32 & DETAIL A. RELOCATED ITEMS #9, #10, #11 & #12 FROM C2. @C3: ADDED FLAG #9. RELOCATED ITEM #15 FROM C1. @B2-B4: REMOVED DIMS. "A" & "B". @B2: ADDED ITEM #31. @A3-B3: ADDED NOTES #9, #10 & #11. @B3: ADDED CYL. VIEW. UPDATED TO CURRENT STANDARDS.		DLI 08/06/2008				
REV	DESCRIPTION	INITIALS				
4			3	10035	ARIEL CORPORATION 35 BLACKJACK ROAD MOUNT VERNON, OHIO 43050	
			2	10297		
			1	8001		
			4	13364	0	7743
			REV	EON	REV	EON
			3		CAH 04/29/99	NONE
					SCALE	
					ASSEMBLY DWG. NO.	A-8598
						SHT 1 OF 1



6/23/10

ARIEL CORPORATION  
SALES ORDER COVER SHEET

C/N: 001

RHCOVP02

SERIAL #: U78900

PART: G-11325 DESCRIPTION: VVCP, 7-3/8R:RJ:ET

7-3/8" JGR:RJ:ET UNLOADER ASSEMBLY, PART NO. G-11325  
STAINLESS STEEL TUBING AND FITTINGS. REF DRAWING A-8598

ITEM	PART NUMBER	QTY	DESCRIPTION
1	C-0411	1	UNL.HEAD, 7-3/8RU
2	D-2950	1	HE UNL ADPTR, 7-3/8R CL
3	B-0579	0	UNL PIST, 7-3/8R:RJ:ET
4	C-3715	0	UNL.STEM,7-3/8RU CL. TAPR/HNDL
5	A-0032	1	O-RING,VT, 7.145 OD X .210, 75 DUROMETER
6	A-0614	1	STEEL GASKET, 07.813 OD X 07.500 ID X .060, HEAD
7	A-0752	1	UNL.PISTON RING, 5-1/2 O.D.
8	C-0369	1	LOCKING HANDLE,UNL,2"THD
9	B-0523	1	UNL PKG RETAINER, 6,15-3/4
10	A-0643	1	BACK-UP RING, PACKING
11	A-0629	1	COMPRESSION SPRING, UNL.
12	A-0639	1	V PACKING, UNL
13	FC0120HS	12	12 PT,5/8-11 X 4 G8
14	A-2389	0	SELF-LOCK NUT,ESNA,TN,1-3/8-12
15	FC0110DF	4	SOC HD CAP,5/16-18 X 7/8 G8
16	FC0110EH	2	SOCKET HEAD CAPSCREW, 3/8-16 X 1-1/4, GRADE 8
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, UNL.THREAD PROTECTOR
21	A-0642	1	BACK-UP RING, BELLOWS

6/23/10

SALES ORDER COVER SHEET

22	FC0134CC	3	BUTTON HEAD CAPSCREW, 1/4-20 X 1/2, 316SS
23	PT0201CD	5."	TUBING, 316 SS, 1/4 OD X .065
24	C-0982	0	HANDLE,UNL,3 PRONG
25	A-0256	1	MACHINE SCREW PLUG, PLASTIC, 1/2-13
26	A-0755	1	DATA PLATE, UNLOADER HEAD SPECIFICATION
27	FR0570CC	4	DRIVE SCREW, TYPE U, #6 X 1/4
28	AC-3716	1	UNL PIST ASSY,7-3/8R:RJ:H:E:ET
32	A-12927	1	DATA PLATE, UNLOADER ADAPTER SPECIFICATION

## VARIABLE VOLUME CLEARANCE POCKET (Headend Unloader) DATA SHEET

### 7-3/8RJ Class Cylinder

Stroke: 3.50 in 89 mm

Bore: 7.375 in 187 mm

MAWP: 845 psig 58.3 bar(g) 5826 kPa(g) 59.4 kg/cm2(g)

### General Data for VVCP (independent of cylinder):

MAWP\*: 1135 78.3 barg 7826 kPa(g)

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

VVCP piston diameter: 5.5 in 140 mm

Stem thread lead (pitch): 0.125 in 3 mm

Total travel: 3.25 in 8.3 cm

Number of turns from closed to fully open: 26.0

Minimum added fixed clearance: 1.7 in3 27.1 cm3

Additional added clearance when fully open: 77 in3 1262 cm3

Total added clearance when fully open: 78.7 in3 1289 cm3

Clearance volume change per turn: 3.0 in3 48.5 cm3

Clearance volume change per change in travel: 23.7 in3/in 152.9 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: 51.5%

Total added clearance when fully open: 52.6%

Head end clearance change per turn: 2.0%

Head end clearance change per change in travel: 15.8% /in 6.2% /cm

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

Minimum fixed head end clearance: 19.5%

Total head end clearance when fully open: 71.0%

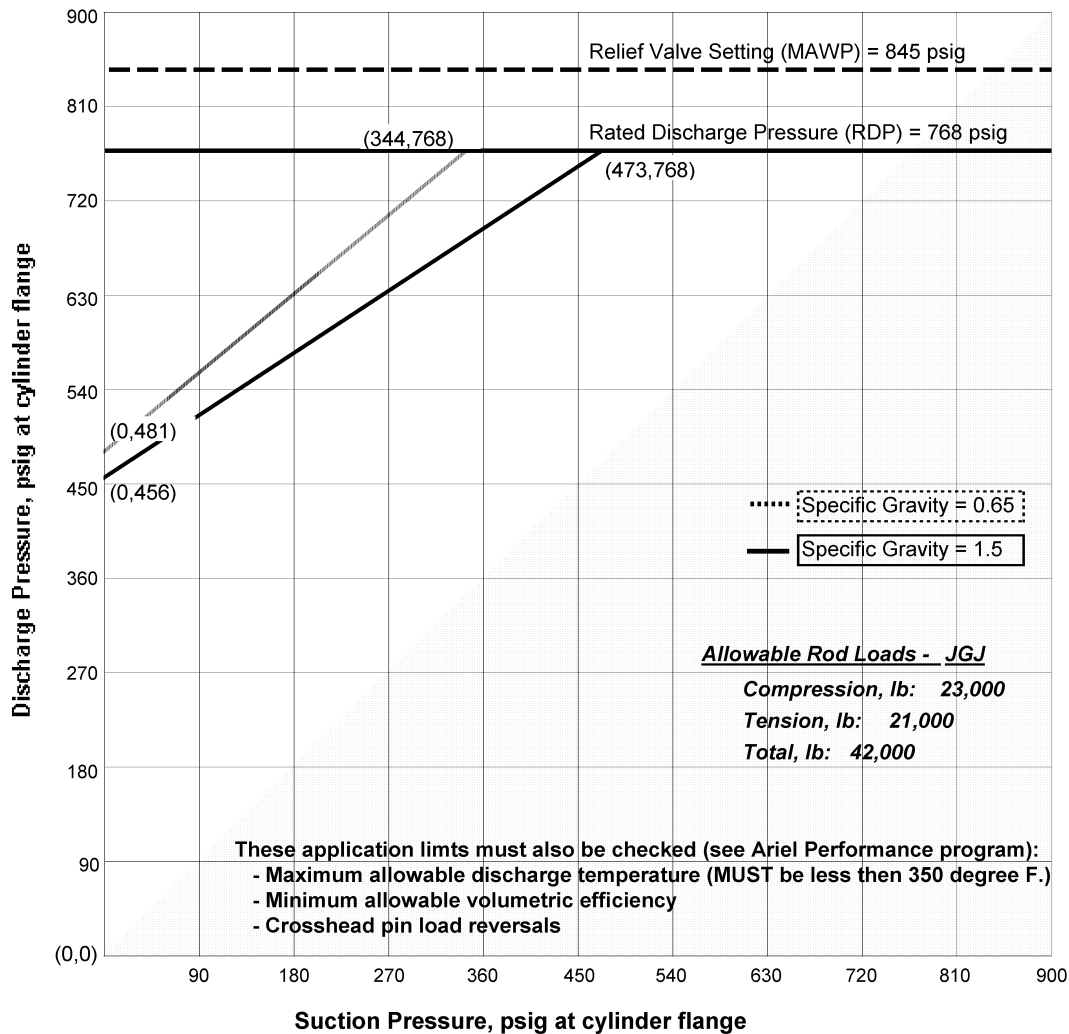
PLEASE NOTE: It is important to understand that the percent clearance figures for the variable volume clearance pocket above include the cylinder headend clearance. However, any valve spacers or other non-standard added clearances on the unit must be accounted for.

## Estimated Gas Rod Load and Pressure Limits for 3.5 inch stroke at 1800 RPM

Cylinder Class: 7-3/8RJ

Bore, inches: 7.375

Cylinder Serial Number: C-116875



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.

6/23/10

ARIEL CORPORATION  
SALES ORDER COVER SHEET

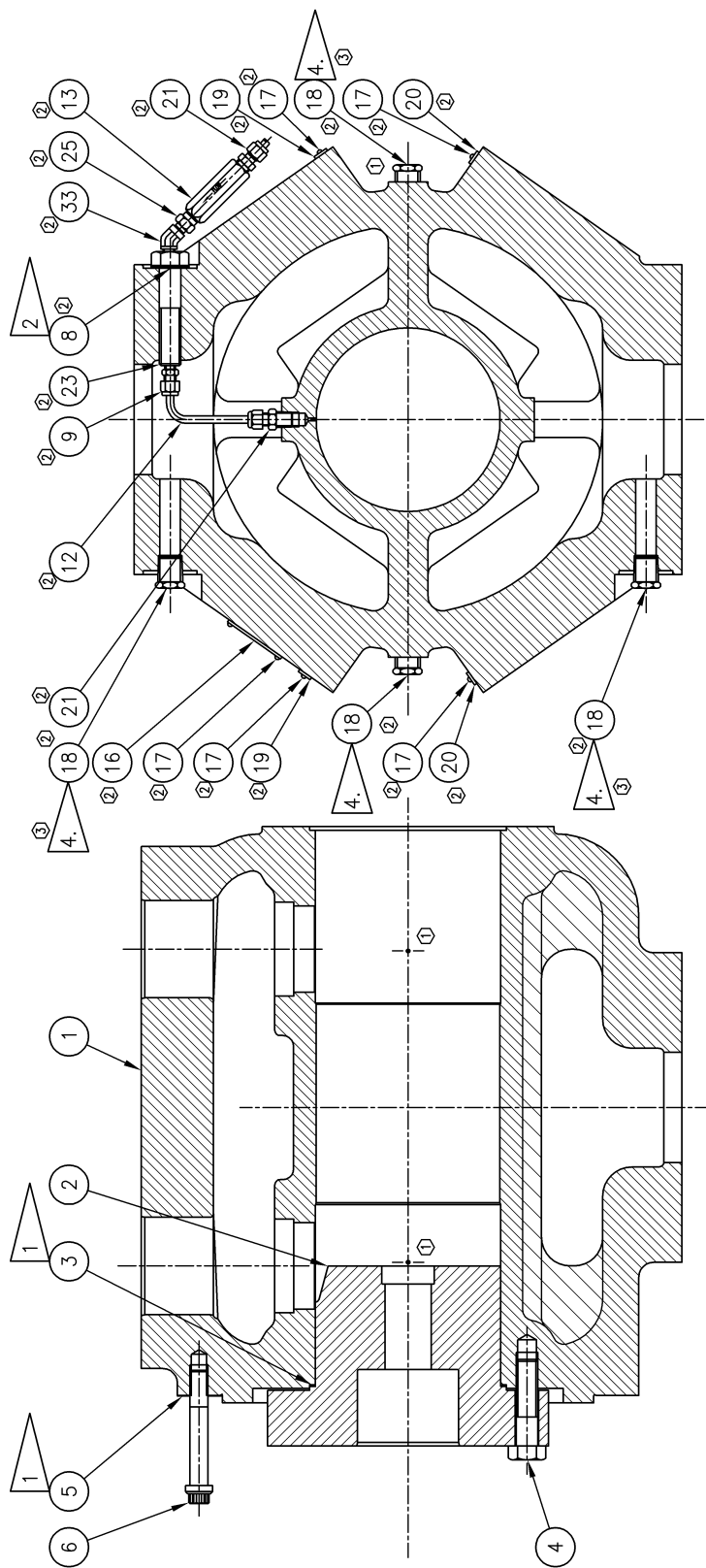
C/N: 001

RHCOVP02

SERIAL #: C116876

PART: 6-3/8RJ CLASS DESCRIPTION: 6-3/8" RJ CYLINDER CLASS


PART NUMBER	QTY	DESCRIPTION	DRAWING NO.
G-3897	1	CYL ASSY, 6 R:RJ,STD 1270	A-4369
G-4114	1	SHIP LOOSE CYL.STD LUBE,STL	N.A.
G-1028	4	SUC VLV ASSY, 6-3/8E,RHRJ-CE	D-0420
G-0621	4	DIS VLV ASSY6-3/8RHRJ,RHRJ-CE	D-0421
G-2364	1	PIST. 6 RJ,STD	A-13335
B-5080-N	4	SUC VLV, 70CRE,PKX	A-9278
B-5079-P	4	DIS VLV, 70CRE,PKX	A-9279



**NOTES:**

1. APPLY AN ANTI-SEIZE LUBRICANT TO GASKET (ITEM #5) SURFACES.
2. OIL FACES OF STATO-SEAL (ITEM #15) BEFORE INSTALLING TO PREVENT ABRASION.
3. LOOSEN OR TIGHTEN ALL FASTENERS PER RECOMMENDED PROCEDURES AND TORQUE VALUES IN MANUAL.
4. USED TO PLUG PASSAGES WHERE APPLICABLE.

3	8001	REMOVED THE WORD INDICATOR FROM NOTE# 4. ADDED FLAG TO ITEM BALLOON 18.
2	7510	ADDED 1/2" NPT PLUG ITEM. CHANGED ITEM NOS.
1	6282	DESCRIPTION

 <b>ARIEL CORPORATION</b> 35 BLACKJACK ROAD MOUNT VERNON, OHIO 43050		ASSEMBLY DWG. NO. <b>A-4369</b>
DRAWN: WRB 01/10/94 CHECKED: 01/13/94	APPROVED: _____ SCALE: NONE	REV ECN 0 5037

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6/23/10

PARTS LIST

6" JGR:RJ STD CYLINDER BODY  
RDP 1155#, MAWP 1270#

PART NO. G-3897  
REF DRAWING A-4369

ITEM	PART NUMBER	QTY	DESCRIPTION
1	D-1783	0	CYL, 6 R:RJ 1270
2	C-0343	0	CE HEAD, 6 R-CE
3	A-0604	1	STEEL GASKET, 06.813 OD X 06.500 ID X .060, HEAD
4	FC0100IO	10	HEX HD CAP, 3/4-10 X 3 G9
5	B-3515	1	GSKT,RND,16, X 1/64, 16 HOLES
6	FC0120HS	12	12 PT,5/8-11 X 4 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
12	PT0200CB	36."	TUBING, SS, 1/4 OD X .035 WALL
13	A-3780	1	CHECK VALVE, POPPET, DOUBLE BALL, SOFT SEAT, SS, 1/4 NPT(FEMALE) X 1/4 NPS(FEMALE)
16	A-0465	1	DATA PLATE, CYLINDER SPECIFICATIONS, 3-1/2 X 2-1/4
17	FR0570CC	12	DRIVE SCREW, TYPE U, #6 X 1/4
18	PP0810GB	5	HEX HEAD PIPE PLUG, STL, 1/2 NPT
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-2074	1	LUBE FITTING, 1/8 NPT, 3/4-10 X 4
25	A-2114	1	HEX REDUCING NIPPLE, STL, 1/4 NPT(MALE) X 1/8 NPT(MALE)
33	A-3989	1	STREET ELBOW, 45°, STL, 1/8 NPT
100	HD-1783	1	CYL ASSY, 6 R:RJ

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

6/23/10

PARTS LIST

CYLINDER TO BE SHIPPED LOOSE                      PART NO. G-4114  
WITH STANDARD LUBE                                      REF DRAWING N.A.  
AND STANDARD TUBING AND FITTINGS

ITEM	PART NUMBER	QTY	DESCRIPTION
1	A-0886	1	BULKHEAD UNION, STL, 1/4 TUBE
2	A-0815	2	MALE ELBOW, STL, 1/4 TUBE X 1/8 NPT

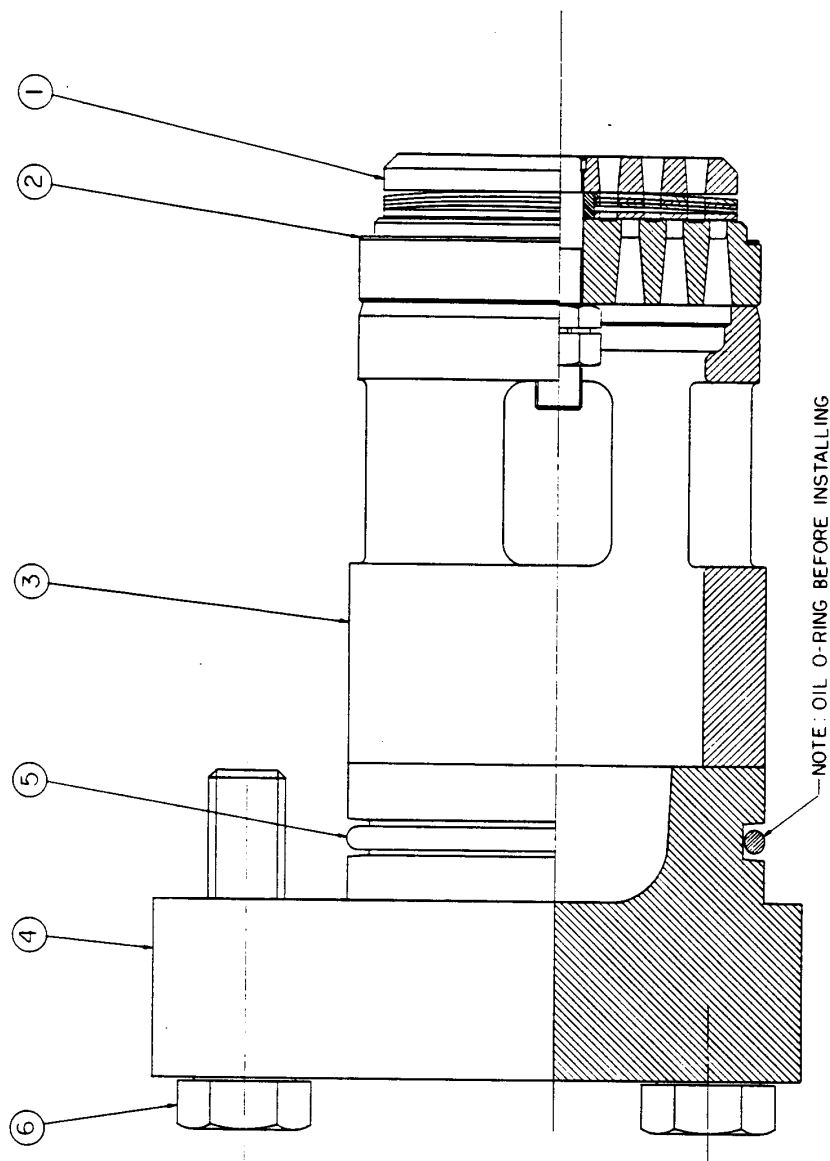
WHEN A ZERO APPEARS IN THE QUANTITY COLUMN IT  
DOES NOT REPRESENT THE QUANTITY REQUIRED.  
\*\*\* ALWAYS PROVIDE SERIAL NUMBER WHEN ORDERING SPARE PARTS. \*\*\*



G-620

G-620-I

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



ASSY DWG NO

D-420

6/23/10

PARTS LIST

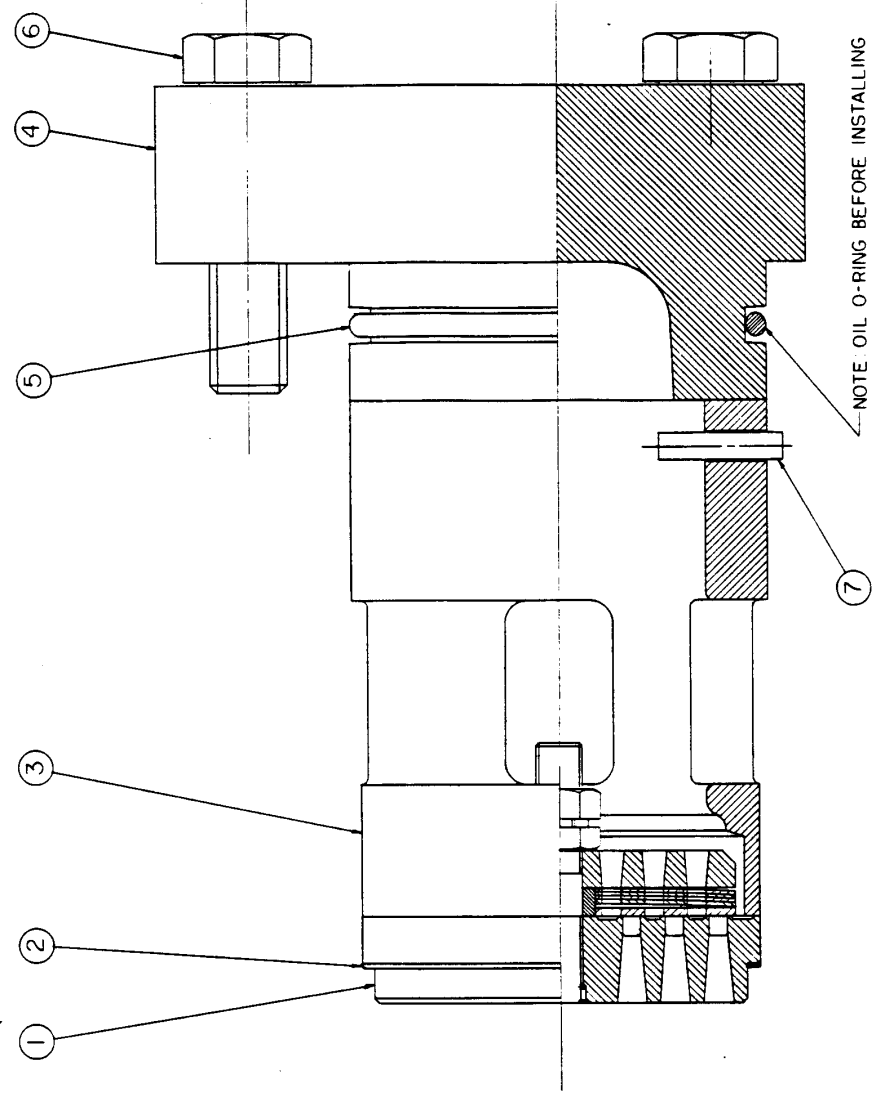
SUCTION VALVE RETAINER AND CAP                      PART NO. G-1028  
6-3/8" JGR, JGH, JGE & RJ CLASS                      REF DRAWING D-0420

ITEM	PART NUMBER	QTY	DESCRIPTION
1	SUCTION VALVE	0	FOR VALVE PART NUMBER, SEE COVER SHEET
2	A-0603	1	STEEL GASKET, 03.220 OD X 03.024 ID X .030, VALVE
3	B-0884	1	VLV RET,SUC, 6-3/8R:H:E:RJ:ET
4	B-0462	0	VLV CAP, 6-3/8R:RJ:H:E:ET CL
5	A-0038	1	O-RING,VT, 3.270 OD X .210, 75 DUROMETER
6	FC0171EGG	3	12 PT,5/8-11 X 2-1/2 X 3/4 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-621  
G-621-I

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



ASSY DWG NO  
D-421



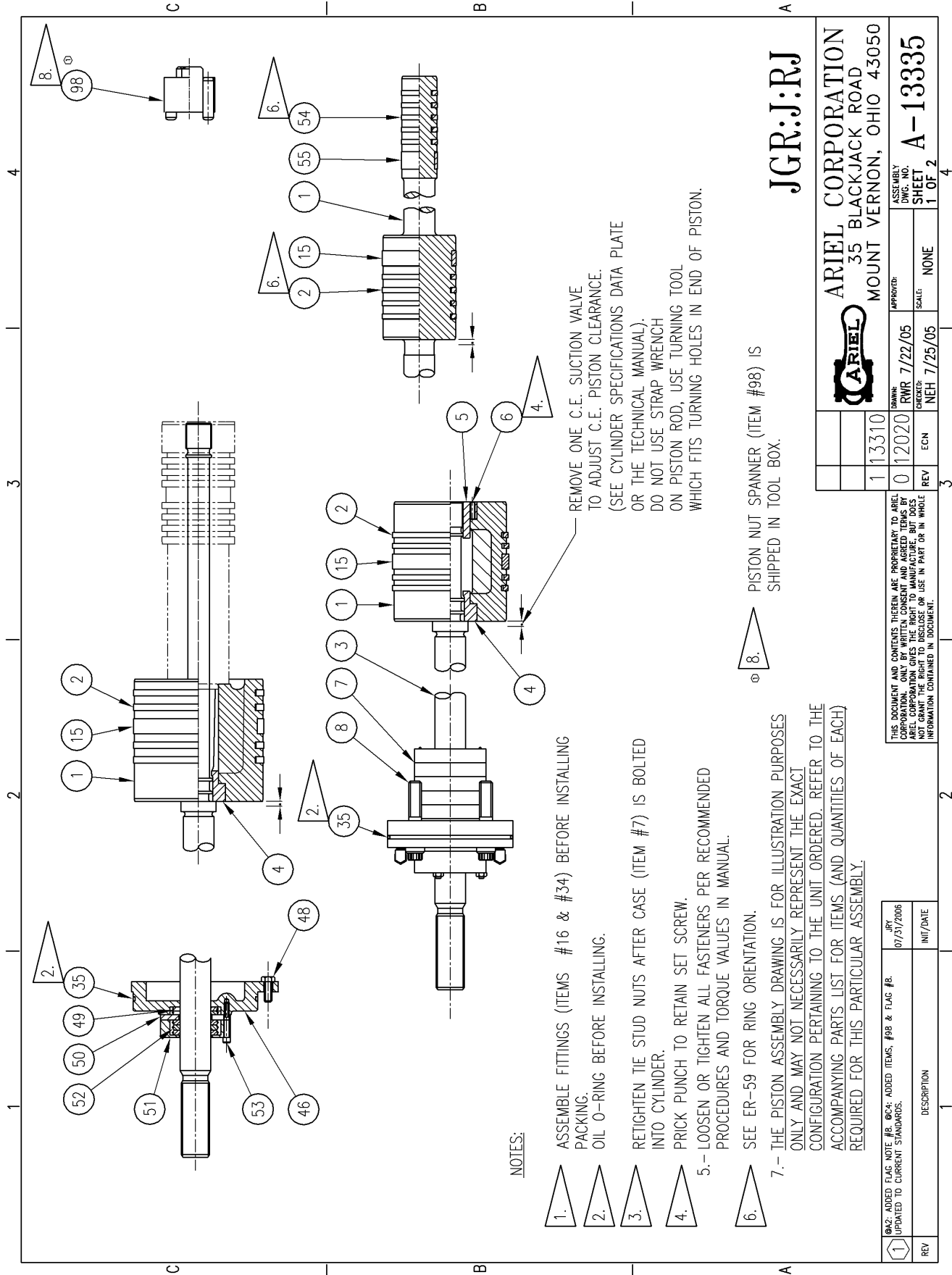
6/23/10

PARTS LIST

DISCHARGE VALVE, RETAINER AND CAP                      PART NO. G-0621  
6-3/8"JGR,JGRJ,JGH,JGE CLASS CYLINDER                      REF DRAWING D-0421

ITEM	PART NUMBER	QTY	DESCRIPTION
1	DISCHARGE VALV	0	FOR VALVE PART NUMBER, SEE COVER SHEET
2	A-0603	1	STEEL GASKET, 03.220 OD X 03.024 ID X .030, VALVE
3	B-0460	1	VLV RET,DIS, 6-3/8R:H:E:RJ:ET
4	B-0462	0	VLV CAP, 6-3/8R:RJ:H:E:ET CL
5	A-0038	1	O-RING,VT, 3.270 OD X .210, 75 DUROMETER
6	FC0171EGG	3	12 PT,5/8-11 X 2-1/2 X 3/4 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. \*\*\*



JGR:J:RJ

ARIEL CORPORATION  
35 BLACKJACK ROAD  
MOUNT VERNON, OHIO 43050

1	13310	0	12020	7/22/05	7/25/05	NONE	ASSEMBLY DWG. NO. SHEET 1 OF 2
REV	ECN	REV	CHEKED	APPROVED	SCALE		

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1	REV	DESCRIPTION	INIT/DATE	BY	DATE
1				JGR	07/17/2005

NOTES:

1. ASSEMBLE FITTINGS (ITEMS #16 & #34) BEFORE INSTALLING PACKING.
2. OIL O-RING BEFORE INSTALLING.
3. RETIGHTEN TIE STUD NUTS AFTER CASE (ITEM #7) IS BOLTED INTO CYLINDER.
4. PRICK PUNCH TO RETAIN SET SCREW.
5. LOOSEN OR TIGHTEN ALL FASTENERS PER RECOMMENDED PROCEDURES AND TORQUE VALUES IN MANUAL.
6. SEE ER-59 FOR RING ORIENTATION.
7. THE PISTON 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.

8. PISTON NUT SPANNER (ITEM #98) IS SHIPPED IN TOOL BOX.

6/23/10

PARTS LIST

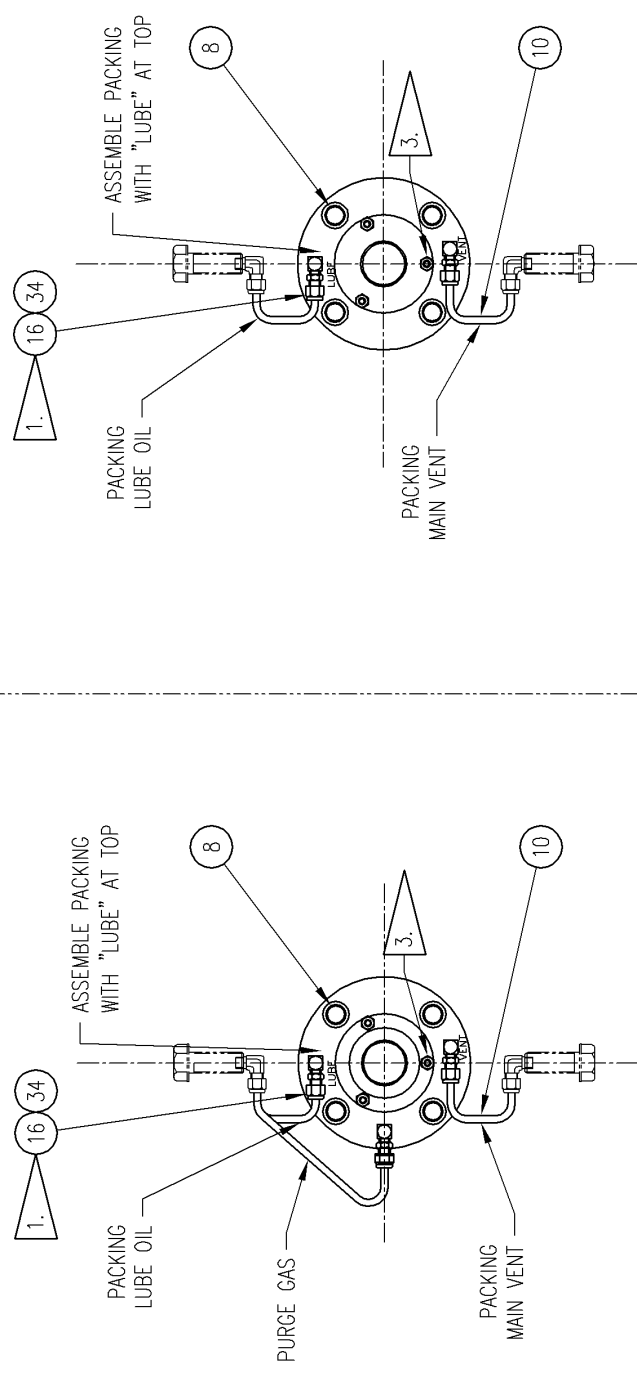
6" JGRJ PISTON, TFE RINGS, TFE WEAR BAND      PART NO. G-2364  
TFE/CI PACKING, 3-1/2" STROKE      REF DRAWING A-13335 2 SHT

ITEM	PART NUMBER	QTY	DESCRIPTION
1	C-1196	1	PIST,WB , 6RJ
2	A-0584	4	PISTON RING, 6R:H:RJ
3	C-1177	1	P ROD, 3.50STK/25.512LG
4	B-1261	1	PISTON COLLAR, J:RJ:HJ:RJ-CE
5	B-1260	1	PISTON NUT,2-5/8 OD,JGJ:RJ:HJ:RJ-HE
6	FS0405CF	2	CUP PT.SET-SCREW, 1/4-28 X 7/8
7	B-1683	1	PKG,1.5,1440,BTR,PU
8	FC0120HP	4	12 PT,5/8-11 X 3-1/4 G8
10	PT0200CB	18."	TUBING, SS, 1/4 OD X .035 WALL
15	A-2996	1	WEAR BAND, 6 RJ:RJ-CE,75W
16	A-0884	0	STREET ELBOW,STL,1/8 NPT SHORT
34	A-0830	0	MALE CONNECTOR, STL, 1/4 TUBE X 1/8 NPT
99	B-1683-K	0	RBLD KIT,PIST ROD PKG,1.500

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

C B A C B A



1	SEE SHEET #1 FOR REVISION.	BY 07/31/2006
REV	DESCRIPTION	INIT/DATE

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113310


012020

REV

ECN

REV

3

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

APPROVED:  
SCALE: NONE

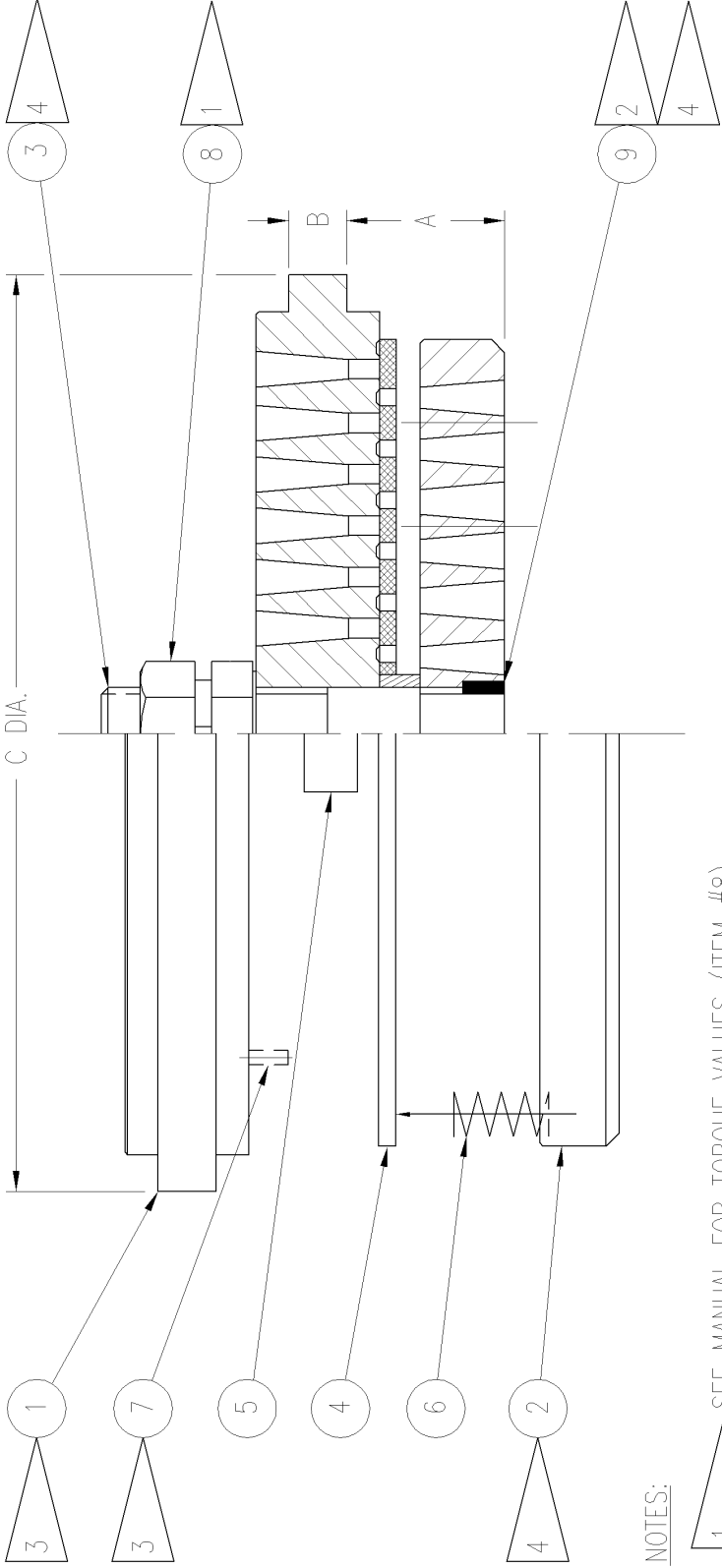
DRAWN:  
RWR 7/22/05

CHECKED:  
HMF 7/00/05

ASSEMBLY  
DWG. NO.  
SHEET **A-13335**  
2 OF 2







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	
DWG. No: A-9278	

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

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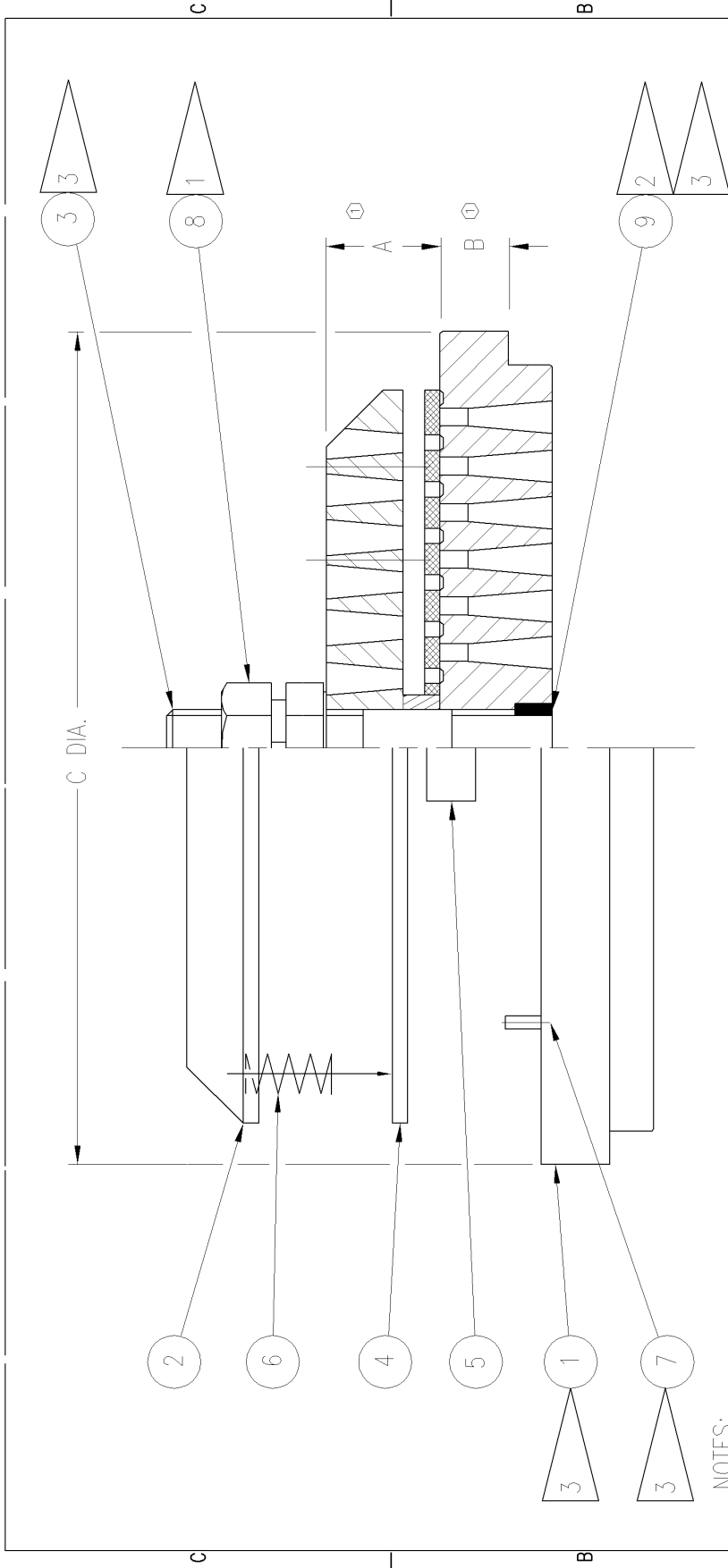
6/23/10

PARTS LIST

0.6060=A	PART NO. B-5080-N
0.5120=B	REF DRAWING A-9278
3.2480=C	
0.0550=LFT	

ITEM	PART NUMBER	QTY	DESCRIPTION
1	A-13977	1	SUC VLV SEAT, 70CRE
2	A-13791-A	1	SUC VLV GUARD ASSY, 70CRE
3	A-2669	1	CNTR STUD,3/8-24 X 2.32
4	A-15742	1	VLV PLT, 70CRE.157THK,PKX
5	A-15442	1	GUIDE RING,70RX,.213 THK
6	A-8898	9	SPRING(.196DX.413 BLUE)
7	A-14645	2	SPIROL PIN,.079D X .142L
8	A-1367	1	LOCKNUT, DRAKE 3/8-24
9	A-16466	1	LOCK,STUD .098D
99	KB-5080-N	0	KIT,VLV, 70CRE,PKX

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

2	(A-4) IN TITLE BLOCK, "DISCHARGE VALVE, CRO/CRE" WAS "DISCHARGE VALVE, CRO".	KSL 12/13/07	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	1	4968	MATERIAL:	PROCURD	A
	©C4 WAS B. ©B4 WAS A.	RWR 6/01/05				1	1	12882	DRAWN:	IC 9/27/99	
1	DESCRIPTION	INT/DATE	INFORMATION CONTAINED IN DOCUMENT.			3	7	7799	CHECKED:	ED 10/4/99	A
REV						3	ECN	NONE	SCALE:	A-9279	

6/23/10

PARTS LIST

0.5980=A	PART NO. B-5079-P
0.3940=B	REF DRAWING A-9279
3.2250=C	
0.0470=LFT	

ITEM	PART NUMBER	QTY	DESCRIPTION
1	A-13980-A	1	DIS VLV SEAT ASSY, 70CRE
2	A-15489-A	1	DIS VLV GUARD ASSY, 70CRE
3	A-2676	1	CNTR STUD,3/8-24 X 2.32
4	A-15742	1	VLV PLT, 70CRE.157THK,PKX
5	A-1735	1	GUIDE RING,70RX,.205 THK
6	A-8897	9	SPRING(.197DX.413 WHITE) .026
7	A-14645	2	SPIROL PIN,.079D X .142L
8	A-1367	1	LOCKNUT, DRAKE 3/8-24
9	A-16466	1	LOCK,STUD .098D
99	KB-5079-P	0	KIT,VLV, 70CRE,PKX

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



6/23/10

ARIEL CORPORATION  
SALES ORDER COVER SHEET

C/N: 001

RHCOVP02

SERIAL #: U78901

PART: G-11328 DESCRIPTION: VVCP, 6 R:RJ:ET-HP

6" JGR:RJ:ET-HP UNLOADER ASSEMBLY, PART NO. G-11328  
STAINLESS STEEL TUBING AND FITTINGS. REF DRAWING A-8598

ITEM	PART NUMBER	QTY	DESCRIPTION
1	C-0433	1	UNL.HEAD, 6 RU
2	D-0529	1	HE UNL ADPTR, 6-3/8R CL
3	B-0599	0	UNL PIST, 6-3/8R
4	C-3717	0	UNL.STEM,6-3/8RU CL. TAPR HNDL
5	A-0724	1	O-RING,VT, 6.645 OD X .210, 75 DUROMETER
6	A-0604	1	STEEL GASKET, 06.813 OD X 06.500 ID X .060, HEAD
7	A-0751	1	UNL.PISTON RING, 5 O.D.
8	C-0369	1	LOCKING HANDLE,UNL,2"THD
9	B-0523	1	UNL PKG RETAINER, 6,15-3/4
10	A-0643	1	BACK-UP RING, PACKING
11	A-0629	1	COMPRESSION SPRING, UNL.
12	A-0639	1	V PACKING, UNL
13	FC0120IT	10	12 PT,3/4-10 X 4-1/2 G8
14	A-2389	0	SELF-LOCK NUT,ESNA,TN,1-3/8-12
15	FC0110DF	4	SOC HD CAP,5/16-18 X 7/8 G8
16	FC0110EH	2	SOCKET HEAD CAPSCREW, 3/8-16 X 1-1/4, GRADE 8
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, UNL.THREAD PROTECTOR
21	A-0642	1	BACK-UP RING, BELLOWS

6/23/10

SALES ORDER COVER SHEET

22	FC0134CC	3	BUTTON HEAD CAPSCREW, 1/4-20 X 1/2, 316SS
23	PT0201CD	5."	TUBING, 316 SS, 1/4 OD X .065
24	C-0982	0	HANDLE,UNL,3 PRONG
25	A-0256	1	MACHINE SCREW PLUG, PLASTIC, 1/2-13
26	A-0755	1	DATA PLATE, UNLOADER HEAD SPECIFICATION
27	FR0570CC	4	DRIVE SCREW, TYPE U, #6 X 1/4
28	AC-3718	1	UNL PIST ASSY, 6-3/8R:RJ:H:E
32	A-12927	1	DATA PLATE, UNLOADER ADAPTER SPECIFICATION

## VARIABLE VOLUME CLEARANCE POCKET (Headend Unloader) DATA SHEET

### 6-3/8RJ Class Cylinder

Stroke: 3.50 in 89 mm

Bore: 6.000 in 152 mm

MAWP: 1270 psig 87.6 bar(g) 8756 kPa(g) 89.3 kg/cm2(g)

### General Data for VVCP (independent of cylinder):

MAWP\*: 1650 113.8 barg 11376 kPa(g)

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

VVCP piston diameter: 5 in 127 mm

Stem thread lead (pitch): 0.125 in 3 mm

Total travel: 3.25 in 8.3 cm

Number of turns from closed to fully open: 26.0

Minimum added fixed clearance: 1.3 in3 20.9 cm3

Additional added clearance when fully open: 64 in3 1049 cm3

Total added clearance when fully open: 65.3 in3 1070 cm3

Clearance volume change per turn: 2.5 in3 40.3 cm3

Clearance volume change per change in travel: 19.7 in3/in 127.0 cm3/cm

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

Minimum added fixed clearance: 1.3%

Additional added clearance when fully open: 64.7%

Total added clearance when fully open: 66.0%

Head end clearance change per turn: 2.5%

Head end clearance change per change in travel: 19.9% /in 7.8% /cm

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

Minimum fixed head end clearance: 19.4%

Total head end clearance when fully open: 84.1%

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.

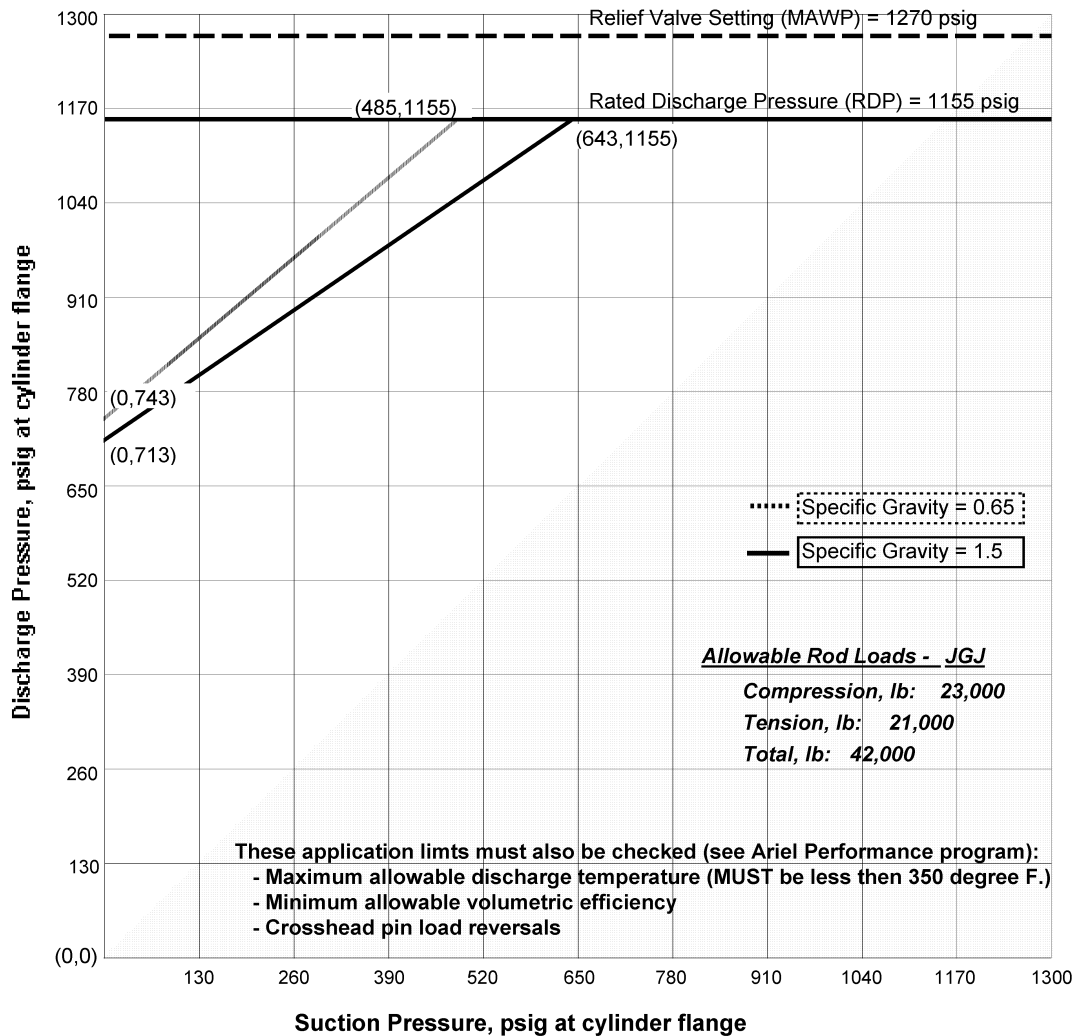


## Estimated Gas Rod Load and Pressure Limits for 3.5 inch stroke at 1800 RPM

Cylinder Class: 6-3/8RJ

Bore, inches: 6.000

Cylinder Serial Number: C-116876



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.