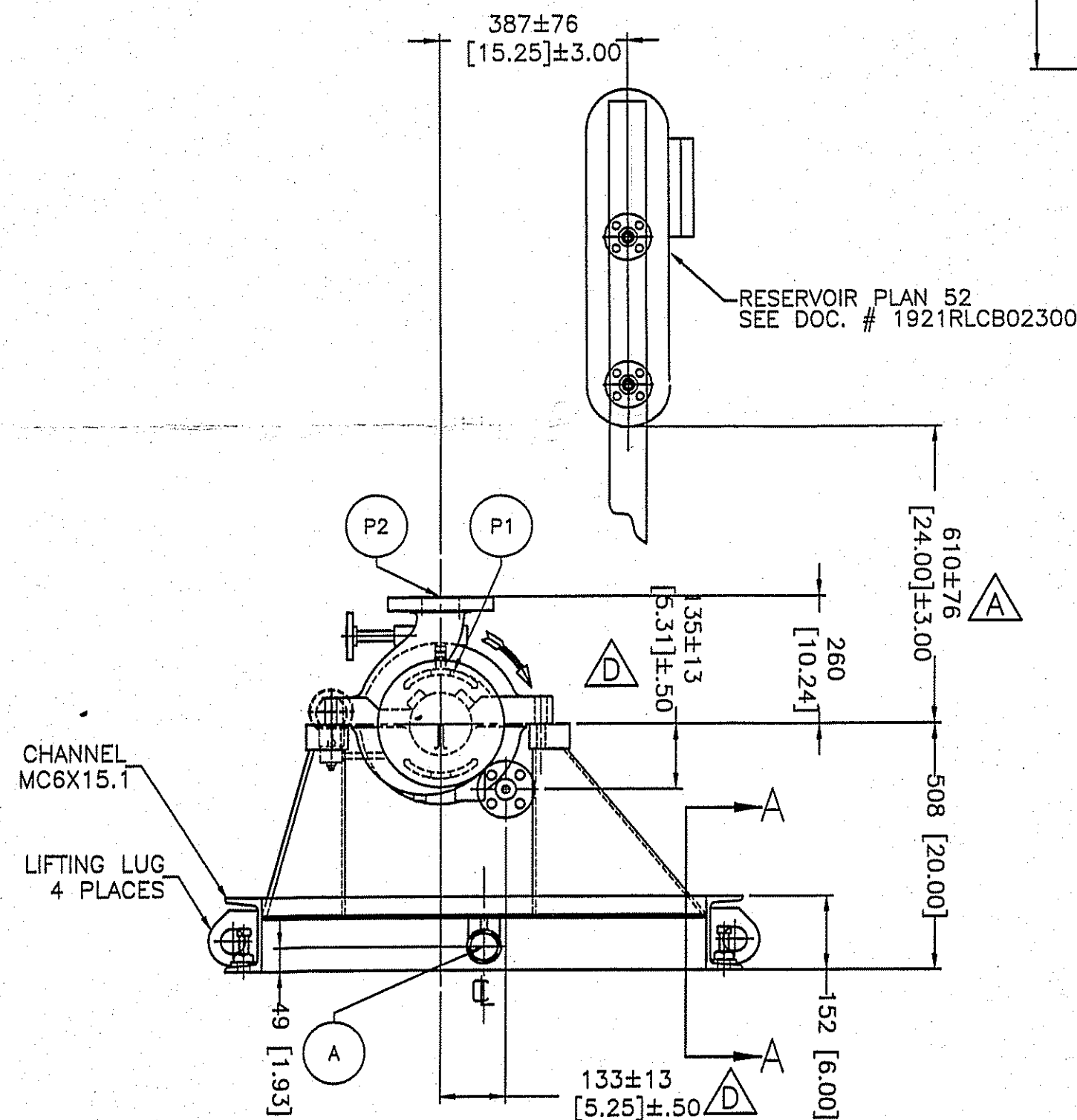


1. TAGGING INFORMATION RECEIVED LESS THAN 30 DAYS PRIOR SHIPMENT
WILL BE SUBJECT TO HANDLING CHARGES.
2. ITEMS WILL NOT BE TAGGED UNLESS CUSTOMER TAG NUMBERS ARE SHOWN.
3. REFERENCE DIMENSION ARE SHOWN FOR NON-CONSTRUCTION PURPOSES ONLY.
4. UNSPECIFIED TOLERANCES ± 6 [± 0.25], FOR ANCHOR BOLTS HOLE LOCATION DIMS ± 3 [± 0.13].

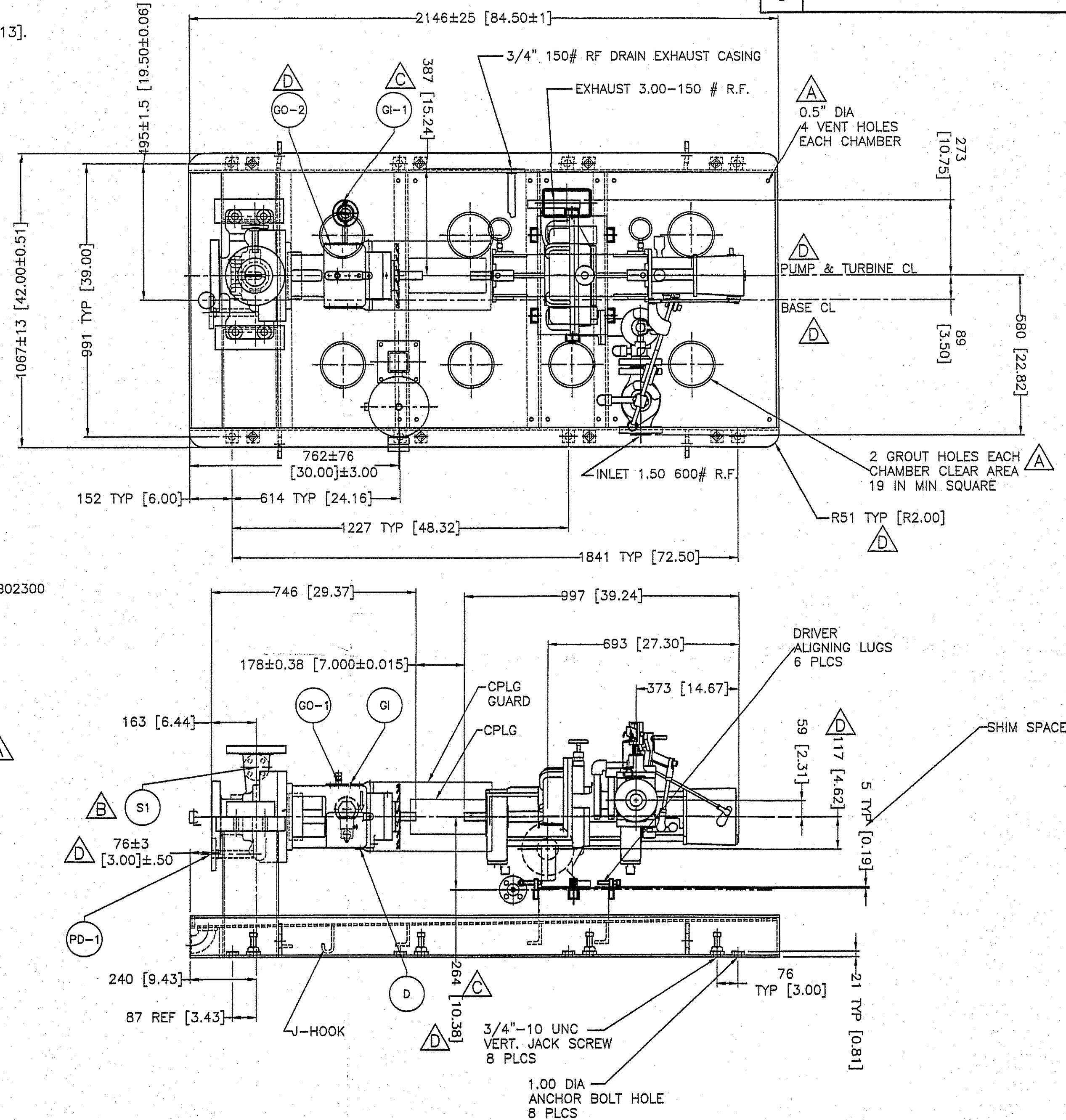


* CUSTOMER CONNECTION POINT			
ITEM	SIZE	DESCRIPTION	CONNECTION
* P2 (1)	—	PUMP DISCHARGE, 3" RF FLANGE CL—300.	SHIPPING COVER
* P1 (1)	—	PUMP SUCTION, 4" RF FLANGE CL—300.	SHIPPING COVER
* GI (1)	0.5 NPT	LUBRICATION INLET	PIPED BY CUSTOMER
GI-1 (1)	0.25 NPT	CONSTANT LEVEL OILER	PIPED BY FLOWSERVE
GO-1 (1)	0.5 NPT	BEARING HOUSING BREATHER	PIPED BY FLOWSERVE
* PD-1 (1)	0.75 S.W.	DRAIN, PUMP CASE W/75—CL300 R.F. FLANGE	SHIPPING COVER
GO-2 (1)	0.25 NPT	OVERFLOW	PLUGGED
A (1)	2 NPT	BASE DRAIN 2" NPT ELBOW COUPLING	OPEN
D (1)	0.5 NPT	DRAIN, BEARING	PLUGGED
S1 (1)	0.5 SW	SEAL RECIRCUL. CONN (PLAN 11) R.F. FLG 300#	PIPED BY FLOWSERVE

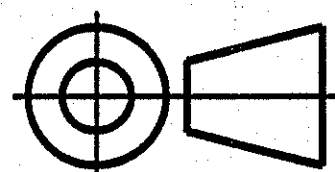
TOLERANCES UNLESS OTHERWISE SPECIFIED	
(IN)	MM
.X ± .5	.X ± 13
.XX ± .25	.XX ± 8
.XXX ± .125	.XXX ± 3
.XXXX ± .0625	

ALL CUSTOMER CONNECTIONS LOCATIONS DIMENSIONS HAVE A TOLERANCE OF ± 50.8 (2.00) EXCEPT FOR THE PUMP SUCTION AND DISCHARGE NOZZLES WHICH HAVE A TOLERANCE OF ±6.4 (.25)

FORCES & MOMENTS				
API 610 FORCES & MOMENTS F=FORCE IN (LB.) M=MOMENTS IN (FT-LB & Nm) R=RESULTANT	U.S. UNITS			
	SUCT.		DISCH.	
	FX	FY	SUCT.	DISCH.
	FX	400	240	1780
	FY	320	200	1420
	FZ	260	300	1160
	FR	570	430	2560
	MX	980	700	1330
	MY	500	350	680
	MZ	740	530	1000
	MR	1330	950	1800



3rd Angle Projection



APPROVAL NOTE TO CUSTOMER

1.-PURCHASER'S COMMENTS AND/OR CORRECTIONS, WITHIN THE SCOPE OF CONTRACT WILL BE MADE ON THE FIRST COMPLETED CERTIFIED DRAWING SUBMITTED BY FLOWSERVE CORPORATION AND RETURNED

2.-CORRECTIONS, ALTERATIONS, ADDITIONS AND MODIFICATIONS OUTSIDE SCOPE OF CONTRACT OR MADE AFTER FIRST SUBMITTAL MAY REQUIRE AN ADDITIONAL ENGINEERING SERVICE CHARGE.

3.-ITEMS CONDITIONALLY APPROVED OR WITH DEFERRED APPROVAL BY PURCHASER, MUST BE SPECIFICALLY STATED OTHERWISE DELIVERY MAY BE EFFECTED.

PROPRIETARY NOTE

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STATUS OF APPROVAL

ORDER No. RLCB02300

DRAWN BY	DATE
M. ARMENDARIZ	05/04/05

CHECKED BY	DATE
N/A	05/04/05

APPROVED BY	DATE
N/A	05/04/05

[illegible]

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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Age Group	Gender	U.S. should take action (%)	U.S. should not take action (%)
18-29	Male	75	25
	Female	80	20
30-49	Male	80	20
	Female	85	15
50-69	Male	85	15
	Female	90	10
70+	Male	90	10
	Female	95	5

REVISIONS

REV.	DESCRIPTION	ECO No	DATE	BY	CHKD
-	ORIGINAL RELEASE		05/04/05		
A	DWG REVISED AS SHOWN		6/8/05	M.A.	
B	ADDED ITEM # S1		6/14/05	M.A.	
C	ADDED CASING DRAIN CONNECTION		7/13/05	M.A.	
D	MISC REVISIONS AS SHOWN		10/27/05	M.A.	

ITEM NUMBERS		
FLOWSERVE SERIAL NO.	PUMP NUMBER	DRIVER NUMBER
05RLCB0230001001	G-546B	STG-546B 
-	-	-
-	-	-
-	-	-
-	-	-

APPROXIMATE WEIGHTS		POUNDS	KILOGRAMS
PUMP -----		267	121
DRIVER -----		360	163
BASEPLATE -----		965	438
AUX. EQUIP. -----		—	—
* ROTOR -----		—	—
* UPPER HALF CASE -----		—	—
TOTAL WEIGHT -----		1592	722

REFERENCE	DRAWINGS
API PLAN 11	400RLCB02300
API PLAN 52	420RLCB02300
MOTOR	1822RLCB02300
MECHANICAL SEAL	1747RLCB02300
COUPLING	1158RLCB02300
SECTIONAL	500RLCB02300

DRIVER		
MFG#: COPPUS		
HP: 15	RPM: 3540	
ENCL/FRAME: RL12L		
PHASE: N/A	HZ: N/A	VOLTS: N/A

MECHANICAL SEAL	
MFGR: FLOWSERVE	
TYPE & SIZE: BXHH/BXH	2375

COUPLING	
MFG: THOMAS	
TYPE & SIZE: 71	150 
GUARD: ALUMINUM	

CUSTOMER: LINDE BOC PROCESS PLANTS LLC	CHYDTEST PR: 900 bar
P.O. NUMBER: PQ7053748	FLOW: 200 GPM
END USER: GIANT INDUSTRIES, INC.	HEAD: 141 FT
PROJECT: ULSD HYDROTREATER	BHP: 10
LOCATION: YORKTOWN, VA	EFFICIENCY: 60.3
SERVICE: FLARE KO DRUM LIQUID PUMP	RPM: 3540
TAG: G-546 B	FLUID: DIESEL FUEL
BLANK2: -	TEMP: 115 °F (NORMAL)
BLANK3: -	S.G.: 0.838

CUSTOMER INFORMATION	OPERATING CONDITIONS
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FLOWSERVE

Pump Division
Vernon Operation

**CERTIFIED
FINAL**

DWG TITLE **# 106014**
GENERAL ARRANGEMENT
3 HPX 7A Extra Heavy API 9

SIZE A 3	DRAWING NO. 302RLCB02300	REV. D
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SCALE	1/22	UNITS	SHEET NO.	1 OF 7/P
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