

NOTE:
INSTALL ST. ELL. (ITEM 159)
SO THAT ORIFICE PLUG (ITEM 167) IS
FACING SUCTION SIDE OF COMPR.
AND SLIGHTLY DOWN.

VARY GASKETS TO POSITION
ROTOR IN CENTER OF AXIAL
TRAVEL.

NOTE:
TIGHTEN CAP SCREW
TO 155 FT.-LBS.
WITH TORQUE WRENCH

VARY GASKETS 131,
AND 132 TO OBTAIN
.015 CLEARANCE

TORQUE SCREWS TO
900 FT.-LBS.

TORQUE SCREWS
TO 900 FT.-LBS.

(6) OF ITEM 5 TO BE USED IN
HOLES STRADDLING CASING SPLIT,
2 ABOVE & 4 BELOW.

RTD BRG. HSG. END

(6) OF ITEM 5 TO USED
IN HOLES STRADDLING CASING
SPLIT 2 ABOVE AND 4 BELOW

TORQUE CASING HORIZONTAL SPLIT
SCREWS TO 720 FT.-LBS.

COUPLING END

TORQUE SCREWS
TO 900 FT.-LBS.

TORQUE SCREWS TO
515 FT.-LBS.

VARY GASKETS 18, 19, & 20 TO OBTAIN
3-1/32 SEAL HEIGHT AS SHOWN. MEASURE
SPACE WITH SHAFT HELD AGAINST THRUST
BRG. ITEM 127.

TORQUE SCREWS
TO 25 FT.-LBS.

NOTES:

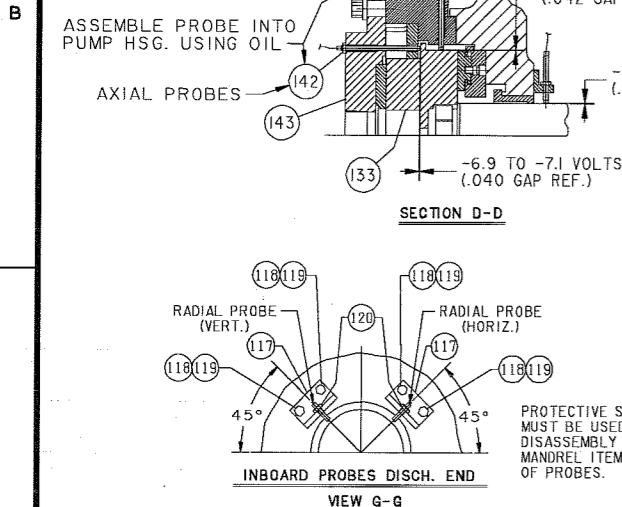
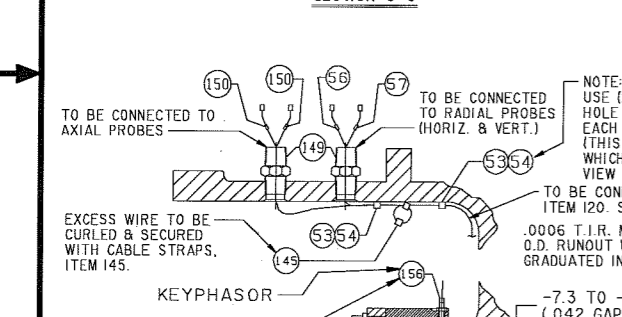
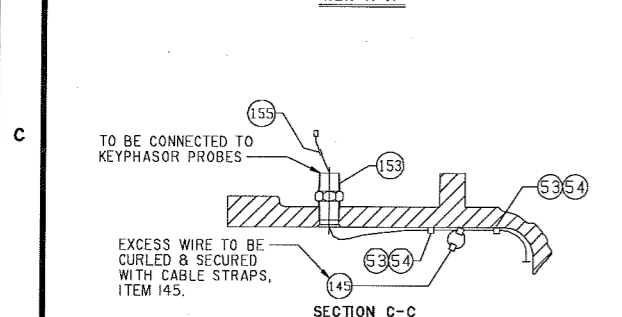
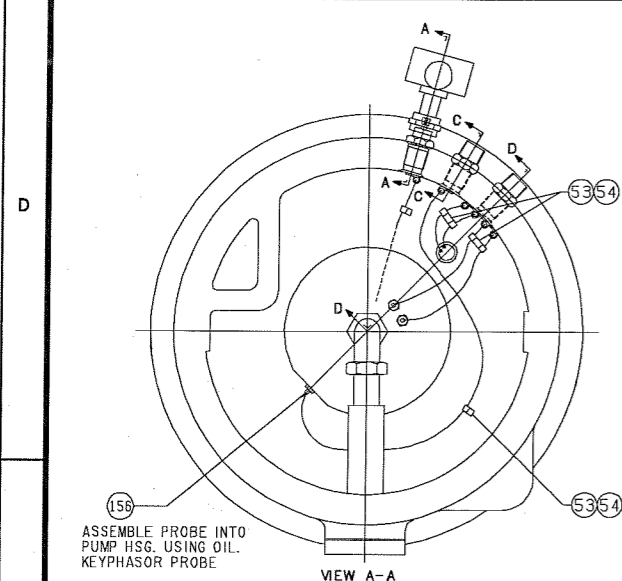
- VACUUM HOLD TEST REQUIRED.
- HYDROSTATIC TEST PRESS. 375 P.S.I.G. 1/2 HOUR (OBSERVED)
- AIR/NITROGEN LEAK TEST PRESS. 250 P.S.I.G. (OBSERVED)
- NITROGEN LEAK TEST COMPRESSOR AND ALL COMPRESSOR COMPONENTS. AFTER RUN-IN (BEFORE SHIPMENT) PRESSURIZE TO 275 P.S.I.G. MOMENTARILY BEFORE REDUCING TO TEST PRESSURE (OBSERVED).
- THIS IS AN R-134A MIX COMPRESSOR APPLICATION WHICH REQUIRES YORK "J" OIL. CHARGE AND FLUSH WITH YORK "J" OIL ONLY. DO NOT MIX OILS.
- THE FOLLOWING YORK SPECIFICATIONS APPLY TO COMPRESSOR AND COMPONENTS: M-320, M-344, AND M-451.

08-177539-01

YORK INTERNATIONAL CORPORATION
YORK, PA. 17405

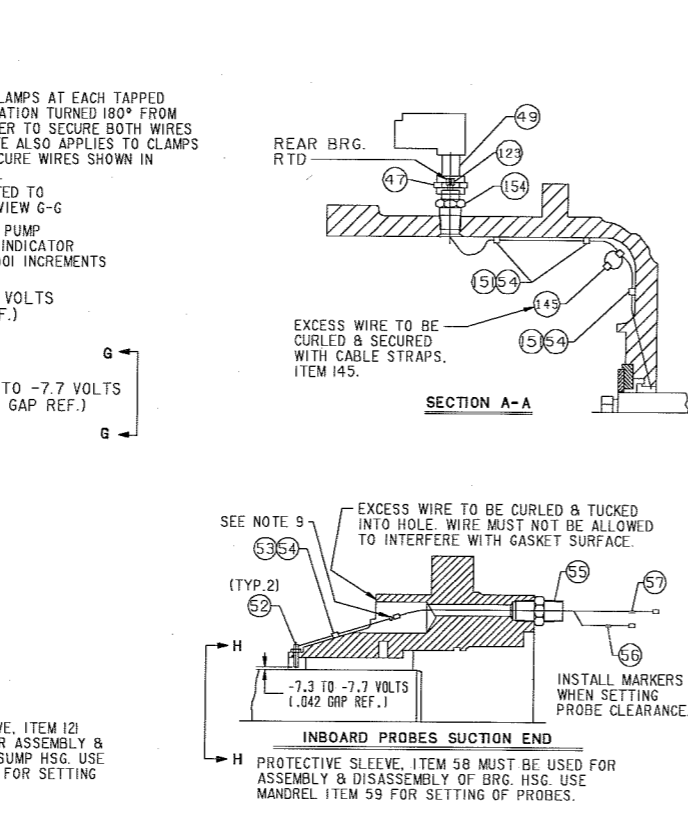
REV. LEV.	DATE	REVISION RECORD	CHG. NO.	DR.	CK.	REV. LEV.	DATE	REVISION RECORD	CHG. NO.	DR.	CK.	REV. LEV.	DATE	REVISION RECORD	CHG. NO.	DR.	CK.
-	NEW		0908														
A	04-30-09	SEE SHT. 2 FOR REV.	3609	AWO	DBG												
B	03-02-09	SEE SHT. 2 FOR REV.	3590	AWO	DBG												
C	12-02-09	SEE SHT. 2 FOR REV.	3591	BLK	AWO												

DIMENSIONS ARE IN INCHES DO NOT SCALE TOLERANCES PER ENG. STD. M-282 PER ENG. STD. M-35 REF. DWG.		COMPR., TURBO 555 RIVERHAWK CPLG. MULTI-STAGE		MATERIAL TYPE _____ ENG. STD. _____ PART NO. _____ CUT SIZE _____	
NAME DR. B.L. KNAUB APPR. A.W. OTTO SCALE: N.T.S.	DATE 01-20-09 02-25-09	SIZE D	CAGE NO. 66935	DRAWING NUMBER 381-17401-000	
WT. = _____ LBS.		ORIG. NO. 381-16398D		SHEET 1 OF 2	



NOTES:

- ASSEMBLE ALL PIPE THREADS THAT CROSS AN INTERNAL/EXTERNAL PRESSURE BOUNDARY WITH ITEM 224 (SEALER, 277). ASSEMBLE ALL OTHER PIPE THREADS WITH ITEM 215 (SEALER, PST 567). ALL PIPE THREADS ARE TO BE ASSEMBLED PER M-365.
- INDICATES RECOMMENDED SPARE PARTS.
- THESE ITEMS TO BE BOXED & SHIPPED WITH COMPR.
- SEE SALES ORDER FOR DATA NAMEPLATE PART NUMBER.
- RADIAL PROBES SHALL OUTPUT -6.0 TO -9.0 V SIGNAL TO BENTLY NEVADA 3300 SERIES MONITOR AT DESIGN OPERATIONAL CONDITIONS. SET THEM AT -7.3 TO -7.7 V DURING ASSEMBLY.
- KEYPHASOR PROBE SHALL BE SET THE SAME WAY AS RADIAL PROBES. THERE IS NO REQUIREMENT ON VOLTAGE OUTPUT IN SERVICE.
- AXIAL PROBE SHALL OUTPUT -5.15 TO -9.15 V SIGNAL TO BENTLY NEVADA 3300 SERIES MONITOR AT DESIGN OPERATIONAL CONDITIONS. SET IT AT -6.9 TO -7.1 V DURING ASSEMBLY WITH ROTOR ON THE FORWARD THRUST BEARING AND USE THE ACTUAL SIGNAL TO ZERO THE MONITOR AT COMMISSIONING.
- ITEMS 219 & 221 TO BE USED FOR INSTALLATION OF SUCTION END & DISCH. END A-4 SEALS RESPECTIVELY.
- AFTER PROBES ARE CONNECTED TO FEEDTHRU WRAP THE CONNECTION WITH TEFLON TAPE THEN APPLY HEAT SHRINKABLE TUBING OVER TAPE AND APPLY HEAT TO SHRINK TUBING. THIS IS APPLICABLE TO ALL INTERNAL PROBES, WAIT UNTIL AFTER FINAL BEARING INSPECTION FOR ALL PROBES MOUNTED IN THE PUMP HSG. ASSEMBLY.
- STAMP LETTER DESIGNATION FOR EACH PROXIMITY PROBE NEXT TO ITS APPROPRIATE FEEDTHRU HOLE ON EXTERIOR OF SUMP.
- THE FOLLOWING REVERSE AXIAL SETPOINTS ARE APPLICABLE AT COMMISSIONING BASED ON SHAFT CLEARANCE MEASURED USING THE THRUST MONITOR:
 THE REVERSE AXIAL ALARM SETPOINT IS BASED ON THE MEASURED CLEARANCE PLUS 2 MILS.
 THE REVERSE AXIAL SHUTDOWN SETPOINT IS BASED ON THE MEASURED CLEARANCE PLUS 5 MILS.
- IN ADDITION, THE MEASURED AXIAL CLEARANCE LIMITS ARE .012" TO .019". CONSULT FACTORY SERVICE PRIOR TO ATTEMPTING TO ADJUST THRUST CLEARANCE.



PART NO.	ITEM	QTY.	DESCRIPTION
021-13986	193	3	FLAT HEAD MACH. SCREW NO. 10 X 3/8
028-11179	194	1	HORIZONTAL SPLIT GASKET, 1/32
029-136188	195	1	PUBLICITY NAMEPLATE
064-19603A	207	4	WELD FLANGE
081-07091	208	4	GASKET, 1/16
021-14289	209	16	12 POINT CAP SCREW 7/8 X 5
381-17439D	214	1	PRV ACTUATOR AND HANDWHEEL ASSY.
013-02280	215	.001	SEALER, PST 567
028-12200	216	3	"O" RING, 1-1/8 ID X 1/8 SECT
081-03763A	217	1	PRV COVER GASKET, 1/16
076-17925B	218	2	GAS SEAL RING
064-38015A	219	4	A4 SEAL CLIP
076-04075B	220	2	A4 SEAL RING
076-04019A	221	4	A4 SEAL CLIP
029-14567A	222	20	HELICAL SPRING
013-03056	224	.002	SEALER, 277
029-14568	225	4	INSERT PIN, 1/8 X 1
381-155140008	227	1	DIFFUSER ENTRANCE VANE
064-340140011	228	8	DIFFUSER VANE
081-17433D	229	1	LAST STAGE EXLT PLATE
029-05873	230	1	INSERT PIN 3/8 X 3/4
029-14213	231	2	INSERT PIN 1/2 X 3
021-12317	232	4	12 POINT CAP SCREW 3/4 X 3-1/2
029-08512	233	14	INSERT PIN 1/2 X 1-3/4
021-05274	234	4	HELICAL SPRING LOCKWASHER 3/4
021-13837	235	4	HEX HD. CAP SCREW 1 X 4
381-08247A	237	1	TAGGING INSTRUCTION
013-01678	241	.001	SEALER, THREADLOCKER 243
064-19601A	247	3	WELD FLANGE
081-05935	248	3	GASKET, 1/16
021-11673	249	12	12 POINT CAP SCREW 5/8 X 3-1/2

RECOMMENDED MONITOR SETTINGS

PROBE	ALARM	SHUTDOWN
RADIAL	2.0 MIL	2.4 MIL
AXIAL (FORWARD)	5 MIL	10 MIL
AXIAL (REVERSE)	SEE NOTE 11	SEE NOTE 11

NOTES FOR 3300 NVs SERIES PROBES:

- USE LOCTITE THREADLOCKER 243 (ITEM 241) ON ALL PROBE LOCKING NUTS. MAX. ALLOWABLE TORQUE = 65 IN. LB.
- TIGHTEN PROBE TO FEEDTHRU CONNECTORS HAND TIGHT AND THEN TURN AN ADDITIONAL 1/8 TURN WITH WRENCH.

PART NO.	ITEM	QTY.	DESCRIPTION
021-11654	101	16	12 POINT CAPSCREW, 3/4 X 6
381-126220001	102	1	PISTON RING HOUSING
029-09118A	103	1	STEP SEAL BEV. PISTON RING
021-11505	109	16	12 POINT CAP SCREW, 1/4 X 5/8
076-03919A	110	1	RETAINING COVER
081-05453A	111	1	RETAINING COVER GASKET
081-01375D	112	1	SEAL RING HOUSING
023-04208	113	1	PIPE PLUG, SOCKET 3/4 SQ.
081-05442A	114	1	SEAL RING HOUSING GASKET, 1/32
021-18813	115	16	12 POINT CAP SCREW 1/2 X 5
076-33882A	117	2	DISCH. SHAFT PROBE BRACKET
021-01379	118	4	HEX HEAD CAP SCREW, 1/4 X 3/4
021-05267	119	4	HELICAL SPRING LOCKWASHER, 1/4
025-29380	120	2	DISCHARGE RADIAL PROXIMITY PROBE 3300 NSV
076-46276B	121	1	PROTECTIVE SLEEVE
076-46275A	122	1	MANDREL
025-40030	123	1	DISCHARGE BEARING RTD
064-32682B	124	1	SLEEVE BEARING
029-05700	125	1	INSERT PIN 1/8 X 3/4
029-03990	126	2	INSERT PIN 1/8 X 9/16
029-14038B	127	1	THRUST BEARING
029-23975	129	1	INSERT PIN 3/8 X 1
081-16421B	131	2	OIL PUMP HOUSING GASKET, 1/64
081-16422B	132	6	OIL PUMP HOUSING GASKET, 0.005
081-16420D	133	1	CENTRIFUGAL OIL PUMP
081-16417C	134	1	VOLUTE SEAL RING
081-16414B	135	2	OIL PUMP HOUSING GASKET, .005
081-16419C	136	1	REVERSE THRUST BEARING
029-07177	137	1	INSERT PIN, 1/4 X 3/8
021-11629	138	1	12 POINT CAP SCREW 5/8 X 4
381-16415B	139	1	OIL PUMP HOUSING
021-31851	140	8	12 POINT CAP SCREW 3/4 X 7
021-14108	141	3	12 POINT CAP SCREW 1/4 X 1-1/2
025-29379	142	2	AXIAL PROXIMITY PROBES 3300 NSV
081-16418C	143	1	PUMP COVER
021-18590	144	2	12 POINT CAP SCREW 3/8 X 4
025-09607	145	14	CABLE STRAP
025-32135	149	2	DUAL FEEDTHROUGH
035-00793	150	2	AXIAL PROBE MARKER
021-14613	151	3	TUBE CLAMP 3/16 OD
025-31238	153	1	SINGLE FEEDTHROUGH
025-39984	154	1	RTD FEEDTHROUGH
035-00803	155	1	KEYPHASOR MARKER
025-29386	156	1	KEYPHASOR
023-17899	159	1	ELBOW, 90 DEG. 1/8 NPTI X 1/8 NPTE
023-06807	160	2	CONNECTOR
003-00952	161	4	TUBING
064-36813A	162	1	ADAPTER
023-14681	164	1	PIPE NIPPLE
364-08604L	166	2	OIL ELIMINATOR
081-01848A003	167	1	ORIFICE PLUG
081-17423A002	168	1	SUMP HOUSING
081-05699A	171	1	COMPRESSOR END GASKET 1/32
081-05700A	172	1	COMPRESSOR END GASKET 1/64
064-15948A	173	1	CENTRIFUGAL OIL PUMP CONNECTION
023-08061	174	1	ELBOW, 90 DEG. TUBE SIZE 2 X 2
081-16488B	175	1	JET PUMP BODY
081-05446A	176	1	JET PUMP NOZZLE GASKET 1/16
076-00728B	177	1	JET PUMP NOZZLE
021-11141	178	8	12 POINT CAP SCREW 3/8 X 1-1/4
081-16513C	179	2	SUMP COVER GASKET 1/16
381-16800C	180	1	OIL SUMP COVER
SEE NOTE 4	182	1	DATA NAMEPLATE
029-13570C002	183	1	PATENT NAMEPLATE
081-17424C	187	1	SHAFT SEAL COVER
029-13766C012	188	1	SHAFT SEAL RING
064-30592A	189	1	SPRING RETAINING WASHER
029-13770B005	190	12	SHAFT SEAL SPRING
029-19175A	191	1	WARNING NAMEPLATE
364-30608B	192	1	SEAL RETAINING ASSEMBLY

PART NO.	ITEM	QTY.	DESCRIPTION
381-17425B	1	1	COUPLING GUARD
029-25627	2	1	RIVERHAWK COUPLING
021-11686	4	52	HEX HEAD CAP SCREW 1-1/8 X 4-1/2
021-11192	5	43	HEX HEAD CAP SCREW 1-1/8 X 4
021-08948	7	18	DRIVE SCREW NO. 4 X 5/16 LG.
029-13187A	8	1	ROTATIONAL NAMEPLATE
381-17602D	9	1	PRV DEVICE
081-05698A	10	2	COMPRESSOR END GASKET 1/16
381-17416D	11	1	CASING
021-13334	12	6	12 POINT CAP SCREW 1/2 X 1-1/4
021-11933	16	12	12 POINT CAP SCREW 1/2 X 1-1/2
081-17423A003	17	1	PRV HOUSING
081-05437B003	18	2	SHAFT SEAL GASKET, 1/16" THICK
081-05437B002	19	2	SHAFT SEAL GASKET, 1/32" THICK
081-05437B001	20	2	SHAFT SEAL GASKET, 1/64" THICK
081-17423A001	21	1	BEARING HOUSING
021-15645	22	12	12 POINT CAP SCREW 7/8 X 4
029-03989	23	2	INSERT PIN, 1/4 X 5/8
081-05455A	24	1	A4 SEAL SLEEVE GASKET
081-05454A	25	1	PRV SLEEVE GASKET, 1/16
081-02463C	26	1	SHAFT SEAL COLLAR
028-13705	27	2	O-RING, 4-1/4 ID X 3/16 SECT
029-04545	28	2	INSERT PIN 3/16 X 7/16
029-08213	29	1	RETAINING RING
029-05700	30	1	INSERT PIN 1/8 X 3/4
081-17434C	31	1	SLEEVE BEARING
064-38662D	33	1	PRV SLEEVE
023-04208	35	1	PIPE PLUG 3/4 NPT
064-14230A	37	4	GUIDE ROD
021-11741	38	12	12 POINT CAP SCREW, 1/4 X 3/4
064-38659B	39	1	RETAINING SLEEVE
081-05439A	40	1	RETAINING SLEEVE GASKET
023-02174	47	2	UNION, 3/4 NPTI
025-42814	48	1	SUCTION BEARING RTD
023-14661	49	2	PIPE NIPPLE, 3/4 X 3
081-05240A	50	1	ADAPTER
025-29381	52	2	SUCTION RADIAL PROXIMITY PROBE 3300 NSV
021-14613	53	18	TUBE CLAMP, 3/16 OD
021-03745	54	17	PAN HEAD MACH. SCREW, NO.10-24 X 3/8
025-32136	55	1	SUCTION DUAL FEEDTHROUGH
035-00800	56	2	HORIZONTAL PROBE MARKER
035-00814	57	2	VERTICAL PROBE MARKER
076-46261B	58	1	PROTECTIVE SLEEVE
076-46260A	59	1	MANDREL
064-12756C024	67	1	RETAINING RING
064-16897D022	68	1	LABYRINTH SEAL RING
064-16976	69	4	ANTI-ROTATION DISK
064-16898D017	70	1	LABYRINTH SEAL RING
064-16898D017	71	1	LABYRINTH SEAL RING
064-16898D018	72	1	LABYRINTH SEAL RING
064-16898D018	73	1	LABYRINTH SEAL RING
064-18170C	78	4	SHAFT LABYRINTH
381-17417E	79	1	ROTOR
381-17429D	80	1	DIFFUSER
381-17430D	81	1	DIFFUSER
381-17431D	82	1	DIFFUSER
381-17432D	83	1	DIFFUSER
029-25320	87	2	COLLAR
081-17415	88	2	INTERNAL EQUALIZING LINE
064-13663A	89	12	INTERNAL EQUALIZING WASHER
029-08386	90	6	TWO PIECE CONTRACTING RING
029-08337	91	6	INTERNAL RETAINING RING
029-08250B	92	6	UNIVERSAL SPRING
064-17311A	93	6	RETAINING WASHER
064-38119C071	94	1	BALANCE PISTON SEAL RING
029-04988	95	1	INSERT PIN 3/8 X 1-1/8
064-38123C068	96	1	BALANCE PISTON SPRING WASHER
064-11565D068	97	1	BALANCE PISTON COVER
021-11190	98	16	HEX HEAD CAP SCREW 1/2 X 2
021-05271	99	32	HELICAL SPRING LOCKWASHER 1/2

REV. NO.	DATE	REVISION RECORD	CHG. NO.	DR.	CK.	REV. NO.	DATE	REVISION RECORD	CHG. NO.	DR.	CK.	REV. NO.	DATE	REVISION RECORD	CHG. NO.	DR.	CK.
-	NEW		0908														
A	04-30-09	ITEM 9 WAS 381-16520D.	3609														
B	09-02-09	ADDED * TO ITEMS 219 & 221.	3540														
C	12-02-09	ADDED NOTE II: REMOVED AXIAL REVERSE SETTINGS AT B-4.	3591														
			3623														

YORK INTERNATIONAL CORPORATION
YORK, PA. 17405

COMPR., TURBO
555 RIVERHAWK CPLG.
MULTI-STAGE

MATERIAL
TYPE _____ ENG. STD. _____
PART NO. _____
CUT SIZE _____

NAME: DR. B. KNAUB DATE: 01-15-09
APPR. A. WOTTO DATE: 02-25-09
SCALE: N.T.S.

SIZE: **D** CAGE NO: **66935** DRAWING NUMBER: **381-17401-000**

WT. = _____ LBS. ORIG. NO. 381-17401D SHEET 2 OF 2

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DIMENSIONS ARE IN INCHES DO NOT SCALE TOLERANCES PER ENG. STD. M-282 WELDING PER ENG. STD. M-30 REF. DWG.

CS. 08-177539 COMPR. 381-17401.SHT2