

NOTICE: WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A GOVERNMENT-RELATED GOVERNMENT RESPONSIBILITY, THE USER ASSUMES ALL LIABILITY FOR ANY AND ALL SUCH USES. THE GOVERNMENT MAKES NO WARRANTY OR REPRESENTATION, AND ACCEPTS NO LIABILITY FOR ANY AND ALL SUCH USES. THE GOVERNMENT WILL NOT BE RESPONSIBLE FOR ANY AND ALL SUCH USES. THE GOVERNMENT WILL NOT BE RESPONSIBLE FOR ANY AND ALL SUCH USES. THE GOVERNMENT WILL NOT BE RESPONSIBLE FOR ANY AND ALL SUCH USES.

EAR 99 - NO LICENSE REQUIRED.
 THE INFORMATION CONTAINED IN THIS DOCUMENT IS TECHNICAL IN CONTENT, BUT NOT TECHNICAL DATA AS DEFINED BY THE INTERNATIONAL TRADE IN ARMS REGULATIONS (ITAR) ON THE EXPORT OF TECHNICAL DATA AND INFORMATION. IT IS THE PROPERTY OF NASA AND IS LOANED TO YOUR AGENCY. IT IS TO BE REPRODUCED AND TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT PERMISSION IN WRITING FROM NASA. THIS DOCUMENT IS THE PROPERTY OF NASA AND IS LOANED TO YOUR AGENCY. IT IS TO BE REPRODUCED AND TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT PERMISSION IN WRITING FROM NASA.

NOTES:

GENERAL

- 1A. REMOVE SCALE AND BURRS AND BREAK SHARP CORNERS AND EDGES.
- 1B. THE INNER SURFACES OF THE HOSE ASSEMBLY SHALL BE CLEANED IN ACCORDANCE WITH KSC-C-123, OR ASTM G 93, OR ISO 14952, OR CGA G-4.1. CLEAN LEVEL TO BE LEVEL 300A. CGA G-4.1 SHALL HAVE A PARTICULATE LEVEL OF 300 AS SPECIFIED IN KSC-123, TABLE 1, MAXIMUM NVR LEVEL OF 1.0 mg/0.1m². CLEANING IS FOR OXYGEN SERVICE.
- 1C. MAXIMUM ALLOWABLE WORKING PRESSURE (MAWP): 100 PSIG, BURST PRESSURE: 400 PSIG OPERATING TEMPERATURE RANGE: -423 TO 150 F
- 1D. THE MINIMUM CENTERLINE DYNAMIC BEND RADIUS SHALL BE NO GREATER THAN 21 INCHES. THE MINIMUM CENTERLINE STATIC BEND RADIUS SHALL BE NO GREATER THAN 11 INCHES.
- 1E. THE FLEXIBLE HOSE ASSEMBLY SHALL BE FABRICATED AND TESTED IN ACCORDANCE WITH ASME B31.3 PARAGRAPH 304.7.2 (c) OR (d). PARAGRAPH 304.7.2(e) SHALL NOT BE USED TO QUALIFY THE FLEXIBLE HOSE OR CONVOLUTE SECTIONS.

MATERIAL

- 2A. FLANGES SHALL BE PER ASME B16.5 WITH CONCENTRICALLY SERRATED RAISED FACES PER MSS-SP-6. MATERIAL SHALL BE PER ASTM A182 GRADE F316L.
- 2B. PIPE SHALL BE PER ASME B36.19M. MATERIAL SHALL BE SEAMLESS PER ASTM A312 GRADE TP316L.
- 2C. PIPE FITTINGS SHALL BE PER ASME B16.9. MATERIAL SHALL BE PER ASTM A403 GRADE WP316L CLASS S OR WX.
- 2D. FLEXIBLE HOSE SHALL BE CLOSE PITCH ANNULAR CONVOLUTIONS. MATERIAL SHALL BE PER ASTM A240 GRADE 316L.
- 2E. BRAID MATERIAL SHALL BE PER ASTM A580 GRADE 316L.
- 2F. REMAINING MATERIALS SHALL BE 316L STAINLESS STEEL AND SHALL MEET THE REQUIREMENTS OF ASME B31.3.

WELDING

- 3A. ALL WELDS SHALL BE PER AWS D17.1, CLAUSE (SECTION) 9, PARAGRAPH 9.1, OPTION 2, AND ASME B31.3 INSPECTION SHALL BE PER AWS D17.1, CLAUSE (SECTION) 9, PARAGRAPH 9.2.4, SEVERE CYCLIC CONDITIONS.
- 3B. ALL WELDS SHALL MEET THE REQUIREMENTS FOR LOW TEMPERATURE TOUGHNESS (IMPACT TEST) IN ACCORDANCE WITH ASME B31.3, PARA. 323.2.2 TO -423 DEGREES FAHRENHEIT.
- 3C. PIPE TO FLEXIBLE HOSE TRANSITION AND WELDS SHALL BE PER THE FABRICATOR'S STANDARD PRACTICE.
- 3D. WELDS AND HEAT AFFECTED AREAS SHALL BE PASSIVATED PER ASTM A967.

TESTING

- 4A. TESTING SHALL BE CONDUCTED IN ORDER SHOWN BELOW.
- 4B. THE ASSEMBLY SHALL BE COLD SHOCKED WITH LN2 BY FILLING OR SUBMERSION ALLOWING ASSEMBLY TO COLD-SOAK FOR 1 HOUR.
- 4C. THE ASSEMBLY SHALL BE HYDROSTATICALLY TESTED USING FILTERED WATER AT A MINIMUM OF 150% OF THE DESIGN PRESSURE AT COINCIDENT TEMPERATURE IN ACCORDANCE WITH ASME B31.3. THE CONTRACTOR SHALL SUBMIT PROPER DOCUMENTATION OF ALL HYDROSTATIC TESTING.
- 4D. THE ASSEMBLY SHALL BE LEAK TESTED USING A HELIUM MASS SPECTROMETER LEAK DETECTOR (HMSLD). LEAKAGE NOT TO EXCEED 10E-6 STD-CC/SEC AND SENSITIVE TO 10E-6 STD-CC/SEC.

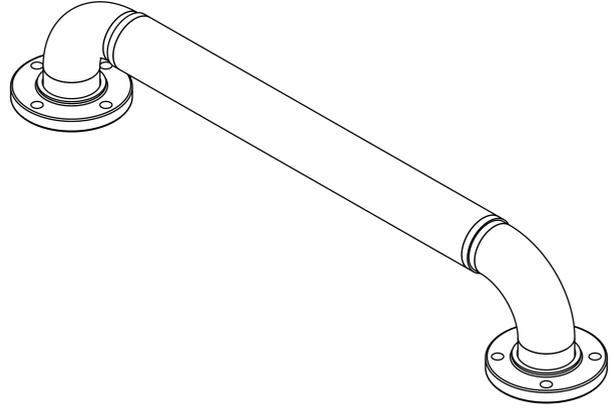
MARKING

- 5A. ELECTROCHEMICAL ETCH (TYPE II), ENGRAVE (TYPE VII), OR LASER ENGRAVE (TYPE VIII) PART NUMBER PART NUMBER:1, USING .12 INCH MINIMUM CHARACTER PER PROVISIONS IN MIL-STD-792 AND THE GENERAL REQUIREMENTS (PARAGRAPH 3.1) AND QUALITY ASSURANCE PROVISIONS (PARAGRAPH 4) OF KSC-STD-E-0015. AT A MINIMUM, THE FOLLOWING INFORMATION SHALL BE INCLUDED:
 MANUFACTURERS NAME
 CONTRACT NUMBER
 SERIAL NUMBER
 DESIGN PRESSURE
 TEST PRESSURE
 TEST DATE
 SERVICE
 YEAR BUILT
 TEMPERATURE RANGE
 WEIGHT

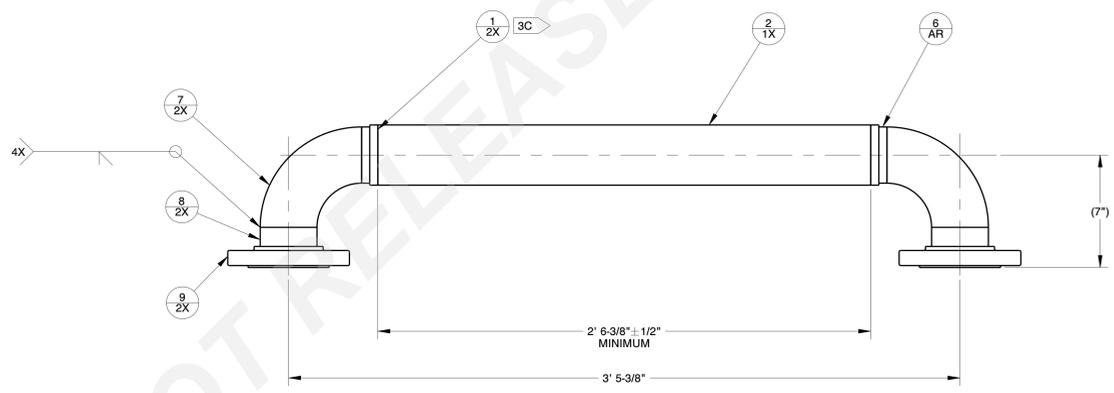
ASSEMBLY

- 6A. FLEX HOSE SHALL BE DELIVERED CAPED USING PARTS LISTED IN TABLE I BELOW. SEALING SURFACE PARTS SHALL BE CLEANED PER NOTE 1B.
- 6B. LUBRICATE TUBE FITTING THREADS PER KSC-SPEC-Z-0009 WITH KRYTOX 240AC, BRAYCOTE 601, BRAYCOTE 615Z OR KSC DESIGN ENGINEERING APPROVED EQUAL FROM QPL-26717.
- 6C. 76K04886 PER ASME B16.21 NONMETALLIC GASKETS SHALL ONLY BE USED TO SEAL THE BLIND FLANGES FOR STORAGE AND TRANSPORT.
- 6D. FLANGE TORQUE VALUES SHALL BE 60 +/- 6 FT-LBS

TABLE I		
QTY	PART NUMBER	DESCRIPTION
16	AEW26X62N000SE4A11	WASHER, TYPE B, NARROW, 5/8, STAINLESS STEEL
2	KT00380-150FL03D000	GASKET, CLASS 150, B16.21
2	KT00114-150SS03D00	FLANGE, BLIND, B16.5, CLASS 150
16	76K04876-10	NUT, HEX
8	76K04875-1015-10	0.825X4.25 STUD ASTM A320



ISOMETRIC



QTY	ZONE	TRD NO OR ITEM NO	MFR CODE	PART OR STOCK NO	DESCRIPTION
2		9	22264	KT00116-150SS03D00	FLANGE, LAP JOINT, B16.5, CLASS 150
2		8	22264	KT00112-10SS03D00	STUB END, SHORT, B16.9, SCHED 10
2		7	22264	KT00104-10SS03D00	ELBOW, 90 DEG, LG RAD, ASME B16.9
2		6	22264	KT00378-03D0010S4	PIPE 3 NPS, SCHED 10
1		2	22264	K0000094325-P002	FLEXIBLE HOSE, 3 INCH
2		1	22264	K0000094325-P001	PIPE TO HOSE TRANSITION, 3 INCH

CAD MAINTAINED. CHANGES SHALL BE INCORPORATED ONLY BY THE DESIGN ACTIVITY. SOFTWARE: CREO PARAMETRIC 2.0 PICTURE: K0000094325D MATERIAL: K0000102542 UPSS DTS K0000094364 UPSS DTS NOTED: NEXT ASSY USED ON APPLICATION FINISH/TREATMENT: NONE FINISH/PROTECTIVE FINISH: NOTED	UNLESS OTHERWISE SPECIFIED DIM ARE IN INCHES. INTERPRET DIM AND TOL PER ASME Y14.5-2009. TOLERANCES ON: FRACTIONS DECIMALS ANGLES ± .1/16 1 PL ± .1 1 PL ± .1 ± .010 2 PL ± .03 3 PL ± .010	ORIGINAL DATE OF DRAWING (YYYYMMDD) 2014/12/22 DESIGNED BY: D. C. STANIFER CHECKED BY: J. T. POLLOCK ENGINEER: J. R. WILLIAMS DRAFTER: D. A. REWINKEL DIMENSIONER: J. J. BEAHN SUBMITTED BY: J. G. GADDONE APPROVED BY: E. A. THAXTON	JOHN F. KENNEDY SPACE CENTER, NASA KENNEDY SPACE CENTER, FLORIDA FLEX HOSE SIZE: E CAGE CODE: 22264 DWS NO: K0000094325 REV: - SCALE: 250 NET WEIGHT: 19.41 SHEET: 1 OF 1
		THIRD ANGLE PROJECTION 	

K0000094325D (FLEX HOSE DRAWING)

Document Number: K0000094325D
Version: -
Name: FLEX HOSE DRAWING
Type: Drawing
Container: UPSS Development Test Site Product
State: In Work
Modified By: Jeffrey R. Williams
Modified On: Thu, May 28, 2015 13:59:49 EDT
Change Requests:
Affected PMNs:

Maturity History

Version	State	Promoted By	Promoted On
-.1	In Work	Daniel Stanifer	Mon, Dec 22, 2014 15:48:25 EST

KDDMS Routing History

CN/CT Number	Task	Assignee	Role	Events	Comment	Started	Completed
0 records found							