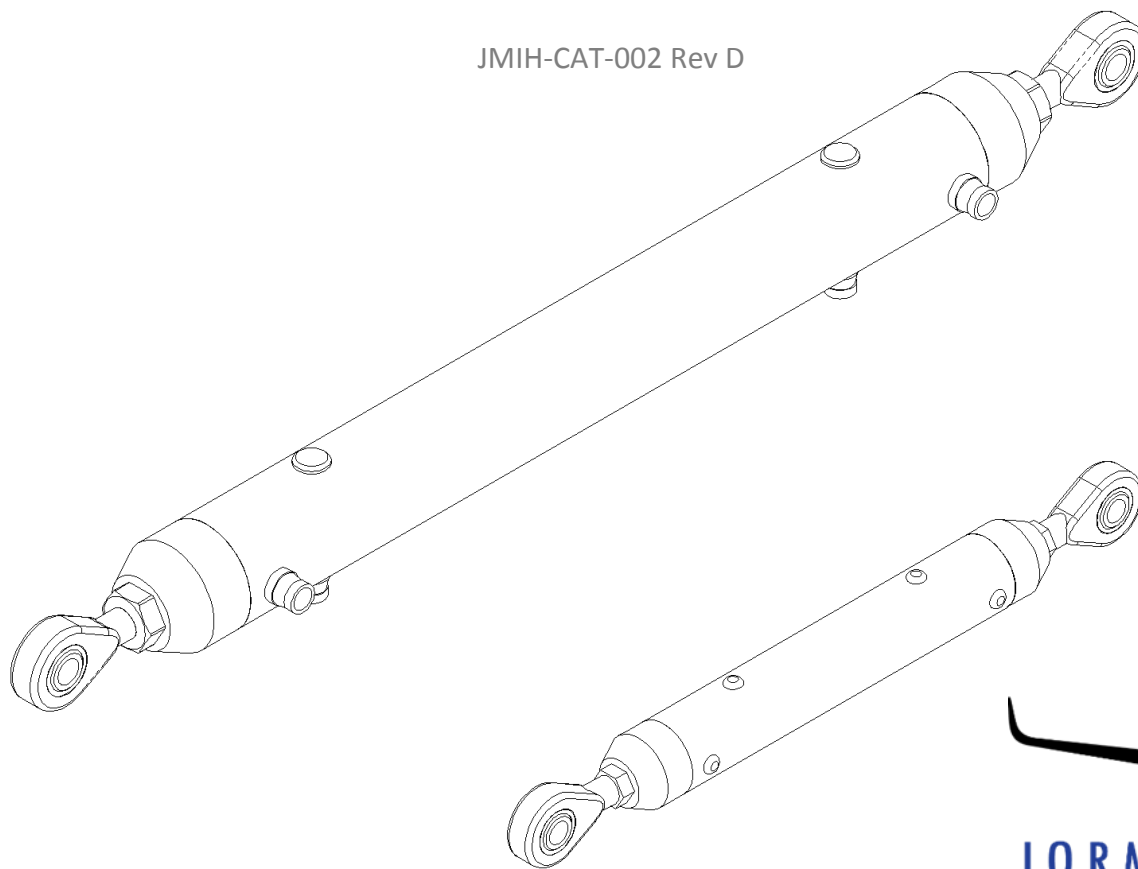




# TIE-ROD ASSEMBLY

## HARDWARE CATALOG

JMIH-CAT-002 Rev D



11221 69th STREET NORTH  
LARGO, FL 33773-5504  
727-549-9600

2670 EDMONDS LN #100  
LEWISVILLE, TX 75067-6728  
972-436-7069

JORMAC.COM



**JORMAC AEROSPACE**



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**TABLE I : Quick Select**

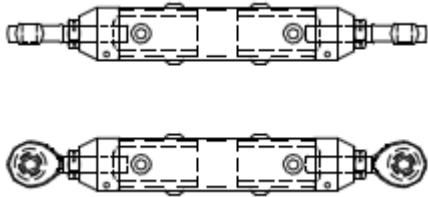
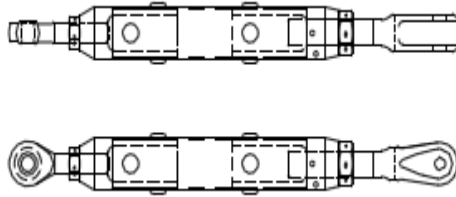
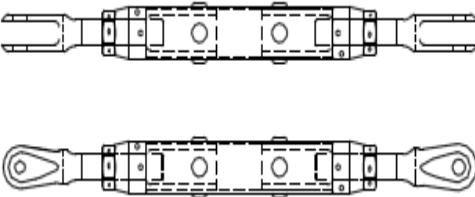
BORE DIA				
L/H	R/H	Rod End / Rod End	Rod End / Clevis End	Clevis End / Clevis End
1/4"	1/4"	TABLE B (Ø 1.0) (Pg3)	TABLE F (Ø 1.0) (Pg7)	TABLE K (Ø 1.0) (Pg11) TABLE T (Ø1.5) (Pg17)
1/4"	5/16"		TABLE G (Ø 1.0) (Pg8)	TABLE L (Ø 1.0) (Pg12) TABLE U (Ø1.5) (Pg18)
5/16"	1/4"	TABLE C (Ø 1.0) (Pg4)	TABLE H (Ø 1.0) (Pg9) TABLE P (Ø1.5) (Pg15)	
5/16"	5/16"	TABLE D (Ø 1.0) (Pg5) TABLE N (Ø1.5) (Pg14)	TABLE J (Ø 1.0) (Pg10) TABLE R (Ø1.5) (Pg16)	TABLE M (Ø 1.0) (Pg13) TABLE V (Ø1.5) (Pg19)
5/16"	3/8"	TABLE E (Ø 1.0) (Pg6)		



FIGURE 1. PART NUMBERING SYSTEM

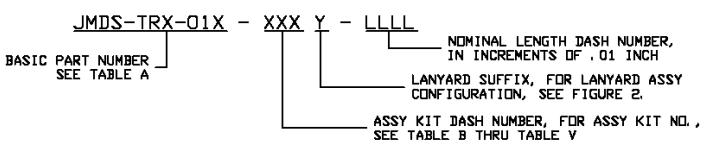
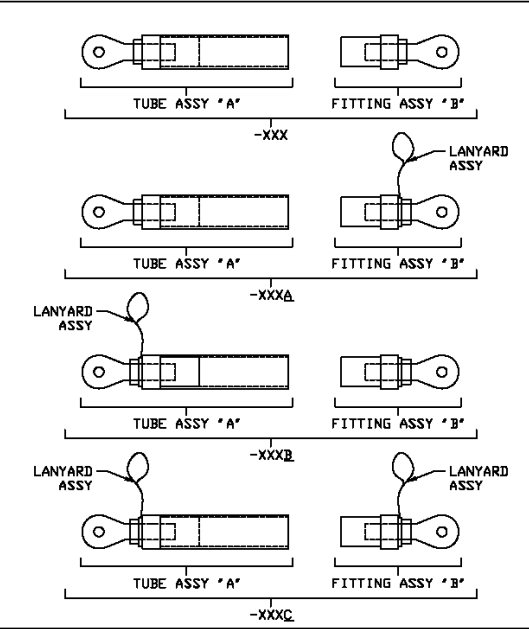
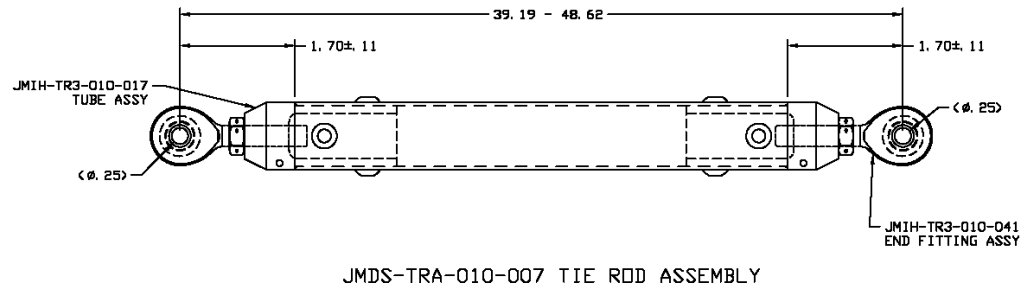


TABLE A
BASIC PART NUMBER (JMDS-TRX-01X)
JMDS-TRA-010
JMDS-TRB-010
JMDS-TRC-010
JMDS-TRC-015

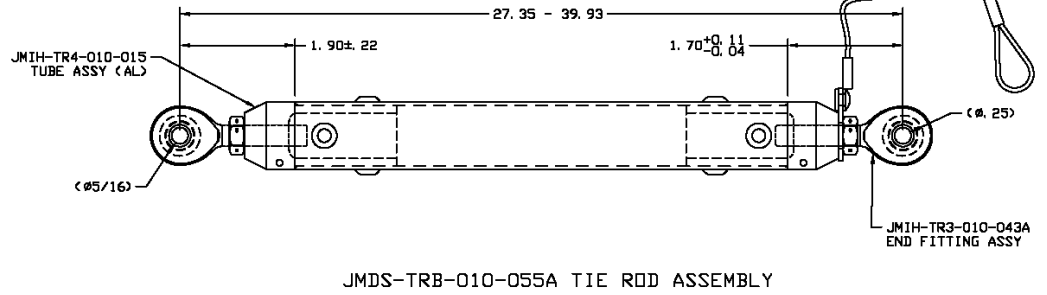
FIGURE 2: LANYARD SUFFIX (Y) FOR LANYARD ASSY CONFIGURATION



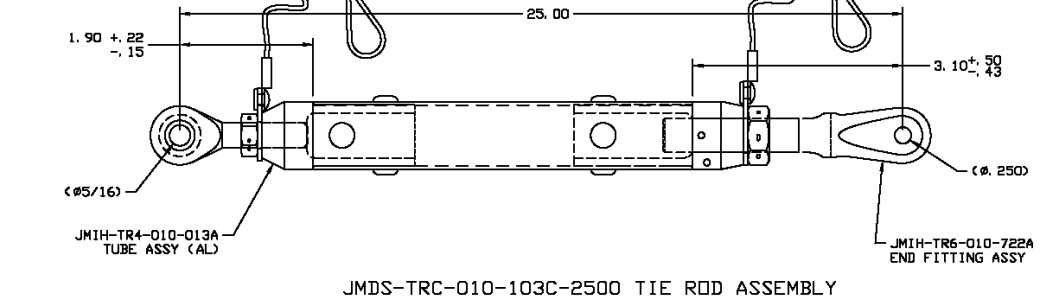
EXAMPLE 1:



EXAMPLE 2:

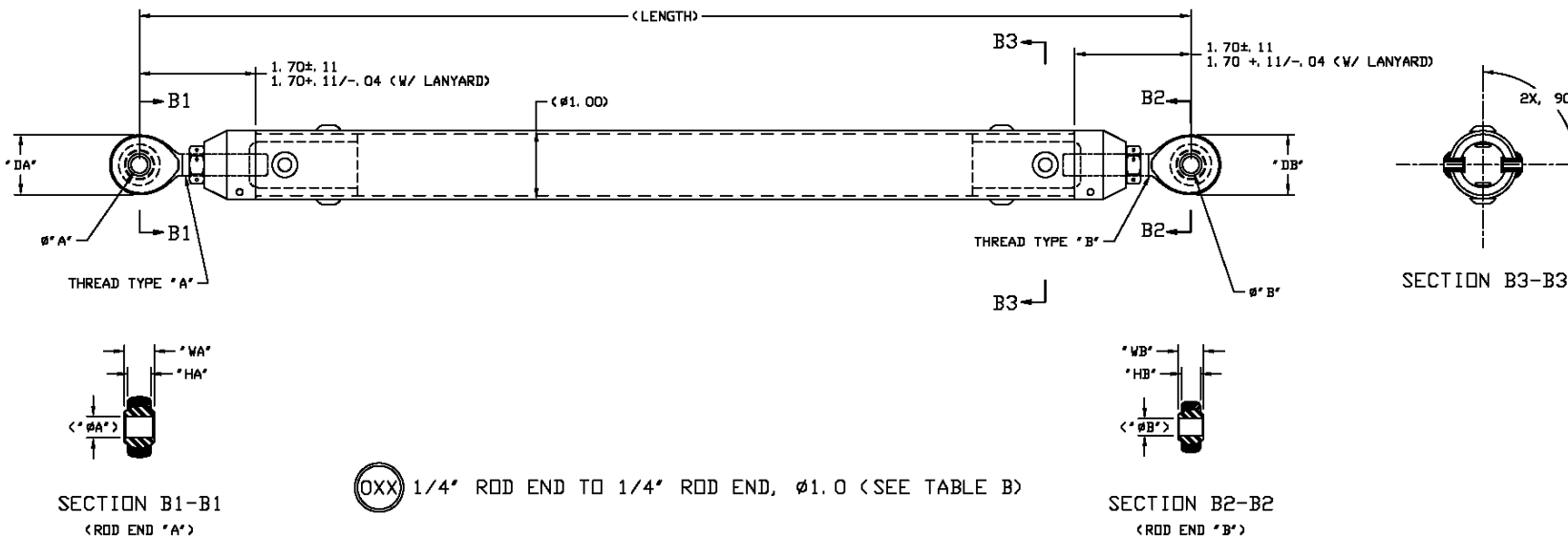


EXAMPLE 3:



# JMDS-TRA-010

JMIH-CAT-002 Rev D



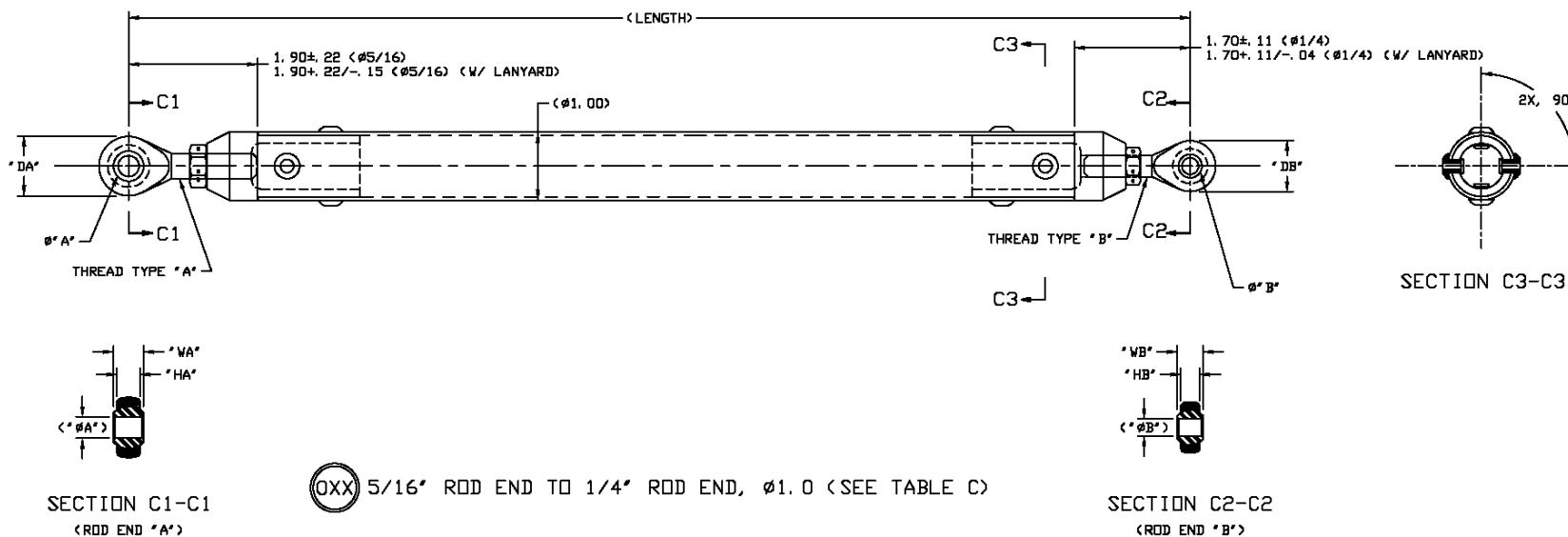
ASSY KIT (XXYY) ■■	NOMINAL LENGTH DASH NUMBER (LLLL)	BORE $\phi$ 'A'	BALL WIDTH 'WA'	HOUSING WIDTH 'HA'	HEAD DIA. 'DA'	THREAD TYPE 'A'	BORE $\phi$ 'B'	BALL WIDTH 'WB'	HOUSING WIDTH 'HB'	HEAD DIA. 'DB'	THREAD TYPE 'B'	TIE ROD LENGTH (IN) , TUBE MATL	TENSION (LBF)	COMPRESSION (LBF)
JMDS-TRA-010-001	0647-1540											■ 6.25-15.62, (ALUMINUM TUBING)	3600	3600
JMDS-TRA-010-003	1541-2740	1/4	(.375)	(.281)	(.885 MAX.)	(R/H)	1/4	(.375)	(.281)	(.885 MAX.)	(L/H)	■ 15.19-27.62, (ALUMINUM TUBING)		1710
JMDS-TRA-010-005	2741-3940	$\pm .0015$ $- .0008$	$\pm .000$ $- .005$	$\pm .005$ $- .005$			$\pm .0015$ $- .0008$	$\pm .000$ $- .005$	$\pm .005$ $- .005$			■ 27.19-39.62, (ALUMINUM TUBING)		840
JMDS-TRA-010-007	3941-4840											■ 39.19-48.62, (ALUMINUM TUBING)		560
JMDS-TRA-010-009	0647-1540											■ 6.25-15.62, (ALUMINUM TUBING)	3600	3600
JMDS-TRA-010-011	1541-2740	1/4	(.375)	(.281)	(.885 MAX.)	(R/H)	1/4	(.375)	(.281)	(.885 MAX.)	(L/H)	■ 15.19-27.62, (ALUMINUM TUBING)		1710
JMDS-TRA-010-013	2741-3940	$\pm .0015$ $- .0008$	$\pm .000$ $- .005$	$\pm .005$ $- .005$			$\pm .0015$ $- .0008$	$\pm .000$ $- .005$	$\pm .005$ $- .005$			■ 27.19-39.62, (ALUMINUM TUBING)		840
JMDS-TRA-010-015	3941-4840											■ 39.19-48.62, (ALUMINUM TUBING)		560
JMDS-TRA-010-023	0647-1540											■ 6.25-15.62, (STEEL TUBING)	5000	5000
JMDS-TRA-010-025	1541-2740	1/4	(.375)	(.281)	(.885 MAX.)	(R/H)	1/4	(.375)	(.281)	(.885 MAX.)	(L/H)	■ 15.19-27.62, (STEEL TUBING)		4470
JMDS-TRA-010-027	2741-3940	$\pm .0015$ $- .0008$	$\pm .000$ $- .005$	$\pm .005$ $- .005$			$\pm .0015$ $- .0008$	$\pm .000$ $- .005$	$\pm .005$ $- .005$			■ 27.19-39.62, (STEEL TUBING)		2300
JMDS-TRA-010-028	3941-5940											■ 39.19-59.62, (STEEL TUBING)		1030
JMDS-TRA-010-029	0647-1540											■ 6.25-15.62, (STEEL TUBING)	5000	5000
JMDS-TRA-010-031	1541-2740	1/4	(.375)	(.281)	(.885 MAX.)	(R/H)	1/4	(.375)	(.281)	(.885 MAX.)	(L/H)	■ 15.19-27.62, (STEEL TUBING)		4470
JMDS-TRA-010-033	2741-3940	$\pm .0015$ $- .0008$	$\pm .000$ $- .005$	$\pm .005$ $- .005$			$\pm .0015$ $- .0008$	$\pm .000$ $- .005$	$\pm .005$ $- .005$			■ 27.19-39.62, (STEEL TUBING)		2300
JMDS-TRA-010-035	3941-5940											■ 39.19-59.62, (STEEL TUBING)		1030

\* JMDS-TRA-010-OXXA MINIMUM TIE ROD LENGTH IS INCREASED BY  $\pm .07$ .  
 JMDS-TRA-010-OXXC MINIMUM TIE ROD LENGTH IS INCREASED BY  $\pm .14$ .  
 \*\* JMDS-TRA-010 DOES NOT CONTAIN LANYARD SUFFIX B AS BOTH ENDS ARE THE SAME AS SUFFIX A.



# JMDS-TRB-010

JMIH-CAT-002 Rev D



(QXX) 5/16" ROD END TO 1/4" ROD END, Ø1.0 (SEE TABLE C)

TABLE C														
ASSY KIT (XXXY)	NOMINAL LENGTH DASH NUMBER (LLLL)	BORE Ø "A"	BALL WIDTH "VA"	HOUSING WIDTH "HA"	HEAD DIA. "DA"	THREAD TYPE "A"	BORE Ø "B"	BALL WIDTH "VB"	HOUSING WIDTH "HB"	HEAD DIA. "DB"	THREAD TYPE "B"	DESCRIPTION TIE ROD LENGTH (IN) , TUBE MATL	TENSION (LBF)	COMPRESSION (LBF)
JMDS-TRB-010-001	0667-1560	5/16	<math>(.437)</math>	<math>(.344)</math>	<math><1.010</math> MAX)	<math>\langle R/LH\rangle</math>	1/4	<math>(.375)</math>	<math>(.281)</math>	<math>(.885</math> MAX)	<math>\langle L/RH\rangle</math>	* 6.34-15.93, (ALUMINUM TUBING)	3600	3600
JMDS-TRB-010-003	1561-2760											* 15.28-27.93, (ALUMINUM TUBING)		1680
JMDS-TRB-010-005	2761-3960											* 27.28-39.93, (ALUMINUM TUBING)		830
JMDS-TRB-010-007	3961-4860											* 39.28-48.93, (ALUMINUM TUBING)		550
JMDS-TRB-010-051	0667-1560	5/16	<math>(.437)</math>	<math>(.344)</math>	<math><1.010</math> MAX)	<math>\langle R/LH\rangle</math>	1/4	<math>(.375)</math>	<math>(.281)</math>	<math>(.885</math> MAX)	<math>\langle R/LH\rangle</math>	* 6.34-15.93, (ALUMINUM TUBING)	3600	3600
JMDS-TRB-010-053	1561-2760											* 15.28-27.93, (ALUMINUM TUBING)		1680
JMDS-TRB-010-055	2761-3960											* 27.28-39.93, (ALUMINUM TUBING)		830
JMDS-TRB-010-057	3961-4860											* 39.28-48.93, (ALUMINUM TUBING)		550
JMDS-TRB-010-101	0667-1560	5/16	<math>(.437)</math>	<math>(.344)</math>	<math><1.010</math> MAX)	<math>\langle R/LH\rangle</math>	1/4	<math>(.375)</math>	<math>(.281)</math>	<math>(.885</math> MAX)	<math>\langle L/RH\rangle</math>	* 6.34-15.93, (STEEL TUBING)	5000	5000
JMDS-TRB-010-103	1561-2760											* 15.28-27.93, (STEEL TUBING)		4420
JMDS-TRB-010-105	2761-3960											* 27.28-39.93, (STEEL TUBING)		2270
JMDS-TRB-010-107	3961-4860											* 39.28-59.93, (STEEL TUBING)		1020
JMDS-TRB-010-151	0667-1560	5/16	<math>(.437)</math>	<math>(.344)</math>	<math><1.010</math> MAX)	<math>\langle R/LH\rangle</math>	1/4	<math>(.375)</math>	<math>(.281)</math>	<math>(.885</math> MAX)	<math>\langle R/LH\rangle</math>	* 6.34-15.93, (STEEL TUBING)	5000	5000
JMDS-TRB-010-153	1561-2760											* 15.28-27.93, (STEEL TUBING)		4420
JMDS-TRB-010-155	2761-3960											* 27.28-39.93, (STEEL TUBING)		2270
JMDS-TRB-010-157	3961-4860											* 39.28-59.93, (STEEL TUBING)		1020

\* JMDS-TRB-010-XXXX/-XXXB MINIMUM TIE ROD LENGTH IS INCREASED BY +.07.  
 JMDS-TRB-010-XXXC MINIMUM TIE ROD LENGTH IS INCREASED BY +.14.

# JMDS-TRB-010

JMIH-CAT-002 Rev D

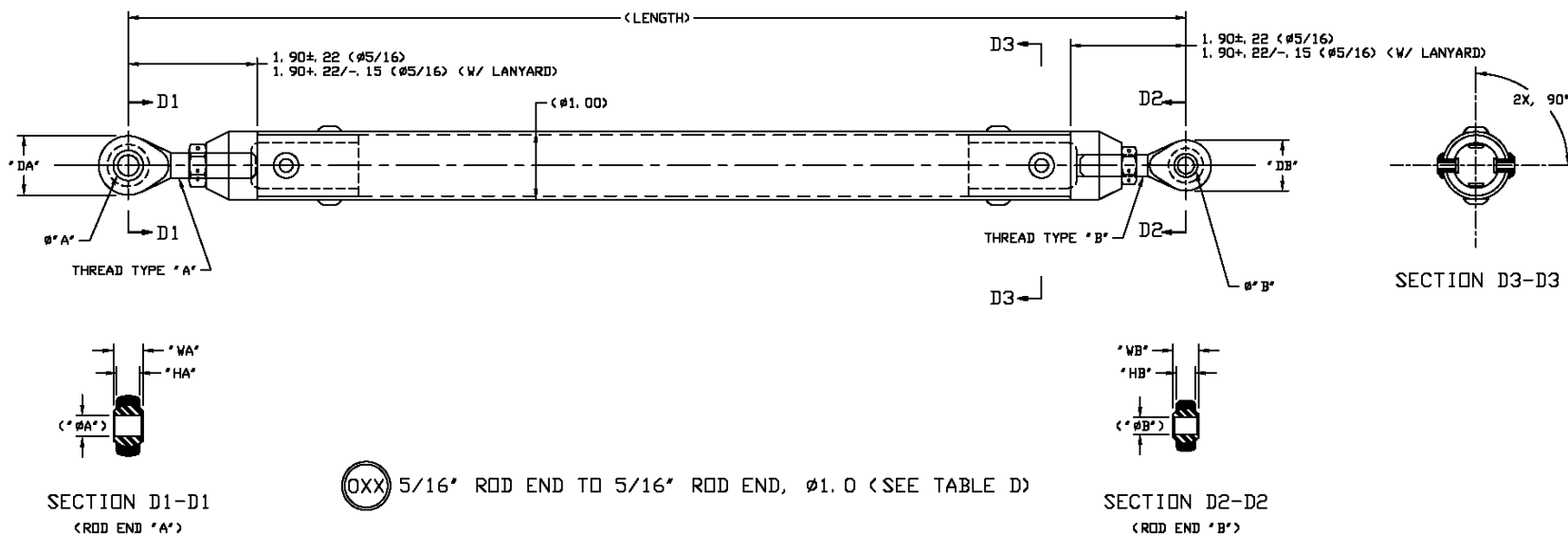


TABLE D

ASSY KIT <math>\langle</math> XXXY <math>\rangle</math>	NOMINAL LENGTH DASH NUMBER <math>\langle</math> LLLL <math>\rangle</math>	BORE $\phi$ 'A'	BALL WIDTH 'WA'	HOUSING WIDTH 'HA'	HEAD DIA. 'DA'	THREAD TYPE 'A'	BORE $\phi$ 'B'	BALL WIDTH 'WB'	HOUSING WIDTH 'HB'	HEAD DIA. 'DB'	THREAD TYPE 'B'	DESCRIPTION TIE ROD LENGTH (IN) , TUBE MATL	TENSION (LBF)	COMPRESSION (LBF)
JMDS-TRB-010-021	0687-1580											* 6. 43-16. 24, <math>\langle</math> ALUMINUM TUBING <math>\rangle</math>		3600
JMDS-TRB-010-023	1581-2780	5/16	<math>\langle</math> .437 <math>\rangle</math>	<math>\langle</math> .344 <math>\rangle</math>	<math>\langle</math> 1.010 <math>\rangle</math> MAX	<math>\langle</math> R/LH <math>\rangle</math>	5/16	<math>\langle</math> .437 <math>\rangle</math>	<math>\langle</math> .344 <math>\rangle</math>	<math>\langle</math> 1.010 <math>\rangle</math> MAX	<math>\langle</math> L/RH <math>\rangle</math>	* 15. 37-28. 24, <math>\langle</math> ALUMINUM TUBING <math>\rangle</math>	3600	1630
JMDS-TRB-010-025	2781-3980	$\pm .0015$ $- .0005$	$\pm .000$ $- .000$	$\pm .000$ $- .000$			$\pm .0015$ $- .0005$	$\pm .000$ $- .000$	$\pm .000$ $- .000$			* 27. 37-40. 24, <math>\langle</math> ALUMINUM TUBING <math>\rangle</math>		800
JMDS-TRB-010-027	3981-4880											* 39. 37-49. 24, <math>\langle</math> ALUMINUM TUBING <math>\rangle</math>		530
JMDS-TRB-010-071	0687-1580											* 6. 43-16. 24, <math>\langle</math> ALUMINUM TUBING <math>\rangle</math>		3600
JMDS-TRB-010-073	1581-2780	5/16	<math>\langle</math> .437 <math>\rangle</math>	<math>\langle</math> .344 <math>\rangle</math>	<math>\langle</math> 1.010 <math>\rangle</math> MAX	<math>\langle</math> R/LH <math>\rangle</math>	5/16	<math>\langle</math> .437 <math>\rangle</math>	<math>\langle</math> .344 <math>\rangle</math>	<math>\langle</math> 1.010 <math>\rangle</math> MAX	<math>\langle</math> R/LH <math>\rangle</math>	* 15. 37-28. 24, <math>\langle</math> ALUMINUM TUBING <math>\rangle</math>	3600	1630
JMDS-TRB-010-075	2781-3980	$\pm .0015$ $- .0005$	$\pm .000$ $- .000$	$\pm .000$ $- .000$			$\pm .0015$ $- .0005$	$\pm .000$ $- .000$	$\pm .000$ $- .000$			* 27. 37-40. 24, <math>\langle</math> ALUMINUM TUBING <math>\rangle</math>		800
JMDS-TRB-010-077	3981-4880											* 39. 37-49. 24, <math>\langle</math> ALUMINUM TUBING <math>\rangle</math>		530
JMDS-TRB-010-121	0687-1580											* 6. 43-16. 24, <math>\langle</math> STEEL TUBING <math>\rangle</math>		5000
JMDS-TRB-010-123	1581-2780	5/16	<math>\langle</math> .437 <math>\rangle</math>	<math>\langle</math> .344 <math>\rangle</math>	<math>\langle</math> 1.010 <math>\rangle</math> MAX	<math>\langle</math> R/LH <math>\rangle</math>	5/16	<math>\langle</math> .437 <math>\rangle</math>	<math>\langle</math> .344 <math>\rangle</math>	<math>\langle</math> 1.010 <math>\rangle</math> MAX	<math>\langle</math> L/RH <math>\rangle</math>	* 15. 37-28. 24, <math>\langle</math> STEEL TUBING <math>\rangle</math>	5000	4370
JMDS-TRB-010-125	2781-3980	$\pm .0015$ $- .0005$	$\pm .000$ $- .000$	$\pm .000$ $- .000$			$\pm .0015$ $- .0005$	$\pm .000$ $- .000$	$\pm .000$ $- .000$			* 27. 37-40. 24, <math>\langle</math> STEEL TUBING <math>\rangle</math>		2240
JMDS-TRB-010-127	3981-5980											* 39. 37-60. 24, <math>\langle</math> STEEL TUBING <math>\rangle</math>		1010
JMDS-TRB-010-171	0687-1580											* 6. 43-16. 24, <math>\langle</math> STEEL TUBING <math>\rangle</math>		5000
JMDS-TRB-010-173	1581-2780	5/16	<math>\langle</math> .437 <math>\rangle</math>	<math>\langle</math> .344 <math>\rangle</math>	<math>\langle</math> 1.010 <math>\rangle</math> MAX	<math>\langle</math> R/LH <math>\rangle</math>	5/16	<math>\langle</math> .437 <math>\rangle</math>	<math>\langle</math> .344 <math>\rangle</math>	<math>\langle</math> 1.010 <math>\rangle</math> MAX	<math>\langle</math> R/LH <math>\rangle</math>	* 15. 37-28. 24, <math>\langle</math> STEEL TUBING <math>\rangle</math>	5000	4370
JMDS-TRB-010-175	2781-3980	$\pm .0015$ $- .0005$	$\pm .000$ $- .000$	$\pm .000$ $- .000$			$\pm .0015$ $- .0005$	$\pm .000$ $- .000$	$\pm .000$ $- .000$			* 27. 37-40. 24, <math>\langle</math> STEEL TUBING <math>\rangle</math>		2240
JMDS-TRB-010-177	3981-5980											* 39. 37-60. 24, <math>\langle</math> STEEL TUBING <math>\rangle</math>		1010

\* JMDS-TRB-010-XXXX/-XXXXB MINIMUM TIE ROD LENGTH IS INCREASED BY +.07.  
JMDS-TRB-010-XXXXC MINIMUM TIE ROD LENGTH IS INCREASED BY +.14.





# JMDS-TRB-010

JMIH-CAT-002 Rev D

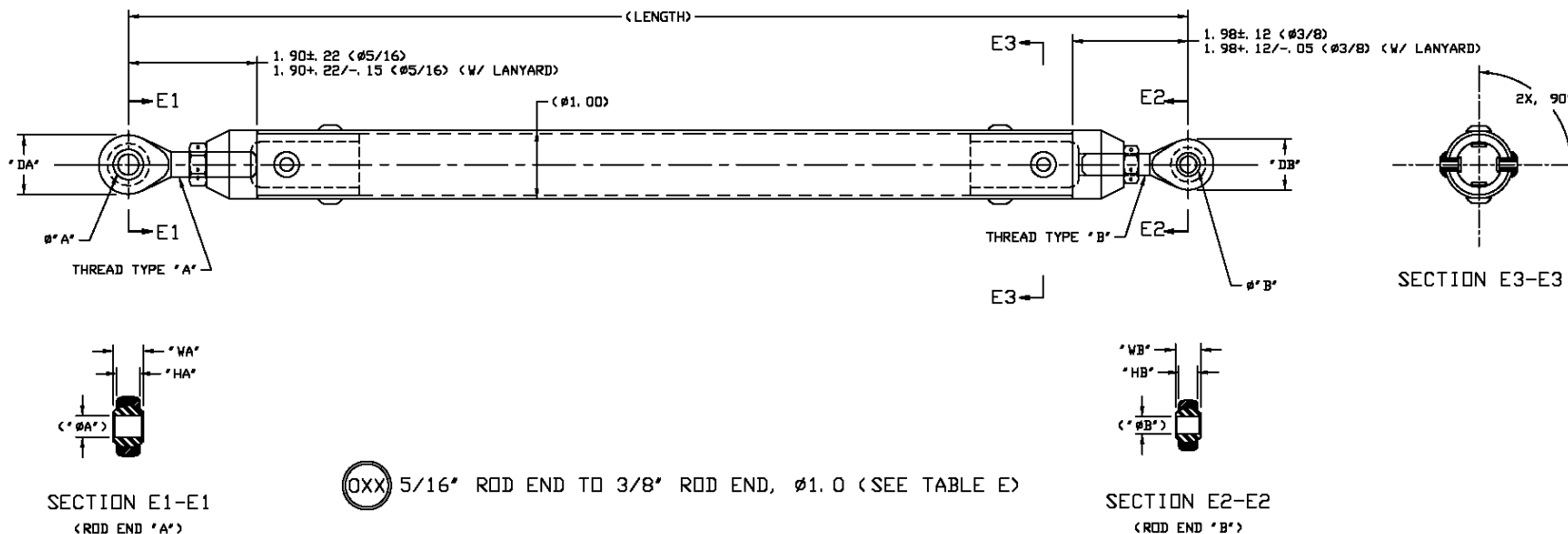


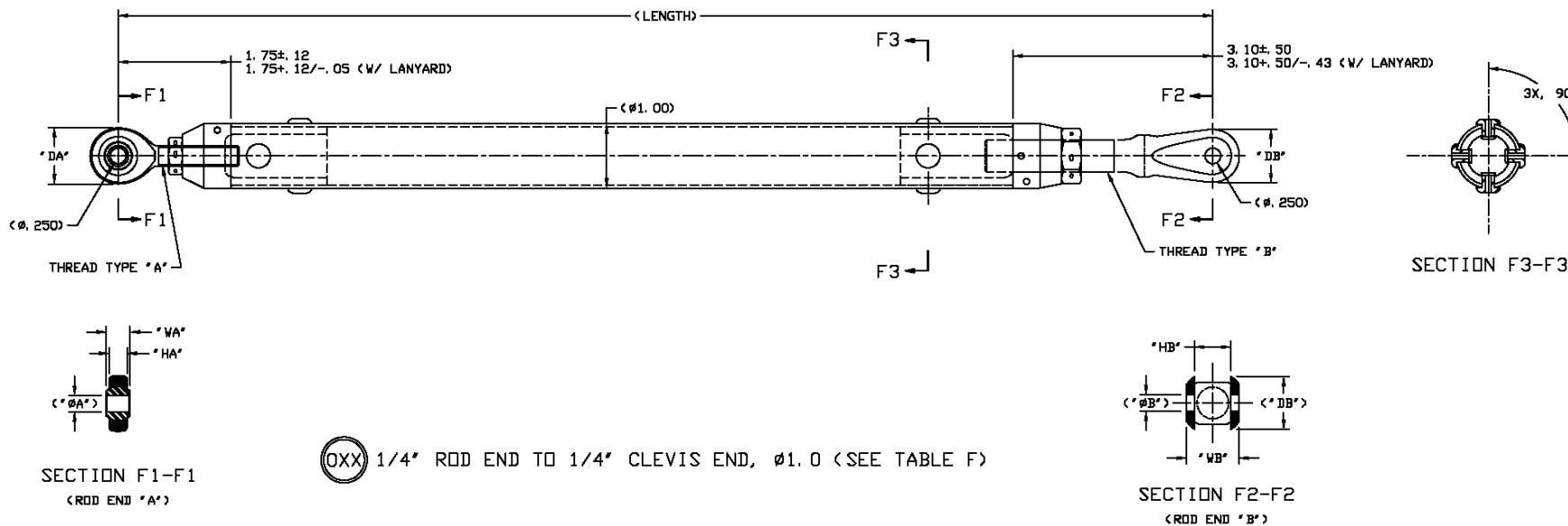
TABLE E														
ASSY KIT (XXXX)	NOMINAL LENGTH DASH NUMBER (LLLL)	BORE $\phi$ 'A'	BALL WIDTH 'WA'	HOUSING WIDTH 'HA'	HEAD DIA. 'DA'	THREAD TYPE 'A'	BORE $\phi$ 'B'	BALL WIDTH 'WB'	HOUSING WIDTH 'HB'	HEAD DIA. 'DB'	THREAD TYPE 'B'	DESCRIPTION TIE ROD LENGTH (IN) , TUBE MATL	TENSION (LBF)	COMPRESSION (LBF)
JMDS-TRB-010-191	0695-1588											* 6.61-16.32, (STEEL TUBING)	5000	5000
JMDS-TRB-010-193	1589-2788	5/16	(.437)	(.344)	<math>\langle 1.010</math> MAX)	<math>\langle R/LH \rangle</math>	3/8	(.500)	(.406)	(1.135 MAX)	<math>\langle L/RH \rangle</math>	* 15.55-28.32, (STEEL TUBING)		4420
JMDS-TRB-010-195	2789-3988	+ .0015 - .0008	+ .000 - .008	+ .005 - .005			+ .0015 - .0008	+ .000 - .008	+ .005 - .005			* 27.55-40.32, (STEEL TUBING)		2250
JMDS-TRB-010-197	3989-5988											* 39.55-60.32, (STEEL TUBING)		1010
JMDS-TRB-010-211	0695-1588											* 6.61-16.32, (STEEL TUBING)	5000	5000
JMDS-TRB-010-213	1589-2788	5/16	(.437)	(.344)	<math>\langle 1.010</math> MAX)	<math>\langle R/LH \rangle</math>	3/8	(.500)	(.406)	(1.135 MAX)	<math>\langle L/RH \rangle</math>	* 15.55-28.32, (STEEL TUBING)		4420
JMDS-TRB-010-215	2789-3988	+ .0015 - .0008	+ .000 - .008	+ .005 - .005			+ .0015 - .0008	+ .000 - .008	+ .005 - .005			* 27.55-40.32, (STEEL TUBING)		2250
JMDS-TRB-010-217	3989-5988											* 39.55-60.32, (STEEL TUBING)		1010

\* JMDS-TRB-010-XXXX-XXXB MINIMUM TIE ROD LENGTH IS INCREASED BY +.07.  
 JMDS-TRB-010-XXXC MINIMUM TIE ROD LENGTH IS INCREASED BY +.14.



# JMDS-TRC-010

JMIH-CAT-002 Rev D



(OXX) 1/4" ROD END TO 1/4" CLEVIS END, \phi 1.0 (SEE TABLE F)

TABLE F

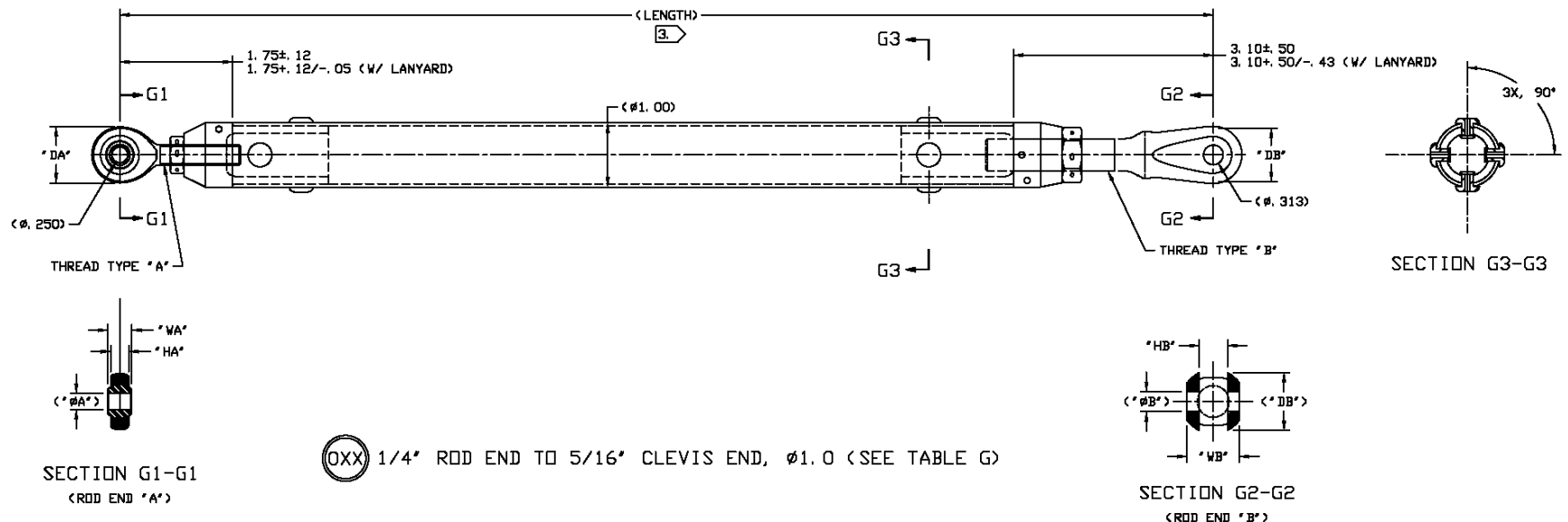
ASSY KIT (XXX)	NOMINAL LENGTH DASH NUMBER (LLLL)	BORE \phi 'A'	BALL WIDTH 'WA'	HOUSING WIDTH 'HA'	HEAD DIA. 'DA'	THREAD TYPE 'A'	BORE \phi 'B'	CLEVIS WIDTH 'WB'	INNER WIDTH 'HB'	CLEVIS HEIGHT 'DB'	THREAD TYPE 'B'	DESCRIPTION TIE ROD LENGTH (IN), TUBE MATL	TENSION (LBF)	COMPRESSION (LBF)
JMDS-TRC-010-001	0817-1685											* 7.55-17.47, (ALUMINUM TUBING)		3600
JMDS-TRC-010-003	1686-2885	1/4	(.375)	(.281)	<.885 MAX	(R/LH)	1/4	(.838 MAX)	(.563)	<.850 MAX	(L/RH)	* 16.24-29.47, (ALUMINUM TUBING)	3600	1500
JMDS-TRC-010-005	2886-4085											* 28.24-41.47, (ALUMINUM TUBING)		770
JMDS-TRC-010-007	4086-4985											* 40.24-50.47, (ALUMINUM TUBING)		520
JMDS-TRC-010-011	0817-1685											* 7.55-17.47, (ALUMINUM TUBING)		3600
JMDS-TRC-010-013	1686-2885	1/4	(.375)	(.281)	<.885 MAX	(R/LH)	1/4	(.838 MAX)	(.563)	<.850 MAX	(R/LH)	* 16.24-29.47, (ALUMINUM TUBING)	3600	1500
JMDS-TRC-010-015	2886-4085											* 28.24-41.47, (ALUMINUM TUBING)		770
JMDS-TRC-010-017	4086-4985											* 40.24-50.47, (ALUMINUM TUBING)		520
JMDS-TRC-010-021	0817-1685											* 7.55-17.47, (STEEL TUBING)		5000
JMDS-TRC-010-023	1686-2885	1/4	(.375)	(.281)	<.885 MAX	(R/LH)	1/4	(.838 MAX)	(.563)	<.850 MAX	(L/RH)	* 16.24-29.47, (STEEL TUBING)	5000	3860
JMDS-TRC-010-025	2886-4085											* 28.24-41.47, (STEEL TUBING)		2080
JMDS-TRC-010-027	4086-6085											* 40.24-61.47, (STEEL TUBING)		970
JMDS-TRC-010-029	6086-7285											* 60.24-73.47, (STEEL TUBING)		680
JMDS-TRC-010-031	0817-1685											* 7.55-17.47, (STEEL TUBING)		5000
JMDS-TRC-010-033	1686-2885	1/4	(.375)	(.281)	<.885 MAX	(R/LH)	1/4	(.838 MAX)	(.563)	<.850 MAX	(R/LH)	* 16.24-29.47, (STEEL TUBING)	5000	3860
JMDS-TRC-010-035	2886-4085											* 28.24-41.47, (STEEL TUBING)		2080
JMDS-TRC-010-037	4086-6085											* 40.24-61.47, (STEEL TUBING)		970
JMDS-TRC-010-039	6086-7285											* 60.24-73.47, (STEEL TUBING)		680

\* JMDS-TRC-010-0XXA/-0XXB MINIMUM TIE ROD LENGTH IS INCREASED BY +.07.  
JMDS-TRC-010-0XXC MINIMUM TIE ROD LENGTH IS INCREASED BY +.14.



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⓪XX 1/4" ROD END TO 5/16" CLEVIS END,  $\phi 1.0$  (SEE TABLE G)

TABLE G

ASSY KIT (XXX)	NOMINAL LENGTH DASH NUMBER (LLLL)	BORE $\phi$ "A"	BALL WIDTH "VA"	HOUSING WIDTH "HA"	HEAD DIA. "DA"	THREAD TYPE "A"	BORE $\phi$ "B"	CLEVIS WIDTH "WB"	INNER WIDTH "HB"	CLEVIS HEIGHT "DB"	THREAD TYPE "B"	TIE ROD LENGTH (IN), TUBE MATL	TENSION (LBF)	COMPRESSION (LBF)
JMDS-TRC-010-051	0817-1685	1/4 + .0015 - .0005	.375 + .000 - .000	.281 + .005 - .005	.885 MAX	(R/LH)	5/16 + .0015 - .0005	.838 MAX	.443 + .005 - .000	.920 MAX	(L/RH)	* 7.55-17.47, (ALUMINUM TUBING)	3600	3600
JMDS-TRC-010-053	1686-2885											* 16.24-29.47, (ALUMINUM TUBING)		1500
JMDS-TRC-010-055	2886-4085											* 28.24-41.47, (ALUMINUM TUBING)		770
JMDS-TRC-010-057	4086-4985											* 40.24-50.47, (ALUMINUM TUBING)		520
JMDS-TRC-010-061	0817-1685	1/4 + .0015 - .0005	.375 + .000 - .000	.281 + .005 - .005	.885 MAX	(R/LH)	5/16 + .0015 - .0005	.838 MAX	.443 + .005 - .000	.920 MAX	(R/LH)	* 7.55-17.47, (ALUMINUM TUBING)	3600	3600
JMDS-TRC-010-063	1686-2885											* 16.24-29.47, (ALUMINUM TUBING)		1500
JMDS-TRC-010-065	2886-4085											* 28.24-41.47, (ALUMINUM TUBING)		770
JMDS-TRC-010-067	4086-4985											* 40.24-50.47, (ALUMINUM TUBING)		520
JMDS-TRC-010-071	0817-1685	1/4 + .0015 - .0005	.375 + .000 - .000	.281 + .005 - .005	.885 MAX	(R/LH)	5/16 + .0015 - .0005	.838 MAX	.443 + .005 - .000	.920 MAX	(L/RH)	* 7.55-17.47, (STEEL TUBING)	5000	5000
JMDS-TRC-010-073	1686-2885											* 16.24-29.47, (STEEL TUBING)		3860
JMDS-TRC-010-075	2886-4085											* 28.24-41.47, (STEEL TUBING)		2080
JMDS-TRC-010-077	4086-6085											* 40.24-61.47, (STEEL TUBING)		970
JMDS-TRC-010-079	6086-7285											* 60.24-73.47, (STEEL TUBING)		680
JMDS-TRC-010-081	0817-1685	1/4 + .0015 - .0005	.375 + .000 - .000	.281 + .005 - .005	.885 MAX	(R/LH)	5/16 + .0015 - .0005	.838 MAX	.443 + .005 - .000	.920 MAX	(R/LH)	* 7.55-17.47, (STEEL TUBING)	5000	5000
JMDS-TRC-010-083	1686-2885											* 16.24-29.47, (STEEL TUBING)		3860
JMDS-TRC-010-085	2886-4085											* 28.24-41.47, (STEEL TUBING)		2080
JMDS-TRC-010-087	4086-6085											* 40.24-61.47, (STEEL TUBING)		970
JMDS-TRC-010-089	6086-7285											* 60.24-73.47, (STEEL TUBING)		680

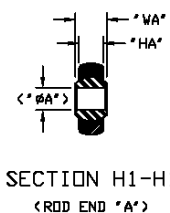
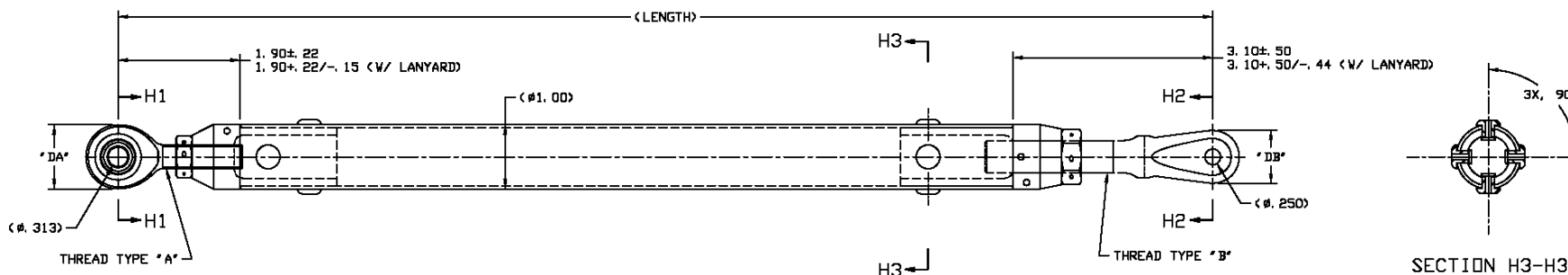
\* JMDS-TRC-010-0XXA/-0XXB MINIMUM TIE ROD LENGTH IS INCREASED BY +.07.  
JMDS-TRC-010-0XXC MINIMUM TIE ROD LENGTH IS INCREASED BY +.14.



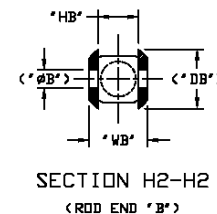


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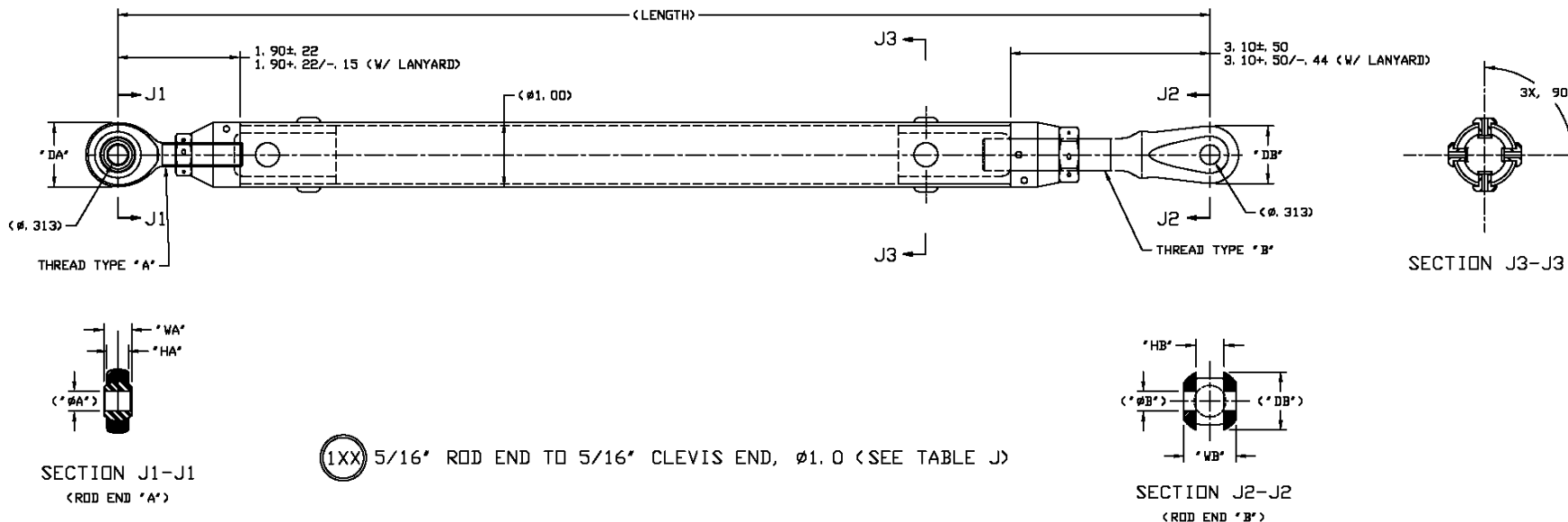


1XX 5/16" ROD END TO 1/4" CLEVIS END, Ø1.0 (SEE TABLE H)



ASSY KIT (XXXY)	NOMINAL LENGTH DASH NUMBER (LLLL)	BORE Ø 'A'	BALL WIDTH 'WA'	HOUSING WIDTH 'HA'	HEAD DIA. 'DA'	THREAD TYPE 'A'	BORE Ø 'B'	CLEVIS WIDTH 'WB'	INNER WIDTH 'HB'	CLEVIS HEIGHT 'DB'	THREAD TYPE 'B'	DESCRIPTION TIE ROD LENGTH (IN) , TUBE MATL	TENSION (LBF)	COMPRESSION (LBF)
JMDS-TRC-010-101	0832-1700	5/16 + .0015 - .0005	< .437	< .344	< 1.010 MAX	R/H	1/4 + .004 - .000	< .838 MAX	< .563 + .005 - .000	< .850 MAX	L/H	* 7.60-17.72, (ALUMINUM TUBING)	3600	3370
JMDS-TRC-010-103	1701-2900											* 16.29-29.72, (ALUMINUM TUBING)		1440
JMDS-TRC-010-105	2901-4100											* 28.29-41.72, (ALUMINUM TUBING)		780
JMDS-TRC-010-107	4101-5000											* 40.29-50.72, (ALUMINUM TUBING)		530
JMDS-TRC-010-111	0832-1700	5/16 + .0015 - .0005	< .437	< .344	< 1.010 MAX	R/H	1/4 + .004 - .000	< .838 MAX	< .563 + .005 - .000	< .850 MAX	R/H	* 7.60-17.72, (ALUMINUM TUBING)	3600	3370
JMDS-TRC-010-113	1701-2900											* 16.29-29.72, (ALUMINUM TUBING)		1440
JMDS-TRC-010-115	2901-4100											* 28.29-41.72, (ALUMINUM TUBING)		780
JMDS-TRC-010-117	4101-5000											* 40.29-50.72, (ALUMINUM TUBING)		530
JMDS-TRC-010-121	0832-1700	5/16 + .0015 - .0005	< .437	< .344	< 1.010 MAX	R/H	1/4 + .004 - .000	< .838 MAX	< .563 + .005 - .000	< .850 MAX	L/H	* 7.60-17.72, (STEEL TUBING)	5000	5000
JMDS-TRC-010-123	1701-2900											* 16.29-29.72, (STEEL TUBING)		3850
JMDS-TRC-010-125	2901-4100											* 28.29-41.72, (STEEL TUBING)		2070
JMDS-TRC-010-127	4101-6100											* 40.29-61.72, (STEEL TUBING)		960
JMDS-TRC-010-129	6101-7300											* 60.29-73.72, (STEEL TUBING)		680
JMDS-TRC-010-131	0832-1700	5/16 + .0015 - .0005	< .437	< .344	< 1.010 MAX	R/H	1/4 + .004 - .000	< .838 MAX	< .563 + .005 - .000	< .850 MAX	R/H	* 7.60-17.72, (STEEL TUBING)	5000	5000
JMDS-TRC-010-133	1701-2900											* 16.29-29.72, (STEEL TUBING)		3850
JMDS-TRC-010-135	2901-4100											* 28.29-41.72, (STEEL TUBING)		2070
JMDS-TRC-010-137	4101-6100											* 40.29-61.72, (STEEL TUBING)		960
JMDS-TRC-010-139	6101-7300											* 60.29-73.72, (STEEL TUBING)		680

\* JMDS-TRC-010-1XXA/-1XXB MINIMUM TIE ROD LENGTH IS INCREASED BY +.07.  
JMDS-TRC-010-1XXC MINIMUM TIE ROD LENGTH IS INCREASED BY +.14.



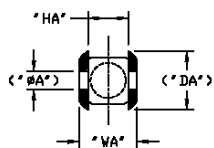
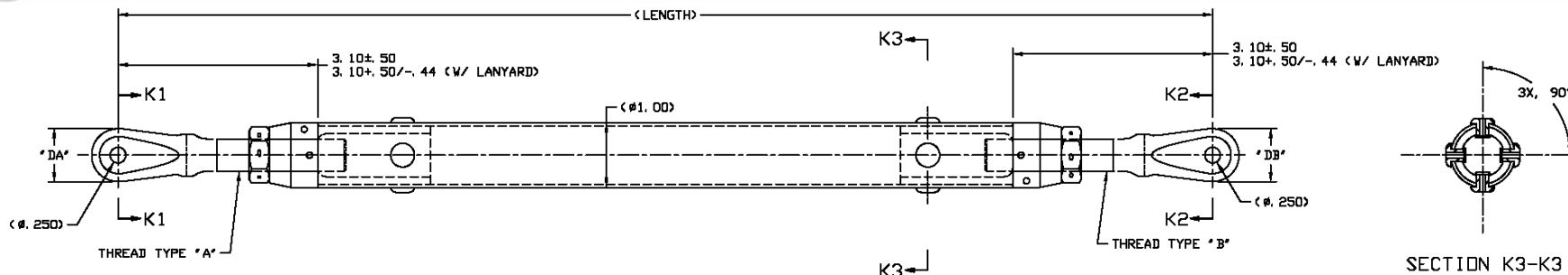
**TABLE J**

ASSY KIT (XXXY)	NOMINAL LENGTH DASH NUMBER (LLLL)	BORE Ø "A"	BALL WIDTH "WA"	HOUSING WIDTH "HA"	HEAD DIA. "DA"	THREAD TYPE "A"	BORE Ø "B"	CLEVIS WIDTH "WB"	INNER WIDTH "HB"	CLEVIS HEIGHT "DB"	THREAD TYPE "B"	TIE ROD LENGTH (IN), TUBE MATL	TENSION (LBF)	COMPRESSION (LBF)
JMDS-TRC-010-151	0832-1700	5/16 +.0015 -.0005	(.437) +.005 -.005	(.344) +.005 -.005	(.010 MAX)	R/LH	5/16 +.0015 -.0005	(.838 MAX)	(.443) +.005 -.005	(.920 MAX)	L/RH	* 7.60-17.72, (ALUMINUM TUBING)	3600	3370
JMDS-TRC-010-153	1701-2900											* 16.29-29.72, (ALUMINUM TUBING)		1440
JMDS-TRC-010-155	2901-4100											* 28.29-41.72, (ALUMINUM TUBING)		780
JMDS-TRC-010-157	4101-5000											* 40.29-50.72, (ALUMINUM TUBING)		530
JMDS-TRC-010-161	0832-1700	5/16 +.0015 -.0005	(.437) +.005 -.005	(.344) +.005 -.005	(.010 MAX)	R/LH	5/16 +.0015 -.0005	(.838 MAX)	(.443) +.005 -.005	(.920 MAX)	R/LH	* 7.60-17.72, (ALUMINUM TUBING)	3600	3370
JMDS-TRC-010-163	1701-2900											* 16.29-29.72, (ALUMINUM TUBING)		1440
JMDS-TRC-010-165	2901-4100											* 28.29-41.72, (ALUMINUM TUBING)		780
JMDS-TRC-010-167	4101-5000											* 40.29-50.72, (ALUMINUM TUBING)		530
JMDS-TRC-010-171	0832-1700	5/16 +.0015 -.0005	(.437) +.005 -.005	(.344) +.005 -.005	(.010 MAX)	R/LH	5/16 +.0015 -.0005	(.838 MAX)	(.443) +.005 -.005	(.920 MAX)	L/RH	* 7.60-17.72, (STEEL TUBING)	5000	5000
JMDS-TRC-010-173	1701-2900											* 16.29-29.72, (STEEL TUBING)		3850
JMDS-TRC-010-175	2901-4100											* 28.29-41.72, (STEEL TUBING)		2070
JMDS-TRC-010-177	4101-6100											* 40.29-61.72, (STEEL TUBING)		960
JMDS-TRC-010-179	6101-7300	* 60.29-73.72, (STEEL TUBING)	680											
JMDS-TRC-010-181	0832-1700	5/16 +.0015 -.0005	(.437) +.005 -.005	(.344) +.005 -.005	(.010 MAX)	R/LH	5/16 +.0015 -.0005	(.838 MAX)	(.443) +.005 -.005	(.920 MAX)	R/LH	* 7.60-17.72, (STEEL TUBING)	5000	5000
JMDS-TRC-010-183	1701-2900											* 16.29-29.72, (STEEL TUBING)		3850
JMDS-TRC-010-185	2901-4100											* 28.29-41.72, (STEEL TUBING)		2070
JMDS-TRC-010-187	4101-6100											* 40.29-61.72, (STEEL TUBING)		960
JMDS-TRC-010-189	6101-7300	* 60.29-73.72, (STEEL TUBING)	680											

\* JMDS-TRC-010-1XXA/-1XXB MINIMUM TIE ROD LENGTH IS INCREASED BY +.07.  
 JMDS-TRC-010-1XXC MINIMUM TIE ROD LENGTH IS INCREASED BY +.14.

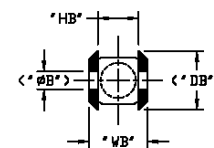
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SECTION K1-K1  
(ROD END 'A')

(2XX) 1/4" CLEVIS END TO 1/4" CLEVIS END, Ø1.0 (SEE TABLE K)



SECTION K2-K2  
(ROD END 'B')

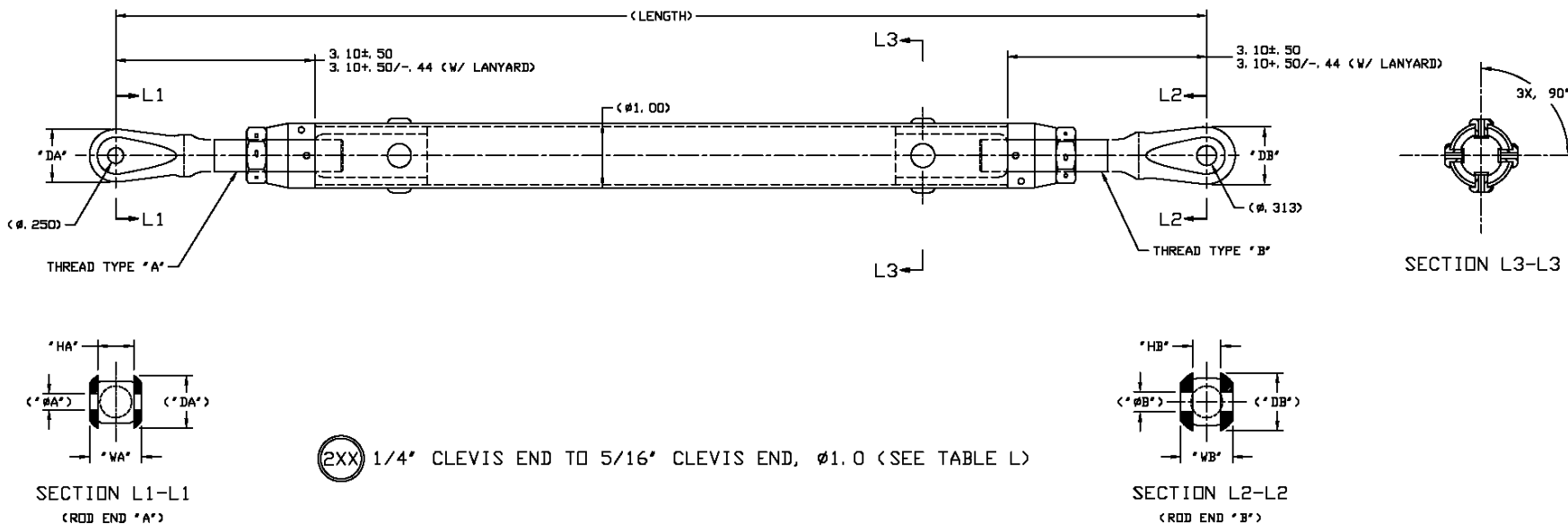
TABLE K

ASSY KIT (XXX) ■■	NOMINAL LENGTH DASH NUMBER (LLLL)	BORE "A"	CLEVIS WIDTH "WA"	INNER WIDTH "HA"	CLEVIS HEIGHT "DA"	THREAD TYPE "A"	BORE "B"	CLEVIS WIDTH "WB"	INNER WIDTH "HB"	CLEVIS HEIGHT "DB"	THREAD TYPE "B"	DESCRIPTION TIE ROD LENGTH (IN) , TUBE MATL	TENSION (LBF)	COMPRESSION (LBF)
JMDS-TRC-010-201	0977-1820	1/4 +0.004 -0.000	(.838 MAX)	(.563 +0.005 -0.000)	(.850 MAX)	(R/LH)	1/4 +0.004 -0.000	(.838 MAX)	(.563 +0.005 -0.000)	(.850 MAX)	(L/RH)	■ 8.77-19.20, (ALUMINUM TUBING)	3600	3320
JMDS-TRC-010-203	1821-3020											■ 17.21-31.20, (ALUMINUM TUBING)		1460
JMDS-TRC-010-205	3021-4220											■ 29.21-43.20, (ALUMINUM TUBING)		770
JMDS-TRC-010-207	4221-5120											■ 41.21-52.20, (ALUMINUM TUBING)		520
JMDS-TRC-010-211	0977-1820	1/4 +0.004 -0.000	(.838 MAX)	(.563 +0.005 -0.000)	(.850 MAX)	(R/LH)	1/4 +0.004 -0.000	(.838 MAX)	(.563 +0.005 -0.000)	(.850 MAX)	(R/LH)	■ 8.77-19.20, (ALUMINUM TUBING)	3600	3320
JMDS-TRC-010-213	1821-3020											■ 17.21-31.20, (ALUMINUM TUBING)		1460
JMDS-TRC-010-215	3021-4220											■ 29.21-43.20, (ALUMINUM TUBING)		770
JMDS-TRC-010-217	4221-5120											■ 41.21-52.20, (ALUMINUM TUBING)		520
JMDS-TRC-010-221	0977-1820	1/4 +0.004 -0.000	(.838 MAX)	(.563 +0.005 -0.000)	(.850 MAX)	(R/LH)	1/4 +0.004 -0.000	(.838 MAX)	(.563 +0.005 -0.000)	(.850 MAX)	(L/RH)	■ 8.77-19.20, (STEEL TUBING)	5000	5000
JMDS-TRC-010-223	1821-3020											■ 17.21-31.20, (STEEL TUBING)		3650
JMDS-TRC-010-225	3021-4220											■ 29.21-43.20, (STEEL TUBING)		1920
JMDS-TRC-010-227	4221-6220											■ 41.21-63.20, (STEEL TUBING)		940
JMDS-TRC-010-229	6221-7420											660		
JMDS-TRC-010-231	0977-1820	1/4 +0.004 -0.000	(.838 MAX)	(.563 +0.005 -0.000)	(.850 MAX)	(R/LH)	1/4 +0.004 -0.000	(.838 MAX)	(.563 +0.005 -0.000)	(.850 MAX)	(R/LH)	■ 8.77-19.20, (STEEL TUBING)	5000	5000
JMDS-TRC-010-233	1821-3020											■ 17.21-31.20, (STEEL TUBING)		3650
JMDS-TRC-010-235	3021-4220											■ 29.21-43.20, (STEEL TUBING)		1920
JMDS-TRC-010-237	4221-6220											■ 41.21-63.20, (STEEL TUBING)		940
JMDS-TRC-010-239	6221-7420											660		

■ JMDS-TRC-010-2XXA MINIMUM TIE ROD LENGTH IS INCREASED BY +.07.  
 JMDS-TRC-010-2XXC MINIMUM TIE ROD LENGTH IS INCREASED BY +.14.  
 ■■ JMDS-TRC-010-201 THROUGH -239 DOES NOT CONTAIN LANYARD SUFFIX B AS BOTH ENDS ARE THE SAME AS SUFFIX A.

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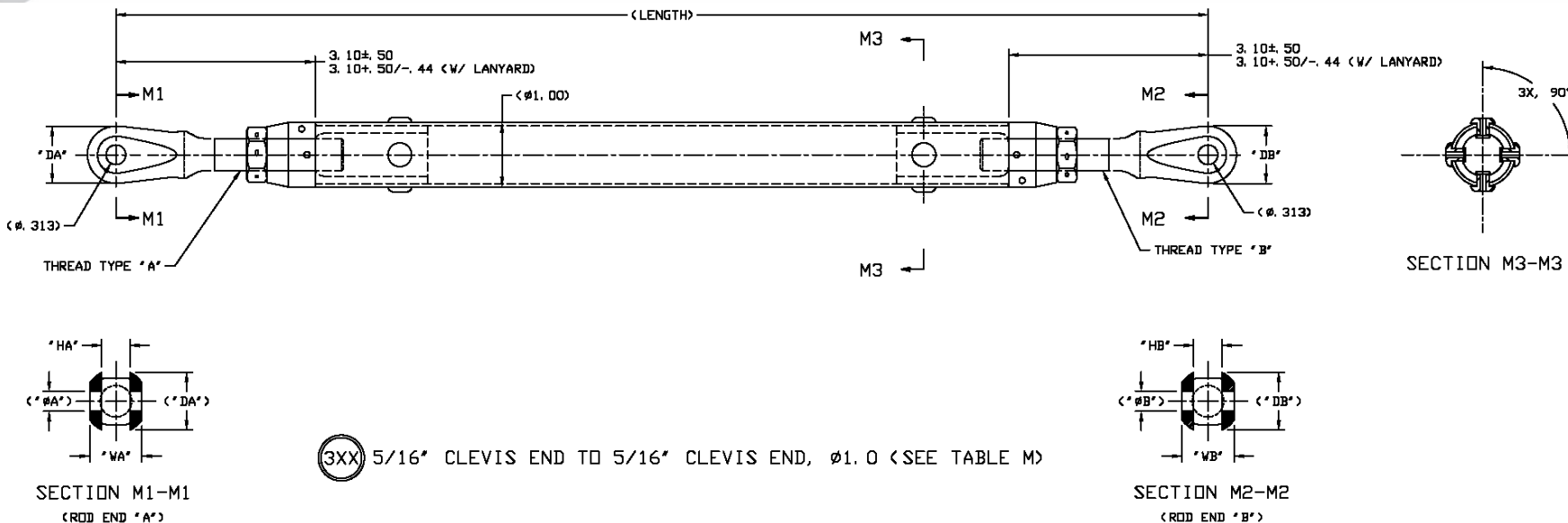
(2XX) 1/4" CLEVIS END TO 5/16" CLEVIS END, Ø1.0 (SEE TABLE L)

TABLE L													TENSION (LBF)	COMPRESSION (LBF)
ASSY KIT (XXXY)	NOMINAL LENGTH DASH NUMBER (LLLL)	BORE Ø "A"	CLEVIS WIDTH "WA"	INNER WIDTH "HA"	CLEVIS HEIGHT "DA"	THREAD TYPE "A"	BORE Ø "B"	CLEVIS WIDTH "WB"	INNER WIDTH "HB"	CLEVIS HEIGHT "DB"	THREAD TYPE "B"	DESCRIPTION TIE ROD LENGTH (IN), TUBE MATL		
JMDS-TRC-010-251	0977-1820	1/4 +.004 -.000	.838 MAX	.563 +.005 -.000	.850 MAX	(R/H)	5/16 +.0015 -.0005	.838 MAX	.443 +.005 -.000	.920 MAX	(L/H)	* 8.77-19.20, (ALUMINUM TUBING)	3600	3320
JMDS-TRC-010-253	1821-3020											* 17.21-31.20, (ALUMINUM TUBING)		1460
JMDS-TRC-010-255	3021-4220											* 29.21-43.20, (ALUMINUM TUBING)		770
JMDS-TRC-010-257	4221-5120											* 41.21-52.20, (ALUMINUM TUBING)		520
JMDS-TRC-010-261	0977-1820	1/4 +.004 -.000	.838 MAX	.563 +.005 -.000	.850 MAX	(R/H)	5/16 +.0015 -.0005	.838 MAX	.443 +.005 -.000	.920 MAX	(R/H)	* 8.77-19.20, (ALUMINUM TUBING)	3600	3320
JMDS-TRC-010-263	1821-3020											* 17.21-31.20, (ALUMINUM TUBING)		1460
JMDS-TRC-010-265	3021-4220											* 29.21-43.20, (ALUMINUM TUBING)		770
JMDS-TRC-010-267	4221-5120											* 41.21-52.20, (ALUMINUM TUBING)		520
JMDS-TRC-010-271	0977-1820	1/4 +.004 -.000	.838 MAX	.563 +.005 -.000	.850 MAX	(R/H)	5/16 +.0015 -.0005	.838 MAX	.443 +.005 -.000	.920 MAX	(L/H)	* 8.77-19.20, (STEEL TUBING)	5000	5000
JMDS-TRC-010-273	1821-3020											* 17.21-31.20, (STEEL TUBING)		3650
JMDS-TRC-010-275	3021-4220											* 29.21-43.20, (STEEL TUBING)		1920
JMDS-TRC-010-277	4221-6220											* 41.21-63.20, (STEEL TUBING)		940
JMDS-TRC-010-279	6221-7420											* 61.21-75.20, (STEEL TUBING)		660
JMDS-TRC-010-281	0977-1820	1/4 +.004 -.000	.838 MAX	.563 +.005 -.000	.850 MAX	(R/H)	5/16 +.0015 -.0005	.838 MAX	.443 +.005 -.000	.920 MAX	(R/H)	* 8.77-19.20, (STEEL TUBING)	5000	5000
JMDS-TRC-010-283	1821-3020											* 17.21-31.20, (STEEL TUBING)		3650
JMDS-TRC-010-285	3021-4220											* 29.21-43.20, (STEEL TUBING)		1920
JMDS-TRC-010-287	4221-6220											* 41.21-63.20, (STEEL TUBING)		940
JMDS-TRC-010-289	6221-7420											* 61.21-75.20, (STEEL TUBING)		660

\* JMDS-TRC-010-2XXA/-2XXB MINIMUM TIE ROD LENGTH IS INCREASED BY +.07.  
 JMDS-TRC-010-2XXC MINIMUM TIE ROD LENGTH IS INCREASED BY +.14.

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3XX 5/16" CLEVIS END TO 5/16" CLEVIS END, Ø1.0 (SEE TABLE M)

TABLE M

ASSY KIT (XXXX) ■■	NOMINAL LENGTH DASH NUMBER (LLLL)	BORE Ø "A"	CLEVIS WIDTH "WA"	INNER WIDTH "HA"	CLEVIS HEIGHT "DA"	THREAD TYPE "A"	BORE Ø "B"	CLEVIS WIDTH "WB"	INNER WIDTH "HB"	CLEVIS HEIGHT "DB"	THREAD TYPE "B"	DESCRIPTION TIE ROD LENGTH (IN) , TUBE MATL	TENSION (LBF)	COMPRESSION (LBF)
JMDS-TRC-010-301	0977-1820	5/16 + .0015 - .0005	.838 MAX	.443 + .005 - .000	.920 MAX	R/H	5/16 + .0015 - .0005	.838 MAX	.443 + .005 - .000	.920 MAX	L/H	■ 8.77-19.20, (ALUMINUM TUBING)	3600	3320
JMDS-TRC-010-303	1821-3020											■ 17.21-31.20, (ALUMINUM TUBING)		1460
JMDS-TRC-010-305	3021-4220											■ 29.21-43.20, (ALUMINUM TUBING)		770
JMDS-TRC-010-307	4221-5120											■ 41.21-52.20, (ALUMINUM TUBING)		520
JMDS-TRC-010-311	0977-1820	5/16 + .0015 - .0005	.838 MAX	.443 + .005 - .000	.920 MAX	R/H	5/16 + .0015 - .0005	.838 MAX	.443 + .005 - .000	.920 MAX	R/H	■ 8.77-19.20, (ALUMINUM TUBING)	3600	3320
JMDS-TRC-010-313	1821-3020											■ 17.21-31.20, (ALUMINUM TUBING)		1460
JMDS-TRC-010-315	3021-4220											■ 29.21-43.20, (ALUMINUM TUBING)		770
JMDS-TRC-010-317	4221-5120											■ 41.21-52.20, (ALUMINUM TUBING)		520
JMDS-TRC-010-321	0977-1820	5/16 + .0015 - .0005	.838 MAX	.443 + .005 - .000	.920 MAX	R/H	5/16 + .0015 - .0005	.838 MAX	.443 + .005 - .000	.920 MAX	L/H	■ 8.77-19.20, (STEEL TUBING)	5000	5000
JMDS-TRC-010-323	1821-3020											■ 17.21-31.20, (STEEL TUBING)		3650
JMDS-TRC-010-325	3021-4220											■ 29.21-43.20, (STEEL TUBING)		1920
JMDS-TRC-010-327	4221-6220											■ 41.21-63.20, (STEEL TUBING)		940
JMDS-TRC-010-329	6221-7420											■ 61.21-75.20, (STEEL TUBING)		660
JMDS-TRC-010-331	0977-1820	5/16 + .0015 - .0005	.838 MAX	.443 + .005 - .000	.920 MAX	R/H	5/16 + .0015 - .0005	.838 MAX	.443 + .005 - .000	.920 MAX	R/H	■ 8.77-19.20, (STEEL TUBING)	5000	5000
JMDS-TRC-010-333	1821-3020											■ 17.21-31.20, (STEEL TUBING)		3650
JMDS-TRC-010-335	3021-4220											■ 29.21-43.20, (STEEL TUBING)		1920
JMDS-TRC-010-337	4221-6220											■ 41.21-63.20, (STEEL TUBING)		940
JMDS-TRC-010-339	6221-7420											■ 61.21-75.20, (STEEL TUBING)		660

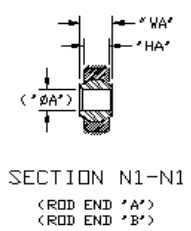
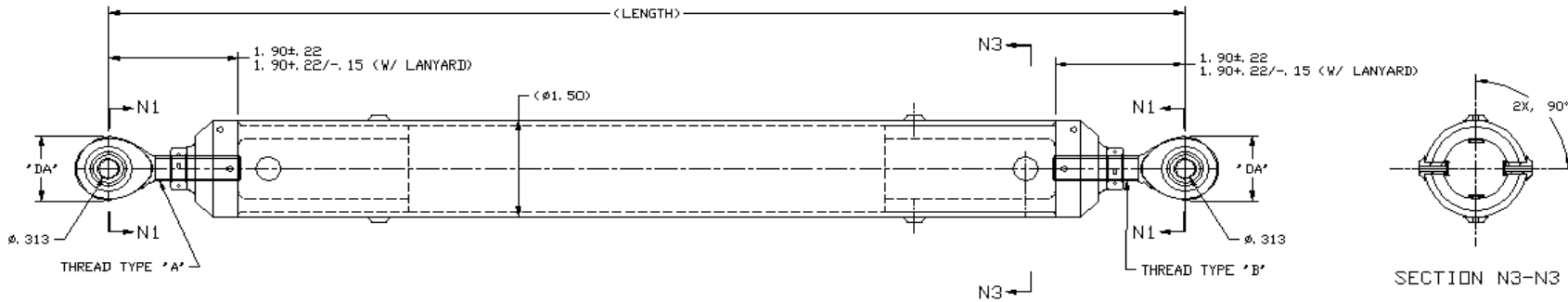
■ JMDS-TRC-010-3XXA MINIMUM TIE ROD LENGTH IS INCREASED BY +.07.  
 JMDS-TRC-010-3XXC MINIMUM TIE ROD LENGTH IS INCREASED BY +.14.

■■ JMDS-TRC-010-301 THROUGH -339 DOES NOT CONTAIN LANYARD SUFFIX B AS BOTH ENDS ARE THE SAME AS SUFFIX A.



# JMDS-TRC-015

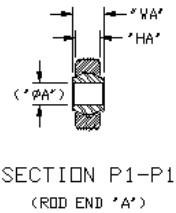
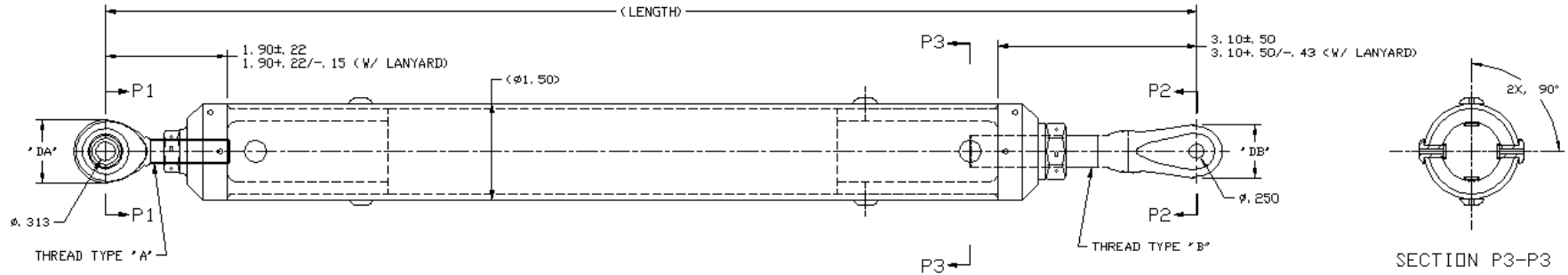
JMIH-CAT-002 Rev D



(XXX) 5/16" ROD END TO 5/16" ROD END,  $\phi 1.5$  (SEE TABLE N)

TABLE N														
ASSY KIT (XXX) **	NOMINAL LENGTH DASH NUMBER (LLLL)	BORE $\phi$ 'A'	BALL WIDTH 'WA'	HOUSING WIDTH 'HA'	HEAD DIA. 'DA'	THREAD TYPE 'A'	BORE $\phi$ 'A'	BALL WIDTH 'WA'	HOUSING WIDTH 'HA'	HEAD DIA. 'DA'	THREAD TYPE 'B'	DESCRIPTION TIE ROD LENGTH (IN) , TUBE MATL	TENSION (LBF)	COMPRESSION (LBF)
JMDS-TRC-015-001	3644-4880	5/16 + .0015 - .0005	(.437) + .005 - .005	(.344) + .005 - .005	(1.010 MAX)	(R/H)	5/16 + .0015 - .0005	(.437) + .005 - .005	(.344) + .005 - .005	(1.010 MAX)	(L/H)	* 36.00-49.24, (ALUMINUM TUBING)	5810	3010
JMDS-TRC-015-003	4881-5980											* 48.37-60.24, (ALUMINUM TUBING)		2040
JMDS-TRC-015-005	5981-7180											* 59.37-72.24, (ALUMINUM TUBING)		1430
JMDS-TRC-015-007	7181-8380											* 71.37-84.24, (ALUMINUM TUBING)		1050
JMDS-TRC-015-011	3644-4880	5/16 + .0015 - .0005	(.437) + .005 - .005	(.344) + .005 - .005	(1.010 MAX)	(R/H)	5/16 + .0015 - .0005	(.437) + .005 - .005	(.344) + .005 - .005	(1.010 MAX)	(R/H)	* 36.00-49.24, (ALUMINUM TUBING)	5810	3010
JMDS-TRC-015-013	4881-5980											* 48.37-60.24, (ALUMINUM TUBING)		2040
JMDS-TRC-015-015	5981-7180											* 59.37-72.24, (ALUMINUM TUBING)		1430
JMDS-TRC-015-017	7181-8380											* 71.37-84.24, (ALUMINUM TUBING)		1050
JMDS-TRC-015-021	3644-4880	5/16 + .0015 - .0005	(.437) + .005 - .005	(.344) + .005 - .005	(1.010 MAX)	(R/H)	5/16 + .0015 - .0005	(.437) + .005 - .005	(.344) + .005 - .005	(1.010 MAX)	(L/H)	* 36.00-49.24, (STEEL TUBING)	5810	5810
JMDS-TRC-015-023	4881-5980											* 48.37-60.24, (STEEL TUBING)		5410
JMDS-TRC-015-025	5981-7180											* 59.37-72.24, (STEEL TUBING)		3870
JMDS-TRC-015-027	7181-8380											* 71.37-84.24, (STEEL TUBING)		2880
JMDS-TRC-015-029	8381-10380											* 83.37-104.24, (STEEL TUBING)		1900
JMDS-TRC-015-031	3644-4880	5/16 + .0015 - .0005	(.437) + .005 - .005	(.344) + .005 - .005	(1.010 MAX)	(R/H)	5/16 + .0015 - .0005	(.437) + .005 - .005	(.344) + .005 - .005	(1.010 MAX)	(R/H)	* 36.00-49.24, (STEEL TUBING)	5810	5810
JMDS-TRC-015-033	4881-5980											* 48.37-60.24, (STEEL TUBING)		5410
JMDS-TRC-015-035	5981-7180											* 59.37-72.24, (STEEL TUBING)		3870
JMDS-TRC-015-037	7181-8380											* 71.37-84.24, (STEEL TUBING)		2880
JMDS-TRC-015-039	8381-10380											* 83.37-104.24, (STEEL TUBING)		1900

\* JMDS-TRC-015-0XXA MINIMUM TIE ROD LENGTH IS INCREASED BY +.07.  
 JMDS-TRC-015-0XXC MINIMUM TIE ROD LENGTH IS INCREASED BY +.14.  
 \*\* JMDS-TRC-015-001 THROUGH -039 DOES NOT CONTAIN LANYARD SUFFIX B AS BOTH ENDS ARE THE SAME AS SUFFIX A.



(XXX) 5/16" ROD END TO 1/4" CLEVIS END,  $\phi 1.5$  (SEE TABLE P)

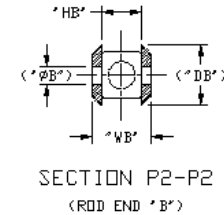


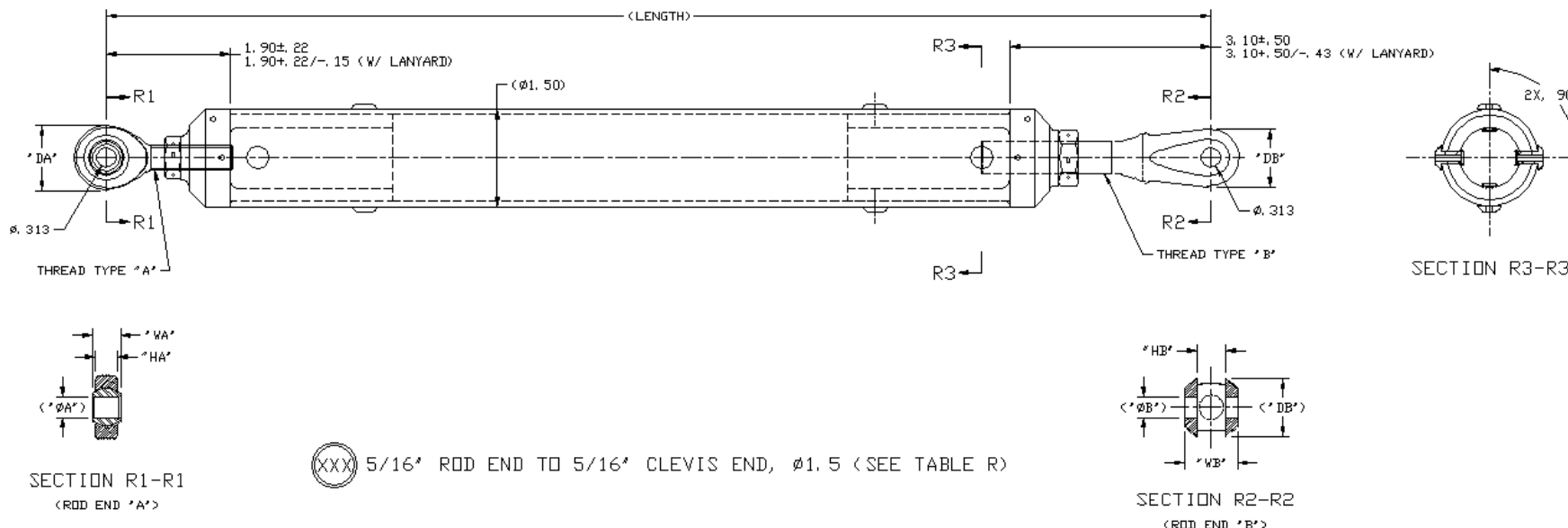
TABLE P														
ASSY KIT (XXX)	NOMINAL LENGTH DASH NUMBER (LLL)	BORE $\phi$ 'A'	BALL WIDTH 'WA'	HOUSING WIDTH 'HA'	HEAD DIA. 'DA'	THREAD TYPE 'A'	BORE $\phi$ 'B'	CLEVIS WIDTH 'WB'	INNER WIDTH 'HB'	CLEVIS HEIGHT 'DB'	THREAD TYPE 'B'	DESCRIPTION TIE ROD LENGTH (IN) , TUBE MATL	TENSION (LBF)	COMPRESSION (LBF)
JMDS-TRC-015-101	3272-5000	5/16 + .0015 - .0005	(.437)	(.344)	< 1.010 MAX)	(R/H)	1/4 + .004 - .000	(.838 MAX)	(.563)	< .850 MAX)	(L/H)	* 32.00-50.72, <ALUMINUM TUBING)	5810	2800
JMDS-TRC-015-103	5001-6100											* 49.29-61.72, <ALUMINUM TUBING)		1930
JMDS-TRC-015-105	6101-7300											* 60.29-73.72, <ALUMINUM TUBING)		1360
JMDS-TRC-015-107	7301-8500											* 72.29-85.72, <ALUMINUM TUBING)		1010
JMDS-TRC-015-111	3764-5000	5/16 + .0015 - .0005	(.437)	(.344)	< 1.010 MAX)	(R/H)	1/4 + .004 - .000	(.838 MAX)	(.563)	< .850 MAX)	(R/H)	* 32.00-50.72, <ALUMINUM TUBING)	5810	2800
JMDS-TRC-015-113	5001-6100											* 49.29-61.72, <ALUMINUM TUBING)		1930
JMDS-TRC-015-115	6101-7300											* 60.29-73.72, <ALUMINUM TUBING)		1360
JMDS-TRC-015-117	7301-8500											* 72.29-85.72, <ALUMINUM TUBING)		1010
JMDS-TRC-015-121	3764-5000	5/16 + .0015 - .0005	(.437)	(.344)	< 1.010 MAX)	(R/H)	1/4 + .004 - .000	(.838 MAX)	(.563)	< .850 MAX)	(L/H)	* 32.00-50.72, <STEEL TUBING)	5810	5810
JMDS-TRC-015-123	5001-6100											* 49.29-61.72, <STEEL TUBING)		5010
JMDS-TRC-015-125	6101-7300											* 60.29-73.72, <STEEL TUBING)		3660
JMDS-TRC-015-127	7301-8500											* 72.29-85.72, <STEEL TUBING)		2760
JMDS-TRC-015-129	8501-10500											* 84.29-105.72, <STEEL TUBING)		1830
JMDS-TRC-015-131	3764-5000	5/16 + .0015 - .0005	(.437)	(.344)	< 1.010 MAX)	(R/H)	1/4 + .004 - .000	(.838 MAX)	(.563)	< .850 MAX)	(R/H)	* 32.00-50.72, <STEEL TUBING)	5810	5810
JMDS-TRC-015-133	5001-6100											* 49.29-61.72, <STEEL TUBING)		5010
JMDS-TRC-015-135	6101-7300											* 60.29-73.72, <STEEL TUBING)		3660
JMDS-TRC-015-137	7301-8500											* 72.29-85.72, <STEEL TUBING)		2760
JMDS-TRC-015-139	8501-10500											* 84.29-105.72, <STEEL TUBING)		1830

\* JMDS-TRC-015-1XXA/-1XXB MINIMUM TIE ROD LENGTH IS INCREASED BY +.07.  
JMDS-TRC-015-1XXC MINIMUM TIE ROD LENGTH IS INCREASED BY +.14.



# JMDS-TRC-015

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(XXX) 5/16" ROD END TO 5/16" CLEVIS END, Ø1.5 (SEE TABLE R)

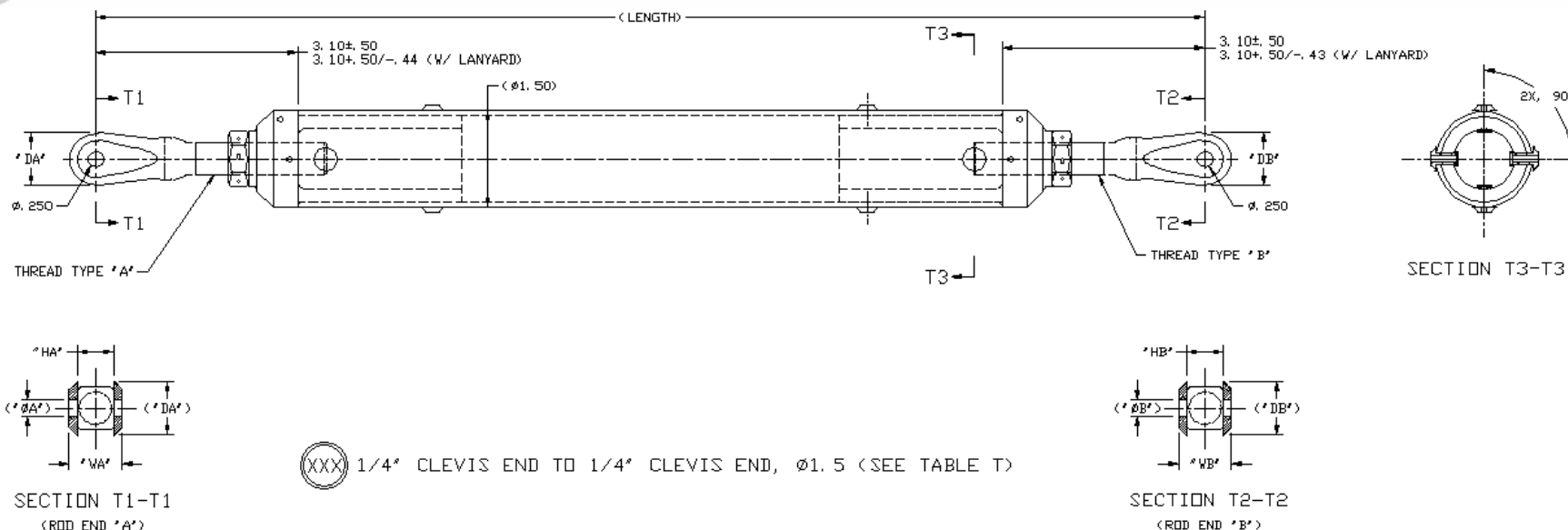
TABLE R

ASSY KIT (XXXX)	NOMINAL LENGTH DASH NUMBER (LLLL)	BORE Ø "A"	BALL WIDTH "WA"	HOUSING WIDTH "HA"	HEAD DIA. "DA"	THREAD TYPE "A"	BORE Ø "B"	CLEVIS WIDTH "WB"	INNER WIDTH "HB"	CLEVIS HEIGHT "DB"	THREAD TYPE "B"	DESCRIPTION TIE ROD LENGTH (IN) , TUBE MATL	TENSION (LBF)	COMPRESSION (LBF)
JMDS-TRC-015-151	3272-5000	5/16 +0.015 -0.005	(.437)	(.344)	<1.010 MAX	(R/H)	5/16 +0.015 -0.005	(.838 MAX)	(.443) +0.005 -0.000	(.920 MAX)	(L/H)	* 32.00-50.72, (ALUMINUM TUBING)	5810	2800
JMDS-TRC-015-153	5001-6100											* 49.29-61.72, (ALUMINUM TUBING)		1930
JMDS-TRC-015-155	6101-7300											* 60.29-73.72, (ALUMINUM TUBING)		1360
JMDS-TRC-015-157	7301-8500											* 72.29-85.72, (ALUMINUM TUBING)		1010
JMDS-TRC-015-161	3764-5000	5/16 +0.015 -0.005	(.437)	(.344)	<1.010 MAX	(R/H)	5/16 +0.015 -0.005	(.838 MAX)	(.443) +0.005 -0.000	(.920 MAX)	(R/H)	* 32.00-50.72, (ALUMINUM TUBING)	5810	2800
JMDS-TRC-015-163	5001-6100											* 49.29-61.72, (ALUMINUM TUBING)		1930
JMDS-TRC-015-165	6101-7300											* 60.29-73.72, (ALUMINUM TUBING)		1360
JMDS-TRC-015-167	7301-8500											* 72.29-85.72, (ALUMINUM TUBING)		1010
JMDS-TRC-015-171	3764-5000	5/16 +0.015 -0.005	(.437)	(.344)	<1.010 MAX	(R/H)	5/16 +0.015 -0.005	(.838 MAX)	(.443) +0.005 -0.000	(.920 MAX)	(L/H)	* 32.00-50.72, (STEEL TUBING)	5810	5810
JMDS-TRC-015-173	5001-6100											* 49.29-61.72, (STEEL TUBING)		5010
JMDS-TRC-015-175	6101-7300											* 60.29-73.72, (STEEL TUBING)		3660
JMDS-TRC-015-177	7301-8500											* 72.29-85.72, (STEEL TUBING)		2760
JMDS-TRC-015-179	8501-10500	* 84.29-105.72, (STEEL TUBING)	1830											
JMDS-TRC-015-181	3764-5000	5/16 +0.015 -0.005	(.437)	(.344)	<1.010 MAX	(R/H)	5/16 +0.015 -0.005	(.838 MAX)	(.443) +0.005 -0.000	(.920 MAX)	(R/H)	* 32.00-50.72, (STEEL TUBING)	5810	5810
JMDS-TRC-015-183	5001-6100											* 49.29-61.72, (STEEL TUBING)		5010
JMDS-TRC-015-185	6101-7300											* 60.29-73.72, (STEEL TUBING)		3660
JMDS-TRC-015-187	7301-8500											* 72.29-85.72, (STEEL TUBING)		2760
JMDS-TRC-015-189	8501-10500	* 84.29-105.72, (STEEL TUBING)	1830											

\* JMDS-TRC-015-1XXA/-1XXB MINIMUM TIE ROD LENGTH IS INCREASED BY +.07.  
JMDS-TRC-015-1XXC MINIMUM TIE ROD LENGTH IS INCREASED BY +.14.

# JMDS-TRC-015

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XXX 1/4" CLEVIS END TO 1/4" CLEVIS END,  $\phi 1.5$  (SEE TABLE T)

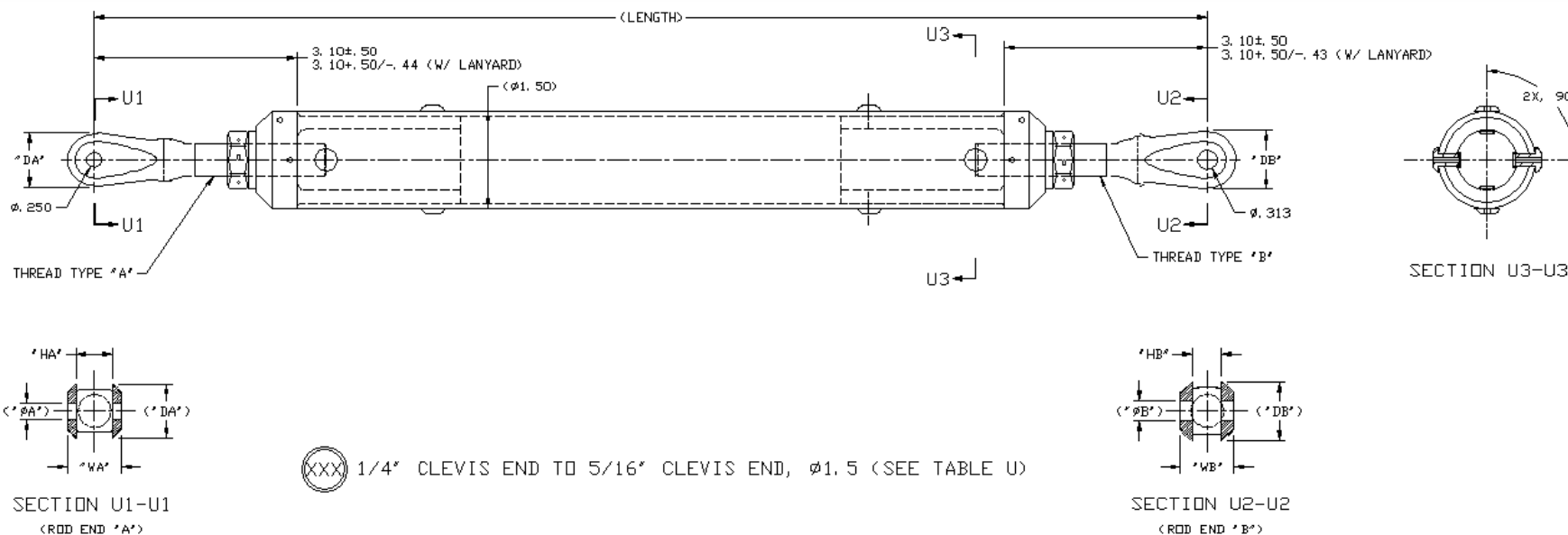
TABLE T

ASSY KIT (XXXY) **	NOMINAL LENGTH DASH NUMBER (LLLL)	BORE $\phi$ 'A'	CLEVIS WIDTH 'WA'	INNER WIDTH 'HA'	CLEVIS HEIGHT 'DA'	THREAD TYPE 'A'	BORE $\phi$ 'B'	CLEVIS WIDTH 'WB'	INNER WIDTH 'HB'	CLEVIS HEIGHT 'DB'	THREAD TYPE 'B'	DESCRIPTION TIE ROD LENGTH (IN) , TUBE MATL	TENSION (LBF)	COMPRESSION (LBF)
JMDS-TRC-015-201	4220-5120	1/4 +.004 -.000	(.838 MAX)	(.563 +.005 -.000)	(.850 MAX)	(R/H)	1/4 +.004 -.000	(.838 MAX)	(.563 +.005 -.000)	(.850 MAX)	(L/H)	* 41.20-52.20, (ALUMINUM TUBING)	636D	2610
JMDS-TRC-015-203	5121-6220											* 50.21-63.20, (ALUMINUM TUBING)		1830
JMDS-TRC-015-205	6221-7420											* 61.21-75.20, (ALUMINUM TUBING)		1310
JMDS-TRC-015-207	7421-8620											* 73.21-87.20, (ALUMINUM TUBING)		980
JMDS-TRC-015-211	4220-5120	1/4 +.004 -.000	(.838 MAX)	(.563 +.005 -.000)	(.850 MAX)	(R/H)	1/4 +.004 -.000	(.838 MAX)	(.563 +.005 -.000)	(.850 MAX)	(R/H)	* 41.20-52.20, (ALUMINUM TUBING)	636D	2610
JMDS-TRC-015-213	5121-6220											* 50.21-63.20, (ALUMINUM TUBING)		1830
JMDS-TRC-015-215	6221-7420											* 61.21-75.20, (ALUMINUM TUBING)		1310
JMDS-TRC-015-217	7421-8620											* 73.21-87.20, (ALUMINUM TUBING)		980
JMDS-TRC-015-221	4220-5120	1/4 +.004 -.000	(.838 MAX)	(.563 +.005 -.000)	(.850 MAX)	(R/H)	1/4 +.004 -.000	(.838 MAX)	(.563 +.005 -.000)	(.850 MAX)	(L/H)	* 41.20-52.20, (STEEL TUBING)	706D	6190
JMDS-TRC-015-223	5121-6220											* 50.21-63.20, (STEEL TUBING)		4680
JMDS-TRC-015-225	6221-7420											* 61.21-75.20, (STEEL TUBING)		3470
JMDS-TRC-015-227	7421-8620											* 73.21-87.20, (STEEL TUBING)		2640
JMDS-TRC-015-229	8621-10620											* 85.21-107.20, (STEEL TUBING)		1780
JMDS-TRC-015-231	4220-5120	1/4 +.004 -.000	(.838 MAX)	(.563 +.005 -.000)	(.850 MAX)	(R/H)	1/4 +.004 -.000	(.838 MAX)	(.563 +.005 -.000)	(.850 MAX)	(R/H)	* 41.20-52.20, (STEEL TUBING)	706D	6190
JMDS-TRC-015-233	5121-6220											* 50.21-63.20, (STEEL TUBING)		4680
JMDS-TRC-015-235	6221-7420											* 61.21-75.20, (STEEL TUBING)		3470
JMDS-TRC-015-237	7421-8620											* 73.21-87.20, (STEEL TUBING)		2640
JMDS-TRC-015-239	8621-10620											* 85.21-107.20, (STEEL TUBING)		1780

\* JMDS-TRC-015-2XXA MINIMUM TIE ROD LENGTH IS INCREASED BY +.07,  
 JMDS-TRC-015-2XXC MINIMUM TIE ROD LENGTH IS INCREASED BY +.14.  
 \*\* JMDS-TRC-015-201 THROUGH -239 DOES NOT CONTAIN LANYARD SUFFIX B AS BOTH ENDS ARE THE SAME AS SUFFIX A.

# JMDS-TRC-015

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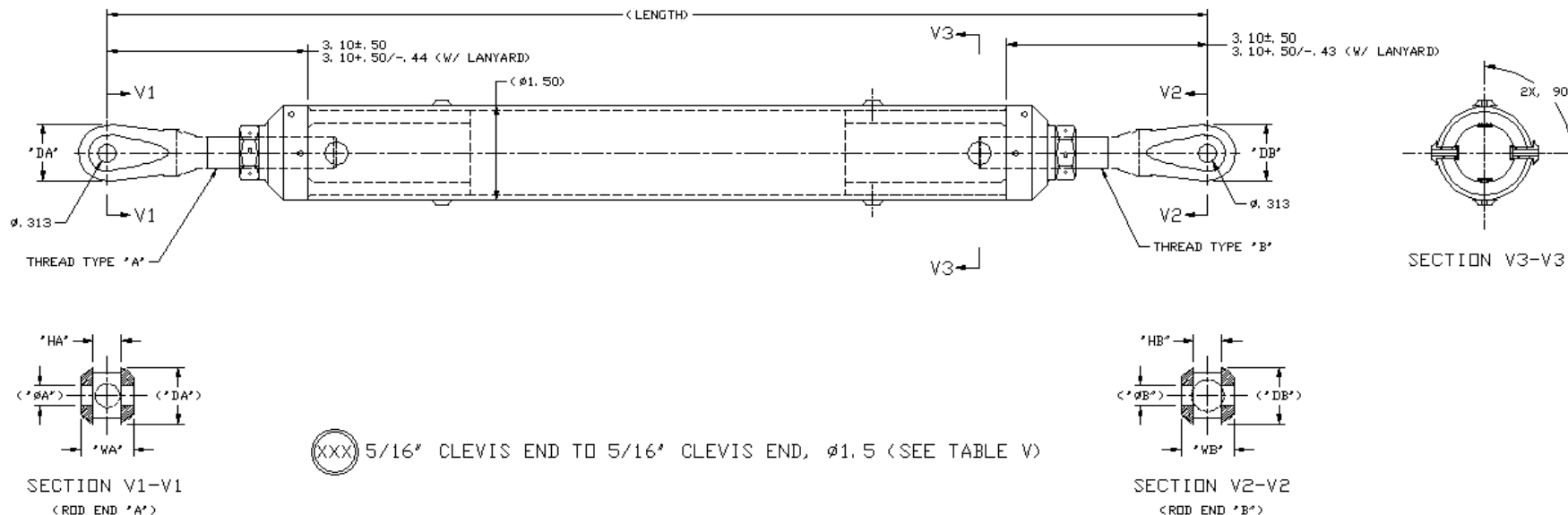


ASSY KIT (XXX)	NOMINAL LENGTH DASH NUMBER (LLL)	BORE Ø 'A'	CLEVIS WIDTH 'WA'	INNER WIDTH 'HA'	CLEVIS HEIGHT 'DA'	THREAD TYPE 'A'	BORE Ø 'B'	CLEVIS WIDTH 'WB'	INNER WIDTH 'HB'	CLEVIS HEIGHT 'DB'	THREAD TYPE 'B'	DESCRIPTION TIE ROD LENGTH (IN) , TUBE MATL	TENSION (LBF)	COMPRESSION (LBF)
JMDS-TRC-015-251	4220-5120	1/4 +0.004 -0.000	(.838 MAX)	(.563 +0.005 -0.000)	(.850 MAX)	<R/H	5/16 +0.0015 -0.0005	(.838 MAX)	(.443 +0.003 -0.000)	(.920 MAX)	<L/H	* 41, 20-52, 20, <ALUMINUM TUBING	6360	2610
JMDS-TRC-015-253	5121-6220											* 50, 21-63, 20, <ALUMINUM TUBING		1830
JMDS-TRC-015-255	6221-7420											* 61, 21-75, 20, <ALUMINUM TUBING		1310
JMDS-TRC-015-257	7421-8620											* 73, 21-87, 20, <ALUMINUM TUBING		980
JMDS-TRC-015-261	4220-5120	1/4 +0.004 -0.000	(.838 MAX)	(.563 +0.005 -0.000)	(.850 MAX)	<R/H	5/16 +0.0015 -0.0005	(.838 MAX)	(.443 +0.003 -0.000)	(.920 MAX)	<R/H	* 41, 20-52, 20, <ALUMINUM TUBING	6360	2610
JMDS-TRC-015-263	5121-6220											* 50, 21-63, 20, <ALUMINUM TUBING		1830
JMDS-TRC-015-265	6221-7420											* 61, 21-75, 20, <ALUMINUM TUBING		1310
JMDS-TRC-015-267	7421-8620											* 73, 21-87, 20, <ALUMINUM TUBING		980
JMDS-TRC-015-271	4220-5120	1/4 +0.004 -0.000	(.838 MAX)	(.563 +0.005 -0.000)	(.850 MAX)	<R/H	5/16 +0.0015 -0.0005	(.838 MAX)	(.443 +0.003 -0.000)	(.920 MAX)	<L/H	* 41, 20-52, 20, <STEEL TUBING	7060	6190
JMDS-TRC-015-273	5121-6220											* 50, 21-63, 20, <STEEL TUBING		4680
JMDS-TRC-015-275	6221-7420											* 61, 21-75, 20, <STEEL TUBING		3470
JMDS-TRC-015-277	7421-8620											* 73, 21-87, 20, <STEEL TUBING		2640
JMDS-TRC-015-279	8621-10620											* 85, 21-107, 20, <STEEL TUBING		1780
JMDS-TRC-015-281	4220-5120	1/4 +0.004 -0.000	(.838 MAX)	(.563 +0.005 -0.000)	(.850 MAX)	<R/H	5/16 +0.0015 -0.0005	(.838 MAX)	(.443 +0.003 -0.000)	(.920 MAX)	<R/H	* 41, 20-52, 20, <STEEL TUBING	7060	6190
JMDS-TRC-015-283	5121-6220											* 50, 21-63, 20, <STEEL TUBING		4680
JMDS-TRC-015-285	6221-7420											* 61, 21-75, 20, <STEEL TUBING		3470
JMDS-TRC-015-287	7421-8620											* 73, 21-87, 20, <STEEL TUBING		2640
JMDS-TRC-015-289	8621-10620											* 85, 21-107, 20, <STEEL TUBING		1780

\* JMDS-TRC-015-2XXA/-2XXB MINIMUM TIE ROD LENGTH IS INCREASED BY +.07.  
 JMDS-TRC-015-2XXC MINIMUM TIE ROD LENGTH IS INCREASED BY +.14.

# JMDS-TRC-015

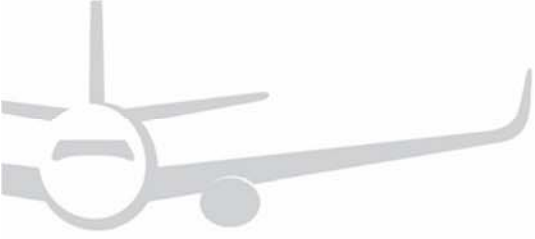
JMIH-CAT-002 Rev D



XXX 5/16" CLEVIS END TO 5/16" CLEVIS END, Ø1.5 (SEE TABLE V)

TABLE V														
ASSY KIT (XXX) **	NOMINAL LENGTH DASH NUMBER (LLLL)	BORE Ø 'A'	CLEVIS WIDTH 'WA'	INNER WIDTH 'HA'	CLEVIS HEIGHT 'DA'	THREAD TYPE 'A'	BORE Ø 'B'	CLEVIS WIDTH 'WB'	INNER WIDTH 'HB'	CLEVIS HEIGHT 'DB'	THREAD TYPE 'B'	DESCRIPTION TIE ROD LENGTH (IN) , TUBE MATL	TENSION (LBF)	COMPRESSION (LBF)
JMDS-TRC-015-301	4220-5120	5/16 +0.015 -0.005	(.838 MAX)	(.443 +0.05 -0.00)	(.920 MAX)	(R/LH)	5/16 +0.015 -0.005	(.838 MAX)	(.443 +0.05 -0.00)	(.920 MAX)	(L/RH)	* 41.20-52.20, (ALUMINUM TUBING)	6360	2610
JMDS-TRC-015-303	5121-6220											* 50.21-63.20, (ALUMINUM TUBING)		1830
JMDS-TRC-015-305	6221-7420											* 61.21-75.20, (ALUMINUM TUBING)		1310
JMDS-TRC-015-307	7421-8620											* 73.21-87.20, (ALUMINUM TUBING)		980
JMDS-TRC-015-311	4220-5120	5/16 +0.015 -0.005	(.838 MAX)	(.443 +0.05 -0.00)	(.920 MAX)	(R/LH)	5/16 +0.015 -0.005	(.838 MAX)	(.443 +0.05 -0.00)	(.920 MAX)	(R/LH)	* 41.20-52.20, (ALUMINUM TUBING)	6360	2610
JMDS-TRC-015-313	5121-6220											* 50.21-63.20, (ALUMINUM TUBING)		1830
JMDS-TRC-015-315	6221-7420											* 61.21-75.20, (ALUMINUM TUBING)		1310
JMDS-TRC-015-317	7421-8620											* 73.21-87.20, (ALUMINUM TUBING)		980
JMDS-TRC-015-321	4220-5120	5/16 +0.015 -0.005	(.838 MAX)	(.443 +0.05 -0.00)	(.920 MAX)	(R/LH)	5/16 +0.015 -0.005	(.838 MAX)	(.443 +0.05 -0.00)	(.920 MAX)	(L/RH)	* 41.20-52.20, (STEEL TUBING)	7060	6190
JMDS-TRC-015-323	5121-6220											* 50.21-63.20, (STEEL TUBING)		4680
JMDS-TRC-015-325	6221-7420											* 61.21-75.20, (STEEL TUBING)		3470
JMDS-TRC-015-327	7421-8620											* 73.21-87.20, (STEEL TUBING)		2640
JMDS-TRC-015-329	8621-10620											* 85.21-107.20, (STEEL TUBING)	1780	
JMDS-TRC-015-331	4220-5120	5/16 +0.015 -0.005	(.838 MAX)	(.443 +0.05 -0.00)	(.920 MAX)	(R/LH)	5/16 +0.015 -0.005	(.838 MAX)	(.443 +0.05 -0.00)	(.920 MAX)	(R/LH)	* 41.20-52.20, (STEEL TUBING)	7060	6190
JMDS-TRC-015-333	5121-6220											* 50.21-63.20, (STEEL TUBING)		4680
JMDS-TRC-015-335	6221-7420											* 61.21-75.20, (STEEL TUBING)		3470
JMDS-TRC-015-337	7421-8620											* 73.21-87.20, (STEEL TUBING)		2640
JMDS-TRC-015-339	8621-10620											* 85.21-107.20, (STEEL TUBING)	1780	

\* JMDS-TRC-015-3XXX MINIMUM TIE ROD LENGTH IS INCREASED BY +.07.  
 JMDS-TRC-015-3XXX MINIMUM TIE ROD LENGTH IS INCREASED BY +.14.  
 \*\* JMDS-TRC-015-301 THROUGH -339 DOES NOT CONTAIN LANYARD SUFFIX B AS BOTH ENDS ARE THE SAME AS SUFFIX A.



# CONTACT INFORMATION

## SUSAN WALL

Configuration Management Lead  
JORMAC AEROSPACE

11221 69<sup>th</sup> Street North  
Largo, FL 33773-5504 USA

Tel: 727-549-9600 ext 2247

Fax: 727-549-1401

Email: [Susan.Wall@Jormac.com](mailto:Susan.Wall@Jormac.com)

WWW.JORMAC.COM

## BRIAN BARBER

Vice President Sales & Marketing  
JORMAC AEROSPACE

11221 69<sup>th</sup> Street North  
Largo, FL 33773-5504 USA

Cell: 918-991-9900

Fax: 727-549-1401

Email: [Brian.Barber@Jormac.com](mailto:Brian.Barber@Jormac.com)

WWW.JORMAC.COM