



Installation, Instruction, Maintenance & Spare Parts Manual for Rigid Lifelines Fold-Away and Swing Arm Fall Protection Systems

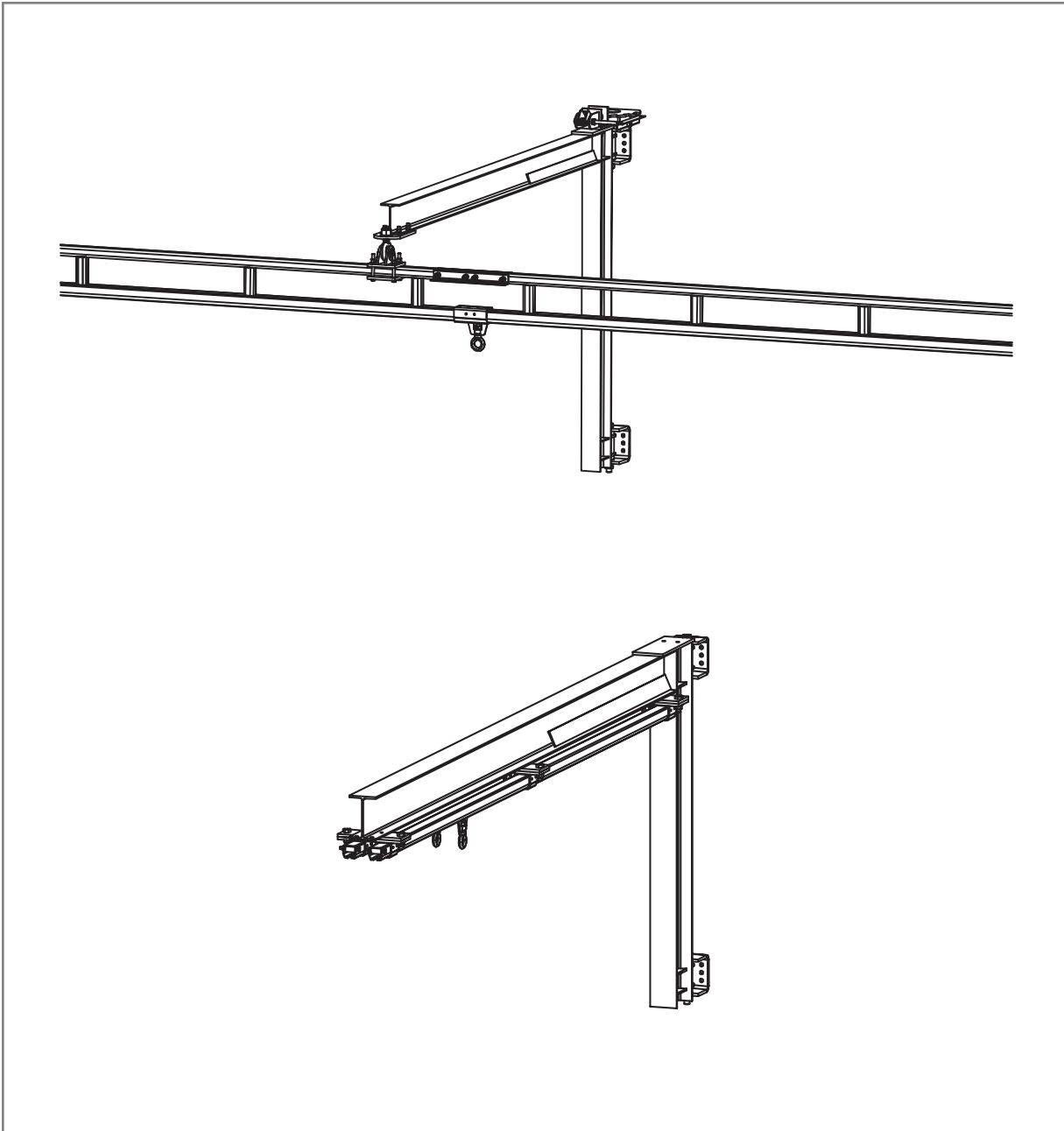


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FORWARD

This manual contains important information to help you install, operate, maintain, and service your new fall protection fold-away or swing arm jib system. We recommend that you study its contents thoroughly before putting the system into use. By practicing the recommended maintenance, with proper installation, and application of correct operating procedures, you will be assured maximum service from your fall protection system.

The systems described in this manual are intended for indoor service. Systems used for outdoor service require special consideration.

INSTALLATION:

Before attempting to install your new system, the following items must be understood...

1. It is the customer's responsibility to ensure that building columns or walls are adequate to support the system.
2. Systems should not be hung from an existing building structure without first consulting a qualified architect or engineer for the purpose of determining the structure's adequacy.



NOTE: DO NOT MOUNT THE SYSTEM TO ANY STRUCTURE UNLESS YOU ARE SURE THE STRUCTURE CAN SAFELY SUPPORT THE LOADS IMPOSED UPON THE STRUCTURE. FAILURE TO CHECK THIS ITEM CAN RESULT IN SEVERE BODILY INJURY OR DEATH.

***The systems are not designed for lateral loading of boom, but rather vertical only.**

3. The installer is responsible for supplying the correct size, length, number, and type of bolts required to attach the system brackets to the structure. Rigid Lifelines recommends that the bolts be ASTM A325 grade.
4. In the design of Rigid Lifelines fall protection fold-away and swing arm jib systems, there is a certain amount of deflection that will occur due to the self weights of the system. There is also additional deflection due to the structure it is mounted to, such as the building columns, in which the installer or customer is responsible for since it can vary. These factors are combined with additional deflection caused if a man or men actually fall and are hanging from the structure. If the deflection is too great, there is the less desired possibility that after a fall, a man could begin to slowly slide along the track. Although Rigid Lifelines does design to accommodate for deflection, Rigid Lifelines also recommends the installer adjust the boom tip equal to an elevation of $L/300$ inches ABOVE the boom center (a point on the boom closest to the wall). Shims can be used between the "bracket to wall connection" to make this adjustment. For example, $L/300$ for a 20' span is equal to $(12 \times 20)/300 = 0.80$ ", or approximately $3/4$ ". This would mean that when installation is complete, the boom tip in this example would be approximately $3/4$ " higher than the inner most part of the boom.

FALL PROTECTION SAFETY AND CONSIDERATIONS

Fall Protection Safety

1. Remove systems and components from service IMMEDIATELY if they have been subjected to fall impact until inspected by a competent person and deemed undamaged and suitable for use.
2. Promptly rescue employees in the event of a fall, or assure that they are able to rescue themselves. (Rigid Lifelines sells a self-rescue trolley to assist in self-rescue.)
3. Inspect systems prior to each use for wear, damage, and other deterioration; and remove defective components.
4. Do NOT attach fall arrest systems to guard rail systems or hoists.
5. Do NOT attach fall arrest systems to crane bridges unless specifically designed for such use by a competent engineer.
6. Every fall arrest system should have a rescue plan to recover fallen workers. If the same fall arrest system will be used to recover a fallen worker, a two man system must be specified.

Fall Protection Considerations

Anyone working in general industry over a height of 4 ft. or more above a lower level with an unprotected side or edge shall be protected from falling.

Anchorage used for attachment of personal fall arrest equipment shall be certified for the applied forces by others.

Note: Consult factory for custom design if maximum arresting force exceeds 900 lb.

If the system is to be used by an employee having a combined person and tool weight of more than 310 pounds, then the system must be appropriately modified.

Check bolts annually for tightness.

FALL PROTECTION COMPONENT AND SYSTEM INSTALLATION REQUIREMENTS

Engineered fall protection components and standard systems displayed in Rigid Lifelines sales literature meet or exceed all regulations as defined by ANSI Z359, OSHA 1910.66 and OSHA 1926.502 for engineered components.

Rigid Lifelines fall arrest components and systems must be employed and maintained in accordance with all ANSI and OSHA regulations.

INSTALLATION INSTRUCTIONS

Install components as defined in this manual and in accordance with ANSI and OSHA regulations. If the system is a standard engineered fall protection system, install the system(s) as defined on the provided assembly drawings.

If the system has been custom engineered as custom system by Rigid Lifelines, install the system(s) as defined on the provided custom assembly drawing.

NOTE: Rigid Lifelines fall protection components are similar to crane designs, but may never be used as a crane.



Never use a Rigid Lifelines fall protection component or system as a crane or to lift objects, unless specifically engineered by Rigid Lifelines to do so.

PERFORMANCE TESTING OF FALL PROTECTION COMPONENTS AND SYSTEMS

Rigid Lifelines recommends following the ANSI requirements for dynamic performance testing of all Rigid Lifelines fall protection components and systems. The dynamic performance test, as defined by ANSI Z359.1-1992 (R1999) consists of a 220 lb test weight dropped for a total 6-foot free fall before a 900 lb MAF (maximum arresting force) 6' long "ripstitch" energy absorbing lanyard engages to decelerate the load. A two-man system will use two separate weights (using one 900 MAF lanyard per weight), a three-man system will use three separate weights, and so on. ANSI standards are available at www.ansi.org

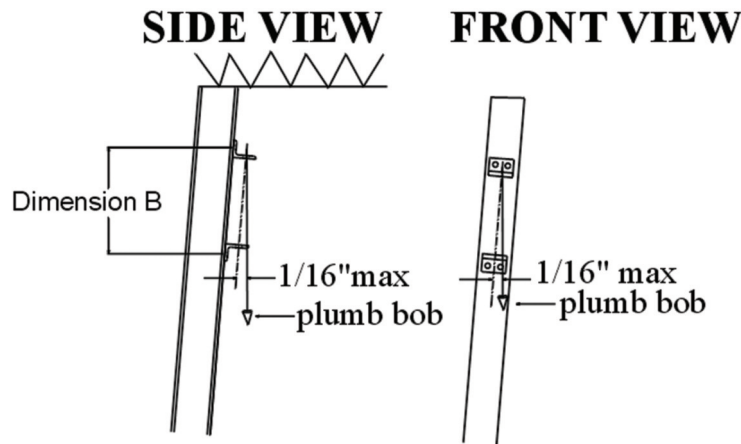
USAGE NOTES

1. Read, understand and follow instructions of all component manuals and warnings before use.
2. Follow all current requirements of ANSI Z359.
3. The following requirements do not preempt any current OSHA, Canadian, or ANSI Z359 fall protection requirements.
4. Always perform a hazard analysis before use that will identify impact hazards, swing hazards, or any other hazards that may exist. Address and correct all hazards before use.
5. Inspect system before use, check for bent, broken, or missing components.
6. Inspect thoroughly by competent person after each fall.
7. Inspect annually by competent person.
8. Never load track at an angle greater than 30° from vertical.
9. Never use system with the attachment point below the D-ring of the harness.
10. Never use with scaffolding.
11. Always have a written rescue plan that defines who will rescue and what equipment will be used.
12. Never use without a worker monitor (buddy system).
13. If the same fall arrest system will be used to recover a fallen worker a minimum of a two man system must be specified.
14. Engineering of any attachment points by others. See the thrust and pull forces defined in this literature.
15. Only the following self retracting lanyard (SRL) design is acceptable for use on SPANCO Rigid Lifelines fall protection systems:
 - 1) 900LB MAF
 - 2) 4.5FT per second lock up speed
 - 3) Disk or drum braking mechanism
 - 4) Wire rope SRL for outdoor use
 - 5) Fabric lanyard SRL for indoor use onlyTearable lanyard, rip stitch packs, or stretchable energy absorbers are not acceptable.
16. Choose the shortest length self retracting lanyard (SRL) available that will allow the worker to perform his/her job function. This will reduce total fall distance and thereby limit any possible injury during a fall. Short cable lengths will reduce the amount of "cable cinching" on the internal SRL pulley, thereby reducing fall distance.
17. Only an ANSI full body fall protection harness is acceptable for use on Rigid Lifelines systems.
18. Never use body belts on Rigid Lifelines fall protection systems.
19. If a jib boom is provided, never apply a lateral load at the boom tip.
20. Per OSHA and ANSI, a competent person must provide proper user training before use.
21. Never deviate from the above unless you have written permission and authorization from Rigid Lifelines.

After reading all the information prior, you may begin the installation procedure. The following is for either a swing arm jib or fold-away system.

NOTE: For installing a fold away system, first install the boom arms as described below (before installing the track)

1. Be sure of proper span clearance when the system folds outward (this should have already been determined).
2. Be sure that the top of the system will have adequate ceiling clearance before proceeding (this should have already been determined).
3. Hold the top wall bracket against the supporting column in its proper location with a C-clamp or other supporting method.
4. Establish the correct distance from the top wall bracket to the bottom wall bracket. Refer to the charts for bracket centers. Hold the bottom wall bracket against the supporting column with a C-clamp or other supporting method.
5. Use a plumb bob to check the alignment of the bottom bracket with the top bracket in two planes. The alignment must be within 1/16 inches from top to bottom.



6. Using the wall brackets as a template, mark the established hole locations.
7. Drill the holes in the column for the wall brackets.
8. Mount the wall brackets and their shims (if used) to the column with bolts supplied by the installer. If “bolt on” rotation stop plates are to be installed, this step is the best time to do that (see page 26). Care should be taken to insure all bolts are properly tightened.
9. Lift the assembly with its bearings attached with a lift truck, or other means, into place. Insert the hex head bolt through the bracket. Insure the thrust plate is properly located at the bottom of each bearing. Install the lock washer and hex nut onto the bolts. Tighten the nut to the torque listed:

PIVOT BOLT TORQUE ONLY	PIVOT BRACKET STYLE	BOLT SIZE	TORQUE ON NUT
	1 T	1"	40 FT-lbs.
	2 T	1 1/4"	75 FT-lbs.

The following remaining step applies only to the fold-away systems:

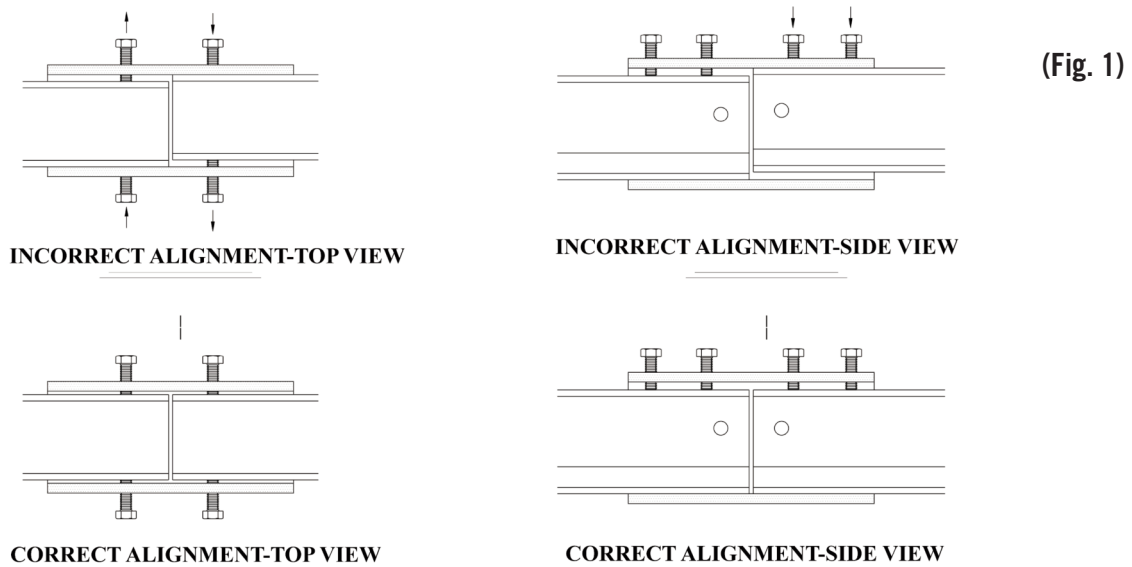
1. After installing the jib boom arms, hang the pieces of track with the provided hardware (see sketch) and torque as required. The pivoting bolt (rotating eye bolt) with the nut, composite washer, and roll pin are already assembled.

	FASTENER SIZE	TORQUE FT. LBS.
STRUCTURAL BOLT ONLY (NOT PIVOT BOLTS)	1/4"	10 FT. LBS.
	5/16"	19 FT. LBS.
	3/8"	33 FT. LBS.
	7/16"	54 FT. LBS.
	1/2"	78 FT. LBS.
	9/16"	114 FT. LBS.
	5/8"	154 FT. LBS.
	3/4"	257 FT. LBS.
	7/8"	341 FT. LBS.
	1"	514 FT. LBS.
	1 1/4"	803 FT. LBS.

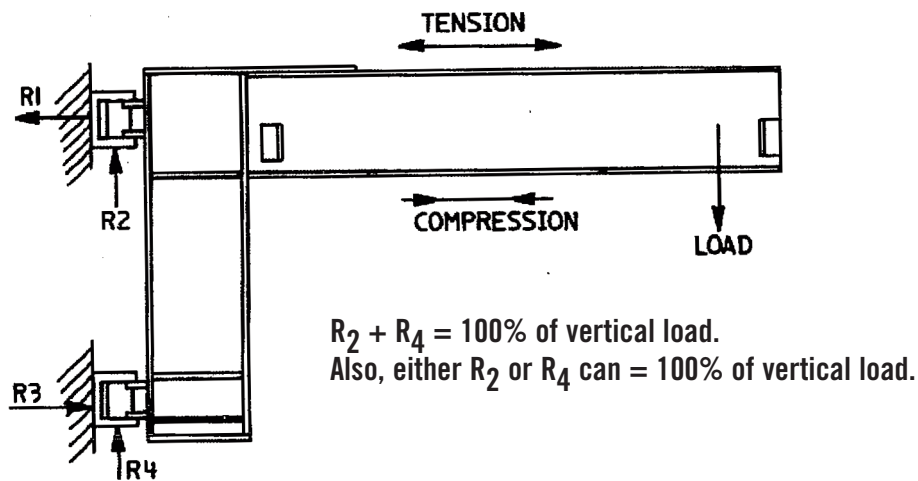
Splices

1. Track splice joints are supplied complete with vertical and horizontal adjustment screws which facilitate precise alignment of the track sections at a joint.
2. When positioning splice joints it is important to insure that they are placed within the allowable distance from an adjacent support bracket for maximum loads.
3. Splice joints should be within 18" max, of a support bracket unless otherwise specified.
4. Welded joints are possible, however they are not recommended as they inhibit the adjustments, future modification, or dismantling of a system angles.
5. Splices are used to join the upper chords of the truss section.

The track splice joint is made from a sleeve with a total of eight set screws threaded into the top and both sides. Slide the sleeve over the end of the first runway track, then butt the second runway track against the first. Center the sleeve over the joint. The two center top set screws should be tightened slightly to push the tracks against the base of the sleeve so that the two bottom surfaces of the track are even. Adjust the side set screws so that the track slots are aligned and there is a smooth transition from one track to the other, see Fig. 1. Tighten all top set screws then side set screws for correct track alignment.



NOTE: SYSTEMS SHOULD NEVER BE HUNG FROM ANY EXISTING BUILDING STRUCTURE, WITHOUT FIRST CONSULTING AN ARCHITECT OR STRUCTURAL ENGINEER. THE RESPONSIBILITY IN DETERMINING IF THE EXISTING STRUCTURE OR SUPPORT TO BE USED IS ADQUATE, RESTS ENTIRELY ON THE CUSTOMER.



TOP AND BOTTOM WALL BRACKETS

BASIC DESCRIPTION:

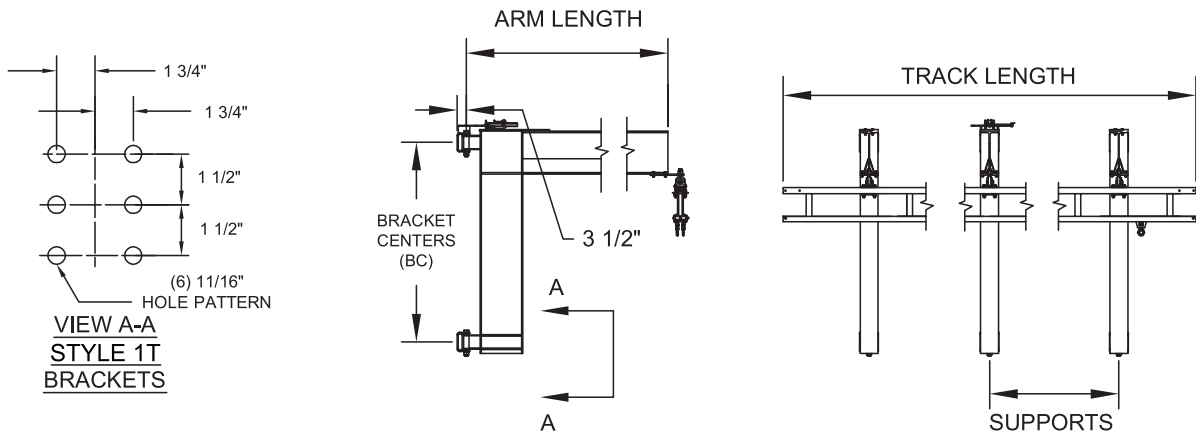
The top and bottom wall brackets in this case are identical fittings. The fittings are of the same basic configuration for all models, except for the drilling dimensions.

The fitting consists of a formed channel, a fabricated bracket, two bronze bushings and bolt to provide rotation. The fabricated bracket is constructed from a steel tube welded to plating in an "I" arrangement which is then welded to the flange of the mast. The tube contains two bronze bushings and grease fitting to assure ease of rotation.

DESIGN ADVANTAGES:

- A) Pivot bolt is in double shear, which provides for a stronger connection.
- B) The bronze bushing and grease fitting provides excellent lubrication and ease of rotation for long life and low maintenance.
- C) The bracket assembly is designed to supply maximum rigidity because of the "I" shape. This shape also provides sufficient length for a sound connection between the bracket and the mast.

FOLD-AWAY FALL PROTECTION



20'-0" SUPPORTS - Single Person / Single Track

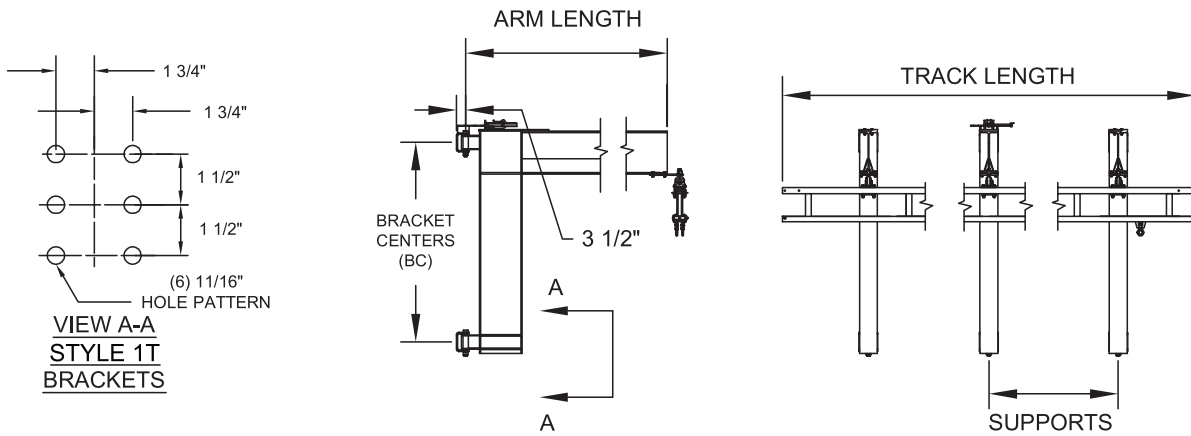
Track Length		Arm Length								
		4'-0"	6'-0"	8'-0"	10'-0"	12'-0"	14'-0"	16'-0"	18'-0"	20'-0"
23'-0"	W	682	702	722	754	789	839	1019	1219	1935
	BC	4	4	4	5	5	5	6	6	6
	TP	2200	3300	4500	4500	5600	6600	6300	7300	8500
43'-0"	W	1018	1058	1088	1180	1258	1333	1603	1903	2977
	BC	4	4	4	5	5	5	6	6	6
	TP	2200	3300	4500	4500	5600	6600	6300	7300	8500
63'-0"	W	1407	1457	1507	1624	1727	1827	2187	2587	4019
	BC	4	4	4	5	5	5	6	6	6
	TP	2200	3300	4500	4500	5600	6600	6300	7300	8500
83'-0"	W	1796	1856	1926	2068	2196	2321	2771	3271	5061
	BC	4	4	4	5	5	5	6	6	6
	TP	2200	3300	4500	4500	5600	6600	6300	7300	8500

25'-0" SUPPORTS - Single Person / Single Track

Track Length		Arm Length								
		4'-0"	6'-0"	8'-0"	10'-0"	12'-0"	14'-0"	16'-0"	18'-0"	20'-0"
28'-0"	W	678	708	738	788	838	888	1068	1268	1984
	BC	4	4	4	5	5	5	6	6	6
	TP	2200	3300	4500	4500	5600	6600	6300	7300	8500
53'-0"	W	1120	1150	1210	1285	1360	1435	1705	2005	3079
	BC	4	4	4	5	5	5	6	6	6
	TP	2200	3300	4500	4500	5600	6600	6300	7300	8500
78'-0"	W	1562	1622	1682	1782	1882	1982	2342	2742	4174
	BC	4	4	4	5	5	5	6	6	6
	TP	2200	3300	4500	4500	5600	6600	6300	7300	8500
103'-0"	W	2004	2094	2154	2279	2404	2529	2979	3479	5269
	BC	4	4	4	5	5	5	6	6	6
	TP	2200	3300	4500	4500	5600	6600	6300	7300	8500

Dimensions and weights are approximate and may change without notice.

FOLD-AWAY FALL PROTECTION

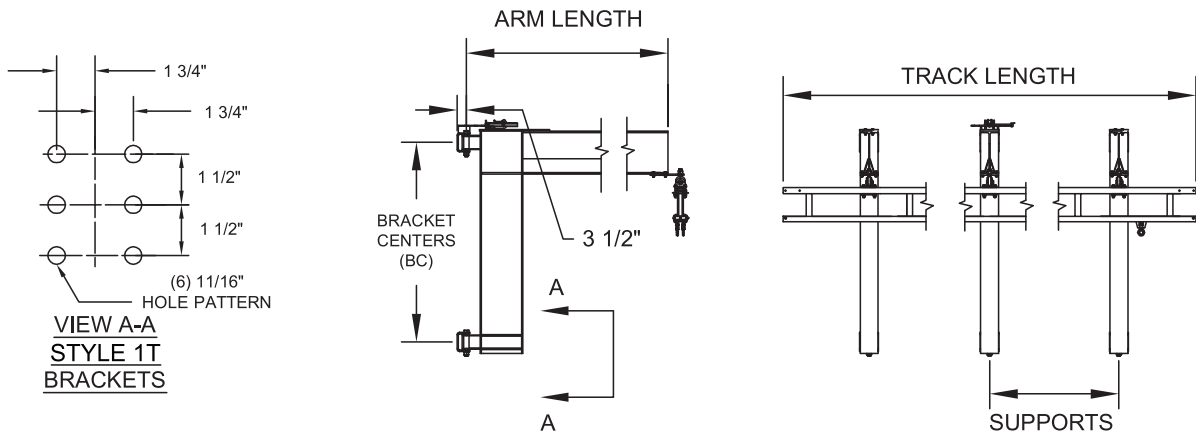


30'-0" SUPPORTS - Single Person / Single Track

Track Length		Arm Length								
		4'-0"	6'-0"	8'-0"	10'-0"	12'-0"	14'-0"	16'-0"	18'-0"	20'-0"
33'-0"	W	832	862	892	942	992	1042	1222	1422	2138
	BC	4	4	4	5	5	5	6	6	6
	TP	2200	3300	4500	4500	5600	6600	6300	7300	8500
63'-0"	W	1589	1619	1679	1779	1879	1979	2339	2739	4171
	BC	4	4	4	5	5	5	6	6	6
	TP	2200	3300	4500	4500	5600	6600	6300	7300	8500
93'-0"	W	2346	2376	2466	2616	2766	2916	3456	4056	6204
	BC	4	4	4	5	5	5	6	6	6
	TP	2200	3300	4500	4500	5600	6600	6300	7300	8500
123'-0"	W	3103	3133	3253	3453	3653	3853	4573	5373	8237
	BC	4	4	4	5	5	5	6	6	6
	TP	2200	3300	4500	4500	5600	6600	6300	7300	8500

Dimensions and weights are approximate and may change without notice.

FOLD-AWAY FALL PROTECTION



20'-0" SUPPORTS - Two Person / Single Track

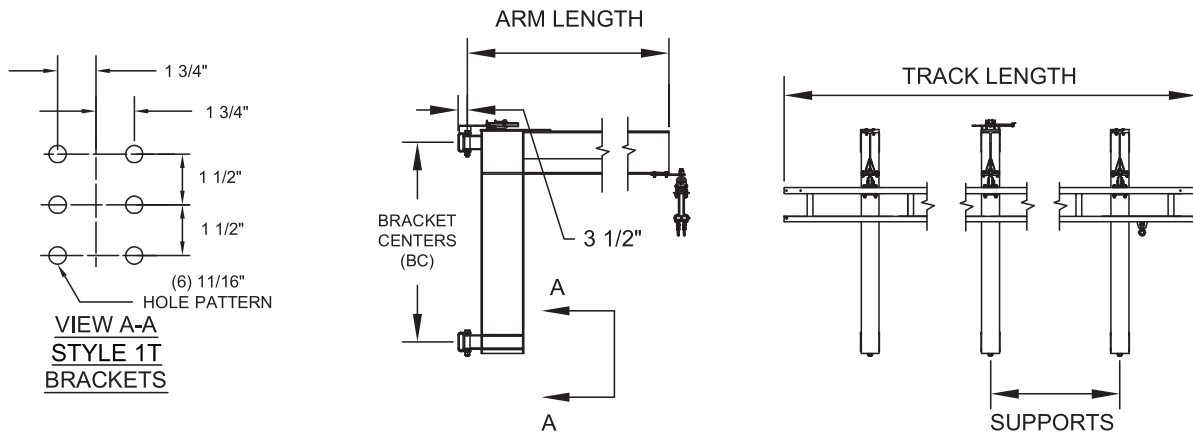
Track Length	Arm Length									
	4'-0"	6'-0"	8'-0"	10'-0"	12'-0"	14'-0"	16'-0"	18'-0"	20'-0"	
23'-0"	W	815	875	935	1277	1321	1713	1891	2591	2763
	BC	4	4	4	5	5	5	6	6	6
	TP	2500	3800	5100	5100	6300	7400	7100	8200	9300
43'-0"	W	1310	1400	1490	2003	2069	1891	2924	3974	4309
	BC	4	4	4	5	5	5	6	6	6
	TP	2500	3800	5100	5100	6300	7400	7100	8200	9300
63'-0"	W	1805	1925	2045	2729	2817	3601	3957	5357	5778
	BC	4	4	4	5	5	5	6	6	6
	TP	2500	3800	5100	5100	6300	7400	7100	8200	9300
83'-0"	W	2300	2450	2600	3455	3565	4545	4990	6740	7247
	BC	4	4	4	5	5	5	6	6	6
	TP	2500	3800	5100	5100	6300	7400	7100	8200	9300

25'-0" SUPPORTS - Two Person / Single Track

Track Length	Arm Length									
	4'-0"	6'-0"	8'-0"	10'-0"	12'-0"	14'-0"	16'-0"	18'-0"	20'-0"	
28'-0"	W	849	909	969	1311	1355	1757	1925	2625	2797
	BC	4	4	4	5	5	5	6	6	6
	TP	2500	3800	5100	5100	6300	7400	7100	8200	9300
53'-0"	W	1409	1499	1589	2102	2168	2812	3069	4119	4377
	BC	4	4	4	5	5	5	6	6	6
	TP	2500	3800	5100	5100	6300	7400	7100	8200	9300
78'-0"	W	1969	2089	2209	2893	2981	3821	4167	5567	5911
	BC	4	4	4	5	5	5	6	6	6
	TP	2500	3800	5100	5100	6300	7400	7100	8200	9300
103'-0"	W	2529	2679	2829	3684	3794	4830	5265	7015	7445
	BC	4	4	4	5	5	5	6	6	6
	TP	2500	3800	5100	5100	6300	7400	7100	8200	9300

Dimensions and weights are approximate and may change without notice.

FOLD-AWAY FALL PROTECTION



30'-0" SUPPORTS - Two Person / Single Track

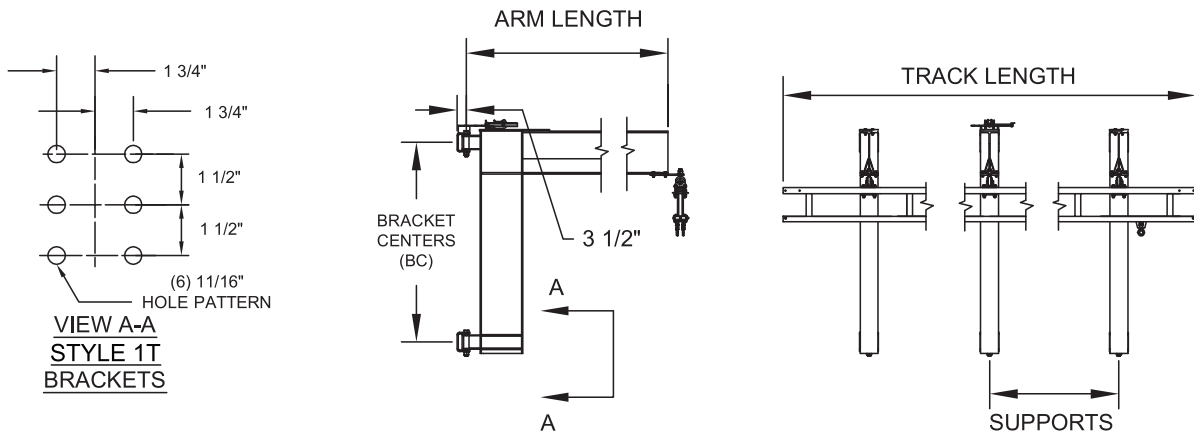
Track Length	Arm Length									
	4'-0"	6'-0"	8'-0"	10'-0"	12'-0"	14'-0"	16'-0"	18'-0"	20'-0"	
33'-0"	W	1282	1342	1402	1744	1788	2180	2358	3058	3230
	BC	4	4	4	5	5	5	6	6	6
	TP	2500	3800	5100	5100	6300	7400	7100	8200	9300
63'-0"	W	2280	2370	2460	2973	3039	3627	3894	4944	5202
	BC	4	4	4	5	5	5	6	6	6
	TP	2500	3800	5100	5100	6300	7400	7100	8200	9300
93'-0"	W	3278	3398	3518	4202	4290	5074	5430	6830	7174
	BC	4	4	4	5	5	5	6	6	6
	TP	2500	3800	5100	5100	6300	7400	7100	8200	9300
123'-0"	W	4276	4426	4576	5431	5541	6521	6966	8716	9146
	BC	4	4	4	5	5	5	6	6	6
	TP	2500	3800	5100	5100	6300	7400	7100	8200	9300

40'-0" SUPPORTS - Two Person / Single Track

Track Length	Arm Length									
	4'-0"	6'-0"	8'-0"	10'-0"	12'-0"	14'-0"	16'-0"	18'-0"	20'-0"	
43'-0"	W	1538	1598	1658	2186	2312	2916	3674	3730	4802
	BC	4	4	4	5	5	5	6	6	6
	TP	2500	3800	5100	5100	6300	7400	7100	8200	9300
83'-0"	W	2807	2897	2987	3779	3968	4874	6011	6095	7703
	BC	4	4	4	5	5	5	6	6	6
	TP	2500	3800	5100	5100	6300	7400	7100	8200	9300
123'-0"	W	4076	4196	4316	5372	5624	6832	8348	8460	10604
	BC	4	4	4	5	5	5	6	6	6
	TP	2500	3800	5100	5100	6300	7400	7100	8200	9300

Dimensions and weights are approximate and may change without notice.

FOLD-AWAY FALL PROTECTION



20'-0" SUPPORTS - Two Person / Dual Track

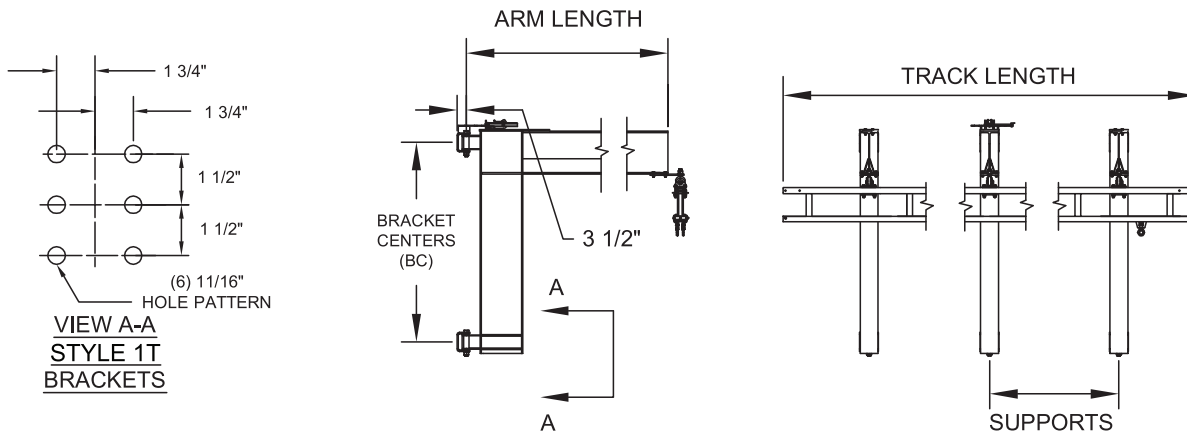
Track Length	Arm Length									
	4'-0"	6'-0"	8'-0"	10'-0"	12'-0"	14'-0"	16'-0"	18'-0"	20'-0"	
23'-0"	W	902	962	1022	1364	1408	1800	1978	2678	2850
	BC	4	4	4	5	5	5	6	6	6
	TP	2900	4400	5900	6000	7300	8600	8300	9600	10,700
43'-0"	W	1484	1574	1664	2177	2243	2831	3098	4148	4483
	BC	4	4	4	5	5	5	6	6	6
	TP	2900	4400	5900	6000	7300	8600	8300	9600	10,700
63'-0"	W	2066	2186	2306	2990	3078	3862	4218	5618	6039
	BC	4	4	4	5	5	5	6	6	6
	TP	2900	4400	5900	6000	7300	8600	8300	9600	10,700
83'-0"	W	2650	2800	2950	3805	3915	4895	5340	7090	7597
	BC	4	4	4	5	5	5	6	6	6
	TP	2900	4400	5900	6000	7300	8600	8300	9600	10,700

25'-0" SUPPORTS - Two Person / Dual Track

Track Length	Arm Length									
	4'-0"	6'-0"	8'-0"	10'-0"	12'-0"	14'-0"	16'-0"	18'-0"	20'-0"	
28'-0"	W	1047	1107	1167	1509	1553	1955	2123	2823	2995
	BC	4	4	4	5	5	5	6	6	6
	TP	2900	4400	5900	6000	7300	8600	8300	9600	10,700
53'-0"	W	1793	1883	1973	2486	2552	3196	3453	4503	4761
	BC	4	4	4	5	5	5	6	6	6
	TP	2900	4400	5900	6000	7300	8600	8300	9600	10,700
78'-0"	W	2545	2665	2785	3469	3557	4397	4743	6143	6487
	BC	4	4	4	5	5	5	6	6	6
	TP	2900	4400	5900	6000	7300	8600	8300	9600	10,700
103'-0"	W	3297	3447	3597	4452	4562	5598	6033	7783	8213
	BC	4	4	4	5	5	5	6	6	6
	TP	2900	4400	5900	6000	7300	8600	8300	9600	10,700

Dimensions and weights are approximate and may change without notice.

FOLD-AWAY FALL PROTECTION



30'-0" SUPPORTS - Two Person / Dual Track

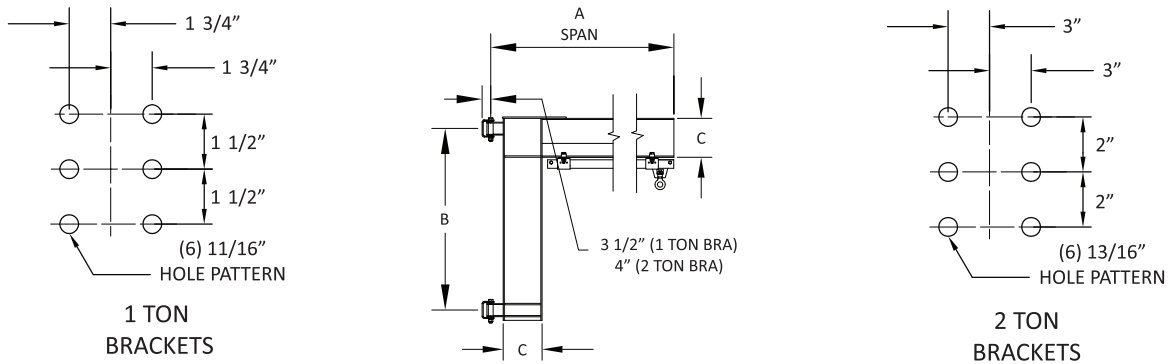
Track Length	Arm Length									
	4'-0"	6'-0"	8'-0"	10'-0"	12'-0"	14'-0"	16'-0"	18'-0"	20'-0"	
33'-0"	W	1125	1185	1245	1587	1631	2023	2201	2901	3073
	BC	4	4	4	5	5	5	6	6	6
	TP	2900	4400	5900	6000	7300	8600	8300	9600	10,700
63'-0"	W	1947	2037	2127	2640	2706	3294	3561	4611	4869
	BC	4	4	4	5	5	5	6	6	6
	TP	2900	4400	5900	6000	7300	8600	8300	9600	10,700
93'-0"	W	2769	2889	3009	3693	3781	4565	4921	6321	6665
	BC	4	4	4	5	5	5	6	6	6
	TP	2900	4400	5900	6000	7300	8600	8300	9600	10,700
123'-0"	W	3591	3741	3891	4746	4856	5836	6281	8031	8461
	BC	4	4	4	5	5	5	6	6	6
	TP	2900	4400	5900	6000	7300	8600	8300	9600	10,700

40'-0" SUPPORTS - Two Person / Dual Track

Track Length	Arm Length									
	4'-0"	6'-0"	8'-0"	10'-0"	12'-0"	14'-0"	16'-0"	18'-0"	20'-0"	
43'-0"	W	1488	1548	1608	2136	2262	2866	3624	3680	4752
	BC	4	4	4	5	5	5	6	6	6
	TP	2900	4400	5900	6000	7300	8600	8300	9600	10,700
83'-0"	W	2664	2754	2844	3636	4185	4731	5863	5952	7560
	BC	4	4	4	5	5	5	6	6	6
	TP	2900	4400	5900	6000	7300	8600	8300	9600	10,700
123'-0"	W	3840	3960	4080	5136	5748	6596	8107	8224	10368
	BC	4	4	4	5	5	5	6	6	6
	TP	2900	4400	5900	6000	7300	8600	8300	9600	10,700

Dimensions and weights are approximate and may change without notice.

SWING ARM FALL PROTECTION



Single Person / Single Track

Span	Bracket Centers	Bracket Style	Weight (LBS)	Thrust & Pull (LBS)
8'-0"	4'-0"	1T	198	4,500
10'-0"	5'-0"	1T	242	4,500
12'-0"	5'-0"	1T	388	5,600
14'-0"	5'-0"	1T	431	6,600
16'-0"	6'-0"	1T	493	6,300
18'-0"	6'-0"	1T	640	7,300
20'-0"	6'-0"	1T	830	8,500
22'-0"	6'-0"	1T	890	9,300
24'-0"	6'-0"	2T	1081	10,500
26'-0"	6'-0"	2T	1149	11,600
28'-0"	6'-0"	2T	1216	12,600
30'-0"	6'-0"	2T	1518	14,200

Two Person / Dual Track

Span	Bracket Centers	Bracket Style	Weight (LBS)	Thrust & Pull (LBS)
8'-0"	4'-0"	1T	229	5,900
10'-0"	5'-0"	1T	382	6,000
12'-0"	5'-0"	1T	433	7,300
14'-0"	5'-0"	1T	484	8,600
16'-0"	6'-0"	1T	650	8,300
18'-0"	6'-0"	1T	813	9,600
20'-0"	6'-0"	1T	906	10,700
22'-0"	6'-0"	2T	1097	12,100
24'-0"	6'-0"	2T	1172	13,400
26'-0"	6'-0"	2T	1458	15,100
28'-0"	6'-0"	2T	1545	16,500
30'-0"	6'-0"	2T	2178	19,100

FALL PROTECTION SAFETY AND MAINTENANCE INSTRUCTIONS

All potential users of this equipment and user's management must read and understand all instructions fully; failure to do so could result in serious or fatal injury.

The user is ultimately responsible for his or her own safety when using a Rigid Lifelines fall arrest product. The following safety and maintenance instructions are designed to make your Rigid Lifelines product as safe as possible. To obtain the utmost level of safety that this equipment can provide all instructions must be followed thoroughly.

All Rigid Lifelines Fall Arrest systems are designed with a safety factor of two. Fall Arrest systems are fully engineering systems based on calculations and testing. All systems are designed to take a maximum arresting force to 900 lbs. per person.

Rigid Lifelines fall arrest systems should be inspected annually and at minimum as described below. For the highest level of safety, Rigid Lifelines fall arrest systems can be checked before each use as described below. The user or management should determine what system will be inspected when, and it is always a good idea to keep an inspection log. Above all simple common sense must always be used to keep safety first.

Overview

- Inspect and maintain equipment
- Understand the limitations and requirements of the equipment
- Understand the penalties of not following and understanding the instructions
- If any of the below items fail the product is unsafe and must be marked unsafe and the system's use must be discontinued until the system is fixed.

Fall Arrest Track (Where Applicable)

- Inspect for loose debris inside track
- Check track for cracks, holes, heavy rust, or deterioration
- If trussed track, inspect welds for stress cracks or broken welds
- Flange thickness should not be worn to less than 90% of original thickness
- Flange should not be bent more than 5 degrees below horizontal

Hanger System (Where Applicable)

- Inspect roof beam clamp bolts to see if tightened to 108 FT.lbs.
- See if all adjustment screws are tight and accounted for
- For side support brackets inspect all mounting bolts, nuts and lock washers for proper installation and tightness
- For drop rod support brackets, inspect for broken welds or stress cracks, inspect drop rods for being bent along with checking drop rod bolts for tightness and proper installation
- Inspect all beam clamps for proper installation and if tightened to 108 FT.lbs.

End Stop Bumper (Where Applicable)

- Inspect to see if end stop bumper is installed at each end of track
- Inspect rubber for wear
- Check for lock washer and nut and check for tightness

Splices (Where Applicable)

- Check for installation of all alignment bolts and inspect for tightness (on track)
- Inspect the four through bolts and check for 50 FT.lbs on bolt head (on Truss)
- Splices should be installed within 1 foot of hanger

Swivel Eye Trolley (Where Applicable)

- Inspect eye for 360 degree of free rotation
- Check for free movement of trolley rolling back and forth with no binding or hesitation for wheel and bearing use

Sway Bracing (drop rod systems) (Where Applicable)

- Check for proper tightness
- Check for hanging or broken or frayed cables
- Check all connections for proper installation

End Trucks (Bridge Crane system) (Where Applicable)

- Roll bridge to each end of runway checking smoothness for wheel and bearing use
- Inspect bolts on fixed end truck (one per bridge) to see if all tightened

Wall Brackets (Where Applicable)

- The sleeve bearings in the brackets are pre-lubricated at the factory. Field lubrication is required based upon usage of the system. Rigid Lifelines recommends that the bearings be lubricated at least once per year. The grease should be lithium soap based grease, consistency No. NLGI 2.

Training Procedures (strongly encouraged)

- Locate all fall hazards and eliminate
- Find and reduce free fall distances
- Properly fit a harness
- Inspect and maintain equipment
- Know the limitations of the equipment
- Know the consequence of not following safety instructions

Emergency Plan

- Minimum time take should be taken to rescue casualty victim, due to blood restriction cause from harness.
- Fire department or other means of professional emergency services should be notified immediately to carry rescue out, due to possible spine injury or possible suspension trauma injury.

Checklist

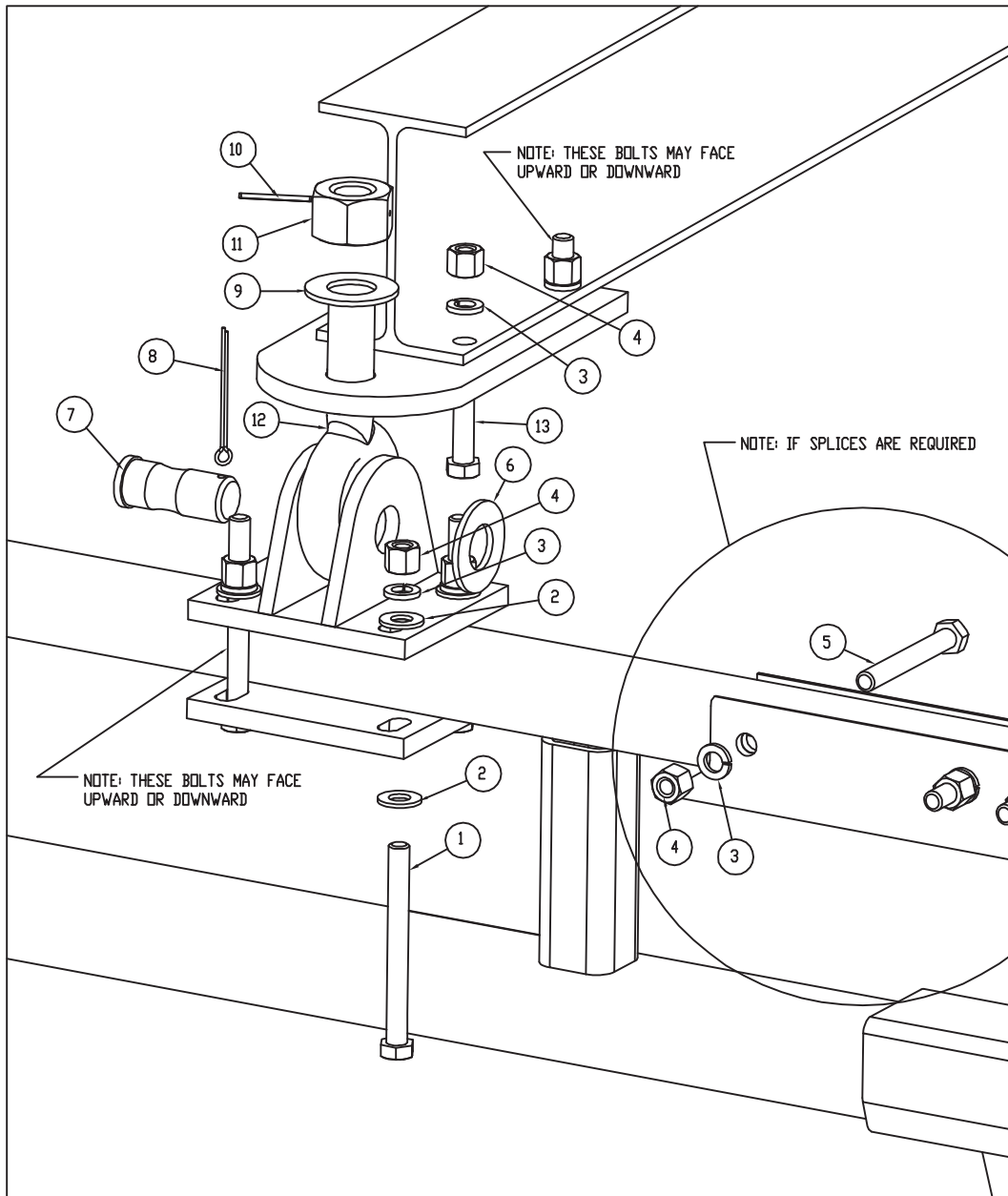
- System assembled to Rigid Lifelines instructions and standards?
- Has user been properly trained on equipment?
- Is the system being used within maximum load capacities?
- Has system been checked with Inspection and is maintenance log being filled out regularly?

FALL ARREST IS NOT DESIGNED FOR NORMAL CRANE USE, ONLY FOR FALL PROTECTION

THE BUYER IS RESPONSIBLE FOR ENSURING CORRECT STRENGTH AND RELIABILITY OF SYSTEM AND PROPER INSTALLATION ACCORDING TO ALL APPLICABLE FALL ARREST SPECIFICATIONS

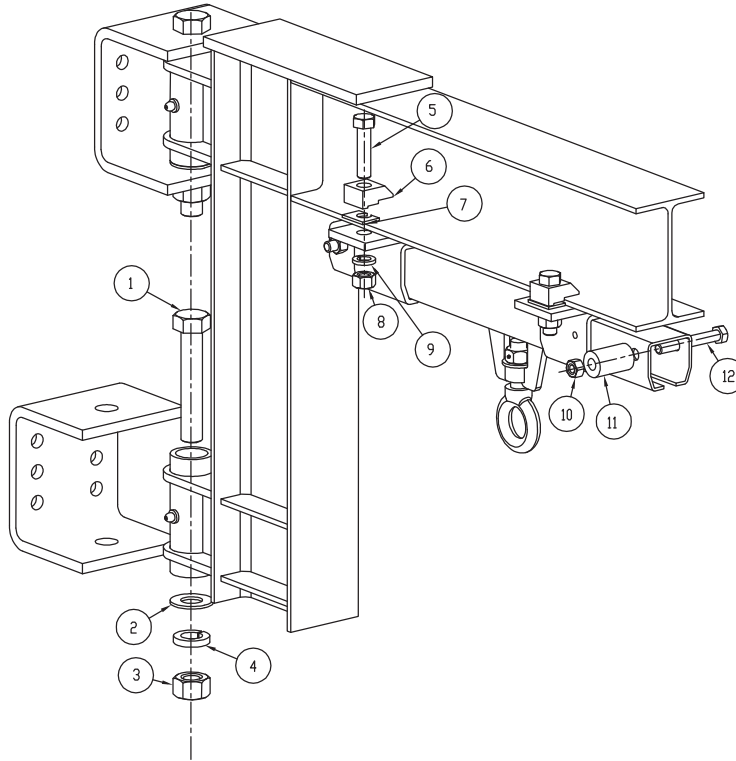
ALL RIGID LIFELINES TRACK, TROLLEYS, JIBS, AND HANGERS ARE DESIGNED IN ACCORDANCE WITH A.N.SI. Spec No. Z359, OSHA 1910.66 and OSHA Std.1926.502

STANDARD BOOM TO TRACK CONNECTION (FOLD-AWAY ONLY)



ITEM	QTY.	PART NO.	DESCRIPTION
1	4	10-0266	BOLT, HEX HEAD 1/2"-13 NC X 5 1/2" full thread
2	8	15-0003	FLAT WASHER, 1/2"
3	12	14-0003	1/2" LOCK WASHER
4	12	13-0011	NUT, HEX LOCK 1/2-13, GR 5 (5/8"H)
5	4	10-0232	BOLT, HEX HEAD 1/2"-13 NC X 4" full thread
6	1	15-0023	FLAT WASHER 1 1/4" ID 2 1/4" OD
7	1	9-1948	700 SERIES HOIST TROLLEY STD LOAD PIN
8	1	23-0003	COTTER PIN 5/32" X 3"
9	1	26-0016	1 1/8" THRUST WASHER
10	1	17-0060	ROLL PIN 1/8 X 1 3/4"
11	1	9-1984	HEAVY HEX NUT 1 1/8"-7NC DRILLED FOR PIN
12	1	9-1931	EYE HOOK, 724RI TROLLEY, 2" ID
13	1	10-0205FT	BOLT, HEX HEAD 1/2"-13 NC X 2 1/2" full thread

300 SWING ARM ONLY (SINGLE TRACK)



W6, W8, W10, W12 BEAM SIZES, SINGLE TRACK

ITEM	QTY.	PART NO.	DESCRIPTION
1	2	10-0604	BOLT, HEX HD 1-8 NC X 9 GR 5
2	2	36-0008	WASHER, THRUST 1.016 ID X 2" OD X 1/8
3	2	11-0080	NUT, HEX 1-8NC
4	2	14-0007	1" LOCK WASHER
10	2	10-0218	BOLT, 1/2-13NC X 3.5 GR5
11	2	13-0003	NUT, HEX LOCK 1/2-13, GR 2 (5/8"H.)
12	2	RR1.25-2	RUBBER, 1.25"OD X 9/16"ID X 2"LONG

W14, W16 BEAM SIZES, SINGLE TRACK

ITEM	QTY.	PART NO.	DESCRIPTION
1	2	10-0806	BOLT, HEX HEAD 1-1/4-7NC X 10 GR5
2	2	36-0009	WASHER, THRUST 1-1/4 X 1-11/16 X 1/8
3	2	11-0090	NUT, HEX 1-1/4-7NC GR5 (1 1/16"H.)
4	2	14-0009	WASHER, LOCK SPLIT 1-1/4"
10	2	10-0218	BOLT, 1/2-13NC X 3.5 GR5
11	2	13-0003	NUT, HEX LOCK 1/2-13, GR 2 (5/8"H.)
12	2	RR1.25-2	RUBBER, 1.25"OD X 9/16"ID X 2"LONG

ANY BEAM SIZE, SINGLE TRACK

	5	10-0302	5/8"-11UNC X 2 1/2" HEX HEAD BOLT
*	6	18-0009	BEAM CLAMP 5/8 A W/SH. TAIL, 1/4"TH
**	6	18-0012	BEAM CLAMP 5/8 A W/MED TAIL, 5/16"TH
***	6	18-0013	BEAM CLAMP 5/8 B W/L. TAIL, 7/16"TH
****	7	18-0007	WASHER 5/8" CLIPPED 1/8"TH
	8	13-0032	HEX LOCK NUT, 5/8"-11 NC
	9	14-0004	5/8" LOCK WASHER

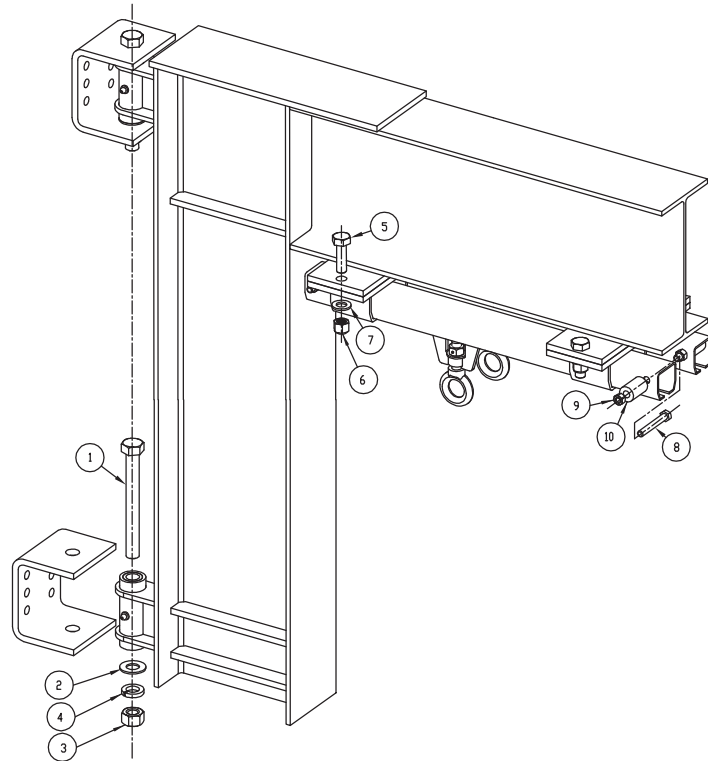
* NOT USED ON S8 AND S16

** NOT USED ON S6, S8, S10, S12 AND S14

*** NOT USED ON S6, S10, S12, S14 AND S16

**** NOT USED ON S6, S8, AND S16

300 SWING ARM ONLY (DUAL TRACK)



W6, W8, W10, W12 BEAM SIZES, DUAL TRACK

ITEM	QTY.	PART NO.	DESCRIPTION
1	2	10-0604	BOLT, HEX HD 1-8 NC X 9 GR 5
2	2	36-0008	WASHER, THRUST 1.016 ID X 2" DD X 1/8
3	2	11-0080	NUT, HEX 1-8NC
4	2	14-0007	1" LOCK WASHER
10	4	10-0218	BOLT, 1/2-13NC X 3.5 GR5
11	4	13-0003	NUT, HEX LOCK 1/2-13, GR 2 (5/8"H.)
12	4	RR1.25-2	RUBBER, 1.25" DD X 9/16" ID X 2" LONG

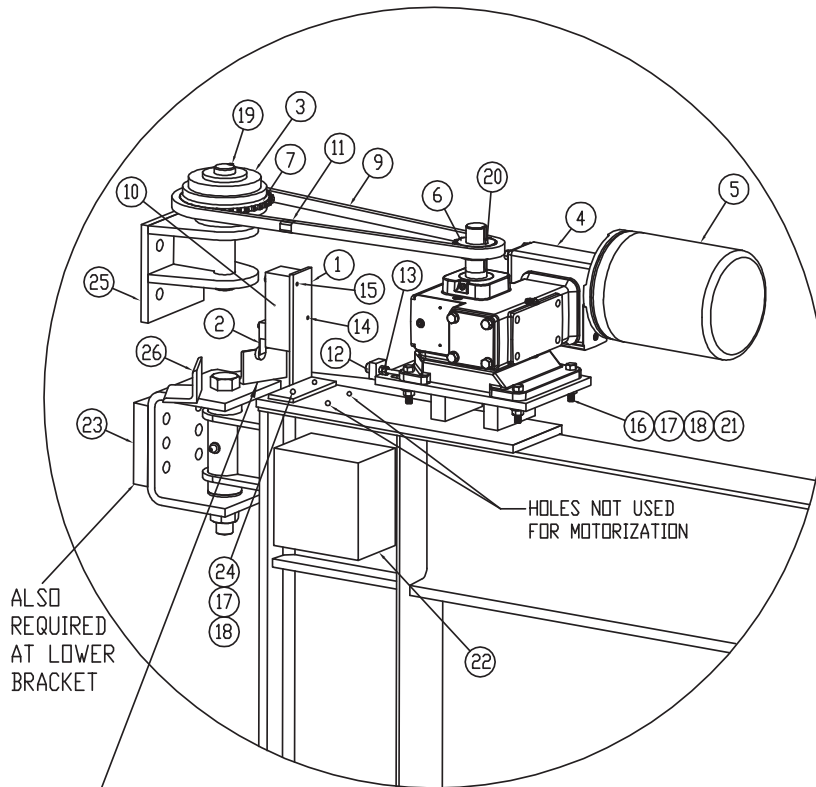
W14, W16, W18 BEAM SIZES, DUAL TRACK

ITEM	QTY.	PART NO.	DESCRIPTION
1	2	10-0806	BOLT, HEX HEAD 1-1/4-7NC X 10 GR5
2	2	36-0009	WASHER, THRUST 1-1/4 X 1-11/16 X 1/8
3	2	11-0090	NUT, HEX 1-1/4-7NC GR5 (1 1/16"H.)
4	2	14-0009	WASHER, LOCK SPLIT 1-1/4"
8	4	10-0218	BOLT, 1/2-13NC X 3.5 GR5
9	4	13-0003	NUT, HEX LOCK 1/2-13, GR 2 (5/8"H.)
10	4	RR1.25-2	RUBBER, 1.25" DD X 9/16" ID X 2" LONG

ANY SIZE BEAM, DUAL TRACK

5	10-0402	BOLT, 3/4-10NC X 2-1/2 GR5
6	13-0012	NUT, HEX LOCK 3/4-10, 7/8"H, GR5 OR 8
7	14-0005	WASHER, LOCK SPLIT 3/4" PLATED

MOTORIZATION OPTION



ALSO
REQUIRED
AT LOWER
BRACKET

HOLES NOT USED
FOR MOTORIZATION

WELD INSTRUCTIONS
FOR ITEM No. 26

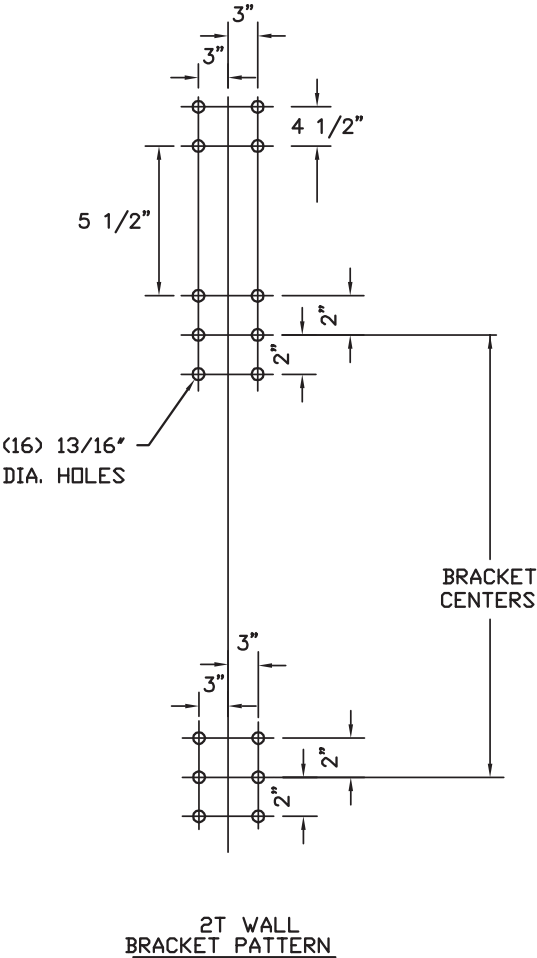
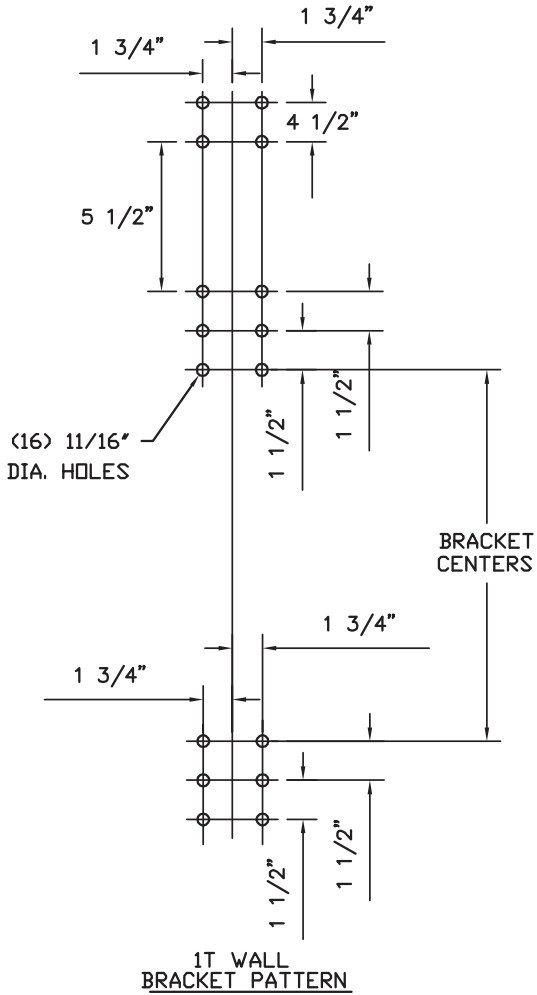
ROTATE JIB TO DESIRED LOCATION ADJUST LIMIT SWITCH
ACTUATION ANGLES SO THAT LIMIT SWITCH HITS
THEN WELD IN PLACE. MAKE SURE THAT ANGLES DO NOT HIT JIB

1/4" TYP

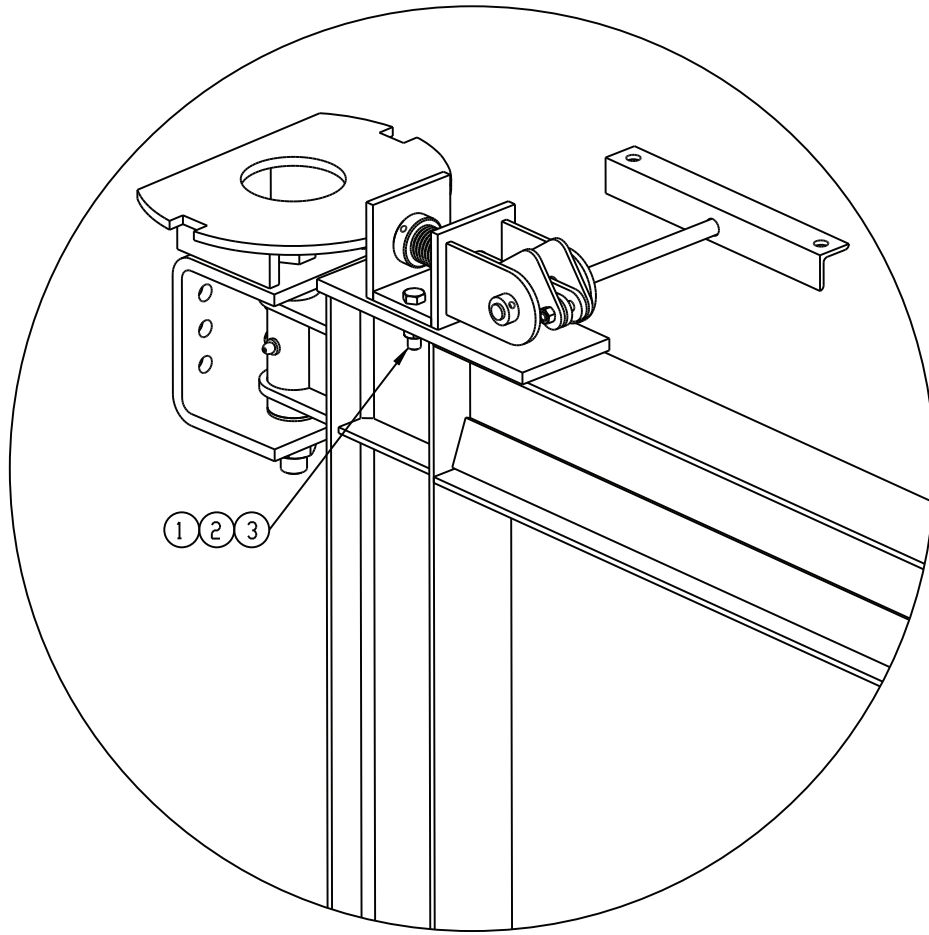
NOTE: ROTATION ACTUATION ANGLES ARE USED ONLY
ON ONE MOTORIZED JIB FOR MULTIPLE BOOM SYSTEM.

ITEM	QTY.	PART No.	DESCRIPTION
1	1	6B6626-2	FALL ARREST LIMIT SWITCH MOUNT
2	1	90-0004	LIMIT SWITCH LEVER
3	1		TORQUE LIMITER
4	1		REDUCER
5	1		MOTOR
6	1		SPROCKET TYPE B
7	1		LIMITER SPROCKET
9	1		CHAIN
10	1		LIMIT SWITCH
11	1		CHAIN CONNECTION LINK
12	2	44-0003	SOCKET HEAD CAP SCREW 1/4-20NC X 2" LG
13	4	11-0010	HEX NUT 1/4"-20NC
14	1	72-0008	RND HD MACHINE SCREW 10-32 X 5/8" LG
15	1	72-0009	RND HD MACHINE SCREW 10-32 X 1 1/4" LG
16	4	10-0205	HEX BOLT 1/2-13NC X 2-1/2" LG
17	6	11-0030	HEX NUT 1/2-13NC
18	6	14-0003	LOCK WASHER 1/2"
19	1		KEY
20	1		KEY
21	4	15-0003	FLAT WASHER 1/2"
22	1	73-0033	JUNCTION BOX
23		1 SHIM PER 1T BRACKET, 2 SHIMS PER 2T BRACKET	
24	2	10-0203	HEX BOLT 1/2-13NC X 2"
25	1		TORQUE LIMITER MOUNT
26	2	LS04-3232-00.25	ROTATION ACTUATION ANGLE

MOTORIZED SINGLE TRACK



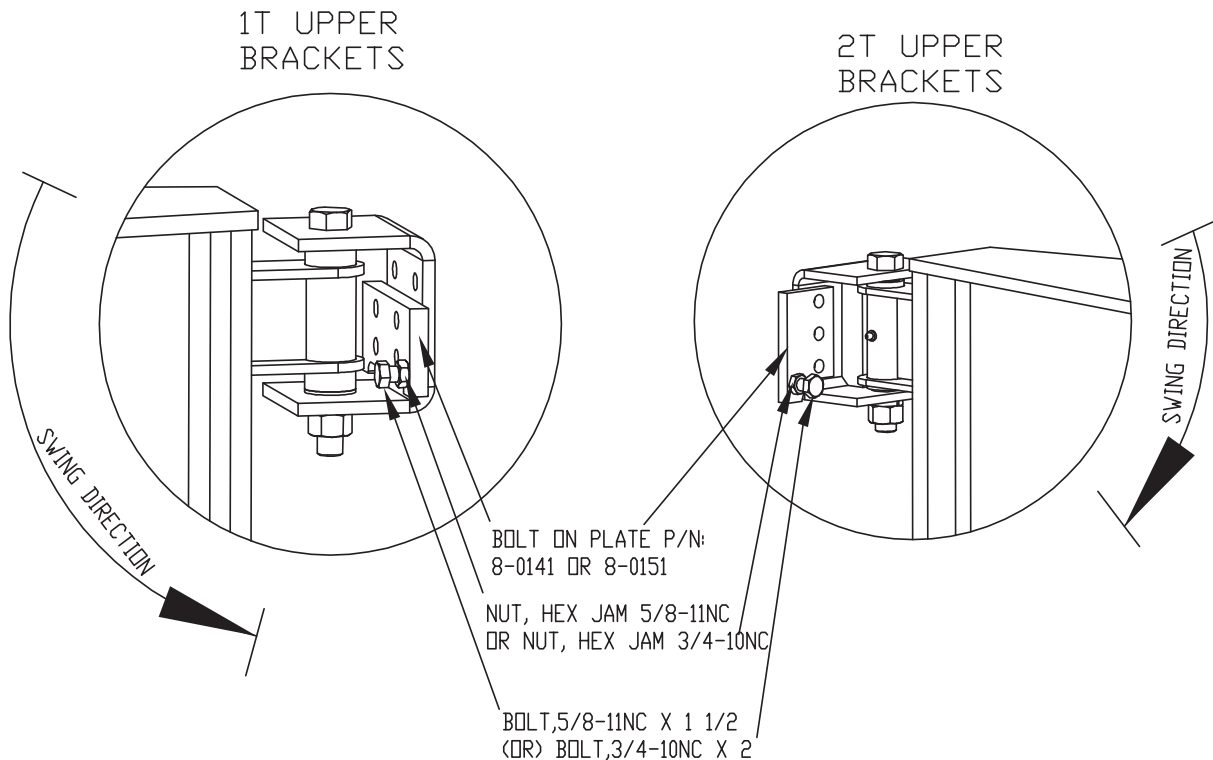
BOOM LOCK OPTION



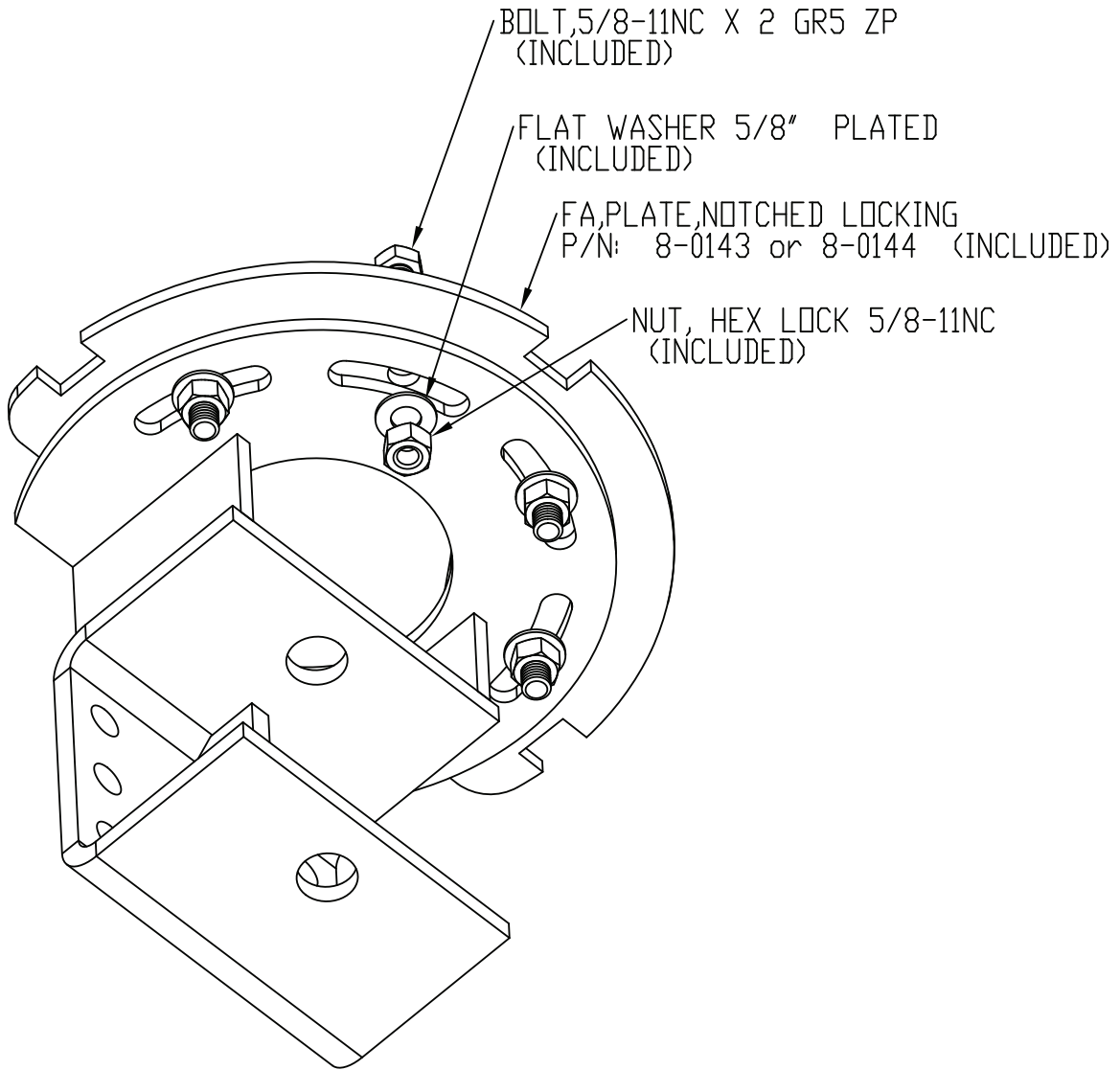
ITEM	QTY.		DESCRIPTION
1	2	10-0203	BOLT, HEX HEAD 1/2-13NC X 2,GR5
2	2	14-0003	WASHER, LOCK SPLIT 1/2" ZINC PLATED
3	2	11-0030	NUT,HX 1/2-13PLTD SAEJ995(7/16"H.)

MECHANICAL STOPS

If over-rotation of a fold-away structure is a concern, if included, use the mechanical stops (see sketch). The Installer's judgment should be used to determine if required (2 stops may be supplied). The stops are most effective on a two boom non-motorized system to keep the system from over rotating. Another reason the installer may desire to use them on a more than two boom system is to keep the track from hitting the mast. There may be other concerns the installer should consider, such as facility obstructions, etc. The stop is normally placed on the folding side of the upper bracket as shown (see sketch). During system operation, the head of the bolt sticking out will hit a portion of the bracket and thus limit rotation of the system. Installing the second stop on a different boom could keep the track from hitting the booms, although this is not required. Again, the installer should use his/her discretion whether or not the stops are needed, as every case is different. The use of a limit switch, for example, may be all that an installer desires to use. If installing the stops, to save time, install during structure (boom) installation (see page 8). Note that different length "bracket to column" bolts may be required (bolts are not included). If retrofitted, properly secure weight of structure with an overhead hoist or other means before removing bracket bolts (to help avoid injury).



ADJUSTABLE BOOM LOCK



MANUAL EXTEND / RETRACT ROPE



For manually operated fold away systems, attach the end of the track to this end of the extend/retract rope as shown. Note that the SRL's are not to be used to extend/retract fold away systems.



This end of the rope is used to pull on the system.

Rigid Lifelines Annual Fall Protection Systems Inspection Checklist



Inspector Name: _____ Date: _____

System Number: _____ Model: _____

Inspection Point	Inspection Result (✓)	
	Pass	Fail
1) Check that the beam clamps are installed horizontal within + / - 5 degrees.		
2) Check that endstop bolts are present and have locknuts installed.		
3) Using a torque wrench, check that all bolts are torqued to values shown in manual.		
4) Check that splices, if supplied, are centered on track joints.		
5) Verify that capacity signs are present, attached, and legible.		
6) Verify that the number of trolleys matches the value on the capacity sign.		
7) Verify that the fall arrest system is not being used for material handling.		
8) Check the track for levelness within + / - 1/4" per 20 feet of track.		
9) Check the track flanges. Track flanges cannot be bent downward more than 5 degrees.		
10) Check the track thickness. Track thickness cannot be worn more than 10 percent.		
11) Check all system welds for cracks.		
12) Check system components for corrosion.		
13) Check system components for bent or damaged areas.		
14) Verify trolley can traverse entire length of track without snags.		
15) Check connector trolley for visibly bent eye bolt, broken welds, or excessive wear or corrosion		
16) Test the operation of the connector trolley eye bolt and verify the eye bolt can rotate freely.		
17) Test the operation of the connector trolley and verify the wheels rotate freely.		
18) Check system components for loose components.		
19) Check system components for loose or missing fasteners.		
20) Check system support structure for stability.		
21) Verify that any hangar clamps are installed properly and fasteners are torqued to proper values.		

Rigid Lifelines Fold-Away Fall Protection Systems Inspection Checklist



Inspector Name: _____ Date: _____

System Number: _____ Model: _____

Inspection Point	Inspection Result (✓)	
	Pass	Fail
1) Test the operation of the support jibs and verify the jibs and connector pivots rotate freely.		
2) Check the support jibs for excessive bearing wear.		
3) Check the support jibs for properly installed and tightened pivot bolts.		
4) Check the support jibs for loose or missing fasteners.		
5) Check the jib connector pivots for bent or broken parts, or bent or broken welds.		
6) Check support structure for stability.		

* Download and print blank checklists from the Literature link at rigidlifelines.com



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Morgantown, PA 19543

Toll Free: (844) 467-4443
Local: (610) 286-8030
Fax: (610) 286-6408

RigidLifelines.com

TEN-YEAR EQUIPMENT WARRANTY

Rigid Lifelines warrants the engineered track equipment, wearable end truck wheels, and Anchor Trolley™ wheels and teeth to be free from defects in material and workmanship for a period of ten (10) years commencing on the date of installation.

TWO-YEAR EQUIPMENT WARRANTY

Rigid Lifelines warrants XSPlatforms Fall Protection components to be free from defects in material and workmanship for a period of two (2) years commencing from the date of installation.

ONE-YEAR EQUIPMENT WARRANTY

Rigid Lifelines warrants the motorized products and drive components to be free from defects in material and workmanship for a period of one (1) year, commencing on the date of shipment to the first retail purchaser ("Purchaser").

Rigid Lifelines warrants all Rigid Lifelines fall protection soft goods, devices, connectors, and accessories to be free from defects in material and workmanship for a period of one (1) year, commencing on the date of shipment to the first retail purchaser ("Purchaser").

Rigid Lifelines is dedicated to offering superior service and quality products to all of our customers. If you would like to contact a customer service representative, please call the following number: 1 (844) 467-4443. We will be happy to assist you in any way that we can.

These warranties do not extend to equipment which has been subject to misuse, use in excess of rated capacity, negligent operation, use beyond Rigid Lifelines published service factors, improper installation or maintenance, adverse environments, and does not apply to any equipment which has been repaired or altered without Rigid Lifelines written authorization. This warranty is void for any product that is designed to deform or absorb energy during a fall event and needs to be replaced after a fall event has occurred.

Written notice of any claimed defect must be given to Rigid Lifelines within thirty (30) days after such defect is discovered. Rigid Lifelines obligation, and Purchaser's sole remedy under this warranty is limited to, at Rigid Lifelines discretion, the replacement or repair of the equipment at Rigid Lifelines factory or at a location approved by Rigid Lifelines. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES WHATSOEVER WHETHER EXPRESS, IMPLIED, OR STATUTORY. SELLER MAKES NO WARRANTY AS TO THE MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OF THE EQUIPMENT AND MAKES NO OTHER WARRANTY, EITHER EXPRESS OR IMPLIED.

Rigid Lifelines shall not be liable, under any circumstances, for any indirect, special, or consequential damages including (but not limited to): lost profits, increased operating costs, or loss of production. This warranty shall not extend to damages including (but not limited to): lost profits, increased operating costs, or loss of production. This warranty shall not extend to any components or accessories not manufactured by Rigid Lifelines (example: casters), with the exception of the components, systems, or accessories involved with XSPlatforms, and purchaser's remedy for such components and accessories shall be determined by the terms and conditions of any warranty provided by the manufacturer of such components and accessories.

SERVICE POLICY

1. Obtain as much information as possible concerning the problem through personal observation by yourself or other authorized personnel familiar with the job and equipment: include model, serial and/or part numbers, voltages, speeds and any other special identifying features. Be prepared to discuss the situation in detail.
2. All authorized labor charges will be based on straight time. Hourly rates, estimated man hours, and not to exceed total dollar amount required for corrections are to be agreed upon before authorization is given. There will be no allowances for overtime except in dire emergencies and then only with prior approval.
3. A verbal agreement may be reached immediately on both the method of correction and the approximate cost. A warranty authorization number will be assigned for the specific incident. A confirming written authorization will be forwarded to the distributor.
4. The distributor must send an itemized invoice, showing our release number or invoice number and warranty authorization number after authorized corrections have been made. A credit memo will be issued by accounting after the invoice has been received and approved. Warranty charges ARE NOT to be deducted from outstanding open account invoices under any circumstances.
5. Any field corrections made prior to an authorization by Rigid Lifelines will not be accepted as a warranty charge or the responsibility of Rigid Lifelines. Any modification to the equipment made without the prior approval of the seller will void all warranties. A verbal authorization for modification may be obtained, in which event a warranty authorization number will be assigned for the specific modification. A confirming written authorization will be forwarded to the distributor.