

Form Number LLCF-015	Issue Date 11/27/95	Revision Date 01/01/24	Form Number LLCF-015
<h1 style="margin:0;">Crane Lift Plan</h1>			

A Crane Lift Plan must be used with any lift by or involving GIS personnel. Fill out only Section 1 for lifts that are less than 50% of the cranes rated capacity. Section 1 & Section 2 must be filled out when a lift is 50% or greater of the crane's rated capacity, lifting over or within 6 feet of process piping or equipment or involves the lifting of personnel.

SECTION: 1

Location: _____	Date of Lift: _____
Crane Operator's Name: _____	Certified Operator? Yes <input type="checkbox"/> No <input type="checkbox"/>
Lift/Load Description: _____	Method of Communication with Rigger: _____
Supervisor Signature: _____	

Weight of load: _____

Weight of lifting tackle: _____

Boom Angle: _____

LIFT IS _____ % OF THE CRANE'S RATED CAPACITY

Sea & Wave Conditions: _____	Latest Crane Certification Date: _____
Enviromental Conditions: _____	(Must be within the past 1 years)

This lift plan shall be utilized for lifts greater than 50% of the crane's rated capacity or if other conditions warrant a critical lift like lifting of employees in a Personnel Basket.

Verified by: _____	Operator Name: _____
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SECTION: 2 Process Piping/Equipment Yes () No () Personnel Lift Yes () No ()

<p>A. WEIGHT</p> <table style="width:100%;"> <tr><td>1. Weight of Headache Ball</td><td>lbs.</td></tr> <tr><td>2. Weight of Block</td><td>lbs.</td></tr> <tr><td>3. Weight of Lifting Bar</td><td>lbs.</td></tr> <tr><td>4. Weight of Slings & Shackles</td><td>lbs.</td></tr> <tr><td colspan="2"> </td></tr> <tr><td>Total Weight of Lifting Assembly</td><td>lbs.</td></tr> <tr><td>Net Weight of Load:</td><td>lbs.</td></tr> <tr><td colspan="2"> </td></tr> <tr><td colspan="2">Total Weight of Load: _____ lbs.</td></tr> <tr><td colspan="2"><small>(Name Plate, Drawings Calculated, Etc.)</small></td></tr> </table> <p>B. CRANE PLACEMENT</p> <table style="width:100%;"> <tr><td>1. Obstacles or Obstructions to lift or swing?</td><td>_____</td></tr> <tr><td colspan="2"> </td></tr> <tr><td>2. Swing Direction and Degree (Boom Swing)</td><td>_____</td></tr> </table> <p>C. SIZING of SLINGS</p> <table style="width:100%;"> <tr><td>1. Number of Slings</td><td>_____</td></tr> <tr><td>2. Type of Configuration (hitch)</td><td>_____</td></tr> <tr><td>3. Size of Slings</td><td>_____</td></tr> <tr><td>4. Sling Length</td><td>_____</td></tr> <tr><td>5. Rated Capacity of Slings</td><td>_____</td></tr> <tr><td>6. Number of Shackles</td><td>_____</td></tr> <tr><td>7. Rated Capacity of Shackles</td><td>_____</td></tr> </table>	1. Weight of Headache Ball	lbs.	2. Weight of Block	lbs.	3. Weight of Lifting Bar	lbs.	4. Weight of Slings & Shackles	lbs.			Total Weight of Lifting Assembly	lbs.	Net Weight of Load:	lbs.			Total Weight of Load: _____ lbs.		<small>(Name Plate, Drawings Calculated, Etc.)</small>		1. Obstacles or Obstructions to lift or swing?	_____			2. Swing Direction and Degree (Boom Swing)	_____	1. Number of Slings	_____	2. Type of Configuration (hitch)	_____	3. Size of Slings	_____	4. Sling Length	_____	5. Rated Capacity of Slings	_____	6. Number of Shackles	_____	7. Rated Capacity of Shackles	_____	<p>D. CRANE</p> <table style="width:100%;"> <tr><td>1. Type of Crane</td><td>_____</td></tr> <tr><td>2. Crane Maximum Rated Capacity</td><td>_____ Tons</td></tr> <tr><td>3. Lifting Arrangement</td><td>_____</td></tr> <tr><td colspan="2"> </td></tr> <tr><td>a. Max. Distance--Center of Load to Center pin of crane</td><td>_____ Ft.</td></tr> <tr><td>b. Length of Boom</td><td>_____ Ft.</td></tr> <tr><td>c. Angle of Boom at pick-up</td><td>_____ degrees</td></tr> <tr><td>d. Angle of Boom at set</td><td>_____ degrees</td></tr> <tr><td>e. Rated capacity of crane under severest lifting conditions (from chart)</td><td>_____ Tons</td></tr> <tr><td>4. From Chart---Rated Capacity of Crane for this lift</td><td>_____ Tons</td></tr> <tr><td>5. Maximum Load on Crane</td><td>_____ Tons</td></tr> </table> <p>F. PRE-LIFT CHECK LIST</p> <table style="width:100%;"> <tr><td></td><td style="text-align:center;">Yes</td><td style="text-align:center;">No</td></tr> <tr><td>1. Swing Room</td><td style="text-align:center;">[]</td><td style="text-align:center;">[]</td></tr> <tr><td>2. Head Room Checked</td><td style="text-align:center;">[]</td><td style="text-align:center;">[]</td></tr> <tr><td>3. Max. Counterweights used</td><td style="text-align:center;">[]</td><td style="text-align:center;">[]</td></tr> <tr><td>4. Tag line used</td><td style="text-align:center;">[]</td><td style="text-align:center;">[]</td></tr> <tr><td>5. Exp/designated Flagman</td><td style="text-align:center;">[]</td><td style="text-align:center;">[]</td></tr> <tr><td>6. Experienced Rigger</td><td style="text-align:center;">[]</td><td style="text-align:center;">[]</td></tr> <tr><td>7. Load chart in crane</td><td style="text-align:center;">[]</td><td style="text-align:center;">[]</td></tr> <tr><td>8. Wind Conditions</td><td style="text-align:center;">[]</td><td style="text-align:center;">[]</td></tr> <tr><td>9. Helicopter Concerns</td><td style="text-align:center;">[]</td><td style="text-align:center;">[]</td></tr> <tr><td>10. Inspection of personnel basket</td><td style="text-align:center;">[]</td><td style="text-align:center;">[]</td></tr> </table>	1. Type of Crane	_____	2. Crane Maximum Rated Capacity	_____ Tons	3. Lifting Arrangement	_____			a. Max. Distance--Center of Load to Center pin of crane	_____ Ft.	b. Length of Boom	_____ Ft.	c. Angle of Boom at pick-up	_____ degrees	d. Angle of Boom at set	_____ degrees	e. Rated capacity of crane under severest lifting conditions (from chart)	_____ Tons	4. From Chart---Rated Capacity of Crane for this lift	_____ Tons	5. Maximum Load on Crane	_____ Tons		Yes	No	1. Swing Room	[]	[]	2. Head Room Checked	[]	[]	3. Max. Counterweights used	[]	[]	4. Tag line used	[]	[]	5. Exp/designated Flagman	[]	[]	6. Experienced Rigger	[]	[]	7. Load chart in crane	[]	[]	8. Wind Conditions	[]	[]	9. Helicopter Concerns	[]	[]	10. Inspection of personnel basket	[]	[]
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Special Instructions / Restrictions for Crane, Rigging, Lift, etc.

No Employee will operate a crane without having a current crane certification.

* When lifting from a vessel, the dynamic load chart should always be used.

WEIGHT IN POUNDS OF STD. WT. WELD FITTING						
NOM. PIPE SIZE	90° LT WELD E11	45° LT WELD E11	STRAIGHT TEES	REDUCERS	STUB ENDS	CAPS
1	.34	.17	.63	.28	.66	.22
1 ½	.84	.42	1.7	.57	1.2	.37
2	1.5	.75	4.2	.90	2.2	.51
2 ½	3.0	1.5	5.9	1.7	3.5	.81
3	4.7	2.3	8.4	2.2	4.7	1.4
4	8.9	4.4	13	3.6	7.0	2.5
6	24	12	36	8.7	15	6.4
8	47	23	61	14	23	11
10	83	42	91	24	40	20
12	123	61	147	33	49	29
14	158	79	226	59	64	35
16	207	104	242	73	72	45
18	263	132	333	88	85	57
20	323	162	504	131	94	71
24	468	234	765	158	113	102

WEIGHT OF STEEL PLATE					
THICKNESS IN INCHES	LBS PER SQ. FT.	SQ. FT. PER TON	THICKNESS IN INCHES	LBS PER SQ. FT.	SQ. FT PER TON
3/8	15.3	1.31	1 1/8	45.9	44
1/2	20.4	.98	1 ¼	51.0	39
5/8	25.5	.79	1 3/8	56.1	35.7
3/4	30.6	.65	1 ½	61.2	32
7/8	35.7	.56	1 ¾	71.4	28
1	40.8	.49	2	81.6	24

WEIGHT IN POUNDS OF WELD NECK FLANGES						
NOM. PIPE SIZE	150 LB	300 LB	600 LB	900 LB	1500 LB	2500 LB
1	3	4	4		9	12
1 ½	4	7	8		13	25
2	6	9	12		25	42
2 ½	8	12	18		36	52
3	10	15	23	31	48	94
4	15	25	42	53	73	145
6	24	42	81	110	165	380
8	39	67	120	175	275	580
10	52	91	190	260	455	1,075
12	80	140	225	325	690	1,152
14	110	180	280	400	940	
16	140	250	390	495	1,250	
18	150	320	475	680	1,625	
20	180	400	590	830	2,050	
24	260	580	830	1,500	3,325	

WEIGHT IN POUNDS OF CAST STEEL, FLANGED GATE VALVES					
SIZE INCHES	150 LBS.	300 LBS.	600 LBS.	900 LBS.	1,500 LBS.
2 ½	55	75	95		180
3	70	100	140		280
4	95	145	170	260	370
6	140	215	330	430	6,101
8	240	420	720	900	1,410
10	400	700	1,220	1,560	2,600
12	630	1,050	1,880	2,350	
14	830	1,490	2,630	3,500	
16	1,150	2,170	3,200	4,680	
16	1,580	2,800	4,230	6,250	

WEIGHTS OF SEAMLESS AND WELDED STEEL PIPE								
NORMAL PIPE SIZE	OUTSIDE DIAMETER	IRON PIPE SIZE			SCHEDULE NUMBER			
		STD. WT.	X.S. WT.	X.X.S. WT.	40 WT.	80 WT.	160 WT.	
1/2	0.840	0.85	1.09	1.71	0.85	1.09	1.3	
3/4	1.050	1.13	1.47	2.44	1.13	1.47	1	
1	1.315	1.68	2.17	3.66	1.68	2.17	1.9	
1 ½	1.900	2.72	3.63	6.41	2.72	3.63	4	
2	2.375	3.65	5.02	9.03	3.65	5.02	2.8	
2 ½	2.875	5.79	7.66	13.70	5.79	7.66	10.	
3	3.500	7.58	10.25	18.58	7.58	10.25	01	
4	4.500	10.79	14.98	27.54	10.79	14.98	14.	
6	6.625	18.97	28.57	53.16	18.97	28.57	31	
8	8.625	28.55	43.39	72.42	28.55	43.39	22.	

SCREW PIN ANCHOR SHACKLES		19 X 7 ROTATION RESISTANT WIRE ROPE WIRE ROPE SLING WEIGHT (APPROX.)		MATERIAL	APPROXIMATE WEIGHT PER CUBIC FOOT	
SIZE (A)	WEIGHT EA.	ROPE DIAM. IN.	LB. PER FT.			
3/16"	.05			ALUMINUM	166 LBS.	
3/4"	0.13	3/16	0.64	ASPHALT	81 LBS.	
5/16"	0.21	1/4	0.133	BRASS	524 LBS.	
3/8"	0.33	5/16	0.177	BRICK (COMMON)	125 LBS.	
7/16"	0.47	3/8	0.25	BRONZE	534 LBS.	
1/2"	0.76	7/16	0.35	CONCRETE	150 LBS.	- 4050 lbs. Per cu. Yd.
5/8"	1.44	1/2	0.45	COPPER	537 LBS.	
3/4"	2.3	9/16	0.58	CRUSHED ROCK	95 LBS.	- 2565 lbs. Per cu. Yd.
7/8"	3.5	5/8	0.71	DRY EARTH LOOSE	76 LBS.	- 2052 lbs. Per cu. Yd.
1"	5	3/4	1.02	IRON CASTING	450 LBS.	
1.1/8"	7	7/8	1.39	LEAD	708 LBS.	
1.1/4"	9.5	1	1.82	LUMBER - FUR - SPRUCE	32 LBS.	- 2666 lbs. Per thousand ft.
1 3/8"	13	1 1/8	2.3	LUMBER - OAK	62 LBS.	- 5166 lbs. Per thousand ft.
1.1/2"	16.5	1 ¼	2.84	MAGNESIUM	109 LBS.	
1 3/4"	29	1 3/8	3.43	MERCURY	848 LBS.	- per flask 76 lbs.
2"	43	1 ½	4.08	PORTLAND CEMENT	94 LBS.	- 3240 lbs. Per cu. Yd.
				RIVER SAND	120 LBS.	- 3240 lbs. Per cu. Yd.
				STEEL	490 LBS.	
				WATER	625 LBS.	
				ZINC		