

# MR. CRANE

OPERATED CRANES / RIGGING  
ENGINEERING / SAFETY

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## MODEL 8460 165 TON TRUCK CRANE

### 77L HAMMERHEAD BOOM RATINGS

With 68,000 Lb "A-B" Counterweight Extended

Boom Length	Radius In Feet	Boom Angle Degrees	Outriggers Set		Ft. From Boom Point
			Over Side	Over Rear	
50 feet	13	83.2	330000	330000	58
	14	82.0	300000	300000	58
	15	80.8	288350	300000	57
	20	75.0	230900	238040	56
	25	69.0	190390	190390	55
	30	62.8	140010	158750	52
	35	56.0	109070	125710	49
	40	48.7	88720	101810	45
60 feet	50	29.7	63660	72770	32
	15	82.4	287020	300000	68
	20	77.6	230460	237880	67
	25	72.6	188720	190260	65
	30	67.6	140270	158650	63
	35	62.3	109260	125950	61
	40	56.7	88860	101990	58
	50	44.1	63790	72930	49
70 feet	60	26.9	48890	55870	35
	16	82.6	272070	297150	77
	20	79.3	229820	237730	77
	25	75.2	186600	190120	76
	30	70.9	139550	158550	74
	35	66.5	109330	126060	72
	40	62.0	88890	102040	70
	50	52.1	63810	72970	63
80 feet	60	40.6	48940	55940	53
	70	24.7	39010	44660	37
	17	82.8	259020	279550	87
	20	80.7	229110	237580	87
	25	77.1	184360	189990	86
	30	73.4	138400	158450	85
	35	69.6	109260	126020	83
	40	65.7	88780	101960	81
90 feet	50	57.6	63670	72840	75
	60	48.5	48810	55820	68
	70	37.8	38880	44550	57
	80	23.0	31790	36540	39
	18	83.0	247550	263790	97
	20	81.7	228330	237430	97
	25	78.5	182070	189860	96
	30	75.3	137220	158360	95
100 feet	35	71.9	108940	125950	94
	40	68.6	88630	101840	92
	50	61.5	63500	72700	87
	60	54.0	48640	55670	81
	70	45.5	38720	44390	72
	80	35.5	31640	36400	60
	90	21.6	26390	30480	41
	20	82.5	203450	237460	107
110 feet	25	79.7	162800	189900	106
	30	76.8	135210	158260	105
	35	73.8	108520	126200	104
	40	70.8	88870	102080	102
	50	64.6	63750	72950	98
	60	58.0	48930	55960	93
	70	51.0	39010	44690	85
	80	43.0	31940	36700	76
100 feet	90	33.6	26760	30850	63
	100	20.4	22600	26190	42
110 feet	21	82.7	192150	224670	117
	25	80.6	161470	189790	117

Boom Length	Radius In Feet	Boom Angle Degrees	Outriggers Set		Ft. From Boom Point
			Over Side	Over Rear	
110 feet (cont.)	30	78.0	133980	158170	116
	35	75.3	107490	126080	114
	40	72.6	88490	101910	113
	50	67.1	63520	72740	109
	60	61.3	48700	55740	104
	70	55.1	38750	44440	98
	80	48.4	31680	36450	90
	90	40.9	26530	30630	80
120 feet	100	31.9	22390	25990	66
	110	19.4	19060	22270	44
	22	82.8	181640	212480	127
	25	81.4	160110	189680	127
	30	79.0	132980	158070	126
	35	76.5	106660	125930	125
	40	74.1	87920	101710	123
	50	69.1	63280	72510	120
130 feet	60	63.8	48440	55500	116
	70	58.4	38490	44190	110
	80	52.5	31420	36190	103
	90	46.2	26280	30390	94
	100	39.0	22160	25760	83
	110	30.5	18850	22060	68
	120	18.5	16120	19010	45
	23	82.9	172390	200460	137
140 feet	25	82.1	158720	189570	137
	30	79.8	131760	157980	136
	35	77.6	105820	125760	135
	40	75.3	87380	101720	134
	50	70.7	63000	72240	131
	60	66.0	48150	55220	127
	70	61.1	38180	43890	122
	80	55.9	31090	35880	115
150 feet	90	50.3	25980	30090	108
	100	44.3	21850	25460	98
	110	37.4	18540	21760	87
	120	29.2	15840	18730	71
	130	17.8	13570	16200	47
	25	82.6	157290	187440	147
	30	80.6	130520	157880	146
	35	78.5	104940	125570	145
160 feet	40	76.4	86610	101510	144
	50	72.2	62720	71980	141
	60	67.8	47860	54940	138
	70	63.3	37880	43590	133
	80	58.6	30780	35570	127
	90	53.7	25680	29800	121
	100	48.4	21550	25170	112
	110	42.6	18240	21460	102
170 feet	120	36.0	15540	18440	90
	130	28.1	13280	15920	73
	140	17.1	11350	13770	48
	26	82.7	144050	144050	157
	30	81.2	129910	142380	156
	35	79.3	104250	125510	155
	40	77.3	86210	101460	154
	50	73.4	62680	71940	152
180 feet	60	69.4	47840	54910	148
	70	65.2	37860	43570	144
	80	60.9	30770	35560	139
	90	56.4	25690	29810	133
	26	82.7	144050	144050	157
	30	81.2	129910	142380	156
	35	79.3	104250	125510	155
	40	77.3	86210	101460	154
190 feet	50	73.4	62680	71940	152
	60	69.4	47840	54910	148
	70	65.2	37860	43570	144
	80	60.9	30770	35560	139
	90	56.4	25690	29810	133
	26	82.7	144050	144050	157
	30	81.2	129910	142380	156
	35	79.3	104250	125510	155

Boom Length	Radius In Feet	Boom Angle Degrees	Outriggers Set		Ft. From Boom Point
			Over Side	Over Rear	
150 feet (cont.)	100	51.7	21560	25180	126
	110	46.6	18270	21490	117
	120	41.0	15570	18470	106
	130	34.7	13310	15950	93
	140	27.1	11400	13820	76
	150	16.5	9760	11990	50
	27	82.8	132850	132850	167
	30	81.7	128720	132850	166
160 feet	35	79.9	103390	125350	166
	40	78.1	85470	101270	165
	50	74.4	62020	71670	162
	60	70.7	47550	54640	159
	70	66.9	37550	43280	155
	80	62.9	30440	35240	150
	90	58.8	25390	29510	145
	100	54.5	21250	24870	138
170 feet	110	49.9	17950	21170	130
	120	45.0	15250	18150	121
	130	39.7	13000	15640	110
	140	33.6	11090	13520	96
	150	26.2	9450	11690	78
	160	15.9	8030	10110	51
	28	82.9	122330	122330	177
	30	82.2	122330	122330	176
180 feet	35	80.5	102520	122330	176
	40	78.8	84880	101060	175
	50	75.4	61490	71410	173
	60	71.9	47260	54360	170
	70	68.3	37250	42980	166
	80	64.6	30120	34930	162
	90	60.8	25070	29210	156
	100	56.9	20940	24570	150
190 feet	110	52.7	17640	20870	143
	120	48.3	14930	17840	135
	130	43.6	12680	15330	125
	140	38.4	10770	13200	113
	150	32.5	9140	11380	99
	160	25.4	7710	9800	80
	170	15.4	6470	8420	52
	29	83.0	111870	111870	187
180 feet	30	82.7	111870	111870	187
	35	81.1	101470	111870	186
	40	79.5	84120	100830	185
	50	76.2	60940	71120	183
	60	72.9	46960	54070	180
	70	69.6	36910	42660	177
	80	66.1	29770	34590	173
	90	62.6	24740	28880	168
190 feet	100	58.9	20590	24230	162
	110	55.1	17290	20530	156
	120	51.1	14580	17500	148
	130	46.9	12330	14990	139
	140	42.3	10420	12850	129
	150	37.3	8790	11040	117
	160	31.6	7360	9450	102
	170	24.7	6120	8070	83
190 feet	180	14.9	5020	6850	54
	31	82.8	102910	102910	197
	35	81.5	100640	102910	196
190 feet	40	80.0	83350	100610	195

(continued)

## 77L HAMMERHEAD BOOM RATINGS (Cont.)

With 68,000 Lb "A-B" Counterweight Extended

Boom Length	Radius In Feet	Boom Angle Degrees	Outriggers Set		Ft. From Boom Point
			Over Side	Over Rear	
190 feet (cont.)	50	76.9	60400	70840	193
	60	73.8	46450	53770	190
	70	70.7	36580	42330	187
	80	67.4	29430	34250	183
	90	64.1	24410	28550	179
	100	60.7	20260	23900	174
	110	57.2	16940	20180	168
	120	53.5	14240	17160	161
	130	49.7	11980	14640	153
	140	45.5	10080	12510	143
	150	41.1	8440	10690	133
	160	36.2	7020	9110	120
	170	30.7	5780	7730	105
	180	24.0	4680	6520	85
	190	14.5	3700	5430	55
200 feet	32	82.8	78400	78400	206
	35	82.0	78400	78400	206
	40	80.5	78400	78400	205
	50	77.6	59980	70670	203
	60	74.7	46120	53620	201
	70	71.7	36440	42190	198
	80	68.6	29290	34110	194
	90	65.5	24290	28440	190
	100	62.3	20140	23780	185
	110	59.0	16830	20070	179
	120	55.6	14120	17040	173
	130	52.1	11880	14530	166
	140	48.3	9960	12400	157
	150	44.3	8330	10580	147
	160	40.0	6920	9010	136
	170	35.6	5680	7640	123
	180	29.9	4580	6410	107
	190	23.3	3610	5330	87
	200	14.1	2740	4370	56
210 feet	33	82.9	73670	73670	216
	35	82.3	73670	73670	216
	40	81.0	73670	73670	215

Boom Length	Radius In Feet	Boom Angle Degrees	Outriggers Set		Ft. From Boom Point
			Over Side	Over Rear	
210 feet cont.	50	78.2	59460	70400	214
	60	75.4	45640	53330	211
	70	72.6	36050	41880	208
	80	69.7	28960	33790	205
	90	66.8	23970	28120	201
	100	63.7	19810	23460	196
	110	60.7	16500	19740	191
	120	57.5	13790	16710	185
	130	54.2	11530	14190	178
	140	50.7	9620	12060	170
	150	47.1	7980	10230	162
	160	43.2	6570	8660	151
	170	39.0	5330	7280	140
	180	34.4	4240	6070	126
220 feet	190	29.1	3260	4990	110
	200	22.8	2400	4030	89
	210	13.8	1620	3160	57
	34	83.0	68970	68970	226
	35	82.7	68970	68970	226
	40	81.4	68920	68920	226
220 feet	50	78.7	58820	67960	224
	60	76.1	45160	53040	222
	70	73.4	35580	41570	219
	80	70.7	29010	33840	216
	90	67.9	23650	27810	212
	100	65.0	19490	23140	207
	110	62.1	16170	19410	202
	120	59.1	13450	16380	197
	130	56.0	11190	13850	190
	140	52.8	9270	11720	183
	150	49.5	7640	9900	175
	160	45.9	6230	8320	166
	170	42.1	4990	6950	155
	180	38.1	3890	5730	143
	190	33.6	2910	4640	129
	200	28.4	2050	3690	112
	210	22.2	1270	2820	91
	220	13.5	—	2040	59

Boom Length	Radius In Feet	Boom Angle Degrees	Outriggers Set		Ft. From Boom Point
			Over Side	Over Rear	
230 feet	36	82.8	64560	64560	236
	40	81.8	64330	64330	236
	50	79.2	58270	63180	234
	60	76.7	44660	52740	232
	70	74.1	35110	41250	229
	80	71.5	28620	33520	226
	90	68.9	23310	27470	223
	100	66.2	19140	22790	218
	110	63.4	15810	19070	214
	120	60.6	13090	16030	208
	130	57.7	10830	13500	202
	140	54.7	8910	11360	196
	150	51.6	7280	9540	188
	160	48.3	5850	7950	180
240 feet	170	44.8	4610	6570	170
	180	41.2	3520	5360	159
	190	37.2	2530	4270	147
	200	32.8	1650	3310	132
	210	27.8	—	2440	115
	220	21.7	—	1660	93
	37	82.8	60050	60050	246
	40	82.1	60030	60030	246
240 feet	50	79.7	58170	59330	244
	60	77.3	44180	52450	242
	70	74.8	34700	40920	240
	80	72.3	28190	33210	237
	90	69.8	22920	27140	233
	100	67.2	18790	22460	229
	110	64.6	15460	18720	225
	120	61.9	12740	15680	220
	130	59.2	10470	13140	214
	140	56.4	8550	11000	208
	150	53.4	6910	9170	201
	160	50.4	5490	7600	193
	170	47.2	4220	6210	184
	180	43.8	3110	4990	174
	190	40.3	2120	3910	163
	200	36.4	1240	2950	150
	210	32.1	—	2070	135
	220	27.2	—	1290	117

8460.01

## 77L HAMMERHEAD BOOM RATINGS

With 68,000 Lb "A-B" Cwt. Retracted

Boom Length	Radius In Feet	Boom Angle Degrees	Outriggers Free		Ft. From Boom Point
			Over Side	Over Rear	
50 feet	50	29.7	16380	35130	32
60 feet	40	56.7	22400	46460	58
	50	44.1	16170	35120	50
	60	26.9	11890	26980	35
70 feet	40	62.0	22070	45960	70
	50	52.1	15890	35020	63
	60	40.6	11690	26940	53
80 feet	40	69.6	25690	50670	83
	50	57.6	15440	34770	76
	60	48.5	11300	26720	68
80 feet	70	37.8	8170	21060	57
	80	23.0	5740	16890	39

Boom Length	Radius In Feet	Boom Angle Degrees	Outriggers Free		Ft. From Boom Point
			Over Side	Over Rear	
90 feet	35	71.9	25190	50010	94
	40	68.6	21110	44680	92
	50	61.5	14990	34510	87
	60	54.0	10900	26480	81
	70	45.5	7800	20830	72
	80	35.5	5410	16680	60
100 feet	90	21.6	3560	13540	41
	35	73.8	25440	50230	104
	40	70.8	21380	44930	103
	50	64.6	15260	34740	98
	60	58.0	11210	26750	93
	70	51.0	8130	21110	86
100 feet	80	43.0	5750	16970	76
	90	33.6	3970	13900	63
	100	20.4	2390	11340	42

Boom Length	Radius In Feet	Boom Angle Degrees	Outriggers Free		Ft. From Boom Point
			Over Side	Over Rear	
110 feet	35	75.3	24840	49460	115
	40	72.6	20820	44200	113
	50	67.1	14730	34410	109
	60	61.3	10720	26430	105
	70	55.1	7640	20790	98
	80	48.4	5290	16650	90
	90	40.9	3560	13620	80
	100	31.9	2010	11080	66
120 feet	110	19.4	710	9010	44
	30	79.0	29510	55130	126
	35	76.5	24280	48750	125
	40	74.1	20290	43540	124
	50	69.1	14220	34080	120
	60	63.8	10230	26110	116
	70	58.4	7170	20470	110
	80	52.5	4830	16330	103
120 feet	90	46.2	3140	13330	95
	100	39.0	1620	10810	83

8460.03

NOTE: Counterweight may be hydraulically extended or retracted. The normal operating condition is with the counterweight extended. When working over the side on rubber the counterweight may be retracted to improve back stability and enable the operator to work at shorter radii.

# 77L TAPERED TIP BOOM RATINGS

With 68,000 Lb "A-B" Counterweight Extended

Boom Length	Radius In Feet	Boom Angle Degrees	Outriggers Set		Ft. From Boom Point
			Over Side	Over Rear	
80 feet	18	80.3	176410	176410	86
	20	78.8	176410	176410	86
	25	75.2	160640	160640	84
	30	71.4	133880	133880	83
	35	67.6	111890	114800	81
	40	63.7	91610	100400	79
	50	55.3	66770	75920	73
	60	46.1	52070	59070	65
	70	35.0	42290	47940	53
	80	19.3	35330	40070	34
90 feet	19	80.7	176300	176300	96
	20	80.1	176300	176300	96
	25	76.8	160520	160520	95
	30	73.5	133780	133780	93
	35	70.2	111770	114720	92
	40	66.8	91440	100320	90
	50	59.6	66560	75740	85
	60	51.9	51870	58880	78
	70	43.3	42060	47730	69
	80	33.0	35090	39840	56
100 feet	21	80.5	176190	176190	106
	25	78.2	160410	160410	105
	30	75.2	133690	133690	104
	35	72.2	110930	114640	102
	40	69.2	91250	100240	101
	50	62.9	66350	75540	96
	60	56.3	51660	58680	90
	70	49.1	41840	47510	83
	80	41.0	34850	39610	73
	90	31.2	29630	33730	59
110 feet	22	80.8	176080	176080	116
	25	79.3	160300	160300	115
	30	76.6	133590	133590	114
	35	73.9	110040	114560	113
	40	71.2	90990	100170	111
	50	65.6	66060	75260	107
	60	59.7	51360	58400	102
	70	53.5	41530	47210	95
	80	46.7	34540	39300	87
	90	39.0	29320	33420	76
120 feet	24	80.6	166900	166900	125
	25	80.2	160180	160180	125
	30	77.7	133500	133500	124
	35	75.3	109140	114490	123
	40	72.8	90350	100090	122
	50	67.7	65770	74990	118
	60	62.5	51080	58120	113
	70	56.9	41220	46920	108
	80	51.0	34220	39000	100
	90	44.6	29140	33250	91
130 feet	25	80.9	160070	160070	135
	30	78.7	133400	133400	135
	35	76.4	108500	114410	133
	40	74.2	90010	100010	132
	50	69.5	65810	75030	129
	60	64.7	51140	58190	125
	70	59.7	41290	46980	119
	80	54.5	34290	39060	113
	90	48.9	29240	33350	105
	100	42.7	25170	28780	95

Boom Length	Radius In Feet	Boom Angle Degrees	Outriggers Set		Ft. From Boom Point
			Over Side	Over Rear	
140 feet	27	80.8	148000	148000	145
	30	79.5	133310	133310	145
	35	77.4	107610	114330	144
	40	75.3	89200	99930	142
	50	71.0	65530	74760	139
	60	66.6	50840	57900	136
	70	62.1	40980	46680	131
	80	57.4	33960	38750	125
	90	52.4	28930	33050	118
	100	47.0	24850	28460	109
150 feet	28	81.0	142170	142820	155
	30	80.2	132410	133210	155
	35	78.3	106700	114260	154
	40	76.3	88570	99860	153
	50	72.3	65230	74480	150
	60	68.3	50540	57610	146
	70	64.1	40660	46370	142
	80	59.8	33640	38430	137
	90	55.2	28620	32740	130
	100	50.5	24550	28160	123
160 feet	30	80.8	131100	133120	165
	35	79.0	105760	114180	164
	40	77.2	87720	99780	163
	50	73.5	64770	74160	160
	60	69.7	50210	57290	157
	70	65.8	40310	46030	153
	80	61.8	33270	38070	148
	90	57.7	28270	32400	142
	100	53.4	24190	27810	135
	110	48.7	20930	24160	127
170 feet	32	80.7	118530	124620	175
	35	79.7	104640	114110	174
	40	77.9	87190	100010	173
	50	74.5	64170	73850	171
	60	70.9	49870	56970	168
	70	67.3	39960	45690	164
	80	63.6	32920	37720	159
	90	59.8	27930	32070	154
	100	55.8	23840	27470	148
	110	51.6	20580	23810	140
180 feet	33	80.9	100930	100930	185
	35	80.2	100930	100930	184
	40	78.6	86680	99950	184
	50	75.4	63780	73710	181
	60	72.0	49760	56850	178
	70	68.7	39850	45580	175
	80	65.2	32810	37620	170
	90	61.6	27850	31980	165
	100	58.0	23760	27390	160
	110	54.1	20500	23730	153

Boom Length	Radius In Feet	Boom Angle Degrees	Outriggers Set		Ft. From Boom Point
			Over Side	Over Rear	
180 feet cont.	130	45.8	15620	18270	136
	140	41.2	13750	16170	126
	150	36.1	12140	14380	113
	160	30.2	10750	12840	98
	170	23.2	9550	11490	78
	180	12.8	8490	10310	47
190 feet	35	80.8	94590	94590	195
	40	79.2	86070	94590	194
	50	76.1	63220	73420	192
	60	73.0	49440	56540	189
	70	69.8	39520	45260	185
	80	66.6	32470	37280	181
	90	63.3	27520	31650	177
	100	59.8	23420	27060	171
	110	56.3	20160	23390	165
	120	52.6	17490	20400	158
200 feet	36	80.9	88140	88140	205
	40	79.8	85260	88140	204
	50	76.9	62650	73110	202
	60	73.9	49020	56230	199
	70	70.9	39190	44930	196
	80	67.8	32120	36940	192
	90	64.7	27180	31330	188
	100	61.5	23090	26720	183
	110	58.2	19820	23060	177
	120	54.7	17150	20060	170
210 feet	38	80.8	81380	81380	214
	40	80.3	81380	81380	214
	50	77.5	62060	72790	212
	60	74.7	48490	55910	210
	70	71.8	38830	44590	207
	80	68.9	31750	36580	203
	90	66.0	26830	30980	199
	100	63.0	22720	26360	194
	110	59.8	19440	22690	189
	120	56.6	16780	19700	182
220 feet	39	81.0	75480	75480	224
	40	80.7	75480	75480	224
	50	78.1	61480	72480	222
	60	75.4	47960	55580	220
	70	72.7	38470	44240	217
	80	69.9	31390	36220	214
	90	67.1	26470	30630	210
	100	64.3	22360	26010	205
	110	61.3	19080	22330	200
	120	58.3	16400	19330	194

# 77L TAPERED TIP BOOM RATINGS (Cont.)

With 68,000 Lb "A-B" Counterweight Extended

Boom Length	Radius In Feet	Boom Angle Degrees	Outriggers Set		Ft. From Boom Point
			Over Side	Over Rear	
220 feet cont.	140	52.0	12300	14740	180
	150	48.6	10680	12940	172
	160	45.0	9290	11380	163
	170	41.2	8070	10030	152
	180	37.1	6990	8830	140
	190	32.5	6040	7770	125
	200	27.3	5200	6830	108
	210	20.9	4440	5980	86
	220	11.6	3770	5240	51
230 feet	41	80.9	59230	59230	234
	50	78.6	57520	57520	233
	60	76.0	47570	55380	230
	70	73.5	38200	44040	228
	80	70.8	31200	36030	224
	90	68.2	26310	30460	221
	100	65.5	22190	25840	216
	110	62.7	18920	22160	211
	120	59.9	16240	19170	206
	130	56.9	14010	16670	200
	140	53.9	12140	14580	193
	150	50.8	10520	12780	185
	160	47.5	9130	11230	177
	170	44.0	7910	9860	167
	180	40.3	6840	8680	156
	190	36.2	5890	7620	143
	200	31.8	5040	6680	128
	210	26.7	4280	5830	110
240 feet	220	20.5	3600	5070	87
	230	11.4	3000	4400	52
	43	80.8	54900	54900	244
	50	79.1	54280	54280	243
	60	76.6	47150	52900	241
	70	74.2	37710	43710	238
	80	71.7	30850	35680	235
	90	69.1	25970	30130	231
	100	66.6	21850	25500	227
	110	63.9	18570	21820	223
	120	61.2	15890	18820	217
	130	58.5	13660	16320	212
250 feet	140	55.6	11770	14210	205
	150	52.7	10160	12420	198
	160	49.6	8760	10860	190
	170	46.4	7550	9510	181
	180	43.0	6470	8310	171
	190	39.4	5520	7250	159
	200	35.5	4660	6300	146
	210	31.1	3900	5450	131
	220	26.1	3210	4690	113
	230	20.0	2600	4010	99

Boom Length	Radius In Feet	Boom Angle Degrees	Outriggers Set		Ft. From Boom Point
			Over Side	Over Rear	
250 feet cont.	80	72.4	30430	35340	245
	90	70.0	25630	29800	242
	100	67.5	21500	25160	238
	110	65.0	18220	21470	234
	120	62.5	15530	18470	229
	130	59.9	13300	15970	223
	140	57.2	11410	13860	217
	150	54.4	9790	12060	210
	160	51.5	8400	10510	203
	170	48.5	7180	9140	194
260 feet	180	45.4	6100	7940	185
	190	42.1	5150	6880	175
	200	38.6	4300	5930	163
	210	34.7	3540	5090	149
	220	30.5	2850	4320	134
	230	25.6	2220	3630	115
	240	19.6	1660	3000	91
	250	10.9	1160	2440	54
	46	80.8	48610	48610	264
	50	79.9	48210	48210	263
	60	77.7	46670	47060	261
	70	75.4	37340	43600	259
	80	73.1	30560	35540	256
	90	70.8	25840	30010	253
	100	68.5	21700	25370	249
	110	66.1	18410	21680	245
	120	63.6	15730	18670	240
	130	61.1	13490	16170	235
	140	58.6	11600	14050	229
270 feet	150	56.0	9980	12250	223
	160	53.3	8580	10680	215
	170	50.5	7360	9330	208
	180	47.5	6290	8130	199
	190	44.5	5320	7060	189
	200	41.2	4470	6110	178
	210	37.8	3710	5260	166
	220	34.0	3010	4490	153
	230	29.9	2390	3800	136
	240	25.1	1830	3170	117

Boom Length	Radius In Feet	Boom Angle Degrees	Outriggers Set		Ft. From Boom Point
			Over Side	Over Rear	
270 feet cont.	170	52.2	6980	8950	220
	180	49.5	5900	7750	212
	190	46.6	4950	6680	203
	200	43.6	4090	5730	193
	210	40.4	3320	4880	182
	220	37.0	2630	4110	170
	230	33.4	2000	3420	156
	240	29.3	1420	2780	139
	250	24.6	—	2200	119
	260	18.9	—	1680	94
280 feet	49	80.9	36550	36550	283
	50	80.6	36330	36330	283
	60	78.6	35180	35180	281
	70	76.5	33800	33800	279
	80	74.4	29780	32410	277
	90	72.2	25160	29440	274
	100	70.1	21130	24790	270
	110	67.9	17830	21100	266
	120	65.6	15150	18090	262
	130	63.4	12910	15590	257
	140	61.1	11020	13470	252
	150	58.7	9400	11670	246
	160	56.3	8000	10100	240
	170	53.8	6770	8740	233
	180	51.2	5700	7540	225
	190	48.5	4730	6470	217
	200	45.7	3880	5520	208
	210	42.8	3110	4670	197
	220	39.7	2400	3900	186

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## LOAD HOISTING DATA

Max. Lifting Capacity in Pounds	Min. Parts of Load Line	Max. Hoisting Distance	
		Main (R.H.) Drum	Aux. (L.H.) Drum
330,000	12	75 ft.	55 ft.
324,940	11	82 ft.	60 ft.
295,420	10	90 ft.	66 ft.
265,880	9	100 ft.	73 ft.
236,340	8	112 ft.	83 ft.
206,790	7	129 ft.	95 ft.
177,250	6	150 ft.	110 ft.
147,710	5	180 ft.	133 ft.
118,170	4	225 ft.	166 ft.
88,620	3	301 ft.	221 ft.
59,080	2	451 ft.	332 ft.
29,540	1	903 ft.	665 ft.

Based on 1" EIPS Rope

# 77L TAPERED TIP BOOM RATINGS

With 68,000 Lb "A-B" Cwt. Retracted

Boom Length	Radius In Feet	Boom Angle Degrees	OUTRIGGERS FREE		Ft. From Boom Point
			Over Side	Over Rear	
80 feet	70	35.0	12440	24530	53
	80	19.3	10120	20460	34
90 feet	60	51.9	15000	29780	78
	70	43.3	11990	24230	69
	80	33.0	9680	20160	56
	90	18.2	7920	17120	35
100 feet	60	56.3	14560	29500	90
	70	49.1	11560	23950	83
	80	41.0	9260	19870	73
	90	31.2	7540	16860	59
	100	17.3	6060	14400	37

Boom Length	Radius In Feet	Boom Angle Degrees	OUTRIGGERS FREE		Ft. From Boom Point
			Over Side	Over Rear	
110 feet	50	65.6	17920	36990	107
	60	59.7	14010	29130	102
	70	53.5	11020	23580	96
	80	46.7	8740	19510	87
	90	39.0	7070	16530	76
	100	29.8	5590	14060	62
	110	16.4	4360	12050	38

Boom Length	Radius In Feet	Boom Angle Degrees	OUTRIGGERS FREE		Ft. From Boom Point
			Over Side	Over Rear	
120 feet	50	67.7	17370	36620	118
	60	62.5	13490	28780	114
	70	56.9	10510	23220	108
	80	51.0	8250	19150	101
	90	44.6	6600	16190	91
	100	37.3	5150	13740	80
	110	28.5	3930	11730	64
	120	15.7	2900	10080	40

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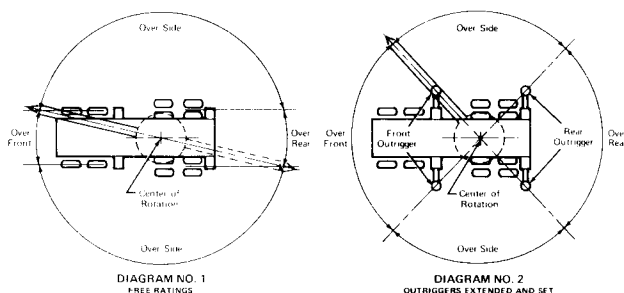
## CRANE RATING DATA

Load ratings are in pounds and do not exceed 85% of the load which would cause tipping with crane standing level on firm uniformly supporting surface. Safe loads depend on ground conditions, boom length, radius of operation, condition and inflation (130 PSI) of tires and proper handling, all of which must be taken into consideration by user. Ratings in shaded areas are based on structural limitations rather than stability. Approved working areas "Free Over Side" and "Free Over Rear" are shown under Diagram No. 1. Approved working areas "Outriggers Extended and Set Over Side or Rear" are shown under Diagram No. 2. Lifting is approved only in those areas for which ratings are shown in the rating chart.

"Radius in feet" is the horizontal distance at crane base level from center pin to a vertical line through the center of gravity of the suspended load. Blocks, slings, buckets, and other load carrying devices are considered part of the load. The weight of standard hoisting ropes has been calculated as part of the boom point dead load and need not be considered in determining net allowable loads. Retractable A-frame must be in fully raised position for all ratings.

Main load line is 1 inch diameter with a minimum breaking strength of 103,400 pounds. Boom suspension line 3/4 inch diameter with minimum breaking strength of 58,800 lb. Boom suspension pendants 1-1/4 inch diameter with minimum breaking strength of 175,800 lb.

Compliance to B30.5 based on American Carrier Mounting.



## BOOM AND JIB ERECTION†

### With Front Bumper Counterweight 18,000 Pounds

BOOM LENGTH	NO. 16HL JIB	NO. 9HL JIB
280' 77L Tapered Tip	—	—
270' 77L Tapered Tip	80'	80'
260' 77L Tapered Tip	100'	80'
240' 77L Hammerhead	—	—
230' 77L Hammerhead	70'	80'
220' 77L Hammerhead	80'	80'

### Without Front Bumper Counterweight

BOOM LENGTH	NO. 16HL JIB	NO. 9HL JIB
280' 77L Tapered Tip	—	—
260' 77L Tapered Tip	—	40'
250' 77L Tapered Tip	50'	60'
240' 77L Tapered Tip	80'	80'
230' 77L Hammerhead	—	—
210' 77L Hammerhead	60'	70'
200' 77L Hammerhead	80'	80'

Front bumper counterweight to be used for erection only. †Self-erection over the rear with "A-B" (68,500 lb) counterweight extended and outriggers extended and set.

## PERFORMANCE

SWING SPEED ..... 3.5 RPM Maximum

### SINGLE LINE SPEED:

#### Main and Auxiliary Hoist Drums

Low speed — bottom layer	93 FPM
Low speed — top layer	142 FPM
High speed — bottom layer	189 FPM
High speed — top layer	282 FPM

#### Auxiliary Third Drum

Low speed — bottom layer	142 FPM
Low speed — top layer	192 FPM
High speed — bottom layer	272 FPM
High speed — top layer	368 FPM

### SINGLE LINE PULL:

#### Main and Auxiliary Hoist Drums

Low speed — bottom layer	45,000 lbs. SLP
Low speed — top layer	30,000 lbs. SLP
High speed — bottom layer	22,500 lbs. SLP
High speed — top layer	15,000 lbs. SLP

#### Auxiliary Third Drum

Low speed — bottom layer	37,300 lbs. SLP
Low speed — top layer	29,600 lbs. SLP
High speed — bottom layer	18,650 lbs. SLP
High speed — top layer	14,800 lbs. SLP

### BOOM SPEED:

Time to raise 50 ft. boom from ground to minimum radius	1.9 minutes
Time to lower 50 ft. boom from minimum radius to ground	1.67 minutes

## BOOM COMPOSITION

### 77L Tubular Hammerhead Boom

Boom Length In Feet	30 Ft 77L Inner	10 Ft 77L Center	20 Ft 77L Center	50 Ft 77L Center	20 Ft 77L Outer Base	Hammerhead
50	1	—	—	—	1	1
60	1	1	—	—	1	1
70	1	—	1	—	1	1
80	1	1	1	—	1	1
90	1	—	2	—	1	1
100	1	—	—	1	1	1
110	1	1	—	1	1	1
120	1	—	1	1	1	1
130	1	1	1	1	1	1
140	1	—	2	1	1	1
150	1	—	—	2	1	1
160	1	1	—	2	1	1
170	1	—	1	2	1	1
180	1	1	1	2	1	1
190	1	—	2	2	1	1
200	1	—	—	3	1	1
210	1	1	—	3	1	1
220	1	—	1	3	1	1
230	1	1	1	3	1	1
240	1	—	2	3	1	1

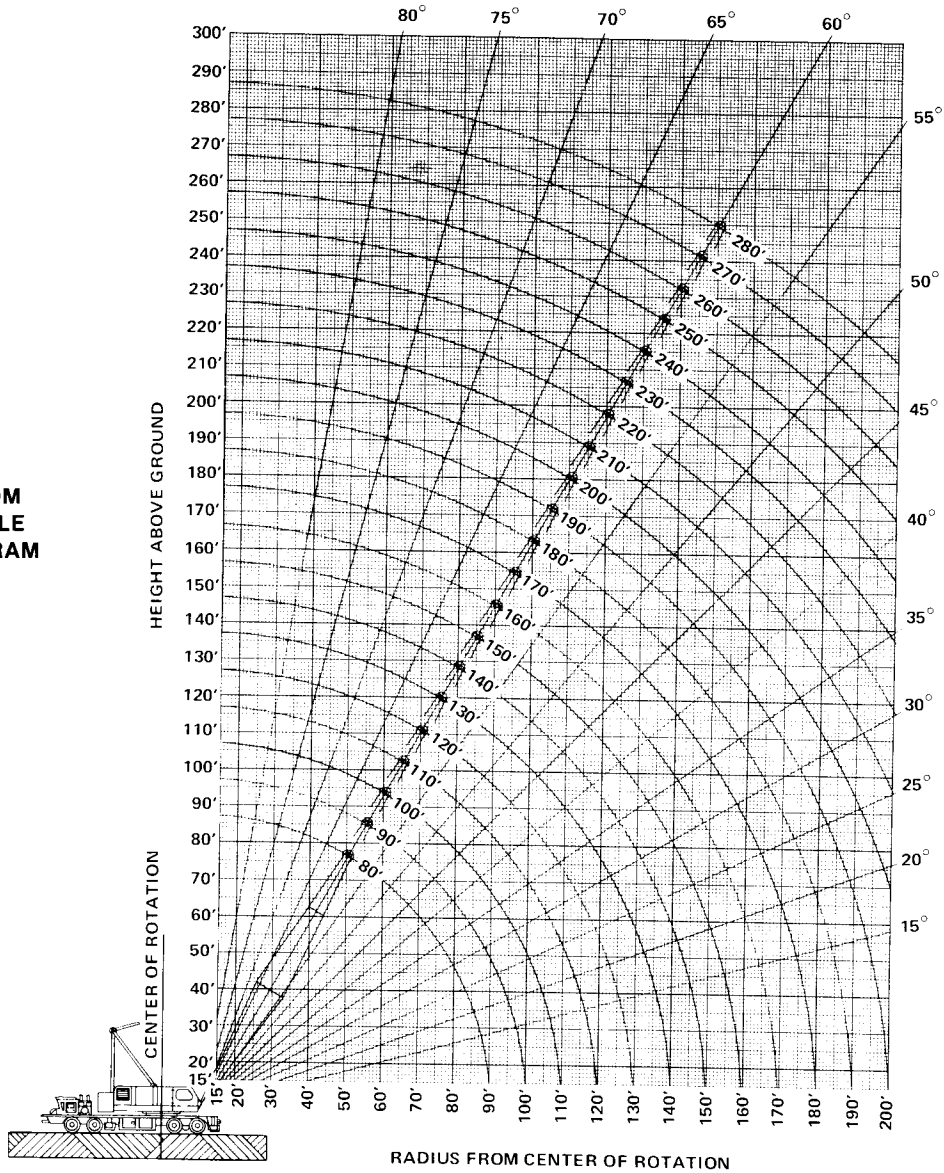
### 77L Tubular Tapered Tip Boom

Boom Length In Feet	30 Ft 77L Inner	10 Ft 77L Center	20 Ft 77L Center	50 Ft 77L Center	20 Ft 77L Outer Base	30 Ft 77L Tapered Tip
80	1	—	—	—	1	1
90	1	1	—	—	1	1
100	1	—	1	—	1	1
110	1	1	1	—	1	1
120	1	—	2	—	1	1
130	1	—	—	1	1	1
140	1	1	—	1	1	1
150	1	—	1	1	1	1
160	1	1	1	1	1	1
170	1	—	2	1	1	1
180	1	—	—	2	1	1
190	1	1	—	2	1	1
200	1	—	1	2	1	1
210	1	1	1	2	1	1
220	1	—	2	2	1	1
230	1	—	—	3	1	1
240	1	1	—	3	1	1
250	1	—	1	3	1	1
260	1	1	1	3	1	1
270	1	—	2	3	1	1
280	1	—	—	4	1	1

NOTE: In accordance with varying material situations, and the Company's policy of constant product improvement, these specifications subject to change without notice and without incurring responsibility to units previously sold.

# AMERICAN MODEL 8460 TRUCK CRANE WORKING RANGES

BOOM  
ANGLE  
DIAGRAM



5JR784

FORM NO. 8460-TR-1

PRINTED IN U.S.A.



CONSTRUCTION MACHINERY DIVISION  
63 SO. ROBERT ST., ST. PAUL, MN 55107

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AMERICAN HOIST & DERRICK COMPANY

P. 167.56

TRUCK CRANES

AMERICAN

APA-113

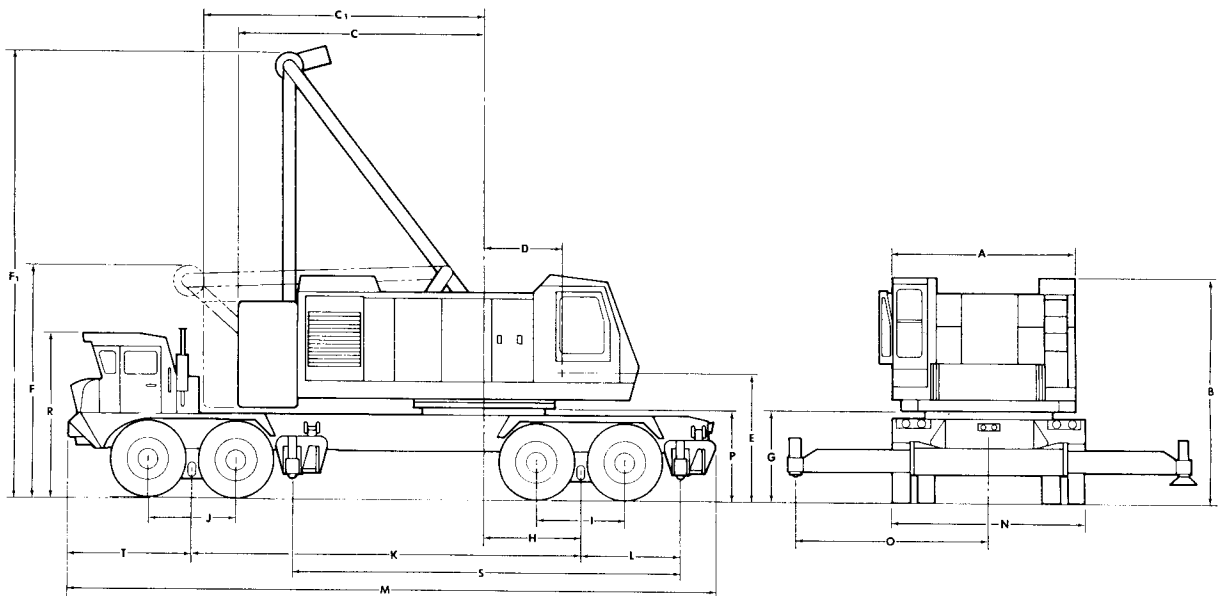
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# 8460

## CARRIER

### SPECIFICATIONS

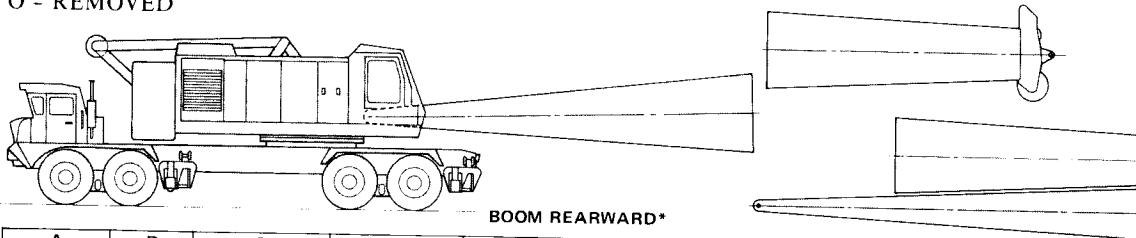


### GENERAL DIMENSIONS

A.	Width of cab	10' 4"	K.	Centerline of rear bogie to centerline of front bogie	22' 0"
B.	Height to top of cab	13' 0"	L.	Centerline of rear bogie to centerline of rear outrigger	6' 3-3/4"
C.	Tailswing - Cwt. Retracted	14' 0"	M.	Overall length	37' 1-3/4"
C <sub>1</sub> .	Tailswing - Cwt. Extended	16' 0"	N.	Overall width	11' 0"
D.	Centerline of rotation to centerline of boom foot	4' 6"	O.	Outriggers extended	11' 0"
E.	Ground to centerline boom foot	7' 2-3/4"	P.	Height over mounting plate	5' 0-1/2"
F.	Height over A-Frame (lowered)	13' 2"	R.	Height over carrier cab	9' 4"
F <sub>1</sub> .	Height over A-Frame (raised)	25' 2"	S.	Centerline of rear outrigger to centerline of front outrigger	22' 0"
G.	Ground to bottom of counterweight	5' 3-1/2"	T.	Distance from Front Bogie to Front Bumper	7' 2-1/2"
H.	Centerline of rotation to centerline of rear bogie	5' 6 1/4"		Turning radius	65' 0"
I.	Distance between rear axles	5' 0"		Clearance (under rear equalizing beam)	7-1/2"
J.	Distance between front axles	5' 0"		Clearance (under rear differential)	12"

# 8460 TRAVELING WEIGHTS

X = IN PLACE  
O = REMOVED



A TAPER TIP FOLDED	B BLOCK	C OUTER BOOM HAMMERHEAD	D INNER BOOM	E COUNTER- WEIGHT	F FRONT OUTRIGGER	G REAR OUTRIGGER	FRONT TANDEM (LB)	REAR TANDEM (LB)	GROSS WEIGHT (LB)
O	X	X	X	X	X	X	77410	136080	213500
O	O	X	X	X	X	X	81870	129630	211490
X	O	O	X	X	X	X	91760	116190	207950
O	X	X	X	O	X	X	21960	123040	145000
O	O	X	X	O	X	X	26410	116580	142990
X	O	O	X	O	X	X	36310	103150	139460
O	X	X	X	O	O	X	14250	119940	134190
O	O	X	X	O	O	X	18710	113490	132200
X	O	O	X	O	O	X	28610	100050	128660
O	X	X	X	O	X	O	25050	109140	134190
O	O	X	X	O	X	O	29510	102690	132200
X	O	O	X	O	X	O	39410	89250	128660
O	X	X	X	O	O	O	17350	106040	123390
O	O	X	X	O	O	O	21810	99590	121400
X	O	O	X	O	O	O	31700	86150	117850
O	O	O	X	X	X	X	97680	106130	203810
O	O	O	X	O	X	X	42220	93090	135310
O	O	O	X	O	O	X	34520	89990	124510
O	O	O	X	O	X	O	45320	79190	124510
O	O	O	X	O	O	O	37620	76090	113710
O	O	O	O	X	X	X	105350	89260	194610
O	O	O	O	O	X	X	49890	76220	126110
O	O	O	O	O	O	X	42190	73120	115310
O	O	O	O	O	X	O	52990	62320	115310
O	O	O	O	O	O	O	45290	59220	104510

\*NOTE: In all conditions the traveling weights for the front and rear tandem are more equally balanced with the boom foot facing the rear of the carrier. EXAMPLE: With boom foot facing forward and items A thru G removed; front tandem = 25,160; rear tandem = 79,350; gross weight 104,510.

NOTE: Due to back stability, full counterweight must not be swung over side of machine without outriggers extended and set.

## ADDITIONAL WEIGHT REDUCTION

ITEM	TOTAL WEIGHT ADJUSTMENT (LB)	EFFECT PER ITEM		ITEMS REMOVED	FRONT TANDEM (LB)	REAR TANDEM (LB)	GROSS WEIGHT (LB)
		FRONT TANDEM (LB)	REAR TANDEM (LB)				
H—Counterweight Beams Rollers and Pins	2,380	—1560	— 820	A thru H	43,730	58,400	102,130
J—Laggings and Ropes, Main Hoist Drums	4,770	—1430	—3340	A thru J	42,300	55,060	97,360
K—Retractable A-Frame	4,700	—4070	— 630	A thru K	38,230	54,430	92,660
L—25% Full Upper Fuel Tank ... Was 50% Full	200	— 130	— 70	A thru L	38,100	54,360	92,460
M—Modular Operator's Cab	470	— 0	— 470	A thru M	38,100	53,890	91,990

Carrier with outriggers and swing bearing — less upper	27525	49555	77080
Carrier with swing bearing — less upper and outriggers	22920	32560	55480

NOTE: Because of variable manufacturing tolerances a variance of  $\pm 3\%$  should be allowed on these weights.

SEE OPERATOR'S MANUAL FOR MAXIMUM MPH TRAVEL SPEED RESTRICTIONS AS LIMITED BY TIRE LOADS.



# 8460 CARRIER SPECIFICATIONS

Specifications for AMERICAN MODEL 8460, 165 ton, 264" wheelbase, 8 x 4 carrier.

**FRAME:** Box welded frame members designed and manufactured to provide adequate support for crane weight and capacities; high strength alloy steel used throughout the construction of the carrier; tow bars are provided front and rear.

**HYDRAULIC OUTRIGGERS:** Two independent housings fabricated from 100,000 PSI yield steel; outrigger beams with horizontal and vertical hydraulic movements; automatic check and manual shutoff valves in hydraulic jacks to assure maximum safety for all lifts; hardened chrome plated rams, fitted with 42" dia. spun high strength steel floats, pin connected and removable; maximum stroke of vertical jacks is 12 inches; maximum lift under floats is 7 inches; outrigger controls for RH outriggers on RH side of carrier and controls for LH outriggers on LH side.

**ENGINE:** Detroit Diesel (GM) 8V-71-N Model No. 7087-7040 diesel engine, 8 cylinder, 4-1/4" bore x 5" stroke, 568 cu. in. displacement, rated 318 HP at 2100 RPM.

**OPTIONAL ENGINE:** Cummins NTC-350 diesel engine, 6 cylinder, 5-1/2" bore x 6" stroke, 855 cu. in. displacement, rated 350 HP at 2100 RPM thermostatically controlled radiator shutters.

**FUEL TANK:** One 125 (U.S.) gallon safety fuel tank.

**ELECTRICAL:** 12 volt system; 500 watt alternator; 2 - 8D 12 volt batteries.

**POWER STEERING:** Garrison twin-ram hydraulic power steering with Ross cam, 20" dia. steering wheel.

**CLUTCH:** Spicer AS 1402, two plate, dry type, angle spring clutch hydraulically actuated.

**MAIN TRANSMISSION:** Fuller Model T955ALL modified to give 5 + 1 speeds forward and 1 + 1 reverse.

## RATIOS:

Low . . . . .	26.54:1	Fourth . . . . .	1.16:1
First . . . . .	6.35:1	Fifth . . . . .	1.00:1
Second . . . . .	3.75:1	Reverse . . . . .	6.48:1
Third . . . . .	2.04:1	Reverse Low . . . . .	27.09:1

**AUXILIARY TRANSMISSION:** Spicer Model 1241C, Four Speed.

RATIOS:	First . . . . .	2.37:1
	Second . . . . .	1.24:1
	Third . . . . .	1.00:1
	Fourth . . . . .	0.81:1

**FRONT AXLES:** Shuler FTCA-34-L-30 in tandem. 48,000# highway capacity.

**REAR AXLES:** Clark planetary 91000 tandem assembly, non-spin differential on leading axle; ratio 9.00:1

**SUSPENSION:** Hendrickson solid mount with rubber bushed torque rods front and rear.

**PROPEL SHAFT:** Spicer 1710 Series and 1810 Series.

**SERVICE BRAKES:** Air on all wheels with 14.5 C.F.M. air compressor and two reservoirs; lining area 20" x 7" (1000 sq. in.) rear; 17-1/2" x 4" (495 sq. in.) front; 1495 sq. in. total lining area.

**EMERGENCY BRAKES:** Spring set, air release system on both rear axles with operator's control on dash panel; air reservoir for release of spring set chambers.

**WHEELS:** Cast spoke front; rear integrally cast with axles; 10.00 x 24 rims.

**TIRES:** Michelin 14:00 x 24 XRB — Three Star.

**CAB:** One man cab 32" wide; fully enclosed offset to left side; hinged and removable panel for engine access; air cushion driver's seat.

**STANDARD EQUIPMENT:** West Coast type mirrors, air windshield wiper, windshield washer, heater, defroster, sealed beam oval headlights, front and rear directional signals, combination stop and taillights, backup lights, clearance lights on cab top and side, electrical and air horns, seat belts, dome light, indirect lighted instrument panel, speedometer, ammeter, fuel gauge, engine temperature indicator, air pressure gauge, oil pressure gauge, low air pressure warning signal, and tachometer.

## OPTIONAL ACCESSORIES:

- A. Remote control
- B. Ether cold weather starting kit
- C. Spare tire & rim
- D. Engine brake
- E. Full length fenders
- F. Side mounted storage box
- G. Float racks
- H. Heavy duty front axles

## PERFORMANCE:

Maximum Governed Speed . . . . .	45 MPH
Minimum Speed (1000 RPM) . . . . .	0.26 MPH
Maximum Gradeability (Off Highway With CTWT) . . . . .	25%

NOTE: In accordance with varying material situations, and the Company's policy of constant product improvement, these specifications subject to change without notice and without incurring responsibility to units previously sold.