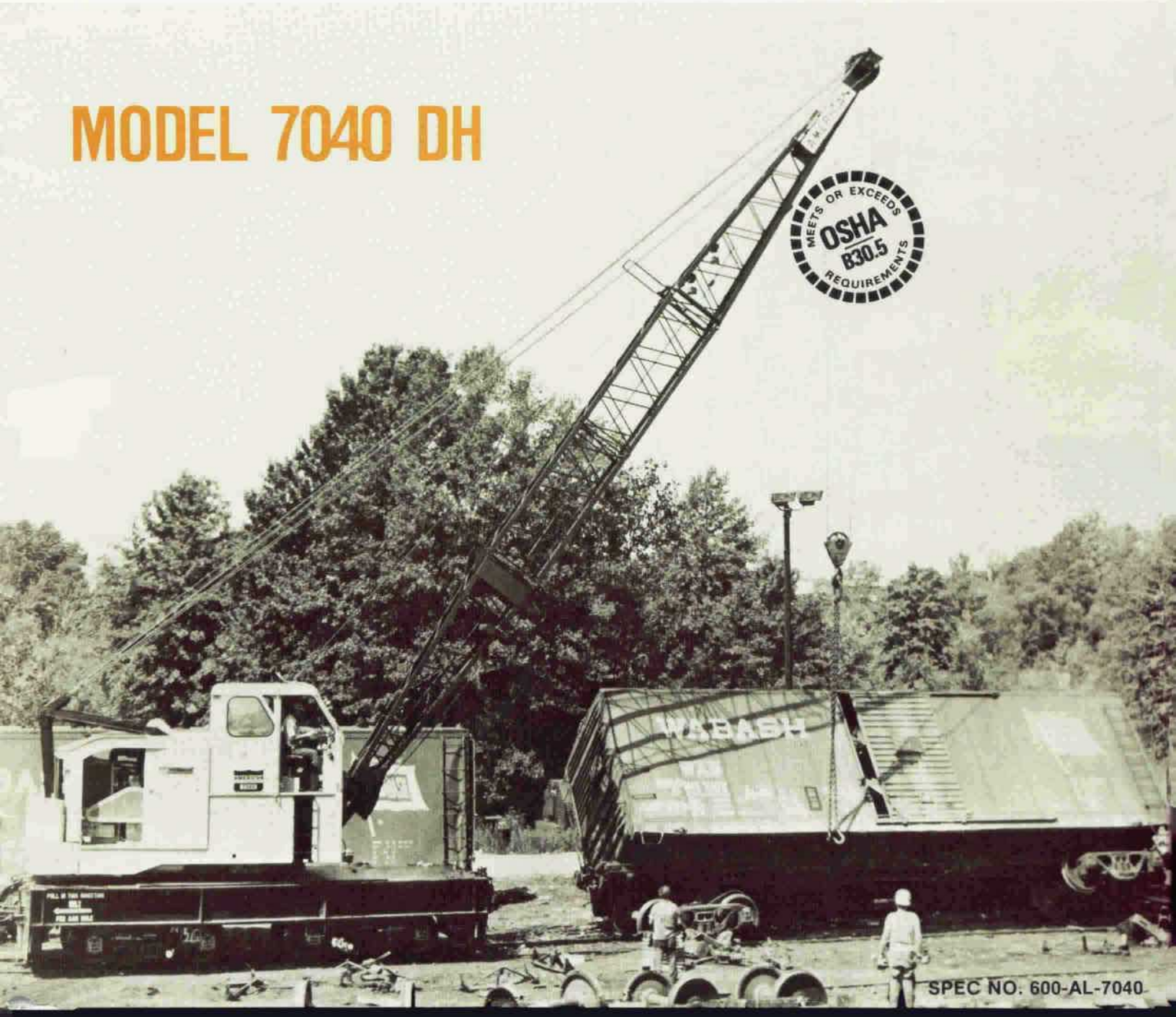
AMERICAN®

DIESEL HYDRAULIC LOCOMOTIVE CRANE

MODEL 7040 DH



SPEC NO. 600-AL-7040

SPECIFICATIONS

AMERICAN HOIST
& DERRICK COMPANY
ST. PAUL, MINNESOTA 55107

Courtesy of CraneMarket

MODEL 7040 DH LOCOMOTIVE CRANE RATINGS
LIFT & DUTY CYCLE RATINGS

Boom Length	Radius In Feet	Boom Angle Degrees	Free Over Side	With Outriggers Set	Duty Cycle Ratings Magnet or Clamshell Work	Rail To Boom Pt.
50 feet	12	80.9	80000	150000	17350	56
	15	77.4	61140	141120	17350	56
	20	71.5	42970	96830	17350	54
	25	65.3	32840	70490	17350	52
	30	58.8	26340	54800	17350	50
	35	51.9	21910	42680	17350	46
	40	44.2	18610	33260	14800	42
	45	35.2	16140	25390	12900	36
	50	23.4	14130	17810	11300	27
55 feet	13	80.7	73140	150000	17350	61
	15	73.6	60930	140890	17350	61
	20	73.2	42780	96720	17350	60
	25	67.7	32660	70370	17350	58
	30	61.9	26160	55000	17350	56
	35	55.8	21740	44720	17350	53
	40	49.3	18430	35660	14700	49
	45	42.0	15910	28290	12700	44
	50	33.5	13970	21900	11400	37
	55	22.3	12350	15520	9800	28
60 feet	14	80.5	66450	142580	17350	66
	15	79.6	60880	139960	17350	66
	20	74.7	42740	96690	17350	65
	25	69.6	32620	70340	17350	63
	30	64.5	26110	54970	173500	61
	35	59.0	21710	45020	173500	58
	40	53.3	18400	37480	14700	55
	45	47.1	15860	30450	12600	51
	50	40.1	13940	24580	11100	46
	55	32.0	12320	19210	9800	39
	60	21.4	10990	13740	8700	29
65 feet	15	80.4	60630	134560	17350	71
	20	75.9	42550	96570	17350	70
	25	71.3	32440	70220	17350	69
	30	66.5	25930	54830	17350	67
	35	61.6	21530	44880	17200	64
	40	66.5	13230	37800	14500	64
	45	51.0	15690	31870	12500	58
	50	45.1	13700	26240	10900	58
	55	38.5	12160	21400	9700	47
	60	30.7	10820	16840	8600	40
	65	20.5	9700	12090	7700	30
70 feet	16	80.2	55920	126100	17350	76
	20	76.9	42440	96490	17350	75
	25	72.6	32340	70140	17350	74
	30	68.3	25830	54750	17350	72
	35	63.8	21430	44800	17100	70
	40	59.2	18120	37710	14400	67
	45	54.3	15600	32460	12400	64
	50	49.1	13600	27530	10800	60
	55	43.4	12070	22980	8500	35
	60	37.0	10730	18830	8500	35
	65	29.6	9610	14910	7600	42
	70	19.8	8660	10740	6900	31
75 feet	16	80.9	55720	120640	DUTY CYCLE LIMITED TO 70 FT. BOOM	81
	20	77.8	42240	96370		80
	25	73.8	32160	70010		79
	30	69.8	25650	54610		77
	35	65.7	21260	44670		75
	40	61.4	17950	37570		73
	45	57.0	15420	32300		70
	50	52.3	13430	28250		66
	55	47.3	11910	24050		62
	60	41.8	10570	20150		57
	65	35.7	9450	16600		51
	70	28.6	8490	13160		43
	75	19.1	7680	9470		32
80 feet	17	80.7	51570	114170		86
	20	78.6	42210	96340		85
	25	74.9	32130	69970		84
	30	71.1	25610	54570		83
	35	67.3	21230	44630		81
	40	63.4	17920	37540		78
	45	59.3	15380	32270		76
	50	55.0	13380	28200		73
	55	50.5	11880	24960		69
	60	45.7	10540	21230		64
	65	40.5	9410	17900		59
	70	34.6	8460	14830		52
	75	27.6	7640	11800		44
	80	18.5	6920	8490		32
85 feet	18	80.6	47800	108050		91
	20	79.2	42020	96210		90
	25	75.8	31940	69840		89
	30	72.3	25420	54430		88
	35	68.7	21050	44500		86
	40	65.0	17740	37400		84

Boom Length	Radius In Feet	Boom Angle Degrees	Free Over Side	With Outriggers Set	Duty Cycle Ratings Magnet or Clamshell Work	Rail To Boom Pt.
85 feet	45	61.3	15210	32130		82
	50	57.3	13210	28060		79
	55	53.2	11720	24940		75
	60	48.9	10380	21900		71
	65	44.3	9250	18730		66
	70	39.2	8300	15860		61
	75	33.5	7470	13150		54
	80	26.8	6760	10470		45
	85	17.9	6140	7490		33
90 feet	19	80.5	44680	100360		96
	20	79.8	41890	96120		96
	25	76.6	31830	69760		95
	30	73.3	25310	54330		93
	35	69.9	20950	44410		92
	40	66.5	17640	37310		90
	45	63.0	15100	32030		87
	50	59.4	13100	27960		84
	55	55.6	11620	24860		81
	60	51.6	10280	22220		73
	65	47.4	9160	19400		73
	70	43.0	8200	16660		68
	75	38.0	7370	14140		62
	80	32.5	6650	11740		55
	85	26.0	6030	9340		46
	90	17.4	5480	6640		34
95 feet	19	81.0	44490	96100		101
	20	80.4	41700	95030		101
	25	77.3	31640	69620		100
	30	74.2	25120	54190		98
	35	71.0	20770	44270		97
	40	67.8	17460	37170		95
	45	64.5	14930	31890		93
	50	61.1	12930	27820		90
	55	57.6	11460	24720		87
	60	54.0	10120	22080		84
	65	50.1	9000	19820		80
	70	46.1	8030	17180		75
	75	41.8	7210	14800		70
	80	37.0	6490	12570		64
	85	31.6	5870	10430		57
	90	25.3	5320	8270		48
	95	16.9	4820	5810		35
100 feet	20	80.9	41610	89880		106
	25	78.0	31550	69540		105
	30	75.0	25040	54110		104
	35	72.0	20680	44190		102
	40	69.0	17370	37090		100
	45	65.9	14840	31810		98
	50	62.7	12840	27740		96
	55	59.4	11380	24650		93
	60	56.0	10040	22010		90
	65	52.5	8910	19810		86
	70	48.8	7950	17650		82
	75	44.9	7130	15360		78
	80	40.6	6410	13250		72
	85	36.0	5780	11270		66
	90	30.8	5230	9350		58
	95	24.7	4730	7370		49
	100	16.5	4300	5130		35
105 feet	21	80.8	38930	85140		111
	25	78.5	31370	69410		110
	30	75.7	24850	53970		109
	35	72.9	20510	44060		107
	40	70.0	17200	36950		106
	45	67.1	14670	31670		104
	50	64.1	12670	27590		101
	55	61.0	11220	24510		99
	60	57.8	9880	21870		96
	65	54.6	8750	19670		93
	70	51.1	7790	17830		89
	75	47.5	6970	15700		84
	80	43.7	6250	13680		80
	85	39.6	5620	11810		74
	90	35.1	5060	10030		67
	95	30.1	4560	8280		66
	100	24.1	4130	6490		50
	105	16.1	3740	4420		36
110 feet	22	80.6	36560	80150		116
	25	79.1	31240	69300		115
	30	76.4	24730	53860		114

Courtesy of Crane.Market

MODEL 7040 DH LOCOMOTIVE CRANE RATINGS (con't)

Boom Length	Radius In Feet	Boom Angle Degrees	Free Over Side	With Outriggers Set	Duty Cycle Ratings Magnet or Clamshell Work	Rail To Boom Pt.
110 feet (cont.)	35	73.7	20400	43960		113
	40	71.0	17080	36840		111
	45	68.2	14550	31560		109
	50	65.4	12550	27480		107
	55	62.5	11110	24410		105
	60	59.5	9770	21770		102
	65	56.4	8640	19570		99
	70	53.2	7680	17730		95
	75	49.9	6850	15980		91
	80	46.4	6130	14030		87
	85	42.7	5500	12230		82
	90	38.7	4940	10550		76
	95	34.3	4460	8960		69
	100	29.4	4010	7370		61
	105	23.5	3620	5720		57
	110	15.7	3270	3820		37
115 feet	23	80.6	34550	74900		120
	25	79.5	31060	69170		120
	30	77.0	24540	53720		119
	35	74.4	20230	43830		118
	40	71.8	16910	36700		116
	45	69.2	14380	31420		114
	50	66.5	12380	27340		112
	55	63.7	10940	24280		110
	60	60.9	9600	21630		108
	65	58.0	8480	19440		105
	70	55.1	7520	17590		101
	75	52.0	6690	16000		98

Boom Length	Radius In Feet	Boom Angle Degrees	Free Over Side	With Outriggers Set	Duty Cycle Ratings Magnet or Clamshell Work	Rail To Boom Pt.
115 feet (cont.)	80	48.7	5970	14230		93
	85	45.3	5340	12500		89
	90	41.7	4790	10900		83
	95	37.8	4290	9390		77
	100	33.5	3840	7920		70
	105	28.7	3450	6480		62
	110	23.0	3090	4970		52
	115	15.4	2770	3200		38
120 feet	23	81.0	34480	70940		126
	25	80.0	30990	69100		125
	30	77.5	24460	53640		124
	35	75.1	20160	43750		123
	40	72.6	16840	36630		122
	45	70.1	14300	31340		120
	50	67.5	12310	27270		118
	55	64.9	10880	24210		116
	60	62.2	9530	21560		113
	65	59.5	8410	19370		110
	70	56.7	7450	17520		107
	75	53.8	6620	15930		104
	80	50.8	5910	14470		100
	85	47.6	5280	12790		96
	90	44.3	4720	11240		91
	95	40.8	4220	9800		85
	100	37.0	3780	8420		79
	105	32.8	3370	7090		72
	110	28.1	3020	5760		63
	115	22.5	2700	4370		53
	120	15.1	2400	2730		38

Rating Chart — 7040.08
Duty Cycle — 7040.-DC-C

CRANE RATING DATA

Free crane ratings do not exceed 85% of tipping load. Outrigged crane ratings do not exceed 80% of tipping load. Clamshell and magnet ratings are in accordance with recommended industry standards and should not be exceeded. Safe loads depend on track condition, boom length, radius of operation, and proper handling, all of which must be taken into consideration by user.

"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. Maximum recommended boom length is 120 ft. for lift crane service and 70 ft. for magnet and clamshell service.

Ratings in shaded areas are based on structural limitations rather than stability.

Designed and rated to comply with ANSI Code B30.5.

BOOM COMPOSITION

Boom Length (feet)	Inner 20 ft. 46H	Center 5 ft. 46H	Center 10 ft. 46H	Center 20 ft. 46H	Center 40 ft. 46H	Outer 20 ft. 46H
50	1	0	0	0	0	1
55	1	1	0	0	0	1
60	1	0	0	1	0	1
65	1	1	0	1	0	1
70	1	0	1	1	0	1
75	1	1	1	1	0	1
80	1	0	0	0	1	1
85	1	1	0	0	1	1
90	1	0	1	0	1	1
95	1	1	1	0	1	1
100	1	0	0	1	1	1
105	1	0	1	1	1	1
110	1	1	1	1	1	1
120	1	0	0	0	2	1

LOAD HOISTING DATA*

26" DRUM LAGGINGS

Maximum Lifting Capacity — Lbs.	Minimum Parts of Line	Maximum Hoisting Distance Main Drum	Auxiliary Drum
118625	6	76'	57'
98855	5	91'	68'
79084	4	114'	85'
59313	3	152'	113'
39542	2	229'	170'
19771	1	457'	339'

*Based on ⅞" Dia. Load Line with Minimum Breaking Strength of 69,200 lbs. or Single Line Pull Capability of Hoist Drum 26" Lagging. (7040LHD-A)

21½" DRUM LAGGINGS (Optional)

Maximum Lifting Capacity — Lbs.	Minimum Parts of Line	Maximum Hoisting Distance Main Drum	Auxiliary Drum
118625	6	140'	104'
98855	5	168'	125'
79084	4	211'	156'
59313	3	281'	207'
39542	2	421'	312'
19771	1	842'	623'

*Based on ⅞" Dia. Load Line with Minimum Breaking Strength of 69,200 lbs. or Single Line Pull Capability of Hoist Drum 21½" Lagging. (7040LHD-B)

Courtesy of Crane.Market

GENERAL SPECIFICATIONS

LOWER MACHINERY:

TRUCKS:

Multi-wear rolled steel 33" wheels standard. Class U.
Cast steel side frames and bolsters. Blocking cams on top of side frames.
AAR standard axles 6" x 11" Timken Roller Bearing Journals.
Two 8" x 8" air brake cylinders on each truck, each cylinder operating brakes on two wheels on one side of truck.
Hydraulic traction motor driving inside axle of each truck, through triple gear reduction, enclosed and running in oil.
Steel spur gears with cut teeth (triple reduction) drive truck axles from hydraulic motors. Gears enclosed in oil tight case. Rapid gear shifter is standard equipment.
Gear box cast ductile iron supported on axle with rubber mounted torque arm fastened to bolster.
Motor flange attached to gear box.
Clearance under hydraulic motor gear case 4⅜".
Clearance under hydraulic motor 8½".
6'8" center to center of truck axles.
Center line to center line of trucks 13'0".
Track gauge 56½".

CARBODY:

All welded, structural steel.
Fully cover plated for safety.
6¼" x 8" type E couplers with friction draft gear.
Sliding end outriggers, box section welded construction are standard.
Lever operating hand brakes on one truck is mounted at end of carbody.
Standard AAR steps and grab irons included.

BULLGEAR AND ROLLER PATH:

Roller path and bullgear are a single unit casting; internal tooth bullgear; outer surface of the bullgear has double tapered roller paths accurately machined to roller contour, welded to top of carbody with suitable reinforcement and bracing.

Bullgear 76 tooth, 60.8" pitch diameter. Roller path 73½" outside diameter.

CENTER PIVOT TUBE:

Center pivot tube cast integral with roller path and bullgear, pressure grease lubricated bronze pivot bushings in rotating machinery base; horizontal loads only — no uplift.

UPPER MACHINERY:

POWER:

Standard: General Motors Model 6-71-N diesel engine with PTO, 6 cylinder, 4¼" bore, 5" stroke, 426 cu. in displacement, rated 185 HP at 1700 RPM, 24 volt electric starting.

ENGINE DRIVE:

The diesel engine is direct connected to a PTO gear box which is direct connected to a drive shaft. Accessory drives on the gear box are provided to direct drive travel and swing pumps. Power to the pumps can be disengaged with the PTO.

Gear box is totally enclosed and gears are oil bath lubricated. Pumps run 2100 RPM.

A sprocket is mounted on the drive shaft, driving a roller chain which in turn drives the main machinery drive shaft.

AIR COMPRESSOR:

Belt driven — Quincy Model 325 — 25 cu. ft. capacity.

ROTATING MACHINERY BASE:

Electric welded steel plate and steel casting unit; tapered deep girder construction with integral walkways; accurate milling, boring, and drilling with modern computer controlled machine using precise jigs and heavy duty fixtures insures perfect alignment of machinery under the most severe operating conditions and provides perfect fit of replacement parts.

COUNTERWEIGHT:

Type "KK" counterweight, 22,000 lbs. casting bolted to crane. Purchaser to install approximately 70,000 lbs. counterweight material in carbody. (As optional we will furnish and install this 70,000 lbs. of counterweight.)

FUEL TANK: 117 gallons capacity.

LOAD AND HOOK ROLLERS:

Large tapered load rollers transmit downward loads to machined upper roller path on carbody; tapered hook rollers transmit uplift loads to lower roller path on carbody; all rollers mounted on anti-friction bearings; easy and precise adjustment for wear by means of eccentric hook roller axle.

Load rollers front — quantity — 4 — 9.35" dia. 5" wide.
Load rollers rear — quantity — 2 — 9.35" dia. 5" wide.
Hook rollers rear — quantity — 4 — 6.75" dia. 3" wide.
Hook rollers front — quantity — 2 — 6.75" dia. 3" wide.

MAIN HOIST DRUM ASSEMBLY:

Twin alloy cast iron drums with integral brake and clutch surfaces; drums mounted in anti-friction bearings; drums skeleton type with split cast steel laggings bolted in place; alloy steel drum shaft mounted in anti-friction bearings in machinery base; clutch spiders splined to drum shaft; air controlled clutches with tandem internal expanding bands with thick moulded linings (36" dia. x 5" wide); smooth operation assured by fully compensated air controls; large external contracting band drum brakes, foot operated, with extra thick moulded linings (46" dia. x 5" wide); brake shafts and pins mounted on anti-friction bearings for responsive operation with minimum effort; brake and clutch surfaces stress relieved for smooth operation without scoring; special thermo cooling rings on drums dissipate heat. Also furnished is a spring set, air released brake mechanism on each drum, controllable from the operator's lever stand, actuates automatically in the event there is a loss of air during crane operations. This brake is capable of holding the rated load indefinitely without attention from the operator.

DRUM LAGGING:

Standard drum laggings are 26" diameter for magnet, clamshell, or grapple service.

Optional laggings are 21½" diameter for maximum rated lift crane service, or controlled load lowering.

713923 — L.H. Lagging — Magnet, Clamshell, or Grapple.

Grooved. 26" dia. x 14¾" wide.
Working Capacity: 340 ft. of ⅞" Rope on 3 layers.
Storage Capacity: 465 ft. of ⅞" Rope on 4 layers.

Courtesy of Crane.Market

GENERAL SPECIFICATIONS (con't)

713897 — L.H. Lagging — Lift Crane.

Smooth. 21½" dia. x 14¾" wide.
Working Capacity: 625 ft. of ⅞" Rope on 6 layers, or 455 ft. of 1" Rope on 5 layers.
Storage Capacity: 750 ft. of ⅞" Rope on 7 layers, or 565 ft. of 1" Rope on 6 layers.

713712 — L.H. Lagging — Controlled Load Lowering.

Smooth. 21½" dia. by 12-19/64" wide.
Working Capacity: 515 ft. of ⅞" Rope on 6 layers, or 375 ft. of 1" Rope on 5 layers.
Storage Capacity: 620 ft. of ⅞" Rope on 7 layers, or 465 ft. of 1" Rope on 6 layers.

713922 — R.H. Lagging — Magnet, Clamshell, or Grapple.

Grooved. 26" dia. x 19¾" wide.
Working Capacity: 455 ft. of ⅞" Rope on 3 layers.
Storage Capacity: 625 ft. of ⅞" Rope on 4 layers.

713921 — R.H. Lagging — Lift Crane.

Smooth. 21½" dia. x 19¾" wide.
Working Capacity: 840 ft. of ⅞" Rope on 6 layers, or 610 ft. of 1" Rope on 5 layers.
Storage Capacity: 1,010 ft. of ⅞" Rope on 7 layers, or 760 ft. of 1" Rope on 6 layers.

713711 — R.H. Lagging — Controlled Load Lowering.

Smooth. 21½" dia. x 19⅛" wide.
Working Capacity: 815 ft. x ⅞" Role on 6 layers, or 595 ft. of 1" Rope on 5 layers.
Storage Capacity: 975 ft. of ⅞" Rope on 7 layers, or 735 ft. of 1" Rope on 6 layers.

BOOM HOIST:

Bronze bushed cast steel boom hoist drum mounted on stationary shaft in machinery base; powered through gear train from engine through swing shaft to boom hoist shaft; single lever graduated air valve controls both raising and lowering; cut tooth spur gear is mounted on anti-friction bearings with alloy cast iron clutch ring keyed to gear hub; clutch spider is splined to clutch shaft; air controlled clutch is external contracting band; clutch shaft is mounted on bronze bushings in machinery base; spring set, air released contracting band brake; spring set, air released locking pawl holds boom during operation or when machine is idle.

CONTROLLED BOOM LOWERING:

Boom lowering speed limited by speed of engine; rapid boom handling; slower boom lowering by reduced engine speed; overrunning sprag clutch mechanism mounted on independent shaft engages positively and smoothly.

BOOM STOPS:

Telescopic tubular boom stops restrain the boom from overtopping in the event of hoist line or hoisting tackle failure.

BOOM HOIST SHUT OFF:

Automatically stops the boom hoist mechanism when the boom reaches a predetermined angle; the adjustable actuator arm, located near the base of the boom, simultaneously disengages the boom hoist clutch and sets the boom hoist brake when the boom reaches the present high limit.

BOOM:

Standard boom is 50 ft., 3-piece, 46" cross-section, with three 24" dia. sheaves mounted on anti-friction bearings in boom point; alloy steel chord angle construction with tubular lacing; pendant type boom suspension is standard.
Standard boom will consist of 20 ft. inner, 10 ft. center, and 20 ft. outer section. Sections are pin-connected for fast assembly and disassembly. Additional center sections with matching pendants are available in 5 ft., 10 ft., and 20 ft. lengths.

TAGLINE WINDER:

Rud-O-Matic #648 tagline winder furnished as standard equipment.

CAB:

Fully enclosed steel cab; all shatterproof glass windows mounted in rubber; removable windows in operator's cab; sliding doors on sides and rear; hinged door on operator's cab roof; ladder to roof at left front; operator located at right hand forward corner to provide unobstructed visibility; steel door between operator's cab and machinery compartment; operator's cab is acoustically insulated; elevated operator's cab is optional.

TRAVEL BRAKES:

Railroad Type — Air operated.

Class I (Standard) — Formerly known as CBG.

This consists of straight air brakes on the crane trucks, operated from the operator's position. A through pipe or train line is provided. (Includes Quincy Model 325, 25 CFM air compressor.)

Class II (Optional) — Formerly known as ABG.

Includes straight air brakes from the operator's cab applying on the crane and also automatically operated air brakes applying on the crane operated by the engineer from the locomotive when crane is hauled in a train (might be called freight car brakes). (Includes Quincy Model 325, 25 CFM air compressor.)

Class III (Optional) — Formerly known as BBG.

Includes straight air brakes from the operator's cab applying on the crane and also automatically operated air brakes applying on the crane operated by the engineer from the locomotive when crane is hauled in a train, and also automatic air brakes on cars being switched by crane. (Includes Quincy Model 350, 50 CFM air compressor.)
All brake classes have brakes applying on all eight wheels. Hand brakes provided on four wheels (one truck).

LIGHTING EQUIPMENT:

100 amp belt driven alternator. 24 volts.
2 150 watt floodlights on cab.
2 150 watt lights on boom.
2 25 watt tail lights.
4 32 cp lights in cab.

BATTERIES:

Two 3-cell batteries are connected in series and provide power for cranking the engine and for lights.

HYDRAULIC SWING SYSTEM:

The swing system is composed of a torque select closed loop hydrostatic drive system. This rotates the upper on a roller path thru means of a gear reduction to the pinion and bullgear. The basic

Courtesy of Crane.Market

GENERAL SPECIFICATIONS (con't)

hydraulic system consists of a variable displacement piston pump and a fixed displacement motor with loop lines between the ports of the pump and motor.

To swing the machine to the right, the operator must pull on the control lever. To swing left, he must push forward on the lever. The pump has a built-in torque select valve. When you move the swing lever, the select lever on the pump linkage moves. This, in turn, produces swing torque. As you pull the handle the torque is increased until the torque requirement to swing the load is reached; then the machine starts to swing. As the machine swing speed increases the required torque drops off and the volume of oil delivery increases until the desired speed is obtained. You may then coast along with the load or you may hydrostatically brake to a stop. Full torque braking may be applied if so desired by stroking the lever over center to full stroke or partial stroke over center for partial braking.

Speed and torque may be varied regardless of engine speed within the limits of the engine capability.

The pump has a pressure limit stop which limits the pressure to 4000 psi. It also has a built-in relief valve set at 4300 psi. This relief valve is only used to release pressure surges caused from shock loading.

In addition to the standard spring set air released swing house brake, there is an air-holding brake equipped with this system. By moving the swing lever to the side, the air swing brake is applied for holding against outside forces, such as when in a neutral position during high winds, or when the machine is on a sloping plane.

HYDRAULIC TRAVEL SYSTEM:

The travel system is composed of a speed control Hydro-Transmission which drives two driving axles with two driving wheels on the rail per axle. The axles are driven thru gear reduction boxes mounted on the drive axles. A variable displacement hydraulic piston motor which can be stroked to high or low range is mounted on each gear box. Each motor is supplied with oil thru a swivel joint from a separate variable displacement piston pump.

The pumps have a flow select control valve with a pressure limiter built into it. This means that when you stroke the lever to a certain position you are selecting a speed. The pump will stroke to a displacement within the limits of the pressure control until that speed is reached,and then hold that speed provided the capability of the engine is not exceeded.

Maximum handle travel represents maximum speed. As you return the handle back toward center, you will get a speed reduction. The pump will brake at a rate within the limits of the pressure control and friction horsepower of the engine. The pressure limits in the control valve, limits the hydraulic pressure to 5000 psi. A 5500 psi relief valve is used to release pressure surges caused from shock loading.

GENERAL:

CONTROLS: Graduated air controls, pioneered by AMERICAN, put "feel" at every operator's fingertips, insure higher production, more accurate control.

MATERIALS: Gears and pinions are heat-treated alloy or high carbon steel; cut teeth on all gears.

Involute splines are used throughout machine for maximum tooth strength through minimum diameter where needed; self centering; equalized bearing and stress among all teeth; smooth tooth surface; easy interchangeability of parts.

Anti-friction bearings are used on all main or high speed shafts and wherever practical to provide friction-free, smooth operation with minimum maintenance.

LUBRICATION: All anti-friction bearings and bronze bushings requiring short period lubrication are provided with pressure grease fittings; swing deck gears are provided with oil bath lubrication; drum gear train and the swing bullgear are arranged for grease lubrication.

PERFORMANCE DATA:

Swing speed ..... variable from 0 to 3 RPM
Line Pull:
with 21½" dia. lagging ..... 29,600 lbs. S.L.P @ 165 FPM
with 26" dia. lagging ..... 24,800 S.L.P @ 200 FPM

TRAVEL SPEEDS AND DRAW BAR PULLS:

With optional low speed gearing (19.96:1 ratio):

Starting draw bar pull	26,400 lbs.
1 MPH	26,400 lbs.
2 MPH	21,000 lbs.
4 MPH	9,500 lbs.
8 MPH	3,000 lbs.
13 MPH	0 lbs.

NOTE: Optional chain drive should be selected for use with above ratio.

With standard gearing (16.82:1 ratio):

Starting draw bar pull	25,000 lbs.
1 MPH	26,000 lbs.
2 MPH	23,000 lbs.
4 MPH	12,000 lbs.
8 MPH	4,000 lbs.
14 MPH	0 lbs.

With optional high speed gearing (8.19:1 ratio):

Starting draw bar pull	10,000 lbs.
1 MPH	11,000 lbs.
2 MPH	11,500 lbs.
4 MPH	9,500 lbs.
8 MPH	4,000 lbs.
14 MPH	1,000 lbs.
19 MPH	0 lbs.

NOTE: Other gear ratios are available for special applications: consult factory.

Maximum grade (no load) 10%
(with std. gearing)

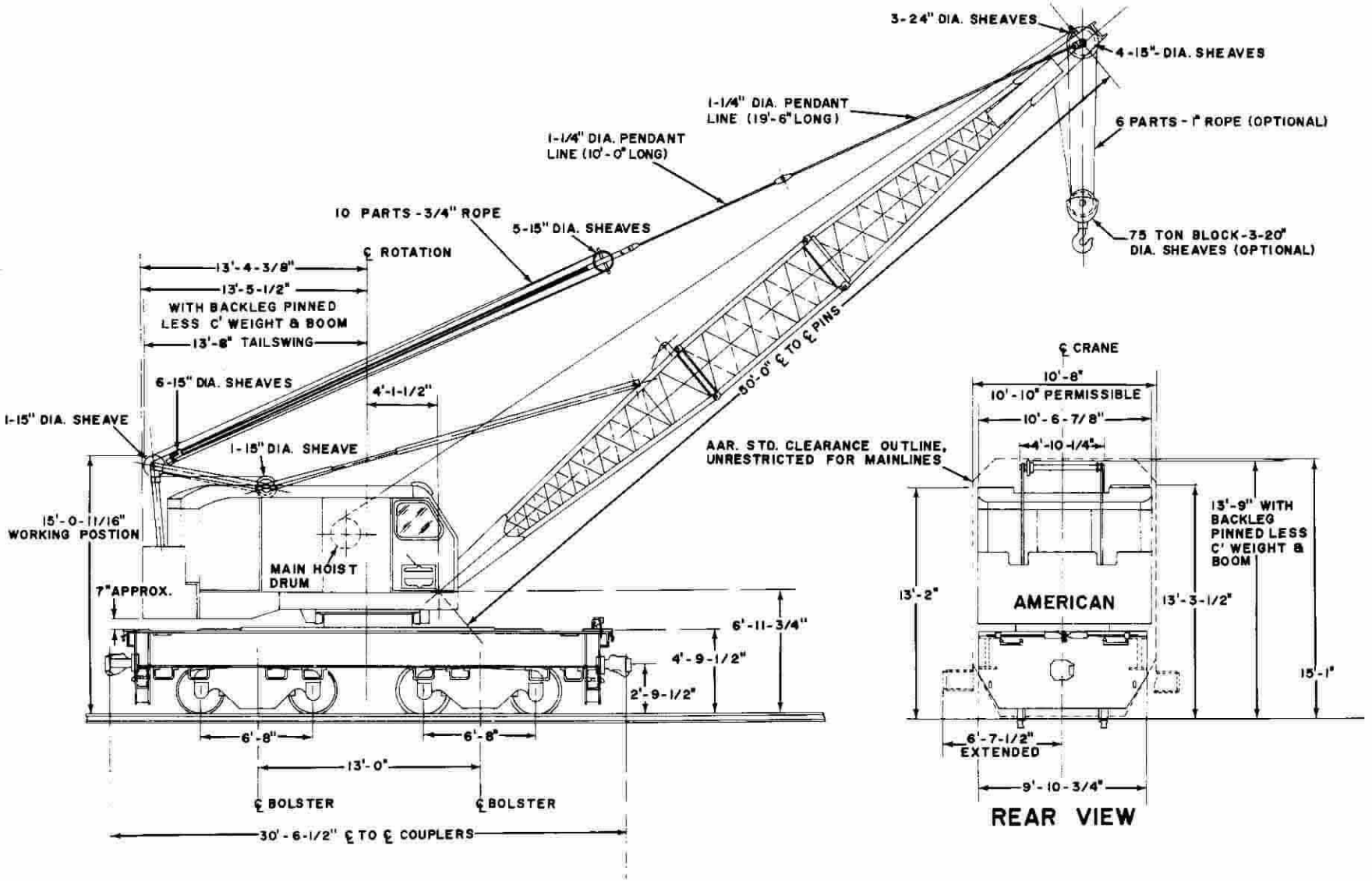
Performance figures are based on machine equipped with standard engine.

WEIGHTS:

Approximate shipping weight	148,000 lbs.
Approximate amount of counterweight to be furnished by purchaser	70,000 lbs.
Total working weight of crane	218,000 lbs.

Courtesy of Crane.Market

American Model 7040-DH & DE



Courtesy of Crane.Market

GENERAL SPECIFICATIONS (con't)

OPTIONAL ATTACHMENTS & ACCESSORIES

CLAMSHELL ATTACHMENT:

For clamshell or grapple work, ⅞" holding line and ⅞" closing line furnished to reach track level.

CONTROLLED LOAD LOWERING:

The controlled load lowering shaft is mounted behind and above the main drum shaft; shaft is alloy steel mounted in anti-friction bearings in the standard A-frame; roller chain sprocket is bolted to a special drum lagging; a mating drive sprocket is provided on the load lowering shaft; clutch is internal expanding band type. Controlled load lowering can be provided for either the right hand or left hand drum, but not both simultaneously; the large driven sprocket is bolted to the special lagging and can be bolted to either right or left lagging as desired.

Loads are lowered through the chain drive to the lowering shaft, then through the lowering clutch to the gear train and back to the engine where they are resisted by the overrunning friction torque of the engine.

Also available as an option is controlled load lowering for second drum; a second chain sprocket is mounted on the controlled load lowering clutch shaft and connected by roller chain to sprocket on drum lagging; single clutch is utilized for lowering of either drum as selected by jaw clutch shifter; cannot lower under control on both drums simultaneously.

A single air valve controls both hoisting and lowering. The foot brake stops the load.

The controlled load lowering is completely independent of all other operations.

When ordered on machines, an engine brake is included.

MAGNET ARRANGEMENT:

25 KW constant voltage magnet generator is belt driven from main engine, eliminating extra fuel costs and maintenance of second engine; voltage regulator holds voltage constant under all operating conditions; magnet controller mounted on operator's cab wall; pushbuttons mounted in operating levers so operator need not release control lever while operating magnet.

Over-excitation arrangement increases magnet pick-up to 20%, increasing daily output; when magnet is dropped on pile of material the operator pushes "LIFT" button on hoist lever which raises generator voltage to 275, materially increasing magnet pick-up capacity; when free from pile the button is released and voltage drops to 200, which is ample to hold the load; to release the load the operator pushes the "DROP" button on the swing lever.

Included with magnet arrangement are Gleason Model S-150 cable reel including power cable, single sheave crane block with bronze bushed sheave, and two-part magnet hoist line to reach track level.

ELEVATED CAB:

For greater vision, the operator's cab can be elevated 2 ft., 3 ft. 5 ft., or 10 ft., above standard.

OPERATOR'S CAB COMPARISON:

	Top of Rail to Eye Level (Operator seated)	Top of Rail to Roof Outside Operator's Cab:
STD.	12'-0	13'-5¼
2 ft.	14'-0	15'-5¼
3 ft.	15'-0	16'-5¼
5 ft.	17'-0	18'-5¼
10 ft.	22'-0	23'-5¼

MISCELLANEOUS OPTIONS:

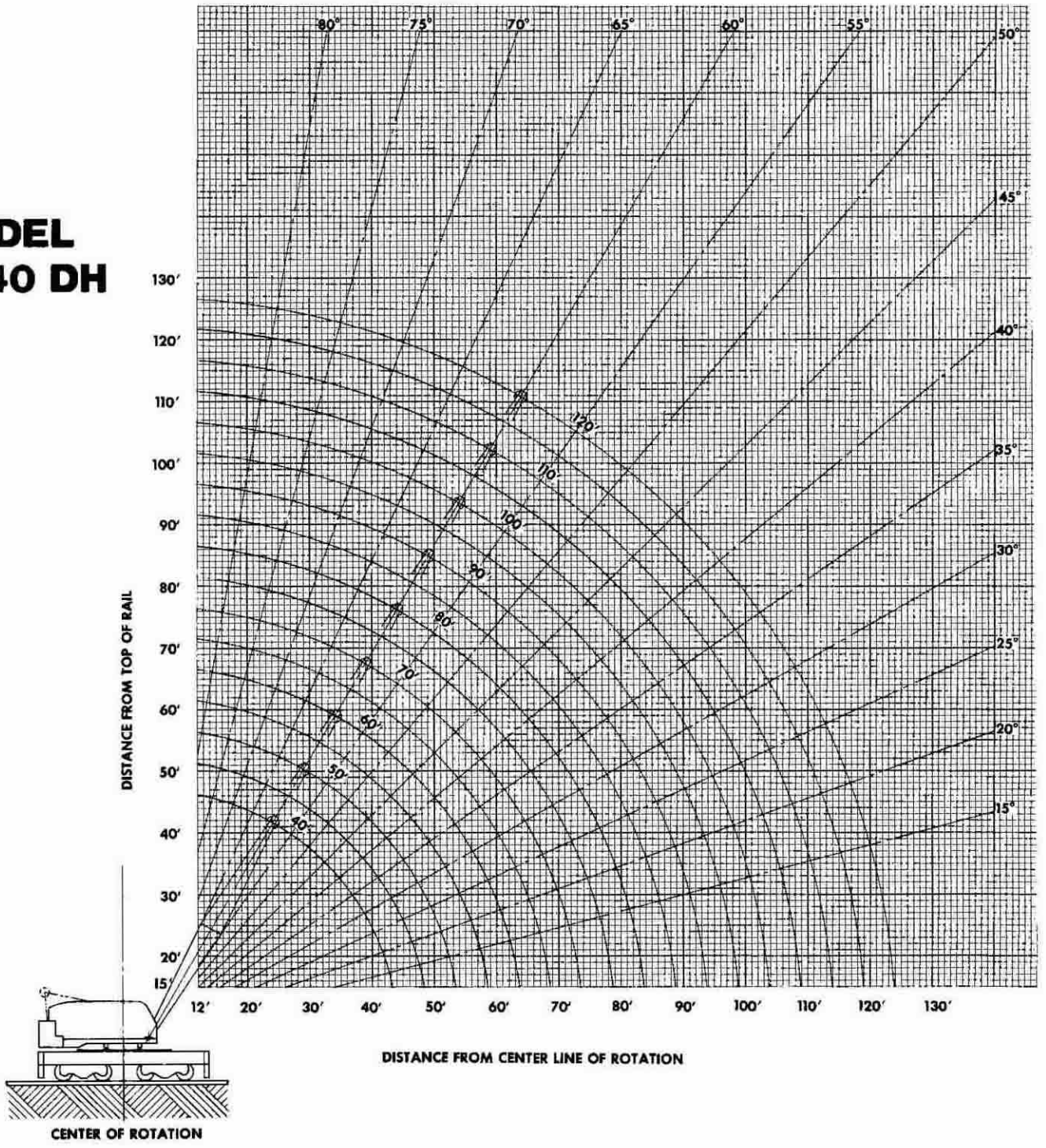
Hand grabs and foot boards.
Air-operated track sanders.
Four manually operated track clamps.
Counterweight in carbody furnished and installed.
Chain drive to make all 8 wheels drivers.
Guide sheaves can be provided in the boom for magnet inhaul service.
Fire extinguisher.
Fan in Cab for cooling or defrosting.
Automatic warning bell and ringer. For travel.
Protecto seal fuel tank cap.
Gyrating, flashing light on top of cab.
American self-folding pile driver leads.

NOTE: To provide our customers with the best possible equipment and offer the latest product improvements, these specifications subject to change without notice and without incurring responsibility to units previously sold.

Courtesy of Crane.Market

BOOM ANGLE DIAGRAM

MODEL 7040 DH



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