

STERLING CRANE

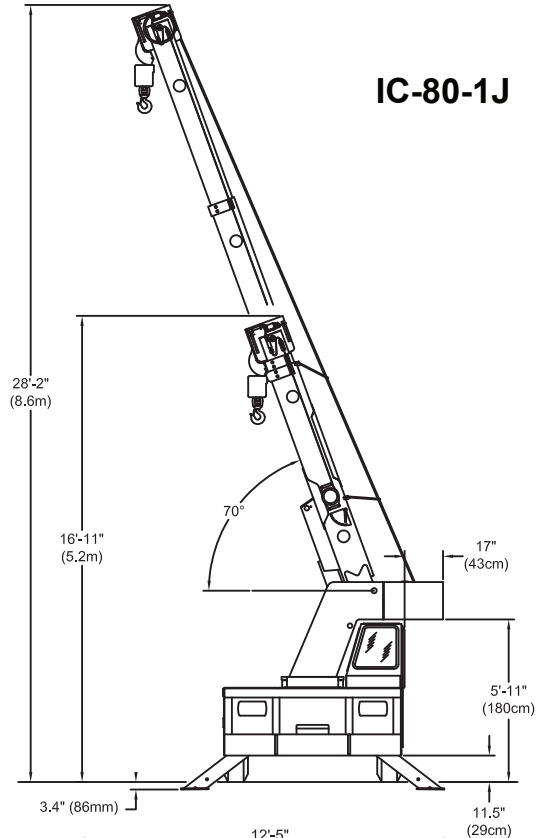


LIFTING CHARTS - Carry Decks

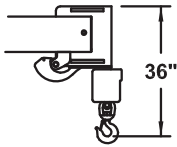
BRODERSON MODEL IC-80-1J/2J/3J - 9 TON CAPACITY

CAPACITIES APPLY TO OPERATION ON FIRM LEVEL SURFACE						
LOAD RADIUS FEET	MAIN BOOM OR EXTENSION CAPACITIES IN POUNDS					
	360° ROTATION		OVER FRONT			
	ON RUBBER	ON OUTRIGGERS	ON RUBBER	ON OUTRIGGERS		
5	9600	17000	11700	18000		
6	7900	14500	10400	14500		
8	5750	10250	8400	10250		
10	4150	7700	6300	7700		
12	3100	6550	4650	6550		
14	2425	5550	3750	5550		
16	2000	4650	3100	4650		
18	1700	4100	2650	4150		
20	1450	3550	2300	3800		
22	1275	3000	2000	3000		
24	1075	2800	1725	2800		
26	925	2500	1500	2600		
28	775	2200	1300	2400		
30	675	2000	1150	2250		
10-FOOT BOOM EXTENSION - STRAIGHT OR OFFSET						
	EXT	MAIN BOOM ANGLE				
	ANGLE	0°	30°	45°	60°	70°
	*† 0°	2250	2600	3200	5000	7000
	†15°	---	2400	2700	3500	4200
†30°	---	2250	2500	3000	3300	

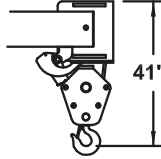
*USE 0° FOR STRAIGHT BOOM EXTENSION. †USE 0°, 15° OR 30° FOR OFFSET BOOM EXTENSION.
 LOAD RADIUS IS THE HORIZONTAL DISTANCE FROM THE CENTER OF ROTATION OF THE UNLOADED CRANE TO THE VERTICAL LOAD LINE WITH THE LOAD APPLIED.
 EXCEEDING CAPACITY RATINGS OR APPLYING SIDE LOADS TO THE BOOM OR BOOM EXTENSION IS MISUSE, IS HAZARDOUS, AND VOIDS WARRANTY.
CAUTION BOOM EXTENSION LOADS MUST NOT EXCEED MAIN BOOM CAPACITY. DO NOT PICK & CARRY WITH LOADS ON BOOM EXTENSION. CAPACITIES ON OUTRIGGERS ARE 85% OF TIPPING LOADS. CAPACITIES ON RUBBER ARE 75% OF TIPPING LOADS. CAPACITIES BELOW BOLD LINE ARE LIMITED BY TIPPING. OTHER CAPACITIES ARE LIMITED BY STRUCTURAL OR HYDRAULIC CAPABILITY.



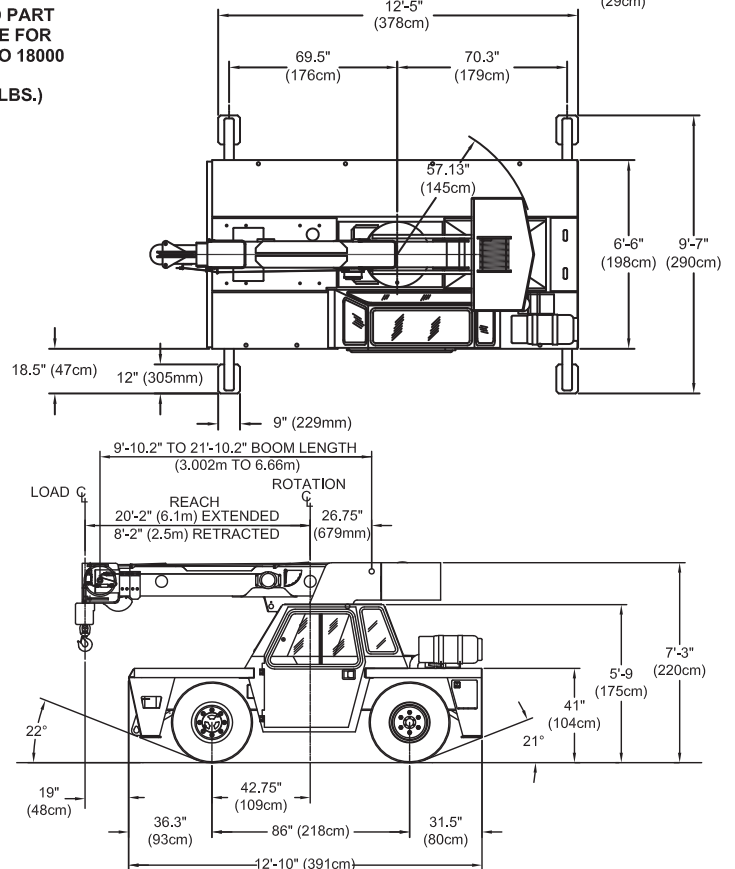
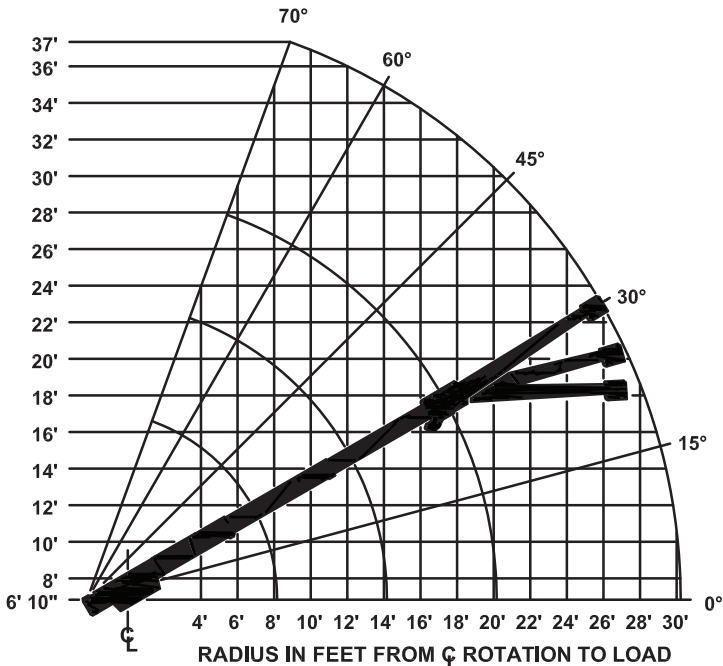
IC-80-1J



USE SINGLE PART LOAD LINE FOR LOADS TO 9000 LBS. (WT. 90 LBS.)



USE TWO PART LOADLINE FOR LOADS TO 18000 LBS. (WT. 124 LBS.)



STERLING CRANE

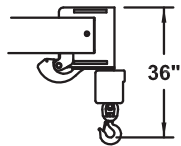
CAPACITIES APPLY TO OPERATION ON FIRM LEVEL SURFACE						
LOAD RADIUS	MAIN BOOM OR EXTENSION CAPACITIES IN POUNDS					
	360° ROTATION		OVER FRONT			
FEET	ON RUBBER	ON OUTRIGGERS	ON RUBBER	ON OUTRIGGERS		
MAIN BOOM	5	9500	17000	11600	18000	
	6	7800	14500	10200	14500	
	8	5650	10250	8250	10250	
	10	4000	7700	6200	7700	
	12	3000	6550	4650	6550	
	14	2350	5550	3650	5550	
	16	1900	4550	2950	4550	
	18	1600	3950	2500	4050	
	20	1350	3350	2150	3650	
	22	1150	2950	1850	3300	
	24	1000	2550	1650	3100	
	10' BOOM EXT.	26	850	2450	1450	2750
		28	725	2175	1275	2500
		30	625	1900	1125	2300
32		525	1725	1000	2100	
34		425	1500	900	1950	
10-FOOT BOOM EXTENSION - STRAIGHT OR OFFSET						
MAIN BOOM ANGLE						
ANGLE	0°	30°	45°	60°	70°	
*† 0°	2250	2600	3200	5000	7000	
115°	---	2400	2700	3500	4200	
130°	---	2250	2500	3000	3300	

*USE 0° FOR STRAIGHT BOOM EXTENSION. †USE 0°, 15° OR 30° FOR OFFSET BOOM EXTENSION.

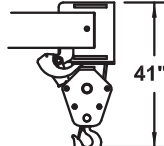
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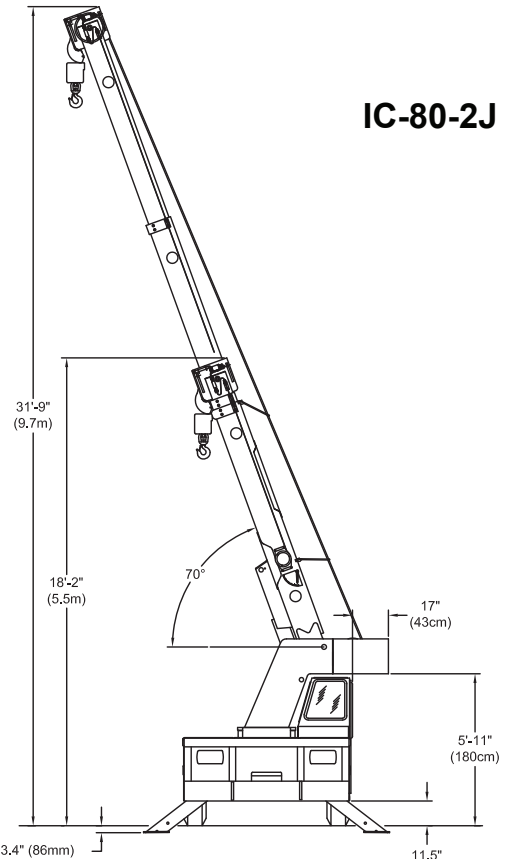
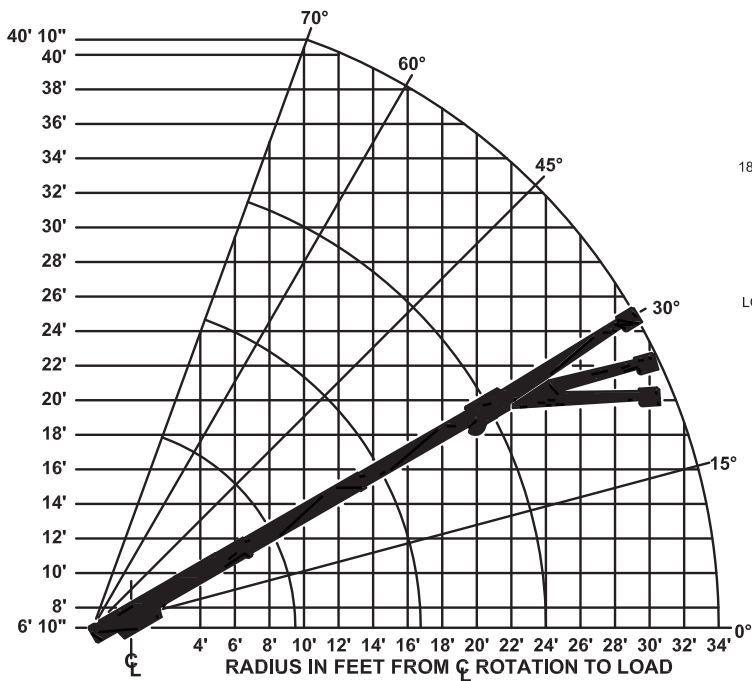
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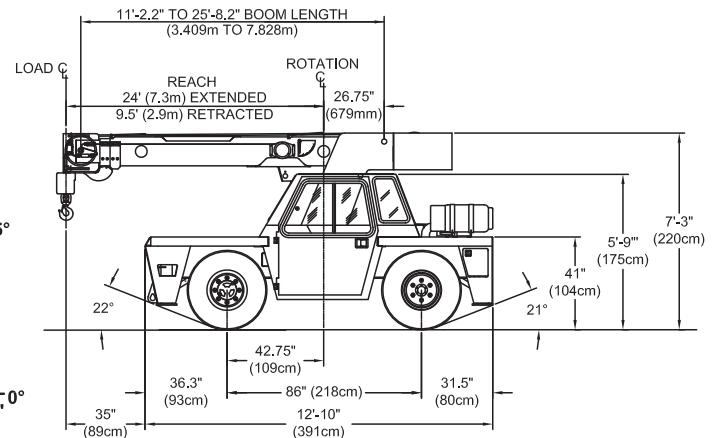
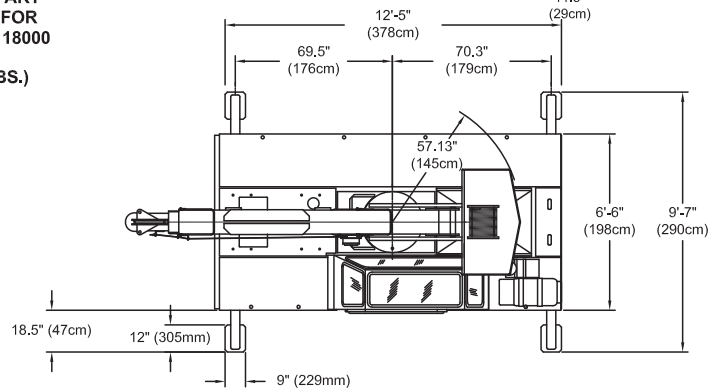
USE SINGLE PART LOAD LINE FOR LOADS TO 9000 LBS. (WT. 90 LBS.)



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IC-80-2J



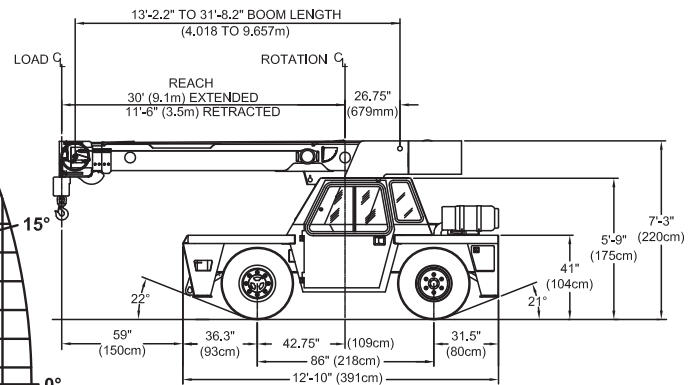
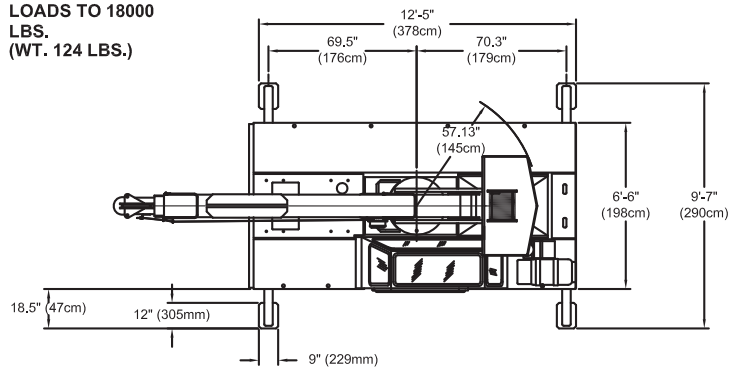
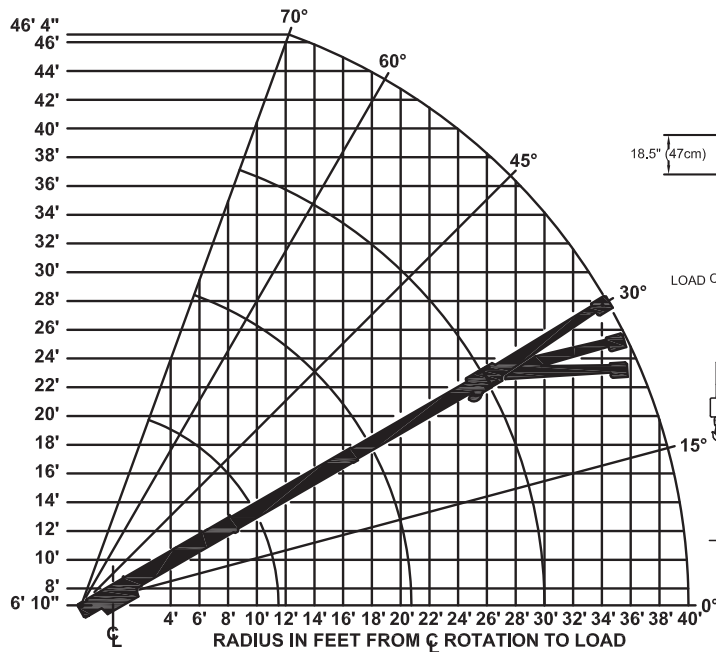
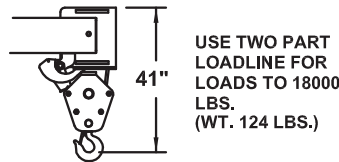
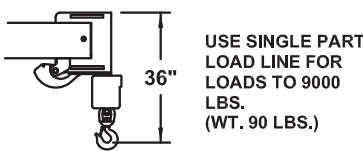
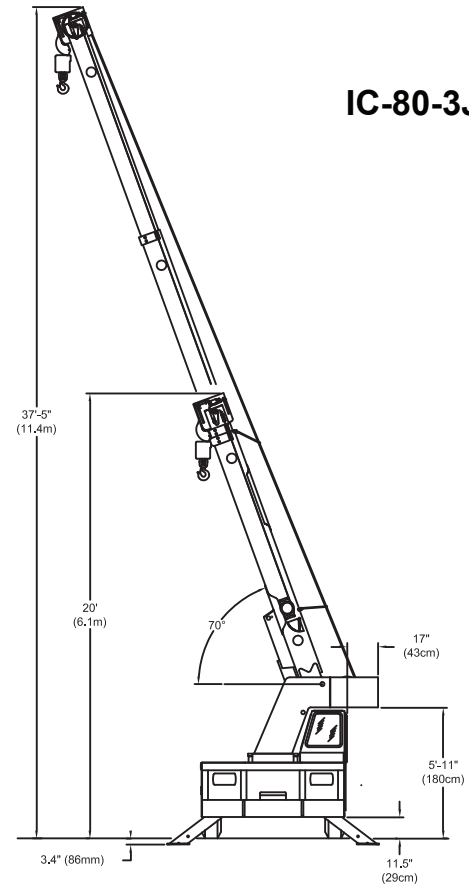
STERLING CRANE

CAPACITIES APPLY TO OPERATION ON FIRM LEVEL SURFACE

LOAD RADIUS FEET	MAIN BOOM OR EXTENSION CAPACITIES IN POUNDS				
	360° ROTATION		OVER FRONT		
	ON RUBBER	ON OUTRIGGERS	ON RUBBER	ON OUTRIGGERS	
5	9400	17000	11400	18000	
6	7550	14000	10000	14000	
8	5600	10000	8100	10000	
10	4300	7700	6100	7700	
12	3200	6100	4450	6100	
14	2550	5200	3400	5200	
16	2050	4400	2700	4400	
18	1650	3900	2200	3900	
20	1350	3400	1800	3400	
22	1150	3050	1550	3050	
24	1000	2750	1350	2800	
26	850	2450	1200	2550	
28	750	2200	1100	2350	
30	650	1950	1000	2150	
32	450	1750	900	1950	
34	350	1600	800	1800	
36	250	1450	700	1650	
38	200	1300	600	1500	
40	150	1150	500	1400	
10-FOOT BOOM EXTENSION - STRAIGHT OR OFFSET					
MAIN BOOM ANGLE					
ANGLE	0°	30°	45°	60°	70°
*0°	2250	2600	3200	5000	7000
†15°	---	2400	2700	3500	4200
‡30°	---	2250	2500	3000	3300

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IC-80-3J



STERLING CRANE

GENERAL:

Weight:	IC-80-1J	IC-80-2J	IC-80-3J
2-Wheel Drive	16,200 lb (7,350 kg)	16,400 lb (7,440 kg)	16,750 lb (7,600 kg)
Boom Movement:			
Rotation	Continuous	Continuous	Continuous
Elevation	0° to 70°	0° to 70°	0° to 70°
Extension	12 ft. (366 cm)	14 ft. 6 in. (442 cm)	18 ft. 6 in. (564 cm)
Boom Speeds:			
Rotation	2.0 RPM	2.0 RPM	2.0 RPM
Elevation	10.0 sec.	10.0 sec.	10.0 sec.
Extension	17.0 sec.	21.0 sec.	27.0 sec.
Turning Radius:			
(C/L of Outside Steering Wheel)		11 ft. 2 in. (3.40 m)	
Aisle Width for 90° Turn:		9 ft. 7 in. (2.92 m)	
Gradeability:		63 percent (32 degrees)	

ENGINE:	Dual Fuel	Diesel
Make	GM	Cummins
Model	3.0 EFI* EPA Tier II	B 3.3L EPA Tier IVi
Type	Gas	Diesel
No. Cyl.	4	4
Displacement	181 CID (3.0 L)	199 CID (3.3 L)
HP @ Gov. Speed	59 (44kW)	74 (55kW)
Electronic Fuel Injection with Dual Fuel, US EPA & CARB. Certified for 2012 emissions standards Fuel Tank Capacity: 17.6 Gallons (66.6 L)		

TRANSMISSION:

Powershift transmission with 4-speeds in forward & reverse. Provides powershifts at any engine speed in any gear. All shifting is done with a single lever electrical control mounted on the steering column. Multiple-disc clutch packs operated by solenoid valve provide forward, neutral, reverse and speed selection. Equipped with oil cooler and filter. Torque converter has stall ratio of 2.2:1.

Transmission Gear	Forward or Reverse	Travel Speed MPH (km/h)	Drawbar Pull ¹ Pounds (kg)
First	5.72:1	4 (6)	15,500 (7,031)
Second	3.23:1	7 (11)	8,700 (3,946)
Third	1.77:1	13 (21)	4,600 (2,087)
Fourth	1.00:1	22 (35)	2,500 (1,134)

1) Drawbar pull is calculated based on GM 3.0L gasoline engine.

AXLES:

Front:

Planetary drive/steer axle with 11.625:1 axle ratio. Differential is "No-Spin." Axle mounted rigidly to frame.

Rear:

2-Wheel Drive:

Axle with 1-1/2° oscillation in either direction.

STEERING:

Hydraulic steering unit with cylinders attached to each axle. Rear axle is the primary steer. An electric switch in the operator's compartment is used to select rear-wheel steering, four-wheel round steering or crab steering. Electronic sensors and control box automatically align the steering when a new mode is selected.

BRAKES:

Four-wheel hydraulic. Wet disc brakes are on the front and rear axles. Parking brake is disc type.

TIRES:

2-Wheel Drive 10.00 x 15, load range H bias, 16-ply rating.

CHASSIS:

Cargo Deck:

53 square feet (5 m²) of deck area. A maximum of 14,000 lb (6,350 kg) capacity on deck when load is centered over or between axles.¹ A storage box is located in front cargo deck. Steps located on front corners. Heavy deck loads allowed at creep speed below 2 MPH (3.2 km/h) and less than 200 feet (61 m) in 30 minutes.

Headlight and Taillight Grilles:

Welded steel protective grilles for headlights and taillights.

Outriggers:

Four hydraulic outriggers of box beam construction. Independent controls for each outrigger. Each cylinder equipped with direct-connected holding valves. Outrigger pad dimension 9 inches (23 cm) x 12 inches (30 cm).

Lifting Rings:

Lifting rings at each corner of cargo deck so sling can be attached for lifting crane.

OPERATOR COMPARTMENT:

Operator's control station provides one-position access to all operating functions. Includes adjustable operator's seat, retracting seat belt, fire extinguisher and bubble level.

ELECTRICAL (12 Volt System):

Instrument Package:

Includes fuel gauge and hourmeter. Also included are warning lights for low oil and transmission pressure, turn signal, high beams, hazard lights, parking brake, hydraulic oil temperature, battery, check engine, stop engine, coolant temperature, outriggers.

Lighting Package:

One pair headlights with Hi and Low beams, back-up lights, integral tail, brake, front and rear turn signals and emergency flasher switch at operator's station. 12V horn actuated by button on shifting control.

Back-Up Alarm:

Provides pulsating sound from 97 dB alarm when transmission is in reverse. Conforms to SAE J994b.

Outrigger Alarm System:

Two-tone alarm is activated when "outrigger down" controls are operated.

HYDRAULIC SYSTEM:

Tandem pump, direct-driven by engine crankshaft, rated at 16 & 32 GPM at rated RPM (61 L/min & 121 L/min). Hydraulic oil tank capacity of 25 gallons (95 L).

BOOM ASSEMBLY:

Three-section boom assembly equipped with bearing pads, double-acting hydraulic cylinders with direct-connected holding valves & boom angle indicator on each side of boom.

Boom Rotation:

Heavy-duty ball bearing rotation gear with external teeth. Rotation is powered by hydraulic motor and worm gear drive.

Boom Hoist:

Turret mounted planetary gear hoist hydraulically powered with a bare-drum line pull of 10,000 lbs (4,536 kg) at a speed of 110 FPM (34 m/min). Includes downhaul weight, swivel hook & sheave block for 2-part line and 125 ft (38 m) of 9/16" (14 mm) hoist rope.

Anti-Two-Block Device:

Prevents damage to hoist rope and/or crane components from pulling load hook against tip.

Sheave Block, Two-Part:

Single sheave block for 2-part line requirements.

Rated Capacity Limiter:

Warns operator of impending overload with audible and visual signals. Prevents overload by stopping boom functions that cause overloads.

Drum Rotation Indicator:

Provides tactile feedback to operator when hoist drum is rotating.