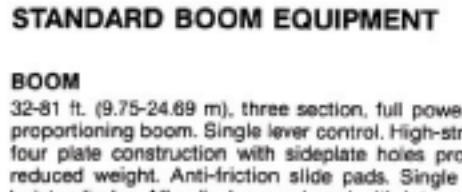


LORAIN®

LRT 300D SERIES

rough terrain cranes specifications



STANDARD BOOM EQUIPMENT

BOOM

32-81 ft. (9.75-24.69 m), three section, full power, self-proportioning boom. Single lever control. High-strength, four plate construction with sideplate holes providing reduced weight. Anti-friction slide pads. Single boom hoist cylinder. All cylinders equipped with integral hold valves.

BOOM HEAD

Welded to third section of boom. Three or four metallic sheaves and two idler sheaves mounted on heavy duty, anti-friction bearings. Quick reeving boom head eliminates need to remove wedge and socket from rope. Provision made for side-stow jib mounting.

OPTIONAL BOOM EQUIPMENT

JIBS

32 ft. (9.75 m) side stow swing-on one-piece lattice type jib. Single metallic sheave mounted on anti-friction bearing. Installs to main boom only.

32-49 ft. (9.75-14.94 m) side stow swing-on lattice type jib. Single sheave mounted on anti-friction bearing. Jib is extendible to 49 ft. (14.94 m) by means of a 17 ft. (5.18 m) manual pull-out tip section, roller supported for ease of extension. Installs to main boom only.

SWING BRAKE

Heavy duty, multiple disc swing brake is mechanically actuated from operator's cab by foot pedal. Brake may be operated to hold upper-structure at any desired degree of rotation. Brake is released by hand.

ANTI-TWO BLOCK SYSTEM

Anti-two block system with audio/visual warning and automatic function disconnects.

OPERATOR'S CAB

Environmental cab with all steel construction, optimum visibility, safety glass throughout and rubber floor matting is mounted on vibration absorbing pads. The cab has a sliding door on the left side, sliding windows on the right side, hinged front Lexan® skylight and removable front windshield. Acoustical foam padding insulates against sound and weather. The deluxe six-way adjustable operator's seat includes head and arm rests.



STANDARD UPPERSTRUCTURE EQUIPMENT

UPPERSTRUCTURE FRAME

All welded one-piece structure fabricated with high tensile strength alloy-steel. Counterweight is bolted to frame.

TURNTABLE CONNECTION

Swing bearing is single row, ball-type, with internal teeth. The swing gear is bolted to revolving upperstructure and to carrier frame.

SWING

A hydraulic motor drives a double planetary reduction gear for precise and smooth swing function. Swing speed (no load) is 3.0 rpm.

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CONTROLS

All control levers and pedals are positioned for efficient operation. Hand-operated control levers include swing, boom telescope, boom hoist, single lever two-speed main winch, and hand throttle. Foot control pedals include boom raise, boom lower, accelerator and swing brake.

INSTRUMENTATION AND ACCESSORIES

In-cab gauges include air pressure, bubble level, engine oil pressure, fuel, engine temperature, voltmeter, transmission temperature, and transmission oil pressure. Switches include ignition, engine stop, steering mode lock and outrigger controls. Indicators include low air, high water temperature/low oil pressure audio/visual warning, high transmission temperature and two-block visual and audio monitors. Accessories include fire extinguisher, light package including headlights, tail lights, brake lights, directional signals, four-way hazard flashers, and back-up lights with audio pulsating back-up alarm; windshield wiper; wiper, R.H. and L.H. rear view mirror; dash light; and seat belt.

HYDRAULIC CONTROL VALVES

Valves are mounted on the upperstructure and are easily accessible. Valves include one four-spool main valve for boom hoist, telescope, main winch, and main winch boost; and one single-spool valve for swing. Quick disconnects are provided for quick connection of pressure check gauges.

OPTIONAL EQUIPMENT

Auxiliary Winch • Winch Cable Rollers • Drum Rotation Indicators • 360° House Lock • Heater/Cooler • Air Conditioner • Tinted Safety Glass • Vandal and Scratch Resistant Glass • Tinted Vandal and Scratch Resistant Glass • Torsion Bar Suspension for Bucket Seat • Roof Window Electric Wiper • Tachometer • Work Lights • Load Moment Indicators.



STANDARD CARRIER EQUIPMENT

CARRIER CHASSIS

Chassis is Lorain designed and built with four-wheel drive and four-wheel steer (4x4x4). Has bow-type construction with reinforcing cross members, a precision machined turntable mounting plate and integrally welded outrigger boxes. Decking has anti-skid surfaces, including tool storage compartments and access ladders left and right side and front and rear corners.

AXLES AND SUSPENSION

Rear axle is a planetary driver/steer type with automatic oscillation lockouts that engage when the superstructure is swung 10° in either direction. Front axle is a planetary driver/steer type, rigid mounted to the frame for increased stability.

STEERING

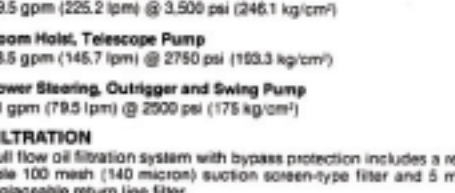
Hydraulic four-wheel power steering for two-wheel, four-wheel, or crab steer is easily controlled by steering wheel.

Turning radius (standard brake)

Two-wheel: 38 ft. 0 in. (11.58 m)
Four-wheel: 22 ft. 6 in. (6.86 m)

TRANSMISSION

Full power-shift transmission with integral torque converter has neutral safety start, 6 speeds forward, and 3 speeds reverse. Automatic pulsating backup alarm.



STANDARD CARRIER EQUIPMENT (continued)

OUTRIGGERS

POWERSHIFT out and down fully independent hydraulic outriggers extend 20 ft. 3 in. centerline to centerline. Easily removable steel floats, each with an area of 254 in² (1639 cm²), stow on the carrier frame. Complete controls and sight leveling bubble are located in the operator's cab.

WHEELS & TIRES

Disc type wheels with full tapered bead seat rim, 137 in. (3.46 m) wheelbase with full width fenders standard.

Tires

18.00 x 25, 28 P.R. (standard) 18.00 x 25, 28 P.R. (optional) 23.50 x 25, 28 P.R. (optional).

BRAKES

Hydraulic disc brakes on each wheel. Total brake area: 1300 in.² (8367 cm²). The combination parking brake and emergency brake is a spring-applied, air released disc operating brake on the transmission output shaft. Parking brake automatically engages when ignition is switched off or switch in cab is manually actuated.

HYDRAULIC SYSTEM

HYDRAULIC PUMPS

Three gear type pumps, one single and two in tandem, driven off the transmission. Combined system capacity is 119 gpm (450 lpm). Includes pump disconnect.

Main and Auxiliary Winch Pump

58.5 gpm (225.2 lpm) @ 2,500 psi (246.1 kg/cm²)
Boom Hoist, Telescope Pump
38.5 gpm (145.7 lpm) @ 2,750 psi (110.3 kg/cm²)

Power Steering, Outrigger and Swing Pump

21 gpm (79.5 lpm) @ 2,900 psi (175 kg/cm²)

FILTRATION

Full flow oil filtration system with bypass protection includes a removable 100 micron (140 micron) suction screen-type filter and 5 micron replaceable return line filter.

HYDRAULIC RESERVOIR

All steel, welded construction with internal baffles and diffuser. Provides easy access to filters and is equipped with an external sight level gauge. The hydraulic tank is pressurized to aid in keeping out contaminants and in reducing potential pump cavitation. Capacity is 112 gal. (424 liters). Swing-away hydraulic oil cooler is standard.

OPTIONAL EQUIPMENT

Cold Weather Starting Aid • Immersion Heater • Rear Axle Centering Light • Pottle Hook • Air Dryer • Fuel Water Separator • Clearance Lights.

MAIN WINCH SPECIFICATIONS

Lorain built hydraulic winch with planetary reduction gearing provides two-speed operation with equal speeds for power up and down. Winch is equipped with an integral automatic brake.

PERFORMANCE	LO-RANGE	H-RANGE
Max. line speed (no load)	177 fpm (54 m/min)	293 fpm (89 m/min)
First layer	257 fpm (78 m/min)	426 fpm (130 m/min)
Permissible line pull	14,000 lbs (6350 kg)	9,500 lbs (4300 kg)

DRUM DIMENSIONS	DRUM CAPACITY
18.5 in (267 mm) drum diameter	Max. Storage: 199 ft. (274 m)
12.6 in (321 mm) length	7th layer not working layer
19.8 in (503 mm) flange dia.	Max. Usable: 738 ft (225 m)*
Cable: 5/8 in x 500 ft (15.9 m x 137.2 m)	
Cable type: 6 x 19 IWRC-XIPS regular lay preferred	*Based on minimum flange height above top layer to comply with ANSI B55.5.

ENGINE SPECIFICATIONS

Make and Model	Cummins 6BTS.9
Type	6 cylinder
Bore and Stroke	4.02 x 4.72 in (102 x 120 mm)
Displacement	359 cu in (5.9 l)
Max. Gross Horsepower	160 hp (119 kw) @ 2500 rpm
Max. Gross Torque	395 lbs-ft (171700 rpm)
Net Horsepower	144 hp (107 kw) @ 2500 rpm
Aspiration	turbocharged
Air Filter	dry type
Electrical System	12 volt
Alternator	102 amp
Battery	(2) 12V-1250 C.C.A.
Fuel Capacity	50 gal (189 l)

OPTIONAL AUXILIARY WINCH

Lorain hydraulic winch, power up and down, equal speed; planetary reduction with integral automatic brake.

PERFORMANCE	Max. line speed (no load)
First layer	338 fpm (103 m/min)
Max. line pull	10,100 lbs (4582 kg)

DRUM DIMENSIONS	DRUM CAPACITY
10.5 in (267 mm) drum diameter	Max. Storage: 615 ft (245 m)
16.1 in (409 mm) length	
17.8 in (452 mm) flange diameter	
Cable: 5/8 in x 500 ft (15.9 m x 152.4 m)	
Cable type: 6 x 19 IWRC-XIPS regular lay preferred	

GENERAL DIMENSIONS

NOTE: Dimensions given assume the boom is fully retracted in travel position and 18.00 x 25 tires.

WEIGHTS & AXLE LOADS	GROSS WEIGHT LBS.	UPPER IN TRAVEL POSITION FRONT	UPPER IN TRAVEL POSITION REAR	GROSS WEIGHT KG.	UPPER IN TRAVEL POSITION FRONT	UPPER IN TRAVEL POSITION REAR
Basic Crane with 81' (24.69 m) Boom, 5100 lbs. (2313 kg) Counterweight, 16.00 x 25 Tires	53,523	31,410	22,113	24,278	14,247	10,030

ADD OPTIONS:						
32' (9.75 m) Swing-on Jib (Stowed)	+ 975	+1,487	+ 512	+ 442	+ 674	+ 232
32'-49' (9.75-14.94 m) Swing-on Jib (Stowed)	+1,325	+1,717	+ 392	+ 691	+ 779	+ 179
35 ton (31.7 mt) Hook Block	+ 700	+1,143	+ 443	+ 317	+ 518	+ 201
Auxiliary Winch with Wire Rope	+ 240	+ 83	+ 323	+ 109	+ 38	+ 146
SUBSTITUTE:						
18.00 x 25 Tires	+ 900	+ 450	+ 450	+ 408	+ 204	+ 204
23.5 x 25 Tires	+1,300	+ 650	+ 650	+ 595	+ 295	+ 295

NOTE: Weights are for Lorain supplied equipment and subject to 2% variation due to manufacturing tolerances.

LORAIN®

LRT 300D SERIES

rough terrain hydraulic crane

35 ton capacity
range diagram & capacity charts

