



## ENGINE

Make .....	Cummins
Model .....	6BT5.9
Maximum Rating, kW (hp)* .....	113 (152)
Flywheel Rating, kW (hp)** .....	102 (137)
Governed RPM .....	2500
Maximum torque, N·m @ RPM .....	576 @ 1500
lbf·ft @ RPM .....	425 @ 1500
Bore x stroke, mm (in) .....	102 x 120 (4.02 x 4.72)
Number of cylinders .....	6
Displacement, liters (cu in) .....	5.88 (359)
Fuel tank capacity, liters (US gal) .....	182 (48)
Electrical system (alternator) .....	12V, 65A

\* Max. hp of basic engine; SAE J1349 standard ambient conditions.  
 \*\*Net usable hp at engine flywheel at 150 m (500 ft) altitude & 30°C (85° F) ambient conditions with fan, alternator, water pump, lube oil pump, fuel pump and air cleaner.



## DRIVETRAIN

**TORQUE CONVERTER:** Clark Model C-270 industrial type; 2.728:1 multiplication factor.

**TRANSMISSION:** Clark Model R-28,320 countershaft type modulated powershift, three speeds forward, three speeds reverse.

Travel speeds:* .....	1st	2nd	3rd
km/h .....	6.6	12.7	25.4
mph .....	4.1	7.9	15.8

\* Measured with 23.1-26 tires.

**AXLES:** Clark with low-friction roller bearing planetary in each wheel. Single-piece cast steel housing with bolt-on spindles; front and rear NoSpin differentials. Front axle oscillates a total of 24°, rear axle fixed.



## BRAKES

**SERVICE:** Clark multi-disc, oil cooled; transmission mounted.

**PARKING:** Lever actuated locking feature on transmission service brake.

**SECONDARY:** Front axle mounted disc brake, hydraulic actuation by separate pedal.



## TIRES

Standard .....

Optional\* .....

\* Heavy duty front axle required for 32 inch wheels.



## HYDRAULIC SYSTEM

**PUMP:** Gear-type; flywheel driven by splined shaft through torque converter.

Pump capacity @ governed RPM .....	139 L/min (36.8 gpm)
System capacity .....	73L (19.2 US gal), Cable
.....	78L (20.5 US gal), 'A'-frame Grapple
.....	84L (22.0 US gal), Hi-Vis Grapple
.....	87L (23.0 US gal), Parallelogram Grapple

**CYLINDERS:** Double-acting

Blade lift (2), Steering (2) .....	89 mm (3.5 in) dia.
Arch (2), Boom (2), Ranger .....	102 mm (4.0 in) dia.
Arch (2), Hi-Vis .....	102 mm (4.0 in) dia.
Grapple, Ranger 70 (2) .....	102 mm (4.0 in) dia.
Grapple, Ranger 105 (1) .....	152 mm (6.0 in) dia.
Grapple, ESCO 86 (2) .....	127 mm (5.0 in) dia.

**CONTROL VALVE:** Sectional design, two spools on Cable Skidder, five or six spools on the Grapple Skidder with adjustable main relief valve and individual overload reliefs. Grapple accumulator system is standard on all Hi-Vis and Parallelogram Grapple Skidders.



## STEERING SYSTEM

Articulated frame; full hydraulic power steering, lever-type control, 90° total steer angle.

**CYLINDERS:** (2), double-acting, interchangeable with blade lift cylinders.



## WINCH (Lufkin WD-410)

Rated capacity, kN (lbf) .....	180 (40,000)
Max. linepull (baredrum), kN (lbf)* ..	138 (31,090)
Maximum line speed (baredrum), m/min (fpm)* ..	124 (408)
Winch drum 305 mm (12 in) dia. x 200 mm (7.88 in) wide;	
495 mm (19.5 in) flange dia. with breakaway anchor.	

Winch housing sealed; winch utilizes transmission lubricating oil. Mechanically driven "live" shaft; torque converter automatically adjusts power/speed for linepull up to maximum without shifting gears while standing or moving, forward or reverse. Self-adjusting for wear with external adjustment for freespool drag.

\* Based on 85% efficiency with 19.1 mm (.75 in) dia. wire rope.



## DRUM CAPACITY (Wire Rope)

15.7 mm (0.62 in) dia. ....	96.0 m (315 ft)
19.1 mm (0.75 in) dia. ....	65.8 m (216 ft)
22.2 mm (0.88 in) dia. ....	48.8 m (160 ft)
25.4 mm (1.00 in) dia. ....	28.1 m (92 ft)



## WEIGHT (Approximate Shipping)

	Cable	'A'-Frame
Front Axle .....	6,055 (13,340)	6,087 (13,420)
Rear Axle .....	3,819 (8,420)	4,749 (10,470)
Total (Std. Tire) ...	9,874 (21,760)	10,836 (23,890)
	Hi-Vis	Parallelogram
Front Axle .....	6,142 (13,540)	6,196 (13,660)
Rear Axle .....	5,185 (11,430)	5,298 (11,680)
Total (Std. Tire) ...	11,326 (24,970)	11,494 (25,340)



## STANDARD EQUIPMENT

Alternator - 12V, 65A  
 Axles - Clark planetary  
 Belly Guards, full length, keel shaped

Blade, utility  
 Brakes, secondary (SAE J1178)  
 Bucket seat, adjustable  
 Canopy, FOPS (SAE J231) ROPS (SAE J1040)  
 Circuit breaker, electrical system main  
 Differentials, NoSpin - front and rear  
 Disconnect switch, battery  
 Fairlead, with four rollers, cable skidder  
 Fan, pusher  
 Fenders, rear wrap-around  
 Fire extinguisher, twin 5 lb (2.3 kg)  
 Grapple - Ranger 70 with 360° continuous rotation, reversible  
 Grapple Controls & hydraulics, grapple skidders  
 Hydraulic Accumulator, Grapple Tyne Close, Hi-Vis and Parallelogram, grapple skidders

## INSTRUMENTS/GAUGES

Electrical gauges for:  
 Voltmeter  
 Hourmeter  
 Mechanical gauges for:  
 Engine coolant temperature  
 Engine oil pressure  
 Torque converter oil temperature

Muffler  
 Neutral start switch  
 Pressure check ports, quick connect  
 Seat belt (SAE J386)  
 Sealed pins, hinge & cradle  
 Side panels, engine compartment  
 Steering frame lock (SAE J276)  
 Tires: 23.1-26, 10 PR (LS-2) (Firestone)  
 Torque converter - Clark C-270  
 Transmission - Clark R-28,320, 3-speed, full reversing, directional modulation  
 Transmission declutch, electric actuated, grapple skidder  
 Winch - Lufkin WD-410