

17,000 • 19,000 • 21,000 • 23,000 • 25,000 • 28,000 lbs

Yale® GP-DB Series

This series of pneumatic tire lift trucks is available in diesel power. The GP-DB series offers superior traction, gradeability and drawbar pull on paved, gravel and unimproved surfaces. The DB Series has high under-clearance, productive travel/lift speeds and excellent maneuverability to meet the demands of tough applications (lumber, pipe, pre-stressed concrete, block/brick, stevedoring and heavy cargo). Various attachments may be required for above applications.

ERGO^{CAB}TM

Yale's ERGO^{CAB}TM is ergonomically designed for maximum operator productivity.

Cab features:

- full-length handrails
- three step entry on special floorboards
- open floor with low front dash
- all gauges, switches, key start and park brake to right of driver
- two way adjustable steering column for height and tilt angle
- inch brake/brake/accelerator pedal arrangement
- custom molded floor mat
- angled overhead guard bars
- 3-way adjustable right hand armrest
- wide angle side view mirrors
- blinking red warning lights on steer column

- side of operator Dash instrument panel with gauges, warning lights and LCD message center
- paddle lever actuators for hydraulic functions and combination paddle/rocker switches for optional attachments
- a full suspension vinyl seat
- horn

Enclosed cab option features:

- curved tempered front and rear glass
- twin arm single 39" blade front wiper, rear wiper and top wiper with washer fluid spray
- ten high capacity outlet vents for heating
- optional air conditioning
- under cab sound insulation
- cab filter for all incoming air
- front and rear screen demisting
- top cover laminated glass
- storage bins

Cab Tilt

The entire cab tilts for complete service access to major powertrain components.

Cummins QSB 6.7L

Cummins 6.7 Liter, QSB6.7 industrial turbo diesel with intercooler features advanced electronics, sculpted blocks, rear gear trains, and a High-Pressure Common-Rail fuel system.

Diesel Engine Specifications

Engine	Cummins QSB 6.7L
Cylinders	6
Displacement	365 cu.in./6 liter
Torque	438 ft-lb. @ 1400 RPM
Horsepower	155 hp @ 2500 RPM

Exhaust

The vertical exhaust is standard and has a large capacity cylindrical muffler.

Air Cleaner

A oversized two-stage air filter and internal back up filter with large site bowl pre-cleaner is standard. Optional Sy-KoneTM or exhaust-aspirated air cleaner with a high air intake for extremely dusty environments includes an oversized two-stage air filter and internal back-up filter. Both standard and optional air cleaners have electronic air filter restriction indicators.

Cooling system

The Quad-Cooler radiator contains four separate cooling cores for the engine, transmission, hydraulics and charge air cooler. The radiator features high performance triangular waved, louvered fins at ten per square inch for reduced plugging from airborne containments. Radiator is easily accessible by lifting gas spring actuated louvered door on top of counterweight.

Drive Axle

The heavy-duty planetary drive axle with secure pinion retention is made of ductile iron and is bolted to the frame. The drive shafts are fully floating allowing the truck and load weight to be carried by the axle housings. A wet disc brake axle is optional.

Truck shown with optional equipment

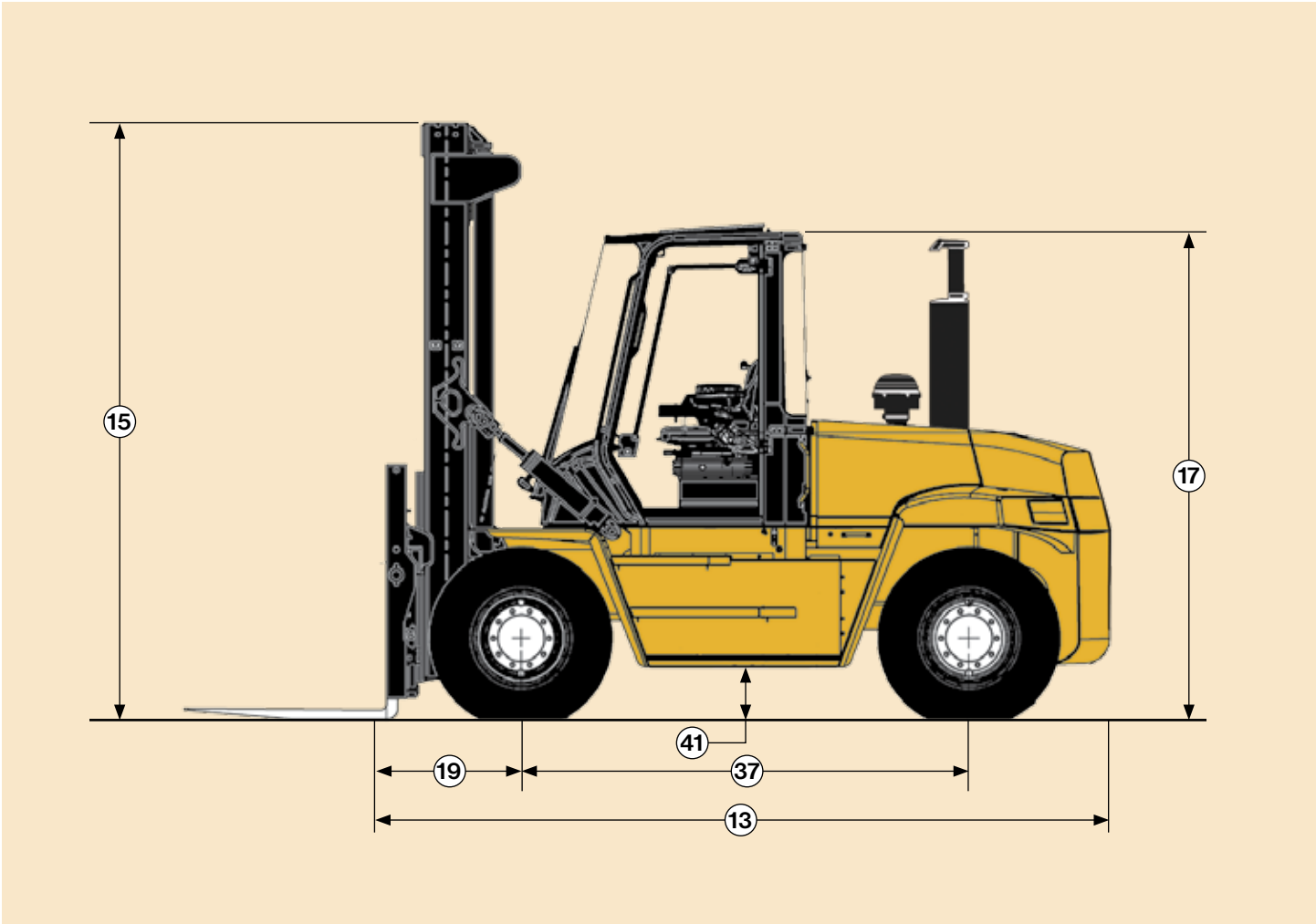
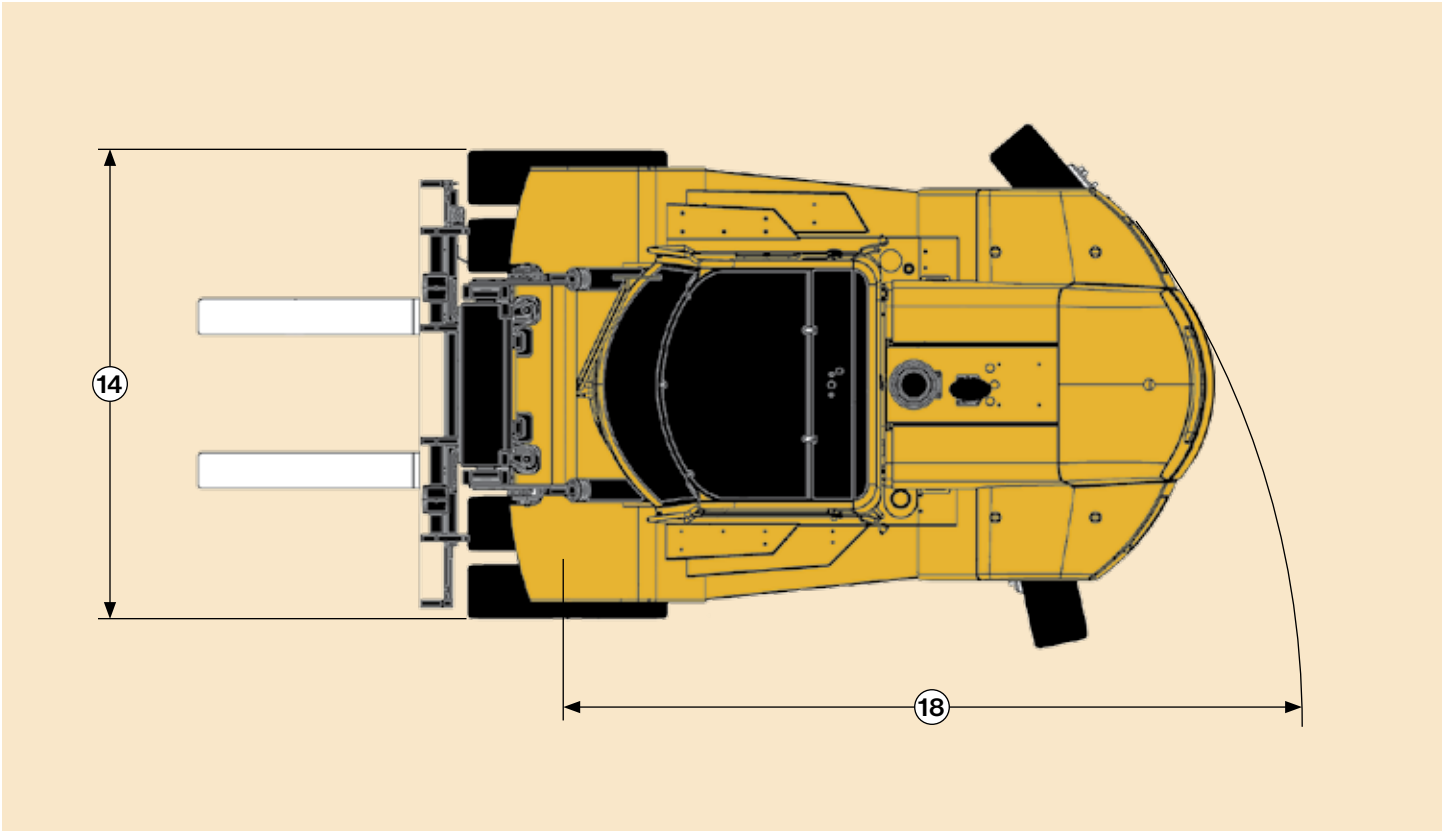


(continued)

Lift and Lower Speeds ft/min (m/s), Weights			
Model	Lift Speed Diesel Empty/Loaded	Lower Speed Diesel Empty/Loaded	*Weights
GP170DB			
ft/min	143/95	94.5/98.4	27,112 lbs.
m/sec	.73/.48	.48/.50	16,438 kg.
GP190DB			
ft/min	143/95	94.5/98.4	27,487 lbs.
m/sec	.73/.48	.48/.50	12,494 kg.
GP210DB			
ft/min	143/95	94.5/98.4	28,112 lbs.
m/sec	.73/.48	.48/.50	12,810 kg.
GP230DB			
ft/min	104/67	96/91	32,806 lbs.
m/sec	.52/.34	.49/.46	14,911 kg.
GP250DB			
ft/min	104/67	96/91	33,191 lbs.
m/sec	.52/.34	.49/.46	15,055 kg.
GP280DB			
ft/min	104/67	96/91	34,690 lbs.
m/sec	.52/.34	.49/.46	15,735 kg.
* Lift heights over 220.5" (6200mm) max. fork height may require capacity and restricted back lift.			

Mast Dimensions			
Model	Maximum Fork Height in (mm)	Overall Lowered Height in (mm)	Overall Extended Height in (mm)
GP170/190/210DB Simplex	148 (3761)	133 (3353)	205 (5196)
	183 (4661)	150 (3803)	240 (6096)
	213 (5411)	165 (4178)	270 (6846)
GP230/250/280DB Simplex	143 (3628)	143 (3628)	216 (5468)
	161 (4078)	161 (4078)	251 (6368)
	176 (4453)	176 (4453)	281 (7118)
	192 (4853)	192 (4853)	312 (7918)

Standard Lift Specifications						
(For other available mast heights, contact your local Yale Dealer.)						
Model	Max Fork Height in (mm)	Free Fork Height w/o LBR in (mm)	O.A.H. in (mm)	Tilt Rwd/Fwd	Drive Tire Size	O.A.W. in (mm)
GP170/190/210DB Simplex	147.5 (3750)	0	131 (3327)	15°/12°	10.0x20.0	98.03 (2490)
	183 (4650)	0	149 (3785)	15°/12°	10.0x20.0	98.03 (2490)
	212.5 (5400)	0	163.5 (4153)	15°/12°	10.0x20.0	98.03 (2490)
GP230/250/280DB Simplex	147.5 (3750)	0	143 (3630)	15°/12°	10.0x20.0	98.03 (2490)
	183 (4650)	0	160.5 (4075)	15°/12°	10.0x20.0	98.03 (2490)
	212.5 (5400)	0	175.5 (4460)	15°/12°	10.0x20.0	98.03 (2490)
	244 (6200)	0	191 (4850)	15°/12°	10.0x20.0	98.03 (2490)



GENERAL	1	Manufacturer	Manufacturer's Name	Yale®				
	2	Model Designation	Manufacturer's Designation	GP170DB		GP190DB		
				Cummins LPG	Cummins Diesel	Cummins LPG	Cummins Diesel	
	3	Load Capacity	Rated capacity	17000 (7700)		19000 (8700)		
	4	Load Center	Distance	24 (600)		24 (600)		
	5	Power Type	Battery, Diesel, LPG, Electric	LPG	Diesel-Turbo	LPG	Diesel-Turbo	
6	Operation	Manual, Pedestrian, Stand, Sit, Seat	Sit		Sit			
WHEELS	7	Tire Type	C-Cushion, P-Pneumatic, Front/Rear	P/P		P/P		
	8	Wheels	Number Front/Rear (X = Driven)	4X/2		4X/2		
	9	Lift Height	in. (mm)	213 (5411)		213 (5411)		
	10	Free Lift	in. (mm)	0		0		
	11	Fork	Dimensions	2.5 x 8 x 48 (63.5 x 203 x 1830)		2.5 x 8 x 48 (63.5 x 203 x 1830)		
DIMENSIONS	12	Mast Tilt	Forward/Backward	15/12		15/12		
	13	Length	To Face of Forks	169 (4292)		169 (4292)		
	14	Overall Width		98.03 (2490)		98.03 (2490)		
	15	Height of Mast	Lowered	165 (4178)		165 (4178)		
	16		Extended Without LBE	270 (6846)		270 (6846)		
	17	Overhead Guard	Height	118.7 (3015)		118.7 (3015)		
	18	Turning Radius	Outside	154 (3912)		154 (3912)		
	19	Load Length	Front Overhang	28.54 (725)		28.54 (725)		
	20	Aisle Width	RT. Angle Stack (Add length of load)	182.6 (4639)		182.6 (4639)		
	21		in. (mm)	-		-		
	22	Towing Coupling	Pin Height	25		25		
PERFORMANCE	23	Travel Speed	With/Without Load	mph	15.7/17.2	17.8/18.9	15.7/17.2	17.8/18.9
	24	Lifting Speed	With/Without Load	fpm	73/136	95/144	73/136	95/144
	25	Lowering Speed	With/Without Load	fpm	99/95	98/95	99/95	98/95
	26	Drawbar Pull	With/Without Load (LPG)	lb. (kg)	17393 (7905) / 8103 (3683)		17351 (7887) / 8103 (3683)	
		Drawbar Pull	With/Without Load (Cummins)	lb. (kg)	20068 (9122) / 8090 (3677)		20068 (9122) / 8090 (3677)	
	27	Gradeability at 1mph.	With/Without Load	%	44/33	55/32	42/32	51/32
	28	Maximum Gradeability	With/Without Load	%	33/54	34/58	50/32	63/32
	29	Maximum Drawbar Pull	With/Without Load (Perkins)	lb. (kg.)	20252 (9205) / 8103 (3683)		20210 (9186) / 8103 (3683)	
		Maximum Drawbar Pull	With/Without Load (Cummins)	lb. (kg)	23507 (10685) / 8090 (3677)		23507 (10685) / 8090 (3677)	
	30	Working Pressure	For Attachments	psi	2400		2400	
31	Oil Flow	For Attachments	gpm	24.7		24.7		
WEIGHTS	32	Unloaded Weight	lb. (kg)	27112 (16438)		27487 (12494)		
	33	Axle Loading	With Load, Front/Rear	lb. (kg)	38598 (17554) / 5514 (2506)		41580 (18900) / 3714 (1688)	
	34		Without Load, Front/Rear	lb. (kg)	13218 (14190) / 13285 (5584)		13826 (6284) / 13661 (6210)	
	35	Tire Size	Front	10.0-20 16PR		10.00-20 16PR		
	36		Rear	10.0-20 16PR		10.00-20 16PR		
	37	Wheelbase	in. (mm)	106.3 (2700)		106.3 (2700)		
	38	Tread Width	Front	in. (mm)	86.2 (2190)		86.2 (2190)	
	39		Rear	in. (mm)	75.98 (1930)		75.98 (1930)	
	40	Ground Clearance	Under Mast, With Load	in. (mm)	10.24 (261)		10.24 (261)	
	41		Center of Wheelbase, With Load	in. (mm)	11.6 (295)		11.6 (295)	
MOTORS	42	Service Brake	Method of Operation/Control	Foot/Air		Foot/Air		
	43	Parking Brake		Hand/Mechanical		Hand/Mechanical		
	44	Engine	Manufacturer/Type	Cummins 6B LPG	Cummins QSB 6.7	Cummins 6B LPG	Cummins QSB 6.7	
	45		Output, In Accordance with ISO 1585	hp (kw)	155 (116)		155 (116)	
	46		Number of Cylinders/Displacement	No. (cc)	6 (409)		6 (409)	
	47	Transmission	Type	Powershift		Powershift		
	48	Noise Level	LEQ	db(A)	77		77	
	49	Hydraulic Tank	Capacity	gal. (litre)	24.6 (93)		24.6 (93)	
	50	Fuel Tank	Capacity	gal. (litre)	32 (122)		32 (122)	
	51	Drive Control		Torque Converter		Torque Converter		

Yale®								1	GENERAL
GP210DB		GP230DB		GP250DB		GP280DB		2	
Cummins LPG	Cummins Diesel	Cummins LPG	Cummins Diesel	Cummins LPG	Cummins Diesel	Cummins LPG	Cummins Diesel	3	
21000 (9600)		23000 (10450)		25000 (11400)		28000 (12700)		4	
24 (600)		24 (600)		24 (600)		24 (600)		5	
LPG	Diesel-Turbo	LPG	Diesel-Turbo	LPG	Diesel-Turbo	LPG	Diesel-Turbo	6	
Sit		Sit		Sit		Sit		7	
P/P		P/P		P/P		P/P		8	
4X/2		4X/2		4X/2		4X/2		9	
213 (5411)		213 (5411)		213 (5411)		213 (5411)		10	
0		0		0		0		11	
2.5 x 8 x 48 (63.5 x 203 x 1830)		3.0 x 8 x 48 (76 x 203 x 1830)		3.0 x 8 x 48 (76 x 203 x 1830)		3.0 x 8 x 48 (76 x 203 x 1830)		12	
15/12		15/12		15/12		15/12		13	
169 (4292)		177 (4495)		177 (4495)		177 (4495)		14	
98.03 (2490)		98.03 (2490)		98.03 (2490)		98.03 (2490)		15	
165 (4178)		176 (4453)		176 (4453)		176 (4453)		16	
270 (6846)		281 (7118)		281 (7118)		281 (7118)		17	
118.7 (3015)		119.4 (3033)		119.4 (3033)		119.4 (3033)		18	
154 (3912)		162 (4115)		162 (4115)		162 (4115)		19	
28.54 (725)		29.72 (755)		29.72 (755)		29.72 (755)		20	
182.6 (4639)		191.8 (4871)		191.8 (4871)		191.8 (4871)		21	
-		-		-		-		22	
25		25.71		25.71		25.71		23	
15.7/17.2	17.8/18.9	15.4/17.0	18.1/19.3	15.3/16.9	18.2/19.4	15.1/16.8	17.7/19.1	24	
73/136	95/144	51/98	67/104	51/98	67/104	51/98	67/104	25	
99/95	98/95	96/91	97/91	96/91	97/91	96/91	97/91	26	
17293 (7860) / 8203 (3728)		17195 (7816) / 9204 (4183)		17152 (7796) / 9304 (4229)		17044 (7747) / 10104 (4592)		27	
19394 (8815) / 8200 (3727)		19282 (8764) / 9300 (4227)		19282 (8764) / 9300 (4227)		19147 (8703) / 10096 (4589)		28	
38/31	47/31	34/31	38/31	31/31	35/31	28/30	32/30	29	
31/46	57/31	40/31	46/31	38/31	43/31	33/30	38/30	30	
20152 (9160) / 8203 (3728)		20054 (9111) / 9300 (4227)		20011 (9096) / 10096 (4589)		19903 (9046) / 10104 (4592)		31	
23462 (10664) / 8200 (3727)		22428 (10194) / 9300 (4227)		22428 (10195) / 9300 (4227)		22293 (10133) / 10096 (5089)		32	
2400		2400		2400		2400		33	
24.7		24.7		24.7		24.7		34	
28112 (12810)		32806 (14911)		33191 (15055)		34690 (15735)		35	
45149 (20522) / 4033 (1833)		50480 (22945) / 15325 (2420)		53379 (24263) / 4812 (2187)		57624 (26192) / 5066 (2302)		36	
13499 (6136) / 14683 (6674)		16642 (7564) / 16642 (7347)		16598 (7544) / 16593 (7678)		16430 (7468) / 18260 (8300)		37	
10.00-20 16PR		10.00-20 16PR		10.00-20 16PR		10.00-20 16PR		38	
10.00-20 16PR		10.00-20 16PR		10.00-20 16PR		10.00-20 16PR		39	
106.3 (2700)		114.2 (2900)		114.2 (2900)		114.2 (2900)		40	
86.2 (2190)		86.2 (2190)		86.2 (2190)		86.2 (2190)		41	
75.98 (1930)		75.98 (1930)		75.98 (1930)		75.98 (1930)		42	
10.24 (261)		11.02 (280)		11.02 (280)		11.02 (280)		43	
11.6 (295)		12.4 (315)		12.4 (315)		12.4 (315)		44	
Foot/Air		Foot/Air		Foot/Air		Foot/Air		45	
Hand/Mechanical		Hand/Mechanical		Hand/Mechanical		Hand/Mechanical		46	
Cummins 6B LPG	Cummins QSB 6.7	Cummins 6B LPG	Cummins QSB 6.7	Cummins 6B LPG	Cummins QSB 6.7	Cummins 6B LPG	Cummins QSB 6.7	47	
155 (116)		155 (116)		155 (116)		155 (116)		48	
6 (409)		6 (409)		6 (409)		6 (409)		49	
Powershift		Powershift		Powershift		Powershift		50	
77		77		77		77		51	
24.6 (93)		24.6 (93)		24.6 (93)		24.6 (93)		52	
32 (122)		32 (122)		32 (122)		32 (122)		53	
Torque Converter		Torque Converter		Torque Converter		Torque Converter		54	

WHEELS

DIMENSIONS

PERFORMANCE

WEIGHTS

MOTORS

Transmission

The three-speed automatic transmission has constant mesh gearing and a high ratio torque converter to multiply engine torque and cushion the drive train. Hydraulic multiple disc clutch packs ensure smooth direction, range selection and long life. The truck has individual pedals for inching and braking. The external control valve is easy to service. This fully electronic transmission has diagnostic and set-up capability with a lap-top computer. A neutral start switch is standard. An optional Foot Directional Control (FDC) provides direction change in lieu of column shifter.

Hydraulic System

The tandem hydraulic pumps operate at 3000 PSI. All hydraulic fittings include O-Ring Face Seal (ORFS). Small hydraulic lines and components allow for easy maintenance access. Electro mechanical solenoids allow precise control of oil flow during hoist and tilt functions and provide excellent load control.

Hydrostatic Steering

The hydrostatic system requires no mechanical drag link steering connections and components. Steering is actuated with a steer pump that controls a two-way cylinder bolted to the steer axle

with eight bolts. The steer axle frame is made of high strength ductile cast steel. The adjustment free tie rods are made of T-1 steel. Tapered roller bearings are used with the heavy-duty spindles. Load sensing steering provides optimum performance at all engine speeds by giving priority to steering.

Chassis

A rugged unitized frame structure is designed for tough, demanding applications with a low step height for easy entry and exit. Side plates are 1/2" (20mm) thick. Mast is mounted to the frame, not the drive axle.

Masts

Yale Hi-Vis Simplex and Triplex masts afford operators outstanding visibility. Nested channel design incorporates full-face load rollers for durability. Rolled mast channels and formed cross-members provide high strength. Leaf-type chain provides superior strength.

Carriage

The standard carriage is a pin type, 98.5" wide. Fork spacing ranges from 10.83" inside to inside, 87.4" outside to outside with a 3.3" diameter fork pin. The carriage is equipped with six angled load rollers.

Brakes

The brakes are "S-cam" power-assisted air type. A separate air compressor air filter provides filtration for the brake system under all operating conditions. An optional extended life wet disc brake axle with dry disc park brake is available.

Electrical

24-volt system with single colored wiring numbered for easy identification. Standard 12-volt accessory converter for optional electrical devices.

Truck performance may be affected by the condition of the vehicle, how it is equipped and the application. Consult your Yale Industrial Truck Dealer if any of the information shown is critical to your application. Specifications are subject to change without notice.

This truck meets all design specifications of ANSI B56.1 Safety Standard for Powered Industrial Trucks at the time of manufacture. Classified by Underwriters' Laboratories, Inc. as to fire hazard only for type E and EE (optional) industrial trucks.

The Yale products included in this document may be covered by US patent 6,684,148 and other patents pending.

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