



GP-VX

VERACITOR® PNEUMATIC TIRE TRUCKS

4,000 · 5,000 lbs

Yale Veracitor® GP-VX Series

This series of trucks is available in several configurations, designed to meet and exceed your material handling application requirements. The Veracitor® forklift can be configured for maximum performance and lowest cost of operation for medium to heavy duty applications with state-of-the-art features and superior power. The innovative Yale® Flex Performance Technology™ offers selectable performance modes that provide the flexibility to maximize fuel economy or productivity to match application needs.

Yale Veracitor® VX Industrial Engines

feature a rigid cast iron block and main bearing caps. The nodular iron crankshaft is supported with five main bearings. All engines include hardened exhaust valve seats with stellite coated valves for superior durability and electronic throttle control for precise performance and consistent operation. Both Kubota engines feature a cast iron cylinder head as well as a long cylinder stroke for improved torque. The PSI and Kubota LPG engines feature coil over plug ignition design which eliminates spark plug wires.

The PSI engines feature twin engine balance shafts to reduce engine vibration resulting in smoother and quieter performance.

The Kubota 2.4L diesel cylinder heads feature a helical, "crossflow" design within each cylinder to create additional airflow into the cylinder for added power. The turbocharger is a simple design, but uses a variable waste-gate to ensure the proper amount of boost at all engine speeds. The charge air cooler (intercooler) helps lower emissions and increase power by cooling the hot air as it exits the turbocharger and enters the intake manifold.

Fuel Systems

All engines are EPA emissions compliant. The PSI and Kubota LPG engines feature closed loop emissions regulation systems that continually monitor exhaust and adjust fuel/air mix as necessary. These engines use a mixer carburetor and a vaporizer/regulator to convert fuel from a liquid to a gas.

The Kubota EPA Certified Tier 4 Final diesel fuel system utilizes an electronically controlled, high-pressure common-rail fuel system that sends up to five individual fuel injections per power stroke for maximum power and efficiency while reducing noise levels. A cooled Exhaust Gas Recirculation

(EGR) system recycles a portion of the exhaust to be re-burned and reduce emissions, along with a diesel oxidation catalyst (DOC) that continuously oxidizes particulate matter (soot) with no effect on truck operation.

Transmission

There are two transmission selections available with multiple engine configurations that will handle a wide variety of material handling applications. Both transmissions feature electronic inching (requires no adjustment), electronic shift control, neutral start switch, and anti-restart protection. A single pedal controls both inching and braking. Optional dual inch/brake pedals are available for operators who prefer this design. A 10 micron filter protects the transmission from abrasive contaminants.

The Techtronix 100 features Auto Deceleration through the controlled application of clutch packs, and also reduces tire spin by precisely regulating engine speed during controlled ramp descent.

Cooling System employs a 17" blade pusher-type fan. A high capacity, cross-flow radiator ensures rapid heat dissipation. The sealed cooling system operates at a pressure of 15 psi and includes a coolant recovery tank for visual inspection of coolant level. The transmission oil cooler is integrated into the radiator and is located in the side tank. The optional combi-cooler radiator features an externally mounted transmission oil cooler for increased heat transfer capability. All radiators are soft-mounted for excellent durability.

Drive Axle

The drive axles are designed to withstand heavy duty loads and absorb shock loads. The wheel hubs rotate on large tapered roller bearings. The drive shaft transmits torsion to the drive axle from the engine and transmission. Transmission torque occurs through an industrial hypoid ring gear and pinion differential assembly.

The drive axle is a self contained assembly that is isolated from the transmission by a heavy duty rubber isolator. The axle shafts utilize a "rolled fillet" root

LPG/Dual Fuel Engine Specifications

Engine	PSI 2.4L
Cylinders	4
Camshaft	Overhead Valve
Displacement	143 cu.in/2.4 liter
Torque	121 lb.ft @ 2000 RPM
Horsepower	59 hp

LP Engine Specifications

Engine	Kubota 2.5L
Cylinders	4
Camshaft	Overhead Valve
Displacement	152 cu.in/2.5 liter
Torque	131 lb.ft @ 1000 RPM
Horsepower	59 @ 2500 rpm
Air Filtration	Two stage, Dry Type
Emission Control	Closed Loop

Diesel Engine Specifications

Engine	Kubota 2.4L Turbo Diesel
Cylinders	4
Camshaft	Overhead Valve
Displacement	149 cu.in/2.4 liter
Torque	146 @ 1500 RPM
Horsepower	57hp

spline design for increased resistance to torsion stress. A magnetic sump plug is used to collect any metal particles that are circulating in the axle oil, preventing excessive component wear.

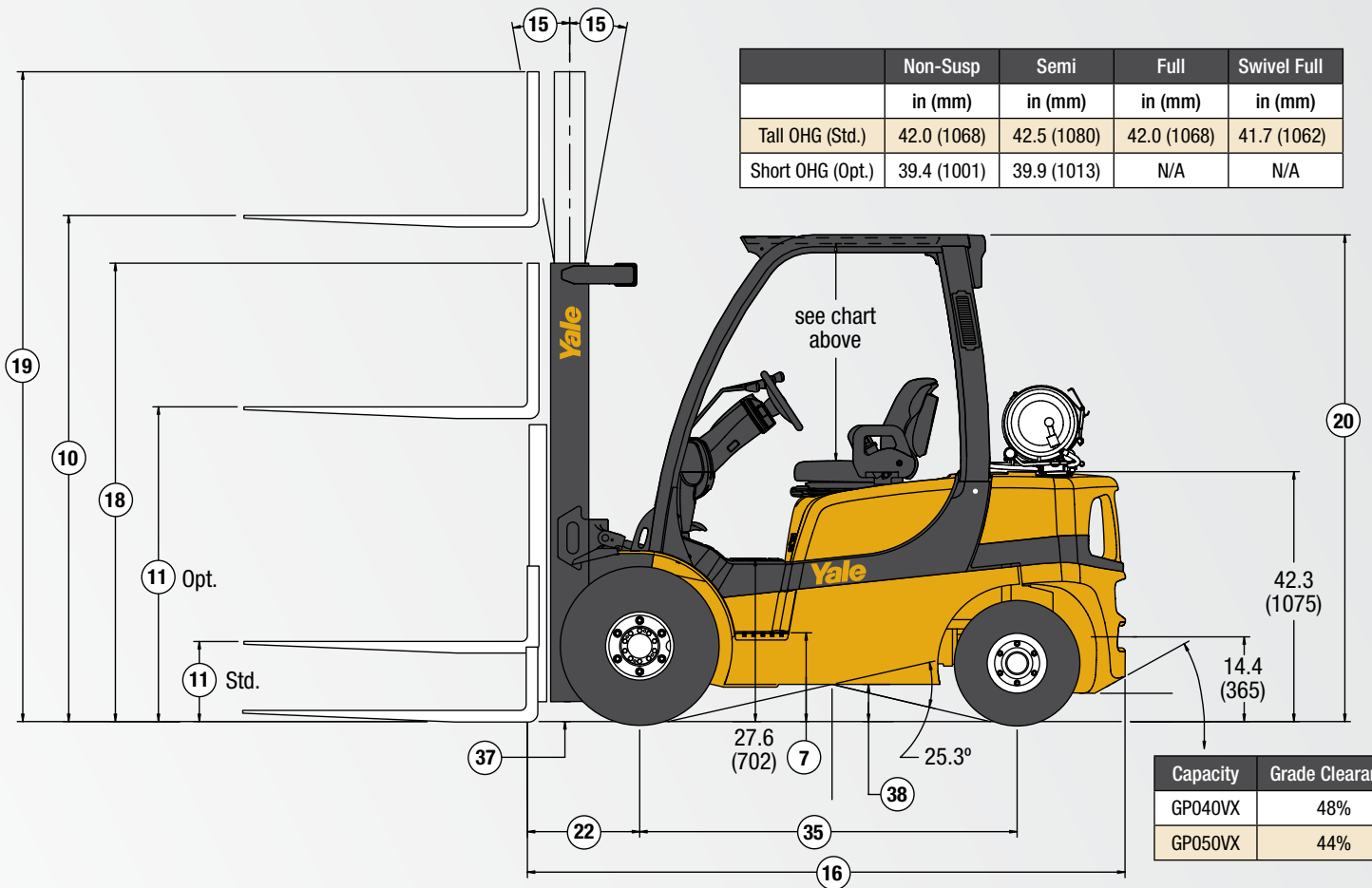
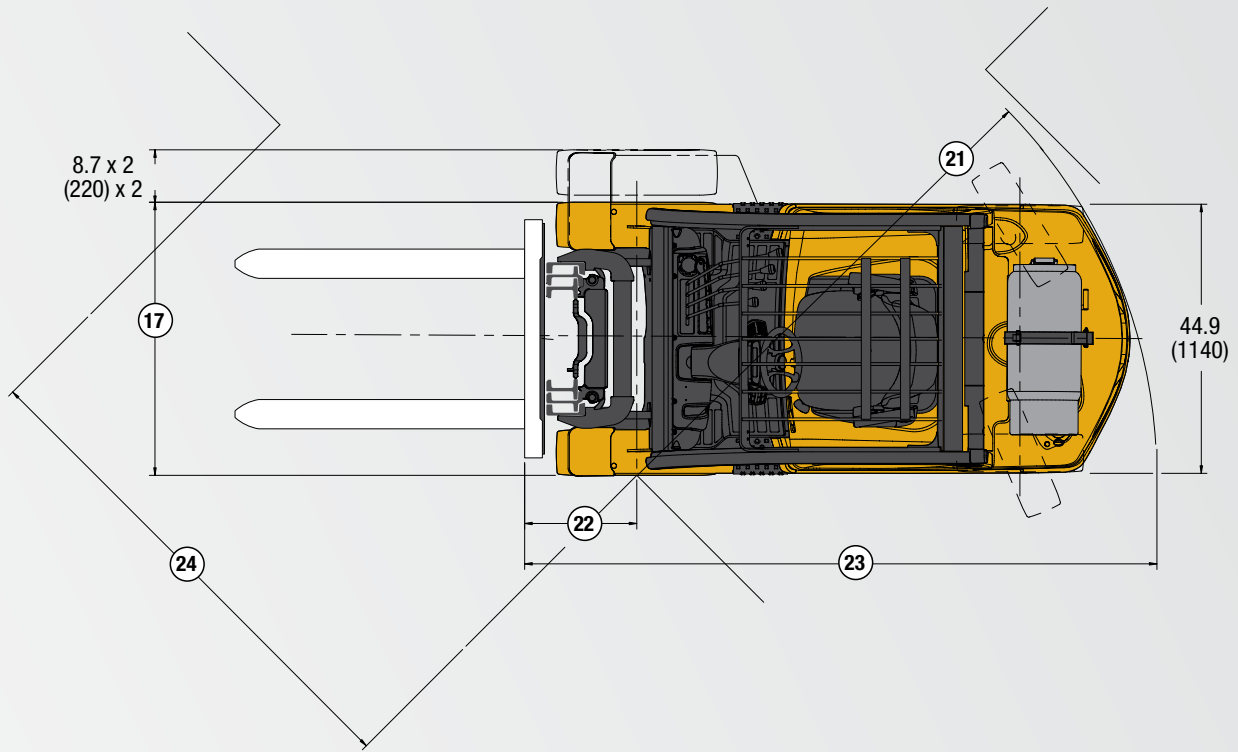
Hydraulic Brakes

Asbestos-free brake linings are bonded to steel shoes and act against cast iron drums. Single circuit master cylinder has a sealed fluid reservoir and features a fluid level sensor which activates

(continued on back)



Truck shown with optional equipment



	Non-Susp	Semi	Full	Swivel Full
	in (mm)	in (mm)	in (mm)	in (mm)
Tall OHG (Std.)	42.0 (1068)	42.5 (1080)	42.0 (1068)	41.7 (1062)
Short OHG (Opt.)	39.4 (1001)	39.9 (1013)	N/A	N/A

Capacity	Grade Clearance
GP040VX	48%
GP050VX	44%

GENERAL	1	Manufacturer Name		Yale			
	2	Model		GP040VX			
		Engine		PSI 2.4L	Kubota 2.5L	Kubota 2.4L Tier 4 Final	
	3	Rated Capacity	lb (kg)	4000 (1814)			
	4	Load Center, Distance	in (mm)	24.0 (610)			
	5	Power Type - LPG, Diesel, Dual Fuel		LPG	Dual Fuel	LPG Diesel	
	6	Operator Type		Sit-Down Rider			
	7	Step Height	in (mm)	15.0 (382)			
	8	Tire Type - Cushion, Solid, Pneumatic		Pneumatic			
DIMENSIONS	9	Wheels, Number - Front/ Rear		2x/2			
	10	Lift Height, Top of Fork (TOF)	in (mm)	129 (3292)			
	11	Lift Heights, Standard Limited Free Lift (LFL) w/o LBR (TOF)	in (mm)	5 (140)			
		Lift Heights, Optional Full Free Lift (FFL) w/o LBR (TOF)	in (mm)	61 (1565)			
	12	Standard Carriage Width	in (mm)	42.0 (1067)			
	13	Forks, Thickness x Width x Length	in	1.6 X 3.9 X 42			
		Forks, Thickness x Width x Length	(mm)	(40 X 100 X 1067)			
	14	Fork Spread, Outside Dimensions	in (mm)	43.3 (1099)			
	15	Mast Tilt Angles, Forward/Backward	degrees	6F/10B			
	16	Length To Face of Forks	in (mm)	98.0 (2486)			
	17	Overall Width, Standard Tread	in (mm)	45.6 (1157)			
		Overall Width, Wide Tread	in (mm)	51.9 (1317)			
	18	Height, Standard Mast - Lowered	in (mm)	86.0 (2170)			
	19	Height, Standard Mast - Extended with LBR	in (mm)	147 (3715)			
		Height, Standard Mast - Extended without LBR	in (mm)	123 (3100)			
	20	Height, Standard Overhead Guard	in (mm)	85.0 (2160)			
		Height, Optional Overhead Guard	in (mm)	82.4 (2093)			
	21	Turning Radius, Minimum Outside (OTR)	in (mm)	84.6 (2149)			
	22	Length, Center of Wheel to Face of Forks	in (mm)	18.5 (470)			
	23	Aisle Width, Right Angle Stack (Add Length of Load)	in (mm)	103.1 (2619)			
	24	Equal Aisle, 90-Degree Intersecting Aisle	in (mm)	79.5 (1987)			
	PERFORMANCE	25	Travel Speed, Powershift Transmission RL/NL	mph (km/h)	11.5/11.8 (18.5/19.0)	10.4/10.6 (16.7/17.0)	11.2/11.3 (18.0/18.2)
		26	Lift Speed, Standard 2-Stage LFL RL/NL	ft/min (m/s)	120/124 (.61/.63)	122/126 (.62/.64)	122/126 (.62/.64)
			Lift Speed, Optional 2-Stage FFL RL/NL	ft/min (m/s)	106/110 (.54/.56)	106/112 (.54/.57)	106/112 (.54/.57)
		Lift Speed, Optional 3-Stage FFL RL/NL	ft/min (m/s)	112/116 (.57/.59)	114/120 (.58/.61)	114/120 (.58/.61)	
27		Lowering Speed, Standard 2-Stage LFL RL/NL	ft/min (m/s)	114/98 (.58/.50)			
		Lowering Speed, Optional 2-Stage FFL RL/NL	ft/min (m/s)	98/83 (.50/.42)			
		Lowering Speed, Optional 3-Stage FFL RL/NL	ft/min (m/s)	106/93 (.54/.47)			
28		Maximum drawbar pull RL/NL	lb (kg)	4980/2315 (2259/1050)	5018/2315 (2276/1050)	5180/2315 (2350/1050)	
		Drawbar Pull, Standard Transmission @ 1 mph RL/NL	lb (kg)	4215/2315 (1912/1050)	4297/2315 (1949/1050)	4760/2315 (2160/1050)	
29		Gradeability, Standard Transmission @ 1 mph RL/NL	Percent %	37/32	38/32	42/32	
WT.	31	Weight, Standard Truck (2-Stg. LFL) NL	lb (kg)	7654 (3472)			
		Weight, Standard Truck (2-Stg. LFL) RL	lb (kg)	11655 (5286)			
	32	Axle Loading, Static Front/Rear NL	lb (kg)	3929/3725 (1782/1690)			
		Axle Loading, Static Front/Rear RL	lb (kg)	10593/1062 (4805/482)			
TIRES & WHEELS	33	Tire Size, Front		7.00 x 12 - 12			
	34	Tire Size, Rear		6.00 x 9			
	35	Wheelbase	in (mm)	63.9 (1623)			
	37	Ground Clearance, Lowest Point NL (w/RL subtract-6mm)	in (mm)	5.2 (132)			
	38	Ground Clearance, Center of Wheelbase NL	in (mm)	6.3 (160)			
	39	Service Brake - Method of Control/Operation		Foot/Hydraulic			
	40	Parking Brake - Method of Control/Operation		Hand/Mechanical			
POWERTRAIN	41	Battery Type		Maintenance Free			
	42	Volts/Cold Cranking Amps	v/cca	12/475		12/770	
	43	Engine, Manufacturer/Model		PSI 2.4L	Kubota 2.5L	Kubota 2.4L	
	44	Permanent Output	hp (kw)	59 (44)	59 (44)	57 (43)	
	45	Torque @ Rated RPM	ft Lbs (kg/m)	121 (16.7) @ 2000 RPM	131 (18) @ 1000 RPM	146 (20) @ 1500 RPM	
	46	Number of Cylinders/Displacement	No/cc (ci)	4/2351 (143)	4/2491 (152)	4/2434 (149)	
	47	Transmission Type, Standard		Electronic Powershift			
		Standard Speeds, Forward - Reverse		1-1			
	49	Hydraulic Tank Capacity (Drain and Refill)	gal (liter)	12.1 (45.8)			
	50	Fuel Tank Capacity (Gas & Diesel Powered Units Only)	gal (liter)	13.9 (52.8)			
	51	Auxiliary Hydraulic Pressure Relief for Attachments	PSI (Mpa)	2250 (15.5)			

GENERAL	1	Manufacturer Name		Yale			
	2	Model		GP050VX			
		Engine		PSI 2.4L	Kubota 2.5L	Kubota 2.4L Tier 4 Final	
	3	Rated Capacity	lb (kg)	5000 (2268)			
	4	Load Center, Distance	in (mm)	24.0 (610)			
	5	Power Type - LPG, Diesel, Dual Fuel		LPG	Dual Fuel	LPG Diesel	
	6	Operator Type		Sit-Down Rider			
	7	Step Height	in (mm)	15.0 (382)			
	8	Tire Type - Cushion, Solid, Pneumatic		Pneumatic			
DIMENSIONS	9	Wheels, Number - Front/ Rear		2x/2			
	10	Lift Height, Top of Fork (TOF)	in (mm)	129 (3292)			
	11	Lift Heights, Standard Limited Free Lift (LFL) w/o LBR (TOF)	in (mm)	5 (140)			
		Lift Heights, Optional Full Free Lift (FFL) w/o LBR (TOF)	in (mm)	61 (1565)			
	12	Standard Carriage Width	in (mm)	42 (1067)			
		Forks, Thickness x Width x Length	in	1.6 X 3.9 X 42			
		Forks, Thickness x Width x Length	(mm)	(40 X 100 X 1067)			
	14	Fork Spread, Outside Dimensions	in (mm)	43.3 (1099)			
	15	Mast Tilt Angles, Forward/Backward	degrees	6F/6B			
	16	Length To Face of Forks	in (mm)	100.7 (2559)			
	17	Overall Width, Standard Tread	in (mm)	45.6 (1157)			
		Overall Width, Wide Tread	in (mm)	51.9 (1317)			
	18	Height, Standard Mast - Lowered	in (mm)	86 (2170)			
	19	Height, Standard Mast - Extended with LBR	in (mm)	147 (3715)			
		Height, Standard Mast - Extended without LBR	in (mm)	123 (3100)			
	20	Height, Standard Overhead Guard	in (mm)	85.0 (2160)			
		Height, Optional Overhead Guard	in (mm)	82 (2093)			
	21	Turning Radius, Minimum Outside (OTR)	in (mm)	87.2 (2216)			
	22	Length, Center of Wheel to Face of Forks	in (mm)	18.5 (470)			
	23	Aisle Width, Right Angle Stack (Add Length of Load)	in (mm)	105.7 (2686)			
	24	Equal Aisle, 90-Degree Intersecting Aisle	in (mm)	80.6 (2020)			
	PERFORMANCE	25	Travel Speed, Powershift Transmission RL/NL	mph (km/h)	11.5/11.8 (18.5/19.0)	10.4/10.6 (16.7/17.0)	11.2/11.3 (18.0/18.2)
		26	Lift Speed, Standard 2-Stage LFL RL/NL	ft/min (m/s)	120/124 (.61/.63)	122/126 (.62/.64)	122/126 (.62/.64)
			Lift Speed, Optional 2-Stage FFL RL/NL	ft/min (m/s)	106/110 (.54/.56)	108/112 (.55/.57)	106/112 (.54/.57)
		Lift Speed, Optional 3-Stage FFL RL/NL	ft/min (m/s)	112/116 (.57/.59)	114/120 (.58/.61)	114/120 (.58/.61)	
27		Lowering Speed, Standard 2-Stage LFL RL/NL	ft/min (m/s)	114/98 (.58/.50)			
		Lowering Speed, Optional 2-Stage FFL RL/NL	ft/min (m/s)	98/83 (.50/.42)			
		Lowering Speed, Optional 3-Stage FFL RL/NL	ft/min (m/s)	106/93 (.54/.47)			
28		Maximum drawbar pull RL/NL	lb (kg)	4952/2249 (2246/1020)	4989/2249 (2263/1020)	5150/2249 (2340/1020)	
		Drawbar Pull, Standard Transmission @ 1 mph RL/NL	lb (kg)	4184/2249 (1898/1020)	4268/2249 (1936/1020)	4730/2249 (2150/1020)	
29		Gradeability, Standard Transmission @ 1 mph RL/NL	Percent %	32/28	33/28	36/28	
WT.	31	Weight, Standard Truck (2-Stg. LFL) NL	lb (kg)	8399 (3810)			
		Weight, Standard Truck (2-Stg. LFL) RL	lb (kg)	13399 (6078)			
	32	Axle Loading, Static Front/Rear NL	lb (kg)	3776/4623 (1713/2097)			
		Axle Loading, Static Front/Rear RL	lb (kg)	12105/1294 (5491/587)			
TIRES & WHEELS	33	Tire Size, Front		7.00 x 12 - 12			
	34	Tire Size, Rear		6.00 x 9			
	35	Wheelbase	in (mm)	63.9 (1623)			
	37	Ground Clearance, Lowest Point NL (w/RL subtract-6mm)	in (mm)	5.2 (132)			
	38	Ground Clearance, Center of Wheelbase NL	in (mm)	6.3 (160)			
	39	Service Brake - Method of Control/Operation		Foot/Hydraulic			
	40	Parking Brake - Method of Control/Operation		Hand/Mechanical			
POWERTRAIN	41	Battery Type		Maintenance Free			
	42	Volts/Cold Cranking Amps	v/cca	12/475		12/770	
	43	Engine, Manufacturer/Model		PSI 2.4L	Kubota 2.5L	Kubota 2.4L	
	44	Permanent Output	hp (kw)	59 (44)	59 (44)	57 (43)	
	45	Torque @ Rated RPM	ft Lbs (kg/m)	121 (16.7) @ 2000 RPM	131 (18) @ 1000 RPM	146 (20) @ 1500 RPM	
	46	Number of Cylinders/Displacement	No/cc (ci)	4/2351 (143)	4/2491 (152)	4/2434 (149)	
	47	Transmission Type, Standard		Electronic Powershift			
		Standard Speeds, Forward - Reverse		1-1			
	49	Hydraulic Tank Capacity (Drain and Refill)	gal (liter)	12.1 (45.8)			
	50	Fuel Tank Capacity (Gas & Diesel Powered Units Only)	gal (liter)	13.9 (52.8)			
	51	Auxiliary Hydraulic Pressure Relief for Attachments	PSI (Mpa)	2250 (15.5)			

GP040-050VX MAST DIMENSIONS							
Maximum Fork Height (TOF) †	Overall Lowered Height	Overall Extended Height		Free Lift (TOF)		Approximate Total Weight of Standard Equipped Truck	
		with LBR	without LBR	with LBR	without LBR	GP040VX	GP050VX
in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	lbs (kg)	lbs (kg)
2-STAGE LIMITED FREE LIFT (LFL) Hi-Vis™2 MAST							
129 (3292)	86 (2170)	178 (4515)	123 (3100)	5 (140)	5 (140)	7654 (3472)	8399 (3810)
2-STAGE FULL FREE LIFT (FFL) Hi-Vis™ MAST							
130 (3302)	86 (2170)	179 (4525)	154 (3910)	37 (950)	61 (1565)	7692 (3489)	8437 (3827)
3-STAGE FULL FREE LIFT (FFL) Hi-Vis™2 MAST							
171 (4350)	78 (1970)	220 (5570)	195 (4935)	29 (750)	54 (1390)	7934 (3599)	8679 (3937)
189 (4800)	84 (2120)	237 (6020)	213 (5385)	35 (900)	60 (1540)	8012 (3634)	8757 (3972)
194 (4950)	86 (2170)	243 (6170)	218 (5535)	37 (950)	62 (1590)	8037 (3645)	8782 (3983)
200 (5100)	90 (2270)	249 (6320)	224 (5685)	41 (1050)	66 (1690)	8083 (3666)	8828 (4004)
218 (5550)	96 (2420)	267 (6770)	242 (6135)	47 (1200)	72 (1840)	8165 (3704)	8910 (4042)

† Lift heights over 171.5" (4356 mm) maximum fork height are considered highlifts and require reduced capacity and restricted back tilt. Total approximate weights listed include mast, standard carriage, load backrest (LBR) and 70 lbs. LPG tank and tank bracket.



(continued from cover)

an indicator light located on the instrument panel. Independent, hand adjustable parking brake with push-button release has audible alarm.

Wet Disc Brakes

Optional oil-cooled wet disc brakes provide excellent stopping power with an extremely long service life. The brake cooling oil circulates within the axle to provide consistent braking performance with no fade or change in pedal effort or travel, throughout the entire shift and beyond.

Hydrostatic Power Steering provides responsive control and eliminates mechanical linkages for reduced surface shock and simplified maintenance. The steering wheel is 12 inches in diameter with a textured surface grip and spinner knob, and requires only four turns lock-to-lock. The center mounted steer cylinder is located within the confines of the steer axle for protection.

Steer Axle is constructed of cast steel and is rubber shock mounted to the frame for reduced wear and vibration. The Continuous Stability System (CSS™) enhances lateral truck stability through reduced steer axle articulation, while simultaneously allowing travel across various surfaces.

Chassis designed by Finite Element Analysis (FEA) methods contains a rugged, unitized frame structure with a low step for simple entrance to the operator's compartment. Ergonomically designed overhead guard is bar type for great visibility and reduced noise.

Operator's Compartment features cowl-mounted hydraulic control levers positioned on the right side of the steering column. Optional Accutouch electro-hydraulic controls are integrated into the operator's right-side armrest allowing superior ergonomic actuation. A pedal arrangement with a large, single inch/brake pedal is standard. Tilt cylinders are located beneath the floor for uncluttered space. Rubber floor mat reduces noise and vibration. Floorplate can be removed without tools for excellent

service access. Low step height and a convenient hand grip provide easy entry and exit to and from the truck.

Intellix VSM acts as a master truck controller, providing extensive monitoring and control of truck functions and systems. CANbus technology reduces wiring complexity and enables comprehensive communications between truck systems. The ergonomically positioned dash display transmits continual feedback to the operator and allows for communication of service codes. Comprehensive on-board diagnostics enable quick and easy troubleshooting. The electrical system features sealed connectors and Hall Effect sensors for superior dependability.

Hydraulic System incorporates a gear type pump, cast iron body for quiet efficiency. The system is protected from overloads by a main relief valve for the lift circuit and a secondary relief valve for tilt and auxiliary functions. Oil is double filtered through a 100 mesh suction line strainer and 10 micron return line filter. The hydraulic tank is integrated into the frame. An emergency lowering valve is provided to allow the load to be lowered in the event of power loss. O-ring face seal fittings are used in all high pressure hydraulic connections.

Masts are available in 2-stage LFL (Hi-Vis™₂), 2-stage FFL (Hi-Vis™), and 3-stage FFL (Hi-Vis™₂) models. Mast features flush-faced design with geometrically matched, angled load roller bearings which are canted, yet provide full-face roller contact. The mast front rail flange angle coupled with the inverted "J" inner channel and three degree mast rollers significantly reduce channel and roller wear. "J-hook" mast mounting system allows for convenient mast installation and removal. A bronze phenolic mast pivot bushing with woven reinforcement offers high load carrying capability with outstanding durability.

Options

- PSI 2.4L dual fuel engine
- Kubota 2.5L LPG engine
- Kubota 2.4L Tier 4 Final turbo diesel engine
- Techtronix 100 transmission
- Auto Deceleration System
- Controlled power reversal feature
- Controlled rollback on ramps

- Powertrain protection with engine shutdown system
- Premium monitoring package
- High air intake with precleaner
- Accumulator
- Keyless start (w/auxiliary key switch)
- Various light packages
 - Two brake/back-up high intensity LED lights
 - Two front and one rear halogen or LED work lights
 - Two front, one rear halogen or LED work light and two brake/tail/back-up high intensity LED lights
- Traction speed limiter
- Heavy duty anti-clog radiator
- Heavy duty combi-cooler radiator
- Swing-out, drop-down EZ-tank bracket
- Accutouch mini-lever electro-hydraulic control
- Return-to-set tilt
- Rear drive handle with horn button
- High-visibility non-cinch seat belt with or without interlock
- Polycarbonate overhead guard rain top
- Swivel full-suspension seat
- Foot Directional Control pedal
- Extension tubes with or without quick disconnects
- 10° forward/6° backward tilt
- Operator password
- Load weight display
- Impact monitor
- Seaside directional control
- Integral sideshifting fork positioner
- Dual side view mirrors
- Audible alarm - reverse actuated 82-102 db(A) self-adjusting
- Visible alarm amber strobe light - continuous activated, overhead guard mounted
- Paper applications kit
- Operator pre-shift checklist
- Oil-cooled wet disc brakes
- Pneumatic shaped solid tires
- Radial tires
- Dual drive tires
- Cab with or without air conditioning
- Dual pedal inch/brake
- Vented hood
- Overhead exhaust
- Integral sideshifter
- UL options of G, GS, D, LPS or DS



YALE MATERIALS HANDLING CORPORATION

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Manufactured in our own ISO 9001 and 14001 Registered Facilities

2219-2E 2/2015 All trucks shown with optional equipment.

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 applicable mandatory requirements of ANSI B56.1 Safety Standard for Powered Industrial Trucks at the time of manufacture. Classified by Underwriters' Laboratories, Inc., as to fire and electric shock hazard only for Type E industrial trucks.

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