

IC-PNEUMATIC

GEN2™ Series

Diesel or LPG engine

Pneumatic or Solid Tires

C15

1500 kg

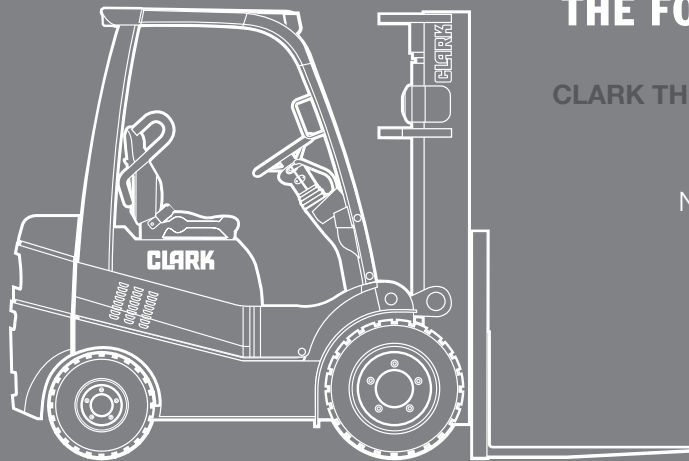
C18

1800 kg

C20s

2000 kg

C15/18/20s



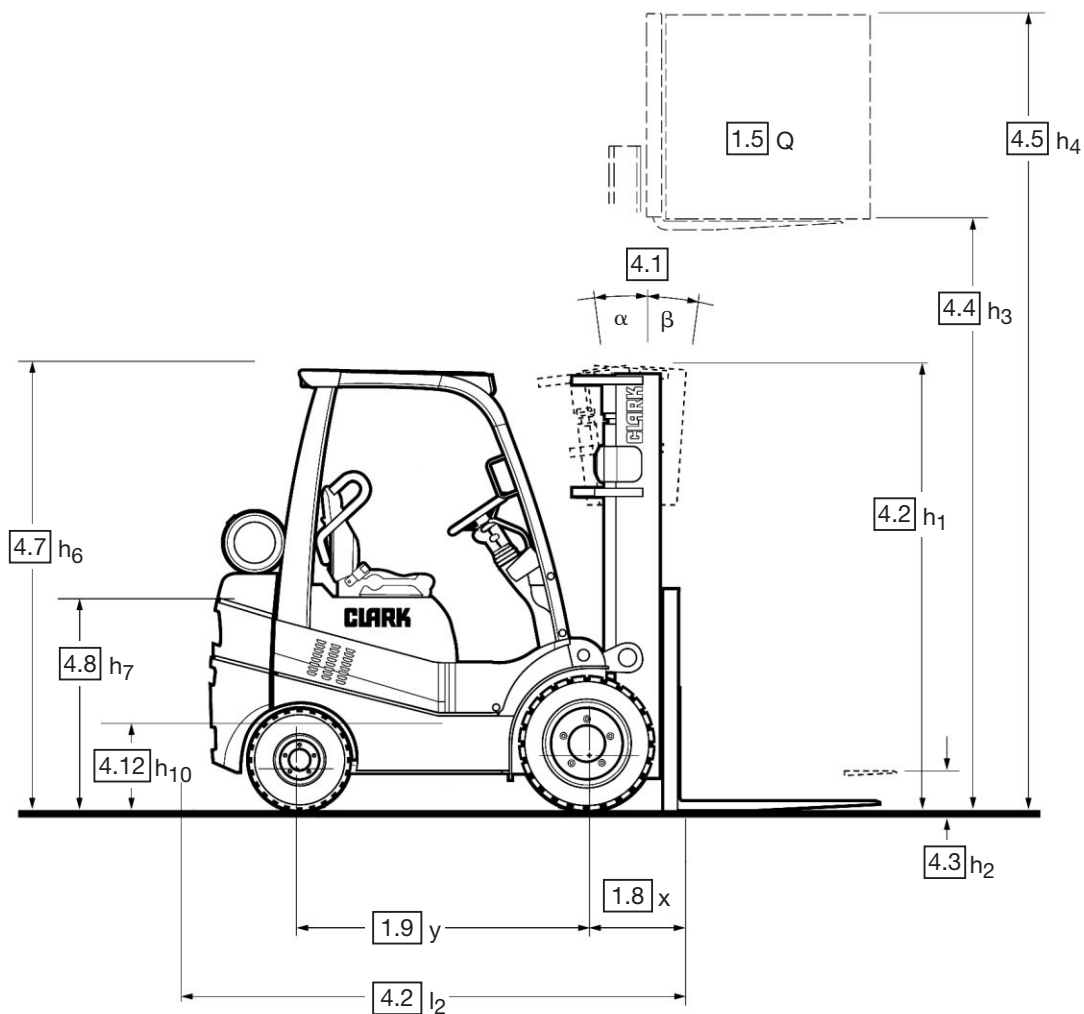
CLARK THE FORKLIFT

Europe

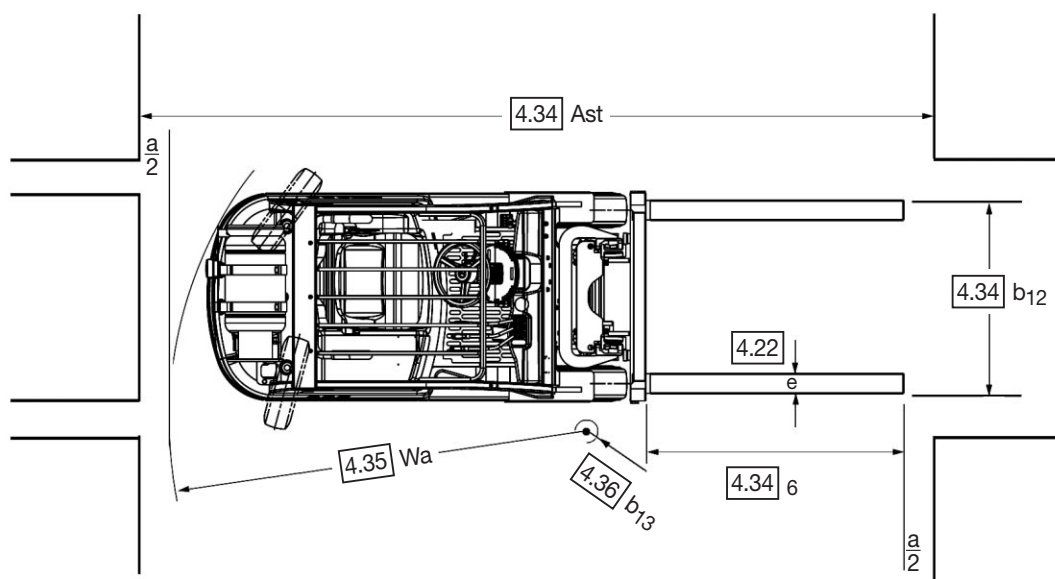
North America

South Korea

www.clarkmheu.com



C15/18/20s



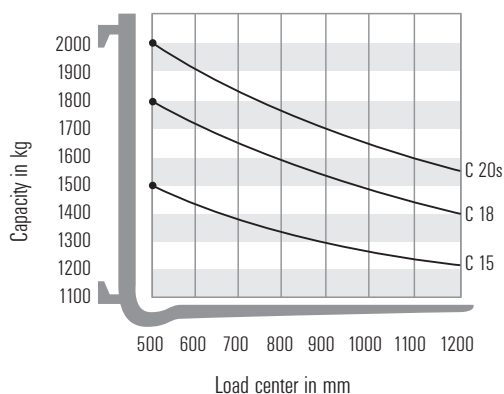
$$A_{st} = W_a + x + l_6 + a$$

a = 200 mm (safety distance)

For corresponding data see Specification Chart.

Truck Capacities

Capacity at different load centres



Note:

The listed capacities are valid only for the standard upright in vertical position with standard fork carriage and standard forks, up to max. lifting height of 3085 mm C15-20s. The centre of gravity of the load may be displaced by max. 100 mm against the longitudinal centre line of the truck. Load centre is determined from top and front face of forks. The values are based on a 1000 mm cube load configuration with the centre of gravity at the true centre of the cube. With upright tilted forward lower capacity values are valid. Attachments, longer forks, exceptional load dimensions and higher lifting heights may reduce the capacity. Please contact your CLARK dealer if you require further information.

Upright table

Capacity at different load centres

Upright table metrics in mm

CLARK Ref	max. fork height h3	overall height lowered h1	free lift h2 h5*
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Standard C 15, 18, 20s L/D

(2 Stage Mast, standard free lift)

V	2265	1730	110
V	2545	1870	110
V	2795	1995	110
V	3085	2140	110
V	3285	2240	110
V	3640	2417	110
V	4070	2690	110
V	4365	2890	110
V	4655	3085	110
V	5145	3415	110

* without LBR

Upright table metrics in mm

CLARK Ref	max. fork height h3	overall height lowered h1	free lift h2 h5*
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Triple C 15, 18, 20s L/D

(3 Stage Mast, full free lift)

M	3970	1870	1238
M	4345	1995	1363
M	4780	2140	1508
M	5185	2290	1658
M	5400	2380	1748
M	5565	2450	1818
M	5720	2515	1883
M	6015	2640	2008
M	6470	2830	2198
M	7075	3085	2453

* without LBR

Upright table metrics in mm

CLARK Ref	max. fork height h3	overall height lowered h1	free lift h2 h5*
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Hi-Lo C 15, 18, 20s L/D

(2 Stage Mast, full free lift)

H	2925	2005	1389
H	3215	2165	1549
H	3515	2305	1689
H	3695	2455	1839
H	3810	2530	1914

* without LBR

LPG engine

according to VDI 2198

All values shown are for standard lift truck with standard equipment. If the truck is supplied with options, values may change. All values given may vary +5% and -10% due to the motor and system tolerances and represent nominal values obtained under typical operating conditions. Specifications for Non-emission limited truck.

SPECIFICATIONS

1.1 Manufacture (Abbreviation)		CLARK	CLARK	CLARK	
Characteristics	1.2 Manufacture's designation	C 15 L	C 18 L	C 20s L	
	1.3 Drive Unit Diesel, L.P. Gas	LP-Gas	LP-Gas	LP-Gas	
	1.4 Operator type stand on / driver seated	driver seated	driver seated	driver seated	
	1.5 Load Capacity / rated load	Q (t)	1,5	1,8	2,0
	1.6 Load Center distance	c (mm)	500	500	500
	1.8 Load Center distance, centre of drive axle to fork face	x (mm)	392	392	392
	1.9 Wheelbase	y (mm)	1400	1400	1400
Weight	2.1 Service weight	kg	2785	3009	3156
	2.2 Axle loading, laden front / rear	kg	3733/552	4166/643	4449/707
	2.3 Axle loading, unladen front / rear	kg	1277/1508	1219/1790	1175/1981
Tires, Chassis	3.1 Tire type, P=pneumatic, SE=superelastic, C=cushion 1)		P/P	P/P	P/P
	3.2 Tire size, front		6.50 x 10-12PR	6.50 x 10-12PR	6.50 x 10-12PR
	3.3 Tire size, rear		5.00 x 8-10PR	5.00 x 8-10PR	5.00 x 8-10PR
	3.5 Wheels, number front / rear (x=drive wheels)		2x/2	2x/2	2x/2
	3.6 Tread, front	b ₁₀ (mm)	890	890	890
	3.7 Tread, rear	b ₁₁ (mm)	890	890	890
Dimensions	4.1 Tilt of upright / fork carriage, α/β	deg	8/8	8/8	8/8
	4.2 Height, upright lowered	h ₁ (mm)	2140	2140	2140
	4.3 Freelift	h ₂ (mm)	110	110	110
	4.4 Lift height 3)	h ₃ (mm)	3085	3085	3085
	4.5 Height upright extended 7)	h ₄ (mm)	4305	4305	4305
	4.7 Height overheadguard (cab): Std / Container	h ₆ (mm)	2120	2120	2120
	4.8 Seat height	h ₇ (mm)	-	-	-
	4.12 Coupling height	h ₁₀ (mm)	-	-	-
	4.19 Overall length	l ₁ (mm)	3266	3311	3353
	4.20 Length to face of forks	l ₂ (mm)	2196	2241	2283
	4.21 Width	b ₁ /b ₂ (mm)	1070	1070	1070
	4.22 Fork dimensions	s/e/l (mm)	40 x 100 x 1070	40 x 100 x 1070	40 x 100 x 1070
	4.23 Fork carriage DIN 15173, A, B		II A	IIA	II A
	4.24 Fork carriage width	b ₃ (mm)	940	940	940
	4.31 Ground clearance minimum, laden 2)	m ₁ (mm)	120	120	120
	4.32 Ground clearance center of wheelbase 2)	m ₂ (mm)	124	124	124
4.34 Stacking aisle for pallets 800x1200 (l ₆ -b ₁₂)		-	-	-	
4.34 Stacking aisle for pallets 1000x1200 (l ₆ -b ₁₂)	A _{st} (mm)	3665	3713	3746	
4.34 Stacking aisle for pallets 1200x800 (l ₆ -b ₁₂)	A _{st} (mm)	-	-	-	
4.35 Turning radius	W _a (mm)	2073	2121	2154	
4.36 Internal turning radius	b ₁₃ (mm)	-	-	-	
Performance	5.1 Travel speed laden/unladen	km/h	18,0 (17,9)/18,4 (18,3)	17,9 (17,9)/18,4 (18,4)	17,9 (17,8)/18,4 (18,5)
	5.2 Lift speed laden/unladen	m/s	0,57/0,61	0,56/0,61	0,54/0,61
	5.3 Lowering speed laden/unladen	m/s	0,47/0,43	0,47/0,43	0,47/0,43
	5.6 Max. drawbar pull laden/unladen	N	17387 (15495)/10787	17456 (15473)/10787	17503 (15642)/9807
	5.8 Max. gradeability laden 4) /unladen 5)	%	45,6 (39,1)/21,1 (20,9)	39,4 (34,5)/19,8 (18,6)	37,0 (32,6)/17,1 (17,1)
	5.9 Acceleration time laden/unladen (0 - 15 m)	s	-/-	-/-	-/-
	5.10 Service brake		hydraulic	hydraulic	hydraulic
	7.1 Manufacturer / Type		MMC 4G63	MMC 4G63	MMC 4G63
	7.2 Rated output acc. DIN 70 020	kW	34,2 (28,5)	34,2 (28,5)	34,2 (28,5)
	7.3 Rated speed acc. DIN 70 020	min ⁻¹	2600 (2200)	2600 (2200)	2600 (2200)
7.4 No. of cylinders / displacement	/cm ³	4/1997	4/1997	4/1997	
7.5 Fuel consumption acc. VDI-Cycles	Diesel=l/h, L.P.Gas=kg/h	-	-	-	
Miscellaneous	8.1 Type of control		hydrodynamic/continous	hydrodynamic/continous	hydrodynamic/continous
	8.2 Operating pressure for attachments	bar	140	140	140
	8.3 Oil volume for attachments	l/min	-	-	-
	8.4 Sound level, driver's ear 6)	dB (A)	79	79	79
	8.5 Towing coupling, class/type DIN		-	-	-

1) Optional solid tires 2) Listed values can change with other tires and uprights 3) For further lift heights, see upright table 4) 2.0 kph 5) at μ = 0.8
6) Equivalent permanent sound-pressure level L pAeq,T in accordance with DIN EN 12053 7) Without LBR

Diesel engine

according to VDI 2198

All values shown are for standard lift truck with standard equipment. If the truck is supplied with options, values may change. All values given may vary +5% and -10% due to the motor and system tolerances and represent nominal values obtained under typical operating conditions. Specifications for Non-emission limited truck.

1.1 Manufacture (Abbreviation)		CLARK	CLARK	CLARK
Characteristics	1.2 Manufacture's designation	C 15 D	C 18 D	C 20s D
	1.3 Drive Unit Diesel, L.P. Gas	Diesel	Diesel	Diesel
	1.4 Operator type stand on / driver seated	driver seated	driver seated	driver seated
	1.5 Load Capacity / rated load Q (t)	1,5	1,8	2,0
	1.6 Load Center distance c (mm)	500	500	500
	1.8 Load Center distance, centre of drive axle to fork face x (mm)	392	392	392
	1.9 Wheelbase y (mm)	1400	1400	1400
Weight	2.1 Service weight kg	2785	3009	3156
	2.2 Axle loading, laden front / rear kg	3733/552	4166/643	4449/707
	2.3 Axle loading, unladen front / rear kg	1277/1508	1219/1790	1175/1981
Tires, Chassis	3.1 Tire type, P=pneumatic, SE=superelastic, C=cushion 1)	P/P	P/P	P/P
	3.2 Tire size, front	6.50 x 10-12PR	6.50 x 10-12PR	6.50 x 10-12PR
	3.3 Tire size, rear	5.00 x 8-10PR	5.00 x 8-10PR	5.00 x 8-10PR
	3.5 Wheels, number front / rear (x=drive wheels)	2x/2	2x/2	2x/2
	3.6 Tread, front b ₁₀ (mm)	890	890	890
	3.7 Tread, rear b ₁₁ (mm)	890	890	890
	Dimensions	4.1 Tilt of upright / fork carriage, α/β deg	8/8	8/8
4.2 Height, upright lowered h ₁ (mm)		2140	2140	2140
4.3 Freelif h ₂ (mm)		110	110	110
4.4 Lift height 3) h ₃ (mm)		3085	3085	3085
4.5 Height upright extended 7) h ₄ (mm)		4305	4305	4305
4.7 Height overheadguard (cab): Std / Container h ₆ (mm)		2120	2120	2120
4.8 Seat height h ₇ (mm)		-	-	-
4.12 Coupling height h ₁₀ (mm)		-	-	-
4.19 Overall length l ₁ (mm)		3266	3311	3353
4.20 Length to face of forks l ₂ (mm)		2196	2241	2283
4.21 Width b ₁ /b ₂ (mm)		1070	1070	1070
4.22 Fork dimensions s/e/l (mm)		40 x 100 x 1070	40 x 100 x 1070	40 x 100 x 1070
4.23 Fork carriage DIN 15173, A, B		II A	IIA	II A
4.24 Fork carriage width b ₃ (mm)		940	940	940
4.31 Ground clearance minimum, laden 2) m ₁ (mm)		120	120	120
4.32 Ground clearance center of wheelbase 2) m ₂ (mm)		124	124	124
4.34 Stacking aisle for pallets 800x1200 (l ₆ -b ₁₂)		-	-	-
4.34 Stacking aisle for pallets 1000x1200 (l ₆ -b ₁₂) A _{st} (mm)	3665	3713	3746	
4.34 Stacking aisle for pallets 1200x800 (l ₆ -b ₁₂) A _{st} (mm)	-	-	-	
4.35 Turning radius W _a (mm)	2073	2121	2154	
4.36 Internal turning radius b ₁₃ (mm)	-	-	-	
Performance	5.1 Travel speed laden/unladen km/h	17,2/17,9	17,6/17,9	17,4/18,1
	5.2 Lift speed laden/unladen m/s	0,57/0,61	0,56/0,61	0,54/0,61
	5.3 Lowering speed laden/unladen m/s	0,47/0,43	0,47/0,43	0,47/0,43
	5.6 Max. drawbar pull laden/unladen N	14945/10787	15014/10787	15083/9807
	5.8 Max. gradeability laden 4) /unladen 5) %	37,5/20,9	33,2/18,6	31,1/17,1
	5.9 Acceleration time laden/unladen (0 - 15 m) s	-/-	-/-	-/-
	5.10 Service brake	hydraulic	hydraulic	hydraulic
Drive Line	7.1 Manufacturer / Type	Yanmar 4TNV88	Yanmar 4TNV8	Yanmar 4TNV8
	7.2 Rated output acc. DIN 70 020 kW	28,4	28,4	28,4
	7.3 Rated speed acc. DIN 70 020 min ⁻¹	2400	2400	2400
	7.4 No. of cylinders / displacement /cm ³	4/2190	4/2190	4/2190
	7.5 Fuel consumption acc. VDI-Cycles Diesel=l/h, L.P.Gas=kg/h	-	-	-
Miscellaneous	8.1 Type of control	hydrodynamic/continous	hydrodynamic/continous	hydrodynamic/continous
	8.2 Operating pressure for attachments bar	140	140	140
	8.3 Oil volume for attachments l/min	-	-	-
	8.4 Sound level, driver's ear 6) dB (A)	81	81	81
	8.5 Towing coupling, class/type DIN	-	-	-

1) Optional solid tires 2) Listed values can change with other tires and uprights 3) For further lift heights, see upright table 4) 2.0 kph 5) at μ = 0.8
6) Equivalent permanent sound-pressure level L pAeq,T in accordance with DIN EN 12053 7) Without LBR

CLARK GEN2 SERIES pneumatic tire trucks are designed for long life in diverse material handling applications such as bottling, manufacturing, recycling, warehousing and distribution. These LPG and Diesel powered trucks provide very high levels of operator comfort, performance, reliability, ease of service, low noise, and have set the ergonomic standard for operator compartment design in the material handling industry.

Operator Control & Comfort

These trucks feature the well-respected operator compartment design of the Gen2 series, providing a quiet, comfortable and spacious environment for operators of all sizes. The large floor area is free of obstructions, has a thick molded floor mat for comfort and noise abatement and is easily removable with no tools. The large open step area and grab handle on both right and left sides provide convenient entry and exit. Foot controls feature a two-pedal inch-brake system with low height and short travel pedals. Left pedal is for inching and brake operations, right pedal is for service brakes only. Left foot applied parking brake is designed for hand or foot release. Hydraulic control valve levers are cowl-mounted. Directional control is left hand fingertip operated and electrically actuated. Direction reversals are hydraulically cushioned. The vinyl safety seat with retractable seat belt and lateral restraint is proven effective. Six inches (150 mm) of forward and backward adjustment, and separate back and seat cushions with molded bolsters for comfort. A tilt steering column locks in one of six positions and 38° total travel. The small diameter, thick section steering wheel is easily operated with one hand, and positioned slightly left of operator center for comfortable and productive operation with the left hand, while allowing right hand operation of the hydraulic levers. Clamshell hood, direct acting latch and gas strut allow easy access for daily inspections.

Instrument Panel

The instrument panel features a full LED/digital display with visual and audible engine monitoring warnings. Functions being monitored include water temperature, engine oil pressure, transmission oil temperature, ammeter, low LPG fuel and maintenance timer. The state-of-the-art instrument panel incorporates many protection devices for the drive train and electrical system. An automatic engine shutdown system continuously monitors engine oil pressure, engine coolant temperature and transmission oil temperature. Also included is a digital hour meter and neutral start switch. There are warning prompts for the seat belt, parking brake, ignition key, headlights and service engine light. The panel incorporates a diagnostic system to assist with fuel system maintenance and fault indication for the electrical system.

Engine

Featuring a Mitsubishi model 4G63, 2.0 liter (122 c.i.) 4-cylinder overhead cam engine with internal dynamic balancers for reduced vibration and an EPA 2004 compliant LPG fuel system with diagnostics. Camshaft and balancers are cog belt driven. Cast iron deep skirt block with aluminum cylinder head, 5-main bearing crankshaft, hydraulic valve lifters and electronic ignition reduce maintenance requirements. This engine is well known for low maintenance and long service life.

An optional Yanmar model 4TNV88, 2.2 liter (134 c.i.) 4 cylinder Diesel engine with direct injection is also available. Vertical exhaust is standard on Diesel. 2004 EPA compliant, not U.L. listed.

Engine Accessories/Capacities

Trucks are 12-volt negative ground incorporating heavy-duty starter with anti-restart system and 50 amp alternator with integral regulator on LPG and 40 amp on Diesel. Battery is rated at 430 CCA at 0°F (-18°C) on LPG and 630 CCA at 0°F (-18°C) on Diesel. Clean air is achieved by a high capacity air cleaner with raised air inlet. An automatic dirt ejector and air restriction indicator provide extended service life. An optional supplemental safety element and precleaner can easily be added without other changes. Electrical relays and automotive type blade fuses are conveniently located in a covered cowl mounted fuse panel. Moisture resistant electrical connectors and fusible links are located outside the main harness for ease of access. Air and oil filters are easily accessible for service and located to prevent spillage. The hydraulic sump breather remotely located to prevent spillage. All fluid level checks are easy to access. Crankcase capacity with filter is 4.0 qts. (3.8L) on LPG, 6.1 qts. (5.8L) on Diesel. The LPG tank bracket with double straps is designed for 33.5 lb (15.2 kg) tanks. Diesel fuel tank capacity is 11.1 gal. (42 L).

Transaxle

Featuring a CLARK Model TA-12 single-speed, full reversing, powershift transaxle. This rugged and proven CLARK transaxle is an integral unit with high ratio, industrial torque converter, full-floating drive axles and drum/shoe brakes. Equipped with electrically controlled directional control, fully modulated clutch packs and precise inching control system. Test ports, fluid check and full-flow oil filter are easily accessible. An integral oil cooler is located in the open core radiator.

Brakes

Self-energizing, hydraulic-actuated drum and shoe type service brakes. Two-pedal system with integral inching and brake pedal on left side and service brake pedal on the right. Heavy cast iron brake shoes, backing plates and drums with openings for lining inspection and adjustment. All components are asbestos-free. The brakes are accessed by removing the wheel and brake drum. The left foot parking brake pedal actuates service brakes at both drive wheels, with electric transmission interrupt and fingertip release. The transmission is disengaged when the parking brake is applied.

Hydraulics

A single gear driven pump provides fluid for hydraulic functions and steering. The prioritydemand steering system conserves energy by supplying hydraulic fluid on demand-only basis. The hydraulic tank is integral with the truck frame with an in-tank screen, and the in-tank return line filter is easily serviced without spill. A quick-connect pressure port allows convenient pressure checks. All pressure fittings use O-ring face seals for positive sealing. Sump tank capacity is 9.0 gal. (34 L).

Steering

Steering is full hydrostatic with tilt wheel, utilizing a compact axle beam and integral double-acting steer cylinder. High strength spindle assemblies incorporate kingpins and double metal sealed bearings to provide rugged, easily serviced assemblies. The steering linkage uses spherical bearings, double shear link pins and grease fittings. Rubber isolation mounts support the axle, absorb shock and reduce noise.

Upright

CLARK designed high visibility uprights are available as standard, Hi-Lo and triple stage in a wide range of lift heights. Upright rails are all-roller operation with canted rollers to accept both normal and side-thrust loads. The ITA Class II fork carriage includes six main rollers and additional side thrust rollers. The load backrest provides excellent visibility. Hydraulic cushioning between stages aids in smooth, quiet operation. Self-lubricating trunion bushings and simplified roller access improve serviceability. A hydraulic tilt lock valve to prevent cavitation; integral flow limiting valves prevent rapid carriage descent in the event of a line failure; and lowering control valves allow faster lowering speeds when empty or with light loads. Tilt cylinders incorporate self-aligning spherical bushings at both ends for extended seal life. Optional hose adaptations provide optimum visibility through the upright.

Additional Features

Single auxiliary valve, two headlights mounted on the overhead guard, and a 48" high load backrest. The auxiliary hydraulic flow can be easily adjusted at the main valve to suit various attachments. With the one-piece hood and quickly removable floorplate, all routine maintenance checkpoints can be easily accessed. An open-core radiator with integral transmission oil cooler is standard. An automatic engine shutdown system protects driveline components. Color is CLARK Green with non-glare matte black trim and white wheels. Tow pin is located in the counterweight. The operator manual is permanently attached in the back of the safety seat.

Available Equipment

Various auxiliary valves and hose adaptations, sideshifters, hydraulic control options, stop/tail/backup lights, rear work light, turn signal lights, strobes, backup alarm, mirrors, convenience console, various seat options, air cleaner safety element, and pre-cleaner.



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