

SERVICE REPAIR

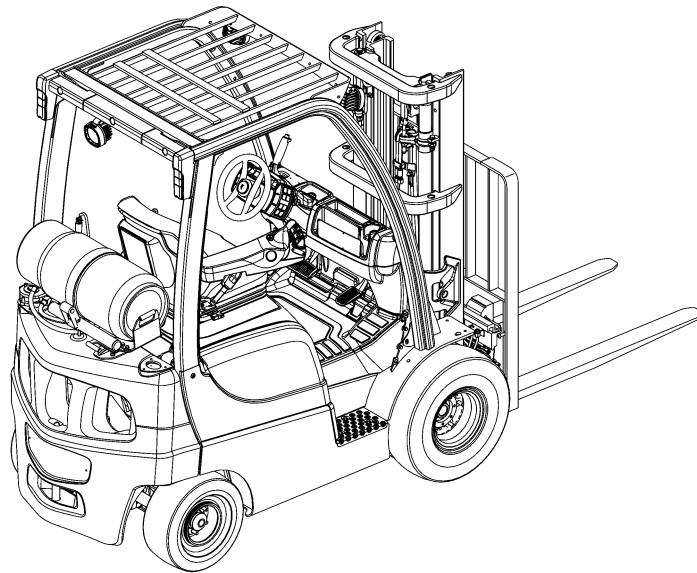
MANUAL

Hyster P177 (H40FT, H50FT, H60FT, H70FT) Forklift
Service Repair Manual

HYSTER

CAPACITIES AND SPECIFICATIONS

**S2.0-3.5FT (S40-70FT, S55FTS) [H187];
H2.0-3.5FT (H40-70FT) [P177]**



HYSTER

SAFETY PRECAUTIONS

MAINTENANCE AND REPAIR

- The Service Manuals are updated on a regular basis, but may not reflect recent design changes to the product. Updated technical service information may be available from your local authorized Hyster® dealer. Service Manuals provide general guidelines for maintenance and service and are intended for use by trained and experienced technicians. Failure to properly maintain equipment or to follow instructions contained in the Service Manual could result in damage to the products, personal injury, property damage or death.
- When lifting parts or assemblies, make sure all slings, chains, or cables are correctly fastened, and that the load being lifted is balanced. Make sure the crane, cables, and chains have the capacity to support the weight of the load.
- Do not lift heavy parts by hand, use a lifting mechanism.
- Wear safety glasses.
- DISCONNECT THE BATTERY CONNECTOR before doing any maintenance or repair on electric lift trucks. Disconnect the battery ground cable on internal combustion lift trucks.
- Always use correct blocks to prevent the unit from rolling or falling. See HOW TO PUT THE LIFT TRUCK ON BLOCKS in the Operating Manual or the Periodic Maintenance section.
- Keep the unit clean and the working area clean and orderly.
- Use the correct tools for the job.
- Keep the tools clean and in good condition.
- Always use HYSTER APPROVED parts when making repairs. Replacement parts must meet or exceed the specifications of the original equipment manufacturer.
- Make sure all nuts, bolts, snap rings, and other fastening devices are removed before using force to remove parts.
- Always fasten a DO NOT OPERATE tag to the controls of the unit when making repairs, or if the unit needs repairs.
- Be sure to follow the WARNING and CAUTION notes in the instructions.
- Gasoline, Liquid Petroleum Gas (LPG), Compressed Natural Gas (CNG), and Diesel fuel are flammable. Be sure to follow the necessary safety precautions when handling these fuels and when working on these fuel systems.
- Batteries generate flammable gas when they are being charged. Keep fire and sparks away from the area. Make sure the area is well ventilated.

NOTE: The following symbols and words indicate safety information in this manual:



WARNING

Indicates a hazardous situation which, if not avoided, could result in death or serious injury.



CAUTION

Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury and property damage.

On the lift truck, the **WARNING** symbol and word are on orange background. The **CAUTION** symbol and word are on yellow background.

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This section is for the following models:

S2.0-3.5FT (S40-70FT, S55FTS) [H187];
H2.0-3.5FT (H40-70FT) [P177]

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Lift Truck Lifting Capacity

Model	Weight
S2.0 (S40FT) (H187) H2.0 (H40FT) (P177)	1814 kg (4000 lb)
S2.5FT (S50FT) (H187) H2.5FT (H50FT) (P177)	2268 kg (5000 lb)
S55FTS (H187)	2495 kg (5500 lb)
S3.0FT (S60FT) (H187) H3.0FT (H60FT) (P177)	2722 kg (6000 lb)
S3.5FT (S70FT) (H187) H3.5FT (H70FT) (P177)	3175 kg (7000 lb)
NOTE: Load center at 500 mm (24 in.).	

Counterweight Weights

Model	Model
S2.0FT (S40FT) (H187)	1040 kg (2293 lb)
S2.5FT (S50FT) (H187)	1395 kg (3075 lb)
S55FTS (H187)	1643 kg (3622 lb)
S3.0FT (S60FT) (H187)	1819 kg (4010 lb)
S3.5FT (S70FT) (H187)	2153 kg (4747 lb)
H2.0FT (H40FT) (P177)	996 kg (2196 lb)
H2.5FT (H50FT) (P177)	1340 kg (2954 lb)
H3.0FT (H60FT) (P177)	1666 kg (3672 lb)
H3.5FT (H70FT) (P177)	1967 kg (4336 lb)



Tire Sizes



Truck	Drive Tires	Steer Tires
S2.0-2.5FT (S40-50FT) (H187)	21 × 7 × 15	16 × 5 × 10.5
S3.0FT (S55FTS-60FT) (H187)	21 × 8 × 15	16 × 6 × 10.5
S3.5FT (S70FT) (H187)	21 × 9 × 15	16 × 6 × 10.5
H2.0-2.5FT (H40-50FT) (P177)	7.00 x 12	6.00 x 9
H2.0-3.5FT (H40-70FT) (P177)	28 x 9	6.50 x 10




Capacities

Item	Quantity	Specifications
Fuel Capacity		
Gas*	52.8 liter (13.9 gal)	86 Octane - Gasoline Mini- mum
LPG	29.9 liter (7.9 gal) 15.2 kg (33.5 lb)	LPG-HD 5, HD 10
Yanmar Diesel H2.0-3.5FT (H40-70FT) (P177) Trucks Only	52.0 liter (13.7 gal)	Diesel No. 2
Kubota 2.4L Diesel H2.0-3.5FT (H40-70FT) (P177) Trucks Only	52.0 liter (13.7 gal)	Ultra-Low Sul- fur ≤ 15 ppm Diesel No. 2
Engine Oil (With Oil Filter)		
PSI 2.4L - Gas* and LPG	4.9 liter (5.2 qt)	-7°C (20°F) and be- low SAE 5W-20 16°C (60 °F) and be- low SAE 5W-30 -18°C (0°F) and above SAE 10W-30 API SL ILSAC GF3 SAE J2362
Kubota 2.5L - LPG	6.6 liter (7.0 qt)	All Temperatures SAE 10W-30 API SL ILSAC GF3 SAE J2362

Item	Quantity	Specifications
Yanmar 2.6L, 3.0L**, and 3.3L - Diesel	10.2 liter (10.8 qt)	20°C (68°F) and over SAE 40 10 to 30°C (50 to 86°F) SAE 30 0 to 20°C (32 to 68°F) SAE 20 -16 to 40°C (3 to 104°F) SAE 15W-40 -20 to 30°C (-4 to 86°F) SAE 10W-30 -10 to 10°C (14 to 50°F) SAE 20W -20 to 10°C (-4 to 50°F) SAE 10W API CG-4 or Better
Kubota 2.4L - Diesel	9.5 liter (10.0 qt)	-10°C (14°F) and above SAE 15W-40 -10°C (14°F) and below SAE 10W-30 API CJ-4 Only

Item	Quantity	Specifications
Cooling System		
PSI 2.4L	11.0 liter (11.6 qt)	 <p>CAUTION Additives may damage the cooling system. Before using additives, contact your local Hyster dealer. Use Ethylene Glycol Boron-free Antifreeze. Purchase a pre-diluted 50/50 solution; or mix 50% concentrate with 50% distilled water or deionized water.</p>
PSI 2.4L With Air Oil Cooler	10.6 liter (11.2 qt)	 <p>CAUTION Additives may damage the cooling system. Before using additives, contact your local Hyster dealer. Use Ethylene Glycol Boron-free Antifreeze. Purchase a pre-diluted 50/50 solution; or mix 50% concentrate with 50% distilled water or deionized water.</p>

Item	Quantity	Specifications
Kubota 2.5L LPG	10.6 liter (11.2 qt)	 CAUTION Additives may damage the cooling system. Before using additives, contact your local Hyster dealer. Use Ethylene Glycol Boron-free Antifreeze. Purchase a pre-diluted 50/50 solution; or mix 50% concentrate with 50% distilled water or deionized water.
Yanmar Diesel	11.5 liter (12.1 qt)	 CAUTION Additives may damage the cooling system. Before using additives, contact your local Hyster dealer. Use Ethylene Glycol Boron-free Antifreeze. Purchase a pre-diluted 50/50 solution; or mix 50% concentrate with 50% distilled water or deionized water.

Item	Quantity	Specifications
Kubota 2.4L Diesel	10.5 liter (11.1 qt)	 CAUTION Additives may damage the cooling system. Before using additives, contact your local Hyster dealer. Use Ethylene Glycol Boron-free Antifreeze. Purchase a pre-diluted 50/50 solution; or mix 50% concentrate with 50% distilled water or deionized water.
Hydraulic Tank Oil Capacity		
S2.0-3.5FT (S40-70FT, S55FTS) (H187)	36.1 liter (38.1 qt) Initial Fill 30.1 liter (32.0 qt) Drain and Fill	 CAUTION Additives may damage the hydraulic system. Before using additives, contact your local Hyster dealer. ISO VG-46 Hydraulic Oil -15°C (5°F) and above
H2.0-3.5FT (H40-70FT) (P177)	45.8 liter (48.4 qt) Initial Fill 39.8 liter (42.0 qt) Drain and Fill	 CAUTION Additives may damage the hydraulic system. Before using additives, contact your local Hyster dealer. ISO VG-46 Hydraulic Oil -15°C (5°F) and above

Item	Quantity	Specifications
Transmission - Aluminum Housing		
Single Speed PS Transmission	13 liter (14.0 qt)	John Deere JDM J20C
DuraMatch Transmission	13 liter (14.0 qt)	John Deere JDM J20C
Transmission - Iron Housing		
Basic PS Transmission	20 liter (21.0 qt)	John Deere JDM J20C
DuraMatch Transmission	20 liter (21.0 qt)	John Deere JDM J20C
Brake Fluid (Dry Brake) Master Cylinder	0.25 liter (0.53 pt)	SAE J-1703, DOT 3
Brake Oil (Wet Brake) Master Cylinder	0.35 liter (0.74 pt)	Dexron III
Differential and Drive Axle Oil (Dry Brake) S2.0-3.5FT (S40-70FT, S55FTS) (H187)	5.0 liter (5.3 qt)	SAE 80W-90 or 85W-140
Differential and Drive Axle Oil (Dry Brake) H2.0-3.5FT (H40-70FT) (P177)	6.5 liter (6.9 qt)	SAE 80W-90 or 85W-140
Drive Axle (Wet Brake)		
Planetary Housing, Left Side H2.0-3.5FT (H40-70FT) (P177)	0.5 liter (0.5 qt)	SAE 80W-90
Planetary Housing, Right Side H2.0-3.5FT (H40-70FT) (P177)	2.0 liter (2.1 qt)	SAE 80W-90
Wet Brake Portion Of Drive Axle Center Section H2.0-3.5FT (H40-70FT) (P177)	1.0 liter (1.1 qt)	John Deere JDM J20C
*Gas fuel used only on lift truck models S40FT, S50FT, S55FTS, S60FT, S70FT (H187) and H40FT, H50FT, H60FT, H70FT (P177).		
**Yanmar 3.0L diesel engine used only on lift truck models H2.0FT, H2.5FT, H3.0FT, H3.5FT (P177).		

Electrical System

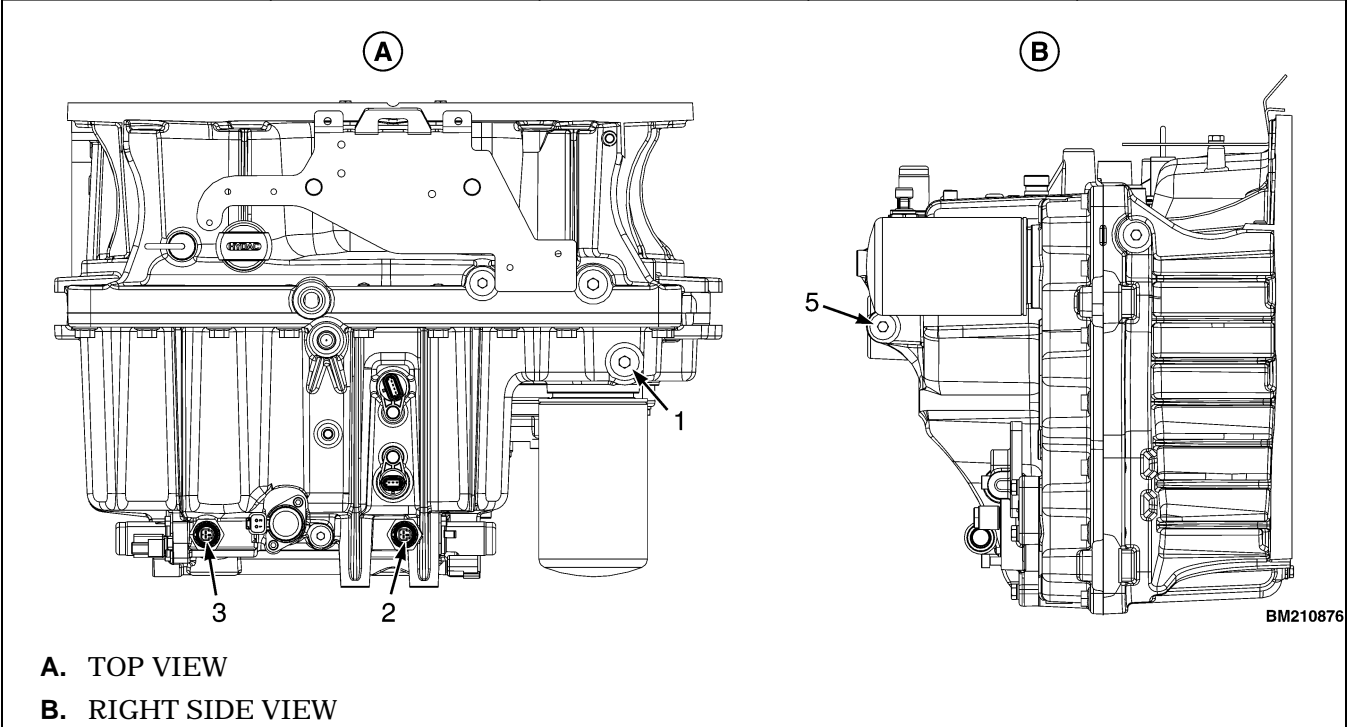
Item	PSI 2.4L	Kubota 2.5L	Yanmar	Kubota 2.4L
Battery	12-volt, negative ground	12-volt, negative ground	12-volt, negative ground	12-volt, negative ground
Spark Plugs	TORCH DK7RTC	N/A	N/A	N/A
Spark Plugs Standard	N/A	NKG BKR6EiX	N/A	N/A
Spark Plugs Long-life	N/A	NKG 1FR6F8DN	N/A	N/A
Spark Plug Gap	0.9 mm (0.035 in.)	0.7 to 0.8 mm (0.028 to 0.032 in.)	N/A	N/A
Ignition Timing:				
Dual Fuel	Not Adjustable - Coil Over Plug Ignition System	N/A	N/A	N/A
LPG	Not Adjustable - Coil Over Plug Ignition System	0.52 rad (30 °) before T.D.C. / 2700 min-1 (rpm) 0.23 rad (13 °) before T.D.C. / 700 min-1 (rpm)	N/A	N/A
Diesel	N/A	N/A	2.6L engine preset @ 4° ATDC 3.3L engine preset @ 6° ATDC 3.0 L engine preset @ 4.5° ATDC	Not Adjustable

PSI 2.4L		
Alternator Output (14 Volts)	Dual Fuel	
	Cold	Stabilized
Idle	35 amps @ 800 rpm	28 amps @ 800 rpm
High Idle	62 amps @ 2700 rpm	50 amps @ 2700 rpm
Kubota 2.5L		
Alternator Output (14 Volts)	LPG	
Idle	20 amps @ 800 rpm	
High Idle	80 amps @ 2500 rpm - 25°C (77°F) Ambient Temperature 65 amps @ 2500 rpm - Maximum Operating Temperature	
Yanmar		
Alternator Output (13.5 Volts)	D	DS
	2.6L	
Low Idle	14 amps @ 825 rpm	20 amps @ 825 rpm
High Idle	57 amps @ 2700 rpm	45 amps @ 2700 rpm
	3.0L	
Low Idle	14 amps @ 825 rpm	20 amps @ 825 rpm
High Idle	53 amps @ 2450 rpm	41 amps @ 2450 rpm
	3.3L	
Low Idle	14 amps @ 825 rpm	20 amps @ 825 rpm
High Idle	56 amps @ 2600 rpm	44 amps @ 2600 rpm
Kubota 2.4L		
Alternator Output (12 Volts)	D	
Idle	20 amps @ 800 rpm	
High Idle	80 amps @ 2400 rpm - 25°C (77°F) Ambient Temperature 65 amps @ 2400 rpm - Maximum Operating Temperature	

Transmission Oil Pressures

1-Speed Transmission - Aluminum Housing All Pressures at 2000 rpm and Oil at 18 to 65°C (65 to 150°F)

Port 1 Transmission Pump		Port 2	Port 3	Port 5
***Low Pressure	High Pressure	Reverse Clutch	Forward Clutch	Lubrication
1089 ±69* kPa (158 ±10 psi)	1241 ±138* kPa (180 ±20 psi)	983 ±58** kPa (142.5 ±8.5 psi)	983 ±58** kPa (142.5 ±8.5 psi)	62 ±41 kPa (9 ±6 psi)

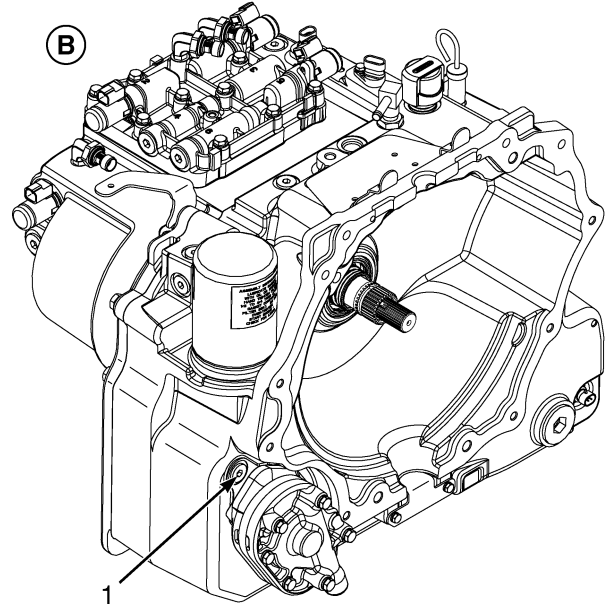
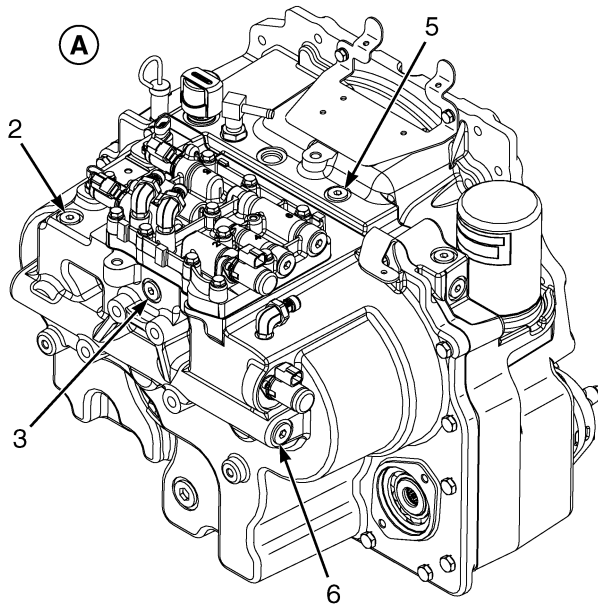


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*Relief Pressure **Clutch pack pressure difference between the forward and reverse packs cannot exceed manufacturing limit of 48 kPa (7 psi) or service limit of 70 kPa (10 psi).

***Low pressure at 800 rpm and oil at 27 to 32°C (80 to 90°F).

2-Speed Transmission All Pressures at 2500 rpm and Oil at 50 to 65°C (120 to 150°F)				
Port 1	Port 2	Port 3	Port 5	Port 6
Transmission Pump	Reverse Clutch	Forward Clutch	Torque Converter	Lubrication
1138 ±96* kPa (165 ±14 psi)	983 ±58** kPa (142.5 ±8.5 psi)	983 ±58** kPa (142.5 ±8.5 psi)	738 ±52 kPa (107 ±7.5 psi)	55 ±28 kPa (8 ±4 psi)



A. REAR VIEW
B. FRONT VIEW

BM211322

*Relief Pressure **Clutch pack pressure difference between the forward and reverse packs cannot exceed manufacturing limit of 48 kPa (7 psi) or service limit of 70 kPa (10 psi).

Hydraulic System Relief Pressures

Table 1. Hydraulic Systems With Hydraulic Gear Pump

Item	Specification
Oil Temperature for Setting Relief Pressure	50 to 65°C (122 to 149°F)
Primary Relief Valve Pressure (High Idle)	
S2.0-3.0FT (S40-60FT, S55FTS) (H187) and H2.0-3.0FT (H40-60FT) (P177)	21.37 ±0.48 MPa (3099 ±70 psi)
S3.5FT (S70FT) (H187) and H3.5FT (H70FT) (P177)	23.44 ±0.48 MPa (3400 ±70 psi)
Secondary Relief Valve Pressure (High Idle)	18.0 MPa (2610 psi)

Table 2. Hydraulic Systems With Variable Displacement Pump

Item	Specification
Oil Temperature for Setting Relief Pressure	50 to 65°C (122 to 149°F)
Primary Relief Valve Pressure (High Idle)	
H2.0-3.5FT (P177)	25.0 ±0.50 MPa (3626 ±72.5 psi)
Secondary Relief Valve Pressure (High Idle)	
H2.0-3.5FT (P177)	18.0 MPa (2610 psi)
Maximum Allowable Leakage at 1A Port to Tank	
H2.0FT (P177)	18 cc @ 19.3 MPa (2799 psi)
H2.5-3.5FT (P177)	15.8 cc @ 19.3 MPa (2799 psi)
Variable Displacement Pump used only on lift truck models H2.0-3.5FT (P177)	

Steering System

Item	Quantity
Oil Temperature for Setting Relief Pressure	50 to 65°C (122 to 149°F)
Steering Relief Pressure at 800 rpms - Lift Trucks with Hydraulic Gear Pump	
S2.0-3.0FT (S40-60FT, S55FTS) (H187) and H2.0-3.0FT (H40-60FT) (P177)	11.0 ±0.3 MPa (1595 ±43.5 psi)
S3.5FT (S70FT) (H187) and H3.5FT (H70FT) (P177)	12.0 ±0.3 MPa (1740 ±43.5 psi)
Steering Relief Pressure at 800 rpms - Lift Trucks with Variable Displacement Pump	
H2.0-3.5FT (P177)	12.0 MPa (1740 psi)
Steering Cylinder Stroke	
S2.0-3.5FT (S40-70FT, S55FTS) (H187)	170.3 mm (6.70 in.)

Item	Quantity	
H2.0-3.5FT (H40-70FT) (P177)	161.6 mm (6.4 in.)	
Inside Steering Tire Angle	82°	
Number of Turns to Lock		
S2.0-3.5FT (S40-70FT, S55FTS) (H187)	3.8	
H2.0-3.5FT (H40-70FT) (P177)	3.7	
Turning Radius (± 50 mm NO LOAD)	Outside	Inside
Cushion Tire Trucks		
S2.0FT (S40FT) (H187)	1950	51
S2.5FT (S50FT) (H187)	2000	51
S55FTS (H187)	1937	32
S3.0FT (S60FT) (H187)	2066	32
S3.5FT (S70FT) (H187)	2119	7
Turning Radius (± 50 mm NO LOAD)	Outside	Inside
Pneumatic Tire Trucks		
H2.0FT (H40FT) (P177)	2150	50
H2.5FT (H50FT) (P177)	2216	50
H3.0FT (H60FT) (P177)	2277	25
H3.5FT (H70FT) (P177)	2380	54

Stall Speeds (in RPM ± 100 rpm)

PSI 2.4L

Engine	New Engine	Broken-In Engine
Gas	2044	2100
LPG	2095	2190

KUBOTA 2.5L

Engine	New Engine	Broken-In Engine
LPG	2025	2075

YANMAR 2.6L

Engine	New Engine	Broken-In Engine*
Diesel	1752	1845
*30 or more hours.		

YANMAR 3.0L

Engine	New Engine	Broken-In Engine*
Diesel	1900	2000
*30 or more hours.		

YANMAR 3.3L

Engine	New Engine	Broken-In Engine*
Diesel	2149	2263
*30 or more hours.		

KUBOTA 2.4L

Engine	New Engine	Broken-In Engine*
Diesel	2025	Power Mode 2160 ECO Mode 1760
*30 or more hours.		

Mast Speeds

NOTE: Lift speed is measured in meters/sec at governed engine RPM with full open valve and 65°C (149°F) oil temperature.

Plus or minus 10% acceptable lifting or lowering.

Lowering speed is measured in meters/sec with full open valve and 65°C (149°F) oil temperature.

Table 3. Lift Truck Models S2.0-3.5FT (S40-70FT, S55FTS) (H187)

Engine/ Model	Mast	Lowering M/Sec		Lifting M/Sec					
		No Load	Rated Load	No Load	S2.0FT (S40FT)	S2.5FT (S50FT)	S55FTS	S3.0FT (S60FT)	S3.5FT (S70FT)
PSI 2.4L S2.0-2.5FT (S40-55FT, S55FTS)	2-Stage LFL	0.50	0.58	0.63	0.61	0.61	0.61	N/A	N/A
	2-Stage FFL	0.42	0.50	0.56	0.54	0.54	0.54	N/A	N/A
	3-Stage FFL	0.47	0.54	0.59	0.57	0.57	0.57	N/A	N/A
	4-Stage FFL	0.37	0.55	0.63	0.61	0.61	0.61	N/A	N/A

Table 3. Lift Truck Models S2.0-3.5FT (S40-70FT, S55FTS) (H187) (Continued)

Engine/ Model	Mast	Lowering M/Sec		Lifting M/Sec					
		No Load	Rated Load	No Load	S2.0FT (S40FT)	S2.5FT (S50FT)	S55FTS	S3.0FT (S60FT)	S3.5FT (S70FT)
PSI 2.4L S3.0-3.5FT (S60-70FT)	2-Stage LFL	0.47	0.53	0.55	N/A	N/A	N/A	0.53	0.53
	2-Stage FFL	0.42	0.50	0.54	N/A	N/A	N/A	0.52	0.52
	3-Stage FFL	0.48	0.58	0.53	N/A	N/A	N/A	0.51	0.51
	4-Stage FFL	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Kubota 2.5L* S2.0-2.5FT (S40-55FT, S55FTS)	2-Stage LFL	0.50	0.58	0.64	0.62	0.61	N/A	N/A	N/A
	2-Stage FFL	0.42	0.50	0.57	0.54	0.55	N/A	N/A	N/A
	3-Stage FFL	0.47	0.54	0.61	0.58	0.57	N/A	N/A	N/A
Kubota 2.5L* S3.0-3.5FT (S60-70FT)	2-Stage LFL	0.47	0.53	0.56	N/A	N/A	N/A	0.51	0.45
	2-Stage FFL	0.42	0.50	0.54	N/A	N/A	N/A	0.50	0.46
	3-Stage FFL	0.48	0.58	0.53	N/A	N/A	N/A	0.50	0.46

*The information in the table is for a lift truck equipped with standard mode Kubota 2.5L engine with a fixed displacement pump.

Table 4. Lift Truck Models H2.0-3.5FT (H40-70FT) (P177)

Engine/ Model	Mast	Lowering M/Sec		Lifting M/Sec				
		No Load	Rated Load	No Load	H2.0FT (H40FT)	H2.5FT (H50FT)	H3.0FT (H60FT)	H3.5FT (H70FT)
PSI 2.4L H2.0-2.5FT (H40-50FT)	2-Stage LFL	0.50	0.58	0.63	0.61	0.61	N/A	N/A
	2-Stage FFL	0.42	0.50	0.57	0.55	0.55	N/A	N/A
	3-Stage FFL	0.47	0.54	0.60	0.58	0.58	N/A	N/A
PSI 2.4L H3.0-3.5FT (H60-70FT)	2-Stage LFL	0.47	0.53	0.56	N/A	N/A	0.54	0.54

Table 4. Lift Truck Models H2.0-3.5FT (H40-70FT) (P177) (Continued)

Engine/ Model	Mast	Lowering M/Sec		Lifting M/Sec				
		No Load	Rated Load	No Load	H2.0FT (H40FT)	H2.5FT (H50FT)	H3.0FT (H60FT)	H3.5FT (H70FT)
	2-Stage FFL	0.42	0.50	0.52	N/A	N/A	0.52	0.52
	3-Stage FFL	0.44	0.58	0.54	N/A	N/A	0.52	0.52
Kubota 2.5L* H2.0-2.5FT (H40-50FT)	2-Stage LFL	0.50	0.58	0.64	0.62	0.61	N/A	N/A
	2-Stage FFL	0.42	0.50	0.57	0.54	0.55	N/A	N/A
	3-Stage FFL	0.47	0.54	0.61	0.58	0.57	N/A	N/A
Kubota 2.5L* H3.0-3.5FT (H60-70FT)	2-Stage LFL	0.47	0.53	0.56	N/A	N/A	0.51	0.45
	2-Stage FFL	0.42	0.50	0.54	N/A	N/A	0.50	0.46
	3-Stage FFL	0.48	0.58	0.53	N/A	N/A	0.50	0.46
*The information in the table is for a lift truck equipped with standard mode Kubota 2.5L engine with a fixed displacement pump.								
**Information applies to lift truck models H60FT								
***Information applies to lift truck models H3.0FT								

Table 5. Kubota 2.5L LPG Engine With Fixed Displacement Pump

Engine Mode/ Model	Mast	Lowering M/Sec		Lifting M/Sec				
		No Load	Rated Load	No Load	S/H2.0FT (S/H40FT)	S/H2.5FT (S/H50FT)	S/H3.0FT (S/H60FT)	S/H3.5FT (S/H70FT)
Power Mode (Mode 2) S/H2.0-2.5FT (S/H40-50FT)	2-Stage LFL	0.50	0.58	0.64	0.62	0.63	N/A	N/A
	2-Stage FFL	0.42	0.50	0.57	0.54	0.55	N/A	N/A
	3-Stage FFL	0.47	0.54	0.61	0.58	0.58	N/A	N/A

Table 5. Kubota 2.5L LPG Engine With Fixed Displacement Pump (Continued)

Engine Mode/ Model	Mast	Lowering M/Sec		Lifting M/Sec				
		No Load	Rated Load	No Load	S/H2.0FT (S/ H40FT)	S/H2.5FT (S/ H50FT)	S/H3.0FT (S/ H60FT)	S/H3.5FT (S/ H70FT)
Power Mode (Mode 2) S/H3.0-3.5FT (S/H60-70FT)	2- Stage LFL	0.47	0.53	0.56	N/A	N/A	0.55	0.57
	2- Stage FFL	0.42	0.50	0.54	N/A	N/A	0.53	0.54
	3- Stage FFL	0.48	0.58	0.53	N/A	N/A	0.51	0.52
ECO Mode S/H2.0-2.5FT (S/H40-50FT)	2- Stage LFL	0.50	0.58	0.59	0.52	0.50	N/A	N/A
	2- Stage FFL	0.42	0.50	0.52	0.46	0.45	N/A	N/A
	3- Stage FFL	0.47	0.54	0.56	0.49	0.48	N/A	N/A
ECO Mode S/H3.0-3.5FT (S/H60-70FT)	2- Stage LFL	0.47	0.53	0.51	N/A	N/A	0.43	0.42
	2- Stage FFL	0.42	0.50	0.50	N/A	N/A	0.42	0.41
	3- Stage FFL	0.48	0.58	0.49	N/A	N/A	0.41	0.40

Table 6. Kubota 2.5L LPG Engine With Variable Displacement Pump

Engine Mode/ Model	Mast	Lowering M/Sec		Lifting M/Sec				
		No Load	Rated Load	No Load	S/H2.0FT (S/ H40FT)	S/H2.5FT (S/ H50FT)	S/H3.0FT (S/ H60FT)	S/H3.5FT (S/ H70FT)
Power Mode (Mode 2) S/H2.0-2.5FT (S/H40-50FT)	2- Stage LFL	0.50	0.58	0.61	0.58	0.57	N/A	N/A
	2- Stage FFL	0.42	0.50	0.54	0.52	0.51	N/A	N/A
	3- Stage FFL	0.47	0.54	0.57	0.55	0.54	N/A	N/A
Power Mode (Mode 2) S/H3.0-3.5FT (S/H60-70FT)	2- Stage LFL	0.47	0.53	0.53	N/A	N/A	0.49	0.48
	2- Stage FFL	0.42	0.50	0.52	N/A	N/A	0.48	0.47
	3- Stage FFL	0.48	0.58	0.50	N/A	N/A	0.47	0.46
ECO Mode S/H2.0-2.5FT (S/H40-50FT)	2- Stage LFL	0.50	0.58	0.55	0.48	0.44	N/A	N/A
	2- Stage FFL	0.42	0.50	0.49	0.44	0.42	N/A	N/A
	3- Stage FFL	0.47	0.54	0.52	0.46	0.43	N/A	N/A
ECO Mode S/H3.0-3.5FT (S/H60-70FT)	2- Stage LFL	0.47	0.53	0.48	N/A	N/A	0.38	0.35
	2- Stage FFL	0.42	0.50	0.47	N/A	N/A	0.38	0.35
	3- Stage FFL	0.48	0.58	0.46	N/A	N/A	0.37	0.35

Table 6. Kubota 2.5L LPG Engine With Variable Displacement Pump (Continued)

Engine Mode/ Model	Mast	Lowering M/Sec		Lifting M/Sec				
		No Load	Rated Load	No Load	S/H2.0FT (S/ H40FT)	S/H2.5FT (S/ H50FT)	S/H3.0FT (S/ H60FT)	S/H3.5FT (S/ H70FT)
Standard Mode (Mode 1) S/H2.0-2.5FT (S/H40-50FT)	2- Stage LFL	0.50	0.58	0.61	0.58	0.53	N/A	N/A
	2- Stage FFL	0.42	0.50	0.54	0.52	0.50	N/A	N/A
	3- Stage FFL	0.47	0.54	0.57	0.55	0.52	N/A	N/A
Standard Mode (Mode 1) S/H3.0-3.5FT (S/H60-70FT)	2- Stage LFL	0.47	0.53	0.53	N/A	N/A	0.45	0.41
	2- Stage FFL	0.42	0.50	0.52	N/A	N/A	0.46	0.42
	3- Stage FFL	0.48	0.58	0.50	N/A	N/A	0.45	0.41

Table 7. Kubota 2.4L Diesel Engine with Fixed Displacement Pump

Engine Mode/ Model	Mast	Lowering M/Sec		Lifting M/Sec				
		No Load	Rated Load	No Load	H2.0FT (H40FT)	H2.5FT (H50FT)	H3.0FT (H60FT)	H3.5FT (H70FT)
Power Mode (Mode 1) H2.0-2.5FT (H40-50FT)	2-Stage LFL	0.50	0.58	0.64	0.62	0.61	N/A	N/A
	2-Stage FFL	0.42	0.50	0.59	0.56	0.56	N/A	N/A
	3-Stage FFL	0.47	0.54	0.63	0.61	0.61	N/A	N/A