

LIFT TRUCK ELECTRONIC SALES MANUAL



GP15N-GP35N/DP15N-DP35N 3,000 lb. – 7,000 lb. Capacity IC Pneumatic Forklifts

Last updated on 15 December 2014

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ABOUT THIS LIFT TRUCK SALES MANUAL

Your Single Source For All Model-Related Selling Information

This document is **your SINGLE SOURCE of all data** needed to support your efforts to sell this product. It combines all “sales technical” data from available Price Pages (excluding prices), Sales Brochures, Mast Tables, and any other product-related information into this sole document.

IF YOU CAN'T FIND YOUR DESIRED INFORMATION IN THIS DOCUMENT, THEN THE INFORMATION:

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- Has not yet been analyzed and created for publication (and/or)
- Is of a proprietary nature (and/or)
- Has not been identified as relevant or missed due to human error (see below ¹)

At the time of this publication, there are 30+ model families that either have or will have Lift Truck Sales Manuals associated with them. They are constantly being updated to provide you with the most comprehensive information for our products and improved to enable faster location of the information you seek.

Please note that this model's **Operation & Maintenance Manual (OMM)**, **Service Manual (SM)**, and **Parts Manual (PM)** will have additional information relating to their respective subject matter.

Your Participation To Improve This Document & Who To Contact

MCFA NEEDS YOUR HELP to make this the best single source of product selling information available to you and your fellow sales associates.

¹ If there is information you consistently need to enable you to sell lift trucks and you have not been able to find it in this document, please let MCFA know!

The MCFA Product Marketing group is responsible for creating this publication. You can contact them in the following ways:

- **e-Mail** – <mailto:sales.training@mcfa.com> (click on address to create e-mail)
- **Phone** – Via MCFA LiftCentral® at (877) 543-6757

The MCFA Product Marketing group thanks you in advance for your active participation!

How To Find Information

We realize that finding information **FAST** is the key for you to address your customer's needs or questions.

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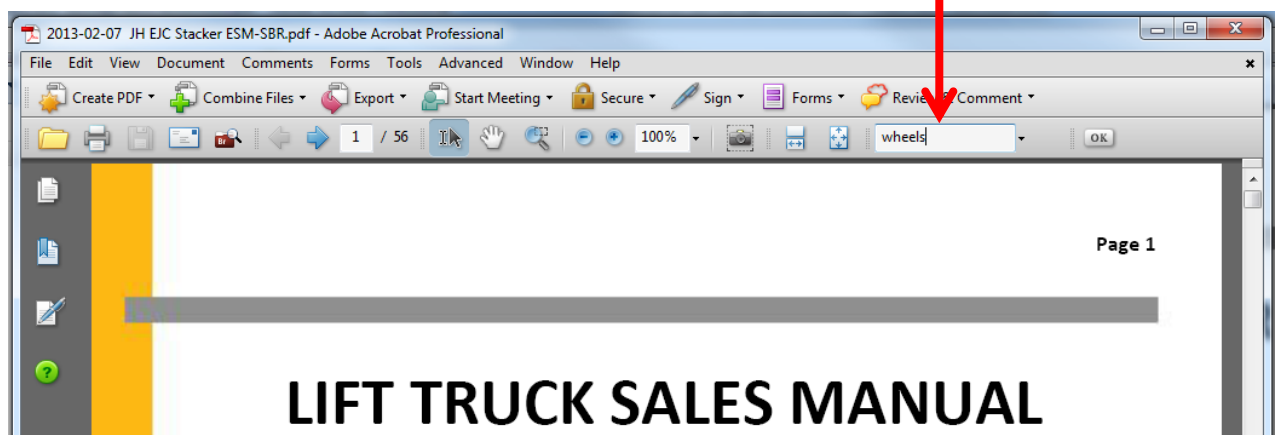
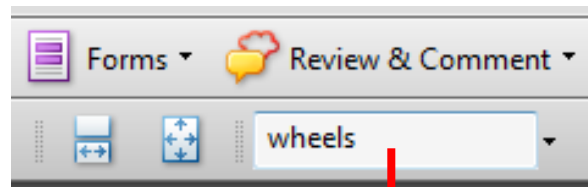
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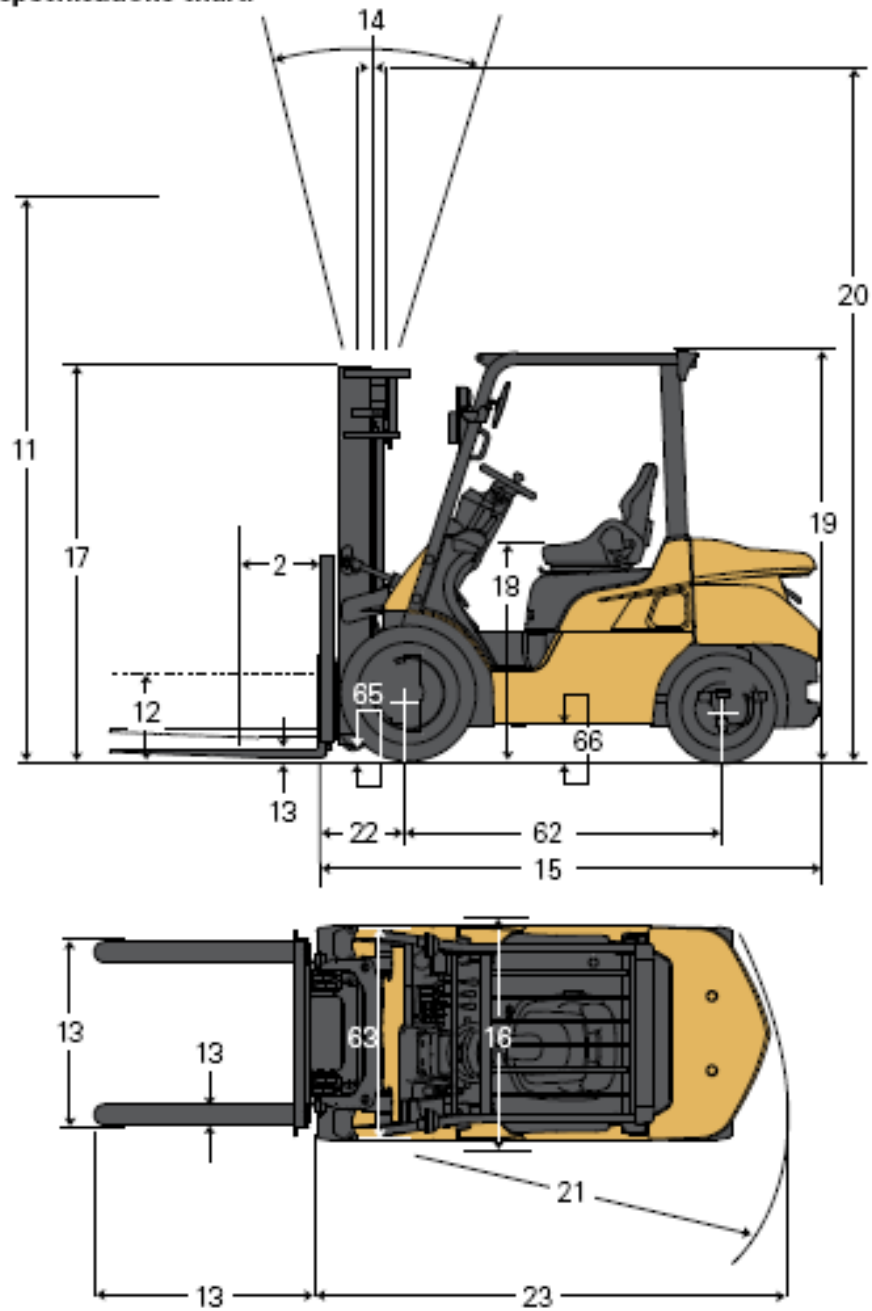
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SPECIFICATIONS

Line Art

Call-out numbers shown in the diagram correspond to the first column of the specifications chart.



Primary Specifications

Characteristics			GP15N		GP18N		GP20CN		GP20N		DP20N		
1	Capacity at rated load center	lb	kg	3,000	1,500	3,500	1,750	4,000	2,000	4,000	2,000	4,000	2,000
2	Capacity at load center – distance	in	mm	24	500	24	500	24	500	24	500	24	500
3	Power – electric, diesel, gasoline or LP gas	gasoline/LPG		gasoline/LPG		gasoline/LPG		gasoline/LPG		diesel			
4	Tire type – cushion or pneumatic	pneumatic		pneumatic		pneumatic		pneumatic		pneumatic		pneumatic	
5	Wheels (x=driven) – number front / rear	2x / 2		2x / 2		2x / 2		2x / 2		2x / 2		2x / 2	
Dimensions			GP15N		GP18N		GP20CN		GP20N		DP20N		
6	Maximum fork height (top of fork) ¹⁾	in	mm	131	3,325	131	3,325	131	3,325	131.5	3,340	131.5	3,340
7	Free fork height ¹⁾	in	mm	4.5	115	4.5	115	4.7	120	5.5	140	5.5	140
8	Forks – thickness x length x width ¹⁾	in	mm	1.4x42.0x3.9	35x1,070x100	1.4x42.0x3.9	35x1,070x100	1.6x42.0x3.9	40x1,070x100	1.6x42.0x3.9	40x1,070x100	1.6x42.0x3.9	40x1,070x100
9	Fork spacing – out-to-out minimum / maximum	in	mm	79 / 36.2	200 / 920	79 / 36.2	200 / 920	79 / 36.2	200 / 920	8.7 / 39.4	220 / 1,000	8.7 / 39.4	220 / 1,000
10	Tilt – forward / backward	deg		6° / 10°		6° / 10°		6° / 10°		6° / 10°		6° / 10°	
11	Length to fork face	in	mm	89.0	2,260	90.4	2,295	92.5	2,350	98.0	2,490	98.0	2,490
12	Width – with single drive tires	in	mm	41.9	1,065	41.9	1,065	41.9	1,065	45.3	1,150	45.3	1,150
13	Width – with dual drive tires			-		-		-		64.6		64.6	
14	Height – with lowered mast ¹⁾	in	mm	84.5	2,140	84.5	2,140	84.5	2,140	84.5	2,145	84.5	2,145
15	Seat height to SIP	in	mm	44.4	1,127	44.4	1,127	44.4	1,127	44.8	1,137	44.8	1,137
16	Height – to top of overhead guard	in	mm	82.7	2,100	82.7	2,100	82.7	2,100	82.9	2,105	82.9	2,105
17	Height – with extended mast ¹⁾	in	mm	179	4,549	179	4,549	179	4,549	180	4,564	180	4,564
18	Minimum outside turning radius	in	mm	76.8	1,950	78.0	1,980	79.5	2,020	86.6	2,200	86.6	2,200
19	Load moment constant	in	mm	15.7	400	15.7	400	16.3	415	17.9	455	17.9	455
20	Minimum aisle – 90° stack – zero clearance without a load	in	mm	92.5	2,350	93.7	2,380	95.9	2,435	105	2,655	105	2,655
Performance			GP15N		GP18N		GP20CN		GP20N		DP20N		
21	Travel speed – loaded / empty	mph	km/h	10.9 / 11.8	17.5 / 19.0	10.9 / 11.8	17.5 / 19.0	11.2 / 11.5	18.0 / 18.5	10.6 / 11.5	17.0 / 18.5	10.3 / 11.2	16.5 / 18.0
22	Lift speed – loaded / empty	fpm	m/s	122 / 124	0.62 / 0.63	122 / 124	0.62 / 0.63	122 / 124	0.62 / 0.63	124 / 128	0.63 / 0.65	120 / 126	0.61 / 0.64
23	Lowering speed – loaded / empty	fpm	m/s	98.4 / 98.4	0.50 / 0.50	98.4 / 98.4	0.50 / 0.50	98.4 / 98.4	0.50 / 0.50	98.4 / 98.4	0.50 / 0.50	98.4 / 98.4	0.50 / 0.50
24	Drawbar pull – loaded at 1 mph (1.6 km)	lb	N	3,910	17,400	3,910	17,400	3,870	17,200	4,920	21,900	3,960	17,600
25	Drawbar pull – loaded maximum	lb	N	4,560	20,300	4,560	20,300	4,500	20,000	5,640	25,100	4,520	20,100
26	Gradeability – loaded at 1 mph (1.6 km)	%		39.0		39.0		38.0		39.0		36.0	
27	Gradeability – maximum loaded	%		63.0		55.0		46.0		57.0		42.0	
Weight			GP15N		GP18N		GP20CN		GP20N		DP20N		
28	Empty	lb	kg	5,650	2,560	6,070	2,750	6,750	3,040	7,370	3,340	7,610	3,450
29	Axle load – with rated load front / rear	lb	kg	7,710 / 940	3,620 / 440	8,460 / 1,110	3,980 / 520	9,370 / 1,360	4,390 / 650	9,950 / 1,420	4,660 / 685	10,060 / 1,550	4,720 / 730
30	Axle load – without load front / rear	lb	kg	2,490 / 3,160	1,130 / 1,430	2,370 / 3,700	1,080 / 1,670	2,390 / 4,360	1,080 / 1,960	3,240 / 4,130	1,470 / 1,870	3,340 / 4,270	1,510 / 1,940
Chassis			GP15N		GP18N		GP20CN		GP20N		DP20N		
31	Tire size – front, standard	in		6.5 x 10 - 10PR		6.5 x 10 - 10PR		6.5 x 10 / 5.0 Solid		70 x 12 - 12PR		70 x 12 - 12PR	
32	Tire size – optional duals	in		-		-		-		70 x 12 - 12PR		70 x 12 - 12PR	
33	Tire size – rear tires	in		5.0 x 8 - 10PR		5.0 x 8 - 10PR		5.0 x 8 / 3.0 Solid		6.0 x 9 - 10PR		6.0 x 9 - 10PR	
34	Wheelbase	in	mm	55.1	1,400	55.1	1,400	55.1	1,400	63.0	1,600	63.0	1,600
35	Tread width – front (standard / optional duals)	in	mm	35.0 / -	890 / -	35.0 / -	890 / -	35.0 / -	890 / -	37.8 / 47.4	960 / 1,205	37.8 / 47.4	960 / 1,205
36	Tread width – rear tires	in	mm	35.4	900	35.4	900	35.4	900	38.6	980	38.6	980
37	Ground clearance – at lowest point at mast	in	mm	4.3	110	4.3	110	4.3	110	4.6	117	4.6	117
38	Ground clearance – at center of wheelbase	in	mm	6.0	152	6.0	152	6.0	152	6.6	167	6.6	167
39	Service brake	foot-operated, hydraulic		foot-operated, hydraulic		foot-operated, hydraulic		foot-operated, hydraulic		foot-operated, hydraulic		foot-operated, hydraulic	
40	Parking brake	hand, mechanical		hand, mechanical		hand, mechanical		hand, mechanical		hand, mechanical		hand, mechanical	
Powertrain			GP15N		GP18N		GP20CN		GP20N		DP20N		
41	Engine model			K21E		K21E		K21E		K25E		4EG	
42	Engine – continuous output S.A.E. gross	HP	kW	53.0	39.6	53.0	39.6	53.0	39.6	61.0	45.8	48.0	36.0
43		at rpm		2,700		2,700		2,700		2,700		2,250	
44	Engine – maximum torque S.A.E. gross	lb-ft	N-m	110	149	110	149	110	149	129	175	131	177
45		at rpm		2,000		2,000		2,000		1,600		1,800	
46	Cylinder / displacement	cu in	L	4 / 126	4 / 2.1	4 / 126	4 / 2.1	4 / 126	4 / 2.1	4 / 152	4 / 2.5	4 / 203	4 / 3.3
47	Transmission – type	powershift		powershift		powershift		powershift		powershift		powershift	
48	Transmission – number of speeds forward / reverse	1 / 1		1 / 1		1 / 1		1 / 1		1 / 1		1 / 1	
49	Battery	volts		12		12		12		12		12	
50	Relief pressure for attachments	psi	bar	2,610	180	2,610	180	2,610	180	2,610	180	2,610	180
51	Noise level – mean value at operator's ear Leq	dB(A)		73.5		73.5		73.5		76.5		75.5	

Characteristics				GP25N		DP25N		GP28N		DP28N	
1	Capacity at rated load center	lb	kg	5,000	2,500	5,000	2,500	5,500	2,800	5,500	2,800
2	Capacity at load center – distance	in	mm	24	500	24	500	24	500	24	500
3	Power – electric, diesel, gasoline or LP gas			gasoline/LPG		diesel		gasoline/LPG		diesel	
4	Tire type – cushion or pneumatic			pneumatic		pneumatic		pneumatic		pneumatic	
5	Wheels (x=driven) – number front / rear			2x / 2		2x / 2		2x / 2		2x / 2	
Dimensions				GP25N		DP25N		GP28N		DP28N	
6	Maximum fork height (top of fork) ¹⁾	in	mm	131.5	3,340	131.5	3,340	130.5	3,315	130.5	3,315
7	Free fork height ¹⁾	in	mm	5.5	140	5.5	140	5.7	145	5.7	145
8	Forks – thickness x length x width ¹⁾	in	mm	1.6x42.0x3.9	40 x 1,070 x 100	1.6x42.0x3.9	40 x 1,070 x 100	1.8x42.0x4.9	45 x 1,070 x 125	1.8x42.0x4.9	45 x 1,070 x 125
9	Fork spacing – out-to-out minimum / maximum	in	mm	8.7 / 39.4	220 / 1,000	8.7 / 39.4	220 / 1,000	9.8 / 39.4	250 / 1,000	9.8 / 39.4	250 / 1,000
10	Tilt – forward / backward	deg		6° / 10°		6° / 10°		6° / 10°		6° / 10°	
11	Length to fork face	in	mm	100	2,550	100	2,550	104	2,645	104	2,645
12	Width – with single drive tires	in	mm	45.3	1,150	45.3	1,150	50.2	1,275	50.2	1,275
13	Width – with dual drive tires			64.6	1,640	64.6	1,640	67.5	1,715	67.5	1,715
14	Height – with lowered mast ¹⁾	in	mm	84.5	2,145	84.5	2,145	85.5	2,165	85.5	2,165
15	Seat height to SIP	in	mm	44.8	1,137	44.8	1,137	46.7	1,187	46.7	1,187
16	Height – to top of overhead guard	in	mm	82.9	2,105	82.9	2,105	83.7	2,125	83.7	2,125
17	Height – with extended mast ¹⁾	in	mm	180	4,564	180	4,564	178.5	4,536	178.5	4,536
18	Minimum outside turning radius	in	mm	87.8	2,230	87.8	2,230	91.1	2,315	91.1	2,315
19	Load moment constant	in	mm	179	455	179	455	19.3	490	19.3	490
20	Minimum aisle – 90° stack – zero clearance without a load	in	mm	106	2,685	106	2,685	110	2,805	110	2,805
Performance				GP25N		DP25N		GP28N		DP28N	
21	Travel speed – loaded / empty	mph	km/h	10.6 / 11.5	17.0 / 18.5	10.3 / 10.9	16.5 / 17.5	10.6 / 11.2	17.0 / 18.0	9.9 / 10.9	16.0 / 17.5
22	Lift speed – loaded / empty	fpm	m/s	124 / 128	0.63 / 0.65	120 / 126	0.61 / 0.64	98.4 / 102	0.50 / 0.52	96.5 / 100	0.49 / 0.51
23	Lowering speed – loaded / empty	fpm	m/s	98.4 / 98.4	0.50 / 0.50	98.4 / 98.4	0.50 / 0.50	98.4 / 98.4	0.50 / 0.50	98.4 / 98.4	0.50 / 0.50
24	Drawbar pull – loaded at 1 mph (1.6 km)	lb	N	4,900	21,800	3,960	17,600	4,990	22,200	3,960	17,600
25	Drawbar pull – loaded maximum	lb	N	5,670	25,200	4,520	20,100	5,800	25,800	4,540	20,200
26	Gradeability – loaded at 1 mph (1.6 km)	%		40.0		31.0		36.0		28.0	
27	Gradeability – maximum loaded	%		49.0		37.0		43.0		32.0	
Weight				GP25N		DP25N		GP28N		DP28N	
28	Empty	lb	kg	7,990	3,620	8,210	3,720	9,090	4,120	9,330	4,230
29	Axle load – with rated load front / rear	lb	kg	11,570 / 1,420	5,450 / 670	11,650 / 1,560	5,490 / 730	12,950 / 1,640	6,100 / 70	13,050 / 1,780	6,150 / 830
30	Axle load – without load front / rear	lb	kg	3,190 / 4,600	1,440 / 2,180	3,260 / 4,950	1,480 / 2,240	3,670 / 5,420	1,660 / 2,460	3,730 / 5,600	1,690 / 2,540
Chassis				GP25N		DP25N		GP28N		DP28N	
31	Tire size – front, standard	in		70 x 12 - 12PR		70 x 12 - 12PR		28 x 9 x 15 - 12PR		28 x 9 x 15 - 12PR	
32	Tire size – optional duals	in		70 x 12 - 12PR		70 x 12 - 12PR		28 x 9 x 15 - 12PR		28 x 9 x 15 - 12PR	
33	Tire size – rear tires	in		6.0 x 9 - 10PR		6.0 x 9 - 10PR		6.5 x 10 - 10PR		6.5 x 10 - 10PR	
34	Wheelbase	in	mm	63.0	1,600	63.0	1,600	63.8	1,620	63.8	1,620
35	Tread width – front (standard / optional duals)	in	mm	37.8 / 47.4	960 / 1,205	37.8 / 47.4	960 / 1,205	41.7 / 47.2	1,060 / 1,200	41.7 / 47.2	1,060 / 1,200
36	Tread width – rear tires	in	mm	38.6	980	38.6	980	38.6	980	38.6	980
37	Ground clearance – at lowest point at mast	in	mm	4.6	117	4.6	117	5.4	136	5.4	136
38	Ground clearance – at center of wheelbase	in	mm	6.6	167	6.6	167	7.4	189	7.4	189
39	Service brake			foot-operated, hydraulic		foot-operated, hydraulic		foot-operated, hydraulic		foot-operated, hydraulic	
40	Parking brake			hand, mechanical		hand, mechanical		hand, mechanical		hand, mechanical	
Powertrain				GP25N		DP25N		GP28N		DP28N	
41	Engine model			K25E		4EG		K25E		4EG	
42	Engine – continuous output S.A.E. gross	HP	kW	61.0	45.8	48.0	36.0	61.0	45.8	48.0	36.0
43		at rpm		2,700		2,250		2,700		2,250	
44	Engine – maximum torque S.A.E. gross	lb-ft	N-m	129	175	131	177	129	175	131	177
45		at rpm		1,600		1,800		1,600		1,800	
46	Cylinder / displacement	cu in	L	4 / 152	4 / 2.5	4 / 203	4 / 3.3	4 / 152	4 / 2.5	4 / 203	4 / 3.3
47	Transmission – type			powershift		powershift		powershift		powershift	
48	Transmission – number of speeds forward / reverse			1 / 1		1 / 1		1 / 1		1 / 1	
49	Battery	volts		12		12		12		12	
50	Relief pressure for attachments	psi	bar	2,610	180	2,610	180	2,610	180	2,610	180
51	Noise level – mean value at operator's ear Leq	dB(A)		76.5		75.5		76.5		75.5	

Characteristics			GP30N		DP30N		GP33N		DP33N		GP35N		DP35N		
1	Capacity at rated load center	lb	kg	6,000	3,000	6,000	3,000	6,500	3,300	6,500	3,300	7,000	3,500	7,000	3,500
2	Capacity at load center – distance	in	mm	24	500	24	500	24	500	24	500	24	500	24	500
3	Power – electric, diesel, gasoline or LP gas	gasoline/LPG		diesel		gasoline/LPG		diesel		gasoline/LPG		diesel			
4	Tire type – cushion or pneumatic	pneumatic		pneumatic		pneumatic		pneumatic		pneumatic		pneumatic			
5	Wheels (x=driven) – number front / rear	2x / 2		2x / 2		2x / 2		2x / 2		2x / 2		2x / 2			
Dimensions			GP30N		DP30N		GP33N		DP33N		GP35N		DP35N		
6	Maximum fork height (top of fork) ¹⁾	in	mm	130.5	3,315	130.5	3,315	131.5	3,350	131.5	3,350	131.5	3,350	131.5	3,350
7	Free fork height ¹⁾	in	mm	5.7	145	5.7	145	5.9	150	5.9	150	5.9	150	5.9	150
8	Forks – thickness x length x width ¹⁾	in	mm	1.8x42.0x4.9	45x1,070x125	1.8x42.0x4.9	45x1,070x125	2.0x42.0x4.9	50x1,070x125	2.0x42.0x4.9	50x1,070x125	2.0x42.0x4.9	50x1,070x125	2.0x42.0x4.9	50x1,070x125
9	Fork spacing – out-to-out minimum / maximum	in	mm	9.8 / 39.4	250 / 1,000	9.8 / 39.4	250 / 1,000	9.8 / 39.4	250 / 1,000	9.8 / 39.4	250 / 1,000	9.8 / 39.4	250 / 1,000	9.8 / 39.4	250 / 1,000
10	Tilt – forward / backward	deg		6° / 10°		6° / 10°		6° / 10°		6° / 10°		6° / 10°		6° / 10°	
11	Length to fork face	in	mm	107	2,720	107	2,720	108	2,750	108	2,750	110	2,790	110	2,790
12	Width – with single drive tires	in	mm	50.2	1,275	50.2	1,275	50.2	1,275	50.2	1,275	50.8	1,290	50.8	1,290
13	Width – with dual drive tires	67.5		1,715		67.5		1,715		67.5		1,715		67.5	
14	Height – with lowered mast ¹⁾	in	mm	86.5	2,165	86.5	2,165	90.5	2,299	90.5	2,299	90.5	2,299	90.5	2,299
15	Seat height to SIP	in	mm	46.7	1,187	46.7	1,187	46.7	1,187	46.7	1,187	46.7	1,187	46.7	1,187
16	Height – to top of overhead guard	in	mm	83.7	2,125	83.7	2,125	83.7	2,125	83.7	2,125	84.3	2,140	84.3	2,140
17	Height – with extended mast ¹⁾	in	mm	178.5	4,536	178.5	4,536	180	4,566	180	4,566	180	4,566	180	4,566
18	Minimum outside turning radius	in	mm	93.7	2,380	93.7	2,380	96.7	2,430	96.7	2,430	96.1	2,440	96.1	2,440
19	Load moment constant	in	mm	19.3	490	19.3	490	19.3	490	19.3	490	19.5	495	19.5	495
20	Minimum aisle – 90° stack – zero clearance without a load	in	mm	113	2,870	113	2,870	115	2,920	115	2,920	116	2,935	116	2,935
Performance			GP30N		DP30N		GP33N		DP33N		GP35N		DP35N		
21	Travel speed – loaded / empty	mph	km/h	10.6 / 11.2	17.0 / 18.0	9.9 / 10.9	16.0 / 17.5	10.9 / 11.5	17.5 / 18.5	10.3 / 11.2	16.5 / 18.0	10.9 / 11.5	17.5 / 18.5	10.3 / 11.2	16.5 / 18.0
22	Lift speed – loaded / empty	fpm	m/s	98.4 / 102	0.50 / 0.52	96.5 / 100	0.49 / 0.51	98.4 / 102	0.50 / 0.52	96.5 / 100	0.49 / 0.51	82.7 / 86.6	0.42 / 0.44	80.7 / 84.6	0.41 / 0.43
23	Lowering speed – loaded / empty	fpm	m/s	98.4 / 98.4	0.50 / 0.50	98.4 / 98.4	0.50 / 0.50	98.4 / 98.4	0.50 / 0.50	98.4 / 98.4	0.50 / 0.50	98.4 / 98.4	0.50 / 0.50	98.4 / 98.4	0.50 / 0.50
24	Drawbar pull – loaded at 1 mph (1.6 km)	lb	N	4,990	22,200	3,960	17,600	4,610	20,500	3,620	16,100	4,610	20,500	3,620	16,100
25	Drawbar pull – loaded maximum	lb	N	5,800	25,800	4,540	20,200	5,310	23,600	4,140	18,400	5,310	23,600	4,140	18,400
26	Gradeability – loaded at 1 mph (1.6 km)	34.0		26.0		29.0		22.0		27.0		21.0			
27	Gradeability – maximum loaded	41.0		30.0		33.0		25.0		32.0		24.0			
Weight			GP30N		DP30N		GP33N		DP33N		GP35N		DP35N		
28	Empty	lb	kg	9,400	4,260	9,640	4,370	10,150	4,600	10,390	4,710	10,340	4,690	10,590	4,800
29	Axle load – with rated load front / rear	lb	kg	13,790 / 1,610	6,390 / 870	13,890 / 1,750	6,550 / 820	14,590 / 2,060	6,880 / 970	14,700 / 2,190	6,920 / 1,040	15,400 / 1,990	7,250 / 940	15,500 / 2,130	7,300 / 1,000
30	Axle load – without load front / rear	lb	kg	3,860 / 5,540	1,700 / 2,560	3,920 / 5,720	1,770 / 2,600	3,790 / 6,360	1,710 / 2,890	3,890 / 6,500	1,760 / 2,950	3,700 / 6,640	1,680 / 3,010	3,820 / 6,770	1,730 / 3,070
Chassis			GP30N		DP30N		GP33N		DP33N		GP35N		DP35N		
31	Tire size – front, standard	in	28 x 9 x 15 - 12PR		28 x 9 x 15 - 12PR		250 x 15 - 16PR		250 x 15 - 16PR		250 x 15 - 16PR		250 x 15 - 16PR		
32	Tire size – optional duals	in	28 x 9 x 15 - 12PR		28 x 9 x 15 - 12PR		28 x 9 x 15 - 12PR		28 x 9 x 15 - 12PR		28 x 9 x 15 - 12PR		28 x 9 x 15 - 12PR		
33	Tire size – rear tires	in	6.5 x 10 - 10PR		6.5 x 10 - 10PR		6.5 x 10 - 12PR		6.5 x 10 - 12PR		6.5 x 10 - 12PR		6.5 x 10 - 12PR		
34	Wheelbase	in	mm	66.9	1,700	66.9	1,700	66.9	1,700	66.9	1,700	66.9	1,700	66.9	1,700
35	Tread width – front (standard / optional duals)	in	mm	41.7 / 47.2	1,060 / 1,200	41.7 / 47.2	1,060 / 1,200	41.7 / 47.2	1,060 / 1,200	41.7 / 47.2	1,060 / 1,200	41.7 / 47.2	1,060 / 1,200	41.7 / 47.2	1,060 / 1,200
36	Tread width – rear tires	in	mm	38.6	980	38.6	980	38.6	980	38.6	980	38.6	980	38.6	980
37	Ground clearance – at lowest point at mast	in	mm	5.4	136	5.4	136	5.4	136	5.4	136	5.7	146	5.7	146
38	Ground clearance – at center of wheelbase	in	mm	7.4	189	7.4	189	7.4	189	7.4	189	8.0	202	8.0	202
39	Service brake	foot-operated, hydraulic		foot-operated, hydraulic		foot-operated, hydraulic		foot-operated, hydraulic		foot-operated, hydraulic		foot-operated, hydraulic			
40	Parking brake	hand, mechanical		hand, mechanical		hand, mechanical		hand, mechanical		hand, mechanical		hand, mechanical			
Powertrain			GP30N		DP30N		GP33N		DP33N		GP35N		DP35N		
41	Engine model	K25E		4EG		K25E		4EG		K25E		4EG			
42	Engine – continuous output S.A.E. gross	HP	kW	61.0	45.8	48.0	36.0	61.0	45.8	48.0	36.0	61.0	45.8	48.0	36.0
43		at rpm		2,700		2,250		2,700		2,250		2,700		2,250	
44	Engine – maximum torque S.A.E. gross	b-ft	N-m	129	175	131	177	129	175	131	177	129	175	131	177
45		at rpm		1,600		1,800		1,600		1,800		1,600		1,800	
46	Cylinder / displacement	cu in	L	4 / 152	4 / 2.5	4 / 203	4 / 3.3	4 / 152	4 / 2.5	4 / 203	4 / 3.3	4 / 152	4 / 2.5	4 / 203	4 / 3.3
47	Transmission – type	powershift		powershift		powershift		powershift		powershift		powershift			
48	Transmission – number of speeds forward / reverse	1 / 1		1 / 1		1 / 1		1 / 1		1 / 1		1 / 1			
49	Battery	volts		12		12		12		12		12			
50	Relief pressure for attachments	psi	bar	2,610	180	2,610	180	2,610	180	2,610	180	2,610	180	2,610	180
51	Noise level – mean value at operator's ear Leq	dB(A)		70.5		75.5		70.5		75.5		70.5		75.5	

Mast Tables

GP15N – Single Drive

Mast Type	Maximum Fork Height		Overall Lowered		Overall Extended Height				Freelift				Tilt	Rated Capacity w/ Forks		Rated Capacity w/ Sideshifter **		Total Weight with Standard Carriage and 42" Forks	
	(MFH)		(OAL)		w/ Load Backrest		w/o Load Backrest		w/ Load Backrest		w/o Load Backrest		F/B	@24 in Load Center	@ 500 mm Load Center	@24 in Load Center	@ 500 mm Load Center	with Standard Carriage and 42" Forks	
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	deg	lb	kg	lb	kg	lb	kg
SIMPLEX	80	2030	59	1500	129	3260	104	2640	4.5	115	4.5	115	6° / 10°	3000	1500	2900	1450	5450	2470
	102	2590	70	1780	151	3820	126	3200	4.5	115	4.5	115	6° / 10°	3000	1500	2900	1450	5540	2510
	110	2790	74	1880	159	4020	134	3400	4.5	115	4.5	115	6° / 6°	3000	1500	2900	1450	5560	2520
	119	3030	79	2000	168	4260	144	3640	4.5	115	4.5	115	6° / 10°	3000	1500	2900	1450	5600	2540
	130	3320	85	2140	180	4550	155	3930	4.5	115	4.5	115	6° / 10°	3000	1500	2850	1430	5650	2560
	140	3560	89	2260	189	4790	164	4170	4.5	115	4.5	115	6° / 10°	3000	1500	2800	1400	5690	2580
	147	3750	95	2400	197	4980	172	4360	4.5	115	4.5	115	6° / 6°	3000	1500	2750	1380	5740	2600
	162	4120	102	2590	211	5350	187	4730	4.5	115	4.5	115	6° / 6°	3000	1500	2600	1330	5830	2640
	177	4510	110	2790	226	5740	202	5120	4.5	115	4.5	115	6° / 6°	2900	1430	2550	1280	5870	2660
	198	5030	121	3050	247	6260	222	5640	4.5	115	4.5	115	6° / 6°	2200	1000	1950	900	6000	2720
	217	5530	130	3300	267	6760	242	6140	4.5	115	4.5	115	6° / 6°	1500	700	1300	600	6070	2750
DUPLEX	237	6030	140	3550	286	7260	262	6640	4.5	115	4.5	115	6° / 6°	*	*	*	*	6130	2780
	111	2830	75	1900	160	4060	136	3440	26	670	50	1290	6° / 6°	3000	1500	2900	1450	5630	2550
	119	3030	79	2000	168	4260	144	3640	30	770	54	1390	6° / 10°	3000	1500	2900	1450	5650	2560
	131	3330	85	2140	180	4560	155	3930	36	920	60	1540	6° / 10°	3000	1500	2850	1430	5690	2580
	139	3550	89	2260	188	4780	164	4150	40	1040	65	1660	6° / 10°	3000	1500	2800	1400	5760	2610
	147	3730	95	2400	196	4960	171	4340	46	1180	70	1800	6° / 6°	3000	1500	2750	1380	5800	2630
TRIPLEX	160	4060	102	2590	209	5290	184	4670	53	1360	78	1980	6° / 6°	3000	1500	2600	1330	5890	2670
	147	3740	71	1800	196	4970	172	4350	22	570	47	1190	6° / 6°	3000	1500	2700	1350	5870	2660
	159	4040	75	1900	208	5270	183	4650	26	670	50	1290	6° / 6°	2900	1450	2600	1330	5910	2680
	171	4340	79	2000	220	5570	195	4950	30	770	54	1390	6° / 6°	2850	1430	2550	1280	5960	2700
	188	4780	85	2140	237	6010	213	5390	36	910	60	1540	6° / 6°	2700	1230	2450	1130	6020	2730
	201	5120	89	2260	250	6350	226	5730	40	1030	65	1660	6° / 6°	2100	980	1900	880	6070	2750
	217	5520	95	2400	266	6750	242	6130	46	1170	70	1800	6° / 6°	1500	700	1400	650	6200	2810
	237	6020	102	2590	286	7250	261	6630	53	1360	78	1980	6° / 6°	1000	480	*	*	6270	2840
	256	6520	113	2850	306	7750	281	7130	63	1620	88	2240	6° / 6°	*	*	*	*	6350	2880
TRIPLEX	276	7030	121	3050	326	8260	301	7640	71	1820	96	2450	6° / 6°	*	*	*	*	6460	2930

* Contact CSM Group to obtain capacities.

** Capacity based on model equipment with MCFA OEM integral sideshifter

NOTE: These specifications assume the use of drive axles, tires and tilt angles specified. Any modification to specifications or other combination of specifications made after the shipment of the truck requires prior written approval from Mitsubishi Caterpillar Forklift America Inc. (MCFA). (See ANSI/ITSDF B56.1 Part II 4.2.)

GP15N – Solid Drive

Mast Type	Maximum Fork Height		Overall Lowered		Overall Extended Height				Freelift				Tilt	Rated Capacity w/ Forks		Rated Capacity w/ Sideshifter **		Total Weight with Standard Carriage and 42" Forks	
	(MFH)		(OAL)		w/ Load Backrest		w/o Load Backrest		w/ Load Backrest		w/o Load Backrest			F/B	@24 in Load Center	@ 500 mm Load Center	@24 in Load Center		
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm			deg	lb	kg	lb	kg
SIMPLEX	80	2030	59	1500	129	3260	104	2640	4.5	115	4.5	115	6° / 10°	3000	1500	3000	1450	5600	2540
	102	2590	70	1780	151	3820	126	3200	4.5	115	4.5	115	6° / 10°	3000	1500	3000	1450	5690	2580
	110	2790	74	1880	159	4020	134	3400	4.5	115	4.5	115	6° / 6°	3000	1500	3000	1450	5710	2590
	119	3030	79	2000	168	4260	144	3640	4.5	115	4.5	115	6° / 10°	3000	1500	3000	1450	5760	2610
	130	3320	85	2140	180	4550	155	3930	4.5	115	4.5	115	6° / 10°	3000	1500	2900	1450	5780	2620
	140	3560	89	2260	189	4790	164	4170	4.5	115	4.5	115	6° / 10°	3000	1500	2850	1430	5830	2640
	147	3750	95	2400	197	4980	172	4360	4.5	115	4.5	115	6° / 6°	3000	1500	2800	1400	5870	2660
	162	4120	102	2590	211	5350	187	4730	4.5	115	4.5	115	6° / 6°	3000	1500	2750	1350	5960	2700
	177	4510	110	2790	226	5740	202	5120	4.5	115	4.5	115	6° / 6°	2900	1430	2600	1300	6020	2730
	198	5030	121	3050	247	6260	222	5640	4.5	115	4.5	115	6° / 6°	2750	1350	2400	1100	6130	2780
	217	5530	130	3300	267	6760	242	6140	4.5	115	4.5	115	6° / 6°	1850	1000	1700	780	6220	2820
	237	6030	140	3550	286	7260	262	6640	4.5	115	4.5	115	6° / 6°	1150	650	1050	475	6290	2850
DUPLEX	111	2830	75	1900	160	4060	136	3440	26	670	50	1290	6° / 6°	3000	1500	3000	1450	5760	2610
	119	3030	79	2000	168	4260	144	3640	30	770	54	1390	6° / 10°	3000	1500	3000	1450	5800	2630
	131	3320	85	2140	180	4560	155	3930	36	910	60	1540	6° / 10°	3000	1500	2900	1450	5850	2650
	139	3540	89	2260	188	4780	164	4150	40	1030	65	1660	6° / 10°	3000	1500	2850	1430	590	2670
	147	3730	95	2400	196	4960	171	4340	46	1170	70	1800	6° / 6°	3000	1500	2800	1400	5940	2690
	160	4060	102	2590	209	5290	184	4670	53	1360	78	1985	6° / 6°	3000	1500	2750	1350	6020	2730
TRIPLEX	147	3740	71	1800	196	4970	172	4350	22	570	47	1190	6° / 6°	3000	1500	2750	1350	6000	2720
	159	4040	75	1900	208	5270	183	4650	26	670	50	1290	6° / 6°	3000	1500	2700	1330	6050	2740
	171	4340	79	2000	220	5570	195	4950	30	770	54	1390	6° / 6°	2900	1430	2600	1300	6110	2770
	188	4780	85	2140	237	6010	213	5390	36	910	60	1540	6° / 6°	2800	1380	2500	1250	6160	2790
	201	5120	89	2260	250	6350	226	5730	40	1030	65	1660	6° / 6°	2700	1330	2250	1030	6220	2820
	217	5520	95	2400	266	6750	242	6130	46	1170	70	1800	6° / 6°	1850	1000	1750	800	6330	2870
	237	6020	102	2590	286	7250	261	6630	53	1360	78	1980	6° / 6°	1150	650	1050	480	6420	2910
	256	6520	113	2850	306	7750	281	7130	63	1620	88	2240	6° / 6°	750	450	600	280	6510	2950
	276	7030	121	3050	326	8260	301	7640	71	1820	96	2450	6° / 6°	350	280	250	130	6600	2990

* Contact CSM Group to obtain capacities.

** Capacity based on model equipment with MCFA OEM integral sideshifter

NOTE: These specifications assume the use of drive axles, tires and tilt angles specified. Any modification to specifications or other combination of specifications made after the shipment of the truck requires prior written approval from Mitsubishi Caterpillar Forklift America Inc. (MCFA). (See ANSI/ITSDF B56.1 Part II 4.2.)

GP18N – Single Drive

Mast Type	Maximum Fork Height		Overall Lowered		Overall Extended Height				Freelift				Tilt	Rated Capacity w/ Forks		Rated Capacity w/ Sideshifter **		Total Weight with Standard Carriage and 42" Forks	
	(MFH)													(OAL)		w/ Load Backrest			
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm		deg	lb	kg	lb	kg	lb
SIMPLEX	80	2030	59	1500	129	3260	104	2640	4.5	115	4.5	115	6° / 10°	3500	1750	3400	1650	5890	2670
	102	2590	70	1780	151	3820	126	3200	4.5	115	4.5	115	6° / 10°	3500	1750	3400	1650	5980	2710
	110	2790	74	1880	159	4020	134	3400	4.5	115	4.5	115	6° / 6°	3500	1750	3400	1650	6000	2720
	119	3030	79	2000	168	4260	144	3640	4.5	115	4.5	115	6° / 10°	3500	1750	3400	1650	6020	2730
	130	3320	85	2140	180	4550	155	3930	4.5	115	4.5	115	6° / 10°	3500	1750	3400	1650	6070	2750
	140	3560	89	2260	189	4790	164	4170	4.5	115	4.5	115	6° / 10°	3500	1750	3350	1650	6110	2770
	147	3750	95	2400	197	4980	172	4360	4.5	115	4.5	115	6° / 6°	3500	1750	3300	1630	6160	2790
	162	4120	102	2590	211	5350	187	4730	4.5	115	4.5	115	6° / 6°	3500	1750	3150	1580	6240	2830
	177	4510	110	2790	226	5740	202	5120	4.5	115	4.5	115	6° / 6°	3150	1450	2900	1330	6310	2860
	196	5030	121	3050	247	6260	222	5640	4.5	115	4.5	115	6° / 6°	2200	1000	1950	900	6420	2910
	217	5530	130	3300	267	6760	242	6140	4.5	115	4.5	115	6° / 6°	1500	700	1300	600	6490	2940
	237	6030	140	3550	286	7260	262	6640	4.5	115	4.5	115	6° / 6°	1000	480	*	*	6570	2980
DUPLEX	111	2830	75	1900	160	4060	136	3440	26	670	50	1290	6° / 6°	3500	1750	3400	1650	6050	2740
	119	3030	79	2000	168	4260	144	3640	30	770	54	1390	6° / 10°	3500	1750	3400	1650	6090	2760
	131	3330	85	2140	180	4560	155	3930	36	910	60	1540	6° / 10°	3500	1750	3400	1650	6130	2780
	139	3550	89	2260	188	4780	164	4150	40	1030	65	1660	6° / 10°	3500	1750	3350	1650	6180	2800
	147	3730	95	2400	196	4960	171	4340	46	1170	70	1800	6° / 6°	3500	1750	3300	1630	6220	2820
160	4060	102	2590	209	5290	184	4670	53	1360	78	1980	6° / 6°	3500	1750	3150	1580	6310	2860	
TRIPLEX	147	3740	71	1800	196	4970	172	4350	22	570	47	1190	6° / 6°	3500	1750	3250	1630	6290	2850
	159	4040	75	1900	208	5270	183	4650	26	670	50	1290	6° / 6°	3450	1730	3150	1580	6330	2870
	171	4340	79	2000	220	5570	195	4950	30	770	54	1390	6° / 6°	3400	1630	3050	1500	6400	2900
	188	4780	85	2140	237	6010	213	5390	36	910	60	1540	6° / 6°	2700	1230	2450	1130	6440	2920
	201	5120	89	2260	250	6350	226	5730	40	1030	65	1660	6° / 6°	2100	980	1900	880	6490	2940
	217	5520	95	2400	266	6750	242	6130	46	1170	70	1800	6° / 6°	1500	700	1400	650	6620	3000
	237	6020	102	2590	286	7250	261	6630	53	1360	78	1980	6° / 6°	1000	480	*	*	6710	3040
	256	6520	113	2850	306	7750	281	7130	63	1620	88	2240	6° / 6°	*	*	*	*	6800	3080
276	7030	121	3050	326	8260	301	7640	71	1820	96	2450	6° / 6°	*	*	*	*	6880	3120	

* Contact CSM Group to obtain capacities.

** Capacity based on model equipment with MCFA OEM integral sideshifter

NOTE: These specifications assume the use of drive axles, tires and tilt angles specified. Any modification to specifications or other combination of specifications made after the shipment of the truck requires prior written approval from Mitsubishi Caterpillar Forklift America Inc. (MCFA). (See ANSI/ITSDF B56.1 Part II 4.2.)

GP18N – Solid Drive

Mast Type	Maximum Fork Height		Overall Lowered		Overall Extended Height				Freelift				Tilt F/B	Rated Capacity w/ Forks		Rated Capacity w/ Sideshifter **		Total Weight with Standard Carriage and 42" Forks	
	(MFH)		(OAL)		w/ Load Backrest		w/o Load Backrest		w/ Load Backrest		w/o Load Backrest			@24 in Load Center	@ 500 mm Load Center	@24 in Load Center	@ 500 mm Load Center	lb	kg
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	deg	lb	kg	lb	kg	lb	kg
SIMPLEX	80	2030	59	1500	129	3260	104	2640	4.5	115	4.5	115	6° / 10°	3500	1750	3500	1650	6050	2740
	102	2590	70	1780	151	3820	126	3200	4.5	115	4.5	115	6° / 10°	3500	1750	3500	1650	6110	2770
	110	2790	74	1880	159	4020	134	3400	4.5	115	4.5	115	6° / 6°	3500	1750	3500	1650	6130	2780
	119	3030	79	2000	168	4260	144	3640	4.5	115	4.5	115	6° / 10°	3500	1750	3500	1650	6180	2800
	130	3320	85	2140	180	4550	155	3930	4.5	115	4.5	115	6° / 10°	3500	1750	3500	1650	6220	2820
	140	3560	89	2260	189	4790	164	4170	4.5	115	4.5	115	6° / 10°	3500	1750	3350	1650	6270	2840
	147	3750	95	2400	197	4980	172	4360	4.5	115	4.5	115	6° / 6°	3500	1750	3300	1650	6310	2860
	162	4120	102	2590	211	5350	187	4730	4.5	115	4.5	115	6° / 6°	3500	1750	3200	1600	6400	2900
	177	4510	110	2790	226	5740	202	5120	4.5	115	4.5	115	6° / 6°	3450	1700	3100	1530	6440	2920
	198	5030	121	3050	247	6260	222	5640	4.5	115	4.5	115	6° / 6°	3050	1400	2400	1100	6570	2980
	217	5530	130	3300	267	6760	242	6140	4.5	115	4.5	115	6° / 6°	1850	1000	1700	780	6640	3010
237	6030	140	3550	286	7260	262	6640	4.5	115	4.5	115	6° / 6°	1150	650	1050	480	6710	3040	
DUPLEX	111	2830	75	1900	160	4060	136	3440	26	670	50	1290	6° / 6°	3500	1750	3500	1650	6200	2810
	119	3030	79	2000	168	4260	144	3640	30	770	54	1390	6° / 10°	3500	1750	3500	1650	6220	2820
	131	3330	85	2140	180	4560	155	3930	36	910	60	1540	6° / 10°	3500	1750	3500	1650	6270	2840
	139	3550	89	2260	188	4780	164	4150	40	1030	65	1660	6° / 10°	3500	1750	3350	1650	6330	2870
	147	3730	95	2400	196	4960	171	4340	46	1170	70	1800	6° / 6°	3500	1750	3300	1650	6380	2890
	160	4060	102	2590	209	5290	184	4670	53	1360	78	1980	6° / 6°	3500	1750	3200	1600	6460	2930
TRIPLEX	147	3740	71	1800	196	4970	172	4350	22	570	47	1190	6° / 6°	3500	1750	3300	1630	6440	2920
	159	4040	75	1900	208	5270	183	4650	26	670	50	1290	6° / 6°	3500	1750	3200	1580	6490	2940
	171	4340	79	2000	220	5570	195	4950	30	770	54	1390	6° / 6°	3450	1700	3100	1550	6530	2960
	188	4780	85	2140	237	6010	213	5390	36	910	60	1540	6° / 6°	3300	1630	3000	1480	6600	2990
	201	5120	89	2260	250	6350	226	5730	40	1030	65	1660	6° / 6°	2900	1330	2250	1030	6640	3010
	217	5520	95	2400	266	6750	242	6130	46	1170	70	1800	6° / 6°	1850	1000	1750	800	6770	3070
	237	6020	102	2590	286	7250	261	6630	53	1360	78	1980	6° / 6°	1150	650	1050	480	6860	3110
	256	6520	113	2850	306	7750	281	7130	63	1620	88	2240	6° / 6°	750	450	600	280	6930	3140
	276	7030	121	3050	326	8260	301	7640	71	1820	96	2450	6° / 6°	350	280	250	130	7040	3190

* Contact CSM Group to obtain capacities.

** Capacity based on model equipment with MCFA OEM integral sideshifter

NOTE: These specifications assume the use of drive axles, tires and tilt angles specified. Any modification to specifications or other combination of specifications made after the shipment of the truck requires prior written approval from Mitsubishi Caterpillar Forklift America Inc. (MCFA). (See ANSI/ITSDF B56.1 Part II 4.2.)

GP20CN – Single Drive

Mast Type	Maximum Fork Height		Overall Lowered		Overall Extended Height				Freelift				Tilt	Rated Capacity w/ Forks		Rated Capacity w/ Sideshifter **		Total Weight with Standard Carriage and 42" Forks	
	(MFH)		(OAL)		w/ Load Backrest		w/o Load Backrest		w/ Load Backrest		w/o Load Backrest			@24 in Load Center	@ 500 mm Load Center	@24 in Load Center	@ 500 mm Load Center	lb	kg
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	deg	lb	kg	lb	kg		
SIMPLEX	80	2040	59	1500	129	3260	104	2640	4.5	115	4.5	115	6° / 10°	3500	2000	3500	1950	6550	2970
	102	2600	70	1780	151	3820	126	3200	4.5	115	4.5	115	6° / 10°	3500	2000	3500	1950	6640	3010
	110	2800	74	1885	159	4020	134	3400	4.5	115	4.5	115	6° / 6°	3500	2000	3500	1950	6660	3020
	119	3040	79	2000	168	4260	144	3640	4.5	115	4.5	115	6° / 10°	3500	2000	3500	1950	6710	3040
	130	3330	85	2140	180	4550	155	3930	4.5	115	4.5	115	6° / 10°	3500	2000	3500	1950	6750	3060
	140	3570	89	2260	189	4790	164	4170	4.5	115	4.5	115	6° / 10°	3500	2000	3350	1930	6800	3080
	147	3760	95	2400	197	4980	172	4360	4.5	115	4.5	115	6° / 6°	3500	2000	3300	1900	6840	3100
	162	4130	102	2590	211	5350	187	4730	4.5	115	4.5	115	6° / 6°	3500	2000	3200	1830	6910	3130
	177	4520	110	2790	226	5740	202	5120	4.5	115	4.5	115	6° / 6°	3450	1950	3100	1780	6970	3160
	198	5040	121	3050	247	6260	222	5640	4.5	115	4.5	115	6° / 6°	3050	1400	2400	1100	7080	3210
	217	5540	130	3300	267	6760	242	6140	4.5	115	4.5	115	6° / 6°	1850	850	1700	*	7170	3250
	237	6040	140	3550	286	7260	262	6640	4.5	115	4.5	115	6° / 6°	1150	525	1050	*	7240	3280
DUPLEX	111	2840	75	1895	160	4060	136	3440	26	670	50	1300	6° / 6°	3500	2000	3500	1950	6730	3050
	119	3040	79	1995	168	4260	144	3640	30	770	54	1400	6° / 10°	3500	2000	3500	1950	6750	3060
	131	3330	85	2140	180	4560	155	3930	36	920	60	1540	6° / 10°	3500	2000	3500	1950	6800	3080
	139	3550	89	2260	188	4780	164	4150	40	1040	65	1660	6° / 10°	3500	2000	3350	1930	6840	3100
	147	3740	95	2400	196	4960	171	4340	46	1180	70	1800	6° / 6°	3500	2000	3300	1900	6910	3130
	160	4070	102	2590	209	5300	184	4670	53	1360	78	1990	6° / 6°	3500	2000	3200	1830	6990	3170
TRIPLEX	147	3750	71	1800	196	4970	172	4350	22	570	47	1200	6° / 6°	3500	2000	3300	1880	6970	3160
	159	4050	75	1900	208	5270	183	4650	26	670	50	1300	6° / 6°	3500	2000	3200	1830	6990	3170
	171	4350	79	2000	220	5570	195	4950	30	77	54	1400	6° / 6°	3450	1950	3100	1780	7060	3200
	188	4790	85	2140	237	6010	212	5390	36	920	60	1540	6° / 6°	3300	1900	3000	1600	7130	3230
	201	5130	89	2260	250	6350	226	5730	40	1040	65	1660	6° / 6°	2900	1330	2250	1030	7170	3250
	217	5530	95	2400	266	6750	242	6130	46	1180	70	1800	6° / 6°	1850	930	1750	*	7280	3300
	237	6030	102	2590	286	7250	261	6630	53	1360	78	1990	6° / 6°	1150	580	1050	*	7370	3340
	256	6530	113	2850	306	7550	281	7130	64	1620	88	2250	6° / 6°	750	350	600	*	7460	3380
	276	7040	121	3050	326	8060	301	7640	72	1830	96	2450	6° / 6°	350	180	250	*	7570	3430

* Contact CSM Group to obtain capacities.

** Capacity based on model equipment with MCFA OEM integral sideshifter

NOTE: These specifications assume the use of drive axles, tires and tilt angles specified. Any modification to specifications or other combination of specifications made after the shipment of the truck requires prior written approval from Mitsubishi Caterpillar Forklift America Inc. (MCFA). (See ANSI/ITSDF B56.1 Part II 4.2.)

P20N – Single Drive

Mast Type	Maximum Fork Height		Overall Lowered		Overall Extended Height				Freelift				Tilt F/B deg	Rated Capacity w/ Forks		Rated Capacity w/ Sideshifter **		Total Weight with Standard Carriage and 42" Forks	
	(MFH)		(OAL)		w/ Load Backrest		w/o Load Backrest		w/ Load Backrest		w/o Load Backrest			@24 in Load Center	@ 500 mm Load Center	@24 in Load Center	@ 500 mm Load Center		
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm		lb	kg	lb	kg		
SIMPLEX	80	2040	59	1500	129	3270	104	2650	5.5	140	5.5	140	6° / 10°	4000	2000	3850	1950	7150	3240
	102	2610	71	1790	151	3840	127	3220	5.5	140	5.5	140	6° / 10°	4000	2000	3850	1950	7260	3290
	119	3040	79	2000	168	4270	144	3650	5.5	140	5.5	140	6° / 10°	4000	2000	3850	1950	7320	3320
	131	3340	85	2150	180	4570	156	3950	5.5	140	5.5	140	6° / 10°	4000	2000	3850	1950	7370	3340
	140	3590	90	2270	190	4810	166	4190	5.5	140	5.5	140	6° / 10°	4000	2000	3850	1950	7430	3370
	148	3780	95	2410	198	5010	173	4390	5.5	140	5.5	140	6° / 8°	4000	2000	3850	1950	7480	3390
	162	4140	102	2590	212	5370	187	4750	5.5	140	5.5	140	6° / 6°	4000	2000	3850	1950	7590	3440
	178	4540	111	2800	227	5770	203	5150	5.5	140	5.5	140	6° / 6°	3950	1950	3850	1900	7680	3470
	198	5040	121	3050	247	6270	223	5650	5.5	140	5.5	140	6° / 6°	3850	1750	3150	1450	7790	3530
	218	5540	130	3300	267	6770	242	6150	5.5	140	5.5	140	6° / 6°	2950	1350	2050	950	7900	3590
237	6040	140	3550	286	7270	262	6650	5.5	140	5.5	140	6° / 6°	2050	950	1300	600	7990	3620	
DUPLEX	112	2850	75	1910	161	4090	137	3480	26	680	50	1280	6° / 10°	4000	2000	3850	1950	7350	3330
	119	3040	79	2000	168	4270	144	3680	30	770	54	1370	6° / 10°	4000	2000	3850	1950	7370	3340
	131	3340	85	2150	180	4570	156	3960	36	920	60	1520	6° / 10°	4000	2000	3850	1950	7430	3370
	140	3570	90	2270	189	4800	166	4190	40	1040	64	1640	6° / 10°	4000	2000	3850	1950	7500	3400
	147	3740	95	2410	196	4970	172	4360	46	1180	70	1790	6° / 8°	4000	2000	3850	1950	7540	3420
	159	4080	102	2590	209	5290	185	4680	53	1360	77	1970	6° / 6°	4000	2000	3850	1950	7660	3470
TRIPLEX	148	3770	72	1910	197	5000	173	4390	22	580	46	1180	6° / 6°	4000	2000	3850	1950	7770	3520
	160	4070	75	1910	209	5300	185	4690	26	680	50	1280	6° / 6°	4000	2000	3850	1950	7830	3550
	170	4340	79	2000	220	5570	196	4960	30	770	54	1370	6° / 6°	4000	1950	3850	1900	7880	3570
	188	4790	85	2150	237	6020	213	5410	36	920	60	1520	6° / 6°	3950	1900	3700	1800	7940	3600
	200	5100	90	2270	249	6330	226	5720	40	1040	64	1640	6° / 6°	3850	1750	3050	1400	8010	3630
	218	5540	95	2410	257	6770	243	6160	46	1180	70	1790	6° / 6°	2850	1300	2050	950	8180	3710
	237	6030	102	2590	286	7260	262	6650	53	1360	77	1970	6° / 6°	2050	950	1300	600	8290	3780
	257	6540	113	2850	306	7770	282	7160	64	1620	87	2230	6° / 6°	1400	650	*	*	8400	3810
	277	7040	121	3050	326	8270	302	7660	71	1820	95	2430	6° / 6°	*	*	*	*	8510	3880

* Contact CSM Group to obtain capacities.

** Capacity based on model equipment with MCFA OEM integral sideshifter

NOTE: These specifications assume the use of drive axles, tires and tilt angles specified. Any modification to specifications or other combination of specifications made after the shipment of the truck requires prior written approval from Mitsubishi Caterpillar Forklift America Inc. (MCFA). (See ANSI/ITSDF B56.1 Part II 4.2.)

GP20N – Solid Single Drive

Mast Type	Maximum Fork Height		Overall Lowered		Overall Extended Height				Freelift				Tilt F/B deg	Rated Capacity w/ Forks		Rated Capacity w/ Sideshifter **		Total Weight with Standard Carriage and 42" Forks	
	(MFH)		(OAL)		w/ Load Backrest		w/o Load Backrest		w/ Load Backrest		w/o Load Backrest			@24 in Load Center	@ 500 mm Load Center	@24 in Load Center	@ 500 mm Load Center	lb	kg
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm		lb	kg	lb	kg	lb	kg
SIMPLEX	80	2040	59	1500	129	3270	104	2650	5.5	140	5.5	140	6° / 10°	4000	2000	4000	1950	7370	3340
	102	2610	71	1790	151	3840	127	3220	5.5	140	5.5	140	6° / 10°	4000	2000	4000	1950	7460	3380
	119	3040	79	2000	168	4270	144	3650	5.5	140	5.5	140	6° / 10°	4000	2000	4000	1950	7520	3410
	131	3340	85	2150	180	4570	156	3950	5.5	140	5.5	140	6° / 10°	4000	2000	4000	1950	7590	3440
	140	3580	90	2270	190	4810	165	4190	5.5	140	5.5	140	6° / 10°	4000	2000	4000	1950	7630	3460
	148	3780	95	2410	198	5010	173	4390	5.5	140	5.5	140	6° / 6°	4000	2000	4000	1950	7700	3490
	162	4140	102	2590	212	5370	187	4750	5.5	140	5.5	140	6° / 6°	4000	2000	4000	1950	7790	3530
	178	4540	111	2800	227	5770	203	5150	5.5	140	5.5	140	6° / 6°	4000	2000	3850	1900	7880	3570
	198	5040	121	3050	247	6270	223	5650	5.5	140	5.5	140	6° / 6°	3900	1950	3700	1850	8010	3630
	218	5540	130	3300	267	6770	242	6150	5.5	140	5.5	140	6° / 6°	3800	1800	2950	1350	8100	3670
237	6040	140	3550	286	7270	262	6650	5.5	140	5.5	140	6° / 6°	2750	1250	1950	900	8180	3710	
DUPLEX	112	2860	75	1910	161	4090	137	3480	26	680	50	1280	6° / 10°	4000	2000	4000	1950	7570	3430
	119	3040	79	2000	168	4270	144	3660	30	770	54	1370	6° / 10°	4000	2000	4000	1950	7590	3440
	131	3340	85	2150	180	4570	156	3960	36	920	60	1520	6° / 10°	4000	2000	4000	1950	7630	3460
	140	3570	90	2270	189	4800	165	4190	40	1040	64	1640	6° / 10°	4000	2000	4000	1950	7700	3490
	147	3740	95	2410	196	4970	172	4360	46	1180	70	1790	6° / 6°	4000	2000	4000	1950	7770	3520
	159	4060	102	2590	209	5290	185	4680	53	1360	77	1970	6° / 6°	4000	2000	4000	1950	7850	3560
TRIPLEX	148	3770	72	1810	197	5000	173	4390	22	580	46	1180	6° / 6°	4000	2000	4000	1950	7990	3620
	160	4070	75	1910	209	5300	185	4690	26	680	50	1280	6° / 6°	4000	2000	4000	1950	8030	3640
	170	4340	79	2000	220	5570	196	4960	30	770	54	1370	6° / 6°	4000	2000	3850	1900	8070	3660
	188	4790	85	2150	237	6020	213	5410	36	920	60	1520	6° / 6°	3950	1950	3700	1850	8160	3700
	200	5100	90	2270	249	6330	226	5720	40	1040	64	1640	6° / 6°	3850	1900	3600	1800	8230	3730
	218	5540	95	2410	267	6770	243	6160	46	1180	70	1790	6° / 6°	3800	1800	3050	1400	8380	3800
	237	6030	102	2590	286	7260	262	6650	53	1360	77	1970	6° / 6°	2750	1250	1950	900	8490	3850
	257	6540	113	2850	306	7770	282	7160	64	1620	87	2230	6° / 6°	1950	900	1200	550	8630	3910
	277	7040	121	3050	326	8270	302	7660	71	1820	95	2430	6° / 6°	1300	600	650	300	8740	3960

* Contact CSM Group to obtain capacities.

** Capacity based on model equipment with MCFA OEM integral sideshifter

NOTE: These specifications assume the use of drive axles, tires and tilt angles specified. Any modification to specifications or other combination of specifications made after the shipment of the truck requires prior written approval from Mitsubishi Caterpillar Forklift America Inc. (MCFA). (See ANSI/ITSDF B56.1 Part II 4.2.)

GP20N – Dual Drive

Mast Type	Maximum Fork Height		Overall Lowered		Overall Extended Height				Freelift				Tilt F/B deg	Rated Capacity w/ Forks		Rated Capacity w/ Sideshifter **		Total Weight with Standard Carriage and 42" Forks	
	(MFH)		(OAL)		w/ Load Backrest		w/o Load Backrest		w/ Load Backrest		w/o Load Backrest			@24 in Load Center	@ 500 mm Load Center	@24 in Load Center	@ 500 mm Load Center		
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm		lb	kg	lb	kg		
SIMPLEX	80	2040	59	1500	129	3270	104	2650	5.5	140	5.5	140	6° / 10°	4000	2000	4000	1950	7370	3340
	102	2610	71	1790	151	3840	127	3220	5.5	140	5.5	140	6° / 10°	4000	2000	4000	1950	7480	3380
	119	3040	79	2000	168	4270	144	3650	5.5	140	5.5	140	6° / 10°	4000	2000	4000	1950	7520	3410
	131	3340	85	2150	180	4570	156	3950	5.5	140	5.5	140	6° / 10°	4000	2000	4000	1950	7590	3440
	140	3580	90	2270	190	4810	165	4190	5.5	140	5.5	140	6° / 10°	4000	2000	4000	1950	7630	3460
	148	3780	95	2410	198	5010	173	4390	5.5	140	5.5	140	6° / 6°	4000	2000	4000	1950	7700	3490
	162	4140	102	2590	212	5370	187	4750	5.5	140	5.5	140	6° / 6°	4000	2000	4000	1950	7790	3530
	178	4540	111	2800	227	5770	203	5150	5.5	140	5.5	140	6° / 6°	4000	2000	3850	1900	7880	3570
	198	5040	121	3050	247	6270	223	5650	5.5	140	5.5	140	6° / 6°	3900	1950	3700	1850	8010	3630
	218	5540	130	3300	287	6770	242	6150	5.5	140	5.5	140	6° / 6°	3800	1800	2950	1350	8100	3670
237	6040	140	3550	288	7270	262	6650	5.5	140	5.5	140	6° / 6°	2750	1250	1950	900	8180	3710	
DUPLEX	112	2860	75	1910	181	4090	137	3480	28	680	50	1280	6° / 10°	4000	2000	4000	1950	7570	3430
	119	3040	79	2000	188	4270	144	3660	30	770	54	1370	6° / 10°	4000	2000	4000	1950	7590	3440
	131	3340	85	2150	180	4570	156	3960	36	920	60	1520	6° / 10°	4000	2000	4000	1950	7630	3460
	140	3570	90	2270	189	4800	165	4190	40	1040	64	1640	6° / 10°	4000	2000	4000	1950	7700	3490
	147	3740	95	2410	198	4970	172	4380	48	1180	70	1790	6° / 6°	4000	2000	4000	1950	7770	3520
	159	4060	102	2590	209	5290	185	4680	53	1360	77	1970	6° / 6°	4000	2000	4000	1950	7850	3560
TRIPLEX	148	3770	72	1810	197	5000	173	4390	22	580	46	1180	6° / 6°	4000	2000	4000	1950	7990	3620
	160	4070	75	1910	209	5300	185	4690	26	680	50	1280	6° / 6°	4000	2000	4000	1950	8030	3640
	170	4340	79	2000	220	5670	196	4960	30	770	54	1370	6° / 6°	4000	2000	3850	1900	8070	3660
	188	4790	85	2150	237	6020	213	5410	36	920	60	1520	6° / 6°	3950	1950	3700	1850	8180	3700
	200	5100	90	2270	249	6330	226	5720	40	1040	64	1640	6° / 6°	3850	1900	3600	1800	8230	3730
	218	5540	95	2410	287	6770	243	6160	48	1180	70	1790	6° / 6°	3800	1800	3050	1400	8380	3800
	237	6030	102	2590	288	7260	262	6650	53	1360	77	1970	6° / 6°	2750	1250	1950	900	8490	3850
	257	6540	113	2850	306	7770	282	7160	64	1620	87	2230	6° / 6°	1950	900	1200	550	8630	3910
	277	7040	121	3050	328	8270	302	7660	71	1820	95	2430	6° / 6°	1300	600	650	300	8740	3980

* Contact CSM Group to obtain capacities.

** Capacity based on model equipment with MCFA OEM integral sideshifter

NOTE: These specifications assume the use of drive axles, tires and tilt angles specified. Any modification to specifications or other combination of specifications made after the shipment of the truck requires prior written approval from Mitsubishi Caterpillar Forklift America Inc. (MCFA). (See ANSI/ITSDF B56.1 Part II 4.2.)

GP20N – Solid Dual Drive

Mast Type	Maximum Fork Height		Overall Lowered		Overall Extended Height				Freelift				Tilt F/B deg	Rated Capacity w/ Forks		Rated Capacity w/ Sideshifter **		Total Weight with Standard Carriage and 42" Forks	
	(MFH)		(OAL)		w/ Load Backrest		w/o Load Backrest		w/ Load Backrest		w/o Load Backrest			@24 in Load Center	@ 500 mm Load Center	@24 in Load Center	@ 500 mm Load Center	lb	kg
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm		lb	kg	lb	kg	lb	kg
SIMPLEX	80	2040	59	1500	129	3270	104	2650	5.5	140	5.5	140	6° / 10°	4000	2000	4000	1950	7770	3520
	102	2610	71	1790	151	3840	127	3220	5.5	140	5.5	140	6° / 10°	4000	2000	4000	1950	7880	3570
	119	3040	79	2000	168	4270	144	3650	5.5	140	5.5	140	6° / 10°	4000	2000	4000	1950	7940	3600
	131	3340	85	2150	180	4570	156	3950	5.5	140	5.5	140	6° / 10°	4000	2000	4000	1950	7990	3620
	140	3580	90	2270	190	4810	165	4190	5.5	140	5.5	140	6° / 10°	4000	2000	4000	1950	8050	3650
	148	3780	95	2410	198	5010	173	4390	5.5	140	5.5	140	6° / 6°	4000	2000	4000	1950	8100	3670
	162	4140	102	2590	212	5370	187	4750	5.5	140	5.5	140	6° / 6°	4000	2000	4000	1950	8210	3720
	178	4540	111	2800	227	5770	203	5150	5.5	140	5.5	140	6° / 6°	4000	2000	3850	1900	8270	3750
	198	5040	121	3050	247	6270	223	5650	5.5	140	5.5	140	6° / 6°	3900	1950	3700	1850	8400	3810
	218	5540	130	3300	267	6770	242	6150	5.5	140	5.5	140	6° / 6°	3800	1850	3500	1750	8510	3860
237	6040	140	3550	286	7270	262	6650	5.5	140	5.5	140	6° / 6°	3700	1800	3400	1700	8600	3900	
DUPLEX	112	2860	75	1910	161	4090	137	3480	26	680	50	1280	6° / 10°	4000	2000	4000	1950	7960	3610
	119	3040	79	2000	168	4270	144	3660	30	770	54	1370	6° / 10°	4000	2000	4000	1950	7990	3620
	131	3340	85	2150	180	4570	156	3960	36	920	60	1520	6° / 10°	4000	2000	4000	1950	8050	3650
	140	3570	90	2270	189	4800	165	4190	40	1040	64	1640	6° / 10°	4000	2000	4000	1950	8120	3680
	147	3740	95	2410	196	4970	172	4360	46	1180	70	1790	6° / 6°	4000	2000	4000	1950	8160	3700
159	4060	102	2590	209	5290	185	4680	53	1360	77	1970	6° / 6°	4000	2000	4000	1950	8270	3750	
TRIPLEX	148	3770	72	1810	197	5000	173	4390	22	580	46	1180	6° / 6°	4000	2000	4000	1950	8380	3800
	160	4070	75	1910	209	5300	185	4690	26	680	50	1280	6° / 6°	4000	2000	4000	1950	8450	3830
	170	4340	79	2000	220	5570	196	4960	30	770	54	1370	6° / 6°	4000	2000	3850	1900	8490	3850
	188	4790	85	2150	237	6020	213	5410	36	920	60	1520	6° / 6°	3950	1950	3700	1850	8560	3880
	200	5100	90	2270	249	6330	226	5720	40	1040	64	1640	6° / 6°	3850	1900	3600	1800	8630	3910
	218	5540	95	2410	267	6770	243	6160	46	1180	70	1790	6° / 6°	3800	1800	3500	1700	8800	3990
	237	6030	102	2590	286	7260	262	6650	53	1360	77	1970	6° / 6°	3500	1750	3300	1650	8910	4040
	257	6540	113	2850	306	7770	282	7160	64	1620	87	2230	6° / 6°	3300	1650	3150	1550	9020	4090
	277	7040	121	3050	326	8270	302	7660	71	1820	95	2430	6° / 6°	2750	1250	2500	1150	9130	4140

* Contact CSM Group to obtain capacities.

** Capacity based on model equipment with MCFA OEM integral sideshifter

NOTE: These specifications assume the use of drive axles, tires and tilt angles specified. Any modification to specifications or other combination of specifications made after the shipment of the truck requires prior written approval from Mitsubishi Caterpillar Forklift America Inc. (MCFA). (See ANSI/ITSDF B56.1 Part II 4.2.)

GP25N – Single Drive

Mast Type	Maximum Fork Height		Overall Lowered		Overall Extended Height				Freelift				Tilt F/B deg	Rated Capacity w/ Forks		Rated Capacity w/ Sideshifter **		Total Weight with Standard Carriage and 42" Forks	
	(MFH)		(OAL)		w/ Load Backrest		w/o Load Backrest		w/ Load Backrest		w/o Load Backrest			@24 in Load Center	@ 500 mm Load Center	@24 in Load Center	@ 500 mm Load Center	lb	kg
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm		lb	kg	lb	kg	lb	kg
SIMPLEX	80	2040	59	1500	129	3270	104	2650	5.5	140	5.5	140	6° / 10°	5000	2500	4850	2400	7770	3520
	102	2610	71	1790	151	3840	127	3220	5.5	140	5.5	140	6° / 10°	5000	2500	4850	2400	7850	3560
	119	3040	79	2000	168	4270	144	3650	5.5	140	5.5	140	6° / 10°	5000	2500	4850	2400	7920	3580
	131	3340	85	2150	180	4570	156	3950	5.5	140	5.5	140	6° / 10°	5000	2500	4850	2400	7990	3620
	140	3580	90	2270	190	4810	165	4190	5.5	140	5.5	140	6° / 10°	5000	2500	4850	2400	8030	3640
	148	3780	95	2410	199	5010	173	4390	5.5	140	5.5	140	8° / 8°	5000	2500	4850	2400	8100	3670
	162	4140	102	2590	212	5370	187	4750	5.5	140	5.5	140	8° / 8°	5000	2500	4700	2350	8180	3710
	178	4540	111	2800	227	5770	203	5150	5.5	140	5.5	140	8° / 8°	4950	2250	4600	2200	8270	3750
	188	5040	121	3050	247	6270	223	5650	5.5	140	5.5	140	8° / 8°	3850	1750	3150	1450	8400	3810
	218	5540	130	3300	267	6770	242	6150	5.5	140	5.5	140	8° / 8°	2950	1350	2050	950	8490	3850
237	6040	140	3550	286	7270	262	6650	5.5	140	5.5	140	8° / 8°	2050	950	1300	600	8580	3890	
DUPLEX	112	2880	75	1910	181	4090	137	3480	28	690	50	1280	6° / 10°	5000	2500	4850	2400	7980	3610
	119	3040	79	2000	168	4270	144	3660	30	770	54	1370	6° / 10°	5000	2500	4850	2400	7990	3620
	131	3340	85	2150	180	4570	156	3960	38	920	80	1520	6° / 10°	5000	2500	4850	2400	8030	3640
	140	3570	90	2270	189	4800	165	4190	40	1040	84	1640	6° / 10°	5000	2500	4850	2400	8100	3670
	147	3740	95	2410	198	4970	172	4360	48	1180	70	1790	8° / 8°	5000	2500	4850	2400	8180	3700
	159	4060	102	2590	208	5280	185	4680	53	1360	77	1970	8° / 8°	5000	2500	4700	2350	8250	3740
TRIPLEX	148	3770	72	1810	197	5000	173	4390	22	580	46	1180	8° / 8°	5000	2500	4850	2400	8380	3800
	160	4070	75	1910	209	5300	185	4690	28	690	50	1290	8° / 8°	5000	2500	4700	2350	8430	3820
	170	4340	79	2000	220	5570	196	4960	30	770	54	1370	8° / 8°	5000	2450	4600	2300	8470	3840
	188	4790	85	2150	237	6020	213	5410	38	920	80	1520	8° / 8°	4700	2150	3950	1800	8580	3860
	200	5100	90	2270	248	6330	226	5720	40	1040	84	1640	8° / 8°	3850	1750	3050	1400	8630	3910
	218	5540	95	2410	267	6770	243	6160	48	1180	70	1790	8° / 8°	2850	1300	2050	950	8780	3960
	237	6030	102	2590	286	7260	262	6650	53	1360	77	1970	8° / 8°	2050	950	1300	600	8880	4030
	257	6540	113	2850	306	7770	282	7160	64	1620	87	2230	8° / 8°	1400	650	*	*	9020	4090
	277	7040	121	3050	328	8270	302	7660	71	1820	95	2430	8° / 8°	*	*	*	*	9130	4140

* Contact CSM Group to obtain capacities.

** Capacity based on model equipment with MCFA OEM integral sideshifter

NOTE: These specifications assume the use of drive axles, tires and tilt angles specified. Any modification to specifications or other combination of specifications made after the shipment of the truck requires prior written approval from Mitsubishi Caterpillar Forklift America Inc. (MCFA). (See ANSI/ITSDF B56.1 Part II 4.2.)

GP25N – Solid Single Drive

Mast Type	Maximum Fork Height		Overall Lowered		Overall Extended Height				Freelift				Tilt F/B deg	Rated Capacity w/ Forks		Rated Capacity w/ Sideshifter **		Total Weight with Standard Carriage and 42" Forks	
	(MFH)		(OAL)		w/ Load Backrest		w/o Load Backrest		w/ Load Backrest		w/o Load Backrest			@24 in Load Center	@ 500 mm Load Center	@24 in Load Center	@ 500 mm Load Center	lb	kg
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm		lb	kg	lb	kg	lb	kg
SIMPLEX	80	2040	59	1500	129	3270	104	2650	5.5	140	5.5	140	6° / 10°	5000	2500	5000	2400	7960	3610
	102	2610	71	1790	151	3840	127	3220	5.5	140	5.5	140	6° / 10°	5000	2500	5000	2400	8070	3660
	119	3040	79	2000	188	4270	144	3650	5.5	140	5.5	140	6° / 10°	5000	2500	5000	2400	8140	3690
	131	3340	85	2150	180	4570	156	3950	5.5	140	5.5	140	6° / 10°	5000	2500	5000	2400	8180	3710
	140	3580	90	2270	190	4810	165	4190	5.5	140	5.5	140	6° / 10°	5000	2500	5000	2400	8250	3740
	148	3780	95	2410	198	5010	173	4390	5.5	140	5.5	140	6° / 6°	5000	2500	5000	2400	8290	3760
	162	4140	102	2590	212	5370	187	4750	5.5	140	5.5	140	6° / 6°	5000	2500	4700	2350	8400	3810
	178	4540	111	2800	227	5770	203	5150	5.5	140	5.5	140	6° / 6°	5000	2500	4800	2300	8470	3840
	198	5040	121	3050	247	6270	223	5650	5.5	140	5.5	140	6° / 6°	4850	2400	4400	2050	8630	3910
	218	5540	130	3300	267	6770	242	6150	5.5	140	5.5	140	6° / 6°	3950	1800	2950	1350	8710	3950
237	6040	140	3550	288	7270	262	6650	5.5	140	5.5	140	6° / 6°	2750	1250	1950	900	8800	3990	
DUPLEX	112	2880	75	1910	181	4090	137	3480	26	660	50	1280	6° / 10°	5000	2500	5000	2400	8160	3700
	119	3040	79	2000	188	4270	144	3680	30	770	54	1370	6° / 10°	5000	2500	5000	2400	8210	3720
	131	3340	85	2150	180	4570	156	3980	36	920	60	1520	6° / 10°	5000	2500	5000	2400	8250	3740
	140	3570	90	2270	189	4800	165	4190	40	1040	64	1640	6° / 10°	5000	2500	5000	2400	8320	3770
	147	3740	95	2410	196	4970	172	4380	46	1180	70	1790	6° / 6°	5000	2500	5000	2400	8380	3790
159	4060	102	2590	209	5290	185	4680	53	1360	77	1970	6° / 6°	5000	2500	4800	2350	8470	3840	
TRIPLEX	148	3770	72	1810	197	5000	173	4390	22	580	46	1180	6° / 6°	5000	2500	5000	2350	8580	3890
	160	4070	75	1910	209	5300	185	4690	26	680	50	1280	6° / 6°	5000	2500	4700	2350	8650	3920
	170	4340	79	2000	220	5570	196	4980	30	770	54	1370	6° / 6°	5000	2500	4800	2300	8690	3940
	188	4790	85	2150	237	6020	213	5410	36	920	60	1520	6° / 6°	4950	2400	4500	2200	8790	3980
	200	5100	90	2270	249	6330	226	5720	40	1040	64	1640	6° / 6°	4850	2350	4400	1950	8820	4000
	218	5540	95	2410	267	6770	243	6160	46	1180	70	1790	6° / 6°	3950	1800	3050	1400	9000	4080
	237	6030	102	2590	288	7280	262	6650	53	1360	77	1970	6° / 6°	2750	1250	1950	900	9110	4130
	257	6540	113	2850	306	7770	282	7160	64	1620	87	2230	6° / 6°	1950	900	1200	550	9240	4190
	277	7040	121	3050	328	8270	302	7660	71	1820	95	2430	6° / 6°	1300	600	650	300	9330	4230

* Contact CSM Group to obtain capacities.

** Capacity based on model equipment with MCFA OEM integral sideshifter

NOTE: These specifications assume the use of drive axles, tires and tilt angles specified. Any modification to specifications or other combination of specifications made after the shipment of the truck requires prior written approval from Mitsubishi Caterpillar Forklift America Inc. (MCFA). (See ANSI/ITSDF B56.1 Part II 4.2.)

GP25N – Dual Drive

Mast Type	Maximum Fork Height		Overall Lowered		Overall Extended Height				Freelift				Tilt	Rated Capacity w/ Forks		Rated Capacity w/ Sideshifter **		Total Weight with Standard Carriage and 42" Forks	
	(MFH)		(OAL)		w/ Load Backrest		w/o Load Backrest		w/ Load Backrest		w/o Load Backrest			@24 in Load Center	@ 500 mm Load Center	@24 in Load Center	@ 500 mm Load Center	lb	kg
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	deg						
SIMPLEX	80	2040	59	1500	129	3270	104	2650	5.5	140	5.5	140	6° / 10°	5000	2500	4850	2400	8050	3650
	102	2610	71	1790	151	3840	127	3220	5.5	140	5.5	140	6° / 10°	5000	2500	4850	2400	8140	3690
	119	3040	79	2000	168	4270	144	3650	5.5	140	5.5	140	6° / 10°	5000	2500	4850	2400	8210	3720
	131	3340	85	2150	180	4570	156	3950	5.5	140	5.5	140	6° / 10°	5000	2500	4850	2400	8270	3750
	140	3580	90	2270	190	4810	165	4190	5.5	140	5.5	140	6° / 10°	5000	2500	4850	2400	8320	3770
	148	3780	95	2410	198	5010	173	4390	5.5	140	5.5	140	6° / 8°	5000	2500	4850	2400	8380	3800
	162	4140	102	2590	212	5370	187	4750	5.5	140	5.5	140	6° / 6°	5000	2500	4700	2350	8470	3840
	178	4540	111	2800	227	5770	203	5150	5.5	140	5.5	140	6° / 8°	4950	2450	4600	2300	8580	3880
	198	5040	121	3050	247	6270	223	5650	5.5	140	5.5	140	6° / 6°	4700	2350	4500	2200	8690	3940
	218	5540	130	3300	267	6770	242	6150	5.5	140	5.5	140	6° / 6°	4600	2250	4250	2100	8780	3980
237	6040	140	3550	286	7270	262	6650	5.5	140	5.5	140	6° / 6°	4400	2150	4150	2050	8870	4020	
DUPLEX	112	2860	75	1910	161	4090	137	3480	26	660	50	1280	6° / 10°	5000	2500	4850	2400	8250	3740
	119	3040	79	2000	168	4270	144	3660	30	770	54	1370	6° / 10°	5000	2500	4850	2400	8270	3750
	131	3340	85	2150	180	4570	156	3960	36	920	60	1520	6° / 10°	5000	2500	4850	2400	8320	3770
	140	3570	90	2270	189	4800	165	4190	40	1040	64	1640	6° / 10°	5000	2500	4850	2400	8380	3800
	147	3740	95	2410	196	4970	172	4360	46	1180	70	1790	6° / 8°	5000	2500	4850	2400	8450	3830
	159	4060	102	2590	209	5290	185	4690	53	1360	77	1970	6° / 6°	5000	2500	4700	2350	8540	3870
TRIPLEX	148	3770	72	1810	197	5000	173	4390	22	580	46	1180	6° / 6°	5000	2500	4850	2400	8670	3930
	160	4070	75	1910	209	5300	185	4690	26	660	50	1280	6° / 6°	5000	2500	4700	2350	8710	3950
	170	4340	79	2000	220	5570	196	4960	30	770	54	1370	6° / 6°	5000	2450	4600	2300	8760	3974
	188	4790	85	2150	237	6020	213	5410	36	920	60	1520	6° / 6°	4700	2350	4500	2200	8850	4010
	200	5100	90	2270	249	6330	226	5720	40	1040	64	1640	6° / 6°	4600	2300	4400	2150	8910	4040
	218	5540	95	2410	267	6770	243	6160	46	1180	70	1790	6° / 6°	4400	2200	4150	2100	9070	4110
	237	6030	102	2590	286	7260	262	6650	53	1360	77	1970	6° / 6°	4250	2100	4050	2000	9180	4160
	257	6540	113	2850	306	7770	282	7160	64	1620	87	2230	6° / 6°	3850	1750	3850	1750	9310	4220
	277	7040	121	3050	326	8270	302	7660	71	1820	95	2430	6° / 6°	2750	1250	2500	1150	9420	4270

* Contact CSM Group to obtain capacities.

** Capacity based on model equipment with MCFA OEM integral sideshifter

NOTE: These specifications assume the use of drive axles, tires and tilt angles specified. Any modification to specifications or other combination of specifications made after the shipment of the truck requires prior written approval from Mitsubishi Caterpillar Forklift America Inc. (MCFA). (See ANSI/ITSDF B56.1 Part II 4.2.)

GP25N – Solid Dual Drive

Mast Type	Maximum Fork Height		Overall Lowered		Overall Extended Height				Freelift				Tilt F/B deg	Rated Capacity w/ Forks		Rated Capacity w/ Sideshifter **		Total Weight with Standard Carriage and 42" Forks	
	(MFH)		(OAL)		w/ Load Backrest		w/o Load Backrest		w/ Load Backrest		w/o Load Backrest			@24 in Load Center	@ 500 mm Load Center	@24 in Load Center	@ 500 mm Load Center	lb	kg
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm		lb	kg	lb	kg	lb	kg
SIMPLEX	80	2040	59	1500	129	3270	104	2650	5.5	140	5.5	140	6° / 10°	5000	2500	5000	2400	8380	3800
	102	2610	71	1790	151	3840	127	3220	5.5	140	5.5	140	6° / 10°	5000	2500	5000	2400	8470	3840
	119	3040	79	2000	168	4270	144	3650	5.5	140	5.5	140	6° / 10°	5000	2500	5000	2400	8540	3870
	131	3340	85	2150	180	4570	158	3950	5.5	140	5.5	140	6° / 10°	5000	2500	5000	2400	8800	3900
	140	3580	90	2270	190	4810	165	4190	5.5	140	5.5	140	6° / 10°	5000	2500	5000	2400	8650	3920
	148	3780	95	2410	198	5010	173	4390	5.5	140	5.5	140	6° / 8°	5000	2500	5000	2400	8710	3950
	162	4140	102	2590	212	5370	187	4750	5.5	140	5.5	140	6° / 6°	5000	2500	4800	2350	8800	3990
	178	4540	111	2800	227	5770	203	5150	5.5	140	5.5	140	6° / 6°	5000	2500	4600	2300	8890	4030
	198	5040	121	3050	247	6270	223	5650	5.5	140	5.5	140	6° / 6°	4850	2400	4500	2200	9020	4090
	218	5540	130	3300	267	6770	242	6150	5.5	140	5.5	140	6° / 6°	4600	2250	4250	2100	9110	4130
237	6040	140	3550	286	7270	262	6650	5.5	140	5.5	140	6° / 6°	4400	2150	4150	2050	9200	4170	
DUPLEX	112	2860	75	1910	161	4090	137	3480	26	660	50	1280	6° / 10°	5000	2500	5000	2400	8580	3890
	119	3040	79	2000	168	4270	144	3660	30	770	54	1370	6° / 10°	5000	2500	5000	2400	8600	3900
	131	3340	85	2150	180	4570	158	3960	36	920	60	1520	6° / 10°	5000	2500	5000	2400	8650	3920
	140	3570	90	2270	189	4800	165	4190	40	1040	64	1640	6° / 10°	5000	2500	5000	2400	8710	3950
	147	3740	95	2410	195	4970	172	4360	46	1180	70	1790	6° / 6°	5000	2500	5000	2400	8780	3980
	159	4060	102	2590	209	5290	185	4690	53	1360	77	1970	6° / 6°	5000	2500	4800	2350	8870	4020
TRIPLEX	148	3770	72	1810	197	5000	173	4390	22	580	46	1180	6° / 6°	5000	2500	5000	2350	9000	4080
	160	4070	75	1910	209	5300	185	4690	26	660	50	1280	6° / 6°	5000	2500	4700	2350	9040	4100
	170	4340	79	2000	220	5570	196	4960	30	770	54	1370	6° / 6°	5000	2500	4600	2300	9090	4120
	188	4790	85	2150	237	6020	213	5410	36	920	60	1520	6° / 6°	4950	2400	4500	2200	9180	4160
	200	5100	90	2270	249	6330	226	5720	40	1040	64	1640	6° / 6°	4850	2350	4400	2150	9240	4190
	218	5540	95	2410	267	6770	243	6160	46	1180	70	1790	6° / 6°	4400	2200	4150	2100	9400	4280
	237	6030	102	2590	286	7260	262	6650	53	1360	77	1970	6° / 6°	4250	2100	4050	2000	9510	4310
	257	6540	113	2850	308	7770	282	7160	64	1620	87	2230	6° / 6°	3850	1750	3950	1750	9640	4370
	277	7040	121	3050	326	8270	302	7660	71	1820	95	2430	6° / 6°	2750	1250	2500	1150	9750	4420

* Contact CSM Group to obtain capacities.

** Capacity based on model equipment with MCFA OEM integral sideshifter

NOTE: These specifications assume the use of drive axles, tires and tilt angles specified. Any modification to specifications or other combination of specifications made after the shipment of the truck requires prior written approval from Mitsubishi Caterpillar Forklift America Inc. (MCFA). (See ANSI/ITSDF B56.1 Part II 4.2.)

GP28N – Single Drive

Mast Type	Maximum Fork Height		Overall Lowered		Overall Extended Height				Freelift				Tilt F/B deg	Rated Capacity w/ Forks		Rated Capacity w/ Sideshifter **		Total Weight with Standard Carriage and 42" Forks	
	(MFH)		(OAL)		w/ Load Backrest		w/o Load Backrest		w/ Load Backrest		w/o Load Backrest			@24 in Load Center	@ 500 mm Load Center	@24 in Load Center	@ 500 mm Load Center		
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm		lb	kg	lb	kg		
SIMPLEX	80	2040	61	1530	129	3270	106	2690	6	150	6	150	6° / 10°	5500	2750	5400	2650	8850	4010
	102	2600	72	1810	151	3830	128	3250	6	150	6	150	6° / 10°	5500	2750	5400	2650	8960	4060
	121	3070	81	2050	170	4300	147	3720	6	150	6	150	6° / 10°	5500	2750	5400	2650	9040	4100
	130	3310	88	2170	179	4540	156	3960	6	150	6	150	6° / 10°	5500	2750	5400	2650	9090	4120
	139	3550	90	2290	189	4780	166	4200	6	150	6	150	6° / 10°	5500	2750	5400	2650	9180	4160
	147	3740	96	2430	196	4970	173	4390	6	150	6	150	6° / 8°	5500	2750	5400	2650	9220	4180
	159	4040	103	2610	208	5270	185	4690	6	150	6	150	6° / 8°	5500	2750	5250	2600	9350	4240
	178	4540	113	2870	227	5770	205	5190	6	150	6	150	6° / 8°	5400	2750	5050	2500	9440	4280
	198	5040	123	3120	247	6270	224	5690	6	150	6	150	6° / 8°	5250	2650	4150	1900	9840	4370
	218	5540	133	3370	267	6770	244	6190	6	150	6	150	6° / 8°	5150	2550	2600	1200	9730	4410
237	6040	144	3640	287	7270	264	6690	6	150	6	150	6° / 8°	4500	2050	1500	700	9840	4460	
DUPLEX	110	2810	76	1930	159	3830	137	3480	27	700	49	1260	6° / 10°	5500	2750	5400	2650	9070	4110
	119	3040	81	2050	168	4080	146	3710	32	820	54	1380	6° / 10°	5500	2750	5400	2650	9110	4130
	129	3290	86	2170	178	4310	156	3960	37	940	59	1500	6° / 10°	5500	2750	5400	2650	9150	4150
	139	3530	90	2290	188	4550	166	4200	41	1060	64	1620	6° / 10°	5500	2750	5400	2650	9240	4190
	147	3740	96	2430	196	4760	174	4410	47	1200	69	1770	6° / 8°	5500	2750	5400	2650	9310	4220
	159	4050	103	2610	208	5070	186	4720	54	1380	76	1950	6° / 8°	5500	2750	5250	2600	9420	4270
TRIPLEX	147	3730	72	1830	196	4750	173	4400	23	600	45	1160	6° / 8°	5500	2750	5400	2650	9510	4310
	158	4030	76	1930	207	5050	185	4700	27	700	49	1260	6° / 8°	5500	2750	5250	2600	9550	4330
	171	4380	81	2050	220	5380	198	5030	32	820	54	1380	6° / 8°	5500	2750	5050	2500	9840	4370
	186	4740	86	2170	235	5760	213	5410	37	940	59	1500	6° / 8°	5400	2700	4950	2450	9710	4400
	200	5100	90	2290	250	6120	227	5770	41	1060	64	1620	6° / 8°	5250	2600	4150	1900	9770	4430
	216	5490	96	2430	265	6510	243	6160	47	1200	69	1770	6° / 8°	5050	2500	2950	1350	9950	4510
	236	6010	103	2610	285	7030	263	6680	54	1380	76	1950	6° / 8°	4500	2050	1750	800	10080	4570
	256	6510	113	2870	305	7530	283	7180	64	1640	87	2210	6° / 8°	3300	1500	*	*	10210	4630
	277	7040	121	3070	326	8080	304	7710	72	1840	94	2410	6° / 8°	*	*	*	*	10320	4680

* Contact CSM Group to obtain capacities.

** Capacity based on model equipment with MCFA OEM integral sideshifter

NOTE: These specifications assume the use of drive axles, tires and tilt angles specified. Any modification to specifications or other combination of specifications made after the shipment of the truck requires prior written approval from Mitsubishi Caterpillar Forklift America Inc. (MCFA). (See ANSI/ITSDF B56.1 Part II 4.2.)

GP28N – Solid Single Drive

Mast Type	Maximum Fork Height		Overall Lowered		Overall Extended Height				Freelift				Tilt F/B deg	Rated Capacity w/ Forks		Rated Capacity w/ Sideshifter **		Total Weight with Standard Carriage and 42" Forks	
	(MFH)		(OAL)		w/ Load Backrest		w/o Load Backrest		w/ Load Backrest		w/o Load Backrest			@24 in Load Center	@ 500 mm Load Center	@24 in Load Center	@ 500 mm Load Center	lb	kg
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm		lb	kg	lb	kg	lb	kg
SIMPLEX	90	2040	81	1530	129	3270	108	2690	6	150	6	145	6° / 10°	5500	2750	5500	2650	9090	4120
	102	2600	72	1810	151	3830	128	3250	6	150	6	145	6° / 10°	5500	2750	5500	2650	9200	4170
	121	3070	81	2050	170	4300	147	3720	6	150	6	145	6° / 10°	5500	2750	5500	2650	9290	4210
	130	3310	88	2170	179	4540	158	3980	6	150	6	145	6° / 10°	5500	2750	5500	2650	9330	4230
	139	3550	90	2290	189	4780	166	4200	6	150	6	145	6° / 10°	5500	2750	5500	2650	9400	4260
	147	3740	98	2430	198	4970	173	4390	6	150	6	145	6° / 6°	5500	2750	5500	2650	9460	4290
	159	4040	103	2610	208	5270	185	4690	6	150	6	145	6° / 6°	5500	2750	5300	2650	9570	4340
	178	4540	113	2870	227	5770	205	5190	6	150	6	145	6° / 6°	5500	2750	5150	2550	9680	4390
	198	5040	123	3120	247	6270	224	5690	6	150	6	145	6° / 6°	5400	2700	4950	2450	9680	4470
	218	5540	133	3370	267	6770	244	6190	6	150	6	145	6° / 6°	5300	3600	4800	2100	9970	4520
237	6040	144	3640	287	7270	264	6690	6	150	6	145	6° / 6°	5150	2500	2600	1200	10080	4560	
DUPLEX	110	2810	76	1930	159	3830	137	3490	27	700	49	1260	6° / 10°	5500	2750	5500	2650	9290	4210
	119	3040	81	2050	168	4060	146	3710	32	820	54	1380	6° / 10°	5500	2750	5500	2650	9350	4240
	129	3290	86	2170	178	4310	156	3980	37	940	59	1500	6° / 10°	5500	2750	5500	2650	9400	4260
	139	3530	90	2290	188	4550	166	4200	41	1060	64	1620	6° / 10°	5500	2750	5500	2650	9480	4300
	147	3740	96	2430	196	4760	174	4410	47	1200	69	1770	6° / 10°	5500	2750	5500	2650	9530	4320
159	4050	103	2610	208	5070	186	4720	54	1380	78	1950	6° / 6°	5500	2750	5300	2650	9680	4380	
TRIPLEX	147	3730	72	1830	198	4750	173	4400	23	600	45	1160	6° / 6°	5500	2750	5500	2650	9730	4410
	158	4030	76	1930	207	5050	185	4700	27	700	49	1260	6° / 6°	5500	2750	5300	2650	9790	4440
	171	4360	81	2050	220	5380	198	5030	32	820	54	1380	6° / 6°	5500	2750	5150	2550	9880	4470
	186	4740	86	2170	235	5760	213	5410	37	940	59	1500	6° / 6°	5500	2750	5050	2500	9830	4500
	200	5100	90	2290	250	6120	227	5770	41	1060	64	1620	6° / 6°	5400	2650	4950	2400	9990	4530
	218	5490	96	2430	265	6510	243	6160	47	1200	69	1770	6° / 6°	5250	2600	4800	2350	10190	4620
	236	6010	103	2610	285	7030	263	6690	54	1380	76	1950	6° / 6°	5050	2500	2850	1300	10300	4670
	256	6510	113	2870	305	7530	283	7180	64	1640	87	2210	6° / 6°	4950	2350	1650	750	10430	4730
	277	7040	121	3070	328	8060	304	7710	72	1840	94	2410	6° / 6°	3400	1550	750	350	10570	4790

* Contact CSM Group to obtain capacities.

** Capacity based on model equipment with MCFA OEM integral sideshifter

NOTE: These specifications assume the use of drive axles, tires and tilt angles specified. Any modification to specifications or other combination of specifications made after the shipment of the truck requires prior written approval from Mitsubishi Caterpillar Forklift America Inc. (MCFA). (See ANSI/ITSDF B56.1 Part II 4.2.)

GP28N – Dual Drive

Mast Type	Maximum Fork Height		Overall Lowered		Overall Extended Height				Freelift				Tilt	Rated Capacity w/ Forks		Rated Capacity w/ Sideshifter **		Total Weight with Standard Carriage and 42" Forks	
	(MFH)		(OAL)		w/ Load Backrest		w/o Load Backrest		w/ Load Backrest		w/o Load Backrest			@24 in Load Center	@ 500 mm Load Center	@24 in Load Center	@ 500 mm Load Center	lb	kg
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	deg	lb	kg	lb	kg		
SIMPLEX	80	2040	61	1530	129	3270	106	2690	6	150	6	150	6° / 10°	5500	2750	5400	2650	9070	4110
	102	2600	72	1810	151	3830	128	3250	6	150	6	150	6° / 10°	5500	2750	5400	2650	9180	4160
	121	3070	81	2050	170	4300	147	3720	6	150	6	150	6° / 10°	5500	2750	5400	2650	9260	4200
	130	3310	86	2170	179	4540	156	3960	6	150	6	150	6° / 10°	5500	2750	5400	2650	9310	4220
	139	3550	90	2290	189	4780	166	4200	6	150	6	150	6° / 10°	5500	2750	5400	2650	9400	4260
	147	3740	96	2430	196	4970	173	4390	6	150	6	150	6° / 6°	5500	2750	5400	2650	9440	4280
	159	4040	103	2610	208	5270	185	4690	6	150	6	150	6° / 6°	5500	2750	5250	2600	9570	4340
	178	4540	113	2870	227	5770	205	5190	6	150	6	150	6° / 6°	5400	2750	5050	2500	9660	4380
	198	5040	123	3120	247	6270	224	5690	6	150	6	150	6° / 6°	5250	2650	4950	2400	9860	4470
	218	5540	133	3370	267	6770	244	6190	6	150	6	150	6° / 6°	5150	2550	4700	2300	9950	4510
237	6040	144	3640	287	7270	264	6690	6	150	6	150	6° / 6°	4850	2400	4600	2250	10060	4560	
DUPLEX	110	2810	78	1930	159	3830	137	3480	27	700	49	1260	6° / 10°	5500	2750	5400	2650	9290	4210
	119	3040	81	2050	168	4060	146	3710	32	820	54	1380	6° / 10°	5500	2750	5400	2650	9330	4230
	129	3290	86	2170	178	4310	156	3960	37	940	59	1500	6° / 10°	5500	2750	5400	2650	9370	4250
	139	3530	90	2290	188	4550	166	4200	41	1060	64	1620	6° / 10°	5500	2750	5400	2650	9460	4290
	147	3740	96	2430	196	4760	174	4410	47	1200	69	1770	6° / 6°	5500	2750	5400	2650	9530	4320
159	4050	103	2610	208	5070	186	4720	54	1380	76	1950	6° / 6°	5500	2750	5250	2600	9640	4370	
TRIPLEX	147	3730	72	1830	196	4750	173	4400	23	600	45	1160	6° / 6°	5500	2750	5400	2650	9730	4410
	158	4030	76	1930	207	5050	185	4700	27	700	49	1260	6° / 6°	5500	2750	5250	2600	9770	4430
	171	4360	81	2050	220	5380	198	5030	32	820	54	1380	6° / 6°	5500	2750	5150	2500	9860	4470
	186	4740	86	2170	235	5760	213	5410	37	940	59	1500	6° / 6°	5400	2700	4950	2450	9930	4500
	200	5100	90	2290	250	6120	227	5770	41	1060	64	1620	6° / 6°	5250	2600	4850	2400	9990	4530
	216	5490	96	2430	265	6510	243	6160	47	1200	69	1770	6° / 6°	5050	2500	4700	2300	10170	4610
	236	6010	103	2610	285	7030	263	6680	54	1360	76	1950	6° / 6°	4850	2400	4500	2200	10300	4670
	256	6510	113	2870	305	7530	283	7180	64	1640	87	2210	6° / 6°	3850	1750	3850	1750	10430	4730
	277	7040	121	3070	326	8080	304	7710	72	1840	94	2410	6° / 6°	*	*	*	*	10540	4780

* Contact CSM Group to obtain capacities.

** Capacity based on model equipment with MCFA OEM integral sideshifter

NOTE: These specifications assume the use of drive axles, tires and tilt angles specified. Any modification to specifications or other combination of specifications made after the shipment of the truck requires prior written approval from Mitsubishi Caterpillar Forklift America Inc. (MCFA). (See ANSI/ITSDF B56.1 Part II 4.2.)

GP28N – Solid Dual Drive

Mast Type	Maximum Fork Height		Overall Lowered		Overall Extended Height				Freelift				Tilt	Rated Capacity w/ Forks		Rated Capacity w/ Sideshifter **		Total Weight with Standard Carriage and 42" Forks	
	(MFH)		(OAL)		w/ Load Backrest		w/o Load Backrest		w/ Load Backrest		w/o Load Backrest			F/B	@24 in Load Center	@ 500 mm Load Center	@24 in Load Center	@ 500 mm Load Center	lb
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	deg	lb	kg	lb	kg		
SIMPLEX	80	2040	81	1530	129	3270	106	2690	6	150	6	150	6° / 10°	5500	2750	5500	2650	9440	4280
	102	2600	72	1810	151	3830	128	3250	6	150	6	150	6° / 10°	5500	2750	5500	2650	9550	4330
	121	3070	81	2050	170	4300	147	3720	6	150	6	150	6° / 10°	5500	2750	5500	2650	9640	4370
	130	3310	88	2170	179	4540	156	3980	6	150	6	150	6° / 10°	5500	2750	5500	2650	9680	4390
	139	3550	90	2290	189	4780	166	4200	6	150	6	150	6° / 10°	5500	2750	5500	2650	9770	4430
	147	3740	96	2430	196	4970	173	4390	6	150	6	150	6° / 6°	5500	2750	5500	2650	9820	4450
	159	4040	103	2610	208	5270	185	4690	6	150	6	150	6° / 6°	5500	2750	5300	2650	9950	4510
	178	4540	113	2870	227	5770	205	5190	6	150	6	150	6° / 6°	5500	2750	5150	2550	10040	4550
	198	5040	123	3120	247	6270	224	5690	6	150	6	150	6° / 6°	5400	2700	4950	2450	10230	4640
	218	5540	133	3370	267	6770	244	6190	6	150	6	150	6° / 6°	5300	2600	4700	2300	10320	4680
	237	6040	144	3640	287	7270	264	6690	6	150	6	150	6° / 6°	5150	2500	4600	2250	10430	4730
DUPLEX	110	2810	76	1930	159	3830	137	3490	27	700	49	1260	6° / 10°	5500	2750	5500	2650	9660	4380
	119	3040	81	2050	168	4060	146	3710	32	820	54	1380	6° / 10°	5500	2750	5500	2650	9710	4400
	129	3290	86	2170	178	4310	156	3960	37	940	59	1500	6° / 10°	5500	2750	5500	2650	9750	4420
	139	3530	90	2290	188	4550	166	4200	41	1060	64	1620	6° / 10°	5500	2750	5500	2650	9840	4460
	147	3740	96	2430	196	4760	174	4410	47	1200	69	1770	6° / 6°	5500	2750	5500	2650	9900	4490
	159	4050	103	2610	208	5070	186	4720	54	1380	76	1950	8° / 6°	5500	2750	5300	2650	10010	4540
TRIPLEX	147	3730	72	1830	196	4750	173	4400	23	600	45	1160	6° / 6°	5500	2750	5500	2650	10100	4580
	158	4030	76	1930	207	5050	185	4700	27	700	49	1260	6° / 6°	5500	2750	5300	2650	10150	4600
	171	4360	81	2050	220	5380	198	5030	32	820	54	1380	6° / 6°	5500	2750	5150	2550	10230	4640
	186	4740	86	2170	235	5760	213	5410	37	940	59	1500	6° / 6°	5500	2750	5050	2500	10300	4670
	200	5100	90	2290	250	6120	227	5770	41	1060	64	1620	6° / 6°	5400	2650	4950	2400	10370	4700
	218	5490	96	2430	265	6510	243	6160	47	1200	69	1770	8° / 6°	5250	2600	4700	2350	10540	4780
	236	6010	103	2610	285	7030	263	6680	54	1380	76	1950	6° / 6°	5050	2500	4500	2200	10680	4840
	256	6510	113	2870	305	7530	283	7180	64	1640	87	2210	8° / 6°	4950	2350	3850	1750	10810	4900
	277	7040	121	3070	326	8060	304	7710	72	1840	94	2410	6° / 6°	3400	1550	2750	1150	10920	4950

* Contact CSM Group to obtain capacities.

** Capacity based on model equipment with MCFA OEM integral sideshifter

NOTE: These specifications assume the use of drive axles, tires and tilt angles specified. Any modification to specifications or other combination of specifications made after the shipment of the truck requires prior written approval from Mitsubishi Caterpillar Forklift America Inc. (MCFA). (See ANSI/ITSDF B56.1 Part II 4.2.)

GP30N – Single Drive

Mast Type	Maximum Fork Height		Overall Lowered		Overall Extended Height				Freelift				Tilt	Rated Capacity w/ Forks		Rated Capacity w/ Sideshifter **		Total Weight with Standard Carriage and 42" Forks	
	(MFH)		(OAL)		w/ Load Backrest		w/o Load Backrest		w/ Load Backrest		w/o Load Backrest		F/B	@24 in Load Center	@ 500 mm Load Center	@24 in Load Center	@ 500 mm Load Center	lb	kg
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	deg	lb	kg	lb	kg		
SIMPLEX	80	2040	81	1530	129	3270	106	2690	6	150	6	145	6° / 10°	6000	3000	5900	2900	9150	4150
	102	2600	72	1810	151	3830	128	3250	6	150	6	145	6° / 10°	6000	3000	5900	2900	9260	4200
	121	3070	81	2050	170	4300	147	3720	6	150	6	145	6° / 10°	6000	3000	5900	2900	9350	4240
	130	3310	88	2170	179	4540	156	3980	6	150	6	145	6° / 10°	6000	3000	5900	2900	9400	4260
	139	3560	90	2290	189	4780	166	4200	6	150	6	145	6° / 10°	6000	3000	5900	2900	9460	4290
	147	3740	98	2430	196	4970	173	4390	6	150	6	145	8° / 8°	6000	3000	5800	2900	9530	4320
	159	4040	103	2610	208	5270	185	4690	6	150	6	145	6° / 6°	6000	3000	5700	2800	9640	4370
	178	4540	113	2870	227	5770	205	5190	6	150	6	145	8° / 6°	5950	2950	5500	2700	9750	4420
	199	5040	123	3120	247	6270	224	5690	6	150	6	145	8° / 6°	5700	2850	4400	2000	9930	4500
	218	5540	133	3370	287	6770	244	6190	6	150	6	145	8° / 6°	5800	2750	2950	1300	10040	4550
237	6040	144	3640	287	7270	264	6690	6	150	6	145	6° / 6°	4500	2050	1650	800	10120	4590	
DUPLEX	110	2810	76	1930	159	3830	137	3480	27	700	49	1260	6° / 10°	6000	3000	5900	2900	9350	4240
	119	3040	81	2050	168	4060	146	3710	32	820	54	1360	6° / 10°	6000	3000	5900	2900	9420	4270
	129	3290	88	2170	178	4310	156	3980	37	940	59	1500	6° / 10°	6000	3000	5900	2900	9460	4290
	139	3530	90	2290	198	4550	166	4200	41	1080	84	1820	6° / 10°	6000	3000	5900	2900	9550	4330
	147	3740	98	2430	196	4790	174	4410	47	1200	89	1770	8° / 6°	6000	3000	5800	2900	9600	4350
	159	4050	103	2610	208	5070	186	4720	54	1380	76	1950	8° / 6°	6000	3000	5700	2800	9730	4410
TRIPLEX	147	3730	72	1830	196	4750	173	4400	23	600	45	1160	6° / 6°	6000	3000	5800	2850	9820	4450
	158	4030	78	1930	207	5050	185	4700	27	700	49	1260	8° / 6°	6000	3000	5800	2800	9860	4470
	171	4360	81	2050	220	5390	198	5030	32	820	54	1360	6° / 6°	6000	3000	5500	2700	9930	4500
	188	4740	88	2170	235	5780	213	5410	37	940	59	1500	8° / 6°	5900	2900	5400	2600	9990	4530
	200	5100	90	2290	250	6120	227	5770	41	1080	84	1820	8° / 6°	5700	2800	4250	1950	10080	4570
	218	5490	96	2430	285	6510	243	6180	47	1200	89	1770	8° / 6°	5500	2750	2950	1350	10260	4650
	236	6010	103	2610	285	7030	263	6680	54	1380	76	1950	6° / 6°	4500	2050	1750	850	10370	4700
	258	6510	113	2870	305	7530	283	7180	64	1640	87	2210	8° / 6°	3300	1500	*	*	10520	4770
	277	7040	121	3070	326	8060	304	7710	72	1840	94	2410	6° / 6°	*	*	*	*	10630	4820

* Contact CSM Group to obtain capacities.

** Capacity based on model equipment with MCFA OEM integral sideshifter

NOTE: These specifications assume the use of drive axles, tires and tilt angles specified. Any modification to specifications or other combination of specifications made after the shipment of the truck requires prior written approval from Mitsubishi Caterpillar Forklift America Inc. (MCFA). (See ANSI/ITSDF B56.1 Part II 4.2.)

GP30N – Solid Single Drive

Mast Type	Maximum Fork Height		Overall Lowered		Overall Extended Height				Freelift				Tilt	Rated Capacity w/ Forks		Rated Capacity w/ Sideshifter **		Total Weight with Standard Carriage and 42" Forks	
	(MFH)		(OAL)		w/ Load Backrest		w/o Load Backrest		w/ Load Backrest		w/o Load Backrest		F/B	@24 in Load Center	@ 500 mm Load Center	@24 in Load Center	@ 500 mm Load Center	lb	kg
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	deg	lb	kg	lb	kg	lb	kg
SIMPLEX	80	2040	61	1530	129	3270	106	2690	6	150	6	145	6° / 10°	6000	3000	6000	2900	9400	4260
	102	2600	72	1810	151	3830	128	3250	6	150	6	145	6° / 10°	6000	3000	6000	2900	9490	4300
	121	3070	81	2050	170	4300	147	3720	6	150	6	145	6° / 10°	6000	3000	6000	2900	9570	4340
	130	3310	88	2170	179	4540	156	3980	6	150	6	145	6° / 10°	6000	3000	6000	2900	9620	4360
	139	3550	90	2290	189	4780	166	4200	6	150	6	145	6° / 10°	6000	3000	6000	2900	9710	4400
	147	3740	96	2430	196	4970	173	4390	6	150	6	145	6° / 6°	6000	3000	6000	2900	9750	4420
	159	4040	103	2610	208	5270	185	4690	6	150	6	145	6° / 6°	6000	3000	5800	2850	9880	4480
	178	4540	113	2870	227	5770	205	5190	6	150	6	145	6° / 6°	6000	3000	5600	2750	9990	4530
	198	5040	123	3120	247	6270	224	5690	6	150	6	145	6° / 6°	5950	2900	5400	2650	10170	4610
	218	5540	133	3370	267	6770	244	6190	6	150	6	145	6° / 6°	5800	2800	4600	2100	10280	4650
DUPLEX	237	6040	144	3640	287	7270	264	6690	6	150	6	145	6° / 6°	5600	2700	2600	1200	10370	4700
	110	2810	76	1930	159	3830	137	3480	27	700	49	1260	6° / 10°	6000	3000	6000	2900	9600	4350
	119	3040	81	2050	168	4060	146	3710	32	820	54	1380	6° / 10°	6000	3000	6000	2900	9640	4370
	129	3290	88	2170	178	4310	156	3980	37	940	59	1500	6° / 10°	6000	3000	6000	2900	9710	4400
	139	3530	90	2290	188	4550	166	4200	41	1060	64	1620	6° / 10°	6000	3000	6000	2900	9770	4430
	147	3740	96	2430	196	4780	174	4410	47	1200	69	1770	6° / 6°	6000	3000	6000	2900	9840	4460
TRIPLEX	159	4050	103	2610	208	5070	186	4720	54	1380	76	1950	6° / 6°	6000	3000	5800	2850	9970	4520
	147	3730	72	1830	196	4750	173	4400	23	600	45	1180	6° / 6°	6000	3000	6000	2900	10040	4550
	158	4030	76	1930	207	5050	185	4700	27	700	49	1260	6° / 6°	6000	3000	5700	2850	10100	4580
	171	4360	81	2050	220	5380	198	5030	32	820	54	1380	6° / 6°	6000	3000	5600	2750	10170	4610
	186	4740	86	2170	235	5760	213	5410	37	940	59	1500	6° / 6°	6000	3000	5500	2700	10230	4640
	200	5100	90	2290	250	6120	227	5770	41	1060	64	1620	6° / 6°	5950	2900	5400	2600	10300	4670
	216	5490	96	2430	265	6510	243	6160	47	1200	69	1770	6° / 6°	5700	2800	4600	2550	10500	4760
	236	6010	103	2610	285	7030	263	6680	54	1380	76	1950	6° / 6°	5500	2700	2850	1300	10610	4810
	256	6510	113	2870	305	7530	283	7180	64	1640	87	2210	6° / 6°	5150	2350	1650	750	10740	4870
TRIPLEX	277	7040	121	3070	326	8080	304	7710	72	1840	94	2410	6° / 6°	3500	1600	750	350	10870	4930

* Contact CSM Group to obtain capacities.

** Capacity based on model equipment with MCFA OEM integral sideshifter

NOTE: These specifications assume the use of drive axles, tires and tilt angles specified. Any modification to specifications or other combination of specifications made after the shipment of the truck requires prior written approval from Mitsubishi Caterpillar Forklift America Inc. (MCFA). (See ANSI/ITSDF B56.1 Part II 4.2.)

GP30N – Dual Drive

Mast Type	Maximum Fork Height		Overall Lowered		Overall Extended Height				Freelift				Tilt	Rated Capacity w/ Forks		Rated Capacity w/ Sideshifter **		Total Weight with Standard Carriage and 42" Forks	
	(MFH)		(OAL)		w/ Load Backrest		w/o Load Backrest		w/ Load Backrest		w/o Load Backrest			@24 in Load Center	@ 500 mm Load Center	@24 in Load Center	@ 500 mm Load Center	lb	kg
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	deg	lb	kg	lb	kg		
SIMPLEX	80	2040	61	1530	129	3270	106	2690	6	150	6	145	6° / 10°	6000	3000	5900	2900	9370	4250
	102	2600	72	1810	151	3830	128	3250	6	150	6	145	6° / 10°	6000	3000	5900	2900	9480	4300
	121	3070	81	2050	170	4300	147	3720	6	150	6	145	6° / 10°	6000	3000	5900	2900	9570	4340
	130	3310	86	2170	179	4540	156	3960	6	150	6	145	6° / 10°	6000	3000	5900	2900	9620	4360
	139	3550	90	2290	189	4780	166	4200	6	150	6	145	6° / 10°	6000	3000	5900	2900	9680	4390
	147	3740	96	2430	196	4970	173	4390	6	150	6	145	6° / 6°	6000	3000	5800	2900	9750	4420
	159	4040	103	2610	208	5270	185	4690	6	150	6	145	6° / 6°	6000	3000	5700	2800	9860	4470
	178	4540	113	2870	227	5770	205	5190	6	150	6	145	6° / 6°	5950	2950	5500	2700	9970	4520
	198	5040	123	3120	247	6270	224	5690	6	150	6	145	6° / 6°	5700	2850	5250	2600	10150	4600
	218	5540	133	3370	267	6770	244	6190	6	150	6	145	6° / 6°	5600	2750	5150	2500	10260	4650
	237	6040	144	3640	287	7270	264	6690	6	150	6	145	6° / 6°	5250	2400	4950	2400	10340	4690
DUPLEX	110	2810	76	1930	159	3830	137	3480	27	700	49	1260	6° / 10°	6000	3000	5900	2900	9570	4340
	119	3040	81	2050	168	4060	146	3710	32	820	54	1380	6° / 10°	6000	3000	5900	2900	9640	4370
	129	3290	86	2170	178	4310	156	3960	37	940	59	1500	6° / 10°	6000	3000	5900	2900	9680	4390
	139	3530	90	2290	188	4550	166	4200	41	1060	64	1620	6° / 10°	6000	3000	5900	2900	9770	4430
	147	3740	96	2430	196	4760	174	4410	47	1200	69	1770	6° / 6°	6000	3000	5800	2900	9820	4450
	159	4050	103	2610	208	5070	186	4720	54	1380	76	1950	6° / 6°	6000	3000	5700	2800	9950	4510
TRIPLEX	147	3730	72	1830	196	4750	173	4400	23	600	45	1160	6° / 6°	6000	3000	5800	2850	10040	4550
	158	4030	76	1930	207	5050	185	4700	27	700	49	1260	6° / 6°	6000	3000	5700	2800	10080	4570
	171	4360	81	2050	220	5380	198	5030	32	820	54	1380	6° / 6°	6000	3000	5500	2750	10150	4600
	186	4740	86	2170	235	5760	213	5410	37	940	59	1500	6° / 6°	5900	2900	5400	2650	10210	4630
	200	5100	90	2290	250	6120	227	5770	41	1060	64	1620	6° / 6°	5700	2800	5250	2600	10300	4670
	216	5490	96	2430	265	6510	243	6160	47	1200	69	1770	6° / 6°	5500	2750	5050	2500	10480	4750
	236	6010	103	2610	285	7030	263	6680	54	1380	76	1950	6° / 6°	5150	2400	4850	2400	10590	4800
	256	6510	113	2870	305	7530	283	7180	64	1640	87	2210	6° / 6°	3850	1750	3850	1750	10740	4870
	277	7040	121	3070	328	8060	304	7710	72	1840	94	2410	6° / 6°	*	*	*	*	10850	4920

* Contact CSM Group to obtain capacities.

** Capacity based on model equipment with MCFA OEM integral sideshifter

NOTE: These specifications assume the use of drive axles, tires and tilt angles specified. Any modification to specifications or other combination of specifications made after the shipment of the truck requires prior written approval from Mitsubishi Caterpillar Forklift America Inc. (MCFA). (See ANSI/ITSDF B56.1 Part II 4.2.)

GP30N – Solid Dual Drive

Mast Type	Maximum Fork Height		Overall Lowered		Overall Extended Height				Freelift				Tilt F/B deg	Rated Capacity w/ Forks		Rated Capacity w/ Sideshifter **		Total Weight with Standard Carriage and 42" Forks	
	(MFH)		(OAL)		w/ Load Backrest		w/o Load Backrest		w/ Load Backrest		w/o Load Backrest			@24 in Load Center	@ 500 mm Load Center	@24 in Load Center	@ 500 mm Load Center	lb	kg
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm		lb	kg	lb	kg	lb	kg
SIMPLEX	80	2040	81	1530	129	3270	108	2890	8	150	8	150	8° / 10°	6000	3000	6000	2900	9750	4420
	102	2600	72	1810	151	3830	128	3250	8	150	8	150	8° / 10°	6000	3000	6000	2900	9880	4470
	121	3070	81	2050	170	4300	147	3720	8	150	8	150	8° / 10°	6000	3000	6000	2900	9950	4510
	130	3310	86	2170	179	4540	156	3960	8	150	8	150	8° / 10°	6000	3000	6000	2900	9990	4530
	139	3550	90	2290	189	4780	166	4200	8	150	8	150	8° / 10°	6000	3000	6000	2900	10060	4560
	147	3740	96	2430	196	4970	173	4390	8	150	8	150	8° / 6°	6000	3000	6000	2900	10120	4590
	159	4040	103	2610	208	5270	185	4690	8	150	8	150	8° / 8°	6000	3000	5800	2850	10230	4640
	178	4540	113	2870	227	5770	205	5190	8	150	8	150	8° / 6°	6000	3000	5600	2750	10340	4690
	198	5040	123	3120	247	6270	224	5690	8	150	8	150	8° / 6°	5950	2900	5400	2650	10520	4770
	218	5540	133	3370	267	6770	244	6190	8	150	8	150	8° / 6°	5800	2800	5150	2500	10630	4820
237	6040	144	3640	287	7270	264	6690	8	150	8	150	8° / 6°	5600	2700	4950	2400	10720	4860	
DUPLEX	110	2810	78	1930	159	3830	137	3480	27	700	49	1260	8° / 10°	6000	3000	6000	2900	9950	4510
	119	3040	81	2050	188	4080	148	3710	32	820	54	1380	8° / 10°	6000	3000	6000	2900	10010	4540
	129	3290	86	2170	178	4310	156	3960	37	940	59	1500	8° / 10°	6000	3000	6000	2900	10060	4560
	139	3530	90	2290	188	4550	166	4200	41	1060	64	1620	8° / 10°	6000	3000	6000	2900	10150	4600
	147	3740	96	2430	196	4760	174	4410	47	1200	69	1770	8° / 6°	6000	3000	6000	2900	10190	4620
159	4050	103	2610	208	5070	186	4720	54	1380	76	1950	8° / 6°	6000	3000	5800	2850	10320	4680	
TRIPLEX	147	3730	72	1830	198	4750	173	4400	23	600	45	1180	8° / 8°	6000	3000	6000	2900	10410	4720
	158	4030	76	1930	207	5050	185	4700	27	700	49	1260	8° / 6°	6000	3000	5700	2850	1450	4740
	171	4360	81	2050	220	5380	198	5030	32	820	54	1380	8° / 8°	6000	3000	5800	2750	10520	4770
	186	4740	86	2170	235	5760	213	5410	37	940	59	1500	8° / 6°	6000	3000	5500	2700	10590	4800
	200	5100	90	2290	250	6120	227	5770	41	1060	64	1620	8° / 6°	5950	2900	5400	2600	10660	4840
	216	5490	96	2430	265	6510	243	6160	47	1200	69	1770	8° / 6°	5700	2800	5050	2550	10850	4920
	236	6010	103	2610	285	7030	263	6690	54	1380	76	1950	8° / 6°	5500	2700	4850	2400	10960	4970
	256	6510	113	2870	305	7530	283	7180	64	1640	87	2210	8° / 6°	5150	2350	3850	1750	11120	5040
277	7040	121	3070	328	8080	304	7710	72	1840	94	2410	8° / 8°	3500	1600	2750	1150	11230	5090	

* Contact CSM Group to obtain capacities.

** Capacity based on model equipment with MCFA OEM integral sideshifter

NOTE: These specifications assume the use of drive axles, tires and tilt angles specified. Any modification to specifications or other combination of specifications made after the shipment of the truck requires prior written approval from Mitsubishi Caterpillar Forklift America Inc. (MCFA). (See ANSI/ITSDF B56.1 Part II 4.2.)

GP33N – Single Drive

Mast Type	Maximum Fork Height		Overall Lowered		Overall Extended Height				Freelift				Tilt F/B deg	Rated Capacity w/ Forks		Rated Capacity w/ Sideshifter **		Total Weight with Standard Carriage and 42" Forks	
	(MFH)		(OAL)		w/ Load Backrest		w/o Load Backrest		w/ Load Backrest		w/o Load Backrest			@24 in Load Center	@ 500 mm Load Center	@24 in Load Center	@ 500 mm Load Center	lb	kg
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm		lb	kg	lb	kg	lb	kg
SIMPLEX	80	2050	65	1650	129	3270	104	2760	6	150	6	150	6° / 10°	6500	3250	6350	3150	9860	4470
	103	2620	77	1940	152	3840	128	3330	6	150	6	150	6° / 10°	6500	3250	6350	3150	9970	4520
	120	3050	88	2180	168	4270	144	3760	6	150	6	150	6° / 10°	6500	3250	6350	3150	10060	4560
	131	3350	91	2300	180	4570	155	4060	6	150	6	150	6° / 10°	6500	3250	6350	3150	10150	4600
	140	3580	97	2450	189	4800	164	4290	6	150	6	150	6° / 10°	6500	3250	6350	3150	10190	4620
	148	3770	99	2510	197	4990	171	4480	6	150	6	150	6° / 6°	6500	3250	6350	3150	10280	4660
	159	4050	109	2770	208	5270	187	4760	6	150	6	150	6° / 6°	6500	3250	6350	3150	10360	4710
	179	4550	119	3010	227	5770	202	5260	6	150	6	150	6° / 6°	6500	3250	6250	3100	10540	4780
	198	5050	129	3260	247	6270	222	5760	6	150	6	150	6° / 6°	6400	3200	4850	2200	10680	4840
	218	5550	139	3510	267	6770	242	6260	6	150	6	150	6° / 6°	6250	2850	2950	1350	10760	4880
238	6050	148	3780	287	7270	262	6760	6	150	6	150	6° / 6°	4500	2050	1650	750	10850	4920	
DUPLEX	110	2810	82	2080	159	4030	141	3580	33	840	51	1290	6° / 10°	6500	3250	6350	3150	10080	4570
	120	3060	86	2180	169	4280	151	3830	37	960	55	1410	6° / 10°	6500	3250	6350	3150	10150	4600
	131	3350	91	2300	180	4570	162	4120	42	1080	60	1530	6° / 10°	6500	3250	6350	3150	10230	4640
	139	3550	97	2450	188	4770	170	4320	48	1220	66	1685	6° / 10°	6500	3250	6350	3150	10280	4660
	148	3770	104	2630	197	4990	179	4540	55	1400	73	1660	6° / 6°	6500	3250	6350	3150	10390	4710
	159	4050	109	2770	208	5270	190	4820	60	1540	78	2000	6° / 6°	6500	3250	6350	3150	10480	4750
TRIPLEX	148	3780	77	1940	197	5020	171	4550	28	720	48	1170	6° / 6°	6500	3250	6350	3150	10540	4780
	159	4060	82	2080	208	5280	183	4830	33	840	51	1290	6° / 6°	6500	3250	6350	3150	10610	4810
	174	4440	86	2180	223	5680	197	5210	37	960	55	1410	6° / 6°	6500	3250	6250	3100	10680	4840
	187	4750	91	2300	235	5970	209	5520	42	1080	60	1530	6° / 6°	6500	3200	6150	3000	10760	4880
	200	5080	97	2450	248	6300	222	5850	48	1220	66	1680	6° / 6°	6400	3150	4950	2250	10940	4960
	221	5630	104	2630	270	6850	244	6400	55	1400	73	1660	6° / 6°	6150	2800	2950	1350	11050	5010
	238	6050	109	2770	287	7270	260	6820	60	1540	78	2000	6° / 6°	4500	2050	1750	850	11140	5050
	258	6560	116	2940	307	7780	281	7330	67	1720	85	2170	6° / 6°	3300	1500	*	*	11250	5100
	277	7050	124	3140	328	8270	301	7820	75	1910	93	2370	6° / 6°	*	*	*	*	11380	5150

* Contact CSM Group to obtain capacities.

** Capacity based on model equipment with MCFA OEM integral sideshifter

NOTE: These specifications assume the use of drive axles, tires and tilt angles specified. Any modification to specifications or other combination of specifications made after the shipment of the truck requires prior written approval from Mitsubishi Caterpillar Forklift America Inc. (MCFA). (See ANSI/ITSDF B56.1 Part II 4.2.)

GP33N – Solid Single Drive

Mast Type	Maximum Fork Height		Overall Lowered		Overall Extended Height				Freelift				Tilt	Rated Capacity w/ Forks		Rated Capacity w/ Sideshifter **		Total Weight with Standard Carriage and 42" Forks	
	(MFH)		(OAL)		w/ Load Backrest		w/o Load Backrest		w/ Load Backrest		w/o Load Backrest			F/B	@24 in Load Center	@ 500 mm Load Center	@24 in Load Center		
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	deg		lb	kg	lb	kg	lb
SIMPLEX	80	2050	65	1650	129	3270	104	2760	6	150	6	150	6° / 10°	6500	3250	6500	3150	10190	4620
	103	2620	77	1940	152	3840	126	3330	6	150	6	150	6° / 10°	6500	3250	6500	3150	10300	4670
	120	3050	86	2180	188	4270	144	3780	6	150	6	150	6° / 10°	6500	3250	6500	3150	10390	4710
	131	3350	91	2300	180	4570	155	4060	6	150	6	150	6° / 10°	6500	3250	6500	3150	10480	4750
	140	3580	97	2450	189	4800	164	4290	6	150	6	150	6° / 10°	6500	3250	6500	3150	10520	4770
	148	3770	99	2510	197	4990	171	4480	6	150	6	150	6° / 6°	6500	3250	6500	3150	10610	4810
	159	4050	109	2770	208	5270	187	4760	6	150	6	150	6° / 6°	6500	3250	6350	3150	10720	4860
	179	4550	119	3010	227	5770	202	5260	6	150	6	150	6° / 6°	6500	3250	6350	3100	10870	4930
	198	5050	129	3260	247	6270	222	5760	6	150	6	150	6° / 6°	6500	3250	6150	3050	11010	4990
	218	5550	139	3510	267	6770	242	6260	6	150	6	150	6° / 6°	6350	3200	4600	2100	11090	5030
236	6050	148	3760	287	7270	262	6760	6	150	6	150	6° / 6°	6250	3100	2600	1200	11180	5070	
DUPLEX	110	2810	82	2060	159	4030	141	3580	33	940	51	1290	6° / 10°	6500	3250	6500	3150	10410	4720
	120	3060	86	2180	169	4280	151	3830	37	960	55	1410	6° / 10°	6500	3250	6500	3150	10480	4750
	131	3350	91	2300	180	4570	162	4120	42	1080	60	1530	6° / 10°	6500	3250	6500	3150	10570	4790
	139	3550	97	2450	188	4770	170	4320	48	1220	66	1685	6° / 10°	6500	3250	6500	3150	10610	4810
	148	3770	104	2630	197	4990	179	4540	55	1400	73	1860	6° / 6°	6500	3250	6500	3150	10720	4860
159	4050	109	2770	208	5270	190	4820	60	1540	78	2000	6° / 6°	6500	3250	6350	3150	10810	4900	
TRIPLEX	148	3780	77	1940	197	5000	171	4550	28	720	46	1170	6° / 6°	6500	3250	6500	3150	10870	4930
	159	4060	82	2060	208	5280	183	4830	33	840	51	1290	6° / 6°	6500	3250	6350	3150	10940	4960
	174	4440	86	2180	223	5660	197	5210	37	960	55	1410	6° / 6°	6500	3250	6350	3150	11010	4990
	187	4750	91	2300	235	5970	209	5520	42	1080	60	1530	6° / 6°	6500	3250	6250	3100	11090	5030
	200	5080	97	2450	248	6300	222	5850	48	1220	66	1680	6° / 6°	6500	3200	6150	3000	11270	5110
	221	5630	104	2630	270	6850	244	6400	55	1400	73	1860	6° / 6°	6300	3150	4600	2100	11380	5160
	236	6050	109	2770	287	7270	260	6820	60	1540	78	2000	6° / 6°	6250	3100	2850	1300	11470	5200
	258	6560	116	2940	307	7780	281	7330	67	1720	85	2170	6° / 6°	6150	2350	1650	750	11580	5250
	277	7050	124	3140	328	8270	301	7820	75	1910	93	2370	6° / 6°	3500	1600	750	350	11690	5300

* Contact CSM Group to obtain capacities.

** Capacity based on model equipment with MCFA OEM integral sideshifter

NOTE: These specifications assume the use of drive axles, tires and tilt angles specified. Any modification to specifications or other combination of specifications made after the shipment of the truck requires prior written approval from Mitsubishi Caterpillar Forklift America Inc. (MCFA). (See ANSI/ITSDF B56.1 Part II 4.2.)

GP33N – Dual Drive

Mast Type	Maximum Fork Height		Overall Lowered		Overall Extended Height				Freelift				Tilt F/B deg	Rated Capacity w/ Forks		Rated Capacity w/ Sideshifter **		Total Weight with Standard Carriage and 42" Forks	
	(MFH)		(OAL)		w/ Load Backrest		w/o Load Backrest		w/ Load Backrest		w/o Load Backrest			@24 in Load Center	@ 500 mm Load Center	@24 in Load Center	@ 500 mm Load Center	lb	kg
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm		lb	kg	lb	kg	lb	kg
SIMPLEX	80	2050	85	1850	129	3270	104	2760	6	150	6	150	6° / 10°	6500	3250	6350	3150	10080	4580
	103	2620	77	1940	152	3840	126	3330	6	150	6	150	6° / 10°	6500	3250	6350	3150	10170	4610
	120	3050	88	2180	188	4270	144	3780	6	150	6	150	6° / 10°	6500	3250	6350	3150	10260	4650
	131	3350	91	2300	180	4570	155	4060	6	150	6	150	6° / 10°	6500	3250	6350	3150	10340	4690
	140	3580	97	2450	189	4800	164	4290	6	150	6	150	6° / 10°	6500	3250	6350	3150	10390	4710
	148	3770	99	2510	197	4990	171	4480	6	150	6	150	6° / 6°	6500	3250	6350	3150	10480	4750
	159	4050	109	2770	208	5270	187	4760	6	150	6	150	6° / 6°	6500	3250	6350	3150	10590	4800
	179	4550	119	3010	227	5770	202	5260	6	150	6	150	6° / 6°	6500	3250	6350	3150	10740	4870
	198	5050	129	3260	247	6270	222	5760	6	150	6	150	6° / 6°	6400	3200	6150	3000	10870	4930
	218	5550	139	3510	267	6770	242	6260	6	150	6	150	6° / 6°	6250	3100	5950	2900	10980	4970
238	6050	148	3760	287	7270	262	6760	6	150	6	150	6° / 6°	5250	2400	5250	2400	11050	5010	
DUPLEX	110	2810	82	2080	159	4030	141	3580	33	940	51	1290	6° / 10°	6500	3250	6350	3150	10280	4680
	120	3080	88	2180	189	4280	151	3830	37	980	55	1410	6° / 10°	6500	3250	6350	3150	10340	4690
	131	3350	91	2300	180	4570	162	4120	42	1080	60	1530	6° / 10°	6500	3250	6350	3150	10430	4730
	139	3550	97	2450	188	4770	170	4320	48	1220	66	1685	6° / 10°	6500	3250	6350	3150	10480	4750
	148	3770	104	2630	197	4990	179	4540	55	1400	73	1860	6° / 6°	6500	3250	6350	3150	10590	4800
159	4050	109	2770	208	5270	190	4820	60	1540	78	2000	6° / 6°	6500	3250	6350	3150	10680	4840	
TRIPLEX	148	3780	77	1940	197	5000	171	4550	28	720	48	1170	8° / 8°	6500	3250	6350	3150	10740	4870
	159	4060	82	2060	208	5280	183	4830	33	840	51	1290	6° / 6°	6500	3250	6350	3150	10810	4900
	174	4440	88	2180	223	5680	197	5210	37	980	55	1410	8° / 8°	6500	3250	6350	3100	10870	4930
	187	4750	91	2300	235	5970	209	5520	42	1080	60	1530	6° / 6°	6500	3200	6150	3050	10980	4970
	200	5080	97	2450	248	6300	222	5850	48	1220	66	1680	6° / 6°	6400	3150	6050	3000	11140	5050
	221	5630	104	2630	270	6850	244	6400	55	1400	73	1860	6° / 6°	6150	3050	5800	2850	11250	5100
	238	6050	109	2770	287	7270	260	6820	60	1540	78	2000	6° / 6°	5250	2400	5250	2400	11340	5140
	258	6560	116	2940	307	7780	281	7330	67	1720	85	2170	6° / 6°	3850	1750	3850	1750	11450	5190
277	7050	124	3140	328	8270	301	7820	75	1910	93	2370	6° / 6°	*	*	*	*	11580	5240	

* Contact CSM Group to obtain capacities.

** Capacity based on model equipment with MCFA OEM integral sideshifter

NOTE: These specifications assume the use of drive axles, tires and tilt angles specified. Any modification to specifications or other combination of specifications made after the shipment of the truck requires prior written approval from Mitsubishi Caterpillar Forklift America Inc. (MCFA). (See ANSI/ITSDF B56.1 Part II 4.2.)

GP33N – Solid Dual Drive

Mast Type	Maximum Fork Height		Overall Lowered		Overall Extended Height				Freelift				Tilt F/B deg	Rated Capacity w/ Forks		Rated Capacity w/ Sideshifter **		Total Weight with Standard Carriage and 42" Forks	
	(MFH)		(OAL)		w/ Load Backrest		w/o Load Backrest		w/ Load Backrest		w/o Load Backrest			@24 in Load Center	@ 500 mm Load Center	@24 in Load Center	@ 500 mm Load Center	lb	kg
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm		lb	kg	lb	kg	lb	kg
SIMPLEX	80	2050	65	1650	129	3270	104	2760	6	150	6	150	6° / 10°	6500	3250	6500	3150	10430	4730
	103	2620	77	1940	152	3840	126	3330	6	150	6	150	6° / 10°	6500	3250	6500	3150	10540	4780
	120	3050	86	2180	168	4270	144	3760	6	150	6	150	6° / 10°	6500	3250	6500	3150	10630	4820
	131	3350	91	2300	180	4570	155	4060	6	150	6	150	6° / 10°	6500	3250	6500	3150	10720	4860
	140	3580	97	2450	189	4800	164	4290	6	150	6	150	6° / 10°	6500	3250	6500	3150	10760	4880
	148	3770	99	2510	197	4990	171	4480	6	150	6	150	6° / 6°	6500	3250	6500	3150	10850	4920
	159	4050	109	2770	208	5270	187	4760	6	150	6	150	6° / 6°	6500	3250	6350	3150	10960	4970
	179	4550	119	3010	227	5770	202	5260	6	150	6	150	6° / 6°	6500	3250	6350	3150	11120	5040
	198	5050	129	3260	247	6270	222	5760	6	150	6	150	6° / 6°	6500	3250	6150	3050	11250	5100
	218	5550	139	3510	267	6770	242	6260	6	150	6	150	6° / 6°	6350	3200	5950	2900	11340	5140
238	6050	148	3760	287	7270	262	6760	6	150	6	150	6° / 6°	6250	3100	5250	2400	11420	5180	
DUPLEX	110	2810	82	2080	159	4030	141	3580	33	840	51	1290	6° / 10°	6500	3250	6500	3150	10850	4830
	120	3060	86	2180	169	4280	151	3830	37	960	55	1410	6° / 10°	6500	3250	6500	3150	10720	4860
	131	3350	91	2300	180	4570	162	4120	42	1080	60	1530	6° / 10°	6500	3250	6500	3150	10810	4900
	139	3550	97	2450	188	4770	170	4320	48	1220	66	1685	6° / 10°	6500	3250	6500	3150	10850	4920
	148	3770	104	2630	197	4990	179	4540	55	1400	73	1860	6° / 6°	6500	3250	6500	3150	10960	4970
	159	4050	109	2770	208	5270	190	4820	60	1540	78	2000	6° / 6°	6500	3250	6350	3150	11050	5010
TRIPLEX	148	3780	77	1940	197	5000	171	4550	28	720	46	1170	6° / 6°	6500	3250	6500	3150	11120	5040
	159	4060	82	2080	208	5280	183	4830	33	840	51	1290	6° / 6°	6500	3250	6350	3150	11180	5070
	174	4440	86	2180	223	5660	197	5210	37	960	55	1410	6° / 6°	6500	3250	6350	3150	11250	5100
	187	4750	91	2300	235	5970	209	5520	42	1080	60	1530	6° / 6°	6500	3250	6250	3100	11340	5140
	200	5080	97	2450	248	6300	222	5850	48	1220	66	1680	6° / 6°	6500	3200	6150	3000	11510	5220
	221	5630	104	2630	270	6850	244	6400	55	1400	73	1860	6° / 6°	6300	3150	5800	2850	11620	5270
	238	6050	109	2770	287	7270	260	6820	60	1540	78	2000	6° / 6°	6250	3100	5250	2400	11710	5310
	258	6560	116	2940	307	7780	281	7330	67	1720	85	2170	6° / 6°	5150	2350	3850	1750	11820	5360
	277	7050	124	3140	326	8270	301	7820	75	1910	93	2370	6° / 6°	3500	1600	2750	1150	11930	5410

* Contact CSM Group to obtain capacities.

** Capacity based on model equipment with MCFA OEM integral sideshifter

NOTE: These specifications assume the use of drive axles, tires and tilt angles specified. Any modification to specifications or other combination of specifications made after the shipment of the truck requires prior written approval from Mitsubishi Caterpillar Forklift America Inc. (MCFA). (See ANSI/ITSDF B56.1 Part II 4.2.)

GP35N – Single Drive

Mast Type	Maximum Fork Height		Overall Lowered		Overall Extended Height				Freelift				Tilt F/B deg	Rated Capacity w/ Forks		Rated Capacity w/ Sideshifter **		Total Weight with Standard Carriage and 42" Forks	
	(MFH)		(OAL)		w/ Load Backrest		w/o Load Backrest		w/ Load Backrest		w/o Load Backrest			@24 in Load Center	@ 500 mm Load Center	@24 in Load Center	@ 500 mm Load Center	lb	kg
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm		lb	kg	lb	kg		
SIMPLEX	80	2050	65	1650	129	3270	104	2760	6	150	6	150	6° / 10°	7000	3500	6850	3400	10060	4560
	103	2620	77	1940	152	3840	126	3330	6	150	6	150	6° / 10°	7000	3500	6850	3400	10170	4610
	120	3050	86	2180	168	4270	144	3760	6	150	6	150	6° / 10°	7000	3500	6850	3400	10280	4660
	131	3350	91	2300	180	4570	155	4060	6	150	6	150	6° / 10°	7000	3500	6850	3400	10340	4690
	140	3580	97	2450	189	4820	164	4290	6	150	6	150	6° / 10°	7000	3500	6850	3400	10410	4720
	148	3770	99	2510	197	4990	171	4480	6	150	6	150	6° / 6°	7000	3500	6800	3400	10480	4750
	159	4050	109	2770	208	5270	187	4780	6	150	6	150	6° / 6°	7000	3500	6700	3300	10590	4800
	179	4550	119	3010	227	5770	202	5260	6	150	6	150	6° / 6°	7000	3500	6500	3200	10740	4870
	198	5050	129	3260	247	6270	222	5760	6	150	6	150	6° / 6°	6900	3400	4850	2200	10870	4930
	218	5550	139	3510	267	6770	242	6260	6	150	6	150	6° / 6°	6250	2850	2950	1350	10960	4970
238	6050	148	3760	287	7270	262	6760	6	150	6	150	6° / 6°	4500	2050	*	*	11070	5020	
DUPLEX	110	2810	82	2080	159	4030	141	3580	33	840	51	1290	6° / 10°	7000	3500	6850	3400	10260	4660
	120	3060	86	2180	169	4280	151	3830	37	960	55	1410	6° / 10°	7000	3500	6850	3400	10340	4690
	131	3350	91	2300	180	4570	162	4120	42	1060	60	1530	6° / 10°	7000	3500	6850	3400	10430	4730
	139	3550	97	2450	188	4770	170	4320	48	1220	68	1685	6° / 10°	7000	3500	6850	3400	10480	4750
	148	3770	104	2630	197	4990	179	4540	55	1400	73	1860	6° / 6°	7000	3500	6800	3400	10610	4810
159	4050	109	2770	208	5270	190	4820	60	1540	78	2000	6° / 6°	7000	3500	6700	3300	10680	4840	
TRIPLEX	148	3780	77	1940	197	5000	171	4550	28	720	48	1170	6° / 6°	7000	3500	6800	3350	10740	4870
	159	4060	82	2060	208	5280	183	4630	33	840	51	1290	6° / 6°	7000	3500	6700	3300	10810	4900
	174	4440	88	2180	223	5680	197	5210	37	960	55	1410	6° / 6°	7000	3500	6500	3200	10870	4930
	187	4750	91	2300	235	5970	209	5520	42	1080	60	1530	6° / 6°	7000	3450	6350	3000	10960	4970
	200	5080	97	2450	248	6300	222	5850	48	1220	68	1680	6° / 6°	6800	3350	4950	2250	11140	5050
	221	5630	104	2630	270	6850	244	6400	55	1400	73	1860	6° / 6°	6150	2800	2950	1350	11270	5110
	238	6050	109	2770	287	7270	260	6820	60	1540	78	2000	6° / 6°	4500	2050	1750	850	11340	5140
	258	6560	116	2940	307	7780	281	7330	67	1720	85	2170	6° / 6°	3300	1500	*	*	11450	5190
	277	7050	124	3140	326	8270	301	7620	75	1910	93	2370	6° / 6°	*	*	*	*	11560	5240

* Contact CSM Group to obtain capacities.

** Capacity based on model equipment with MCFA OEM integral sideshifter

NOTE: These specifications assume the use of drive axles, tires and tilt angles specified. Any modification to specifications or other combination of specifications made after the shipment of the truck requires prior written approval from Mitsubishi Caterpillar Forklift America Inc. (MCFA). (See ANSI/ITSDF B56.1 Part II 4.2.)

GP35N – Solid Single Drive

Mast Type	Maximum Fork Height		Overall Lowered		Overall Extended Height				Freelift				Tilt F/B deg	Rated Capacity w/ Forks		Rated Capacity w/ Sideshifter **		Total Weight with Standard Carriage and 42" Forks	
	(MFH)		(OAL)		w/ Load Backrest		w/o Load Backrest		w/ Load Backrest		w/o Load Backrest			@24 in Load Center	@ 500 mm Load Center	@24 in Load Center	@ 500 mm Load Center		
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm		lb	kg	lb	kg		
SIMPLEX	80	2050	65	1650	129	3270	104	2760	6	150	6	150	6° / 10°	7000	3500	7000	3400	10390	4710
	103	2620	77	1940	152	3840	126	3330	6	150	6	150	6° / 10°	7000	3500	7000	3400	10500	4760
	120	3050	88	2180	168	4270	144	3760	6	150	6	150	6° / 10°	7000	3500	7000	3400	10610	4810
	131	3350	91	2300	180	4570	155	4060	6	150	6	150	6° / 10°	7000	3500	7000	3400	10680	4840
	140	3580	97	2450	189	4800	164	4290	6	150	6	150	6° / 10°	7000	3500	7000	3400	10740	4870
	148	3770	99	2510	197	4990	171	4480	6	150	6	150	6° / 6°	7000	3500	7000	3400	10810	4900
	159	4050	109	2770	208	5270	187	4760	6	150	6	150	6° / 6°	7000	3500	6800	3350	10920	4950
	179	4550	119	3010	227	5770	202	5280	6	150	6	150	6° / 6°	7000	3500	6800	3250	11070	5020
	198	5050	129	3260	247	6270	222	5760	6	150	6	150	6° / 6°	7000	3500	6350	3150	11200	5080
	218	5550	139	3510	267	6770	242	6260	6	150	6	150	6° / 6°	6800	3350	4600	2100	11290	5120
	238	6050	148	3760	287	7270	262	6760	6	150	6	150	6° / 6°	6600	3250	2800	1200	11400	5170
DUPLEX	110	2810	82	2080	159	4030	141	3580	33	840	51	1290	6° / 10°	7000	3500	7000	3400	10810	4810
	120	3060	88	2180	169	4280	151	3830	37	960	55	1410	6° / 10°	7000	3500	7000	3400	10680	4840
	131	3350	91	2300	180	4570	162	4120	42	1080	60	1530	6° / 10°	7000	3500	7000	3400	10760	4860
	139	3550	97	2450	188	4770	170	4320	48	1220	66	1685	6° / 10°	7000	3500	7000	3400	10810	4900
	148	3770	104	2630	197	4990	179	4540	55	1400	73	1860	6° / 6°	7000	3500	7000	3400	10940	4960
	159	4050	109	2770	208	5270	190	4820	60	1540	78	2000	6° / 6°	7000	3500	6800	3350	11010	4990
TRIPLEX	148	3780	77	1940	197	5000	171	4550	28	720	46	1170	6° / 6°	7000	3500	7000	3400	11070	5020
	159	4060	82	2060	208	5280	183	4830	33	840	51	1290	6° / 6°	7000	3500	6800	3350	11140	5050
	174	4440	86	2180	223	5660	197	5210	37	960	55	1410	6° / 6°	7000	3500	6600	3250	11200	5080
	187	4750	91	2300	235	5970	209	5520	42	1080	60	1530	6° / 6°	7000	3500	6500	3150	11290	5120
	200	5080	97	2450	248	6300	222	5850	48	1220	66	1680	6° / 6°	7000	3450	6350	3100	11470	5200
	221	5630	104	2630	270	6850	244	6400	55	1400	73	1860	6° / 6°	6700	3300	4600	2100	11600	5260
	238	6050	109	2770	287	7270	260	6820	60	1540	78	2000	6° / 6°	6600	3200	2850	1300	11670	5290
	258	6560	116	2940	307	7780	281	7330	67	1720	85	2170	6° / 6°	5150	2350	1650	750	11780	5340
	277	7050	124	3140	326	8270	301	7820	75	1910	93	2370	6° / 6°	3500	1600	750	350	11890	5390

* Contact CSM Group to obtain capacities.

** Capacity based on model equipment with MCFA OEM integral sideshifter

NOTE: These specifications assume the use of drive axles, tires and tilt angles specified. Any modification to specifications or other combination of specifications made after the shipment of the truck requires prior written approval from Mitsubishi Caterpillar Forklift America Inc. (MCFA). (See ANSI/ITSDF B56.1 Part II 4.2.)

GP35N – Dual Drive

Mast Type	Maximum Fork Height		Overall Lowered		Overall Extended Height				Freelift				Tilt F/B deg	Rated Capacity w/ Forks		Rated Capacity w/ Sideshifter **		Total Weight with Standard Carriage and 42" Forks	
	(MFH)		(OAL)		w/ Load Backrest		w/o Load Backrest		w/ Load Backrest		w/o Load Backrest			@24 in Load Center	@ 500 mm Load Center	@24 in Load Center	@ 500 mm Load Center		
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm		lb	kg	lb	kg		
SIMPLEX	80	2050	85	1850	129	3270	104	2780	6	150	6	150	6° / 10°	7000	3500	6850	3400	10280	4650
	103	2620	77	1940	152	3840	126	3330	6	150	6	150	6° / 10°	7000	3500	6850	3400	10370	4700
	120	3050	86	2180	168	4270	144	3760	6	150	6	150	6° / 10°	7000	3500	6850	3400	10480	4750
	131	3350	91	2300	180	4570	155	4080	6	150	6	150	6° / 10°	7000	3500	6850	3400	10540	4780
	140	3580	97	2450	189	4800	164	4290	6	150	6	150	6° / 10°	7000	3500	6850	3400	10610	4810
	148	3770	99	2510	197	4990	171	4480	6	150	6	150	6° / 6°	7000	3500	6850	3400	10680	4840
	159	4050	109	2770	208	5270	187	4760	6	150	6	150	6° / 6°	7000	3500	6700	3350	10790	4890
	179	4550	119	3010	227	5770	202	5280	6	150	6	150	6° / 6°	7000	3500	6500	3200	10940	4960
	198	5050	129	3280	247	6270	222	5780	6	150	6	150	6° / 6°	6900	3400	6250	3100	11070	5020
	218	5550	139	3510	287	6770	242	6280	6	150	6	150	6° / 6°	6800	3200	6050	3000	11180	5080
	238	6050	148	3760	287	7270	262	6760	6	150	6	150	6° / 6°	5250	2400	5250	2400	11270	5110
DUPLEX	110	2810	82	2060	159	4030	141	3580	33	840	51	1290	6° / 10°	7000	3500	6850	3400	10480	4750
	120	3080	86	2180	169	4280	151	3830	37	960	55	1410	6° / 10°	7000	3500	6850	3400	10540	4780
	131	3350	91	2300	180	4570	162	4120	42	1080	60	1530	6° / 10°	7000	3500	6850	3400	10630	4820
	139	3550	97	2450	188	4770	170	4320	48	1220	66	1685	6° / 10°	7000	3500	6850	3400	10680	4840
	148	3770	104	2630	197	4990	179	4540	55	1400	73	1860	6° / 6°	7000	3500	6850	3400	10810	4900
	159	4050	109	2770	208	5270	190	4820	60	1540	78	2000	6° / 6°	7000	3500	6700	3350	10870	4930
TRIPLEX	148	3780	77	1940	197	5000	171	4550	28	720	46	1170	6° / 6°	7000	3500	6800	3350	10940	4960
	159	4060	82	2060	208	5280	183	4830	33	840	51	1290	6° / 6°	7000	3500	6700	3300	11010	4990
	174	4440	86	2180	223	5660	197	5210	37	960	55	1410	6° / 6°	7000	3500	6500	3200	11070	5020
	187	4750	91	2300	235	5970	209	5520	42	1080	60	1530	6° / 6°	7000	3450	6350	3150	11180	5060
	200	5080	97	2450	248	6300	222	5850	48	1220	66	1680	6° / 6°	6800	3350	6250	3050	11340	5140
	221	5630	104	2630	270	6850	244	6400	55	1400	73	1880	6° / 6°	6350	3200	5950	2950	11470	5200
	238	6050	109	2770	287	7270	260	6820	60	1540	78	2000	6° / 6°	5250	2400	5250	2400	11540	5230
	258	6580	118	2940	307	7780	281	7330	67	1720	85	2170	6° / 6°	3850	1750	3850	1750	11850	5280
	277	7050	124	3140	328	8270	301	7820	75	1910	93	2370	6° / 6°	*	*	*	*	11760	5330

* Contact CSM Group to obtain capacities.

** Capacity based on model equipment with MCFA OEM integral sideshifter

NOTE: These specifications assume the use of drive axles, tires and tilt angles specified. Any modification to specifications or other combination of specifications made after the shipment of the truck requires prior written approval from Mitsubishi Caterpillar Forklift America Inc. (MCFA). (See ANSI/ITSDF B56.1 Part II 4.2.)

GP35N – Solid Dual Drive

Mast Type	Maximum Fork Height		Overall Lowered		Overall Extended Height				Freelift				Tilt F/B deg	Rated Capacity w/ Forks		Rated Capacity w/ Sideshifter **		Total Weight with Standard Carriage and 42" Forks	
	(MFH)		(OAL)		w/ Load Backrest		w/o Load Backrest		w/ Load Backrest		w/o Load Backrest			@24 in Load Center	@ 500 mm Load Center	@24 in Load Center	@ 500 mm Load Center		
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm		lb	kg	lb	kg		
SIMPLEX	80	2050	65	1650	129	3270	104	2760	6	150	6	150	6° / 10°	7000	3500	7000	3400	10630	4820
	103	2620	77	1940	152	3840	126	3330	6	150	6	150	6° / 10°	7000	3500	7000	3400	10740	4870
	120	3050	88	2180	188	4270	144	3780	6	150	6	150	6° / 10°	7000	3500	7000	3400	10850	4920
	131	3350	91	2300	180	4570	155	4060	6	150	6	150	6° / 10°	7000	3500	7000	3400	10920	4950
	140	3580	97	2450	189	4800	164	4290	6	150	6	150	6° / 10°	7000	3500	7000	3400	10980	4980
	148	3770	99	2510	197	4990	171	4480	6	150	6	150	6° / 6°	7000	3500	7000	3400	11050	5010
	159	4050	109	2770	208	5270	187	4760	6	150	6	150	6° / 6°	7000	3500	6800	3350	11180	5060
	179	4550	119	3010	227	5770	202	5280	6	150	6	150	6° / 6°	7000	3500	6800	3200	11310	5130
	198	5050	129	3280	247	6270	222	5760	6	150	6	150	6° / 6°	7000	3500	6350	3100	11450	5190
	218	5550	139	3510	267	6770	242	6260	6	150	6	150	6° / 6°	6800	3350	6050	3000	11540	5230
238	6050	148	3780	287	7270	262	6760	6	150	6	150	6° / 6°	6800	3250	5250	2400	11650	5280	
DUPLEX	110	2810	82	2080	159	4030	141	3580	33	840	51	1290	6° / 10°	7000	3500	7000	3400	10850	4920
	120	3060	88	2180	169	4280	151	3830	37	960	55	1410	6° / 10°	7000	3500	7000	3400	10920	4950
	131	3350	91	2300	180	4570	162	4120	42	1080	60	1530	6° / 10°	7000	3500	7000	3400	11010	4990
	139	3550	97	2450	188	4770	170	4320	48	1220	66	1685	6° / 10°	7000	3500	7000	3400	11050	5010
	148	3770	104	2630	197	4990	179	4540	55	1400	73	1860	6° / 6°	7000	3500	7000	3400	11180	5070
	159	4050	109	2770	208	5270	190	4820	60	1540	78	2000	6° / 6°	7000	3500	6800	3350	11250	5100
TRIPLEX	148	3780	77	1940	197	5000	171	4550	28	720	48	1170	6° / 6°	7000	3500	7000	3350	11310	5130
	159	4060	82	2080	208	5280	183	4830	33	840	51	1290	6° / 6°	7000	3500	6800	3350	11380	5160
	174	4440	88	2180	223	5680	197	5210	37	960	55	1410	6° / 6°	7000	3500	6800	3250	11450	5190
	187	4750	91	2300	235	5970	209	5520	42	1080	60	1530	6° / 6°	7000	3500	6500	3150	11540	5230
	200	5080	97	2450	248	6300	222	5850	48	1220	66	1680	6° / 6°	7000	3450	6350	3100	11710	5310
	221	5630	104	2630	270	6850	244	6400	55	1400	73	1860	6° / 6°	6700	3300	5950	2950	11840	5370
	238	6050	109	2770	287	7270	260	6820	60	1540	78	2000	6° / 6°	6800	3200	5250	2400	11910	5400
	258	6560	116	2940	307	7780	281	7330	67	1720	85	2170	6° / 6°	5150	2350	3850	1750	12020	5450
	277	7050	124	3140	328	8270	301	7820	75	1910	93	2370	6° / 6°	3500	1600	2750	1150	12130	5500

* Contact CSM Group to obtain capacities.

** Capacity based on model equipment with MCFA OEM integral sideshifter

NOTE: These specifications assume the use of drive axles, tires and tilt angles specified. Any modification to specifications or other combination of specifications made after the shipment of the truck requires prior written approval from Mitsubishi Caterpillar Forklift America Inc. (MCFA). (See ANSI/ITSDF B56.1 Part II 4.2.)

INTRODUCTION

Market Focus

Class V Market Opportunity

According to ITA information, class V is one of the larger of the lift truck classes as can be seen in the chart below. Because of this, it is imperative that Cat lift trucks offers a premium lineup of strongly competitive IC pneumatic, sit down, counterbalance lift trucks to gain even more presence in the market than it has built over the years. The data is tracked back all the way through 2004 in order to show more than just how the market has fared since the economic troubles that came in the late 2000s.

Over the last 10 years (even with the improvement of electric lift truck technology and stringent federal emissions regulations), the number of trucks sold has fluctuated greatly. Even with this fluctuation, the percentage of all lift trucks sold in the market that are class V has hovered around the same level, at 1/4 of all trucks sold.

Year	Total Class V ITA Factory Orders	Total ITA Factory Orders Across All Classes	Class V As a Percentage of All Orders
2004	65915	233935	28.17%
2005	70714	246539	28.68%
2006	72142	260500	27.69%
2007	72697	244440	29.74%
2008	51722	190318	27.17%
2009	21285	112519	18.92%
2010	43535	174967	24.88%
2011	59482	214057	27.79%
2012	58856	223002	26.39%
2013	57158	236613	24.15%
TOTAL	573506	2136890	26.83%

Class V by Product Type

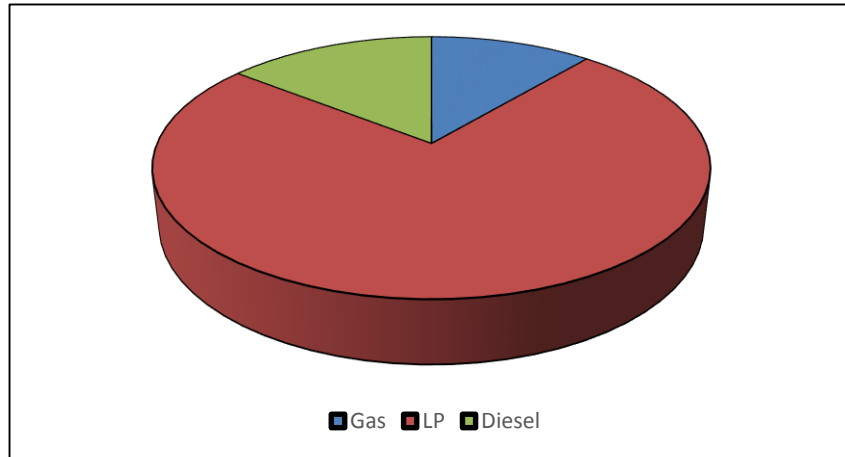
So let's get a little more specific, as this manual is not about ALL of Class V. How do the trucks that will be described in this manual fit into the marketplace? How much of the 1/4 of all trucks consists of the small IC pneumatic trucks that are described in the following pages? Here you go:

The numbers below suggest that of the one quarter of ALL lift truck factory orders according to the ITA (total Class V sales determined above), around 75% of those orders have been small IC pneumatic capacity trucks. These are the trucks that are a huge population in the market and will be discussed in detail in this manual.

Year	SICP Truck Factory Orders	Total Class V Factory Orders	SICP Trucks as a Percentage of All Class V Orders
2004	48314	65915	73.24%
2005	50648	70714	71.62%
2006	51885	72142	71.92%
2007	54518	72697	74.99%
2008	37860	51722	73.20%
2009	16431	21285	77.20%
2010	33637	43535	77.26%
2011	45906	59482	77.18%
2012	44536	58856	75.67%
2013	43899	57158	76.80%
TOTAL	427634	573506	74.56%

SICP by Fuel Type

The small IC pneumatics are available in diesel, gasoline and LP configurations. Market data below (from 2004-2013) shows that a vast majority of the trucks in the market at this size are LP trucks, coming in at 74.39% of all SICP factory orders. At 318,116 actual orders over the time frame listed, these might be the single most important truck offering that you have at your disposal.



Fuel Type	Total Factory Orders	Percentage of Total SICP Orders
Gas	47804	11.18%
LP	318116	74.39%
Diesel	61714	14.43%
TOTAL	427634	100%

Target Industries/Applications

Obviously, there is a more than adequate market for IC pneumatic lift trucks, but where should you start? Below are some of the most common applications and industry segments that have regular use for the family of trucks that are covered in this manual. They represent the heaviest usage of IC lift trucks in the market today.

Industry	Description
Building Materials and Garden Supplies	This industry segment is a key player for class V. It ranks in the top 10 as far as ITA ranked market segments go. It is the most ripe retail market there is for these size trucks and includes the wood and lumber industry where they are extremely popular.
Fabricated Metal Industries	Prone to economic volatility, the fabricated metal products industry is consistently in the top 15 among ITA ranked industry groups. While vulnerable to economic fluctuation, it is also among the first to benefit from economic recovery. Due to its industrial nature, it favors class V trucks.
Stone, Clay, and Glass	While this industry is impacted by both seasonal and cyclical volatility, this group ranks top 20 among ITA industry groups. There is high demand for IC trucks, particularly class V, and there is a favorable long-term forecast for the industry segment.
Industrial Machinery and Equipment	This group is also prone to economic volatility but has consistently ranked in the top 10 of ITA industry groups. While the industry handles a lot of different materials and has a good spread across all five classes, it has a heavier concentration on class V lift trucks.
Miscellaneous Durable Goods	Wholesale trade and durable goods consists of a broad array of establishments that buy bulk merchandise in order to sell into the retail market.

Product Configuration

Models and Capacities

Model	Capacity (Pounds)	Wheelbase (Inches)	Engine	Fuel Type
GP15N	3,000	55.1	K21	Gas/LP
GP18N	3,500	55.1	K21	Gas/LP
GP20N	4,000	55.1	K21	Gas/LP
GP20CN	4,000	55.1	K21	Gas/LP
DP20N	4,000	63.0	Tier 4 Final 4EG	Diesel
GP25N	5,000	63.0	K25	Gas/LP
DP25N	5,000	63.0	Tier 4 Final 4EG	Diesel
GP28N	5,500	63.8	K25	Gas/LP
DP28N	5,500	63.8	Tier 4 Final 4EG	Diesel
GP30N	6,000	66.9	K25	Gas/LP
DP30N	6,000	66.9	Tier 4 Final 4EG	Diesel
GP33N	6,500	66.9	K25	Gas/LP
DP33N	6,500	66.9	Tier 4 Final 4EG	Diesel
GP35N	7,000	66.9	K25	Gas/LP
DP35N	7,000	66.9	Tier 4 Final 4EG	Diesel

Standards Compliance

In addition to relevant global and national health and safety standards, this family of lift trucks is designed according to the highest standards using the latest technologies.

ANSI/ITSDF

All trucks are manufactured in accordance with the American National Standards Institute/Industrial Truck Standards Development Foundation B56.1. These are the safety standards for low lift and high lift trucks.



NFPA 505

All trucks are manufactured in accordance with National Fire Protection Association (NFPA) 505, Fire Safety Standard for Powered Industrial Trucks, including type designations, areas of use, maintenance, and operation.



UL 558

All trucks listed in the standard price list for North American sale are manufactured in compliance with UL 558, Standard for Industrial Trucks, Internal Combustion Engine-Powered. Please note that some options ordered through the Custom Shop Modifications (CSM) group may void UL listing. Please inquire within the CSM group to determine the specific UL position on CSM options ordered. UL LPS and DS type ratings are available as price list options. These ratings provide additional safeguards against fire hazards compared to those required for the types LP and D. To determine what classification your customer's application requires, refer to the Powered Industrial Trucks, Type Designations, Areas of Use, Maintenance and Operations, NFPA 505.



OSHA

All trucks are labelled in accordance with Occupational Safety and Health Administration (OSHA) Section 1910.178.



EMISSIONS: EPA & CARB

EPA stands for the U.S. Environmental Protection Agency (EPA), which measures and sets performance emission regulations for air, water and land pollution for the United States. EPA has adopted mandatory regulations with regards to engine emissions. These regulations require manufacturers of forklifts to certify that the engines meet a minimum standard for HC+NO_x - hydrocarbon plus nitrogen oxides and carbon monoxide (CO) emissions. The California Air Resources Board (CARB) is a long-standing organization that oversees the activities of 35 local and regional air pollution control districts within California. These districts regulate industrial pollution sources and set mandates within the state.



COMPETITIVE COMPARISON

In 2013, Cat Lift Trucks brought competitive trucks in house to be tested against the Cat 2P5000 (the same model as the GP25N in every aspect other than nomenclature) in as many different tests as possible. Knowing the importance of the 5,000 lb. pneumatic tire trucks in our lineup, we were pleased to see that we have quite a story to tell in many categories. As part of the analysis of the competitive testing, we have drastically extrapolated the numbers in outrageous examples to help show just how much our product can be differentiated over time given some of the advantages that we found through the testing.



Ramp Performance

When tested for ramp performance, the Cat truck had a clear advantage in speed up the ramp. This is a blatant advantage that can be exploited any time the end user has an application that either utilizes ramps to enter /exit warehouses or any time the environment that the truck will be working on has inclines or declines. The benefits of improved ramp performance can be sold to a number of potential purchase influencers such as the operator, operations managers and purchasing managers. This can be done by showing how the job can be made easier, productivity levels can be increased and the way that increased productivity can justify up front purchase prices to the decision makers listed above, respectively.



It is possible to calculate the amount of productivity that can be had with these speed advantages with the specifics of the application site. Below are the test results at a 10% grade and also on a 14% grade.

	Test	Units	Cat Lift Trucks	Hyster	Toyota
10% Grade	Speed (Unloaded)	Km/h	13.30	12.30	11.70
		mph	8.31	7.69	7.31
	Speed (Loaded)	Km/h	9.70	9.10	9.00
		mph	6.06	5.69	5.63

These test results show that the Cat GP25N is **8% faster** unloaded and **6.5% faster** loaded than the comparable Hyster truck on a 10% grade. Compared to the comparable Toyota truck, the Cat lift truck was **13.6% faster** unloaded and **7.7% faster** loaded than their truck... these are substantial differences.

	Test	Units	Cat Lift Trucks	Hyster	Toyota
14% Grade	Speed (Unloaded)	Km/h	10.90	10.90	9.50
		mph	6.81	6.81	5.94
	Speed (Loaded)	Km/h	7.70	7.30	6.90
		mph	4.81	4.56	4.31

This chart shows substantial differences as well. The GP25N was the same speed unloaded and **5.4% faster** loaded than the Hyster and **14.6% faster** unloaded and **11.6% faster** loaded than the Toyota truck on the 14% grade.

Exaggerated Example:

So what do these numbers mean to our customers? Let's take a look at these values extrapolated out into an example that can really show the kind of difference that this advantage can make over time.

Let's pretend for a moment that these lift trucks were required to make the greatest climb that there is... to the



peak of Mt. Everest at 29,029 ft. of altitude all while carrying a rated load. So of course we know that Mt. Everest is not at a 10% grade, but using trigonometry, we can find that if it was, the total travel distance required to reach the peak would be 293,222 feet of travel. At the speeds tested in the first chart above, this would mean that in the time that it took the Cat truck to travel all the way to the peak, the Hyster truck would only be able to travel to 273,162 feet and the Toyota truck would only be able to travel to 270,643 feet. That is only 93% and 92% of the total climb, respectively. So whenever it comes to ramp performance, who is the king of the mountain?

Top Travel Speed

Top travel speed can directly impact productivity levels. When testing these trucks head to head, the Cat truck was clocked at a higher top speed than the competition. This can make a major difference in applications that have longer cycle times or a longer distance to travel when moving loads.

Test	Units	Cat Lift Trucks	Hyster	Toyota
Top Travel Speed (Unloaded)	Km/h	19.30	18.70	18.30
	mph	12.06	11.69	11.44
Top Travel Speed (Loaded)	Km/h	19.20	18.80	18.10
	Mph	12.00	11.75	11.31

The above chart tells us that when loaded, the Cat truck was 2.1% and 6% faster than the Hyster and Toyota comparable trucks respectively. Whenever unloaded, the truck was 3% and 5% faster than the Hyster and Toyota, respectively.

Exaggerated Example:



If we expand the numbers again to find out just how much more ground the Cat Lift Truck can cover than the leading competition, let's think about marathons. In the time that it would take our truck to cover the distance of a marathon (26.2 miles), the Hyster and Toyota trucks would only be able to travel 25.6 and 24.6 miles each. Doesn't sound like a huge advantage? What if during the course of a week, your lift truck travels one marathon while loading and unloading materials? That would mean that over the course of a year, the Cat GP15N would be able to travel more than 2 marathons more than the competition. Think about that... that means that while the competition is maxing out over the course of a year (based on 26.2 miles of travel a week), the Cat truck would be able to travel 57 more miles. That's a lot of ground covered, and a lot of product moved. How can a Cat lift truck carry your customers and their product across the finish line in first place?

Lift Speeds

When testing for lift speeds, Cat had an advantage again over Hyster and Toyota as can be witnessed by the chart below. You may be starting to notice a trend that is leading to our next comparison that is the most important of all.

Test	Condition	Cat Lift Trucks	Hyster	Toyota
Lift Speed – 1 st stage (fpm)	Unloaded	118.31	96.85	101.38
	Loaded	118.11	86.02	93.70
Lift Speed – 2 nd Stage (fpm)	Unloaded	131.30	109.65	113.58
	Loaded	130.71	98.23	107.28

As you can see, there are pretty substantial differences when tested head to head. That being said, let's look at another drastic example.

Exaggerated Example:

Lift speed can directly affect the number of cycles that your truck can run in a regular day to day application, but just how much of a difference can it make? If we pretend that we had all three of these trucks and they had an imaginary one stage mast that rose at a rate that is the average of the test results above (for 1st and 2nd stage), then the Cat truck would easily reach the top of the Willis Tower in Chicago (at 1,451 feet tall) first with or without a load... and by quite a margin. If the load was at the top of the tower, and the truck was getting it down, it would take the Cat truck 11 minutes to reach the top based on average lift speed... while it would take the Hyster 14.08 minutes and the Toyota 13.5 minutes. That's quite a difference. What about it the truck was lifting the load to the top of the tower? The Cat truck would take 11.7 minutes as compared to 15.75 minutes and 14.43 minutes of the Hyster and Toyota, respectively.



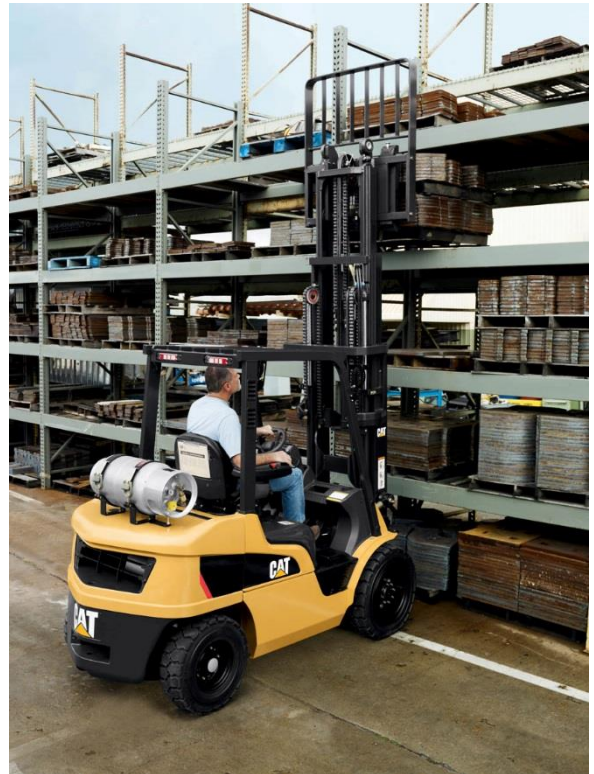
Fuel Consumption and Productivity Cycles

You may have noticed as mentioned in the above sections, all of the side by side performance testing leads up to one thing, which might be the single most important test of all... overall productivity. Some of our competitors have been harping on fuel efficiency for the last few years, and to be perfectly honest, they are good at talking about it. They often speak in straight fuel efficiency, which is determined by finding how much fuel is burned over a set amount of operation of the truck. We also tested this through the use of a standard VDI cycle and found the following:

Test	Cat Lift Trucks	Hyster	Toyota
Straight Fuel Consumption (lb/hr) VDI Cycle	9.05	9.60	8.65
Productivity Cycles	42	36	38

Exaggerated Example:

So what exactly does the chart above mean? Quite simply it means that the Cat lift truck can get more work done in an hour than the competition. The 42 cycles may not seem to have a drastic advantage over the 36 and 38 cycles that Hyster and Toyota ran in the same amount of time respectively, but whenever you extend it over the course of time it makes a huge difference. For example, if you consider that the Cat truck can run 42 cycles in an hour, over a 10 hour shift, 5 days a week, for 52 weeks... the Cat truck can run 109,200 cycles, versus 93,600 by Hyster or 98,800 by Toyota. That is a difference of over 10,000 cycles over the course of a year whenever you do the math. Sure, whenever we ran the test the Toyota used less fuel in an hour, but the reality is that the Cat truck moved more than enough product to compensate for the slight difference in straight fuel consumption. It is time to stop asking how much fuel was burned and start discussing how much product was moved.



PRODUCTIVITY

K21 and K25 Engines

The LP and gasoline configurations in this model family are equipped with the K21 or K25 engines that have an existing track record of performance and durability and have been engineered to meet the needs of the lift truck industry. The K21/K25 are designed for high performance, low noise and vibration, excellent fuel economy for the production provided and low emissions to meet the CARB/EPA requirements that were instituted in 2010.

The models and engines are as follows:

Model	Engine	HP	Torque
GP15N	K21	53 @ 2,700 RPM	110 lb-ft @ 2,000 RPM
GP18N			
GP20N			
GP20CN			
GP25N	K25	61 @ 2,700 RPM	129 lb-ft @ 1,600 RPM
GP28N			
GP30N			
GP33N			
GP35N			

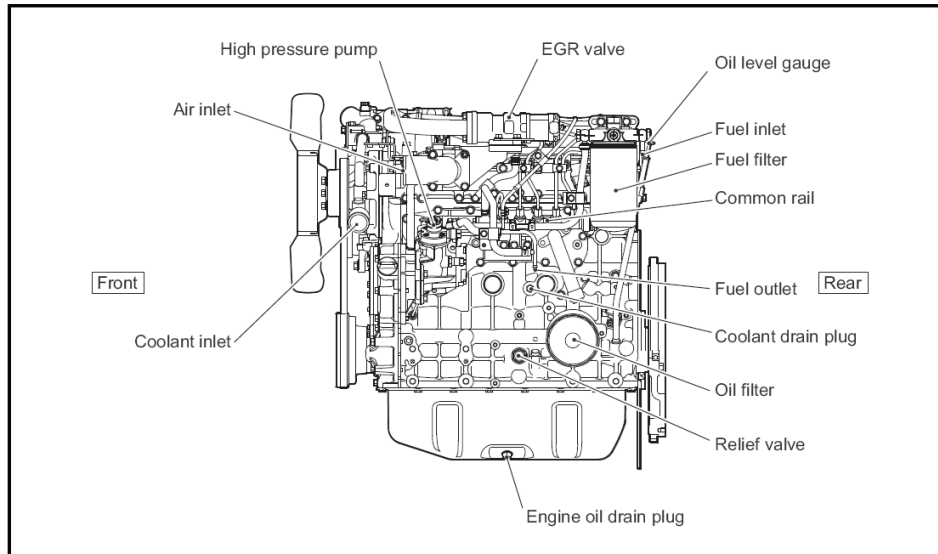
These engines are equipped with two computers, the Engine Control Module (ECM) which delivers a precisely calculated mixture of air and fuel to the cylinders of the engine, and the Vehicle Control Module (VCM) which controls the Engine Protection System (EPS).

These engines use an overhead valve design in which a rocker shaft located in the cylinder block controls the valves and push rods transfer the movement to the valves. This design helps to reduce premature wear on the valve train. A velocity governor is pre-set at the factory to control engine speed and benefit by helping prevent the hydraulic pump and fan drive from being over-spiced and providing controlled speed in applications that are high traffic or require limitations in operating speeds.

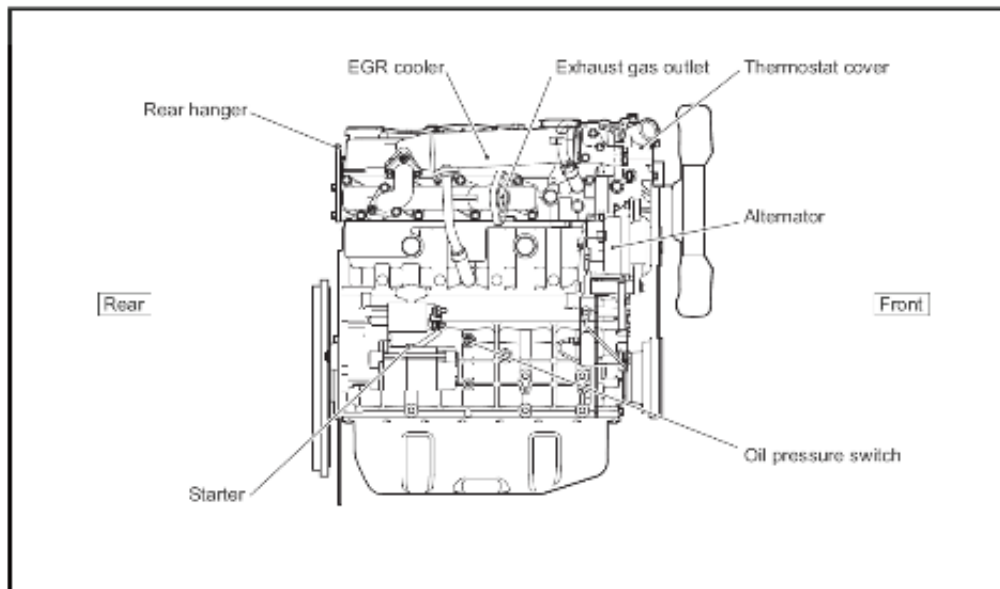
With these engines, there are three fuel configuration options... the end user can select the Gasoline, LP or dual fuel configuration. The dual fuel configuration includes a dash toggle switch that allows the user to switch between using gasoline or LP as the fuel source of the truck.

4EG Diesel Engine

These trucks are equipped with a tier 4 final, water cooled 4 stroke cycle diesel engine. The inline 4-cylinder 4EG uses a direct injection system with an overhead valve type mechanism. It is a 3.3L engine that has been tested to provide the performance and efficiency needed to provide productivity in even the harshest applications.



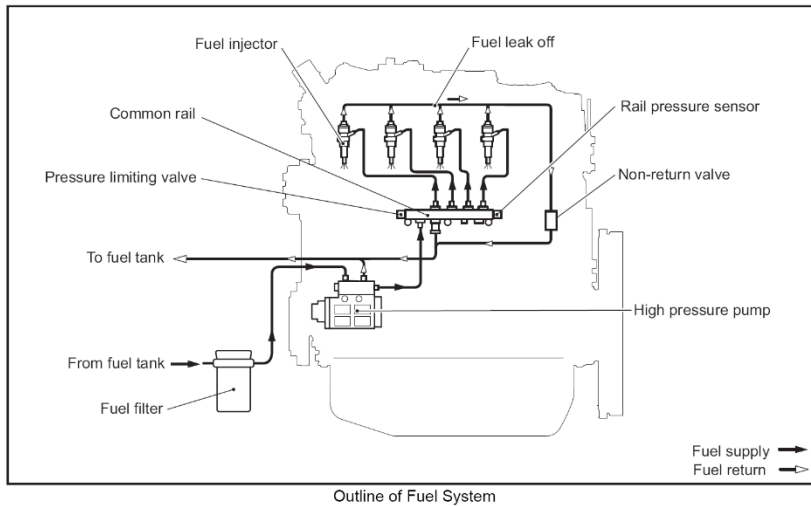
Left Side View



Right Side View

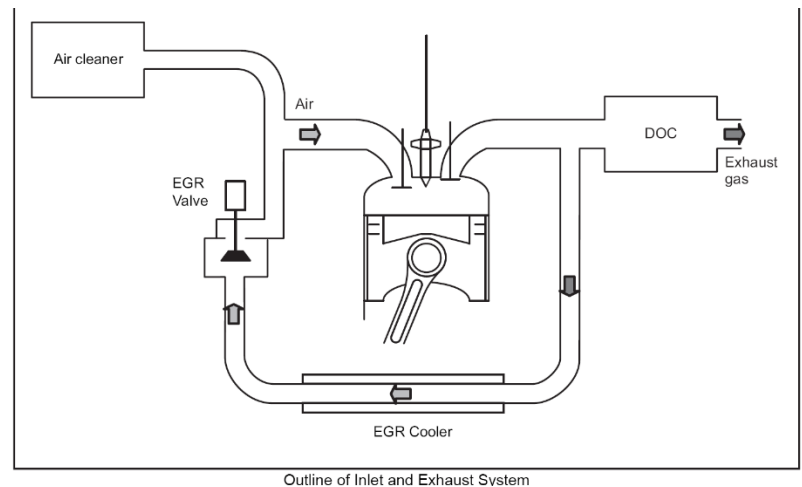
Emissions Compliant Fuel System

The fuel system of the truck is designed to meet stringent tier 4 final emissions standards. There are a number of ways that it is able to accomplish this without the use of a diesel particulate filter (DPF) or a selective catalyst reduction (SCR) system.



Common rail systems are a modern variant of direct fuel injection systems. The common rail, which can be seen near the center of this diagram is controlled by the ECM of the engine which opens each fuel injector in the given cylinder. This process helps to ensure that fuel/air mixture used for combustion in the engine is precisely tuned for minimal harmful emissions.

There are also two ways by which the exhaust of the engine is manipulated in order to minimize harmful emissions. The first is the utilization of a diesel oxidation catalyst (DOC). A diesel oxidation catalyst is a chamber through which exhaust leaving the truck will pass through. Whenever it does, the carbon monoxide, hydrocarbons and particulate matter (all harmful emissions) go through an oxidation process and are reduced to carbon dioxide and water, which are harmless.



The second way that exhaust is manipulated is that it is returned to the engine compartment for use in the combustion phase through a process called exhaust gas recirculation (EGR). As you can see in the diagram above, part of the engine exhaust is recirculated through a cooler, and then released through a valve to combine with air coming in from the air intake cleaner and is reused in the combustion process.

Powershift Transmission

The powershift transmission of the truck consists of one forward gears and one reverse gear. The changeover is accomplished with a powershift mechanism that employs hydraulically controlled multi-disc clutches. The transmission is equipped with a Power Take Off (PTO) that transmits power to the hydraulic pump and the parking brake circuit, without losing any power to the drive gear.

Clutch Drums



The transmission utilizes four hydraulically-actuated oil cooled clutch drum assemblies; two for forward direction, one for reverse, and one for the parking brake. They consist of six carbon fiber mating plates and five friction plates that transmit torque and motion from the input to the output shaft.

These drums help to dissipate frictional heat during normal operation.

Helical Gears

The angled teeth engage more gradually than common spur gear teeth, causing them to run more smoothly and quietly, as well as reducing stress from the high power transmission.



Transmission Control Valve

The flow to the clutch packs is controlled by a solenoid valve or an “electro-hydraulic shift” employed by the “drive by wire” system of the lift truck. The signal to this solenoid valve is controlled by the Vehicle Control Module of the truck, directing the truck to travel forward, in reverse, or disengage.

This transmission interlock is a key component to the PDS system because a signal will not be sent to engage the transmission unless the operator is properly seated in the truck.

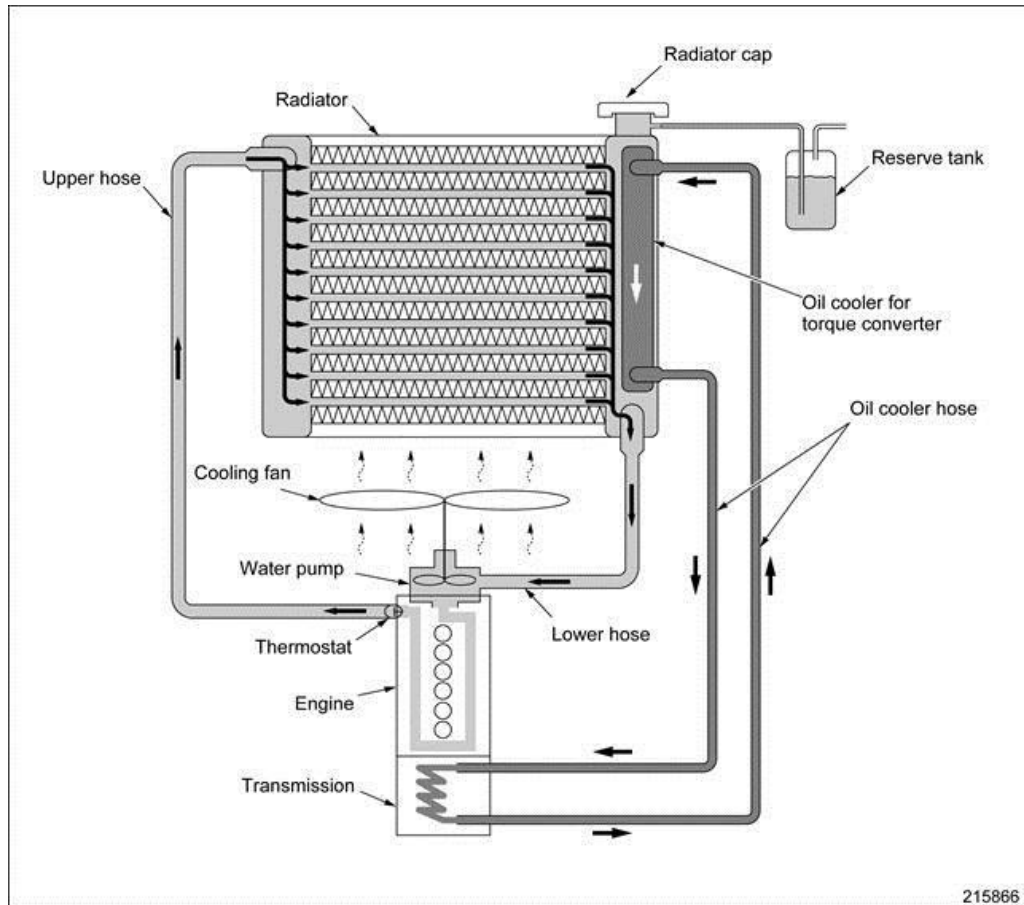
Inching Valve



This valve controls the oil inflow to the clutch drum by the amount of force applied to the inching pedal. Half-clutch operation of the powershift transmission model is created as a result which allows the operator to “inch” while moving loads.

Transmission Oil Cooler

The transmission oil cooler is located in the radiator itself. The continuous circulation of the fluid allows for easy dissipation of the heat that can build in the clutch packs, which is transmitted into the radiator.



Torque Converter

The torque converter smoothly transfers the power from the engine and multiplies the torque sent to the transmission which can provide increased power on demand. These benefits are provided by the fluid connection of the converter, which is located between the engine and the transmission. It connects the engine flywheel to the transmission input shaft.

RELIABILITY

Durable Steel Frame

The robust steel frame of the truck is first designed using Finite Element Analysis (FEA) in which computers are able to model the truck frame and analyze where the stress will affect the frame the most whenever the truck is loaded. With the help of the FEA system, the frame is adjusted to help minimize, or in some cases, eliminate these stress points altogether so that whenever the frame is then built it is as strong as possible. More steel in the frame means more durability and a lower center of gravity which helps to provide higher residual capacity for the truck as well.



Mast and Carriage



The masts of these trucks incorporate modern engineering and design practices that allow them to provide the high rigidity, while maintaining excellent visibility. Engineers designed the masts to have more narrow flanges, in order to increase that visibility. To provide more strength however, they made the webs deeper and six load rollers provide more strength and support for forward and backward loading of the carriage, respectively. The specially shaped channels allow for the load rollers to contact them at two points, which increases the ability to handle side thrust forces between the mast channels. There are also two side thrust rollers to help maintain alignment with the mast.

If a tilt cylinder is not properly aligned, it can lead to eventual leaks and possible failure. Because of this, the cylinder rod ends mount to the mast of these trucks using spherical bushings which prevent misalignment. Each lift cylinder is also equipped with an internal drain that permits a controlled amount of hydraulic oil to flow above the piston, preventing corrosion of the cylinder rod.

Chains and hoses are canted at 45° so that the operator has a better view from their seat in a normal operating position. The diameter of the lift cylinders in the mast were also made smaller for visibility purposes as well.

The carriage was designed to increase visibility as well with square fork bars rather than rectangular, and more space in-between the fork bars.

Overhead Guard

The overhead guard of the truck is also designed using the Finite Element Analysis. The modern computational design process helps to ensure that the stress points on the overhead guard are kept to a minimum. The guard is one of the most vital parts of the truck whenever it comes to operator comfort and security because it encases the operator in the operator compartment.

Because of this, it is imperative that it does not obstruct the vision of the operator during use of the truck. Keeping that in mind, the overhead guard was designed so that it does not use any horizontal stability bars that might block vision when the operator is looking up at a load on his forks through the top of the overhead guard.



The overhead guard is also constructed using a welded, one-piece design instead of a bolt together system. Through rigorous testing, it was found that this helps to reduce wear down of the joints of the overhead guard over time and extensive use.

Low Profile Counterweight

The counterweight of the truck is a simple but crucial part of the integrity of the truck. It has many purposes and was designed specifically to best meet the needs of the truck.

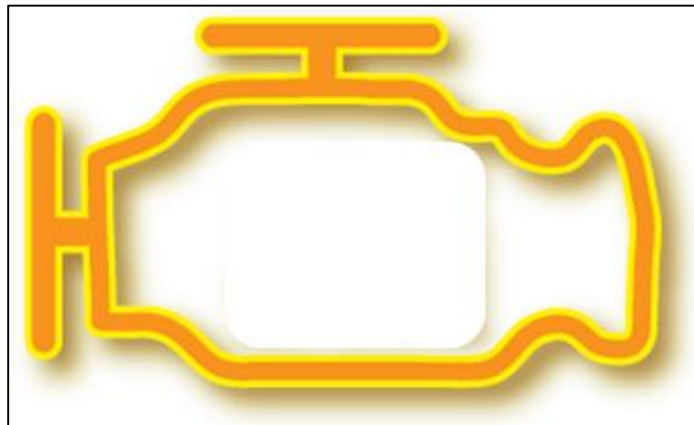
1. Design provides for shorter turning radius (see specs)
2. Provides truck with maximum residual capacity due to strategic weight positioning
3. Provides housing for the muffler and radiator while providing airflow to the cooling system which is critical in high shuttle, dusty or dirty applications
4. Low profile allows for good visibility behind the truck from the operator compartment



Engine Protection System

The Engine Protection System (EPS) is controlled by the Engine Control Module. It is invaluable, standard feature on Cat lift trucks because it immediately notifies the operator if there is a failure or something wrong with the way that the truck is running. The operator maintenance crews can quickly see to the issue reducing the chance for further damage to be done by continued usage, which immediately results in less downtime and cost of ownership on more expensive repairs. The EPS is capable of:

- Monitoring engine oil pressure, coolant temperature and transmission temperature
- Lowering max engine speed if coolant temperature reaches critical levels
- Slowing travel and hydraulic speeds if the truck is not performing at acceptable levels
- Notifying the operator of issues by way of display panel lights and diagnostic trouble codes (DTCs)

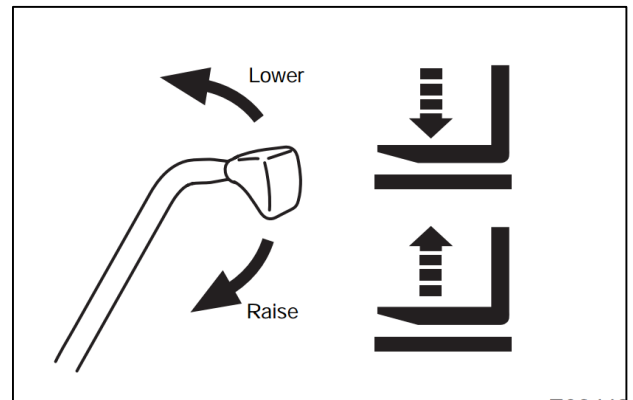


3-Section Hydraulic Control Valve with Cowl Mounted Levers

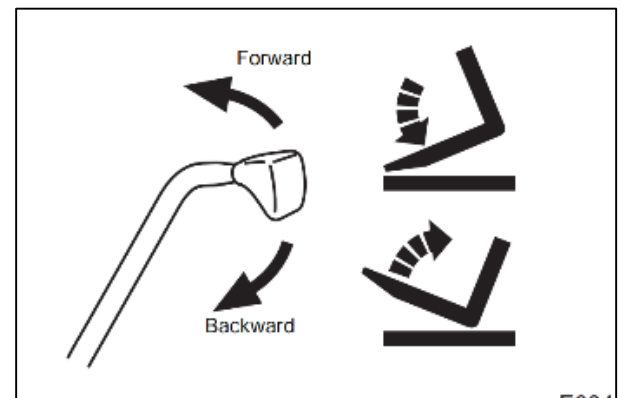
The standard configuration of the truck consists of three ergonomically shaped levers that are designed to match the natural swing of the arm of the operator. They are located in close proximity to the steering wheel so there is little movement required to move the right hand from the steering wheel while driving to the required lever. Each knob has a soft touch urethane cover for excellent grip.

As mentioned, there are three knobs, but in the standard configuration, only two are used, with the third lever available for use if there are added hydraulic functions or attachments.

The lever closest to the steering wheel is the lift lever. Lifting speed is controlled by the speed of the engine (position of the accelerator pedal) and the position of the lift lever and lowering speed is controlled only by the position of the lift lever regardless of engine speed. In order to lower the forks, the lever should be pushed forward (away from the operator) and to raise the forks, the lever should be pulled back (towards the operator). The lever will return to the neutral position when released.



The second lever is the tilt lever. The tilt speed is controlled by the speed of the engine (position of the accelerator pedal) and the position of the tilt lever. The lever will automatically return to the neutral position when released.



Both of the above levers can be directly affected by the mast interlock system. In order to deactivate the mast interlock system, the operator must sit on the operator seat while the key switch is in the (ON) position regardless of whether the engine is running or not, and then operate the tilt lever.

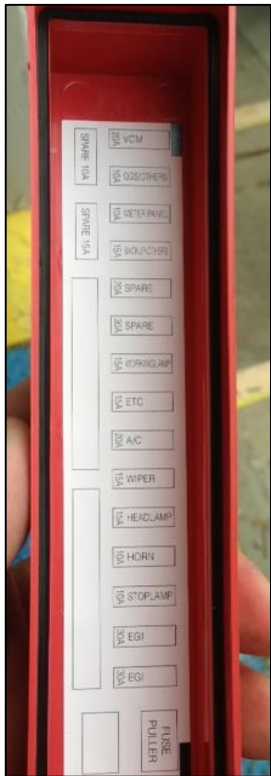
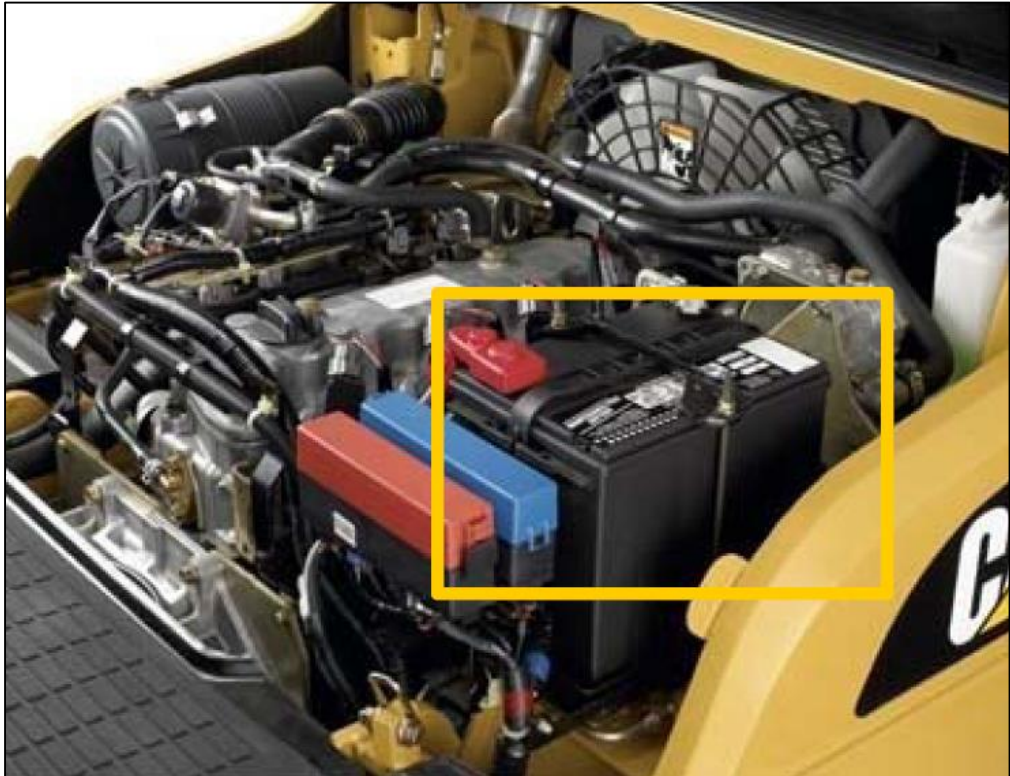
Vehicle Control Module

The Vehicle Control Module (VCM) is the computer of the truck that controls a number of input and output signals from the truck in order to make sure that everything is operating properly. It is easy to access and troubleshoot by way of laptop of your authorized Cat dealer's service technician. Below are the signals that the VCM can get through communication with the truck.

Principle Functions of the VCM		
No.	Item	Function
1	Transmission Control	Power to the transmission forward and reverse solenoid is controlled by the Vehicle Control Manager (VCM) output according to the position of the FNR lever input to the VCM. When the operator leaves the normal operating position the VCM interrupts power output to the forward and reverse solenoid placing the transmission in the neutral position.
2	Engine Control	Idle- up solenoid output is turned on to prevent engine stall when hydraulic pressure (main) exceeds preset level
3	Ground Speed Control	Computes vehicle speed from vehicle pulse signal and transmits output
4	Buzzer Output	Issues a buzzer control signal to the instrument panel when the seat belt is not fastened or operator leaves the normal operating position without applying parking brake.
5	User Setting and Self-Diagnosis	VCM sensors input values can be checked.
6	Fail-Safe and Error Archiving	When a fault is detected in the VCM itself or any peripheral device, the VCM takes appropriate action. An error due to a detected fault is indicated through the warning lamp in the controller etc. and recorded in the EEPROM with hour meter reading at the same time. The error is also communicated to a possible connected laptop of the dealer's service technician.
7	Diagnostic Software	When the diagnostic software tool is connected by the authorized dealer, sensor signal status and past errors archived in the EEPROM can be monitored. Also, optional functions and various parameters can be monitored.
8	Inter-Controller Communicator	CAN communication exchange of sensor signals, control signals, fault information, etc. is possible with instrument panel and other devices throughout the truck.

Electrical System

These trucks operate using a 12V electrical system. The battery is maintenance free and is conveniently located on the left hand side of the chassis along with the relays and fuses. The fuses that are used are automotive style standard fuse that are grouped and conveniently located in boxes in close proximity to the battery and have labels for each fuse underneath the cover of the fuse box.



Hydraulic System

The hydraulic system works in such a way that it sucks up hydraulic oil from the hydraulic tank and distributes pressurized oil to work equipment and the steering system with the priority valve.

Pressurized oil is fed to each cylinder through the control valve of the system.

Hydraulic Tank

The hydraulic tank is located in the middle of the right side of the frame of the truck and is part of the frame structure itself. There are three pipes that are welded onto the tank cover, which are the suction pipe, pipe for the return line and the pipe for level gauge. At the top of each of these three pipes are a suction strainer, return filter, level gauge and a cap. This is done so that the parts of the tank can be removed as an assembly if the tank cover is removed.

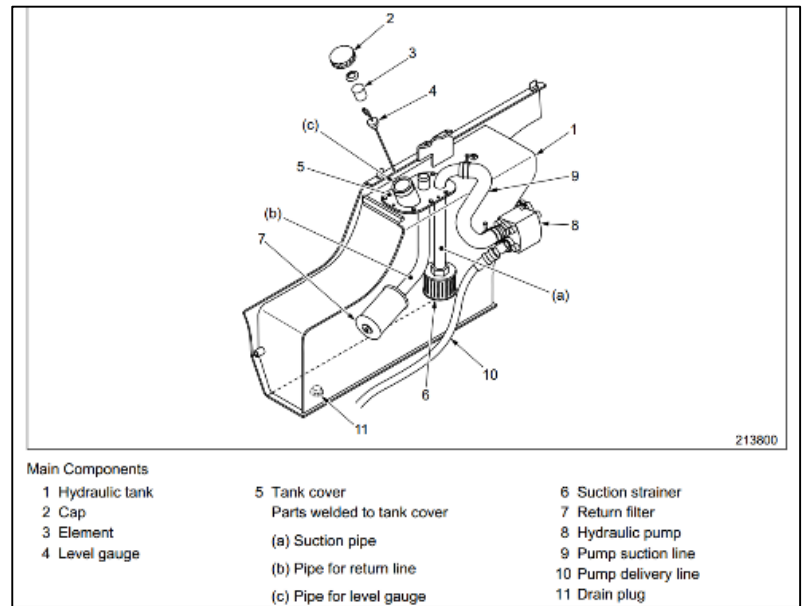
The filter can be replaced or the strainer cleaned easily once the tank cover is removed.

The hydraulic tank cap has two air holes that serve as a vent for the air trapped inside the tank, which will fluctuate depending on the level of oil. There is also a filter element installed in the cap to serve as an air filter to prevent debris from entering the tank.

At the end of the return pipe is a return filter which is a cartridge type of 15 µm with a built in relief valve. When that filter is clogged, the relief valve activates to divert unfiltered oil into the tank. Periodic replacement is needed.

Oil filter replacement is recommended once a month after the purchase of the lift truck or after conducting a major overhaul that includes replacing parts. The suction strainer is 100 mesh screen gauze and should be cleaned at every oil replacement.

There is also a drain plug at the bottom of the tank.



Gear Pump

The gear pump is a circumscribed gear pump that sends the hydraulic oil required to activate the hydraulic cylinder.

Priority Valve

Of the working oil that is discharged from the gear pump, only the amount that is required for steering operation is supplied to the steering control valve. The rest is forwarded for use by other equipment.

Whenever the truck is in neutral, almost all of the work of the fluid is routed to the other equipment mentioned above.

Hydraulic Control Valve

The hydraulic control valves of the standard truck move mechanically. When one of the control levers is operated, the spool valve starts to move up and down and exchanges pressure oils with the corresponding hydraulic cylinders.

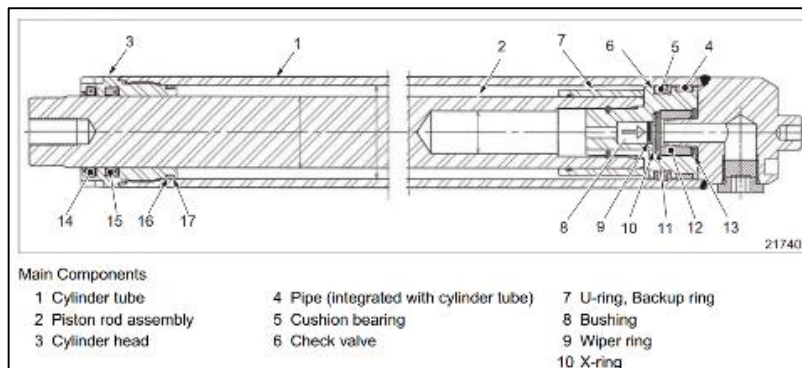
If a truck is equipped with fingertip controls, the hydraulic control is a solenoid valve. As the valve spools move in proportion to control input of the FC control box operated by the operator, the controller and electromagnetic proportional pressure control valve are used.

Because it is a sectioned valve, it is easy to upgrade to allow for more auxiliary functions. The most basic valve is a 3 section valve, which would consist of the tilt, lift, and one auxiliary function. All trucks come standard with these three basic functions. It is also possible to create a 4-way, or 5-way valve by adding the appropriate attachment valves and associated parts.

Lift Cylinders

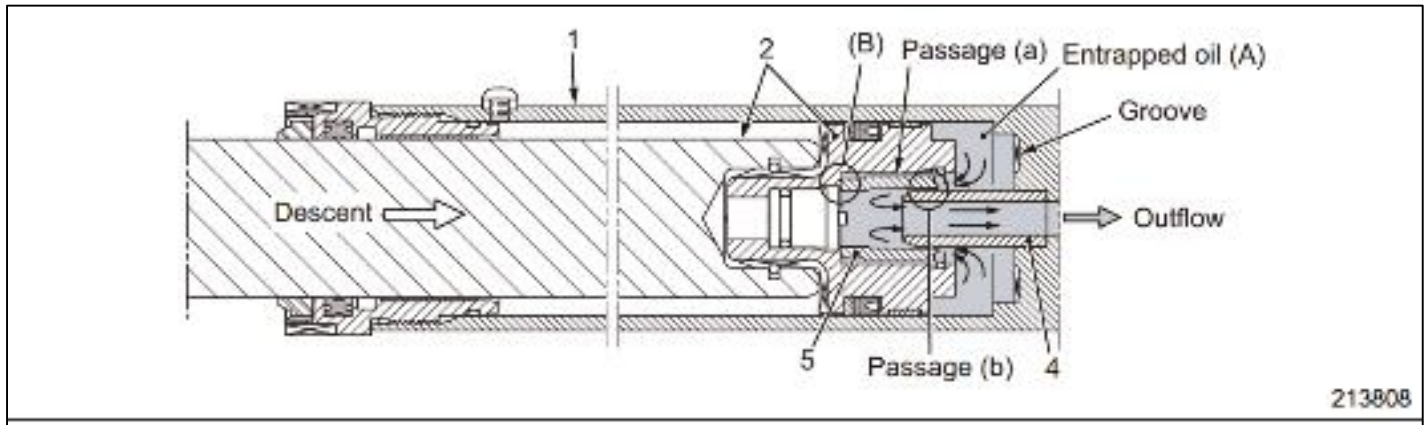
Second Lift Cylinder For Simplex and Triplex Mast-

This lift cylinder has a check valve in the piston instead of a return pipe and is called an internal drain type cylinder. The bottom of the piston is provided with a cushion mechanism for soft landing.



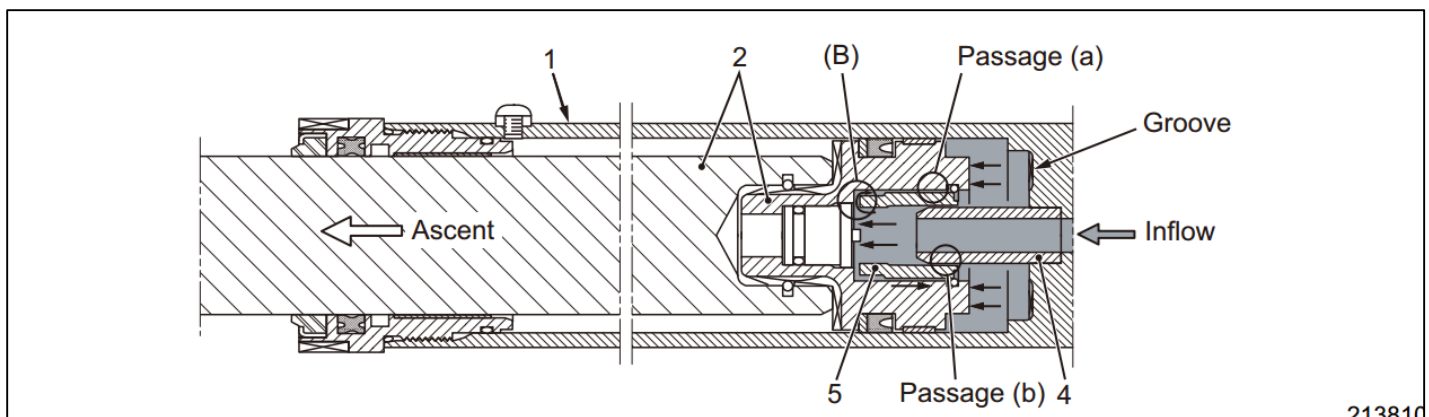
Action During Piston Descent –

The picture below shows a condition in which the piston rod assembly (2) is descending. The cushion bearing (5) is pushed upward by entrapped oil (A) and the piston and cushion bearing make surface contact (B). This blocks passage A in the diagram. The only outflow passage for entrapped oil is clearance (b) between the cushion bearing and the outside of the pipe. This passage (b) becomes narrower as the piston descends further. Therefore, the descending speed of the piston becomes gradually slower and impulsive contact is avoided.



Action During Initial Stage of Piston Ascent –

The illustration below shows what happens to the piston immediately after the assembly ascends. Oil that flows in acts on the center of the piston rod assembly slightly. At the same time, the cushion bearing (5) descends by being pushed by the inflowing oil. This action opens up area (B) causing passage (a) to open. Oil from passage (a) and passage (b) which open from the beginning, flow in the piston bottom, acting on the entire bottom surface of the piston and pushing the assembly upward.

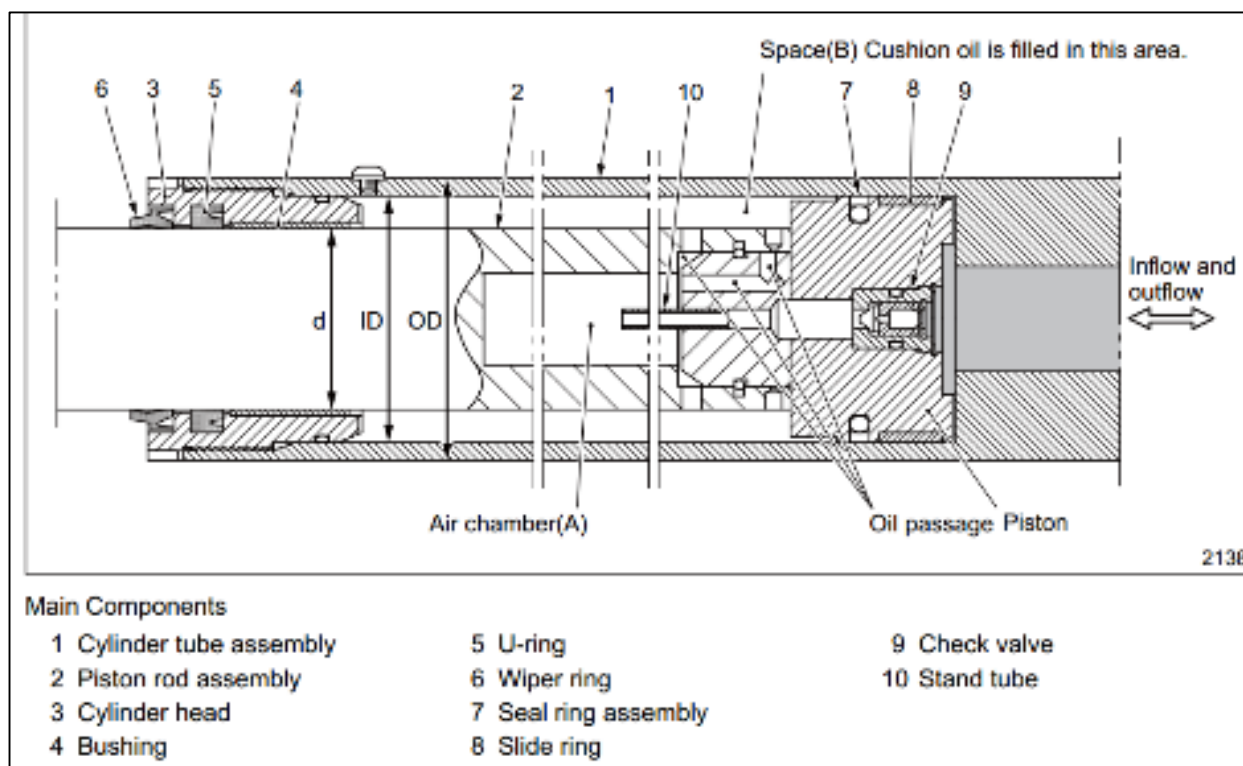


First Cylinder for Duplex and Triplex Mast –

This cylinder is mounted on the center of the mast and is the first to act during the ascending stroke of the forks. The piston rod extends from the cylinder tube by pressure oil acting on the piston bottom.

For prevention of an impulsive approach of the piston and the cylinder head at the last stage of its ascent, cushion oil is always filled in space (B) between the cylinder tube and the piston rod. When the piston rod ascends, it ascends while pushing out cushion oil out to air chamber A at its last stage. This is how the last stage becomes smooth.

In the descending stroke of the piston rod, cushion oil in air chamber A is sucked into space B. The air chamber, stand tube and check valve are all involved in the cushioning action. Extra oil which leaks from around the piston and enters space B returns from the stand tube (10) to the cylinder bottom by way of the check valve (9) at the last stage of the cylinder's ascension. The stand tube always retains a certain amount of oil as cushion oil.



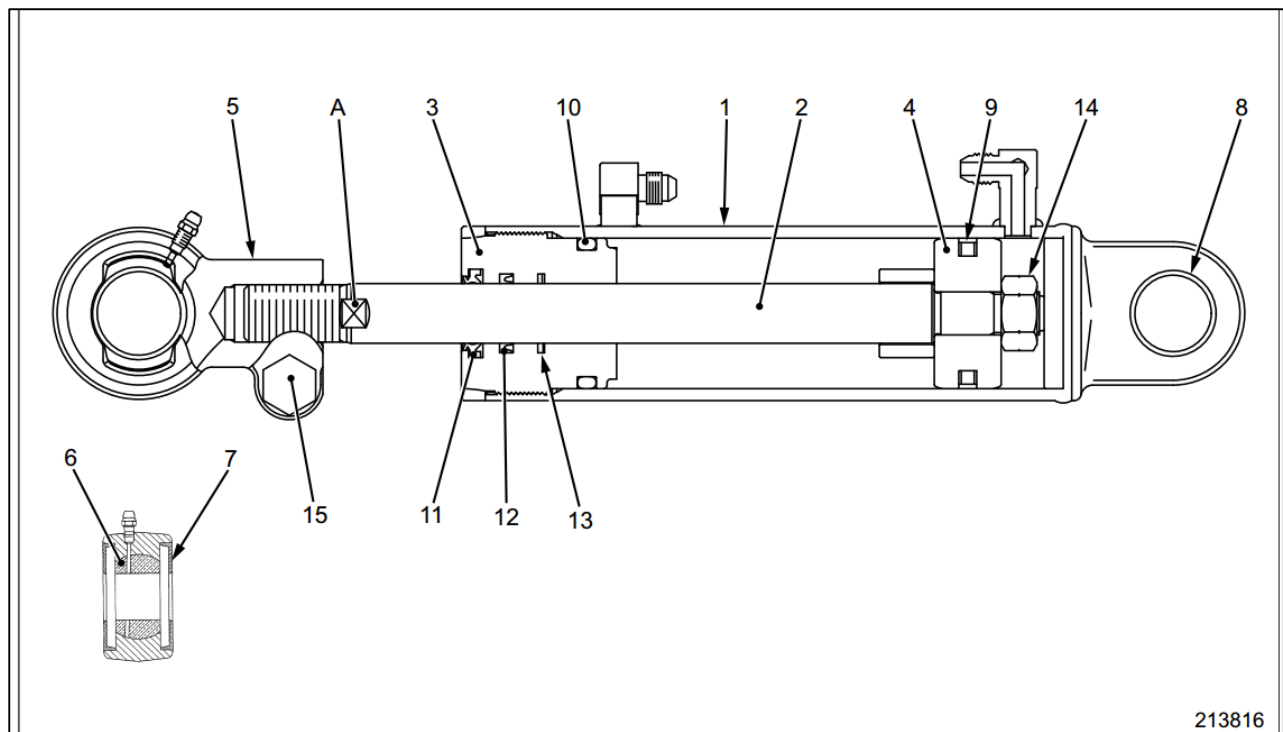
Flow Regulator Valve (For trucks with Fingertip Control Valve Only)

This is an adjustable valve that is located between the lift cylinders and the lift control valve. Its purpose is to limit the amount of return hydraulic fluid that is allowed to flow. The valve can be adjusted by an authorized service technician with an easily reachable screw on the valve. The end user is thus able to customize the lowering speed of the truck based on application if necessary.

Flow regulator valve should **NEVER** be adjusted to allow the forks to lower faster than the standard factory setting (which is the industry standard). This adjustment should only be made by an authorized Cat lift trucks dealer.

Tilt Cylinder

The tilt cylinder is a double action type and has the rod end threaded for adjusting the balance between the right and left sides when the mast is mounted. The tilt angle can be modified with an optional adjustment of the collar and socket.



Main Components

1 Cylinder	5 Socket	9 Piston seal	13 Buffer ring
2 Rod	6 Bearing	10 O-ring	14 Nut
3 Guide bushing	7 Seal	11 Dust seal	15 Clamp bolt
4 Piston	8 Bushing	12 Packing	

Air Intake Process

The air intake is vital to the performance and efficiency of the engine as contaminated air will rob power and eventually damage an engine causing extremely costly repairs. Because of this, great attention was paid to provide the engine with clean air, free of debris with the system used.

The air intake vents were positioned high on the rear overhead guard levels in an attempt to reduce the potential for contaminants like dust and debris kicked up from the ground to enter the system.



Once the air enters the truck, it then travels through the second step of the air intake process, which is the air cleaner located on the right side of the engine compartment. Vanes around the filter element create a cyclone effect causing the larger dust particles to drop to the bottom of the air cleaner canister. Then, a dry paper element filters the remaining, finer particles from the air. This element is easily replaceable without the use of any tools.

Drive Axle

The drive axle on these trucks is the front axle. Designed for durability, it is a full-floating, banjo shaped design that can carry more weight than a semi-floating or non-floating axle assembly because the hubs have two bearings riding on a fixed spindle. The axle shaft itself does not carry any weight; it serves only to transmit torque from the differential to the wheels.



Steer Axle

The steer axle of the truck is one solid unit, which gives it superior strength and rigidity. It allows the truck to perform in the most strenuous environments because the solid steel unit withstands the stress that is exerted on the axle and the chassis of the truck. The design makes it extremely suitable as a connection piece between the two knuckles and the steering cylinder.

Hydrostatic Power Steering System

Directly related to the steer axle housing unit, the hydrostatic steering system is powered by hydraulic oil flow, which minimizes the effort needed for the operator to easily and smoothly steer the truck. Any kickback from the steer wheels into the steering wheel is eliminated by the system. It also removes the need for any mechanical linkage in the steering process which lowers the amount of maintenance needed. The precise steering control of the truck allows the operator to easily turn the steering wheel regardless of truck speed which aids with control and maneuverability in various scenarios and applications.



When the steering wheel is turned, hydraulic oil flows into a small oil pump inside the steering valve. At the core of the pump is a pump rotor called a “gerotor” which rotates coaxially with the steering wheel. Because of this, when the steering wheel is turned, the pump rotor also turns, which delivers pressure oil from the left or right port of the steering valve to the steering cylinder. At the same time, the steering cylinder return passage to the hydraulic control valve is opened to allow return flow. As this pressure and return oil flows back and forth from one side to another, the steering cylinder rod extends to the right or left, which activates the tie rod to turn the knuckle, which turns the rear wheels of the truck and alters the direction of travel.

The Kingpin layout of the hydrostatic steering is supported by needle bearings and a thrust bearing. Each of these has a function as the needle bearings are capable of handling radial forces (forces incurred when turning), and the thrust bearing helps to handle the axial forces (forces caused by the weight of the truck). It is an easy system to maintain as there is no special tooling required to pre-load the bearings. The Kingpin does require greasing as it helps to reduce the risk of premature wear by water and dust.

The steering control valve is also equipped with a solenoid valve that compensates deviation of the steering wheel knob position from the correct forward drive position. Whenever there is a difference, the valve is opened to allow drainage of some part of the supplied oil to return it to a correct forward drive position.

Cooling System

One of the biggest challenges with internal combustion lift trucks is making sure that the engine stays cool. These trucks are equipped with a corrugated, aluminum core radiator that provides excellent cooling because of the large surface area exposed on the fins.

As mentioned above, the core of the radiator is aluminum which horizontal flow. This aluminum core is more resistant to galvanic corrosion in the cooling system. It has also proven over time that it is more effective at transferring heat than traditional copper or brass radiators.

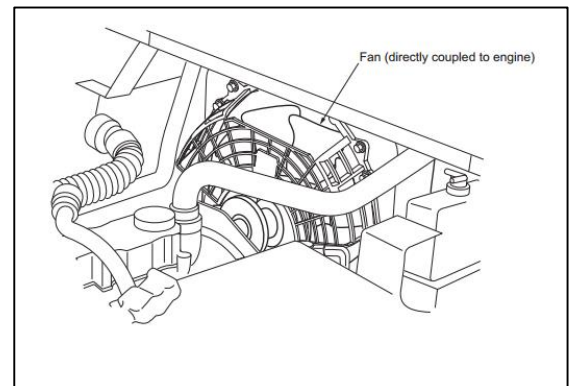
The side tanks of the radiator are plastic. One of these tanks includes a heat exchange unit for the powershift transmission.



Cooling Fan

The truck is equipped with a pusher that is directly coupled to the engine itself. Its purpose is to pull air from under the truck and out of the back of the counterweight helping to keep constant airflow through the engine compartment.

The fan is also covered with a plastic guard for safety reasons and to help minimize the chances of large debris from becoming tangled in the fan itself.



Two Pedal Brake System

Located directly to the left of the accelerator pedal of the truck are two brake pedals that activate the dual brake pedal system. One is a standard brake pedal (it is the middle pedal) and the inching pedal (on the far left) is intended to allow the operator to apply the brake without disengaging the transmission while using hydraulic functions. Remember, as mentioned in the hydraulic system section, some functions (lift, tilt forward and backwards) are directly affected by not only the lever being activated, but also by the engine output affected by the accelerator pedal.

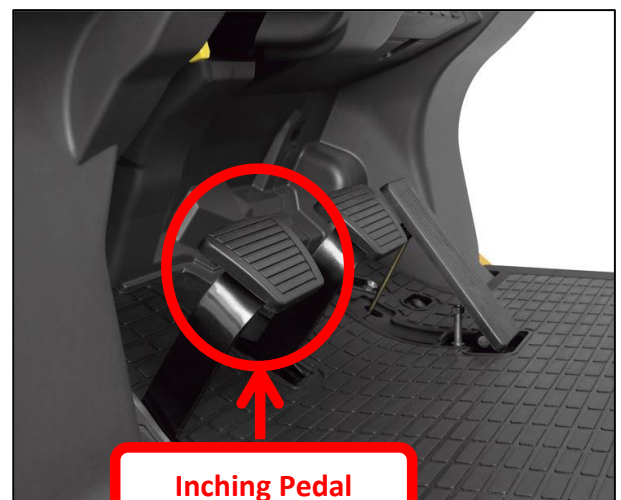
The brake assembly is a large 12.2 inch (10 inch on GP15N-GP20CN) for high lining to drum contact area. The brake shoes are made of non-asbestos material with very good cold and warm frictional characteristics. This is to help ensure consistent brake feel throughout the shift. Whenever the brakes are applied, a self-energizing mechanism transfers turning force from the leading shoe to the training shoe. This presses both shoes against the drum with greater strength and provides more breaking force. The self-energizing shoes help reduce the amount of force needed to be applied to the pedal, which can help reduce the amount of operator fatigue over the course of a shift.

When travelling in reverse, there is a self-adjusting mechanism as well that is activated. As the clearance between the shoes and the drum increases, an adjustment screw is turned one notch by the lever of the adjuster to reposition the shoes closer to the drum.

Inching Pedal

As mentioned before, the inching pedal is to the left of the standard brake pedal. It simultaneously applies the brakes without disengaging the transmission. It does this by disengaging the clutch, or “inching” by letting the clutch slip as the brakes are released. This can give advantages such as slow, controlled acceleration where it is needed most, such as when working on a grade or in tight areas that require high maneuverability.

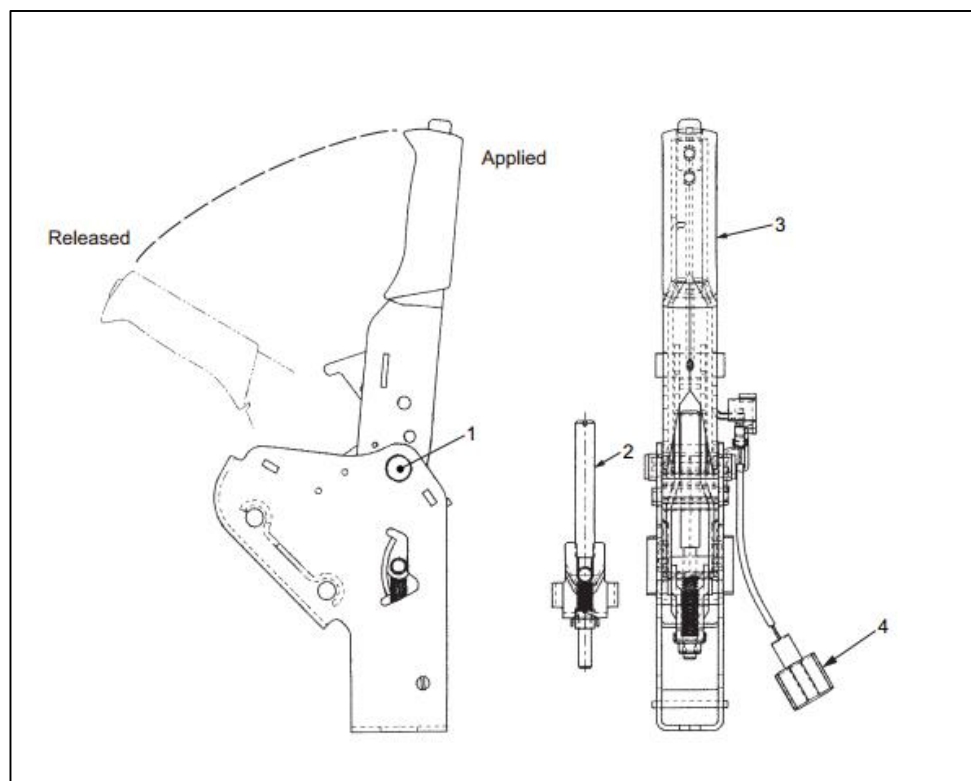
*It is important to note that if the inching pedal is continuously ridden while travelling, there will be damage to the transmission and/or premature wear of brake components.



Inching Pedal

Parking Brake System

The parking brake lever is conveniently located to the left of the steering column. It is a dual action parking brake, which means that the operator must depress the button on top of the lever in order to release the brake. This helps minimize the chances that the operator might accidentally release the brake unintentionally. There is also a sensor in the parking brake that communicates with the PDS system.



Tires

This family of trucks comes standard with air filled pneumatic tires. They provide good traction and added operator comfort by cushioning the overall ride for the operator. The only exception to this is the 2 ton compact model (GP20CN) that comes standard with solid pneumatics. Solid pneumatics for the rest of the lineup are available as optional upgrades.



Models	Tire Size	
	Drive Tires	Steer Tires
GP15N-GP18N	6.5x10-10PR	5.0x8-8PR
GP20CN (Solid Pneumatics Standard)	6.5x10/5.00	6.0x9-10PR
GP20N-GP25N	7.0x12-14PR	6.0x9-10PR
GP28N-GP30N	28x15-14PR	6.5x10-10PR
GP33N-GP35N	250x15-16PR	6.5x10-12PR

Easy Maintenance

These trucks are designed to perform with maximum productivity and efficiency for the end user. In order to accomplish this, it is important that the truck is given every opportunity to do so. To ensure this peak performance, as with any machine, maintenance is a vital step. These trucks are designed to allow for regular maintenance to be completed with relative ease minimizing down time and saving the owner money.

- **Daily Checks** – Daily checks are made that much easier and less time consuming because of the ease of gaining access to all of the major components of the truck. The engine cover opens wide and allows access to check fluid levels and carry out the visual inspections needed before the daily shift.

1. Move the steering column using the yellow lever on the left of the column.

2. Move the seat forward as far as possible and fold the seat down using the spring-loaded locking pin located near the left side hip restraint. ***NOTE: It is not necessary to fold down the seat on diesel and gasoline models (unless they are equipped with a cab) because there is no obstruction by way of propane tank.***



3. Raise the engine cover by pulling the latch located on the front left side of the cover. A single gas-assisted spring permits the cover to be raised with minimal effort and keeps it in a raised position.
4. For even more access, there are NO TOOLS REQUIRED to remove the floor plate and the steel side covers. They can be quickly and easily removed and replaced if needed.
5. The brake master cylinder reservoir is made of translucent molded plastic which makes it possible to verify fluid levels with a quick visual check.
6. These trucks use fuses that are easily accessible. Inside the fuse box, there is also a tool to remove them as well as a labeled guide with an explanation of the function of each fuse.

500 Hour Service Intervals

Extended service intervals mean that this truck will have less down time and less money spent on the planned maintenance of the truck over its lifetime.

*** This may vary based on application.**



Preventative Maintenance Interval	Number of Preventative Maintenance Sessions	Labor @ \$80	Parts @ \$20	Estimated Total Preventative Maintenance Expense
200	50	\$4,000	\$1,000	\$5,000
250	40	\$3,200	\$800	\$4,000
500	20	\$1,600	\$400	\$2,000

SUPERIOR OPERATOR COMFORT

Full Suspension Vinyl Seat

The standard vinyl seat* for this model provides adjustment in numerous planes to allow the operator to put himself in an extremely comfortable position.

1. **Front and Back Adjustment** – Lever positioned on the front right side of the seat can adjust the seat forward and backwards up to 6.5" to accommodate operators at various heights
2. **Suspension Adjustment** – Knob located on the front of the seat can be turned (clockwise to increase support, counterclockwise to decrease support) to adjust the suspension of the seat



3. **Lumbar Support Adjustment** – Knob on the left side of the seat can adjust the lumbar support to the preference of the operator
4. **Fold Down Pin** – Pin located on the left side of the seat just to the rear of the steel wrapped hip restraint allows the seat to fold down

*Seat shown in picture is cloth version of standard seat.

Orange Seatbelt

The **standard orange seat belt** allows for easier visible confirmation that the belt is being used properly during operation of the truck.

Noise Reduction Features

There are a number of standard features that are built into the truck that limit noise and vibration. This helps to keep the operator comfortable, thus increasing his efficiency and output. They include:

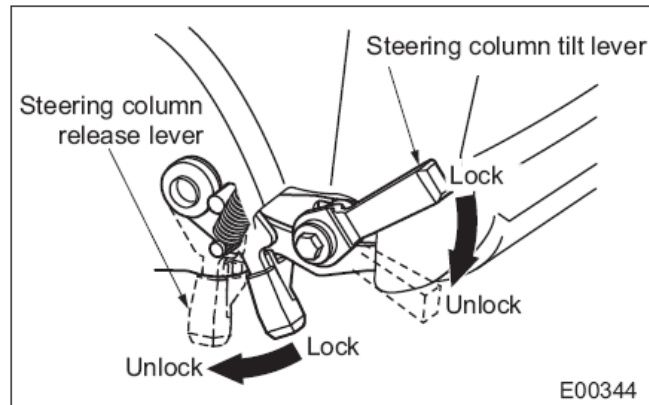
1. Rubber mounted key components isolate noise and vibration transfer to the steel frame
 - a. Hydraulic control valves, transmission, engine, radiator, exhaust system, and secondary lift cylinders on the mast
2. Fully insulated steel engine hood limits the amount of noise and vibration directly under the operators compartment
3. Helical transmission gears reduce drivetrain noise
4. Closed wheel wells reduce noise from the engine
5. Hydraulic accumulator in the transmission control valve promotes smooth shifts and direction changes up to 2.5 mph, reducing shocks in the powertrain



Tilt Steer Column with Mechanical Quick Return

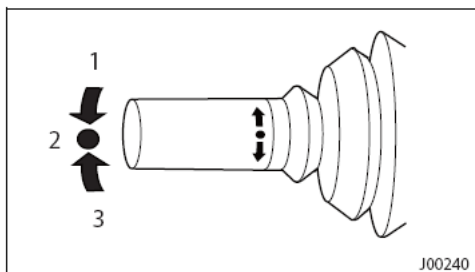
The tilt steering column is equipped with a two lever system that is designed to adjust and lock with a wide range. The forward position allows for extra clearance when opening and closing the engine cover. After daily inspections (or any other reason to open the hood), the operator can return the steering column to the pre-set position customized to their comfort level using the “memory” function.

1. Black release lever provides desired position within 12° to be locked (pull down to position, push up to lock)
2. Yellow release lever allows column to move 13° forward (lift)



Electronic Direction Control

The electronic directional control lever on the left side of the steering column allows the operator to easily shift between forward and reverse travel without ever having to lose contact with the steering wheel. A change in direction is as simple as a flick of the finger.



1. FORWARD (F)
2. NEUTRAL (N)

3. REVERSE (R)



Three Point Entry System

The three-point entry system of all Cat lift trucks IC sit down forklifts allows the user to easily access the operator's compartment. The driver of the lift truck can be in and out with little effort and a consistent method of entry and exit that is more conducive to productivity.

1. Elongated Grab Bar

- a. 18" long to allow easy reachability for operators of all heights
- b. Mounted inside operator compartment to reduce chance of damage

2. Low Entry Step with Anti-slip Step Plates

- a. Open step frame allows for easy entry
- b. Natural step height provides a proper step-up and step-down



3. Wrapped Steel Hip Restraint

- a. Offers third point of contact for secure entry/exit while climbing into truck
- b. Provides multiple points to hold onto while climbing into truck



Floor Mat



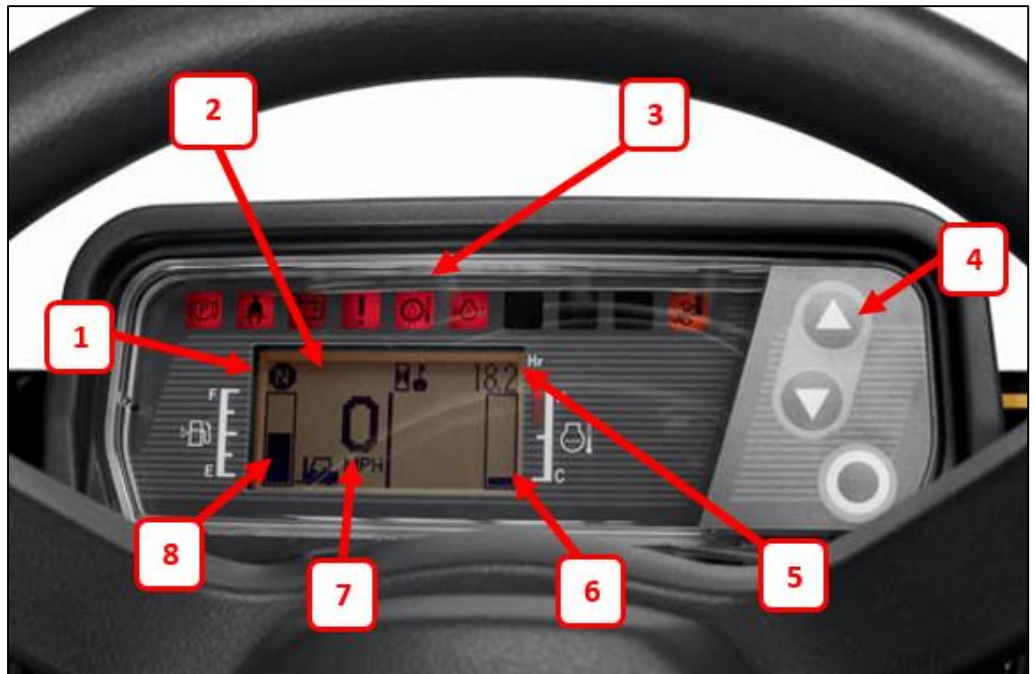
The raised, 4 mm thick floor mat of the truck is designed to provide traction in the operator's compartment and channels water or any other spills away from the feet of the user. It also is one of the many features that help to isolate the vibration and noise of the truck.

INCREASED OPERATOR AWARENESS

Premium LCD/LED Display Panel

The light emitting diode (LED) and liquid crystal display (LCD) meter panel provides a number of important indicator lights and information to the operator. These indicators are crucial to the operator whenever it comes to knowing how the truck is currently running (speedometer, travel direction indicator, etc.), what problems need to be addressed with the truck (maintenance requirement indicator icons), and general reference points (fuel level indicator and clock).

1. Travel Direction
2. Service Interval
3. Warning Icons (See Next Page)
4. Operator Button
5. Clock Time/ Hour Meter
6. Water Temperature Gauge
7. Speedometer
8. Fuel Gauge

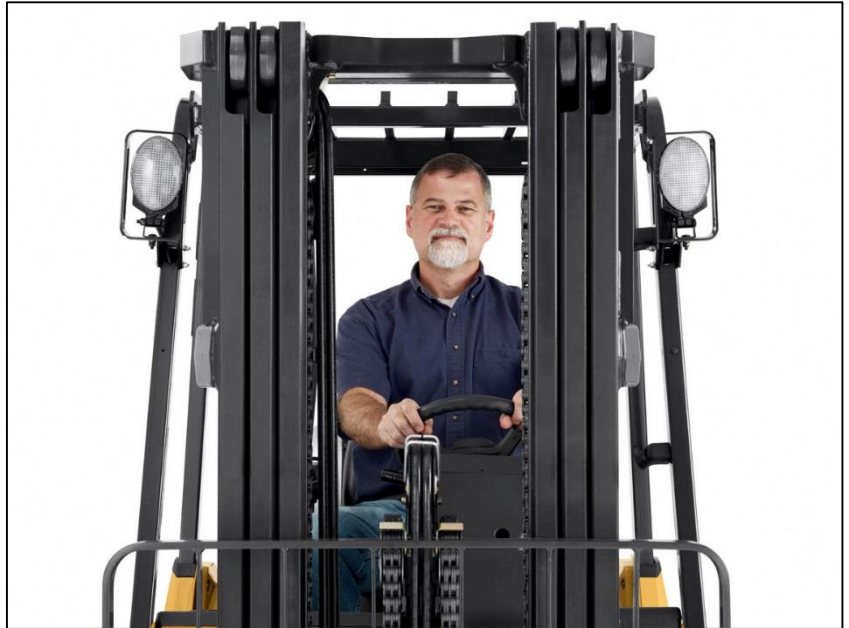


Meter Panel Indicator Lights

Symbol	Name	Illuminated Condition and Models Applicable*
	Low Coolant Level Warning	When coolant level is low. (Optional)
	Clogged Air Cleaner Element Warning	When air cleaner is clogging. (Optional)
	Low Fuel Level Warning	When diesel levels are low.
	Parking Brake Warning/Brake Fluid Level Warning	When parking brake is activated/ When brake fluid is low.
	Seat Belt Warning	When seat belt is not fastened.
	Battery Charge Warning	When battery charging system is not working properly.
	Multi-Purpose Warning	When a minor fault occurs or operating cautions are being issued.
	Torque Converter Fluid Temperature Warning	When torque convertor fluid temperature is not normal. (Only available on models with ProShift®)
	Low Engine Oil Pressure Warning	When engine oil pressure is low.
	Engine Warning (Check)	When the engine has experienced a fault.
	ProShift®	When protective function against sudden travelling direction change is activated. (Optional)
	Mast Interlock Indicator	When PDS is activated.

Mast Visibility

Narrow mast channels provide the large window of vision for the operator while in normal operating position. The 3° canted rollers provide stability of the load on these narrower mast channels. The cross members of the truck are designed to make sure that the operator has good visibility through the mast. The carriage is designed with square fork bars instead of rectangular ones, providing more space, and therefore more visibility, between the bars.



LED Forward Work Lights

Light emitting diode (LED) work lights are mounted on the mast of the truck. LED lamps provide the truck with the latest development in light technology. Benefits of the LED lamps include brighter light, longer life, and a cooler light source than traditional bulbs used by forklift manufacturers. There is no filament in these lights which eliminates the typical weak point of ordinary lamp breakage.

The vertical pattern of the light emission projects where the operator needs it; illuminating the forks of the truck as well as the racks in front of the truck. The LED light also minimizes glare off of the mast.

The standard lights of this series of trucks further minimize cost of ownership in a number of ways:

- Longer bulb life
- Durable aluminum die cast housing minimizes damage
- Steel outer guard to protect entire housing
- **Coverage under the standard warranty terms of the truck**



Rear Combination LED Lights

Rear combination LED stop/tail/backup lights and turn signals come included with the standard offering of this truck. They are located on rear of the overhead guard and help to inform pedestrians and the other operators what the current and intended movements of the lift truck are.

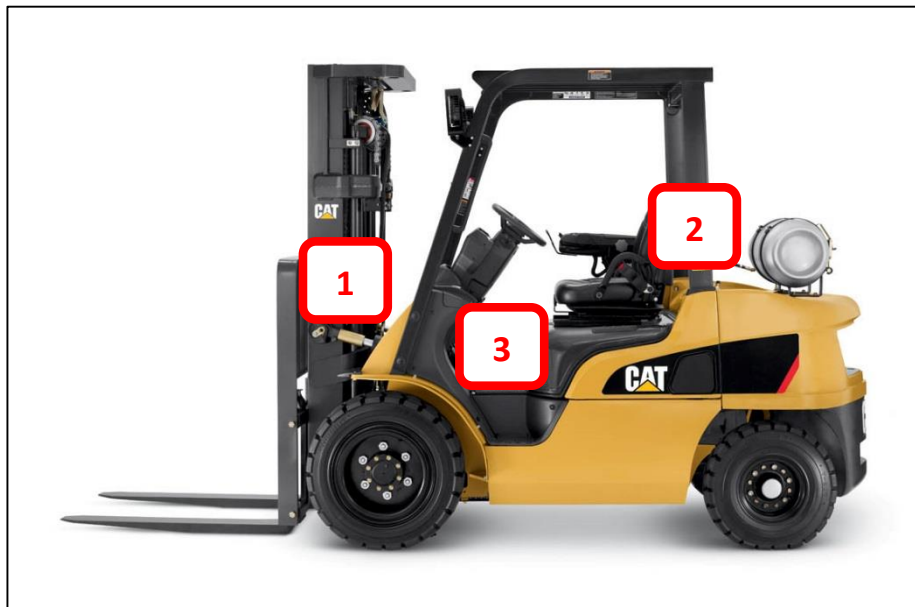


ADDED OPERATOR PROTECTION

Presence Detection System (PDS)

Cat Lift Trucks has a PDS system that is equipped with an integral computer-based feedback system. This system was introduced as the industry's first in 2004 and remains the premier presence detection system. It is activated whenever the operator does not fasten their seat belt during operation or exits the truck without activating the parking brake. It uses visual and audible cues to notify the operator if they are not in the normal operating position with seat belt fastened:

1. Electronically stops powered travel movement of the truck (transmission) and stops activation of load handling functions (hydraulics)
2. Seat belt warning indicator (both buzzer and icon)
3. Parking brake reminder (both buzzer and icon)



Parking Brake

The parking brake of the truck is a dual action lever that is located to the left of the steering column on the dash. The operator must press the button at the top of the lever in order to release the parking brake in order to move the truck. As noted above in the PDS section, an alarm will sound if the operator has left the normal operating position without setting it.



Ground Speed Control

The ground speed control feature allows the truck's top travel speed to be set at one of four options: 5.5 mph, 6.5 mph, 7.5 mph or 8.5 mph. Software and sensors limit the max travel speed of the truck without limiting lift performance. This could be helpful in areas where lift trucks and pedestrians work in close proximity, where fragile materials are handled or in locations where stricter policies are being enforced.

Electronic Backup Alarm

This family of trucks comes standard with an electronic backup alarm that sounds any time the truck is in reverse. This allows pedestrians who are working within close proximity of the lift truck to know that it is the intention of the operator to move backwards, and react accordingly if necessary.

OPTIONS

Custom Shop Modifications (CSMs)

The following section of this manual will describe the options that are immediately available by way of the price pages, but we certainly understand that there are a number of other options that a customer might need for their specific application that are not listed. This does not, by any means, mean that the needs of the customer cannot be accommodated. For any option that you cannot find in the price pages, you will need to submit a CSM request that will go directly to our engineering department that specializes in providing the solutions to the customers in option form. This department will gladly help to determine pricing and availability, as these specialized options will take some time to design and implement. Many times, however, there is a good chance that they have done something in the past that might be able to help you and your customer.

In the LiftNet 2.0 quoting tool, you will see some “SPI” part numbers that you can select. “SPI”s are previous CSM parts that have been built into the system for your convenience in ordering. There is also a spreadsheet that is on the portal of “SPI”s from the past that you can search through to find a price for the option that your customer needs.

Fork Options

Order Code

DP100N-DP160N	Description
Reference the Price Pages for the complete listing of forks styles and part numbers available.	

Description

Hook and shaft type forks are available for order in various sizes.

Lumber forks are thinner than most forks and allow the operator to pick up stacked product easier. Different fork sizes might be needed for different kinds of material handling

UL Safety Rated Chassis Options

Order Code

GP15N-GP35N/DP20N-DP35N	Description
ULGSP15I	UL Rated Gas
ULLPSP15I	UL Rated LPS
ULDSP15I	UL Rated Diesel

Description

For applications that require safety rated chassis, these model families are available with a UL safety rated chassis designation. These chassis are designated with an “S” in their nomenclature (LES,DS, GES) and include certain standard components that are replaced with specifically designed components that help reduce the possibility of spark ignition. Battery disconnect switches, sealed wiring connectors and additional labels are added to aid the operator in applications that might require this kind of upgrade.

Componentry changes include an enclosed alternator, spark resistant muffler, battery disconnect switch, self closing lockable fuel caps, silicone sealed wiring and the UL label to designate safety rated trucks.

In order to receive a “safety rating,” there is an intense review and testing process. It is important to note that although you may add the components listed above, it is not considered “safety rated” unless it has been deemed as such by the manufacturer and is an officially rated UL safety rated truck.

While the LP, Gas and diesel options are available through the price pages, there is no dual fuel configuration that is listed in the price pages. It is available however through CSM.



Applications where this might be common include chemical and chemical processing, petroleum processing, fine dust (paper) and any application where spark ignition could pose a problem. Refer to Powered Industrial Trucks, Type designations, Areas of Use, Maintenance and operations, NFPA 505. The chart below can be used in reference to applications in which safety rated trucks might be needed.

Summary Table on Use of Powered Industrial Trucks														
	CNG Powered		Diesel Powered				Electric Powered				Gasoline Powered		LP Gas Powered	
Locations	CN	CNS	D	DS	DY	DX	E	ES	EE	EX	G	GS	LP	LPS
Class I, Division 1														
Group A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Group B	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Group C	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Group D	NA	NA	NA	NA	NA	A	NA	NA	NA	A	NA	NA	NA	NA
Class I, Division 2														
Group A	NA	NA	NA	NA	K	K	NA	NA	K	K	NA	NA	NA	NA
Group B	NA	K	NA	K	K	K	NA	K	K	K	NA	K	NA	K
Group C	NA	K	NA	K	K	K	NA	K	K	K	NA	K	NA	K
Group D	NA	J	NA	J	A	A	NA	J	A	A	NA	J	NA	J
Class II, Division 1														
Group E	NA	NA	NA	NA	NA	J	NA	NA	NA	J	NA	NA	NA	NA
Group F	NA	NA	NA	NA	NA	A	NA	NA	NA	A	NA	NA	NA	NA
Group G	NA	NA	NA	NA	NA	A	NA	NA	NA	A	NA	NA	NA	NA
Class II, Division 2														
Group F	NA	J	NA	J	A	A	NA	J	A	A	NA	J	NA	J
Group G	NA	J	NA	J	A	A	NA	J	A	A	NA	J	NA	J
Class III, Division 1														
Division 1	NA	J	NA	J	A	A	NA	J	A	A	NA	J	NA	J
Class III, Division 2														
Division 2	NA	A	NA	A	A	A	J	A	A	A	A	A	A	A
Ordinary (Unclassified)	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Notes:														
1. A=Type truck authorized for location described														
2. J=Type truck authorized for location described with approval of the authority having jurisdiction														
3. K=Type truck authorized to be determined by the authority having jurisdiction														
4. NA=Type truck not authorized in location described														
Source: NFPA 505, 2002 Edition														

Optional Wide Carriages

Order Code

GP20N-GP25N/DP20N-DP25N	GP28N-GP35N/DP25N-DP35N	Description
CARR55P25I		55" Wide ITA Class II Hook Type Carriage
	CARR59P30I	59" Wide ITA Class III Hook Type Carriage

Description

These trucks can be fitted with optional wide carriages in order to accommodate the various attachments that an application might require. All carriage widths include a 48" high load backrest. When installing attachments with optional width carriages, be sure to verify compatibility between the attachment and the carriage. Please note that:

- These carriages are NOT AVAILABLE with quad masts.
- Make sure to add 1" to carriage and/or attachment width when determining width over the load backrest

Sideshifters

Order Code

GP15N-GP20CN	GP25N-GP28N/DP25N-DP28N	GP28N-GP35N/DP28N-DP35N	Description
ISS36P15I			36" Wide ITA Class II Integral Sideshifter
	ISS39P25I		39.5" Wide ITA Class II Integral Sideshifter
		ISS39P30I	39.5" Wide ITA Class III Integral Sideshifter
	ISS55P25I		55" Wide ITA Class II Integral Sideshifter
		ISS59P30I	55" Wide ITA Class III Integral Sideshifter
SSHO36P15I			36" Wide ITA Class II Hang-On Sideshifter
	SSHO39P25I		39.5" Wide ITA Class II Hang-On Sideshifter
		SSHO39P30I	39.5" Wide ITA Class III Hang-On Sideshifter

Description

Neither type of side shifter is compatible with quad mast options. Both require single function internal hosing at a minimum.

When the integral carriage options are ordered, they replace the standard carriage that is on the mast.

The hang-on sideshifters mount to the standard carriage on the mast of the truck and are not compatible with optional wide carriages.

3- & 4- Section Control Valves with Levers and Fingertip Control Options

Order Code

GP15N-GP35N/DP20N-DP35N	GP15N-GP35N/DP20N-DP35N (Fingertip Controls)	Description
VLV3-STD	HVLV3FCP15I	3 section control valve
VLV4P15I	HVLV4FCP15I	4 section control valve

Description

In the standard configuration, the standard relief valve for lift, tilt and 3rd section is set at 2,650 psi. When ordering the 4-section control valve with cowl mounted levers, the 3rd and 4th sections are set at 2,250 psi.



The addition of the fingertip control armrest is preferred by some customers as it provides an ergonomic armrest and the ability to control the hydraulic functions of the truck with the ease of one's fingertips, but it is important to know the requirements and limitations of some other options when ordering fingertip controls.

- On the 3,000 lb. to 4,000 lb. compact models, fingertip controls require a swing down LP tank bracket on dual fuel or LP chassis, because of interference with the LP tank whenever the hood is opened. The fire extinguisher option is also not available with fingertip controls on this sized chassis for similar reasons.
- Fingertip controls in general ARE NOT for use with the following options: UL safety rated trucks, swivel seat, enclosed cabin, operator convenience tray, accumulator or enclosed cab options.
- Fingertip controls require a full suspension seat.

Single Function Internal Hosing

Order Code

GP15N-GP35N/DP20N-DP35N	Description
3VSIMP15I	For use with simplex masts
3VDUPP15I	For use with duplex masts
3VTRIP15I	For use with triplex masts
TC3VQUAP15I	For use with quad masts

Description

Single function internal hosing is required for some options and includes one pair of #6 hoses and fittings that terminate at the back of the carriage bottom plate.

Dual Function Internal Hosing

Order Code

GP15N-GP35N/DP20N-DP35N	Description
4VSIMP15I	For use with simplex masts
4VDUPP15I	For use with duplex masts
4VTRIP15I	For use with triplex masts
TC4VQUAP15I	For use with quad masts

Description

Single function internal hosing is required for some options and includes one pair of #6 hoses and fittings that terminate at the back of the carriage bottom plate. It requires 4-section valve at a minimum.

Hydraulic Steel Supply Lines

Order Code

GP15N-GP35N/DP20N-DP35N	Description
SFSSL3P15I	Single function steel supply lines
SFSSL4P15I	Single function steel supply lines – 4 way valve
DFSSL4P15I	Dual Function Steel Supply Lines

Description

These steel supply lines replace the normal supply lines of hydraulic fluid to attachments.

The first option above (SFSSL3P15I) is for use with single function, carriage mounted hydraulic attachments. The line terminates at the right hand side of the carriage top plate. These ARE NOT for use with factory-installed sidershifters or optional carriage widths.

The second option above (SFSSL4P15I) is for use with a single function, sidershifter mounted attachment and the line terminates in the same place, at the right hand side of the carriage top plate.

The third option above (DFSSL4P15I) is for use with dual function, carriage mounted hydraulic attachments. The 3rd function line terminates at the right hand side of the carriage top plate and the 4th function line terminates at the left hand side of the carriage top plate. This option is NOT for use with the factory ordered sidershifter either.

Hydraulic Lift Line Accumulator

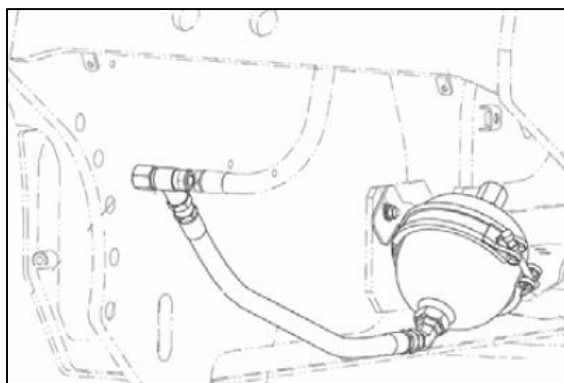
Order Code

GP15N-GP35N/DP20N-DP35N	Description
TC-1060I	Hydraulic Lift Line Accumulator

Description

This 1 Liter diaphragm type lift line accumulator helps to provide shock dampening to the load and front end components of the truck. It should be offered and considered for applications in which the loads tend to be fragile or there is potential from damaging during hydraulic activity of the truck.

This option is NOT for use with fingertip control options.



Load Bearing Clamp Lockout

Order Code

GP15N-GP35N/DP20N-DP35N	Description
TC-7100I	Load Bearing Clamp Lockout

Description

This option requires the operator to depress a button that is on the side of one of the cowl mounted levers in conjunction with the rearward movement of the lever in order to unclamp a load with clamp attachments. It is required for all trucks with clamp attachments to have this option to remain in compliance with ANSI B56 Standards.

This option is NOT for use with fingertip control options.



Bottler's Tilt

Order Code

GP15N-GP35N/DP20N-DP35N	Description
BTLP15I	9° Forward/6° Backward Bottler's Tilt

Description

This is an option that is referred to as "Bottler's Tilt" for its common existence in the beverage industry. The reason for this customization is that many times the pallets in the beverage industry are kept in a rack or in trucks that require the mast to tilt forward more in order to get them out of the racks. If the customer is in the beverage industry, this is something to offer.

Tilt Cylinder Boot Kit

Order Code

GP15N-GP35N/DP20N-DP35N	Description
BOOTTLTP15I	Covers for tilt cylinders

Description

Tilt cylinder boots are an accordion-like rubber covering that is mounted over the tilt cylinders that help reduce the risk of damage from debris or dust getting into the cylinder. This option does limit the back tilt to 6°.



Overhead Guard Options

Order Code

GP15N-GP35N/DP20N-DP35N	Description
TC-2045I	Lowered OHG
TC-2040I	Raised OHG

Description

The lowered overhead guard option lowers the OHG 3" lower than the standard OHG of the truck. Because of this, it includes the change to a vinyl comfort (non-suspension) seat. It is NOT for use with thermoformed OHG cover options or enclosed cabin options.

The raised overhead guard option raises the OHG 3" higher than the standard OHG and is NOT for use with enclosed cabin options either.

Martin Cab

Order Code

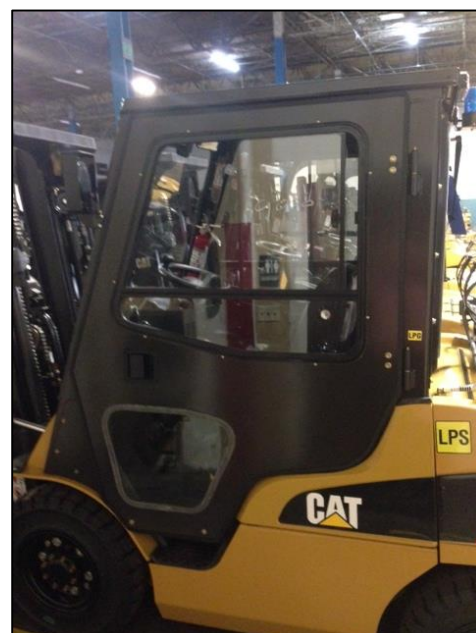
GP20N-GP35N/DP20N-DP35N	Description
TC-3260I	Martin Cab

Description

This fully enclosed cab includes the following: Front and split-rear laminated safety glass windshields with wiper and washer, top clear, modified acrylic panel, right and left steel doors with modified, acrylic sliding windows, headliner with a dome light, front window defogger, rear combination stop/tail/backup lights and a heater.

Important notes with this cab include:

- The overall height from the ground to the top of the enclosed cabin increases approximately 1" as compared to the standard OHG.
- Cab may increase the sound level at the operator's ear.
- This option is NOT compatible with optional OHG's, thermoformed OHG cover options, foot direction control or fingertip controls.
- The mast will be restricted to 6° back tilt with this cabin equipped.
- Please contact CSM department regarding the use of OHG mounted accessories and options.
- Please contact the cab manufacturer (Martin) for any warranty or product support.



Martin Cab Accessories

NOTE: All electrical cab accessories are 12 volt.

NOTE: Cab accessories are NOT for use with Warning/Light options (except for Service Indicator Package, Engine Shut Down and Seat Belt Ignition Interlock).

Order Code

GP20N-GP35N/DP20N-DP35N	Description	Notes
TC-2120I	Vertical Exhaust	For use with gas or diesel options and standard muffler
TC-3190I	Rear Window Defogger Fan	Defogger fan for rear windshield
TC-3200I	Inside Rearview Mirror	Automobile style center mounted rearview mirror
TC-3210I	Rear Work light	One work light mounted outside the cab
TC-3220I	Turn Signals	Front and rear turn signals
TC-3230I	Amber Rotating Beacon	Rotating beacon mounted behind the cab that continuously operates with the keyswitch on
TC-3240I	Amber Strobe	Flashing strobe mounted behind the cab that continuously operates with the keyswitch on
TC-3270I	Foundry and Brick Package for Cab	Includes: Radiator coolant level warning light, air cleaner service indicator, dust proof hydraulic tank breather kit, dust proof front axle breather, air intake pre-cleaner (modified for Martin Cab), transmission oil filter, dual element air cleaner and tilt cylinder boot kit. NOT for use with vertical exhaust options.
TC-3275I	Foundry and Brick Package with elevated exhaust	Includes: Radiator coolant level warning light, air cleaner service indicator, dust proof hydraulic tank breather kit, dust proof front axle breather, air intake pre-cleaner (modified for Martin Cab), transmission oil filter, dual element air cleaner and tilt cylinder boot kit.

Harris Stolper Cab

Order Code

GP20N-GP35N/DP20N-DP35N	Description
TC-3265I	Harris Stolper Cab

Description

This fully enclosed cab includes the following: Front and split-rear laminated safety glass windshields with wiper and washer, top clear, modified acrylic panel, right and left steel doors with modified, acrylic sliding windows, headliner with a dome light, front window defogger, rear combination stop/tail/backup lights and a heater.

Important notes with this cab include:

- The overall height from the ground to the top of the enclosed cabin increases approximately 1" as compared to the standard OHG.
- Cab may increase the sound level at the operator's ear.
- This option is NOT compatible with optional OHG's, thermoformed OHG cover options, foot direction control or fingertip controls.
- The mast will be restricted to 6° back tilt with this cabin equipped.
- Please contact CSM department regarding the use of OHG mounted accessories and options.
- Please contact the cab manufacturer (Martin) for any warranty or product support.



Harris Stolper Cab Accessories

NOTE: All electrical cab accessories are 12 volt.

NOTE: Cab accessories are NOT for use with Warning/Light options (except for Service Indicator Package, Engine Shut Down and Seat Belt Ignition Interlock).

Order Code

GP20N-GP35N/DP20N-DP35N	Description	Notes
TC-2125I	Vertical Exhaust	For use with gas or diesel options and standard muffler
TC-3195I	Rear Window Defogger Fan	Defogger fan for rear windshield
TC-3205I	Inside Rearview Mirror	Automobile style center mounted rearview mirror
TC-3215I	Rear Work light	One work light mounted outside the cab
TC-3225I	Turn Signals	Front and rear turn signals
TC-3235I	Amber Rotating Beacon	Rotating beacon mounted behind the cab that continuously operates with the keyswitch on
TC-3245I	Amber Strobe	Flashing strobe mounted behind the cab that continuously operates with the keyswitch on
TC-3255I	Foundry and Brick Package for Cab	Includes: Radiator coolant level warning light, air cleaner service indicator, dust proof hydraulic tank breather kit, dust proof front axle breather, air intake pre-cleaner (modified for Martin Cab), transmission oil filter, dual element air cleaner and tilt cylinder boot kit. NOT for use with vertical exhaust options.
TC-3280I	Foundry and Brick Package with elevated exhaust	Includes: Radiator coolant level warning light, air cleaner service indicator, dust proof hydraulic tank breather kit, dust proof front axle breather, air intake pre-cleaner (modified for Martin Cab), transmission oil filter, dual element air cleaner and tilt cylinder boot kit.

Tire Options

Order Code

GP15N-GP20CN	Description
SPTP15I	Solid Pneumatic Single Drive and Steer Tires. Drive – 6.5x10; Steer – 5x8.
TC-3175I	Non-Marking Solid Pneumatic Single Drive and Steer Tires. For use with 3,000-4,000 lb. and 5,500-7,000 lb. models. Drive – 6.5x10; Steer – 5x8

GP20N-GP25N	Description
SPT1D1SP25NI	Solid Pneumatic Single Drive and Steer Tires. Drive – 7x12; Steer – 6x9.
TC-3180I	Non-Marking Solid Pneumatic Single Drive and Steer Tires. Drive – 7x12; Steer – 6x9.
TC-3450I	Large Pneumatic Single Drive Tires. Tires are 28x9-15. Increase chassis width to 46.7". Not for use with steel supply lines.
TC-3460I	Large Solid Pneumatic Single Drive Tires. Tires are 28x9-15. Increases chassis width to 46.7". Not for use with steel supply lines.
DRP28DP25I	Air-Filled Pneumatic Dual Drive and Single Steer Tires. Drive Tires are 7x12-14PR.
SPT2D1SP25I	Solid Pneumatic Dual Drive and Single Steer Tires. Drive – 7x12; Steer – 6.5x10.

GP30N-GP35N	Description
SPT1D1SP30NI	Solid Pneumatic Single Drive and Steer Tires. 5,500-6,000 lb. capacity: Drive – 28x9-15; Steer – 6.5x10. 6,500-7,000 lb. capacity – Drive – 250x15; Steer – 6.5x10.
TC-3185I	Non-Marking Solid Pneumatic Single Drive and Steer Tires. Drive – 28x9-15; Steer – 6.5x10.
DRP28DP30I	Air-Filled Pneumatic Dual Drive and Single Steer Tires. Drive Tires are 28x9-15-14PR.
SPT2D1SP30I	Solid Pneumatic Dual Drive and Single Steer Tires. Drive – 28x9x15; Steer – 6.5x10.

Description

There are a wide array of different tires that are in the price pages for this model family. This is however, only a fraction of the tires that you can get on Cat Lift Trucks. If there is something that the customer needs but is not in the price pages, be sure to consult the CSM department.

All trucks come standard with air-filled pneumatics, but if the application is one that is traditionally tough on the tires and might result in excessive damage, then the customer should consider solid pneumatics.

Also, dual drive tires can add stability when lifting a load by providing a wider base on the front of the truck, where the load is being lifted.



Seat Options

Order Code

GP15N-GP35N	Description
SEATVI	Comfort (non-suspension) Vinyl Seat. Not for use with fingertip controls or adjustable armrest. Automatically included with lowered OHG option.
SEATCI	Comfort (non-suspension) Cloth Seat. Not for use with fingertip controls or adjustable armrest. Automatically included with lowered OHG option.
SEATFSCCI	Full Suspension Cloth Seat
SEATFSVSI	Full-Suspension Fold Down Vinyl Swivel Seat. Provides 18° of swivel to the right with a latch at the end of travel. Reduces torso clearance to the OHG by approximately 1.25". Not for use with the convenience tray, adjustable armrest or fingertip controls. If this is ordered in combination with armrest TC-1870, please contact CSM.
SEATFSCSI	Full-Suspension Fold Down Cloth Swivel Seat. Provides 18° of swivel to the right with a latch at the end of travel. Reduces torso clearance to the OHG by approximately 1.25". Not for use with the convenience tray, adjustable armrest or fingertip controls. If this is ordered in combination with armrest TC-1870, please contact CSM.
TC-8100I	Full-Suspension Vinyl Seat with Back Adjustment. Back of seat can adjust 6° forward and 8° backward. Not for use with fingertip controls and armrest options.
TC-8110I	Full-Suspension Cloth Seat with Back Adjustment. Back of seat can adjust 6° forward and 8° backward. Not for use with fingertip controls and armrest options.

Foot Direction Control

Order Code

GP20N-GP35N/DP20N-DP35N	Description
FDCP15I	Foot Direction Control

Description

This option removes the electronic direction control lever from the steering column and adds the pictured direction control lever that is operated using the foot by the operator. Often referred to as Monotrol, this is simply preferred by some operators that are used to using it.



Reverse Drive Packages

Order Code

GP20N-GP35N/DP20N-DP35N	Description
RDPCP15I	Reverse Drive Package – Cloth Seat
RDPVP15I	Reverse Drive Package – Vinyl Seat

Description

The reverse drive package includes the following accessories in order to make it easier and more comfortable for an operator that is in an application that is travelling in reverse a large portion of the time:

1. Swivel Seat Base – Allows for 12° swivel in either direction.
2. Reverse Hand Grip with Horn Button – Mounted on the rear OHG leg and allows the operator to have something to hold onto while turned facing backwards and a horn to use without having to use the conventional forward facing horn on the steering wheel.
3. Steering Wheel Knob – Allows for easier turning of the steering wheel.

Reverse drive packages are not for use with fingertip control options due to interference when swiveling.

Steering Wheel Knob

Order Code

GP20N-GP35N/DP20N-DP35N	Description
STKNB15I	Steering Wheel Knob

Description

The steering wheel knob provides the operator with a smooth knob used for turning the steering wheel with ease. It is a plastic knob attached to the steering wheel.



Rear Grab Bar With Horn Button

Order Code

DP100N-DP160N	Description
RGHP15I	Rear grab bar with horn button

Description

The rear grab bar is mounted to the overhead guard on its back, right leg and has a yellow button to activate the horn of the truck.

This option is not for use on the 3,000-4,000 lb. compact models.



Swing Down LP Tank Bracket

GP20N-GP35N	Description
SDBKTP15I	Swing-Down LP Tank Bracket

Description

This patented swing down bracket allows more convenience to the operator whenever changing the LP tank of the truck. For some operator's the idea of changing the tank at the top of the counterweight can be a daunting task, so this bracket swings the tank out, and then down to a more manageable height.

It is important to keep in mind that this swing down LP bracket does cause the tank to sit a little higher than normal and as a result might limit some rearward visibility, especially visibility to the area directly behind the counterweight.

This option is obviously only available on LP trucks and the brackets are for use with both 33.5 lb and 43.5 lb. LP tanks.



Underbelly Screen

GP20N-GP35N	Description
UBSP15I	Underbelly Screen

Description

This optional underbelly screen was designed to fully cover the underside of the truck with perforated metal. The natural operation of a forklift sucks air up into the engine compartment in order to cool it. This underbelly screen might inhibit some of the cooling capability of the truck, but at the same time will prevent debris from being sucked up into the engine compartment. This is commonly used to avoid large debris such as shrink-wrap from getting sucked into the engine where it can cause damage to components if it gets tangled.

High Pass Through Radiator

GP20N-GP35N	Description
HPTRADP15I	Square Fin Radiator

Description

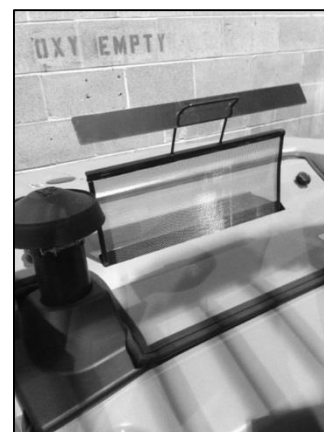
This high pass through radiator is a square fin design, as opposed to the serpentine fin design of the standard radiator. It is commonly used in applications with a lot of dust and debris as the square fin design allows for more dust or fiber to pass completely through a radiator rather than being stuck on the front end and possibly clogging it up. This is very common in cardboard or paper applications.

Radiator Screen

GP20N-GP35N	Description
RADSCR15I	Radiator Screen

Description

Another option to help prevent the clogging of the radiator would be to add this option. This is a slide in screen that protects the front of the radiator from debris. The screen can then be removed and cleaned whenever necessary.



High Speed Fan

GP20N-GP35N	Description
HSFP15I	High Speed Fan Upgrade

Description

Heat balance and overheating are one of the major challenges that forklift manufacturers face. If there is an application where the customer is consistently experiencing overheating or where it might be a problem, this option provides a higher speed fan to pull hot air from the engine and expel it from the engine compartment at a higher rate than the standard cooling fan.

Cotton/Fiber Protection Package

GP20N-GP35N	Description
LINTPROTP15I	Cotton/Fiber Protection

Description

This package is put together for ease of order for applications that are particularly exposed to fiber or particles. The components included in the package include the few previously listed options:

- *Square Fin Radiator*- Allows debris to pass through the radiator more easily to prevent clogging.
- *Radiator Screen* – Blocks heavier debris from entering into the radiator
- *High Speed Fan* – Pushes hot air out of the engine compartment

Dust Proof Hydraulic Tank Breather Kit

GP20N-GP35N	Description
HTBP15I	Hydraulic Tank Breather Kit

Description***Dust Proof Front Axle Breather Kit***

GP20N-GP35N	Description
FABP15I	Front Axle Breather Kit

Description

This breather kit is attached to the drive axle (front axle) of the truck and can help reduce the possibility of contamination of the gear oil from dust and debris in dirtier applications. This is part of the Foundry/Brick Protection Package.

Dual Element Air Cleaner

GP20N-GP35N	Description
AIRCLDEP15I	Dual Element Air Cleaner

Description

This option adds a secondary filter element inside of the standard primary air cleaner element. It helps to reduce the chances of dust or debris from entering into the engine system and is part of the larger Foundry/Brick Protection Package.



Elevated Air Intake Pre-cleaner

GP20N-GP35N	Description
PRECLNRP15I	Elevated Air Intake Pre-cleaner

Description

This moves that air intake of the truck to an elevated location mounted to the rear OHG leg. It helps to further reduce the chance of contamination of the engine by way of dust particles taken in through air intake because the entry point is higher from the ground, where many of the contaminants originate. It reduces the load on the air filament itself.

This option is not for use with cabin options or with the elevated exhaust option.

Transmission Fluid Filter

GP20N-GP35N	Description
TFFP15I	Transmission Fluid Filter

Description

This is an external filter that is added to one of the transmission lines to help trap any debris that might contaminate the transmission. It is often added in applications with excessive dirt or dust and is part of the Foundry/Brick Protection Package.

Foundry and Brick Protection Package

GP20N-GP35N	Description
DUSTPROTP15I	Foundry/Brick Protection Package
TC-1315I	Foundry/Brick Protection Package for use with Elevated Exhaust

Description

This is a compiled package of options that is designed to help trucks perform at an optimal level in applications that are particularly dirty and/or dusty. This package is not for use with cabin options or elevated exhaust (unless option TC-1315I is ordered) and comes with the following options:

- *Service Indicator Package* – Additional icons added to monitor air cleaner and radiator coolant levels
- *Dust Proof Hydraulic Tank Breather Kit* – Hydraulic tank protection from contamination
- *Dust Proof Front Axle Breather Kit* – Drive axle protection from contamination
- *Dual Element Air Cleaner* – Provides more efficient filtration system during air intake process
- *Elevated Air Intake Pre-Cleaner* – Elevates air intake to lessen chance of contaminant entry into the engine.
- *Transmission Fluid Filter* – Fluid to increase protection from contamination of the transmission fluid
- *Tilt Cylinder Boot Kit*- Covers for the tilt cylinders to help protect from dust or debris contamination

Exhaust Options

GP20N-GP35N	Description
EXHSELEP15I	Elevated Exhaust
TC-6715I	Wrapped Exhaust

Description

The elevated exhaust option re-routes the exhaust of the truck from underneath it, to the rear right hand overhead guard leg of the truck. This blows the exhaust fumes from below the truck to above the truck as to allow for less release of exhaust where it might irritate pedestrians or product.



Sealed Alternator

DP20N-DP35N	Description
TC-3610I	Sealed Alternator

Description

This is an option that is commonly used in excessively dirty/dusty applications and is a 35 amp sealed alternator. It comes included with the UL Safety rated trucks.

Engine Block Heater

GP20N-GP35N	Description
TC-6720I	Engine Block Heater

Description

This is an engine block heater that could help in cold start environments.

Rear LED Working Light

GP20N-GP35N	Description
RLWLP15I	Rear Facing Working Light

Description

A rear facing LED work light is mounted to the rear left OHG leg. This option might benefit a customer who uses the lift truck in a lowly lit environment and often works in reverse. This rearward illumination can drastically increase visibility behind the truck.



Premium Working Light Package

GP20N-GP35N	Description
RLMRLP15I	Premium Light Package

Description

This is a package intended to help increase operator awareness by combining the following options:

- *Rear View Mirror Kit* – Mirrors mounted to increase rearward visibility
- *Rear Work Light* – Increases rearward visibility and view of area behind truck in dimly lit areas



LED Turn Signals

GP20N-GP35N	Description
LTSP15I	Turn Signals

Description

LED turn signals can be added to the truck and are OHG mounted. They allow the operator to utilize them to notify pedestrians or other operators what the intended path of the truck is going to be.



Amber Strobes

GP20N-GP35N	Description
BUHASP15I	Amber Strobe Mounted Above OHG
BULASP15I	Amber Strobe Mounted Below OHG

Description

An amber strobe can be mounted above or below the overhead guard based on customer preference or need. Whenever the key switch is activated, the strobe will flash to visually notify pedestrians and other operators that the truck is in the area. Applications with low lighting, high ambient noise levels and high pedestrian and vehicle traffic might benefit from having trucks equipped with this option.

It is important to keep in mind that when mounted above the OHG, this option increases overall height clearance of the truck and when mounted below, it can affect rearward visibility by way of physically being in the line of sight and by flashing brightly.



Blue Spotlights

GP20N-GP35N	Description
TC-3370I	Rear Activated Rear Facing Blue Spotlight
TC-3375I	Forwarded Activated Forward Facing Blue Spotlight

Description

These blue spotlights are used to announce the presence of the truck by projecting a blue spotlight onto the ground either in front or behind the truck on the ground, dependent on the direction of travel of the truck. The spotlights are mounted on the overhead guard of the truck. The forward facing option shines through the mast and the rearward facing option shines to the ground behind the counterweight.

These allow pedestrians around corners or away from the lift truck to know that it is coming because the arrival of the truck is preceded by the shining blue light. These options are not for use with lowered OHG options or fully enclosed cabin options.



Additional Indicators

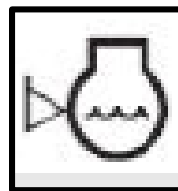
GP20N-GP35N	Description
ACSIP15I	Air Cleaner Service Indicator
RCWLP15I	Radiator Coolant Warning Light
SRVCINDP15I	Service Indicator Package: Includes Air Cleaner Service and Radiator Coolant Warning Lights

Description

These are added service indicators on the in dash display. The air cleaner service indicator makes the operator aware whenever the air intake is clogging and the radiator coolant warning light lets the operator know if they radiator coolant level is low.



Air Cleaner Service Indicator



Radiator Coolant Warning Icon

Engine Shut Down System

GP20N-GP35N	Description
TC-1020I	Engine Shut Down System

Description

The engine shut down system is an option which shuts down the engine if any of the following occur:

- High transmission temperature (>230° F)
- High coolant temperature (>225° F)
- Low engine oil pressure (<3.5 psi)

If any of the above occur, an audible alarm will sound and a dash light will illuminate. This will happen for 30 seconds and if the engine isn't shut down by the operator, then the engine will shut down on its own. Once this happens, the engine can be restarted by cycling the key switch, but if the condition that cause the shutdown still exists, the engine will shut down after 30 seconds again.

Appropriate sensors are added to the truck and the wiring harness for the system is installed through the frame of the truck. Also, the buzzer that sounds whenever the system is activated must be installed. Everything is routed through a relay box which tells the engine if any of the trigger conditions are occurring.

The benefits here are that the operator cannot continue to operate the truck if there one of any of a number of fluid conditions that could cause expensive and time consuming repairs. If the truck is automatically shut down, there is a better chance of diagnosing the issue and fixing it with less money spent by the end user.

Seat Belt Ignition Interlock

GP20N-GP35N	Description
TC-2020I	Seat Belt Ignition Interlock

Description

Seat belt ignition interlock is an option that adds sensors and wiring to mandate that the operator is using the seat belt and parking brake during operation of the truck.

- If the operator has not fastened the seat belt, the ignition of the truck will not start.
- If the operator is running the truck and removes the seat belt, then the engine will stop running in 2.5 seconds.
- If the operator leaves the seat without setting the parking brake, the engine will shut down within 2.5 seconds as well.



Wiring is added to the truck that communicates whether the critical components are being used correctly. The seat belt and seat sensor work hand in hand so that the engine knows if the operator is in the seat and the seat belt is fastened. The wiring is also connected to the parking brake and will shut the engine down if the operator leaves the seat (warning the engine by way of the seat sensor) without setting the brake.

The benefit here is added security to the operator. If the engine cannot run without these major components being used, then it could help reduce the chances for improper use. This takes the PDS system a step further and completely shuts the engine down instead of a lockout of hydraulic and transmission functions.

Dual Panoramic Rear View Mirror Kit

GP20N-GP35N	Description
RVWMIRRI	Rearview Mirror Kit

Description

This option adds to adjustable rear view mirrors that are mounted to the front legs of the OHG to increase operator visibility behind the truck without having to actually turn to face in a rearward direction. This option is part of the premium working light package.

This mirror is not for use with enclosed cabin options.



Adjustable Armrest

GP20N-GP35N	Description
TC-1870I	Armrest

Description

This adjustable armrest mounts to the right side of the seat and conveniently adjusts in numerous ways in order to reach the position that is most comfortable for the operator. This low cost option is a great way to increase the ergonomics of the operator compartment during operation.



Operator Fan

GP20N-GP35N	Description
TC-6700I	Operator Compartment Fan

Description

This is a small fan that is mounted (usually in the upper right hand corner of the operator's compartment) to blow air on the operator. This option comes included with the cabin options of this model family.



Keyless Ignition

GP20N-GP35N	Description
TC-2015I	Keyless Ignition

Description

As suggested in the name of the option, this allows the truck to be started without the need of a key. Usually this adds a keypad where the operator will enter a passcode and the engine of the truck will start automatically. The difference between this and the standard truck's passcode capabilities is that a key is still required to start the truck with the standard offering.

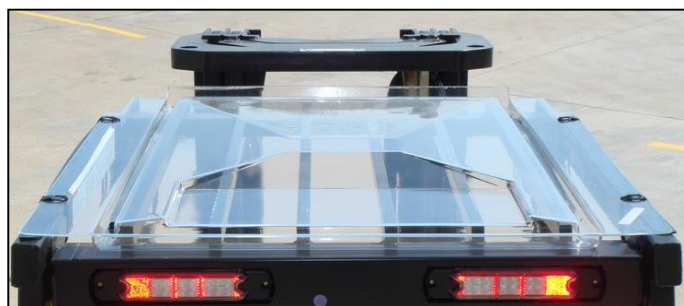
Thermoformed Overhead Guard Covers

GP20N-GP35N	Description
TC-1930I	Tinted Overhead Guard Cover
HGCP15I	Clear Overhead Guard Cover

Description

These acrylic OHG covers are built to form fit the top of the overhead guard and is held securely in place with Velcro straps so that the cover is easily to remove and replace. It can help protect the operator from the elements and small falling objects without restricting the visibility through the top of the operator's compartment. There is a drain hose that runs down the left front OHG leg to prevent water from gathering on top of the cover.

Applications that could benefit from the use of this option include those where the truck is regularly operated outdoors or where the customer has covered the OHG regularly with other materials that might affect visibility such as cardboard, plywood, or other plastic materials.



Fire Extinguisher

GP20N-GP35N	Description
FIREEXTP15I	Fire Extinguisher

Description

This option adds an ABC-type 2.5 lb. fire extinguisher to the right rear OHG leg of the truck. This extinguisher meets the UL rated requirements of the US market and some countries or customers might require a fire extinguisher that meets other requirements.

Because it is mounted on the rear OHG leg, there is a chance that it might slightly affect rearward visibility and this option is not available with certain options.

Benefits of this option include increased fire safety and possible compliance with insurance policies required on certain sites. The end user is responsible for the training of the operator whenever it comes to use of the extinguisher.



Drawbar Pin

GP20N-GP35N	Description
DRWPINP15I	Drawbar Pin

Description

The drawbar pin is the steel pin that is located on the back of the counterweight. It is important to note that lift trucks are not intended to “tow” anything with this pin. The pin is intended for the loading and unloading of the truck onto trailers.



Lifting Eyes

GP20N-GP35N	Description
LFTEYEC15I	Counterweight Mounted Lifting Eyes
LFTEYEMP15I	Mast Mounted Lifting Eyes

Description

Lifting eyes are used whenever an end user needs to move the lift truck with the use of a crane. The **counterweight mounted lift eyes** consist of a lifting eye that is forged onto a rod and fitted into the appropriate holes in the counterweight. Secured with a nut and a pin, a rubber socket prevents the eyes from damaging the paint of the counterweight. These eyes can be used to remove the counterweight if it is ever needed. When combined with the **mast mounted lift eyes**, the truck can be completely hoisted using a crane.



This option is commonly used in stevedoring to lift a truck onto the deck of a ship for deck loading.

It is important to note that counterweight mounted lift eyes are not compatible with LP models due to inference with the LP tank mounting.

Special Paint Options

GP20N-GP35N	Description
9999-72110I	Red Paint; RAL: 3002
9999-72120I	Blue Paint; RAL: 5015
9999-72130I	Bright Yellow; RAL: 1023
9999-72140I	Gray Paint; RAL: 7001
9999-72150I	Green Paint; RAL: 6024
9999-72160I	White Paint; RAL: 9016
9999-72170I	Orange Paint; RAL: 2011

Description

Special paint can be ordered by the end user. The RAL codes of the various price page option colors are listed above. If a custom color is desired, it can be done through the CSM department (inquire for pricing as there is a minimum amount of powder that must be ordered for custom colors) with RAL code.



Language Markings

GP20N-GP35N	Description
LANGENGUEUI	European English Language Markings
LANGDFREEUI	French Language Markings
LANDSPAAMI	Spanish Language Markings (North/South America)
LANGPORAMI	Portuguese Language Markings (South America)

Description

These options change the language of all of the decals are changed to the language requested. The languages listed above are the most frequently ordered, but in the future there are a number of other languages that will be available. See the price pages for available options.

Customer Service

Customer Support Programs

Cat Lift Trucks has an extremely strong dealer network that is able to provide its customers with the most comprehensive support system possible. There are a number of ways that this is accomplished.

Warranty Information

- **Standard Warranty Program**
 - 1 Year / 2,000 Hour Standard Warranty
 - 2 Year / 4,000 Hour Powertrain Warranty
- **Optional Extended Warranties**
 - Lift Plus™ Extended Warranty Program
 - 2 year / Unlimited hour, 3 year / 6,000 hour , 4 year / 8,000 hour and 5 year / 10,000 hour options for “carriage to counterweight” coverage extension options
 - 3 year / 6,000 hour, 4 year / 8,000 hour and 5 year / 10,000 hour options for Powertrain coverage extension options
 - Lift Truck Advantage Warranty Extensions
 - 3 year / 6,000 hour , 4 year / 8,000 hour and 5 year / 10,000 hour options for “carriage to counterweight” coverage extension options
 - 4 year / 8,000 hour and 5 year / 10,000 hour options for Powertrain coverage
- **Parts Fast or Parts Free Guarantee (U.S. and Canada Only)**
 - This guarantee ensures next day business delivery of parts *to the dealership* or they are free, freight included.
- **Separate Extended Warranty for Emission Parts (U.S. and Canada Only)**

Dealer Network

Supported by the most extensive dealer network in the industry, Cat Lift Trucks is driven and committed to keeping the end user's fleet up and running. If anything goes awry, help is always a phone call away.



Forklifts Are Not Commodities

The Cat lift trucks brand is well known around the globe for being a premium brand. It leads the industry in its three core beliefs of quality, reliability, and customer service. As with its counterparts on the earth moving side, these products have a reputation for being tough, durable, and backed by an extremely strong dealer network.

As a salesman, it is important to remember that this purchase is an investment, and a large one at that. As

you discuss the needs and desires of the end user, do not forget to take time to remind them of the features that are listed in this manual that make these lift trucks stand out. A lift truck is not a commodity. It is not something that you purchase to run until it dies and then just toss it in the dump and get a new one. There is a very good and clear reason that there are so many premium features that are standard on Cat lift trucks while competitors might only offer them as options that add to the baseline price, or not at all.

These lift trucks are meant as an investment. They are meant to be sold on the premise that the unique features it has and the presence of your dealership will provide a wide array of benefits that will HEAVILY outweigh the relatively minor lifetime cost of the truck.

