

◆ General

Taking proper care of your lift truck is a vital part of the overall planned maintenance program. Your participation in this program will provide an early identification of potential maintenance problems. Do-it-yourself maintenance does not include repairs. If your lift truck requires any repairs, consult your authorized Cat lift truck dealer. The dealer's lift truck mechanics are well trained and know how to safely make repairs.

WARNING

Follow these rules to help save you from injury and to service your lift truck properly.

- Make sure the service area is safe.
- Park the lift truck on level ground with the forks lowered until the fork tips touch the floor, parking brake applied, direction lever in the NEUTRAL position, engine stopped and the wheels blocked.
- All repairs must be made by authorized personnel.
- Follow the recommended safety procedures.
- Use only the right tools for the job.

WARNING

DO NOT bypass any electrical switches on this lift truck.

WARNING

If during operation the lift truck becomes unsafe in any way, the matter must be reported immediately to the user's designated authority, and the lift truck must not be operated until it has been restored to a safe operating condition.

WARNING

BE SURE to perform inspections.

- If you fail to perform required inspections, it could lead to accidents.
- Operate the lift truck at a reduced speed when performing an operational inspection.
- If operated at higher speeds during an operational inspection, it could cause an accident if the lift truck is faulty.
- Dress properly for the job. **DO NOT** wear loose clothing or accessories—flapping cuffs, dangling chains, neckties, scarves, or rings—that could catch in moving parts.
- Wear personal protective equipment appropriate for the conditions of your work places.

◆ Recommended Fuels and Oils

Fuel or Oil		Recommendation	Recommendation for Ambient Temperatures, °C (°F)						
			-30 (-22)	-20 (-4)	-10 (14)	0 (32)	10 (50)	20 (68)	30 (86)
Fuel			Consult your authorized Cat lift truck dealer (For gasoline engine: Use unleaded regular gasoline with an octane rating of 91 or more.)						
Engine oil	LP-Gas Models	API service classification SL, min.	SAE10W-30						
	Diesel Models	API service classification CF, min.	SAE10W-30						
Transfer and Differential oil		API service classification multi-purpose type GL-4 or GL-5	SAE80W			SAE90			
Powershift Transmission Oil		Dexron II	Consult your authorized Cat lift truck dealer						
Hydraulic Oil		ISO VG32							
Brake Oil		Recommended oil by manufacturer							
Grease	Wheel Bearings	NLGI No.2 grade multipurpose type (lithium base), consistency: 271							
	Chassis	NLGI No.1 grade multipurpose type (lithium base), consistency: 315							

Antifreeze solution	Ambient Temperature, °C (°F)	-45 (-49)	-39 (-38)	-30 (-22)	-25 (-13)	-20 (-4)	-15 (5)	-10 (14)
	Concentration (%)	60	55	50	45	40	35	30

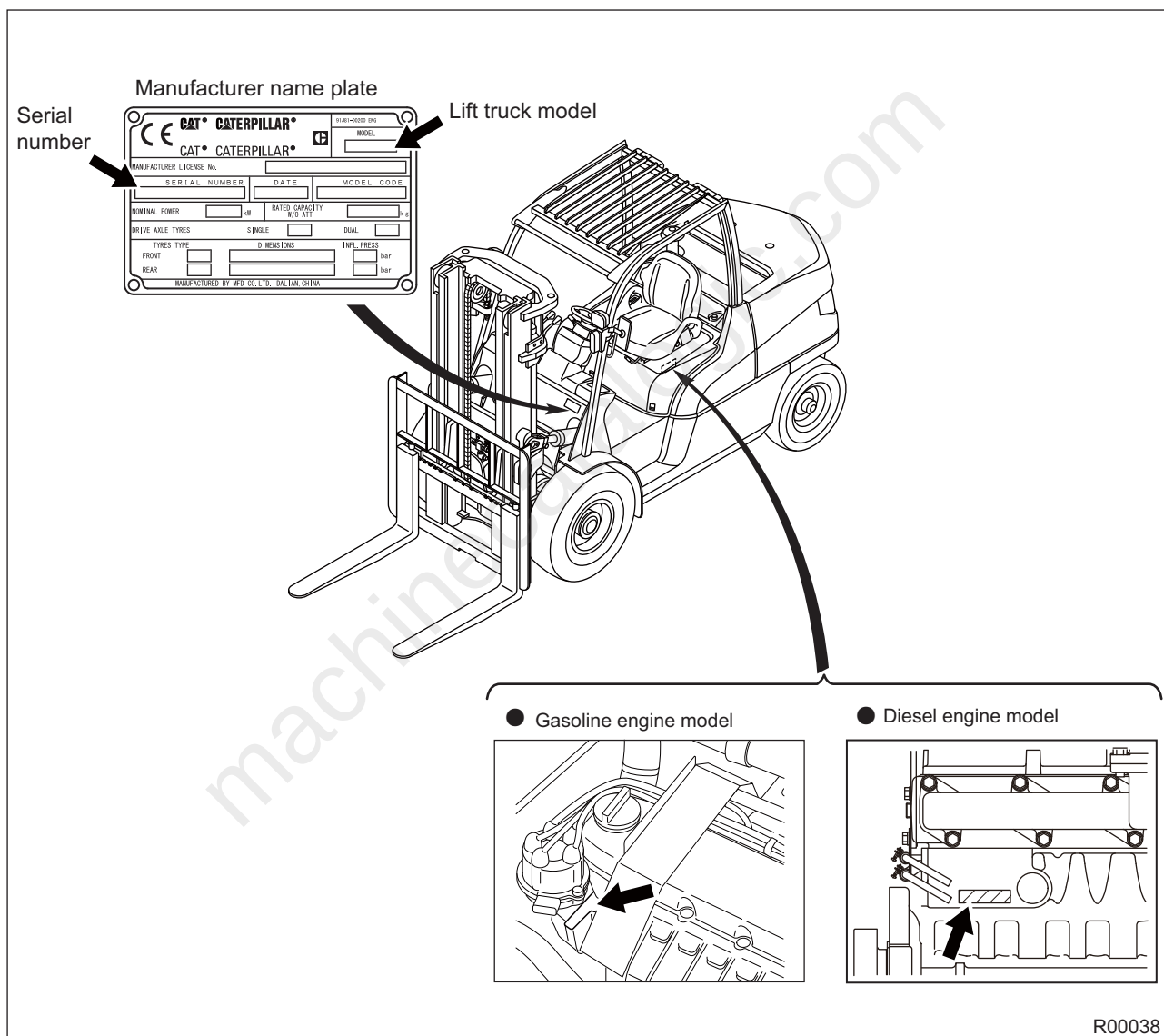
Note:

- Avoid mixing lubricants. In some cases, different brands of lubricants are not compatible with each other and deteriorate when mixed. It is best to stick with the same brand at successive intervals.
- For refill capacities and measurements, see "Specifications (Standard Models)" in this section.

◆ Instructions for Ordering Parts

When ordering parts, or when asking your authorized Cat lift truck dealer to have your lift truck repaired, be sure to provide the following items:

- Lift truck model
- Lift truck serial number
- Engine serial number



R00038

Unit: mm

	GP/DP40N				GP/DP45N				GP/ DP40N	GP/ DP45N
Triplex	3700 (145.7)	1950 (76.8)	4830 (190.2)	870 (34.3)	3750 (147.6)	2050 (80.7)	4830 (190.1)	970 (38.2)	4000 (157.5)	4500 (177.2)
	4000 (157.5)	2050 (80.7)	5130 (202.0)	970 (38.2)	4000 (157.5)	2170 (85.4)	5170 (203.5)	1090 (42.9)	4000 (157.5)	4500 (177.2)
	4360 (171.7)	2170 (85.4)	5490 (216.1)	1090 (42.9)	4360 (171.7)	2260 (89.0)	5440 (214.2)	1180 (46.5)	4000 (157.5)	4500 (177.2)
	4000 (157.5)	2285 (90.0)	5830 (229.5)	1200 (47.2)	4700 (185.0)	2320 (91.3)	5630 (221.7)	1240 (48.8)	3900 (153.5)	4500 (177.2)
	5050 (198.8)	2400 (94.5)	6180 (243.3)	1320 (52.0)	5050 (198.8)	2400 (94.5)	5880 (231.5)	1320 (52.0)	3800 (149.6)	4500 (177.2)
	5500 (216.5)	2550 (100.4)	6630 (261.0)	1470 (57.9)	5500 (216.5)	2500 (98.4)	6180 (243.3)	1420 (55.9)	3050 (120.1)	3600 (141.7)
	6000 (236.2)	2750 (108.3)	7130 (280.7)	1670 (65.7)	5500 (216.5)	2650 (104.3)	6630 (261.0)	1570 (61.8)	2400 (94.5)	2700 (106.3)
	7000 (275.6)	3150 (124.0)	8130 (320.1)	2070 (81.5)	6000 (236.2)	2850 (112.2)	7130 (280.7)	1770 (69.7)	—	—
	—	—	—	—	7000 (275.6)	3250 (128.0)	8130 (320.1)	2170 (85.4)	—	—

•Coolant Water

The manufacturer recommends the use of distilled water or deionized water to reduce the potential and severity of chemical insolubility.

- Hard water, or water with high levels of calcium and magnesium ions, encourages the formation of insoluble chemical compounds by combining with cooling system additives such as silicates and phosphates. The tendency of silicates and phosphates to precipitate out-of-solution increases with increasing water hardness.
- Hard water, or water with high levels of calcium and magnesium ions, encourages the formation of insoluble chemicals, especially after a number of heating and cooling cycles.

- Using water that meets the minimum acceptable water requirement may not prevent dropout of these chemical compounds completely but should control the dropout rate at acceptable levels.

Acceptable Water	
Water Content	Limits (ppm)
Chlorides (Cl)	50 ppm (maximum)
Sulfates (SO ₄)	50 ppm (maximum)
Total Hardness	80 mg/l
Total Solids	250 ppm (maximum)
pH	6.0 to 8.0

ppm = parts per million

•Antifreeze Solution

The manufacturer recommends that the coolant mix contain 50% commercially available automotive antifreeze, or equivalent, and acceptable water to maintain an adequate water pump cavitation temperature for efficient water pump performance.

Note:

- Do not add pure (100%) antifreeze to the cooling system. Add antifreeze mixed with distilled water using the same freeze protection ratio that is in your cooling system.
- Premix the coolant solution to provide protection to the lowest expected outside (ambient) temperature. Pure undiluted antifreeze will freeze at -23°C (-10°F).
- Use a greater concentration (above 50%) of commercially available automotive antifreeze only as needed for anticipated outside (ambient) temperatures.
- Do not exceed the coolant-to-water mix ratio recommendations provided with the commercially available automotive antifreezes.
- Most commercial antifreezes are formulated for gasoline engine applications and will, therefore, have high silicate content.

◆ Specifications (Standard Models)

Truck model			GP40N	GP45N	GP50CN	GP50N	GP55N
Item							
Alternator drive belt deflection when pushed with 98 N (10 kgf) [22 lbf] pressure, mm (in.)			11 to 13 (0.4 to 0.5)				
Spark plugs	Type - NGK		BPR4ES				
	Gap, mm (in.)		0.8 to 0.9 (0.032 to 0.035)				
Engine idling speed, rpm			650 to 700				
Steering wheel free play when measured at rim with engine idling, mm (in.)			15 to 30 (0.6 to 1.2)				
Inching pedal free play, mm (in.)			3 to 6 (0.1 to 0.2)				
Brake pedal free play, mm (in.)			5 (0.2)				
Tire size	Front	Single	8.25-15-14PR(1)	300-15-18PR(1)			
		Dual	7.50-16-12PR(1)				
	Rear		7.00-12-12PR(1)				7.00-12-14PR(1)
Tire pressure, kPa (kgf/cm ²) [psi] (Pneumatic)	Front single		800 (8.0) [115]				
	Front dual		700 (7.0) [100]				
	Rear		700 (7.0) [100]	850 (8.5) [120]		1000 (10.0) [145]	
Tightening torque for wheel nuts, N·m (kgf·m) [lbf·ft]		Front	600 ± 60 (61 ± 6) [443 ± 44.3]				
		Rear	377.3 (38) [278]				
Lift chain elongation limit, mm (in.) / 20 links			518 (20.4)		648 (25.5)		

Note:

The service data are subject to change without notice.

SERVICE DATA

Truck model			DP40N	DP45N	DP50CN	DP50N	DP55N
Item							
Alternator drive belt deflection when pushed with 98 N (10 kgf) [22 lbf] pressure, mm (in.)			11 to 13 (0.4 to 0.5)				
Spark plugs	Type - NGK		—				
	Gap, mm (in.)		—				
Engine idling speed, rpm			650 to 700				
Steering wheel free play when measured at rim with engine idling, mm (in.)			15 to 30 (0.6 to 1.2)				
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Tightening torque for wheel nuts, N·m (kgf·m) [lbf·ft]		Front	600 ± 60 (61 ± 6) [443 ± 44.3]				
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Lift chain elongation limit, mm (in.) / 20 links			518 (20.4)		648 (25.5)		

Note:

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◆ Refill Capacities

Truck model			GP40N	GP45N	GP50CN	GP50M	GP55N
Item							
Refill capacities (Approximate), liter (U.S. gal.)	Fuel tank		87 (23.0)	105 (27.7)			
	Engine cooling system - 0.65 liter (1.4 pt) reserve tank included		16 (4.2)				
	Engine oil	Crankcase	8.3 (2.2)				
		Oil filter	0.3 (0.08)				
		Total	8.6 (2.3)				
	Transmission		17 (4.5)				
	Hydraulic tank		72 (19.0)		81 (21.4)		
Battery electrolyte specific gravity			Consult battery manufacturer for specific gravity of your specific battery.				

Truck model			DP40N	DP45N	DP50CN	DP50M	DP55N
Item							
Refill capacities (Approximate), liter (U.S. gal.)	Fuel tank		87 (23.0)	105 (27.7)			
	Engine cooling system - 0.65 liter (1.4 pt) reserve tank included		12.9 (3.4)				
	Engine oil	Crankcase	11.0 (2.9)				
		Oil filter	1.0 (0.3)				
		Total	12.0 (3.2)				
	Transmission		17 (4.5)				
	Hydraulic tank		72 (19.0)		81 (21.4)		
Battery electrolyte specific gravity			Consult battery manufacturer for specific gravity of your specific battery.				

Full Version Available

Caterpillar GP40N1 Forklift Operator Manual (99730-6E110)

Caterpillar GP40N1 Forklift operator manual, covers safe operation, inspections, and scheduled maintenance. Searchable PDF download.

[VIEW THE FULL MANUAL](https://machinecatalogic.com/caterpillar-gp40n1-forklift-operator-manual-99730-6e110/)

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