CATERPILLAR®

Service Manual

Models
TL1055
TL1255

S/N TBM00100 & After
S/N TBN00100 & After

31200293

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Compartment or System	Type and Classification	Viscosities	Ambient Temperature Range			
			°F		°C	
			Min	Max	Min	Max
Fuel	#2 Diesel	Low Sulfur	Standard			
	Blend of #1 diesel and #2 diesel fuels ("winterized" #2)		Cold Weather			
Air Conditioning	Refrigerant R-134a	Tetrafluorethane				

Note: *Friction Modifier (CAT Brake Oil Additive P/N 197-0017) required for axle differentials, see Section b, "Capacities."*

b. Capacities

Engine Crankcase Oil

Capacity with Filter Change	
TL1055 Before S/N TBM01316 excluding TBM01298 TL1255 Before S/N TBN00799 excluding TBN00785	7 quarts (6,5 liters)
TL1055 S/N TBM01316 & After including TBM01298 TL1255 S/N TBN00799 & After including TBN00785	8 quarts (7,6 liters)

Fuel Tank

Capacity	38 gallons (144 liters)

Cooling System

System Capacity	
TL1055 Before S/N TBM01316 excluding TBM01298 TL1255 Before S/N TBN00799 excluding TBN00785	20.5 quarts (19,4 liters)
TL1055 S/N TBM01316 & After including TBM01298 TL1255 S/N TBN00799 & After including TBN00785	19 quarts (18,0 liters)
Overflow Bottle Capacity	
TL1055 Before S/N TBM01316 excluding TBM01298 TL1255 Before S/N TBN00799 excluding TBN00785	3 quarts (2,8 liters)

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7.11 TROUBLESHOOTING

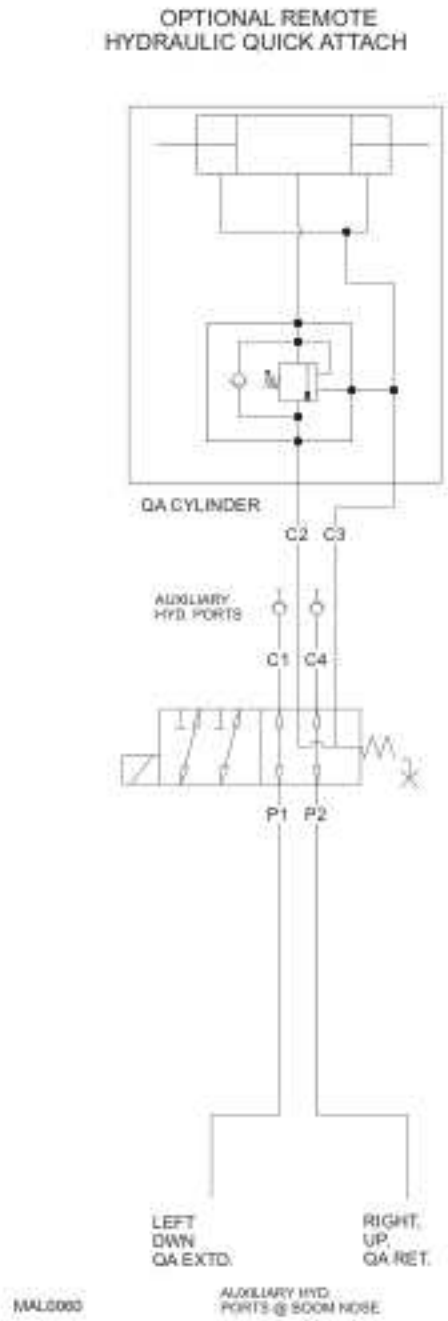
Trouble	Possible Causes (see key, below)
Low Cranking Power	1, 2, 3, 4
Will Not Start	5, 6, 7, 8, 9, 10, 12, 13, 14, 15, 16, 17, 18, 19, 20, 22, 31, 32, 33
Difficult Starting	5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 18, 19, 20, 21, 22, 24, 29, 31, 32, 33, 61, 63
Lack of Power	8, 9, 10, 11, 12, 13, 14, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 31, 32, 33, 61, 63
Misfiring	8, 9, 10, 12, 13, 14, 16, 18, 19, 20, 25, 26, 28, 29, 30, 32
Excessive Fuel Consumption	11, 13, 14, 16, 18, 19, 20, 22, 23, 24, 25, 27, 28, 29, 31, 32, 33, 63
Black Exhaust	11, 13, 14, 16, 18, 19, 20, 22, 24, 25, 27, 28, 29, 31, 32, 33, 61, 63
Blue/White Exhaust	4, 16, 18, 19, 20, 25, 27, 31, 33, 34, 35, 45, 56, 62
Low Oil Pressure	4, 36, 37, 38, 39, 40, 42, 43, 44, 58
Knocking	9, 14, 16, 18, 19, 22, 26, 28, 29, 31, 33, 35, 36, 45, 46, 59
Erratic Running	7, 8, 9, 10, 11, 12, 13, 14, 16, 20, 21, 23, 26, 28, 29, 30, 33, 35, 45, 59
Vibration	13, 14, 20, 23, 25, 26, 29, 30, 33, 45, 47, 48, 49
High Oil Pressure	4, 38, 41
Overheating	11, 13, 14, 16, 18, 19, 24, 25, 45, 50, 51, 52, 53, 54, 57
Excessive Crankcase Pressure	25, 31, 33, 34, 45, 55, 60
Poor Compression	11, 19, 25, 28, 29, 31, 32, 33, 34, 46, 59
Starts and Stops	10, 11, 12

Key to Possible Causes

1. Battery charge low
2. Bad electrical connection
3. Faulty starter motor
4. Incorrect grade of lubricating oil
5. Low cranking speed
6. Fuel tank empty
7. Faulty stop control operation
8. Fuel inlet restricted
9. Faulty fuel lift pump
10. Clogged fuel filter
11. Restricted air cleaner
12. Air in fuel system
13. Faulty fuel injection pump
14. Faulty fuel injectors or incorrect type
15. Incorrect use of cold start equipment
16. Faulty cold start equipment
17. Broken fuel injection pump drive
18. Incorrect fuel pump timing
19. Incorrect valve timing
20. Poor compression
21. Blocked fuel tank vent
22. Incorrect grade of fuel
23. Sticking throttle or restricted movement
24. Exhaust pipe restriction
25. Leaking cylinder head gasket
26. Overheating
27. Cold running
28. Incorrect tappet adjustment
29. Sticking valves
30. Incorrect high pressure pipes
31. Worn cylinder bores
32. Pitted valves and seats
33. Broken, worn or sticking piston ring(s)
34. Worn valve stems and guides
35. Restricted air cleaner
36. Worn or damaged bearings
37. Insufficient oil in sump
38. Inaccurate gauge
39. Oil pump worn
40. Pressure relief valve sticking open
41. Pressure relief valve sticking closed
42. Broken relief valve spring
43. Faulty suction pipe
44. Restricted oil filter
45. Piston seizure/pick up
46. Incorrect piston height
47. Damaged fan
48. Faulty engine mounting
49. Incorrectly aligned flywheel housing or incorrectly aligned flywheel
50. Faulty thermostat
51. Restriction in water jacket
52. Loose fan belt
53. Restricted radiator
54. Faulty water pump
55. Restricted breather pipe
56. Damaged valve stem oil deflectors (if fitted)
57. Coolant level too low
58. Blocked sump strainer
59. Broken valve spring
60. Exhauster or vacuum pipe leak
61. Turbo impeller damaged or dirty
62. Turbo lubricating oil seal leak
63. Induction system leaks

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8.4.3Hydraulic Schematic (Continued)



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