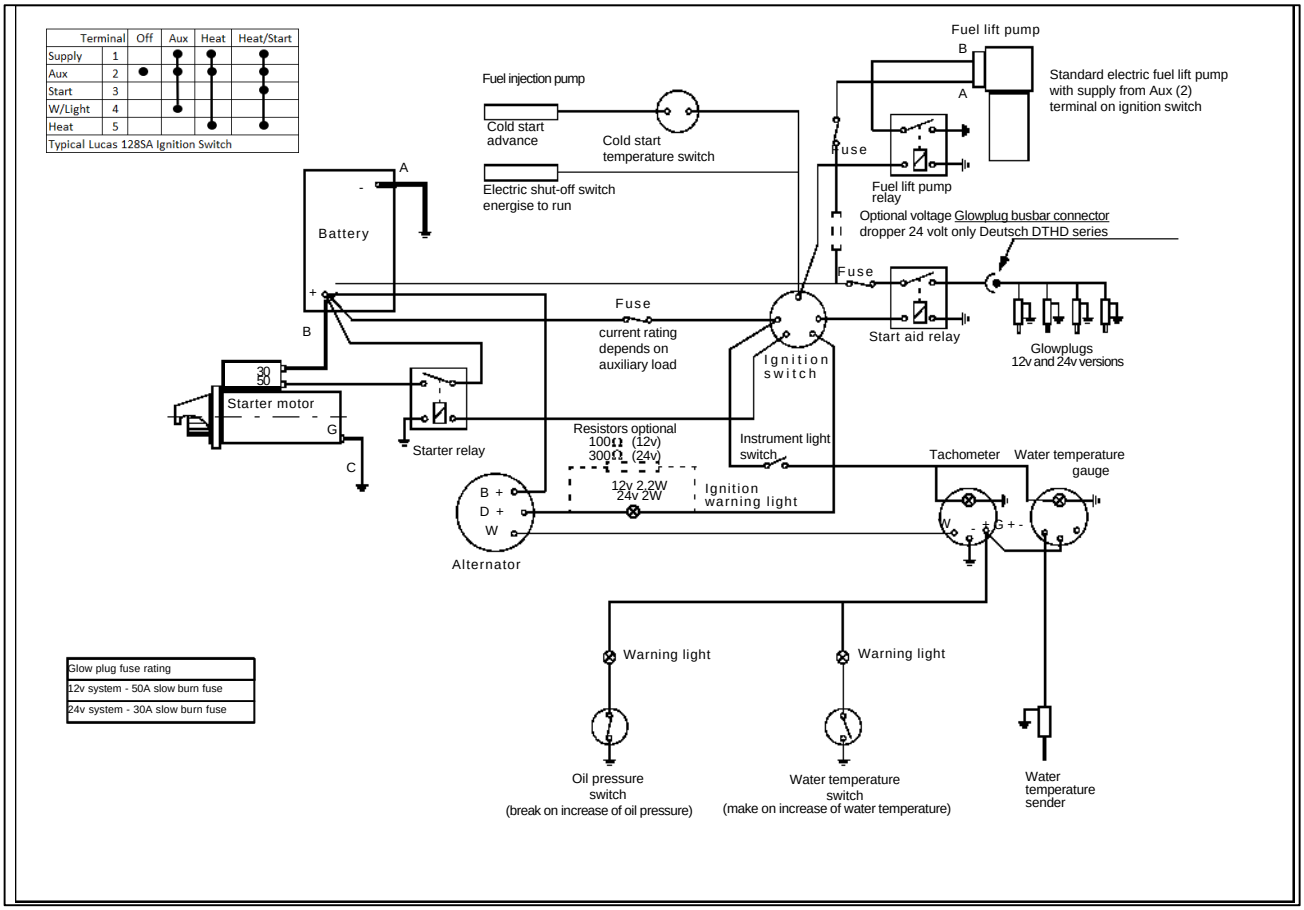
Electrical Wiring Diagram – Caterpillar Model 3054 S/No. Prefix 330 & 334



Starter motors

Model	Voltage	Solenoid current		Max volts drop in solenoid circuit
		Max pull-in amps	Max hold-in amps	
P95	12	60	15	0.5
R4.5	24	45	15	1.0

Note: Resistance of battery cables A, B, and C not to exceed 0.0017 ohm.

Alternators

Model	Rating	Min cable size for rating	Max circuit Volt drop
A115i	14V 65A	8,50 mm^2	0.5V
	14V 75A	16,00 mm^2	
	14V 85A	16,00 mm^2	
A127iR	14V 100A	25,00 mm^2	
	14V 120A	25,00 mm^2	
A127iM	28V 55A	8,50 mm^2	1.0V
	28V 75A	16,00 mm^2	

Suggested cable sizes

Cross-section area mm^2	Max current amps	Resistance m ohm / m
1,00	16.5	18,5
1,25	18.5	14,9
1,50	21.0	12
2,00	25.0	8,95
2,50	29.0	7,29
3,00	33.0	6,15
4,00	39.0	4,60
6,00	50.0	3,14
8,50	63.0	2,20
10,00	70.0	1,82
16,00	94.0	1,16
25,00	125.0	0,74

Notes:

- Ratings quoted for +30 °C (86 °F) above ambient in free air. For wires bundled in harness, derate values by 50% assuming all cables are carrying rated current at the same time
- Minimum cable size 1 mm^2 for mechanical strength rather than current capacity
- All cable runs to be kept as short as possible to minimise volt drop within a general limit of 0.5 volt (12V), and 1.0 volt (24V) unless specified otherwise.

Fuel injection pump data

Pump		12 Volt	24 Volt
Bosch EPVE	Electric shut-off	1.7 amps continuous	1 amp continuous
	Cold start device	3 amp switch-in 1.0 ±0.3 amp continuous	3 amp switch-in 1.0 ±0.3 amp continuous
Delphi DP210	Electric shut-off	0.75 amp continuous	0.4 amps continuous
	Cold start device	0.75 amp continuous	0.4 amp continuous

Cold start aids

Glowplugs (4 off) volts	Initial current amps	After 8 seconds amps	After 20 seconds amps	After 60 seconds amps
11.5	84	48	36	34
23.0	38	24	17	14

Electric fuel lift pump

Nominal system	Max allowable current draw		
	Peak start-up not to exceed	Sustained operating current not to exceed	Fuse rating
12 volt	19.0 amp	4.5 amp @ 14.2 volt	7.5 amp
24 volt	10.0 amp	3.0 amp @ 28.5 volt	5.0 amp