



SERVICE MANUAL

TRUCKS

L 385

Export Service Department

AKTIEBOLAGET

VOLVO

GÖTEBORG, SWEDEN

SPECIFICATIONS

System voltage	24-volt
BATTERIES	
Type, 12-volt	Tudor 6 E 6 SP, SAAJ E 13-12, Boliden 6 AB 6 C, Noack 219 or corresponding types.
Number of batteries	2
Ground	Negative terminal
Voltage	24-volt
Battery capacity, standard	114 amp. hours
Specific gravity of electrolyte when battery is fully charged	1.275-1.285
Specific gravity of electrolyte when battery should be recharged	1.230
STARTER MOTOR	
Type designation	CAV BS 5 24 L 52
System voltage	24-volt
Ground	Negative
Direction of rotation	Clockwise
Output	approx. 4 b.h.p.
Number of teeth on pinion	9
Carbon brushes, designation	CAV 5586/12 A
Number of brushes	4
Mechanical test values:	
Brush spring tension	1.2-1.5 kg (42-53 oz.)
Pinion axial clearance	0.5-2.5 mm (0.02"-0.100")
Pinion idling torque	0.069-0.138 kgm (6-12 lb.in.)
Overload protection, starts slipping at	11.0-13.8 kgm (80-100 lb.ft.)

Armature travel	25 mm (1")
Armature travel before shift lever releases	15 mm (37/64")
Armature return spring tension	3.5 kg (7.7 lb.)
Distance between pinion and ring gear teeth	3.2 mm (1/8")

Electrical test values:

No load test:

Test time (unloaded)	max. 15 seconds
22.8 volts and 50-55 amps..	4200-6000 r.p.m.

Load test:

16 volts and 330-350 amps..	1400-1600 r.p.m.
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Lock test:

9 volts and 650-670 amps..	4.5-4.7 kgm (33-34 lb.ft.)
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Starter Relay (Solenoid)

Test values:

Current consumption of coil	3 amps. at 24 volts
Cuts-in at	12-15 volts
Cuts-out at	2-3.5 volts

GENERATOR

Type	CAV D5 LFA 24/21
System voltage	24 volts
Ground	Negative
Direction of rotation	Clockwise
Carbon brushes, designation	CAV 5603/128
Number of brushes	4

Test values:

Output, continuous, at 1400 r.p.m. and 25-26 volts.....	max. 18 amps.
Brush spring tension	0.40-0.57 kg (14-24 oz.)
Field coil resistance	17.5 ohms
Generator as motor	2.5 amps. at 25 volts

Cold output:

Max. 1000 r.p.m.	24 volts 0 amps.
Max. 1400 r.p.m.	27 volts 18 amps.

Generator Regulator

Type	CAV RB 310
System voltage	24 volts
Ground	Negative
Regulator resistors	3 (60, 120 and 240 ohms)

Test values:

Cut-out relay:

Air gap between iron core and armature	0.25 mm (0.010")
Air gap between armature stop and contact spring	0.45 mm (0.018")
Adjust for cut-in at	27.0-27.5 volts
Adjust for cut-out at (broken circuit)	19.0-21.0 volts
Cut-out current	3.0-5.0 amps.

Voltage regulator:

Air gap between iron core and armature	0.38 mm (0.015")
Voltage setting range	28.0-28.5 volts

Current regulator:

Air gap between iron core and armature	0.38 mm (0.015")
Adjust to	19.5 \pm 1 amp.

FUSES

Standard:

Rated current	8 amps.
Number of fuses	12

With two-speed rear axle:

Rated current	8 amps.
Number of fuses	11

Rated current	25 amps.
Number of fuses	1

LAMP BULBS

	Number	Watts	Socket
Headlamps	2	50-50	BA 20 d
Parking lamps	2	5	BA 15 s
Stoplights and tail lamps	2	15	BA 15 s
	2	5	S 8
Instrument lighting, vacuum gauge	1	5	BA 15 s
Instrument lighting, speedometer and combined instrument	2	4	BA 9 s
Charging control lamp	1	3	BA 9 s

HEADLAMP BEAM ALIGNMENT

Carry out alignment with the truck standing unloaded 5 m (16 ft.) from a wall.

Vertical	150 mm (6") below the headlamp horizontal center line
Lateral	75 mm (3") outwards from the headlamp vertical center line.