

## 3.5 Electrical connections

**✓ Prerequisite**

The leads of the cables must have a cross-section of 0.75 mm<sup>2</sup>.

**! Important**

All 'Plus' lines must be protected:

- 8 A at an operating voltage of 12 V
- 5 A at an operating voltage of 24 V

**Additional information**

Information on connection values and the assignment of ZuE to the electrical connections of the tachographs can be found in *Section 9 Chapter 2 'Interfaces'*.

### 3.5.1 Tachograph 1318

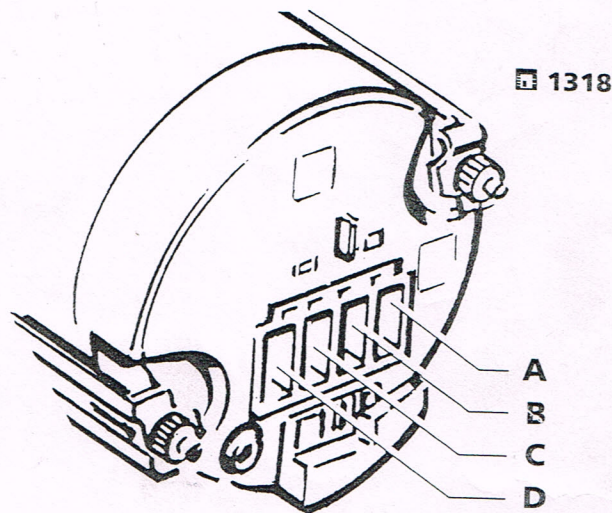
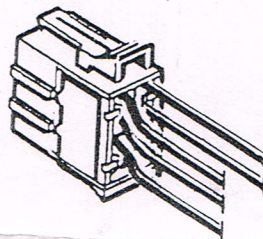


Fig. 3-16: 1318: Electrical connections

#### Voltage supply - Connector A



**A** beige

- |               |          |   |                           |
|---------------|----------|---|---------------------------|
| A 1 - red     | T. 30+   | Clock, 'v' measuring system                     | <i>CONST. CLOCK POWER</i> |
| A 2 - gry red | T. 58+   | Lighting  | <i>ILLUMINATION</i>       |
| A 3 - blk     | T. 15+   | Warning contacts, 'n' measuring system (or STB) | <i>(GND)</i>              |
| A 4 -         | T. 30+   | Lead for 'n' measuring system with STB-65       |                           |
| A 5 - brn blk | T. 31a-  | Clock, 'v' measuring system                     |                           |
| A 6 - brn     | T. 31-   | Lighting, additional stylus                     |                           |
| A 7           | not used |   |                           |
| A 8 -         |          | 'v' warning contact (external)                  |                           |

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**Special feature of the 1318 tachograph after applying voltage**

**Auto-diagnosis**

After the operating voltage has been applied the 1318 tachograph performs an auto-diagnosis if the diagram chart(s) have been inserted: the speed pointer and speed stylus briefly deflect to the upper scale value and return to zero.



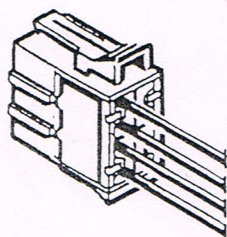
**1318 $\mu$ P**

1318 tachographs with  $\mu$ P technique must receive a minimum of 10 pulses from the pulse generator to perform the auto-diagnosis.

**Additional information**

The auto-diagnosis function of the 1318 tachographs must be checked. A detailed description of the test procedure and error diagnosis can be found in Chapter 4.5 'Checking auto-diagnosis of 1318 tachographs'.

**Speed + ZuE - Connector B**



- B 1 - blk (+) to pulse generator 2159...
- B 2 - brn (-) to pulse generator 2159...
- B 3 - blu lht from pulse generator 2159...
- B 4 - wht from pulse generator 2159...
- B 5 - Control input Minus (discontinued)
- B 6 - Minus (discontinued)
- B 7 - v pulse
- B 8 - 4 imp/m

**B** yellow

2159 pulse generator

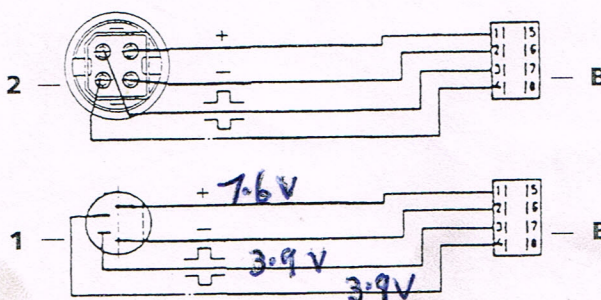


Fig. 3-17: Connection diagram, 2159 pulse generator for 1318 tachograph

1 Pulse generator 2159-01...

2 Pulse generator 2159-04/ -05 Volvo



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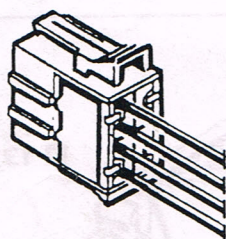
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**Speed + ZuE - Connector B**



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- B 2 - brn (-) to pulse generator 2159...
- B 3 - blu lht from pulse generator 2159...
- B 4 - wht from pulse generator 2159...
- B 5 - Control input Minus (discontinued)
- B 6 - Minus (discontinued)
- B 7 - v pulse — C 3 OUTPUT
- B 8 - 4 imp/m

**B** yellow

**2159 pulse generator**

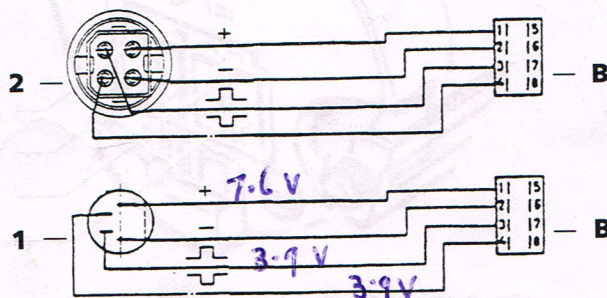


Fig. 3-17: Connection diagram, 2159 pulse generator for 1318 tachograph

- 1 Pulse generator 2159-01...
- 2 Pulse generator 2159-04/ -05 Volvo



**3.5.3 Tachograph types 1310, 1314**

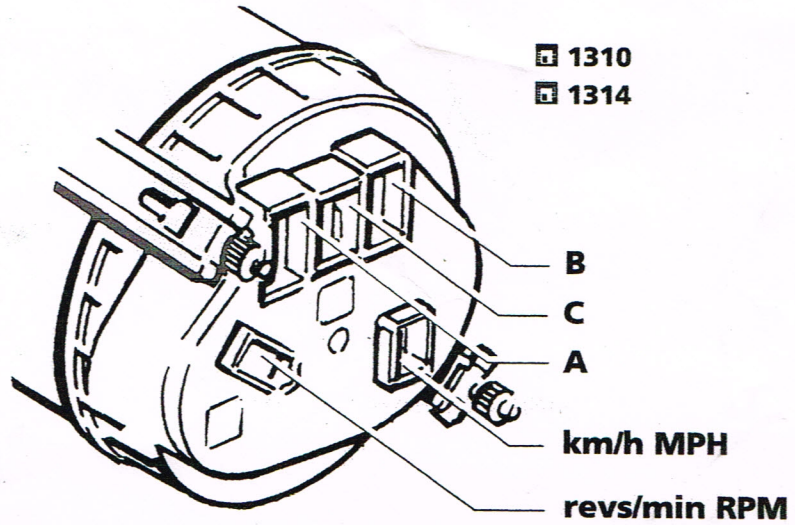
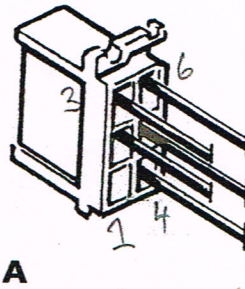


Fig. 3-21: 1310/ 1314: Electrical connections

**Voltage supply - Connector A**



A 1 not used

A 2 - blk T. 30+

A 3 - gry red T. 58+

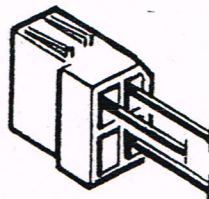
A 4 - grn blk T. 15+

A 5 - brn blk T. 31a-

A 6 - brn T. 31-

Clock, WT motor *Batt constant.*  
 Lighting *Switched tve.*  
 Warning lamp, 'v' measuring system *Ign.*  
 Clock, 'v' measuring system, WT motor *GND*  
 Lighting, warning lamp *GND.*

**Speed - Connector km/h MPH**



1 not used

2 - blk (+) to pulse generators 2155/ 2157

3 - brn (-) to pulse generators 2155/ 2157

4 - blu lht from pulse generators 2155/ 2157

**km/h MPH**

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