2. Generator

The generator has a built-in regulator which provides diagnostic functions in addition to a voltage regulating function as follows:

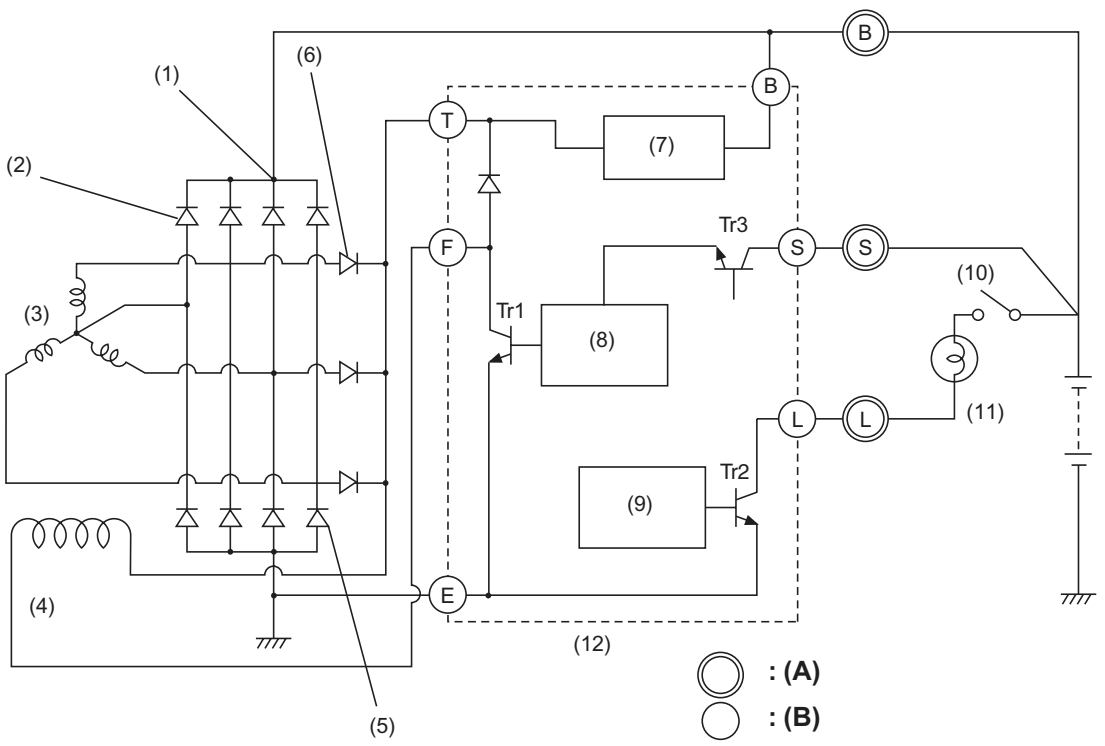
1) Voltage regulation

The on-off operation of transistor Tr_1 connects and disconnects the field current circuit, providing a constant level of output voltage.

2) Diagnosis warning

When any of the following problems occur, the charge lamp illuminates.

a. No voltage generation
   Brush wear exceeds specified wear limits, field coil circuit is broken, etc.
b. Excessive output
   Output voltage is greater than 16 volts (approx.)
c. Terminal B disconnection
   Harness is disconnected from alternator terminal B.
d. Terminal S disconnection
   Harness is disconnected from alternator terminal S. In this case, voltage is slightly greater than specified regulated voltage; however, voltage regulation is still controlled and the battery is prevented from becoming overcharged.



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(1) Positive side diodes (3 pcs.)
(2) Additional diodes (2 pcs.)
(3) Stator coil
(4) Field coil
(5) Negative side diodes (3 pcs.)
(6) Trio diodes (3 pcs.)
(7) Energizing circuit
(8) Constant voltage circuit
(9) Diagnostic and warning circuit
(10) Ignition switch
(11) Charge light
(12) IC regulator
(A) Alternator terminal
(B) Regulator terminal