

























| change to |  ECE (A) | Year | 77 - 79 | 76 - 79 | 77 - 86 | 79 - 86 | 76 - 82 | 79 - 86 |
|---|---|---------|---|---------|--------------------------------|---------------|---------------|---------------|
| |  US Models | Version | ECE - Models with Mechanical transmission | | | | | |
| |  Japanese Models | Model | 728 | 730 | 728 i | 732 i | 733 i | 735 i |
| Technical Data | - Electrical System | Unit | | | | | | |
| 12 11 ... Distributor | | | | | | | | |
| Make | | | Bosch | | | | | |
| Code No. | | | 0 231 309 006 | | - | | | |
| With indicator sensor (breakerless) | | | | | | | | |
| Caution! Stop engine and switch off ignition für any work on the breakerless transistorized coil ignition system. | | | | | | | | |
| High Voltage - Danger! | | | - | - | 0 237 302 019 0 237 302 029 | DME | 0 237 302 013 | 0 237 302 008 |
| > 9 / 80 | | | - | - | - | - | DME | |
| > 9 / 84 | | | - | - | 0 237 304 028 | - | - | - |
|  | | | - | - | 0 237 302 013 | 0 237 302 013 | - | - |
|  | > 9 / 81 | | - | - | 0 237 302 030 | - | - | - |
|  | > 9 / 84 | | - | - | 0 237 304 029 | - | - | - |
| Coil resistance | | kΩ | 600 ± 10% | | | | | |
| > 4 / 81 | | kΩ | - | - | 1100 ± 100 | - | - | - |
| Clearance between stator and rotor teeth | | | 0,3 ... 0,7 | | | | | |
| 12 11 ... Distributor Rotor | | | | | | | | |
| Shield resistor | | kΩ | 5 | | | | | |
| | | | 5 +20% -10% | | | | | |
| | with Transistor Coil Ignition (TCI) | kΩ | 1 ± 20% | | | | | |
| | with Digital Motor Elektronik (DME) | kΩ | 1 ± 20% | | | | | |
| Crankshaft cut-out speed | | 1/min | 6600 ± 150 | | | | | |
| Camshaft cut-out speed | | 1/min | 3300 ± 75 | | | | | |
| 12 11 ... Resistors in Secondary Circuit | | | | | | | | |
| Shielded plug | | kΩ | 1 ± 20% | | | | | |
| Angled plug | | kΩ | 1 ± 20% | | | | | |
| Spark plug connector | | kΩ | 1 ± 20% | | | | | |
| 12 11 ... Position Transmitter | | | | | | | | |
| Make | | | Bosch | | | | | |
| Code No. | | | 0 335 541 002 | | | | | |
| Coil resistance | | Ω | 80 ± 10 | | | | | |
| | at | °C | 25 | | | | | |
| Insulation resistance | | kΩ | = 60 | | | | | |




| change to |  ECE (A) | Year | 77 - 79 | 76 - 79 | 77 - 86 | 79 - 86 | 76 - 82 | 79 - 86 |
|---|--|---|------------------------------------|---|---------------|---------------|---------------|---------------|
| | |  US Models | Version | ECE - Models with Mechanical transmission | | | | |
| |  Japanese Models | Model | 728 | 730 | 728 i | 732 i | 733 i | 735 i |
| Technical Data | - Electrical System | Unit | | | | | | |
| 12 12 ... Spark Plugs | | | | | | | | |
| Bosch Type | | | W 8 DC | | | | | |
| with catalytic converter | | | W 9 LC | | | | | |
| Electrode gap | mm | 0,7 + 0,1 | | | | | | |
| 12 13 ... Ignition Coil | | | | | | | | |
| Make | | | Bosch | | | | | |
| operate this ignition coil only in conjunction with a 0,9 ± 0,05 Ω resistor (resistor wire in engine's wire harness) | | | - | 0 221 119 017 | 0 221 122 010 | - | - | - |
| | | | - | - | - | 0 221 122 032 | 0 221 122 010 | |
| > 9 / 80 | | | - | - | - | - | - | 0 221 122 032 |
| > 4 / 81 | | | - | - | 0 221 122 319 | - | - | - |
| > 1 / 84 | | | - | - | - | - | - | 0 221 118 335 |
| | | | Overview of types of Ignition coil | | | | | |
| Color of label | | | 0 221 119 017 | 0 221 122 010 | 0 221 122 032 | 0 221 122 319 | 0 221 118 335 | |
| | | | - | yellow | light blue | light grey | yellow | |
| Primary coil resistance | Ω | 1,7 ... 2,1 | 0,4 | 0,5 | 0,82 | 0,5 | | |
| Sekundary coil resistance | kΩ | - | 9,5 | 6,0 | 8,25 | 6,0 | | |
| Primary inductance | mH | - | 3,0 | 3,7 | 5,6 | 3,7 | | |
| Secondary inductance | H | - | 60 | 31 | 31 | 31 | | |
| 12 13 ... Ballast Resistore for Ignition Coil | | | | | | | | |
| Make | | | Bosch | | | | | |
| Rated resistance | Ω | - | - | - | - | 0,4 and 0,6 | - | |
| 12 14 ... Control Unit for Transistor Coil Ignition (TCI) | | | | | | | | |
| Code No. | | | 0 227 100 025 | - | 0 227 100 008 | - | 0 227 100 008 | 0 227 100 025 |
| > Model ' 80 | | | - | - | - | - | 0 227 100 025 | - |
| > 4 / 81 | | | 0 227 100 111 | - | - | - | - | - |
| DME | | | - | - | - | x | - | > 9.80 |
| DME (Digitale Motor Electronics) | | | see Group 13 61 ... | | | | | |
| 12 14 ... Control Unit for TCI - R | | | | | | | | |
| Code No. | | | - | - | 0 227 920 001 | - | - | - |
| 12 14 ... Pulse Transmitters (Reference Mark and Speed Sensors) | | | | | | | | |
| Resistance of coil | Ω | 960 ± 10% | | | | | | |
| Insulating resistance | kΩ | = 100 | | | | | | |




| change to |  ECE (A) | Year | 77 - 79 | 76 - 79 | 77 - 86 | 79 - 86 | 76 - 82 | 79 - 86 |
|---|--|---------|---|---------------|---------------|---------|---------------|---------|
| |  US Models | Version | ECE - Models with Mechanical transmission | | | | | |
| |  Japanese Models | Model | 728 | 730 | 728 i | 732 i | 733 i | 735 i |
| Technical Data | - Electrical System | Unit | | | | | | |
| 12 31 ... Alternator | | | | | | | | |
| Make | | | Bosch | | | | | |
| Code | | | 0 120 489 650 | 0 120 489 650 | 0 120 489 619 | - | 0 120 489 619 | - |
| Voltage | | V | 14 | | | | | |
| Max. Current | - max. | A | 55 | 55 | 65 / 80 | | | |
| Max. Power | - max. | A | 770 | 770 | 910 / 1120 | | | |
| Speed | - max. | 1/min | 1500 | | | | | |
| 12 31 ... Shielded Capacitor | | | | | | | | |
| Capacitance | | µF | 2,2 + 20% | | | | | |
| 12 31 ... Drive Belt | | | | | | | | |
| Narrow belt | (open flank) | | 12,5 x 1055 | | | | | |
| | or (< model ' 80) | | 12,5 x 1060 LA | | | | | |
| 12 32 ... Voltage Regulator | | | | | | | | |
| Code No. | | | EL 14 V 4 B / C | | | | | |
| | < model ' 80 | | EE 14 V 3 | | | | | |
| Regulating Voltage at 1500 rpm engine speed | | V | 13,5 ... 14,7 | | | | | |
| 12 41 ... Starter | | | | | | | | |
| Make | | | Bosch | | | | | |
| Direction of rotation | | | clockwise | | | | | |
| Armature axial play | | mm | 0,1 ... 0,2 | | | | | |
| | < model ' 80 | mm | 0,01 ... 0,3 | | | | | |
| Carbon brush length | min. | mm | 13 | | | | | |
| Operating voltage | | V | 12 | | | | | |
| Testing voltage | | V | 13 + 0,2 | | | | | |
| Nominal rating | | kW | 1,0 | 1,3 | | 1,5 | 1,3 | 1,5 |
| | > Model ' 80 | kW | - | - | - | 1,5 | | - |
| | > 11 / 82 | kW | - | - | 1,5 | - | - | - |
| No. of pinion teeth | | | 9 | | | | | |



| change to |  ECE (A) | Year | 77 - 79 | 76 - 79 | 77 - 86 | 79 - 86 | 76 - 82 | 79 - 86 |
|---|---|-------------|---|---------|---------|---------|---------|---------|
| |  US Models | Version | ECE - Models with Mechanical transmission | | | | | |
| |  Japanese Models | Model | 728 | 730 | 728 i | 732 i | 733 i | 735 i |
| Technical Data - Electrical System | | Unit | | | | | | |
| 12 41 ... Solenoid Switch | | | | | | | | |
| Power consumption on term. 50 (with rated voltage) | | | | | | | | |
| Activating and holding coil | A | 35 | 46 | 40 | | | | |
| < model ' 80 | A | - | - | 46 | - | 46 | - | |
| Holding coil | A | 6 | 11 | 7,5 | | | | |
| < model ' 80 | A | - | - | 11 | - | 11 | - | |
| 12 61 ... Oil Pressure Switch | | | | | | | | |
| Switching-on pressure | bar | 0,2 ... 0,5 | | | | | | |
| 12 61 ... Dynamic Oil Level Switch | | | | | | | | |
| Resistance (measured on disconnected plug against ground) | | | | | | | | |
| Dynamic on conn. 2 (White wire) | | | | | | | | |
| Level correct | kO | 1 ± 1% | | | | | | |
| Level too low | O | 0 ... 0,2 | | | | | | |
| Static on conn. 1 (blue violet wire) | | | | | | | | |
| Level correct | O | 0 ... 0,2 | | | | | | |
| Level too low | O | 8 | | | | | | |


| change to |  ECE | Year | 77 - 79 | 76 - 79 | 77 - 86 | 79 - 86 | 76 - 82 | 79 - 86 | 79 - 86 | |
|---|--|---------|--|---------|---------------|---------------|---------------|---------------|---------------------------|---------|
| |  US Models | Version | ECE - Models with Automatic transmission | | | | | | | |
| |  Japanese Models | Model | 728 A | 730 A | 728 i A | 732 i A | 733 i A | 735 i A | 745 i A | |
| Technical Data | - Electrical System | Unit | | | | | | | | |
| 12 11 ... Distributor | | | | | | | | | | |
| Make | | | Bosch | | | | | | | |
| Code No. | | | 0 231 309 006 | | - | | | | | |
| With indicator sensor (breakerless) | | | | | | | | | | |
| Caution! Stop engine and switch off ignition für any work on the breakerless transistorized coil ignition system. | | | | | | | | | | |
| High Voltage - Danger! | | | - | - | 0 237 302 019 | DME | 0 237 302 013 | 0 237 302 008 | 0 237 304 017 | |
| | | | | | 0 237 302 029 | | | | | |
| > 9 / 80 | | kΩ | - | - | - | - | DME | | - | |
| > 9 / 81 | | kΩ | - | - | - | - | - | - | 0 237 306 047 | |
| > 5 / 83 | | kΩ | - | - | - | - | - | - | DME | |
| > 9 / 84 | | kΩ | - | - | 0 237 304 028 | - | - | - | - | |
|  | | kΩ | - | - | 0 237 302 013 | 0 237 302 013 | - | - | - | |
|  | > 9 / 81 | kΩ | - | - | 0 237 302 030 | - | - | - | - | |
|  | > 9 / 84 | kΩ | - | - | 0 237 304 029 | - | - | - | - | |
| Coil resistance | | kΩ | 600 ± 10% | | | | | | | |
| > 4 / 81 | | kΩ | - | - | 1100 ± 100 | - | - | - | - | |
| Clearance between stator and rotor teeth | | | 0,3 ... 0,7 | | | | | | | |
| 12 11 ... Distributor Rotor | | | | | | | | | | |
| Shield resistor | | kΩ | 5 | | | | | | | |
| | | | 5 +20% | | | | | | | |
| with Transistor Coil Ignition (TCI) | | kΩ | -10% | | | | | | | |
| with Digital Motor Elektronik (DME) | | kΩ | 1 ± 20% | | | | | | 5 ^{+30%} -10% | |
| Crankshaft cut-out speed | | 1/min | 6600 ± 150 | | | | | | | |
| Camshaft cut-out speed | | 1/min | 3300 ± 75 | | | | | | | |
| 12 11 ... Resistors in Secondary Circuit | | | | | | | | | | |
| Shielded plug | | kΩ | 1 ± 20% | | | | | | | |
| Angled plug | | kΩ | 1 ± 20% | | | | | | | |
| Spark plug connector | | kΩ | 1 ± 20% | | | | | | | |
| > 5 / 83 | | kΩ | - | | | | | | | 5 ± 20% |



| change to |  ECE | Year | 77 - 79 | 76 - 79 | 77 - 86 | 79 - 86 | 76 - 82 | 79 - 86 | 79 - 86 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---------------|---|---------------|---------------|---------------|---------------|---------------|---------------|--|---------------|---------------|---------------|---------------|---------------|----------------|---|--------|------------|------------|--------|-------------------------|-------------|-----|-----|------|-----|---------------------------|---|-----|-----|------|-----|--------------------|---|-----|-----|-----|-----|----------------------|---|----|----|----|----|
| |  US Models | Version | ECE - Models with Automatic transmission | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| |  Japanese Models | Model | 728 A | 730 A | 728 i A | 732 i A | 733 i A | 735 i A | 745 i A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Technical Data | - Electrical System | Unit | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 11 ... Position Transmitter | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Make | | | Bosch | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Code No. | | | 0 335 541 002 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Coil resistance | | Ω | 80 ± 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | gemessen bei | °C | 25 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Insulation resistance | | kΩ | = 60 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 12 ... Spark Plugs | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bosch Type | | | W 8 DC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | with catalytic converter | | - | - | - | - | - | W 9 LC | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Electrode gap | | mm | 0,7 + 0,1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 13 ... Ignition Coil | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Make | | | Bosch | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| operate this ignition coil only in conjunction with a 0,9 ± 0,05 Ω resistor (resistor wire in engine's wire harness) | | | - | 0 221 119 017 | 0 221 122 010 | - | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | - | - | - | 0 221 122 032 | 0 221 122 010 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | > 9 / 80 | | - | - | - | - | - | 0 221 122 032 | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | > 4 / 81 | | - | - | 0 221 122 319 | - | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | > 5 / 83 | | - | - | - | - | - | - | 0 221 118 335 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | > 1 / 84 | | - | - | - | - | - | 0 221 118 335 | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | <p style="text-align: center;">Overview of types of Ignition coil</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>0 221 119 017</th> <th>0 221 122 010</th> <th>0 221 122 032</th> <th>0 221 122 319</th> <th>0 221 118 335</th> </tr> </thead> <tbody> <tr> <td>Color of label</td> <td>-</td> <td>yellow</td> <td>light blue</td> <td>light grey</td> <td>yellow</td> </tr> <tr> <td>Primary coil resistance</td> <td>1,7 ... 2,1</td> <td>0,4</td> <td>0,5</td> <td>0,82</td> <td>0,5</td> </tr> <tr> <td>Sekundary coil resistance</td> <td>-</td> <td>9,5</td> <td>6,0</td> <td>8,25</td> <td>6,0</td> </tr> <tr> <td>Primary inductance</td> <td>-</td> <td>3,0</td> <td>3,7</td> <td>5,6</td> <td>3,7</td> </tr> <tr> <td>Secondary inductance</td> <td>-</td> <td>60</td> <td>31</td> <td>31</td> <td>31</td> </tr> </tbody> </table> | | | | | | | | 0 221 119 017 | 0 221 122 010 | 0 221 122 032 | 0 221 122 319 | 0 221 118 335 | Color of label | - | yellow | light blue | light grey | yellow | Primary coil resistance | 1,7 ... 2,1 | 0,4 | 0,5 | 0,82 | 0,5 | Sekundary coil resistance | - | 9,5 | 6,0 | 8,25 | 6,0 | Primary inductance | - | 3,0 | 3,7 | 5,6 | 3,7 | Secondary inductance | - | 60 | 31 | 31 | 31 |
| | 0 221 119 017 | 0 221 122 010 | 0 221 122 032 | 0 221 122 319 | 0 221 118 335 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Color of label | - | yellow | light blue | light grey | yellow | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Primary coil resistance | 1,7 ... 2,1 | 0,4 | 0,5 | 0,82 | 0,5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sekundary coil resistance | - | 9,5 | 6,0 | 8,25 | 6,0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Primary inductance | - | 3,0 | 3,7 | 5,6 | 3,7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Secondary inductance | - | 60 | 31 | 31 | 31 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 13 ... Ballast Resistore for Ignition Coil | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Make | | | Bosch | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rated resistance | | Ω | - | - | - | - | 0,4 and 0,6 | - | 0,4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |




| change to |  ECE  US Models  Japanese Models | Year | ECE - Models with Automatic transmission | | | | | | |
|--|---|---------------------|--|---------------|---------------|---------|---------------|---------------|---------------|
| | | Version | 77 - 79 | 76 - 79 | 77 - 86 | 79 - 86 | 76 - 82 | 79 - 86 | 79 - 86 |
| | | Model | 728 A | 730 A | 728 i A | 732 i A | 733 i A | 735 i A | 745 i A |
| Technical Data | | - Electrical System | Unit | | | | | | |
| 12 14 ... Control Unit for Transistor Coil Ignition (TCI) | | | | | | | | | |
| Code No. | | | 0 227 100 025 | - | 0 227 100 008 | - | 0 227 100 008 | 0 227 100 025 | |
| > Modell ' 80 | | | - | - | - | - | 0 227 100 025 | - | - |
| > 4 / 81 | | | 0 227 100 111 | - | - | - | - | - | - |
| DME | | | - | - | - | X | - | > 9.80 | > 5.83 |
| DME (Digitale Motor Electronics) | | | see Group 13 61 ... | | | | | | |
| 12 14 ... Control Unit for TCI - R | | | | | | | | | |
| Code No. | | | - | - | 0 227 920 001 | - | - | - | 0 227 920 002 |
| 12 14 ... Control Unit for Knock Control | | | | | | | | | |
| Code No. | | | | | | | | | 0 261 201 003 |
| Color Code | | | | | | | | | white |
| 12 14 ... Knock Sensors | | | | | | | | | |
| Code No | | | | | | | | | 0 261 231 001 |
| Resistance at 20°C | | kΩ | | | | | | | 280 ... 310 |
| 12 14 ... Pulse Transmitters (Reference Mark and Speed Sensors) | | | | | | | | | |
| Resistance of coil | | Ω | | | | | | | 960 ± 10% |
| Insulating resistance | | kΩ | | | | | | | = 100 |
| 12 14 ... Cylinder Identifying Sensor | | | | | | | | | |
| Coil resistance at 20°C | | Ω | | | | | | | 0,8 ... 1,1 |
| 12 31 ... Alternator | | | | | | | | | |
| Make | | | Bosch | | | | | | |
| Code | | | 0 120 489 650 | 0 120 489 650 | 0 120 489 619 | - | 0 120 489 619 | - | |
| Voltage | | V | 14 | | | | | | |
| Max. Current | - max. | A | 55 | 55 | 65 / 80 | | | | 80 |
| Max. Power | - max. | A | 770 | 770 | 910 / 1120 | | | | 1120 |
| Speed | - max. | 1/min | 1500 | | | | | | |
| 12 31 ... Shielded Capacitor | | | | | | | | | |
| Capacitance | | μF | 2,2 + 20% | | | | | | |
| 12 31 ... Drive Belt | | | | | | | | | |
| Narrow belt | (open flank) | | 12,5 x 1055 | | | | | | |
| | or (< model ' 80) | | 12,5 x 1060 LA | | | | | | |
| 12 32 ... Voltage Regulator | | | | | | | | | |
| Code No. | | | EL 14 V 4 B / C | | | | | | |
| | < model ' 80 | | EE 14 V 3 | | | | | | |
| Regulating Voltage at 1500 rpm engine speed | | V | 13,5 ... 14,7 | | | | | | |




| change to |  ECE  US Models  Japanese Models | Year | ECE - Models with Automatic transmission | | | | | | |
|---|---|---------------------|--|---------|---------|---------|---------|---------|---------|
| | | Version | 77 - 79 | 76 - 79 | 77 - 86 | 79 - 86 | 76 - 82 | 79 - 86 | 79 - 86 |
| | | Model | 728 A | 730 A | 728 i A | 732 i A | 733 i A | 735 i A | 745 i A |
| Technical Data | | - Electrical System | Unit | | | | | | |
| 12 41 ... Starter | | | | | | | | | |
| Make | | | Bosch | | | | | | |
| Direction of rotation | | | clockwise | | | | | | |
| Armature axial play | | mm | 0,1 ... 0,2 | | | | | | |
| < Model ' 80 | | mm | 0,01 ... 0,3 | | | | | | |
| Carbon brush length | | min. mm | 13 | | | | | | |
| Operating voltage | | V | 12 | | | | | | |
| Testing voltage | | V | 13 + 0,2 | | | | | | |
| Nominal rating | | kW | 1,0 | 1,3 | | 1,5 | 1,3 | 1,5 | |
| > Modell ' 80 | | kW | - | - | - | 1,5 | | - | - |
| > 11 / 82 | | kW | - | - | 1,5 | - | - | - | - |
| No. of pinion teeth | | | 9 | | | | | | |
| 12 41 ... Solenoid Switch | | | | | | | | | |
| Power consumption on term. 50 (with rated voltage) | | | | | | | | | |
| Activating and holding coil | | A | 35 | 46 | 40 | | | | |
| < model ' 80 | | A | - | - | 46 | - | 46 | - | - |
| Holding coil | | A | 6 | 11 | 7,5 | | | | |
| < model ' 80 | | A | - | - | 11 | - | 11 | - | - |
| 12 61 ... Oil Pressure Switch | | | | | | | | | |
| Switching-on pressure | | bar | 0,2 ... 0,5 | | | | | | |
| 12 61 ... Dynamic Oil Level Switch | | | | | | | | | |
| Resistance (measured on disconnected plug against ground) | | | | | | | | | |
| Dynamic on conn. 2 (White wire) | | | | | | | | | |
| Level correct | | kO | 1 ± 1% | | | | | | |
| Level too low | | O | 0 ... 0,2 | | | | | | |
| Static on conn. 1 (blue violet wire) | | | | | | | | | |
| Level correct | | O | 0 ... 0,2 | | | | | | |
| Level too low | | O | 8 | | | | | | |




| change to |  | ECE | Year | 77 - 84 | 77 - 84 | 84 - 86 | 84 - 86 |
|---|--|---------------------|---------|---------------|---------|---------------|---------|
| | | ECE (A) | Version | US Models | | | |
| |  | Japanese Models | Model | 733 i | 733 i A | 735 i | 735 i A |
| Technical Data | | - Electrical System | Unit | | | | |
| 12 11 ... Distributor | | | | | | | |
| Make | | | | Bosch | | | |
| With indicator sensor (breakerless) | | | | | | | |
| Caution! Stop engine and switch off ignition für any work on the breakerless transistorized coil ignition system. | | | | | | | |
| High Voltage - Danger! | | | | | | | |
| > 9 / 80 | | | | 0 237 302 013 | | 0 237 302 008 | |
| | | | | DME | | | |
| Coil resistance | | | kΩ | 600 ± 10% | | | |
| Clearance between stator and rotor teeth | | | | 0,3 ... 0,7 | | | |
| 12 11 ... Distributor Rotor | | | | | | | |
| Shield resistor | | | kΩ | 5 | | | |
| | | | | 5 +20% | | | |
| with Transistor Coil Ignition (TCI) | | | kΩ | -10% | | | |
| with Digital Motor Elektronik (DME) | | | kΩ | 1 ± 20% | | | |
| Crankshaft cut-out speed | | | 1/min | 6600 ± 150 | | | |
| Camshaft cut-out speed | | | 1/min | 3300 ± 75 | | | |
| 12 11 ... Resistors in SecondaryCircuit | | | | | | | |
| Shielded plug | | | kΩ | 1 ± 20% | | | |
| Angled plug | | | kΩ | 1 ± 20% | | | |
| Spark plug connector | | | kΩ | 1 ± 20% | | | |
| 12 11 ... Position Transmitter | | | | | | | |
| Make | | | | Bosch | | | |
| Code No. | | | | 0 335 541 002 | | | |
| Coil resistance | | | Ω | 80 ± 10 | | | |
| at | | | °C | 25 | | | |
| Insulation resistance | | | kΩ | = 60 | | | |
| 12 12 ... Spark Plugs | | | | | | | |
| Bosch Type | | | | W 8 DC | | | |
| with catalytic converter | | | | - | | W 9 LC | |
| Electrode gap | | | mm | 0,7 + 0,1 | | | |

| change to |  | ECE | Year | 77 - 84 | 77 - 84 | 84 - 86 | 84 - 86 | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---------------------|---------------|---|---------|---------------|---------|--|---------------|---------------|---------------|----------------|--------|------------|--------|-------------------------|-----|-----|-----|---------------------------|-----|-----|-----|--------------------|-----|-----|-----|----------------------|----|----|----|
| | | ECE (A) | Version | US Models | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Japanese Models | Model | 733 i | 733 i A | 735 i | 735 i A | | | | | | | | | | | | | | | | | | | | | | | | |
| Technical Data | | - Electrical System | | Unit | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 13 ... Ignition Coil | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Make | | | | Bosch | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Code No. | | | | 0 221 122 010 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| > 9 / 80 | | | | - | | 0 221 122 032 | | | | | | | | | | | | | | | | | | | | | | | | | |
| > 1 / 84 | | | | - | | 0 221 118 335 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | <p style="text-align: center;">Overview of types of Ignition coil</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>0 221 122 010</th> <th>0 221 122 032</th> <th>0 221 118 335</th> </tr> </thead> <tbody> <tr> <td>Color of label</td> <td>yellow</td> <td>light blue</td> <td>yellow</td> </tr> <tr> <td>Primary coil resistance</td> <td>0,4</td> <td>0,5</td> <td>0,5</td> </tr> <tr> <td>Sekundary coil resistance</td> <td>9,5</td> <td>6,0</td> <td>6,0</td> </tr> <tr> <td>Primary inductance</td> <td>3,0</td> <td>3,7</td> <td>3,7</td> </tr> <tr> <td>Secondary inductance</td> <td>60</td> <td>31</td> <td>31</td> </tr> </tbody> </table> | | | | | 0 221 122 010 | 0 221 122 032 | 0 221 118 335 | Color of label | yellow | light blue | yellow | Primary coil resistance | 0,4 | 0,5 | 0,5 | Sekundary coil resistance | 9,5 | 6,0 | 6,0 | Primary inductance | 3,0 | 3,7 | 3,7 | Secondary inductance | 60 | 31 | 31 |
| | 0 221 122 010 | 0 221 122 032 | 0 221 118 335 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Color of label | yellow | light blue | yellow | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Primary coil resistance | 0,4 | 0,5 | 0,5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sekundary coil resistance | 9,5 | 6,0 | 6,0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Primary inductance | 3,0 | 3,7 | 3,7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Secondary inductance | 60 | 31 | 31 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 13 ... Ballast Resistor for Ignition Coil | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Make | | | | Bosch | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rated resistance | | | | 0,4 and 0,6 | | - | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 14 ... Control Unit for Transistor Coil Ignition (TCI) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Code No. | | | | 0 227 100 008 | | 0 227 100 025 | | | | | | | | | | | | | | | | | | | | | | | | | |
| > Model ' 80 | | | | 0 227 100 025 | | - | | | | | | | | | | | | | | | | | | | | | | | | | |
| DME | | | | - | | > 9.80 | | | | | | | | | | | | | | | | | | | | | | | | | |
| DME (Digitale Motor Electronics) | | | | see Group 13 61 ... | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 14 ... Pulse Transmitters (Reference Mark and Speed Sensors) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Resistance of coil | | | | 960 ± 10% | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Insulating resistance | | | | = 100 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 31 ... Alternator | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Make | | | | Bosch | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Code | | | | 0 120 489 619 | | - | | | | | | | | | | | | | | | | | | | | | | | | | |
| Voltage | | | | 14 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Max. Current - max. | | | | 65 / 80 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Max. Power - max. | | | | 910 / 1120 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Speed - max. | | | | 1500 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 31 ... Shielded Capacitor | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Capacitance | | | | 2,2 + 20% | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| change to |  | ECE | Year | 77 - 84 | 77 - 84 | 84 - 86 | 84 - 86 |
|---|--|-------------------|---------|-----------------|---------|---------|---------|
| | | ECE (A) | Version | US Models | | | |
| |  | Japanese Models | Model | 733 i | 733 i A | 735 i | 735 i A |
| Technical Data - Electrical System | | | Unit | | | | |
| 12 31 ... Drive Belt | | | | | | | |
| Narrow belt | | (open flank) | | 12,5 x 1055 | | | |
| | | or (< model ' 80) | | 12,5 x 1060 LA | | | |
| 12 32 ... Voltage Regulator | | | | | | | |
| Code No. | | | | EL 14 V 4 B / C | | | |
| | | < model ' 80 | | EE 14 V 3 | | | |
| Regulating Voltage at 1500 rpm engine speed | | | V | 13,5 ... 14,7 | | | |
| 12 41 ... Starter | | | | | | | |
| Make | | | | Bosch | | | |
| Direction of rotation | | | | clockwise | | | |
| Armature axial play | | | mm | 0,1 ... 0,2 | | | |
| | | <Model ' 80 | mm | 0,01 ... 0,3 | | | |
| Carbon brush length | | min. | mm | 13 | | | |
| Operating voltage | | | V | 12 | | | |
| Testing voltage | | | V | 13 + 0,2 | | | |
| Nominal rating | | | kW | 1,3 | | 1,5 | |
| No. of pinion teeth | | | | 9 | | | |
| 12 41 ... Solenoid Switch | | | | | | | |
| Power consumption on term. 50 (with rated voltage) | | | | | | | |
| Activating and holding coil | | | A | 40 | | | |
| | | < model ' 80 | A | 46 | | - | |
| Holding coil | | | A | 7,5 | | | |
| | | < model ' 80 | A | 11 | | - | |
| 12 61 ... Oil Pressure Switch | | | | | | | |
| Switching-on pressure | | | bar | 0,2 ... 0,5 | | | |
| 12 61 ... Dynamic Oil Level Switch | | | | | | | |
| Resistance (measured on disconnected plug against ground) | | | | | | | |
| Dynamic on conn. 2 (White wire) | | | | | | | |
| | | Level correct | kO | 1 ± 1% | | | |
| | | Level too low | O | 0 ... 0,2 | | | |
| Static on conn. 1 (blue violet wire) | | | | | | | |
| | | Level correct | O | 0 ... 0,2 | | | |
| | | Level too low | O | 8 | | | |

| change to |  ECE | Year | 78 - 84 | 84 - 86 | 84 - 86 |
|--|--|------------------------------------|-------------------------|---------------|---------|
| | | Version | Japanese Models | | |
| |  ECE (A) | Model | 733 i A | 735 i A | 745 i A |
| |  US Models | Unit | | | |
| Technical Data | | - Electrical System | | | |
| 12 13 ... Ignition Coil | | | | | |
| Make | Bosch | | | | |
| Code No. | 0 221 122 010 | | | | |
| > 9 / 80 | - | 0 221 122 032 | - | | |
| > 5 / 83 | - | - | - | 0 221 118 335 | |
| > 1 / 84 | - | 0 221 118 335 | - | | |
| | | Overview of types of Ignition coil | | | |
| Color of label | 0 221 122 010 yellow | 0 221 122 032 light blue | 0 221 118 335 yellow | | |
| Primary coil resistance | O | 0,4 | 0,5 | 0,5 | |
| Sekundary coil resistance | kO | 9,5 | 6,0 | 6,0 | |
| Primary inductance | mH | 3,0 | 3,7 | 3,7 | |
| Secondary inductance | H | 60 | 31 | 31 | |
| 12 13 ... Ballast Resistor for Ignition Coil | | | | | |
| Make | Bosch | | | | |
| Rated resistance | O | 0,4 and 0,6 | - | 0,4 | |
| 12 14 ... Control Unit for Transistor Coil Ignition (TCI) | | | | | |
| Code No. | 0 227 100 008 | 0 227 100 025 | | | |
| > Modell ' 80 | 0 227 100 025 | - | | | |
| DME | - | > 9.80 | > 5.83 | | |
| DME (Digitale Motor Electronics) | see Group 13 61 ... | | | | |
| 12 14 ... Control Unit for TCI - R | | | | | |
| Code No. | - | - | 0 227 920 002 | | |
| 12 14 ... Control Unit for Knock Control | | | | | |
| Code No. | - | 0 261 201 003 | | | |
| Color Code | - | weiß | | | |
| 12 14 ... Knock Sensors | | | | | |
| Code No | - | 0 261 231 001 | | | |
| Resistance at 20°C | kO | - | 280 ... 310 | | |
| 12 14 ... Pulse Transmitters (Reference Mark and Speed Sensors) | | | | | |
| Resistance of coil | O | 960 ± 10% | | | |
| Insulating resistance | kO | = 100 | | | |
| 12 14 ... Cylinder Identifying Sensor | | | | | |
| Coil resistance at 20°C | O | - | 0,8 ... 1,1 | | |

| change to |  ECE | Year | 78 - 84 | 84 - 86 | 84 - 86 |
|--|--|---------------------|-----------------|---------|---------|
| | | Version | Japanese Models | | |
| |  ECE (A) | Model | 733 i A | 735 i A | 745 i A |
| |  US Models | Unit | | | |
| Technical Data | | - Electrical System | | | |
| 12 31 ... Alternator | | | | | |
| Make | | Bosch | | | |
| Code | | 0 120 489 619 | - | | |
| Voltage | V | 14 | | | |
| Max. Current | - max. | A | 65 / 80 | | 80 |
| Max. Power | - max. | A | 910 / 1120 | | 1120 |
| Speed | - max. | 1/min | 1500 | | |
| 12 31 ... Shielded Capacitor | | | | | |
| Capacitance | µF | 2,2 + 20% | | | |
| 12 31 ... Drive Belt | | | | | |
| Narrow belt | (open flank) or (< model ' 80) | 12,5 x 1055 | | | |
| | | 12,5 x 1060 LA | | | |
| 12 32 ... Voltage Regulator | | | | | |
| Code No. | | EL 14 V 4 B / C | | | |
| | < model ' 80 | EE 14 V 3 | | | |
| Regulating Voltage at 1500 rpm engine speed | V | 13,5 ... 14,7 | | | |
| 12 41 ... Starter | | | | | |
| Make | | Bosch | | | |
| Direction of rotation | | clockwise | | | |
| Armature axial play | | mm | 0,1 ... 0,2 | | |
| | <Model ' 80 | mm | 0,01 ... 0,3 | | |
| Carbon brush length | min. | mm | 13 | | |
| Operating voltage | | V | 12 | | |
| Testing voltage | | V | 13 + 0,2 | | |
| Nominal rating | | kW | 1,3 | 1,5 | |
| No. of pinion teeth | | | 9 | | |
| 12 41 ... Solenoid Switch | | | | | |
| Power consumption on term. 50 (with rated voltage) | | | | | |
| Activating and holding coil | | A | 40 | | |
| | < model ' 80 | A | 46 | - | - |
| Holding coil | | A | 7,5 | | |
| | < model ' 80 | A | 11 | - | - |
| 12 61 ... Oil Pressure Switch | | | | | |
| Switching-on pressure | bar | 0,2 ... 0,5 | | | |

| | | | | | | |
|-----------|---|-----------|---------|-----------------|---------|---------|
| change to |  | ECE | Year | 78 - 84 | 84 - 86 | 84 - 86 |
| |  | ECE (A) | Version | Japanese Models | | |
| |  | US Models | Model | 733 i A | 735 i A | 745 i A |

| | | | |
|-----------------------|----------------------------|------|--|
| Technical Data | - Electrical System | Unit | |
|-----------------------|----------------------------|------|--|

| | | | |
|---|----|-----------|--|
| 12 61 ... Dynamic Oil Level Switch | | | |
| Resistance (measured on disconnected plug against ground) | | | |
| Dynamic on conn. 2 (White wire) | | | |
| Level correct | kO | 1 ± 1% | |
| Level too low | O | 0 ... 0,2 | |
| Static on conn. 1 (blue violet wire) | | | |
| Level correct | O | 0 ... 0,2 | |
| Level too low | O | 8 | |



Service-Information BMW Automobile



Service-Information BMW Automobile



Service-Information BMW Automobile

All Service Informations are saved in german language, please find them in the german manual.

| Tightening Torques | | | Nm | | mkp | |
|--|------------|-------------|-------------------|-----|------|------|
| | | | from | to | from | to |
| Engine Electrical System | | | | | | |
| 12 11 ... Distributor | | | | | | |
| Distributor | | | | 10 | | 1 |
| Distributor rotor to adapter with DME | | | | 2,8 | | 0,28 |
| High tension distributor cap | | | | 4 | | 0,4 |
| 12 12 ... Spark plugs | | | | | | |
| Spark plugs (unlubricated | engine M30 | M 14 x 1,25 | | 30 | | 3 |
| 12 13 ... Ignition coil | | | | | | |
| Primary connections | | | Kl. 1 | 3 | | 0,3 |
| | | | Kl. 15 | 4,5 | | 0,45 |
| 12 14 ... Electronic Switch or Control Units | | | | | | |
| TCI control unit | | | | 2,5 | | 0,25 |
| Knock sensor | | | | 20 | | 2 |
| | | | 745 iA | 13 | | 1,3 |
| Speed and reference mark senders (all with DME) | | | | 7 | | 0,7 |
| 12 31 ... Alternator with drive and mountings | | | | | | |
| Wires to alternator | | | Kl. D+ | 7 | | 0,7 |
| | | | Kl. B+ | 13 | | 1,3 |
| Pulley | | | | 45 | | 4,5 |
| Pulley (poly-V-belt) | | | | 55 | | 5,5 |
| Rear bracket | | | | 3,5 | | 0,35 |
| Cylinder bolt for wiring bracker | | | | 3,5 | | 0,35 |
| 12 41 ... Starter and Mounting Parts | | | | | | |
| Starter | | | | 50 | | 5 |
| Support to starter | | | M5 | 5 | | 0,5 |
| Support to crankcase | | | | 47 | | 4,7 |
| Wires to starter | | | Terminal 30h (M5) | 5 | | 0,5 |
| | | | Terminal 50 (M6) | 6 | | 0,6 |
| | | | Terminal 30 (M8) | 12 | | 1,2 |

| Tightening Torques | Nm | | mkp | |
|---|-----------|----|------------|----|
| | from | to | from | to |
| Engine Electrical System | | | | |
| 12 61 ... Oil pressure, oil temperature, oil level display | | | | |
| Oil pressure switch (Lubricate threads) | 40 | | 4 | |
| 12 62 ... Coolant Temperature | | | | |
| Coolant temperature sensor | 20 | | 2 | |
| Temperature gage sender to cylinder head | 19 | | 1,9 | |
| 12 72 ... Senders for Control unit | | | | |
| Lever to pedal value sender | 9 | | 0,9 | |
| Pedal value sender to pedal console | 5 | | 0,5 | |