

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                          |                                                                                                                                                                                                                                                               |                                                                                                                               |                                                                                                                                   |                                                                                                                                          |                                                                                                                             |                                                                                                                               |                                                                                                                                   |   |   |   |   |   |   |   |   |   |   |    |   |   |   |   |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|---|---|---|---|---|---|---|---|---|---|----|---|---|---|---|
| <b>Anziehvorschrift für Zylinderkopf</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                          | <b>149.302</b>                                                                                                                                                                                                                                                | <br><b>Das Original</b>                      |                                                                                                                                   |                                                                                                                                          |                                                                                                                             |                                                                                                                               |                                                                                                                                   |   |   |   |   |   |   |   |   |   |   |    |   |   |   |   |
| <b>Tightening Instructions for Cylinder Head</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                          | passend für / suitable for                                                                                                                                                                                                                                    |                                                                                                                               |                                                                                                                                   |                                                                                                                                          |                                                                                                                             |                                                                                                                               |                                                                                                                                   |   |   |   |   |   |   |   |   |   |   |    |   |   |   |   |
| <b>Instructions de serrage pour culasse</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                          | adaptable à / adaptable a                                                                                                                                                                                                                                     |                                                                                                                               |                                                                                                                                   |                                                                                                                                          |                                                                                                                             |                                                                                                                               |                                                                                                                                   |   |   |   |   |   |   |   |   |   |   |    |   |   |   |   |
| <b>Prescripciones de apriete para culatas</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                          | <b>Audi</b>                                                                                                                                                                                                                                                   |                                                                                                                               |                                                                                                                                   |                                                                                                                                          |                                                                                                                             |                                                                                                                               |                                                                                                                                   |   |   |   |   |   |   |   |   |   |   |    |   |   |   |   |
| Schraubenkopf / Head shape<br>Tête de vis / Cabeza de tornillo                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                          | Anziehreihenfolge/Tightening sequence/Ordre de serrage/Orden de apriete                                                                                                                                                                                       |                                                                                                                               |                                                                                                                                   |                                                                                                                                          |                                                                                                                             |                                                                                                                               |                                                                                                                                   |   |   |   |   |   |   |   |   |   |   |    |   |   |   |   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                          | <table><tr><td>10</td><td>6</td><td>1</td><td>3</td><td>7</td></tr><tr><td>8</td><td>4</td><td>2</td><td>5</td><td>9</td></tr><tr><td>8</td><td>4</td><td>2</td><td>5</td><td>9</td></tr><tr><td>10</td><td>6</td><td>1</td><td>3</td><td>7</td></tr></table> |                                                                                                                               | 10                                                                                                                                | 6                                                                                                                                        | 1                                                                                                                           | 3                                                                                                                             | 7                                                                                                                                 | 8 | 4 | 2 | 5 | 9 | 8 | 4 | 2 | 5 | 9 | 10 | 6 | 1 | 3 | 7 |
| 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 6                                                                                                                                        | 1                                                                                                                                                                                                                                                             | 3                                                                                                                             | 7                                                                                                                                 |                                                                                                                                          |                                                                                                                             |                                                                                                                               |                                                                                                                                   |   |   |   |   |   |   |   |   |   |   |    |   |   |   |   |
| 8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 4                                                                                                                                        | 2                                                                                                                                                                                                                                                             | 5                                                                                                                             | 9                                                                                                                                 |                                                                                                                                          |                                                                                                                             |                                                                                                                               |                                                                                                                                   |   |   |   |   |   |   |   |   |   |   |    |   |   |   |   |
| 8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 4                                                                                                                                        | 2                                                                                                                                                                                                                                                             | 5                                                                                                                             | 9                                                                                                                                 |                                                                                                                                          |                                                                                                                             |                                                                                                                               |                                                                                                                                   |   |   |   |   |   |   |   |   |   |   |    |   |   |   |   |
| 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 6                                                                                                                                        | 1                                                                                                                                                                                                                                                             | 3                                                                                                                             | 7                                                                                                                                 |                                                                                                                                          |                                                                                                                             |                                                                                                                               |                                                                                                                                   |   |   |   |   |   |   |   |   |   |   |    |   |   |   |   |
| 130.120<br>M 12x1,5x159                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                          |                                                                                                                                                                                                                                                               |                                                                                                                               |                                                                                                                                   |                                                                                                                                          |                                                                                                                             |                                                                                                                               |                                                                                                                                   |   |   |   |   |   |   |   |   |   |   |    |   |   |   |   |
| <table><tr><td>Anziehen/<br/>Tightening/<br/>Serrage/<br/>Apriete</td><td>*<br/><br/>➤<br/>➤</td><td>35 Nm<br/>60 Nm<br/>90°<br/>90°</td></tr></table>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                          |                                                                                                                                                                                                                                                               |                                                                                                                               | Anziehen/<br>Tightening/<br>Serrage/<br>Apriete                                                                                   | *<br><br>➤<br>➤                                                                                                                          | 35 Nm<br>60 Nm<br>90°<br>90°                                                                                                |                                                                                                                               |                                                                                                                                   |   |   |   |   |   |   |   |   |   |   |    |   |   |   |   |
| Anziehen/<br>Tightening/<br>Serrage/<br>Apriete                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | *<br><br>➤<br>➤                                                                                                                          | 35 Nm<br>60 Nm<br>90°<br>90°                                                                                                                                                                                                                                  |                                                                                                                               |                                                                                                                                   |                                                                                                                                          |                                                                                                                             |                                                                                                                               |                                                                                                                                   |   |   |   |   |   |   |   |   |   |   |    |   |   |   |   |
| Zeichenerklärung / Explanations / Explication / Explicacion                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                          |                                                                                                                                                                                                                                                               |                                                                                                                               |                                                                                                                                   |                                                                                                                                          |                                                                                                                             |                                                                                                                               |                                                                                                                                   |   |   |   |   |   |   |   |   |   |   |    |   |   |   |   |
| <table><tr><td>*<br/>★<br/>□<br/>●<br/>➤</td><td>neue Zylinderkopf-<br/>schrauben verwenden<br/>Warmlauf (80°C)<br/>Schrauben einzeln lösen<br/>und wieder anziehen<br/>Setzzeit<br/>Drehwinkel</td><td>use new cylinder<br/>head bolts<br/>warm up time (80°C)<br/>loosen and tighten<br/>each bolt<br/>relaxation time<br/>torque angle</td><td>utiliser des vis<br/>neuves<br/>chauffage (80°C)<br/>deserrer et serrer<br/>vis par vis<br/>durée de tassement<br/>angle de serrage</td><td>emplar tornillos nuevos<br/>calentamiento (80°C)<br/>aflojar y apretar<br/>tornillo a tornillo<br/>tiempo de espera<br/>ángulo de giro</td></tr></table> |                                                                                                                                          |                                                                                                                                                                                                                                                               |                                                                                                                               | *<br>★<br>□<br>●<br>➤                                                                                                             | neue Zylinderkopf-<br>schrauben verwenden<br>Warmlauf (80°C)<br>Schrauben einzeln lösen<br>und wieder anziehen<br>Setzzeit<br>Drehwinkel | use new cylinder<br>head bolts<br>warm up time (80°C)<br>loosen and tighten<br>each bolt<br>relaxation time<br>torque angle | utiliser des vis<br>neuves<br>chauffage (80°C)<br>deserrer et serrer<br>vis par vis<br>durée de tassement<br>angle de serrage | emplar tornillos nuevos<br>calentamiento (80°C)<br>aflojar y apretar<br>tornillo a tornillo<br>tiempo de espera<br>ángulo de giro |   |   |   |   |   |   |   |   |   |   |    |   |   |   |   |
| *<br>★<br>□<br>●<br>➤                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | neue Zylinderkopf-<br>schrauben verwenden<br>Warmlauf (80°C)<br>Schrauben einzeln lösen<br>und wieder anziehen<br>Setzzeit<br>Drehwinkel | use new cylinder<br>head bolts<br>warm up time (80°C)<br>loosen and tighten<br>each bolt<br>relaxation time<br>torque angle                                                                                                                                   | utiliser des vis<br>neuves<br>chauffage (80°C)<br>deserrer et serrer<br>vis par vis<br>durée de tassement<br>angle de serrage | emplar tornillos nuevos<br>calentamiento (80°C)<br>aflojar y apretar<br>tornillo a tornillo<br>tiempo de espera<br>ángulo de giro |                                                                                                                                          |                                                                                                                             |                                                                                                                               |                                                                                                                                   |   |   |   |   |   |   |   |   |   |   |    |   |   |   |   |
| <b>Motortyp / Engine type / Type de moteur / Tipo de motor</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                          |                                                                                                                                                                                                                                                               |                                                                                                                               |                                                                                                                                   |                                                                                                                                          |                                                                                                                             |                                                                                                                               |                                                                                                                                   |   |   |   |   |   |   |   |   |   |   |    |   |   |   |   |
| ♣1,10 mm 1 Loch                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                          |                                                                                                                                                                                                                                                               |                                                                                                                               |                                                                                                                                   |                                                                                                                                          |                                                                                                                             |                                                                                                                               |                                                                                                                                   |   |   |   |   |   |   |   |   |   |   |    |   |   |   |   |
| Cyl. 1 -4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                          |                                                                                                                                                                                                                                                               |                                                                                                                               |                                                                                                                                   |                                                                                                                                          |                                                                                                                             |                                                                                                                               |                                                                                                                                   |   |   |   |   |   |   |   |   |   |   |    |   |   |   |   |
| Mot. BVN, BMC, BTR, CEMA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                          |                                                                                                                                                                                                                                                               |                                                                                                                               |                                                                                                                                   |                                                                                                                                          |                                                                                                                             |                                                                                                                               |                                                                                                                                   |   |   |   |   |   |   |   |   |   |   |    |   |   |   |   |
| 235,240 kW ( 320,326 PS )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                          |                                                                                                                                                                                                                                                               |                                                                                                                               |                                                                                                                                   |                                                                                                                                          |                                                                                                                             |                                                                                                                               |                                                                                                                                   |   |   |   |   |   |   |   |   |   |   |    |   |   |   |   |
| Audi A8,Q7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                          |                                                                                                                                                                                                                                                               |                                                                                                                               |                                                                                                                                   |                                                                                                                                          |                                                                                                                             |                                                                                                                               |                                                                                                                                   |   |   |   |   |   |   |   |   |   |   |    |   |   |   |   |
| ElringKlinger AG, Max-Eyth-Str.2<br>72581 Dettingen / Erms. Tel. 07123/724 601                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                          | <b>*149.302*</b>                                                                                                                                                                                                                                              |                                                                                                                               |                                                                                                                                   |                                                                                                                                          |                                                                                                                             |                                                                                                                               |                                                                                                                                   |   |   |   |   |   |   |   |   |   |   |    |   |   |   |   |