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| **Information about optional components** |
| **KDI-TCP 3404E5 Workshop Manual (Rev. 01.1)** |



**Registration of modifications to the document**

Any modifications to this document must be registered by the drafting body, by completing the following table.

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**Translated from the original manual in Italian language**

Data reported in this issue can be modified at any time by KOHLER.

Sommario

[1. TITOLO 1 2](#_Toc495648770)

[1.1. Asdfsdfsdf 2](#_Toc495648771)

[1.2. Asdfsdfsdfggg 2](#_Toc495648772)

# Information about optional components

## Heater (replacement)

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| Z_importante.jpg  **Important**       * Before proceeding with operation, read [**Par. 3.3.2**](https://iservice.lombardini.it/jsp/Template2/manuale.jsp?id=642&parent=1273&txts=3.3.2) . | |
| **11.1.1 Disassembly**   1. Undo the screws **A** . 2. Remove the flange **C** . 3. Remove the heater **E** and the relevant gaskets **F** . | 11.1.jpg **Fig 11.1** |
| **11.1.2 Assembly**    Z_importante.jpg **Important**       * Always replace gaskets **F** , with each assembly.      1. In sequence, fit the manifold **G** with the gasket **F** , the new heater **E** , the second gasket **F** , the flange **C** , the washers **H** , the screws **A** and the cable **B** . 2. Secure the flange **C** with the screws **A** (tightening torque at **22 Nm** ). | 11.2.jpg **Fig 11.2** |

## Idler gear (for 3rd / 4th PTO)

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| Z_importante.jpg  **Important**       * Before proceeding with operation, read [**Par. 3.3.2**](https://iservice.lombardini.it/jsp/Template2/manuale.jsp?id=642&parent=1273&txts=3.3.2) . | |
| **11.2.1 Disassembly**   1. Perform the operations of point **7** of [**Par. 7.4.1**](https://iservice.lombardini.it/jsp/Template2/manuale.jsp?id=593&parent=1273) **.** 2. Perform the operations from point **2** to **3** of  [**Par. 6.6.1**](https://iservice.lombardini.it/jsp/Template2/manuale.jsp?id=585&parent=1273) **.** 3. Perform the operations of point **3** of  [**Par. 7.8.1**](https://iservice.lombardini.it/jsp/Template2/manuale.jsp?id=602&parent=1273) **.** 4. Perform the operations of [**Par. 7.8.2**](https://iservice.lombardini.it/jsp/Template2/manuale.jsp?id=602&parent=1273) **.** 5. Loosen capscrews **A** and remove plate **B1** . 6. Extract gear **C** . 7. Remove gudgeon **D** together with plate **B2** . | 11.3.jpg **Fig 11.3** |
| 11.4.jpg  **Fig 11.4** |
| **11.2.2 Assembly**    Z_importante.jpg **Important**       * Make sure that gudgeon **D** has no impurities inside.      1. On capscrew **A** , assemble:       - plate **B1**     - gudgeon **D**     - gear **C**     - plate **B2** . | 11.3.jpg  **Fig 11.5** |

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| 1. Position gear unit **C1** onto crankcase **E** , complying with reference **J1** , **J2** with gear **F** . 2. Secure unit **C1** by means of capscrew **A** (tightening torque **25 Nm** ).   **NOTE:** the reference **J1** can have 2 different configurations for the gear **C** , **Fig. 11.6b** shows the correct position of the reference **J1** for both configurations. | 11.6.jpg  **Fig 11.6**  11_xx_Ingranaggio_ozioso_01.png  11_xx_Ingranaggio_ozioso_02.png  **Fig 11.6b** |

## 3rd PTO (replacement)

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| Z_importante.jpg  **Important**       * Before proceeding with operation, read [**Par. 3.3.2**](https://iservice.lombardini.it/jsp/Template2/manuale.jsp?id=642&parent=1273&txts=3.3.2) . | |
| **11.3.1 Disassembly**   1. Perform the operations of point **7** of  [**Par. 7.4.1**](https://iservice.lombardini.it/jsp/Template2/manuale.jsp?id=593&parent=1273) **.** 2. Perform the operations from point **2** to **3** of  [**Par. 6.6.1**](https://iservice.lombardini.it/jsp/Template2/manuale.jsp?id=585&parent=1273) **.** 3. Perform the operations of point **3** of [**Par. 7.8.1**](https://iservice.lombardini.it/jsp/Template2/manuale.jsp?id=602&parent=1273) . 4. Perform the operations of [**Par. 7.8.2**](https://iservice.lombardini.it/jsp/Template2/manuale.jsp?id=602&parent=1273) **.** 5. Extract gear **A** . | 11.7.jpg **Fig 11.7** |
| **11.3.2 Assembly**   1. Insert gear **A** into the seat of crankcase **B** , fitting the shaft of pump **C** in gear **A** . | 11.8.jpg **Fig 11.8** |

## 4th PTO (replacement)

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| Z_importante.jpg  **Important**       * Before proceeding with operation, read [**Par. 3.3.2**](https://iservice.lombardini.it/jsp/Template2/manuale.jsp?id=642&parent=1273&txts=3.3.2) . | |
| **11.4.1 Disassembly**   1. Perform the operations of point **7** of  [**Par. 7.4.1**](https://iservice.lombardini.it/jsp/Template2/manuale.jsp?id=593&parent=1273) **.** 2. Perform the operations from point **2** to **3** of  [**Par. 6.6.1**](https://iservice.lombardini.it/jsp/Template2/manuale.jsp?id=585&parent=1273) **.** 3. Perform the operations of point **3** of [**Par. 7.8.1**](https://iservice.lombardini.it/jsp/Template2/manuale.jsp?id=602&parent=1273) . 4. Perform the operations of [**Par. 7.8.2**](https://iservice.lombardini.it/jsp/Template2/manuale.jsp?id=602&parent=1273) **.** 5. Extract gear **A** . | 11.9.jpg **Fig 11.9** |
| **11.4.2 Assembly**   1. Insert gear **A** into the seat of crankcase **B** , fitting the shaft of pump **C** in gear **A** . | 11.10.jpg **Fig 11.10** |

## Balancer device (replacement)

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| Z_importante.jpg **Importante**       * Before proceeding with operation, read [**Par. 3.3.2**](https://iservice.lombardini.it/jsp/Template2/manuale.jsp?id=642&parent=1273&txts=3.3.2) . | |
| **11.5.1 Disassembly**   1. Perform the operations described in [**Par. 11.2.1**](https://iservice.lombardini.it/jsp/Template2/manuale.jsp?id=640&parent=1273) **.** 2. Extract shaft **A1 e A2.** | 11.11.jpg **Fig 11.11** |
| **11.5.2 Assembly**   1. Lubricate gudgeon **C** of shaft **A1** and **A2** with oil. 2. Insert shaft **A1** into seat **B1** of the crankcase, complying with reference **D** of gear **E** . 3. Insert shaft **A2** into seat **B2** of the crankcase. 4. Perform the operations described in [**Par. 11.2.2**](https://iservice.lombardini.it/jsp/Template2/manuale.jsp?id=640&parent=1273) **.**   **NOTE:** the shafts **A1** and **A2** are different and it is important not to invert the assembly position, the reference **D** is specific for the shaft **A1** and is timed with the gear **E** , the reference **J2** is specific for the shaft **A2** and is timed with the idler gear **F** (see the **Fig. 11.12b** ).  11.12.jpg  **Fig 11.12**  11_xx_Equilibratore_A1.png     11_xx_Equilibratore_A2.png  **Fig 11.12b** | |

## ETB (replacement)

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| 1. Unscrew screws **A** and remove the ETB valve **B** with its gasket **C** .     Z_importante.jpg **Important**         * Always replace the gasket **C** at each assembly. | CAP_11_ETB_01.png  **Fig. 11.13** |
| 1. Fix the ETB valve **B** and its gasket **C** by means of screws **A** (tightening torque **10 Nm** ) | CAP_11_ETB_02.png  **Fig. 11.14** |

## Air filter (cartridge replacement)

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| 1. Release the two hooks **F** and remove the cover **A** from the body **D** . 2. Remove the cartridges **B** and **G** .       Z_importante.jpg **Important**       * Before proceeding with operation, read  [**Par. 3.3.2**](https://iservice.lombardini.it/jsp/Template2/manuale.jsp?id=198&parent=1000) . * The safety cartridge **G** (if present) must always be replaced if it is dirty or damaged.  1. Insert the new cartridge **G** inside the new cartridge **B** and both of them inside the filter body **D** . 2. Secure the cover **A** via the hooks **F** . | 5.3.jpg  5.4.jpg  **Fig 11.59** |

## Cooling circuit (replacement)

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| Z_importante.jpg  **Important**       * Before proceeding with operation, read  [**Par. 3.3.2**](https://iservice.lombardini.it/jsp/Template2/manuale.jsp?id=198&parent=1000) . * Before carrying out the operation, refer to the machine manual to disconnect the fuel waste line from the fuel radiator **C2** . | Cap_11_I_CO_309_TCP_E5.png |
| **11.8.1 Smontaggio vaschetta di espansione \***  1 - Release the clamp **A1, A2** . 2 - Disconnect hose **B1, B2, B3** **.** 3 - Loosen capscrews **C1** .  4 - Loosen capscrews **C3** e rimuovere la vaschetta **C4** . \* | Cap_11_I_CO_326_TCP_E5.png  Cap_11_I_CO_327_TCP_E5.png  Cap_11_I_CO_328_TCP_E5.png |
| **11.8.2 Radiator d** **isassembly**  1 - Release the clamp **A3, A5** . 2 - Disconnect hose **B4** from radiator **C** . | Cap_11_I_CO_293_TCP_E5.png |
| 4 - Release the clamp **A2, A4, A5** . 5 - Disconnect hose **B3, B5** from radiator **C** . | Cap_11_I_CO_307_TCP_E5.png  Cap_11_I_CO_308_TCP_E5.png |
| 6 - Loosen all capscrews **E1, E2, E3.** 7 - Release nut **F** . 8 - Remove floodgates **G1** and **G2** . 9 - Loosen capscrews **K** . 10 - Disconnect radiator **C** from hoses **H1** and **H2** , being careful not to deform tubes **J1** and **J2** . | Cap_11_I_CO_294_TCP_E5.png  Cap_11_I_CO_295_TCP_E5.png  Cap_11_I_CO_296_TCP_E5.png  Cap_11_I_CO_297_TCP_E5.png  Cap_11_I_CO_298_TCP_E5.png |
| **11.8.3 Fuel radiator replacement**  1 - Loosen the screws **E4** , extract the radiator **C2** from the conveyor **C1** . 2 - Insert the radiator **C2** in the conveyor **C1** . 3 - Fasten the radiator **C2** with the screws **E4** and washers **E5** (tightening torque of **10 Nm** ). | Cap_11_I_CO_311_TCP_E5.png  Cap_11_I_CO_312_TCP_E5.png  Cap_11_I_CO_313_TCP_E5.png |
| **11.8.4** **Fan disassembly**  1 - Undo the screws **P** and remove the fan **R** . | Cap_11_I_CO_299_TCP_E5.png |
| **11.8.5** **Fan assembly**  1 - Assemble the fan **R** on the pulley **U** . 2 - Fasten the fan **R** by using the screws **P** (tightening torque at **10 Nm** ). | Cap_11_I_CO_300_TCP_E5.png |

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| **11.8.6** **Radiator assembly**  1 - Insert the vibration damper **V2** correctly on bracket **S** .  2 - Fit radiator **C** onto hose **H1** , **H2** being careful not to deform tube **J1** , **J2** . 3 - Centre radiator **C** onto vibration-dampening devices **V** . 4 - Secure radiator **C** onto vibration-dampening devices **V** by means of capscrews **K** (tightening torque at **25** **Nm** ). 5 - Fix the vibration damper **V2** on the bracket **S** through the nut **F** (tightening torque of **25 Nm** ). 6 - Secure hose **H2** by means of clamp **A5** . | Cap_11_I_CO_301_TCP_E5.png  Cap_11_I_CO_306_TCP_E5.png  Cap_11_I_CO_303_TCP_E5.png |
| 7 - Position floodgate **G1** onto radiator **C** . 8 - Secure all capscrews **E1** , **E3** , **E2** . | Cap_11_I_CO_304_TCP_E5.png  Cap_11_I_CO_294_TCP_E5.png  Cap_11_I_CO_295_TCP_E5.png |

|  |  |
| --- | --- |
| 9 - Secure hoses **B3,** **B4,** **B5** by means of clamps **A2** , **A3, A4** . | Cap_11_I_CO_293_TCP_E5.png  Cap_11_I_CO_310_TCP_E5.png |
| **11.8.7 Montaggio vaschetta di espansione \***  1 - Fissare la vaschetta **C4** sul radiatore **C** tramite le viti **C3** (coppia di serraggio a **25** **Nm** ). \*  2 - Fissare i manicotti **B3,** **B1,** **B2** tramite le fascette **A1** , **A2** . \* | Cap_11_I_CO_330_TCP_E5.png  Cap_11_I_CO_328b_TCP_E5.png  Cap_11_I_CO_331_TCP_E5.png |

