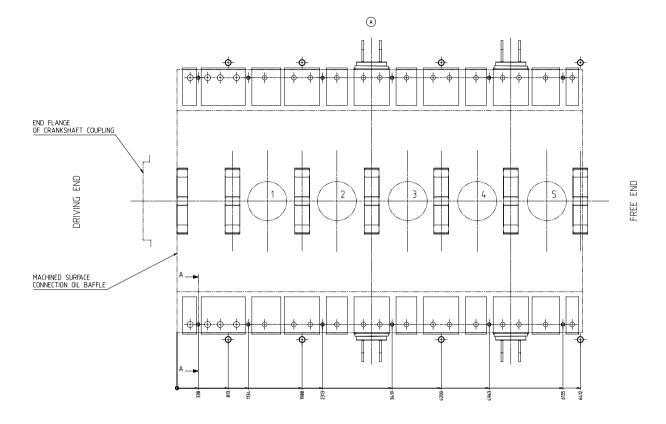
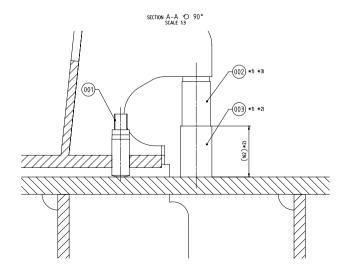
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# (A) CAUTION

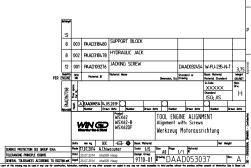
Tool and/or bedplate damage

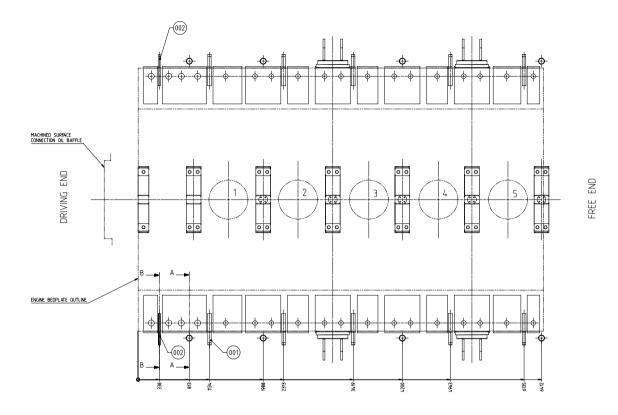
Countermeasure: Avoid overloading of jacking screws and/or bedplate areas by observing the appropriate engine alignment/assembly procedure as follows:

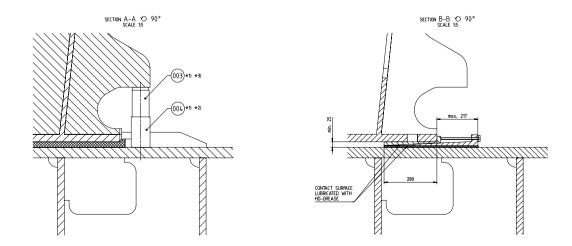
- Lift the engine into the engine room and place it on levelled, temporary blocks, underneath the bedplate beside the jacking screws.
- Screw in all jacking screws until touching the foundation top plate (the full number of jacking screws must be used).
- Apply hydraulic jacks to the protruding bedplate ribs nearby the jacking screws as indicated in the drawing.
- Remove the temporary blocks by slightly lifting the engine with the hydraulic jacks.
- Start with the engine alignment by means of jacking screws. Before turning a jacking screw, reduce its load by use of the hydraulic jacks. Any height adjustment must be performed in small steps no more than 1 mm per step (equals to 1/2 screw turn, based on 2 mm thread pitch). Changes in height larger than the maximum allowance (1 mm) require a gradual process where all jacking screws are successively adjusted in stages, to ensure the best possible load distribution.

# A Remarks

- \*1) To be provided by the shipyard.
   \*2) Height depending on the requirement (chock thickness in correlation with maximum permissible extension of the hydraulic jack).
- \*3) Hydraulic jack proposal Type: Enerpac RCS-1002 Load at 700 bar: 880 kN





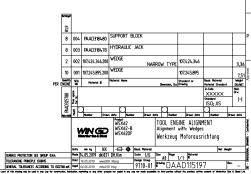


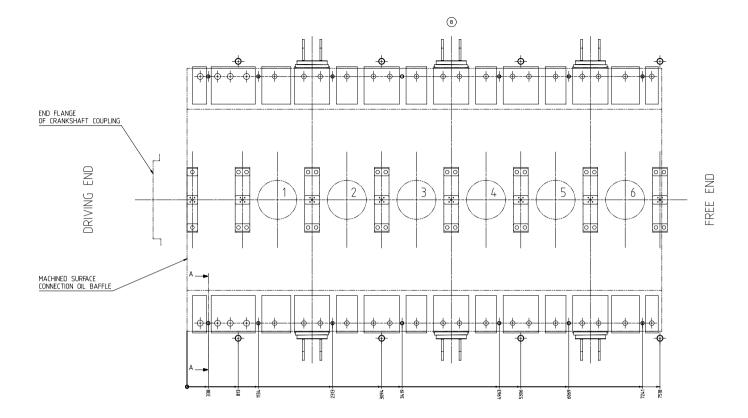
Tool and/or bedplate damage

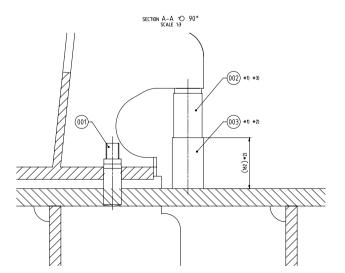
Countermeasure: Avoid overloading of bedplate areas by observing the appropriate engine alignment/assembly procedure as follows:

- Insert wedges and/or shims in all indicated positions.
- Lift the engine into the engine room and place it on levelled wedges and/or shims (wedges or shims must be inserted as deep as possible below the bedplate to ensure that the support point is as close as possible at the engine monoblock column).
- Apply hydraulic jacks to the protruding bedplate ribs nearby the relevant wedge and/or shim as indicated in the drawing.
- Start with the engine alignment by means of wedges and/or shims. Before adjusting the height of wedges and/or shims lift the engine by the hydraulic jacks. Any height adjustment must be performed in small steps no more than 1 mm per step. Changes in height larger than the maximum allowance (1mm) require a gradual process where all wedges and/or shims are successively adjusted in stages, to ensure the best possible load distribution.

- \*1) To be provided by the shipyard.
  \*2) Height depending on the requirement (chock thickness in correlation with maximum permissible extension of the hydraulic jack).
  \*3) Hydraulic jack proposal
  Type: Enerpac RCS-1002
  Load at 700 bar: 880 kN







# (B) CAUTION

Tool and/or bedplate damage

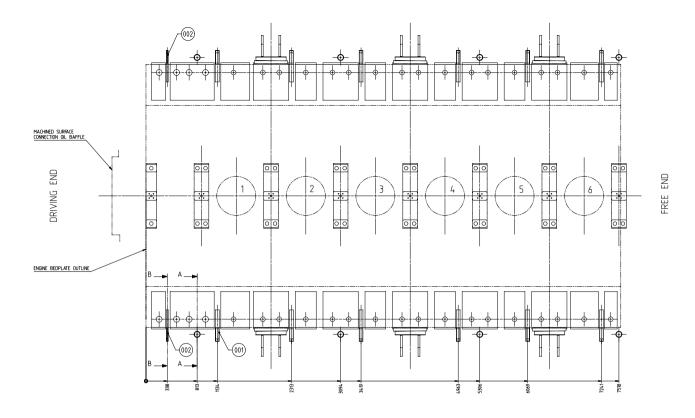
Avoid overloading of jacking screws and/or bedplate areas by observing the appropriate engine alignment/assembly procedure as follows:

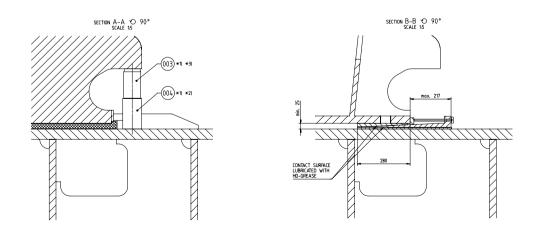
- Lift the engine into the engine room and place it on levelled, temporary blocks, underneath the bedplate beside the jacking screws.
- Screw in all jacking screws until touching the foundation top plate (the full number of jacking screws must be used).
- Apply hydraulic jacks to the protruding bedplate ribs nearby the jacking screws as indicated in the drawing.
- Remove the temporary blocks by slightly lifting the engine with the hydraulic jacks.
- Start with the engine alignment by means of jacking screws. Before turning a jacking screw, reduce its load by use of the hydraulic jacks. Any height adjustment must be performed in small steps no more than 1 mm per step (equals to 1/2 screw turn, based on 2 mm thread pitch). Changes in height larger than the maximum allowance (1 mm) require a gradual process where all jacking screws are successively adjusted in stages, to ensure the best possible load distribution.

# B Remarks

- \*1) To be provided by the shipyard.
- \*1) to be provided by the shippyara.
  \*2) Height depending on the requirement (chock thickness in correlation with maximum permissible extension of the hydraulic jack).
  \*3) Hydraulic jack proposal Type: Enerpac RCS-1002 Load at 700 bar: 880 kN







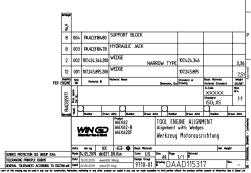
Tool and/or bedplate damage

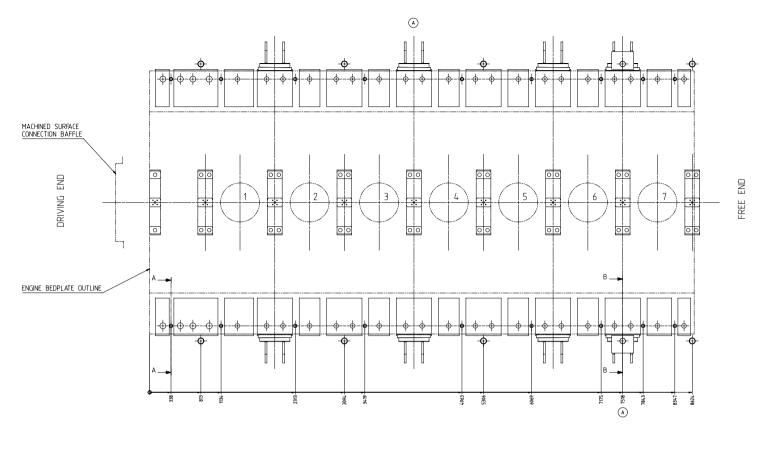
### Countermeasure:

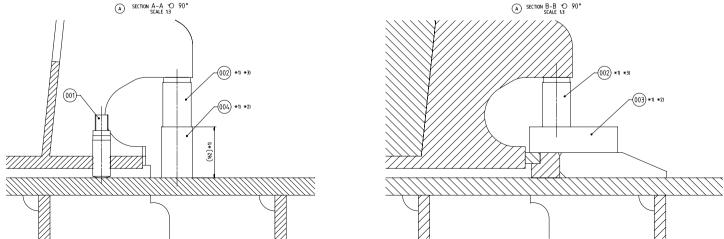
Avoid overloading of bedplate areas by observing the appropriate engine alignment/assembly procedure as follows:

- Insert wedges and/or shims in all indicated positions.
- Lift the engine into the engine room and place it on levelled wedges and/or shims (wedges or shims must be inserted as deep as possible below the bedplate to ensure that the support point is as close as possible at the engine monoblock column).
- Apply hydraulic jacks to the protruding bedplate ribs nearby the relevant wedge and/or shim as indicated in the drawing.
- Start with the engine alignment by means of wedges and/or shims. Before adjusting the height of wedges and/or shims lift the engine by the hydraulic jacks. Any height adjustment must be performed in small steps no more than 1 mm per step. Changes in height larger than the maximum allowance (firm) require a gradual process where all wedges and/or shims are successively adjusted in stages, to ensure the best possible load distribution.

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- (chock thickness in correlation with maximum permissible extension of the hydraulic jack).
- \*3) Hydraulic jack proposal Type: Enerpac RCS-1002 Load at 700 bar: 880 kN







# (A) CAUTION

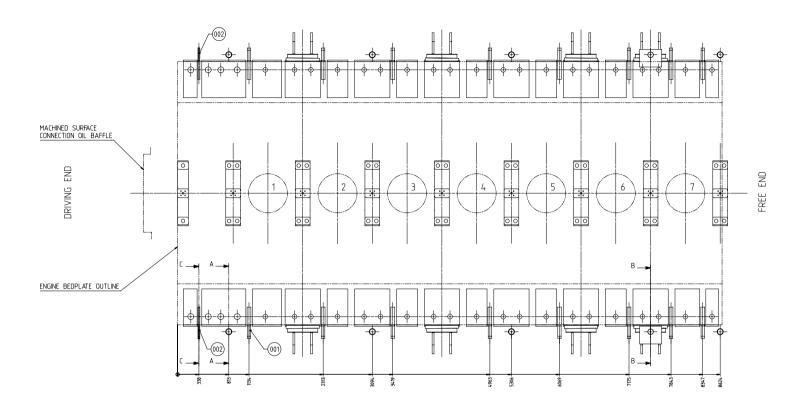
Tool and/or bedplate damage

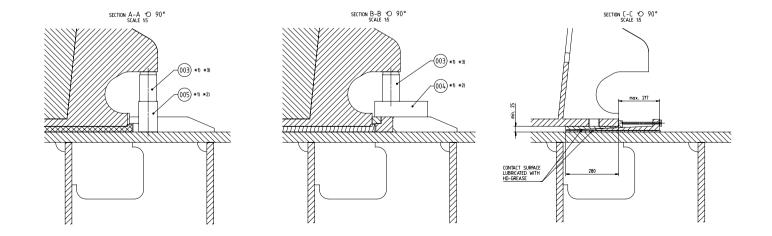
Countermeasure: Avoid overloading of jacking screws and/or bedplate areas by observing the appropriate engine alignment/assembly procedure as follows:

- Lift the engine into the engine room and place it on levelled, temporary blocks, underneath the bedplate beside the jacking screws.
- Screw in all jacking screws until touching the foundation top plate (the full number of jacking screws must be used).
- Apply hydraulic jacks to the protruding bedplate ribs nearby the jacking screws as indicated in the drawing.
- Remove the temporary blocks by slightly lifting the engine with the hydraulic jacks.
- Start with the engine alignment by means of jacking screws. Before turning a jacking screw, reduce its load by use of the hydraulic jacks. Any height adjustment must be performed in small steps no more than 1 mm per step (equals to 1/2 screw turn, based on 2 mm thread pitch). Changes in height larger than the maximum allowance (1 mm) require a gradual process where all jacking screws are successively adjusted in stages, to ensure the best possible load distribution.

- \*1) To be provided by the shipyard.\*2) Height depending on the requirement (chock thickness in correlation with maximum permissible extension of the hydraulic jack).
- \*3) Hydraulic jack proposal Type: Enerpac RCS-1002 Load at 700 bar: 880 kN







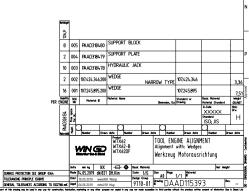
Tool and/or bedplate damage

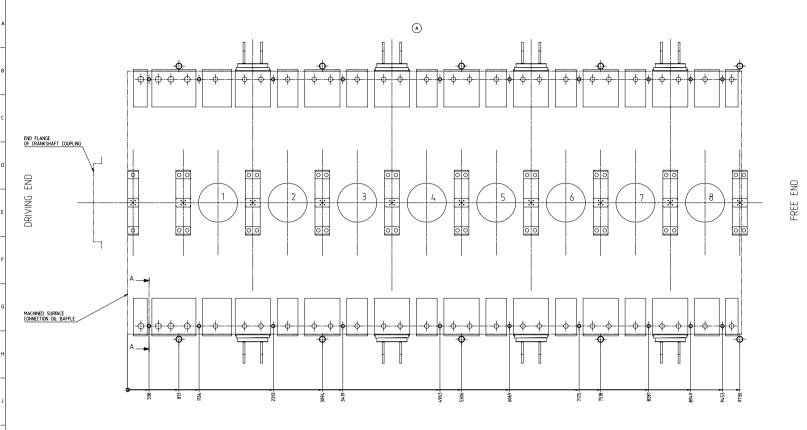
### Countermeasure:

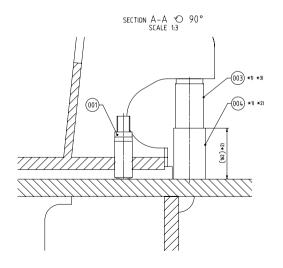
Avoid overloading of bedplate areas by observing the appropriate engine alignment/assembly procedure as follows:

- Insert wedges and/or shims in all indicated positions.
- Lift the engine into the engine room and place it on levelled wedges and/or shims (wedges or shims must be inserted as deep as possible below the bedplafe to ensure that the support point is as close as possible at the engine monoblock column).
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- \*3) Hydraulic jack proposal Type: Enerpac RCS-1002 Load at 700 bar: 880 kN







Rist

Tool and/or bedplate damage

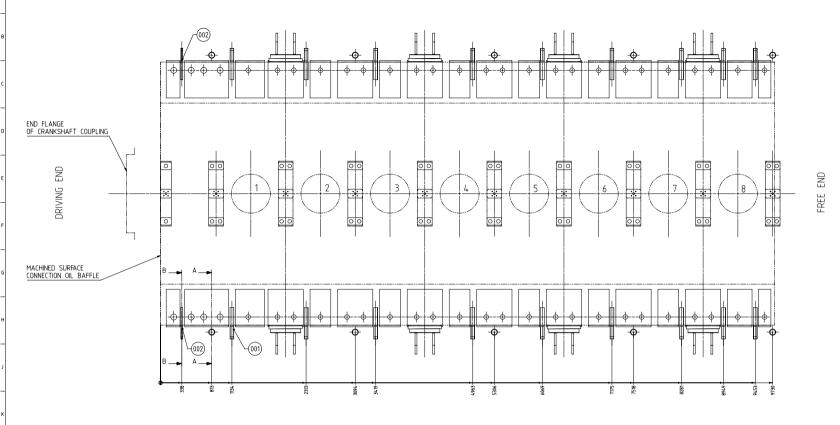
#### Countermeasure:

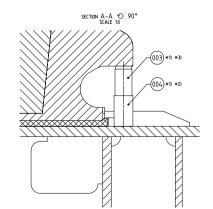
Avoid overloading of jacking screws and/or bedplate areas by observing the appropriate engine alignment/assembly procedure as follows:

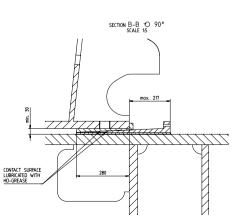
- Lift the engine into the engine room and place it on levelled, temporary blocks, underneath the bedplate beside the jacking screws.
- Screw in all jacking screws until touching the foundation top plate (the full number of jacking screws must be used).
- Apply hydraulic jacks to the protruding bedplate ribs nearby the jacking screws as indicated in the drawing.
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- Start with the engine alignment by means of jacking screws. Before turning a jacking screw, reduce its load by use of the hydraulic jacks. Any height adjustment must be performed in small steps - no more than 1 mm per step (equals to 1/2 screw turn, based on 2 mm thread pitch). Changes in height larger than the maximum allowance (1 mm) require a gradual process where all jacking screws are successively adjusted in stages, to ensure the best possible load distribution.

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- \*2) Height depending on the requirement
  (chock thickness in correlation with maximum
  permissible extension of the hydraulic inch
- permissible extension of the hydraulic jack). \*3) Hydraulic jack proposal Type: Enerpac RCS-1002 Load at 700 bar: 880 kN







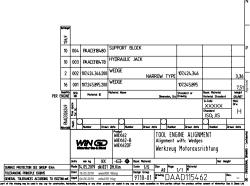


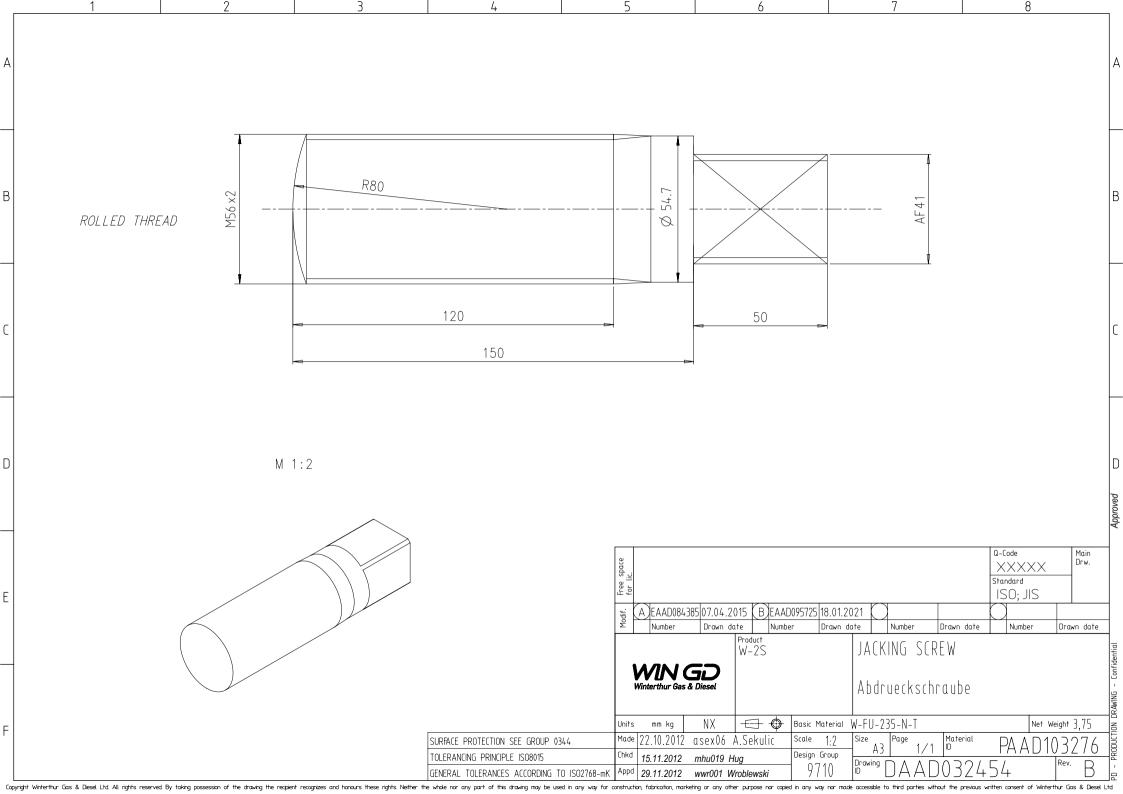
Tool and/or bedplate damage

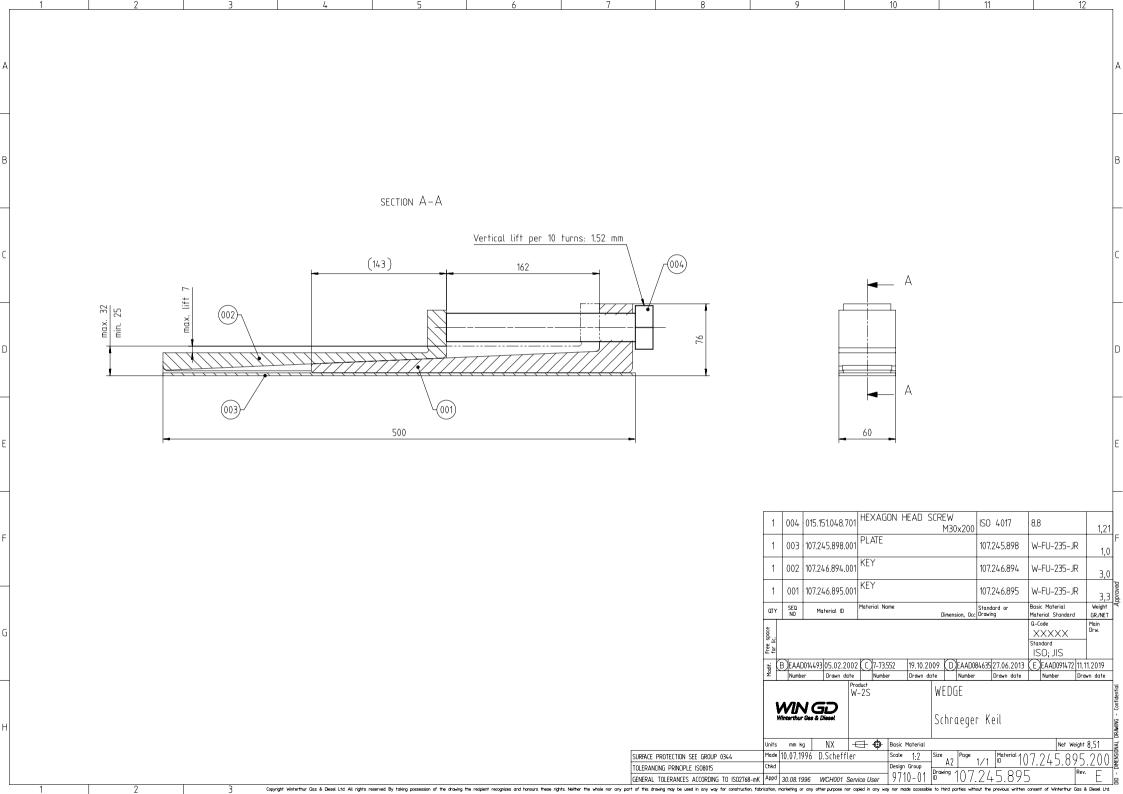
Avoid overloading of bedplate areas by observing the appropriate engine alignment/assembly procedure as follows:

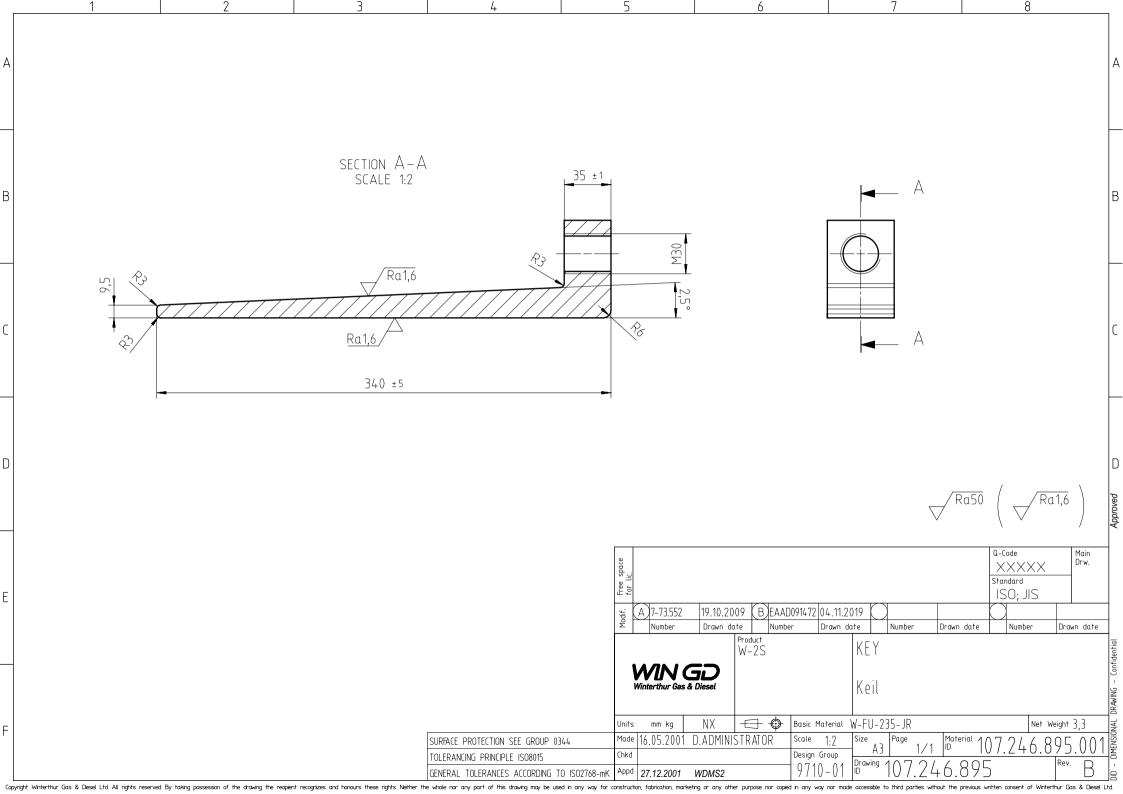
- Insert wedges and/or shims in all indicated positions.
- Lift the engine into the engine room and place it on levelled wedges and/or shims (wedges or shims must be inserted as deep as possible below the bedplate to ensure that the support point is as close as possible at the engine monoblock column).
- Apply hydraulic jacks to the protruding bedplate ribs nearby the relevant wedge and/or shim as indicated in the drawing.
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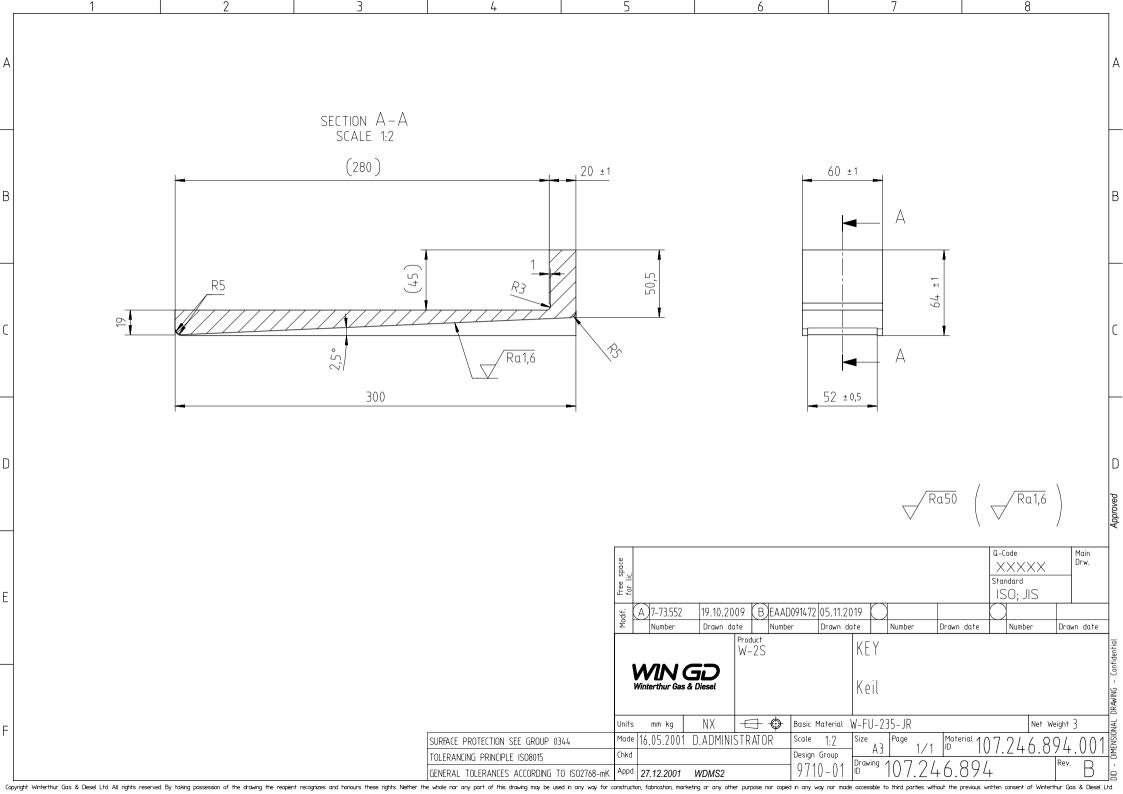
- \*1) To be provided by the shipyard. \*2) Height depending on the requirement (chock thickness in correlation with maximum
- permissible extension of the hydraulic jack).
- \*3) Hydraulic jack proposal Type: Enerpac RCS-1002 Load at 700 bar: 880 kN

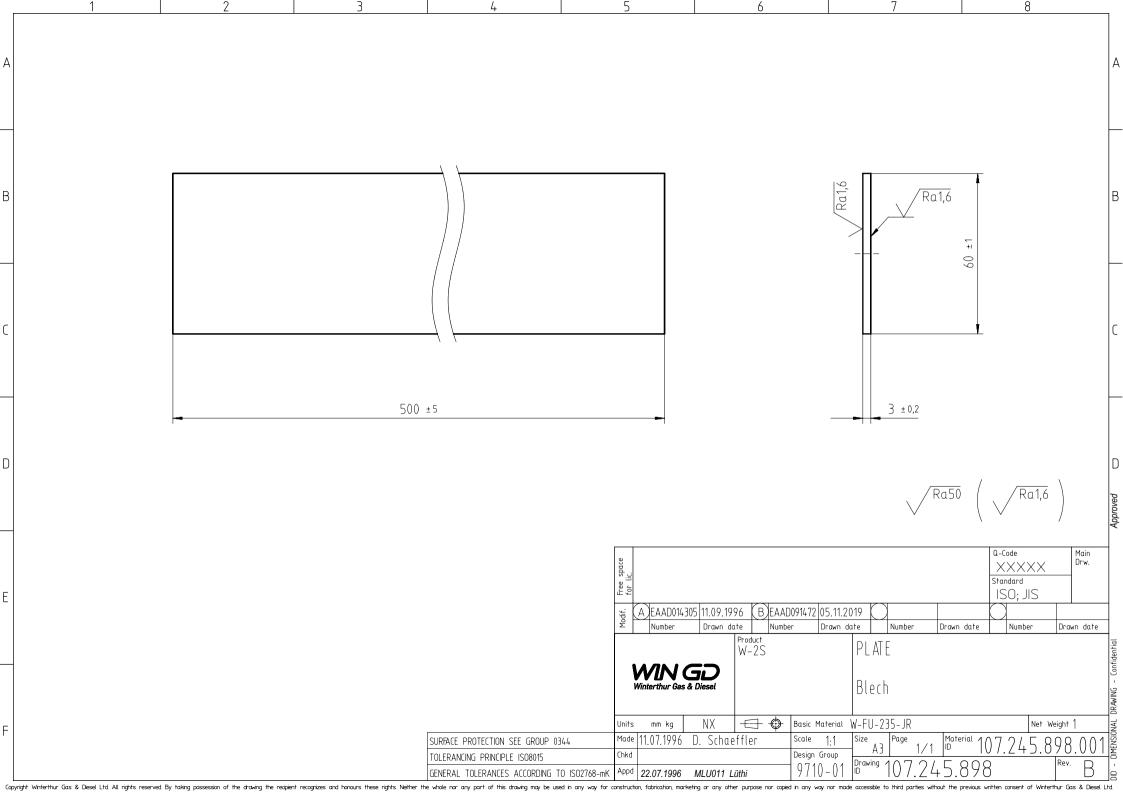


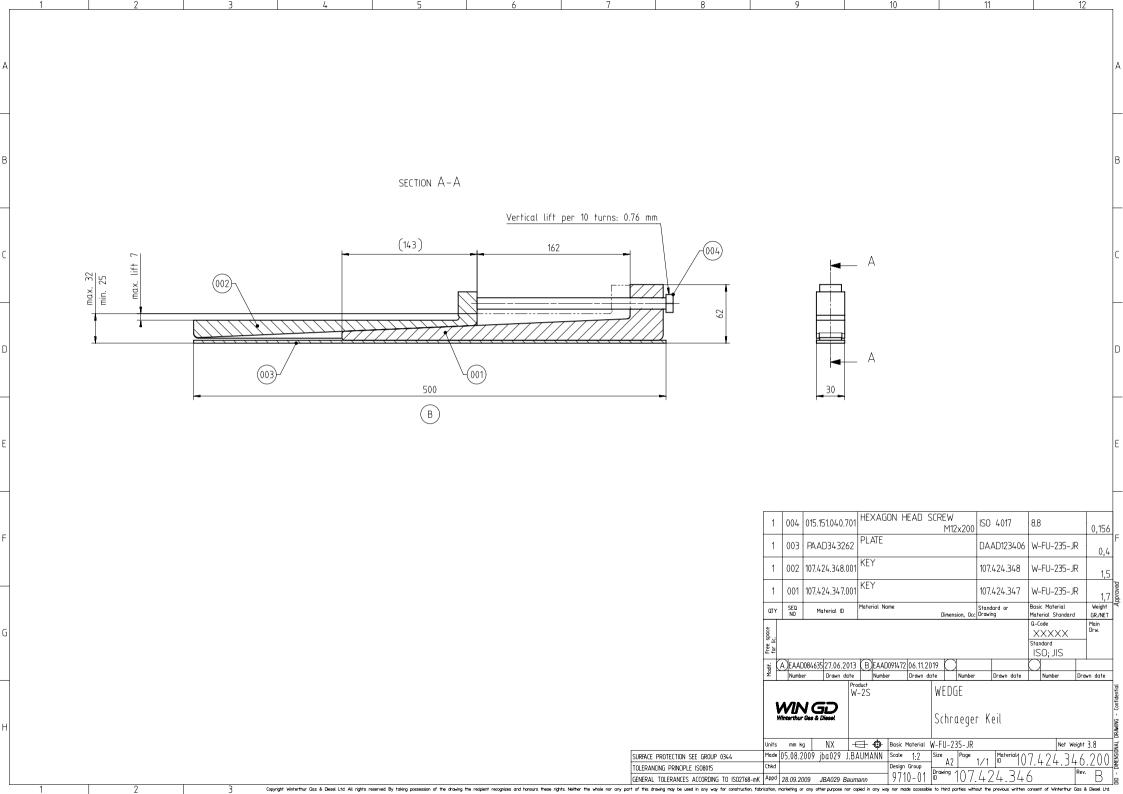


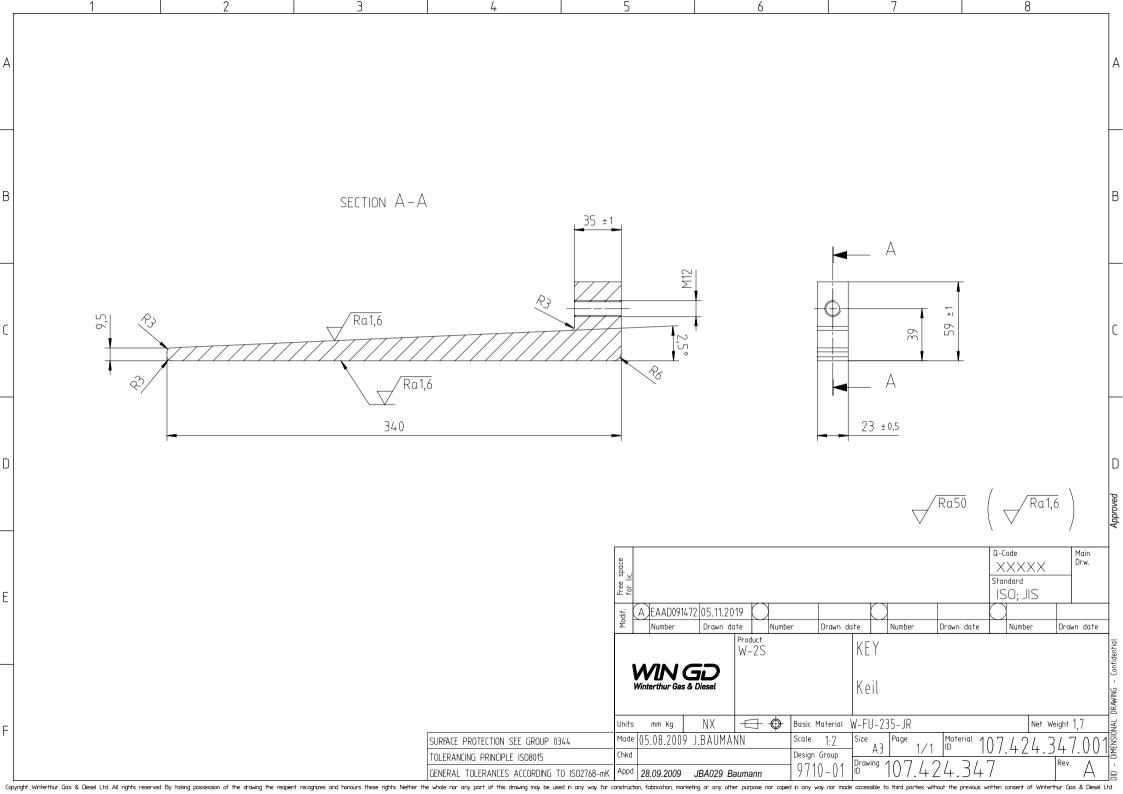


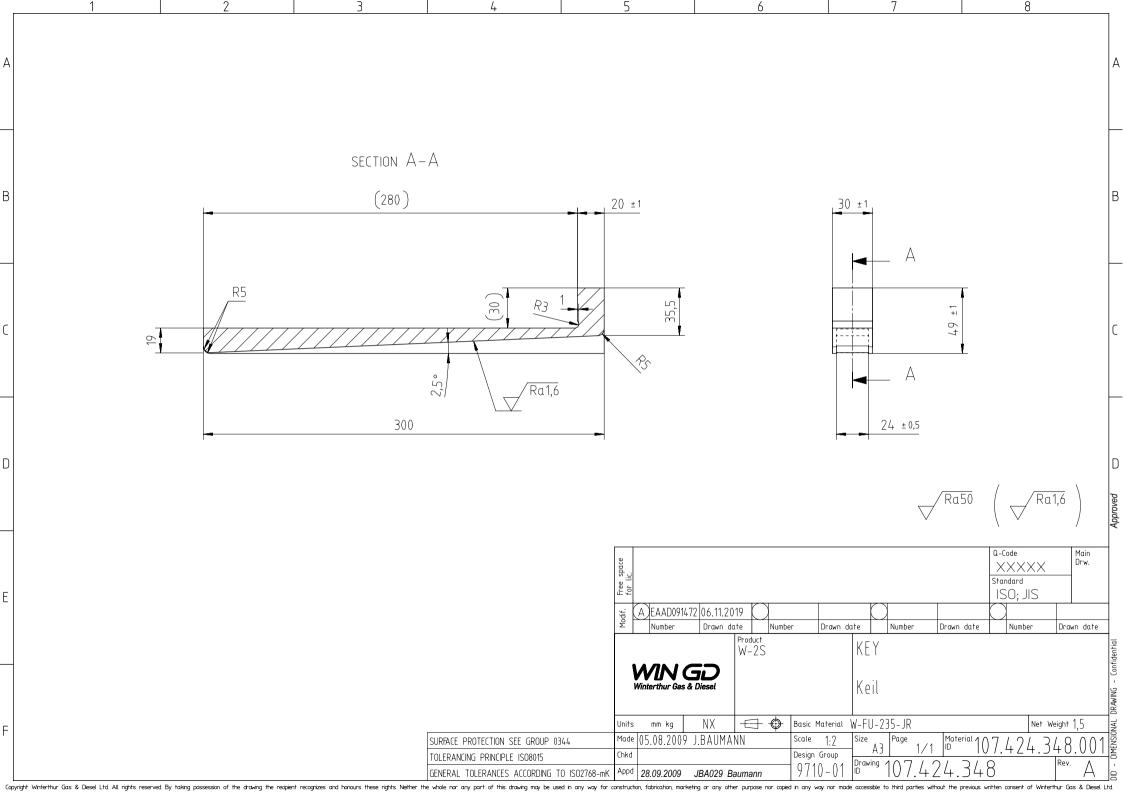


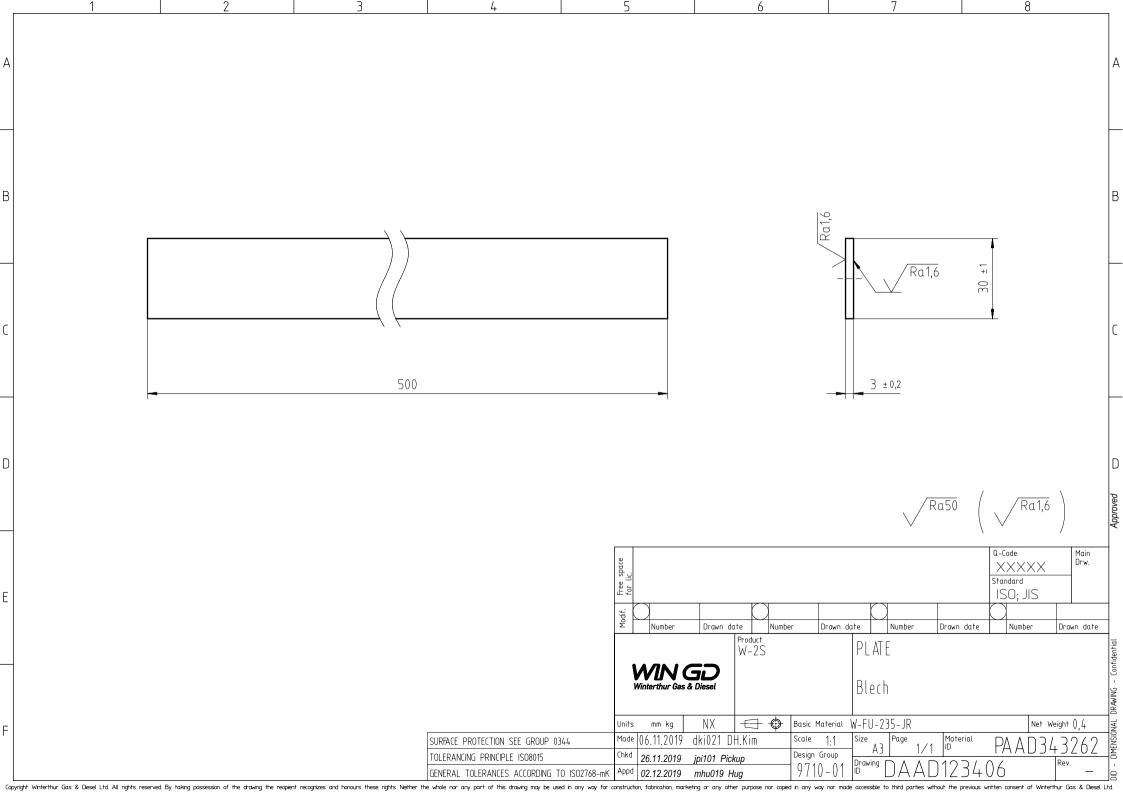














# MIDS - WinGD X62/-B/DF - Tool Engine Alignment (DG9710-01)

# TRACK CHANGES

DATE	SUBJECT	DESCRIPTION
2016-11-04	DRAWING SET	First web upload
2016-11-25	DAAD083181	Drawing set for 7X62/-B/DF - added
2019-03-28	DAAD113246	Drawing set for 8X62/-B/DF - added
2019-07-17	DAAD032572 DAAD053037 DAAD083181 DAAD113246 DAAD115197 DAAD115317 DAAD115393 DAAD115462	Arrangement drgs – new revisions and new executions for alignment by wedges introduced
2020-09-29	107.245.895 107.246.895 107.246.894 107.245.898 107.424.346 107.424.347 107.424.348	Wedge assembly drgs – new revision
2021-05-20	DAAD032454	Jacking Screw drg – new revision
2023-01-19	PAAD325788 PAAD167768 PAAD325977 PAAD103372 PAAD326134 PAAD242995 PAAD326249 PAAD322052	New main drgs revisions - added

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