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Boretech HDD swivel maintenance

Product description:

The design of Boretech HDD swivels are based on a nominal load with a high safety factor. This means that the swivels can handle extreme loads under normal circumstances without breaking. Usage above nominal values will have a negative effect on the lifetime of the bearings.

The universal joint connecting pins are designed to be the weakest part of the construction and fail safety of the swivel. If loads exceed the nominal values the pins will be the first components to deform and break at extreme overload. Breakage of the connecting pins prevents extreme damage on other construction parts of the swivel except for the bearings.

The connection pins need to be visually inspected before every job on damage and deformation. The lifespan expectancy graph supplies information about the lifetime expectancy of the bearings under normal usage and extreme circumstances. The lifetime of the bearings will shorten with loads above normal if max. rpm is not exceeded.

Construction

The bearings are lubricated with heavy duty oil to maintain optimal operation, cooling and load of the bearings under extreme circumstances.

By using a grease pressured compartment in the swivel are pressure differences between the in- and outside the swivel extremely low. This reduces the mechanical loads on the seals and extends the life of the seals.

Temperature change during usage will cause the lubricants to expand, the grease pressure compartment will absorb this expansion by releasing some of the grease out of the compartment. It is necessary to refill the compartment with grease after using the swivel with a grease hand pump.

The grease pressure compartment also functions as a buffer in case the outer seal is damaged, it prevents that contamination can infiltrate the oil and damage the bearings. Even though the bearings have a relative high tolerance for contamination it will shorten the life of the bearings. The lifetime of the bearings in the graph is based on fully functioning seals and clean oil in the swivel and is just an indication of the expected life of the swivel.

Maintenance:

The swivel needs to be cleaned thoroughly after usage and the pressure grease compartment needs to be refilled with clean grease, any water resistant grease can be used. When pumping grease in the compartment you will see that grease will come out through the seal along side the shaft. When the grease is clean the seal is still undamaged, if the grease is polluted you will need to replace the outer seal. The seal can be replaced easily without any special tools.

Greasing the swivel after every drilling is important to prevent corrosion on the seal areas. Corrosion is often the reason for damaged seals which can eventually lead to internal damage of the swivel. The life of the seals cannot be predicted because this relies too much on the external circumstances, maintenance and type of fluids.

We advise to replace the outer seal at least once every 500 operational hours and at least once a year or earlier when the seal is damaged.