



KOZANOĞLU

**KOZMAKSAN**

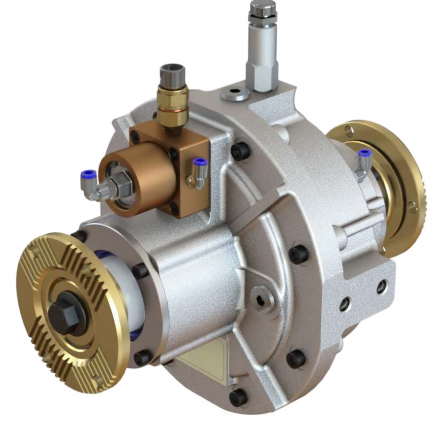
## KRD.36 Owner's Manual



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## KRD.36 OWNER'S MANUAL

KRD.36 is a Clutch System, specially designed for on-board equipment, road maintenance vehicles, fire trucks, sewage trucks, snow plough vehicle and off-road vehicles. No matter from what power source it is driven by, KRD.36 Clutch System will provide **HOT SHIFT FEATURE**.



### 1. DEFINITION

The Clutch System transmits the motion required for the operation without changing the direction of the rotation. ATF 320 or equivalent oil must be used. The PTO is pneumatic control with no need to stop the shaft rotation during engage/disengage operation.

### 2. TECHNICAL DATA

**Rotation :** The same of input

**Maximum Continuous Torque :** 640 KGM / 6276 Nm

**Maximum Instant Torque :** 800 KGM / 7845 Nm

**Maximum Rotation :** 5000 RPM

**Quantity of Oil :** 1.9 LT

### 3. ENGAGE-DISENGAGE



**Engage/Disengage process should be done at MAX. 800 RPM.**

**The Clutch System should be operated at 6 - 8 bar air for Engage/Disengage**

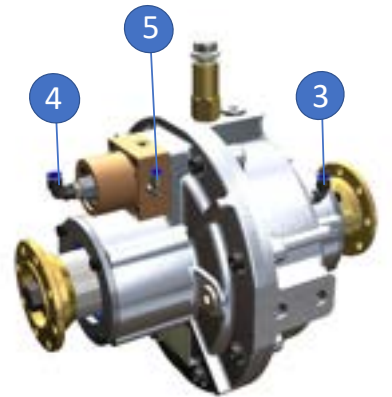
**3.1** - Air must be supplied from fitting number 3 to engage clutch.

**3.2** - The operator should wait 3-5 secs after engaging the clutch initially.

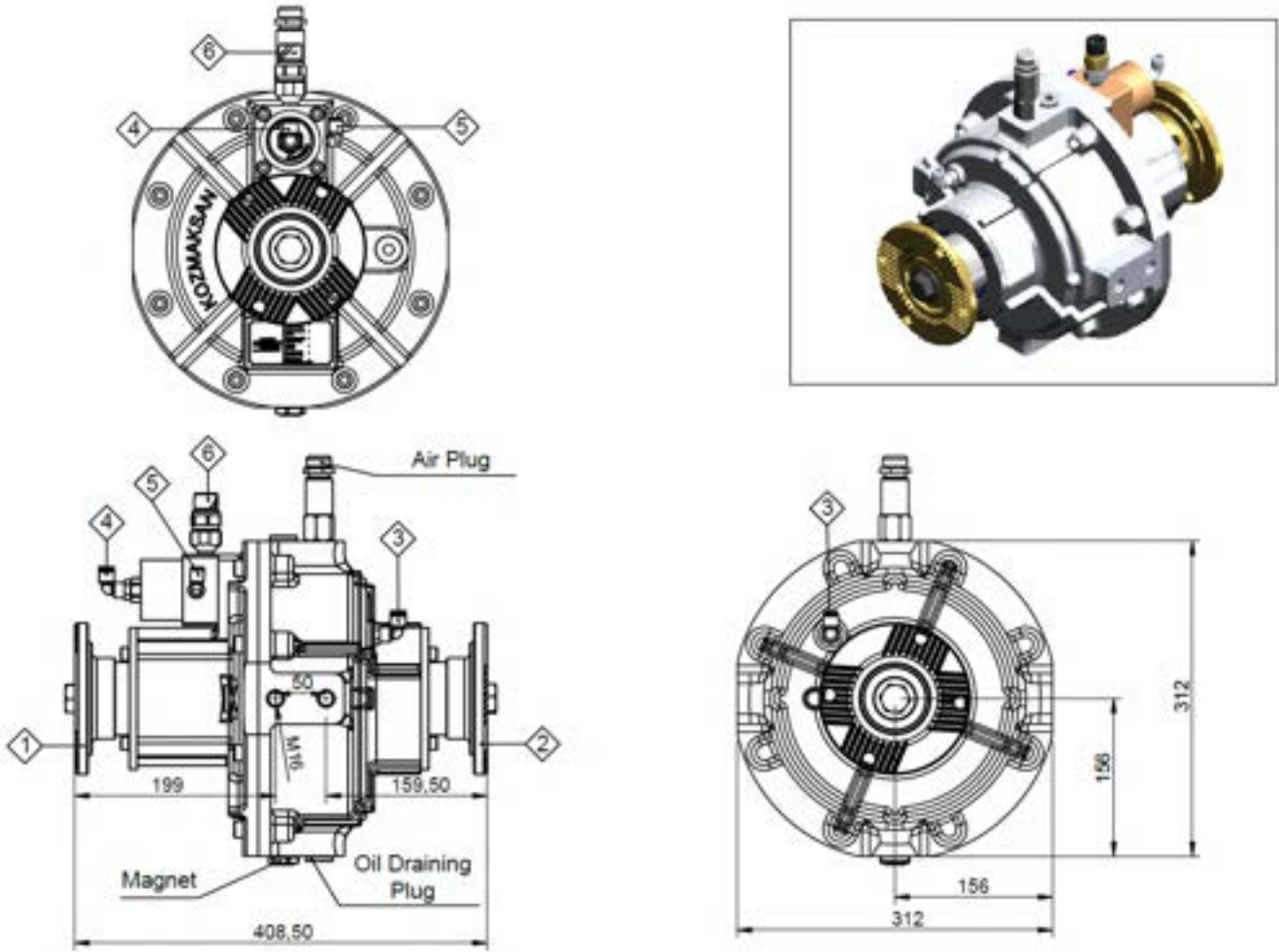
**3.3** - Next, mechanical locking should be engaged by supplying air into fitting number 4.

**3.4** - Air should be discharged from fitting number 3 after mechanical locking process. Clutch will continue to transmit the rotation with mechanical system. This operation configuration yields a durable product thanks to mechanical system inside.

**3.5** - Air should be provided through fitting number 5 while air discharged from elbow number 4 to disengage the clutch system. This will disengage the mechanical lock and engage the clutch system.



#### 4. DIMENSIONS



#### 5. SERVICE

##### OIL FILLING

The Clutch System is shipped without oil. Oil should be filled using the oil filling mechanism before running the equipment. The oil filling operation should be made on the ground. The correct oil level is the top level shown on the indicator. The oil should be totally clean. You are required to use only the recommended oil. **(ATF 320 or equivalent oil)** Using any oil other than the recommended oil will nullify the warranty coverage.



## 6. MAINTENANCE

### 6.1 OIL LEVEL INSPECTION

Maintenance should be conducted before and after long operation time. Maintenance should be made on ground level when the vehicle is not running. If the oil level is less than required, oil should be added.

### 6.2 OIL REPLACEMENT

Make sure that contaminated oil is totally drained and that you are using recommended oil. Mixing old and new oil would cause damage to gearbox components ( shaft, gear, bearing etc.)



### 6.3 OIL CHANGING

First oil change should be done after 100 hours from the commissioning of the Clutch System. Oil change should be done when the oil is cool. Draining could be made by removing the drain plug. In order to accelerate the process, it is recommended to remove the filling plug as well. Clean the drain plug before mounting it back. Subsequent oil changes should be done once in every 1000 hours or once a year. Oil should be warm to make sure it is liquid enough for draining quickly without any residue.

**IMPORTANT**

**During oil change, do not touch the hot oil. Act in compliance with the country legislations in the disposal of the waste oil. Do not pollute the environment.**

### 6.4 IDENTIFICATION OF OIL LEAKS

Check for oil leaks periodically. Check for any oil leaks in vehicle operation area and surroundings. If you detect any oil leaks, intervene and add oil if necessary, and contact with KOZMAKSAN if the problem persists.



## 6.5 GENERAL EQUIPMENT INSPECTION

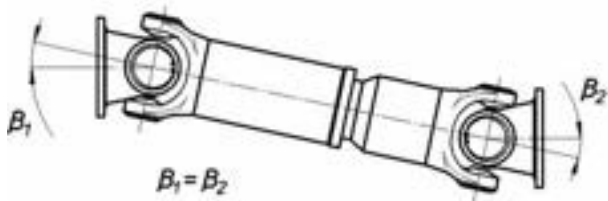
Inspect the equipment and parts periodically. If needed, tighten the loose bolts.

## 7. MOUNTING INSTRUCTIONS

- There must be special suspension kit to install the Clutch System.
- The product's brackets should be installed on proper locations of the chassis. Consult Kozmaksan if you have doubts.

### NEVER USE WELDING FOR INSTALLATION.

- Balanced shafts should be used.
- U-joint flanges should be parallel. This configuration prevents vibration and noise. Moreover, the shaft of main transmission, the product and other components should be aligned accordingly.  $\beta_1$  and  $\beta_2$  angles should be identical. These angles may vary due to chassis type and should be between  $3^\circ$ - $7^\circ$ .



| SPEED    | OPERATING ANGLE |
|----------|-----------------|
| 5000 RPM | $3^\circ 15'$   |
| 4000 RPM | $4^\circ 15'$   |
| 3000 RPM | $5^\circ 30'$   |

- The shaft of the PTO and transmission should be installed with u-joint bolts. U-joint screw dimensions should match with equipment and prevent any possible friction and collision. Yokes and reference points on the shafts should be checked to make sure they are appropriate.

## 7. MOUNTING THE SUPPORT/BRACKET

Support/Bracket must be designed or provided by customer depending on the project and mounted on the points indicated on "Figure A" with the bolt on the "Figure B" provided by Kozmaksan. Please apply number 2 Locktide to "C" and number 2 Locktide to "D" area of bolt.



Number 1 Locktide



Number 2 Locktide

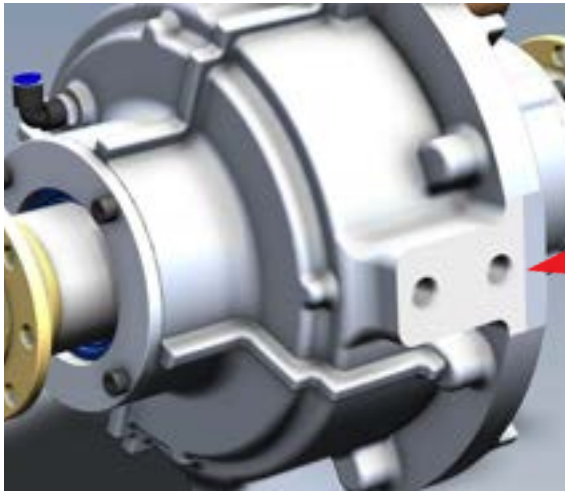


Figure A

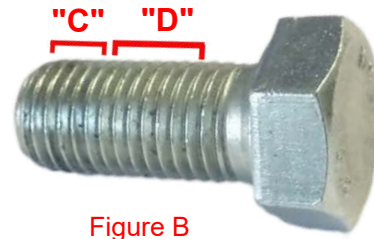
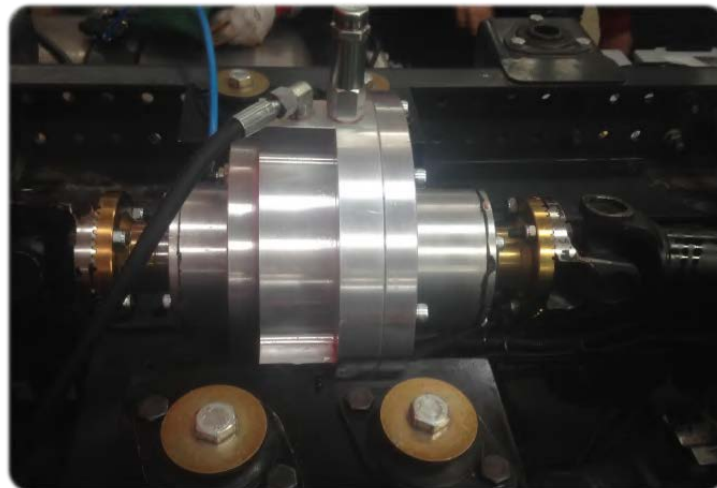


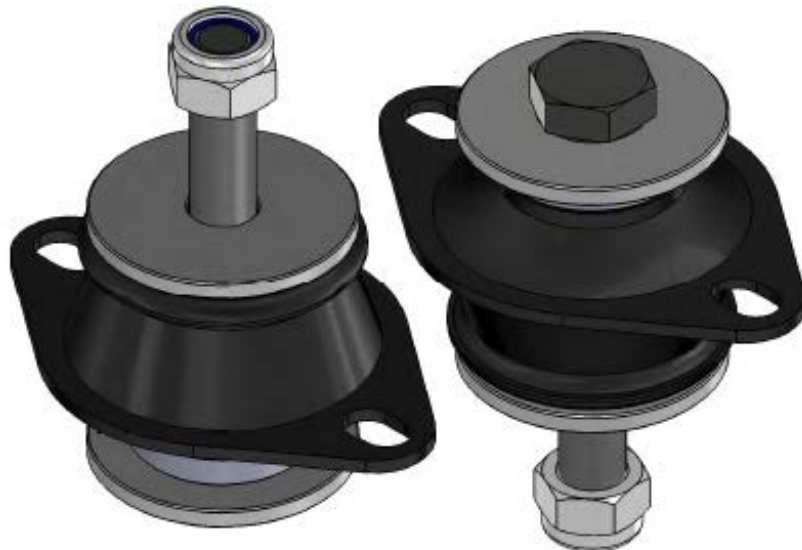
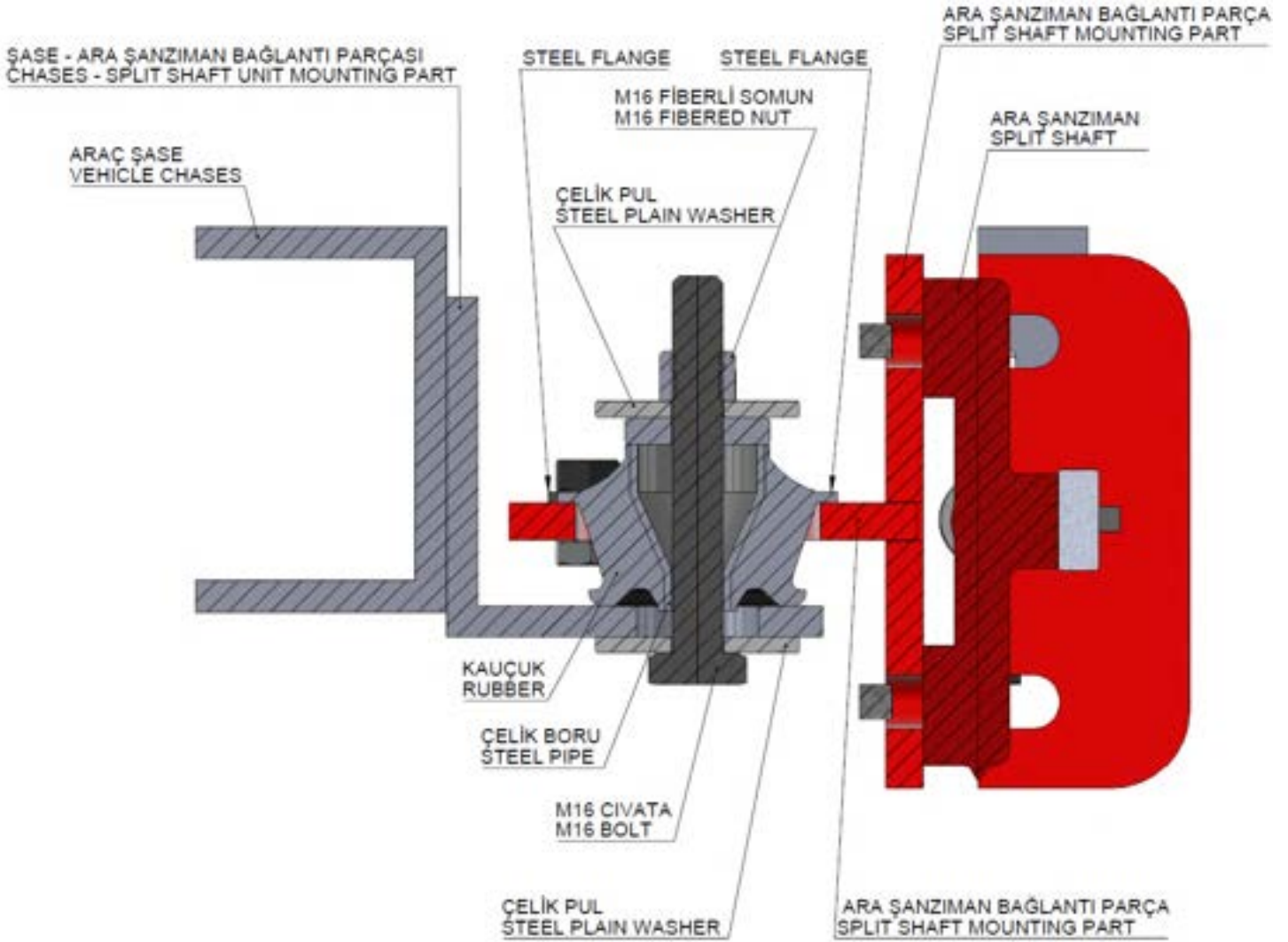
Figure B

C area = 5 mm  
D area = 15 mm

## Installed KRD.36



## 8. SHOCK ABSORBER MOUNTING







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**THANK YOU FOR CHOOSING US!**

visit [www.kozmaksan.net](http://www.kozmaksan.net) for more...

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DIRECTION TO THE SECTOR  
JUST AS WE GIVE  
SHAPE TO THE  
STEEL**

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