

# UARA.400.2.H I.ISO-II.ISO OWNER'S INSTRUCTIONS



**KOZANOĞLU**  
**KOZMAKSAN**  
HYDRAULIC PUMPS & POWER TAKE-OFFS MANUFACTURING LIMITED CO.  
HİDROLİK POMPA ve ARA ŞANZİMAN PTO İMALAT SAN. LTD. ŞTİ.

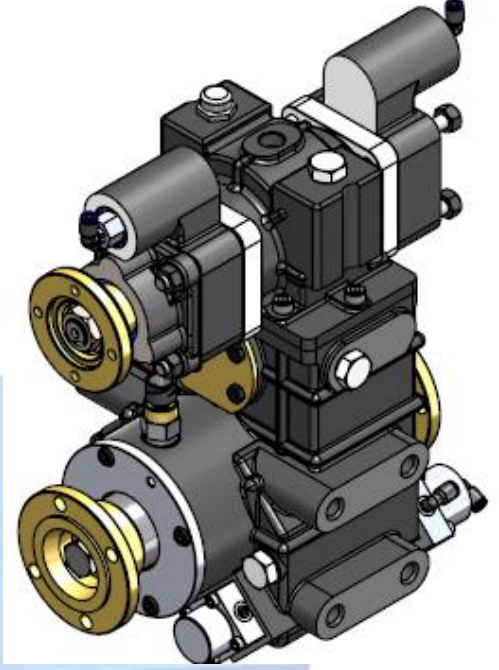
## 1. APPLICATIONS

Fire Fighting Truck

Water Truck

## 2. DEFINITION

UARA.400,2.H I.ISO-II. ISO Split Shaft PTO can be used on three basic position. While truck is at mobile position only main shaft can be engaged, while truck is at mobile position main shaft and top shaft can be engaged simultaneously, while truck is at stationary position top axis can be engaged.



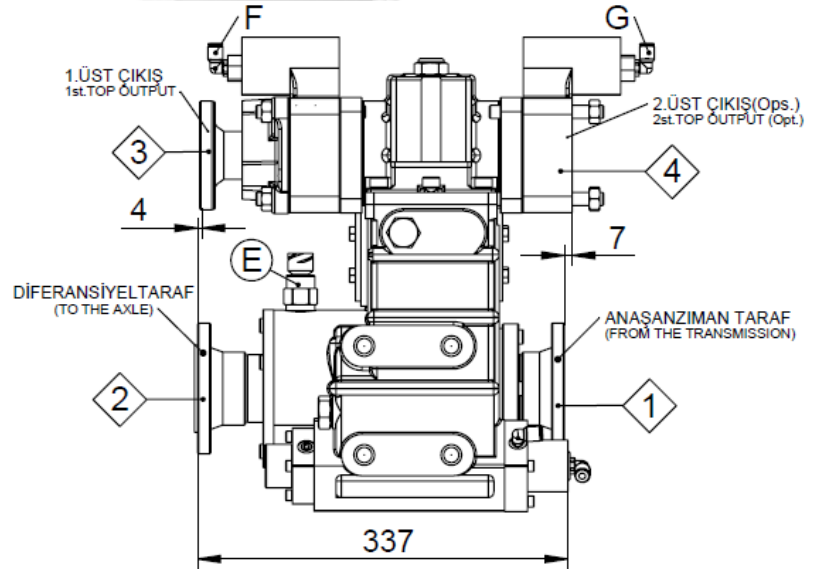
**2.1** UARA.3005 takes power from main shaft to make equipments work.

For input and output flanges;

ISO 8667, ISO 7646, ISO 7647 std. are matched.

**2.2** UARA.400,2.H I.ISO-II.ISO, Split Shaft PTO

Has 2 outputs at the top axis. ③ + ④



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**2.3** UARA.400,2.H I.ISO-II. ISO Split Shaft PTO Engage/Disengage process are done by synchromesh.

Synchromesh system are controlled by 6-8 bar air pressure.

**2.4** UARA.400,2.H I.ISO-II. ISO Split Shaft PTO requires SAE 80 W 90 EP type oil or equivalent oil.

## 3. TECHNICAL DATA

This split shaft warrant below values in case it is used proper.

### 3.1. MAIN INPUT-OUTPUT

Maximum Continues Torque 4300 ( Nm)

Maximum Instant Torque 5590 ( Nm)

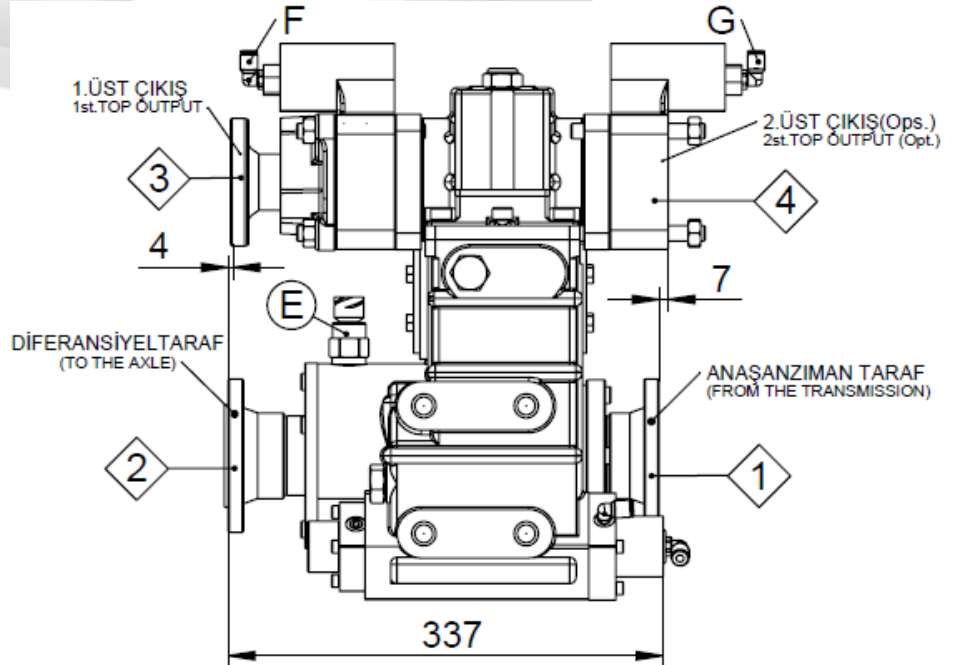
Maximum Rotation 3600

### 3.2. TOP OUTPUTS +

Available Ratios 1/1.5 – 1/1.8

Max. Torque 340 (Nm)

Power [KW] (1000 RPM) 55 (Kw)



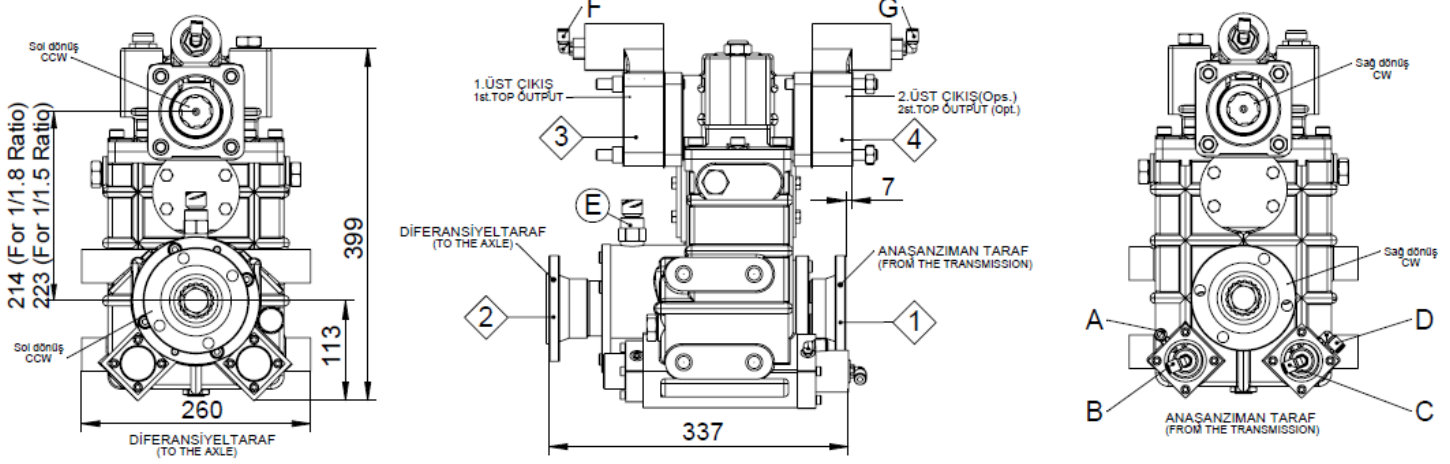
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## 3.4. SENSE OF ROTATION



## 4. ENGAGING & DISENGAGING

Generally, engaging-disengaging operation is made by the 6-8 bar double-action pneumatic cylinder. To keep engage or disengage stable there is safety catch system.

**4.1** A: By air inlet top axis is engaged  $\diamond 3 + \diamond 4$

B: By air inlet top axis is disengaged  $\diamond 3 + \diamond 4$

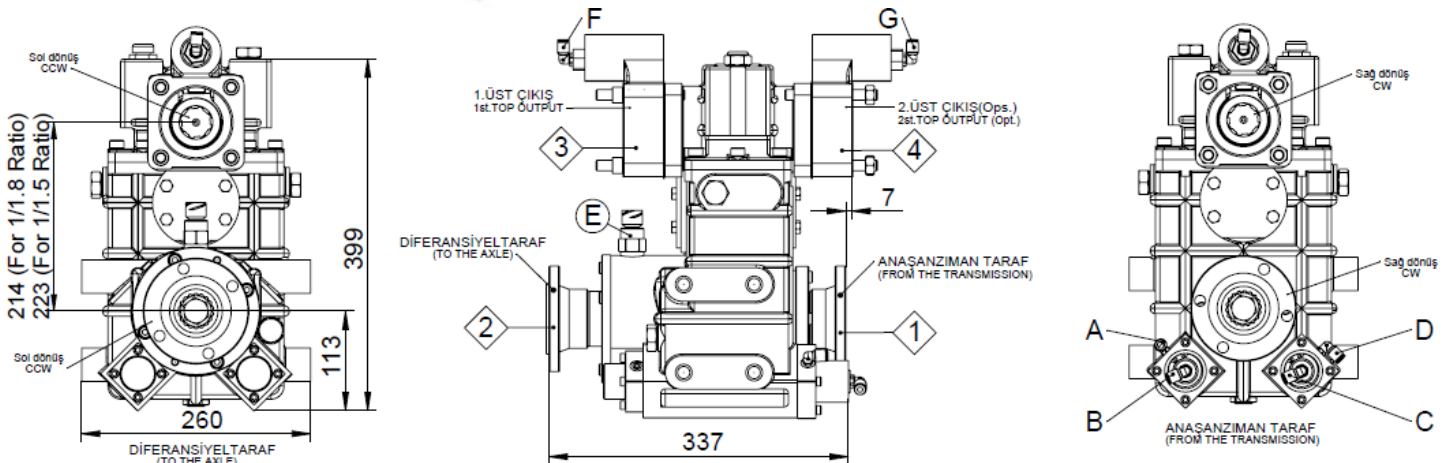
C: By air inlet main axis is engaged  $\diamond 1 \& \diamond 2$

D: By air inlet main axis is disengaged  $\diamond 1 \& \diamond 2$

F: By air inlet 1st. Output is engaged ( First A air inlet should be active)

G: : By air inlet 2nd. Output is engaged ( First A air inlet should be active)

## 5. DIMENSIONS



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## **6. SERVICE & OIL FILLING**

The split shaft units are shipped as unoiled. Oil should be filled into the Split Shaft PTO using the oil filling mechanism, before running the vehicle. 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. **(SAE 80 W 90 EP or equivalent oil)** In case of using any oil other than the recommended oil, the vehicle is out of warranty coverage..

## **7. MAINTENANCE**

### **7.1 OIL LEVEL CONTROL**

Maintenance should be made before and after long trips. Maintenance should be made at ground level and when the vehicle is not running. In case the oil level is less than required, oil should be added..

### **7.2 OIL REPLACEMENT**

Make sure that old oil is totally drained and make sure that you are using recommended (correct) oil. In case of mixing old and new oil; This situation is going to cause damage of components of gearbox ( shaft, gear, bearing etc.)

### **7.3 OIL CHANGING**

First oil changing should be made following 100 hours after the Split Shaft Unit has started to run. Oil changing should be made when the oil is cold. Draining could be made by removing the drain plug. In order to accelerate the process, it is recommended to remove the filling plug also. Before re-starting, the drain plug is required to be cleaned. Subsequent oil replacements should be made once in every 1000 hours or once a year.

### **IMPORTANT**

**During oil replacement, 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.**

### **7.4 IDENTIFICATION of OIL LEAKS**

Check for oil leaks periodically. Check for any oil leaks in the area where the vehicle is operated and the surroundings. In case of detecting any oil leaks, Prevent oil leaking, add oil if necessary, contact with manufacturer firm KOZANOĞLU KOZMAKSAN.

### **7.5 GENERAL EQUIPMENT CONTROL**

Check for equipments and parts of product periodically. If needed, make bolts tighten



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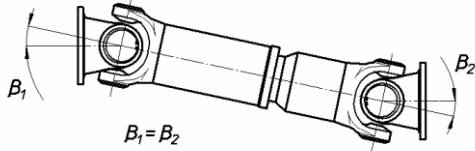
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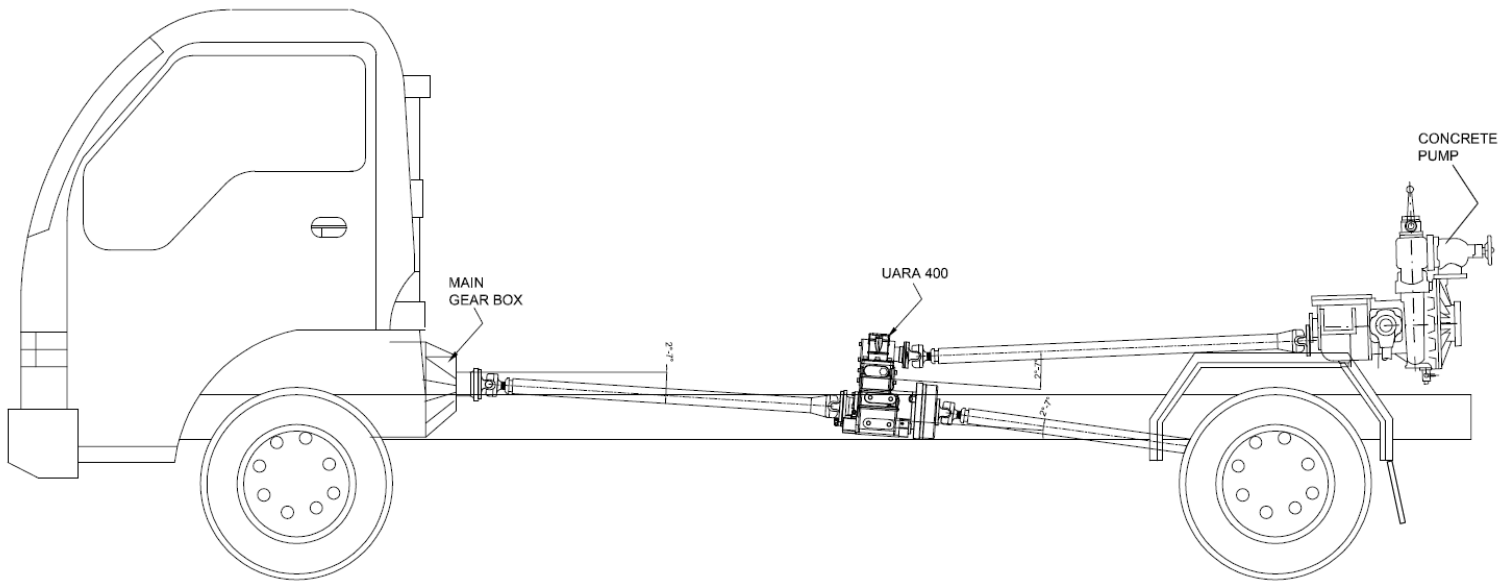
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## INSTALLATION

- There must be special suspension kit to install the PTO
- The gearbox's brackets should be screwed proper location on chassis. Before screw the proper location on chassis, approval should be received by manufacturer. **NEVER INSTALL IT WITH WELDING PROCESS**
- Balanced shafts should be used
- U-joint flanges should be parallel. This analogy avoids vibration and noise. Also shaft of main transmission, the gearbox and other components should be install compatible to this parallelism.  $\beta_1$  and  $\beta_2$  angles should be identical. These angles are changeable due to chassis type and ratio between  $3^\circ$ - $7^\circ$



- Shaft of PTO and transmission should be install with u-joint bolts. U-joint screw dimensions, should match with equipments and should avoid any possible friction and collision. Yokes and reference points which placed on shaft should be controlled and should be checked for making sure.



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