

### **1.APPLICATIONS**

Vacuum truck

Combination Sewer Cleaning Truck

Fire Fighting Truck

## 2.DEFINITION

UARA.3005 is a Split Shaft PTO which is designed with automatic hot shift clutch for easy engage process. UARA.3005 can be engage no matter truck is moving or not, you can use it for both situation.

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 match.

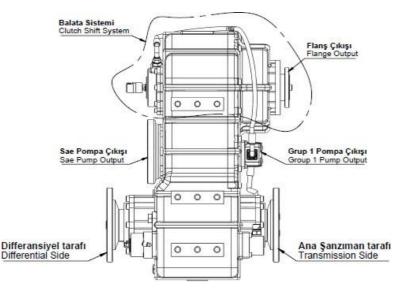
<u>2.2</u> UARA.3005 split shaft has 2 outputs in its middle axial and 1 otput in its top axial.

2.2.1 One of middle output is SAE B (Z:23),

Second output of middle axis is group 1 Pump

output (DIN 5463 6x21x25).

2.2.2 Top output ; ISO 8667, ISO 7646, ISO 7647 std. flanges are matched.







2.3 UARA.3005 Split Shaft PTO has hot shift clutch (bronze-steel disc) system. Hot shift clutch system ensures engage or disengage the equipments without the necessity of make the vehicle stopped. The split shaft is controlled by pneumatic system.

(Caution: Engage/disengage process should be done up to 1000 RPM)

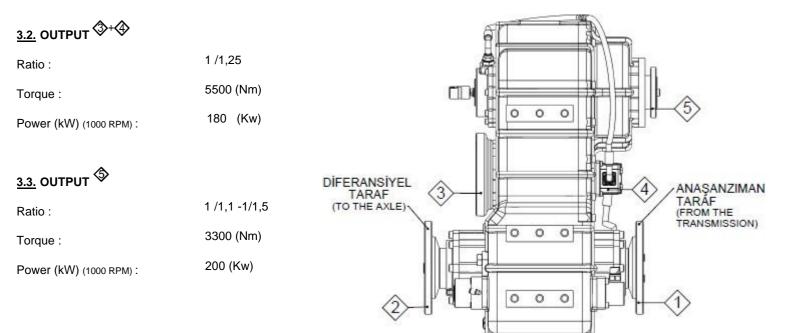
2.4 UARA.3005 split shaft requires ATF 320 type oil or equivalent oil.

## **3. TECHNICAL DATA**

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

## 3.1. MAIN INPUT-OUTPUT &&

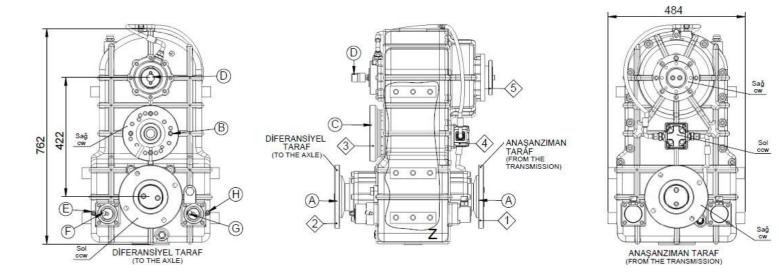
Maximum Continuous Torque :	29400 Nm / 3000 kgm / 21700 lb-ft
Maximum Instant Torque :	37265 Nm / 3800 kgm / 2748 lb-ft
Maximum Rotation :	2500 – 3300 rpm







## 3.4. SENSE OF ROTATION

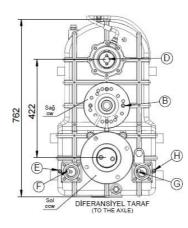


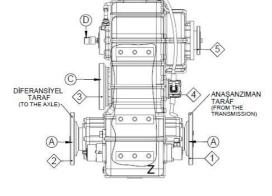
### 4. ENGAGING & DISENGAGING

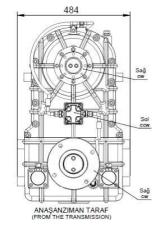
Generally, engaging-disengaging operation is made by the 6-8 bar double-action pneumatic cylinder. To keep engage or disengage stable there is safety catch system. For top output where the clutch mechanism is located, there is rotary union (air inlet to engage the clutch discs) and air should apply **continuously**.

- <u>4.1</u> Main Drive ; is driven by (E) air inlet, Disangage by (F) air inlet &&
- <u>4.2</u> Middle ; is driven by (G)air inlet, Diaengage by (H) air inlet. (During this process clutch pedal should be pressed and wait aprx. 15 seconds)
- 4.3 Top shaft
   ; after middle axial is engaged by (G)air inlet , top axial can be driven by (D) air inlet (top axis revolution value should be max.1000 RPM)

In case of not following these instructions, the vehicle is out of warranty coverage.











## 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. (ATF 320 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 situatation 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

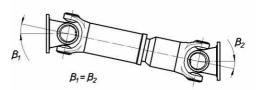
Check for equipments and parts of product periodically. If needed, make bolts tighten

#### 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. β1 and β2 angels should be identical. These angels are changeable due to chassis type and ratio between 3°-7°



SPEED	OPERATING ANGLE
5000 RPM	3° 15'
4000 RPM	4° 15'
3000 RPM	5° 30'

Shaft of PTO and transmission shuld be install with u-joint bolts. U-joint screw diemensions, 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.

