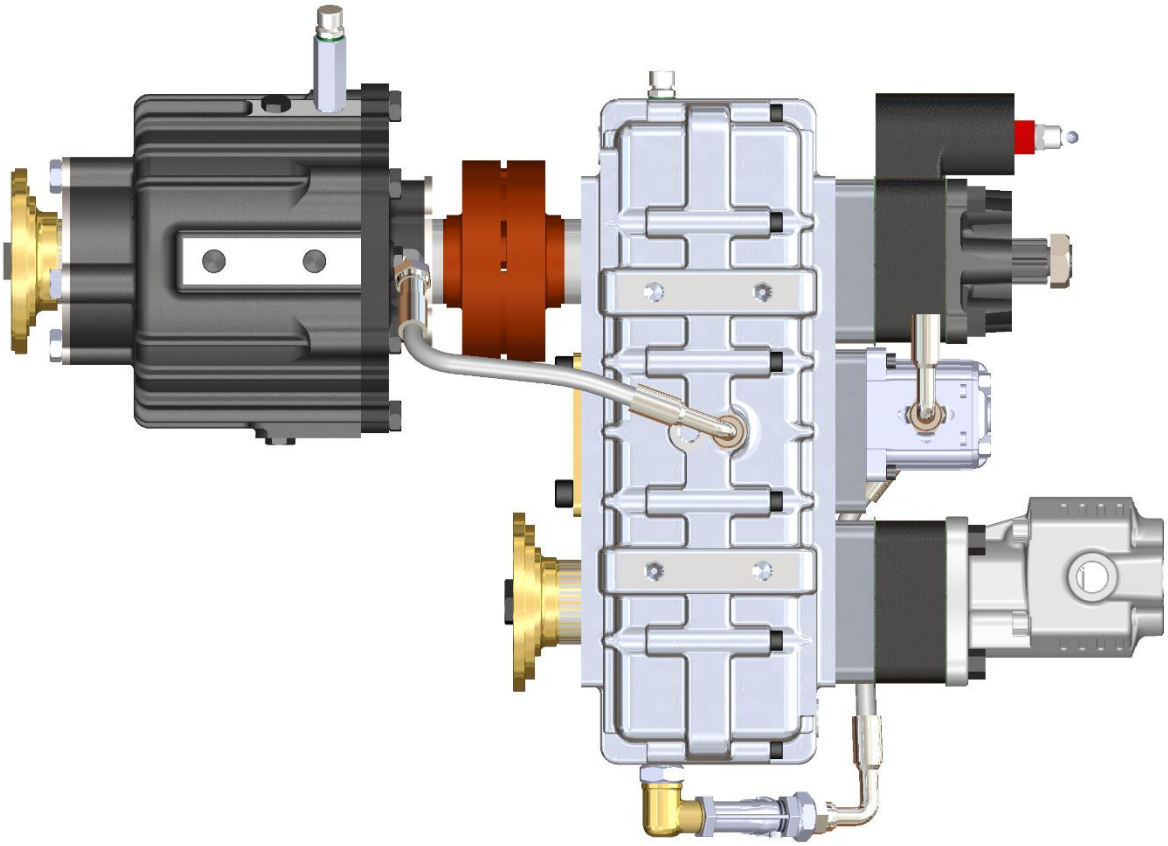
Rev / Date : 01 – 05.08.2021

KOZANOĞLU

KOZMAKSAN

HYDRAULIC PUMPs & POWER TAKE-OFFs MANUFACTURING LIMITED CO.

HİDROLİK POMPA ve ARA ŞANZIMAN PTO İMALAT SAN.LTD.ŞTİ.



KRD.28.5.KRD.16.ZF.1.636.KIT.55.02.UF

USER MANUAL

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

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The pictures used in this manual are for demonstration purposes and may not be identical to the actual purchased products

Safety Information

The following information is for your safety. Make sure to read and understand them before attempting to use the equipment.

Overall Safety

✓ Carefully read the user manual provided and take notice of the instructions indicated.
✓ The important sections for operator safety and a prolonged product life are marked with symbols. Take notice of such symbols.
✓ Make sure to check if the instructions you follow and the tools you use are intended for the work you are engaging in.
✓ Never work alone when doing repair or maintenance works under the vehicle.
✓ Ensure to mount the parts properly.
✓ Never use worn or damaged parts.
✓ Do not attempt any modification on the split shaft PTO or any other drive components of the vehicle.

Instructions for Operation in Cold Weather

For prevention of injuries and damage to the gearbox;

✓ Check the drive components of the vehicle.
✓ Do not attempt to use drive components without warming up thevehicle for a minimum period of 5 minutes.

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KRD.28.5.KRD.16.ZF.1.636.KIT.55.02.UF Features

KRD.28.5.KRD.16.ZF.1.636.KIT.55.02.UF is coupled with the driveline and provides the following functions:

- ✓ ISO pump output
- ✓ An output with synchromesh separator
- ✓ An output with clutch separator.

Product Features;

- KRD.28.5.KRD.16.ZF.1.636.KIT.55.02.UF has three axes.
- The gearbox has in-built lubrication system. A cooling system can be integrated into this lubrication system depending on the operating conditions.
- The gearbox has 3 equipment outputs on it.
- The output with clutch system can be engaged/disengaged while the system is still running.
- The output with synchromesh separator system cannot be engaged/disengaged while the system is still running.
- The control system is pneumatic.

Technical Data

Input

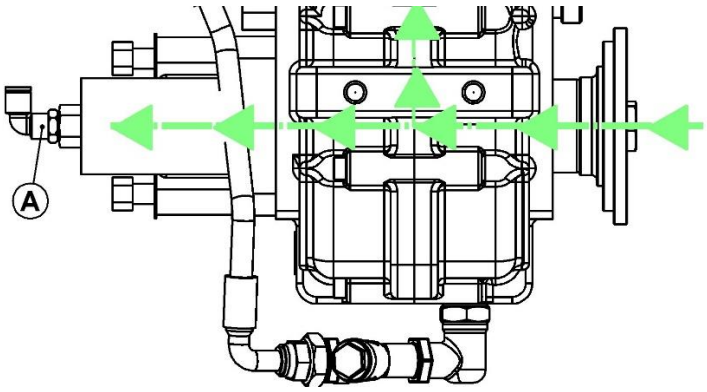
Max. Torque	-
Max. revolution	2000-2200 RPM

Output

Technical Drawing.(P.13)	**1st OUTPUT**	**2nd OUTPUT**	**3rd OUTPUT**
Power	50 KW	50 KW	110 KW
Max. Revolution	2000 RPM	3500 RPM	3500 RPM
Ratios	1/1	1/1.51	1/1.51

⚠ **This gearbox guarantees the indicated values provided that it is used in suitable conditions and safety rules are abided by.**

Engage and Disengage



As seen on Figure 1, the motion coming from the green arrow direction can be used to drive or not to drive the pump through manipulating air fitting A. Fitting A functions as control of the output.

FIGURE 1

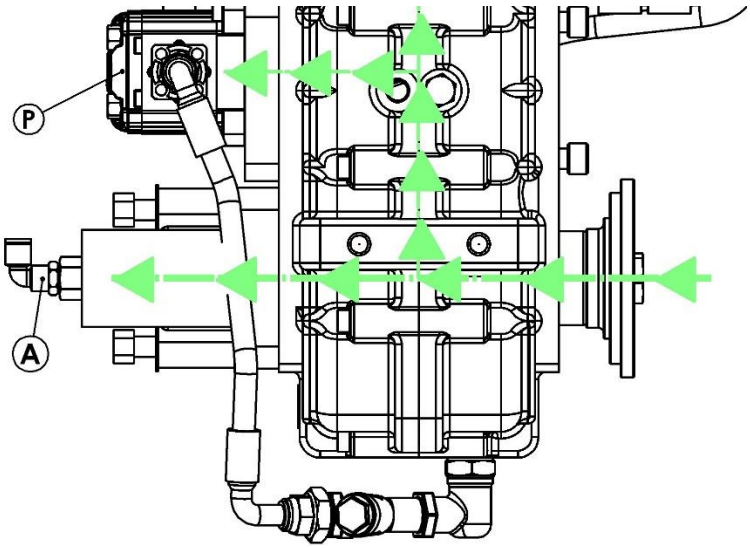


FIGURE 2

As seen on Figure 2, the motion coming from the green arrow direction is transmitted to next axis and drives the lubrication pump P. The pump will keep running as long as the system is active.

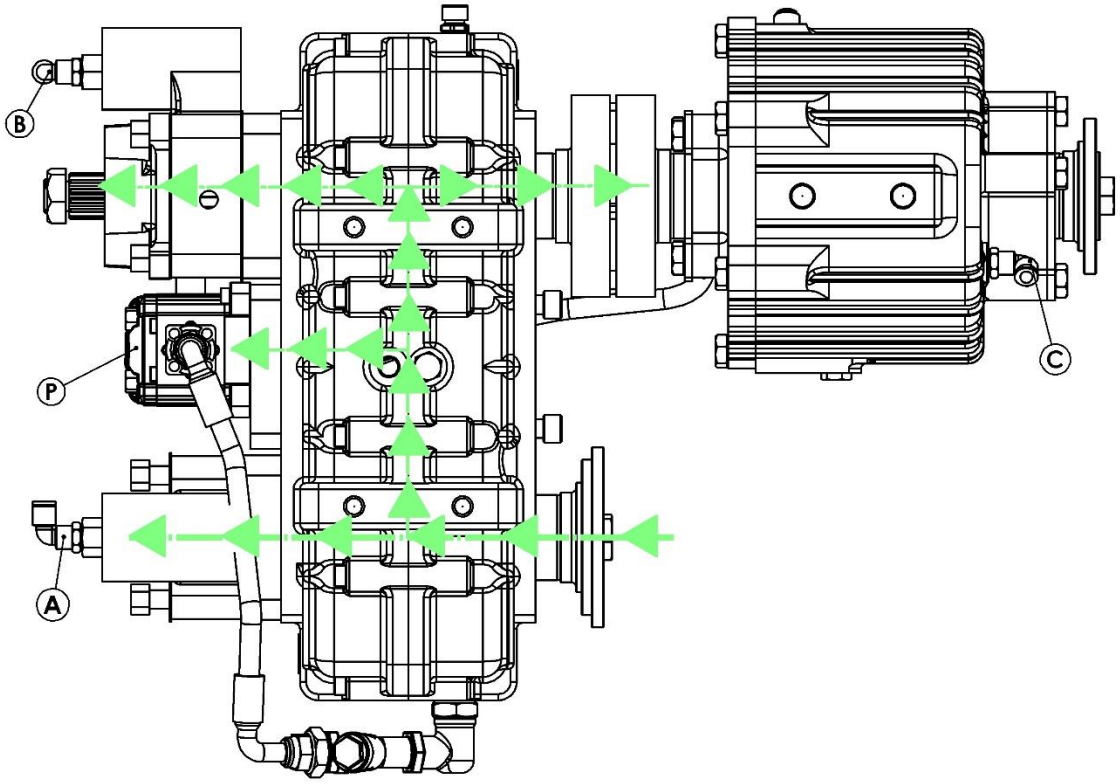


FIGURE 3

As seen on Figure 3, the motion coming from the green arrow direction is transmitted to the 3rd axis by increasing the rpm. It may /may not transmit the motion depending on the position of the fitting B. The crucial point is that the position of fitting B must BE changed when system is NOT running. Otherwise, it may result in permanent damage.

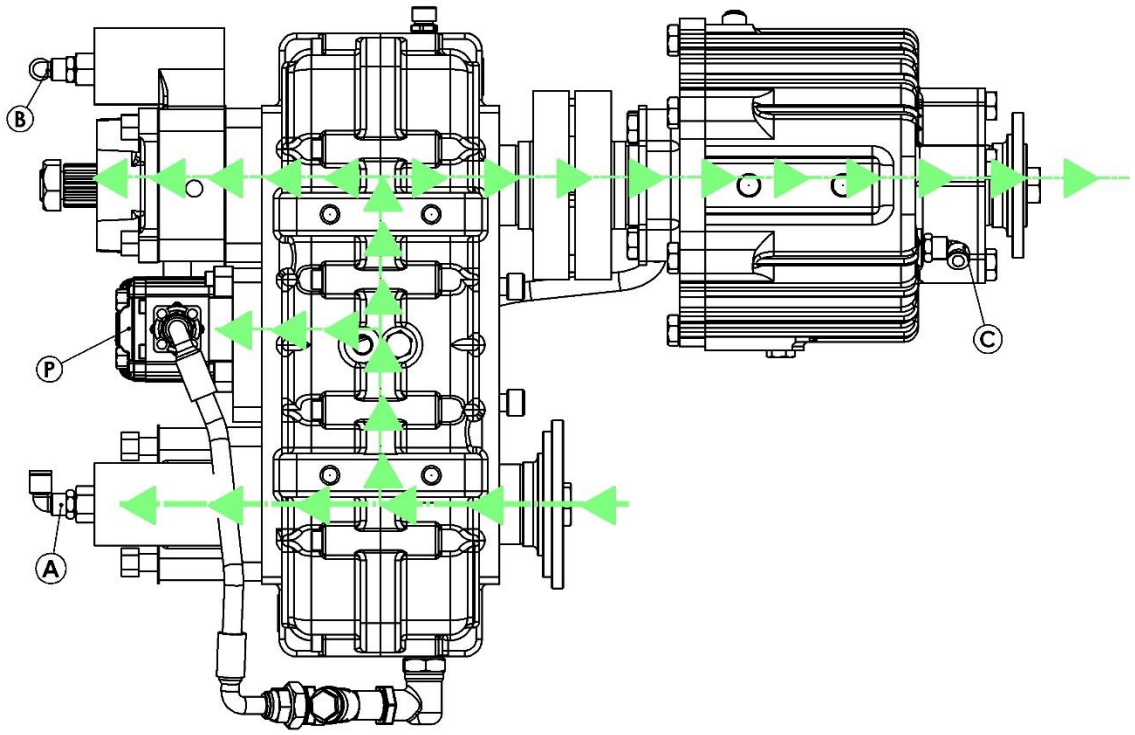


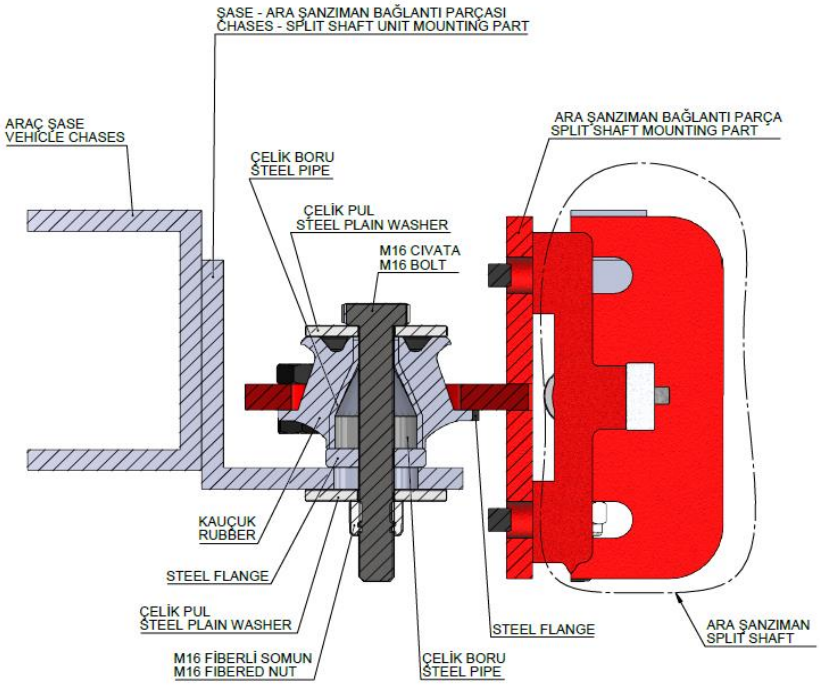
FIGURE 4

As seen on Figure 4, the motion coming from the green arrow direction is transmitted to the 3rd axis by increasing the rpm through the gears. The motion may/ may not be transmitted to clutch output depending on the position of the fitting C.

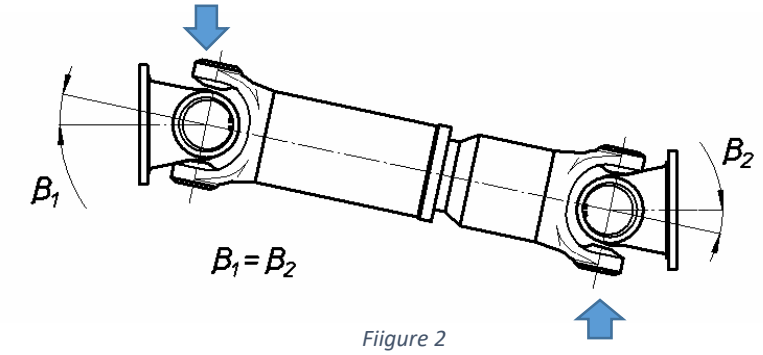
⚠ The above engage-disengage operations are effected once the main shaft is totally still. Do not attempt to engage or disengage while driving. Damage resulting from engagement or disengagement done during drive is not under warranty coverage.

Gearbox Mounting

Oil must be added into the gearbox before the mounting. After adjusting the position, the gearbox must be fastened with suitable connection brackets and rubber pads on the connection holes. Make sure that the loadbearing direction of the pads are correctly aligned with this gearbox. (See Figure 1)



U-connection flanges and the centers indicated by arrows must be parallel to each other in planar sense. Such a position would prevent vibration and noise. The transmission shaft must be mounted accordingly. B1 and B2 angles must be identical. These angles vary depending on the chassis and operating rpm, however they must be between 3°and 7° (Ensure that the shaft manufacturers have provided shaft connections complying with operating rpm-connection angle values). It must be borne in mind that connections with bigger shaft angle would cause noise (See Figure 2).



Fiigure 2

Servicing and Maintenance

Adding Oil

Gearboxes are shipped without oil inside. Oil must be added into them before commissioning through the oil filling mechanism. The task must be performed on a flat ground. Oil must be added by checking the oil level indicator provided on the equipment (or to the amount recommended by Kozmaksan). The oil must be completely clean. You should only use the recommended oil types.

Recommended Oil Types

- ATF320 Automatic Gearbox Oil

⚠**Oil capacity:**

- 3.2 Liter (75 cc oil must be added for each meters of hose between the fan and gearbox)

⚠ **Oil use other than the recommended oil types would put the equipment out of warranty coverage**

⚠ **The oil adding operation should be done by referring to the oil level indicator on the split shaft PTO. If the equipment does not have such an indicator, then fill oil to the extent recommended by KOZMAKSAN.**

Oil Level Inspection

Oil level should be inspected referring to the oil level indicator on the split shaft PTO. The equipment periodic maintenance should be performed weekly, and maintenance works should also be done after long operation hours. The maintenance must be performed on ground level and when the engine is off. Add oil if the oil levels are below the required limit.

Oil Change

Make sure to drain the used oil completely before changing oil. It can be drained by opening the drainage cap. It is recommended to remove the filling cap to accelerate the process. The drainage cap must be cleaned before fastening it back. Care must be taken to have a new oil from the types recommended. Mixing old and new oil would result in shortening gearbox oil life.

Oil Leakage Detection

Check for oil leakage periodically. Watch for oil leakage in vehicle operation site or surroundings. Upon detecting leakage, prevent it. After checking the available oil level, add oil into the equipment where necessary. Contact KOZMAKSAN if the oil leakage persists in spite of the intervention.

Avoid contacting hot oil during oil change for your occupational health. Remember to use your required personal protective equipment during split shaft PTO maintenance keeping in mind the occupational health safety requirements. Act in accordance with the applicable regulations considering environmental protection concerns while disposing the used oil.

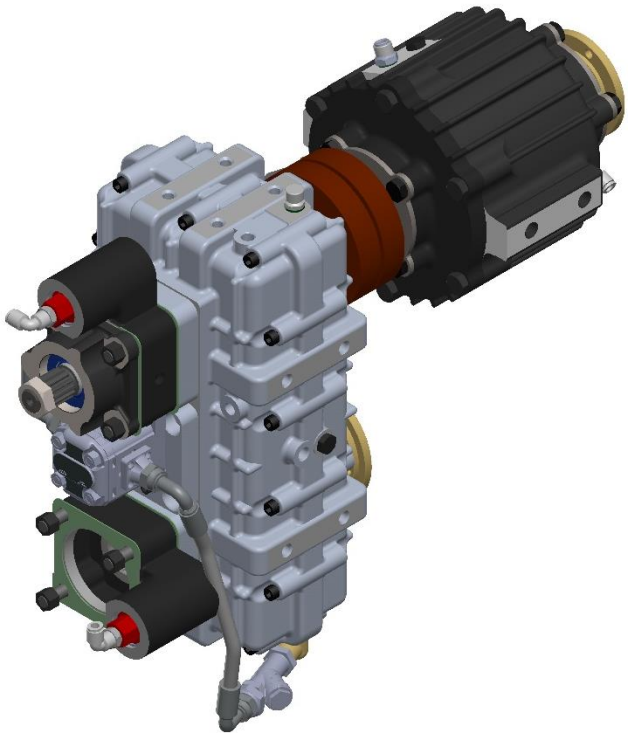
Maintenance Period	Actions
First 50 Hours or 1 Month	✓ Regularly check the gearbox for oil leakage. ✓ After 50 hours or 1 Month(whichever lapses first),change the oil.
First 50 to 300 Hours or 1 to 6 Months	✓ Regularly check the gearbox for oil leakage. ✓ After 300 hours or 6 Months (whichever lapses first),change the oil.
After First 300 Hours or 6 Months	✓ Regularly check the gearbox for oil leakage. ✓ After 300 hours or every year (whichever lapses first), change the oil. ✓ After every 1200 hours or 2 years (whichever lapses first),change the sealing components (O-ring, seal etc.). ✓ After every 2400 hours or 4 years (whichever lapses first), change all bearings.

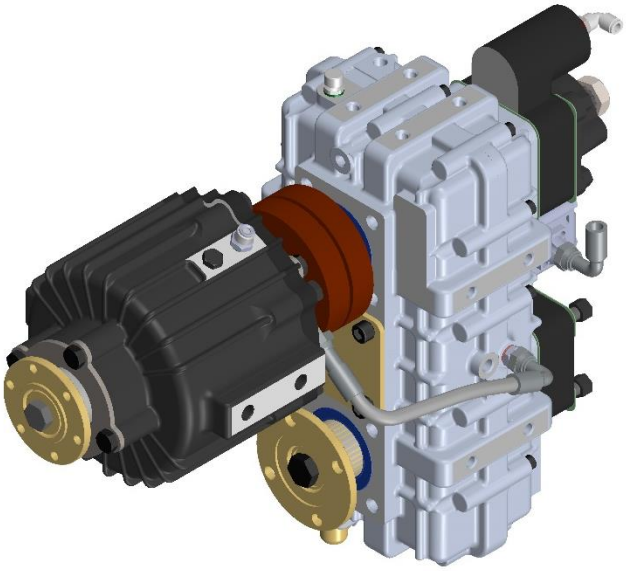
⚠ **Note that this is a technical product, and change the replacement parts on time for its maintenance. Check the components periodically. Inspect mounting components, transmission elements, drive and pump connection shafts. If required, tighten them again.**

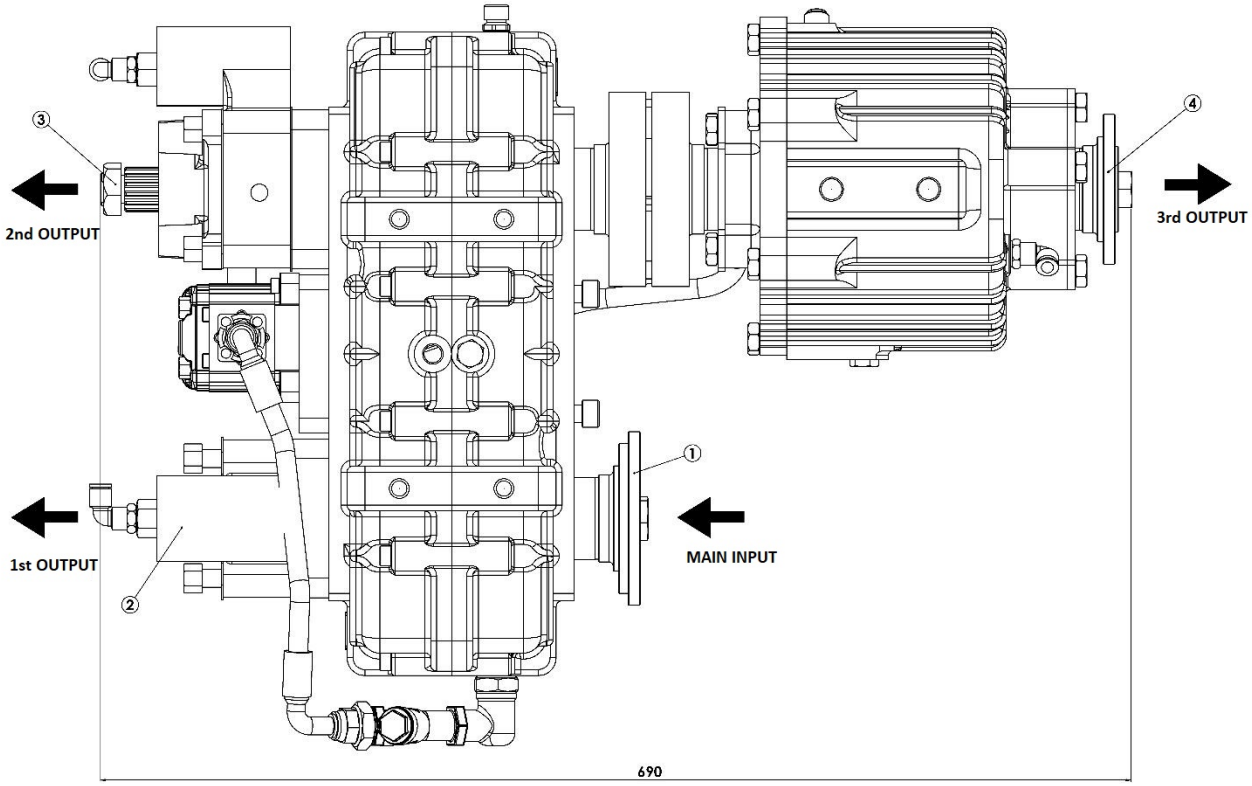
Precautions for Emergency

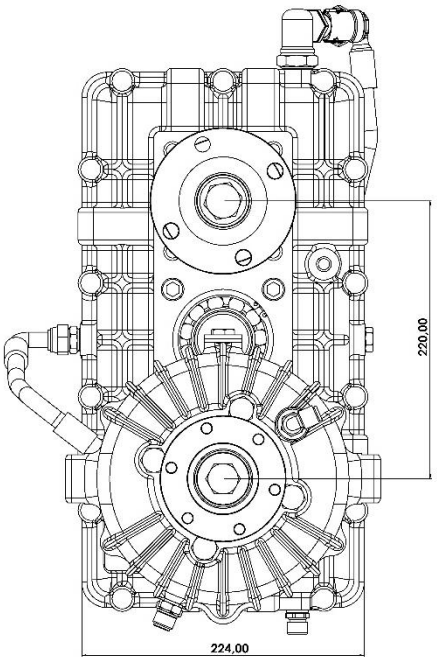
If you wish to disengage the gearbox in case of emergency, use the emergency stop mechanism provided by the manufacturer of the vehicle superstructure. This has to be done only by pressing the vehicle clutch pedal..

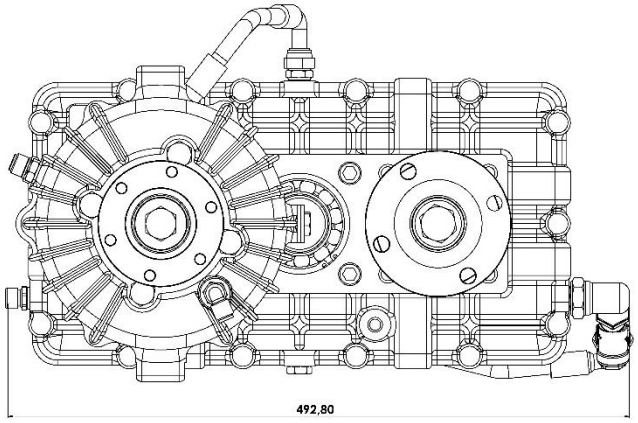
Technical Drawings






③
2nd OUTPUT
④
3rd OUTPUT
①
MAIN INPUT
②
1st OUTPUT
690


220,00
224,00


492,80

Technical Drawings

1.Warranty period is one (1) year from the delivery of the product.

2.In the event that the product fails during the warranty period, the following apply:

—Failure repair time is 1 to 8 working days depending on its nature. (Domestic claims)

— Where the repair time lasts more than 14 working days (except transportation time), a new product shall be supplied to the customer till the failure has been repaired.

3.Where a failure occurs within the warranty period due to the defects possibly arising from the manufacturing stages, the product shall be repaired free of charge in terms of servicing and replaced part price.

4. Warranty certificate has to be presented when asking for services for the products under warranty. Where the certificate is lost or not presented, then sales invoice (invoice with waybill) has to be presented.

Situations Which Terminate Warranty Obligations

1.Using the product for a purpose other than the intended use,

2.Changes to the product that are not approved by Kozmaksan,

3.Digression from defined specifications and reference limits,

4.Selling to third parties one or more products not bearing our approval seal,

5.Failing to perform indicated product maintenance,

6.Having a service provider, other than the manufacturer or trader, repair, carry out maintenance works or replace parts of the product within the warranty period,

7.Using the product against the usage terms set forth in the usage instructions,

8.Where the product is damaged during the mounting on the vehicle.