

SPLIT SHAFT UNIT GENERAL SPECIFICATION 32901/2 (HORIZONTAL) & 32903/4 (VERTICAL)

Compact design

- Reduced length for easy fit in short wheelbase trucks.
- Reduced height for maximum space availability for the bodywork and other equipment. Fits below the frame rails.

Lightweight: 32901/2 = 103Kg (without flanges) , 106Kg (with flanges)
32903/4 = 109Kg (without flanges) , 111Kg (with flanges)

PTO outputs

- Adaptors are available to suit all popular hydraulic pumps or drive flanges for standard propshafts (see enclosed chart) for remote equipment.
- Converting from one to another output configuration is possible without dismantling the Unit.
- Provision for pulse sender for electronic tachograph drive/rev counter.
- Provision for microswitch to indicate engagement/disengagement of the drive to the rear axle. The switch can operate a control light and/or be utilized to interlock with the electric system of the auxiliary equipment.

Main shaft flanges

- Companion flanges are available to suit the drive shafts of all popular vehicles.

SHIFTING MECHANISM

Main shaft

- Vehicle drive engagement/disengagement controlled by double acting air cylinder. Current position is retained when air pressure is discontinued.
- For added safety a mechanical detent ensures that drive to the rear axle will not be disconnected even if all air pressure is lost.

PTO output shafts

- Four power take-off outputs available, each one independently controlled by single acting air cylinder. Sturdy sliding splined sleeves will not be damaged even if the PTO is occasionally engaged while the unit is turning slowly. However this practice is not recommended as part of a normal operation.

LUBRICATION

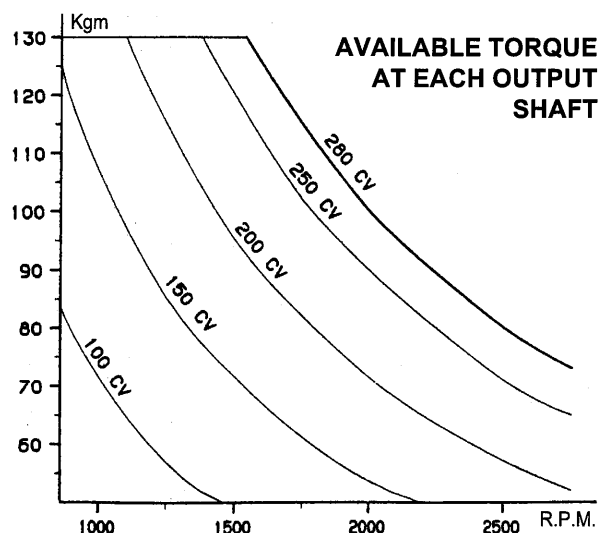
- Splash type: only 4,5 kg oil required for optimum lubrication of all components.
- Filler breather, drain and level plugs are readily accessible to allow for easy oil servicing. Magnetic drain plugs retain all metallic impurities.

CONSTRUCTION

- Strong, compact housing, cast in grey iron. One-piece construction with only one top aperture for maximum (structural) sturdiness. Housing surface is ribbed for improved heat (exchange) elimination.
- Main transmission shafts manufactured in forged alloy steel and case hardened.
- Teeth of spur gears are profile ground, alloy forged steel, case hardened.
- The main shafts are supported by heavy-duty ball bearings.
- Tapered roller bearings support the PTO output shafts.

SPECIFICATIONS

Throughput torque	32901/3	2000Kgm
	32902/4	3000Kgm
Max output torque	32901/2	130Kgm
	32903/4	110Kgm
PTO Ratio	32901/2/3/4	1.28:1



3.2.90 SPLIT-SHAFT UNIT INSTALLATION

1 - SPLIT-SHAFT UNIT POSITIONING

The PZB Split-Shaft Unit should be located between the gearbox and the rear axle, as near as possible to the gearbox output flange. If possible locate the Split-Shaft Unit in place of the midship bearing. Elastic suspension elements (Silentblocks) should always be fitted between the Split-Shaft and the truck chassis. Suitable suspension kits are available to facilitate the installation of the Split-Shaft Unit.

2 - MOUNTING THE SPLIT SHAFT UNIT TO THE TRUCK FRAME

Welding to frame beams or cross members is not allowed.

All brackets should be fastened to the truck frame using bolts. Existing holes should be used. Additional holes should only be made with the approval of the truck Manufacturer.

3 - DRIVE SHAFTS

All shafts used in the vehicle's drive line should be the same size and quality as the original ones. The same applies to flanges, bolts and nuts. Self locking nuts should never be used twice and should be replaced with new ones.

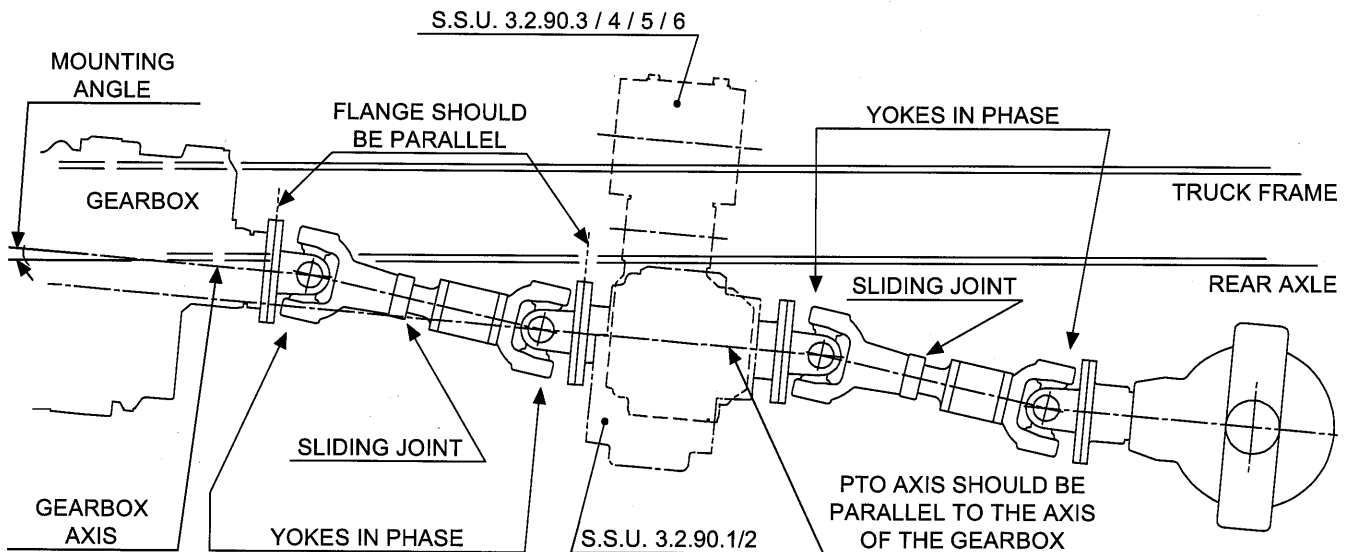
3.1 Balance

All drive shafts should be statically and dynamically balanced.

3.2 Angles

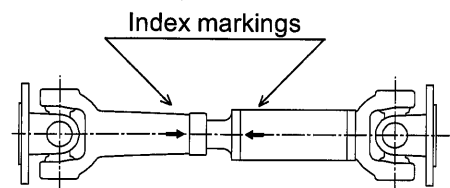
To prevent vibration and noise during operation all drive flanges must be parallel.

Therefore it is necessary to incline the Split-Shaft Unit and all other driven equipment at the same angle to the truck frame as the gearbox. This angle varies with the truck model. Information should be obtained from the truck Manufacturer.



3.3 Phase

Propshafts with sliding joint should be used. Make sure that enough compensation is allowed for length changes. When assembling make sure that all U-Joints are correctly phased by ensuring that index markings are correctly aligned.



3.4 Protection

For safety reasons it is highly recommended to provide all accessible propshafts with protection covers.

3.2.90 SHIFTING AND OPERATING INSTRUCTIONS

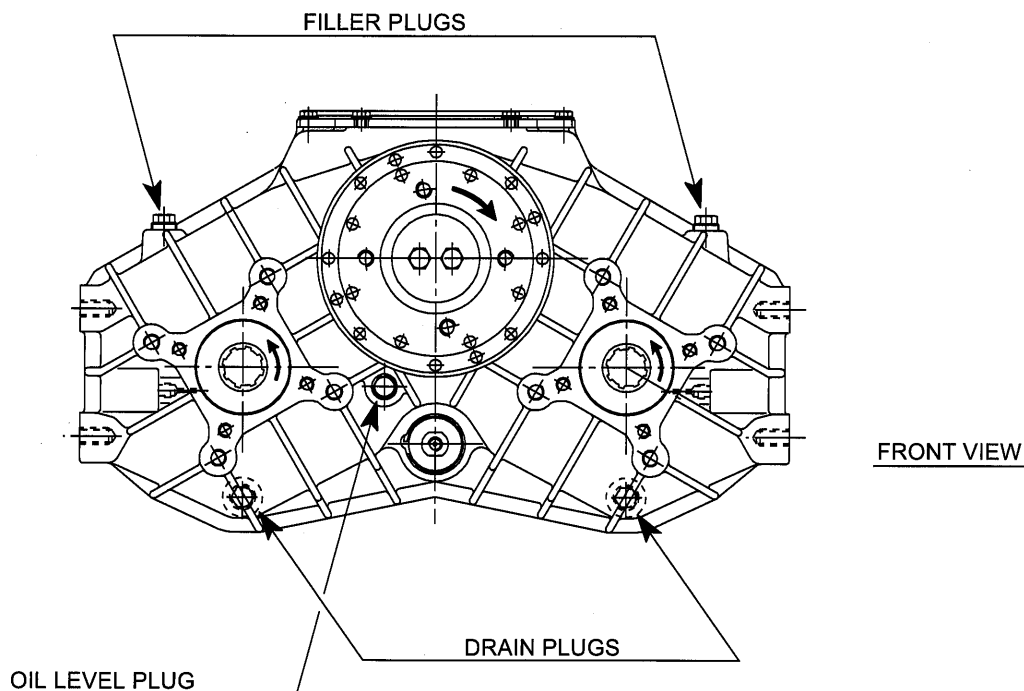
ENGAGING THE SPLIT-SHAFT UNIT

- 1 - Stop the vehicle and put the gearbox into neutral.
- 2 - Apply the handbrake (if the Unit shall operate while the vehicle is stationary).
- 3 - Shift the main (double acting) aircontrol to disconnect the drive to the rear axle.
- 4 - Engage the required PTO output(s) by operating the relevant aircontrol(s).
- 5 - Depress the clutch pedal and select the required gear.
- 6 - Slowly release the clutch pedal (similar to when driving away the vehicle).
- 7 - Set the engine speed to the required r.p.m.

DISENGAGING THE SPLIT-SHAFT UNIT

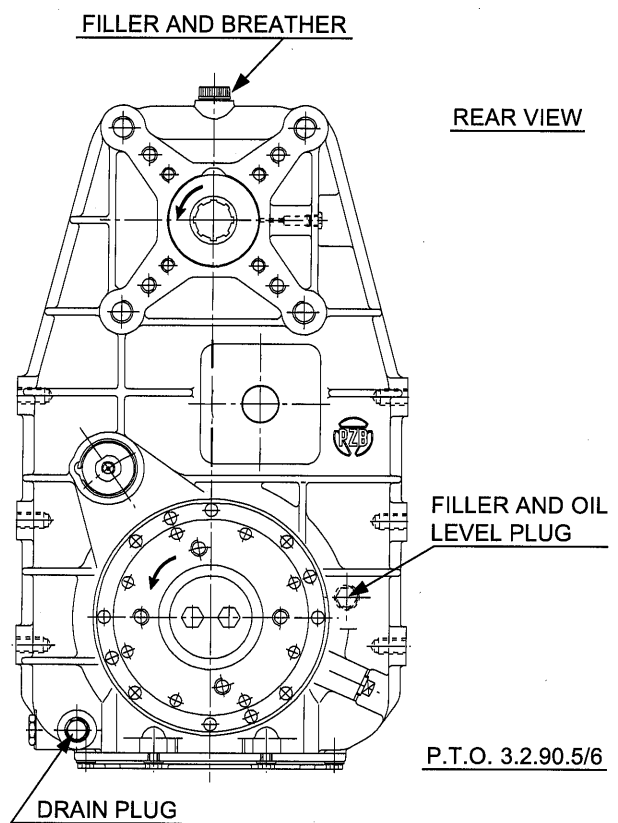
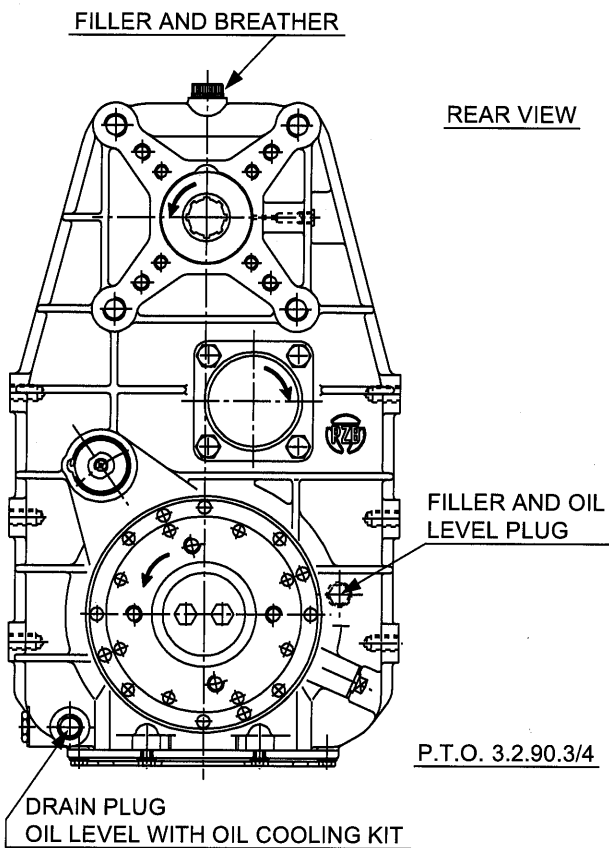
- 1 - Return the engine speed to tickover.
 - 2 - Depress the clutch pedal and put the gearbox into neutral.
 - 3 - Disengage the PTO output(s) by operating the relevant aircontrol(s).
 - 4 - Shift the main (double acting) aircontrol to reengage the drive to the rear axle.
 - 5 - All PTO outputs are now disengaged. The vehicle can be driven away as normal.
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3.2.90.1/2 OIL SERVICE



- 1 - Split-Shaft Unit must be filled with oil up to oil level plug before use.
- 2 - The oil level must be checked regularly every two weeks.
- 3 - The oil must be changed every 2000 working hours.
- 4 - Remove bottom drain plugs on left and right hand side to ensure old oil is completely drained from the Split-Shaft Unit.
- 5 - Clean metal particles from the magnetic drain plugs before refitting.
- 6 - To refill unit pour oil through one of the uppermost filler plugs until it reaches the oil level plug.
- 7 - Use SAE 90 EP gearbox oil. The nominal oil capacity is 4,5 litres

3.2.90.3/4/5/6 OIL SERVICE



- 1 - Split-Shaft Unit must be filled with oil up to oil level plug before use.
- 2 - The oil level must be checked regularly every two weeks.
- 3 - The oil must be changed every 2000 working hours.
- 4 - Clean metal particles from the magnetic drain plugs before refitting.
- 5 - To refill unit pour oil through one of the oil level plug or to the breather plug until it reaches the oil level plug.
- 6 - Use SAE 90 EP gearbox oil. The nominal oil capacity is:
4,5 litres for standard P.T.O., without oil cooling kit,
2 litres for P.T.O. with oil cooling kit.