

Massey Ferguson®

1635 / 1643 Compact Tractor

WORKSHOP SERVICE MANUAL 4283386M1

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INPUT GEARS

INPUT GEAR DISASSEMBLY

Separate the tractor between the front and rear transmission housing.

FIG. 37: Remove the gear shift lever.



FIG. 37

FIG. 38: Remove the metal cover.



FIG. 38

FIG. 39: Remove the four bolts securing the four wheel drive shifter.

Remove the four wheel drive shifter.



FIG. 39

Input Gears

FIG. 40: Remove bolts and metal support from the front transmission case.



FIG. 40

FIG. 41: Remove main change gear clusters as an assembly.

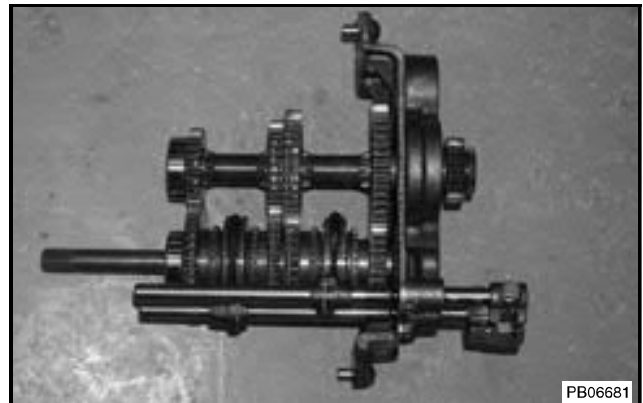


FIG. 41

FIG. 42: Remove the bolts from the PTO support.



FIG. 42

FIG. 43: Remove the PTO support and PTO clutch pack as an assembly.

NOTE: The PTO brake tab (1) must be inserted into the locking groove in the support metal.

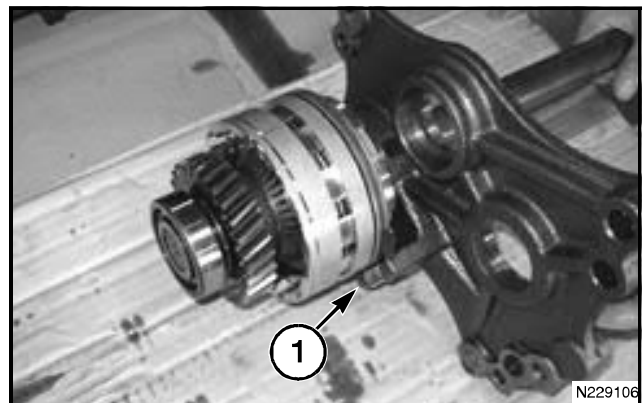
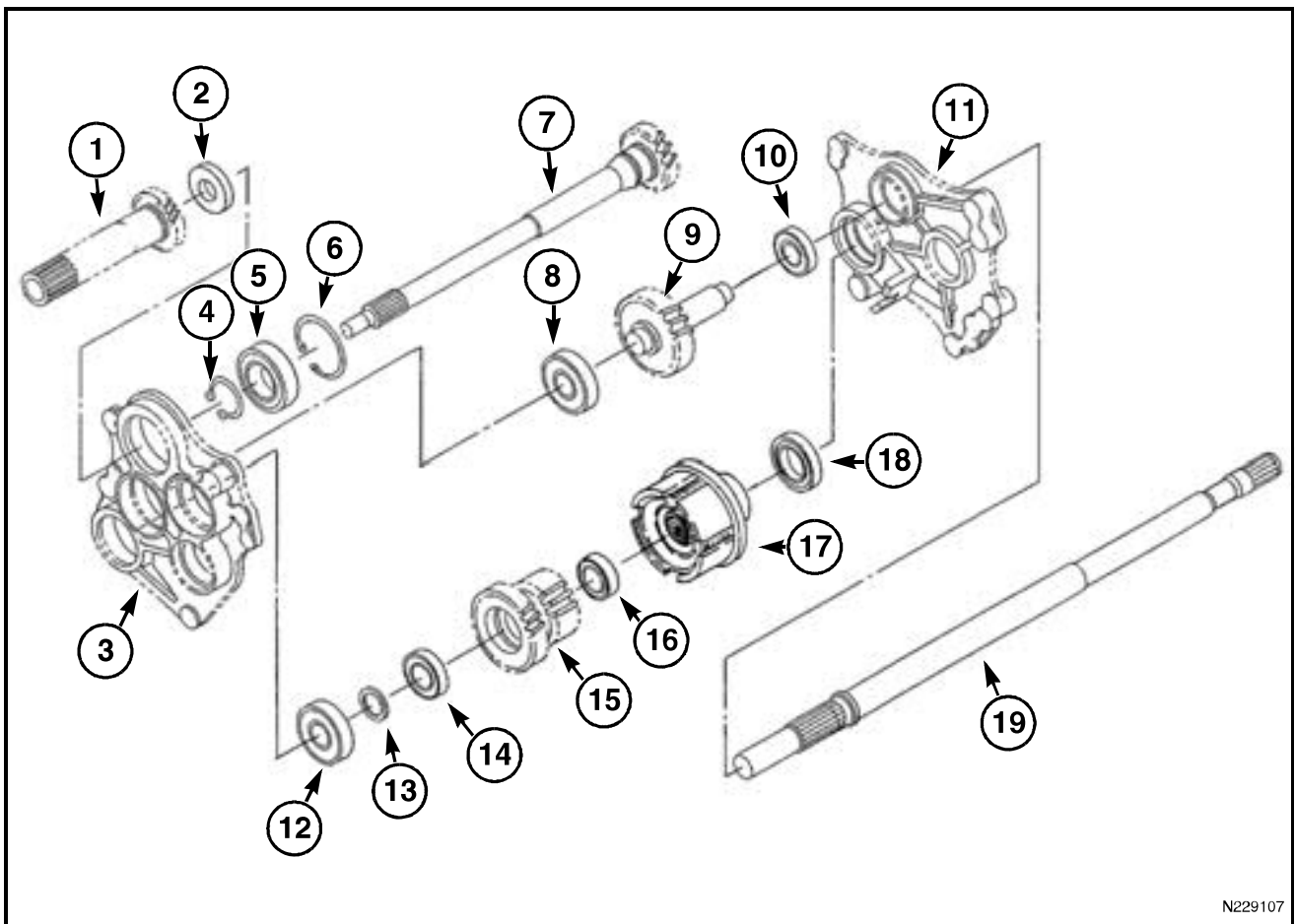


FIG. 43



N229107

FIG. 44

FIG. 44: Front PTO gear system

- | | |
|-------------------------------|--------------------------------|
| (1) Shaft | (10) Bearing |
| (2) Oil Seal | (11) Bearing and Shaft Support |
| (3) Bearing and Shaft Support | (12) Bearing |
| (4) Snap Ring | (13) Collar |
| (5) Bearing | (14) Bearing |
| (6) Snap Ring | (15) Gear |
| (7) Shaft | (16) Bearing |
| (8) Bearing | (17) PTO Clutch |
| (9) Gear | (18) Bearing |
| | (19) Shaft |

Input Gears

FIG. 45: Remove the input gears and support metal as an assembly.

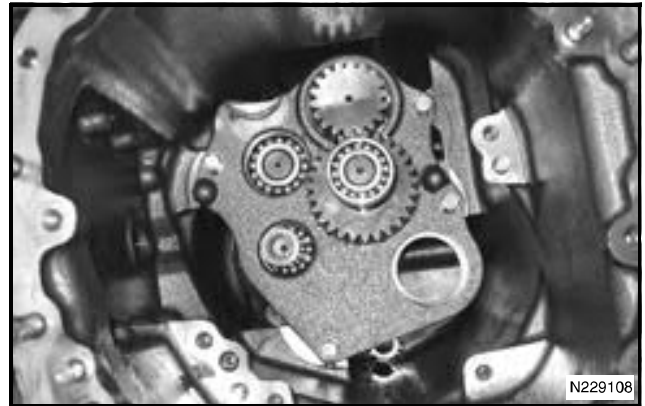


FIG. 45

FIG. 46: Remove reverse gear, synchronizer, and shift fork.

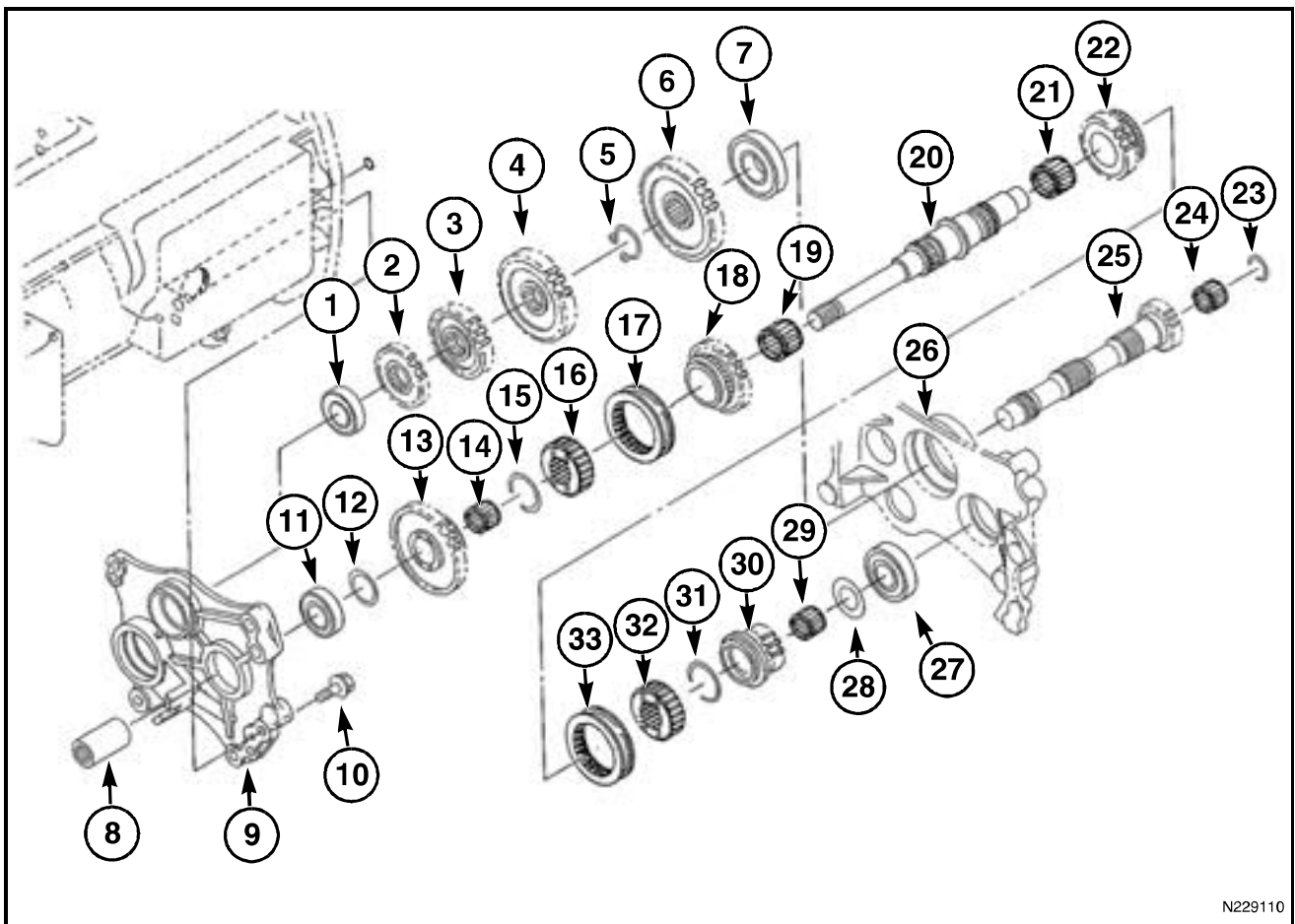


FIG. 46

FIG. 47: Remove the reverse gear, synchronizer, and shift fork.



FIG. 47



N229110

FIG. 48

FIG. 48: Main gear assembly

- | | |
|---------------------|---------------------|
| (1) Bearing | (17) Coupling |
| (2) Gear | (18) Gear |
| (3) Gear | (19) Needle Bearing |
| (4) Gear | (20) Main Shaft |
| (5) Snap Ring | (21) Needle Bearing |
| (6) Gear | (22) Gear |
| (7) Bearing | (23) Snap Ring |
| (8) Collar | (24) Needle Bearing |
| (9) Support | (25) Gear |
| (10) Bolt | (26) Support |
| (11) Bearing | (27) Bearing |
| (12) Washer | (28) Washer |
| (13) Gear | (29) Needle Bearing |
| (14) Needle Bearing | (30) Gear |
| (15) Snap Ring | (31) Snap Ring |
| (16) Hub | (32) Hub |
| | (33) Coupling |

Input Gears

Assembly

FIG. 49: Install the input gear assembly with the support metal.

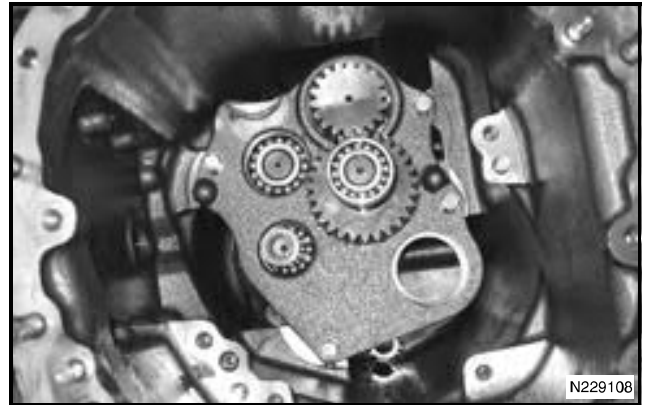


FIG. 49

FIG. 50: Install the PTO clutch assembly and PTO support.

NOTE: Make sure the PTO clutch brake tab is aligned inside the groove in the support housing.

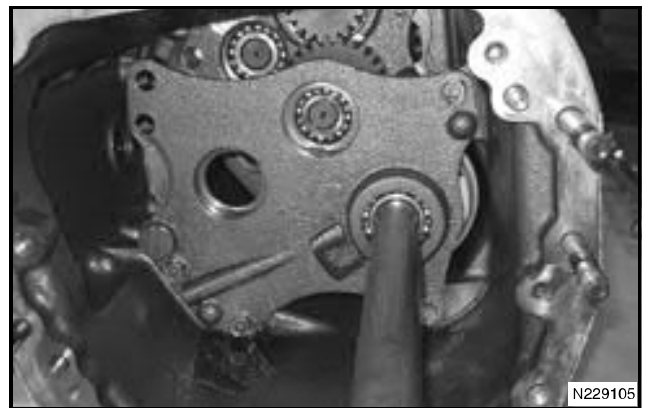


FIG. 50

FIG. 51: Install the main change gear clusters.

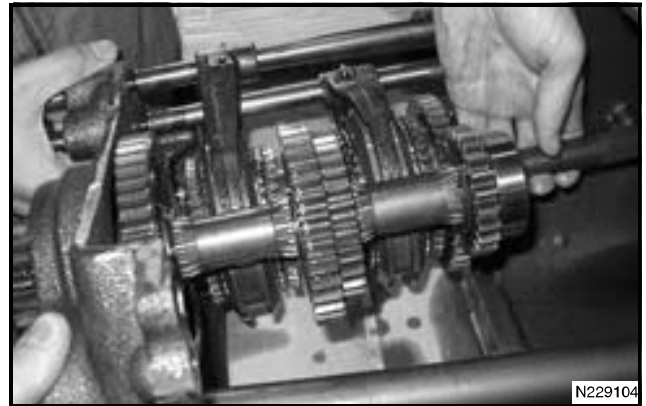


FIG. 51

FIG. 52: And rear support as an assembly.



FIG. 52

Input Housing

FIG. 53: Separate transmission between the engine and the front housing.

Remove the wire (1).

Thread a bolt into the pin (2) and attach a slide hammer to the bolt.

Remove the pin.

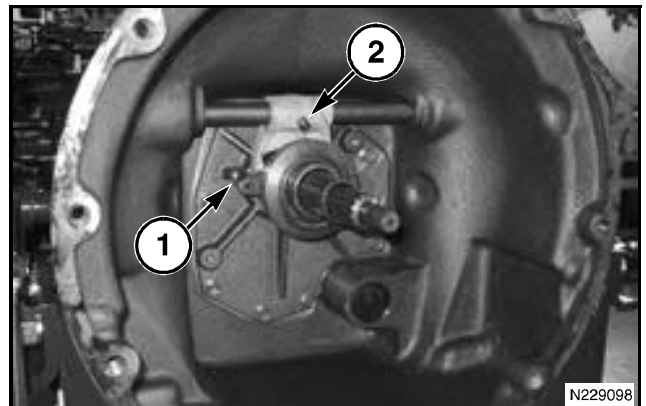


FIG. 53

Input Gears

FIG. 54: Thread two bolts into the input cover.

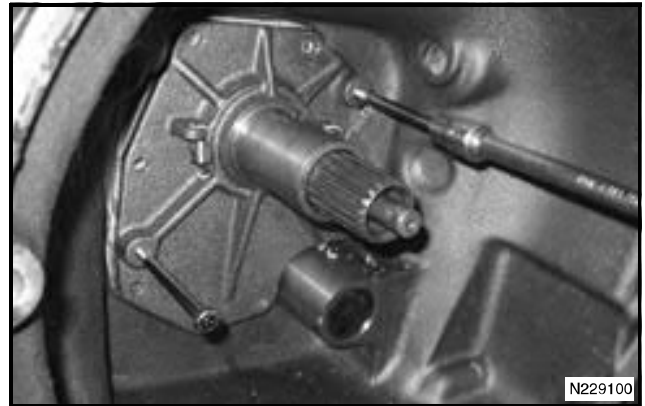
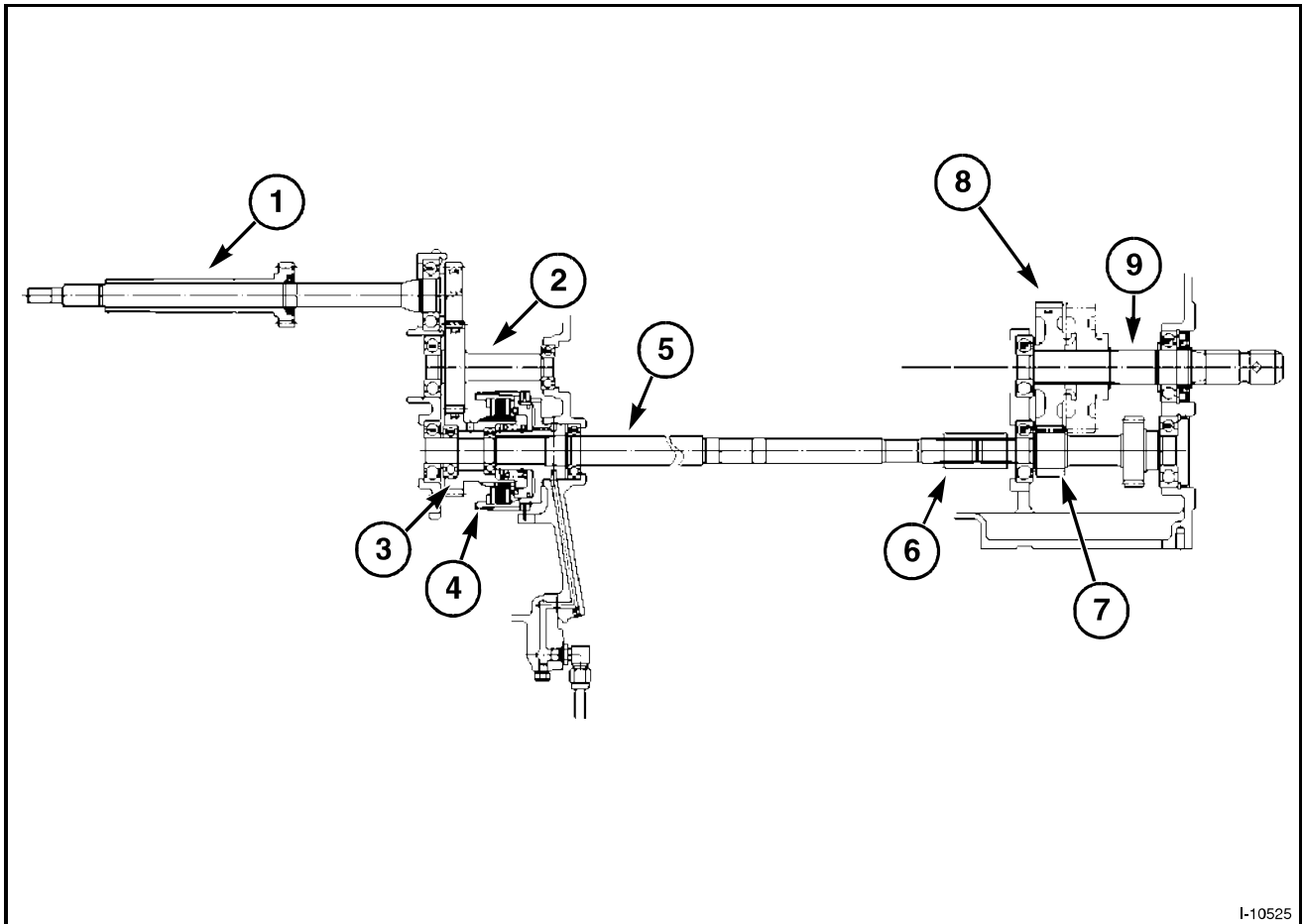


FIG. 54

FIG. 55: Remove the input cover.



FIG. 55

REAR PTO**REAR PTO**

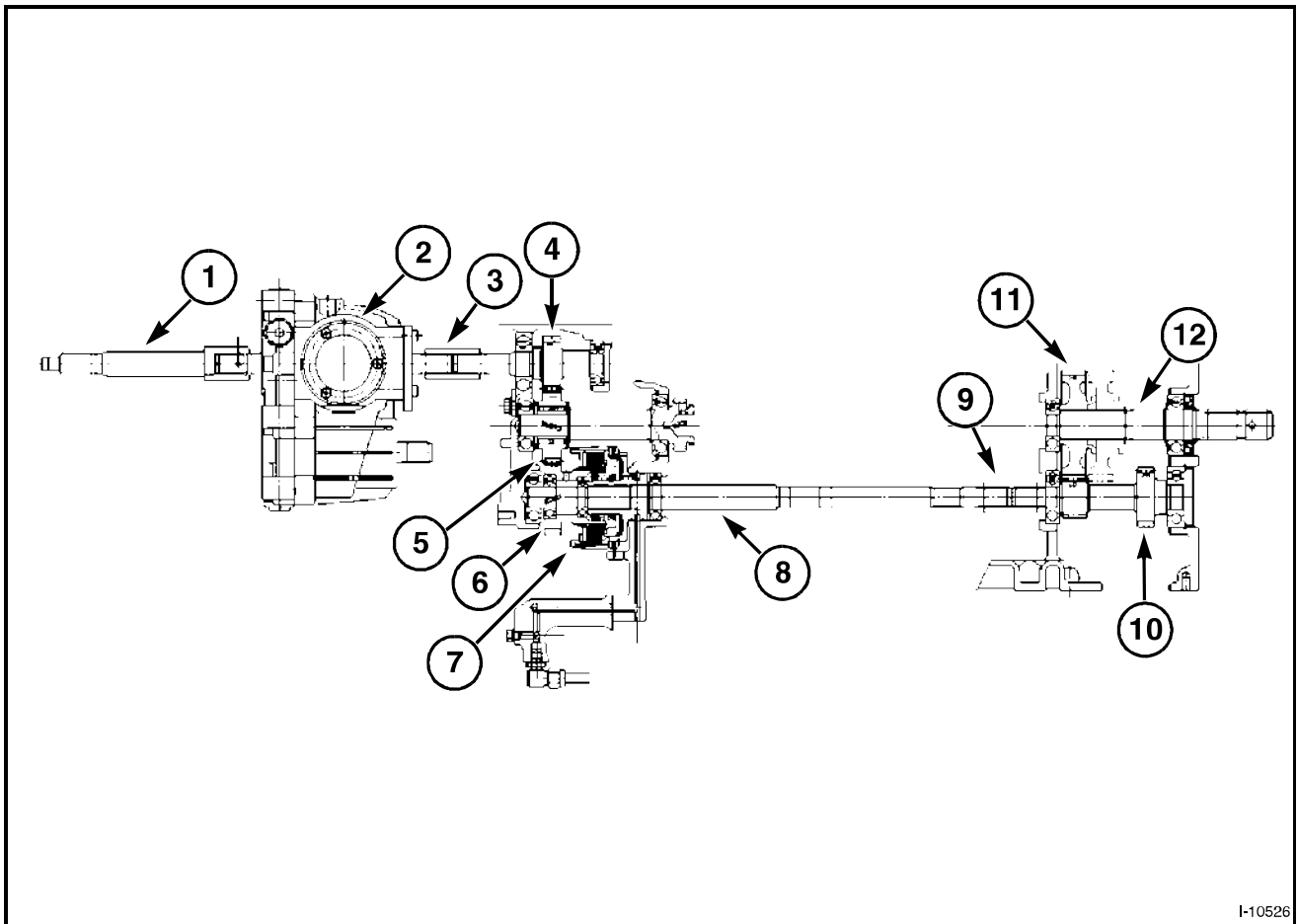
I-10525

FIG. 56

FIG. 56: Synchro shuttle and power shuttle PTO assembly

- (1) PTO Input Shaft
- (2) PTO Idler Gear
- (3) PTO Clutch Gear
- (4) PTO Clutch
- (5) PTO Drive Shaft
- (6) Coupling
- (7) PTO Counter Gear
- (8) PTO Change Gear
- (9) PTO Shaft

Rear PTO



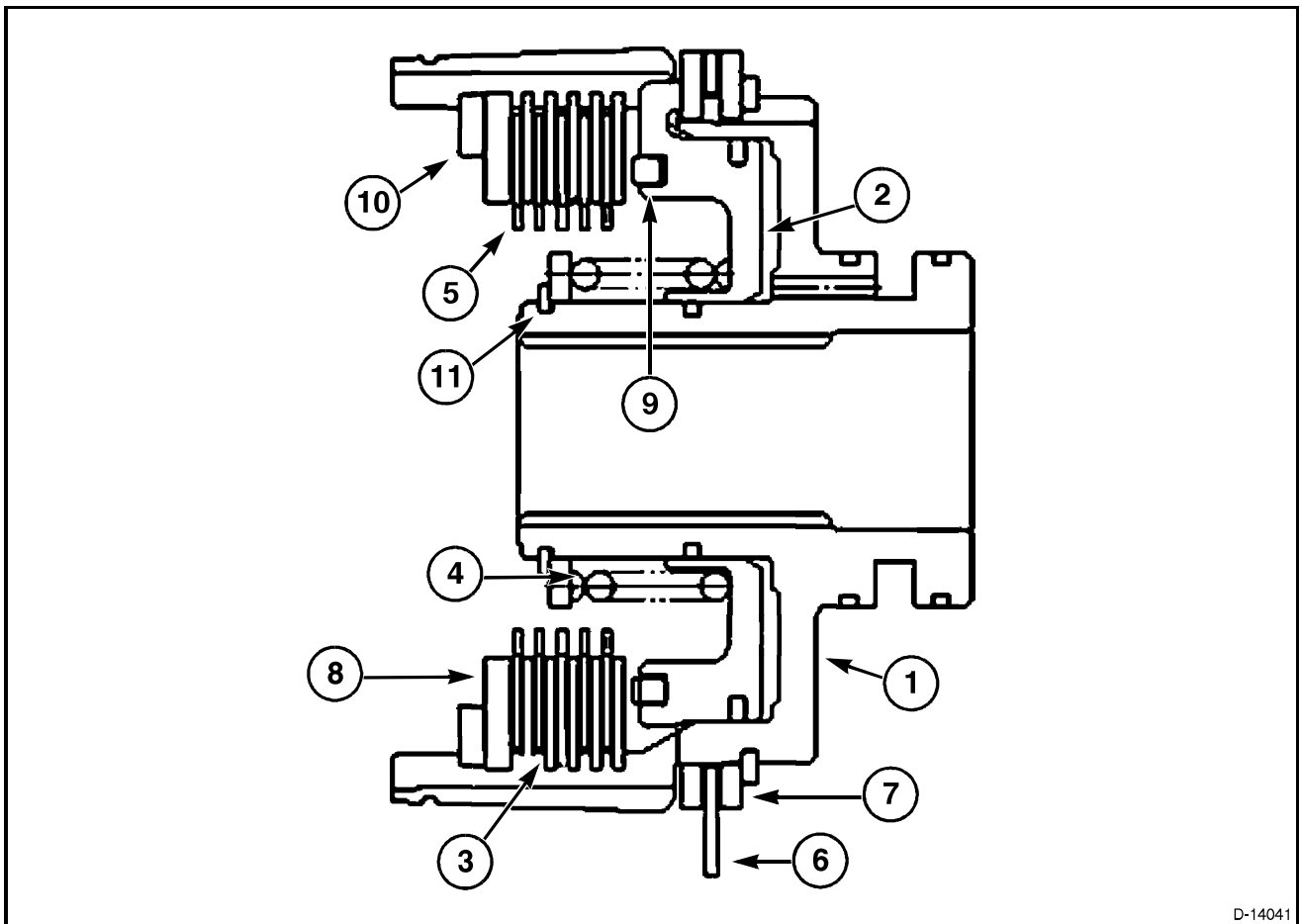
I-10526

FIG. 57

FIG. 57: Hydrostat PTO assembly

- (1) Input Shaft
- (2) HST unit
- (3) Coupling
- (4) PTO Input Gear
- (5) PTO Idler Gear
- (6) PTO Clutch Gear
- (7) PTO Clutch
- (8) PTO Drive Shaft
- (9) Coupling
- (10) PTO Counter Gear
- (11) PTO Change Gear
- (12) PTO Shaft

PTO CLUTCH



D-14041

FIG. 58

FIG. 58: PTO clutch pack

- (1) Clutch Case
- (2) Piston
- (3) Separate Plate
- (4) Spring
- (5) Friction Plate Qty-5
- (6) Brake Disk
- (7) Brake Pressure
- (8) Back Plate
- (9) Wave Spring

The clutch cases have the following identification markings:

The PTO clutch case is made of die-cast aluminum.

Make sure to take caution in handling the clutch case and do not damage or deform it.

Remove snap ring (10) and take out the back up plate, separator plates and disc. While holding spring (4) compressed with jig, remove snap ring (11).

Rear PTO

FIG. 59: PTO clutch snap ring Jig to compress the PTO clutch can be fabricated.

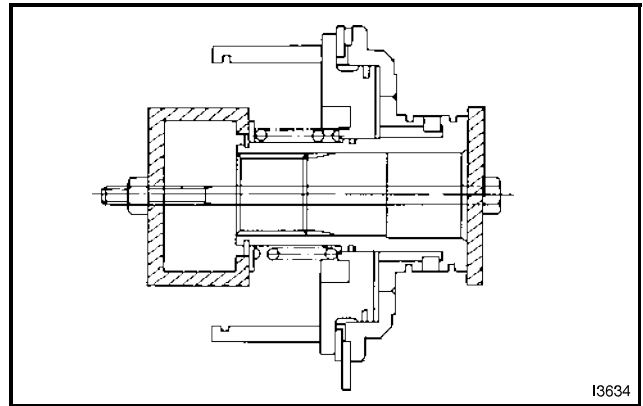
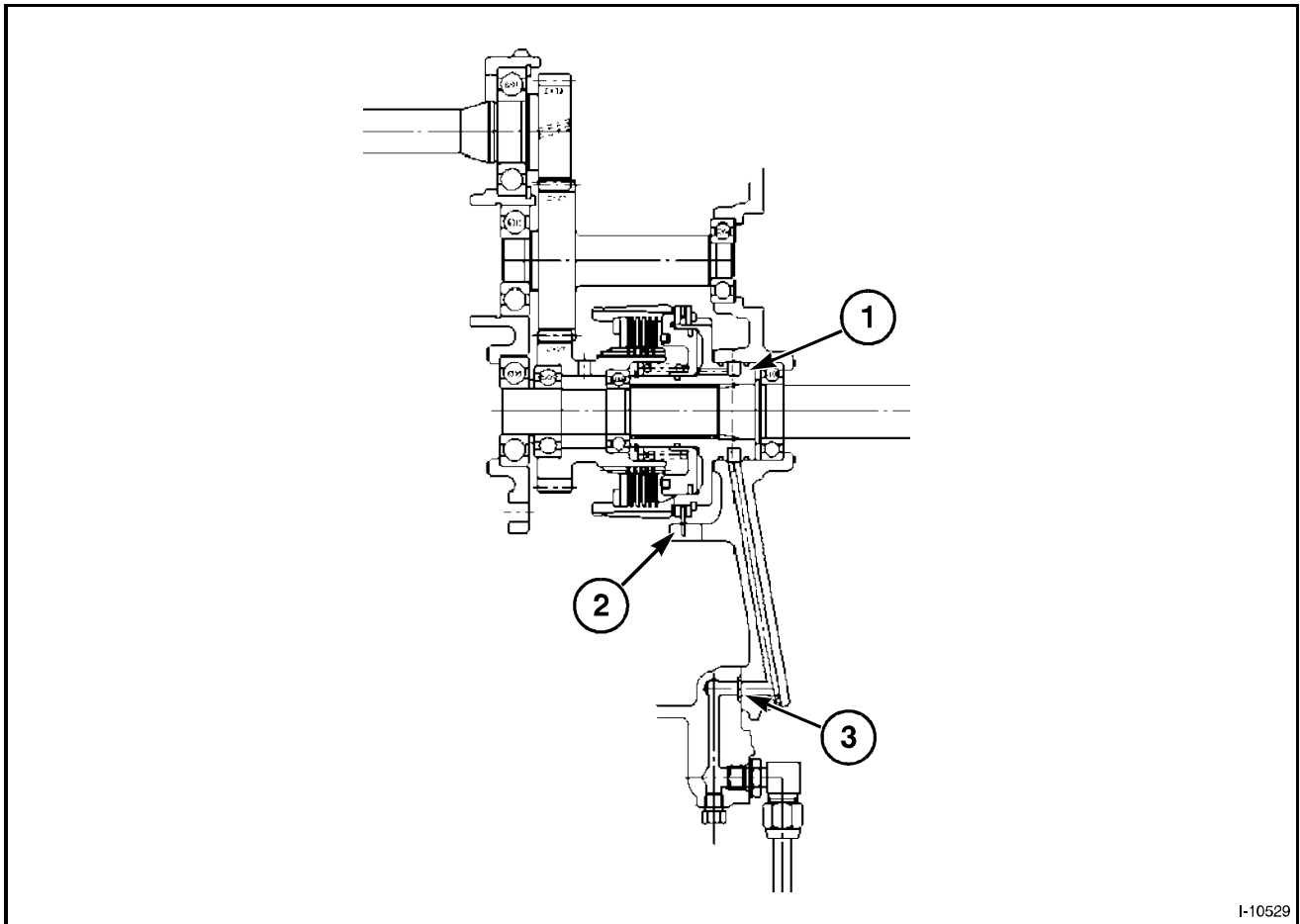


FIG. 59

ASSEMBLY



I-10529

FIG. 60

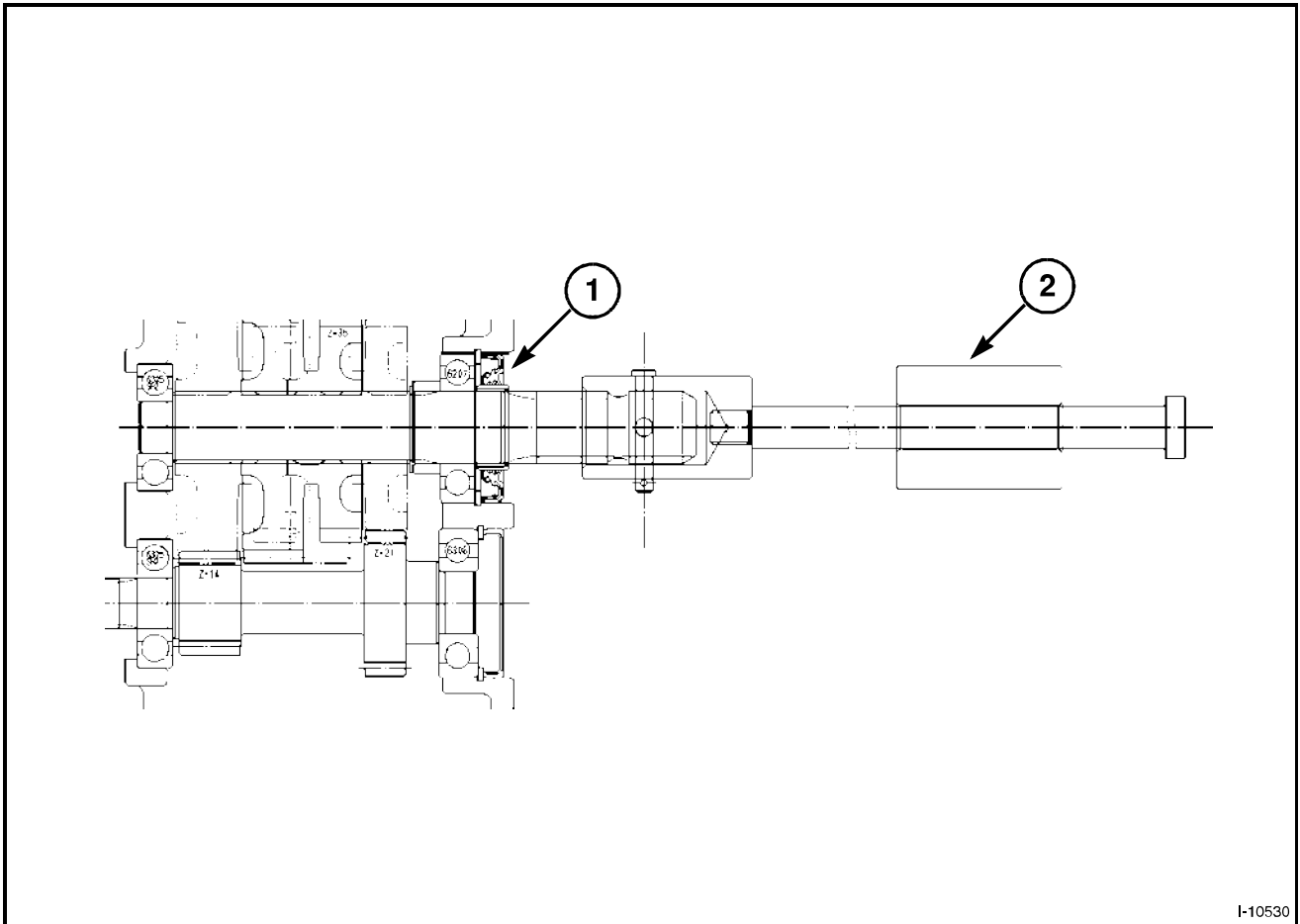
FIG. 60: Assembly precautions - PTO

Apply grease to seal (1). Check for any damages.

Make sure that the brake disk tab (2) is inserted firmly into the metal groove in support housing.

Apply grease to O-ring (3).

Rear PTO



I-10530

FIG. 61

FIG. 61: Assembly precautions PTO Shaft

Check the oil seal (1) and the sleeve.

Fabricate slide hammer jig (2) to help remove and install 540 PTO shaft.

ASSEMBLY

FIG. 62: HST only

Apply thread retaining compound (1).

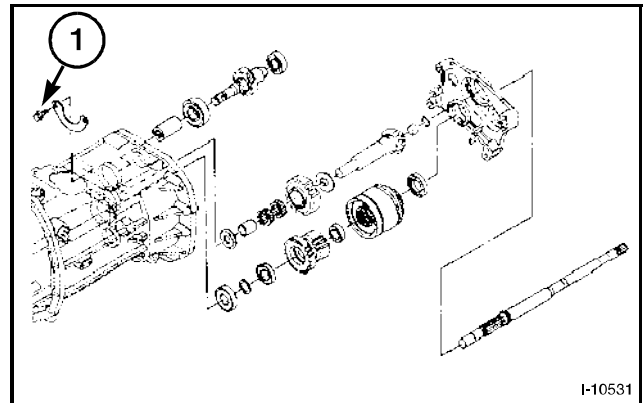


FIG. 62

FIG. 63: All versions

Punched Fracture Side of the coupler (1) goes to the rear.

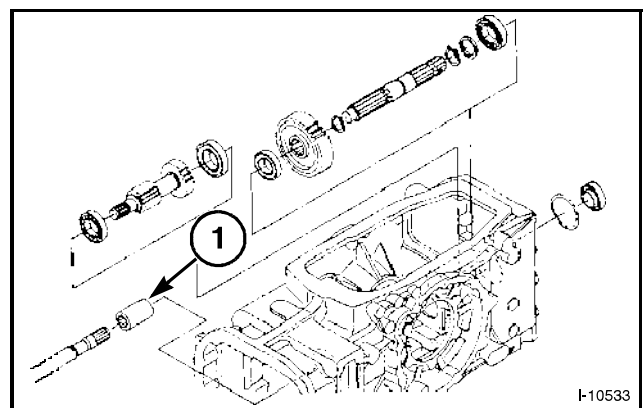
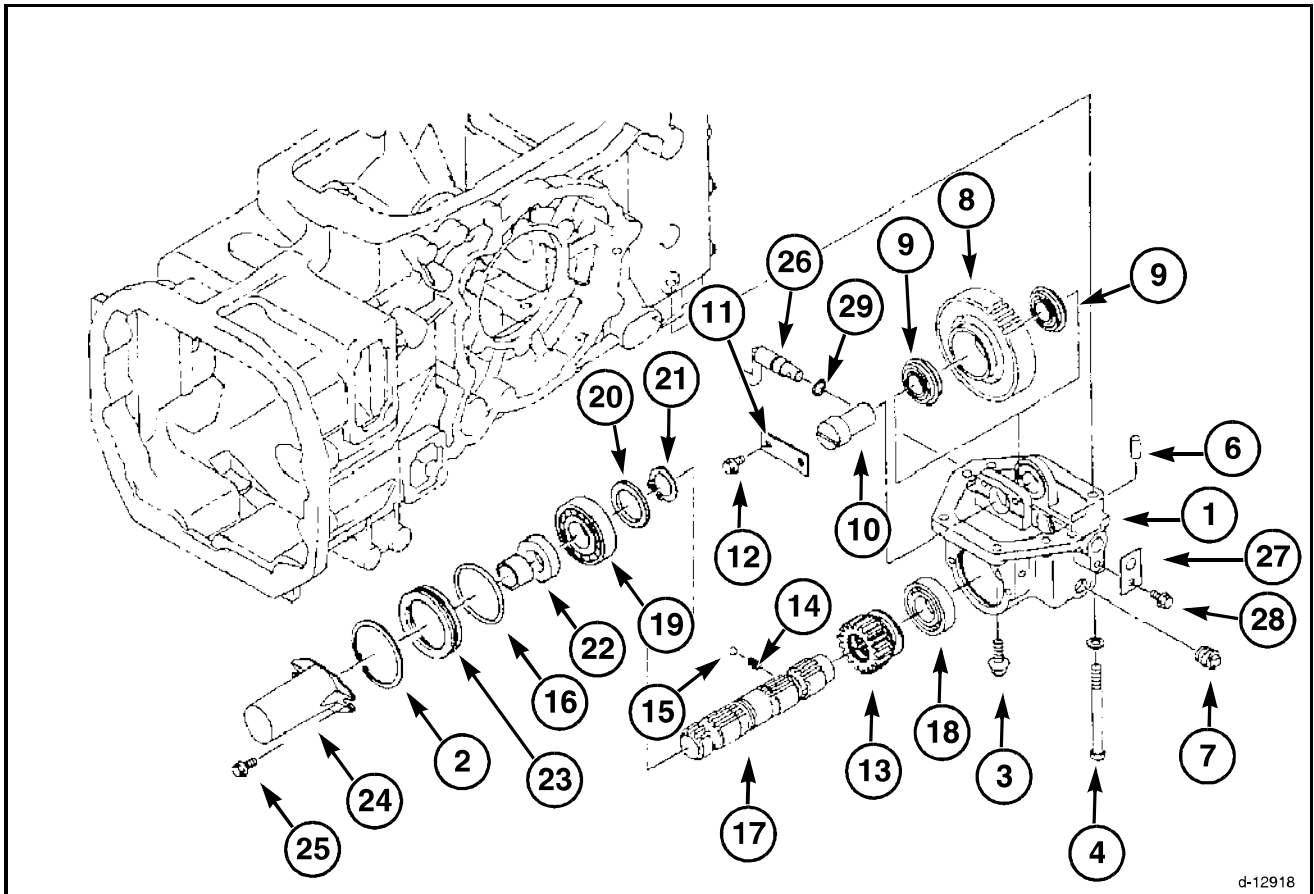


FIG. 63

NOTES

MID PTO

MID PTO



d-12918

FIG. 64

FIG. 64: Mid PTO set

- | | |
|---------------------|-----------------------------|
| (1) PTO Case | (15) Ball |
| (2) Snap Ring | (16) O-Ring |
| (3) Flange Bolt | (17) PTO Shaft |
| (4) Bolt | (18) Ball Bearing |
| (5) Lock Washer | (19) Ball Bearing |
| (6) Pin | (20) Collar |
| (7) Plug | (21) Snap Ring |
| (8) Spur Gear-40 | (22) Seal Assembly |
| (9) Bearing | (23) Seal |
| (10) Shaft | (24) PTO Shaft Cap |
| (11) Plate 25 x 68 | (25) Flange Bolt |
| (12) Flange Bolt | (26) MID Shift Arm assembly |
| (13) Spur Gear-19 | (27) Plate 30 x 50 |
| (14) Shifter Spring | (28) Flange Bolt |
| | (29) O-Ring |

Mid PTO

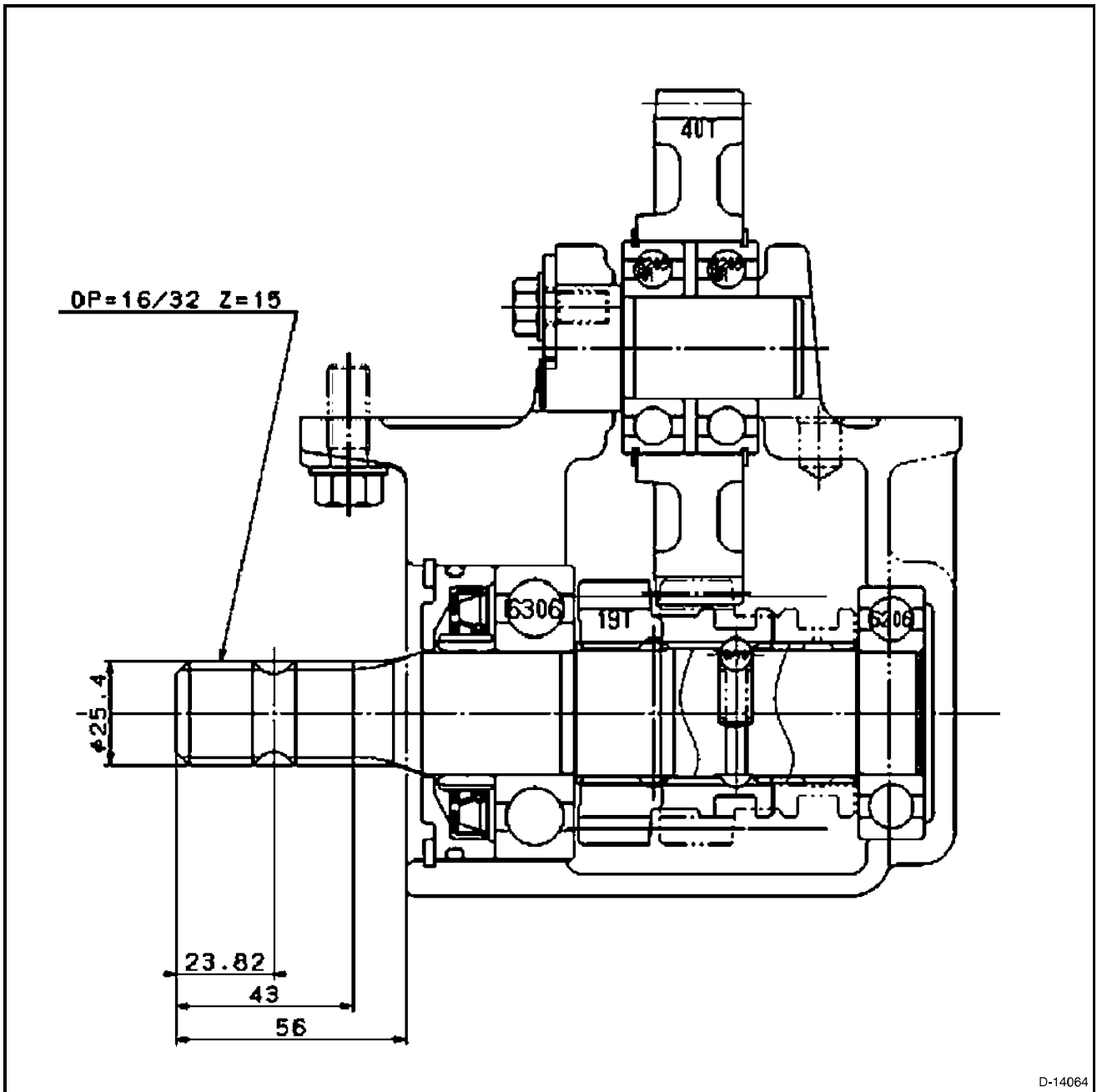


FIG. 65

FIG. 65: Dimensions of the mid-PTO

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