

MASSEY FERGUSON
GC2300
TRACTOR

TRACTOR
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TRANSMISSION

TRANSMISSION

GROUND SPEED SELECTION

FIG. 1: The hydrostatic transmission provides variable speed control in forward or reverse..

Range shift lever - (1) provides two major changes in ground speed.

IMPORTANT: STOP tractor whenever shifting range shift lever 1.

Hydrostatic control pedal - (2) controls forward travel speed. As pedal is progressively pushed down, a corresponding increase in ground speed will be noticed. When released, pedal will return to neutral position.

Reverse travel speed is obtained by pushing the rearward portion of the pedal downward. As pedal is progressively pushed down, a corresponding increase in ground speed will be noticed. When released, pedal will return to neutral position.

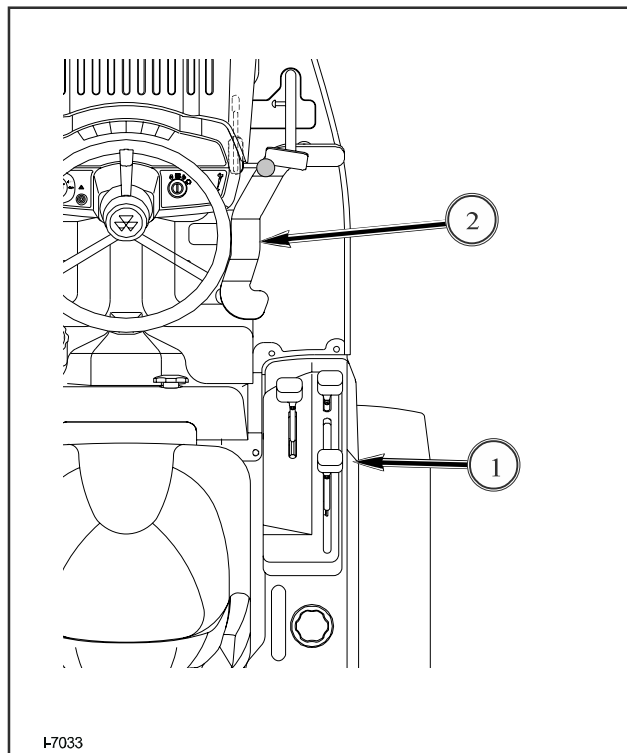


FIG. 1

FIG. 2: Arrangement of gear with appropriate ground speeds, in order from slow to fast, are shown in the chart.

NOTE: Ground speed indicated at 2600 engine rpm with 26 x 12.00 – 12 agriculture type rear tires and with 26 x 12.00 – 12 turf type rear tires.





SHIFT POSITIONS				
	Range	MPH	KPH	MPH
Tire	Agri		Turf	
Forward				
	0-4.29	0-6.90	0-4.18	0-6.72
	0-9.13	0-14.70	0-8.90	0-14.33
Reverse				
	0-3.22	0-5.18	0-3.13	0-5.04
	0-6.85	0-11.03	0-6.68	0-10.75

FIG. 2

HYDROSTATIC TRANSMISSION

NOTE: Refer to the hydraulic section of this manual for HST specifications.

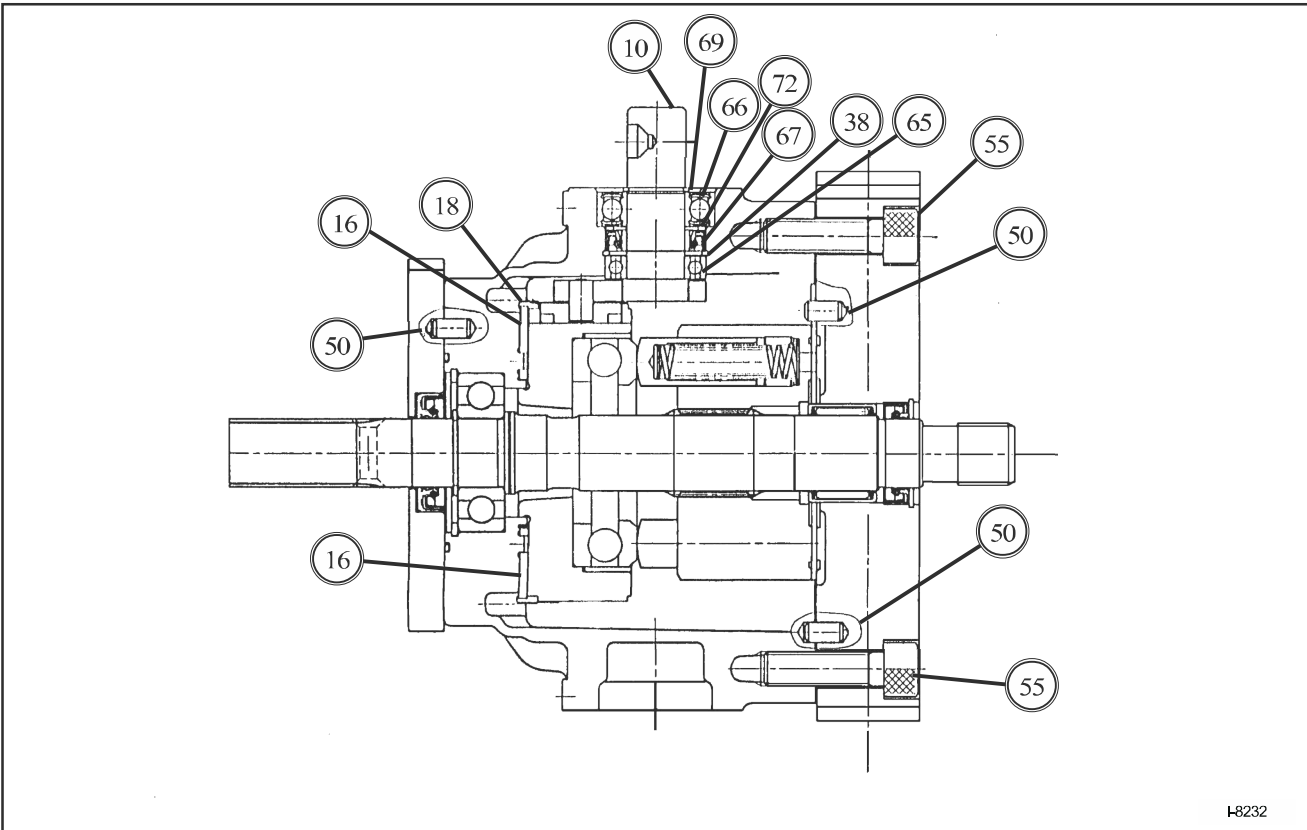


FIG. 3

MAJOR COMPONENTS

FIGS. 3 - 5: Conctruction and names of major components.

- | | | |
|--------------------|---------------------------|----------------------|
| 1. Case | 18. Slide Metal | 47. O-ring |
| 2. Port Block | 19. Cover | 48. O-ring |
| 3. Cylinder Block | 20. Spring | 49. Gasket |
| 4. Slant Board | 21. Spring | 50. Pin |
| 5. Piston | 22. Spring | 55. Socket Head Bolt |
| 6. Valve Plate | 27. Relief Valve | 58. Name Plate |
| 7. Valve Plate | 28. Charge Pressure Valve | 59. Drive Screw |
| 8. Shaft | 29. Poppet | 61. Oil Seal |
| 9. Shaft | 30. Poppet | 65. Ball Bearing |
| 10. Trunnion Shaft | 33. Plug | 66. Ball Bearing |
| 11. Bore Plug | 34. Plug | 67. Oil Seal |
| 13. Thrust Bearing | 35. Plug | 69. Snap Ring |
| 14. Ball Bearing | 36. Snap Ring | 71. Screw |
| 15. Needle Bearing | 37. Snap Ring | 72. Washer |
| 16. Bushing | 38. Snap Ring | 82. O-ring |
| 17. Bushing | 41. Spring Holder | |
| | 42. Oil Seal | |

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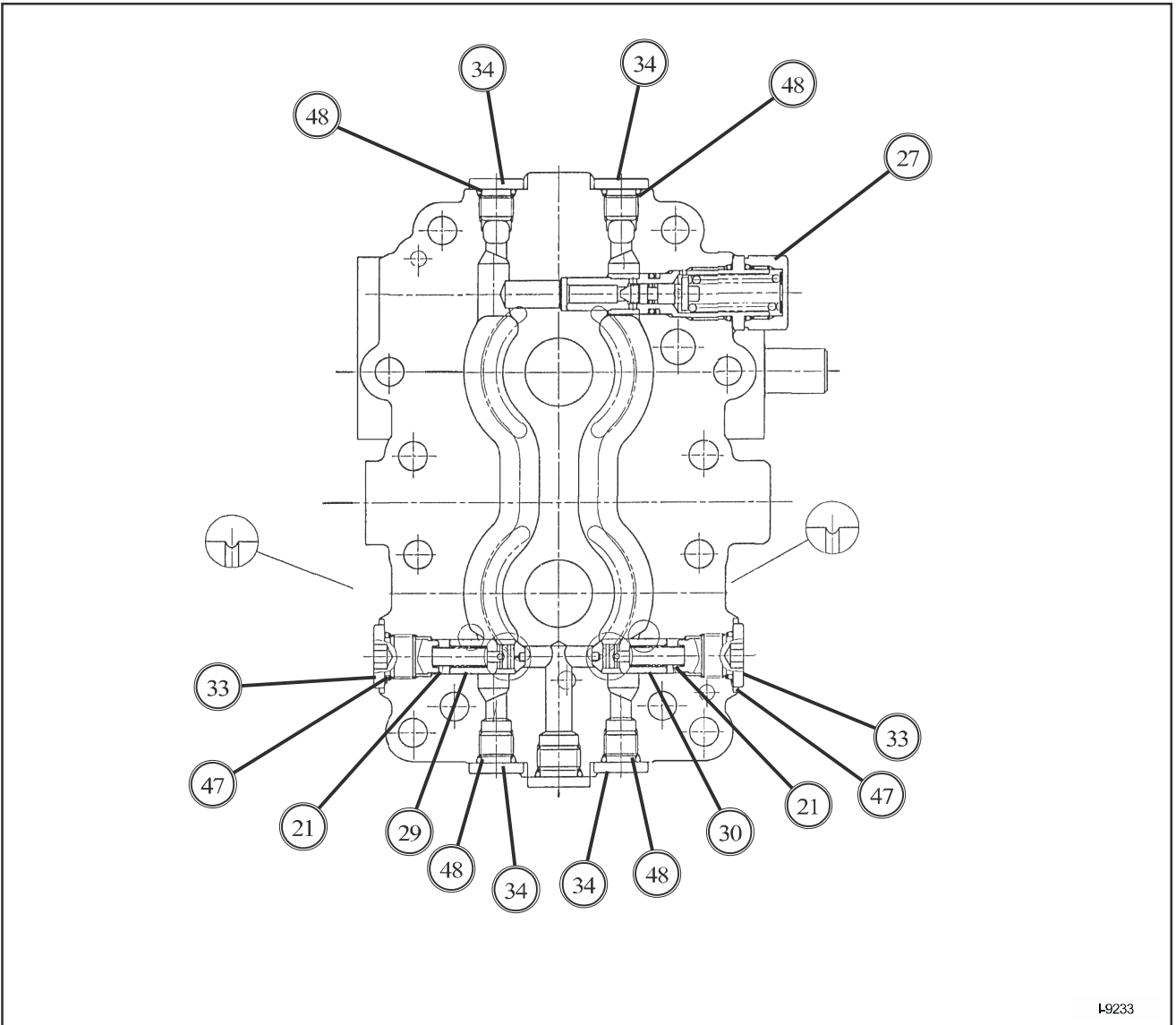
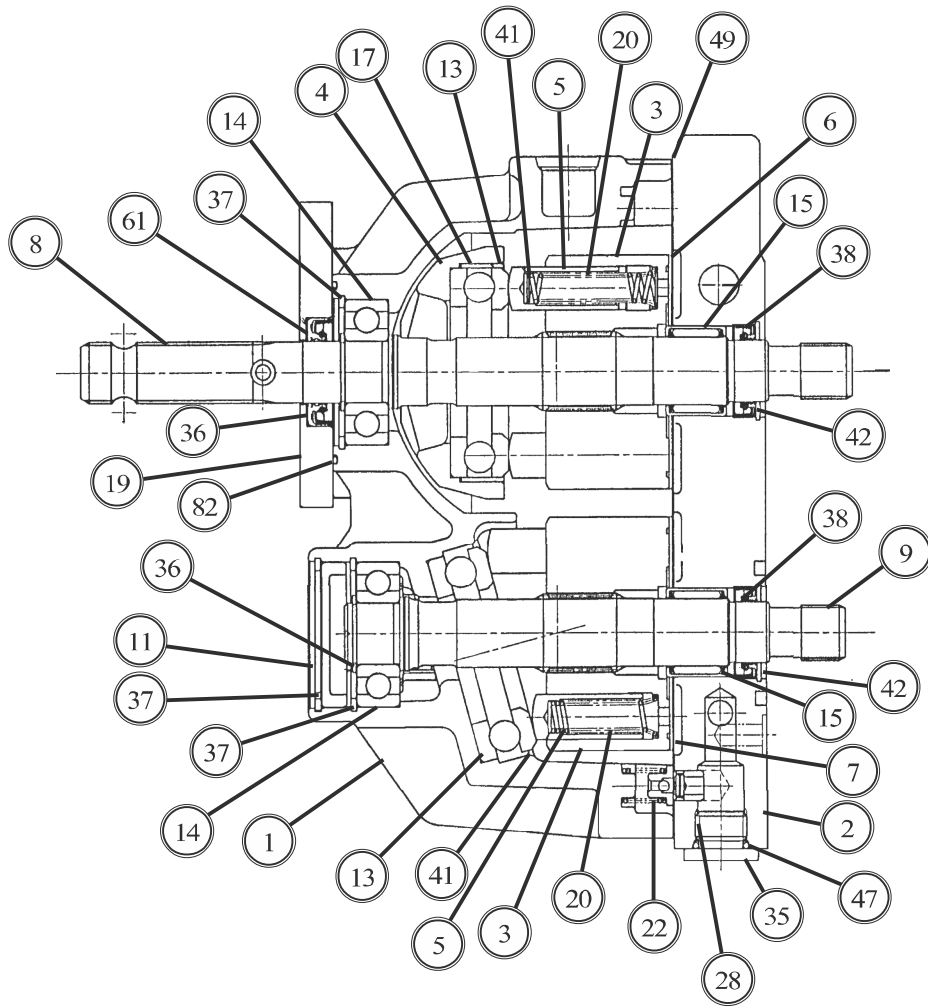


FIG. 4

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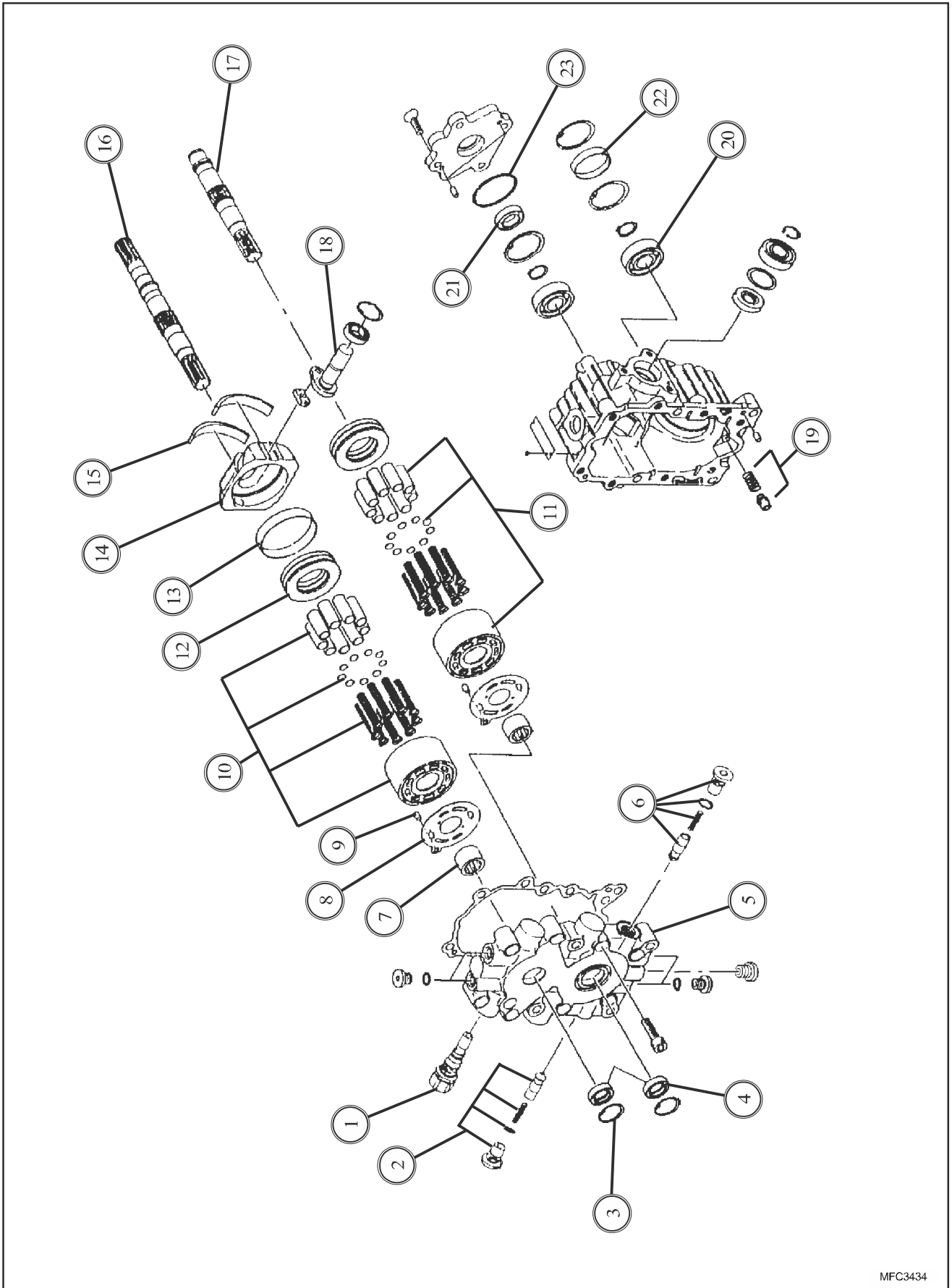
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FIG. 5

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FIG. 6: HST assembly

1. Main Relief
2. Hi Pressure Check Valve
3. Snap Ring
4. Seal
5. Valve Block
6. Hi Pressure Check Valve
7. Needle Bearing
8. Valve Plate
9. Pin
10. Pump Assembly
11. Motor Assembly
12. Thrust Plate
13. Bushing
14. Swash Plate
15. Bearing
16. Input Shaft / PTO Shaft
17. Output Shaft
18. Trunion
19. Charge Pressure
20. Bearing
21. Seal
22. Plug
23. O-Ring



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FIG. 6

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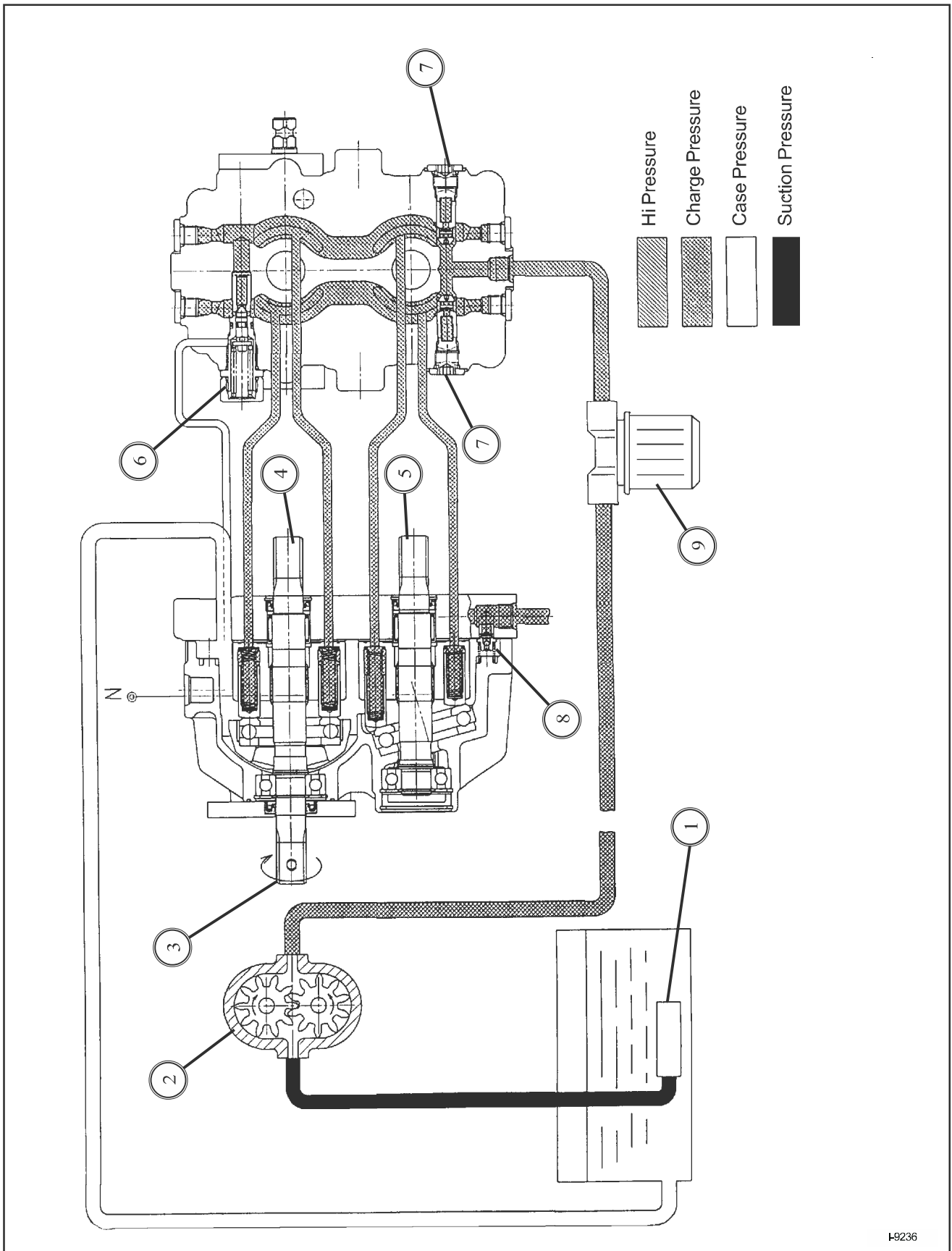


FIG. 7

Operating Diagram of HST

1. Strainer
2. Pump
3. Input Shaft
4. PTO Shaft
5. Output Shaft
6. Relief Valve
7. Hi Pressure Chack Valve
8. Charge Pressure Valve
9. Filter

HYDRO PEDAL LINKAGE

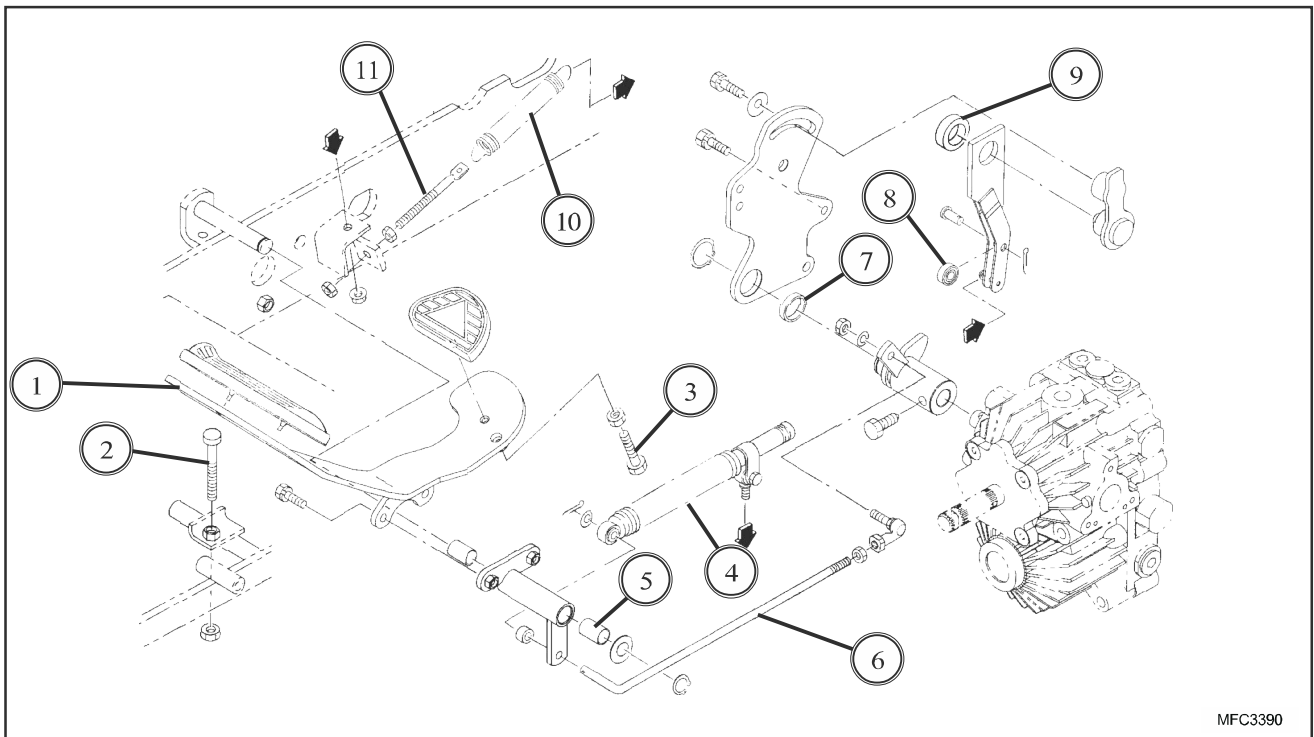


FIG. 8

FIG. 8: HST linkage assembly.

- | | |
|----------------------|------------|
| 1. Pedal | 7. Bushing |
| 2. Forward Stop Bolt | 8. Bearing |
| 3. Reverse Stop Bolt | 9. Collar |
| 4. Dampner | 10. Spring |
| 5. Bushing | 11. Rod |
| 6. Rod | |

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Re-Assembly

FIG. 9: Re-assemble in reverse order.

Lubricate seals, o-rings and pivot locations prior to assembly.

Tighten all hardware to standard torque values.

Properly adjust spring length and turnbuckle length.

1. Spring Length (inside of hook to inside of hook): 120-125mm
2. Turnbuckle Length: 335mm
3. Reverse Stop Bolt: Adjust to 27mm of travel
4. Forward Stop Bolt: Adjust to allow full pedal travel, then turn bolt 360° counter clockwise so pedal does not damage HST due to over travel.

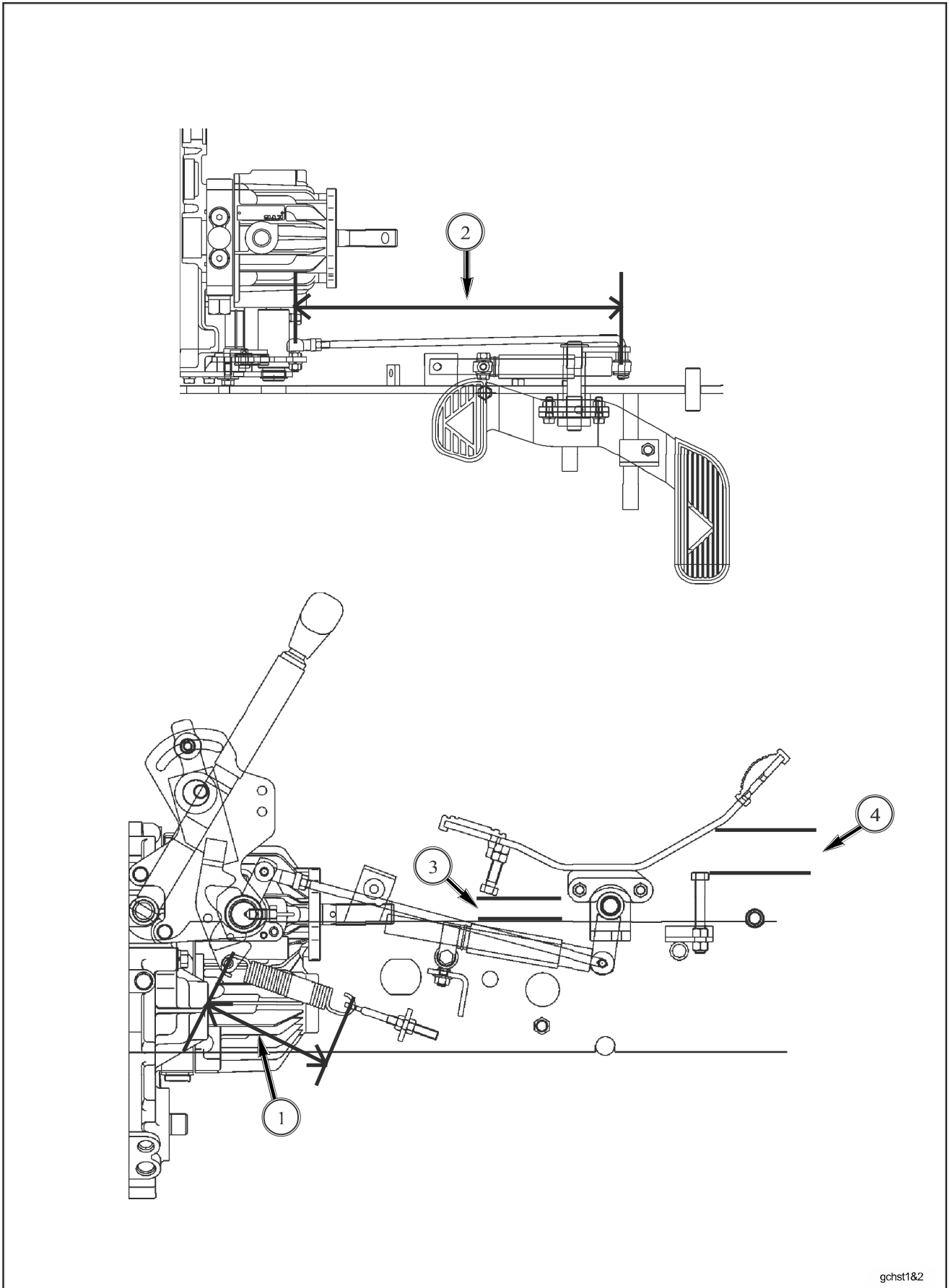
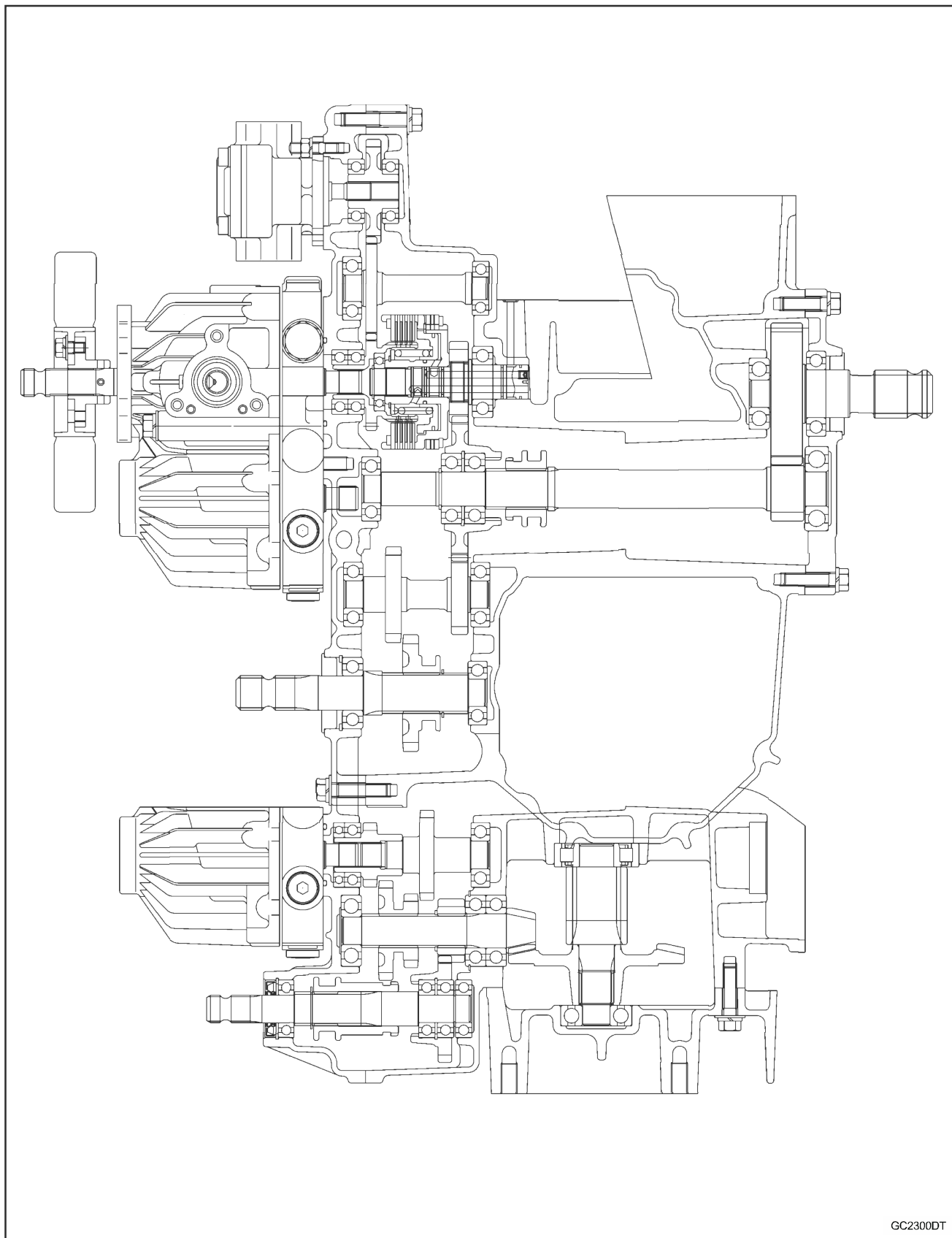


FIG. 9

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FIG. 10

FIG. 10: Complete drivetrain construction.

FIG. 11: Input shaft assembly

- 1. Engine Coupler
- 2. U-Joint

- 3. Drive Shaft
- 4. HST Coupler

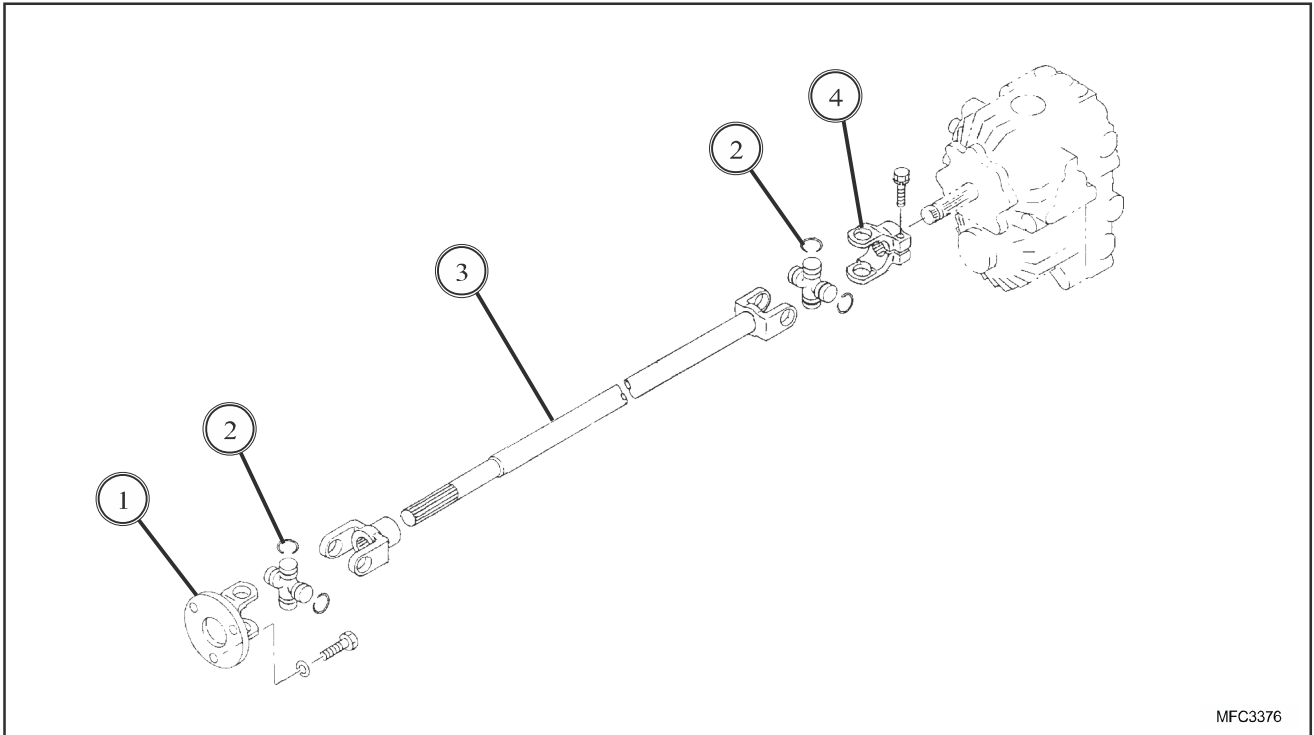


FIG. 11

FIG. 12: Hydrostat assembly

- 1. Cooling Fan
- 2. Fan Hub
- 3. HST

- 4. O-Rings
- 5. Dowel Pin
- 6. Roll pin

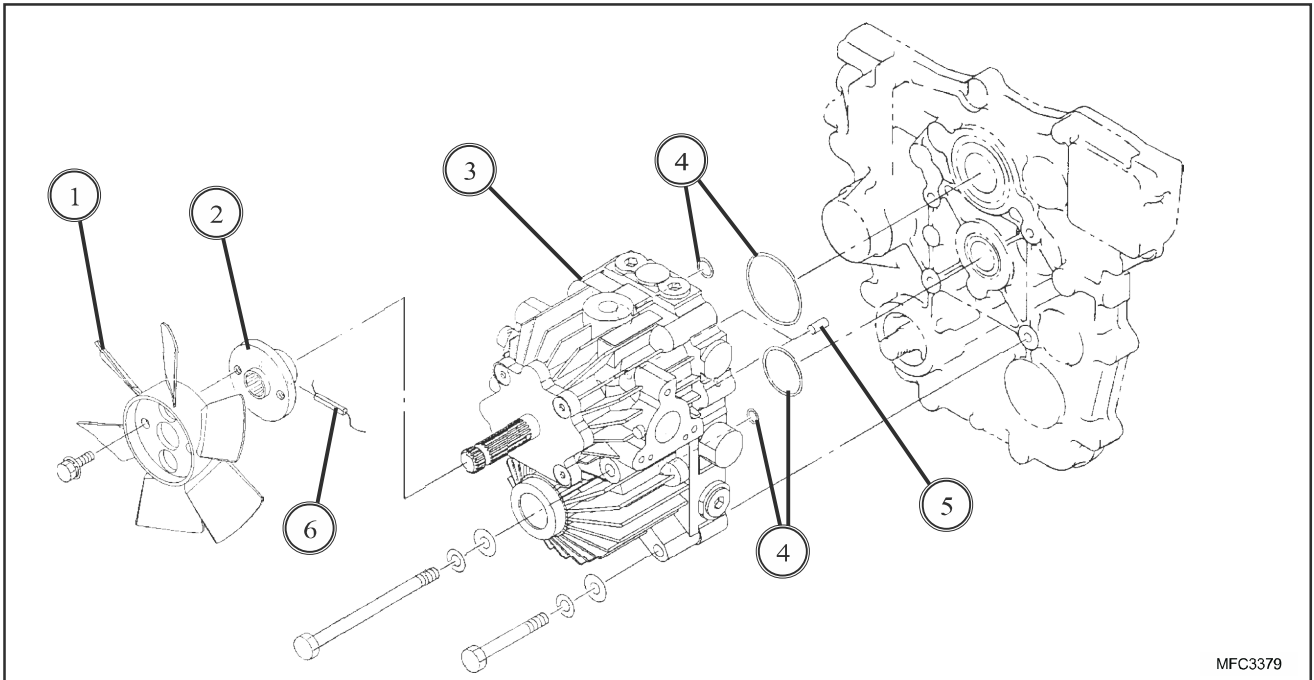


FIG. 12

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FIG. 13: Front transmission cover

- 1. Front Cover
- 2. Dowel Pin

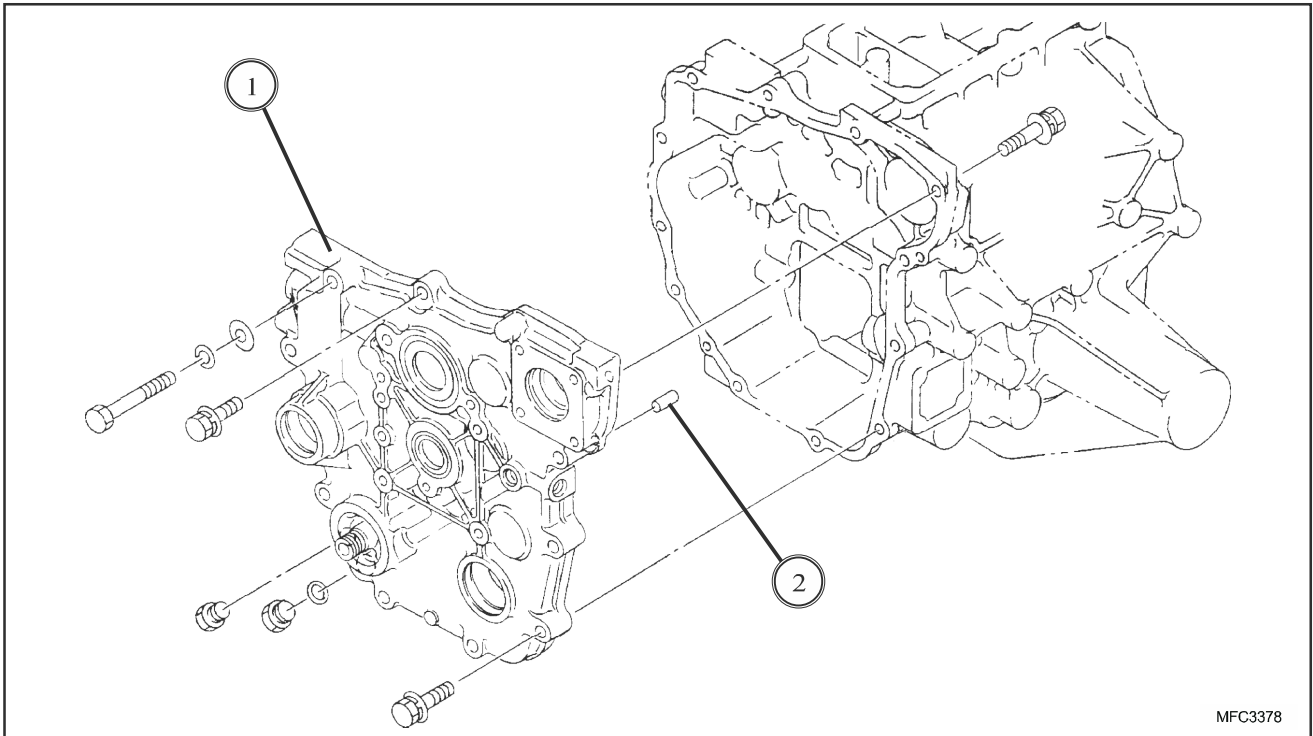


FIG. 13

FIG. 14: Pump drive system

- 1. Pump Drive Gear
- 2. Idler Gear
- 3. PTO Drive Gear

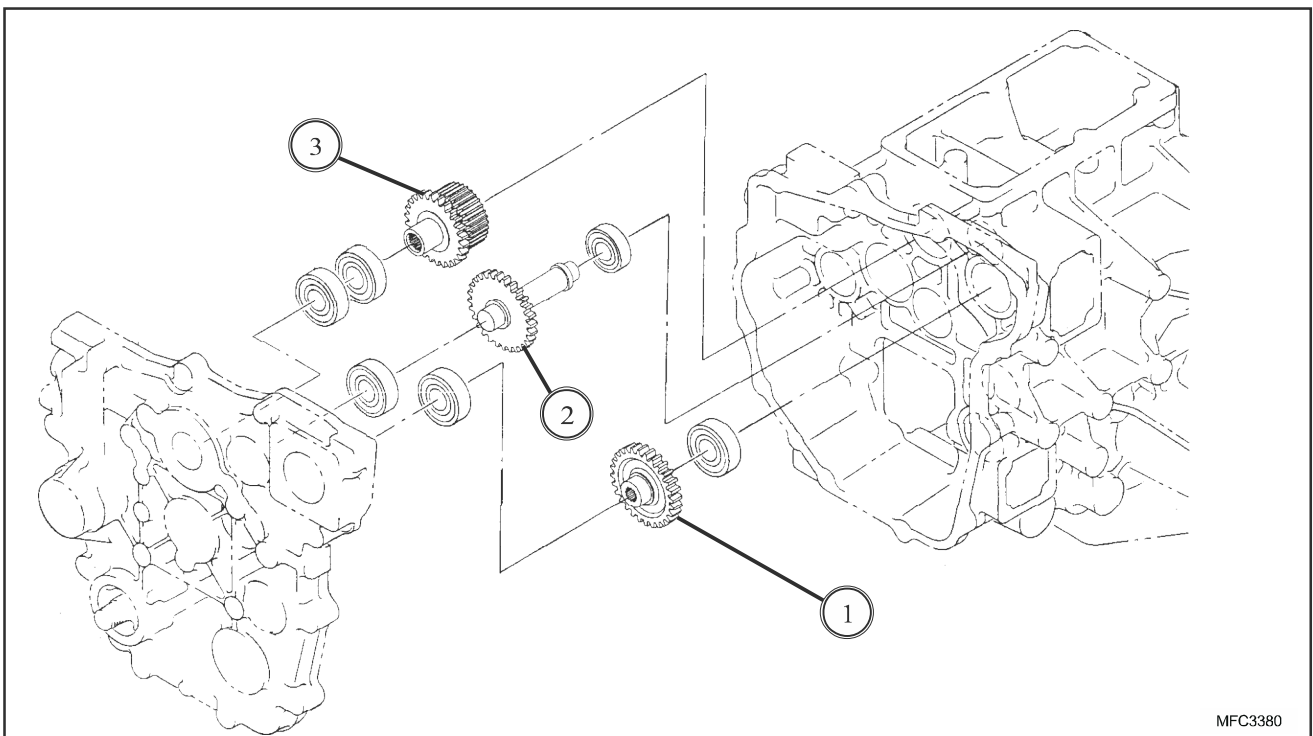
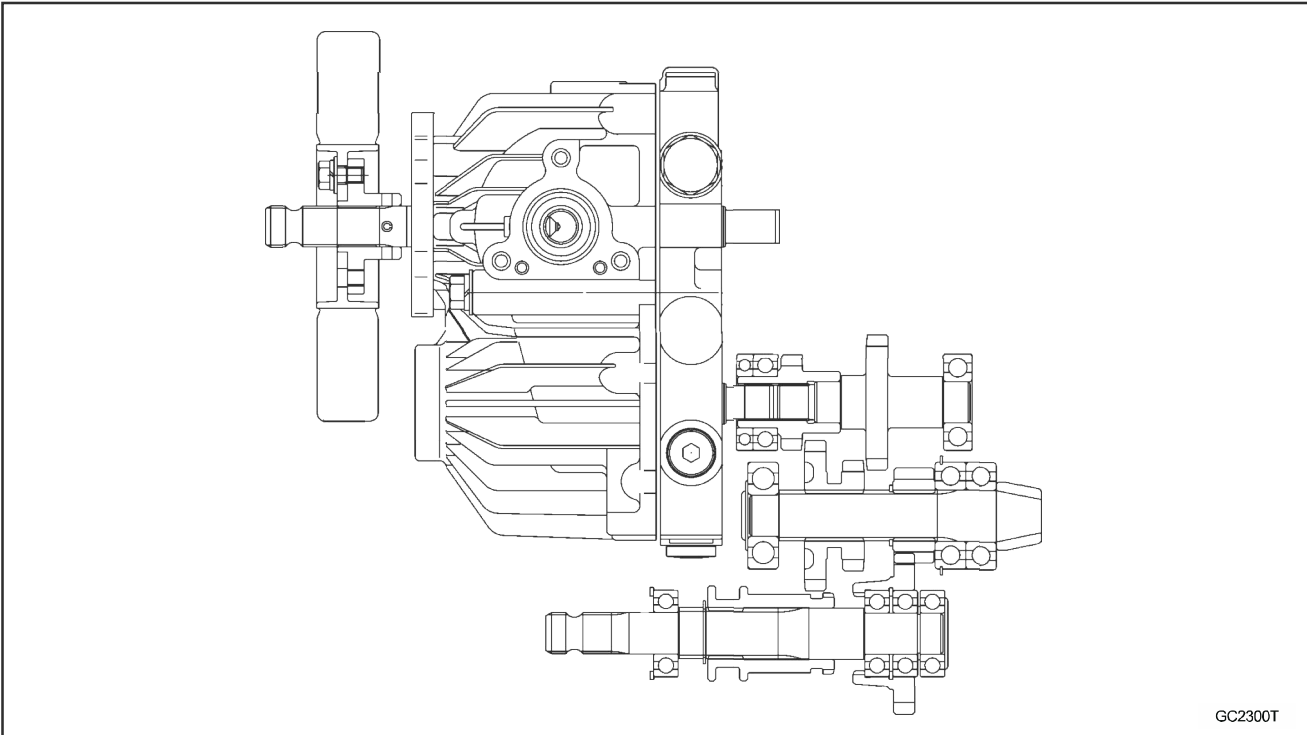


FIG. 14

FIG. 15: Transmission Gear Construction

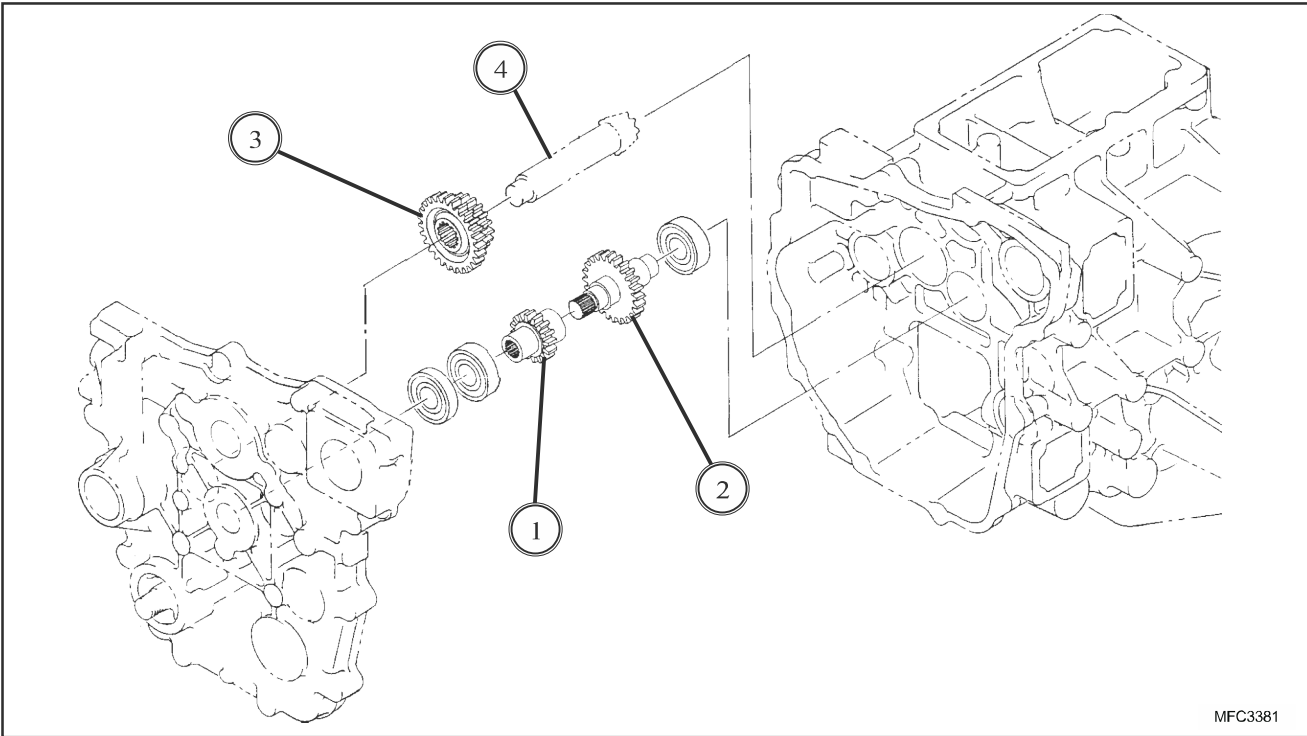


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FIG. 15

FIG. 16: Range gears.

- 1. Coupler
- 2. Input Shaft
- 3. Sliding Gear (Hi/Lo Range)
- 4. Pinion Shaft



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FIG. 16

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FIG. 17: 4WD gear system

1. Pinoin Shaft
2. 4WD Input Gear
3. 4WD Shift Collar
4. 4WD Output Shaft
5. 4WD Output Gear
6. Seal
7. Snap Ring

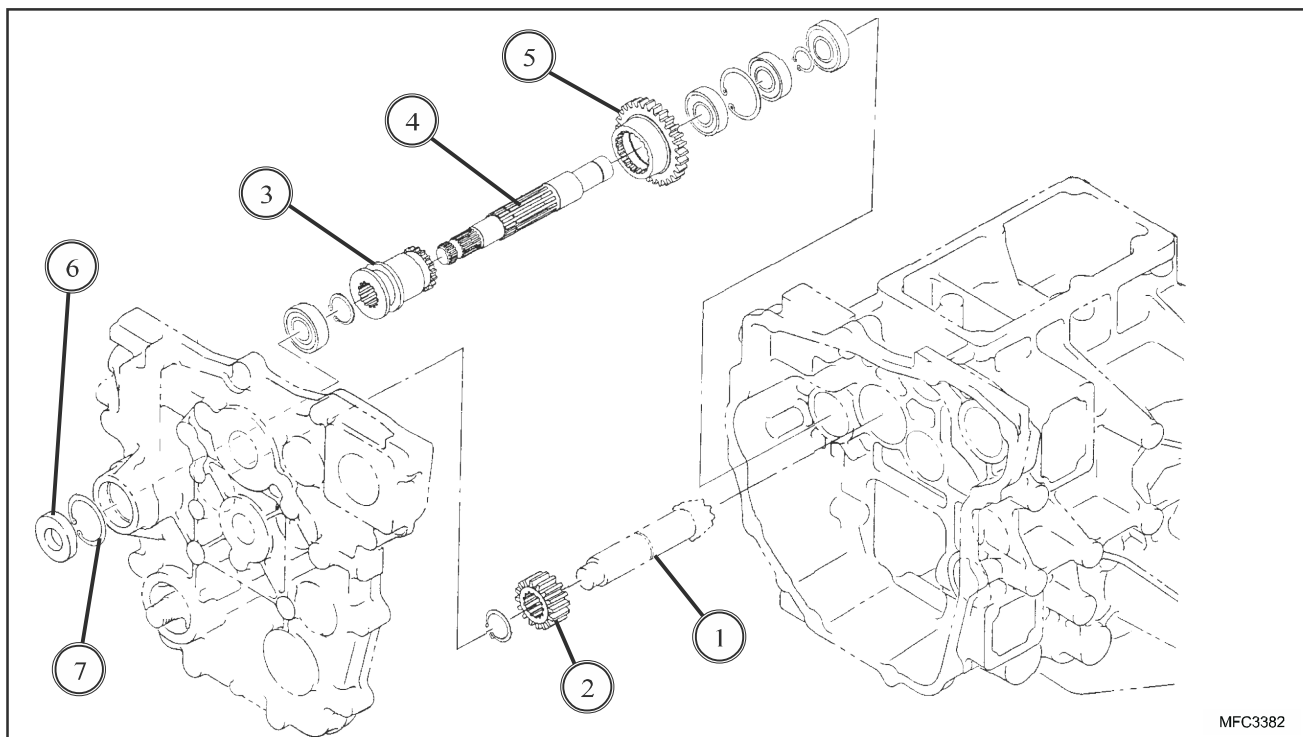


FIG. 17

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Disassembly

FIG: 18: Shift the range transmission into the neutral position. Remove the transmission from the tractor as outlined in the CHASSIS section of this manual.

Remove the seat support assembly.

Remove the oil filter.



FIG. 18

FIG. 19: Remove the HST linkage assembly.



FIG. 19

FIG. 20: Remove the cooling fan from the front of the HST.



FIG. 20

FIG. 21: Remove the 4 bolts securing the HST assembly to the front transmission cover. Remove the HST.

NOTE: Do not lose the o-rings between the HST and the front cover.



FIG. 21

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