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10. Some components of your tractor, such as gaskets and friction surfaces (brake linings, clutch linings, etc.) may contain asbestos. Breathing asbestos dust is dangerous to your health. You are advised to have any maintenance or repair on such components carried out by an authorized NEW HOLLAND Dealer. However, if service operations are to be undertaken on parts that contain asbestos, the essential precautions listed below must be observed:
    - Work out of doors or in a well ventilated area.
    - Dust found on the tractor or produced during work on the tractor should be removed by extraction, not by blowing.
    - Dust waste should be dampened, placed in a sealed container, and marked to ensure safe disposal.
    - If any cutting, drilling, etc. is attempted on materials containing asbestos, the item should be dampened and only hand tools or low speed power tools used.

Operating the tractor

1. Before starting the tractor, apply the parking brake, place the PTO lever in the 'OFF' position, the lift control lever in the down position, the remote control valve levers in the neutral position, and the transmission in neutral.
2. Always sit in the tractor seat when starting the engine or operating controls. Do not start the engine or operate controls while standing beside the tractor.
3. Do not bypass the neutral start switches. Consult your NEW HOLLAND Dealer if your neutral start controls malfunction. Use jumper cables only in the recommended manner. Improper use can result in tractor runaway.
4. Avoid accidental contact with the gear shift lever while the engine is running, as this can cause unexpected tractor movement.
5. Before getting off the tractor, disengage the PTO, turn the engine off, and apply the parking brake. Never get off the tractor while it is in motion.
6. Do not park the tractor on a steep incline.
7. Do not operate the tractor engine in an enclosed building without adequate ventilation. Exhaust fumes can cause death or illness.
8. If the power steering or engine ceases operating, stop the tractor immediately.
9. Pull only from the drawbar or the lower link drawbar in the down position. Use only a drawbar pin that locks in place. Pulling from the tractor rear axle or any point above the axle may cause the tractor to upset.
10. If the front end of the tractor tends to rise when heavy implements are attached to the three-point hitch, install front end or front wheel weights. Do not operate the tractor with a light front end.
11. Always set the hydraulic selector lever in position control when attaching or transporting equipment. Ensure hydraulic couplers are properly mounted and will disconnect safely in case of accidental detachment of implement
12. Do not leave equipment in the raised position.
13. Use the flasher/turn signal lights and Slow Moving Vehicle (SMV) signs when traveling on public roads both day and night (unless prohibited by law).
14. When operating at night, adjust lights to prevent blinding oncoming drivers.

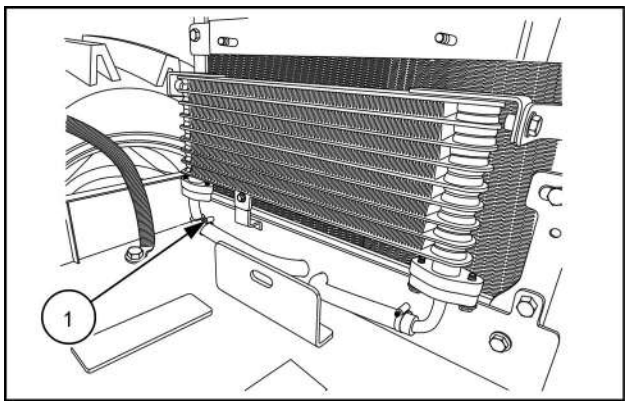
Driving the tractor

1. Watch where you are going, especially at row ends, on roads, around trees and low hanging obstacles.
2. To avoid upsets, drive the tractor with care and at a safe speed. Use extra caution when operating over rough ground, when crossing ditches or slopes, and when turning corners.
3. To provide two-wheel braking, lock tractor brake pedals together when transporting on roads.
4. Do not coast or free wheel down hills. Use the same gear when going downhill as is used when going uphill.
5. Any towed vehicle with a total weight exceeding that of the towing tractor should be equipped with brakes for safe operation.
6. If the tractor becomes stuck or the tires become frozen to the ground, back up the tractor to prevent upset.
7. Always check overhead clearance, especially when transporting the tractor.
8. When operating at night, adjust lights to prevent blinding oncoming drivers.

Operating the Power Take-Off (PTO)

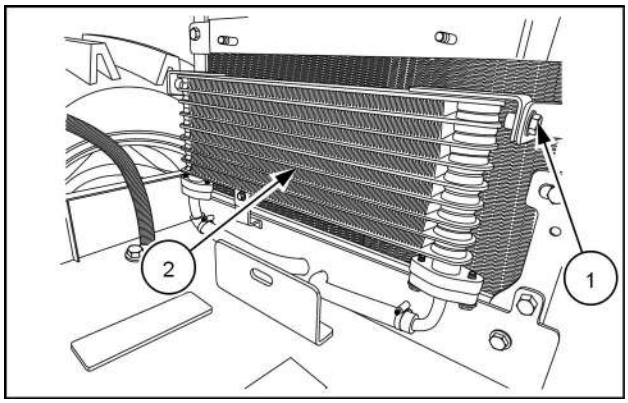
Fuel cooler - Remove

1. Lift the front hood.
2. Remove the battery. See **Battery - Remove (55.302)**.
3. Disconnect the fuel pipes **(1)** on the fuel cooler.



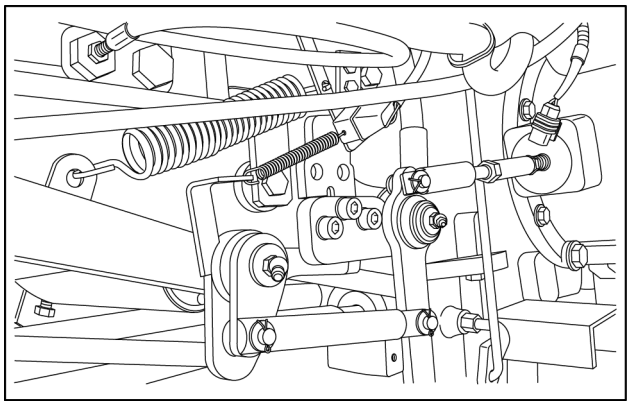
GNIL14TR00703AA 1

4. 1. Loosen all the bolts **(1)**.
   2. Remove the fuel cooler **(2)**.



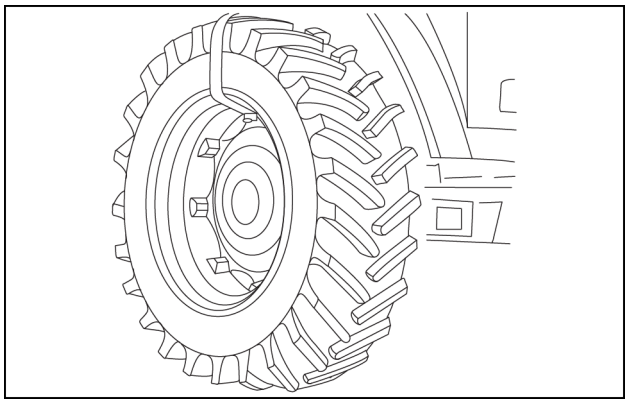
GNIL14TR00703AA 2

3. Disconnect the clutch linkages and the brake linkages.



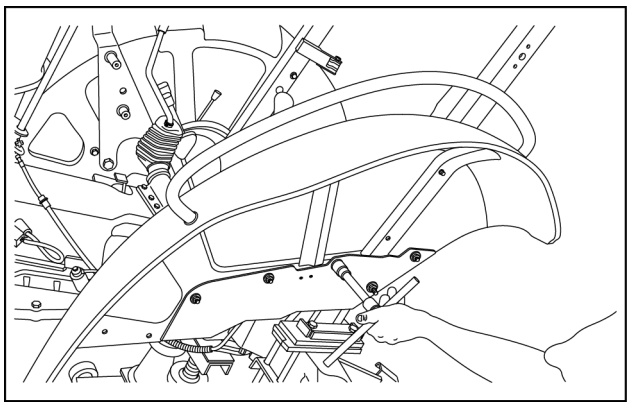
GNIL14TR00766AA 3

4. Remove both the left-hand and right-hand side wheels.



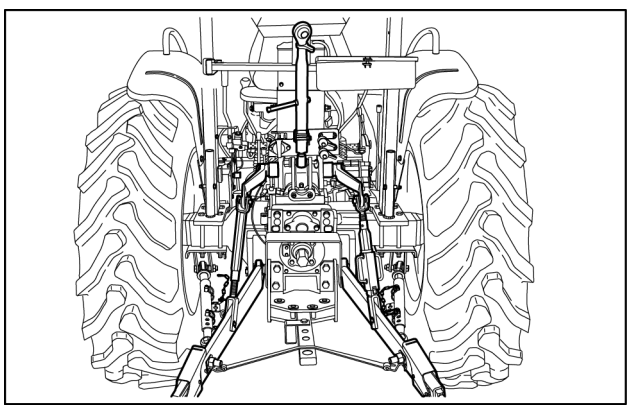
GNIL14TR04016AB 4

5. Loosen the bolts **(1)** and remove fenders from both sides.
   Drain oil from transmission housing.



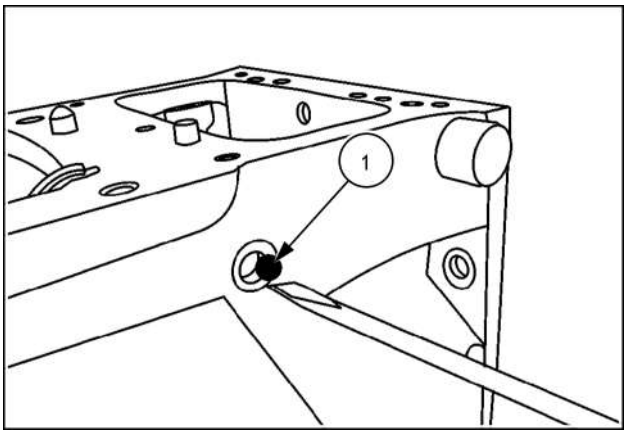
GNIL14TR00790AA 5

6. Disconnect all the hydraulic lines.
7. Remove three point linkages from the tractor.



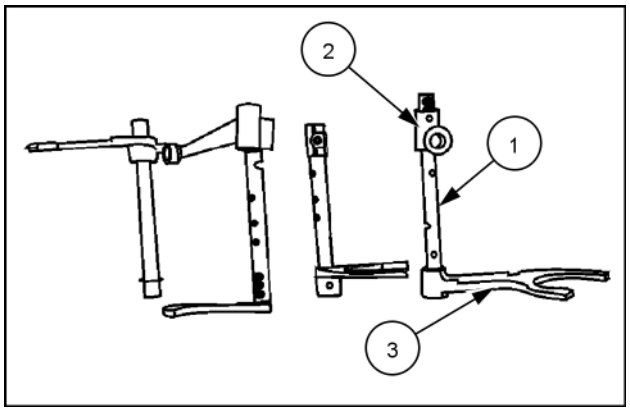
GNIL14TR00562AA 6

4. After fitting reverse rail insert ball **(1)**, applying some grease in the housing.



20097886 4

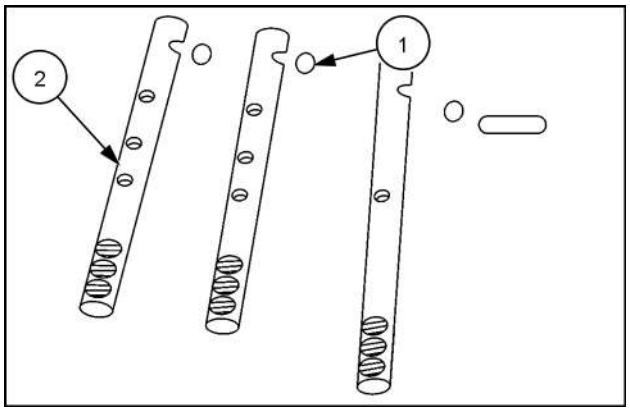
5. Insert the rail **(1)**, of 3rd/4th with gate **(2)**, passing through fork **(3)**, of 3rd/4th gear as shown in **5**.
   Insert gate of 1st/2nd rail shaft on the notch of 1st/2nd gear fork.



200900175 5

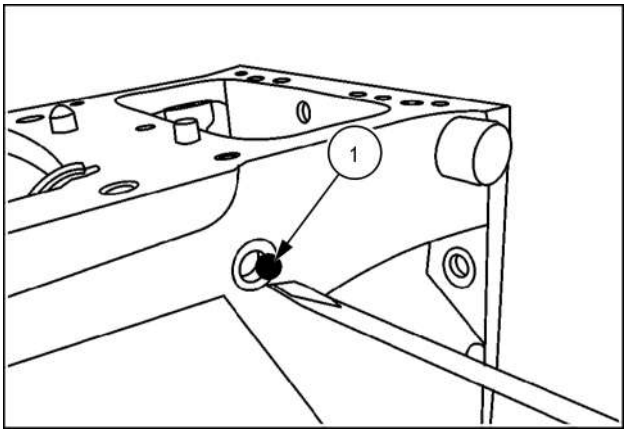
6. Insert the ball **(1)**, applying some grease in housing after removing bolt as shown in **4**.
7. Insert the 1st/2nd rail **(2)**, passing thru gate as shown in **5**.

NOTE: *Keep grooves of rails upward to make easy fitment of balls and springs.*



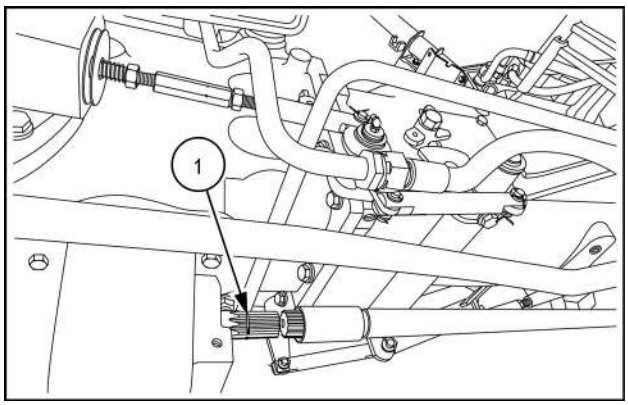
200900174 6

8. Insert the ball and pin **(1)**, after removing neutral safety switch for Hi/Lo rail then fit neutral safety switch and tighten it.



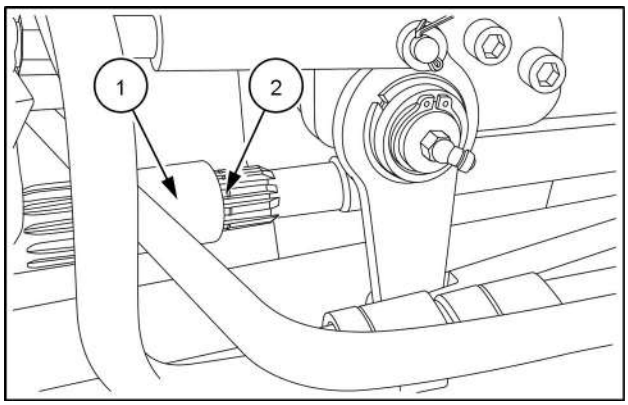
20097886 7

4. Seat the retaining rings **(8)**, figure **1**, on the front axle PTO shaft and 4WD shaft.
5. Seat the retaining ring **(1)** on the PTO shaft of the drop box.



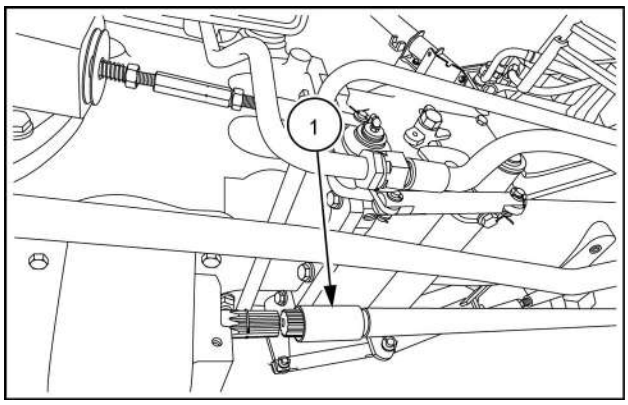
GNIL15TR01130AA 4

6. Slide the spline coupler **(1)** toward the drop box.
7. Measure the gap **(2)** on the 4WD shaft between retaining ring groove and sleeve face.



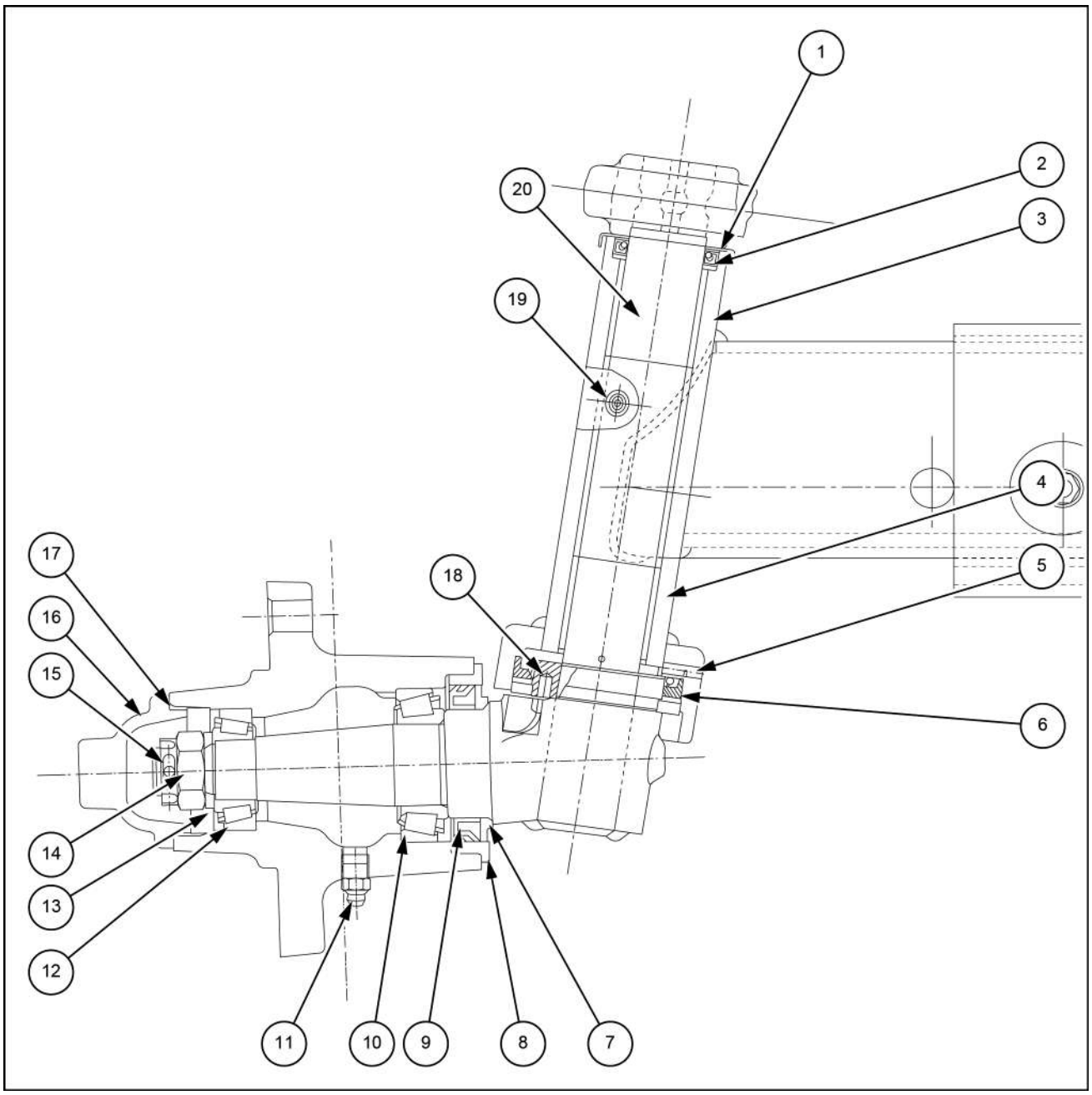
GNIL15TR01131AA 5

8. Slide the spline coupler **(1)** away from the drop box.



GNIL15TR01130AA 6

9. Insert suitable shim or combination of shims **(9)**, figure **1**, on the drop box PTO shaft to make up for the gap. Maintain a free play of **0.3 mm**.
10. Slide the spline coupler toward the drop box and seat the retaining ring **(3)**, figure **1**.

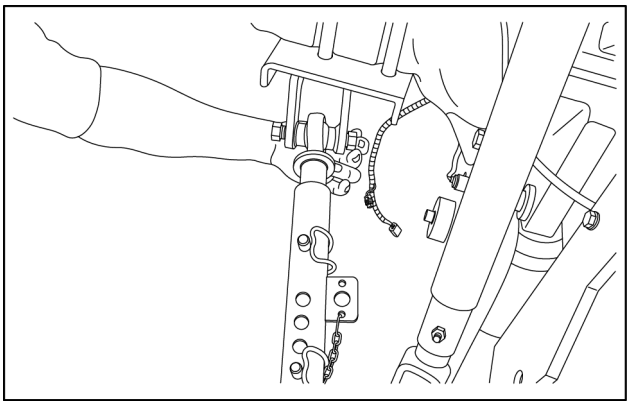


GNIL14TR04433GB 2

Stub assembly

1. Dust cover
2. Oil seal
3. Bush upper
4. Bush lower
5. Thrust washer
6. Seal
7. Dust cover
8. Bush (sleeve)
9. Seal
10. Bearing
11. Grease nipple
12. Bearing
13. Thrust washer
14. Castle nut
15. Split pin
16. Dust cover
17. O-ring
18. Thrust washer pin
19. Grease nipple
20. King pin

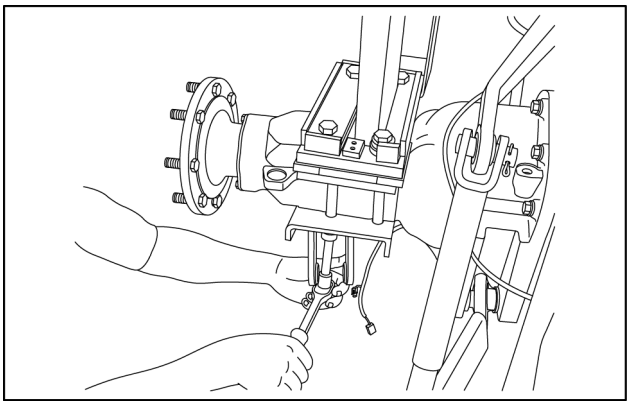
4. Remove the check chain and lower link of the three point linkage.



GNIL14TR00864AA 4

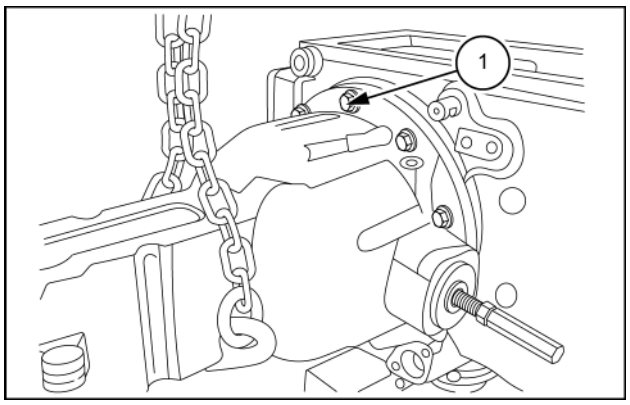
5. Remove the ROPS (Roll Over Protective Structure).

NOTE: *Use a suitable hoist.*



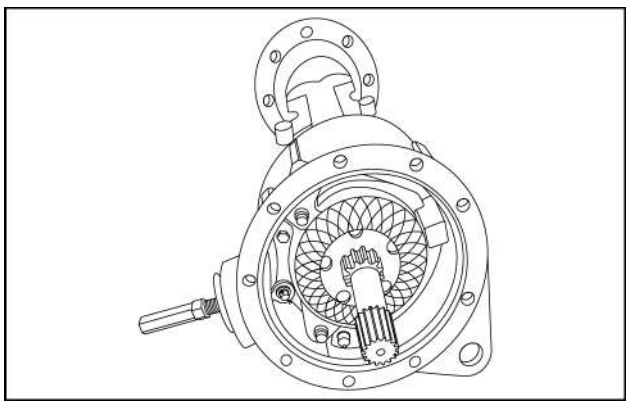
GNIL14TR00865AA 5

6. 1. Wrap chain around final drive housing and loosen bolts **(1)**.
   2. Remove the final drive housing.

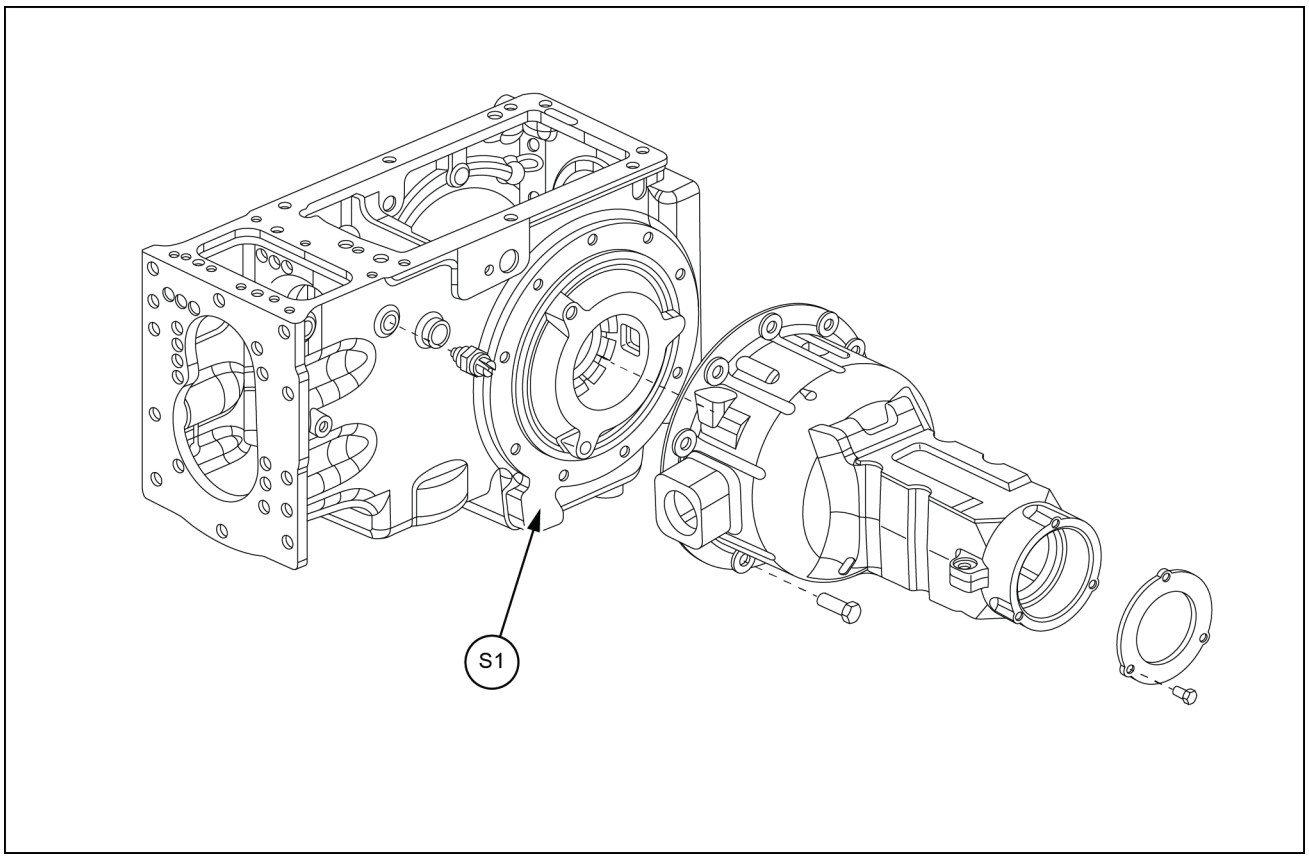


GNIL14TR04276AB 6

7. Place the trumpet housing assembly on plane surface.



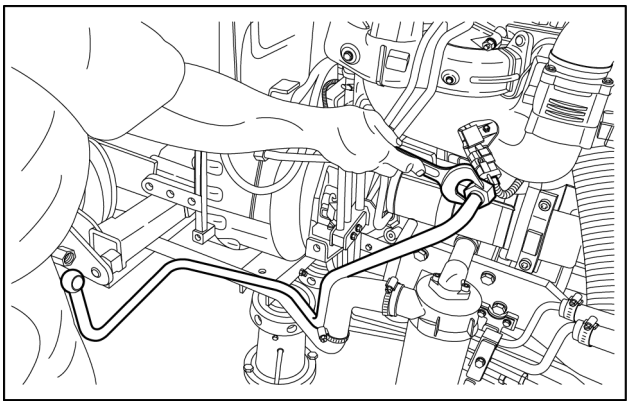
GNIL14TR04336AA 7



GNIL14TR04327FB 1

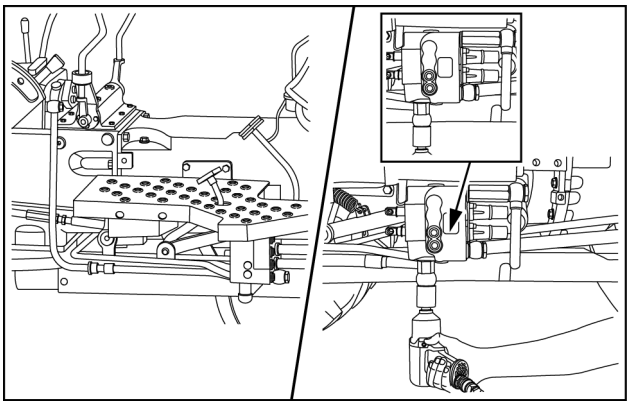
Mid-mount remote control valve - Remove

1. Disconnect the two joystick cable from the mid-mount valve. See **Joystick and Electric Hydraulic (EH) control - Remove (55.512)**.
2. Disconnect the hydraulic delivery pipe between hydraulic pump and mid-mount valve.



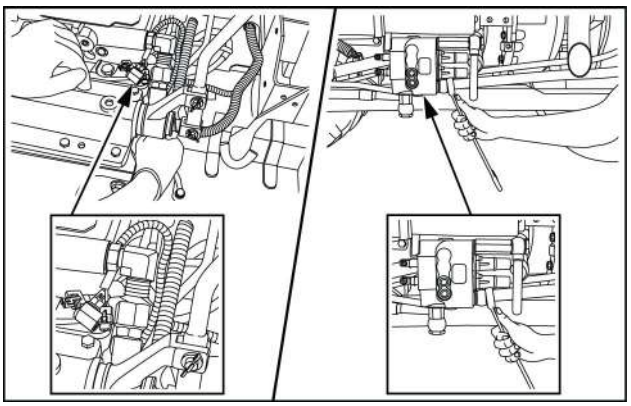
GNIL14TR00783AA 1

3. Disconnect the hydraulic delivery pipe between mid-mount valve and main control valve.



GNIL14TR00843AA 2

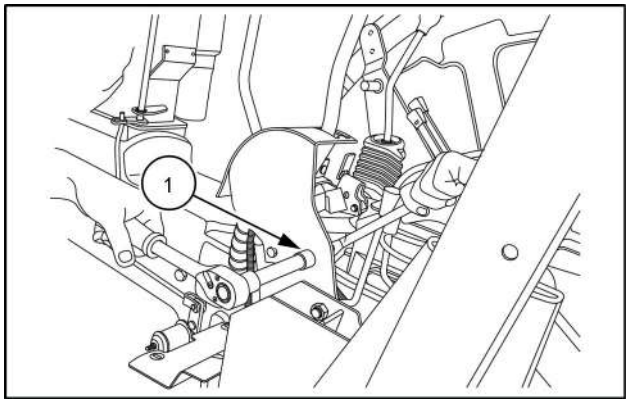
4. Disconnect the hydraulic line between the mid-mount valve and hydraulic lift body.



GNIL14TR00842AA 3

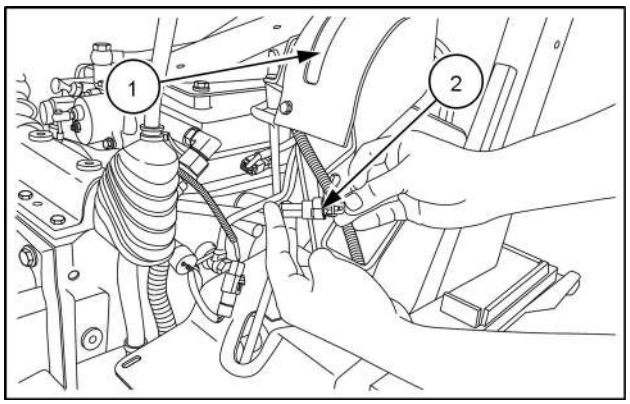
Power Take-Off (PTO) speed sensor - Remove

1. Remove the fender from left side of the tractor. See **Fenders and guards - Remove (90.116)**.
2. Loosen the bolts **(1)**.



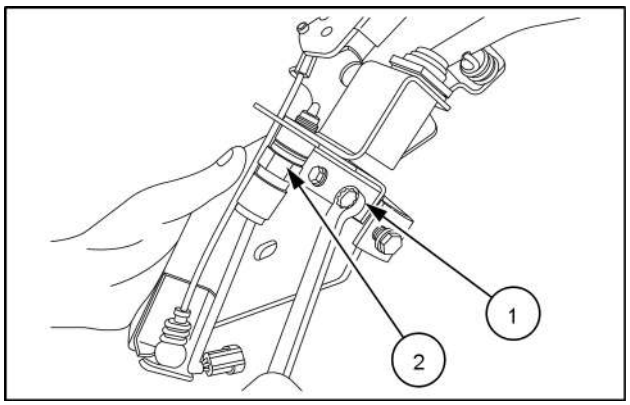
GNIL14TR00840AA 1

3. Lift the plate **(1)** access the wire connector.
4. Disconnect the wiring **(2)**.



GNIL14TR00838AA 2

5. Loosen the bolts **(1)** and remove the sensor assembly.
6. Loosen the nut **(2)** and remove the PTO sensor.



GNIL14TR00839AA 3

18 

Work lights (amber)

This warning light illuminates when the work lights are switched on.

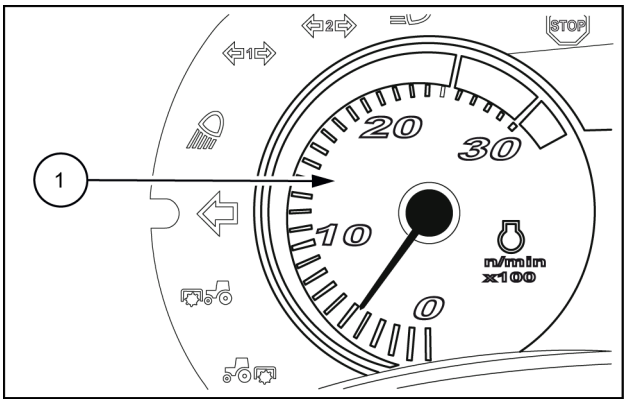
19

Information Display

The display shows information on the operational condition of the machine and highlights any trouble in the form of symbols or error codes.

Rev counter/ Techometer

The rev counter **(1)** indicates the engine rpm. Each division on the scale represents 100 rev/min., therefore, with the needle indicating 20 , the engine is running at **2000 RPM**.



DCUTLBRNE003S3A 2

Engine speed

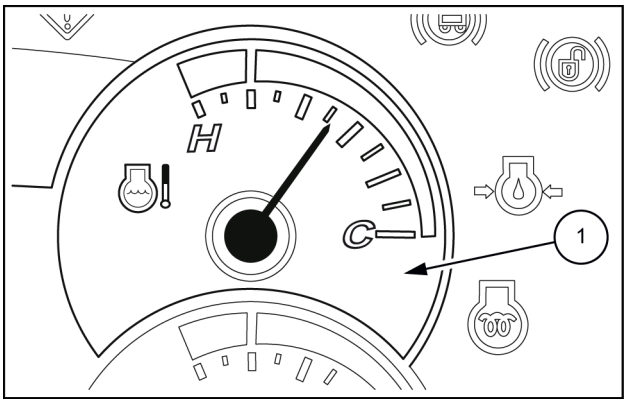
NOTICE: *Never use the engine continuously for a long time at speeds between* ***2500 - 3000 RPM*** *(yellow area on the speedometer) to avoid damage to the engine and definitely never exceed* ***3000 RPM*** *(red area on the speedometer). For appropriate use, always operate under the speed corresponding to* ***2300 RPM****.*

Engine coolant temperature gauge

The temperature display **(1)** indicates the temperature of the engine coolant.

- blue area = normal temperature;
- red area = temperature too high.

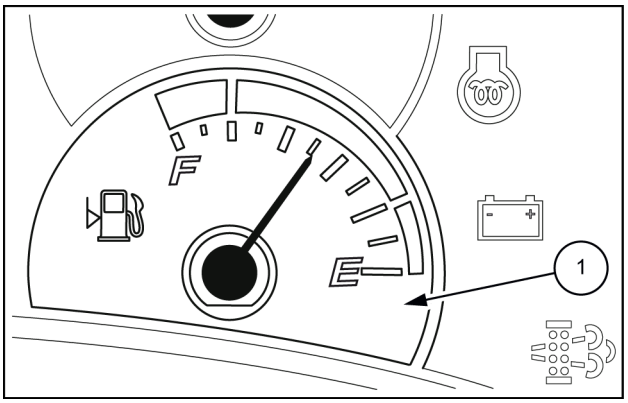
In this case, slow the engine to idling speed (without stopping the engine) and, if the light stays on, have the cooling system checked.



DCUTLBRNE004S3A 3

Fuel level gauge

This instrument **(1)** indicates the level of diesel in the tank and only works when the ignition key is turned onto ON.



DCUTLBRNE005S3A 4

A. If there is less than approximately **12 V**, continue to Step **5**.

B. If there is approximately **12 V**, check the ECU A-9000 for the appropriate software and re-flash, if necessary.

5. Check the ECU A-9000 voltage supply wiring for a short circuit to ground.

   With the key in the ON position, use a multimeter to perform the following voltage check on the vehicle harness (VE) side :

From	To	Value
X-9102 pin K01	Chassis ground	There should be no continuity.
X-9102 pin K03	Chassis ground	There should be no continuity.
X-9102 pin K05	Chassis ground	There should be no continuity.

   A. If there is continuity, there is a short circuit to ground condition in the ECU A-9000 voltage supply wiring. Use the appropriate service manual to locate and repair the shorted conductor.

   B. If there is no continuity, check the ECU A-9000 for the appropriate software and re-flash, if necessary.

6. Visually inspect the relevant harnesses and connectors for damage, bent or dislocated pins, corroded terminals, or broken wires. Verify that the connectors are fully installed. Flex the harnesses involved to reveal intermittent breaks or shorts in the wiring concerned. Operate the machine while you monitor the display.

   A. If you find damage or the display indicates other than normal display readings, then repair the damage discovered during the inspection or locate and repair the other than normal display condition and verify that the error has been resolved.

   B. If you do not find damage and the display indicates only normal readings, then erase the fault code and continue operation.

Wiring harnesses - Electrical schematic sheet 02 – Engine Control Unit (ECU) power and after treatment system (engine schematics) (55.100.DP-C.20.E.02)