# SERVICE MANUAL

## T4.85 / T4.95 / T4.105 / T4.115
## With Hi-Lo Transmission
## With Mechanical or Power Shuttle Transmission
## Tractor

*With Hi-Lo Transmission PIN ZxJT0xxxx and above*
*With Mechanical or Power Shuttle Transmission PIN ZxJT5xxxx and above*



**Part number 47865295**
English
March 2015
*Replaces part number 47557565*

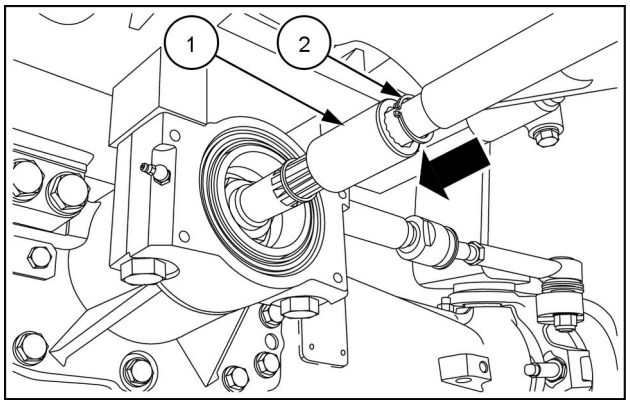
NEW HOLLAND AGRICULTURE

**Axle shafts and steering knuckles**

| | |
|---|---|
| Diameter of outer axle shafts in correspondence with bushes | **44.975 - 45.000 mm** (**1.771 - 1.772 in**) |
| Inside diameter of installed bushes | **45.100 - 45.175 mm** (**1.776 - 1.779 in**)(*) |
| Clearance between axle shafts and bushes | **0.100 - 0.200 mm** (**0.004 - 0.008 in**) |
| Interference fit between bushes and respective bores | **0.064 - 0.129 mm** (**0.003 - 0.005 in**) |
| Thickness of steering knuckle bearing adjuster plates | **0.100 mm** (**0.004 in**)- **0.150 mm** (**0.006 in**) - **0.200 mm** (**0.008 in**) - **0.250 mm** (**0.010 in**) - **0.300 mm** (**0.012 in**) |
| Planetary final drives: | |
| Reduction ratio | 12 : 12 + 60 = 1 : 6 |
| Thickness of driven gears thrust rings | **0.77 - 0.83 mm** (**0.03 - 0.03 in**) |

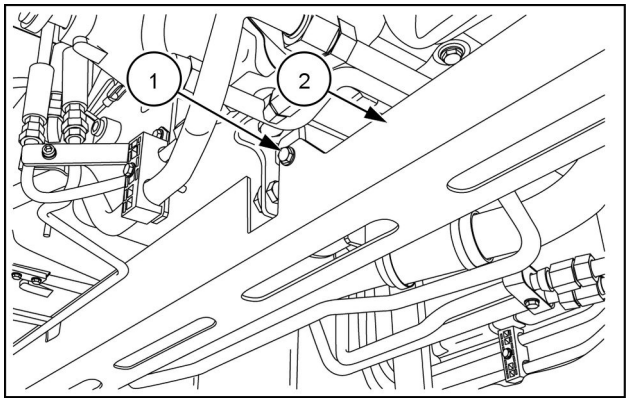
(*) Value to be obtained without refacing.

4. Slide the sleeve **(1)** along the drive shaft toward the front axle. Then install the circlip **(2)**.



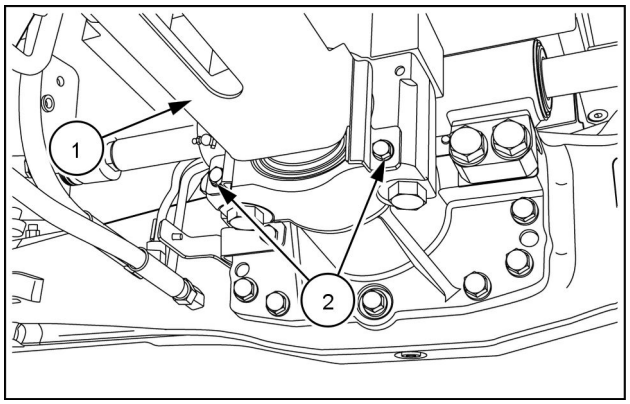

MOIL14TR01688AA 4

5. Use the central screws **(1)** to secure the guard **(2)** of the drive shaft to the drive shaft.



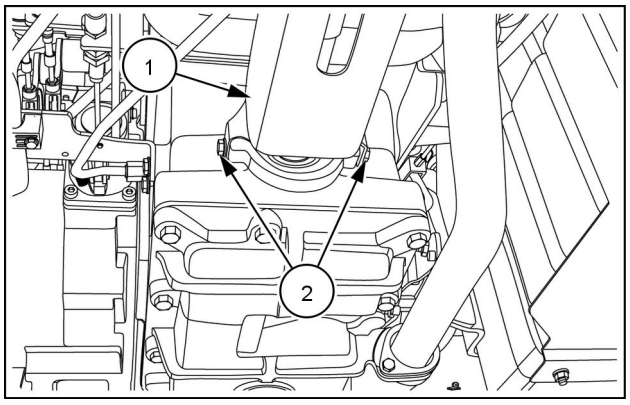

MOIL14TR01687AA 5

6. Tighten the screws **(2)** that secure the guard **(1)** of the drive shaft to the front axle.




MOIL14TR01686AA 6

7. Tighten the screws **(2)** that secure the guard **(1)** of the drive shaft to the rear axle.




MOIL14TR01685AA 7

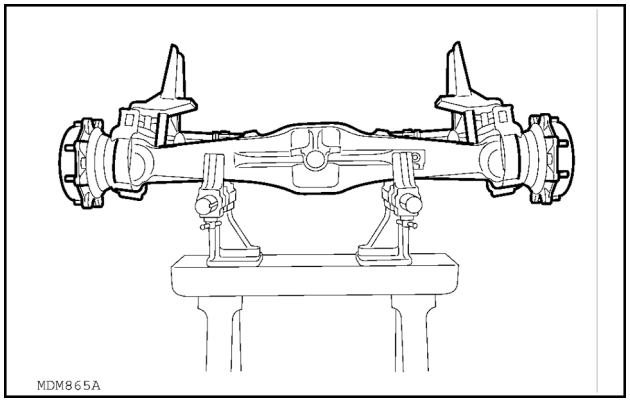
# Four-Wheel Drive (4WD) axle - Disassemble – Heavy duty axle

## ⚠ WARNING

**Avoid injury!**
**Handle all parts carefully. Do not place your hands or fingers between parts. Use Personal Protective Equipment (PPE) as indicated in this manual, including protective goggles, gloves, and safety footwear.**
**Failure to comply could result in death or serious injury.**

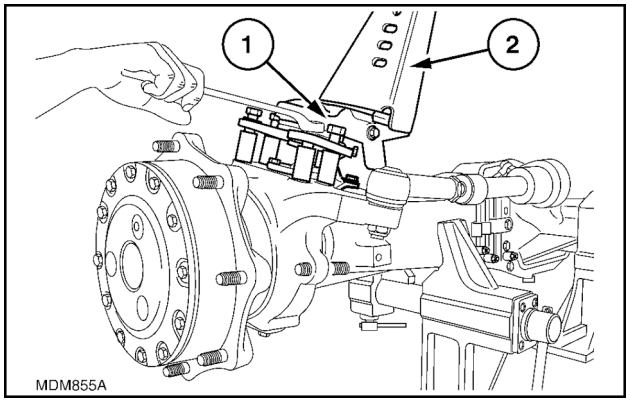
**W0208A**

***NOTE:*** *Front axle overhaul operations must be carried out on the jack stand.*



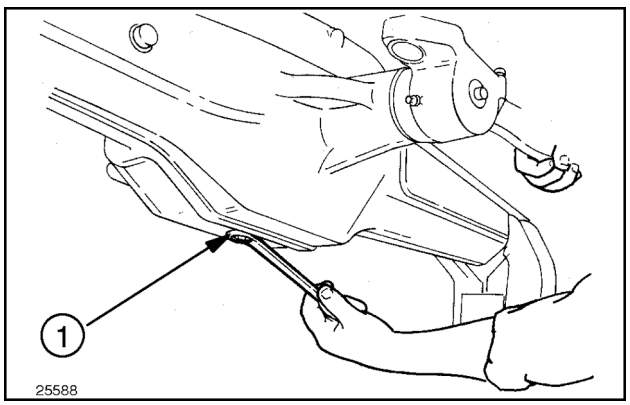

SEZ25CAP1A-13 1

1. Take out the three bolts **(1)** securing the fender support **(2)**.




SEZ25CAP1A-14 2

2. Remove the plug **(1)**. Drain the oil from the axle case.




SEZ25CAP1A-15 3

# Axle support - Remove

**⚠ DANGER**

**Heavy objects!**
**Lift and handle all heavy components using lifting equipment with adequate capacity. Always support units or parts with suitable slings or hooks. Make sure the work area is clear of all bystanders.**
**Failure to comply will result in death or serious injury.**

**D0076A**

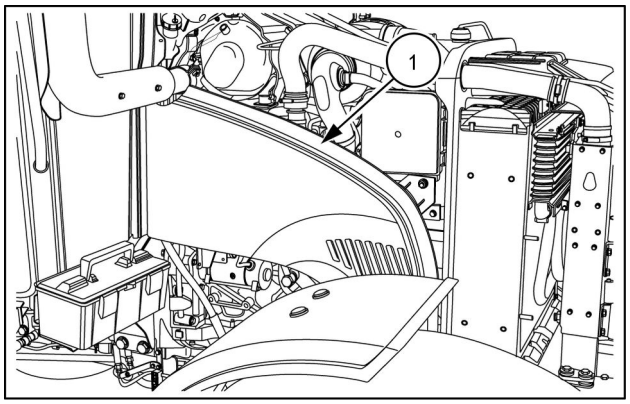
**⚠ WARNING**

**Avoid injury!**
**Handle all parts carefully. Do not place your hands or fingers between parts. Use Personal Protective Equipment (PPE) as indicated in this manual, including protective goggles, gloves, and safety footwear.**
**Failure to comply could result in death or serious injury.**

**W0208A**

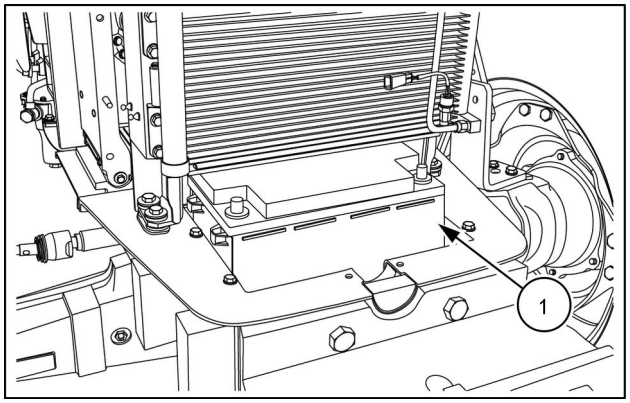
**Prior operation:**
**Hood - Remove (90.100)**.
**Hood closing support - Remove (90.102)**.

1. Remove the side panel **(1)** from both sides.




MOIL14TR01691AA 1

2. Disconnect the battery **(1)** and remove the battery, as described in **Battery - Remove (55.302)**.



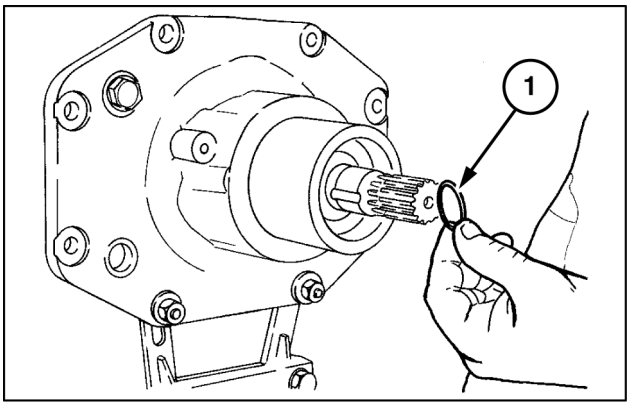

MOIL15TR00085AA 2

# Index

# Front axle system - 25

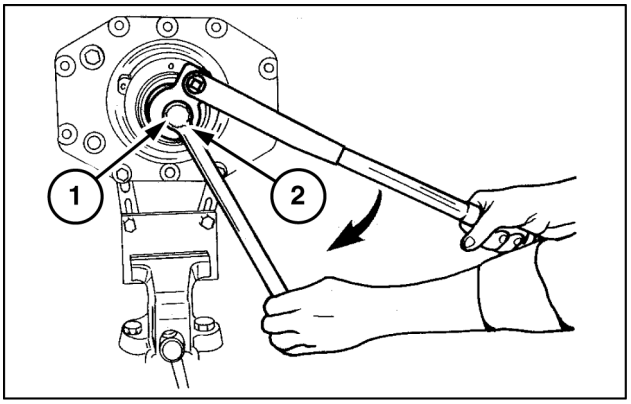
## Powered front axle - 100

12. Remove tools **380000248** and **380000249** from the bevel drive housing.
13. Fit the drive pinion complete with: Inner bearing rings, spacer and pre-determined adjustment shims.
14. Fit the O-ring **(1)** on the bevel pinion shaft.
15. Insert the spacer on the pinion and, after having carefully greased the outer surface, fit the anti-rotation ball.



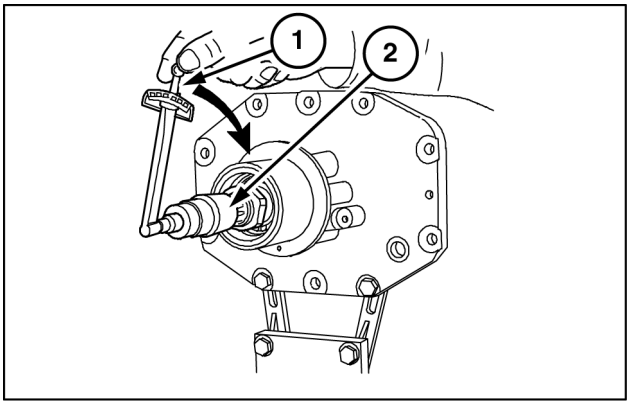

MOLI11U0186AB 5

16. Fit pinion retaining tool **380000257 (2)**.
17. Insert wrench **380000268** on the adjuster ring nut.
18. Using the torque wrench on the pinion retaining wrench **(2)**, hold the bevel pinion in position and, using a torque wrench (positioned as in the figure) on the ring nut wrench **(1)**, tighten the ring nut **(C3)** ( **Powered front axle - Torque (25.100)**) to a torque of **380 - 420 N·m** (**280.3 - 309.8 lb ft**), whilst rotating the pinion shaft to ensure a perfect bearing fit.




MOLI11U0187AB 6

19. With torque wrench 380001633 **(1)** fitted on pinion retaining wrench **380000257 (2)** check that the pinion rolling torque, without oil seal and relative dust seal, is **0.8 - 1.3 N·m** (**0.590 - 0.959 lb ft**).
    If the rolling torque is less than the prescribed value, fit a thinner adjustment shim. If the torque is greater than the prescribed value, fit a thicker adjustment shim.
20. Unscrew the ring nut and fit the seal and the relative dust seal ring. Tighten the nut to a torque value of **380 - 420 N·m** (**280.3 - 309.8 lb ft**) while simultaneously rotating the pinion shaft to ensure that the bearings are seated correctly.
21. With torque wrench 380001633 **(1)** fitted on pinion retaining wrench **380000257 (2)** check that the pinion rolling torque, with oil seal and relative dust seal, is **0.6 - 1.5 N·m** (**0.443 - 1.106 lb ft**).
    Finally, secure the ring nut and fit the circlip on the bevel pinion shaft.




MOLI11U0188AB 7

## Adjusting the ring bevel gear bearings and checking the clearance between the teeth of the bevel gear pair

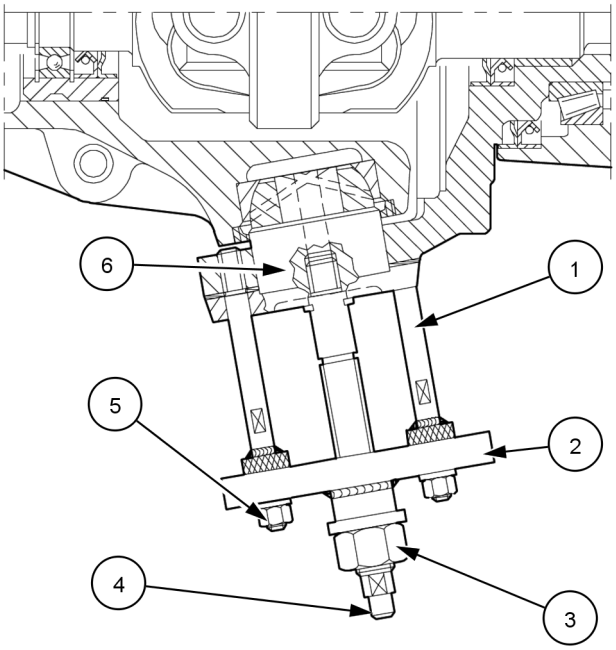
# Contents

## Front axle system - 25

### Final drive hub, steering knuckles, and shafts - 108

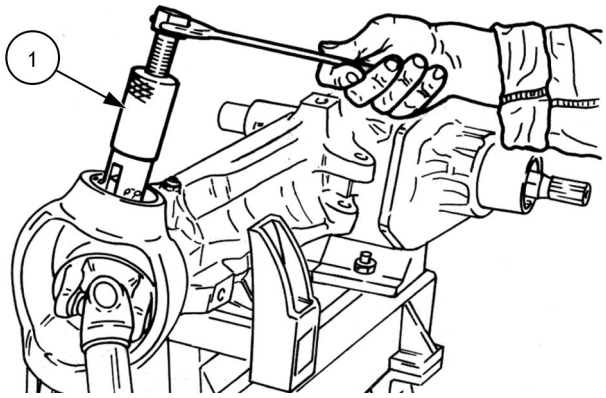
# Steering knuckle and king pin - Replace

1. Remove the grease fittings and the retaining bolts of the steering knuckle pins.
2. Fit the bolts **(1)** of tool **380000265**.
3. Fit the plate **(2)** of the tool. Fix the plate to the three bolts with nuts **(5)**.
4. Fit the tie rod **(4)**. Screw the tie rod fully into the grease fitting bore on the pin **(6)**.
5. Screw in the nut **(3)** to drive the pin out of its bore.




MOIL14UTL0164HA 1

6. Use the extractor tool **380000234 (1)** to remove the steering knuckle bearings.
7. Use a suitable striker tool to re-install the steering knuckle bearings.

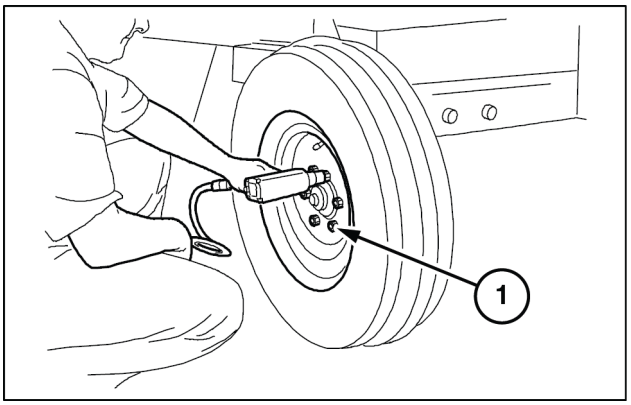



MOIL14UTL0129AA 2

# Non-powered front axle - Sectional view

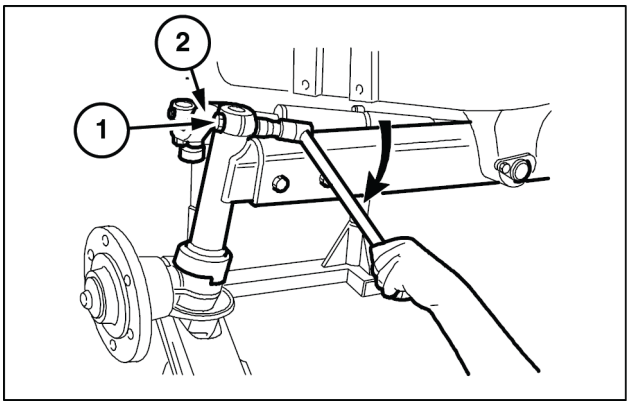
| | |
|---|---|
| T4.105 less cab, with mechanical or power shuttle transmission [ZxJT5xxxx] | |
| T4.105 with cab, with mechanical or power shuttle transmission [ZxJT5xxxx] | |
| T4.115 less cab, with mechanical or power shuttle transmission [ZxJT5xxxx] | |
| T4.115 with cab, with mechanical or power shuttle transmission [ZxJT5xxxx] | |
| T4.85 less cab, with mechanical or power shuttle transmission [ZxJT5xxxx] | |
| T4.85 with cab, with mechanical or power shuttle transmission [ZxJT5xxxx] | |
| T4.95 less cab, with mechanical or power shuttle transmission [ZxJT5xxxx] | |
| T4.95 with cab, with mechanical or power shuttle transmission [ZxJT5xxxx] | |

4. Remove the front wheel fixing bolts **(1)**.



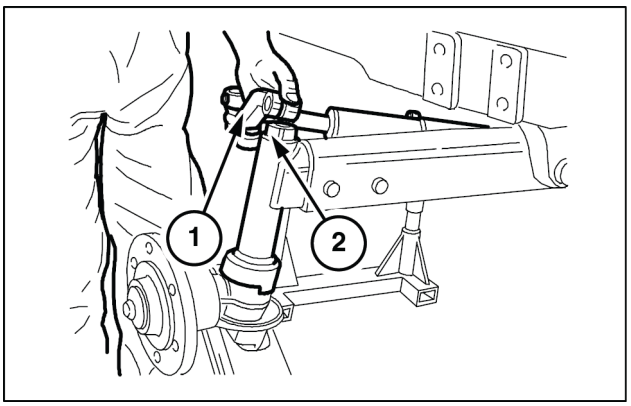

MOLI12U0154AB 3

5. Place a hydraulic jack beneath the stub axle and unscrew the bolt **(1)** fixing the control lever **(2)** to the stub axle pin.



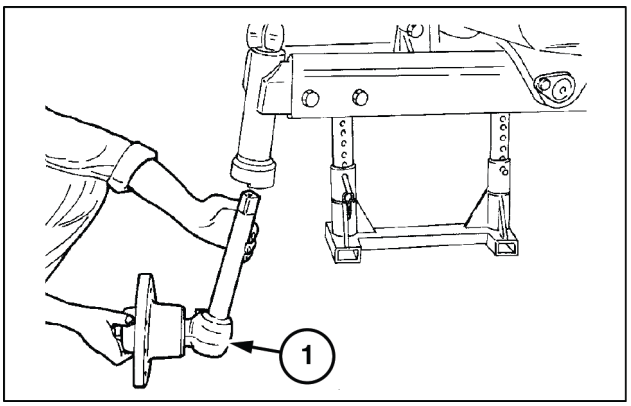

MOLI12U0155AB 4

6. Withdraw the control lever **(1)** from the stub axle pin **(2)**.




MOLI12U0156AB 5

7. Lower the hydraulic jack and remove the stub axle **(1)**.




MOLI12U0157AB 6

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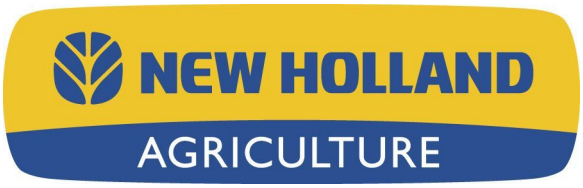




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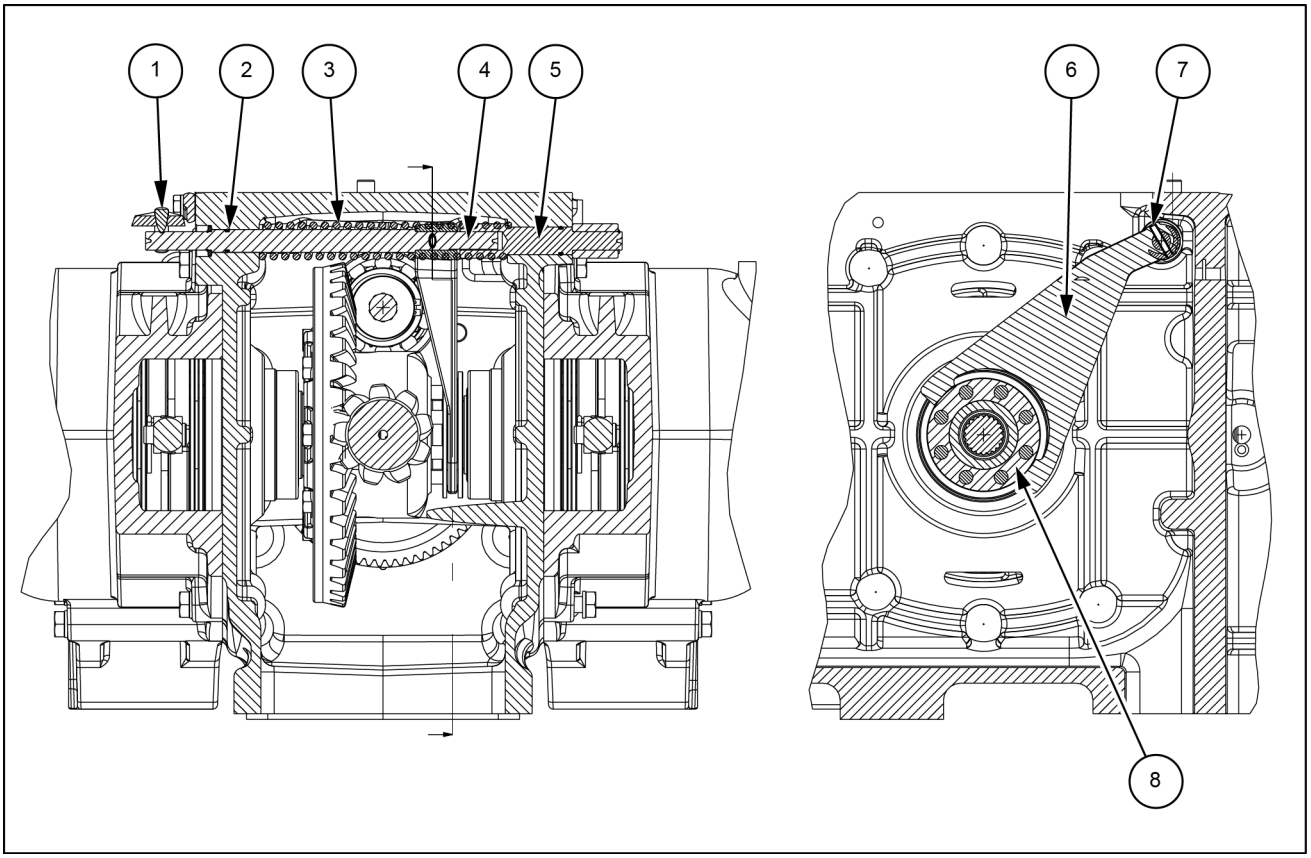
# Differential lock mechanical control - Sectional view

| | |
|---|---|
| T4.105 less cab, with mechanical or power shuttle transmission [ZxJT5xxxx] | |
| T4.105 with cab, with mechanical or power shuttle transmission [ZxJT5xxxx] | |
| T4.115 less cab, with mechanical or power shuttle transmission [ZxJT5xxxx] | |
| T4.115 with cab, with mechanical or power shuttle transmission [ZxJT5xxxx] | |
| T4.85 less cab, with mechanical or power shuttle transmission [ZxJT5xxxx] | |
| T4.85 with cab, with mechanical or power shuttle transmission [ZxJT5xxxx] | |
| T4.95 less cab, with mechanical or power shuttle transmission [ZxJT5xxxx] | |
| T4.95 with cab, with mechanical or power shuttle transmission [ZxJT5xxxx] | |




MOIL13TR01635FA 1

**Sectional view of the mechanically controlled differential lock**

1. Outer control handle for the differential lock
2. Seal
3. Spring
4. Control rod of the differential lock
5. Support for the control rod of the differential lock
6. Control fork for the differential lock
7. Fork anti-rotation dowel
8. Differential lock sleeve

# Differential - Disassemble

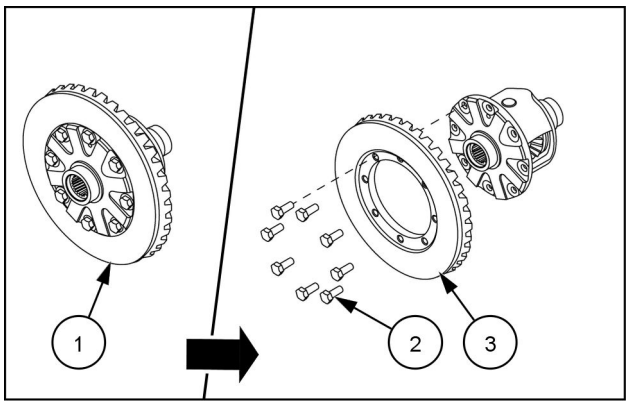
**⚠ WARNING**

**Avoid injury!**
**Handle all parts carefully. Do not place your hands or fingers between parts. Use Personal Protective Equipment (PPE) as indicated in this manual, including protective goggles, gloves, and safety footwear.**
**Failure to comply could result in death or serious injury.**

**W0208A**

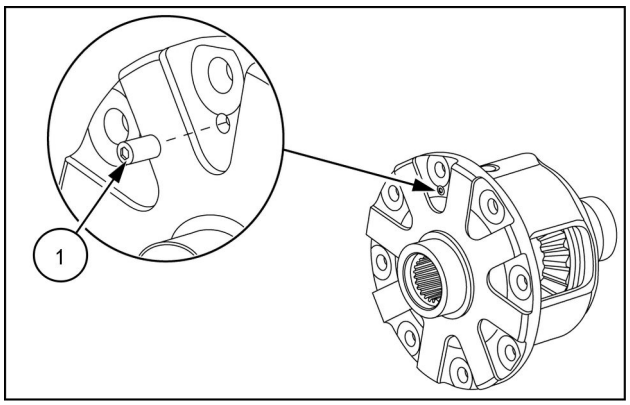
**Prior operation:**
**Differential - Remove (27.106)**.

1. Position the differential **(1)** together with bevel ring gear on the workbench.
2. Loosen the retaining screws **(2)**. Remove the bevel ring gear **(3)** from the differential housing.



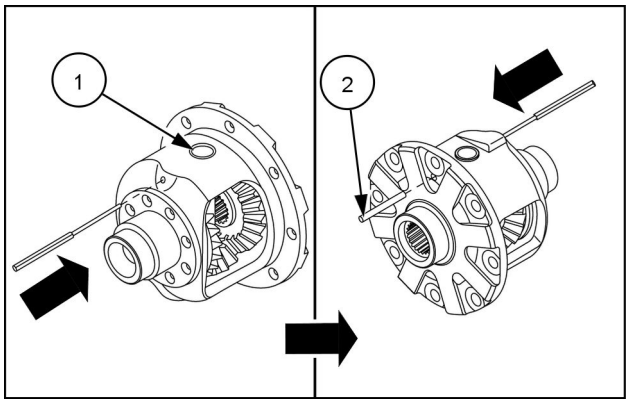

MOIL14TR01725AA 1

3. Loosen and remove the dowel **(2)** to release the locking pin of the central spindle **(1)**.




MOIL14TR01724AB 2

4. Use a suitable drift to remove the pin **(2)** that locks the central spindle **(1)**.




MOIL14TR01726AA 3

# Differential lock - Remove

| | |
|---|---|
| T4.105 less cab, with mechanical or power shuttle transmission [ZxJT5xxxx] | |
| T4.105 with cab, with mechanical or power shuttle transmission [ZxJT5xxxx] | |
| T4.115 less cab, with mechanical or power shuttle transmission [ZxJT5xxxx] | |
| T4.115 with cab, with mechanical or power shuttle transmission [ZxJT5xxxx] | |
| T4.85 less cab, with mechanical or power shuttle transmission [ZxJT5xxxx] | |
| T4.85 with cab, with mechanical or power shuttle transmission [ZxJT5xxxx] | |
| T4.95 less cab, with mechanical or power shuttle transmission [ZxJT5xxxx] | |
| T4.95 with cab, with mechanical or power shuttle transmission [ZxJT5xxxx] | |

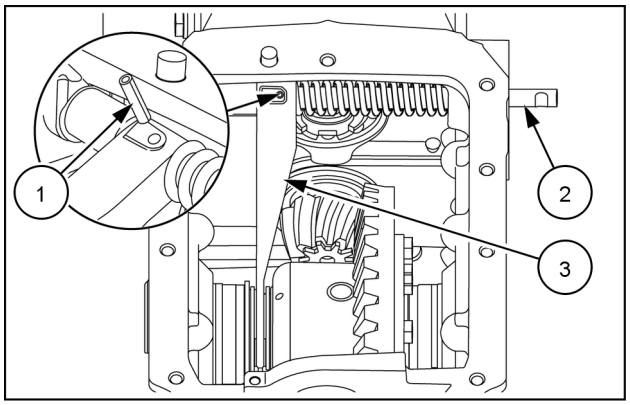
**⚠ WARNING**

**Avoid injury!**
**Handle all parts carefully. Do not place your hands or fingers between parts. Use Personal Protective Equipment (PPE) as indicated in this manual, including protective goggles, gloves, and safety footwear.**
**Failure to comply could result in death or serious injury.**

**W0208A**

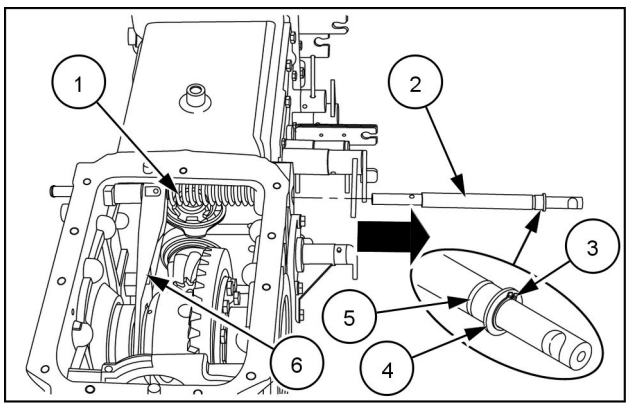
**Prior operation:**
**Differential lock mechanical control - Remove (27.106)**.

1. Remove the spring pin **(1)** that secures the fork **(3)** to the control rod **(2)** of the differential lock.




MOIL14TR01669AA 1

2. Extract the control rod **(2)** of the differential lock together with seal **(5)**, spacer **(4)**, and locking ring **(3)**. At the same time, retrieve the spring **(1)** and the fork **(6)**.




MOIL14TR01668AA 2

# Differential lock mechanical control - Adjust

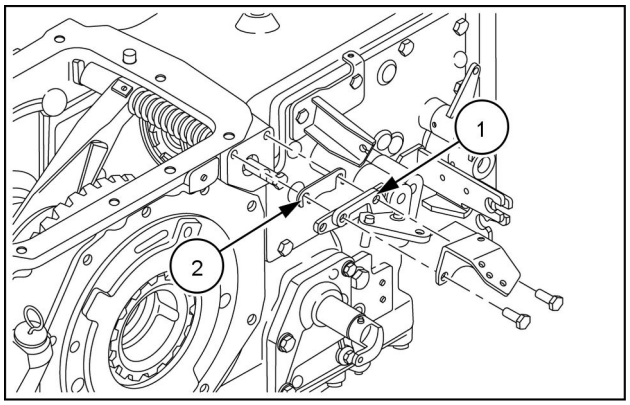
| | |
|---|---|
| T4.105 less cab, with mechanical or power shuttle transmission [ZxJT5xxxx] | |
| T4.105 with cab, with mechanical or power shuttle transmission [ZxJT5xxxx] | |
| T4.115 less cab, with mechanical or power shuttle transmission [ZxJT5xxxx] | |
| T4.115 with cab, with mechanical or power shuttle transmission [ZxJT5xxxx] | |
| T4.85 less cab, with mechanical or power shuttle transmission [ZxJT5xxxx] | |
| T4.85 with cab, with mechanical or power shuttle transmission [ZxJT5xxxx] | |
| T4.95 less cab, with mechanical or power shuttle transmission [ZxJT5xxxx] | |
| T4.95 with cab, with mechanical or power shuttle transmission [ZxJT5xxxx] | |

**⚠ CAUTION**

**Pinch hazard!**
**Always use suitable tools to align mating parts. DO NOT use your hand or fingers.**
**Failure to comply could result in minor or moderate injury.**

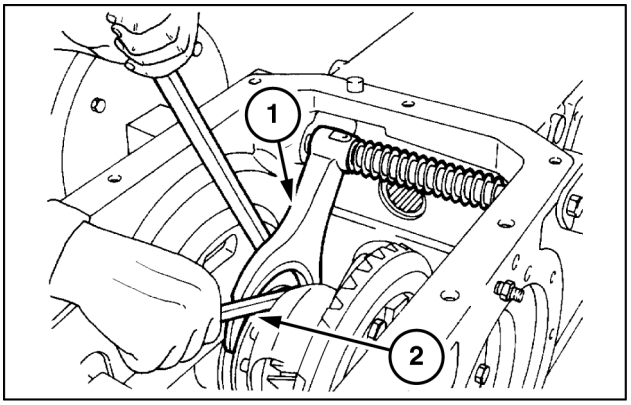
C0044A

1. On the transmission case, install the control lever assembly **(1)** of the differential lock without the adjustment shim **(2)**.



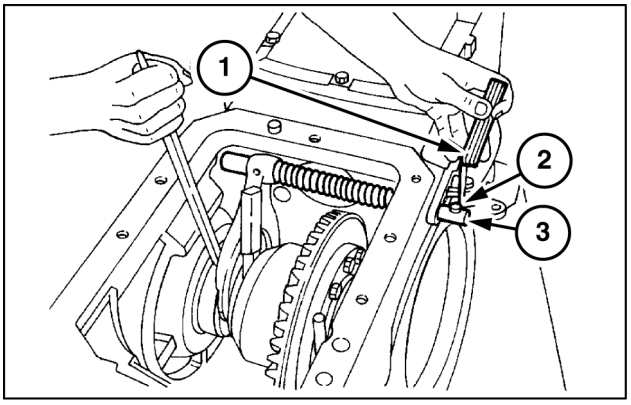

MOIL14TR01432AA 1

2. Insert the gauge **(2)** with the **2.52 - 2.5 mm** (**0.10 - 0.10 in**) shim between the sliding sleeve and the differential housing until the gauge makes contact with the sliding surfaces of the sleeve on the housing.
3. Use a crowbar to adjust the fork **(1)** to the position of the feeler gauge in order to bring the sliding sleeve into contact with the gauge and the differential housing.




MOLI11U0223AB 2

4. Use a feeler gauge **(1)** to measure the distance between the control pin **(2)** and the relevant seat on the fork control rod **(3)**.




MOLI11U0224AB 3

# Index

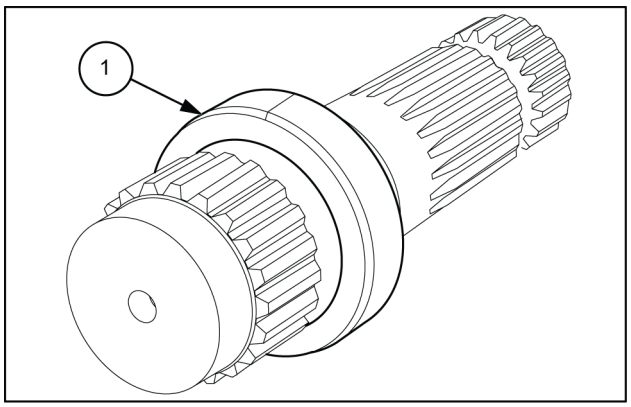
## Rear axle system - 27

### Planetary and final drives - 120

# Contents

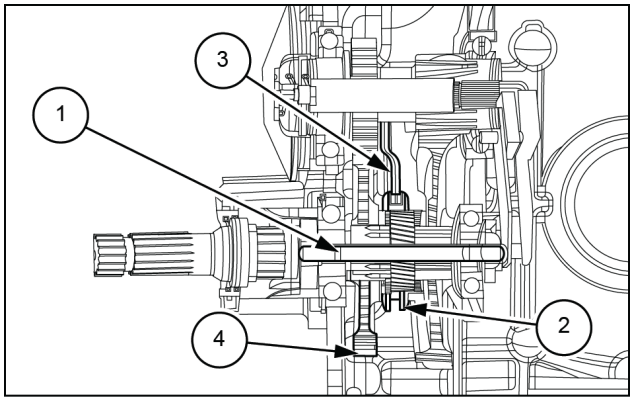
# Power Take-Off (PTO) - 31

4. With the **3/8 in** output shaft (21 grooves) **(1)** for **1000 RPM** and without a pin.




MOIL13TR01477AB 4

5. When you fit this output shaft, the central pin **(1)** of the driven shaft of the PTO gearbox does not move. The speed selection sleeve **(2)** is left by the fork **(3)** on the rear of the gearbox, which sets the speed to **1000 RPM (4)**.




MOIL14UTL0075AA 5

# Contents

# Power Take-Off (PTO) - 31

## Rear electro-hydraulic control - 104

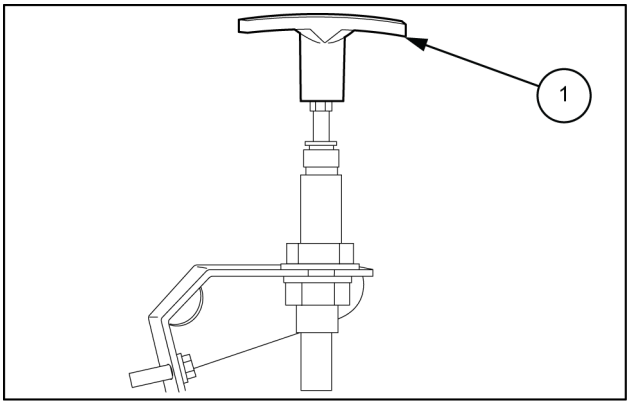


(*) See content for specific models

# Power Take-Off (PTO) speed rate selector - Adjust - PTO 540/540E rpm

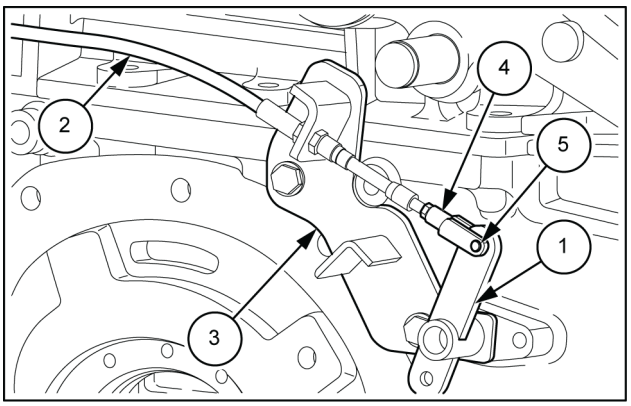
| | |
|---|---|
| T4.105 less cab, with hi-lo transmission [ZxJT0xxxx] | |
| T4.105 less cab, with mechanical or power shuttle transmission [ZxJT5xxxx] | Transmission - Power Shuttle |
| T4.105 with cab, with hi-lo transmission [ZxJT0xxxx] | |
| T4.105 with cab, with mechanical or power shuttle transmission [ZxJT5xxxx] | Transmission - Power Shuttle |
| T4.115 less cab, with hi-lo transmission [ZxJT0xxxx] | |
| T4.115 less cab, with mechanical or power shuttle transmission [ZxJT5xxxx] | Transmission - Power Shuttle |
| T4.115 with cab, with hi-lo transmission [ZxJT0xxxx] | |
| T4.115 with cab, with mechanical or power shuttle transmission [ZxJT5xxxx] | Transmission - Power Shuttle |
| T4.85 less cab, with hi-lo transmission [ZxJT0xxxx] | |
| T4.85 less cab, with mechanical or power shuttle transmission [ZxJT5xxxx] | Transmission - Power Shuttle |
| T4.85 with cab, with hi-lo transmission [ZxJT0xxxx] | |
| T4.85 with cab, with mechanical or power shuttle transmission [ZxJT5xxxx] | Transmission - Power Shuttle |
| T4.95 less cab, with hi-lo transmission [ZxJT0xxxx] | |
| T4.95 less cab, with mechanical or power shuttle transmission [ZxJT5xxxx] | Transmission - Power Shuttle |
| T4.95 with cab, with hi-lo transmission [ZxJT0xxxx] | |
| T4.95 with cab, with mechanical or power shuttle transmission [ZxJT5xxxx] | Transmission - Power Shuttle |

1. Keep the knob **(1)** pressed fully down.



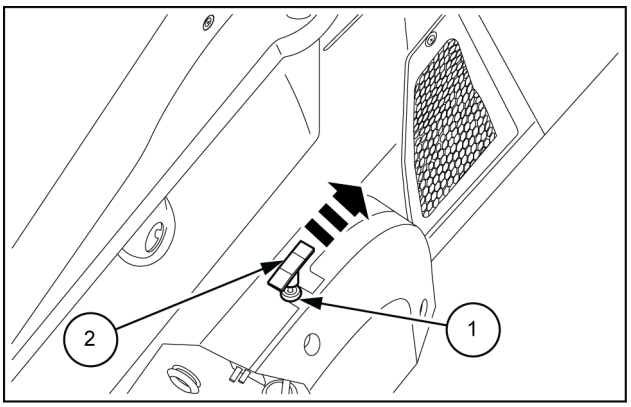

MOIL13TR01479AB 1

2. Pull the lever **(1)** of the gearbox fully backward.
3. Secure the cable **(2)** to the reaction bracket **(3)**.
4. Screw the fork **(4)** onto the end of the threaded cable until you can insert the pin **(5)**.




MOIL13TR01480AB 2

5. Loosen the locking nut **(1)** of the knob **(2)**. Orient the knob as indicated in the image below. Tighten the locking nut.




MOIL13TR01481AB 3

# Power Take-Off (PTO) clutch - General specification

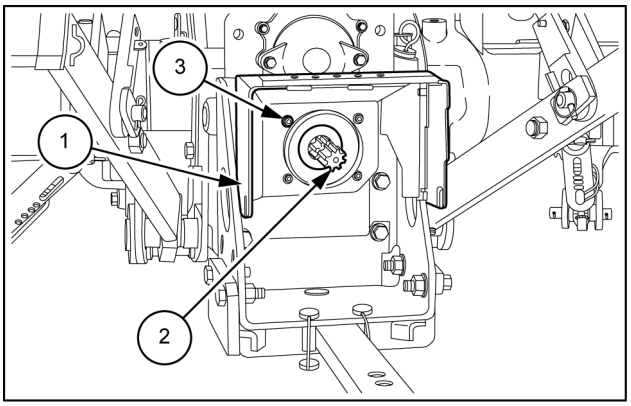
| | |
|---|---|
| T4.105 with cab, with hi-lo transmission [ZxJT0xxxx] | |
| T4.115 less cab, with mechanical or power shuttle transmission [ZxJT5xxxx] | Transmission - Power Shuttle |
| T4.85 with cab, with hi-lo transmission [ZxJT0xxxx] | |
| T4.85 with cab, with mechanical or power shuttle transmission [ZxJT5xxxx] | Transmission - Power Shuttle |
| T4.95 less cab, with hi-lo transmission [ZxJT0xxxx] | |
| T4.95 with cab, with mechanical or power shuttle transmission [ZxJT5xxxx] | Transmission - Power Shuttle |

## Main Data

| | |
|---|---|
| Number of clutch driving plates | No.5 |
| Thickness of driving plates | **1.950 - 2.050 mm** (**0.077 - 0.081 in**)(*) |
| Driving plate material | N266420 |
| Number of clutch driven plates | No.5 |
| Driven plate thickness | **2.250 - 2.350 mm** (**0.089 - 0.093 in**)(*) |
| Driven plate thickness | **2.350 - 2.450 mm** (**0.093 - 0.096 in**)(*) |
| Driven plate material | Turn the crank handle counter-clockwise until it locks up in the rearward position as shown |
| Reaction plate thickness | **8.500 mm** (**0.335 in**) |
| Thickness of clutch assembly under a load of **1600.0 N** (**359.7 lb**) | **21.800 - 22.000 mm** (**0.858 - 0.866 in**) |
| Hydraulic control valve | Mounted on the outer left-hand side of the clutch casing |
| PTO clutch working pressure | **17.5 - 18.5 Kg/cm²** (**248.9 - 263.1 psi**) |
| Accumulator spring ( **(4)** see **Power Take-Off (PTO) clutch - Sectional view (31.114)** ) | |
| Spring free length | **122.000 mm** (**4.803 in**) |
| Spring length under load of **34.9 kg** (**76.9 lb**) | **100.000 mm** (**3.937 in**) |
| Spring length under load of **74.2 kg** (**163.6 lb**) | **75.000 mm** (**2.953 in**) |

***NOTE:*** *(*) Value to be obtained by varying the thickness of the driving plates.*

3. Position the rear guard **(1)** of the splined output shaft **(2)** tightening the four retaining bolts **(3)**.




MOIL13TR01653AB 3

# One-speed rear Power Take-Off (PTO) - Remove - Hydraulic PTO - 540 rpm

| | |
|---|---|
| T4.105 less cab, with hi-lo transmission [ZxJT0xxxx] | |
| T4.105 less cab, with mechanical or power shuttle transmission [ZxJT5xxxx] | Transmission - Power Shuttle |
| T4.105 with cab, with hi-lo transmission [ZxJT0xxxx] | |
| T4.105 with cab, with mechanical or power shuttle transmission [ZxJT5xxxx] | Transmission - Power Shuttle |
| T4.115 less cab, with hi-lo transmission [ZxJT0xxxx] | |
| T4.115 less cab, with mechanical or power shuttle transmission [ZxJT5xxxx] | Transmission - Power Shuttle |
| T4.115 with cab, with hi-lo transmission [ZxJT0xxxx] | |
| T4.115 with cab, with mechanical or power shuttle transmission [ZxJT5xxxx] | Transmission - Power Shuttle |
| T4.85 less cab, with hi-lo transmission [ZxJT0xxxx] | |
| T4.85 less cab, with mechanical or power shuttle transmission [ZxJT5xxxx] | Transmission - Power Shuttle |
| T4.85 with cab, with hi-lo transmission [ZxJT0xxxx] | |
| T4.85 with cab, with mechanical or power shuttle transmission [ZxJT5xxxx] | Transmission - Power Shuttle |
| T4.95 less cab, with hi-lo transmission [ZxJT0xxxx] | |
| T4.95 less cab, with mechanical or power shuttle transmission [ZxJT5xxxx] | Transmission - Power Shuttle |
| T4.95 with cab, with hi-lo transmission [ZxJT0xxxx] | |
| T4.95 with cab, with mechanical or power shuttle transmission [ZxJT5xxxx] | Transmission - Power Shuttle |

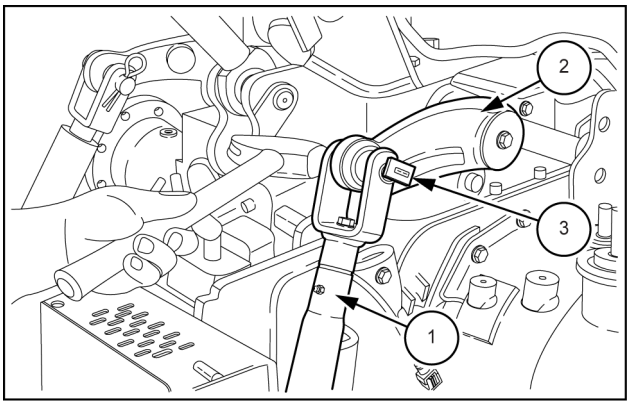
**⚠ WARNING**

**Avoid injury!**
**Handle all parts carefully. Do not place your hands or fingers between parts. Use Personal Protective Equipment (PPE) as indicated in this manual, including protective goggles, gloves, and safety footwear.**
**Failure to comply could result in death or serious injury.**

**W0208A**

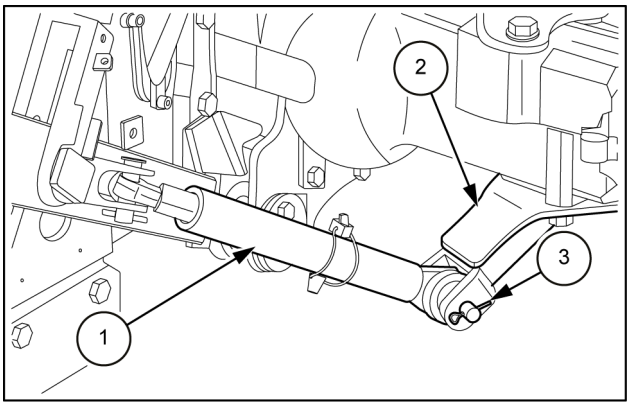
**Prior operation:**
**Cab - Remove (90.150) Operator platform less cab - Remove (90.110)**

1. Remove the vertical tie rods **(1)** from the arms **(2)** of the lift, extracting the pins **(3)** .



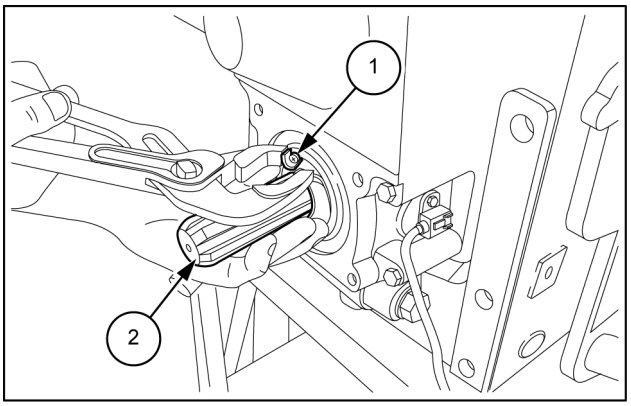

MOIL13TR01529AB 1

2. Detach the stabilisers **(1)** from the brackets **(2)** on the final drives, extracting the pins **(3)** .



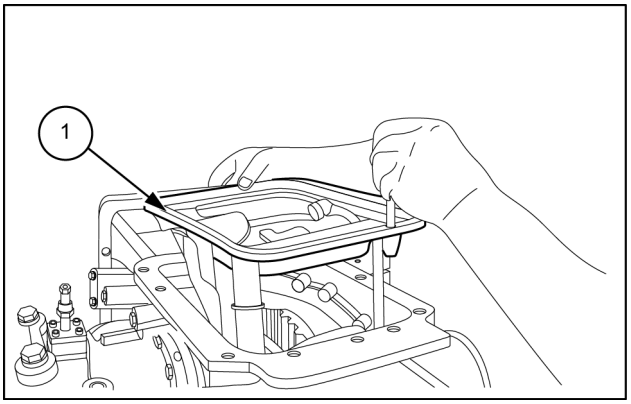

MOIL13TR01530AB 2

15. Position the circlip **(1)** of the splined output shaft **(2)** .



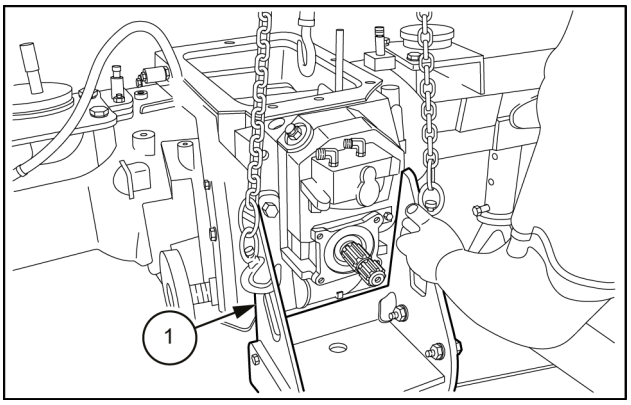

MOIL13TR01562AB 15

16. Position the lift reservoir **(1)** and tighten the respective bolts.



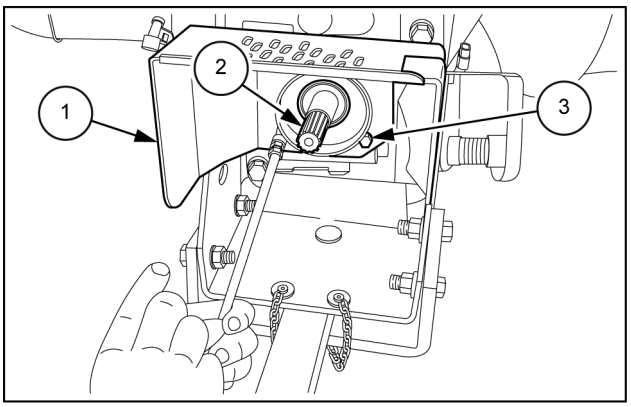

MOIL13TR01915AA 16

17. Connect the tow hook **(1)** to the hoist, position it and secure it with the respective retaining bolts.




MOIL13TR01901AA 17

18. Position the rear guard **(1)** of the splined output shaft **(2)** tightening the four retaining bolts **(3)**.




MOIL13TR01535AB 18

# Power Take-Off (PTO) clutch - Install

| | |
|---|---|
| T4.85 less cab, with mechanical or power shuttle transmission [ZxJT5xxxx] | Transmission - Power Shuttle |
| T4.85 with cab, with hi-lo transmission [ZxJT0xxxx] | |
| T4.85 with cab, with mechanical or power shuttle transmission [ZxJT5xxxx] | Transmission - Power Shuttle |
| T4.95 less cab, with hi-lo transmission [ZxJT0xxxx] | |
| T4.95 less cab, with mechanical or power shuttle transmission [ZxJT5xxxx] | Transmission - Power Shuttle |
| T4.95 with cab, with hi-lo transmission [ZxJT0xxxx] | |
| T4.95 with cab, with mechanical or power shuttle transmission [ZxJT5xxxx] | Transmission - Power Shuttle |

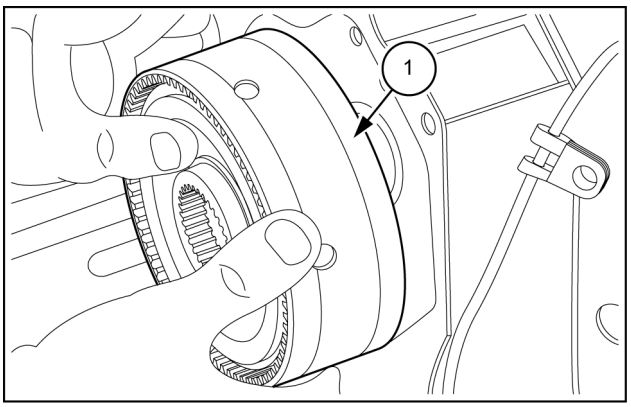
**⚠ WARNING**

**Avoid injury!**
**Handle all parts carefully. Do not place your hands or fingers between parts. Use Personal Protective Equipment (PPE) as indicated in this manual, including protective goggles, gloves, and safety footwear.**
**Failure to comply could result in death or serious injury.**

**W0208A**

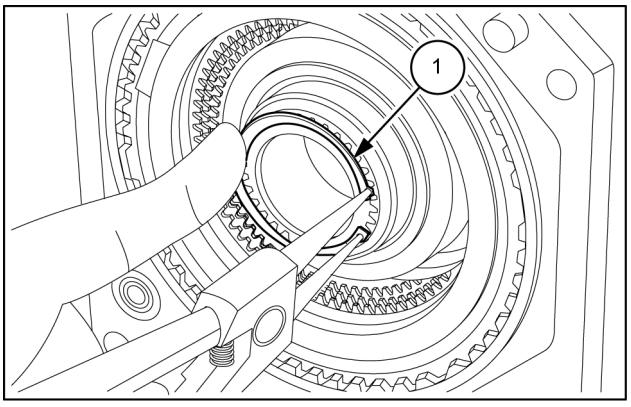
**Prior operation:**
**Power Take-Off (PTO) clutch - Assemble (31.110)**

1. Install the PTO clutch **(1)** in its housing.




MOIL13TR01670AB 1

2. Lock the clutch with the circlip **(1)**.




MOIL13TR01671AB 2

# Two-speed rear Power Take-Off (PTO) - General specification - Mechanical PTO - 540/540E rpm

| | |
|---|---|
| T4.105 less cab, with mechanical or power shuttle transmission [ZxJT5xxxx] | Transmission - Mechanical |
| T4.105 with cab, with mechanical or power shuttle transmission [ZxJT5xxxx] | Transmission - Mechanical |
| T4.115 less cab, with mechanical or power shuttle transmission [ZxJT5xxxx] | Transmission - Mechanical |
| T4.115 with cab, with mechanical or power shuttle transmission [ZxJT5xxxx] | Transmission - Mechanical |
| T4.85 less cab, with mechanical or power shuttle transmission [ZxJT5xxxx] | Transmission - Mechanical |
| T4.85 with cab, with mechanical or power shuttle transmission [ZxJT5xxxx] | Transmission - Mechanical |
| T4.95 less cab, with mechanical or power shuttle transmission [ZxJT5xxxx] | Transmission - Mechanical |
| T4.95 with cab, with mechanical or power shuttle transmission [ZxJT5xxxx] | Transmission - Mechanical |

| | |
|---|---|
| Type | Independent of tractor ground speed |
| Engagement and control | Mechanical or hydraulic control by means of a hand lever located to the right of the operator |
| Speed Selection | By means of hand lever located to the left of the driver |
| Direction of rotation (from tractor rear) | Clockwise |
| Engine speed with PTO at **540 RPM** | **1957 RPM** |
| Engine speed with PTO at **540E RPM** | **1535 RPM** |
| PTO revolution speed with engine at max. power **2300 RPM**:<br>For **540 RPM** PTO<br>For **540E RPM** PTO | <br>**634 RPM**<br>**809 RPM** |
| Diameter of splined output shaft | **3/8 in** (6 splines) |

# Two-speed rear Power Take-Off (PTO) - General specification - Mechanical PTO - 540/1000 rpm

| | |
|---|---|
| T4.105 less cab, with mechanical or power shuttle transmission [ZxJT5xxxx] | Transmission - Mechanical |
| T4.105 with cab, with mechanical or power shuttle transmission [ZxJT5xxxx] | Transmission - Mechanical |
| T4.115 less cab, with mechanical or power shuttle transmission [ZxJT5xxxx] | Transmission - Mechanical |
| T4.115 with cab, with mechanical or power shuttle transmission [ZxJT5xxxx] | Transmission - Mechanical |
| T4.85 less cab, with mechanical or power shuttle transmission [ZxJT5xxxx] | Transmission - Mechanical |
| T4.85 with cab, with mechanical or power shuttle transmission [ZxJT5xxxx] | Transmission - Mechanical |
| T4.95 less cab, with mechanical or power shuttle transmission [ZxJT5xxxx] | Transmission - Mechanical |
| T4.95 with cab, with mechanical or power shuttle transmission [ZxJT5xxxx] | Transmission - Mechanical |

| | |
|---|---|
| Type | Independent with respect to tractor speed |
| Engagement and control | Mechanical or hydraulic control by means of a hand lever located to the right of the operator |
| Direction of rotation (from tractor rear) | Clockwise |
| Engine speed with PTO at **540 RPM**: | **1957 RPM** |
| Engine speed with PTO at **1000 RPM**: | **2125 RPM** |
| PTO revolution speed with engine at max. power **2300 RPM**:<br>For **540 RPM** PTO<br>For **1000 RPM**PTO | <br>**634 RPM**<br>**1082 RPM** |
| Diameter of splined output shaft:<br>For **540 RPM** PTO<br>For **1000 RPM**PTO | <br>**3/8 in** (6 splines)<br>**3/8 in** (21 splines) |

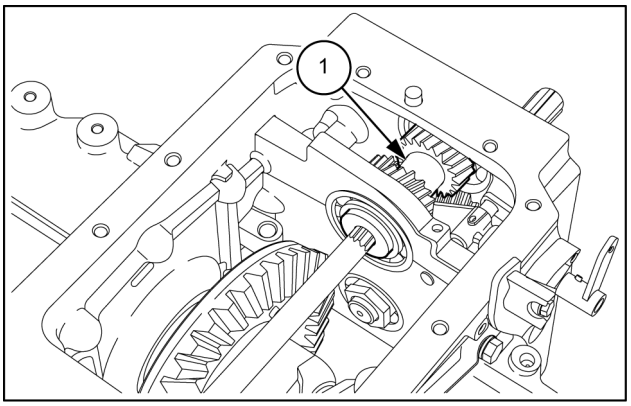
# Two-speed rear Power Take-Off (PTO) - General specification - Hydraulic PTO - 540/540E rpm

| | |
|---|---|
| T4.105 less cab, with hi-lo transmission [ZxJT0xxxx] | |
| T4.105 less cab, with mechanical or power shuttle transmission [ZxJT5xxxx] | Transmission - Power Shuttle |
| T4.105 with cab, with hi-lo transmission [ZxJT0xxxx] | |
| T4.105 with cab, with mechanical or power shuttle transmission [ZxJT5xxxx] | Transmission - Power Shuttle |
| T4.115 less cab, with hi-lo transmission [ZxJT0xxxx] | |
| T4.115 less cab, with mechanical or power shuttle transmission [ZxJT5xxxx] | Transmission - Power Shuttle |
| T4.115 with cab, with hi-lo transmission [ZxJT0xxxx] | |
| T4.115 with cab, with mechanical or power shuttle transmission [ZxJT5xxxx] | Transmission - Power Shuttle |
| T4.85 less cab, with hi-lo transmission [ZxJT0xxxx] | |

1. PTO front driving shaft
2. Sleeve
3. Bearing retaining circlip
4. Rear drive shaft bearing
5. PTO transmission shaft with front gear **540 RPM** and rear gear **1000 RPM**
6. PTO rear driving shaft
7. PTO engagement clutch
8. Clutch cover
9. Splined output shaft
10. Splined output shaft protection
11. Seal
12. Driven shaft
13. Driven Gear **1000 RPM**
14. Speed selector sleeve
15. Fixed portion, keyed onto the shaft and sleeve
16. Driven Gear **540 RPM**
17. Driven shaft retaining ring nut
18. Fork sliding rod
19. Speed selector fork
20. Roll Pin
21. Spring

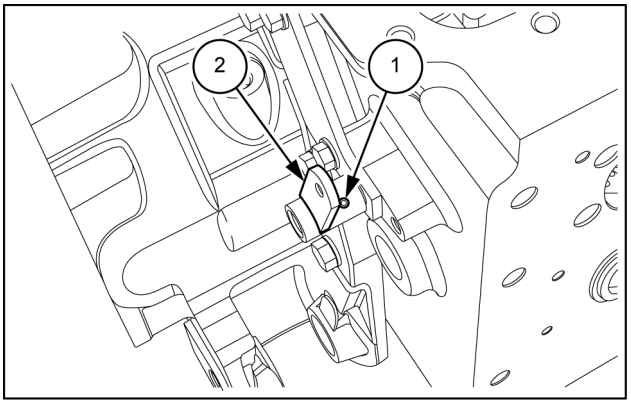
***NOTE:*** *When mounting apply sealing compound to surfaces “X”.*

11. Remove the PTO drive shaft **(1)**with the respective bearings.



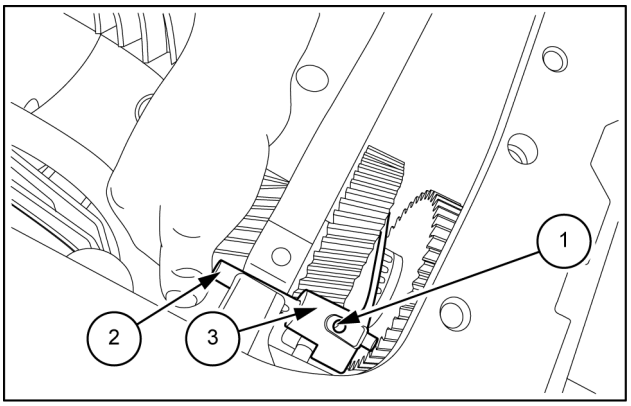

MOIL13TR01649AB 11

12. Extract the roll pin **(1)** and remove the speed selector lever **(2)**.



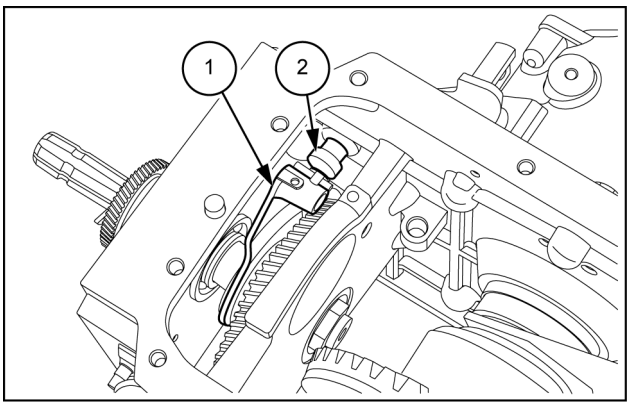

MOIL13TR01546AB 12

13. Extract the roll pin **(1)** and remove the sliding rod **(2)** of the speed selection fork **(3)** , retrieving the spring and ball.



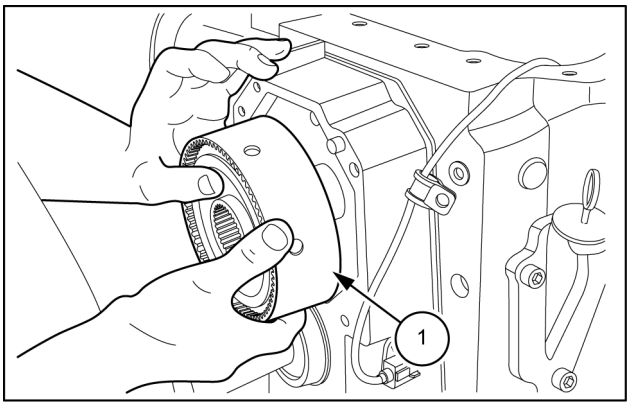

MOIL13TR01547AB 13

14. Remove the fork **(1)** and the shaft of the speed selection lever **(2)** .



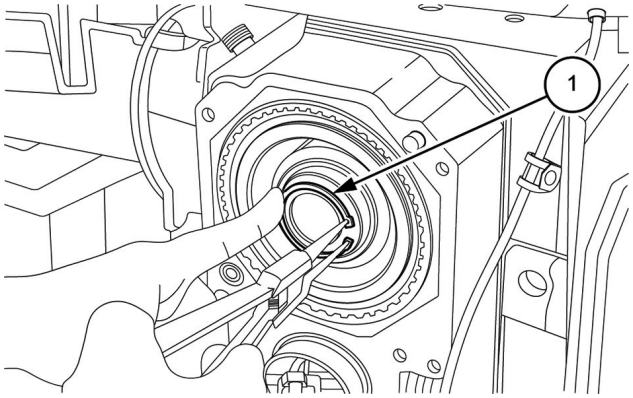

MOIL13TR01548AB 14

12. Install the PTO clutch **(1)** in its housing.



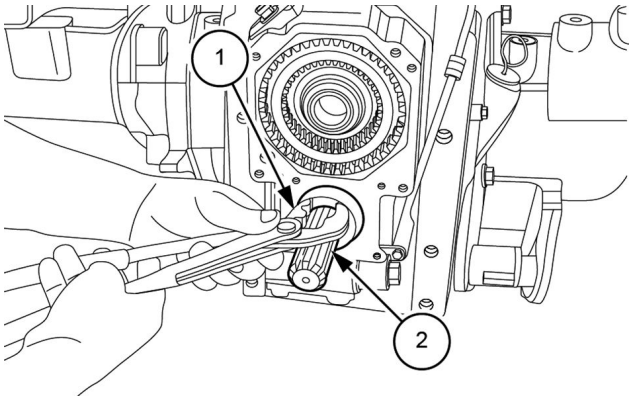

MOIL13TR01556AB 11

13. Lock the clutch with the snap ring **(1)**.



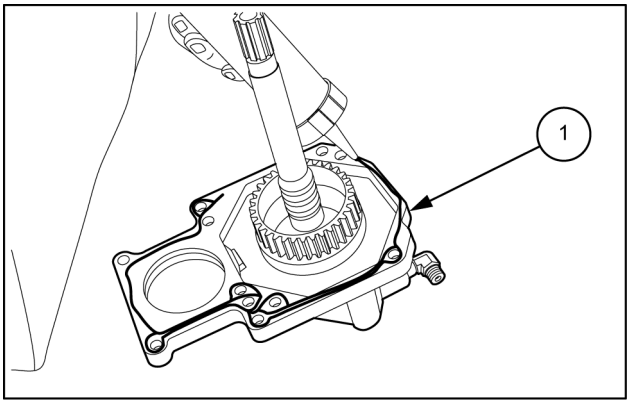

MOIL14UTL0069AA 12

14. Remove the snap ring **(1)** from the splined terminal **(2)** to position the PTO cover, without damaging the seal (See **(11) Two-speed rear Power Take-Off (PTO) - Sectional view (31.114)**).



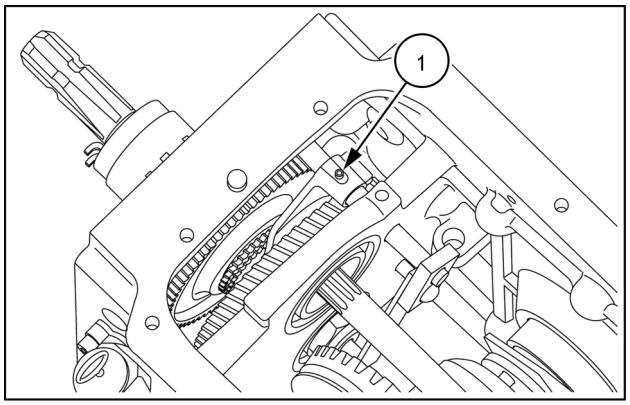

MOIL14UTL0070AA 13

15. Carefully clean the contact surfaces between the PTO cover and the clutch cover **(1)** and apply the sealing compound, see **Basic instructions ()**.



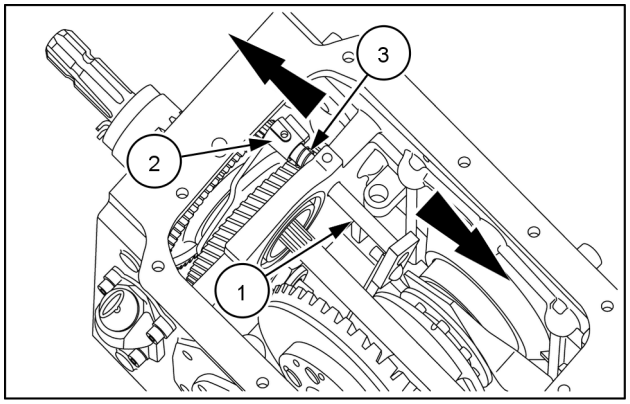

MOIL13TR01659AB 14

19. Extract the roll pin **(1)** and remove the speed selector lever **(2)**.



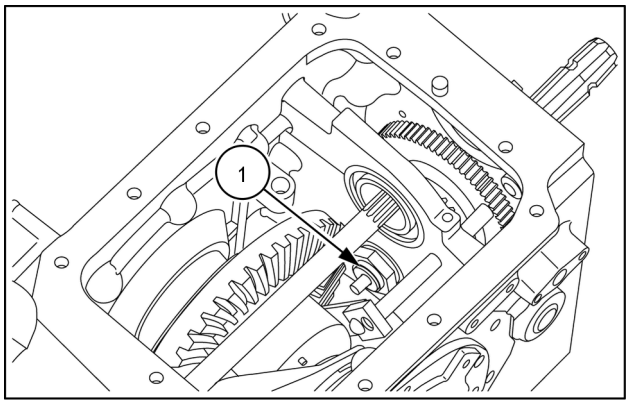

MOIL14UTL0053AA 19

20. Move forward the tie rod **(1)** of the speed fork **(2)**. Remove the fork, retrieving the spring **(3)**.



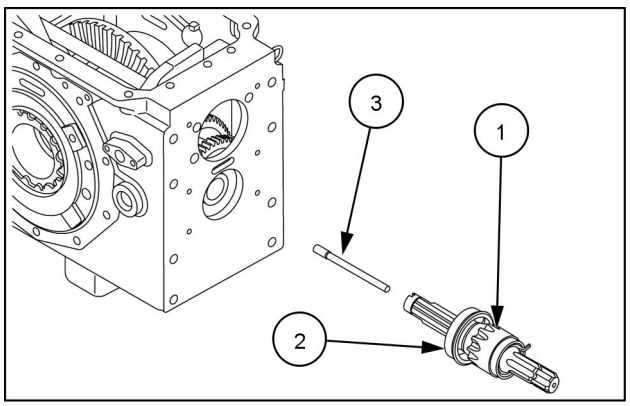

MOIL14UTL0054AA 20

21. Straighten the stake mark on the tightening nut **(1)**. Remove the tightening nut.



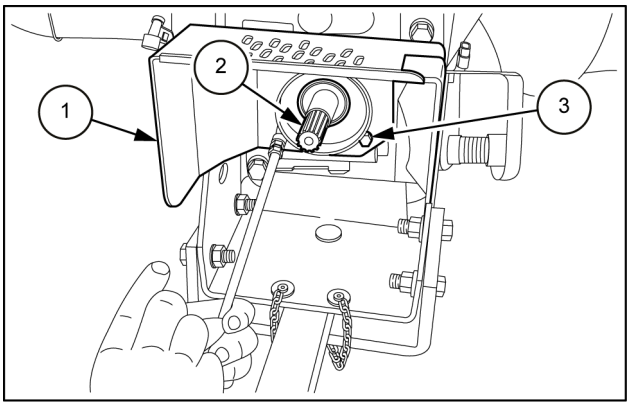

MOIL14UTL0055AA 21

22. Extract the driven shaft **(1)** with the respective bearings **(2)**, the splined output shaft, and the pin **(3)**.



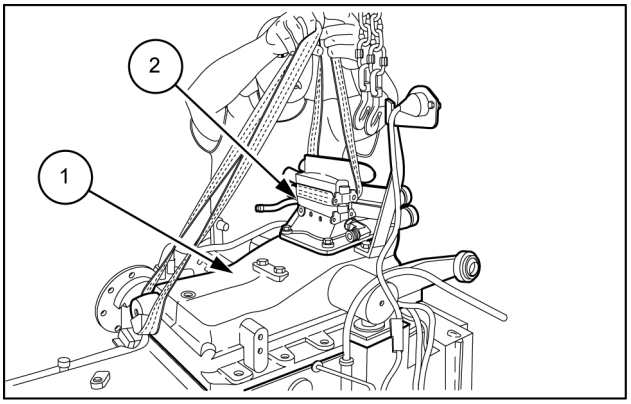

MOIL14UTL0056AA 22

12. Position the rear guard **(1)** of the splined output shaft **(2)** tightening the four retaining bolts **(3)**.



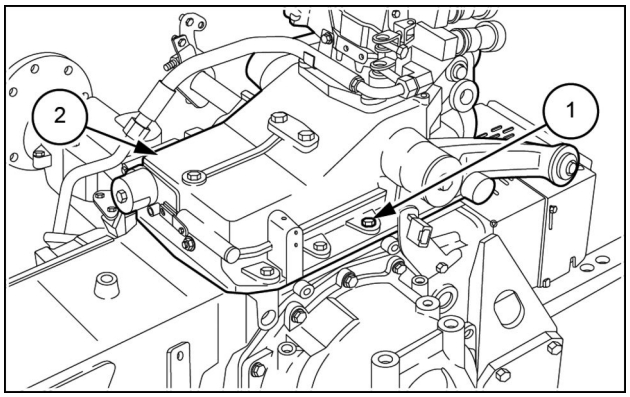

MOIL13TR01535AB 11

13. Apply the sealing compound (see **Basic instructions ()**). Use a hoist to position the lift **(1)** complete with remote valves **(2)**. Connect the pipes.



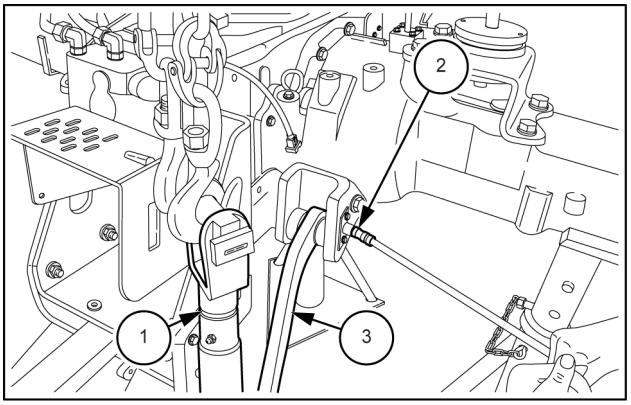

MOIL13TR01645AB 12

14. Tighten the retaining bolts **(1)** of the lift **(2)** .



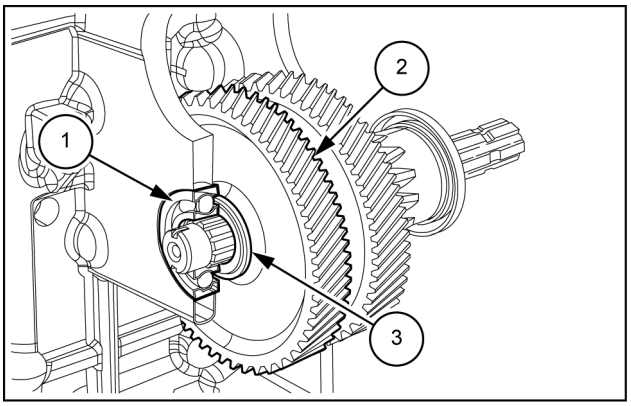

MOIL14UTL0062AA 13

15. Connect the tie rods **(1)** to the lifting hook with chain, connected to the hoist. Attach the lower arms **(3)** of the lift. Insert the pins and tighten the respective retaining bolts **(2)**.



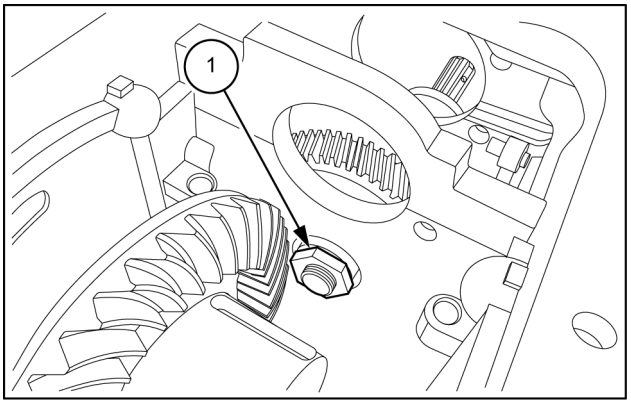

MOIL13TR01531AB 14

3. Between the bearing **(1)** and the gear **540 RPM (2)**, place the thrust spacer **(3)**.



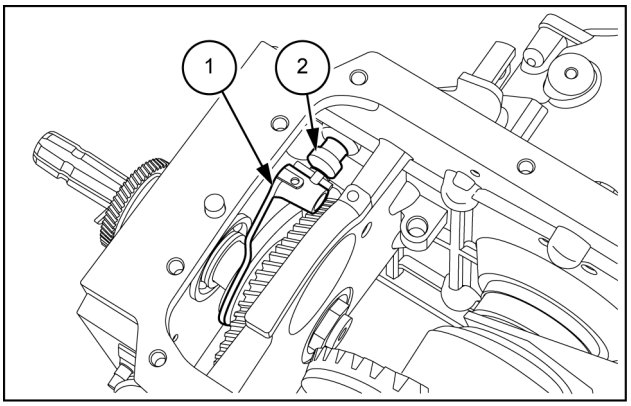

MOIL13TR01552AB 3

4. Screw the tightening nut **(1)** on the output shaft with a tightening torque as indicated in ( **Rear electro-hydraulic control - Torque (31.104)**) and make a stake mark.



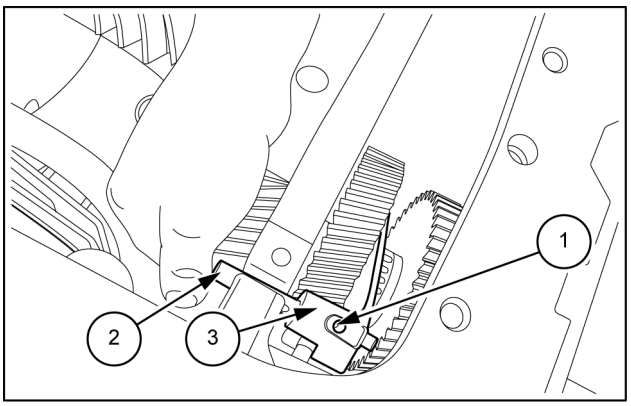

MOIL13TR01549AB 4

5. Position the shaft of the speed selection lever **(2)** and the fork **(1)**.



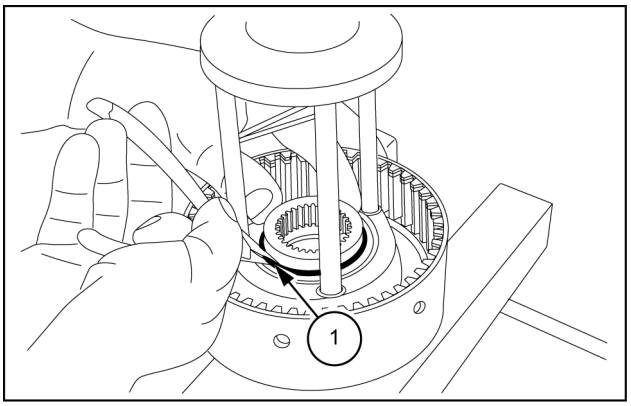

MOIL13TR01548AB 5

6. Insert the sliding rod **(2)** of the range fork **(3)**, the roll pin **(1)**, the spring and the ball.

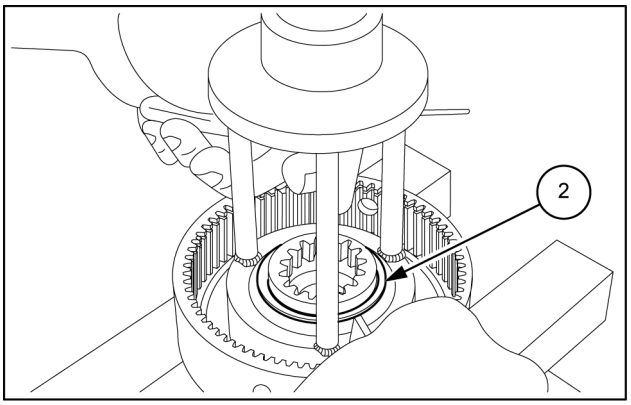



MOIL13TR01547AB 6

3. Press the Belleville springs with a press tool. Remove the locking circlip **(1)** and the retaining ring **(2)**.

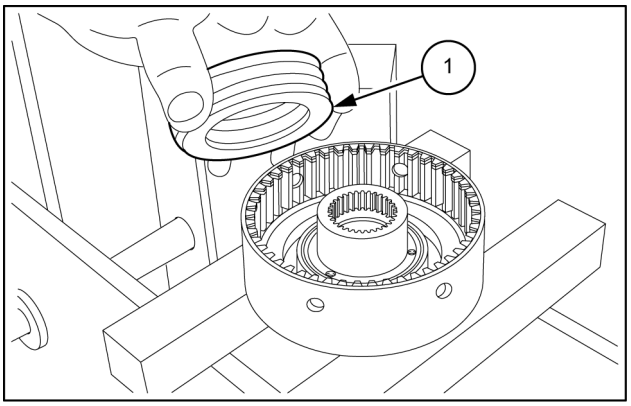



MOIL13TR01666AB 3



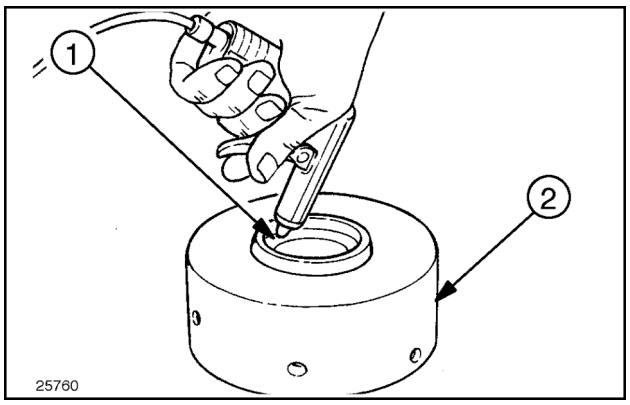

MOIL13TR01667AB 4

4. Retrieve the Belleville springs **(1)**.



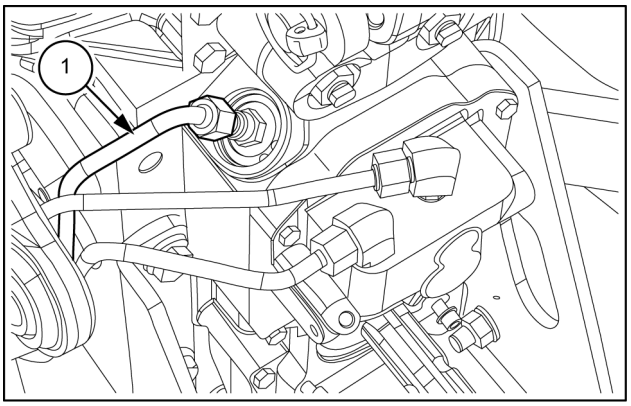

MOIL13TR01668AB 5

5. Using a compressed air gun, expel the piston **(1)** from the clutch case **(2)**.




SEZ31CAP2A-51 6

3. Attach the PTO brake coupling/decoupling tubing **(1)**.




MOIL13TR01675AB 3