



Rear Axle Support

Groundsmaster® 5900 or 5910 Rotary Mower

Model No. 145-8319

Installation Instructions

Installation

Loose Parts

Use the chart below to verify that all parts have been shipped.

Procedure	Description	Qty.	Use
1	No parts required	–	Prepare the machine.
2	No parts required	–	Prepare the rear axle.
3	No parts required	–	Remove the rear axle.
4	No parts required	–	Remove the existing rear axle support.
5	No parts required	–	Remove paint from the rear axle support.
6	Rear axle support Spacer axle	1 1	Install the replacement rear axle support.
7	No parts required	–	Weld the replacement rear axle support.
8	No parts required	–	Finish the kit installation.



1

Preparing the Machine

No Parts Required

Procedure

1. Park the machine on a level surface.
2. Engage the parking brake.
3. Shut off the engine, remove the key, and allow the machine to cool.

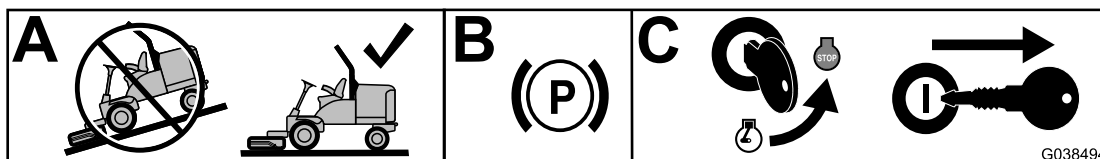


Figure 1

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4. Remove the hood from its hinges.

Note: Retain all removed parts for later installation.

5. Rotate the battery-disconnect switch to the OFF position (Figure 2).

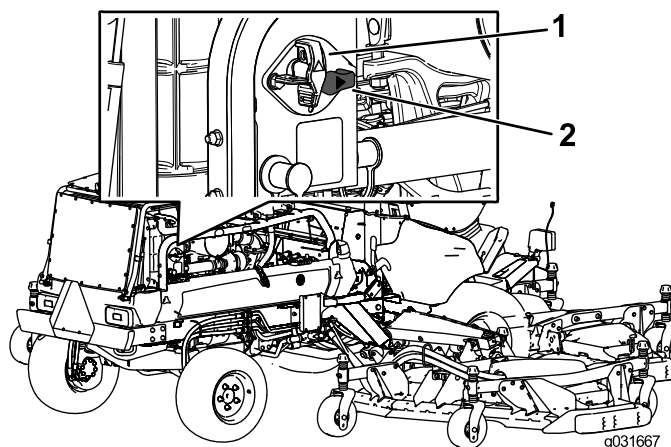


Figure 2

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1. Battery-disconnect switch (OFF position)
2. Battery-disconnect switch (ON position)

6. Raise the rear of the machine and support it with jack stands. Refer to *Operator's Manual* for the correct procedure.

2

Preparing the Rear Axle

No Parts Required

Procedure

This step will create space around the rear axle prior to removing it.

1. Remove the rear wheels ([Figure 3](#)).

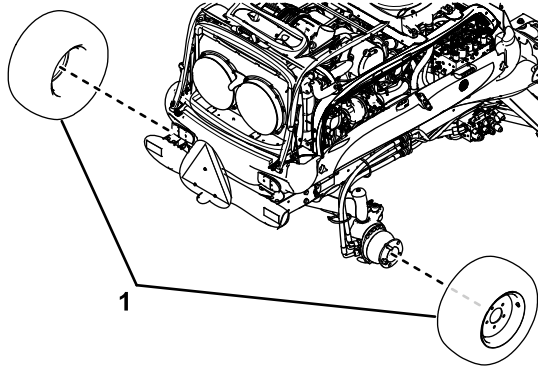


Figure 3

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1. Rear wheel
-

2. Remove any parts located between the engine and the rear of the machine so that the rear axle support is exposed ([Figure 4](#)):

- Cooling assembly
- Batteries
- Air filter
- Alternator
- Electrical subsystems
- Hydraulic hoses

Remove as many parts as needed so that there is enough space to remove the rear axle support in step [4 Removing the Existing Rear Axle Support \(page 8\)](#).

Note: Retain all removed parts for later installation.

Note: To ease assembly, label any hydraulic hoses to indicate their correct locations. Put caps and plugs on all fittings and hoses to prevent contamination.

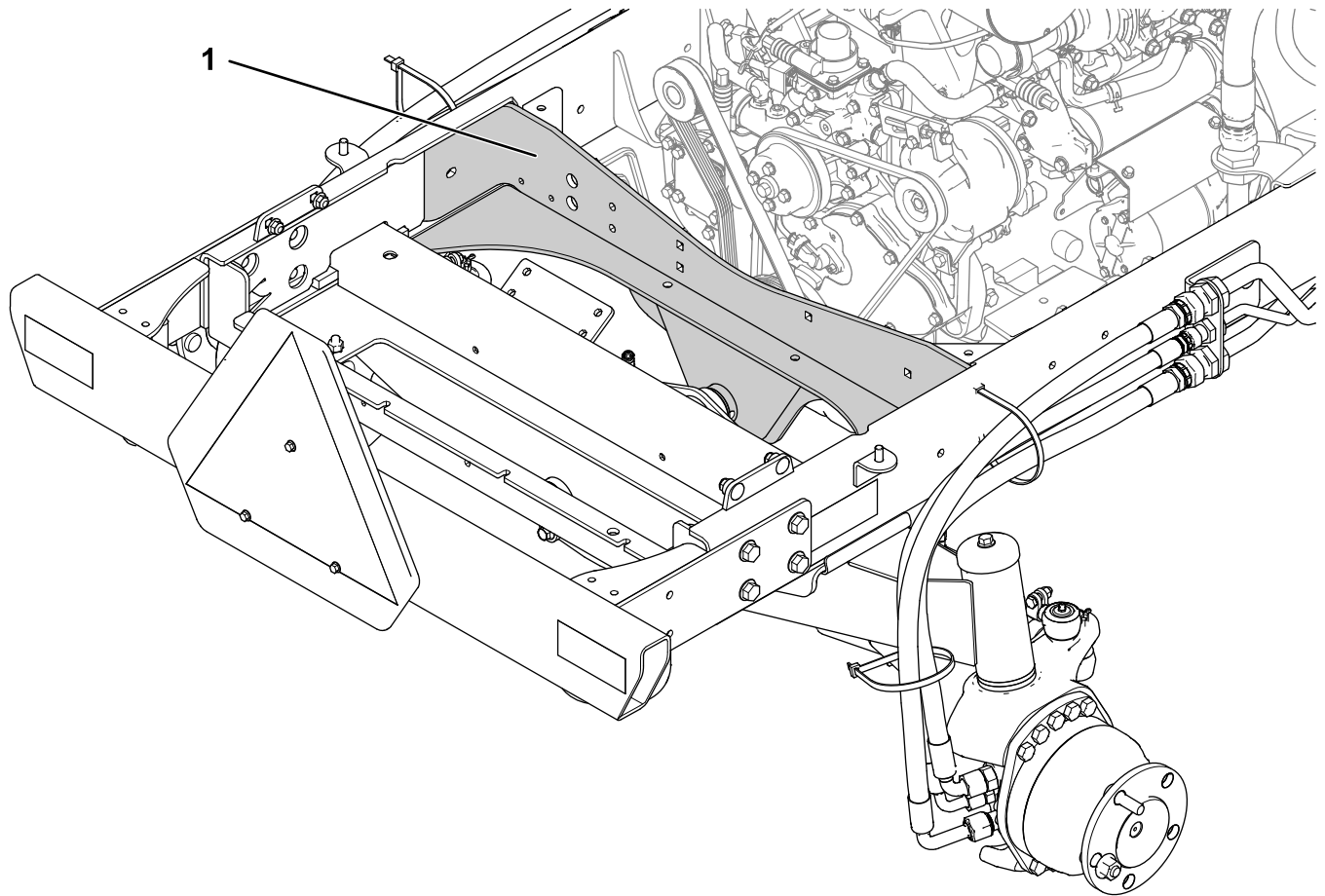


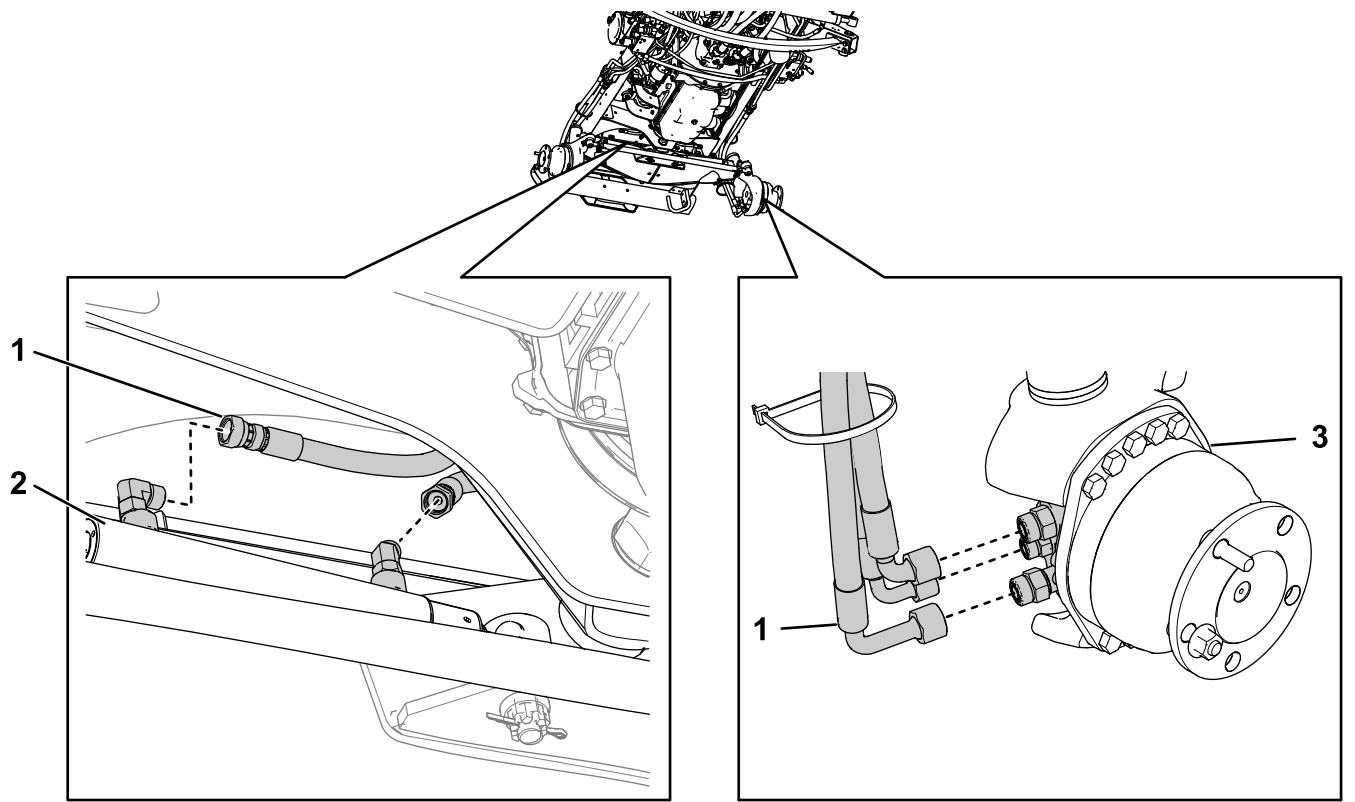
Figure 4

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1. Rear axle support

3. Remove any parts that are still attached to the axle support.

4. Disconnect any hydraulic hoses attached to the steering cylinders and the rear wheel motors ([Figure 5](#)). Repeat on the other side for each.



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Figure 5

- | | |
|----------------------|---------------------|
| 1. Hydraulic hose | 3. Rear wheel motor |
| 2. Steering cylinder | |

3

Removing the Rear Axle

No Parts Required

Procedure

1. Remove the locknut and the thrust washer that secures the pivot shaft to the frame as shown in [Figure 6](#).

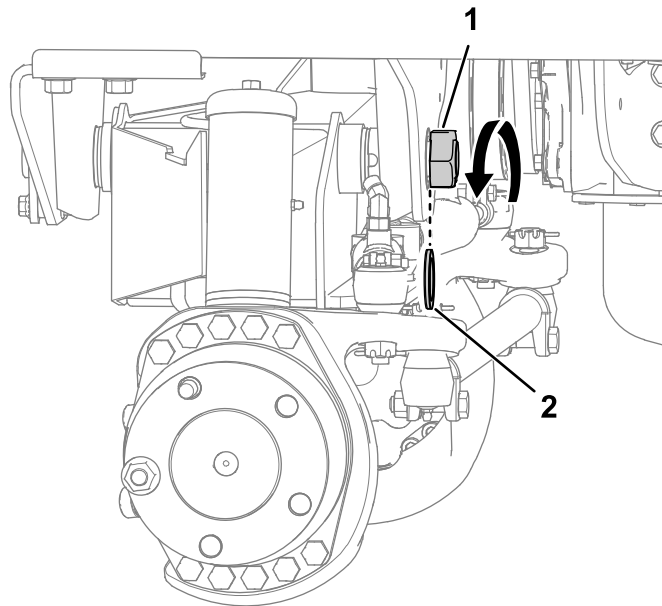


Figure 6

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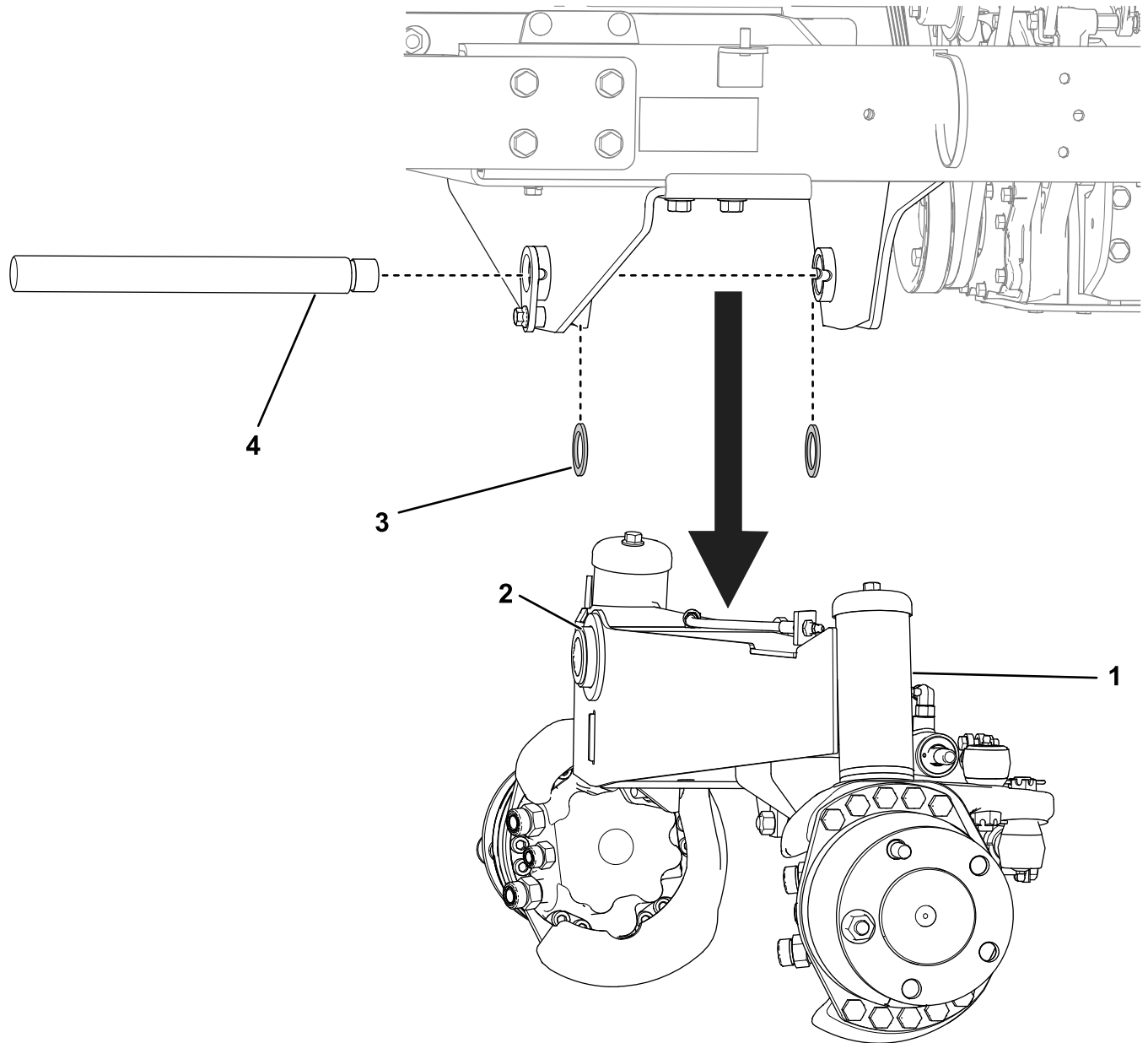
- | | |
|------------|------------------|
| 1. Locknut | 2. Thrust washer |
|------------|------------------|

2. Support the rear axle to prevent it from falling.

⚠ CAUTION

The rear axle assembly weighs approximately 136 kg (300 lb). Use an appropriate lifting device to safely lift the rear axle assembly.

3. Pull the pivot shaft from the frame and the rear axle. Carefully lower the entire rear axle assembly and remove it from under the machine. Locate and retrieve the 2 thrust washers from between the machine frame and rear axle ([Figure 7](#)).



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Figure 7

- | | |
|-----------------------|------------------|
| 1. Rear axle assembly | 3. Thrust washer |
| 2. Rear axle | 4. Pivot shaft |

4

Removing the Existing Rear Axle Support

No Parts Required

Procedure

This step describes how to remove the existing axle support and prepare the frame for the next step.

1. Grind down the weld located between the axle support and the corner support as shown in (Figure 8). Repeat on the other side.

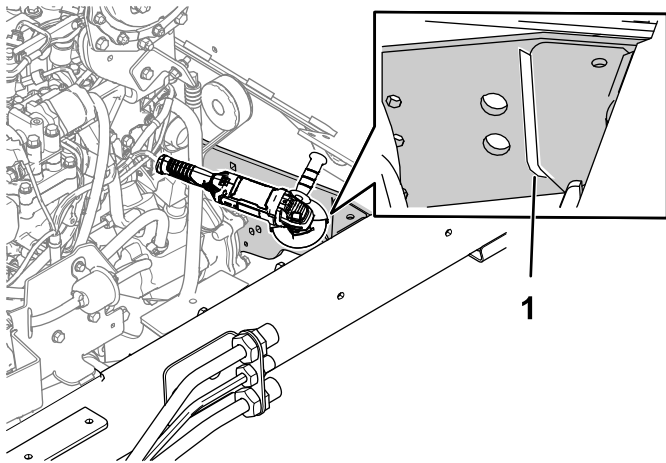


Figure 8

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1. Grind down this weld. Repeat on the other side.

2. Using a ruler and a drawing tool, draw a line angled 90° from the base of the axle support in both directions (Figure 9). Repeat on the other side.

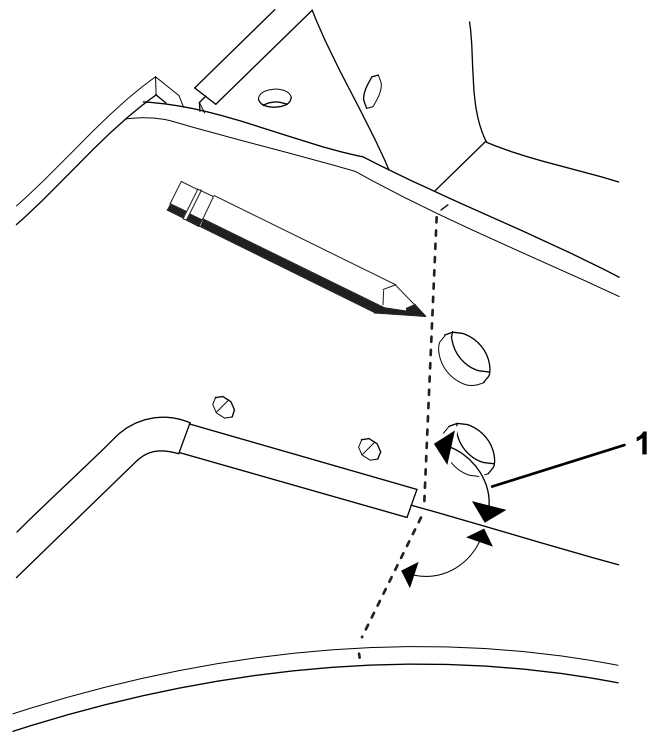


Figure 9

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1. 90° angle

3. Use a reciprocating saw to cut straight through the metal along the markings (Figure 10). If required, use a sander to ensure that the cuts are flush to the edge.

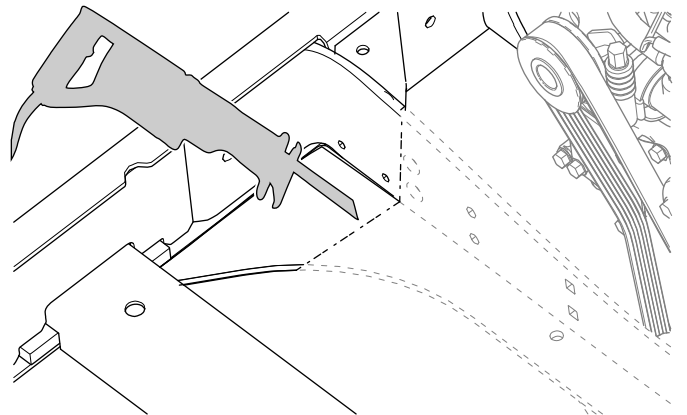


Figure 10

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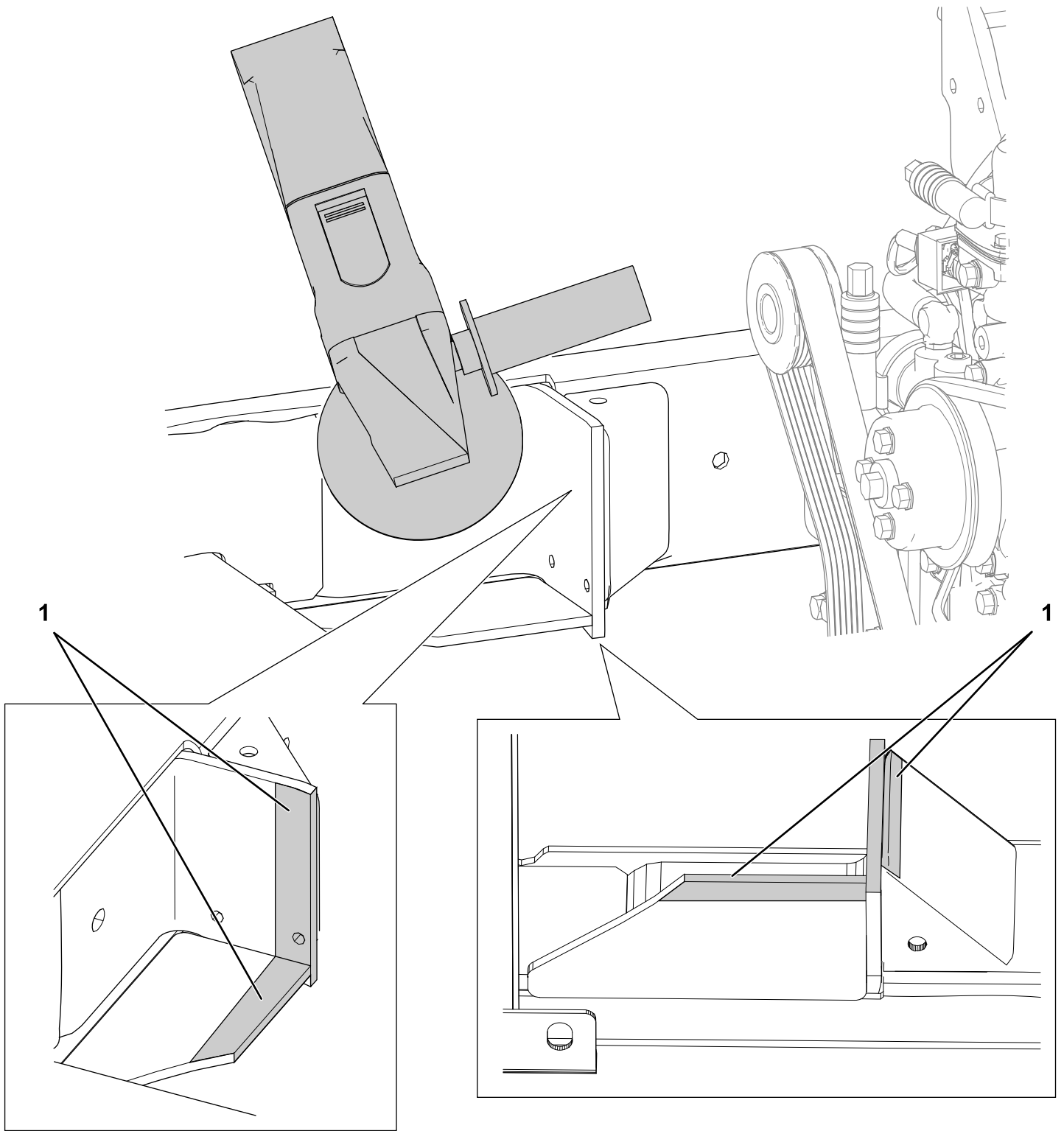
5

Removing paint from the Rear Axle Support

No Parts Required

Procedure

Remove any paint from the indicated areas to ensure a continuous weld in step [7 Welding the Replacement Rear Axle Support \(page 12\)](#). Repeat on the other side for each ([Figure 11](#)).



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Figure 11

1. Remove paint from these areas

6

Installing the Replacement Rear Axle Support

Parts needed for this procedure:

1	Rear axle support
1	Spacer axle

Procedure

1. Put the replacement axle support into position. Using clamps and metal support plates, secure it as shown in [Figure 12](#). Ensure that the axle support is flush to the existing frame and that there aren't any gaps.

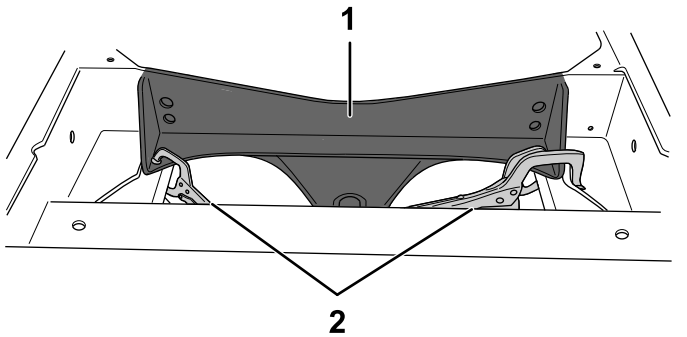


Figure 12

1. Replacement rear axle support
2. Clamp support

2. Insert the spacer axle between the axle supports to ensure that they are the correct distance apart ([Figure 13](#)). Adjust the position of the replacement axle support accordingly.

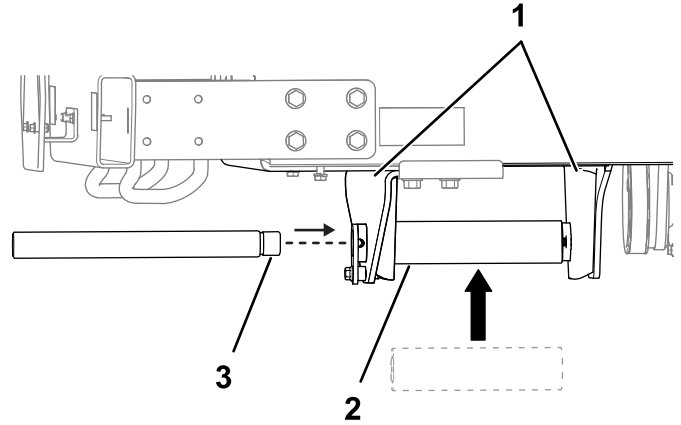


Figure 13

1. Axle supports
2. Spacer axle
3. Pivot shaft

3. Insert the pivot shaft through the spacer axle ([Figure 13](#)). If the pivot shaft does not rotate freely adjust the position of the replacement axle support. Sand the edges of the frame as required.
4. After the axle support is in the correct position, remove the pivot shaft and the spacer axle.

5. Apply tack welds to the outside, underside, and where the corner support touches the axle support in order to hold it in place (Figure 14). Repeat on the other side.

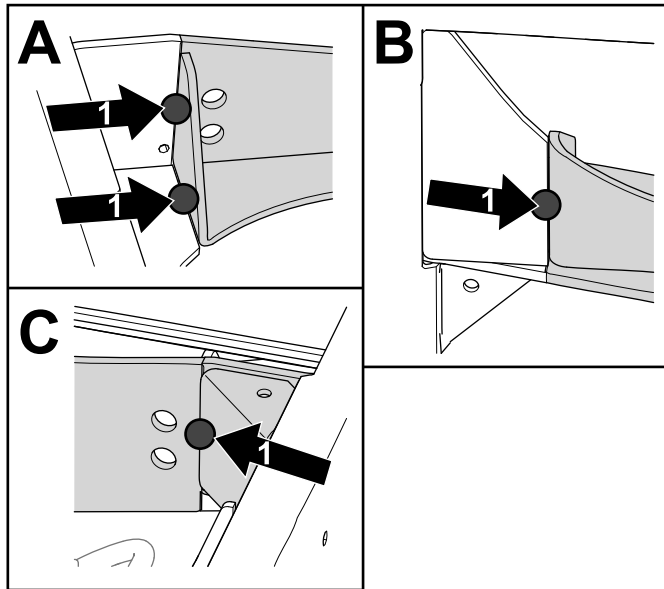


Figure 14

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1. Apply tack welds to these locations
-
6. Remove the clamps and the metal plates holding the axle support in place.

7

Welding the Replacement Rear Axle Support

No Parts Required

Procedure

1. Weld the axle support to the frame in the areas shown in (Figure 15). Repeat on the other side.

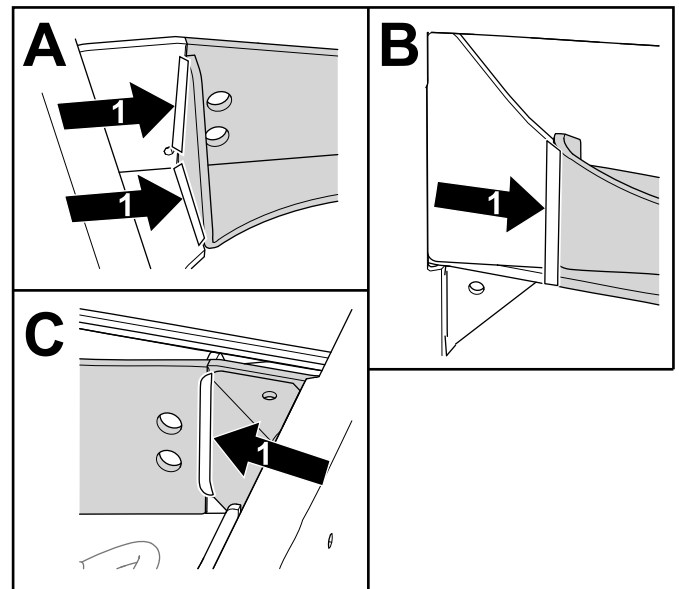


Figure 15

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1. Apply welds to these areas
-
2. Remove any weld splatter and ensure that all surfaces are clean.
 3. Spray paint the newly welded areas.

8

Finishing the Kit Installation

No Parts Required

Completing the Rear Axle Installation

1. Position the rear axle assembly to the frame. Raise the axle assembly to the frame and slide the pivot shaft through the frame, the axle, and 3 thrust washers (Figure 16).

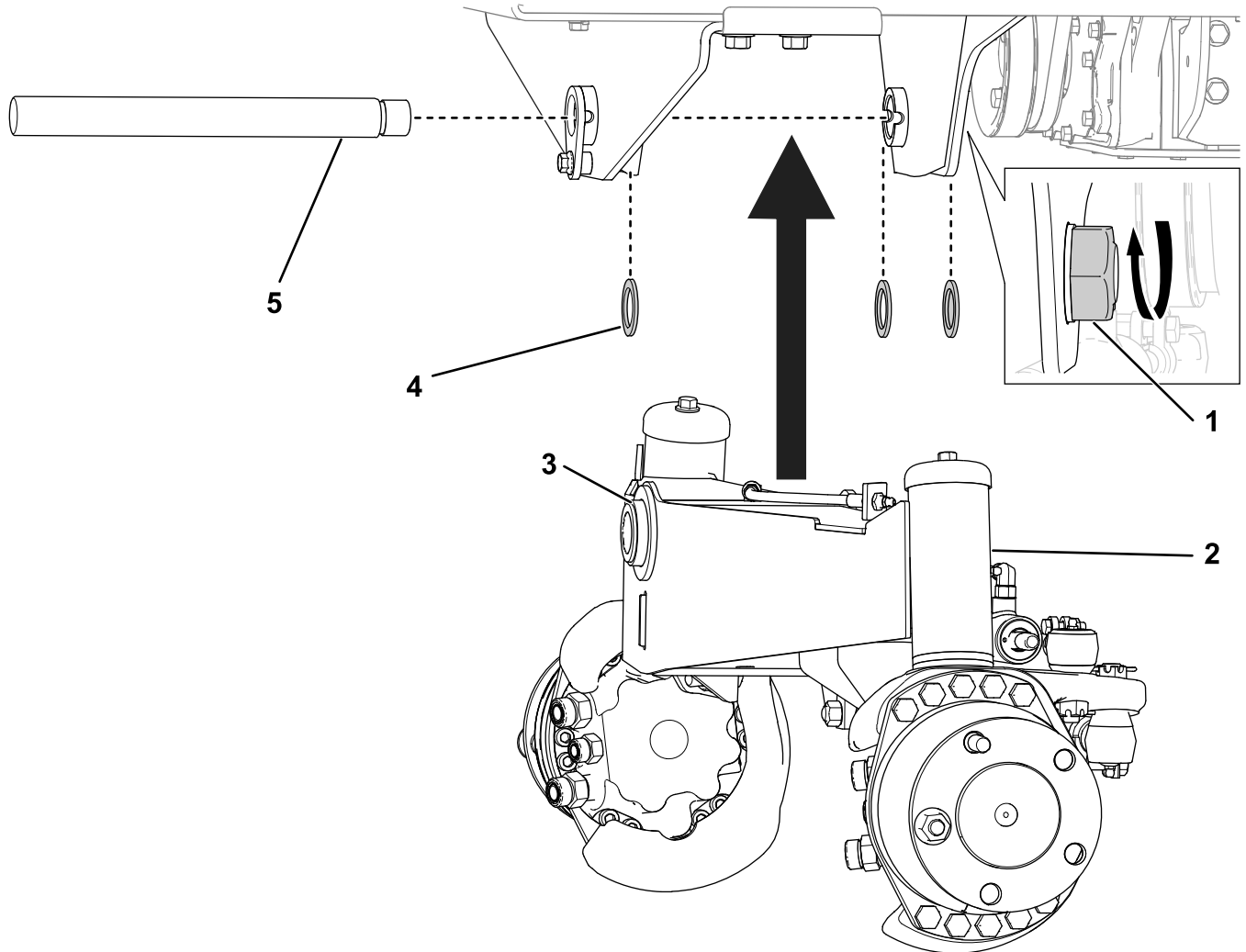


Figure 16

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- | | |
|-----------------------|------------------|
| 1. Locknut | 4. Thrust washer |
| 2. Rear axle assembly | 5. Pivot shaft |
| 3. Axle | |
-
2. Secure the locknut to the pivot shaft to eliminate any axial (front to back) movement of the rear axle. Make sure that the axle can still pivot freely after the locknut is tightened (Figure 16).
 3. Install any hydraulic hoses to the steering cylinders and the rear wheel motors.
 4. Install the parts that you removed in [2 Preparing the Rear Axle \(page 2\)](#) and any hydraulic hoses.

5. Install the rear wheels. Tighten the wheel lug nuts evenly in a cross pattern.
6. Lower the rear of the machine and remove the jack stands. Refer to *Operator's Manual* for the correct procedure.

Connecting the Battery

1. Rotate the battery-disconnect switch to the ON position as shown in [Figure 2](#).
2. Close the hood and secure it with the 2 hood latches.

Notes:



Count on it.