Form No. 3354-803 Rev E

Cross Trax All-Wheel Drive Kit

Reelmaster® 5010 Series Traction Units

Model No. 03671

Installation Instructions

Note: This kit, when installed to Reelmaster 5010 series Traction Units, is covered by Patent # 7,017,703.

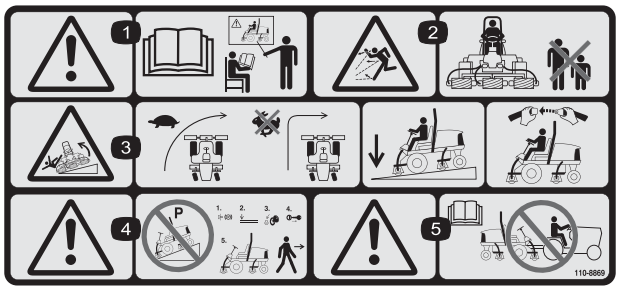
Bodily injury could occur if the traction unit rolls over.

When operating machine, always use the seat belt and ROPS together.

Safety

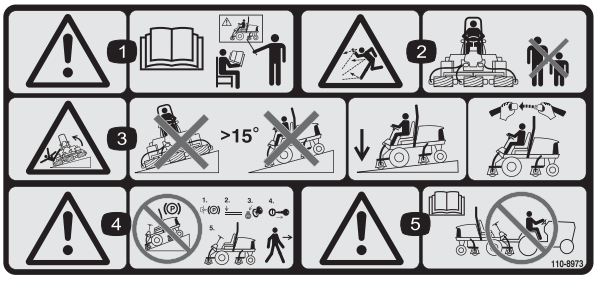
Safety and Instructional Decals

Safety decals and instructions are easily visible to the operator and are located near any area of potential danger. Replace any decal that is damaged or lost.



110-8869

1. Warning—read the *Operator's Manual* and receive training before operating the machine.
2. Thrown object hazard—keep bystanders a safe distance from the machine.
3. Tipping hazard—slow machine before turning, do not turn at high speeds; lower the cutting unit when driving down slopes; use a roll over protection system and wear the seat belt. Always wear a seat belt when a ROPS is in place.
4. Warning—do not park the machine on slopes; engage the parking brake, lower the cutting units, stop the engine and remove the ignition key before leaving the machine.
5. Warning—read the *Operator's Manual*. Do not tow the machine without following the instructions in the *Operator's Manual*.



110-8973

1. Warning—read the *Operator's Manual* and receive training.
2. Thrown object hazard—keep bystanders a safe distance from the machine.
3. Tipping hazard—do not operate on slopes greater than 15 degrees; lower the cutting units when operating on slopes; wear the safety belt.
4. Warning—do not park the machine on slopes; engage the parking brake, lower the cutting units, stop the engine and remove the ignition key before leaving the machine
5. Warning—read the *Operator's Manual*, do not tow the machine.

8111 Lyndale Avenue South
Bloomington, MN 55420

Register at www.Toro.com.

Original Instructions (EN)
Printed in the USA.

Installation

Loose Parts

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

Procedure	Description	Qty.	Use
1	RH wheel motor LH wheel motor Hydraulic fitting, 45 degrees Bolt (1/2 x 2-1/4 inch) Lockwasher (1/2 inch)	1 1 4 8 8	Mount the wheel motor assemblies.
2	Manifold Hydraulic fitting, straight Diagnostic fitting Dust cap Bolt (3/8 x 1-3/4 inches) Lockwasher (3/8 inch) Spacer	1 7 2 2 3 3 3	Install the manifold.
3	Hydraulic hose	4	Install the wheel motor hoses.
4	Hydraulic tube, part no. 108-7624 Hydraulic tube, part no. 108-7625 Hydraulic tube, part no. 108-7626 Bulkhead lock nut Tube clamp halves Cap screw (5/16 x 1-1/2 inches) Flat washer (.344 x .688) Lock nut (5/16 inch)	1 1 1 3 2 1 1 1	Installing the manifold tubes.
5	No parts required	–	Removing the front tube and the hydraulic hose.
6	Hydraulic tube, part no. 108-7622 Hydraulic tube, part no. 108-7623 Hydraulic fitting, 90 degrees Hydraulic hose Cable tie	1 1 1 1 3	Installing the front tubes and the hydraulic hose.
7	No parts required	–	Checking the hydraulic hoses and tubes.
8	Seat belt Bolt (7/16 x inch) Lock washers (7/16 inch)	1 2 2	Mounting the seat belt.
9	Roll bar Flange head bolt (1/2 x 1-1/4 inches)	1 8	Mounting the ROPS.
10	Decal Decal 110–8869, danger Decal 110–8973, CE danger (Europe only)	2 1 1	Installing the decals.
11	Operator's Manual Parts Catalog	1 1	Finish the setup.

1

Mounting the Wheel Motor Assemblies

Parts needed for this procedure:

1	RH wheel motor
1	LH wheel motor
4	Hydraulic fitting, 45 degrees
8	Bolt (1/2 x 2-1/4 inch)
8	Lockwasher (1/2 inch)

Procedure

1. Jack up the rear of the machine and support it with jack stands.
2. Remove the 5 lug nuts securing each rear tire to the wheel spindle hub (Figure 1). Remove the tires.

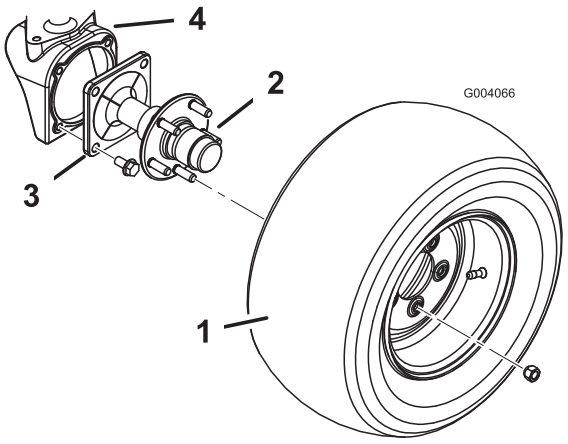


Figure 1

1. Rear tire
2. Wheel spindle hub
3. Wheel spindle
4. Wheel housing

3. Remove the 4 flange bolts securing each wheel spindle to each wheel housing (Figure 1). Remove the wheel spindles. The wheel hub does not need to be removed from the spindle.
4. Install two 45 degree hydraulic fittings into each wheel motor assembly (Figure 2). Position the fittings so they point straight to the rear.

   Note: Make sure the O-rings are lubricated and in position on all of the fittings before installation.

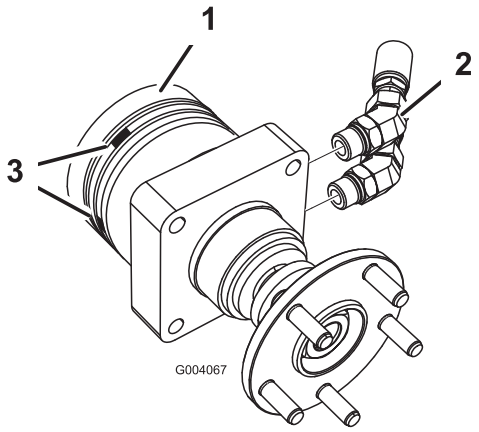


Figure 2

Right hand side wheel motor shown

1. Wheel motor
2. 45 degree fittings
3. Identification grooves

5. Identify the Left and Right hand wheel motors. The wheel motor for the Right hand side of the machine is identified with additional grooves in the outer surface of the motor housing. For further verification, the left-hand motor can be identified by a small yellow sticker or paint mark on the motor housing.
6. Mount the respective wheel motor assembly to each wheel housing with 4 bolts (1/2 x 2-1/4 inch) and lock washers (1/2 inch) (Figure 3). Torque the bolts to 70-80 ft-lb.

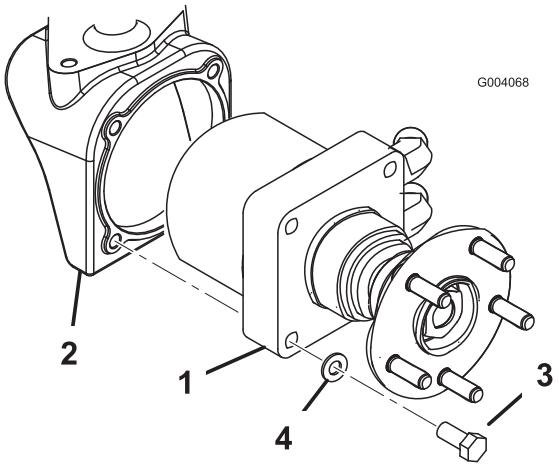


Figure 3

1. Wheel motor
2. Wheel housing
3. Wheel motor bolt
4. Lock washer

2

Installing the Manifold

Parts needed for this procedure:

1	Manifold
7	Hydraulic fitting, straight
2	Diagnostic fitting
2	Dust cap
3	Bolt (3/8 x 1-3/4 inches)
3	Lockwasher (3/8 inch)
3	Spacer

Procedure

1. Install 4 straight hydraulic fittings into the rear of the manifold (Figure 4).

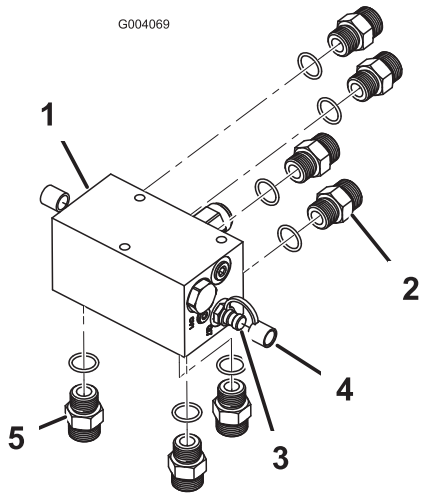


Figure 4

1. Manifold
2. Straight fitting, rear install (4)
3. Diagnostic fitting (2)
4. Dust cap (2)
5. Straight fitting, underside install (3)

2. Install 2 diagnostic fittings into either side of the manifold along with dust caps (Figure 4).
3. Install 3 straight hydraulic fittings into the bottom of the manifold (Figure 4).
4. Mount the manifold assembly to the underside of the manifold bracket with 3 bolts (3/8 x 1-3/4 inches), lock washers (3/8 inch) and spacers. Position the spacers between the manifold bracket and the top of the manifold. The manifold is to be positioned so the fittings point to the rear, and down (Figure 5).

Note: Make sure the O-rings are lubricated and in position on all of the fittings before installation.

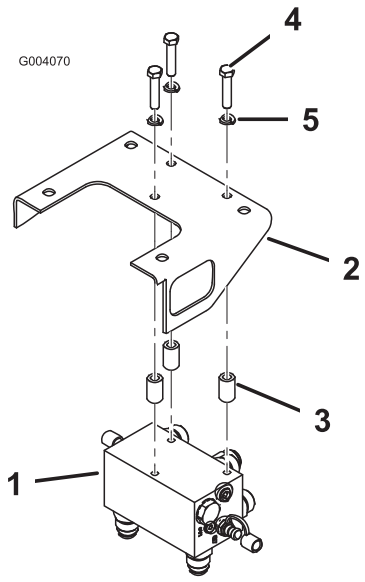


Figure 5

1. Manifold assembly
2. Machine frame
3. Spacer
4. Bolt (3/8 x 1-3/4 inches)
5. Lock washers (3/8 inch)

3

Installing the Wheel Motor Hoses

Parts needed for this procedure:

4	Hydraulic hose

Procedure

1. Loosely thread the 45 degree fitting end of each hydraulic hose onto the straight fittings at the rear of the manifold (Figure 6).

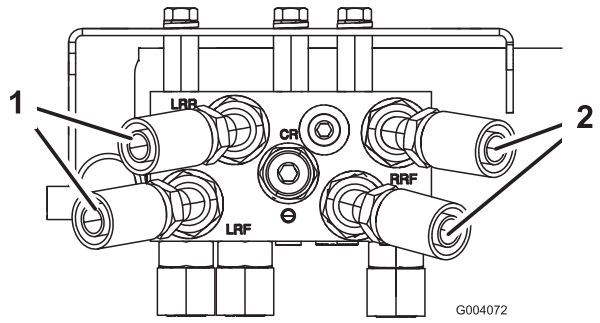


Figure 6

1. LH fitting, at 10 degrees 2. RH fitting, at 10 degrees

2. Route the 2 left hoses to the left wheel motor. Connect the upper manifold hose to the upper wheel motor fitting and the lower manifold hose to the lower wheel motor fitting (Figure 7). If the hoses are not properly routed they may come in contact with the tires or rear bumper which will cause damage to the hoses.

   Important: Do not cross the hydraulic hoses as they are routed from the manifold to the wheel motors.

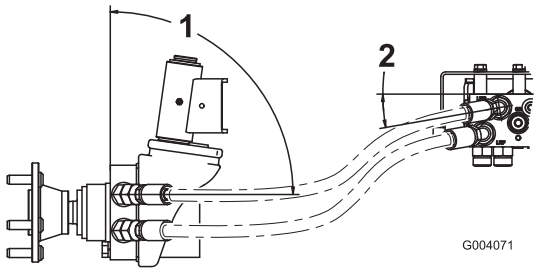


Figure 7

1. 90 degrees 2. 10 degrees

3. Repeat the procedure for the right wheel motor. Position the hoses as shown in Figure 8 and tighten all the hose fittings.

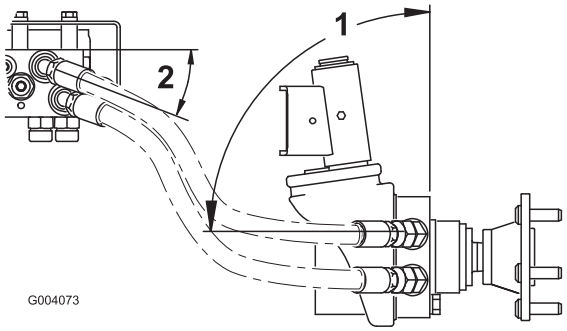


Figure 8

1. 90 degrees 2. 10 degrees

4. Reinstall the rear tires and torque the lug nuts to 85-100 ft-lb.

Important: Check the hose routing to ensure there is proper clearance when the axle is oscillated and when the steering wheel is operated in a full right and left lock turn. The minimum tire to axle clearance should be 1/2 inch (13 mm).

4

Install the Manifold Tubes

Parts needed for this procedure:

1	Hydraulic tube, part no. 108-7624
1	Hydraulic tube, part no. 108-7625
1	Hydraulic tube, part no. 108-7626
3	Bulkhead lock nut
2	Tube clamp halves
1	Cap screw (5/16 x 1-1/2 inches)
1	Flat washer (.344 x .688)
1	Lock nut (5/16 inch)

Procedure

1. Route the hydraulic tube, part no. 108-7624, from the left manifold fitting labeled "RF" to the right hole in the right frame bulkhead bracket (Figure 9).
2. Secure the rear of the hydraulic tube to the manifold fitting and the front to the bulkhead with a bulkhead locknut (Figure 9).
3. Route hydraulic tube, part no. 108-7626, from the center manifold fitting labeled "REV" to the hole in the left frame bulkhead bracket (Figure 9).
4. Secure the rear of the hydraulic tube to the manifold fitting and the front to the bulkhead bracket with a bulkhead locknut.
5. Route hydraulic tube, part no. 108-7625, from the right manifold fitting labeled "LF" to the left hole in the right frame bulkhead bracket (Figure 9).
6. Secure the rear of the hydraulic tube to the manifold fitting and the front to the bulkhead with a bulkhead locknut.
7. Secure the 2 right bulkhead lines together with the tube clamp halves, cap screw (5/16 x 1-1/2 inches), flat washer (.344 x .688) and a locknut (5/16 inch) (Figure 9).

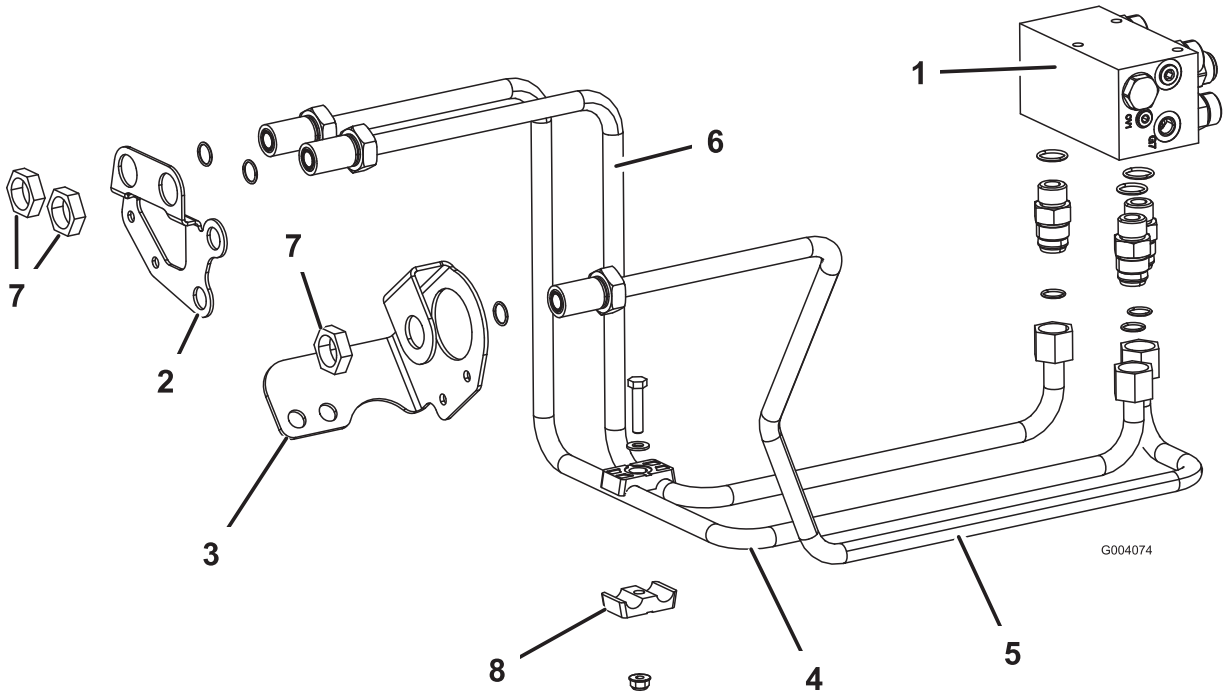


Figure 9

1. Manifold
2. Right frame bulkhead bracket
3. Left frame bulkhead bracket
4. Hydraulic tube, part no. 108-7624
5. Hydraulic tube, part no. 108-7626
6. Hydraulic tube, part no. 108-7625
7. Bulkhead nut
8. Tube clamp

5

Remove the Front Tube and the Hydraulic Hose

No Parts Required

Procedure

1. Raise the front of the unit and support it on jack stands.
2. Remove the lug nuts securing the wheel assemblies and remove the wheels.
3. Remove the cap screws and nuts securing the wheel shields to the front axle flanges (Figure 10).
4. Disconnect the hydraulic tube from the top fitting on the front left wheel motor and the bottom fitting on the front right wheel motor (Figure 10).
5. Remove the R-clamps securing the tube to the frame (Figure 10) and the cable ties securing the brake cables to the hydraulic tubes.

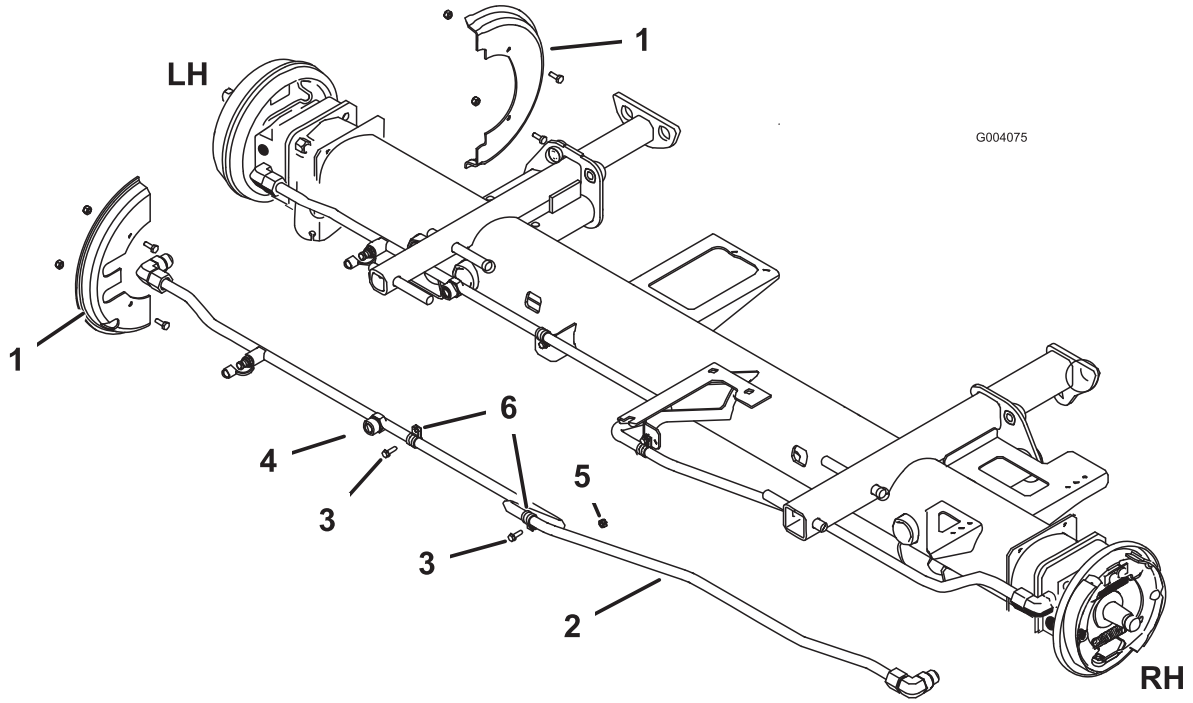


Figure 10

1. Wheel shields
2. Hydraulic tube
3. Screw
4. Hose connection fitting
5. Lock nut
6. R-clamp

6. Disconnect the left hand hose from the variable pump and the hydraulic tube (Figure 10). Also, remove the 45 degree fitting from the bottom of the variable pump (Figure 10).

   Note: The right hand hose can also be removed to improve clearance for the removal and installation of the front tube. This is not necessary but can aid in the installation of this kit.

6

Install the Front Tubes and the Hydraulic Hose

Parts needed for this procedure:

1	Hydraulic tube, part no. 108-7622
1	Hydraulic tube, part no. 108-7623
1	Hydraulic fitting, 90 degrees
1	Hydraulic hose
3	Cable tie

Procedure

1. Connect hydraulic tube, part no. 108-7622, to the right wheel motor fitting and to the right hydraulic tube in the right frame bulkhead (Figure 11).
2. Connect hydraulic tube, part no. 108-7623, to the left wheel motor fitting and to the left hydraulic tube in the right frame bulkhead (Figure 11).
3. Install a 90 degree hydraulic fitting into the bottom of the variable pump (Figure 11).
4. Connect the hydraulic hose to the left hand pump fitting and to the hydraulic tube at left frame bulkhead. If the right hand hose was removed, connect it at this time.
5. Secure the hydraulic hose to the bottom of the battery tray with a cable tie (Figure 11).
6. Install the wheel shields to the front axle flanges with the cap screws and nuts previously removed (Figure 10).
7. Install the cable ties to secure the brake cables to the hydraulic tubes.

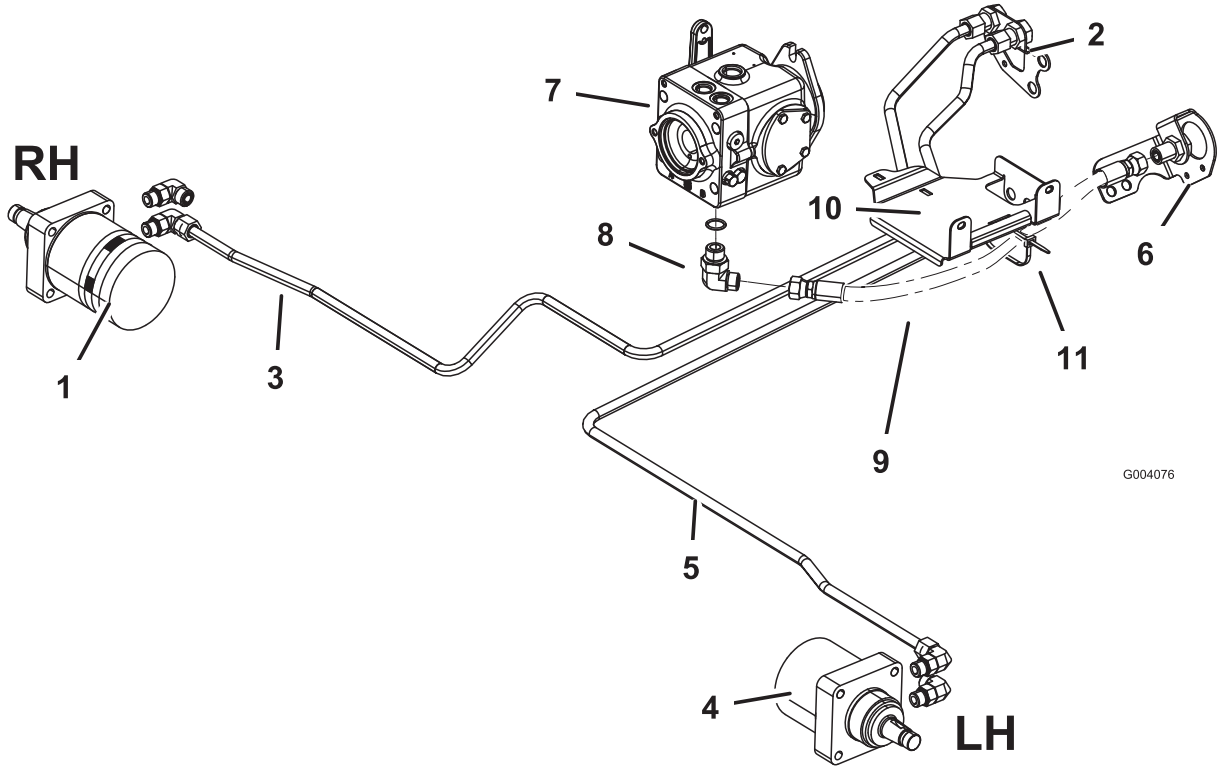


Figure 11

1. Right wheel motor
2. Right frame bulkhead
3. Hydraulic tube, part no. 108-7622
4. Left wheel motor
5. Hydraulic tube, part no. 108-7623
6. Left frame bulkhead
7. Variable pump
8. 90 degree fitting
9. Hydraulic hose
10. Battery tray
11. Cable tie

7

Check the Hydraulic Hoses and Tubes

No Parts Required

Procedure

Check the hydraulic tubes and hoses for leaks, loose fittings, kinked lines, and loose mounting supports. Make necessary repairs before operating.

Note: Keep areas around the hydraulic system clean from grass and debris build up.

Hydraulic fluid escaping under pressure can penetrate skin and cause injury. Fluid accidentally injected into the skin must be surgically removed within a few hours by a doctor familiar with this form of injury or gangrene may result.

- **Keep body and hands away from pin hole leaks or nozzles that eject high pressure hydraulic fluid.**
- **Use cardboard or paper to find hydraulic leaks.**

1. Install the R-clamps removed previously using 2 screws and lock nuts to secure the hydraulic tubes to the machine frame shown in Figure 12.

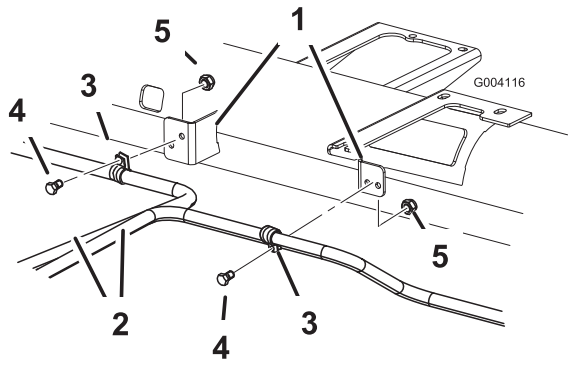


Figure 12

1. Machine frame
2. Hydraulic tubes
3. R-clamp
4. Screw
5. Lock nut

2. Install the front tires using the fasteners removed previously. Torque the lug nuts to 85-100 ft-lb.
3. Remove the machine from the jack stands and lower the unit to the floor.
4. Check the hydraulic oil level. If necessary, add fluid to the bring the level to the full mark on the dipstick. Refer to the *Operator's Manual* for more information.
5. Operate the machine to test for leaks. Shut down the machine as specified in the *Operator's Manual* and check for leaks in the hydraulic system.
6. Check the hydraulic oil level one more time. If necessary, add fluid to the bring the level to the full mark on the dipstick. Refer to the *Operator's Manual* for more information.

8

Mount the Seat Belt

Parts needed for this procedure:

1	Seat belt
2	Bolt (7/16 x inch)
2	Lock washers (7/16 inch)

Procedure

Mount the seat belt to the holes in the side of the seat with 2 bolts (7/16 x 1 inch) and lock washers (7/16 inch). Tighten the bolts securely. The tongue side of the seat belt is to be mounted to the left side of the seat (Figure 13).

Note: When operating machine, always use the seat belt and ROPS together.

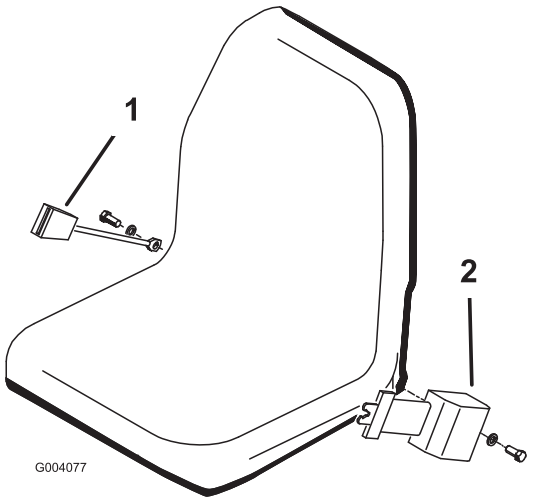


Figure 13

1. Seat belt latch
2. Seat belt tongue

9

Mount the ROPS

Parts needed for this procedure:

1	Roll bar
8	Flange head bolt (1/2 x 1-1/4 inches)

Procedure

1. Position the roll bar frame so the offset is facing to the rear of the mounting bracket.
2. Lower the roll bar onto the frame, aligning it with the mounting bracket holes.
3. Secure each side of the roll bar to the frame with 4 flange head bolts (1/2 x 1-1/4 inches) as shown in Figure 14. Torque the bolts to 70-80 ft-lb.

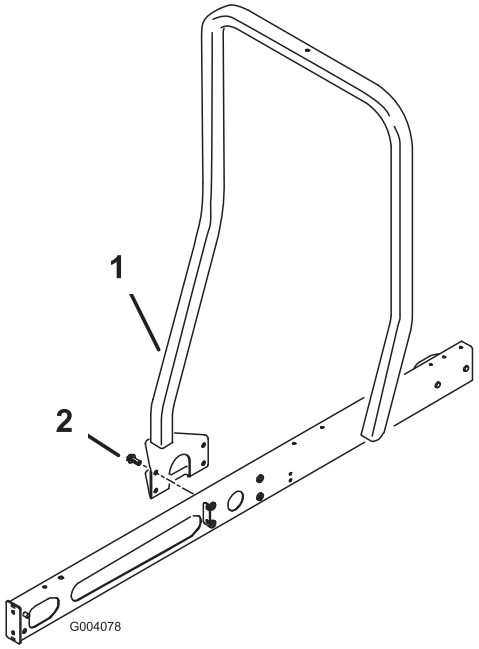


Figure 14

1. Roll bar (ROPS), offset to the rear
2. Flange bolt

10

Install the Decals

Parts needed for this procedure:

2	Decal
1	Decal 110–8869, danger
1	Decal 110–8973, CE danger (Europe only)

Procedure

1. Install each decal at locations below as follows:
   A. Thoroughly clean the area where you will install the decal.
   B. Dampen the area with water or mildly soapy water.
   C. Peel the decal from the backing and install it in place.
   D. Squeegee across the surface of the decal, starting at the center of the decal and working toward the edges, using overlapping strokes.
2. Using the dimensions shown in Figure 15, locate and affix a CROSSTRAX decal to the lower rear corner of each side of the hood.

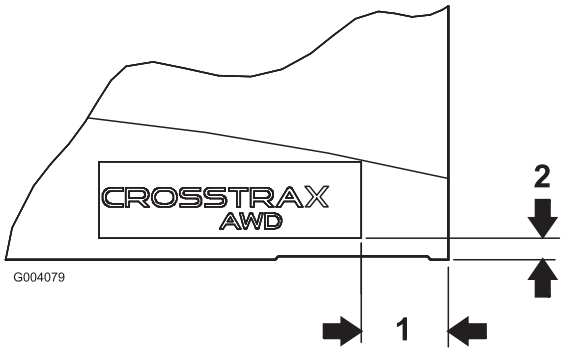


Figure 15

1. 4.00 inches
2. 1.00 inch

3. Affix the appropriate danger decal over the existing decal on the operator platform (Figure 16):
   - For domestic units apply decal 110-8869.
   - For CE (European) units apply decal 110-89673.

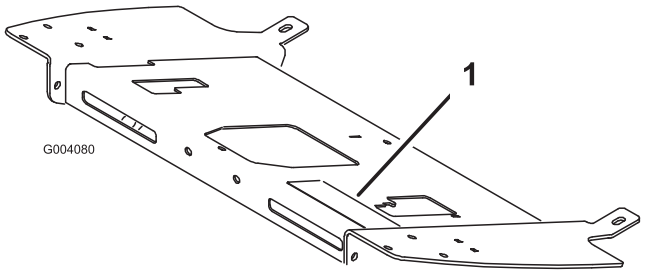


Figure 16

1. Danger decal

11

Finishing the Setup

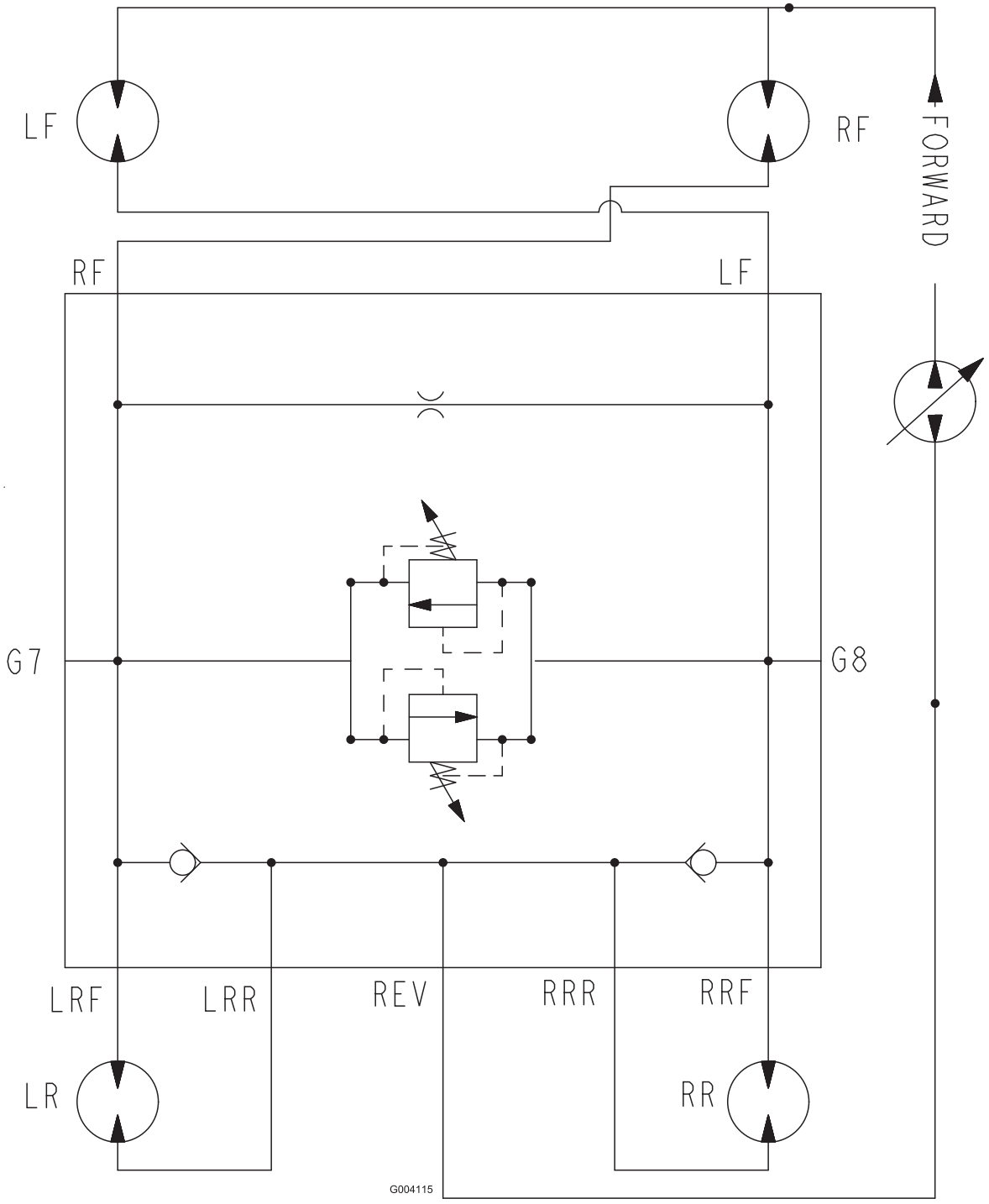
Parts needed for this procedure:

1	*Operator's Manual*
1	*Parts Catalog*

Procedure

- Read the *Installation Instructions*.
- Save the *Parts Catalog*.

Schematics



Hydraulic Schematic (Rev. A)