



Hydra Borer Pro Sneak 360 or 365 Vibratory Plow

Model No. 25418
Model No. 25418E
Model No. 25421
Model No. 25421E

Operator's Manual

⚠ WARNING

CALIFORNIA Proposition 65 Warning

This product contains a chemical or chemicals known to the State of California to cause cancer, birth defects, or reproductive harm.

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.

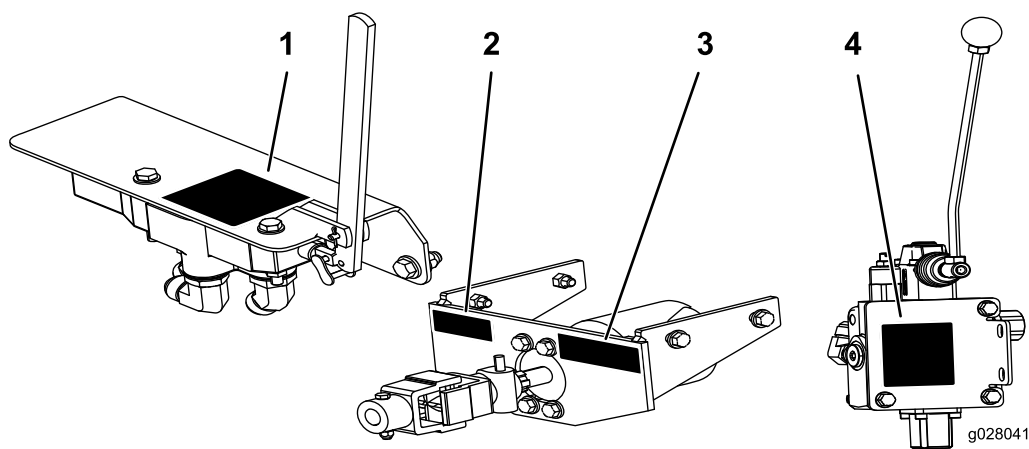


Figure 1

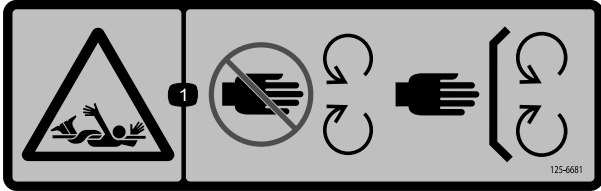
- | | |
|----------------------------------|----------------------------------|
| 1. Decal 125-8488 (ProSneak 360) | 3. Decal 125-6681 |
| 2. Decal 125-6671 | 4. Decal 125-8488 (ProSneak 365) |





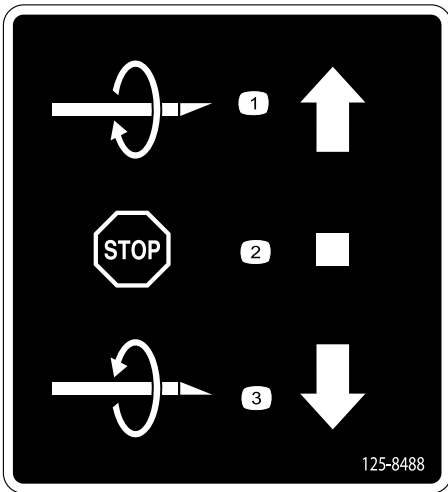
125-6671

1. Explosion hazard; electric shock hazard—call local utilities before digging.



125-6681

1. Entanglement hazard—keep away from moving parts; keep all guards in place.



125-8488

1. Turn clockwise
2. Stop rotation
3. Turn counterclockwise

Setup

Loose Parts

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

Procedure	Description	Qty.	Use
1	Motor Adapter Retainer adapter Lock washer Bolt (1/2 x 1-1/4 inches) 90-degree, elbow fitting Bracket Bolt (1/2 x 1-3/4 inch) Flat washer (1/2 inch) Locknut (1/2 inch) Joint assembly Nut (3/8 inch) Bolt (3/8 x 2-1/2 inch)	1 1 1 1 1 2 1 8 8 8 1 1 1	Install the Hydra Borer motor.
2	Bracket Control valve 90-degree, elbow fitting 45-degree, elbow fitting Straight fitting Bolt (3/8 x 1 inch) Flat washer (3/8 inch) Nut (3/8 inch) Bolt (5/16 x 2-1/2 inch) Bolt (5/16 x 2-1/4 inch) Flat washer (0.344 inch) Locknut (5/16 inch) Clevis pin Cotter pin Control lever Link assembly Snap clip	1 1 1 2 1 2 4 2 1 1 2 2 1 1 1 1 1 1	Install the control valve and handle (Pro Sneak 360).
3	Bracket Control valve 45-degree, elbow fitting Straight fitting Bolt (1 1/4 inch) Nut Handle assembly	1 1 2 3 3 3 1	Install the control valve and handle (Pro Sneak 365).
4	Hose, 114.3 cm (45 inches) Hose, 91.44 cm (36 inches) Hose, 37.44 cm (14 3/4 inches) Hose connector	2 1 1 1	Install the hoses (Pro Sneak 360).

Procedure	Description	Qty.	Use
5	Hose, 51 cm (20 inches)	1	Install the hoses (Pro Sneak 365).
	Hose, 95 cm (38 inches)	2	
	Hydraulic tube	3	
	90 degree adapter fitting	1	
	45 degree adapter fitting	2	
	R-clamps	2	
	Bolts	2	
	Nuts	2	
6	No parts required	–	Test the installation.

1

Installing the Hydra Borer Motor

Parts needed for this procedure:

1	Motor
1	Adapter
1	Retainer adapter
1	Lock washer
1	Bolt (1/2 x 1-1/4 inches)
2	90-degree, elbow fitting
1	Bracket
8	Bolt (1/2 x 1-3/4 inch)
8	Flat washer (1/2 inch)
8	Locknut (1/2 inch)
1	Joint assembly
1	Nut (3/8 inch)
1	Bolt (3/8 x 2-1/2 inch)

Procedure

- Grease the shaft of the motor and place the adapter onto the motor (Figure 2).

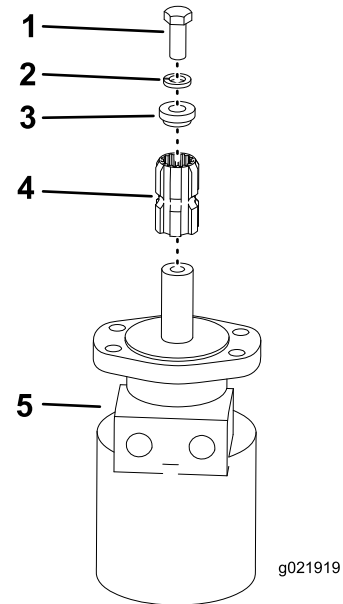


Figure 2

- | | |
|----------------------------|------------|
| 1. Bolt (1/2 x 1-1/4 inch) | 4. Adapter |
| 2. Lock washer | 5. Motor |
| 3. Retainer adapter | |

- Put the retainer adapter on the adapter.
- Place the washer on the bolt and apply thread-locking adhesive to the bolt.
- Secure the bolt to the adapters; torque to 160 to 165 N-m (118 to 122 ft-lb).
- Install 2 of the 90-degree, elbow fittings into the ports on the motor (Figure 3).

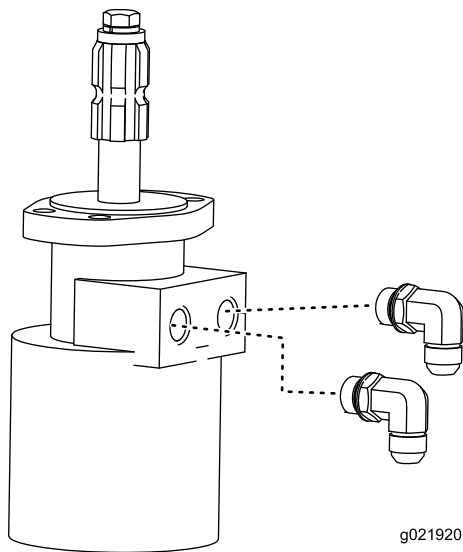


Figure 3

6. Torque the fittings to 104 to 127 N-m (77 to 94 ft-lb).
7. Secure the bracket to the motor using the 4 bolts (1/2 x 1 3/4 inch), the 4 flat washers (1/2 inch), and the 4 locknuts (1/2 inch) (Figure 4).

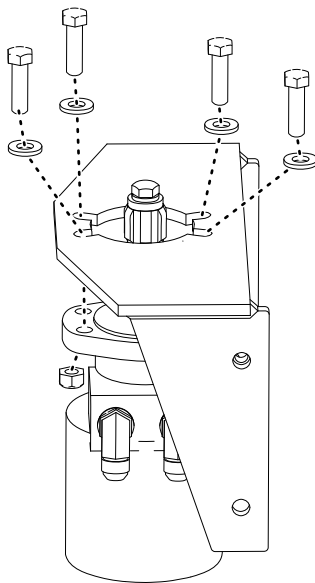


Figure 4

8. Torque the bolts to 91 to 113 N-m (67 to 83 ft-lb).
9. Secure the motor assembly to the machine using 4 bolts (1/2 x 1-3/4 inch), 4 flat washers (1/2 inch), and 4 locknuts (1/2 inch) (Figure 5).

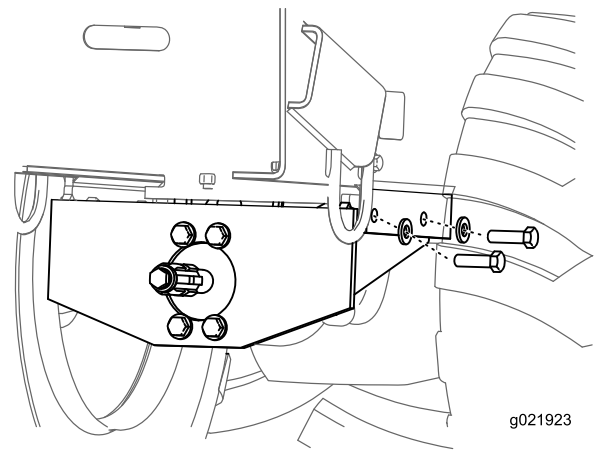


Figure 5

10. Torque the bolts to 91 to 113 N-m (67 to 83 ft-lb).
11. Install the joint assembly to the motor assembly. Secure with the bolt (3/8 inch) and the nut (3/8 x 2-1/2 inch) (Figure 6).

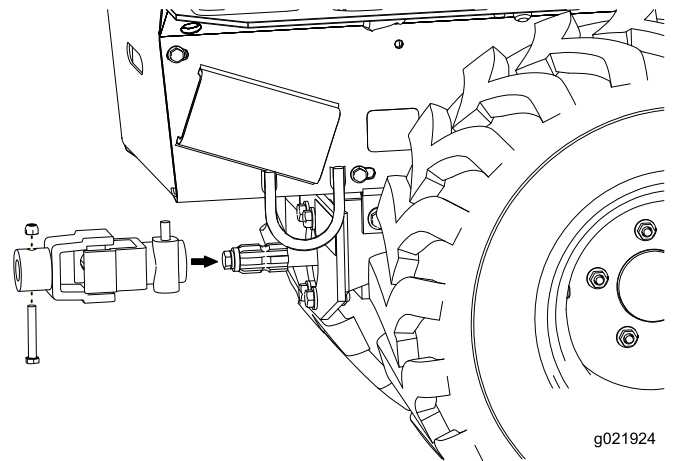


Figure 6

12. Torque the bolts to 55 to 63 N-m (40 to 45 ft-lb).

2

Installing the Control Valve and Handle (Pro Sneak 360)

Parts needed for this procedure:

1	Bracket
1	Control valve
1	90-degree, elbow fitting
2	45-degree, elbow fitting
1	Straight fitting
2	Bolt (3/8 x 1 inch)
4	Flat washer (3/8 inch)
2	Nut (3/8 inch)
1	Bolt (5/16 x 2-1/2 inch)
1	Bolt (5/16 x 2-1/4 inch)
2	Flat washer (0.344 inch)
2	Locknut (5/16 inch)
1	Clevis pin
1	Cotter pin
1	Control lever
1	Link assembly
1	Snap clip

Procedure

1. Install the fittings as shown in [Figure 7](#).

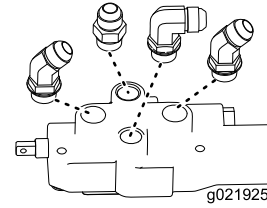


Figure 7

2. Torque the fittings to 104 to 127 N-m (77 to 94 ft-lb).
3. Install the bracket and secure with the 2 nuts (3/8 inch), the 2 washers (3/8 inch), and the 2 bolts (3/8 inch) ([Figure 8](#)); torque to 38 to 43 N-m (28 to 32 ft-lb).

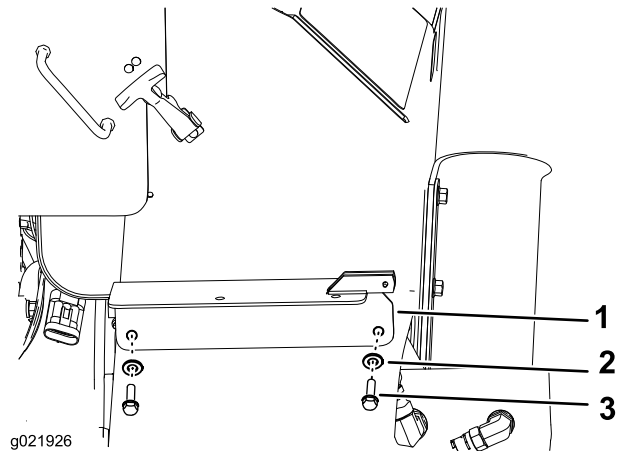


Figure 8

1. Nut (3/8 inch)
2. Flat washer (3/8 inch)
3. Bolt (3/8 inch)

4. Install the control valve onto the bracket and secure with the 2 bolts (5/16 x 2-1/4 inch and 5/16 x 2-1/2 inch), the 2 flat washers (0.344 inch) and the 2 locknuts (5/16 inch) ([Figure 9](#)); torque to 20 to 25 N-m (175 to 225 in-lb).

3

Installing the Control Valve and Handle (Pro Sneak 365)

Parts needed for this procedure:

1	Bracket
1	Control valve
2	45-degree, elbow fitting
3	Straight fitting
3	Bolt (1 1/4 inch)
3	Nut
1	Handle assembly

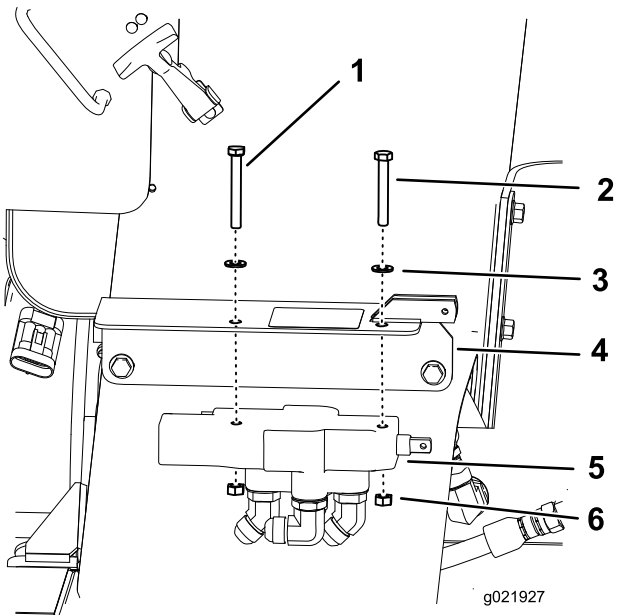


Figure 9

1. Bolt (2-1/4 inch)
2. Bolt (2-1/2 inch)
3. Washer (0.344 inch)
4. Bracket
5. Control valve
6. Locknut (5/16 inch)

5. Place the hydra-borer-control lever between the guide on the bracket attached to the machine so that the holes line up. Secure the control lever with the link assembly and snap clip (Figure 10).

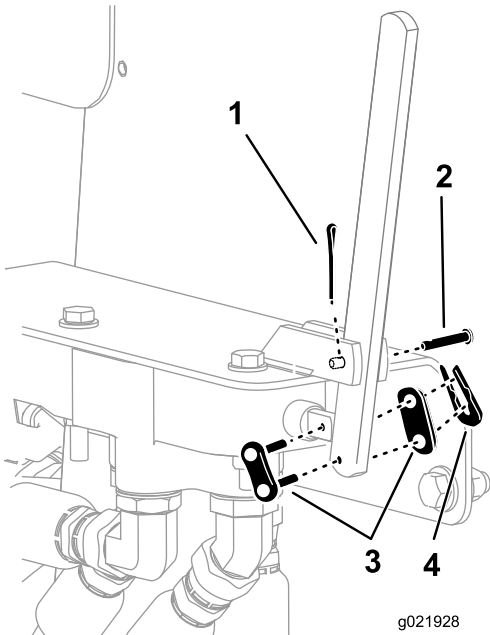


Figure 10

1. Cotter pin
2. Clevis pin
3. Link assembly
4. Snap clip

6. Secure the upper hole of the control lever with the clevis pin and the cotter pin (Figure 10).

Procedure

1. Attach the bracket to the valve using the 3 bolts and 3 nuts shown in Figure 11.

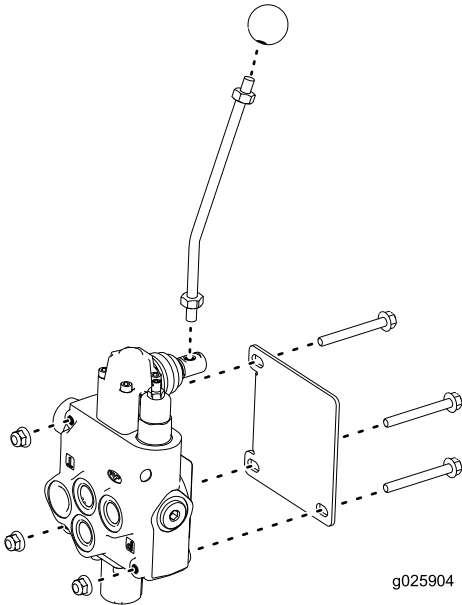


Figure 11

2. Attach the fittings to the valve as shown in Figure 12 and torque to 104 to 127 N-m (77 to 94 ft-lb).

4

Installing the Hoses (Pro Sneak 360)

Parts needed for this procedure:

2	Hose, 114.3 cm (45 inches)
1	Hose, 91.44 cm (36 inches)
1	Hose, 37.44 cm (14 3/4 inches)
1	Hose connector

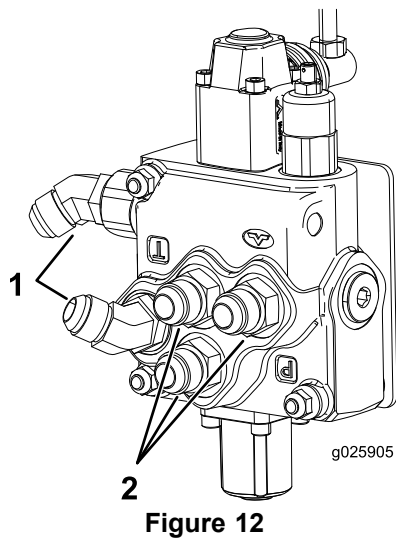


Figure 12

1. 45-degree fitting (2)
2. Straight fitting (3)

3. Remove the bolts securing the left panel to the machine.
4. Using the left panel bolts, install the valve assembly to the machine (refer to [Figure 13](#)).

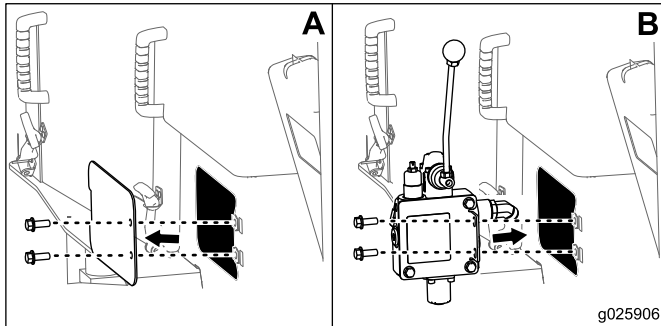


Figure 13

Installing the Hoses on Machines with or without the Trencher Attachment Installed

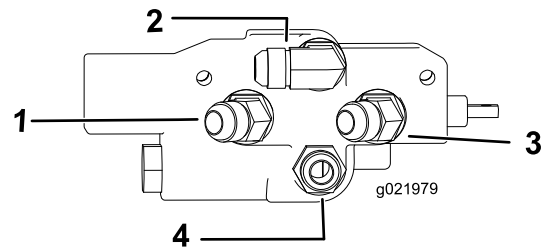
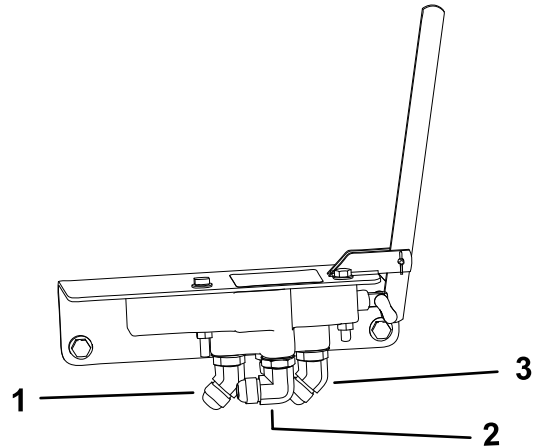


Figure 14

Control Valve Views

1. 45-degree fitting (Port B)
(45-inch hose from the Motor)
2. 90-degree fitting (Out port)
(Hose B 14 3/4-inch hose to the Plow Valve)
3. 45-degree fitting (Port A)
(45-inch hose from Motor)
4. Straight fitting (In Port)
(Hose C / 36-inch hose)

1. Route a 114.3 cm (45 inch) hose from port A on the motor to port A on the hydra-borer-control valve ([Figure 15](#)).

Note: Route the hoses under the frame.

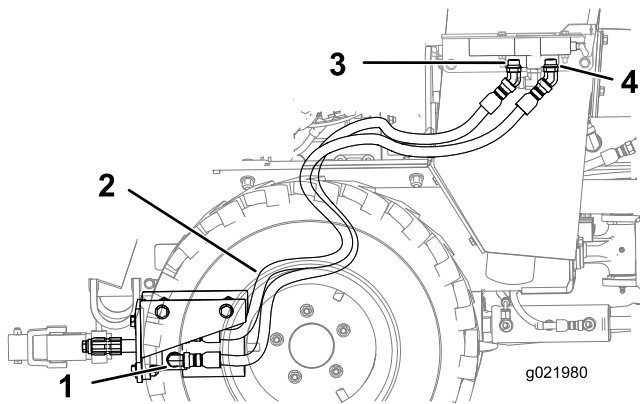


Figure 15

- | | |
|------------------------|--|
| 1. Port A on the motor | 3. Port A on the hydra-borer-control valve |
| 2. Port B on the motor | 4. Port B on the hydra-borer-control valve |

- Route the other 114.3 cm (45 inch) hose from port B on the motor to port B on the hydra-borer-control valve (Figure 14 and Figure 15).
- Torque the hose ends to 73 to 89 N-m (54 to 66 ft-lb).

Installing the Hoses on a Machine without the Trencher Attachment Installed

Use this procedure if you have a machine that does not have a trencher attached. If you have a machine has trencher attached, go to [Installing the Hoses on a Machine with the Trencher Attachment Installed](#) (page 10).

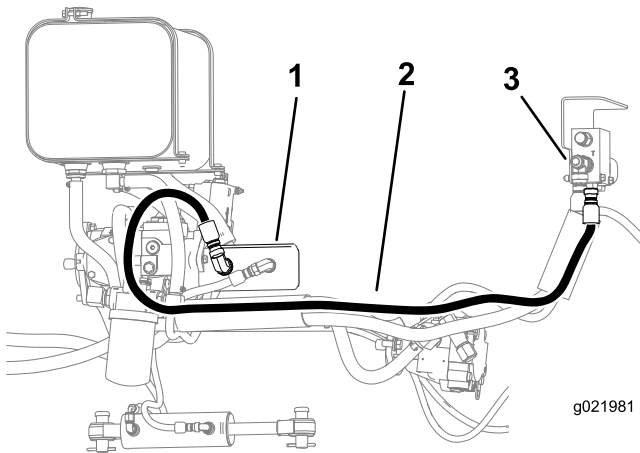


Figure 16

Current hose routing

- | | |
|--|-----------------------|
| 1. Hydraulic pump | 3. Plow-control valve |
| 2. Hose A (currently installed on the machine) | |

- Disconnect hose A from the hydraulic pump (Figure 16), add the hose connector, and connect hose B to the other end of the connector (Figure 17).

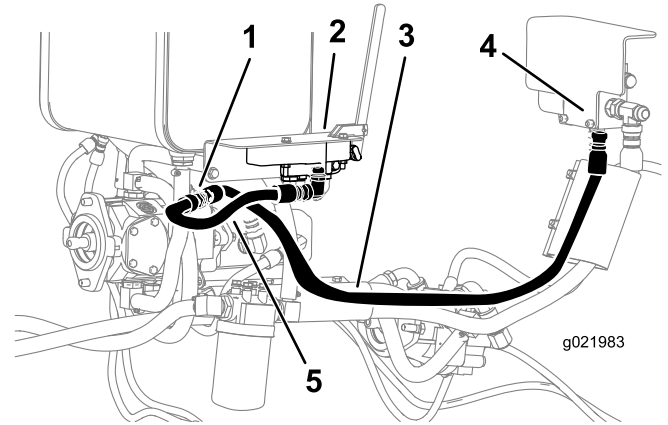


Figure 17

- | | |
|------------------------------|---------------------------|
| 1. Hose connector | 4. Plow-control valve |
| 2. Hydra-borer-control valve | 5. Hose B (14 3/4 inches) |
| 3. Hose A | |

- Connect hose B (14 3/4 inches) to the 90-degree fitting (Out port) on the control valve (Figure 14 and Figure 17).
- Torque the hose ends to 73 to 89 N-m (54 to 66 ft-lb).
- Connect hose C (36 inches) to the straight fitting (In port) on the control valve (Figure 14) to the hydraulic pump (where Hose A was previously installed (Figure 16); refer to Figure 18).

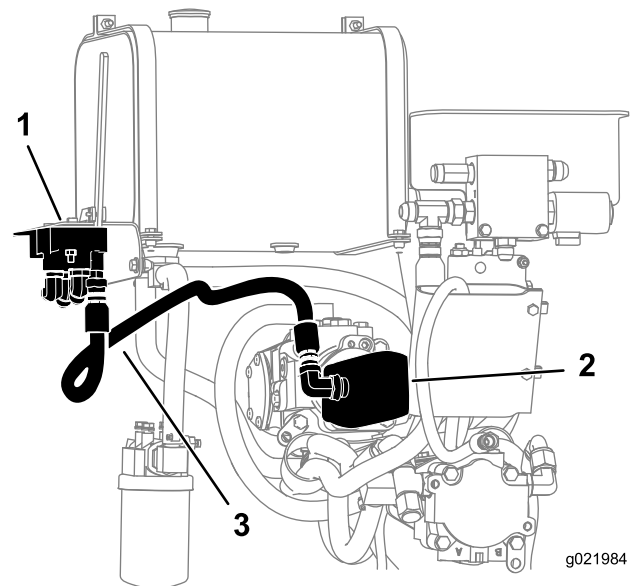


Figure 18

- | | |
|------------------------------|-----------------------|
| 1. Hydra-borer-control valve | 3. Hose C (36 inches) |
| 2. Hydraulic pump | |

- Torque the hose ends to 73 to 89 N-m (54 to 66 ft-lb).

Installing the Hoses on a Machine with the Trencher Attachment Installed

Use this procedure if you have a machine that has a trencher attached. If you have a machine that does not have a trencher attached, go to [Installing the Hoses on a Machine without the Trencher Attachment Installed](#) (page 9).

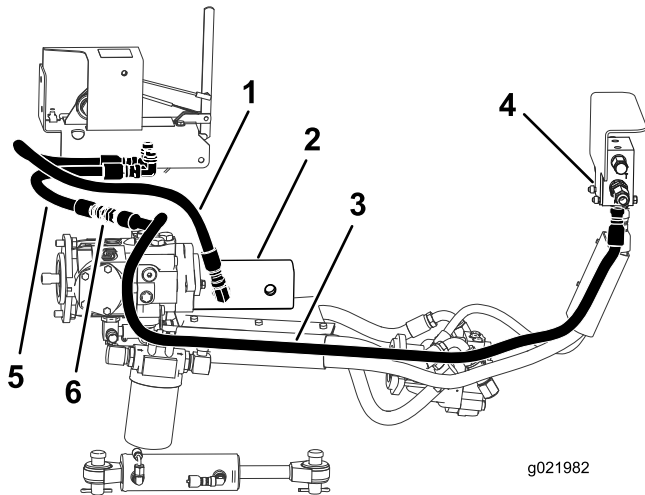


Figure 19

Current hose routing on a machine with a trencher installed.

- | | |
|---------------------------|---------------------------|
| 1. Hose E (trencher hose) | 4. Plow-control valve |
| 2. Hydraulic pump | 5. Hose D (trencher hose) |
| 3. Hose A | 6. Hose connector |

1. Disconnect hose A from hose D, leaving the hose connector attached to hose A (Figure 19).
2. Connect hose B (14 3/4 inches) to the hose connector attached to hose A.
3. Connect the other end of hose B to the 90-degree fitting (Out port) on the hydra-borer-control valve (Figure 14 and Figure 20).

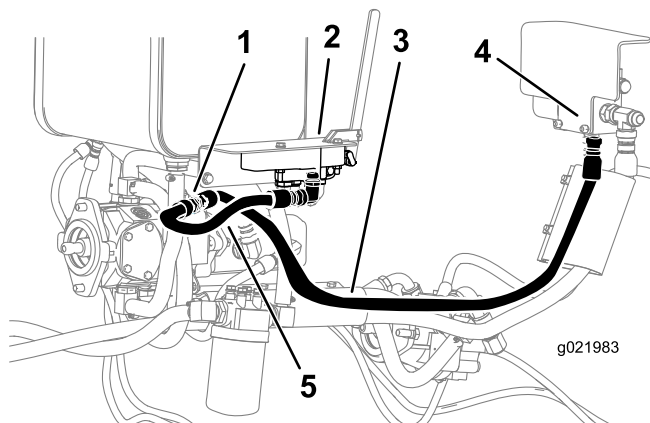


Figure 20

- | | |
|------------------------------|---------------------------|
| 1. Hose connector | 4. Plow-control valve |
| 2. Hydra-borer-control valve | 5. Hose B (14 3/4 inches) |
| 3. Hose A | |

4. Add a hose connector to the end of hose D.

5. Route hose C (36 inches) from the straight fitting (In Port) on the hydra-borer control valve (Figure 14) to the hose connector on hose D (Figure 21).

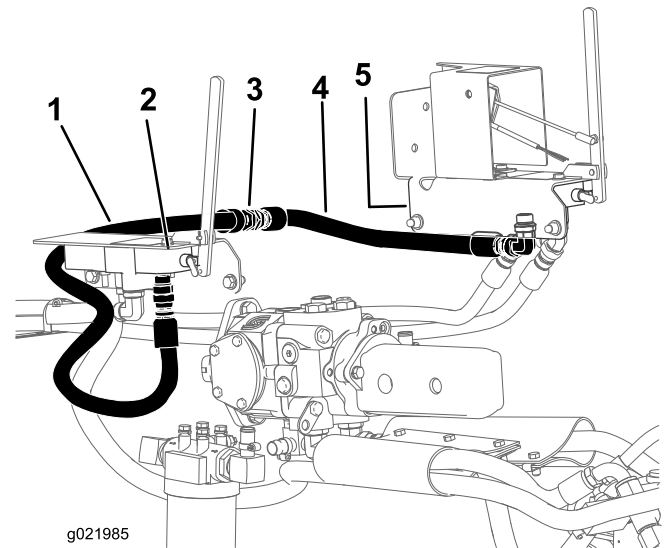


Figure 21

- | | |
|------------------------------|---------------------------|
| 1. Hose C (36 inches) | 4. Hose D |
| 2. Hydra-borer-control valve | 5. Trencher-control valve |
| 3. Hose connector | |

6. Torque the hose ends to 73 to 89 N-m (54 to 66 ft-lb).

5

Installing the Hoses (Pro Sneak 365)

Parts needed for this procedure:

1	Hose, 51 cm (20 inches)
2	Hose, 95 cm (38 inches)
3	Hydraulic tube
1	90 degree adapter fitting
2	45 degree adapter fitting
2	R-clamps
2	Bolts
2	Nuts

Installing the Hoses to the Hydra Borer Motor

Use a proper container to catch hydraulic fluid that will come from disconnected hoses.

1. Connect the 2 45-degree adapter fittings onto the middle port of the control valve (Figure 22); torque to 81 N-m (60 ft-lb).

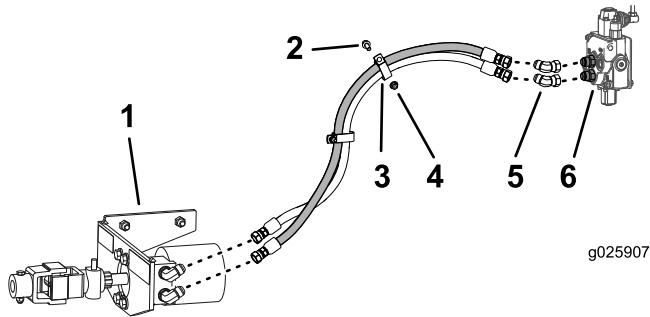


Figure 22

- | | |
|----------------------|-------------------------------|
| 1. Hydra-borer motor | 4. Nut |
| 2. Bolt | 5. 45-degree adapter fittings |
| 3. R-clamp | 6. Hydra-borer-control valve |

2. Route the 2 hoses (95 cm) from the hydra-borer-control valve to the hydra-borer motor as shown in Figure 22.

Note: Route the hoses under the frame.

3. Torque the hose ends to 73 to 89 N-m (54 to 66 ft-lb).
4. Secure the hoses with the r-clamps, bolts, and nuts.

Installing the Hoses on a Machine without the Trencher Attachment Installed

Use this procedure if you have a machine that does not have a trencher attached. If you have a machine equipped with a trencher attachment, go to [Installing the Hoses on a Machine with the Trencher Attachment Installed](#) (page 12).

1. Disconnect the hose that is installed on the front section of the hydraulic pump and connect it to the hydra-borer-control valve as shown in Figure 23; box A.

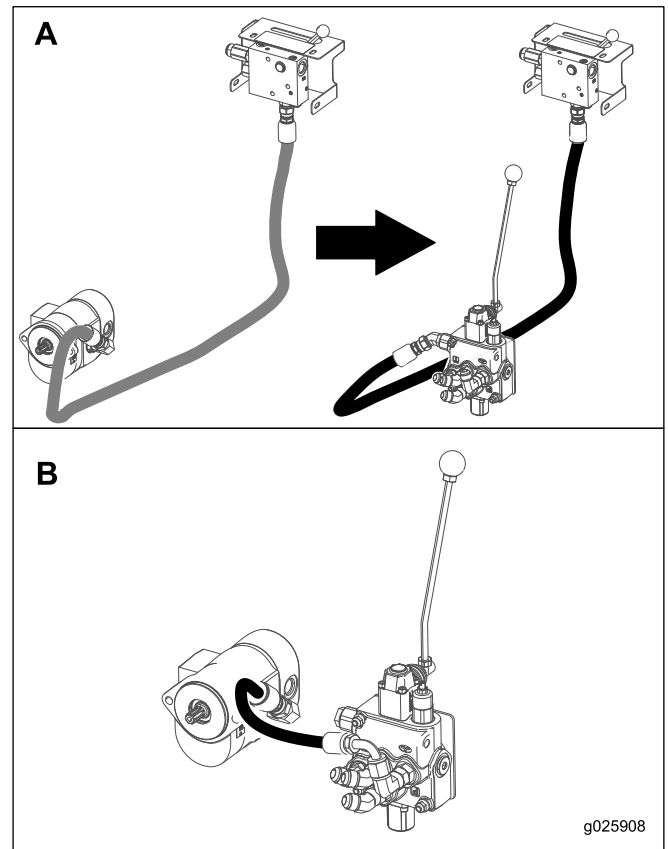


Figure 23

2. Torque the hose end to 81 N-m (60 ft-lb).
3. Connect the 51 cm hose from the open fitting on the hydraulic pump to the hydra-borer-control valve (Port B) as shown in Figure 23; box B.
4. Torque to 81 N-m (60 ft-lb).
5. Remove the cap on the radiator tube line (Figure 24).

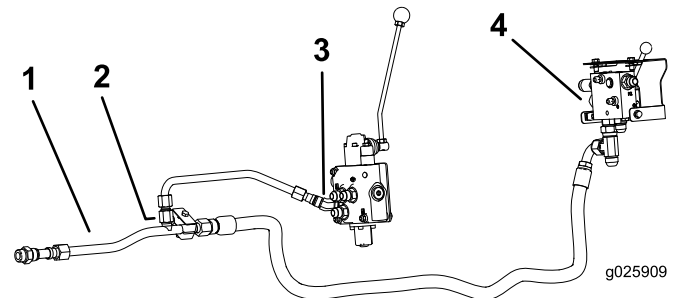


Figure 24

- | | |
|-----------------------|------------------------|
| 1. Radiator tube line | 3. 45-degree adapter |
| 2. Cap | 4. Plow-cylinder valve |

6. Connect a hydraulic tube from the hydra-borer-control valve (Port T) to the radiator tube line (Figure 24).
7. Torque to 81 N-m (60 ft-lb).

Installing the Hoses on a Machine with the Trencher Attachment Installed

Use this procedure if you have a machine that has a trencher attached. If you have a machine that does not have a trencher attached, go to [Installing the Hoses on a Machine without the Trencher Attachment Installed](#) (page 11).

1. Remove the short hose coming from the trencher valve that is connected to the long hose leading to the plow-cylinder valve ([Figure 25](#)).

The short hose is not needed for this installation. The hose can be discarded or kept for future use.

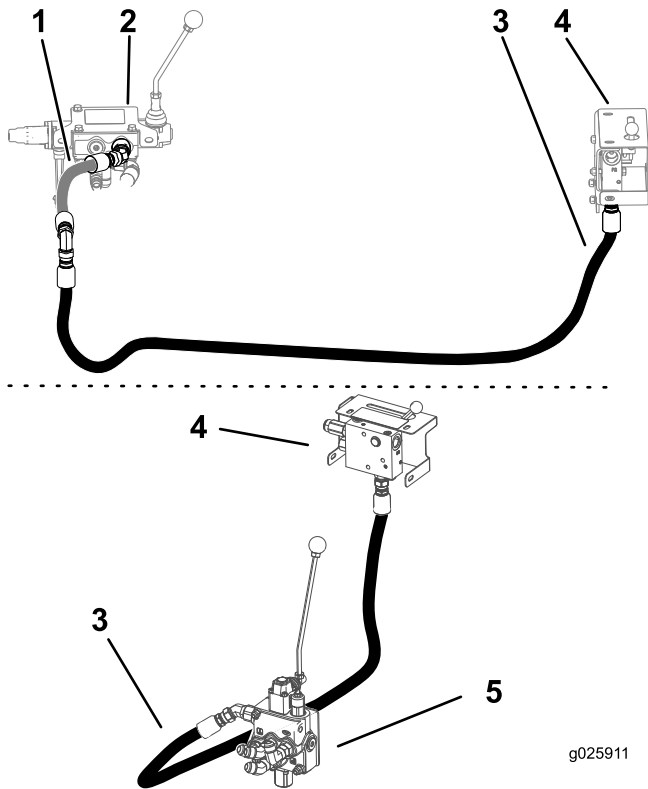


Figure 25

- | | |
|--|------------------------|
| 1. Short hose coming from the trencher valve. | 4. Plow-cylinder valve |
| 2. Trencher valve | 5. Hydra-borer valve |
| 3. Long hose coming from the plow-cylinder valve | |

2. Connect the long hose coming from the plow-cylinder valve to the inside fitting on the hydra-borer valve as shown in [Figure 25](#).
3. Torque to 81 N-m (60 ft-lb).
4. Connect a hydraulic tube from the open port on the trencher valve to the hydra-borer valve (Port P) as shown in [Figure 26](#).

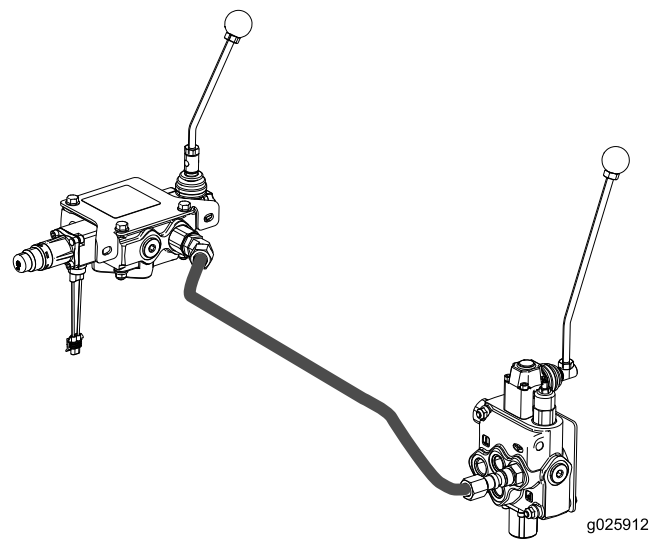


Figure 26

5. Torque to 81 N-m (60 ft-lb).
6. Remove the cap on the tube coming from the trencher valve to the tube line ([Figure 27](#)).

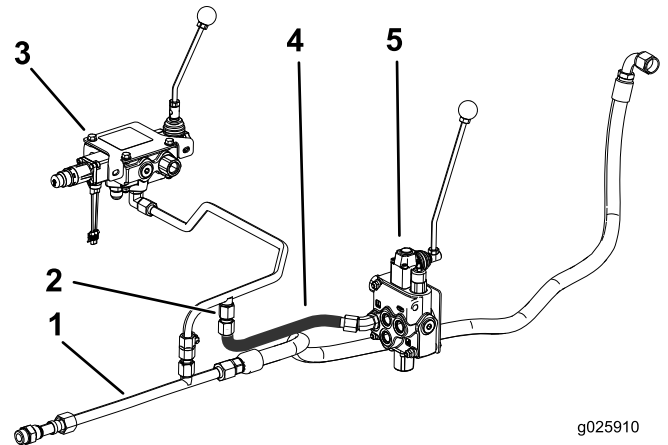


Figure 27

- | | |
|-----------------------|----------------------|
| 1. Radiator tube line | 4. Hydraulic tube |
| 2. Cap | 5. Hydra-borer valve |
| 3. Trencher valve | |

7. Connect a hydraulic tube from the hydra-borer valve (Port T) to the trencher tube as shown in [Figure 27](#).
8. Torque to 81 N-m (60 ft-lb)

6

Testing the Installation

No Parts Required

Procedure

Testing the Hydra Borer requires 2 people; 1 person to move the control lever and 1 person to check the joint rotation.

1. Sit in the operator seat and start the machine.
2. Pull the hydra-borer control lever to rotate the joint counterclockwise.
3. Verify that the joint is moving in the correct direction.
4. Push the hydra-borer control lever to rotate the joint clockwise.
5. Verify that the joint is moving in the correct direction.

Operation

Boring a Hole

Digging the Trenches

Before drilling under a walk or driveway, you must make an entrance and an exit trench on either side of the drilling area. Both trenches must be at least 15.24 cm (6 inches) wide and 45.72 cm (18 inches deep). The entrance trench must be at least 213.36 cm (7 feet) long and the exit trench 91.44 to 182.88 cm (3 to 6 feet) long. The entrance trench should be perpendicular to the walk or driveway and the exit trench should be parallel to the walk or driveway. The exit trench should be centered across from the entrance trench (Figure 28).

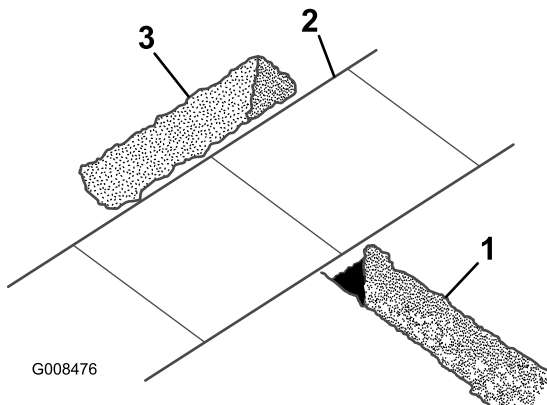


Figure 28

1. Entrance trench
2. Sidewalk
3. Exit trench

Boring the Hole

Important: Boring is a two person operation. Do not attempt to perform this operation by yourself.

1. Position the machine with the drive head at the beginning of the trench and lower it to the appropriate depth.
2. Stop the engine and wait for all moving parts to stop.
3. Connect a rod and boring bit onto the drive head.
4. Connect the rod guide tool to the rod just behind the boring bit (Figure 29).

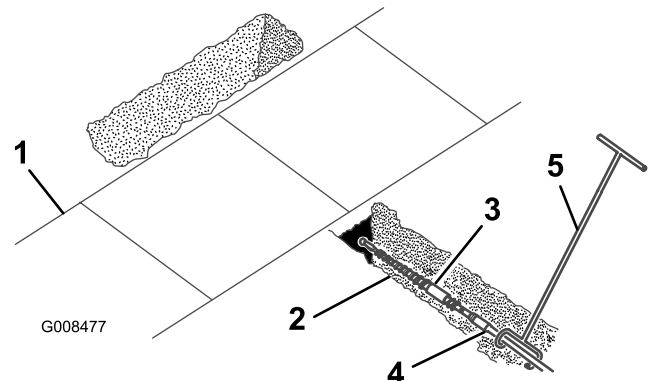


Figure 29

1. Sidewalk or driveway
2. Entrance trench
3. Boring bit
4. Rod
5. Rod guide tool

5. With the person guiding the boring bit positioned to the right of the trench (Figure 29), start the engine, position the throttle to within the middle of the RPM range, and push the hydra-borer-control lever forward to start the forward rotation of the boring bit.
6. Slowly move the machine forward, while the person with the rod guide tool guides the boring bit into the soil (Figure 29).
7. Once the entire drill bit is in the soil, push the control lever into neutral.
8. Stop the engine and wait for all moving parts to stop.
9. Check the grade of the rod.
If the rod is not within the grade tolerances for the job being performed, start the engine, and drive backward to pull the boring bit out of the soil, then repeat steps 5 through 9, making adjustments to correct the grade.
10. Remove the rod guide tool.
11. Start the engine and pull the control lever rearward to start the boring bit.
12. Slowly move the machine forward as the boring bit digs into the soil.

Important: Do not drive too fast, forcing the bit into the soil. Allow the bit to progress at its own

rate. Do not push or pull the bit through the soil when the drive head is not turning.

13. When about 15 cm (6 inches) of rod are left showing in the entrance trench or when the boring bit completely enters and bores into the far side of the exit trench, stop the machine, push the control lever into neutral, and stop the engine.
14. If the boring bit has not yet entered the exit trench, complete the following:
 - A. Detach the rod from the drive head.
 - B. Start the engine and back up to the end of the entrance trench.
 - C. Stop engine and wait for all moving parts to stop.
 - D. Connect another rod and repeat steps 11 through 14.

6. When a rod coupling is about 15 cm (6 inches) into the entrance trench or when the reamer completely enters the trench with about 15 cm (6 inches) of the cable or piping, stop the machine, pull the control lever into neutral, and stop the engine.
7. If the reamer has not yet entered the exit trench, complete the following:
 - A. Detach the rod from the drive head and rod still in the soil.
 - B. Start the engine and move to the front of the entrance trench.
 - C. Stop the engine and wait for all moving parts to stop.
 - D. Connect the drive head to the rod shaft in the soil.
 - E. Repeat steps 4 through 7.
8. With the reamer and cable/piping in the entrance trench, remove the cable or piping from the reamer.

Reaming the Hole

1. With a shovel, carefully dig around the boring bit clearing it of soil until it can be removed (Figure 30).

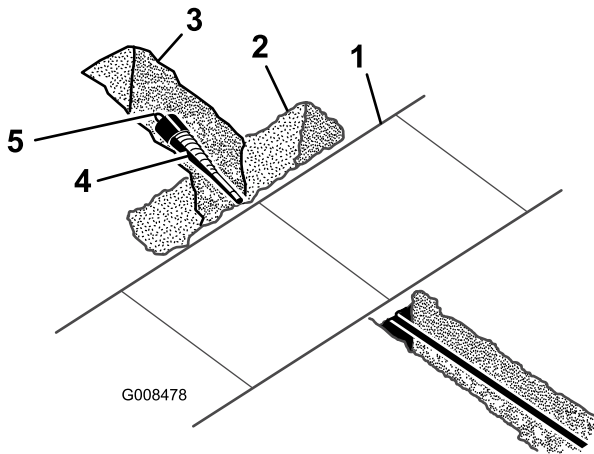


Figure 30

- | | |
|-------------------------------|-----------|
| 1. Sidewalk or driveway | 4. Reamer |
| 2. Exit trench | 5. Swivel |
| 3. Shovel dug area around bit | |

2. Remove the boring bit and attach the reamer (Figure 30).
3. Attach the cable or piping being installed to the swivel on the end of the reamer (Figure 30).
4. Start the engine and pull the control lever rearward to start the reamer.
5. Slowly move the machine rearward as the reamer digs into the soil.

Important: Do not drive too fast, forcing the reamer into the soil. Allow the reamer to progress at its own rate. Never push or pull the reamer through the soil when the drive head is not turning.

Storage

1. Before long term storage, wash the attachment with mild detergent and water to remove dirt and grime.
2. Check the condition of the hydraulic hoses. Replace any damaged hoses.
3. Ensure that all hydraulic couplers are connected together to prevent contamination of the hydraulic system.
4. Check and tighten all bolts, nuts, and screws. Repair or replace any damaged or worn part.
5. Paint all scratched or bare metal surfaces. Paint is available from your Authorized Service Dealer.
6. Store the attachment in a clean, dry garage or storage area. Cover it to protect it and keep it clean.

Troubleshooting

Problem	Possible Cause	Corrective Action
The bore drive head does not rotate.	<ol style="list-style-type: none"><li data-bbox="586 216 1029 264">1. The hydraulic coupler is not completely connected.<li data-bbox="586 279 959 306">2. A hydraulic coupler is damaged.<li data-bbox="586 338 1019 386">3. There is an obstruction in a hydraulic hose.<li data-bbox="586 401 906 428">4. A hydraulic hose is kinked.<li data-bbox="586 436 1019 485">5. The auxiliary valve on the machine is not opening.<li data-bbox="586 491 1029 518">6. A hydraulic motor is damaged or worn.	<ol style="list-style-type: none"><li data-bbox="1062 216 1425 243">1. Check and tighten all couplers.<li data-bbox="1062 279 1487 327">2. Check the couplers and replace any that are damaged.<li data-bbox="1062 338 1446 365">3. Find and remove the obstruction.<li data-bbox="1062 401 1365 428">4. Replace the kinked hose.<li data-bbox="1062 436 1279 464">5. Repair the valve.<li data-bbox="1062 491 1398 518">6. Replace or repair the motor.