

**520xi****Wheel Horse® Garden Tractor****Model No. 73570–220000001 & Up****Setup
Instructions**

Loose Parts

Note: Use the chart below to identify parts for assembly.

DESCRIPTION	QTY.	USE
Rear Wheel	2	Installing the rear wheels
Wheel Bolt	10	
R.H. Wheel Spindle	1	Installing the front wheels
L.H. Wheel Spindle	1	
Unplated Thrust Washer, 1.56 in. O.D x 0.06 in. thick	2	
Plated Wheel Washer, 1.5 in. O.D x 0.05 in. thick	4	
Bolt, 5/16-18 x 2.25 in.	2	
Hex Nut, 5/16-18 in.	2	
Spindle Cap	2	
Front Wheel	2	
Hubcap Washer, 2.5 in. O.D. x 0.05 in. thick	2	
Cotter Pin, 1.5 in.	2	
Shim Washer, 1.5 in. O.D. x 0.015 in. thick	2	
Hubcap	2	
Steering Wheel	1	Installing the steering wheel
Boot Washer	1	
Nut	1	
Lock Washer	1	
Trim Cover	1	
Seat Assembly	1	Installing the seat
Shoulder Bolt, 5/16 in.	2	
Locknut, 5/16 in.	2	
Bolt, 1/4-20 x 0.88 in.	2	Attaching the battery cables
Washer, 1/4 in.	2	
Hex Nut, 1/4-20 in.	2	

DESCRIPTION	QTY.	USE
Grill Screw, #8 x 0.5 in.	2	Securing the grill
Grill Washer, 0.75 in. O.D.	2	
Hitch Pin	1	Installing the drawbar hitch pin
Hairpin Cotter	1	
Flat Washer, 0.50 in. I.D.	1	
Key	2	Use in ignition and KeyChoice switches

Installing the Rear Wheels

1. Remove the four wheel bolts holding the rear shipping brackets to the rear hubs.
2. Using a jack or suitable hoist, raise the rear of the tractor only high enough to install the rear wheels.
3. Install the wheels onto the hubs with the valve stems facing inward (Fig. 1).
4. Install the wheel bolts and torque them to 75 to 80 ft-lb (105 to 112 N•m).

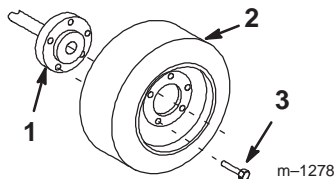


Figure 1

1. Hub
2. Rear wheel
3. Wheel bolt (5)

Installing the Front Wheels

Important Never raise the front of the tractor by placing a jack under the bumper or front axle because the tractor may be damaged. The front hood support braces have two slots (Fig. 2) that may be used to lift the tractor to install the front wheel spindles. To access these slots, remove the front grill and raise the hood.

1. Remove the front grill and raise the hood.

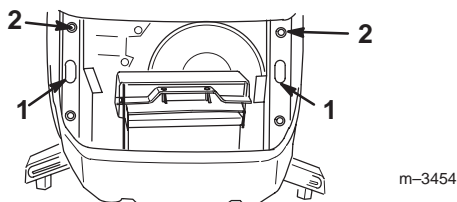


Figure 2

1. Slots
2. Grill Grommets

2. Remove, or be careful not to damage, the two upper grill grommets (Fig. 2).
3. Using a suitable hoist, raise the front of the tractor only high enough to install the front wheel spindles.

Important Do not pivot the weight of the tractor onto the rear drawbar hitch because the hitch will be damaged.

4. Install a 1.56 in. O.D. x 0.06 in. thick unplated thrust washer onto the splined shaft of the R.H. wheel spindle (Fig. 4).
5. Install the splined end of the R.H. spindle through the R.H. end of the front axle and into the steering arm (Fig. 4).

Note: The L.H. and R.H. spindles are different. Assemble the spindles as shown in figure 3.

Note: The outside edge of the spindle must be parallel to the end of the steering arm (Fig. 3).

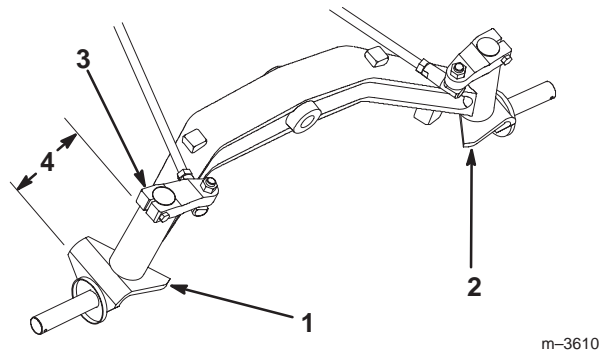


Figure 3

1. R.H. Spindle
2. L.H. Spindle
3. Steering arm
4. Parallel relationship
6. Secure the spindle shaft to the steering arm with a 5/16–18 x 2.25 in. bolt and 5/16 in. nut (Fig. 4).
7. Torque the nut to 205 to 255 in-lbs (23 to 29 N•m).
8. Insert a 1.50 in. O.D x 0.05 in. thick plated wheel washer onto the R.H. spindle (Fig. 4).
9. Install a front wheel onto the R.H. spindle with the valve stem facing inward (Fig. 4).

10. Insert another 1.50 in. O.D x 0.05 in. thick plated wheel washer onto the R.H. spindle (Fig. 4).
11. Install a 2.50 in. O.D x 0.05 in thick hub cap washer onto the spindle.
12. Insert a 1.50 in. long cotter pin into the hole in the spindle (Fig. 4).
13. Check the front wheel end play.
14. Install shim washers inside the hubcap washer as necessary so there is minimum end play.

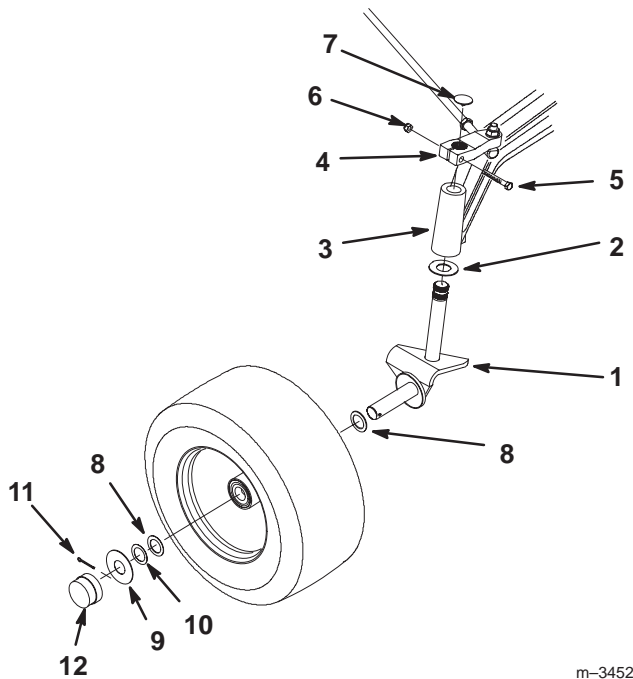


Figure 4

- | | |
|--|---|
| 1. Wheel spindle | 8. Plated wheel washer, 1.50 x 0.05 in. |
| 2. Unplated thrust washer, 1.56 x 0.06 in. | 9. Hub cap washer, 2.50 x 0.05 in. |
| 3. Front axle | 10. Shim washer, 1.50 x 0.015 in. |
| 4. Steering arm | 11. Cotter pin, 0.056 x 1.50 in. |
| 5. Bolt, 5/16-18 x 2.25 in. | 12. Hubcap |
| 6. Nut, 5/16 in. | |
| 7. Spindle cap | |

15. Secure the wheel to the spindle with the cotter pin. Bend the ends of the cotter pin completely around the spindle.
16. Install a hubcap onto the hubcap washer until it snaps in place (Fig. 4).
17. Look at the end of the steering arm and the inside edge of the tire. The end of the steering arm and the inside edge of the tire must be parallel (Fig. 5).
18. Adjust the steering arm if required.

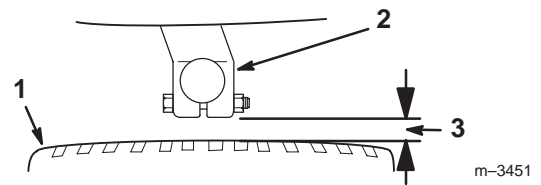


Figure 5

- | | |
|-----------------|--------------------------|
| 1. Wheel | 3. Parallel relationship |
| 2. Steering arm | |

19. Insert a spindle cap into the steering arm (Fig. 4).
20. Repeat steps 4 through 19 on the opposite end of the front axle.
21. Grease both spindles and the front axle pivot until grease begins to come out of the bearings.
22. Lower the tractor to the ground.
23. Leave the front grill off until you have serviced the battery.

Installing the Seat

1. Mount the seat to the seat base using two 5/16 in. shoulder bolts and locknuts (Fig. 6).
2. Insert the seat switch wire through the center opening in the seat base (Fig. 6).
3. Push the seat switch wire connector into the wire harness connector.

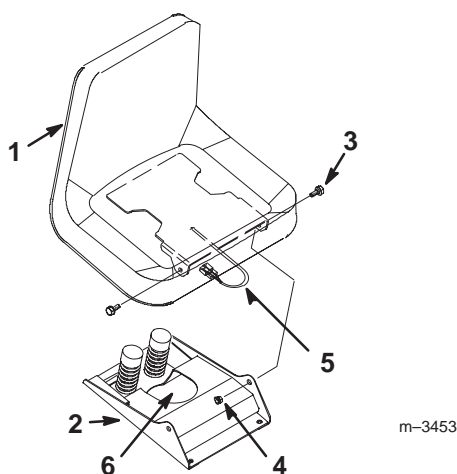


Figure 6

1. Seat
2. Seat base
3. Shoulder bolt (2), 5/16 in.
4. Locknut (4), 5/16 in.
5. Seat switch wire connector
6. Opening for seat switch wire

Installing the Steering Wheel

1. Install the boot washer onto the steering shaft (Fig. 7).
2. Remove the plastic trim cover from the steering wheel (Fig. 7)
3. Install the steering wheel onto the shaft, carefully aligning the splines (Fig. 7).

Note: There is no fixed straight ahead position on power steering models.

4. Secure the steering wheel to the shaft with a lock washer and nut (Fig. 7).
5. Tighten the retaining nut to 45 to 50 ft-lbs (61 to 67 N•m)
6. Install the trim cover on the steering wheel.

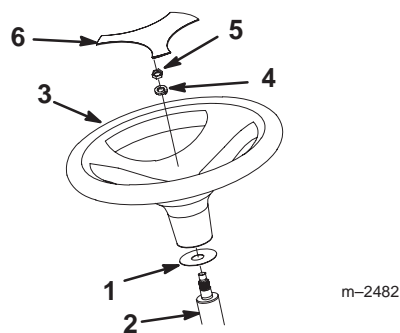


Figure 7

1. Boot washer
2. Steering shaft
3. Steering wheel
4. Lock washer
5. Nut
6. Trim cover

Checking Front Wheel Toe-In

With the tractor on a level surface, check to make sure the front wheel toe-in is between 1/8 and 1/4 in. (3 to 6 mm). For instructions on adjusting toe-in, refer to the Maintenance section in Operator's Manual.

Ensuring that the Steering Linkage is Centered

1. With the tractor on a level surface, turn the steering wheel fully to the left and check the clearance of the left hand spindle stop to the stop on the front axle.

There should be a slight clearance between the stops (Fig. 8).

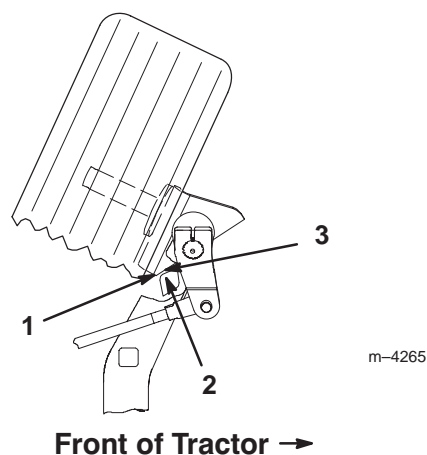


Figure 8

1. Left hand spindle stop
2. Axle stop
3. Clearance

2. Repeat for the right front tire in a right turn.

3. If the stops on one side hit, and on the other side have clearance, shorten the tie rod on the side that hits, and equally lengthen the tie rod on the opposite side until both sides have clearance.
4. Recheck the toe in.

Checking Tire Pressure

Check front and rear tire pressure. The correct front and rear tire pressure is 20 psi (138 kPa).

Activating the Battery



Warning



Battery posts, terminals, and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm. *Wash hands after handling.*

Bulk electrolyte with 1.265 specific gravity must be purchased from a local battery supply outlet.



Danger



Battery electrolyte contains sulfuric acid which is a deadly poison and causes severe burns.

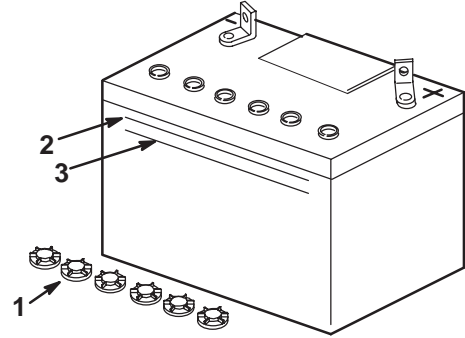
- Do not drink electrolyte and avoid contact with skin, eyes or clothing. Wear safety glasses to shield your eyes and rubber gloves to protect your hands.
- Fill the battery where clean water is always available for flushing the skin.

1. Remove the battery from the tractor.
 2. Clean the top of the battery with a paper towel.
- Note:** Never fill the battery with electrolyte while the battery installed in the tractor. Electrolyte could be spilled on other parts and cause corrosion.
3. Remove the vent caps from the battery (Fig. 9).
 4. Slowly pour electrolyte into each battery cell until the level is up to the upper line (Fig. 9) on the battery case.

Important Do not overfill the battery because electrolyte (sulfuric acid) can cause severe corrosion and damage to the chassis.

5. Wait five to ten minutes after filling the battery cells. Add electrolyte, if necessary, until the electrolyte level is up to the upper line (Fig. 9) on the battery case.

6. Install battery filler caps.



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Figure 9

1. Filler caps
2. Upper line
3. Lower line

7. Charge battery for 10 to 15 minutes at 25 to 30 amps or 30 minutes at 4 to 6 amps.



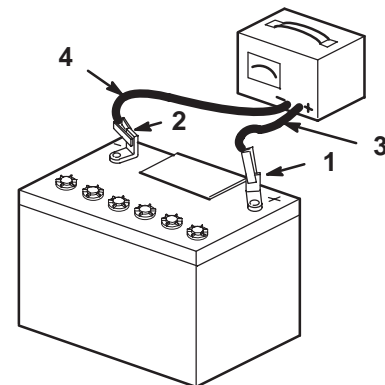
Warning



Charging the battery produces gasses that can explode.

Never smoke near the battery and keep sparks and flames away from battery.

8. When the battery is fully charged, unplug the charger from the electrical outlet, then disconnect the charger leads from the battery posts (Fig. 10).



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Figure 10

1. Positive Battery Post
2. Negative Battery Post
3. Red (+) Charger Lead
4. Black (-) Charger Lead

9. Install the battery in the tractor and connect the battery cables. (Refer to the Operator's Manual – Installing the Battery.)

Note: Do not run the tractor with the battery disconnected, electrical damage may occur.

10. After servicing the battery, replace the front grill of the tractor and secure the grill with two #8 x .50" long grill screws and .75" O.D. grill washers in the upper two grill mounting holes (Fig. 11).

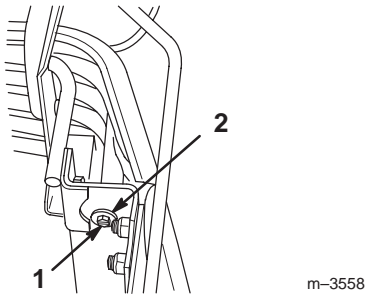


Figure 11

1. Grill screw (1 of 2) 2. Grill washer (1 of 2)

Installing the Drawbar Hitch Pin

Insert the drawbar hitch pin into the drawbar hitch and secure it with a 0.50 in. I.D. flat washer and hairpin cotter (Fig. 12).

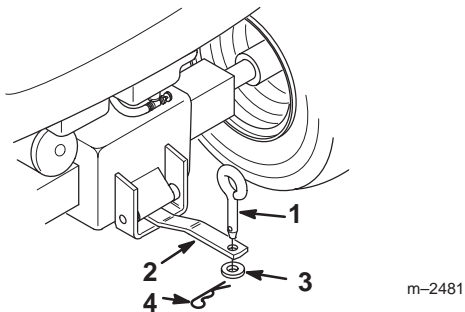


Figure 12

1. Drawbar hitch pin 3. Flat washer, 0.50 in. I.D.
2. Drawbar hitch 4. Hairpin cotter

Test Driving the Tractor

1. Check the oil level in the crankcase (refer to the Operator's Manual for oil type, viscosity and crankcase capacity).
2. Check the oil level in the transaxle (refer to the Operator's Manual for oil type, viscosity and capacity).
3. Check the coolant level in the coolant recovery tank.
4. Ensure that all lubrication points have been greased as shown in the Maintenance section of tractor Operator's Manual.
5. Fill the tank with unleaded regular gasoline with an octane rating of at least 85.
6. Open the fuel shutoff valve and check the fuel hose and fittings for leaks.
7. As applicable, check and test the operation of the following:
 - Engine, choke and throttle controls
 - Gauges
 - Headlights and taillights
 - Indicator lights
 - PTO clutch and brake
 - Lift system
 - Service and parking brakes
 - Transmission controls
 - Steering
 - Tractor operation in forward and reverse
8. Test the operation of the safety interlock system (refer to the Operator's Manual for the correct procedure).

Checking the Wiring and Fasteners

- Inspect the tractor for any loose electrical connections and secure them as required.
- Check the wire routing to make sure moving parts do not interfere with wires and cause a short.
- Ensure all fasteners are tight.

