

Brake Bleeding Procedure

Document Number	Model	Serial Number Range	Part Number
12-80026	520Y / 520M	All Units	

⚠ WARNING

Before making repairs or adjustments set the parking brake, turn off engine, and remove ignition key.

Always disconnect the negative battery cable from the battery when working with electrical components. Always work in a manner that does not put safety at risk!

⚠ WARNING

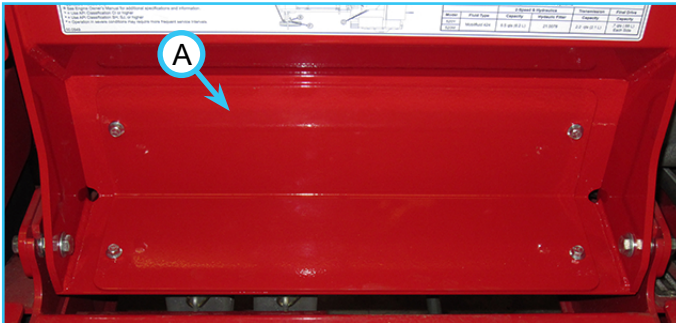
Safety glasses must be worn during installation. Ear (hearing) protection must be worn when using air or power tools.

Installation Notes: Right and left hand orientation referred to in these instructions is determined as if facing forward from the operator station.

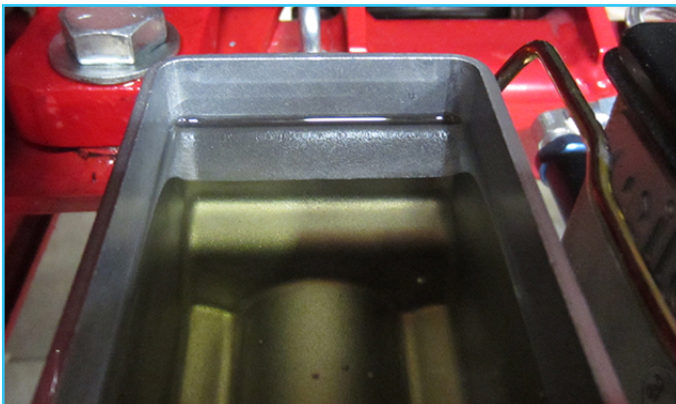
Installation Time (estimated) 1 hour

Tools Required: 1/4" wrench, 3/8" wrench, 3/8" socket, 9/16" wrench, 9/16" socket, 13/16" wrench, 13/16" socket, Ratchet, Torque Wrench, Jack, Jack stands

1. Park the tractor on a level surface.
2. Engage the parking brake and shut off the engine.
3. Remove the key from the ignition switch.
4. Remove the brake master cylinder cover (A) by removing the four 1/4" bolts.



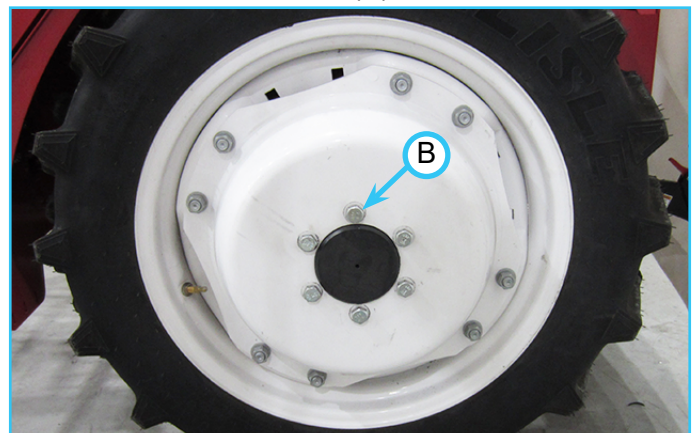
5. Check the brake master cylinder fluid level add fluid as required in accordance with the 520 series tractor operators manual.
6. The fluid level should be 1/4" to 1/2" from the top of the reservoir.



⚠ WARNING

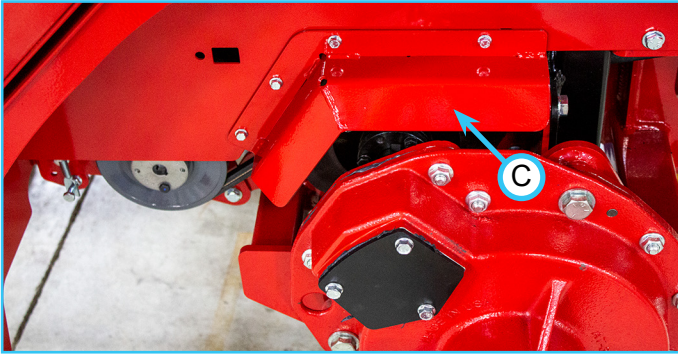
Ensure that the tractor is securely supported when the wheels are lifted off of the ground. Failure to secure the tractor properly can result in personal injury or death.

7. Using a jack and jack stands lift the rear of the tractor, raising the rear wheel approximately 2 inches off of the ground.
8. Remove the rear wheel by removing the six 9/16" wheel stud bolts (B).

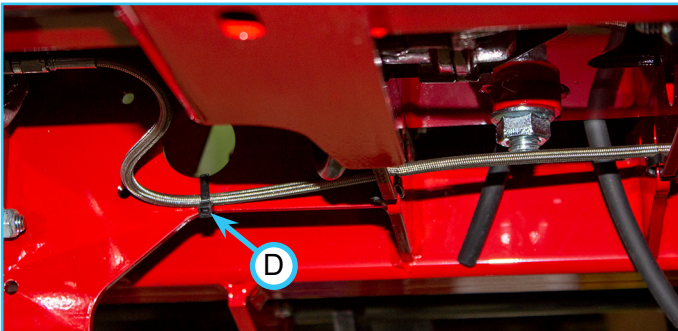


9. Remove the wheel from the hub.

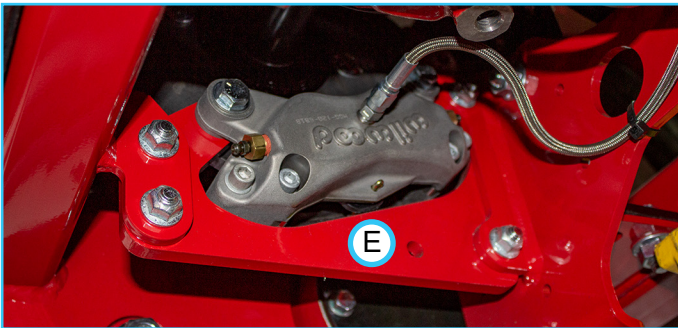
10. Remove the rotor cover (C) from the inner fender by removing the four 1/4" bolts.



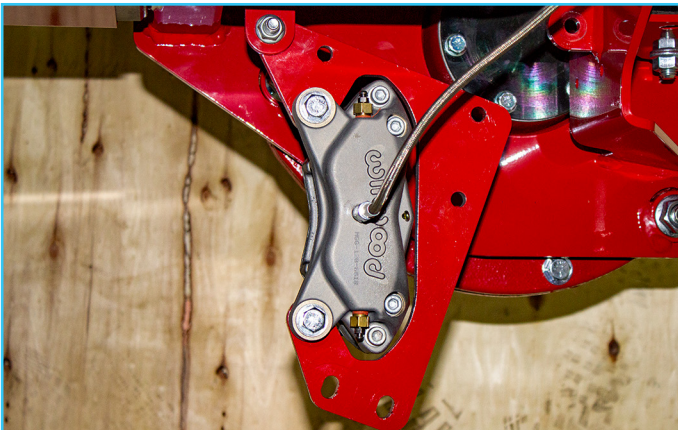
11. Remove the cable tie (D) securing the brake line to the frame.



12. Remove the brake caliper from the rotor by removing the caliper mounting bracket (E).

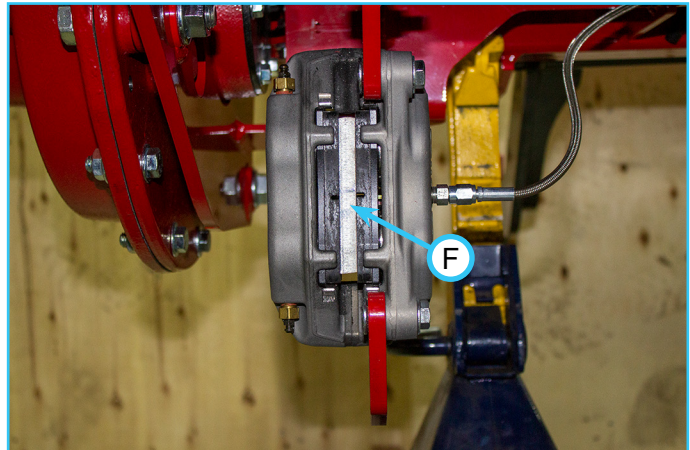


13. Remove the four 3/8" nuts and bolts securing the bracket to the frame.
14. Rotate the brake caliper 90 degree so the bleed valves are vertical.
15. Using a 3/8" bolt and nut secure the caliper to the forward mounting bracket as shown below.

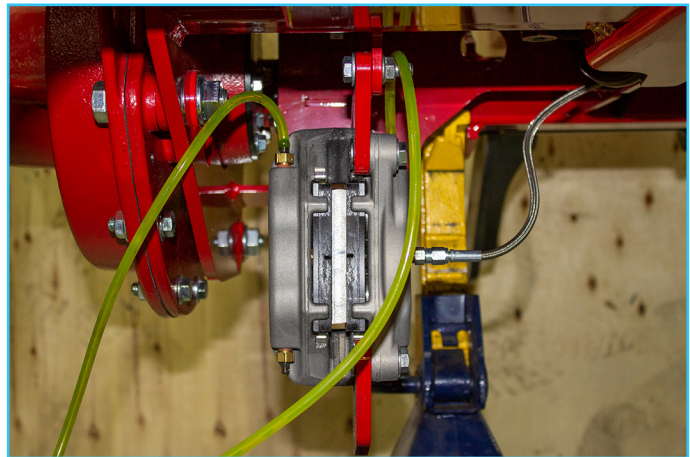


16. Compress the caliper pistons.

17. Place a 3/8" spacer (F) between the brake pads and pump the brake pedal until the caliper holds the 3/8" spacer between the brake pads.



18. Connect two hoses to the inner and outer bleed valves as shown below.



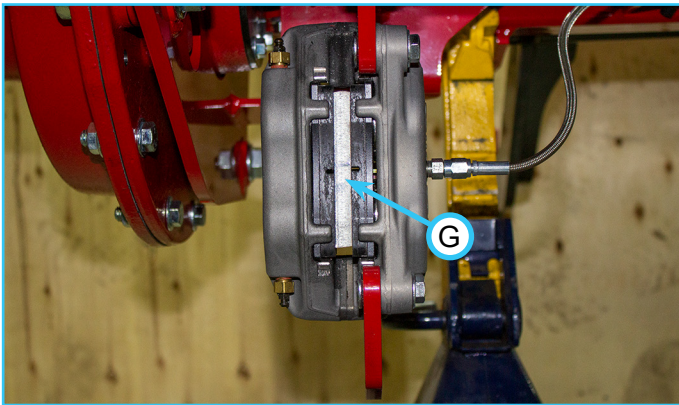
19. Ensure that the hoses are routed to a drip pan to catch any brake fluid.

CAUTION

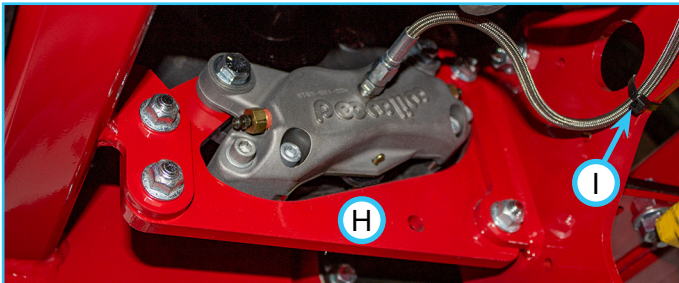
Use half strokes of the brake pedal when bleeding the brake lines. Using a full stroke of the line could cause damage to the master cylinder and or master cylinder push rod.

20. Apply pressure to the brake pedal.
21. Open one of the bleed valves, as the pedal is depressed look for air being discharged from the bleed valve.
22. When the pedal reaches half stroke hold the pedal and close the valve.
23. Allow the pedal to return, and re-apply pressure.
24. Repeat the process until no air is observed leaving the bleed valve.
25. Both sides of the caliper must be bled. Complete steps 18-24 for the other side of the brake caliper.

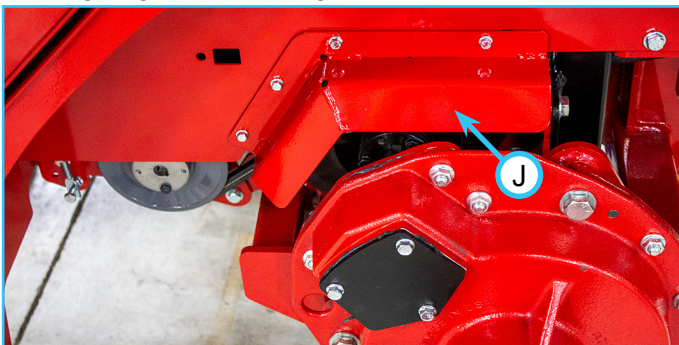
26. The pedal should return fully and the brakes should feel firm when the process is complete.
27. With the process completed disconnect the bleed hoses.
28. Remove the 3/8" spacer (G) from the brake caliper.



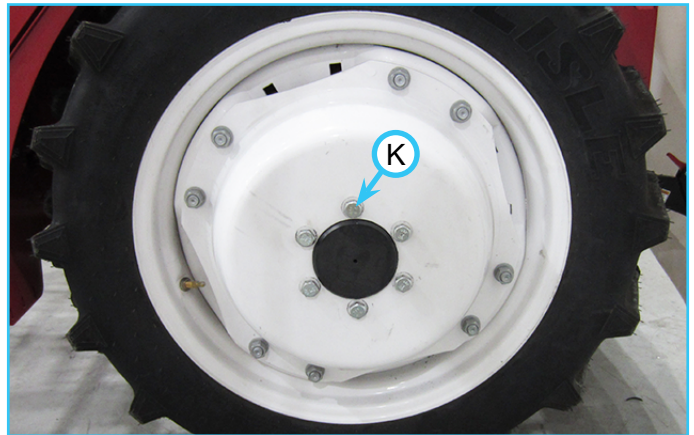
29. Compress the caliper pistons.
30. Remove the 3/8" mounting hardware from the caliper mount.
31. Rotate the brake caliper 90 degrees.
32. Install the caliper over the brake rotor aligning the mounting bracket mounting holes with the mounting tabs on the frame.
33. Install the 3/8" bolts through the mounting bracket (H) and frame secure the hardware in place using 3/8" locknuts.



34. Torque the locknuts to 31 ft-lbs (42 Nm).
35. Secure the brake line against the frame using a cable tie (I).
36. Ensure the brake pads are not contacting the rotor. If the pads are contacting the rotor the rotor adjustment procedure must be completed.
37. Position the rotor cover (J) in the rear fender aligning the mounting holes.



38. Secure the rotor cover in place using four 1/4" bolts.
39. Torque the 1/4" bolts to 100 in-lbs (11 Nm).
40. To install the wheel position the wheel against the hub aligning the mounting holes.
41. Install the rear wheel by installing the six 9/16" wheel stud bolts (K).



42. Torque the 9/16" wheel stud bolts 130 ft-lbs (176 Nm).
43. Before starting and moving the tractor check the brake fluid. Cycle the brakes and ensure that they feel firm.
44. Install the brake master cylinder cover (L).



45. Torque the 1/4" bolts to 100 in-lbs (11 Nm).
46. Repeat the procedure or the other rear brake as required.

END OF PROCEDURE