

ZipLoader System Test, Manual

Perform this test after attaching loader to GT, and before doing any critical alignment of the hopper and loader. The only alignment requirement is that the pushrod moves freely in the spindle liner. Do not put any parts in the tray or hopper.

Enable bypass key on loader so it will run with cover open; on GT, disengage bypass switch (disengaged = key can be removed) and close the door (or splash-guard on GT-Jr).

Power up, set servos on, establish home.

1. Verify that Auto/Manual keyswitch on Loader Manual Control is in Auto (switch lamps not lit).
2. Verify that green stacklamp is lit.
3. Push loader shuttle against adjustable home stop; verify that "Home" LED is lit.
4. Move the shuttle to "InPlace" sensor; the LED on sensor should light.
5. Move the shuttle to the "Push2" sensor; the LED on sensor should light.
6. Move the shuttle to "EoB" sensor (End of Bar); the LED on sensor should light.
7. Push the shuttle right, until "Eject" sensor LED lights.
8. Set Auto/Manual keyswitch on Loader Manual Control to Manual; three green push-buttons should light.
9. On knife cylinder, verify that LED on lower sensor is lit.
10. Press "Knife" switch; knife should rise smoothly. On knife cylinder, LED on upper sensor must light (LED on lower switch should go out). Release switch; knife should fall back.
11. Press "Push" switch; shuttle should move to your right; press "Retract" until shuttle returns to home.
12. Set Auto/Manual switch to Auto. Home the CNC and go to MDI mode. Front door of GT-75 must be closed or the door interlock bypass key-switch must be engaged; ziploader cover bypass key-switch on PLC cabinet must also be engaged (engaged=cannot remove key).
13. Issue M40; knife should rise. Verify upper knife-cylinder sensor is lit. Issue M41; knife should fall; verify lower knife-cylinder sensor is lit.
14. Issue M45: rear stop shot-pin and spring-loaded stop piston rod should extend. Verify rear stop shot-pin sensor is lit. M46 to retract.
15. Issue M56; red stack-lamp should be lit.
16. Move the shuttle off the home sensor. Press Reset/Initialize switch on loader; shuttle should retract to home and green stack-lamp should be lit.

This concludes the System Test, Manual. Proceed to System Test, Automatic.

ZipLoader System Test, Automatic

This test verifies operation of the ZipLoader and integrity of the safety interlock system.
NOTE: Collet will close during this test (Steps 5 & 9), so take necessary precautions.

1. Place a three inch long wooden test block on the rodless cylinder at far right. Manually push shuttle against block and verify that shuttle stops before EoB sensor is reached.
2. Issue M50 from MDI to set bar-mode, then issue M47; observe the shuttle retract toward home then stop. The knife will cycle, then the shuttle will move forward. When shuttle passes "Push2" sensor, its speed should change, then continue, until it is pressing against wooden stop.
3. Open the door on GT-75 (or lift the splash guard on GT-Jr). Verify that Motion Stop switch on GT lights, and that stack lamp on loader goes from green to red. Close the door, then press Zip Loader Reset/Initialize switch; shuttle should retract to home, stacklamp should go from red to green, and Motion Stop switch lamp on GT should go out.
4. Disengage ZipLoader bypass key, and close ZipLoader cover, then issue M47 to repeat step 2. When the shuttle stops against the block this time, open the ZipLoader cover. Verify that GT and ZipLoader fault as in Step 3, above. Engage the bypass key on loader, then press Reset/Initialize switch to return shuttle to home.
5. Issue M47 to repeat step 2. When the shuttle stops against the block this time, issue M10. Collet should clamp and shuttle should stop pushing. Verify this by moving the shuttle to the left, away from the block.
6. Open door on GT: Zip Loader should NOT fault, because it is not pushing.
7. Issue M43; shuttle should move to left, away from the block.
8. Issue M11; collet should open, and shuttle should press against wooden block again.
9. Issue M10 again; remove wooden block. Issue M11: shuttle should move forward and stop after crossing EoB sensor. On PLC, verify X10 and Y6 LEDs are lit. This represents End of Bar.
10. Issue M48; observe the shuttle move forward to "Eject" sensor, then return to home.

This concludes the System Test, Automatic.