

PTO On New Holland TS100

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Aim of the Project

The Aim of the project is to identify and fix the problem which wouldn't allow the PTO (Power Take Off) to spin on the New Holland TS100.

Background

At the beginning of the project we were told to fix the Pallaskey Agricultural Colleges TS100. We were told by our supervisors that the issues could either be

- Electrical
- Transmission related

In order to find the issue we had to do some testing with the switch of the PTO and the pressure in the PTO pack in the tractor's transmission.

Objectives

- Pressure test the PTO pack.
- Test the current from the back of the switch.
- Have the PTO running.
- Complete the project within the deadline.
- Order parts.



Photo of: TS100.

Testing of the Switch



Photo of: Test of PTO Switch.

In order to test the PTO switch in the cab of the tractor we needed to remove the panel where the switch was located this gave us access to terminals on the switch. We then set a multimeter to voltage and tested each terminal on the switch and compared our values to the TS100 manual.

We found no issues with the current flowing from the switch, so we ruled out a problem with the switch. As we had the panel off, we checked to see if there was any problem with the wiring using the manual as a reference. We also found no issue there.

Testing the PTO Pack

Once we tested the switch, we then had to test the pressure in the PTO pack to ensure that there wasn't an issue with the internals of the transmission which would prevent the PTO from turning.



Photo of PTO clutch pack.

After pressuring testing the pack and comparing the values to manual, we found that the clutch pack was in perfect working order so that wasn't the issue with the PTO not operating.

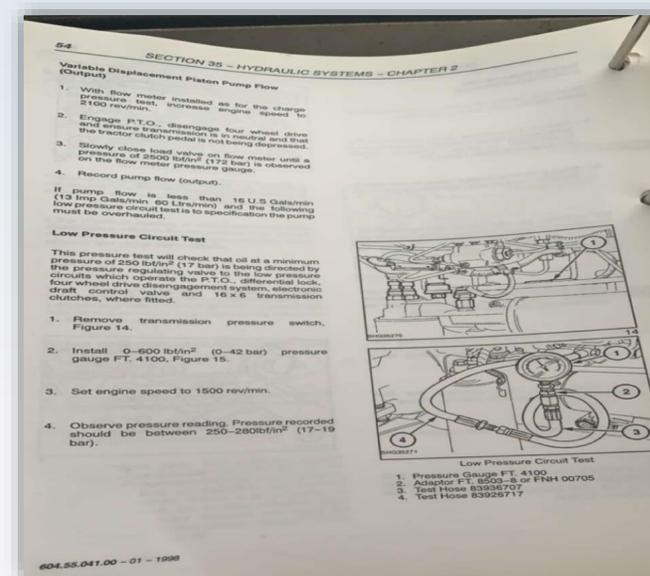


Photo of: How to conduct Pressure test from manual.

Conclusion

From preform the test of the switch and the PTO pack we had no idea what was wrong with the TS100. We then decided to have another look at the switch we then took apart the switch to look at the internals to ensure nothing was seized inside the switch.

We noticed that there is a central button in the switch which acts as a safety measure that had become stuck from use. We managed to release the center button from the switch, and we were able to engage the PTO. In order to prevent this from happening we ordered a replacement PTO switch for the tractor and fitted it.



References

- New Holland TS100 operator manual.
- M&S Machinery, Cashel, Co. Tipperary.
- TractorData.com:
<http://www.tractordata.com/farm-tractors/003/1/1/3116-new-holland-ts100-engine.html>