Proposed Solution for Group G



## **Company E (AGCO)**

Oliver Fridorf – 201907235

Tobias Andersen – 201905423

Lasse Bjørnskov – 201907292

Michael Nørbo – 202202966

Anisa Mohamed – 201806371

Julia walczynska – 202202970

Claes Jensen – 201907300

Henrik Buhl – 201905590

Dilan Celebi – 202202967

Johansen, Alexander Stæhr – 201905865

Kuang, Liulihan – 201906612

Rammohan, Shivaram - 202202968

Document revision history

|  |  |  |  |
| --- | --- | --- | --- |
| Rev. | Date | Change description | Creator |
| 1.0 | 2023-03-29 | First proposed solution | Dilan, Julia, and Anisa |
|  |  |  |  |

Document review version

|  |  |  |
| --- | --- | --- |
| Rev. | Date | Review group |
| 1.0 | 2023-xx-xx |  |
|  |  |  |

**Introduction**

We have outlined the system specifications in this document for you to consider as potential solution.

**Requirements**

1. Fluid Capacity: The hydraulic system must have sufficient fluid capacity to effectively operate the harvester wheels.
2. Pressure Rating: The hydraulic system must be designed to provide a sufficient pressure rating.
3. Flow Rate: The hydraulic system must provide a sufficient flow rate per minute to operate the wheels.
4. Hoses requirements: If hoses are utilized, they must be manufactured of high-quality materials, rated to resist the pressures and temperatures produced during operation, and used in the wheel system.
5. Hydraulic Pressure and Fluid: The system must be capable of generating and maintaining sufficient hydraulic pressure to move the wheels and stabilize the header, using hydraulic fluid that is compatible with the system's materials.
6. Wheel Size and Mobility: The system must use appropriately sized wheels that can support the header's weight and size and move quickly and smoothly to stabilize the header as it rotates.
7. Hydraulic Reservoir: The system must have a reservoir to store hydraulic fluid and maintain proper fluid levels for operation.
8. Control System: The system must have a control system that can monitor and adjust hydraulic pressure, wheel mobility, and other factors necessary for proper header stabilization.
9. Safety Features: The system must include appropriate safety features, such as pressure relief valves and emergency stop buttons, to prevent accidents and protect users.
10. Maintenance and Repair: The system must be designed for ease of maintenance and repair, with easily accessible and replaceable components.
11. Environmental Considerations: The system should be designed to minimize negative environmental impact, including noise, vibration, and fluid leakage.
12. Cost: The system should be cost-effective, considering factors such as materials, manufacturing processes, and maintenance costs.

Contributions

|  |  |  |
| --- | --- | --- |
| **Date** | **Contribution** | **Contributor** |
| 2023-03-29 | First proposed solution for group G | Dilan, Julia, and Anisa |
|  |  |  |
|  |  |  |
|  |  |  |