L0002 Hendrickson Auto Lift Axle with ISS Override

L0002	Version 2	Special Options	02-10-00

System Operation

The lift axle air supply comes from the auxiliary air tank which has a hold back valve attached off the main brake tanks, protecting the brake system.

Operation	Pressure From Air Springs	Lift Axle Position	Abs Integrated Speed Switch Relay	Lift Axle Overide Switch	Lift Axle Solenoid Valve	Lift Axle Manual Overide
Trailer laden override switch off	65 psi plus	Down	Active below 10 km/h Inactive above 10 km/h	Not Active	Not Active	Pushed in Normal
Trailer unladen override switch off	30 psi and less	Up	Active below 10 km/h Inactive above 10 km/h	Not Active	Not Active	Pushed in Normal
Override switch on when laden 0>10 km/h	65 psi plus	Up	Active below 10 km/h	Active	Active	Pushed in Normal
Override switch on when unladen 0>10 km/h	30 psi and less	Up	Active below 10 km/h	Active	Active	Pushed in Normal
Override switch on when laden 0<10 km/h	65 psi plus	Down	Inactive above 10 km/h	Active	Not Active	Pushed in Normal
Override switch on when unladen 0<10 km/h	30 psi and less	Up	Inactive above 10 km/h	Active	Not Active	Pushed in Normal
Manual override pulled out Laden	Unladen pressure to laden to pressure	Down	Active below 10 km/h Inactive above 10 km/h	Not Active	Not Active	Pulled out

Operation	Pressure From Air Springs	Lift Axle Position	Abs Integrated Speed Switch Relay	Lift Axle Overide Switch	Lift Axle Solenoid Valve	Lift Axle Manual Overide
Manual override pulled out Unladen	Unladen pressure to laden pressure	Down	Active below 10 km/h Inactive above 10 km/h	Not Active	Not Active	Pulled out
Manual override pulled out and lift axle override switch on Laden	65 psi plus	Up Down	Active below 10 km/h Inactive above 10 km/h	Active Active	Active Not Active	Pulled out Pulled out

Lift Axle Operation.

The lift axle control valve is supplied air to P1 from the auxiliary air tank also mounted on that line is a Manual Override Valve for the Lift Axle.

The lift axle control valve gets a signal from the air springs though lines P4 and P6 to what load is on the unit (marked on control valve).

If the signal from the air springs is 30 psi and less the control valve releases the lift axle air spring air pressure though P3 and P5 to atmosphere, then P1 supplies air pressure to the lift axle air bag via P7 raising the axle.

The lift axle will not lower till the laden pressure is reached unless the system is fitted with a manual override valve. (Optional)

If the signal from the air spring is 65 psi and more, the control valve releases the lift axle air bag pressure though P7 to atmosphere, then P3 and P5 are supplied air pressure via P4 and P6 till all air springs are at the same pressure and height.

NOTE: The loose of P1 pressure will automatically lower the lift axle

Manual Overide Valve (Optional).

The Manual Override valve dumps main supply line air to atmosphere which dumps line pressure to lift axle bag P7, allowing air spring signal from P4 and P6 to lower the lift axle air springs so all air springs are at the same height and pressure.

Abs Intergrated Speed Switch (Optional).

In conjunction with the ABS system the ISS control system has been incorporated allowing the lift axle to be lowered and rise at certain speeds.

Also as part of this option is a solenoid valve and switched power supply from the prime mover cab.

The solenoid valve is fitted in the signal line from the four air springs to the lift axle control valve P4 and P6. The solenoid valve is normally open allowing air supply to lift axle valve unless the solenoid valve has been activated.

Solenoid Valve is activated via switch in prime mover cab but the ISS must be with in the speed parameters to allow the solenoid to be activated.

This system allows the lift axle to be raised under maximum axle loading when slow speed yard manoeuvring is required only.

If it is over looked to lower the lift axle after yard manoeuvring when the speed is above 10 km/h the lift axle will automatically lower.

NOTE: If Lift Axle switch is left on when the speed goes below 10 km/h the axle will raise and the power light in prime mover will be on, then once above 10 km/h the axle will lower and the power light will be off. *(Make sure switch is turn off)*

Therefore power light in prime mover cab will be coming off and on as speed increases/decreases.