

2014 Grain Cart  
Service Training



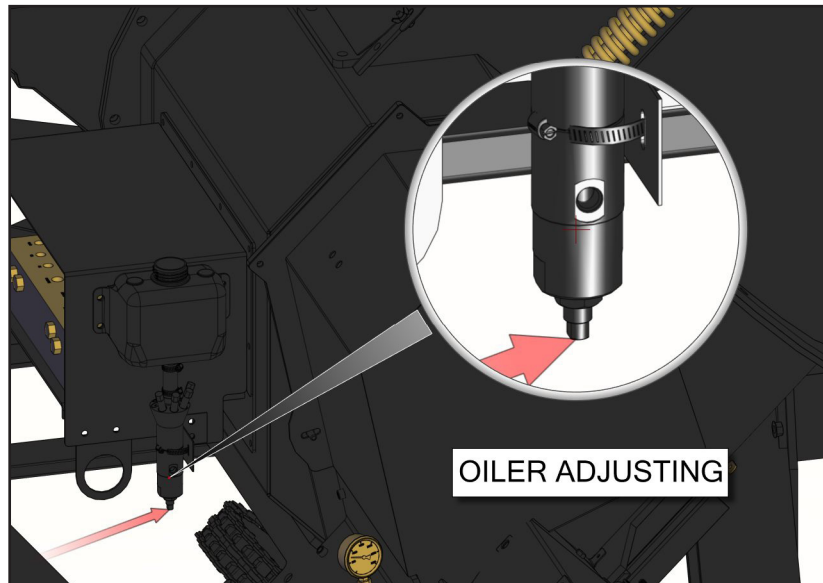
**BALZER**



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# Automatic Oiler System



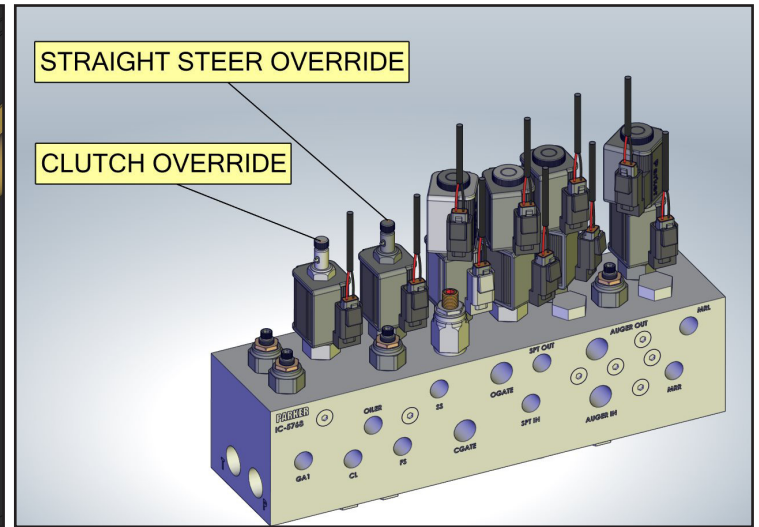
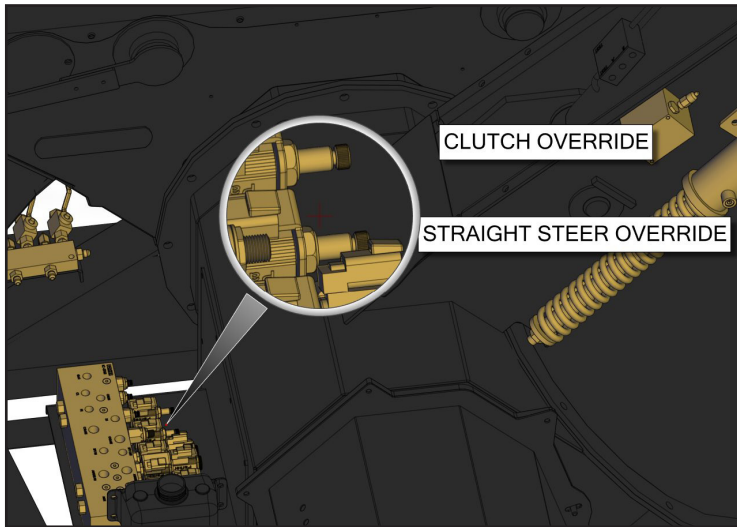
## Key Facts

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- The automatic oiler system is tied in with the clutch on the horizontal auger
- When the clutch trigger on the joystick is engaged, it also energizes the automatic oiler to provide a “shot” of oil to the chains that drive both the vertical and horizontal augers
- An adjustment screw located on the bottom side of the automatic oiler can be used to adjust the amount of oil released with each “shot”

\*It is recommended that you do not engage the trigger more than necessary as it will over-oil and drain the reservoir faster than desired.

# Hydraulic Control Block



## Key Facts

The hydraulic control block controls all functions of the grain cart from the use of the joystick mounted inside the tractor cab. It must maintain 12 volts at all times to operate correctly.

## Safety Features

- When folding the vertical auger in, it will automatically rotate the spout forward
- If the clutch for the horizontal auger is ON, the auger in function will not work
- Remind customers to briefly hold the auger out function to ensure vertical auger is completely stroked to lock position

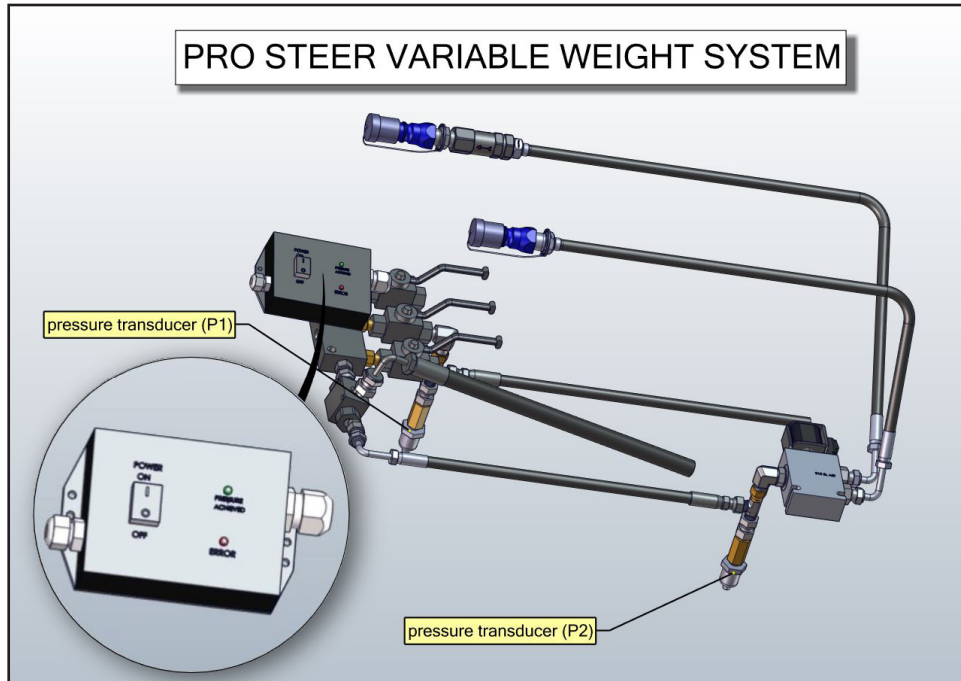
## For Service Tech ONLY

There are two override features on the hydraulic control block in the event the joystick fails:

1. Lockout for straight steer
2. Lockout for clutch on horizontal auger



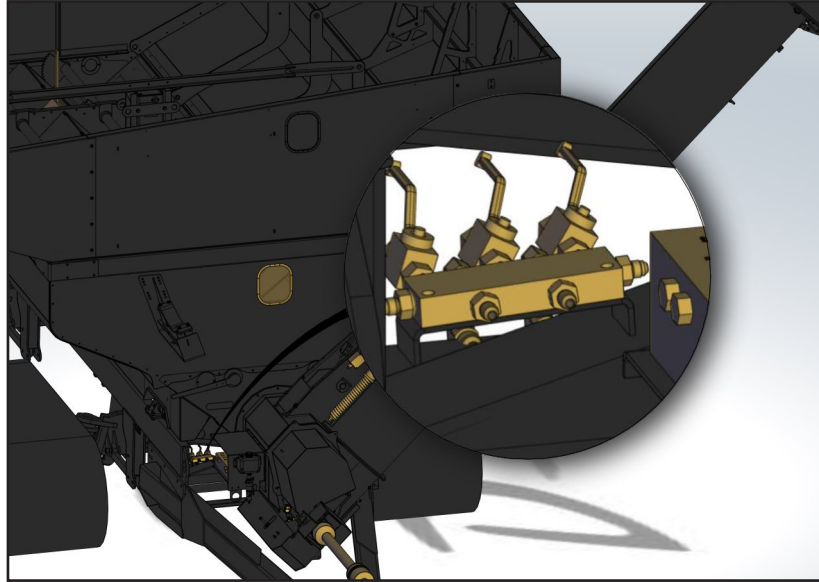
# Prosteer



## Key Facts

- The Prosteer system is an intelligent steering return system that utilizes existing components and can be added to a grain cart steering system.
- The intelligence of the system begins with a pressure transducer (P1) installed into the circuit of the suspension cylinder which has varying pressure due to the amount of load on the machine
- Another pressure transducer (P2) is installed into the circuit on the steering return side of the hydraulic cylinder on the machine used to lock the steering axle in a straight position
- The transducers (P1) and (P2) create an electronic reading that is sent to the systems control board
- The goal of the system is to have the readings of (P1) and (P2) match. To obtain this, the reading from (P1) is connected to the control board and by using the adjustable programming, it sends a signal to a proportional valve which controls an amount of pressure sent to (P2) until the readings of (P1) and (P2) are the same.
- As the grain cart is loaded or unloaded, and as the pressure changes in the suspension cylinder, the Prosteer system is constantly monitoring and adjusting to maintain even pressure between pressure transducers (P1) and (P2)

# Hydraulic Suspension

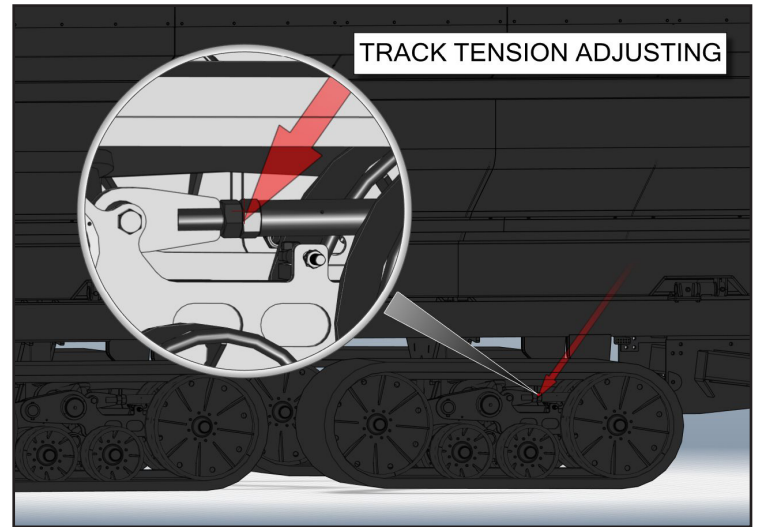
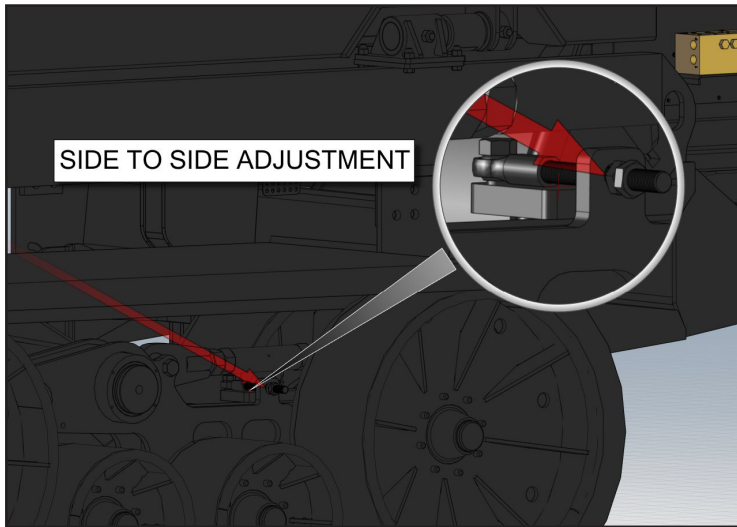


## Hydraulic Suspension Valves and Functionality

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- To set suspension height, the joystick needs to be powered with the straight steer toggle switch locked into position
- With hydraulic power to the cart, the valves can now be used to set or adjust the suspension height of the grain cart
- The valve located next to the frame is the common rod end for all cylinders
- The center valve will supply oil to the butt-end of the right side of the cart only
- The valve furthest away from the frame will supply oil to the butt-end of the left side of the cart
- The common rod end valve needs to be opened with either of the other two valves and/or may all be opened at the same time to raise both sides simultaneously

# Tracks



## Track Tension and Alignment

- Each track assembly is relatively low maintenance
- There is one grease point on the main pivot point where the track attaches to the axle
- All other pivots have poly bushings and require no grease
- The large turnbuckle is used to adjust the track tension
- The small threaded rod moves the idler assembly to adjust for proper track alignment



# Resources

Department	Contact	Phone Number	Email Address
Parts	Ken Classen	507.427.3133 Ext. 104	kenc@balzerinc.com
Service	David Bennett	507.427.3133 Ext. 134	davidb@balzerinc.com
Engineering	Randall Adrian	507.427.3133 Ext. 111	randall@balzerinc.com

# Notes

The image features a dark grey header at the top. Below the header, there is a decorative graphic consisting of a thick yellow wavy shape and a thinner grey wavy shape underneath it. The rest of the page is filled with horizontal white lines, creating a notebook-like appearance.

# Notes

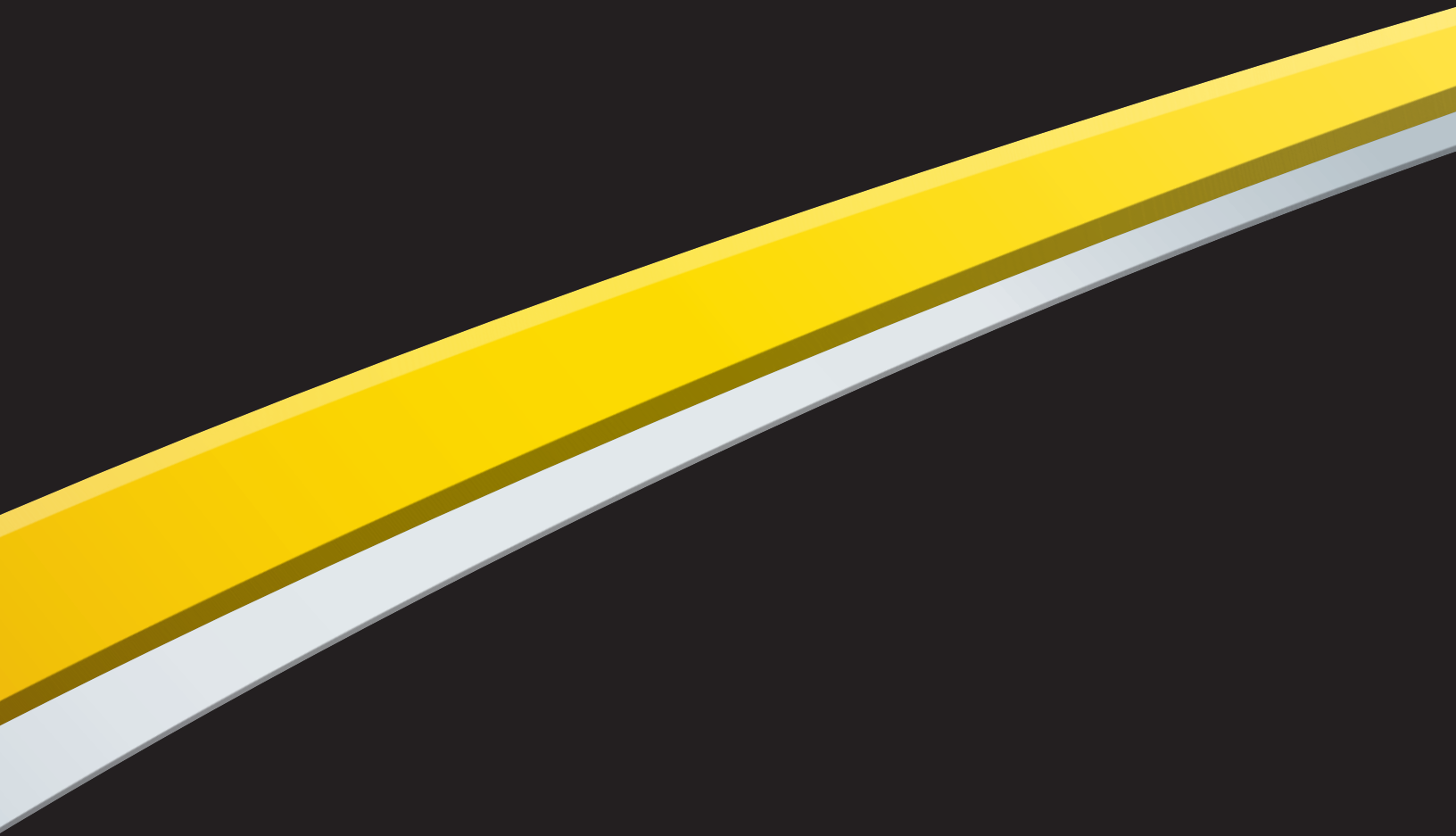


The image shows a decorative header for a notes page. It features a dark grey background at the top. A yellow bar with a 3D effect and a grey shadow is positioned below the dark grey area. Below the yellow bar, there are several horizontal lines on a light grey background, resembling a notepad. The word 'Notes' is written in a large, white, sans-serif font in the top left corner.

# Notes



The image shows a decorative header for a notes page. It features a dark grey background at the top. A yellow bar with a 3D effect and a grey shadow is positioned below the dark grey area. Below the yellow bar, there are several horizontal lines on a light grey background, creating a ruled area for writing notes.



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