



Cushion Release Push Frame and Weight Transfer Kits

Project Title Cushion Release Push Frame and Weight Transfer Kits

Project Number 2009-03

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Problem Operators using tractor-mounted snow blowers to clear city sidewalks often had to make a second pass over the blowing area to clear remaining snow. Driving over cracks in the sidewalk or slight changes in elevation jolted the operator, posing safety concerns, and also left snow behind on the plowed surface. A lack of traction was also an issue for operators, even with chains installed on the equipment.

Solution The City of Glenwood installed one Cushion Release Push Frame and two Weight Transfer Kits on its snow blowing and lawn mowing equipment. The Cushion Release Push Frame assisted the blower in continuously scraping the surface being cleared, and the Weight Transfer Kits permitted operators to shift the weight of the equipment to the drive wheels, allowing for more traction.

Procedure The Cushion Release Push Frame was installed on the city's four-wheel-drive 1445 John Deere tractor on October 1, 2009. Weight Transfer Kits were installed on the four-wheel-drive tractor as well as the city's two-wheel-drive 1445 John Deere tractor on January 12, 2010.

Results The Cushion Release Push Frame eliminated the need for blower operators to go over cleared areas repeatedly to remove excess snow. It improved operator safety as well, absorbing the jolt often felt by operators when driving over an elevation change. Repairs to the blowing equipment were significantly reduced, as the Cushion Release Push Frame eliminated the bent cutting edges and broken pins often experienced prior to its installation.

The Weight Transfer Kits worked effectively on the heavier four-wheel-drive tractor, allowing lawn mower operators to cover most areas without using four-wheel drive. For blower operators, the kits assisted in maintaining traction on icy sidewalks. On the lighter two-wheel-drive tractor, the Weight Transfer Kit was less successful. It adjusted too much weight to the wheels, causing the mower deck to cut unevenly. Ongoing setting adjustments are being made in an attempt to correct this issue.

Approximate Cost \$7,500 (\$5,000 approved for project)

Implementation Both items remain in use on the 1445 John Deere tractors. The Cushion Release Push Frame is only used during the winter for plowing snow, but the Weight Transfer Kits are used throughout the year.

Status Complete

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