

**Winter Equipment Committee's Survey
of
Equipment Operators**

FIELD REPORT

Prepared by

Office of Maintenance

&

Director's Staff Division

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INTRODUCTION

The Winter Equipment Committee, with support from the Office of Maintenance, conducted a survey of all equipment operators in April of 2005 as part of an effort to review the performance of equipment being used by the Iowa Department of Transportation.

This report summarizes the Committee's work on reviewing the findings as well as presents the overall results for each item of the survey.

EXECUTIVE SUMMARY OF FINDINGS

Findings are presented by overall equipment performance areas addressed in the survey, ranked by the reported need for improvement. The top five areas were: cab environment, truck liquid systems, wings, front plow and spreader. Results in each area were broken out by the age of equipment. The "Impact?" column reports whether the age of the equipment appeared to have significantly impacted the ratings (**Yes** – it did, **No** – it didn't, **?** – unclear).

CAB ENVIRONMENT

% Needs Improvement		Age			
		1999 & Older	2000 & Newer	Impact?	
29.9%	Cab Environment	37.7%	17.4%	Yes	
	% Needs Work				
	36.5%	Noise Level	46.3%	19.9%	Yes
	33.0%	Size of Cab Environment	39.9%	20.5%	Yes
	26.4%	Seats	34.2%	12.3%	Yes
	24.2%	Windshield Visibility	28.5%	16.8%	Yes

Findings/Next Steps – The results confirmed the committee's belief that age of equipment played a role in how items in this area were rated. As a result, it was decided that identified problems should be dealt with through new purchases. The committee will look at results for newer cabs to guide this effort.

TRUCK LIQUID SYSTEMS

% Needs Improvement		Age			
		1999 & Older	2000 & Newer	Impact?	
28.8%	Truck Liquid Systems	28.4%	30.3%	No	
	% Needs Work				
	25.6%	Design	26.8%	21.6%	?
	20.9%	Maintenance of Equipment	20.9%	24.5%	?
	20.3%	Capacity	21.4%	17.2%	?

Findings/Next Steps – The committee's next step will be to work on newly designed in-bed tanks to be tested this winter. The committee will look further into why newer trucks appear to need more work in regard to maintenance.

WINGS

% Needs Improvement		Age			
		1999 & Older	2000 & Newer	Impact?	
19.5%	Wings	18.1%	21.4%	No	
	% Needs Work				
	20.8%	Removing shoulder rock	20.5%	21.1%	No
	16.2%	Wing Design	12.3%	22.1%	Yes

Findings/Next Steps – The committee will break down the data further. The committee will look into why there are more complaints on newer equipment in this area.

FRONT PLOW

% Needs Improvement		Age			
		1999 & Older	2000 & Newer	Impact?	
18.5%	Front Plow	19.6%	17.7%	No	
	% Needs Work				
	54.1%	Keeps snow from windshield	58.5%	46.4%	Yes
	47.5%	Ability to remove ice	47.7%	48.3%	No

Findings/Next Steps – The committee will continue to investigate down pressure plows. DOT will be entering in to research project with CTRE to develop new and different ways to remove snow and ice. The committee will be involved.

SPREADER

% Needs Improvement		Age			
		1999 & Older	2000 & Newer	Impact?	
18.0%	Spreader	17.9%	17.7%	No	
	% Needs Work				
	16.1%	Type of spinner	15.6%	17.9%	No
	14.9%	Clean out	10.8%	22.5%	Yes

Findings/Next Steps – The committee will break down the data further to determine why clean out is a greater problem on newer equipment.

AREAS NOT CURRENTLY BEING EXAMINED IN GREATER DETAIL BY COMMITTEE

% Needs Improvement	
14.4%	Dumpbox
10.6%	Anti-Ice Trailer
9.3%	Underbody Plow

HISTORY

In working through the survey and its results, the Winter Equipment Committee met several times, reviewing various reports and discussing findings. The following is a brief outline of the process. The various reports generated and reviewed are listed in bold italics.

Preliminary Report

- Reported percent responses for each overall area as well as individual items.
- Decided to look at Overall Equipment Performance categories by:
 - District
 - Operator Experience
 - Age of Truck
 - Class of Truck

A Breakdown of Overall Equipment Performance

- Reported results for the eight “Overall Equipment Performance” categories
- Decided to look at results by age (1999 and older, 2000 and newer) for:
 - Cab Environment
 - Truck Liquid Systems
 - Wings
 - Front Plow
 - Spreader
- Results looked at individual items in each category.

Sub-Areas by Age of Equipment

- Reported results for the top five categories by age.
- Confirmed age of equipment accounted for much of the “Cab Environment ratings, and decided man of the issues could be addressed through new purchases. Decided to look at new cab results to determine any useful guidance for purchases.
- Decided to look at the following:
 - Cab Environment item ratings for NEW CABS
 - Truck Liquid Systems
 - Spreader Items: Clean Out, Standard Tailgate and Winter Tailgate

Cab Environment in New Cabs

Truck Liquid Systems

Winter & Standard Tailgate and Clean Out

Raven Spreader Controls

- Reported results broken down by district, experience, vehicle class, and age of vehicle.
- Information will be used to review identified areas.
- Decided to share survey results, process and plans with operators across the state.

Field Report

- Reported findings, history, analysis, and data for public review across the state.

WINTER EQUIPMENT COMMITTEE MEMBERS

Please feel free to contact a representative of the Winter Equipment Committee if you have any comments or questions concerning this report. The committee would like to thank everyone involved with the guidance it received in constructing the survey, all involved with the distribution and return of all the surveys.

A special **Thank You** goes to all the equipment operators who filled them out.

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District 1

Harold Phipps	District Mechanic	(515) 233-0622	Ames
Rex Evans	Garage Operations Assistant	(641) 792-7783	Newton

District 2

Kevin Adams	Equipment Operator	(319) 352-1045	Waverly
Mike Hagen**	Equipment Operator Senior	(641) 896-3100	Hanlontown

District 3

Kim Christensen	District Mechanic	(712) 239-1856	Sioux City
Todd Cogdill	Mechanic.	(712) 423-2040	Onawa

District 4

Larry Shriver	Mechanic	(712) 485-2591	Neola
Bill Shuler	Equipment Operator Senior	(712) 523-2383	Bedford

District 5

Brian Isles	Equipment Operator	(319) 385-8641	Mt Pleasant
Larry Pottridge	Highway Maintenance Supervisor	(641) 764-2755	Martensdale

District 6

Jeff Tjaden	Highway Maintenance Supervisor	(319) 364-8189	Cedar Rapids
Brien Keltner	Mechanic	(319) 462-3676	Anamosa

**Winter Steering Committee Liaison

HOW TO READ THE RESULTS

This report presents a large amount of information. The primary method of communicating results is through the use of percentages. The percent provided represented the percent of those responding to a specific question or item. The number of responses may vary from item to item. To help provide context, the number of responses is often provided (usually in parentheses).

For example, in the portion of the survey on Cab Environment:

- A total of 862 people responded to the Noise Level items. Of those 862 people, **12.3%** (or 106 people) marked it “Works Great.”
- When looking at Noise Level results by Class of Vehicle, 38 people reported using a class 11 vehicle. Of those 38, none of them - **0.0% (-)** - responded “N/A.”
- Note, those responding to items like Noise Level may not provide an answer or information to more detailed items. As in the example, the 803 (278 + 38 + 487) who provided Class of Vehicle information is less than the 862 who responded to the Noise Level item.

SPECIFIC EQUIPMENT PERFORMANCE – CAB ENVIRONMENT

	<i>Needs Work</i>	<i>Okay</i>	<i>Works Great</i>	<i>N/A</i>
Noise Level (n=862).....	36.5% (315)	50.7% (437)	<u>12.3%</u> (106)	0.5% (4)
CLASS OF VEHICLE				
Class 7 (n=278)	36.7% (102)	54.0% (150)	8.6% (24)	0.7% (2)
Class 11 (n=38)	2.6% (1)	52.6% (20)	44.7% (17)	0.0% (-)
Class 12 (n=487)	39.4% (192)	48.0% (234)	12.3% (60)	0.2% (1)

OVERALL SURVEY RESULTS

Returns

A total of 875 surveys were returned. The table below presents returns by district.

District Returns		
District 1: 166	District 2: 126	District 3: 126
District 4: 138	District 5: 134	District 6: 185

General Information

To better understand results, respondents were asked to provide both the A-number of the truck they use and their years of plowing experience.

A-Number of Truck - 94.4% of respondents (826) supplied an A-number

Years of Plowing Experience – Average: 14.8 years, Range: 0 to 40

OVERALL EQUIPMENT PERFORMANCE

For eight overall areas, respondents indicated which part or parts of snow plowing equipment they felt needed improvement. Respondents were allowed to select more than one. This section of the report provides a summary of results of the eight overall equipment performance areas, presented in ranked order on percent needing improvement. The table below summarizes the ranked results.

OVERALL AREA	PERCENT “NEEDS IMPROVEMENT”	NUMBER MARKING “NEEDS IMPROVEMENT”
Cab Environment	29.9%	261
Truck Liquid Systems	28.8%	251
Wings	19.5%	170
Front Plow	18.5%	161
Spreader	18.0%	157
Dumpbox	14.4%	126
Anti-Ice Trailer	10.6%	92
Underbody Plow	9.3.%	81

Within each overall area, respondents were presented more detailed features to rate. They were asked to indicate whether the issue or feature “Needs Work,” was “Okay,” “Works Great,” or “N/A” if it didn’t apply to them. The rest of this section of the report presents there results broken down by district, operator experience, class of vehicle, and age of vehicle. Items within an area are presented in rank order based on the percent of respondents indicating the item “Needs Work.”

Specific Equipment Performance – Cab Environment

	<i>Needs Work</i>	<i>Okay</i>	<i>Works Great</i>	<i>N/A</i>
Noise Level (n=862)	36.5% (315)	50.7% (437)	12.3% (106)	0.5% (4)
WORK LOCATION				
District 1 (n=165)	40.0% (66)	49.1% (81)	10.9% (18)	0.0% (-)
District 2 (n=125)	36.0% (45)	48.0% (60)	15.2% (19)	0.8% (1)
District 3 (n=126)	31.7% (40)	50.0% (63)	17.5% (22)	0.8% (1)
District 4 (n=136)	38.2% (52)	52.9% (72)	8.8% (12)	0.0% (-)
District 5 (n=128)	33.6% (43)	52.3% (67)	12.5% (16)	1.6% (2)
District 6 (n=182)	37.9% (69)	51.6% (94)	10.4% (19)	0.5% (1)
OPERATOR EXPERIENCE				
0-5 years (n=163)	35.6% (58)	50.3% (82)	13.5% (22)	0.6% (1)
6-10 years (n=176)	31.3% (55)	55.1% (97)	12.5% (22)	1.1% (2)
11-15 years (n=105)	38.1% (40)	47.6% (50)	14.3% (15)	0.0% (-)
16-20 years (n=169)	41.4% (70)	47.9% (81)	10.7% (18)	0.0% (-)
21-25 years (n=124)	40.3% (50)	44.4% (55)	14.5% (18)	0.8% (1)
26+ years (n=113).....	33.6% (38)	58.4% (66)	8.0% (9)	0.0% (-)
CLASS OF VEHICLE				
Class 7 (n=278).....	36.7% (102)	54.0% (150)	8.6% (24)	0.7% (2)
Class 11 (n=38).....	2.6% (1)	52.6% (20)	44.7% (17)	0.0% (-)
Class 12 (n=487).....	39.4% (192)	48.0% (234)	12.3% (60)	0.2% (1)
AGE OF VEHICLE				
1999 and older (n=510).....	46.3% (236)	48.8% (249)	4.3% (22)	0.6% (3)
2000 and newer (n=292)	19.9% (58)	53.1% (155)	27.1% (79)	0.0% (-)
Size of Cab Environment (n=857)	33.0% (283)	51.2% (439)	15.2% (130)	0.6% (5)
WORK LOCATION				
District 1 (n=164)	36.6% (60)	53.0% (87)	10.4% (17)	0.0% (-)
District 2 (n=124)	27.4% (34)	54.0% (67)	17.7% (22)	0.8% (1)
District 3 (n=126)	27.0% (34)	54.0% (68)	17.5% (22)	1.6% (2)
District 4 (n=136)	33.8% (46)	52.9% (72)	13.2% (18)	0.0% (-)
District 5 (n=126)	34.1% (43)	45.2% (57)	19.0% (24)	1.6% (2)
District 6 (n=181)	36.5% (66)	48.6% (88)	14.9% (27)	0.0% (-)
OPERATOR EXPERIENCE				
0-5 years (n=163)	25.2% (41)	57.1% (93)	16.6% (27)	1.2% (2)
6-10 years (n=176)	29.0% (51)	53.4% (94)	15.9% (28)	1.7% (3)
11-15 years (n=105)	34.3% (36)	50.5% (53)	15.2% (16)	0.0% (-)
16-20 years (n=167)	43.1% (72)	43.7% (73)	13.2% (22)	0.0% (-)
21-25 years (n=123)	35.8% (44)	48.0% (59)	16.3% (20)	0.0% (-)
26+ years (n=112).....	32.1% (36)	54.5% (61)	13.4% (15)	0.0% (-)
CLASS OF VEHICLE				
Class 7 (n=276).....	34.8% (96)	53.6% (148)	10.5% (29)	1.1% (3)
Class 11 (n=38).....	7.9% (3)	50.0% (19)	42.1% (16)	0.0% (-)
Class 12 (n=485).....	33.8% (164)	49.9% (242)	16.1% (78)	0.2% (1)
AGE OF VEHICLE				
1999 and older (n=506).....	39.9% (202)	52.2% (264)	7.1% (36)	0.8% (4)
2000 and newer (n=292)	20.5% (60)	49.7% (145)	29.8% (87)	0.0% (-)

	<i>Needs Work</i>	<i>Okay</i>	<i>Works Great</i>	<i>N/A</i>
Seats (n=855)	26.4% (226)	55.0% (470)	17.7% (151)	0.9% (8)
WORK LOCATION				
District 1 (n=164)	32.3% (53)	54.9% (90)	12.8% (21)	0.0% (-)
District 2 (n=125)	20.0% (25)	55.2% (69)	24.0% (30)	0.8% (1)
District 3 (n=125)	23.2% (29)	56.0% (70)	19.2% (24)	1.6% (2)
District 4 (n=133)	26.3% (35)	59.4% (79)	13.5% (18)	0.8% (1)
District 5 (n=125)	29.6% (37)	45.6% (57)	23.2% (29)	1.6% (2)
District 6 (n=183)	25.7% (47)	57.4% (105)	15.8% (29)	1.1% (2)
OPERATOR EXPERIENCE				
0-5 years (n=162)	22.8% (37)	59.9% (97)	16.0% (26)	1.2% (2)
6-10 years (n=175)	31.4% (55)	48.0% (84)	18.3% (32)	2.3% (4)
11-15 years (n=105)	30.5% (32)	54.3% (57)	15.2% (16)	0.0% (-)
16-20 years (n=166)	24.1% (40)	58.4% (97)	16.9% (28)	0.6% (1)
21-25 years (n=123)	28.5% (35)	50.4% (62)	21.1% (26)	0.0% (-)
26+ years (n=112).....	19.6% (22)	58.9% (66)	20.5% (23)	0.9% (1)
CLASS OF VEHICLE				
Class 7 (n=274).....	26.3% (72)	59.1% (162)	12.4% (34)	2.2% (6)
Class 11 (n=38).....	5.3% (2)	39.5% (15)	55.3% (21)	0.0% (-)
Class 12 (n=484).....	27.9% (135)	53.3% (258)	18.6% (90)	0.2% (1)
AGE OF VEHICLE				
1999 and older (n=503).....	34.2% (172)	54.7% (275)	9.9% (50)	1.2% (6)
2000 and newer (n=292)	12.3% (36)	54.8% (160)	32.5% (95)	0.3% (1)
Windshield Visibility (n=860)	24.2% (208)	57.7% (496)	17.7% (152)	0.5% (4)
WORK LOCATION				
District 1 (n=165)	33.3% (55)	50.3% (83)	15.8% (26)	0.6% (1)
District 2 (n=124)	17.7% (22)	61.3% (76)	20.2% (25)	0.8% (1)
District 3 (n=126)	25.4% (32)	54.8% (69)	19.8% (25)	0.0% (-)
District 4 (n=134)	24.6% (33)	61.2% (82)	14.2% (19)	0.0% (-)
District 5 (n=128)	24.2% (31)	57.0% (73)	17.2% (22)	1.6% (2)
District 6 (n=183)	19.1% (35)	61.7% (113)	19.1% (35)	0.0% (-)
OPERATOR EXPERIENCE				
0-5 years (n=163)	23.3% (38)	55.8% (91)	19.0% (31)	1.8% (3)
6-10 years (n=175)	18.3% (32)	61.7% (108)	19.4% (34)	0.6% (1)
11-15 years (n=105)	26.7% (28)	54.3% (57)	19.0% (20)	0.0% (-)
16-20 years (n=168)	29.8% (50)	54.8% (92)	15.5% (26)	0.0% (-)
21-25 years (n=124)	25.0% (31)	54.8% (68)	20.2% (25)	0.0% (-)
26+ years (n=113).....	23.0% (26)	64.6% (73)	12.4% (14)	0.0% (-)
CLASS OF VEHICLE				
Class 7 (n=278).....	24.5% (68)	60.4% (168)	14.4% (40)	0.7% (2)
Class 11 (n=38).....	10.5% (4)	42.1% (16)	47.4% (18)	0.0% (-)
Class 12 (n=485).....	25.2% (122)	56.7% (275)	17.9% (87)	0.2% (1)
AGE OF VEHICLE				
1999 and older (n=509).....	28.5% (145)	62.5% (318)	8.6% (44)	0.4% (2)
2000 and newer (n=291)	16.8% (49)	48.1% (140)	34.7% (101)	0.3% (1)

	<i>Needs Work</i>	<i>Okay</i>	<i>Works Great</i>	<i>N/A</i>
Mirrors (n=855)	18.7% (160)	64.1% (548)	16.8% (144)	0.4% (3)
WORK LOCATION				
District 1 (n=163)	25.2% (41)	62.0% (101)	12.9% (21)	0.0% (-)
District 2 (n=123)	15.4% (19)	65.9% (81)	17.9% (22)	0.8% (1)
District 3 (n=126)	17.5% (22)	61.1% (77)	21.4% (27)	0.0% (-)
District 4 (n=135)	19.3% (26)	66.7% (90)	14.1% (19)	0.0% (-)
District 5 (n=125)	12.0% (15)	65.6% (82)	21.6% (27)	0.8% (1)
District 6 (n=183)	20.2% (37)	63.9% (117)	15.3% (28)	0.5% (1)
OPERATOR EXPERIENCE				
0-5 years (n=163)	18.4% (30)	63.8% (104)	17.2% (28)	0.6% (1)
6-10 years (n=174)	16.7% (29)	69.5% (121)	12.6% (22)	1.1% (2)
11-15 years (n=105)	23.8% (25)	56.2% (59)	20.0% (21)	0.0% (-)
16-20 years (n=166)	16.9% (28)	65.1% (108)	18.1% (30)	0.0% (-)
21-25 years (n=124)	20.2% (25)	62.1% (77)	17.7% (22)	0.0% (-)
26+ years (n=111).....	18.0% (20)	64.9% (72)	17.1% (19)	0.0% (-)
CLASS OF VEHICLE				
Class 7 (n=275).....	16.4% (45)	66.9% (184)	16.0% (44)	0.7% (2)
Class 11 (n=38).....	15.8% (6)	44.7% (17)	39.5% (15)	0.0% (-)
Class 12 (n=483).....	20.9% (101)	62.9% (304)	16.1% (78)	0.0% (-)
AGE OF VEHICLE				
1999 and older (n=503).....	20.3% (102)	69.0% (347)	10.3% (52)	0.4% (2)
2000 and newer (n=292)	16.8% (49)	54.1% (158)	29.1% (85)	0.0% (-)
Raven Spreader Controls (n=838)	17.4% (146)	44.6% (374)	16.3% (137)	21.6% (181)
WORK LOCATION				
District 1 (n=156)	20.5% (32)	42.3% (66)	13.5% (21)	23.7% (37)
District 2 (n=123)	11.4% (14)	52.8% (65)	13.8% (17)	22.0% (27)
District 3 (n=123)	22.0% (27)	35.8% (44)	17.9% (22)	24.4% (30)
District 4 (n=131)	22.9% (30)	47.3% (62)	11.5% (15)	18.3% (24)
District 5 (n=124)	12.9% (16)	46.0% (57)	23.4% (29)	17.7% (22)
District 6 (n=181)	14.9% (27)	44.2% (80)	18.2% (33)	22.7% (41)
OPERATOR EXPERIENCE				
0-5 years (n=160)	12.5% (20)	47.5% (76)	20.0% (32)	20.0% (32)
6-10 years (n=171)	14.6% (25)	40.9% (70)	24.0% (41)	20.5% (35)
11-15 years (n=103)	20.4% (21)	48.5% (50)	12.6% (13)	18.4% (19)
16-20 years (n=162)	21.6% (35)	43.8% (71)	15.4% (25)	19.1% (31)
21-25 years (n=121)	19.0% (23)	43.8% (53)	11.6% (14)	25.6% (31)
26+ years (n=109).....	15.6% (17)	45.9% (50)	11.0% (12)	27.5% (30)
CLASS OF VEHICLE				
Class 7 (n=274).....	19.3% (53)	47.8% (131)	17.5% (48)	15.3% (42)
Class 11 (n=28).....	16.7% (6)	47.2% (17)	25.0% (9)	11.1% (4)
Class 12 (n=45).....	14.5% (68)	42.8% (201)	15.5% (73)	27.2% (128)
AGE OF VEHICLE				
1999 and older (n=492).....	17.5% (86)	40.9% (201)	9.6% (47)	32.1% (158)
2000 and newer (n=287)	13.9% (40)	51.6% (148)	28.9% (83)	5.6% (16)

	<i>Needs Work</i>	<i>Okay</i>	<i>Works Great</i>	<i>N/A</i>
Steering Wheel Size (n=855)	15.9% (136)	64.4% (551)	19.1% (163)	0.6% (5)
WORK LOCATION				
District 1 (n=163)	16.0 (26)	65.0% (106)	18.4% (30)	0.6% (1)
District 2 (n=124)	11.3% (14)	65.3% (81)	22.6% (28)	0.8% (1)
District 3 (n=126)	12.7% (16)	65.9% (83)	20.6% (26)	0.8% (1)
District 4 (n=135)	18.5% (25)	65.9% (89)	15.6% (21)	0.0% (-)
District 5 (n=125)	17.6% (22)	59.2% (74)	21.6% (27)	1.6% (2)
District 6 (n=182)	18.1% (33)	64.8% (118)	17.0% (31)	0.0% (-)
OPERATOR EXPERIENCE				
0-5 years (n=161)	11.2% (18)	65.8% (106)	21.7% (35)	1.2% (2)
6-10 years (n=174)	14.9% (26)	60.9% (106)	22.4% (39)	1.7% (3)
11-15 years (n=105)	12.4% (13)	67.6% (71)	20.0% (21)	0.0% (-)
16-20 years (n=167)	19.2% (32)	63.5% (106)	17.4% (29)	0.0% (-)
21-25 years (n=124)	16.9% (21)	65.3% (81)	17.7% (22)	0.0% (-)
26+ years (n=113).....	20.4% (23)	65.5% (74)	14.2% (16)	0.0% (-)
CLASS OF VEHICLE				
Class 7 (n=275).....	14.9% (41)	69.1% (190)	14.9% (41)	1.1% (3)
Class 11 (n=38).....	2.6% (1)	50.0% (19)	47.4% (18)	0.0% (-)
Class 12 (n=483).....	17.4% (84)	62.7% (303)	19.7% (95)	0.2% (1)
AGE OF VEHICLE				
1999 and older (n=506).....	21.7% (110)	66.8% (338)	10.7% (54)	0.8% (4)
2000 and newer (n=289)	5.5% (16)	59.9% (173)	34.6% (100)	0.0% (-)
Electric Plow Controls (n=7825).....	14.5% (120)	37.5% (309)	11.2% (92)	36.8% (304)
WORK LOCATION				
District 1 (n=159)	17.6% (28)	39.6% (63)	8.8% (14)	34.0% (54)
District 2 (n=115)	7.0% (8)	44.3% (51)	13.0% (15)	35.7% (41)
District 3 (n=123)	23.1% (8)	30.6% (37)	10.7% (13)	35.5% (43)
District 4 (n=130)	16.2% (21)	36.2% (47)	11.5% (15)	36.2% (47)
District 5 (n=119)	19.3% (23)	31.9% (38)	12.6% (15)	36.1% (43)
District 6 (n=181)	6.6% (12)	40.3% (73)	11.0% (20)	42.0% (76)
OPERATOR EXPERIENCE				
0-5 years (n=162)	16.7% (27)	38.3% (62)	9.9% (16)	35.2% (57)
6-10 years (n=168)	10.7% (18)	32.7% (55)	13.1% (22)	43.5% (73)
11-15 years (n=102)	10.8% (11)	40.2% (41)	10.8% (11)	38.2% (39)
16-20 years (n=159)	12.6% (20)	42.1% (67)	13.2% (21)	32.1% (51)
21-25 years (n=117)	17.1% (20)	35.9% (42)	10.3% (12)	36.8% (43)
26+ years (n=105).....	20.0% (21)	36.2% (38)	8.6% (9)	35.2% (37)
CLASS OF VEHICLE				
Class 7 (n=275).....	16.7% (46)	51.6% (142)	16.0% (44)	15.6% (43)
Class 11 (n=36).....	8.3% (3)	11.1% (4)	11.1% (4)	69.4% (25)
Class 12 (n=458).....	12.9% (59)	29.0% (133)	8.3% (38)	49.8% (228)
AGE OF VEHICLE				
1999 and older (n=493).....	16.8% (83)	43.4% (214)	10.3% (51)	29.4% (145)
2000 and newer (n=275)	9.1% (25)	23.6% (65)	12.4% (34)	54.9% (151)

	<i>Needs Work</i>	<i>Okay</i>	<i>Works Great</i>	<i>N/A</i>
Steering Wheel (n=856)	13.1% (112)	66.1% (566)	20.7% (177)	0.1% (1)
WORK LOCATION				
District 1 (n=163)	12.9% (21)	67.5% (110)	19.6% (32)	0.0% (-)
District 2 (n=125)	7.2% (9)	67.2% (84)	24.8% (31)	0.8% (1)
District 3 (n=126)	9.5% (12)	71.4% (90)	19.0% (24)	0.0% (-)
District 4 (n=136)	16.9% (23)	66.9% (91)	16.2% (22)	0.0% (-)
District 5 (n=124)	18.5% (23)	57.3% (71)	24.2% (30)	0.0% (-)
District 6 (n=182)	13.2% (24)	65.9% (120)	20.9% (38)	0.0% (-)
OPERATOR EXPERIENCE				
0-5 years (n=162)	12.3% (20)	64.8% (105)	22.8% (37)	0.0% (-)
6-10 years (n=175)	12.0% (21)	64.6% (113)	22.9% (40)	0.6% (1)
11-15 years (n=105)	12.4% (13)	68.6% (72)	19.0% (20)	0.0% (-)
16-20 years (n=166)	12.0% (20)	68.3% (114)	19.8% (33)	0.0% (-)
21-25 years (n=123)	12.1% (15)	69.4% (86)	18.5% (23)	0.0% (-)
26+ years (n=113).....	16.8% (19)	62.8% (71)	20.4% (23)	0.0% (0)
CLASS OF VEHICLE				
Class 7 (n=274).....	13.9% (38)	70.8% (194)	15.3% (42)	0.0% (-)
Class 11 (n=38).....	2.6% (1)	39.5% (15)	57.9% (22)	0.0% (-)
Class 12 (n=486).....	12.8% (62)	66.3% (322)	21.0% (102)	0.0% (-)
AGE OF VEHICLE				
1999 and older (n=505).....	16.6% (84)	71.9% (363)	11.5% (58)	0.0% (-)
2000 and newer (n=292)	5.8% (17)	57.2% (167)	37.0% (108)	0.0% (-)
Cable Plow Controls (n=798)	7.9% (63)	31.6% (252)	16.2% (129)	44.4% (354)
WORK LOCATION				
District 1 (n=147)	12.2% (18)	32.7% (48)	11.6% (17)	43.5% (64)
District 2 (n=116)	0.9% (18)	34.5% (40)	19.0% (22)	45.7% (53)
District 3 (n=120)	8.3% (10)	27.5% (33)	20.8% (25)	43.3% (52)
District 4 (n=126)	7.9% (10)	34.9% (44)	16.7% (21)	40.5% (51)
District 5 (n=115)	7.8% (9)	25.2% (29)	22.6% (26)	44.3% (51)
District 6 (n=174)	8.6% (15)	33.3% (58)	10.3% (18)	47.7% (83)
OPERATOR EXPERIENCE				
0-5 years (n=154)	8.4% (13)	26.0% (40)	13.6% (21)	51.9% (80)
6-10 years (n=162)	4.3% (7)	29.0% (47)	21.0% (34)	45.7% (74)
11-15 years (n=96)	7.3% (7)	25.0% (24)	19.8% (19)	47.9% (46)
16-20 years (n=155)	10.3% (16)	32.9% (51)	14.8% (23)	41.9% (65)
21-25 years (n=114)	9.6% (11)	36.0% (41)	12.3% (14)	42.1% (48)
26+ years (n=108).....	7.4% (8)	41.7% (45)	13.9% (18)	34.3% (37)
CLASS OF VEHICLE				
Class 7 (n=254).....	5.5% (14)	25.2% (64)	12.2% (31)	57.1% (145)
Class 11 (n=36).....	5.6% (2)	16.7% (6)	36.1% (13)	41.7% (15)
Class 12 (n=455).....	9.2% (42)	34.3% (156)	16.5% (75)	40.0% (182)
AGE OF VEHICLE				
1999 and older (n=469).....	8.3% (39)	28.6% (134)	9.4% (44)	53.7% (252)
2000 and newer (n=275)	6.9% (19)	33.5% (92)	27.3% (74)	32.4% (89)

	<i>Needs Work</i>	<i>Okay</i>	<i>Works Great</i>	<i>N/A</i>
Lever Plow Controls (n=835)	7.5% (63)	38.7% (323)	24.3% (203)	29.5% (246)
WORK LOCATION				
District 1 (n=157)	15.3% (24)	40.8% (64)	19.1% (30)	24.8% (39)
District 2 (n=122)	2.5% (3)	40.2% (49)	28.7% (35)	28.7% (35)
District 3 (n=123)	5.7% (7)	35.0% (43)	29.3% (36)	30.1% (37)
District 4 (n=134)	6.0% (8)	42.5% (57)	23.1% (31)	28.4% (38)
District 5 (n=122)	5.7% (7)	32.0% (39)	29.5% (36)	32.8% (40)
District 6 (n=177)	7.9% (14)	40.1% (71)	19.8% (35)	32.2% (57)
OPERATOR EXPERIENCE				
0-5 years (n=156)	9.6% (15)	38.5% (60)	16.0% (25)	35.9% (56)
6-10 years (n=170)	5.9% (10)	34.1% (58)	31.2% (53)	28.8% (49)
11-15 years (n=104)	7.7% (8)	36.5% (38)	26.0% (27)	29.8% (31)
16-20 years (n=163)	5.5% (9)	37.4% (61)	23.9% (39)	33.1% (54)
21-25 years (n=120)	5.8% (7)	48.3% (58)	25.0% (30)	20.8% (25)
26+ years (n=111).....	10.8% (12)	36.9% (41)	25.2% (28)	27.0% (30)
CLASS OF VEHICLE				
Class 7 (n=265).....	4.2% (11)	34.3% (91)	16.6% (44)	44.9% (119)
Class 11 (n=37).....	2.7% (1)	18.9% (7)	43.2% (16)	35.1% (13)
Class 12 (n=477).....	9.0% (43)	40.3% (192)	28.1% (134)	22.6% (108)
AGE OF VEHICLE				
1999 and older (n=490).....	8.0% (39)	40.0% (196)	19.4% (95)	32.7% (160)
2000 and newer (n=288)	5.6% (16)	32.6% (94)	34.4% (99)	27.4% (79)
SpreadSmart Spreader Controls (n=768)	6.3% (48)	16.5% (127)	7.0% (54)	70.2% (539)
WORK LOCATION				
District 1 (n=150)	10.0% (15)	22.0% (33)	8.0% (12)	60.0% (90)
District 2 (n=109)	4.6% (5)	14.7% (16)	9.2% (10)	71.6% (78)
District 3 (n=116)	5.2% (6)	12.1% (14)	6.9% (8)	75.9% (88)
District 4 (n=119)	10.9% (13)	16.8% (20)	6.7% (8)	65.5% (78)
District 5 (n=108)	3.7% (4)	7.4% (8)	7.4% (8)	81.5% (88)
District 6 (n=166)	3.0% (5)	21.7% (36)	4.8% (8)	70.5% (117)
OPERATOR EXPERIENCE				
0-5 years (n=151)	2.0% (3)	17.2% (26)	8.6% (13)	72.2% (109)
6-10 years (n=162)	5.6% (9)	15.4% (25)	6.2% (10)	72.8% (118)
11-15 years (n=93)	7.5% (7)	14.0% (13)	4.3% (4)	74.2% (69)
16-20 years (n=146)	6.2% (9)	16.4% (24)	6.8% (10)	70.5% (103)
21-25 years (n=105)	10.5% (11)	16.2% (17)	6.7% (7)	66.7% (70)
26+ years (n=101).....	8.9% (9)	19.8% (20)	9.9% (10)	61.4% (62)
CLASS OF VEHICLE				
Class 7 (n=246).....	5.3% (13)	15.4% (38)	5.7% (14)	73.6% (181)
Class 11 (n=35).....	11.4% (4)	11.4% (4)	11.4% (4)	65.7% (23)
Class 12 (n=437).....	5.3% (23)	17.2% (75)	7.6% (33)	70.0% (306)
AGE OF VEHICLE				
1999 and older (n=454).....	5.7% (26)	17.0% (77)	3.7% (17)	73.6% (334)
2000 and newer (n=263)	5.3% (14)	15.2% (40)	12.9% (34)	66.5% (175)

	<i>Needs Work</i>	<i>Okay</i>	<i>Works Great</i>	<i>N/A</i>
Joystick Plow Controls (n=791)	6.2% (49)	21.9% (173)	14.7% (116)	57.3% (453)
WORK LOCATION				
District 1 (n=153)	8.5% (13)	21.6% (33)	13.7% (21)	56.2% (86)
District 2 (n=113)	3.5% (4)	23.9% (27)	12.4% (14)	60.2% (68)
District 3 (n=115)	9.5% (11)	17.2% (20)	11.2% (13)	62.1% (72)
District 4 (n=127)	10.2% (13)	26.0% (33)	18.1% (23)	45.7% (58)
District 5 (n=110)	4.5% (5)	16.4% (18)	19.1% (21)	60.0% (66)
District 6 (n=172)	1.7% (3)	24.4% (42)	14.0% (24)	59.9% (103)
OPERATOR EXPERIENCE				
0-5 years (n=153)	2.6% (4)	20.3% (31)	12.4% (19)	64.7% (99)
6-10 years (n=166)	5.4% (9)	22.3% (37)	21.7% (36)	50.6% (84)
11-15 years (n=97)	7.2% (7)	15.5% (15)	11.3% (11)	66.0% (64)
16-20 years (n=147)	8.8% (13)	23.8% (35)	12.9% (19)	54.4% (80)
21-25 years (n=115)	6.1% (7)	24.3% (28)	15.7% (18)	53.9% (62)
26+ years (n=104).....	8.7% (9)	24.0% (25)	11.5% (12)	55.8% (58)
CLASS OF VEHICLE				
Class 7 (n=248).....	4.8% (12)	15.3% (38)	12.5% (31)	67.3% (167)
Class 11 (n=35).....	14.3% (5)	20.0% (7)	25.7% (9)	40.0% (14)
Class 12 (n=455).....	5.7% (26)	24.0% (109)	14.9% (68)	55.4% (252)
AGE OF VEHICLE				
1999 and older (n=460).....	4.8% (22)	17.4% (80)	7.4% (34)	70.4% (324)
2000 and newer (n=277)	7.6% (21)	26.7% (74)	26.7% (74)	39.0% (108)

CAB ENVIRONMENT

% Needs Improvement		Age			
		1999 & Older	2000 & Newer	Impact?	
29.9%	Cab Environment	37.7%	17.4%	Yes	
	% Needs Work				
	36.5%	Noise Level	46.3%	19.9%	Yes
	33.0%	Size of Cab Environment	39.9%	20.5%	Yes
	26.4%	Seats	34.2%	12.3%	Yes
	24.2%	Windshield Visibility	28.5%	16.8%	Yes

Findings/Next Steps – The results confirmed the committee’s belief that age of equipment played a role in how items in this area were rated. As a result, it was decided that identified problems should be dealt with through new purchases. The committee will look at results for newer cabs to guide this effort.

Specific Equipment Performance – Truck Liquid Systems

	<i>Needs Work</i>	<i>Okay</i>	<i>Works Great</i>	<i>N/A</i>
Design (n=845).....	25.6% (216)	58.5% (494)	13.0% (110)	3.0% (25)
WORK LOCATION				
District 1 (n=161)	26.7% (43)	57.1% (92)	12.4% (20)	3.7% (6)
District 2 (n=122)	30.3% (37)	51.6% (63)	15.6% (19)	2.5% (3)
District 3 (n=124)	24.2% (30)	57.3% (71)	13.7% (17)	4.8% (6)
District 4 (n=133)	23.3% (31)	64.7% (86)	11.3% (15)	0.8% (1)
District 5 (n=126)	31.7% (40)	55.6% (70)	9.5% (12)	3.2% (4)
District 6 (n=179)	19.6% (35)	62.6% (112)	15.1% (27)	2.8% (5)
OPERATOR EXPERIENCE				
0-5 years (n=161)	20.5% (33)	58.4% (94)	14.9% (24)	6.2% (10)
6-10 years (n=174)	26.4% (46)	58.6% (102)	13.8% (24)	1.1% (2)
11-15 years (n=101)	25.7% (26)	60.4% (61)	10.9% (11)	3.0% (3)
16-20 years (n=165)	30.9% (51)	55.2% (91)	12.1% (20)	1.8% (3)
21-25 years (n=123)	24.4% (30)	61.0% (75)	12.2% (15)	2.4% (3)
26+ years (n=110)	22.7% (25)	60.9% (67)	13.6% (15)	2.7% (3)
CLASS OF VEHICLE				
Class 7 (n=274).....	25.2% (69)	60.2% (165)	9.1% (25)	5.5% (15)
Class 11 (n=36).....	13.9% (5)	66.7% (24)	19.4% (7)	0.0% (-)
Class 12 (n=478).....	25.5% (122)	59.2% (283)	14.6% (70)	0.6% (3)
AGE OF VEHICLE				
1999 and older (n=500).....	26.8% (134)	61.0% (305)	8.8% (44)	3.4% (17)
2000 and newer (n=287)	21.6% (62)	57.8% (166)	20.2% (58)	0.3% (1)
Maintenance of Equipment (n=849)	23.0% (195)	61.1% (519)	12.7% (108)	3.2% (27)
WORK LOCATION				
District 1 (n=161)	27.3% (44)	55.9% (90)	11.8% (19)	5.0% (8)
District 2 (n=124)	22.6% (28)	58.9% (73)	16.1% (20)	2.4% (3)
District 3 (n=123)	17.1% (21)	61.8% (76)	16.3% (20)	4.9% (6)
District 4 (n=135)	18.5% (25)	71.9% (97)	8.1% (11)	1.5% (2)
District 5 (n=127)	24.4% (31)	62.2% (79)	11.0% (14)	2.4% (3)
District 6 (n=179)	25.7% (46)	58.1% (104)	13.4% (24)	2.8% (5)
OPERATOR EXPERIENCE				
0-5 years (n=161)	21.1% (34)	55.9% (90)	15.5% (25)	7.5% (12)
6-10 years (n=174)	25.3% (44)	62.1% (108)	11.5% (20)	1.1% (2)
11-15 years (n=102)	22.5% (23)	62.7% (64)	11.8% (12)	2.9% (3)
16-20 years (n=169)	25.4% (43)	59.8% (101)	13.0% (22)	1.8% (3)
21-25 years (n=122)	18.9% (23)	65.6% (80)	13.1% (16)	2.5% (3)
26+ years (n=110)	20.9% (23)	65.5% (72)	10.9% (12)	2.7% (3)
CLASS OF VEHICLE				
Class 7 (n=273).....	19.8% (54)	64.8% (177)	9.5% (26)	5.9% (16)
Class 11 (n=39).....	10.3% (4)	64.1% (25)	25.6% (10)	0.0% (-)
Class 12 (n=481).....	24.7% (119)	60.5% (291)	13.9% (67)	0.8% (4)
AGE OF VEHICLE				
1999 and older (n=502).....	20.9% (105)	65.5% (329)	10.2% (51)	3.4% (17)
2000 and newer (n=290)	24.5% (71)	56.6% (164)	17.9% (52)	1.0% (3)

	<i>Needs Work</i>	<i>Okay</i>	<i>Works Great</i>	<i>N/A</i>
Capacity (n=853).....	20.3% (173)	63.7% (543)	12.9% (110)	3.2% (27)
WORK LOCATION				
District 1 (n=161)	18.6% (30)	64.0% (103)	13.7% (22)	3.7% (6)
District 2 (n=123)	24.4% (30)	57.7% (71)	15.4% (19)	2.4% (3)
District 3 (n=124)	29.0% (36)	54.8% (68)	11.3% (14)	4.8% (6)
District 4 (n=135)	20.7% (28)	65.9% (89)	11.9% (16)	1.5% (2)
District 5 (n=128)	17.2% (22)	69.5% (89)	10.2% (13)	3.1% (4)
District 6 (n=182)	14.8% (27)	67.6% (123)	14.3% (26)	3.3% (6)
OPERATOR EXPERIENCE				
0-5 years (n=161)	20.5% (33)	62.1% (100)	11.2% (18)	6.2% (10)
6-10 years (n=175)	20.0% (35)	63.4% (111)	15.4% (27)	1.1% (2)
11-15 years (n=102)	16.7% (17)	65.7% (67)	13.7% (14)	3.9% (4)
16-20 years (n=168)	20.8% (35)	65.5% (110)	11.9% (20)	1.8% (3)
21-25 years (n=124)	22.6% (28)	60.5% (75)	13.7% (17)	3.2% (4)
26+ years (n=112)	20.5% (23)	64.3% (72)	12.5% (14)	2.7% (3)
CLASS OF VEHICLE				
Class 7 (n=275).....	19.3% (53)	65.7% (181)	9.5% (26)	5.5% (15)
Class 11 (n=39).....	12.8% (5)	59.0% (23)	28.2% (11)	0.0% (-)
Class 12 (n=482).....	20.7% (100)	64.3% (310)	13.9% (67)	1.0% (5)
AGE OF VEHICLE				
1999 and older (n=504).....	21.4% (108)	66.1% (333)	8.9% (45)	3.6% (18)
2000 and newer (n=291)	17.2% (50)	61.9% (180)	20.3% (59)	0.7% (2)
Pre-Wetting System (n=834)	19.4% (162)	57.8% (482)	16.3% (136)	6.5% (54)
WORK LOCATION				
District 1 (n=159)	26.4% (42)	52.2% (82)	14.5% (23)	6.9% (11)
District 2 (n=121)	19.0% (23)	54.5% (66)	19.0% (23)	7.4% (9)
District 3 (n=119)	16.8% (20)	58.8% (70)	16.8% (20)	7.6% (9)
District 4 (n=132)	16.7% (22)	65.9% (87)	12.1% (16)	5.3% (7)
District 5 (n=125)	19.2% (24)	58.4% (73)	17.6% (22)	4.8% (6)
District 6 (n=178)	17.4% (31)	57.9% (103)	18.0% (32)	6.7% (12)
OPERATOR EXPERIENCE				
0-5 years (n=159)	18.9% (30)	57.2% (91)	16.4% (26)	7.5% (12)
6-10 years (n=170)	25.3% (43)	52.4% (89)	18.8% (32)	3.5% (6)
11-15 years (n=99)	17.2% (17)	60.6% (60)	15.2% (15)	7.1% (7)
16-20 years (n=166)	18.1% (30)	61.4% (102)	12.7% (21)	7.8% (13)
21-25 years (n=121)	19.0% (23)	54.5% (66)	19.8% (24)	6.6% (8)
26+ years (n=110)	14.5% (16)	64.5% (71)	15.5% (17)	5.5% (6)
CLASS OF VEHICLE				
Class 7 (n=267).....	17.2% (46)	59.6% (159)	12.4% (33)	10.9% (29)
Class 11 (n=38).....	10.5% (4)	55.3% (21)	28.9% (11)	5.3% (2)
Class 12 (n=476).....	20.8% (99)	57.8% (275)	18.1% (86)	3.4% (16)
AGE OF VEHICLE				
1999 and older (n=493).....	19.1% (94)	60.0% (296)	13.0% (64)	7.9% (39)
2000 and newer (n=287)	19.2% (55)	55.4% (159)	22.6% (65)	2.8% (8)

	<i>Needs Work</i>	<i>Okay</i>	<i>Works Great</i>	<i>N/A</i>
Pressurized Feed (n=828)	15.9% (132)	48.3% (400)	12.9% (107)	22.8% (189)
WORK LOCATION				
District 1 (n=158)	18.4% (29)	53.2% (84)	13.3% (21)	15.2% (24)
District 2 (n=118)	16.9% (20)	36.4% (43)	9.3% (11)	37.3% (44)
District 3 (n=123)	19.5% (24)	38.2% (47)	13.8% (17)	28.5% (35)
District 4 (n=135)	15.6% (21)	64.4% (87)	11.1% (15)	8.9% (12)
District 5 (n=124)	12.1% (15)	54.8% (68)	17.7% (22)	15.3% (19)
District 6 (n=170)	13.5% (23)	41.8% (71)	12.4% (21)	32.4% (55)
OPERATOR EXPERIENCE				
0-5 years (n=158)	15.2% (24)	39.2% (62)	17.7% (26)	27.8% (44)
6-10 years (n=174)	20.1% (35)	44.3% (77)	16.1% (28)	19.5% (34)
11-15 years (n=98)	11.2% (11)	57.1% (56)	6.1% (6)	25.5% (25)
16-20 years (n=160)	16.3% (26)	53.8% (86)	13.1% (21)	16.9% (27)
21-25 years (n=119)	15.1% (18)	47.1% (56)	11.8% (14)	26.1% (31)
26+ years (n=109)	13.8% (15)	54.1% (59)	9.2% (10)	22.9% (25)
CLASS OF VEHICLE				
Class 7 (n=265).....	17.0% (45)	46.4% (123)	7.9% (21)	28.7% (76)
Class 11 (n=39).....	5.1% (2)	56.4% (22)	35.9% (14)	2.6% (1)
Class 12 (n=470).....	15.7% (74)	48.1% (226)	14.9% (70)	21.3% (100)
AGE OF VEHICLE				
1999 and older (n=486).....	15.6% (76)	44.7% (217)	8.0% (39)	31.7% (154)
2000 and newer (n=287)	15.7% (45)	53.3% (153)	23.0% (66)	8.0% (23)
Anti-Ice System (n=823)	15.8% (130)	46.3% (381)	13.0% (107)	24.9% (205)
WORK LOCATION				
District 1 (n=157)	19.1% (30)	41.4% (65)	12.1% (19)	27.4% (43)
District 2 (n=122)	21.3% (26)	39.3% (48)	12.3% (15)	27.0% (33)
District 3 (n=120)	16.7% (20)	40.8% (49)	14.2% (17)	28.3% (34)
District 4 (n=127)	11.8% (15)	63.0% (80)	10.2% (13)	15.0% (19)
District 5 (n=125)	12.0% (15)	52.8% (66)	17.6% (22)	17.6% (22)
District 6 (n=172)	14.0% (24)	42.4% (73)	12.2% (21)	31.4% (54)
OPERATOR EXPERIENCE				
0-5 years (n=159)	11.9% (19)	46.5% (74)	17.6% (28)	23.9% (38)
6-10 years (n=172)	16.9% (29)	41.9% (72)	15.7% (27)	25.6% (44)
11-15 years (n=98)	11.2% (11)	51.0% (50)	8.2% (8)	29.6% (29)
16-20 years (n=160)	16.3% (26)	49.4% (79)	11.9% (19)	22.5% (36)
21-25 years (n=116)	20.7% (24)	44.0% (51)	12.1% (14)	23.3% (27)
26+ years (n=107)	16.8% (18)	48.6% (52)	9.3% (10)	25.2% (27)
CLASS OF VEHICLE				
Class 7 (n=265).....	13.6% (36)	45.7% (121)	9.8% (26)	30.9% (82)
Class 11 (n=37).....	5.4% (2)	40.5% (15)	32.4% (12)	21.6% (8)
Class 12 (n=466).....	17.2% (80)	46.4% (216)	13.7% (64)	22.7% (106)
AGE OF VEHICLE				
1999 and older (n=483).....	13.9% (67)	46.2% (223)	8.7% (42)	31.3% (151)
2000 and newer (n=284)	18.0% (51)	45.4% (127)	20.8% (59)	15.8% (45)

	<i>Needs Work</i>	<i>Okay</i>	<i>Works Great</i>	<i>N/A</i>
Controls (n=849)	15.5% (132)	64.3% (546)	17.0% (144)	3.2% (27)
WORK LOCATION				
District 1 (n=161)	23.0%	60.2%	12.4%	4.3%
District 2 (n=123)	13.0%	61.8%	22.0%	3.3%
District 3 (n=124)	16.1%	61.3%	17.7%	4.8%
District 4 (n=134)	15.7%	67.2%	15.7%	1.5%
District 5 (n=127)	11.0%	70.9%	15.7%	2.4%
District 6 (n=180)	13.3%	65.0%	18.9%	2.8%
OPERATOR EXPERIENCE				
0-5 years (n=161)	9.9%	66.5%	17.4%	6.2%
6-10 years (n=175)	10.3%	67.4%	20.6%	1.7%
11-15 years (n=100)	15.0%	64.0%	18.0%	3.0%
16-20 years (n=167)	20.4%	62.3%	15.6%	1.8%
21-25 years (n=123)	19.5%	62.6%	15.4%	2.4%
26+ years (n=113)	19.3%	62.8%	14.2%	3.5%
CLASS OF VEHICLE				
Class 7 (n=273).....	16.8%	64.1%	13.2%	5.9%
Class 11 (n=39).....	2.6%	64.1%	33.3%	0.0%
Class 12 (n=480).....	15.0%	65.6%	18.5%	0.8%
AGE OF VEHICLE				
1999 and older (n=500).....	17.0%	67.0%	12.4%	3.6%
2000 and newer (n=291)	11.3%	61.9%	26.1%	0.7%
Ease of Operation (n=852)	12.3% (105)	65.3% (556)	19.5% (166)	2.9% (25)
WORK LOCATION				
District 1 (n=162)	17.9%	63.0%	15.4%	3.7%
District 2 (n=123)	10.6%	63.4%	23.6%	2.4%
District 3 (n=125)	14.4%	57.6%	23.2%	4.8%
District 4 (n=135)	11.9%	72.6%	14.8%	0.7%
District 5 (n=127)	9.4%	67.7%	19.7%	3.1%
District 6 (n=180)	9.4%	66.7%	21.1%	2.8%
OPERATOR EXPERIENCE				
0-5 years (n=161)	8.1%	64.6%	21.1%	6.2%
6-10 years (n=175)	12.6%	62.3%	23.4%	1.7%
11-15 years (n=103)	9.7%	67.0%	20.4%	2.9%
16-20 years (n=166)	15.7%	63.9%	18.7%	1.8%
21-25 years (n=122)	10.7%	68.9%	18.0%	2.5%
26+ years (n=113)	15.0%	69.0%	14.2%	1.8%
CLASS OF VEHICLE				
Class 7 (n=276).....	14.9%	63.8%	15.6%	5.8%
Class 11 (n=39).....	5.1%	53.8%	41.0%	0.0%
Class 12 (n=480).....	11.0%	67.7%	20.8%	0.4%
AGE OF VEHICLE				
1999 and older (n=504).....	12.9%	68.8%	15.1%	3.2%
2000 and newer (n=290)	10.7%	60.0%	28.6%	0.7%

	<i>Needs Work</i>	<i>Okay</i>	<i>Works Great</i>	<i>N/A</i>
Gravity Feed (n=809).....	12.2% (99)	45.0% (364)	11.0% (89)	31.8% (257)
WORK LOCATION				
District 1 (n=152).....	19.7% (30)	40.8% (62)	5.3% (8)	34.2% (52)
District 2 (n=114).....	6.1% (7)	54.4% (62)	19.3% (22)	20.2% (23)
District 3 (n=120).....	16.7% (20)	37.5% (45)	10.0% (12)	35.8% (43)
District 4 (n=125).....	11.2% (14)	39.2% (49)	8.8% (11)	40.8% (51)
District 5 (n=122).....	9.8% (12)	41.0% (50)	13.9% (17)	35.2% (43)
District 6 (n=176).....	9.1% (16)	54.5% (96)	10.8% (19)	25.6% (45)
OPERATOR EXPERIENCE				
0-5 years (n=155).....	10.3% (16)	41.9% (65)	11.0% (17)	36.8% (57)
6-10 years (n=166).....	12.7% (21)	40.4% (67)	12.0% (20)	34.9% (58)
11-15 years (n=96).....	9.4% (9)	43.8% (42)	14.6% (14)	32.3% (31)
16-20 years (n=159).....	13.2% (21)	45.9% (73)	9.4% (15)	31.4% (50)
21-25 years (n=116).....	15.5% (18)	47.4% (55)	8.6% (10)	28.4% (33)
26+ years (n=105).....	10.5% (11)	56.2% (59)	10.5% (11)	22.9% (24)
CLASS OF VEHICLE				
Class 7 (n=267).....	12.0% (32)	45.3% (121)	11.2% (30)	31.5% (84)
Class 11 (n=34).....	5.9% (2)	14.7% (5)	8.8% (3)	70.6% (24)
Class 12 (n=452).....	12.6% (57)	46.5% (210)	10.8% (49)	30.1% (136)
AGE OF VEHICLE				
1999 and older (n=486).....	13.2% (64)	50.8% (247)	11.1% (54)	24.9% (121)
2000 and newer (n=266).....	10.2% (27)	33.1% (88)	10.5% (28)	46.2% (123)

TRUCK LIQUID SYSTEMS

% Needs Improvement			Age		
			1999 & Older	2000 & Newer	Impact?
28.8%	Truck Liquid Systems		28.4%	30.3%	No
	% Needs Work				
	25.6%	Design	26.8%	21.6%	?
	20.9%	Maintenance of Equipment	20.9%	24.5%	?
	20.3%	Capacity	21.4%	17.2%	?

Findings/Next Steps – The committee’s next step will be to work on newly designed in-bed tanks to be tested this winter. The committee will look further into why newer trucks appear to need more work in regard to maintenance.

Specific Equipment Performance – Wings

	<i>Needs Work</i>	<i>Okay</i>	<i>Works Great</i>	<i>N/A</i>
Wing Removing Shoulder Rock (n=806)	20.8% (168)	48.5% (391)	11.9% (96)	18.7% (151)
WORK LOCATION				
District 1 (n=152)	25.0% (38)	40.8% (62)	10.5% (16)	23.7% (36)
District 2 (n=115)	18.3% (21)	55.7% (64)	13.0% (15)	13.0% (15)
District 3 (n=116)	19.0% (22)	50.0% (58)	8.6% (10)	22.4% (26)
District 4 (n=129)	24.8% (32)	50.4% (65)	10.9% (14)	14.0% (18)
District 5 (n=121)	19.8% (24)	42.1% (51)	14.9% (18)	23.1% (28)
District 6 (n=173)	17.9% (31)	52.6% (91)	13.3% (23)	16.2% (28)
OPERATOR EXPERIENCE				
0-5 years (n=152)	19.1% (29)	50.0% (76)	7.9% (12)	23.0% (35)
6-10 years (n=166)	18.7% (31)	44.0% (73)	15.7% (26)	21.7% (35)
11-15 years (n=97)	28.9% (28)	43.3% (42)	11.3% (11)	16.5% (16)
16-20 years (n=158)	23.4% (37)	46.8% (74)	13.9% (22)	15.8% (25)
21-25 years (n=117)	22.2% (26)	49.6% (58)	10.3% (12)	17.9% (21)
26+ years (n=107)	14.0% (15)	58.9% (63)	11.2% (12)	15.9% (17)
CLASS OF VEHICLE				
Class 7 (n=249)	19.7% (49)	45.4% (113)	8.0% (20)	17.3% (67)
Class 11 (n=36)	13.9% (5)	55.6% (20)	8.3% (3)	0.0% (8)
Class 12 (n=468)	22.0% (103)	49.4% (231)	14.3% (67)	4.5% (67)
AGE OF VEHICLE				
1999 and older (n=477)	20.5% (98)	49.9% (238)	10.1% (48)	19.5% (93)
2000 and newer (n=275)	21.1% (58)	45.8% (126)	15.3% (42)	17.8% (49)
Wing Design (n=841)	16.2% (136)	58.0% (488)	17.1% (144)	8.7% (73)
WORK LOCATION				
District 1 (n=153)	17.6% (27)	51.0% (78)	13.7% (21)	17.6% (27)
District 2 (n=123)	13.0% (16)	64.2% (79)	17.1% (21)	5.7% (7)
District 3 (n=122)	13.9% (17)	59.8% (73)	18.9% (23)	7.4% (9)
District 4 (n=134)	18.7% (25)	60.4% (81)	14.2% (19)	6.7% (9)
District 5 (n=131)	19.8% (26)	53.4% (70)	19.1% (25)	7.6% (10)
District 6 (n=178)	14.0% (25)	60.1% (107)	19.7% (35)	6.2% (11)
OPERATOR EXPERIENCE				
0-5 years (n=158)	9.5% (15)	61.4% (97)	17.1% (27)	12.0% (19)
6-10 years (n=171)	21.6% (37)	50.9% (87)	18.1% (31)	9.4% (16)
11-15 years (n=102)	19.6% (20)	59.8% (61)	15.7% (16)	4.9% (5)
16-20 years (n=166)	19.3% (32)	54.8% (91)	18.7% (31)	7.2% (12)
21-25 years (n=123)	13.0% (16)	61.8% (76)	16.3% (20)	8.9% (11)
26+ years (n=112)	14.3% (16)	62.5% (70)	15.2% (17)	8.0% (9)
CLASS OF VEHICLE				
Class 7 (n=259)	11.2% (29)	59.8% (155)	11.2% (29)	17.8% (46)
Class 11 (n=38)	34.2% (13)	47.4% (18)	18.4% (7)	0.0% (-)
Class 12 (n=487)	17.2% (84)	58.5% (285)	19.9% (97)	4.3% (21)
AGE OF VEHICLE				
1999 and older (n=494)	12.3% (61)	62.6% (309)	14.2% (70)	10.9% (54)
2000 and newer (n=289)	22.1% (64)	51.6% (149)	21.8% (63)	4.5% (13)

	<i>Needs Work</i>	<i>Okay</i>	<i>Works Great</i>	<i>N/A</i>
Lowering the Wing (n=842)	14.5% (122)	58.8% (495)	18.2% (153)	8.6% (72)
WORK LOCATION				
District 1 (n=153)	13.1%	56.9%	12.4%	17.6%
District 2 (n=123)	13.8%	59.3%	22.0%	4.9%
District 3 (n=122)	17.2%	58.2%	17.2%	7.4%
District 4 (n=135)	14.2%	61.5%	17.8%	6.7%
District 5 (n=130)	15.4%	56.2%	20.8%	7.7%
District 6 (n=179)	14.0%	60.3%	19.6%	6.1%
OPERATOR EXPERIENCE				
0-5 years (n=158)	13.9%	56.3%	17.7%	12.0%
6-10 years (n=172)	11.0%	58.7%	20.9%	9.3%
11-15 years (n=103)	14.6%	63.1%	17.5%	4.9%
16-20 years (n=167)	19.2%	55.1%	19.2%	6.6%
21-25 years (n=122)	15.6%	57.4%	18.0%	9.0%
26+ years (n=112)	13.4%	64.3%	14.3%	8.0%
CLASS OF VEHICLE				
Class 7 (n=259).....	8.9%	57.5%	16.2%	17.4%
Class 11 (n=39).....	46.2%	38.5%	15.4%	0.0%
Class 12 (n=487).....	15.2%	61.4%	19.1%	4.3%
AGE OF VEHICLE				
1999 and older (n=494).....	10.7%	63.0%	15.6%	10.7%
2000 and newer (n=290)	21.4%	52.1%	22.1%	4.5%
Raising the Wing (n=841)	12.0% (101)	60.3% (507)	19.0% (160)	8.7% (73)
WORK LOCATION				
District 1 (n=152)	13.8%	55.3%	12.5%	18.4%
District 2 (n=123)	5.7%	67.5%	22.0%	4.9%
District 3 (n=122)	14.8%	60.7%	17.2%	7.4%
District 4 (n=136)	12.5%	62.5%	18.4%	6.6%
District 5 (n=130)	13.8%	56.2%	22.3%	7.7%
District 6 (n=178)	11.2%	60.7%	21.9%	6.2%
OPERATOR EXPERIENCE				
0-5 years (n=157)	12.1%	56.7%	19.1%	12.1%
6-10 years (n=172)	9.9%	59.3%	21.5%	9.3%
11-15 years (n=103)	14.6%	61.2%	18.4%	5.8%
16-20 years (n=167)	14.4%	58.7%	20.4%	6.6%
21-25 years (n=122)	11.5%	61.5%	18.0%	9.0%
26+ years (n=112)	10.7%	66.1%	15.2%	8.0%
CLASS OF VEHICLE				
Class 7 (n=260).....	6.9%	60.0%	15.8%	17.3%
Class 11 (n=39).....	25.6%	56.4%	17.9%	0.0%
Class 12 (n=485).....	14.0%	60.8%	20.6%	4.5%
AGE OF VEHICLE				
1999 and older (n=497).....	11.5%	62.0%	15.7%	10.9%
2000 and newer (n=286)	13.6%	57.3%	24.5%	4.5%

	<i>Needs Work</i>	<i>Okay</i>	<i>Works Great</i>	<i>N/A</i>
Wing Style (length) (n=831)	9.7% (81)	65.3% (543)	15.9% (131)	9.0% (75)
WORK LOCATION				
District 1 (n=152)	11.8% (18)	58.6% (89)	11.8% (18)	17.8% (27)
District 2 (n=123)	8.9% (11)	65.0% (80)	20.3% (25)	5.7% (7)
District 3 (n=119)	10.9% (13)	63.9% (76)	17.6% (21)	7.6% (9)
District 4 (n=133)	7.5% (10)	72.9% (97)	12.8% (17)	6.8% (9)
District 5 (n=128)	10.9% (14)	64.8% (83)	14.8% (19)	9.4% (12)
District 6 (n=176)	8.5% (15)	67.0% (118)	18.2% (32)	6.3% (11)
OPERATOR EXPERIENCE				
0-5 years (n=154)	6.5% (10)	64.9% (100)	16.2% (25)	12.3% (19)
6-10 years (n=169)	13.0% (22)	62.1% (105)	14.2% (24)	10.7% (18)
11-15 years (n=103)	12.6% (13)	65.0% (67)	17.5% (18)	4.9% (5)
16-20 years (n=164)	11.0% (18)	65.2% (107)	16.5% (27)	7.3% (12)
21-25 years (n=122)	7.4% (9)	68.0% (83)	15.6% (19)	9.0% (11)
26+ years (n=111)	7.2% (8)	69.4% (77)	15.3% (17)	8.1% (9)
CLASS OF VEHICLE				
Class 7 (n=255).....	7.1% (18)	65.1% (166)	9.8% (25)	18.0% (46)
Class 11 (n=39).....	17.9% (7)	64.1% (25)	17.9% (7)	0.0% (-)
Class 12 (n=480).....	10.2% (49)	66.3% (318)	19.0% (91)	4.6% (27)
AGE OF VEHICLE				
1999 and older (n=484).....	7.9% (38)	68.2% (330)	12.8% (62)	11.2% (54)
2000 and newer (n=289)	12.5% (36)	61.6% (178)	21.1% (61)	4.8% (14)
Benching (n=811)	9.6% (78)	43.9% (356)	13.8% (112)	32.7% (265)
WORK LOCATION				
District 1 (n=150)	10.0% (15)	48.7% (73)	12.0% (18)	29.3% (44)
District 2 (n=120)	13.3% (16)	48.3% (58)	12.5% (15)	25.8% (31)
District 3 (n=116)	6.1% (7)	40.0% (46)	19.1% (22)	34.8% (40)
District 4 (n=129)	8.4% (11)	51.9% (68)	12.2% (16)	27.5% (36)
District 5 (n=117)	11.6% (14)	28.9% (35)	12.4% (15)	47.1% (57)
District 6 (n=169)	8.6% (15)	43.7% (76)	14.9% (26)	32.8% (57)
OPERATOR EXPERIENCE				
0-5 years (n=152)	9.2% (14)	37.5% (57)	10.5% (16)	42.8% (65)
6-10 years (n=170)	8.8% (15)	40.6% (69)	16.5% (28)	34.1% (58)
11-15 years (n=99)	9.1% (9)	45.5% (45)	12.1% (12)	33.3% (33)
16-20 years (n=157)	11.5% (18)	43.9% (69)	15.9% (25)	28.7% (45)
21-25 years (n=117)	12.8% (15)	46.2% (54)	11.1% (13)	29.9% (35)
26+ years (n=107)	6.5% (7)	53.3% (57)	15.9% (17)	24.3% (26)
CLASS OF VEHICLE				
Class 7 (n=247).....	10.5% (26)	27.9% (69)	4.5% (11)	57.1% (141)
Class 11 (n=34).....	14.7% (5)	17.6% (6)	17.6% (6)	50.0% (17)
Class 12 (n=474).....	9.5% (45)	51.9% (246)	18.6% (88)	20.0% (95)
AGE OF VEHICLE				
1999 and older (n=477).....	8.8% (42)	44.0% (210)	13.4% (64)	33.8% (161)
2000 and newer (n=277)	12.3% (34)	39.7% (110)	14.8% (41)	33.2% (92)

	<i>Needs Work</i>	<i>Okay</i>	<i>Works Great</i>	<i>N/A</i>
Wing Type (front, mid, rear) (n=800).....	9.0% (78)	61.6% (356)	18.9% (112)	10.5% (265)
WORK LOCATION				
District 1 (n=149)	12.8% (19)	53.7% (80)	14.1% (21)	19.5% (29)
District 2 (n=120)	4.2% (5)	69.2% (83)	20.8% (25)	5.8% (7)
District 3 (n=116)	12.1% (14)	56.0% (65)	20.7% (24)	11.2% (13)
District 4 (n=129)	8.5% (11)	67.4% (87)	16.3% (21)	7.8% (10)
District 5 (n=117)	10.3% (12)	62.4% (73)	16.2% (19)	11.1% (13)
District 6 (n=169)	6.5% (11)	62.1% (105)	24.3% (41)	7.1% (12)
OPERATOR EXPERIENCE				
0-5 years (n=152)	5.3% (8)	65.1% (99)	17.1% (26)	12.5% (19)
6-10 years (n=162)	13.6% (22)	54.3% (88)	19.1% (31)	13.0% (21)
11-15 years (n=98)	12.2% (12)	62.2% (61)	19.4% (19)	6.1% (6)
16-20 years (n=155)	9.7% (15)	60.0% (93)	20.6% (32)	9.7% (15)
21-25 years (n=118)	7.6% (9)	62.7% (74)	19.5% (23)	10.2% (12)
26+ years (n=107)	5.6% (6)	67.3% (72)	17.8% (19)	9.3% (10)
CLASS OF VEHICLE				
Class 7 (n=250).....	4.4% (11)	63.6% (159)	12.4% (31)	19.6% (49)
Class 11 (n=38).....	28.9% (11)	44.7% (17)	26.3% (10)	0.0% (-)
Class 12 (n=458).....	9.8% (45)	62.0% (284)	22.3% (102)	5.9% (27)
AGE OF VEHICLE				
1999 and older (n=472).....	6.6% (31)	64.8% (306)	15.9% (75)	12.7% (60)
2000 and newer (n=273)	13.2% (36)	56.4% (154)	24.5% (67)	5.9% (16)
Ability to Remove Snow from (n=844)	4.5% (38)	60.3% (509)	26.4% (223)	8.8% (74)
Shoulder				
WORK LOCATION				
District 1 (n=153)	4.6% (7)	54.2% (83)	23.5% (36)	17.6% (27)
District 2 (n=122)	3.3% (4)	68.0% (83)	23.8% (29)	4.9% (6)
District 3 (n=125)	4.0% (5)	63.2% (79)	23.2% (29)	9.6% (12)
District 4 (n=136)	8.8% (12)	62.5% (85)	22.8% (31)	5.9% (8)
District 5 (n=132)	4.5% (6)	59.8% (79)	28.0% (37)	7.6% (10)
District 6 (n=176)	2.3% (4)	56.8% (100)	34.7% (61)	6.3% (11)
OPERATOR EXPERIENCE				
0-5 years (n=157)	1.3% (2)	58.0% (91)	28.7% (45)	12.1% (19)
6-10 years (n=173)	8.1% (14)	56.6% (98)	25.4% (44)	9.8% (17)
11-15 years (n=103)	6.8% (7)	61.2% (63)	25.2% (26)	6.8% (7)
16-20 years (n=167)	5.4% (9)	58.7% (98)	29.3% (49)	6.6% (11)
21-25 years (n=123)	0.8% (1)	65.0% (80)	25.2% (31)	8.9% (11)
26+ years (n=111)	4.5% (5)	64.0% (71)	24.3% (27)	7.2% (8)
CLASS OF VEHICLE				
Class 7 (n=261).....	5.0% (13)	60.9% (159)	16.5% (43)	17.6% (46)
Class 11 (n=38).....	10.5% (4)	55.3% (21)	34.2% (13)	0.0% (-)
Class 12 (n=488).....	3.7% (18)	60.2% (294)	31.6% (154)	4.5% (22)
AGE OF VEHICLE				
1999 and older (n=497).....	3.2% (16)	63.2% (314)	22.7% (113)	10.9% (54)
2000 and newer (n=289)	6.6% (19)	55.4% (160)	33.2% (96)	4.8% (14)

WINGS

% Needs Improvement		Age			
		1999 & Older	2000 & Newer	Impact?	
19.5%	Wings	18.1%	21.4%	No	
	% Needs Work				
	20.8%	Removing shoulder rock	20.5%	21.1%	No
	16.2%	Wing Design	12.3%	22.1%	Yes

Findings/Next Steps – The committee will break down the data further. The committee will look into why there are more complaints on newer equipment in this area.

Specific Equipment Performance – Front Plow

	<i>Needs Work</i>	<i>Okay</i>	<i>Works Great</i>	<i>N/A</i>
Keeps Snow From Windshield (n=861) ...	54.7% (471)	39.4% (339)	5.6% (48)	0.3% (3)
WORK LOCATION				
District 1 (n=165)	23.0%	60.2%	12.4%	4.3%
District 2 (n=125)	13.0%	61.8%	22.0%	3.3%
District 3 (n=124)	16.1%	61.3%	17.7%	4.8%
District 4 (n=136)	15.7%	67.2%	15.7%	1.5%
District 5 (n=130)	11.0%	70.9%	15.7%	2.4%
District 6 (n=181)	13.3%	65.0%	18.9%	2.8%
OPERATOR EXPERIENCE				
0-5 years (n=164)	50.6%	43.3%	5.5%	0.6%
6-10 years (n=177)	54.2%	36.7%	8.5%	0.6%
11-15 years (n=105)	55.2%	37.1%	6.7%	1.0%
16-20 years (n=168)	55.4%	41.7%	3.0%	0.0%
21-25 years (n=123)	56.1%	38.2%	5.7%	0.0%
26+ years (n=113)	59.3%	36.3%	4.4%	0.0%
CLASS OF VEHICLE				
Class 7 (n=277).....	52.3%	41.2%	6.1%	0.4%
Class 11 (n=38).....	34.2%	52.6%	13.2%	0.0%
Class 12 (n=480).....	57.1%	37.9%	4.9%	0.0%
AGE OF VEHICLE				
1999 and older (n=510).....	58.8%	36.1%	4.9%	0.2%
2000 and newer (n=289)	46.4%	46.4%	7.3%	0.0%
Ability to Remove Ice (n=851)	47.5% (404)	40.8% (347)	6.1% (52)	5.6% (48)
WORK LOCATION				
District 1 (n=164)	48.2%	39.6%	6.7%	5.5%
District 2 (n=122)	49.2%	38.5%	5.7%	6.6%
District 3 (n=124)	49.2%	41.9%	5.6%	3.2%
District 4 (n=134)	46.3%	46.3%	3.0%	4.5%
District 5 (n=128)	49.2%	37.5%	5.5%	7.8%
District 6 (n=179)	44.1%	40.8%	8.9%	6.1%
OPERATOR EXPERIENCE				
0-5 years (n=163)	51.5%	39.3%	4.9%	4.3%
6-10 years (n=178)	45.5%	43.3%	6.7%	4.5%
11-15 years (n=101)	48.5%	32.7%	7.9%	10.9%
16-20 years (n=168)	45.2%	42.9%	4.2%	7.7%
21-25 years (n=121)	48.8%	39.7%	6.6%	5.0%
26+ years (n=109)	45.0%	44.0%	8.3%	2.8%
CLASS OF VEHICLE				
Class 7 (n=274).....	49.3%	39.1%	4.7%	6.9%
Class 11 (n=38).....	39.5%	42.1%	10.5%	7.9%
Class 12 (n=488).....	47.9%	41.3%	6.3%	4.6%
AGE OF VEHICLE				
1999 and older (n=5050).....	47.7%	42.6%	4.8%	5.0%
2000 and newer (n=286)	48.3%	37.1%	8.0%	6.6%

	<i>Needs Work</i>	<i>Okay</i>	<i>Works Great</i>	<i>N/A</i>
Clean Road to Bare Pavement (n=857)	26.7% (229)	62.1% (532)	10.3% (88)	0.9% (8)
WORK LOCATION				
District 1 (n=1661)	25.9% (43)	62.7% (104)	10.2% (17)	1.2% (2)
District 2 (n=123)	28.5% (35)	61.0% (75)	8.1% (10)	2.4% (3)
District 3 (n=124)	31.5% (39)	60.5% (75)	8.1% (10)	0.0% (-)
District 4 (n=134)	27.6% (37)	61.9% (83)	10.4% (14)	0.0% (-)
District 5 (n=128)	25.0% (32)	60.2% (77)	13.3% (17)	1.6% (2)
District 6 (n=182)	23.6% (43)	64.8% (118)	11.0% (20)	0.5% (1)
OPERATOR EXPERIENCE				
0-5 years (n=163)	30.1% (49)	58.3% (95)	10.4% (17)	1.2% (2)
6-10 years (n=177)	28.2% (50)	59.3% (105)	11.3% (20)	1.1% (2)
11-15 years (n=104)	25.0% (26)	61.5% (64)	12.5% (13)	1.0% (1)
16-20 years (n=170)	21.8% (37)	67.6% (115)	10.0% (17)	0.6% (1)
21-25 years (n=121)	27.3% (33)	60.3% (73)	11.6% (14)	0.8% (1)
26+ years (n=111)	27.9% (31)	64.9% (72)	6.3% (7)	0.9% (1)
CLASS OF VEHICLE				
Class 7 (n=276).....	23.6% (65)	63.8% (176)	11.6% (32)	1.1% (3)
Class 11 (n=37).....	29.7% (11)	51.4% (19)	18.9% (7)	0.0% (-)
Class 12 (n=485).....	28.5% (138)	61.6% (299)	9.3% (45)	0.6% (3)
AGE OF VEHICLE				
1999 and older (n=509).....	26.7% (136)	62.7% (319)	9.4% (48)	1.2% (6)
2000 and newer (n=288)	27.1% (78)	60.4% (174)	12.5% (36)	0.0% (-)
Blade Trip Mechanism (n=854).....	15.5% (132)	66.9% (571)	16.9% (144)	0.8% (7)
WORK LOCATION				
District 1 (n=164)	26.5% (27)	61.6% (101)	20.1% (33)	1.8% (3)
District 2 (n=123)	13.8% (17)	69.9% (86)	13.8% (17)	2.4% (3)
District 3 (n=124)	23.4% (29)	62.9% (78)	13.7% (17)	0.0% (-)
District 4 (n=135)	20.0% (27)	68.1% (92)	11.9% (16)	0.0% (-)
District 5 (n=128)	12.5% (16)	66.4% (85)	20.3% (26)	0.8% (1)
District 6 (n=180)	8.9% (16)	71.7% (129)	19.4% (35)	0.0% (-)
OPERATOR EXPERIENCE				
0-5 years (n=164)	15.9% (26)	62.2% (102)	20.1% (33)	1.8% (3)
6-10 years (n=176)	13.6% (24)	65.3% (115)	19.9% (35)	1.1% (2)
11-15 years (n=103)	14.6% (15)	61.2% (63)	23.3% (24)	0.0% (1)
16-20 years (n=169)	12.4% (21)	75.1% (127)	12.4% (21)	0.0% (-)
21-25 years (n=119)	18.5% (22)	66.4% (79)	14.3% (17)	0.8% (1)
26+ years (n=112)	19.6% (22)	69.6% (78)	10.7% (12)	0.0% (-)
CLASS OF VEHICLE				
Class 7 (n=276).....	16.3% (45)	67.0% (185)	16.3% (45)	0.4% (1)
Class 11 (n=36).....	5.6% (2)	72.2% (26)	19.4% (7)	2.8% (1)
Class 12 (n=484).....	15.9% (77)	66.5% (322)	16.9% (82)	0.6% (3)
AGE OF VEHICLE				
1999 and older (n=509).....	14.9% (76)	68.0% (346)	16.5% (84)	0.6% (3)
2000 and newer (n=286)	16.8% (48)	65.0% (186)	17.5% (50)	0.7% (2)

	<i>Needs Work</i>	<i>Okay</i>	<i>Works Great</i>	<i>N/A</i>
Size and Weight of Plow (n=858)	13.6% (117)	67.4% (578)	18.5% (159)	0.5% (4)
WORK LOCATION				
District 1 (n=163)	13.5% (22)	69.3% (114)	17.2% (28)	0.0% (-)
District 2 (n=124)	12.9% (16)	64.5% (80)	20.2% (25)	2.4% (3)
District 3 (n=126)	18.3% (23)	62.7% (79)	19.0% (24)	0.0% (-)
District 4 (n=133)	18.0% (24)	66.2% (88)	15.8% (21)	0.0% (-)
District 5 (n=130)	13.1% (17)	63.1% (82)	23.8% (31)	0.0% (-)
District 6 (n=182)	8.2% (15)	74.7% (136)	16.5% (30)	0.5% (1)
OPERATOR EXPERIENCE				
0-5 years (n=164)	13.4% (22)	63.4% (104)	22.6% (37)	0.6% (1)
6-10 years (n=176)	14.2% (25)	65.9% (116)	19.3% (34)	0.6% (1)
11-15 years (n=104)	15.4% (16)	64.4% (67)	19.2% (20)	1.0% (1)
16-20 years (n=168)	11.3% (19)	71.4% (120)	17.3% (29)	0.0% (-)
21-25 years (n=123)	13.8% (17)	68.3% (84)	17.9% (22)	0.0% (-)
26+ years (n=112)	15.2% (17)	69.6% (78)	14.3% (16)	0.9% (1)
CLASS OF VEHICLE				
Class 7 (n=277).....	15.5% (43)	66.4% (184)	17.7% (49)	0.4% (1)
Class 11 (n=36).....	11.1% (4)	69.4% (25)	19.4% (7)	0.0% (-)
Class 12 (n=486).....	12.3% (60)	68.1% (331)	19.3% (94)	0.2% (1)
AGE OF VEHICLE				
1999 and older (n=500).....	15.0% (77)	67.2% (344)	17.4% (89)	0.4% (2)
2000 and newer (n=291)	10.5% (30)	68.2% (195)	21.3% (61)	0.0% (-)
Ability to Remove Slush (n=864)	6.8% (59)	65.4% (565)	27.4% (237)	0.3% (3)
WORK LOCATION				
District 1 (n=166)	8.4% (14)	66.9% (11)	24.7% (41)	0.0% (-)
District 2 (n=123)	4.9% (6)	67.5% (84)	25.2% (31)	2.4% (3)
District 3 (n=126)	5.6% (7)	65.1% (82)	29.4% (37)	0.0% (-)
District 4 (n=135)	8.1% (11)	65.9% (89)	25.9% (35)	0.0% (-)
District 5 (n=131)	9.9% (13)	62.6% (82)	27.5% (36)	0.0% (-)
District 6 (n=183)	4.4% (8)	64.5% (118)	31.1% (57)	0.0% (-)
OPERATOR EXPERIENCE				
0-5 years (n=165)	9.1% (15)	64.2% (106)	26.1% (43)	0.6% (1)
6-10 years (n=177)	6.8% (12)	62.1% (110)	30.5% (54)	0.6% (1)
11-15 years (n=105)	2.9% (3)	67.6% (71)	28.6% (30)	1.0% (1)
16-20 years (n=171)	7.0% (12)	67.8% (116)	25.1% (43)	0.0% (-)
21-25 years (n=122)	9.0% (11)	59.0% (72)	32.0% (39)	0.0% (-)
26+ years (n=113)	4.4% (5)	70.8% (80)	24.8% (28)	0.0% (-)
CLASS OF VEHICLE				
Class 7 (n=278).....	9.4% (26)	62.9% (175)	27.3% (76)	0.4% (1)
Class 11 (n=38).....	7.9% (3)	55.3% (21)	36.8% (14)	0.0% (-)
Class 12 (n=487).....	5.3% (26)	67.6% (330)	27.0% (132)	0.0% (-)
AGE OF VEHICLE				
1999 and older (n=512).....	7.4% (38)	68.2% (349)	24.2% (124)	0.2% (1)
2000 and newer (n=291)	3.1% (17)	62.1% (177)	34.8% (97)	0.0% (-)

	<i>Needs Work</i>	<i>Okay</i>	<i>Works Great</i>	<i>N/A</i>
Ability to Remove Snow (n=863)	5.3% (46)	63.8% (551)	30.4% (262)	0.5% (4)
WORK LOCATION				
District 1 (n=165)	6.1% (10)	62.4% (103)	31.5% (52)	0.0% (-)
District 2 (n=124)	6.5% (8)	64.5% (80)	26.6% (33)	2.4% (3)
District 3 (n=126)	7.9% (10)	64.3% (81)	27.8% (35)	0.0% (-)
District 4 (n=135)	4.4% (6)	66.7% (90)	28.1% (38)	0.7% (1)
District 5 (n=130)	3.8% (5)	65.4% (85)	30.8% (40)	0.0% (-)
District 6 (n=183)	3.8% (7)	61.2% (112)	35.0% (64)	0.0% (-)
OPERATOR EXPERIENCE				
0-5 years (n=165)	4.2% (7)	63.5% (105)	31.5% (52)	0.6% (1)
6-10 years (n=177)	2.3% (4)	63.3% (112)	33.3% (59)	1.1% (2)
11-15 years (n=105)	7.6% (8)	57.1% (60)	34.3% (36)	1.0% (1)
16-20 years (n=169)	5.9% (10)	66.9% (113)	27.2% (46)	0.0% (-)
21-25 years (n=123)	10.6% (13)	55.3% (68)	34.1% (42)	0.0% (-)
26+ years (n=113)	3.5% (4)	74.3% (84)	22.1% (25)	0.0% (-)
CLASS OF VEHICLE				
Class 7 (n=278).....	7.2% (20)	64.4% (175)	28.1% (78)	0.4% (1)
Class 11 (n=38).....	7.9% (3)	44.7% (17)	47.4% (18)	0.0% (-)
Class 12 (n=487).....	4.7% (23)	64.9% (316)	30.2% (147)	0.2% (1)
AGE OF VEHICLE				
1999 and older (n=512).....	7.2% (37)	64.8% (332)	27.5% (141)	0.4% (2)
2000 and newer (n=290)	3.1% (9)	62.1% (180)	34.8% (101)	0.0% (-)

FRONT PLOW

% Needs Improvement			Age		
			1999 & Older	2000 & Newer	Impact?
18.5%	Front Plow		19.6%	17.7%	No
	% Needs Work				
	54.1%	Keeps snow from windshield	58.5%	46.4%	Yes
	47.5%	Ability to remove ice	47.7%	48.3%	No

Findings/Next Steps – The committee will continue to investigate down pressure plows. DOT will be entering in to research project with CTRE to develop new and different ways to remove snow and ice. The committee will be involved.

Specific Equipment Performance – Spreader

	<i>Needs Work</i>	<i>Okay</i>	<i>Works Great</i>	<i>N/A</i>
Type of Spinner (n=850).....	16.1% (137)	62.5% (531)	19.9% (169)	1.5% (13)
WORK LOCATION				
District 1 (n=163)	17.8% (29)	60.7% (99)	20.2% (33)	1.2% (2)
District 2 (n=123)	15.4 (19)	62.6% (77)	20.3% (25)	1.6% (2)
District 3 (n=126)	20.6% (26)	56.3% (71)	22.2% (28)	0.8% (1)
District 4 (n=131)	19.8% (26)	62.6% (82)	16.8% (22)	0.8% (1)
District 5 (n=127)	13.4% (17)	59.8% (76)	22.0% (28)	4.7% (6)
District 6 (n=180)	11.1% (20)	70.0% (126)	18.3% (33)	0.6% (1)
OPERATOR EXPERIENCE				
0-5 years (n=162)	14.8% (24)	63.0% (102)	20.4% (33)	1.9% (3)
6-10 years (n=173)	15.6% (27)	61.8% (107)	20.2% (35)	2.3% (4)
11-15 years (n=99)	14.1% (14)	60.6% (60)	23.2% (23)	2.0% (2)
16-20 years (n=169)	19.5% (33)	60.9% (103)	18.9% (32)	0.6% (1)
21-25 years (n=123)	13.0% (16)	66.7% (82)	18.7% (23)	1.6% (2)
26+ years (n=114)	18.4% (21)	62.3% (71)	18.4% (21)	0.9% (1)
CLASS OF VEHICLE				
Class 7 (n=270).....	15.6% (42)	63.7% (172)	20.0% (54)	0.7% (2)
Class 11 (n=38).....	31.6% (12)	34.2% (13)	34.2% (13)	0.0% (-)
Class 12 (n=484).....	15.7% (76)	64.3% (311)	18.8% (91)	1.2% (6)
AGE OF VEHICLE				
1999 and older (n=501).....	15.6% (78)	65.9% (330)	17.4% (87)	1.2% (6)
2000 and newer (n=290)	17.9% (52)	56.9% (165)	24.5% (71)	0.7% (2)
Clean Out (n=861)	14.9% (128)	66.7% (574)	18.1% (156)	0.3% (3)
WORK LOCATION				
District 1 (n=1631)	16.0% (26)	68.1% (111)	16.0% (26)	4.3% (-)
District 2 (n=123)	14.6% (18)	65.0% (80)	18.7% (23)	3.3% (2)
District 3 (n=125)	12.0% (15)	67.2% (84)	20.8% (26)	4.8% (-)
District 4 (n=136)	15.4% (21)	69.9% (95)	14.7% (20)	1.5% (-)
District 5 (n=130)	12.3% (16)	66.9% (87)	20.8% (27)	2.4% (-)
District 6 (n=184)	17.4% (32)	63.9% (117)	18.5% (34)	2.8% (1)
OPERATOR EXPERIENCE				
0-5 years (n=163)	17.8% (29)	65.6% (107)	16.6% (27)	0.0% (-)
6-10 years (n=176)	16.5% (29)	64.2% (113)	18.8% (33)	0.6% (1)
11-15 years (n=103)	17.5% (18)	65.0% (67)	16.5% (17)	1.0% (1)
16-20 years (n=170)	14.7% (25)	65.3% (111)	20.0% (34)	0.0% (-)
21-25 years (n=124)	12.9% (16)	70.2% (87)	16.9% (21)	0.0% (-)
26+ years (n=114)	8.8% (10)	70.2% (80)	20.2% (23)	0.9% (1)
CLASS OF VEHICLE				
Class 7 (n=276).....	11.6% (32)	68.8% (190)	19.6% (54)	0.0% (-)
Class 11 (n=39).....	38.5% (15)	46.2% (18)	15.4% (6)	0.0% (-)
Class 12 (n=488).....	15.2% (74)	67.2% (328)	17.4% (85)	0.2% (1)
AGE OF VEHICLE				
1999 and older (n=509).....	10.8% (55)	72.3% (368)	16.7% (85)	0.2% (1)
2000 and newer (n=293)	22.5% (66)	57.0% (167)	20.5% (60)	0.0% (-)

	<i>Needs Work</i>	<i>Okay</i>	<i>Works Great</i>	<i>N/A</i>
Winter Tailgate (n=801)	8.6% (69)	36.2% (290)	10.9% (87)	44.3% (355)
WORK LOCATION				
District 1 (n=156)	7.7%	39.7%	15.4%	37.2%
District 2 (n=114)	14.0%	36.0%	12.3%	37.7%
District 3 (n=115)	7.0%	33.0%	11.3%	48.7%
District 4 (n=124)	7.3%	35.5%	8.1%	49.2%
District 5 (n=121)	12.4%	33.1%	9.1%	45.5%
District 6 (n=171)	5.3%	38.0%	8.8%	48.0%
OPERATOR EXPERIENCE				
0-5 years (n=156)	5.1%	37.2%	12.2%	45.5%
6-10 years (n=165)	9.7%	31.5%	7.9%	50.9%
11-15 years (n=100)	12.0%	37.0%	6.0%	45.0%
16-20 years (n=156)	9.6%	35.9%	14.7%	39.7%
21-25 years (n=114)	8.8%	38.6%	12.3%	40.4%
26+ years (n=101)	7.9%	38.6%	10.9%	42.6%
CLASS OF VEHICLE				
Class 7 (n=253).....	7.9%	37.2%	8.3%	46.6%
Class 11 (n=39).....	15.4%	38.5%	33.3%	12.8%
Class 12 (n=458).....	8.1%	35.2%	10.5%	46.3%
AGE OF VEHICLE				
1999 and older (n=471).....	7.4%	39.1%	6.4%	47.1%
2000 and newer (n=278)	10.1%	30.6%	18.7%	40.6%
Capacity (n=858)	8.5% (73)	70.4% (604)	20.6% (177)	0.5% (4)
WORK LOCATION				
District 1 (n=163)	9.8%	69.3%	20.9%	0.0%
District 2 (n=122)	5.7%	71.3%	21.3%	1.6%
District 3 (n=125)	6.4%	72.8%	20.8%	0.0%
District 4 (n=134)	7.5%	74.6%	17.9%	0.0%
District 5 (n=130)	13.8%	64.6%	20.8%	0.8%
District 6 (n=184)	7.6%	70.1%	21.7%	0.5%
OPERATOR EXPERIENCE				
0-5 years (n=163)	7.4%	68.7%	23.9%	0.0%
6-10 years (n=176)	8.0%	69.9%	21.0%	1.1%
11-15 years (n=103)	3.9%	74.8%	20.4%	1.0%
16-20 years (n=169)	11.8%	68.6%	19.5%	0.0%
21-25 years (n=124)	9.7%	71.0%	19.4%	0.0%
26+ years (n=113)	8.0%	71.7%	19.5%	0.9%
CLASS OF VEHICLE				
Class 7 (n=274).....	10.6%	73.0%	16.4%	0.0%
Class 11 (n=39).....	7.7%	61.5%	30.8%	0.0%
Class 12 (n=488).....	7.6%	69.9%	22.1%	0.2%
AGE OF VEHICLE				
1999 and older (n=508).....	10.0%	72.2%	17.5%	0.2%
2000 and newer (n=292)	6.2%	67.5%	26.0%	0.3%

	<i>Needs Work</i>	<i>Okay</i>	<i>Works Great</i>	<i>N/A</i>
Drive Mechanism (n=853)	5.9% (50)	71.0% (606)	22.2% (189)	0.9% (8)
WORK LOCATION				
District 1 (n=161)	8.7% (14)	70.2% (113)	20.5% (33)	0.6% (1)
District 2 (n=122)	4.9% (6)	69.7% (85)	23.0% (28)	2.5% (3)
District 3 (n=126)	5.6% (7)	70.6% (89)	23.0% (29)	0.8% (1)
District 4 (n=134)	8.2% (11)	73.9% (99)	17.9% (24)	0.0% (-)
District 5 (n=128)	4.7% (6)	68.0% (87)	26.6% (34)	0.8% (1)
District 6 (n=182)	3.3% (6)	73.1% (133)	22.5% (41)	1.1% (2)
OPERATOR EXPERIENCE				
0-5 years (n=162)	3.7% (6)	74.1% (120)	21.6% (35)	0.6% (1)
6-10 years (n=175)	6.9% (12)	70.3% (123)	21.1% (37)	1.7% (3)
11-15 years (n=103)	4.9% (5)	66.0% (68)	28.2% (29)	1.0% (1)
16-20 years (n=167)	6.6% (11)	71.9% (120)	21.0% (35)	0.6% (1)
21-25 years (n=124)	7.3% (9)	68.5% (85)	23.4% (29)	0.8% (1)
26+ years (n=113)	6.2% (7)	73.5% (83)	19.5% (22)	0.9% (1)
CLASS OF VEHICLE				
Class 7 (n=272).....	4.4% (12)	74.6% (203)	20.2% (55)	0.7% (2)
Class 11 (n=39).....	10.3% (4)	53.8% (21)	35.9% (14)	0.0% (-)
Class 12 (n=487).....	6.6% (32)	70.4% (343)	22.4% (109)	0.6% (3)
AGE OF VEHICLE				
1999 and older (n=505).....	5.5% (28)	73.7% (372)	20.4% (103)	0.4% (2)
2000 and newer (n=292)	6.8% (20)	66.4% (194)	25.7% (75)	1.0% (3)
Augers (n=860)	5.9% (51)	67.3% (579)	24.1% (207)	2.7% (23)
WORK LOCATION				
District 1 (n=165)	7.9% (13)	68.5% (113)	21.8% (36)	1.8% (3)
District 2 (n=123)	8.9% (11)	65.9% (81)	22.8% (28)	2.4% (3)
District 3 (n=126)	3.2% (4)	69.0% (87)	27.0% (34)	0.8% (1)
District 4 (n=135)	7.4% (10)	69.6% (94)	22.2% (30)	0.7% (1)
District 5 (n=128)	3.9% (5)	64.8% (83)	31.3% (40)	0.0% (-)
District 6 (n=183)	4.4% (8)	66.1% (121)	21.3% (39)	8.2% (15)
OPERATOR EXPERIENCE				
0-5 years (n=163)	5.5% (9)	69.3% (113)	23.3% (38)	1.8% (3)
6-10 years (n=176)	6.8% (12)	63.6% (112)	26.1% (46)	3.4% (6)
11-15 years (n=103)	6.8% (7)	65.0% (67)	26.2% (27)	1.9% (2)
16-20 years (n=170)	7.6% (13)	64.7% (110)	25.9% (44)	1.8% (3)
21-25 years (n=124)	2.4% (3)	70.2% (87)	23.4% (29)	4.0% (5)
26+ years (n=113)	6.2% (7)	71.7% (81)	19.5% (22)	2.7% (3)
CLASS OF VEHICLE				
Class 7 (n=275).....	5.1% (14)	72.7% (200)	21.1% (58)	1.1% (3)
Class 11 (n=39).....	10.3% (4)	38.5% (15)	43.6% (17)	7.7% (3)
Class 12 (n=488).....	6.6% (32)	66.8% (326)	24.2% (118)	2.5% (12)
AGE OF VEHICLE				
1999 and older (n=509).....	5.9% (30)	71.7% (365)	21.2% (108)	1.2% (6)
2000 and newer (n=292)	6.8% (20)	60.3% (176)	28.8% (84)	4.1% (12)

	<i>Needs Work</i>	<i>Okay</i>	<i>Works Great</i>	<i>N/A</i>
Standard Tailgate (n=839)	5.8% (49)	66.6% (559)	21.7% (182)	5.8% (49)
WORK LOCATION				
District 1 (n=158)	8.2% (13)	69.6% (110)	17.1% (27)	5.1% (8)
District 2 (n=121)	1.7% (2)	61.2% (74)	29.8% (36)	7.4% (9)
District 3 (n=124)	10.5% (13)	66.9% (83)	17.7% (22)	4.8% (6)
District 4 (n=131)	5.3% (7)	74.8% (98)	16.8% (22)	3.1% (4)
District 5 (n=126)	4.0% (5)	63.5% (80)	28.6% (36)	4.0% (5)
District 6 (n=179)	5.0% (9)	63.7% (114)	21.8% (39)	9.5% (17)
OPERATOR EXPERIENCE				
0-5 years (n=159)	6.9% (11)	66.0% (105)	20.1% (32)	6.9% (11)
6-10 years (n=173)	6.4% (11)	64.2% (111)	21.4% (37)	8.1% (14)
11-15 years (n=102)	4.9% (5)	66.7% (68)	19.6% (20)	8.8% (9)
16-20 years (n=163)	6.7% (11)	66.9% (109)	22.7% (37)	3.7% (6)
21-25 years (n=122)	4.1% (5)	65.6% (80)	24.6% (30)	5.7% (7)
26+ years (n=109)	5.5% (6)	70.6% (77)	22.9% (25)	0.9% (1)
CLASS OF VEHICLE				
Class 7 (n=270).....	5.2% (14)	71.9% (194)	20.4% (55)	2.6% (7)
Class 11 (n=36).....	2.8% (1)	30.6% (11)	27.8% (10)	38.9% (14)
Class 12 (n=476).....	6.3% (30)	67.6% (322)	21.4% (102)	4.6% (22)
AGE OF VEHICLE				
1999 and older (n=500).....	6.2% (31)	71.4% (357)	19.8% (99)	2.6% (13)
2000 and newer (n=282)	5.0% (14)	60.3% (170)	24.1% (68)	10.6% (30)

SPREADER

% Needs Improvement	Age				
	1999 & Older	2000 & Newer	Impact?		
18.0%	Spreader		17.9%	17.7%	No
	% Needs Work				
	16.1%	Type of spinner	15.6%	17.9%	No
	14.9%	Clean out	10.8%	22.5%	Yes

Findings/Next Steps – The committee will break down the data further to determine why clean out is a greater problem on newer equipment.

Specific Equipment Performance – Dumpbox

	<i>Needs Work</i>	<i>Okay</i>	<i>Works Great</i>	<i>N/A</i>
Material Capacity (n=858)	16.7% (143)	64.3% (552)	18.4% (158)	0.6% (5)
WORK LOCATION				
District 1 (n=164)	21.3% (35)	60.4% (99)	17.7% (29)	0.6% (1)
District 2 (n=123)	13.0% (16)	69.1% (85)	16.3% (20)	1.6% (2)
District 3 (n=124)	9.7% (12)	73.4% (91)	16.9% (21)	0.0% (-)
District 4 (n=135)	17.0% (23)	68.1% (92)	14.8% (20)	0.0% (-)
District 5 (n=129)	27.9% (36)	54.3% (70)	17.8% (23)	0.0% (-)
District 6 (n=183)	11.5% (21)	62.8% (115)	24.6% (45)	1.1% (2)
OPERATOR EXPERIENCE				
0-5 years (n=163)	9.9% (29)	61.3% (100)	20.2% (33)	0.6% (1)
6-10 years (n=177)	10.3% (31)	61.0% (108)	20.9% (37)	0.6% (1)
11-15 years (n=103)	15.0% (19)	64.1% (66)	15.5% (16)	1.9% (2)
16-20 years (n=169)	20.4% (31)	63.3% (107)	18.3% (31)	0.0% (-)
21-25 years (n=123)	19.5% (17)	65.9% (81)	19.5% (24)	0.8% (1)
26+ years (n=112)	12.5% (14)	72.3% (81)	15.2% (17)	0.0% (-)
CLASS OF VEHICLE				
Class 7 (n=275).....	20.0% (55)	67.3% (185)	12.7% (35)	0.0% (-)
Class 11 (n=39).....	2.6% (1)	41.0% (16)	51.3% (20)	5.1% (2)
Class 12 (n=487).....	15.4% (75)	65.1% (317)	19.3% (95)	0.2% (1)
AGE OF VEHICLE				
1999 and older (n=5080).....	17.3% (88)	70.1% (356)	12.4% (63)	0.2% (1)
2000 and newer (n=292)	14.7% (43)	55.1% (161)	29.5% (86)	0.7% (2)
Ease of Maintenance (n=854).....	16.0% (137)	64.9% (554)	18.1% (155)	0.9% (8)
WORK LOCATION				
District 1 (n=162)	20.4% (33)	64.2% (104)	13.6% (22)	1.9% (3)
District 2 (n=124)	14.5% (18)	65.3% (81)	18.5% (23)	1.6% (2)
District 3 (n=124)	12.1% (15)	71.8% (89)	16.1% (20)	0.0% (-)
District 4 (n=133)	12.0% (16)	69.9% (93)	16.5% (22)	1.5% (2)
District 5 (n=130)	19.2% (25)	61.5% (80)	19.2% (25)	0.0% (-)
District 6 (n=181)	16.6% (30)	59.1% (107)	23.8% (43)	0.6% (1)
OPERATOR EXPERIENCE				
0-5 years (n=163)	17.8% (29)	65.0% (106)	16.6% (27)	0.6% (1)
6-10 years (n=176)	14.2% (25)	65.3% (115)	18.8% (33)	1.7% (3)
11-15 years (n=105)	14.3% (15)	63.8% (67)	19.0% (20)	2.9% (3)
16-20 years (n=168)	17.9% (30)	64.3% (108)	17.9% (30)	0.0% (-)
21-25 years (n=122)	13.1% (16)	64.8% (79)	21.3% (26)	0.8% (1)
26+ years (n=110)	18.2% (20)	64.5% (71)	17.3% (19)	0.0% (0)
CLASS OF VEHICLE				
Class 7 (n=274).....	16.1% (44)	68.6% (188)	15.0% (41)	0.4% (1)
Class 11 (n=39).....	2.6% (1)	51.3% (20)	41.0% (16)	5.1% (2)
Class 12 (n=485).....	17.5% (85)	63.8% (310)	18.1% (88)	0.2% (3)
AGE OF VEHICLE				
1999 and older (n=506).....	20.2% (102)	65.6% (332)	13.6% (69)	0.6% (3)
2000 and newer (n=292)	9.6% (28)	63.4% (185)	26.0% (76)	1.0% (3)

	<i>Needs Work</i>	<i>Okay</i>	<i>Works Great</i>	<i>N/A</i>
Lift Style (n=852)	15.1% (129)	64.3% (548)	20.0% (170)	0.6% (5)
WORK LOCATION				
District 1 (n=161)	18.6% (30)	62.1% (100)	18.6% (30)	0.6% (1)
District 2 (n=122)	12.3% (15)	66.4% (81)	19.7% (24)	1.6% (2)
District 3 (n=124)	15.3% (19)	68.5% (85)	16.1% (20)	0.0% (-)
District 4 (n=135)	11.1% (15)	70.4% (95)	18.5% (25)	0.0% (-)
District 5 (n=128)	21.9% (28)	60.2% (77)	18.0% (23)	0.0% (-)
District 6 (n=182)	12.1% (22)	60.4% (110)	26.4% (48)	1.1% (2)
OPERATOR EXPERIENCE				
0-5 years (n=163)	14.7% (24)	63.8% (104)	20.9% (34)	0.6% (1)
6-10 years (n=176)	10.2% (18)	64.8% (114)	24.4% (43)	0.6% (1)
11-15 years (n=104)	9.6% (10)	71.2% (74)	17.3% (18)	1.9% (2)
16-20 years (n=168)	16.7% (28)	64.3% (108)	19.0% (32)	0.0% (-)
21-25 years (n=121)	21.5% (26)	57.9% (70)	19.8% (24)	0.8% (1)
26+ years (n=110)	20.0% (22)	63.6% (70)	16.4% (18)	0.0% (-)
CLASS OF VEHICLE				
Class 7 (n=273).....	14.7% (40)	68.1% (186)	17.2% (47)	0.0% (-)
Class 11 (n=39).....	5.1% (2)	48.7% (19)	41.0% (16)	5.1% (2)
Class 12 (n=485).....	15.5% (75)	64.9% (315)	19.4% (94)	0.2% (1)
AGE OF VEHICLE				
1999 and older (n=505).....	20.2% (102)	66.1% (334)	13.5% (68)	0.2% (1)
2000 and newer (n=291)	5.2% (15)	63.9% (186)	30.2% (88)	0.7% (2)
Style (n=845)	10.3% (87)	69.5% (587)	19.3% (163)	0.9% (8)
WORK LOCATION				
District 1 (n=161)	14.9% (24)	65.2% (105)	18.0% (29)	1.9% (3)
District 2 (n=123)	6.5% (8)	71.5% (88)	19.5% (24)	2.4% (3)
District 3 (n=123)	8.9% (11)	74.8% (92)	16.3% (20)	0.0% (-)
District 4 (n=132)	10.6% (14)	72.0% (95)	17.4% (23)	0.0% (-)
District 5 (n=129)	16.3% (21)	64.3% (83)	19.4% (25)	0.0% (-)
District 6 (n=177)	5.1% (9)	70.1% (124)	23.7% (42)	1.1% (2)
OPERATOR EXPERIENCE				
0-5 years (n=163)	8.0% (13)	68.7% (112)	22.1% (36)	1.2% (2)
6-10 years (n=176)	7.4% (13)	70.5% (124)	21.0% (37)	1.1% (2)
11-15 years (n=101)	14.9% (15)	70.3% (71)	12.9% (13)	2.0% (2)
16-20 years (n=166)	12.7% (21)	66.3% (110)	20.5% (34)	0.6% (1)
21-25 years (n=120)	5.8% (7)	71.7% (86)	21.7% (26)	0.8% (1)
26+ years (n=108)	14.8% (16)	70.4% (76)	14.8% (16)	0.0% (-)
CLASS OF VEHICLE				
Class 7 (n=270).....	9.6% (26)	71.9% (194)	18.1% (49)	0.4% (1)
Class 11 (n=38).....	2.6% (1)	52.6% (20)	39.5% (15)	5.3% (2)
Class 12 (n=482).....	11.6% (56)	69.7% (336)	18.0% (87)	0.6% (3)
AGE OF VEHICLE				
1999 and older (n=500).....	12.0% (61)	73.4% (367)	13.6% (68)	0.8% (4)
2000 and newer (n=2891)	7.3% (21)	63.3% (183)	28.7% (83)	0.7% (2)

	<i>Needs Work</i>	<i>Okay</i>	<i>Works Great</i>	<i>N/A</i>
Type (n=847)	9.2% (78)	69.7% (590)	20.3% (172)	0.8% (7)
WORK LOCATION				
District 1 (n=162)	11.1% (18)	68.5% (111)	19.1% (31)	1.2% (2)
District 2 (n=123)	8.1% (10)	70.7% (87)	19.5% (24)	1.6% (2)
District 3 (n=124)	8.1% (10)	75.8% (94)	16.1% (20)	0.0% (-)
District 4 (n=132)	7.6% (10)	74.2% (98)	18.2% (24)	0.0% (-)
District 5 (n=130)	15.4% (20)	63.1% (82)	21.5% (28)	0.0% (-)
District 6 (n=176)	5.7% (10)	67.0% (118)	25.6% (45)	1.7% (3)
OPERATOR EXPERIENCE				
0-5 years (n=163)	8.0% (13)	68.7% (112)	22.7% (37)	0.6% (1)
6-10 years (n=177)	7.3% (13)	70.1% (124)	21.5% (38)	1.1% (2)
11-15 years (n=101)	12.9% (13)	69.3% (70)	15.8% (16)	2.0% (2)
16-20 years (n=166)	11.4% (19)	66.9% (111)	21.1% (35)	0.6% (1)
21-25 years (n=121)	5.8% (7)	70.2% (85)	23.1% (28)	0.8% (1)
26+ years (n=108)	10.2% (11)	70.1% (80)	15.7% (17)	0.0% (-)
CLASS OF VEHICLE				
Class 7 (n=272).....	7.7% (21)	73.2% (199)	19.1% (52)	50.0% (-)
Class 11 (n=38).....	0.0% (-)	52.6% (20)	42.1% (16)	5.3% (2)
Class 12 (n=482).....	10.4% (50)	69.9% (3137)	19.1% (92)	0.6% (3)
AGE OF VEHICLE				
1999 and older (n=501).....	10.0% (50)	75.2% (377)	14.4% (72)	0.4% (2)
2000 and newer (n=290)	7.2% (21)	61.4% (178)	30.3% (88)	1.0% (3)

**DUMPBOX - AREA NOT CURRENTLY BEING EXAMINED IN GREATER DETAIL
BY COMMITTEE**

% Needs Improvement	
14.4%	Dumpbox

Specific Equipment Performance – Anti-Ice Trailer

	<i>Needs Work</i>	<i>Okay</i>	<i>Works Great</i>	<i>N/A</i>
Frame (n=714)	23.4% (167)	27.7% (198)	4.8% (34)	44.1% (315)
WORK LOCATION				
District 1 (n=143)	36.4% (52)	27.3% (39)	5.6% (8)	30.8% (44)
District 2 (n=99)	22.2% (22)	17.2% (17)	2.0% (2)	58.6% (58)
District 3 (n=108)	7.4% (8)	34.3% (37)	9.3% (10)	49.1% (53)
District 4 (n=109)	32.1% (35)	35.8% (39)	1.8% (2)	30.3% (33)
District 5 (n=95)	7.4% (7)	18.9% (18)	3.2% (3)	70.5% (67)
District 6 (n=160)	26.9% (43)	30.0% (48)	5.6% (9)	37.5% (60)
OPERATOR EXPERIENCE				
0-5 years (n=141)	25.5% (36)	27.7% (39)	2.1% (3)	44.7% (63)
6-10 years (n=148)	25.7% (38)	27.7% (41)	8.8% (13)	37.8% (56)
11-15 years (n=81)	13.6% (11)	33.3% (27)	7.4% (6)	45.7% (37)
16-20 years (n=139)	27.3% (38)	23.0% (32)	3.6% (5)	46.0% (64)
21-25 years (n=105)	21.9% (23)	30.5% (32)	4.8% (5)	42.9% (45)
26+ years (n=92)	18.5% (17)	29.3% (27)	2.2% (2)	50.0% (46)
CLASS OF VEHICLE				
Class 7 (n=224).....	12.1% (27)	28.1% (63)	1.3% (3)	58.5% (131)
Class 11 (n=33).....	21.2% (7)	33.3% (11)	18.2% (6)	27.3% (9)
Class 12 (n=408).....	28.4% (116)	27.7% (113)	5.6% (23)	38.2% (156)
AGE OF VEHICLE				
1999 and older (n=429).....	17.2% (74)	28.4% (122)	3.5% (15)	50.8% (218)
200 and newer (n=236)	32.2% (76)	27.5% (65)	7.2% (17)	33.1% (78)
Axles (n=708)	13.8% (98)	38.6% (259)	5.2% (37)	44.4% (314)
WORK LOCATION				
District 1 (n=142)	25.4% (36)	36.6% (52)	6.3% (9)	31.7% (45)
District 2 (n=97)	16.5% (16)	19.6% (19)	4.1% (4)	59.8% (58)
District 3 (n=106)	5.7% (6)	37.7% (40)	8.5% (90)	48.1% (51)
District 4 (n=109)	10.1% (11)	57.8% (63)	1.8% (2)	30.3% (33)
District 5 (n=95)	8.4% (8)	16.8% (16)	3.2% (3)	71.6% (68)
District 6 (n=159)	13.2% (21)	43.4% (69)	6.3% (10)	37.1% (59)
OPERATOR EXPERIENCE				
0-5 years (n=140)	12.9% (18)	40.0% (56)	2.9% (4)	44.3% (62)
6-10 years (n=148)	18.2% (27)	33.1% (49)	9.5% (14)	39.2% (58)
11-15 years (n=79)	6.3% (5)	40.5% (32)	7.6% (6)	45.6% (36)
16-20 years (n=138)	15.2% (21)	34.8% (48)	4.3% (6)	45.7% (63)
21-25 years (n=105)	14.3% (15)	38.1% (40)	4.8% (5)	42.9% (45)
26+ years (n=91)	11.0% (10)	36.3% (33)	2.2% (2)	50.5% (46)
CLASS OF VEHICLE				
Class 7 (n=221).....	9.0% (20)	30.8% (68)	1.4% (3)	58.8% (130)
Class 11 (n=33).....	9.1% (3)	45.5% (15)	18.2% (6)	27.3% (9)
Class 12 (n=405).....	15.8% (64)	39.8% (161)	5.9% (24)	38.5% (156)
AGE OF VEHICLE				
1999 and older (n=424).....	11.3% (48)	34.4% (146)	3.3% (14)	50.9% (216)
200 and newer (n=235)	16.6% (39)	41.7% (98)	8.1% (19)	33.6% (79)

	<i>Needs Work</i>	<i>Okay</i>	<i>Works Great</i>	<i>N/A</i>
Braking System (n=707)	13.6% (96)	36.8% (260)	5.7% (40)	44.0% (311)
WORK LOCATION				
District 1 (n=141)	17.7% (25)	45.4% (64)	5.7% (8)	31.2% (44)
District 2 (n=97)	13.4% (13)	22.7% (22)	3.1% (3)	60.8% (59)
District 3 (n=104)	12.5% (13)	28.8% (30)	11.5% (12)	47.1% (49)
District 4 (n=110)	6.4% (7)	60.9% (67)	2.7% (3)	30.0% (33)
District 5 (n=95)	10.5% (10)	14.7% (14)	4.2% (4)	70.5% (67)
District 6 (n=160)	17.5% (28)	39.4% (63)	6.3% (10)	36.9% (59)
OPERATOR EXPERIENCE				
0-5 years (n=141)	14.9% (21)	33.3% (47)	7.1% (10)	44.7% (63)
6-10 years (n=148)	16.9% (25)	34.5% (51)	10.8% (16)	37.8% (56)
11-15 years (n=78)	10.3% (8)	38.5% (30)	5.1% (4)	46.2% (36)
16-20 years (n=139)	9.4% (13)	41.7% (58)	4.3% (6)	44.6% (62)
21-25 years (n=103)	16.5% (17)	37.9% (39)	1.9% (2)	43.7% (45)
26+ years (n=90)	20.0% (9)	37.8% (34)	2.2% (2)	50.0% (45)
CLASS OF VEHICLE				
Class 7 (n=221).....	6.8% (15)	31.2% (69)	3.2% (7)	58.8% (130)
Class 11 (n=33).....	15.2% (5)	45.5% (15)	12.1% (4)	27.3% (9)
Class 12 (n=404).....	16.1% (65)	40.1% (162)	5.9% (24)	37.9% (153)
AGE OF VEHICLE				
1999 and older (n=424).....	9.9% (42)	36.1% (153)	3.3% (14)	50.7% (215)
2000 and newer (n=234)	18.4% (43)	39.7% (93)	9.0% (21)	32.9% (77)
Wiring / Lighting (n=706)	12.9% (91)	36.8% (260)	6.2% (44)	44.1% (311)
WORK LOCATION				
District 1 (n=143)	16.8% (24)	46.9% (67)	4.9% (7)	31.5% (45)
District 2 (n=97)	13.4% (13)	20.6% (20)	6.2% (6)	59.8% (58)
District 3 (n=104)	9.6% (10)	32.7% (34)	10.6% (11)	47.1% (49)
District 4 (n=109)	13.8% (15)	52.3% (57)	3.7% (4)	30.3% (33)
District 5 (n=95)	4.2% (4)	20.0% (19)	5.3% (5)	70.5% (67)
District 6 (n=158)	15.8% (25)	39.9% (63)	7.0% (11)	37.3% (59)
OPERATOR EXPERIENCE				
0-5 years (n=141)	12.8% (18)	35.5% (50)	7.8% (11)	44.0% (62)
6-10 years (n=148)	14.9% (22)	36.5% (54)	10.1% (15)	38.5% (57)
11-15 years (n=78)	6.4% (5)	39.7% (31)	7.7% (6)	46.2% (36)
16-20 years (n=137)	10.9% (15)	38.4% (54)	4.4% (6)	45.3% (62)
21-25 years (n=103)	16.5% (17)	35.0% (36)	4.9% (5)	43.7% (45)
26+ years (n=91)	13.2% (12)	36.3% (33)	1.1% (1)	49.5% (45)
CLASS OF VEHICLE				
Class 7 (n=220).....	7.3% (16)	31.4% (69)	2.3% (5)	59.1% (130)
Class 11 (n=32).....	9.4% (3)	40.6% (13)	21.9% (7)	28.1% (9)
Class 12 (n=405).....	16.3% (66)	38.8% (157)	7.2% (29)	37.8% (153)
AGE OF VEHICLE				
1999 and older (n=424).....	11.1% (47)	34.2% (145)	3.8% (16)	50.9% (216)
2000 and newer (n=233)	16.3% (38)	40.3% (94)	10.7% (25)	32.6% (76)

	<i>Needs Work</i>	<i>Okay</i>	<i>Works Great</i>	<i>N/A</i>
Nozzles (n=708)	7.1% (50)	40.8% (289)	7.6% (54)	44.5% (315)
WORK LOCATION				
District 1 (n=143)	16.1% (23)	44.1% (63)	7.7% (11)	32.2% (46)
District 2 (n=96)	5.2% (5)	29.2% (28)	3.1% (3)	62.5% (60)
District 3 (n=106)	1.9% (2)	41.5% (44)	9.4% (10)	47.2% (50)
District 4 (n=110)	7.3% (8)	57.3% (63)	5.5% (6)	30.0% (33)
District 5 (n=94)	1.1% (1)	21.3% (20)	6.4% (6)	71.3% (67)
District 6 (n=159)	6.9% (11)	44.7% (71)	11.3% (18)	37.1% (59)
OPERATOR EXPERIENCE				
0-5 years (n=141)	7.1% (10)	39.7% (56)	9.2% (13)	44.0% (62)
6-10 years (n=149)	8.7% (13)	40.9% (61)	10.7% (16)	39.6% (59)
11-15 years (n=78)	1.3% (1)	43.6% (34)	7.7% (6)	47.4% (37)
16-20 years (n=138)	11.6% (16)	37.7% (52)	5.8% (8)	44.9% (62)
21-25 years (n=104)	6.7% (7)	42.3% (44)	6.7% (7)	44.2% (46)
26+ years (n=91)	2.1% (2)	44.0% (40)	4.4% (4)	49.5% (45)
CLASS OF VEHICLE				
Class 7 (n=221).....	3.2% (7)	35.7% (79)	2.3% (5)	58.8% (130)
Class 11 (n=33).....	0.0% (-)	54.5% (18)	18.2% (6)	27.3% (9)
Class 12 (n=405).....	9.1% (37)	42.1% (171)	10.1% (41)	38.7% (157)
AGE OF VEHICLE				
1999 and older (n=426).....	6.3% (27)	37.1% (158)	5.4% (23)	51.2% (218)
2000 and newer (n=234)	7.3% (17)	47.0% (110)	12.4% (29)	33.3% (78)
Brine Pump (n=707)	6.9% (49)	40.7% (288)	7.2% (51)	45.1% (319)
WORK LOCATION				
District 1 (n=142)	12.0% (17)	47.2% (67)	8.5% (12)	32.4% (46)
District 2 (n=96)	8.3% (8)	25.0% (24)	4.2% (4)	62.5% (60)
District 3 (n=106)	2.8% (3)	40.6% (43)	10.43% (11)	46.2% (49)
District 4 (n=110)	0.9% (1)	61.8% (68)	4.5% (5)	32.7% (36)
District 5 (n=94)	1.1% (1)	22.3% (21)	5.3% (5)	71.3% (67)
District 6 (n=159)	11.9% (19)	40.9% (65)	8.8% (14)	38.4% (61)
OPERATOR EXPERIENCE				
0-5 years (n=141)	4.3% (6)	42.6% (60)	9.2% (13)	44.0% (62)
6-10 years (n=149)	9.4% (14)	38.9% (58)	11.4% (17)	40.3% (60)
11-15 years (n=78)	3.8% (3)	41.0% (32)	6.4% (5)	48.7% (38)
16-20 years (n=137)	7.3% (10)	40.1% (55)	6.6% (9)	46.0% (63)
21-25 years (n=104)	8.7% (9)	43.3% (45)	4.8% (5)	43.3% (45)
26+ years (n=91)	6.6% (6)	39.6% (36)	2.2% (2)	51.6% (47)
CLASS OF VEHICLE				
Class 7 (n=221).....	4.1% (9)	34.8% (77)	2.3% (5)	58.8% (130)
Class 11 (n=33).....	3.0% (1)	45.5% (15)	15.2% (5)	36.4% (12)
Class 12 (n=405).....	8.6% (35)	43.0% (174)	9.4% (38)	39.0% (158)
AGE OF VEHICLE				
1999 and older (n=425).....	4.5% (19)	39.3% (167)	4.7% (20)	51.5% (219)
2000 and newer (n=234)	11.1% (26)	42.3% (99)	12.0% (28)	33.3% (81)

	<i>Needs Work</i>	<i>Okay</i>	<i>Works Great</i>	<i>N/A</i>
Brine Capacity (n=705)	5.5% (39)	42.0% (296)	8.4% (59)	44.1% (311)
WORK LOCATION				
District 1 (n=142)	7.7%	51.4%	9.2%	31.7%
District 2 (n=96)	10.4%	24.0%	5.2%	60.4%
District 3 (n=104)	4.8%	36.5%	11.5%	47.1%
District 4 (n=110)	1.8%	61.8%	6.4%	30.0%
District 5 (n=94)	1.1%	21.3%	6.4%	71.3%
District 6 (n=159)	6.3%	46.5%	10.1%	37.1%
OPERATOR EXPERIENCE				
0-5 years (n=141)	5.0%	39.7%	11.3%	44.0%
6-10 years (n=148)	5.4%	43.2%	12.8%	38.5%
11-15 years (n=78)	5.1%	41.0%	7.7%	46.2%
16-20 years (n=138)	7.2%	42.8%	5.1%	44.9%
21-25 years (n=103)	4.9%	44.7%	6.8%	43.7%
26+ years (n=90)	4.4%	41.1%	4.4%	50.0%
CLASS OF VEHICLE				
Class 7 (n=219).....	2.7%	34.7%	3.2%	59.4%
Class 11 (n=34).....	5.9%	50.0%	17.6%	26.5%
Class 12 (n=404).....	6.9%	45.0%	10.1%	37.9%
AGE OF VEHICLE				
1999 and older (n=424).....	4.0%	39.6%	5.4%	50.9%
2000 and newer (n=233)	8.2%	45.9%	13.3%	32.6%
Spray Bar (n=706)	5.4% (91)	41.7% (260)	7.9% (44)	45.0% (311)
WORK LOCATION				
District 1 (n=141)	11.3%	48.2%	6.4%	34.0%
District 2 (n=96)	5.2%	31.3%	3.1%	60.4%
District 3 (n=105)	2.9%	36.2%	12.4%	48.6%
District 4 (n=110)	4.5%	59.1%	5.5%	30.9%
District 5 (n=94)	1.1%	20.2%	7.4%	71.3%
District 6 (n=159)	5.0%	46.5%	11.3%	37.1%
OPERATOR EXPERIENCE				
0-5 years (n=141)	2.8%	41.1%	9.9%	46.1%
6-10 years (n=149)	8.1%	43.0%	10.7%	38.3%
11-15 years (n=78)	2.6%	41.0%	9.0%	47.4%
16-20 years (n=138)	8.7%	39.9%	6.5%	44.9%
21-25 years (n=102)	4.9%	42.2%	6.9%	46.1%
26+ years (n=90)	2.2%	44.4%	3.3%	50.0%
CLASS OF VEHICLE				
Class 7 (n=220).....	2.7%	34.5%	3.2%	59.5%
Class 11 (n=33).....	3.0%	48.5%	21.2%	27.3%
Class 12 (n=404).....	6.7%	44.3%	9.9%	39.1%
AGE OF VEHICLE				
1999 and older (n=424).....	4.5%	38.2%	5.4%	51.9%
2000 and newer (n=233)	6.4%	46.8%	13.3%	33.5%

	<i>Needs Work</i>	<i>Okay</i>	<i>Works Great</i>	<i>N/A</i>
Hitch (n=704)	5.4% (38)	42.9% (302)	7.2% (51)	44.5% (313)
WORK LOCATION				
District 1 (n=142)	4.9% (7)	56.3% (80)	7.0% (10)	31.7% (45)
District 2 (n=96)	8.3% (8)	27.1% (26)	4.2% (4)	60.4% (58)
District 3 (n=104)	1.9% (2)	39.4% (41)	10.6% (11)	48.1% (50)
District 4 (n=109)	9.2% (10)	56.0% (61)	4.6% (5)	30.3% (33)
District 5 (n=94)	2.1% (2)	20.2% (19)	5.3% (5)	72.3% (68)
District 6 (n=159)	5.7% (9)	47.2% (75)	10.1% (16)	37.1% (59)
OPERATOR EXPERIENCE				
0-5 years (n=140)	2.1% (3)	43.6% (61)	10.0% (14)	44.3% (62)
6-10 years (n=149)	6.7% (10)	43.0% (64)	11.4% (17)	38.6% (58)
11-15 years (n=77)	3.9% (3)	41.6% (32)	7.8% (6)	46.8% (36)
16-20 years (n=138)	5.1% (7)	46.4% (64)	3.6% (5)	44.9% (62)
21-25 years (n=103)	8.7% (9)	40.8% (42)	6.8% (7)	43.7% (45)
26+ years (n=90)	4.4% (4)	42.2% (38)	2.2% (2)	51.1% (46)
CLASS OF VEHICLE				
Class 7 (n=220).....	3.6% (8)	34.5% (76)	2.7% (6)	59.1% (130)
Class 11 (n=33).....	6.1% (2)	48.5% (16)	18.2% (6)	27.3% (9)
Class 12 (n=403).....	6.2% (25)	46.7% (188)	8.7% (35)	38.5% (155)
AGE OF VEHICLE				
1999 and older (n=424).....	5.0% (21)	38.9% (165)	5.2% (22)	50.9% (216)
2000 and newer (n=232)	6.0% (14)	49.6% (115)	10.8% (25)	33.6% (78)
Brine Tank (n=705)	4.4% (31)	43.3% (305)	8.2% (58)	44.1% (311)
WORK LOCATION				
District 1 (n=142)	9.9% (14)	51.4% (73)	7.0% (10)	31.7% (45)
District 2 (n=96)	4.2% (4)	29.2% (28)	6.3% (6)	60.4% (58)
District 3 (n=104)	1.0% (1)	39.4% (41)	12.5% (13)	47.1% (49)
District 4 (n=110)	3.6% (4)	60.9% (67)	5.5% (6)	30.0% (33)
District 5 (n=95)	2.1% (2)	22.1% (21)	5.3% (5)	70.5% (67)
District 6 (n=158)	3.8% (6)	47.5% (75)	11.4% (18)	37.3% (59)
OPERATOR EXPERIENCE				
0-5 years (n=141)	5.0% (7)	39.7% (56)	11.3% (16)	44.0% (62)
6-10 years (n=149)	4.0% (6)	45.6% (68)	12.1% (18)	38.3% (57)
11-15 years (n=78)	3.8% (3)	42.3% (33)	7.7% (6)	46.2% (36)
16-20 years (n=137)	5.1% (7)	44.5% (61)	5.1% (7)	45.3% (62)
21-25 years (n=103)	3.9% (4)	45.6% (47)	6.8% (7)	43.7% (45)
26+ years (n=90)	3.3% (3)	42.2% (38)	4.4% (4)	50.0% (45)
CLASS OF VEHICLE				
Class 7 (n=220).....	2.3% (5)	35.5% (78)	3.2% (7)	59.1% (130)
Class 11 (n=33).....	6.1% (2)	51.5% (17)	15.2% (5)	27.3% (9)
Class 12 (n=404).....	5.2% (21)	46.5% (188)	10.4% (42)	37.9% (33)
AGE OF VEHICLE				
1999 and older (n=424).....	4.0% (17)	39.9% (169)	5.2% (22)	50.9% (216)
2000 and newer (n=233)	4.7% (11)	48.9% (114)	13.7% (32)	32.6% (76)

	<i>Needs Work</i>	<i>Okay</i>	<i>Works Great</i>	<i>N/A</i>
Lane Selector Valve (n=704)	3.8% (27)	39.1% (275)	10.5% (74)	46.6% (328)
WORK LOCATION				
District 1 (n=1421)	7.0% (10)	49.3% (70)	9.9% (14)	33.8% (48)
District 2 (n=96)	5.2% (5)	25.0% (24)	5.2% (5)	64.6% (62)
District 3 (n=104)	1.0% (1)	33.7% (35)	16.3% (17)	49.0% (51)
District 4 (n=110)	4.5% (5)	54.5% (60)	8.2% (9)	32.7% (36)
District 5 (n=94)	1.1% (1)	18.1% (17)	7.4% (7)	73.4% (69)
District 6 (n=158)	3.2% (5)	43.7% (69)	13.9% (22)	39.2% (62)
OPERATOR EXPERIENCE				
0-5 years (n=141)	1.4% (2)	37.6% (53)	14.9% (21)	46.1% (65)
6-10 years (n=148)	5.4% (8)	41.2% (61)	12.8% (19)	40.5% (60)
11-15 years (n=79)	2.5% (2)	38.0% (30)	10.1% (8)	49.4% (39)
16-20 years (n=136)	3.7% (5)	41.2% (56)	7.4% (10)	47.8% (65)
21-25 years (n=103)	4.9% (5)	39.8% (41)	8.7% (9)	46.6% (48)
26+ years (n=90)	4.4% (4)	35.6% (32)	7.8% (7)	52.2% (47)
CLASS OF VEHICLE				
Class 7 (n=221).....	2.7% (6)	33.0% (73)	4.1% (9)	60.2% (133)
Class 11 (n=34).....	5.9% (2)	44.1% (15)	17.6% (6)	32.4% (11)
Class 12 (n=403).....	4.5% (18)	41.2% (166)	13.4% (54)	40.9% (165)
AGE OF VEHICLE				
1999 and older (n=424).....	3.1% (13)	36.8% (156)	6.8% (29)	53.3% (226)
2000 and newer (n=234)	5.6% (13)	41.9% (98)	17.1% (40)	35.5% (83)

**ANTI-ICE TRAILER - AREA NOT CURRENTLY BEING EXAMINED IN GREATER
DETAIL BY COMMITTEE**

% Needs Improvement	
10.6%	Anti-Ice Trailer

Specific Equipment Performance – Underbody Plow

	<i>Needs Work</i>	<i>Okay</i>	<i>Works Great</i>	<i>N/A</i>
Length (n=791)	14.0% (111)	50.6% (400)	14.9% (118)	20.5% (162)
WORK LOCATION				
District 1 (n=146)	6.8%	60.3%	17.1%	15.8%
District 2 (n=118)	16.1%	44.1%	15.3%	24.6%
District 3 (n=116)	13.8%	48.3%	12.9%	25.0%
District 4 (n=125)	14.4%	55.2%	9.6%	20.8%
District 5 (n=114)	14.9%	43.9%	17.5%	23.7%
District 6 (n=172)	18.0%	49.4%	16.3%	16.3%
OPERATOR EXPERIENCE				
0-5 years (n=143)	10.5%	46.2%	14.0%	29.4%
6-10 years (n=166)	15.1%	50.6%	16.9%	17.5%
11-15 years (n=93)	14.0%	46.2%	11.8%	28.0%
16-20 years (n=155)	11.6%	54.8%	16.8%	16.8%
21-25 years (n=116)	18.1%	53.4%	12.1%	16.4%
26+ years (n=110)	16.4%	50.9%	16.4%	16.4%
CLASS OF VEHICLE				
Class 7 (n=225).....	5.8%	28.9%	9.3%	56.0%
Class 11 (n=38).....	5.3%	50.0%	39.5%	5.3%
Class 12 (n=477).....	19.3%	61.0%	14.7%	5.0%
AGE OF VEHICLE				
1999 and older (n=460).....	17.6%	45.0%	9.3%	28.0%
2000 and newer (n=279)	9.3%	59.9%	22.6%	8.2%
Ability to Remove Ice (n=794)	13.1% (104)	44.6% (354)	21.3% (169)	21.0% (167)
WORK LOCATION				
District 1 (n=150)	14.0%	50.7%	20.7%	14.7%
District 2 (n=118)	12.7%	39.0%	23.7%	24.6%
District 3 (n=116)	16.4%	44.8%	14.7%	24.1%
District 4 (n=123)	12.2%	48.0%	17.9%	22.0%
District 5 (n=114)	13.2%	37.7%	22.8%	26.3%
District 6 (n=173)	11.0%	45.1%	26.0%	17.9%
OPERATOR EXPERIENCE				
0-5 years (n=144)	11.1%	37.5%	22.9%	28.5%
6-10 years (n=166)	10.2%	51.2%	21.7%	16.9%
11-15 years (n=94)	18.1%	30.9%	22.3%	28.7%
16-20 years (n=156)	12.2%	47.4%	20.5%	19.9%
21-25 years (n=116)	10.3%	52.6%	19.8%	17.2%
26+ years (n=109)	19.3%	43.1%	21.1%	16.4%
CLASS OF VEHICLE				
Class 7 (n=224).....	9.4%	21.4%	12.5%	56.7%
Class 11 (n=39).....	25.6%	46.2%	15.4%	12.8%
Class 12 (n=479).....	14.4%	53.7%	26.7%	5.2%
AGE OF VEHICLE				
1999 and older (n=463).....	10.6%	41.5%	19.4%	28.5%
2000 and newer (n=278)	18.3%	46.8%	25.9%	9.0%

	<i>Needs Work</i>	<i>Okay</i>	<i>Works Great</i>	<i>N/A</i>
Down Pressure (n=795)	12.6% (100)	46.3% (368)	20.4% (162)	20.8% (165)
WORK LOCATION				
District 1 (n=150)	12.0%	51.3%	21.3%	15.3%
District 2 (n=117)	14.5%	40.2%	20.5%	24.8%
District 3 (n=116)	14.7%	39.7%	19.0%	26.7%
District 4 (n=125)	12.0%	50.4%	16.0%	21.6%
District 5 (n=114)	14.9%	39.5%	21.9%	23.7%
District 6 (n=173)	9.2%	52.0%	22.5%	16.2%
OPERATOR EXPERIENCE				
0-5 years (n=144)	12.5%	35.4%	21.5%	30.6%
6-10 years (n=167)	10.8%	50.9%	21.6%	16.8%
11-15 years (n=94)	11.7%	39.4%	21.3%	27.7%
16-20 years (n=154)	12.3%	48.1%	22.1%	17.5%
21-25 years (n=116)	17.2%	50.9%	15.5%	16.4%
26+ years (n=111)	12.6%	50.5%	19.8%	17.1%
CLASS OF VEHICLE				
Class 7 (n=225).....	10.2%	23.6%	9.8%	56.4%
Class 11 (n=39).....	15.4%	46.2%	33.3%	5.1%
Class 12 (n=479).....	14.4%	56.2%	24.2%	5.2%
AGE OF VEHICLE				
1999 and older (n=462).....	11.5%	41.3%	18.4%	28.8%
2000 and newer (n=280)	16.1%	53.2%	23.2%	7.5%
Speed of Travel (n=794)	10.7% (85)	51.5% (409)	17.5% (139)	20.3% (161)
WORK LOCATION				
District 1 (n=149)	12.8%	53.7%	18.8%	14.8%
District 2 (n=118)	5.1%	50.8%	19.5%	24.6%
District 3 (n=116)	10.3%	49.1%	15.5%	25.0%
District 4 (n=125)	12.0%	56.0%	11.2%	20.8%
District 5 (n=113)	11.5%	44.2%	20.4%	23.9%
District 6 (n=173)	11.6%	53.2%	19.1%	16.2%
OPERATOR EXPERIENCE				
0-5 years (n=144)	14.6%	41.7%	15.3%	28.5%
6-10 years (n=166)	9.0%	54.2%	19.3%	17.5%
11-15 years (n=94)	8.5%	47.9%	16.0%	27.7%
16-20 years (n=155)	11.6%	55.5%	16.1%	16.8%
21-25 years (n=116)	12.1%	49.1%	22.4%	16.4%
26+ years (n=110)	8.2%	60.0%	15.5%	16.4%
CLASS OF VEHICLE				
Class 7 (n=273).....	2.7%	29.3%	12.0%	56.0%
Class 11 (n=39).....	5.1%	43.6%	46.2%	5.1%
Class 12 (n=480).....	14.6%	63.0%	17.6%	4.8%
AGE OF VEHICLE				
1999 and older (n=461).....	11.9%	47.5%	12.6%	28.0%
2000 and newer (n=280)	8.2%	58.6%	25.4%	7.9%

	<i>Needs Work</i>	<i>Okay</i>	<i>Works Great</i>	<i>N/A</i>
Ability to Remove Slush (n=794)	3.1% (25)	45.0% (357)	28.6% (227)	23.3% (185)
WORK LOCATION				
District 1 (n=150)	4.7% (7)	52.7% (79)	24.7% (37)	18.0% (7)
District 2 (n=118)	2.5% (3)	37.3% (44)	31.4% (37)	28.8% (34)
District 3 (n=116)	1.7% (2)	44.0% (51)	27.6% (32)	26.7% (31)
District 4 (n=123)	4.9% (6)	45.5% (56)	26.0% (32)	23.6% (29)
District 5 (n=114)	2.6% (3)	43.0% (49)	29.8% (34)	24.6% (28)
District 6 (n=173)	2.3% (4)	45.1% (78)	31.8% (55)	20.8% (36)
OPERATOR EXPERIENCE				
0-5 years (n=144)	2.1% (3)	36.8% (53)	29.2% (42)	31.9% (46)
6-10 years (n=166)	5.4% (9)	45.2% (75)	28.9% (48)	20.5% (34)
11-15 years (n=94)	3.2% (3)	39.4% (37)	23.4% (22)	34.0% (32)
16-20 years (n=156)	2.6% (4)	49.4% (77)	28.2% (44)	19.9% (31)
21-25 years (n=115)	3.5% (4)	48.7% (56)	29.6% (34)	18.3% (21)
26+ years (n=110)	1.8% (2)	48.2% (53)	32.7% (36)	17.3% (19)
CLASS OF VEHICLE				
Class 7 (n=224).....	0.9% (2)	23.7% (53)	19.2% (43)	56.3% (126)
Class 11 (n=39).....	2.6% (1)	46.2% (18)	41.0% (16)	10.3% (4)
Class 12 (n=479).....	4.2% (20)	54.3% (260)	32.4% (155)	9.2% (44)
AGE OF VEHICLE				
1999 and older (n=461).....	4.1% (19)	40.8% (188)	24.1% (111)	31.0% (143)
2000 and newer (n=280)	1.4% (4)	51.1% (143)	36.4% (102)	11.1% (31)
Ability to Remove Snow (n=798).....	2.4% (19)	43.1% (344)	33.1% (264)	21.4% (171)
WORK LOCATION				
District 1 (n=150)	4.0% (6)	48.0% (72)	31.3% (47)	16.7% (25)
District 2 (n=118)	1.7% (2)	37.3% (44)	34.7% (41)	26.3% (31)
District 3 (n=117)	3.4% (4)	41.9% (49)	28.2% (33)	26.5% (31)
District 4 (n=125)	3.2% (4)	44.8% (56)	29.6% (37)	22.4% (28)
District 5 (n=114)	0.0% (-)	40.4% (46)	36.0% (41)	23.7% (27)
District 6 (n=174)	1.7% (3)	44.3% (77)	37.4% (65)	16.7% (29)
OPERATOR EXPERIENCE				
0-5 years (n=144)	1.4% (2)	34.0% (49)	34.7% (50)	29.9% (43)
6-10 years (n=166)	3.6% (6)	41.6% (69)	35.5% (59)	19.3% (32)
11-15 years (n=95)	2.1% (2)	32.6% (31)	30.1% (34)	29.5% (28)
16-20 years (n=156)	2.6% (4)	49.4% (77)	29.9% (47)	17.9% (28)
21-25 years (n=117)	1.7% (2)	51.3% (60)	30.7% (35)	17.1% (20)
26+ years (n=111)	2.7% (3)	46.8% (52)	34.2% (38)	16.2% (18)
CLASS OF VEHICLE				
Class 7 (n=226).....	1.3% (3)	21.7% (49)	20.4% (46)	56.6% (128)
Class 11 (n=39).....	0.0% (-)	33.3% (13)	61.5% (24)	5.1% (2)
Class 12 (n=481).....	3.3% (16)	53.0% (255)	37.4% (180)	6.2% (30)
AGE OF VEHICLE				
1999 and older (n=465).....	3.4% (16)	39.4% (183)	27.7% (129)	29.5% (137)
2000 and newer (n=280)	1.1% (3)	47.9% (134)	42.9% (120)	8.2% (23)

**UNDERBODY PLOW - AREA NOT CURRENTLY BEING EXAMINED IN GREATER
DETAIL BY COMMITTEE**

% Needs Improvement	
9.3%	Underbody Plow

TRAINING

CONTENT – Mark the types of equipment training you would like to receive. (Check [✓] *all* that apply)

- 34.4% Operational
- 66.9% New equipment
- 29.5% Safety
- 42.4% Maintenance
- 47.7% Trouble Shooting
- 5.3% Other _____

DELIVERY – Mark the method you prefer for receiving training. (Check [✓] *all* that apply)

- 80.2% Hands On
- 27.5% Class Room
- 39.5% Video
- 11.3% Computer Based
- 20.7% Simulator
- 19.5% Training at Central Location
- 25.6% Training in Districts
- 3.3% Other _____
- 0.9% Other _____

OPTIONAL: If you are willing to discuss any questions regarding your input, give your name and number and a member of the Winter Equipment Committee may call you. THANKS!

Name 31.3% (274) of surveys had an entry **Number** 26.5% (232) had an entry