Outline

- Clustering
- Association rules
- Graphic user interface

• Select k-M	eans and choo	Clustering se the variables		
Wariables: Categorical: none Continuous: none Quick k-Means Quick k-Means EM K-Means Number of clusters: 2 Number of iterations: 50	Sample	Select variables for the analy -Operator Station -AMS -Control Peak-age -Fiende Cplinder Control -Fower Take-Off -Fitch Duck Coupler and Drawbar Select All Spread Zoom Categorical variables 1-6 Show appropriate variables only	sis Select All Spread Zoom Continuous variables	CAN Cancel Cancel (Bundles] Use the "Show appropriate option here variables conty" option here variables and thow categorical thom categorical
	MD casewise deletion			

Choose the	Cluster distance metrics and initia & Generalized Cluster Analysis: S	ing al cluster cent	ters
	Yariables: Categorical: Continuous: Quick k-Means Validation Initial cluster centers • Magimize the initial distance • Bandomly choose k observations • Choose the first <u>k</u> observations Distance measure: Euclidean Distances	Cancel Specify the continuous and/or categorical variables for the cluster analysis. Coptions Coptions Categorical variables for the cluster analysis. Coptions W Categorical w Coptions W MD casewise deletion	

5 clusters and	Clusteri see the results	ng	
	Stance Cluster Analysis: Sample Algorithm: N=Generalized Cluster Analysis: Sample Algorithm: N=Generalized Cluster flaring: initia HD casewise deletion: No Testing sample: O Training cases: 1271 Training error: 0.84529 Number of clusters: 5 Quick Advanced Emiliant Cluster means Emiliant Graph of continuous variable means Graph of cost sequence Cluster gopenties All Clusters: All Clusters: Sove classifications & distances Emiliant Clusters: Save classifications & distances	Data.sta ? K	

	Centroids for k-mea Number of clusters: Total number of tra Operator Station	ns clus 5 ining ca	tering (SampleData.s ases: 1271 Comfort Package	sta) Remote Cylinder	Power Take-Off	Hitch Ouick	Number of cases	Percentage(%)
Cluster	spendes station		section of decage	Control	i en or rake off	Coupler and		
1	991	1005	1210	2400	2410	2530	386	30.36979
2	989	1005	1200	2400	2410	2530	420	33.04485
3	991	1005	1200	2400	2410	2530	150	11.80173
4	986	1005	1200	2300	2410	2530	152	11.95909
5	989	1005	1200	2300	2420	2530	163	12.82455

AMS Comfort Package Remote Cylinder Control Power Take-Off Drawbar Hitch Quick Drawbar Distance to centroid 991 1005 1200 2400 2410 2560 1.000000 999 1005 1200 2400 2410 2560 1.000000 999 1005 1200 2400 2410 2560 1.000000 999 1005 1200 2400 2410 2560 1.000000 999 1005 1200 2400 2410 2560 1.000000 999 1005 1200 2400 2410 2560 1.000000 999 1005 1200 2400 2410 2560 1.000000 999 1005 1200 2400 2410 2560 1.000000 999 1005 1200 2400 2410 2560 1.000000 999 1005 1200 2300 2410 2560 1.000000 999 1005	Clus: Num Tota	ter members (Sa ber of clusters: S	nd their dis	tan	ce to the co	entroids			
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Ital Ital <th< th=""><th>Clus Num Tota</th><th>ter members (Sa ber of clusters: 5</th><th>ampleData.sta)</th><th></th><th></th><th></th><th></th><th></th><th></th></th<>	Clus Num Tota	ter members (Sa ber of clusters: 5	ampleData.sta)						
AMS Zemfort Package Remote Cylinder Control Power Take-Off Hitch Quick Coupler and Drawbar Distance to centroid 991 1005 1200 2400 2410 2560 1.000000 999 1005 1200 2400 2410 2560 1.000000 999 1005 1200 2400 2410 2560 1.000000 989 1005 1200 2400 2410 2560 1.000000 989 1005 1200 2400 2410 2560 1.000000 989 1005 1200 2400 2410 2560 1.000000 989 1005 1200 2400 2410 2560 1.000000 989 1005 1200 2400 2410 2560 1.000000 989 1005 1200 2400 2410 2560 1.000000 989 1005 1200 2300 2410 2530 1.000000 999 1005	Num	ber of clusters: 5	inpiepata.sta)				·		
1271 AMS Comfort Package Remote Cylinder Control Power Take-Off Hitch Quick Coupler and Drawbar Distance to centroid 991 1005 1200 2400 2410 2560 1.000000 999 1005 1200 2400 2410 2560 1.000000 989 1005 1200 2400 2410 2560 1.000000 989 1005 1200 2400 2410 2560 1.000000 989 1005 1200 2400 2410 2560 1.000000 989 1005 1200 2400 2410 2560 1.000000 989 1005 1200 2400 2410 2560 1.000000 989 1005 1200 2400 2410 2560 1.000000 989 1005 1200 2300 2410 2530 1.000000 989 1005 1200 2300 2410 2530 1.000000	Tota		5 '						
AMS Comfort Package (a) Remote Cylinder Control Power Take-Off (a) Huth Cylinder (b) Distance to (b) 991 1005 1200 2400 2410 2560 1.000000 998 1005 1200 2400 2410 2560 1.000000 998 1005 1200 2400 2410 2560 1.000000 998 1005 1200 2400 2410 2560 1.000000 998 1005 1200 2400 2410 2560 1.000000 998 1005 1200 2400 2410 2560 1.000000 998 1005 1200 2400 2410 2560 1.000000 998 1005 1200 2400 2410 2560 1.000000 999 1005 1200 2400 2410 2560 1.000000 999 1005 1200 2400 2410 2550 1.000000 909 1005 <t< td=""><td></td><td>al number of train</td><td>ning cases: 1271</td><td></td><td></td><td></td><td></td><td></td><td></td></t<>		al number of train	ning cases: 1271						
Operation Control Control Control of Drawbar 991 1005 1200 2400 2410 2560 1.000000 989 1005 1200 2400 2410 2560 1.000000 989 1005 1200 2400 2410 2560 1.000000 989 1005 1200 2400 2410 2560 1.000000 989 1005 1200 2400 2410 2560 1.000000 989 1005 1200 2400 2410 2560 1.000000 989 1005 1200 2400 2410 2560 1.000000 989 1005 1200 2400 2410 2560 1.000000 989 1005 1200 2300 2410 2560 1.000000 999 1005 1200 2300 2410 2530 1.000000	Fina	al classification	Operator Station	AMS	Comfort Package	Remote Cylinder	Power Take-Off	Hitch Quick	Distance to
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000 1005 1000 0000 000 000 0000 1000000	73	2	989	1005	1200	2300	2410	2530	1.000000
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	Association rules									
	See rules									
_	Community of an antibility with a formula Date	- 4-1								
	Summary of association rules (SampleData Min. support = 40.0%. Min. confidence = 44	.sta) 4.0%. N	Ain. correlation = 50.0%							
	Max. size of body = 10, Max. size of head =	: 10								
	Body	==>	Head	Support(%)	Confidence(%)	Correlation(%)				
1	Comfort Package == 1200	==>	Power Take-Off == 2410	46.57750	69.81132	72.05552				
2	Comfort Package == 1200	==>	Hitch Quick Coupler and Drawbar == 2530	44.92526	67.33491	67.93846				
3	Remote Cylinder Control == 2300	==>	Hitch Quick Coupler and Drawbar == 2530	42.64359	83.00153	73.48864				
4	Power Take-Off == 2410	==>	Comfort Package == 1200	46.57750	74.37186	72.05552				
5	Hitch Quick Coupler and Drawbar == 2530	==>	Comfort Package == 1200	44.92526	68.54742	67.93846				
6	Hitch Quick Coupler and Drawbar == 2530	==>	Remote Cylinder Control == 2300	42.64359	65.06603	73.48864				
	1					- 1				



























