

Validating Google Earth Pro as a Scientific Utility for Use in Accident Reconstruction

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ABSTRACT

With the prevalence of satellite imagery in the analysis of collision events growing in the field of accident reconstruction, this research aims to quantify, refine, and compare the accuracies of measurements obtained utilizing conventional instruments to the measurements obtained using Google Earth Pro software. Researchers documented and obtained 1305 unique measurements from 68 locations in 25 states and provinces in the United States, Canada, and Australia using measuring wheels and tape measures. Measurements of relevant features at each location (crosswalks, curved roadways, off-road features, etc.) were documented and subdivided into three groups: On-Road, Off-Road, and Curved Path measurements. These measurements were compared to the measurements obtained of the same features from current and historical satellite imagery within Google Earth Pro. The accuracy of the relative measurements was divided into distance-based subsets within the three groups; for example, the error of measurements ranging from 0 - 12 feet to over 1000 feet both On- and Off-Road, and Curved Path measurement groups established the rate of error for each distance-based subset for the On-Road, Off-Road, and Curved Path measurement groupings taken from Google Earth Pro versus conventionally-obtained measurements.

CITATION: Harrington, S., Teitelman, J., Rummel, E., Morse, B. et al., "Validating Google Earth Pro As a Scientific Utility for Use in Accident Reconstruction," *SAE Int. J. Trans. Safety* 5(1):2017, doi:10.4271/2017-01-9750.

INTRODUCTION

The ability to accurately measure specific distances of varying lengths with a known error rate is important in any survey-based application; specifically, this measurement ability is foundational in the field of accident reconstruction. Lengths and widths of crosswalks, visual sightline obstructions, eyewitness locations relative to fixed objects, and the distance a vehicle traveled from the point of impact to the point of final rest are all important measurements that are quantified in accident reconstruction analyses.

Google Earth (Google Inc., Mountain View, CA), released in 2005, is a satellite imagery-based mapping service that has gained widespread use in the field of accident reconstruction. The software creates a virtual globe by combining several different file formats and imaging methods including aerial photography, satellite imagery, and geographic information system (GIS) technology. Google Earth Pro is a feature-rich version of the Google Earth software and includes advanced measurement tools as well as other features for commercial use of the program.

Within the field of accident reconstruction, the utilization of satellite imagery within Google Earth Pro is gaining relevance as a scientific utility for acquiring case-specific measurements. Google Earth Pro often provides clear images of sites that are either difficult to access or have been altered since the date of the accident being analyzed. As intersections, painted lane delineations, and other roadway features are constantly changing, the historical imaging feature of Google Earth Pro is sometimes the only way to accurately depict a collision site's condition at the time of the accident being studied. In addition, using Google Earth Pro to take case-specific measurements of the subject intersection can be more cost efficient than conventional methods and can limit unnecessary travel.

The images in the Google Earth Pro software are constantly updating. Both the image quality and accuracy of measurements taken from Google Earth Pro, however, can vary from one location to another. The best image quality is found in highly populated areas and important landmarks. Although some urban locations are cited to have as high at sub-meter resolution, there is no single measure of image or measurement accuracy listed by Google.

Previous literature attempted to quantify the rate of error of using programs such as Google Earth Pro as a measurement technique. A 2013 study focused on the positional accuracy of Google Earth. The study used a Trimble 1800 surveying GPS receiver to compare measured coordinates to those provided on Google Earth. The researchers concluded that Google Earth provided sufficient accuracy to be used to derive planmetric and topographical maps [1]. A similar study from 2014 used LEICA-SR530 GPS equipment to measure latitudinal and longitudinal coordinates. This research compared these coordinates with those provided on Google Earth and concluded that the program is a reasonable tool to use in the production of contour maps with a 1:50,000 or smaller scale [2].

A 2015 SAE paper assessed Google Earth Pro's accuracy as a tool for accident reconstruction [3]. The researchers compared 114 measurements of roadway features taken with Google Earth Pro with those taken on Total Station survey equipment of previously-documented collision sites. This research concluded that Google Earth Pro is an effective tool for obtaining measurements relied upon for accident reconstruction, but their conclusions were limited to On-Road areas of paved roadways and adjacent shoulders. Of the 114 total measurements, 54 were less than 25 feet and the largest measurement distance was 547.570 feet. There were only 16 measurements taken over 100 feet (Table 1).

Table 1. Results from SAE 2015-01-1435.

Measurement (ft)	Number of Measurements	RMSE (ft)	Average % Difference
5 to 25	54	0.227	1.23%
25 to 50	19	0.580	1.39%
50 to 75	17	0.405	0.48%
75 to 100	8	0.530	0.50%
Over 100	16	1.192	0.70%

This research aims to expand and improve upon the work of these previous studies. By utilizing a larger sampling of measurements taken from Google Earth Pro that considers different distance ranges, locations, curved path measurements, and relevant on- and off-road features, this paper will quantify the rate of error from measurements taken with Google Earth Pro compared to conventional instruments, and validate Google Earth Pro's scientific utility as a tool in accident reconstruction over short- and long-distances.

METHODOLOGY

To thoroughly quantify the accuracy of measurements taken from Google Earth Pro, measurements from Google Earth Pro were compared to measurements taken from 68 unique locations across 25 North American and Australian states and provinces: Arizona, California, Colorado, Connecticut, Delaware, Florida, Georgia, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Nevada, North Carolina, Ohio, Ontario, Oregon, Pennsylvania, Rhode Island, New South Wales, Victoria, Virginia, Utah, and Washington. Specific relevant roadway features such as on-road crosswalks, curved paths on roadways, and off-road measurements were focused on and highlighted for individual analysis.

Each measurement was taken from Google Earth Pro version 7.1.5.1557 using the 'Line' and 'Path' functions of the ruler feature within the program. The ground-length measurement, which takes into account elevation changes of the terrain, was used as opposed to the map-length measurement within the software. Each Google Earth Pro measurement was saved digitally as an image with the measurement (straight-line or curved sequential path) clearly shown as a yellow line with a highlighted beginning and endpoint(s). In addition, the ruler feature displaying the measured distance was saved in the image. Researchers zoomed, tilted, and rotated the images as necessary to clearly display each measurement's start and end location. The '3D Buildings' layer was also utilized when necessary to clearly display the best perspective of the measurement of interest.

Measurements were taken in feet for consistency, but other units, including metric units, are available within the software. The historical imagery feature was used as necessary for locations that were either modified since the time of the physical measurements or contained poor image quality in the most recent imagery. Each location was marked and saved in the 'My Places' section of Google Earth Pro to ensure the ability to easily revisit the specific location if needed.

Due to the number of measurements obtained, and the magnitude of the distances acquired, measuring wheels were utilized to collect data for the majority of the comparisons with the measurements obtained from Google Earth Pro. Utilization of a measuring wheel is an accepted analog method of acquiring large measurements in land surveying and accident reconstruction as it is efficient, accurate, and can be used for a broad range of distances [4, 5]. The measuring wheel senses fractional increments of a revolution, and based on the diameter of the wheel, converts this into the linear distance that the wheel was rolled. Approximately one percent of the data collected utilized a standard 25-foot steel tape measure.

Although the use of measuring wheels as the primary instrument for documenting physical evidence at scenes has declined with the rise of more precise digital acquisition methods, i.e. laser scanning and total station data, they are still used in the field of accident reconstruction for acquiring both short- and long-distance measurements. Whether it be the simplicity and immediacy of rolling a 300-foot measurement of a witnesses perspective to the area of impact, the relative ease of traveling with a measuring wheel compared to a laser scanner, tripod, and spheres for travel purposes, or a case which only requires a singular measurement compared to fully digitizing a 500-foot scene into a project point cloud, measuring wheels are still utilized in the field of accident reconstruction for analyses. Their use in this research was for all of the reasons stated above. Specifically, measuring wheels provided the ability to acquire geographically-diverse measurements quickly and accurately in order to quantify the accuracy of the available imagery in Google Earth Pro.

Each measurement was rolled between two unique objects or roadway features that were either relevant to the field of accident reconstruction or easy to locate within Google Earth Pro. Some of these objects and roadway features included light posts, street signs, crack seals, off-road fixed objects, crosswalks, roadway edges, fog lines, and lane lines. Researchers took a series of photographs for each specific measurement; an overall, beginning, end, and documentation perspective of each measurement was taken where applicable. This methodology ensured that the beginning and end points of each measurement would be consistent with the measurement obtained from Google Earth Pro. The measuring wheels used in this research displayed distance in feet and inches; researchers converted the measurements into feet to the hundredth of a foot. Some of the different measuring wheels utilized included the Lufkin Pro Series PSMW48, Trumeter 5505E, Tooluxe 01594L, Lufkin Pro Series PSMW18N, Calculated Industries Wheel Master Pro, Lufkin

Pro Series PSMW28, TR Industrial 88016 FX Series, and the Lufkin Pro Series PSMW18. Twelve researchers participated in the collection and processing of measurements and data.

The accuracy of each of the measuring wheels utilized in this research was verified through the use of a 25-foot steel tape. In addition, the two most-utilized measuring wheels, the Lufkin Pro Series PSMW48 and Calculated Industries Wheel Master Pro, were measured against a known fixed distance on a 100-meter (328.08 feet) track. For example, the Lufkin Pro Series PSMW48 measured 329.33 feet over this distance for a rate of error of 0.38%; similarly, the Calculated Industries Wheel Master Pro PSMW48 measured 329.0 feet over this distance for a rate of error of 0.28%. The measurements of the 100-meter track were repeated with the two previously-mentioned measuring wheels yielding consistent results and error rates.

A rolled measurement was accepted even when it was affected by a small rock, ditch, or any other imperfection in the roadway, as these were considered as part of the error of the measuring wheel technique and are commonly seen in the field. If an abnormal imperfection during the roll affected a measurement, however, the researcher rerolled the measurement, and avoided the disturbance when possible. If a measurement was physically obstructed by a vehicle or other object, it was omitted from the research as a proper comparison could not be made.

Figures 1, 2, 3, 4 represent the overall, beginning, end, and documentation photographs for a measurement taken at the intersection of George Washington Highway and Victory Boulevard in Portsmouth, Virginia. The measurement was obtained using the Lufkin Pro Series PSMW48 measuring wheel and the measurement was recorded as 124.79 feet.



Figure 1. Overall perspective depicting the intended direction of the measurement by the researcher.



Figure 2. Beginning perspective depicting the starting reference point for the measurement.



Figure 3. End perspective depicting the reference point for the end of the measurement.



Figure 4. Documentation perspective depicting the length of the rolled measurement.

<u>Figure 5</u> is a screen capture of the measurement obtained from Google Earth Pro of the measurement documented in <u>Figures 1, 2, 3, 4</u> at the intersection of George Washington Highway and Victory Boulevard in Portsmouth, Virginia. It shows the on-road straight-line that was measured to be 124.62 feet in the Google Earth Pro software utilizing the '3D Buildings' layer and a zoomed, tilted, and rotated perspective. The methodology documented in <u>Figures 1, 2, 3, 4, 5</u> was utilized for obtaining on- and off-road straight-line measurements within Google Earth Pro.



Figure 5. Google Earth Pro image and corresponding measurement of the intersection in Portsmouth, Virginia.

For curved measurements, a best-fit approach was taken in the Google Earth Pro software to match the beginning, arc of the curve, and endpoint of the curved measurement to the measurement that was obtained using the measuring wheel. Figures 6, 7, 8, 9 represent the overall, beginning, end, and documentation photographs for a curved measurement taken at the Floral Clock in Ontario, Canada. The measurement was obtained using the Lufkin Pro Series PSMW18N measuring wheel and the measurement was recorded as 21.79 feet.



Figure 6. Overall perspective depicting the intended direction of the curved measurement by the researcher.



Figure 7. Beginning perspective depicting the starting reference point for the curved measurement.



Figure 8. End perspective depicting the reference point for the end of the curved measurement.



Figure 9. Documentation perspective depicting the length of the rolled curved measurement.

Figure 10 is a screen capture of the measurement obtained from Google Earth Pro of the curved measurement documented in <u>Figures</u> <u>6</u>, <u>7</u>, <u>8</u>, <u>9</u> at the Floral Clock in Ontario, Canada. It shows the curved path that was measured to be 21.40 feet in the Google Earth Pro software utilizing the '3D Buildings' layer and a zoomed, tilted, and

rotated perspective. The methodology documented in <u>Figures 6</u>, <u>7</u>, <u>8</u>, <u>9</u>, <u>10</u> was utilized for obtaining curved-path measurements within Google Earth Pro.



Figure 10. Google Earth Pro image and corresponding measurement of the curved path in Ontario, Canada.

RESULTS

The total data set from this study contains 1305 valid measurements ranging from 2.24 - 2147.63 feet. The measurements were taken from 68 unique sites including urban, rural, and suburban locations spanning 25 states and provinces in North America and Australia. The total data set and the results are presented in tabular format in the <u>Appendix</u>.

Operator bias, specifically whether certain researchers and the dataset as a whole were biased towards either over- or under-estimating the measurements obtained via the measuring wheel versus the measurements obtained using Google Earth Pro was evaluated. Out of the 1305 measurements obtained, 618 Google Earth Pro measurements over-estimated the distance measured compared to the measuring wheel. Similarly, 678 Google Earth Pro measurements under-estimated the distance measured to the measuring wheel and nine measurements were equal.



Figure 11. Operator bias for the three researchers with the most measurements and the dataset as a whole.

In general, the error rates were balanced about zero (i.e. equal amount of over-and under-estimated measurements), which is confirmation that there was no bias in the research.



Figure 12. Distribution of error rates for the entire dataset.

The measurements were divided into three main groups, On-Road, Off-Road, and Curved Path measurements. On-Road measurements included any measurement that spanned the majority of a roadway-type surface; asphalt roadways, concrete sidewalks, and paved brick crosswalks are examples that qualified as On-Road surfaces. Off-Road measurements included any measurement that spanned a non-roadwaytype surface; grassy areas and fields, sand-composed shoulders, rock and/ or pebble-filled areas are examples of areas that qualified as Off-Road surfaces. Finally, Curved Path measurements included any measurements that had some radius of curvature in their delineation; rounded sidewalk corners, S-type turns in roadways, and curved fog lines are examples of areas that qualified as Curved Path measurements.

A total of 802 On-Road measurements, 226 Off-Road measurements, and 277 Curved Path measurements were obtained. 1296 measurements were obtained using a measuring wheel, and 9 measurements were obtained using a standard tape measure. These measurements were subdivided into eight distance-based subsets; 0 to less than 12 feet, 12 to less than 25 feet, 25 to less than 50 feet, 50 to less than 100 feet, 100 to less than 250 feet, 250 to less than 500 feet, 500 to less than 1000 feet, and over 1000 feet.

	Numb	er of Measureme	ents (n)
Subset	On-Road	Off-Road	Curved Path
0 - <12 (ft):	72	23	32
12 – <25 (ft):	100	24	40
25 – <50 (ft):	181	26	44
50 – <100 (ft):	131	33	29
100 – <250 (ft):	182	70	48
250 - <500 (ft):	74	23	47
500 - <1000 (ft):	35	19	20
1000+ (ft):	27	8	17
Total:	802	226	277

Table 2. Distribution of the On-Road, Off-Road, and Curved Path measurements.

The error of each measurement was defined as the delta between the control measurement (the measurement obtained via a conventional methodology [CONV]) and the experimental measurement (the measurement obtained via Google Earth Pro [GEP]). The percentage error of each measurement was calculated using the formula:

$$\% Error = \frac{|GEP - CONV|}{CONV} \times 100$$

Table 3. Average error of the On-Road, Off-Road, and Curved Path measurements.

	F	Average Error (%	0)
Subset	On-Road	Off-Road	Curved Path
0 - <12 (ft):	3.35	5.47	4.14
12 – <25 (ft):	2.99	2.47	2.07
25 – <50 (ft):	1.75	1.72	1.95
50 – <100 (ft):	1.03	1.42	1.22
100 – <250 (ft):	0.70	0.60	1.69
250 - <500 (ft):	0.35	0.37	0.98
500 - <1000 (ft):	0.31	1.55	0.49
1000+ (ft):	0.26	1.05	0.30

The Root Mean Square Error [RMSE] for each distance-based subset was calculated using the Google Earth Pro (GEP) and Measuring Wheel (MW) measurements utilizing the formula:

$$RMSE = \sqrt{\frac{\sum_{t=1}^{n} (GEP_t - MW_t)^2}{n}}$$

Table 4. Root Mean Square Error of the On-Road, Off-Road, and Curved Path measurements.

	Root N	lean Square Erro	or (feet)
Subset	On-Road	Off-Road	Curved Path
0 - <12 (ft):	0.34	0.50	0.52
12 – <25 (ft):	0.78	0.55	0.62
25 – <50 (ft):	1.12	0.75	1.12
50 – <100 (ft):	1.08	1.67	1.26
100 – <250 (ft):	1.96	1.51	4.86
250 – <500 (ft):	1.92	1.70	6.32
500 – <1000 (ft):	2.48	12.86	3.99
1000+ (ft):	4.70	19.68	4.57

Table 5. Minimum and maximum absolute errors of the On-Road, Off-Road, and Curved Path measurements.

	Minimum and Maximum Error (ABSI%)									
Subset	On-l	Road	Off-	Road	Curved Path					
	Min	Max	Min	Max	Min	Max				
0 - <12 (ft):	0.00	16.10	0.52	17.21	0.10	28.40				
12 – <25 (ft):	0.10	24.35	0.34	5.84	0.06	18.01				
25 – <50 (ft):	0.00	50.33	0.06	4.52	0.00	11.05				
50 – <100 (ft):	0.00	13.28	0.10	14.65	0.02	6.31				
100 – <250 (ft):	0.01	8.75	0.00	4.12	0.00	10.58				
250 – <500 (ft):	0.00	2.44	0.02	1.42	0.02	8.54				
500 – <1000 (ft):	0.05	0.68	0.04	3.46	0.07	1.73				
1000+ (ft):	0.00	0.76	0.04	2.75	0.10	0.52				

The maximum and minimum absolute percentage errors for each distance-based subset were determined.

The 95th-percentile confidence levels for each of the measurements in their respective distance-based subsets were calculated. The confidence intervals for each distance-based subset were calculated using the formula:

Confidence Interval =
$$\bar{x} \pm z^* \frac{\sigma}{\sqrt{r}}$$

where $\overline{\mathbf{x}}$ was defined as the mean of the differences between the conventional measurements and their respective Google Earth Pro measurements in each subset, z^* was defined as the 95th-percentile confidence level (z^* -value = 1.96), σ was defined as the standard deviation of the conventional measurements and their respective Google Earth Pro measurements in each subset:

$$\sigma = \sqrt{\frac{1}{n} \sum_{i=1}^{n} ((GEP_i - CONV_i) - \bar{x})^2}$$

and n was defined as the number of measurements in the subset.

Table 6. Mean (\bar{x}) and 95 th -percentile confidence levels $(\pm z^*)$	$\frac{\sigma}{\sqrt{n}}$) for e	each
distance-based subset.		

	On-l	Road	Off-l	Road	Curve	Curved Path	
Subset	Mean	+/-	Mean	+/-	Mean	+/-	
0 - <12 (ft):	0.00	0.08	0.01	0.20	-0.16	0.17	
12 – <25 (ft):	-0.13	0.15	0.03	0.21	-0.09	0.19	
25 – <50 (ft):	0.02	0.16	-0.26	0.27	-0.24	0.32	
50 – <100 (ft):	0.03	0.18	0.11	0.56	0.32	0.44	
100 – <250 (ft):	0.16	0.29	0.37	0.34	1.43	1.30	
250 – <500 (ft):	-0.18	0.40	0.59	0.64	-0.62	1.78	
500 – <1000 (ft):	-0.58	0.72	-4.12	5.37	1.08	1.65	
1000+ (ft):	-1.98	1.59	-13.24	10.27	-4.20	1.04	

DISCUSSION

The results of this research had a strong correlation with the hypothesis that measurements obtained from Google Earth Pro were consistent with the measurements obtained from conventional instruments over short- and long-distances over multiple surfaces. Based on the number of measurements obtained, the geographical breadth of the measurements, the balance of the measurements over- or under-estimation about zero, the lack of negative or positive bias by individual researchers, the lack of negative or positive bias of the entire dataset, the low error rates of the measurements obtained from Google Earth Pro compared to the conventional measurements, the mean of the differences between measurements obtained from Google Earth Pro and the conventional measurements in the distance-based subsets near zero, and the narrow ranges for the 95th-percentile confidence intervals, the dataset in this research was deemed to be statistically significant to establish error rates for measurements from Google Earth Pro. Furthermore, the results of

this research validate the use of Google Earth Pro as a scientific utility and a measurement tool for short- and long-distance measurements within the software.

The mean of the differences between measurements obtained from Google Earth Pro and the conventional measurements in the distance-based subsets was near zero (<1) for most of the dataset below 500 feet. Furthermore, the confidence intervals were less than one for this same range. For example, with 95% confidence, the average difference between On-Road measurements obtained from Google Earth Pro and the On-Road measurements obtained using conventional instruments in the 100 - <250 foot distance-based subset was 0.16 ± 0.29 feet. Likewise, with 95% confidence, the average difference between Curved Path measurements obtained from Google Earth Pro and the Curved Path measurements obtained using conventional instruments in the 50 - <100 foot distance-based subset was 0.32 ± 0.44 feet. Generally, as the measurement distance increased, the magnitude of the mean and the range of the 95th-percentile confidence levels increased.

The percentage average error rates of the On-Road, Off-Road, and Curved Path measurements from Google Earth Pro generally decreased as the magnitude of the distance measured increased. For example, 69 On-Road measurements were taken between 0 - 12 feet with an average error of 3.35%, the 27 On-Road measurements taken over 1000 feet yielded an average error of over an order of magnitude smaller, only 0.26%. Variability in the image quality was one contributing factor that increased the relative error rate between the distance-based subsets; larger measurements with easier to define starting and ending reference points were easier to select than their relatively smaller (25 foot or less) counterparts.

The proper selection of the appropriate starting and ending point on a measurements error was magnified at the smaller distance-based subsets. While attempting to measure the width of a crosswalk, for instance, moving the starting or ending point a small distance relative to a pixelated and zoomed-in Google Earth Pro image can alter the measurement by half of a foot. A half foot variation over a ten foot distance due to the relative image quality is the largest contributor of error to the smaller measurement.

On-Road and Off-Road measurements were generally equally accurate for the same distance-based subset. One notable exception (more than 2% delta in the average error) was for the 0 - 12 foot distance-based subset. This result is likely due to the compounding error of the measuring wheel slipping more over the Off-Road surface and the selection of more ambiguous starting and ending points (i.e. the center of a tree or large embedded rock) in a pixelated and zoomed-in Google Earth Pro image of an Off-Road measurement. The other notable exception was for the 500 - 1000 and 1000+ foot On-Road and Off-Road distance-based subsets. The average error of Off-Road measurements was four to five times higher than the On-Road measurements over the same distance-based subset. This is likely due to the compounding error of the measuring wheel slipping more over the Off-Road's uneven surface over a larger distance compared to the On-Road measurement obtained on a smoother, more even surface. In addition, a smaller diameter measuring wheel was utilized for the majority of these Off-Road distance-based

subsets, larger diameter measuring wheels are less prone to error over uneven surfaces. Therefore, field measurements of 500+ foot Off-Road distances with measuring wheels must be taken with care and alternate measurement techniques should be considered.

Curved Path measurements were generally equally as accurate as both On- and Off-Road measurements between 0 - 50 feet. The relative accuracy of the Curved Path measurements and On- and Off-Road measurements began to diverge between 50 - 500 feet. Curved Path measurements require more user input for their selection in the Google Earth Pro software, the addition of more points along the curved path by the user can compound an error compared to the two-step (beginning and end selection) process for the On-Road Measurement.

The use of historical imagery within Google Earth Pro allowed the researchers to take accurate measurements of locations that had either changed from the current image displayed in Google Earth Pro or when a historical image provided a clearer perspective of the measurement of interest. This utility allowed the researchers to compare multiple historical images of an incident location that were taken over a multiple-year period, and to choose the most relevant image for the analysis of the measurement.

Often, there are over a dozen available historical images that pre- and post-date the accident being investigated. As demonstrated through its use in this study, the technique of verifying a site's substantial similarity in the most resolute Google Earth Pro image to the Google Earth Pro image that was taken in the closest proximity to the incident date yields accurate results. For example, if shadows in one historical image of the incident site being studied obscure the area of interest, another historical image of either better quality or without the shadows can be obtained. Even though the images may have been taken in different years, the substantial similarity of the image can be established through similar measurements in each image of relevant roadway features like lane widths, measurements between utility poles, crosswalks, etc. The substantial similarity of measurements within these respective images is also supported by the use of this methodology within this research and the accurate results obtained.

		2015-01-	1435	2017-01-9750			
Subset (ft)	n	RMSE (ft)	Avg. % Difference	n	RMSE (ft)	Avg. % Difference	
5 to 25	54	0.227	1.23%	162	0.67	2.94%	
25 to 50	19	0.580	1.39%	181	1.12	1.75%	
50 to 75	17	0.405	0.48%	85	1.08	1.10%	
75 to 100	8	0.530	0.50%	46	1.09	0.90%	
Over 100	16	1.192	0.70%	296	1.96	0.56%	

Table 7. Comparison of SAE 2015-01-1435 data to the On-Road data collected in this research, SAE 2017-01-9750.

The results of this research were compared to the 2015 SAE paper that assessed Google Earth Pro's accuracy as a tool for accident reconstruction. The dataset from this research was organized to match the subsets the authors studied in their prior research using a Total

Station. As the previous authors only measured On-Road surfaces, only On-Road measurements from this research were compared. Off-Road and Curved Path measurements were ignored.

As expected, the use of a Total Station at distances under 100 feet yielded more accurate measurements when compared to the measurements obtained using conventional instruments. The smaller sample size of measurements over 100 feet in the 2015 SAE paper, however, prevented the authors for this research from directly comparing the results of this research against a larger sample size of Total Station measurements at distances between 500 - <1000 feet or 1000+ feet. However, the more accurate average percent difference for all measurements over 100 feet in this research compared to the 2015 SAE paper indicates that conventional instruments can be as accurate as Total Station data or laser scanners over long distances. The authors recognize the need for more research comparing laser scan data to measurements obtained from Google Earth Pro for distances over 100 feet.

SUMMARY/CONCLUSIONS

- For most uses within accident reconstruction, relatively flat ground-length measurements from aerial views of Google Earth Pro presented sufficient accuracy to allow a substitution of actual on-site measurements. This study confirmed such measurement accuracy to distances over 2000 feet.
- 2. On-road, off-road, and curved path measurements from Google Earth Pro presented an average error rate of 1.45%, 1.61%, and 1.73%, respectively, to those obtained by manually rolled measurements for more than 1300 worldwide measurements.
- 3. The error rate of the measurements generally decreased with the length of the measurement.
- 4. This study utilized measurements obtained by conventional instruments over the subject terrain. The authors theorize that measurements taken by more accurate means, i.e., laser scanning, or total stations, will present lower error rates for equivalent measurements. This was confirmed for measurements less than 100 feet with the prior SAE 2015-01-1425 paper that focused on Total Station data.
- 5. The sample used in this study was statistically significant to establish an error rate for measurements from Google Earth Pro aerial views.
- 6. The use of historical imagery within Google Earth Pro was included in this study; error rates associated with the use of historical images were consistent with the most recent images provided in Google Earth Pro.
- 7. As the most recent Google Earth Pro image may not always provide the most resolute perspective, image quality in Google Earth Pro must be considered when identifying measurement points. The use of historical imagery within Google Earth Pro

is an appropriate methodology for obtaining measurements in these conditions.

 More study is required to validate measurements with severe, off-road elevation changes, which may occur only rarely in accident reconstruction, such as large ditches, onto or across underpasses, or steep slopes on road edges.

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ACKNOWLEDGMENTS

The authors would like to acknowledge all of the diligent researchers who made this study possible. They would also like to thank the SAE manuscript review committee for their insightful and constructive peer-review.

APPENDIX

APPENDIX A. MASTER TABLE OF RESULTS

	Google Earth Pro v. Conventional - Curved Path (Path Function)					Google Earth Pro v. Conventional - Off- Road (Ruler Function)				Google Earth Pro v. Conventional - On- Road (Ruler Function)						
	Data Points (n):	95 th % confidence (± ft):	Mean (ft):	Root Mean Square Error (ft):	Average Error:	Data Points (n):	Average Error: Root Mean Square Error (ft): Mean (ft): 95 th % confidence (± ft): Data Points (n):				Data Points (n):	95 th % confidence (± ft):	Mean (ft):	Root Mean Square Error (ft):	Average Error:	
	32	0.17	-0.16	0.52	4.14%	23	0.20	0.01	0.50	5.47%	72	0.08	0.00	0.34	3.35%	0-12 (ft)
	40	0.19	-0.09	0.62	2.07%	24	0.21	0.03	0.55	2.47%	100	0.15	-0.13	0.81	2.99%	12-25 (ft)
	44	0.32	-0.24	1.12	1.95%	26	0.27	-0.26	0.75	1.72%	181	0.16	0.02	1.12	1.75%	25-50 (ft)
	29	0.44	0.32	1.26	1.22%	33	0.56	0.11	1.67	1.42%	131	0.18	0.03	1.08	1.03%	50-100 (ft)
	48	1.30	1.43	4.86	1.69%	70	0.34	0.37	1.51	0.60%	182	0.29	0.16	1.96	0.70%	100-250 (ft)
	47	1.78	-0.62	6.32	0.98%	23	0.64	0.59	1.70	0.37%	74	0.40	-0.18	1.92	0.35%	250-500 (ft)
Data Point	20	1.65	1.08	3.99	0.49%	19	5.37	-4.12	12.86	1.55%	35	0.72	-0.58	2.48	0.31%	500-1000 (ft)
s (total):	17	1.04	-4.20	4.57	0.30%	8	10.27	-13.24	19.68	1.05%	27	1.59	-1.98	4.70	0.26%	1000+ (ft)
1305	277					226					802					Total

APPENDIX B. MASTER DATA SET

	Zip	Measu	rement	Delta (ft)	Error (%)	Convent	Conventional Information		
Date Obtained	Postal Code Postcode	GEP	Conv.	GEP v. Conv	GEP v. Conv	Method	Instrument	ID	Meas. Type
06/07/16	32827	2.24	2.67	-0.43	16.10%	Roll-a-wheel	5505E	JMT	OnR
08/16/16	44130	2.55	3.08	-0.53	17.21%	Roll-a-wheel	PSMW48	SH	OffR
06/14/16	19952	3.00	3.04	-0.04	1.32%	Roll-a-wheel	PSMW48	JMT	OnR
06/07/16	32827_	3.21	3.42	-0.21	6.14%	Roll-a-wheel	5505E	JMT	OnR
07/12/16	18943	3.63	3.83	-0.20	5.22%	Roll-a-wheel	WMP12	ETR	OnR
08/16/16	44130	3.73	4.04	-0.31	7.67%	Roll-a-wheel	PSMW48	SH	OffR
08/16/16	44130	4.05	4.00	0.05	1.25%	Roll-a-wheel	PSMW48	SH	OffR
06/07/16	32827	4.06	4.25	-0.19	4.47%	Roll-a-wheel	5505E	JMT	OnR
06/07/16	32822	4.08	4.67	-0.59	12.63%	Roll-a-wheel	5505E	JMT	OnR
08/16/16	44130	4.09	3.83	0.26	6.79%	Roll-a-wheel	PSMW48	SH	OffR
08/16/16	44130	4.11	4.08	0.03	0.74%	Roll-a-wheel	PSMW48	SH	OffR
08/16/16	45839	4.29	4.17	0.12	2.88%	Roll-a-wheel	PSMW48	SH	OffR
06/07/16	32827_	4.41	4.75	-0.34	7.16%	Roll-a-wheel	5505E	JMT	OnR
08/31/16	98107	4.41	5	-0.59	11.80%	Roll-a-wheel	PSMW18	BJM	СР
08/16/16	44130	4.48	4.42	0.06	1.36%	Roll-a-wheel	PSMW48	SH	OffR
08/16/16	44130	4.63	4.17	0.46	11.03%	Roll-a-wheel	PSMW48	SH	OffR
06/13/16	01862_	4.80	5.08	-0.28	5.51%	Roll-a-wheel	PSMW48	JMT	OnR
06/02/16	33126	4.97	4.92	0.05	1.02%	Roll-a-wheel	PSMW48	JMT	OnR
06/08/16	32821	5.20	4.75	0.45	9.47%	Roll-a-wheel	5505E	JMT	OnR
06/14/16	19952	5.20	5.50	-0.30	5.45%	Roll-a-wheel	PSMW48	JMT	OnR
10/20/15	04090	5.27	5.5	-0.23	4.18%	Roll-a-wheel	PSMW28	PC	OnR
08/28/16	06042	5.37	7.50	-2.13	28.40%	Roll-a-wheel	PSMW28	PC	СР
08/09/12	18966	5.51	5.68	-0.17	2.99%	Roll-a-wheel	WMP12	AI/BS	СР
09/12/16	3000 (VIC)	5.55	5.41	0.14	2.59%	Tape Measure	TM	КРН	OnR
09/12/16	3000 (VIC)	5.57	5.58	-0.01	0.18%	Tape Measure	TM	КРН	OnR
06/07/16	32827	5.87	5.42	0.45	8.30%	Roll-a-wheel	5505E	JMT	OnR
06/07/16	32827	5.90	6.92	-1.02	14.74%	Roll-a-wheel	5505E	JMT	OnR
08/16/16	44130	6.04	6.08	-0.04	0.66%	Roll-a-wheel	PSMW48	SH	OffR
08/31/16	98107	6.25	6	0.25	4.17%	Roll-a-wheel	PSMW18	BJM	СР
08/09/12	18966	6.28	6.96	-0.68	9.77%	Roll-a-wheel	WMP12	AI/BS	СР
08/31/16	98107	6.33	6.25	0.08	1.28%	Roll-a-wheel	PSMW18	BJM	СР
08/09/12	18966	6.36	6.83	-0.47	6.88%	Roll-a-wheel	WMP12	AI/BS	СР
06/07/16	32827	6.49	6.92	-0.43	6.21%	Roll-a-wheel	5505E	JMT	OnR
06/14/16	19952	6.68	6.83	-0.15	2.20%	Roll-a-wheel	PSMW48	JMT	OnR
06/14/16	19952	6.73	8.00	-1.27	15.88%	Roll-a-wheel	PSMW48	JMT	OnR
08/16/16	45839	6.73	6.92	-0.19	2.75%	Roll-a-wheel	PSMW48	SH	OffR
08/16/16	44130	6.74	7.42	-0.68	9.16%	Roll-a-wheel	PSMW48	SH	OffR
07/12/16	18943	6.90	6.88	0.02	0.29%	Roll-a-wheel	WMP12	ETR	OnR
08/09/12	18966	6.93	6.92	0.01	0.14%	Roll-a-wheel	WMP12	AI/BS	СР
06/26/13	12831	6.93	6	0.93	15.50%	Tape Measure		PC	OffR
06/07/16	32827	7.00	7.83	-0.83	10.60%	Roll-a-wheel	5505E	JMT	OnR
08/16/16	44130	7.05	7.00	0.05	0.71%	Roll-a-wheel	PSMW48	SH	OffR
08/16/16	44130	7.12	7.08	0.04	0.56%	Roll-a-wheel	PSMW48	SH	OffR
07/12/16	18943	7.17	7.04	0.13	1.85%	Roll-a-wheel	WMP12	ETR	OnR
06/13/16	03060	7.24	7.08	0.16	2.26%	Roll-a-wheel	PSMW48	JMT	OnR
10/30/15	10993	7.25	7.00	0.25	3.57%	Roll-a-wheel	PSMW28	PC	OnR
06/14/16	19952	7.46	8.00	-0.54	6.75%	Roll-a-wheel	PSMW48	JMT	OnR
06/02/16	33407	7.50	7.50	0.00	0.00%	Roll-a-wheel	PSMW48	JMT	OnR
08/31/16	98107	7.58	7.92	-0.34	4.29%	Roll-a-wheel	PSMW18	BJM	СР
05/29/16	08402	7.63	7.50	0.13	1.73%	Roll-a-wheel	PSMW48	JMT	OnR

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08/16/16	45839	7.72	7.83	-0.11	1.40%	Roll-a-wheel	PSMW48	SH	OffR
06/13/16	01821	7.73	7.58	0.15	1.98%	Roll-a-wheel	PSMW48	JMT	OnR
08/16/16	44130	7.73	8.00	-0.27	3.37%	Roll-a-wheel	PSMW48	SH	OffR
08/31/16	98107	7.76	7.38	0.38	5.15%	Roll-a-wheel	PSMW18	BJM	СР
08/16/16	44130	7.78	8.33	-0.55	6.60%	Roll-a-wheel	PSMW48	SH	OffR
08/31/16	98107	7.8	8.17	-0.37	4.53%	Roll-a-wheel	PSMW18	BJM	СР
06/13/16	01862_	7.81	8.46	-0.65	7.68%	Roll-a-wheel	PSMW48	JMT	OnR
08/31/16	98107	7.83	8.33	-0.50	6.00%	Roll-a-wheel	PSMW18	BJM	СР
08/31/16	98107	7.86	7.46	0.40	5.36%	Roll-a-wheel	PSMW18	BJM	СР
08/16/16	45839	7.86	8.08	-0.22	2.72%	Roll-a-wheel	PSMW48	SH	OffR
08/31/16	98107	7.9	7.92	-0.02	0.25%	Roll-a-wheel	PSMW18	BJM	СР
08/31/16	98107	7.9	8	-0.10	1.25%	Roll-a-wheel	PSMW18	BJM	СР
08/28/16	06042	8.07	9.08	-1.01	11.16%	Roll-a-wheel	PSMW28	PC	СР
08/09/12	18966	8.23	8.17	0.06	0.73%	Roll-a-wheel	WMP12	AI/BS	СР
07/12/16	18943	8.25	8.08	0.17	2.10%	Roll-a-wheel	WMP12	ETR	OnR
09/12/16	3000 (VIC)	8.29	7.74	0.55	7.11%	Tape Measure	TM	КРН	OnR
07/12/16	18943	8.39	8.29	0.10	1.21%	Roll-a-wheel	WMP12	ETR	OnR
06/02/16	33126	8.42	8.42	0.00	0.00%	Roll-a-wheel	PSMW48	JMT	OnR
08/09/12	18966	8.45	8.33	0.12	1.44%	Roll-a-wheel	WMP12	AI/BS	СР
06/07/16	32827_	8.47	8.50	-0.03	0.35%	Roll-a-wheel	5505E	JMT	OnR
06/07/16	32822	8.70	8.50	0.20	2.35%	Roll-a-wheel	5505E	JMT	OnR
07/12/16	18943	8.73	8.67	0.06	0.69%	Roll-a-wheel	PSMW48	JMT	OnR
07/12/16	18943	8.82	8.54	0.28	3.28%	Roll-a-wheel	WMP12	ETR	OnR
06/02/16	33054	8.83	8.96	-0.13	1.45%	Roll-a-wheel	PSMW48	JMT	OnR
08/09/12	18966	8.84	8.75	0.09	1.03%	Roll-a-wheel	WMP12	AI/BS	СР
07/12/16	18943	8.92	9.13	-0.21	2.30%	Roll-a-wheel	PSMW48	JMT	OnR
07/12/16	18943	9.03	8.88	0.15	1.69%	Roll-a-wheel	WMP12	ETR	OnR
06/29/16	ON.L2E	9.05	9.04	0.01	0.11%	Roll-a-wheel	PSMW48	JMT	OnR
08/31/16	98107	9.06	8.92	0.14	1.57%	Roll-a-wheel	PSMW18	BJM	СР
06/28/16	12206	9.15	9.13	0.02	0.22%	Roll-a-wheel	PSMW48	JMT	OnR
08/16/16	44130	9.16	10.25	-1.09	10.63%	Roll-a-wheel	PSMW48	SH	OffR
07/12/16	18943	9.18	9.13	0.05	0.55%	Roll-a-wheel	PSMW48	JMT	OnR
08/17/16	44028	9.20	8.75	0.45	5.14%	Roll-a-wheel	PSMW48	SH	OffR
06/29/16	ON.L2E	9.34	9.46	-0.12	1.27%	Roll-a-wheel	PSMW48	JMT	OnR
05/31/16	19150	9.38	8.75	0.63	7.20%	Roll-a-wheel	PSMW48	JMT	OnR
08/31/16	98107	9.49	10.08	-0.59	5.85%	Roll-a-wheel	PSMW18	BJM	СР
08/09/12	18966	9.5	9.66	-0.16	1.66%	Roll-a-wheel	WMP12	AI/BS	СР
06/29/16	ON.L2E	9.52	9.33	0.19	2.04%	Roll-a-wheel	PSMW18N	SH	OnR
08/16/16	45839	9.53	9.58	-0.05	0.52%	Roll-a-wheel	PSMW48	SH	OffR
08/09/12	18966	9.54	9.5	0.04	0.42%	Roll-a-wheel	WMP12	AI/BS	СР
06/09/16	32803	9.57	9.58	-0.01	0.10%	Roll-a-wheel	5505E	SH	OnR
08/24/16	2010 (NSW)	9.71	9.65	0.06	0.62%	Tape Measure	TM	КРН	OnR
06/29/16	ON.L2E	9.74	9.50	0.24	2.53%	Roll-a-wheel	PSMW48	JMT	OnR
08/31/16	98107	9.85	10.09	-0.24	2.38%	Roll-a-wheel	PSMW18	BJM	СР
05/29/16	08402	9.91	9.58	0.33	3.44%	Roll-a-wheel	PSMW48	JMT	OnR
08/26/16	2010 (NSW)	9.93	9.92	0.01	0.10%	Roll-a-wheel	TRI88016	КРН	OnR
06/07/16	32827_	9.94	9.83	0.11	1.12%	Roll-a-wheel	5505E	JMT	OnR
08/31/16	98107	9.96	9.83	0.13	1.32%	Roll-a-wheel	PSMW18	BJM	CP
08/09/12	18966	9.98	10	-0.02	0.20%	Roll-a-wheel	WMP12	AI/BS	СР
04/29/15	10001	10.03	10	0.03	0.30%	Roll-a-wheel	PSMW28	PC	OnR
04/29/15	10001	10.06	10	0.06	0.60%	Roll-a-wheel	PSMW28	PC	OnR
08/28/16	06042	10.07	9.83	0.24	2.41%	Roll-a-wheel	PSMW28	PC	СР
07/12/16	18943	10.10	10.04	0.06	0.60%	Roll-a-wheel	WMP12	ETR	OnR
07/20/16	18940	10.12	10.00	0.12	1.20%	Roll-a-wheel	PSMW48	JMT	OnR
08/16/16	45893	10.18	9.50	0.68	7.16%	Roll-a-wheel	PSMW48	SH	OffR
07/20/16	18940	10.20	9.83	0.37	3.76%	Roll-a-wheel	PSMW48	JMT	OnR
06/13/16	01862_	10.24	10.33	-0.09	0.87%	Roll-a-wheel	PSMW48	JMT	OnR
00/00/110	18966	10.37	10.38	-0.01	0.10%	Roll-a-wheel	WMP12	AI/BS	CP

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06/2716 14261 10.72 14.17 3.45 2.42% Tage Mesure PSMV184 Stil Onf. 09/0716 32827 10.84 10.58 0.26 2.27% Tage Mesure PSMV174 95107 11.06 11 0.06 0.55% Roll-a-wheel PSMV184 DMM CP 09/11/16 98107 11.24 11.42 0.18 1.58% Roll-a-wheel PSMV184 DMM CP 09/11/15 01821 11.36 11.29 0.077 0.042% Roll-a-wheel PSMV284 DMT Ont 05/11/16 10152 11.46 1.1.50 0.042% Roll-a-wheel PSMV284 DMT Ont 05/11/16 10152 1.1.46 1.1.50 0.253 Roll-a-wheel PSMV284 DMT Ont 05/02/16 3054 1.1.61 1.1.75 0.66 0.51% Roll-a-wheel PSMV284 DMT Ont 05/11/16 0.452 1.2.0 1.0.00 1.0.21% <th>09/09/16</th> <th>30269</th> <th>10.50</th> <th>10.5</th> <th>0.00</th> <th>0.00%</th> <th>Tape Measure</th> <th>ТМ</th> <th>BS</th> <th>OnR</th>	09/09/16	30269	10.50	10.5	0.00	0.00%	Tape Measure	ТМ	BS	OnR
09/09/16 30269 10.75 11 0.25 12.27% Tape Messure TM BS OrR 09/07/16 32827 10.84 10.58 0.26 2.46% Roll-wheel PSMV18 UM CP 09/17/16 98107 11.24 11.42 0.18 Roll-wheel PSMV18 UM CP 06/13/15 01821 11.36 11.29 0.07 0.62% Roll-wheel PSMV28 I// C Onthell 06/07/16 30269 11.38 11.33 0.05 0.44% Roll-wheel PSMV28 I// C Onthell 06/07/16 30261 11.50 11 0.50 4.55% Roll-wheel PSMV28 I// Onthell Onthell </td <td>06/29/16</td> <td>14261</td> <td>10.72</td> <td>14.17</td> <td>-3.45</td> <td>24.35%</td> <td>Roll-a-wheel</td> <td>PSMW18N</td> <td>SH</td> <td>OnR</td>	06/29/16	14261	10.72	14.17	-3.45	24.35%	Roll-a-wheel	PSMW18N	SH	OnR
06/07/16 32827 10.84 10.58 0.26 2.46% Roll-arwheel 5505E IVIT Ord 08/31/16 98107 11.24 11.42 0.18 1.55% Roll-arwheel PSWV18 BMM CP 06/31/16 98107 11.24 11.42 0.18 1.55% Roll-arwheel PSWV18 BMM CP 06/31/16 11.88 11.33 0.15 0.44% Roll-arwheel PSWV28 PC OrA 06/31/16 11.952 11.46 11.50 0.44% Roll-arwheel PSWV88 MT OrR 06/27/16 33054 11.69 1.75 0.05 0.51% Roll-arwheel PSWV88 MT OrR 06/27/16 33054 11.69 1.75 0.05 0.51% Roll-arwheel PSWV88 MT OrR 06/37/16 0.1862 1.120 1.02 1.021 1.024 1.024 1.024 1.024 1.026 1.02 1.027 1.043	09/09/16	30269	10.75	11	-0.25	2.27%	Tape Measure	ТМ	BS	OnR
08/11/16 98107 11.06 11 0.06 0.55% Roll-wheel PSMV18 DIM CP 08/11/16 08107 11.28 11.29 0.07 0.62% Roll-wheel PSMV18 DIM CP 08/09/12 10986 11.48 11.63 0.05 0.44% Roll-wheel PSMV18 DIM CP 0.61 08/09/12 11866 11.45 11.63 0.18 0.18 Roll-wheel PSMV18 DIM CP 06/07/16 13952 11.46 11.50 10 0.53 4.55% Roll-wheel PSMV18 AIK OnR 07/25/16 98103 11.51 11.00 0.53 4.52% Roll-wheel PSMV18 MIT OnR 06/27/16 30364 11.69 11.75 10.70 0.53 5.99% Roll-wheel PSMV48 JMT OnR 06/27/16 03422 11/25 11.33 0.42 3.73% Roll-wheel PSMV48 JMT	06/07/16	32827_	10.84	10.58	0.26	2.46%	Roll-a-wheel	5505E	JMT	OnR
08/31/16 09/31/16 01/321 11.36 11.29 0.07 0.67% Rell-wrheel PSMW18 IMT OP 08/31/16 11.995 11.36 11.29 0.07 0.67% Rell-wrheel PSMW18 IMT OP 08/09/12 13956 11.45 11.63 0.018 1.55% Rell-wrheel PSMW18 IMT OP 06/14/16 10952 11.46 11.50 -0.04 0.55% Rell-wrheel PSMW18 IMT OR 06/20/16 31630 11.53 11.00 0.53 4.22% Rell-wrheel PSMW18 IMT OR 06/20/16 33054 11.96 11.75 10.36 0.51% Rell-wrheel PSMW48 IMT OR 06/32/16 03862 11.02 12.00 0.02 0.37% Rell-wrheel PSMW48 IMT OR 06/32/16 03862 11.02 12.00 0.02 0.37% Rell-wrheel PSMW48 IMT OR	08/31/16	98107	11.06	11	0.06	0.55%	Roll-a-wheel	PSMW18	BJM	СР
Op/13/16 01321/15	08/31/16	98107	11.24	11.42	-0.18	1.58%	Roll-a-wheel	PSMW18	BJM	СР
1030715 10393 11.38 11.33 0.05 0.44% Poll-wheel PSMV28 PC 0.nk 08/09/12 13956 11.46 11.50 -0.04 0.35% Roll-wheel PSMV28 MT OnR 04/29/13 10001 11.50 10 0.50 4.55% Roll-wheel PSMV18 MT OnR 04/29/13 10001 11.53 11.00 0.53 4.22% Roll-wheel PSMV18 MT OnR 06/20/16 33564 11.69 11.75 0.06 0.51% Roll-wheel PSMV18 MT OnR 06/13/16 01862 11.75 11.33 0.42 3.71% Roll-wheel PSMV48 MT OnR 06/13/16 01862 11.22 12.00 0.02 0.17% Roll-wheel PSMV48 MT OnR 06/13/16 01862 12.02 12.00 0.02 0.17% Roll-wheel PSMV48 MT OnR 07/20/16<	06/13/16	01821	11.36	11.29	0.07	0.62%	Roll-a-wheel	PSMW48	JMT	OnR
08/09/12 13896 11.45 11.63 0.18 1.55 Roll-a-wheel PSMW28 AV/IS CP 06/14/16 13992 11.46 11.50 11 0.50 4.55% Roll-a-wheel PSMW28 PC OnR 07/22/16 38103 11.53 11.00 0.53 4.224 Roll-a-wheel PSMW18 SH OnR 06/23/16 33054 11.69 11.75 1.028 Roll-a-wheel PSMW18 MT OnR 06/13/16 01862 11.75 11.73 0.42 3.1% Roll-a-wheel PSMW48 MT OnR 06/13/16 01862 11.75 11.33 0.42 3.1% Roll-a-wheel PSMW48 MT OnR 06/13/16 01862 11.24 1.020 0.02 0.17% Roll-a-wheel PSMW48 MT OnR 06/13/16 11.64 1.202 1.200 0.02 0.17% Roll-a-wheel PSMW48 MT OnR OnR	10/30/15	10993	11.38	11.33	0.05	0.44%	Roll-a-wheel	PSMW28	PC	OnR
06/14/16 1993/2 11.46 11.50 0.04 0.35% Foil-=wheel PSMW28 PC One 04/29/15 10001 11.50 11 0.50 4.55% Roll==wheel PSMW28 PC One 06/22/16 38103 11.53 11.00 0.53 4.82% Roll==wheel PSMW18 A/C One 06/22/16 33054 11.69 11.75 11.33 0.42 0.51% Roll==wheel PSMW48 MT One 06/31/16 01862 11.75 11.33 0.42 3.71% Roll==wheel PSMW48 MT One 06/31/16 01862 11.02 12.00 0.02 0.17% Roll==wheel PSMW48 JMT One 05/07/16 118940 12.02 12.00 0.02 0.17% Roll==wheel PSMW48 JMT One 05/07/16 32807 12.04 12.17 0.04 3.27% Roll==wheel PSMW48 JMT One	08/09/12	18966	11.45	11.63	-0.18	1.55%	Roll-a-wheel	WMP12	AI/BS	СР
04/28/15 10001 11.50 11 0.50 4.85% Roll-wheel PSMV28 PC 0.nR 06/23/16 18261 11.53 11.00 0.53 4.82% Roll-wheel PSMV18N ALC 0.nR 06/23/16 33054 11.69 11.75 11.33 0.02 Solits Roll-wheel PSMV48 JMT 0.nR 06/13/16 01862 11.75 11.33 0.42 3.71% Roll-wheel PSMV48 JMT 0.nR 06/13/16 01862 11.75 11.33 0.42 3.71% Roll-wheel PSMV48 JMT 0.nR 06/13/16 01862 11.20 12.00 0.02 0.17% Roll-wheel PSMV48 JMT 0.nR 06/13/16 01862 12.01 12.01 12.03 12.33 -0.30 2.43% Roll-wheel PSMV48 JMT 0.nR 06/14/16 33002 (VC) 12.21 12.04 3.62% Roll-wheel PSMV48 JM	06/14/16	19952	11.46	11.50	-0.04	0.35%	Roll-a-wheel	PSMW48	JMT	OnR
07/25/16 98103 11.53 11.00 0.53 4.82% Roll-awheel PSMW138 AC OnR 06/02/16 14261 11.54 11.42 0.12 1.02% Roll-awheel PSMW18N SH OnR 06/02/16 33054 11.69 11.75 0.02 0.51% Roll-awheel PSMW48 JMT OnR 06/13/16 01862 11.75 11.33 0.42 3.73% Roll-awheel PSMW48 JMT OnR 07/20/16 10862 12.02 12.00 0.02 0.17% Roll-awheel PSMW48 JMT OnR 07/20/16 18940 12.02 12.00 0.02 0.17% Roll-awheel PSMW48 JMT OnR 06/12/16 23287 12.04 12.21 0.40 3.29% Roll-awheel PSMW48 JMT OnR 06/13/16 98107 12.61 12.61 0.40 3.62% Roll-awheel PSMW48 JMT OnR	04/29/15	10001	11.50	11	0.50	4.55%	Roll-a-wheel	PSMW28	PC	OnR
06/29/16 13261 11.54 11.42 0.12 1.02% Roll-a-wheel PSMW48 JMT OnR 06/13/16 03654 11.75 11.17 0.51% Roll-a-wheel PSMW48 JMT OnR 06/13/16 01652 11.75 11.13 0.52 S.19% Roll-a-wheel PSMW48 JMT OnR 06/22/16 01862 11.94 11.25 0.69 F.13% Roll-a-wheel PSMW48 JMT OnR 06/23/16 01880 12.02 12.00 0.02 0.17% Roll-a-wheel PSMW48 JMT OnR 06/13/16 44130 12.03 12.03 0.30 2.43% Roll-a-wheel PSMW48 JMT OnR 06/14/16 2257 12.01 12.01 12.04 3.23% Roll-a-wheel PSMW48 JMT OnR 06/14/16 2952 12.61 12.17 0.44 3.23% Roll-a-wheel PSMW48 JMT OnR 06/14/	07/25/16	98103	11.53	11.00	0.53	4.82%	Roll-a-wheel	PSMW18	AJC	OnR
06/02/16 33054 11.65 11.75 0.06 0.51% Roll-a-wheel PSMW48 JMT OnR 06/13/16 0.1862 11.75 11.33 0.42 3.71% Roll-a-wheel PSMW48 JMT OnR 06/13/16 0.1862 11.75 11.33 0.42 3.71% Roll-a-wheel PSMW48 JMT OnR 06/13/16 0.1862 12.02 12.00 0.02 0.17% Roll-a-wheel PSMW48 JMT OnR 06/13/16 0.1862 12.02 12.00 0.02 0.17% Roll-a-wheel PSMW48 JMT OnR 06/07/16 18940 12.02 12.00 0.02 0.17% Roll-a-wheel PSMW48 JMT OnR 06/07/16 32827 12.04 12.17 0.40 3.29% Roll-a-wheel PSMW48 JMT OnR 06/14/16 91907 12.61 12.17 0.40 3.29% Roll-a-wheel PSMW48 JMT OnR	06/29/16	14261	11.54	11.42	0.12	1.02%	Roll-a-wheel	PSMW18N	SH	OnR
06/13/16 01862 11.75 11.17 0.58 5.19% Roll-a-wheel PSMW48 JMT OnR 08/28/16 0.682 11.74 11.25 0.69 6.13% Roll-a-wheel PSMW28 JMT OnR 08/28/16 0.6842 11.24 11.25 0.69 6.13% Roll-a-wheel PSMW28 JMT OnR 08/28/16 0.18840 12.02 12.00 0.02 0.17% Roll-a-wheel PSMW48 JMT OnR 08/16/16 44130 12.02 12.00 0.02 0.17% Roll-a-wheel PSMW48 JMT OnR 09/12/16 32827 12.04 12.21 12.06 -0.75 5.79% Tape Measure TM KPH OnR 09/12/16 398107 12.61 11.14 9.11% Roll-a-wheel PSMW28 JJMT OR 09/31/16 98107 12.71 12.67 0.03 0.24% Roll-a-wheel PSMW28 JJMT OR	06/02/16	33054	11.69	11.75	-0.06	0.51%	Roll-a-wheel	PSMW48	ЈМТ	OnR
06/13/16 01862 11.75 11.33 0.42 3.71% Roll+a-wheel PSMW48 JMT OnR 08/23/16 06042 11.94 11.25 0.69 6.13% Roll-a-wheel PSMW48 JMT OnR 06/13/16 01852 12.02 12.00 0.02 0.17% Roll-a-wheel PSMW48 JMT OnR 08/16/16 44130 12.03 12.33 0.30 2.43% Roll-a-wheel PSMW48 JMT OnR 06/07/16 32827 12.04 12.17 0.01 3.26% Roll-a-wheel PSMW48 JMT OnR 06/14/16 27958 12.57 12.17 0.44 3.62% Roll-a-wheel PSMW48 JMT OnR 08/13/16 98107 12.61 12.17 0.44 3.62% Roll-a-wheel PSMW28 BJM CP 08/31/16 98107 12.71 12.67 0.03 0.24% Roll-a-wheel PSMW28 BJM CP <t< td=""><td>06/13/16</td><td>01862_</td><td>11.75</td><td>11.17</td><td>0.58</td><td>5.19%</td><td>Roll-a-wheel</td><td>PSMW48</td><td>JMT</td><td>OnR</td></t<>	06/13/16	01862_	11.75	11.17	0.58	5.19%	Roll-a-wheel	PSMW48	JMT	OnR
08/28/16 06042 11.94 11.25 0.69 6.13% Roll-a-wheel PSMW28 PC CP 06/13/16 0.1862 12.02 12.00 0.02 0.17% Roll-a-wheel PSMW48 JMT OnR 08/15/16 18940 12.02 12.00 0.02 0.17% Roll-a-wheel PSMW48 SH Orff 06/07/16 32827_ 12.04 12.11 0.05 5.79% Tape Measure TM KPH OnR 06/14/16 29912/16 3000 (VIC) 12.21 12.66 0.75 5.79% Tape Measure TM KPH OnR 06/14/16 19952 12.61 12.17 0.40 3.29% Roll-a-wheel PSMW28 JMT OnR 07/20/16 18940 12.66 12.78 0.03 0.24% Roll-a-wheel PSMW28 JMT OnR 08/31/16 98107 12.73 13.25 -0.52 3.92% Roll-a-wheel PSMW28 BJM <td< td=""><td>06/13/16</td><td>01862</td><td>11.75</td><td>11.33</td><td>0.42</td><td>3.71%</td><td>Roll-a-wheel</td><td>PSMW48</td><td>ТМГ</td><td>OnR</td></td<>	06/13/16	01862	11.75	11.33	0.42	3.71%	Roll-a-wheel	PSMW48	ТМГ	OnR
06/13/16 01862 12.02 12.00 0.02 0.17% Roll-a-wheel PSMW48 JMT OnR 07/20/16 18940 12.03 12.03 0.03 2.43% Roll-a-wheel PSMW48 SH Orif 09/16/16 32827, 12.04 12.17 -0.13 1.07% Roll-a-wheel PSMW48 SH Orif 09/12/16 3000 (VIC) 12.21 12.96 -0.75 5.79% Tape Measure TM KPH OnR 06/14/16 2958 12.61 12.17 0.44 3.62% Roll-a-wheel PSMW29 BJM CP 06/14/16 19952 12.64 11.50 1.14 9.91% Roll-a-wheel PSMW28 BJM CP 06/14/16 19850 12.72 12.67 0.03 0.24% Roll-a-wheel PSMW28 BJM CP 08/03/16 98107 12.72 12.67 0.05 0.39% Roll-a-wheel PSMW23 BJM CP <	08/28/16	06042	11.94	11.25	0.69	6.13%	Roll-a-wheel	PSMW28	PC	СР
07/20/16 18940 12.02 12.00 0.02 0.17% Roll-a-wheel PSMW48 JMT OnR 08/16/16 44130 12.03 12.33 -0.30 2.43% Roll-a-wheel PSMW48 SH OfR 06/07/16 32827 12.04 12.17 -0.13 1.07% Roll-a-wheel PSMW48 SH OnR 09/12/15 3000 (VIC) 12.21 12.17 0.40 3.29% Roll-a-wheel PSMW48 JMT OnR 09/14/16 19952 12.64 11.50 1.14 9.91% Roll-a-wheel PSMW48 JMT OnR 09/12/16 18940 12.67 12.67 0.03 0.24% Roll-a-wheel PSMW28 BJM CP 08/09/12 18966 12.72 12.67 0.05 0.39% Roll-a-wheel PSMW23 BJM CP 08/31/16 98107 12.73 13.25 -0.52 3.32% Roll-a-wheel PSMW23 BJM CP	06/13/16	01862	12.02	12.00	0.02	0.17%	Roll-a-wheel	PSMW48	JMT	OnR
08/16/16 44130 12.03 12.33 -0.30 2.43% Roll-a-wheel PSMW48 SH OffR 06/07/16 23827	07/20/16	18940	12.02	12.00	0.02	0.17%	Roll-a-wheel	PSMW48	JMT	OnR
06/07/16 32827_ 12.04 12.17 -0.13 1.07% Roll-a-wheel 5505E JMT OnR 09/12/16 3000 (VIC) 12.21 12.96 -0.75 5.79% Tape Measure TM KPH OnR 06/14/16 27958 12.57 12.17 0.44 3.62% Roll-a-wheel PSMW2B BJM CP 06/14/16 19952 12.64 11.50 1.14 9.91% Roll-a-wheel PSMW2B BJM CP 06/31/16 98107 12.7 12.67 0.03 0.24% Roll-a-wheel PSMW2B BJM CP 08/31/16 98107 12.72 12.67 0.03 0.24% Roll-a-wheel PSMW2B BJM CP 08/31/16 98107 12.73 13.25 -0.52 3.92% Roll-a-wheel PSMW2B BJM CP 08/31/16 98107 12.83 12.86 0.25 1.99% Roll-a-wheel PSMW25 BJM CP <tr< td=""><td>08/16/16</td><td>44130</td><td>12.03</td><td>12.33</td><td>-0.30</td><td>2.43%</td><td>Roll-a-wheel</td><td>PSMW48</td><td>SH</td><td>OffR</td></tr<>	08/16/16	44130	12.03	12.33	-0.30	2.43%	Roll-a-wheel	PSMW48	SH	OffR
09/12/16 3000 (VIC) 12.21 12.96 -0.75 5.79% Tape Measure TM KPH OnR 09/12/16 29510 12.61 12.17 0.40 3.29% Roll-a-wheel PSMW48 JMT OnR 08/31/16 99107 12.61 12.17 0.44 3.62% Roll-a-wheel PSMW48 JMT OnR 08/14/16 19952 12.64 11.50 1.14 9.91% Roll-a-wheel PSMW48 JMT OnR 08/31/16 98107 12.7 12.67 0.03 0.24% Roll-a-wheel PSMW28 BJM CP 08/31/16 98107 12.73 13.25 -0.52 3.92% Roll-a-wheel PSMW23 BJM CP 08/31/16 98107 12.84 12.56 0.25 1.99% Roll-a-wheel PSMW23 BJM CP 08/31/16 98107 12.84 15.66 -2.82 18.01% Roll-a-wheel PSMW248 SH OffR	06/07/16	32827	12.04	12.17	-0.13	1.07%	Roll-a-wheel	5505E	IMT	OnR
Obj14/16 27958 12.57 12.17 0.40 3.29% Roll-a-wheel PSMW48 JMT OnR 08/31/16 98107 12.61 12.17 0.44 3.62% Roll-a-wheel PSMW29 BIM CP 06/14/16 19952 12.64 11.50 1.14 9.91% Roll-a-wheel PSMW48 JMT OnR 08/31/16 98107 12.7 12.67 0.03 0.24% Roll-a-wheel PSMW28 BIM CP 08/91/16 98107 12.72 12.67 0.05 0.39% Roll-a-wheel PSMW27 BIM CP 08/31/16 98107 12.73 13.25 0.52 3.92% Roll-a-wheel PSMW23 BIM CP 08/31/16 98107 12.83 12.58 0.25 1.99% Roll-a-wheel PSMW25 BIM CP 08/09/12 18966 12.84 15.66 -2.82 18.01% Roll-a-wheel PSMW48 SH OfR	09/12/16	3000 (VIC)	12.21	12.96	-0.75	5.79%	Tape Measure	TM	КРН	OnR
08/31/16 98107 12.61 12.17 0.44 3.62% Roll-a-wheel PSMW29 BJM CP 06/31/16 19952 12.64 11.50 1.14 9.91% Roll-a-wheel PSMW48 JMT ORR 08/31/16 98107 12.7 12.67 0.03 0.24% Roll-a-wheel PSMW28 JMT ORR 08/31/16 98107 12.72 12.75 -0.03 0.24% Roll-a-wheel WMP12 A//85 CP 08/31/16 98107 12.73 13.25 -0.52 3.92% Roll-a-wheel PSMW23 BJM CP 08/31/16 98107 12.83 12.58 0.25 1.99% Roll-a-wheel PSMW23 BJM CP 08/31/16 98107 12.83 12.64 15.66 -2.82 18.01% Roll-a-wheel PSMW23 BJM CP 08/17/16 14028 13.20 13.04 0.16 1.23% Roll-a-wheel PSMW48 SH Of	06/14/16	27958	12.57	12.17	0.40	3.29%	Roll-a-wheel	PSMW48	IMT	OnR
06/14/16 19952 12.64 11.50 11.14 9.91% Roll-a-wheel S505E SH OffR 07/20/16 19840 12.66 12.58 0.08 0.64% Roll-a-wheel PSMW28 BJM OR 08/31/16 98107 12.77 12.67 0.03 0.24% Roll-a-wheel PSMW28 BJM CP 08/31/16 98107 12.72 12.67 0.03 0.24% Roll-a-wheel PSMW27 BJM CP 08/31/16 98107 12.73 13.25 -0.52 3.92% Roll-a-wheel PSMW27 BJM CP 08/31/16 98107 12.73 13.25 0.25 1.99% Roll-a-wheel PSMW28 BJM CP 08/31/16 98107 12.83 12.84 15.66 -2.82 18.01% Roll-a-wheel PSMW48 SH OffR 08/17/16 14028 13.20 13.04 0.16 1.23% Roll-a-wheel PSMW48 SH Off	08/31/16	98107	12.61	12.17	0.44	3.62%	Roll-a-wheel	PSMW29	BJM	СР
107/20/16 18340 12.66 12.58 0.08 0.64% Roll-a-wheel PSMW48 JNT OnR 08/31/16 98107 12.7 12.67 0.03 0.24% Roll-a-wheel PSMW28 BJM CP 08/09/12 18966 12.72 12.75 -0.03 0.24% Roll-a-wheel PSMW28 BJM CP 08/31/16 98107 12.73 13.25 -0.52 3.92% Roll-a-wheel PSMW23 BJM CP 08/09/12 18966 12.84 15.66 -2.82 18.01% Roll-a-wheel PSMW23 BJM CP 08/09/12 18966 12.84 15.66 -2.82 18.01% Roll-a-wheel PSMW48 SH OffR 08/17/16 40228 13.20 13.04 0.16 1.23% Roll-a-wheel PSMW48 SH OffR 09/12/16 3000 (Vic) 13.28 12.42 0.86 6.92% Roll-a-wheel VMP12 ETR OffR <td>06/14/16</td> <td>19952</td> <td>12.64</td> <td>11.50</td> <td>1.14</td> <td>9,91%</td> <td>Roll-a-wheel</td> <td>5505F</td> <td>SH</td> <td>OffR</td>	06/14/16	19952	12.64	11.50	1.14	9,91%	Roll-a-wheel	5505F	SH	OffR
07/1016 98107 12.7 12.67 0.03 0.24% Roll-a-wheel PSMW28 BJM CP 08/09/12 18966 12.72 12.75 -0.03 0.24% Roll-a-wheel PSMW28 BJM CP 08/01/16 98107 12.73 12.67 0.05 0.39% Roll-a-wheel PSMW23 BJM CP 08/31/16 98107 12.73 13.25 -0.52 3.92% Roll-a-wheel PSMW23 BJM CP 08/31/16 98107 12.84 15.66 -2.82 18.01% Roll-a-wheel PSMW23 BJM CP 08/07/16 16350 13.17 13.83 -0.66 4.77% Roll-a-wheel PSMW48 SH OffR 09/12/16 3000 (VIC) 13.25 13.06 0.19 1.45% Tape M-a-wheel PSMW48 SH OffR 06/02/16 32821 13.28 12.42 0.86 6.92% Roll-a-wheel PSMW48 SH OfR	07/20/16	18940	12.66	12.58	0.08	0.64%	Roll-a-wheel	PSMW48	ІМТ	OnR
06/09/12 1836 1.7.2 1.7.5 -0.03 0.2.4% Roll-a-wheel WMP12 AI/85 CP 08/03/16 98107 12.72 12.67 0.05 0.39% Roll-a-wheel PSMW27 BJM CP 08/31/16 98107 12.73 13.25 -0.52 3.92% Roll-a-wheel PSMW23 BJM CP 08/31/16 98107 12.83 12.58 0.25 1.99% Roll-a-wheel PSMW23 BJM CP 08/09/12 18966 12.84 15.66 -2.82 18.01% Roll-a-wheel PSMW48 SH OffR 08/07/16 44028 13.20 13.04 0.16 1.23% Roll-a-wheel PSMW48 SH OffR 09/12/16 30201/17 44028 13.26 0.32 2.63% Roll-a-wheel PSMW48 SH OffR 06/08/16 32821 13.46 0.32 2.63% Roll-a-wheel PSMW48 SH OnR 06/	08/31/16	98107	12.7	12.67	0.03	0.24%	Roll-a-wheel	PSMW28	BJM	CP
06/07/16 08/31/16 08/31/16 08/31/16 08/31/16 08/31/16 08/31/16 08/31/16 08/31/16 11/2 12.72 12.67 0.05 0.39% Roll-a-wheel PSMW27 BJM CP 08/31/16 98107 12.73 13.25 0.25 1.99% Roll-a-wheel PSMW25 BJM CP 08/09/12 18966 12.84 15.66 -2.82 18.01% Roll-a-wheel PSMW25 BJM CP 08/09/12 18956 12.84 15.66 -2.82 18.01% Roll-a-wheel PSMW48 SH OffR 08/17/16 16350 13.17 13.83 -0.66 4.77% Roll-a-wheel PSMW48 SH OffR 06/08/16 32821 13.28 12.42 0.86 6.92% Roll-a-wheel PSMW48 SH OnR 06/07/16 32827 13.47 13.12 0.35 2.67% Roll-a-wheel PSMW18N SH OnR 06/07/16 1426	08/09/12	18966	12 72	12 75	-0.03	0.24%	Roll-a-wheel	WMP12	AI/BS	СР
Op/0716 Open Open Open Open PSMW23 BJM CP 08/31/16 98107 12.83 12.58 0.25 1.99% Roll-a-wheel PSMW25 BJM CP 08/31/16 98107 12.83 12.58 0.25 1.99% Roll-a-wheel PSMW25 BJM CP 08/31/16 13966 12.84 15.66 -2.82 18.01% Roll-a-wheel PSMW48 SH OffR 08/17/16 14028 13.20 13.04 0.16 1.23% Roll-a-wheel PSMW48 SH OffR 09/12/16 3000 (ViC) 13.25 13.06 0.19 1.45% Tape Measure TM KPH OnR 06/07/16 32821 13.47 13.12 0.35 2.67% Roll-a-wheel PSSOSE JMT OnR 06/07/16 32827 13.47 13.12 0.35 1.63% Roll-a-wheel PSMW18 SH OnR 06/13/16 04864	08/31/16	98107	12.72	12.67	0.05	0.39%	Roll-a-wheel	PSMW27	BJM	СР
Object Oscie Oscie Oscie Oscie PSMW25 BJM CP 08/31/16 98107 12.83 12.58 0.25 1.99% Roll-a-wheel PSMW25 BJM CP 08/09/12 18966 12.84 15.66 -2.82 18.01% Roll-a-wheel PSMW48 SH OffR 08/17/16 44028 13.20 13.04 0.16 1.23% Roll-a-wheel PSMW48 SH OffR 09/12/16 3000 (VIC) 13.25 13.06 0.19 1.45% Tape Measure TM KPH OnR 06/08/16 32821 13.28 12.42 0.86 6.92% Roll-a-wheel WMP12 ETR OffR 06/02/16 14261 13.68 13.46 0.22 1.63% Roll-a-wheel WMP12 ETR OnR 06/13/16 01862 14.16 14.42 -0.26 1.80% Roll-a-wheel PSMW48 JMT OnR 06/29/16 0N12E	08/31/16	98107	12 73	13.25	-0.52	3 92%	Roll-a-wheel	PSMW23	BJM	СР
05/09/12 18866 12.84 15.66 -2.82 18.01% Roll-a-wheel WMP12 Al/BS CP 08/09/12 18366 13.17 13.83 -0.66 4.77% Roll-a-wheel PSMW48 SH OffR 08/17/16 16350 13.17 13.83 -0.66 4.77% Roll-a-wheel PSMW48 SH OffR 09/12/16 3000 (VIC) 13.25 13.06 0.19 14.5% Tape Measure TM KPH OnR 06/08/16 32821 13.28 12.42 0.86 6.92% Roll-a-wheel WMP12 ETR OffR 06/09/16 32827 13.47 13.12 0.35 2.67% Roll-a-wheel PSMW18N SH OnR 06/13/16 04864 13.78 13.63 0.15 1.10% Roll-a-wheel PSMW18N SH OnR 06/13/16 04862 14.16 14.42 -0.26 1.80% Roll-a-wheel PSMW48 JMT OnR <td>08/31/16</td> <td>98107</td> <td>12.83</td> <td>12.58</td> <td>0.25</td> <td>1,99%</td> <td>Roll-a-wheel</td> <td>PSMW25</td> <td>BJM</td> <td>СР</td>	08/31/16	98107	12.83	12.58	0.25	1,99%	Roll-a-wheel	PSMW25	BJM	СР
05/01/L 010000 010000 010000 010000 010000 010000 010000 010000 010000 010000 010000 010000 010000 010000 01000000 01000000 010000000 0100000000 0100000000000000000 01000000000000000000000000000	08/09/12	18966	12.84	15.66	-2.82	18.01%	Roll-a-wheel	WMP12	AI/BS	СР
Op/1716 13120 13.04 0.16 1.123% Roll-a-wheel PSMW48 SH OffR 09/12/16 3000 (VIC) 13.25 13.06 0.19 1.45% Tape Measure TM KPH OnR 06/08/16 32821 13.28 12.42 0.86 6.92% Roll-a-wheel S055E JMT OnR 07/14/16 18940 13.46 13.83 -0.37 2.68% Roll-a-wheel WMP12 ETR OffR 06/09/16 32827 13.47 13.12 0.35 2.67% Roll-a-wheel SMV12 OnR 06/29/16 14261 13.68 13.46 0.22 1.63% Roll-a-wheel PSMW18N SH OnR 06/13/16 01862 14.16 14.42 -0.26 1.80% Roll-a-wheel PSMW48 JMT OnR 06/29/15 10001 14.16 14 0.16 1.14% Roll-a-wheel PSMW48 JMT OnR 06/29/16 ONL	08/17/16	16350	13.17	13.83	-0.66	4.77%	Roll-a-wheel	PSMW48	SH	OffR
Op/12/16 ODO (VIC) 13.25 13.06 0.19 1.45% Tape Measure TM KPH OnR 06/08/16 32821 13.28 12.42 0.86 6.92% Roll-a-wheel 5505E JMT OnR 07/14/16 18940 13.46 13.83 -0.37 2.68% Roll-a-wheel WMP12 ETR OffR 06/07/16 32827 13.47 13.12 0.35 2.67% Roll-a-wheel S505E JMT OnR 06/29/16 14261 13.68 13.46 0.22 1.63% Roll-a-wheel PSMW18N SH OnR 06/13/16 01862 14.16 14.42 -0.26 1.80% Roll-a-wheel PSMW48 JMT OnR 04/29/15 10001 14.16 14 0.16 1.14% Roll-a-wheel PSMW48 JMT OnR 06/29/16 ON.12E 14.61 13.46 1.15 8.54% Roll-a-wheel PSMW48 JMT OnR <t< td=""><td>08/17/16</td><td>44028</td><td>13.20</td><td>13.04</td><td>0.16</td><td>1.23%</td><td>Roll-a-wheel</td><td>PSMW48</td><td>SH</td><td>OffR</td></t<>	08/17/16	44028	13.20	13.04	0.16	1.23%	Roll-a-wheel	PSMW48	SH	OffR
Op/Op/16 Op/Op/16 Op/Op/Op/Op/Op/Op/Op/Op/Op/Op/Op/Op/Op/O	09/12/16	3000 (VIC)	13.25	13.06	0.19	1.45%	Tape Measure	тм	КРН	OnR
OD/05 DBSU DBSU <t< td=""><td>06/08/16</td><td>32821</td><td>13.28</td><td>12.42</td><td>0.86</td><td>6.92%</td><td>Roll-a-wheel</td><td>5505E</td><td>IMT</td><td>OnR</td></t<>	06/08/16	32821	13.28	12.42	0.86	6.92%	Roll-a-wheel	5505E	IMT	OnR
Object Object<	07/14/16	18940	13.46	13.83	-0.37	2.68%	Roll-a-wheel	WMP12	ETR	OffR
Object Obsect Onternational Onternational Onternational Onternational O6/29/16 14261 13.68 13.46 0.22 1.63% Roll-a-wheel PSMW18N SH OnR 07/13/16 08648 13.78 13.63 0.15 1.10% Roll-a-wheel PSMW18N SH OnR 06/13/16 01862 14.16 14.42 -0.26 1.80% Roll-a-wheel PSMW18N JMT OnR 04/29/15 10001 14.16 14 0.16 1.14% Roll-a-wheel PSMW48 JMT OnR 08/16/16 44130 14.49 14.83 -0.34 2.29% Roll-a-wheel PSMW48 JMT OnR 06/29/16 ON.12E 14.61 13.46 1.15 8.54% Roll-a-wheel PSMW48 JMT OnR 06/29/16 ON.12E 14.66 16.13 -1.47 9.11% Roll-a-wheel PSMW48 JMT OnR 07/12/16 18943	06/07/16	32827	13.47	13.12	0.35	2.67%	Roll-a-wheel	5505E	ІМТ	OnR
Openet Desc Desc <thdesc< th=""> Desc Desc <t< td=""><td>06/29/16</td><td>14261</td><td>13.68</td><td>13.46</td><td>0.22</td><td>1.63%</td><td>Roll-a-wheel</td><td>PSMW18N</td><td>SH</td><td>OnR</td></t<></thdesc<>	06/29/16	14261	13.68	13.46	0.22	1.63%	Roll-a-wheel	PSMW18N	SH	OnR
Op/13/16 OB/0 DB/0 DD/0 DD/0	07/13/16	08648	13.78	13.63	0.15	1.10%	Roll-a-wheel	WMP12	FTR	OnR
04/29/15 10001 14.16 14 0.16 1.14% Roll-a-wheel PSMW28 PC OnR 08/16/16 44130 14.49 14.83 -0.34 2.29% Roll-a-wheel PSMW28 SH OffR 06/29/16 ON.L2E 14.61 13.46 1.15 8.54% Roll-a-wheel PSMW48 JMT OnR 06/29/16 ON.L2E 14.61 16.13 -1.47 9.11% Roll-a-wheel PSMW48 JMT OnR 06/29/16 ON.L2E 14.66 16.13 -1.47 9.11% Roll-a-wheel PSMW48 JMT OnR 06/29/16 14261 14.75 14.13 0.62 4.39% Roll-a-wheel PSMW48 JMT OnR 06/29/16 18943 14.95 14.79 0.16 1.08% Roll-a-wheel PSMW48 JMT OnR 06/08/16 32821 15.22 15.67 -0.45 2.87% Roll-a-wheel PSMW48 SH OffR	06/13/16	01862	14 16	14 42	-0.26	1 80%	Roll-a-wheel	PSMW48	ІМТ	OnR
08/16/16 44130 14.49 14.83 -0.34 2.29% Roll-a-wheel PSMW48 SH OffR 06/29/16 ON.L2E 14.61 13.46 1.15 8.54% Roll-a-wheel PSMW48 JMT OnR 06/29/16 ON.L2E 14.66 16.13 -1.47 9.11% Roll-a-wheel PSMW48 JMT OnR 06/29/16 04.261 14.75 14.13 0.62 4.39% Roll-a-wheel PSMW48 JMT OnR 06/29/16 14261 14.75 14.13 0.62 4.39% Roll-a-wheel PSMW48 JMT OnR 07/12/16 18943 14.95 14.79 0.16 1.08% Roll-a-wheel PSMW48 JMT OffR 07/14/16 18940 15.11 15.00 0.11 0.73% Roll-a-wheel PSMW48 SH OffR 08/06/16 32821 15.22 15.67 -0.45 2.87% Roll-a-wheel PSMW48 SH OffR <td>04/29/15</td> <td>10001</td> <td>14.16</td> <td>14</td> <td>0.16</td> <td>1.14%</td> <td>Roll-a-wheel</td> <td>PSMW28</td> <td>PC</td> <td>OnR</td>	04/29/15	10001	14.16	14	0.16	1.14%	Roll-a-wheel	PSMW28	PC	OnR
Object Object<	08/16/16	44130	14 49	14.83	-0.34	2 29%	Roll-a-wheel	PSMW48	SH	OffR
O6/29/16 ON.L2E 14.66 16.13 -1.47 9.11% Roll-a-wheel PSMW48 JMT OnR 06/29/16 14261 14.75 14.13 0.62 4.39% Roll-a-wheel PSMW48 JMT OnR 06/29/16 14261 14.75 14.13 0.62 4.39% Roll-a-wheel PSMW48 JMT OnR 07/12/16 18943 14.95 14.79 0.16 1.08% Roll-a-wheel PSMW48 JMT OffR 07/14/16 18940 15.11 15.00 0.11 0.73% Roll-a-wheel PSMW18N JMT OffR 06/08/16 32821 15.22 15.67 -0.45 2.87% Roll-a-wheel PSMW48 SH OffR 08/16/16 44130 15.30 15.13 0.17 1.12% Roll-a-wheel PSMW48 SH OffR 08/09/12 18966 15.62 15.66 -0.04 0.26% Roll-a-wheel PSMW48 JMT OnR <td>06/29/16</td> <td>ON L2F</td> <td>14.61</td> <td>13.46</td> <td>1 1 5</td> <td>8 54%</td> <td>Roll-a-wheel</td> <td>PSMW48</td> <td>IMT</td> <td>OnR</td>	06/29/16	ON L2F	14.61	13.46	1 1 5	8 54%	Roll-a-wheel	PSMW48	IMT	OnR
Object Object<	06/29/16	ON L2E	14.66	16.13	-1 47	9.11%	Roll-a-wheel	PSMW48	ІМТ	OnR
00/12/16 14101 14102	06/29/16	14261	14.75	14.13	0.62	4 39%	Roll-a-wheel	PSMW48	IMT	OnR
O7/12/16 14.15 14.15 14.15 14.15 14.15 14.15 14.05 14.05% 14.01%	07/12/16	18943	14.95	14.15	0.02	1.08%	Boll-a-wheel	PSMW48	імт	OffR
Or/14/16 1511 15.00 0.11 0.75% Roll-a-wheel 15.01 0.01 06/08/16 32821 15.22 15.67 -0.45 2.87% Roll-a-wheel 5505E JMT OnR 08/16/16 44130 15.30 15.13 0.17 1.12% Roll-a-wheel PSMW48 SH OffR 08/09/12 18966 15.62 15.66 -0.04 0.26% Roll-a-wheel WMP12 Al/BS CP 06/02/16 33054 15.70 16.04 -0.34 2.12% Roll-a-wheel PSMW48 JMT OnR 08/31/16 98107 16.01 16.25 -0.24 1.48% Roll-a-wheel PSMW48 JMT OnR 07/14/16 18940 16.06 16.17 -0.01 0.68% Roll-a-wheel PSMW18N JMT OffR 07/12/16 18943 16.15 16.17 -0.02 0.12% Roll-a-wheel WMP12 ETR OnR 08/16/16	07/14/16	18940	15 11	15.00	0.11	0.73%	Roll-a-wheel	PSMW18N	IMT	OffR
08/16/16 44130 15.12 15.13 0.17 1.12% Roll-a-wheel PSMW48 SH OffR 08/09/12 18966 15.62 15.66 -0.04 0.26% Roll-a-wheel PSMW48 SH OffR 06/02/16 33054 15.70 16.04 -0.34 2.12% Roll-a-wheel PSMW48 JMT OnR 08/31/16 98107 16.01 16.25 -0.24 1.48% Roll-a-wheel PSMW26 BJM CP 07/14/16 18940 16.06 16.17 -0.11 0.68% Roll-a-wheel PSMW18N JMT OffR 07/12/16 18943 16.15 16.17 -0.02 0.12% Roll-a-wheel PSMW18N JMT OffR 08/16/16 44130 16.15 16.75 -0.60 3.58% Roll-a-wheel PSMW48 SH OffR 06/29/16 ON.L2E 16.21 16.13 0.08 0.50% Roll-a-wheel PSMW18N SH OffR	06/08/16	32821	15.22	15.67	-0.45	2 87%	Roll-a-wheel	5505F	імт	OnR
OS/20/20 11330 151300 151300 151300	08/16/16	44130	15 30	15.13	0.17	1.12%	Roll-a-wheel	PSMW48	SH	OffR
Oc/02/16 33054 15.70 16.04 -0.34 2.12% Roll-a-wheel PSMW48 JMT OnR 08/31/16 98107 16.01 16.25 -0.24 1.48% Roll-a-wheel PSMW48 JMT OnR 07/14/16 18940 16.06 16.17 -0.11 0.68% Roll-a-wheel PSMW18N JMT OffR 07/12/16 18943 16.15 16.17 -0.02 0.12% Roll-a-wheel PSMW18N JMT OffR 08/16/16 44130 16.15 16.75 -0.60 3.58% Roll-a-wheel PSMW48 SH OffR 06/29/16 ON.L2E 16.21 16.13 0.08 0.50% Roll-a-wheel PSMW18N SH OffR 08/16/16 44130 16.27 16.42 -0.15 0.91% Roll-a-wheel PSMW48 SH OffR	08/09/12	18966	15.62	15.66	-0.04	0.26%	Roll-a-wheel	WMP12	AI/BS	CP
08/31/16 98107 16.01 16.25 -0.24 1.48% Roll-a-wheel PSMW26 BJM CP 07/14/16 18940 16.06 16.17 -0.11 0.68% Roll-a-wheel PSMW26 BJM CP 07/12/16 18943 16.15 16.17 -0.02 0.12% Roll-a-wheel PSMW18N JMT OffR 08/16/16 44130 16.15 16.75 -0.60 3.58% Roll-a-wheel PSMW48 SH OffR 06/29/16 ON.L2E 16.21 16.13 0.08 0.50% Roll-a-wheel PSMW18N SH OnR 08/16/16 44130 16.27 16.42 -0.15 0.91% Roll-a-wheel PSMW48 SH OffR	06/02/16	33054	15 70	16.04	-0.34	2 12%	Roll-a-wheel	PSMW48	IMT	OnR
00/01/10 10000 1000 1000	08/31/16	98107	16.01	16.25	-0.24	1 48%	Roll-a-wheel	PSMW26	BJM	СР
07/12/16 18943 16.15 16.17 -0.02 0.12% Roll-a-wheel WMP12 ETR OnR 08/16/16 44130 16.15 16.75 -0.60 3.58% Roll-a-wheel PSMW48 SH OffR 06/29/16 ON.L2E 16.21 16.13 0.08 0.50% Roll-a-wheel PSMW48 SH OffR 08/16/16 44130 16.27 16.42 -0.15 0.91% Roll-a-wheel PSMW48 SH OffR	07/14/16	18940	16.06	16.17	-0.11	0.68%	Roll-a-wheel	PSMW18N	IMT	OffR
08/16/16 44130 16.15 16.75 -0.60 3.58% Roll-a-wheel PSMW48 SH OffR 06/29/16 ON.L2E 16.21 16.13 0.08 0.50% Roll-a-wheel PSMW48 SH OnR 08/16/16 44130 16.27 16.42 -0.15 0.91% Roll-a-wheel PSMW48 SH OffR	07/12/16	18943	16 15	16 17	-0.02	0.12%	Roll-a-wheel	WMP12	ETR	OnR
06/29/16 ON.L2E 16.21 16.13 0.08 0.50% Roll-a-wheel PSMW18N SH OnR 08/16/16 44130 16.27 16.42 -0.15 0.91% Roll-a-wheel PSMW48 SH OffR	08/16/16	44130	16.15	16.75	-0.60	3 5 8%	Roll-a-wheel	PSMW48	SH	OffR
08/16/16 44130 16.27 16.42 -0.15 0.91% Roll-a-wheel PSMW48 SH OffR	06/29/16	ON 12F	16.15	16.12	0.00	0.50%	Roll-a-wheel		сн	OnP
	08/16/16	44130	16.27	16.42	-0.15	0.91%	Roll-a-wheel	PSMW48	SH	OffR

07/13/16	08648	16 32	15.88	0 44	2 77%	Boll-a-wheel	W/MP12	FTR	OnR
06/13/16	03060	16.52	16.38	0.15	0.92%	Roll-a-wheel	PSMW48	імт	OnR
06/13/10	19952	16.55	16.30	0.13	0.79%	Boll-a-wheel	PSM/W48	імт	OnR
08/09/12	18966	16.55	16.33	0.22	1 35%	Roll-a-wheel	WMP12	AI/BS	CP
06/09/12	ON 125	16.78	16.38	0.40	2.44%	Boll-a-wheel	PSM/M/48	імт	OnR
08/31/16	98107	16.82	16.5	0.40	1 0/1%	Roll-a-wheel	PSMW18	BIM	CP
06/13/16	06269	16.02	16.3	0.52	3.86%	Roll-a-wheel			OnR
06/13/16	00209	10.90	17.25	0.03	3.80%	Roll-a-wheel			
06/29/16	0N.LZE	10.90	17.25	-0.29	1.08%	Roll-a-wheel			OnR
05/31/16	19150	17.04	17.25	-0.21	1.22%	Roll-a-wheel			Onk
08/16/16	44130	17.08	16.33	0.75	4.59%	Koll-a-wheel	P31V1V40		
06/14/16	19952	17.12	17.54	-0.42	2.39%	Roll-a-wheel	PSIVIW48		OnR
06/07/16	32822	17.12	17.67	-0.55	3.11%	Roll-a-wheel	5505E	JMT	OnR
06/13/16	01862_	17.15	18.13	-0.98	5.41%	Roll-a-wheel	PSMW48	JMT	OnR
06/02/16	33407	17.19	18.08	-0.89	4.92%	Roll-a-wheel	PSMW48		OnR
06/13/16	01862_	17.22	17.00	0.22	1.29%	Roll-a-wheel	PSMW48	JMT	OnR
07/12/16	18943	17.22	17.46	-0.24	1.37%	Roll-a-wheel	WMP12	ETR	OnR
06/14/16	19952	17.32	17.67	-0.35	1.98%	Roll-a-wheel	PSMW48	JMT	OnR
07/12/16	18943	17.33	17.42	-0.09	0.52%	Roll-a-wheel	WMP12	ETR	OnR
06/08/16	32821	17.34	17.00	0.34	2.00%	Roll-a-wheel	5505E	JMT	OnR
07/14/16	18940	17.36	17.42	-0.06	0.34%	Roll-a-wheel	PSMW18N	JMT	OffR
07/14/16	18940	17.36	17.83	-0.47	2.64%	Roll-a-wheel	PSMW18N	JMT	OffR
06/13/16	01862_	17.38	17.75	-0.37	2.08%	Roll-a-wheel	PSMW48	JMT	OnR
06/29/16	ON.L2E	17.38	19.00	-1.62	8.53%	Roll-a-wheel	PSMW48	JMT	OnR
06/29/16	14261	17.43	17.92	-0.49	2.73%	Roll-a-wheel	PSMW18N	SH	OnR
07/12/16	18943	17.46	17.92	-0.46	2.57%	Roll-a-wheel	PSMW48	JMT	OnR
07/12/16	18943	17.47	17.71	-0.24	1.36%	Roll-a-wheel	WMP12	ETR	OnR
08/09/12	18966	17.47	17.21	0.26	1.51%	Roll-a-wheel	WMP12	AI/BS	СР
06/14/16	19952	17.50	20.38	-2.88	14.13%	Roll-a-wheel	PSMW48	JMT	OnR
06/13/16	06269	17.59	17.33	0.26	1.50%	Roll-a-wheel	PSMW48	JMT	OnR
07/12/16	18943	17.73	17.88	-0.15	0.84%	Roll-a-wheel	PSMW48	JMT	OnR
08/09/12	18966	17.77	17.33	0.44	2.54%	Roll-a-wheel	WMP12	AI/BS	СР
08/09/12	18966	17.85	17.86	-0.01	0.06%	Roll-a-wheel	WMP12	AI/BS	СР
08/16/16	44130	17.89	19.00	-1.11	5.84%	Roll-a-wheel	PSMW48	SH	OffR
06/02/16	33407	17.92	15.29	2.63	17.20%	Roll-a-wheel	PSMW48	TML	OnR
06/08/16	32821	17.92	17.83	0.09	0.50%	Roll-a-wheel	5505E	ІМТ	OnR
07/12/16	18943	18.08	18 13	-0.05	0.28%	Roll-a-wheel	WMP12	ETR	OnR
08/28/16	06042	18.00	18.17	-0.08	0.42%	Roll-a-wheel	PSM/W28	PC	СР
07/12/16	18943	18.11	18.29	-0.18	0.98%	Boll-a-wheel	PSM/W/48	імт	OnR
05/26/16	11799	19.20	17.67	0.18	3.00%	Roll-a-wheel			OnR
05/20/10	03060	10.20	10.40	0.55	1.03%	Roll a wheel			OnR
06/13/16	03060	10.25	10.42	-0.19	0.44%	Roll-a-wheel	F31V1VV46		OnR
08/17/10	52827	10.25	10.17	0.08	0.44%	Roll-a-wheel			Offe
08/17/16	44028	18.26	18.08	0.18	1.00%	Roll-a-wheel		сц сц	OffR
08/16/16	44130	18.32	19.00	-0.68	3.58%	Roll a wheel			
08/16/16	45839	18.36	18.08	0.28	1.55%	Ruii-a-wheel	P3IVIVV48	<u> </u>	OTTR
06/13/16	03060	18.45	19.00	-0.55	2.89%	Roll-a-wheel	PSMW48	JMT	OnR
06/07/16	32827	18.53	18.08	0.45	2.49%	Roll-a-wheel	5505E	JMT	OnR
06/13/16	03060	18.63	18.75	-0.12	0.64%	Roll-a-wheel	5505E	SH	OnR
06/13/16	01821	18.72	18.92	-0.20	1.06%	Roll-a-wheel	PSMW48	JMT	OnR
06/13/16	03060	18.77	18.92	-0.15	0.79%	Roll-a-wheel	5505E	SH	OnR
06/13/16	03060	18.78	19.42	-0.64	3.30%	Roll-a-wheel	5505E	SH	OnR
06/28/16	12206	18.79	18.38	0.41	2.23%	Roll-a-wheel	PSMW48	JMT	OnR
06/13/16	03060	18.90	19.00	-0.10	0.53%	Roll-a-wheel	5505E	SH	OnR
06/13/16	01862_	18.92	18.42	0.50	2.71%	Roll-a-wheel	PSMW48	JMT	OnR
08/26/16	80222	18.92	19.92	-1.00	5.02%	Roll-a-wheel	PSMW28	CAS	OnR
06/13/16	03060	18.93	18.67	0.26	1.39%	Roll-a-wheel	5505E	SH	OnR
08/16/16	44130	18.95	18.83	0.12	0.64%	Roll-a-wheel	PSMW48	SH	OffR
06/29/16	ON.L2E	18.97	19.29	-0.32	1.66%	Roll-a-wheel	PSMW18N	SH	OnR
06/13/16	03060	18.98	18.25	0.73	4.00%	Roll-a-wheel	5505E	SH	OnR

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06/13/16	03060	19.11	19.25	-0.14	0.73%	Roll-a-wheel	5505E	SH	OnR
06/13/16	03060	19.13	18.92	0.21	1.11%	Roll-a-wheel	5505E	SH	OnR
08/09/12	18966	19.27	19.66	-0.39	1.98%	Roll-a-wheel	WMP12	AI/BS	СР
08/09/12	18966	19.28	19.17	0.11	0.57%	Roll-a-wheel	WMP12	AI/BS	СР
08/09/12	18966	19.34	19.54	-0.20	1.02%	Roll-a-wheel	WMP12	AI/BS	СР
06/13/16	03060	19.37	18.58	0.79	4.25%	Roll-a-wheel	5505E	SH	OnR
06/02/16	33126	19.50	19.63	-0.13	0.66%	Roll-a-wheel	PSMW48	IMT	OnR
06/29/16	14261	19.56	19.58	-0.02	0.10%	Roll-a-wheel	PSMW18N	SH	OnR
08/16/16	44130	19.67	18.67	1.00	5 36%	Roll-a-wheel	PSMW48	SH	OffR
08/28/16	06042	19.82	19.75	0.07	0.35%	Roll-a-wheel	PSMW/28	PC	СР
07/12/16	18943	19.84	20.08	-0.24	1 20%	Roll-a-wheel	WMP12	ETR	OnR
08/09/12	18966	10.8/	10.00	-0.08	0.40%	Roll-a-wheel	WMP12	AI/BS	СР
08/16/16	44130	10.07	18.83	1.09	5 79%	Roll-a-wheel	PSMW48	SH	OffR
07/20/16	18940	20.08	20.17	-0.09	0.45%	Roll-a-wheel		імт	OnR
06/14/16	23702	20.00	19.17	0.69	3 55%	Boll-a-wheel	5505F	лин 1	OnR
08/17/16	44028	20.11	20.00	0.05	1 15%	Boll-a-wheel	PSMW48	SH	OffP
07/20/16	18040	20.25	10.92	0.25	2.27%	Roll a wheel			
07/20/16	2010 (NISW/)	20.28	21.67	1.26	6.28%	Roll-a-wheel	TRI88016	ТИЛ	OnR
06/20/10		20.31	21.07	-1.30	2.920/	Roll a wheel			
06/29/16	ONLIZE	20.40	21.21	-0.81	5.82%	Roll-a-wheel	PSIVIVV48		
06/29/16	06042	20.49	21.75	-1.26	5.79%	Roll-a-wheel	PSIVIVV48		
08/28/16	06042	20.55	21.33	-0.78	5.07%	Roll-a-wheel			
08/31/16	98107	20.66	20.83	-0.17	0.82%	Roll-a-wheel	PSIVIVV22	DIN	
08/31/16	98107	20.73	21.5	-0.77	3.58%	Roll-a-wheel	PSIVIVV21	BIM	
06/07/16	32827	20.91	20.75	0.16	0.77%	Roll-a-wheel	5505E	JMT	OnR
08/31/16	98107	21.02	20.83	0.19	0.91%	Roll-a-wheel	PSIVIVV20	BJIM	CP
08/01/16	11576	21.12	21.83	-0.71	3.25%	Roll-a-wheel	PSIVIW48	EIR	OnR
08/28/16	06042	21.15	20.50	0.65	3.17%	Roll-a-wheel	PSMW28	PC	СР
06/02/16	33407	21.17	21.71	-0.54	2.49%	Roll-a-wheel	PSMW48	JMT	OnR
08/09/12	18966	21.35	21.79	-0.44	2.02%	Roll-a-wheel	WMP12	AI/BS	СР
06/29/16	ON.L2E	21.40	21.79	-0.39	1.79%	Roll-a-wheel	PSMW18N	SH	СР
06/07/16	32827	21.71	22.33	-0.62	2.78%	Roll-a-wheel	5505E	JMT	OnR
06/07/16	32827	21.72	21.42	0.30	1.40%	Roll-a-wheel	5505E	JMT	OnR
08/31/16	98107	21.93	23.08	-1.15	4.98%	Roll-a-wheel	PSMW19	BJM	СР
05/23/16	18925	22.06	23.10	-1.04	4.50%	Roll-a-wheel	PSMW48	SH	OnR
08/28/16	06042	22.07	21.17	0.90	4.27%	Roll-a-wheel	PSMW28	PC	СР
06/29/16	ON.L2E	22.09	22.42	-0.33	1.47%	Roll-a-wheel	PSMW18N	SH	OnR
08/28/16	06042	22.21	22.00	0.21	0.95%	Roll-a-wheel	PSMW28	PC	СР
06/07/16	32827_	22.26	21.33	0.93	4.36%	Roll-a-wheel	5505E	JMT	OnR
06/02/16	33054	22.58	23.08	-0.50	2.17%	Roll-a-wheel	PSMW48	JMT	OnR
06/14/16	27958	22.68	21.92	0.76	3.47%	Roll-a-wheel	PSMW48	JMT	OnR
06/07/16	32827	22.90	22.42	0.48	2.14%	Roll-a-wheel	5505E	JMT	OnR
08/28/16	06042	22.91	22.83	0.08	0.34%	Roll-a-wheel	PSMW28	PC	СР
08/16/16	44130	22.91	22.67	0.24	1.06%	Roll-a-wheel	PSMW48	SH	OffR
08/28/16	06042	23.01	23.17	-0.16	0.68%	Roll-a-wheel	PSMW28	PC	СР
06/07/16	32822	23.16	23.00	0.16	0.70%	Roll-a-wheel	5505E	JMT	OnR
08/09/12	18966	23.19	23.33	-0.14	0.60%	Roll-a-wheel	WMP12	AI/BS	СР
08/09/12	18966	23.2	22.96	0.24	1.05%	Roll-a-wheel	WMP12	AI/BS	СР
06/08/16	32821	23.21	24.75	-1.54	6.22%	Roll-a-wheel	5505E	JMT	OnR
08/28/16	80503	23.44	24.00	-0.56	2.33%	Roll-a-wheel	PSMX28	CAS	OnR
05/26/16	11788	23.63	24.83	-1.20	4.83%	Roll-a-wheel	PSMW48	JMT	OnR
06/13/16	01862	23.81	23.25	0.56	2.41%	Roll-a-wheel	PSMW48	JMT	OnR
06/14/16	19952	23.87	24.04	-0.17	0.71%	Roll-a-wheel	PSMW48	JMT	OnR
06/29/16	ON.L2E	24.05	24.67	-0.62	2.51%	Roll-a-wheel	PSMW48	JMT	OnR
06/07/16	32822	24.08	23.17	0.91	3.93%	Roll-a-wheel	5505E	JMT	OnR
06/14/16	21853	24.09	24.29	-0.20	0.82%	Roll-a-wheel	PSMW48	SH	OnR
06/14/16 08/16/16	21853 45839	24.09 24.15	24.29 23.17	-0.20 0.98	0.82% 4.23%	Roll-a-wheel Roll-a-wheel	PSMW48 PSMW48	SH SH	OnR OffR
06/14/16 08/16/16 06/29/16	21853 45839 14261	24.09 24.15 24.16	24.29 23.17 23.13	-0.20 0.98 1.03	0.82% 4.23% 4.45%	Roll-a-wheel Roll-a-wheel Roll-a-wheel	PSMW48 PSMW48 PSMW18N	SH SH SH	OnR OffR CP

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06/13/16	01862	24.35	23.21	1.14	4.91%	Roll-a-wheel	PSMW48	JMT	OnR
06/13/16	84737	24.42	23.92	0.50	2.09%	Roll-a-wheel	01594L	DM	OnR
06/14/16	27958	24.61	25.54	-0.93	3.64%	Roll-a-wheel	PSMW48	JMT	OnR
08/09/12	18966	24.67	24.92	-0.25	1.00%	Roll-a-wheel	WMP12	AI/BS	СР
06/14/16	21853	24.71	27.00	-2.29	8.48%	Roll-a-wheel	PSMW48	SH	OnR
06/14/16	19952	24.75	25.50	-0.75	2.94%	Roll-a-wheel	PSMW48	JMT	OnR
08/09/12	18966	24.81	24.54	0.27	1.10%	Roll-a-wheel	WMP12	AI/BS	СР
08/09/12	18966	24.84	24.58	0.26	1.06%	Roll-a-wheel	WMP12	AI/BS	СР
06/29/16	ON.L2E	24.85	25.17	-0.32	1.27%	Roll-a-wheel	PSMW18N	SH	OnR
06/07/16	32827	24.89	24.83	0.06	0.24%	Roll-a-wheel	5505E	JMT	OnR
08/31/16	98107	24.89	25	-0.11	0.44%	Roll-a-wheel	PSMW24	BJM	СР
06/11/16	92328	24.94	25.00	-0.06	0.24%	Roll-a-wheel	01594L	DM	OnR
08/09/12	18966	25.20	25.58	-0.38	1.49%	Roll-a-wheel	WMP12	AI/BS	СР
08/04/10	02883	25.32	25	0.32	1.28%	Roll-a-wheel	PSMW48	PC	OnR
08/31/16	98107	25.34	25.42	-0.08	0.31%	Roll-a-wheel	PSMW18	AI/BS	СР
08/28/16	80840	25.49	26.75	-1.26	4.71%	Roll-a-wheel	PSMW28	CAS	OnR
06/13/16	01862	25.68	25.92	-0.24	0.93%	Roll-a-wheel	PSMW48	JMT	OnR
06/02/16	33407	25.82	24.58	1.24	5.04%	Roll-a-wheel	PSMW48	JMT	OnR
06/14/16	27958	25.84	26.29	-0.45	1.71%	Roll-a-wheel	PSMW48	JMT	OnR
08/26/16	2010 (NSW)	25.86	27.67	-1.81	6.54%	Roll-a-wheel	TRI88016	КРН	OnR
08/09/12	18966	26.06	26.88	-0.82	3.05%	Roll-a-wheel	WMP12	AI/BS	СР
06/02/16	33407	26.16	26.75	-0.59	2 21%	Roll-a-wheel	PSMW48	JMT	OnR
07/20/16	18940	26.17	26.00	0.17	0.65%	Roll-a-wheel	PSMW48	JMT	OnR
07/12/16	18943	26.30	26.08	0.22	0.84%	Roll-a-wheel	WMP12	ETR	OnR
06/07/16	32827	26.33	26.46	-0.13	0.49%	Roll-a-wheel	5505E	JMT	OnR
07/14/16	18940	26.33	26.49	-0.16	0.60%	Roll-a-wheel	PSMW48	JMT	OffR
07/12/16	18943	26.46	26.71	-0.25	0.94%	Roll-a-wheel	WMP12	ETR	OnR
07/20/16	18940	26.54	26.29	0.25	0.95%	Roll-a-wheel	PSM/W/48	JMT	OnR
07/12/16	18943	26.55	26.38	0.17	0.55%	Roll-a-wheel	WMP12	ETR	OnR
07/12/16	18943	26.62	26.96	-0.34	1 26%	Roll-a-wheel	PSM/W/48	JMT	OnR
07/12/16	18943	26.83	26.71	0.12	0.45%	Roll-a-wheel	PSMW48	JMT	OnR
06/08/16	32821	26.86	26.08	0.78	2.99%	Roll-a-wheel	5505E	JMT	OnR
08/09/12	18966	26.91	26.75	0.16	0.60%	Roll-a-wheel	WMP12	AI/BS	СР
07/12/16	18943	26.94	27.08	-0.14	0.52%	Roll-a-wheel	WMP12	ETR	OnR
06/29/16	14261	27.14	27.29	-0.15	0.55%	Roll-a-wheel		SH	OnR
07/12/16	18943	27.29	27.29	0.15	0.00%	Roll-a-wheel	PSM/M/48	ІМТ	OnR
06/29/16	ON 12F	27.43	28.17	-0.74	2.63%	Roll-a-wheel		SH	OnR
09/23/11	08857	27.60	27.50	0.10	0.36%	Roll-a-wheel	PSMW48	PC	OnR
08/31/16	98107	27.69	27.50	0.19	0.69%	Roll-a-wheel	PSMW18	AI/BS	СР
06/29/16	ON 12F	27.03	27.30	0.13	0.03%	Roll-a-wheel		IMT	OnR
08/09/12	18966	27.78	27.58	0.01	0.73%	Roll-a-wheel	WMP12	AI/BS	СР
08/09/12	18966	28.10	27.92	0.18	0.64%	Roll-a-wheel	WMP12	AI/BS	СР
08/03/12	98107	28.16	28.50	-0.34	1 19%	Roll-a-wheel	PSMW18	BIM	СР
08/31/16	98107	28.16	28.42	-0.34	0.91%	Roll-a-wheel	PSMW18	BJM/MI	OffR
08/17/16	44028	28.18	28.04	0.20	0.50%	Roll-a-wheel	PSMW48	SH	OffR
07/14/16	18940	28.10	29.63	-1.34	4 52%	Roll-a-wheel	WMP12	FTR	OffR
06/13/16	06269	28.23	29.00	-1.54	2 2 9 %	Roll-a-wheel		імт	OnR
07/14/16	18940	28.01	29.58	_1 11	3.75%	Roll-a-wheel	WMP12	FTR	OffR
06/13/16	01821	28.47	29.30	-1.11	3.75%	Roll-a-wheel		імт	OnR
07/12/16	18943	28 51	28.88	-0.54	1 29%	Roll-a-wheel	WMP12	FTR	OnR
06/13/16	06269	28 54	27.75	0.57	2 85%	Roll-a-wheel	DSN/14/48		OnR
06/02/16	33126	28 55	27.92	0.73	2.05%	Roll-a-wheel	 	јмт	OnR
08/01/16	11576	28.55	28.50	0.05	0.46%	Roll-a-wheel	PSM/M/40	FTR	OnR
08/01/10	98107	28.65	20.50	0.13	1 75%	Roll-a-wheel	PSN/\\/12		OffR
06/29/16	14261	20.00	27.63	1 10	2 000/	Roll-a-wheel		SH SH	OnR
06/29/16	14261	20.75	27.05	1.10	3.30% 2.25%	Roll-a-wheel		сн	СР
08/00/12	19066	20.75	29.42	-0.03	2.35%	Roll-a-wheel			СР
06/14/16	27052	29.19	23.21	-0.02	2 03%	Roll-a-wheel			
00/14/10	2,350	23.21	20.05	0.58	2.03/0	non a wheel	F 31V1 VV 40	1 21411	

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06/14/16	19952	29.33	29.83	-0.50	1.68%	Roll-a-wheel	PSMW48	JMT	OnR
08/04/10	02883	29.55	30	-0.45	1.50%	Roll-a-wheel	PSMW48	PC	OnR
05/29/16	08402	29.60	29.33	0.27	0.92%	Roll-a-wheel	PSMW48	JMT	OnR
07/14/16	18940	29.67	30.08	-0.41	1.36%	Roll-a-wheel	PSMW48	JMT	OffR
08/09/12	18966	29.77	29.63	0.14	0.47%	Roll-a-wheel	WMP12	AI/BS	СР
06/02/16	33407	29.79	28.92	0.87	3.01%	Roll-a-wheel	PSMW48	JMT	OnR
06/02/16	33126	29.84	30.21	-0.37	1.22%	Roll-a-wheel	PSMW48	JMT	OnR
07/12/16	18943	29.87	29.83	0.04	0.13%	Roll-a-wheel	WMP12	ETR	OnR
05/31/16	19150	29.92	29.88	0.04	0.13%	Roll-a-wheel	PSMW48	JMT	OnR
06/29/16	ON.L2E	29.96	30.75	-0.79	2.57%	Roll-a-wheel	PSMW48	JMT	OnR
07/20/16	18940	29.98	30.17	-0.19	0.63%	Roll-a-wheel	PSMW48	JMT	OnR
08/04/10	02883	30.01	30	0.01	0.03%	Roll-a-wheel	PSMW48	PC	OnR
07/20/16	18940	30.53	30.00	0.53	1.77%	Roll-a-wheel	PSMW48	JMT	OnR
06/07/16	32827	30.69	29.50	1.19	4.03%	Roll-a-wheel	5505E	JMT	OnR
06/29/16	ON.L2E	30.85	31.13	-0.28	0.90%	Roll-a-wheel	PSMW18N	SH	OnR
08/31/16	98107	30.87	30.92	-0.05	0.16%	Roll-a-wheel	PSMW18	AI/BS	СР
08/26/16	80222	30.89	30.42	0.47	1.55%	Roll-a-wheel	PSMW28	CAS	OnR
08/31/16	98107	30.99	30.92	0.07	0.23%	Roll-a-wheel	PSMW18	BJM/MI	OffR
08/31/16	98107	31.17	31.83	-0.66	2.07%	Roll-a-wheel	PSMW18	BJM/MI	OffR
08/16/16	45839	31.25	29.92	1.33	4.45%	Roll-a-wheel	PSMW48	SH	OffR
06/08/16	32821	31.36	32.00	-0.64	2.00%	Roll-a-wheel	5505E	JMT	OnR
06/09/16	08075	31.38	31.79	-0.41	1.29%	Roll-a-wheel	PSMW48	JMT	OnR
06/14/16	23702	31.46	31.25	0.21	0.67%	Roll-a-wheel	5505E	SH	OnR
07/14/16	18940	31.46	31.41	0.05	0.16%	Roll-a-wheel	PSMW48	JMT	OffR
08/31/16	98107	31.48	31.92	-0.44	1.38%	Roll-a-wheel	PSMW18	BJM/MI	OffR
06/29/16	ON.L2E	31.55	32.92	-1.37	4.16%	Roll-a-wheel	PSMW48	JMT	OnR
08/28/16	06042	31.60	30.92	0.68	2.21%	Roll-a-wheel	PSMW28	PC	СР
08/09/12	18966	31.63	32.00	-0.37	1.16%	Roll-a-wheel	WMP12	AI/BS	СР
06/07/16	32827	31.92	31.33	0.59	1.88%	Roll-a-wheel	5505E	JMT	OnR
06/13/16	01821	31.96	32.42	-0.46	1.42%	Roll-a-wheel	PSMW48	JMT	OnR
06/13/16	01821	31.99	31.67	0.32	1.01%	Roll-a-wheel	PSMW48	JMT	OnR
06/14/16	19952	32.11	31.00	1.11	3.58%	Roll-a-wheel	5505E	SH	OffR
06/12/16	08402	32.12	32.33	-0.21	0.65%	Roll-a-wheel	PSMW48	JMT	OnR
08/16/16	44130	32.18	32.25	-0.07	0.22%	Roll-a-wheel	PSMW48	SH	OffR
06/13/16	01862	32.30	32.00	0.30	0.94%	Roll-a-wheel	PSMW48	JMT	OnR
08/28/16	06042	32.31	31.58	0.73	2.30%	Roll-a-wheel	PSMW28	PC	СР
06/14/16	27958	32.33	32.33	0.00	0.00%	Roll-a-wheel	PSMW48	JMT	OnR
08/16/16	44130	32.45	32.88	-0.43	1.31%	Roll-a-wheel	PSMW48	SH	OffR
06/29/16	ON.L2E	32.92	33.38	-0.46	1.38%	Roll-a-wheel	PSMW18N	SH	OnR
06/14/16	19952	33.02	33.88	-0.86	2.54%	Roll-a-wheel	PSMW48	JMT	OnR
06/29/16	ON.L2E	33.06	33.25	-0.19	0.57%	Roll-a-wheel	PSMW18N	SH	OnR
06/29/16	ON.L2E	33.09	33.50	-0.41	1.22%	Roll-a-wheel	PSMW48	JMT	OnR
06/13/16	03060	33.11	33.71	-0.60	1.78%	Roll-a-wheel	PSMW48	JMT	OnR
06/13/16	01862	33.14	33.33	-0.19	0.57%	Roll-a-wheel	PSMW48	JMT	OnR
06/07/16	32827	33.21	32.42	0.79	2.44%	Roll-a-wheel	5505E	JMT	OnR
06/29/16	ON.L2E	33.22	35.25	-2.03	5.76%	Roll-a-wheel	PSMW48	JMT	OnR
06/29/16	ON.L2E	33.22	33.38	-0.16	0.48%	Roll-a-wheel	PSMW18N	SH	OnR
06/08/16	32821	33.23	32.08	1.15	3.58%	Roll-a-wheel	5505E	JMT	OnR
08/17/18	44028	33.28	32.50	0.78	2.40%	Roll-a-wheel	PSMW48	SH	OffR
08/31/16	98107	33.38	33.50	-0.12	0.36%	Roll-a-wheel	PSMW18	AI/BS	СР
08/31/16	98107	33.56	34.08	-0.52	1.53%	Roll-a-wheel	PSMW18	AI/BS	СР
07/13/16	08648	33.61	34.13	-0.52	1.52%	Roll-a-wheel	WMP12	ETR	OnR
06/07/16	32827	33.72	33.08	0.64	1.93%	Roll-a-wheel	5505E	JMT	OnR
06/29/16	ON.L2E	33.78	33.92	-0.14	0.41%	Roll-a-wheel	PSMW18N	SH	OnR
04/29/15	10001	33.79	33	0.79	2.39%	Roll-a-wheel	PSMW28	PC	OnR
08/16/16	44130	33.81	33.08	0.73	2.21%	Roll-a-wheel	PSMW48	SH	OffR
09/11/16	2010 (NSW)	33.83	35.33	-1.50	4.25%	Roll-a-wheel	TRI88016	КРН	СР
06/29/16	ON.L2E	33.99	22.58	11.41	50.53%	Roll-a-wheel	PSMW48	JMT	OnR

07/20/16	18940	34.14	34.50	-0.36	1.04%	Roll-a-wheel	PSMW48	JMT	OnR
06/12/16	08402	34.21	34.54	-0.33	0.96%	Roll-a-wheel	PSMW48	JMT	OnR
08/28/16	06042	34 39	32.42	1 97	6.09%	Roll-a-wheel	PSMW28	PC	СР
06/09/16	08075	34.63	34.58	0.05	0.14%	Roll-a-wheel	PSMW/48	JMT	OnR
09/11/16	2010 (NSW)	3/1.70	38.42	-3.63	9.45%	Roll-a-wheel	T 9101048	КРН	СР
06/29/16	ON L2E	34.79	34.21	-3.03	3 10%	Boll-a-wheel		SH SH	
06/23/10	19952	35.30	35.67	1.00	1.04%	Roll-a-wheel		імт	OnR
06/29/16	01125	25.25	25.07	-0.37	1.04%	Poll a wheel	P 51V1VV46		OnR
00/29/10	06042	35.55	35.65	-0.48	0.64%	Roll-a-wheel	PSIVIW18IN		
08/28/16	06042	35.39	35.17	0.22	0.64%	Roll-a-wheel	PSMW28		
08/09/12	18966	35.40	35.40	0.00	0.00%	Roll-a-wheel	WIMP12		
07/12/16	18943	35.57	35.42	0.15	0.42%	Roll-a-wheel	WIMP12	EIR	Onk
08/04/10	02883	35.63	36	-0.37	1.03%	Roll-a-wheel	PSMW48	PC	OnR
06/29/16	ON.L2E	35.66	36.28	-0.62	1.71%	Roll-a-wheel	PSMW48	JMT	OnR
09/11/16	2010 (NSW)	35.69	35.92	-0.23	0.64%	Roll-a-wheel	TRI88016	КРН	СР
07/12/16	18943	35.70	36.00	-0.30	0.83%	Roll-a-wheel	PSMW48	JMT	OnR
08/04/10	02883	35.71	36	-0.29	0.81%	Roll-a-wheel	PSMW48	PC	OnR
06/02/16	33407	35.75	35.66	0.09	0.25%	Roll-a-wheel	PSMW48	JMT	OnR
06/14/16	19952	35.77	36.42	-0.65	1.78%	Roll-a-wheel	PSMW48	JMT	OnR
07/12/16	18943	35.77	36.04	-0.27	0.75%	Roll-a-wheel	WMP12	ETR	OnR
06/07/16	32822	35.83	36.80	-0.97	2.64%	Roll-a-wheel	5505E	JMT	OnR
08/04/10	02883	35.83	36	-0.17	0.47%	Roll-a-wheel	PSMW48	PC	OnR
06/13/16	06269	35.88	35.00	0.88	2.51%	Roll-a-wheel	PSMW48	JMT	OnR
07/12/16	18943	35.91	35.67	0.24	0.67%	Roll-a-wheel	WMP12	ETR	OnR
07/12/16	18943	35.95	35.96	-0.01	0.03%	Roll-a-wheel	WMP12	ETR	OnR
07/12/16	18943	36.03	36.25	-0.22	0.61%	Roll-a-wheel	PSMW48	JMT	OnR
08/16/16	44130	36.05	37.17	-1.12	3.01%	Roll-a-wheel	PSMW48	SH	OffR
07/12/16	18943	36.09	36.04	0.05	0.14%	Roll-a-wheel	PSMW48	JMT	OnR
06/29/16	ON.L2E	36.15	38.13	-1.98	5.19%	Roll-a-wheel	PSMW48	JMT	OnR
08/16/16	44130	36.15	36.67	-0.52	1.42%	Roll-a-wheel	PSMW48	SH	OffR
06/09/16	08075	36.31	36.08	0.23	0.64%	Roll-a-wheel	PSMW48	JMT	OnR
06/14/16	19952	36.32	36.17	0.15	0.41%	Roll-a-wheel	PSMW48	JMT	OnR
08/31/16	98107	36.36	36.42	-0.06	0.16%	Roll-a-wheel	PSMW18	BJM	СР
09/11/16	2010 (NSW)	36.36	38.83	-2.47	6.36%	Roll-a-wheel	TRI88016	КРН	СР
06/14/16	19952	36.42	36.71	-0.29	0.79%	Roll-a-wheel	PSMW48	JMT	OnR
06/14/16	19952	36.45	36.33	0.12	0.33%	Roll-a-wheel	PSMW48	JMT	OnR
05/31/16	19150	36.52	36.04	0.48	1.33%	Roll-a-wheel	PSMW48	JMT	OnR
06/07/16	32827	36.52	36.08	0.44	1 22%	Roll-a-wheel	5505F	JMT	OnR
06/29/16	ON L2F	36.52	34.83	1.69	1.2270	Roll-a-wheel		імт	OnR
08/09/12	18966	36.68	37.54	-0.86	2.29%	Roll-a-wheel	WMP12	AI/BS	СР
06/14/16	19952	36.81	37 42	-0.00	1.63%	Roll-a-wheel	DSN/1/10	IMT	OnR
08/21/16	08107	37.12	36.92	0.01	0.54%	Roll-a-wheel	PSM/\/18	ΔI/RS	CP
06/14/16	10052	37.12	36.52	0.20	1 /1 20/	Boll-a-wheel		ІМТ	
06/12/16	19992	37.15	30.03	1.40	2.610/	Boll-a-whool			
06/12/16	010209	37.55	30.75	-1.40	3.61%	Roll a wheel			
06/13/10	01021	27.04	20.42	-0.//	2.00%	Roll a wheel	PSIVIW48		
00/29/16	UN.LZE	37.84	38.33	-0.49	1.28%	Roll-a-wheel	PSIVIW18N	SH	
06/14/16	23702	37.91	38.50	-0.59	1.53%	Koll-a-wheel	5505E	SH IN 17	OnR
06/13/16	01862	37.93	37.71	0.22	0.58%	Koll-a-wheel	PSMW48	JMI	UnR
06/28/16	12206	38.00	40.75	-2.75	6.75%	Roll-a-wheel	PSMW48	JMT	OnR
06/13/16	06269	38.02	37.88	0.14	0.37%	Roll-a-wheel	PSMW48	JMT	OnR
05/31/16	19150	38.02	39.33	-1.31	3.33%	Roll-a-wheel	PSMW48	JMT	OnR
04/29/15	10001	38.12	38.33	-0.21	0.55%	Roll-a-wheel	PSMW28	PC	OnR
06/13/16	01821	38.13	37.17	0.96	2.58%	Roll-a-wheel	PSMW48	JMT	OnR
06/13/16	03060	38.25	39.33	-1.08	2.75%	Roll-a-wheel	PSMW48	JMT	OnR
07/12/16	18943	38.25	38.29	-0.04	0.10%	Roll-a-wheel	WMP12	ETR	OnR
08/16/16	44130	38.31	38.25	0.06	0.16%	Roll-a-wheel	PSMW48	SH	OffR
06/13/16	03060	38.33	39.67	-1.34	3.38%	Roll-a-wheel	PSMW48	JMT	OnR
08/09/12	18966	38.39	38.25	0.14	0.37%	Roll-a-wheel	WMP12	AI/BS	СР
06/08/16	32821	38.44	38.17	0.27	0.71%	Roll-a-wheel	5505E	JMT	OnR

06/13/16	03060	38.47	38.33	0.14	0.37%	Roll-a-wheel	5505E	SH	OnR
06/13/16	03060	38.56	39.50	-0.94	2.38%	Roll-a-wheel	PSMW48	JMT	OnR
05/20/15	19407	38.67	38	0.67	1.76%	Roll-a-wheel	PSMW48	PC	OnR
06/13/16	03060	38.71	39.29	-0.58	1.48%	Roll-a-wheel	PSMW48	JMT	OnR
06/29/16	ON.L2E	38.89	36.00	2.89	8.03%	Roll-a-wheel	PSMW48	JMT	OnR
06/13/16	03060	39.05	38.17	0.88	2.31%	Roll-a-wheel	5505E	SH	OnR
08/31/16	98107	39.06	38.83	0.23	0.59%	Roll-a-wheel	PSMW18	AI/BS	СР
08/31/16	98107	39.08	39.58	-0.50	1.26%	Roll-a-wheel	PSMW18	BJM	СР
06/13/16	03060	39.14	39.17	-0.03	0.08%	Roll-a-wheel	PSMW48	JMT	OnR
06/13/16	03060	39.19	39.42	-0.23	0.58%	Roll-a-wheel	PSMW48	JMT	OnR
06/13/16	03060	39.30	39.33	-0.03	0.08%	Roll-a-wheel	PSMW48	JMT	OnR
06/13/16	03060	39.39	39.17	0.22	0.56%	Roll-a-wheel	PSMW48	JMT	OnR
06/13/16	03060	39.45	39.25	0.20	0.51%	Roll-a-wheel	PSMW48	JMT	OnR
06/13/16	03060	39.49	39.42	0.07	0.18%	Roll-a-wheel	PSMW48	JMT	OnR
06/13/16	03060	39.54	38.25	1.29	3.37%	Roll-a-wheel	5505E	SH	OnR
06/02/16	33126	39.56	39.71	-0.15	0.38%	Roll-a-wheel	PSMW48	JMT	OnR
06/09/16	32803	39.72	39.42	0.30	0.76%	Roll-a-wheel	5505E	SH	OnR
06/13/16	03060	39.84	39.50	0.34	0.86%	Roll-a-wheel	PSMW48	JMT	OnR
06/13/16	03060	39.90	39.92	-0.02	0.05%	Roll-a-wheel	PSMW48	JMT	OnR
06/13/16	03060	39.99	39.38	0.61	1.55%	Roll-a-wheel	PSMW48	JMT	OnR
08/28/16	06042	40.05	40.42	-0.37	0.91%	Roll-a-wheel	PSMW28	PC	СР
08/09/12	18966	40.08	41.63	-1.55	3.72%	Roll-a-wheel	WMP12	AI/BS	СР
05/29/16	08402	40.10	40.46	-0.36	0.89%	Roll-a-wheel	PSMW48	JMT	OnR
06/13/16	03060	40.15	40.17	-0.02	0.05%	Roll-a-wheel	PSMW48	JMT	OnR
07/20/16	18940	40.19	40.21	-0.02	0.05%	Roll-a-wheel	PSMW48	JMT	OnR
07/20/16	18940	40.23	40.13	0.10	0.25%	Roll-a-wheel	PSMW48	JMT	OnR
08/09/12	18966	40.24	40.88	-0.64	1.57%	Roll-a-wheel	WMP12	AI/BS	СР
05/31/16	19150	40.25	39.54	0.71	1.80%	Roll-a-wheel	PSMW48	JMT	OnR
06/09/16	08075	40.33	39.88	0.45	1.13%	Roll-a-wheel	PSMW48	JMT	OnR
06/12/16	08402	40.36	39.04	1.32	3.38%	Roll-a-wheel	PSMW48	JMT	OnR
08/31/16	98107	40.77	41.42	-0.65	1.57%	Roll-a-wheel	PSMW18	BJM	СР
06/14/16	27958	41.01	40.50	0.51	1.26%	Roll-a-wheel	PSMW48	JMT	OnR
07/20/16	18940	41.04	41.33	-0.29	0.70%	Roll-a-wheel	PSMW48	JMT	СР
10/20/15	04090	41.28	40.5	0.78	1.93%	Roll-a-wheel	PSMW28	РС	OnR
06/29/16	14261	41.41	41.21	0.20	0.49%	Roll-a-wheel	PSMW48	JMT	OnR
06/28/16	12206	41.51	41.42	0.09	0.22%	Roll-a-wheel	PSMW48	JMT	OnR
06/14/16	19952	41.63	41.83	-0.20	0.48%	Roll-a-wheel	PSMW48	JMT	OnR
06/28/16	12206	41.76	41.50	0.26	0.63%	Roll-a-wheel	PSMW48	JMT	OnR
06/08/16	32821	41.77	40.25	1.52	3.78%	Roll-a-wheel	5505E	JMT	OnR
06/13/16	01821	41.89	41.21	0.68	1.65%	Roll-a-wheel	PSMW48	JMT	OnR
06/28/16	12206	41.99	42.42	-0.43	1.01%	Roll-a-wheel	PSMW48	JMT	OnR
06/29/16	ON.L2E	42.06	38.67	3.39	8.77%	Roll-a-wheel	PSMW48	JMT	СР
07/14/16	18940	42.08	42.19	-0.11	0.26%	Roll-a-wheel	PSMW48	JMT	OffR
05/26/16	11788	42.15	42.58	-0.43	1.01%	Roll-a-wheel	PSMW48	JMT	OnR
07/20/16	97756	42.26	42.29	-0.03	0.07%	Roll-a-wheel	PSMW18	BJM	OnR
06/14/16	19952	42.45	42.08	0.37	0.88%	Roll-a-wheel	PSMW48	JMT	OnR
06/14/16	27958	42.54	43.08	-0.54	1.25%	Roll-a-wheel	PSMW48	JMT	OnR
01/08/15	06798	42.63	43.3	-0.67	1.55%	Roll-a-wheel	PSMW48	PC	OnR
07/14/16	18940	42.96	43.00	-0.04	0.09%	Roll-a-wheel	PSMW48	JMT	OnR
09/23/11	08857	43.23	46.67	-3.44	7.37%	Roll-a-wheel	PSMW48	PC	OnR
07/12/16	18943	43.44	43.92	-0.48	1.09%	Roll-a-wheel	WMP12	ETR	OnR
08/31/16	98107	43.45	43.17	0.28	0.65%	Roll-a-wheel	PSMW18	AI/BS	СР
07/14/16	18940	43.55	45.08	-1.53	3.39%	Roll-a-wheel	WMP12	ETR	OffR
07/14/16	18940	43.76	45.00	-1.24	2.76%	Roll-a-wheel	WMP12	ETR	OffR
06/09/16	08075	44.00	43.75	0.25	0.57%	Roll-a-wheel	PSMW48	JMT	OnR
07/12/16	18943	44.03	44.38	-0.35	0.79%	Roll-a-wheel	WMP12	ETR	OnR
07/12/16	18943	44.22	45.08	-0.86	1.91%	Roll-a-wheel	PSMW48	JMT	OnR
06/07/16	32827_	44.35	43.67	0.68	1.56%	Roll-a-wheel	5505E	JMT	OnR

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06/07/16	32827	44.38	44.33	0.05	0.11%	Roll-a-wheel	5505E	JMT	OnR
07/14/16	18940	44.67	45.46	-0.79	1.74%	Roll-a-wheel	PSMW48	JMT	OffR
06/28/16	12206	44.79	44.00	0.79	1.80%	Roll-a-wheel	PSMW48	ЈМТ	OnR
07/12/16	18943	44.80	44.75	0.05	0.11%	Roll-a-wheel	WMP12	ETR	OnR
07/12/16	18943	44.83	45.08	-0.25	0.55%	Roll-a-wheel	PSMW/48	JMT	OnR
07/12/16	18943	45.03	45.00	0.03	0.07%	Roll-a-wheel	WMP12	FTR	OnR
05/31/16	19150	45.09	44.58	0.03	1 14%	Roll-a-wheel		імт	OnR
06/14/16	27958	45.05	45.04	0.09	0.18%	Roll-a-wheel		імт	OnR
05/20/15	19407	45.12	45.04	0.08	0.18%	Roll-a-wheel	PSIVIVV48		
03/20/13	19407	45.55	45	0.33	0.73%	Roll-a-wheel	PSIVIVV48		
07/12/16	18945	45.01	45.55	0.28	0.62%	Roll-a-wheel	PSIVIVV48		
07/12/16	18945	45.05	45.92	-0.27	0.59%	Roll-a-wheel	PSIVIW48		OnR
07/12/16	18943	45.91	46.08	-0.17	0.37%	Roll-a-wheel	WWP12	EIR	OnR
06/07/16	32827	45.94	45.00	0.94	2.09%	Roll-a-wheel	5505E	JIVIT	Unk
08/31/16	98107	46.17	46.08	0.09	0.20%	Roll-a-wheel	PSMW18	AI/BS	СР
06/14/16	23702	46.50	46.50	0.00	0.00%	Roll-a-wheel	5505E	SH	OnR
06/13/16	06269	46.80	46.42	0.38	0.82%	Roll-a-wheel	PSMW48	JMT	OnR
06/07/16	32822	47.33	46.29	1.04	2.25%	Roll-a-wheel	5505E	JMT	OnR
08/09/12	18966	47.61	47.00	0.61	1.30%	Roll-a-wheel	WMP12	AI/BS	СР
04/29/15	10001	47.76	48	-0.24	0.50%	Roll-a-wheel	PSMW28	PC	OnR
05/26/16	11788	47.92	47.50	0.42	0.88%	Roll-a-wheel	PSMW48	JMT	OnR
08/04/10	02883	48.46	52.2	-3.74	7.16%	Roll-a-wheel	PSMW48	PC	OnR
06/29/16	ON.L2E	48.94	50.75	-1.81	3.57%	Roll-a-wheel	PSMW48	JMT	OnR
06/08/16	32821	49.05	49.25	-0.20	0.41%	Roll-a-wheel	5505E	JMT	OnR
08/31/16	98107	49.10	49.58	-0.48	0.97%	Roll-a-wheel	PSMW18	BJM	СР
07/20/16	18940	49.38	49.79	-0.41	0.82%	Roll-a-wheel	PSMW48	JMT	OnR
07/14/16	18940	49.39	49.42	-0.03	0.06%	Roll-a-wheel	WMP12	ETR	OffR
07/14/16	18940	49.44	49.67	-0.23	0.46%	Roll-a-wheel	WMP12	ETR	OffR
08/31/16	98107	49.57	50.33	-0.76	1.51%	Roll-a-wheel	PSMW18	AI/BS	СР
08/09/12	18966	49.74	49.58	0.16	0.32%	Roll-a-wheel	WMP12	AI/BS	СР
06/07/16	32827	49.75	50.50	-0.75	1.49%	Roll-a-wheel	5505E	імт	OnR
07/14/16	18940	50.12	51.5	-1.38	2.68%	Roll-a-wheel	PSMW48	JMT	OffR
07/20/16	18940	50.24	50.29	-0.05	0.10%	Roll-a-wheel	PSMW48	JMT	OnR
06/09/16	08075	50.27	49.08	1 19	2.42%	Roll-a-wheel	PSMW/48	ІМТ	OnR
07/14/16	18940	50.44	51.42	-0.98	1.91%	Roll-a-wheel	PSMW48	JMT	OffR
06/14/16	19952	50 74	50.00	0.74	1.48%	Roll-a-wheel	PSMW/48	імт	OnR
07/20/16	18940	50.77	50.13	0.64	1 28%	Roll-a-wheel	PSMW48	JMT	OnR
06/02/16	22126	50.96	50.92	0.13	0.26%	Roll-a-wheel		імт	OnR
05/02/10	10150	50.50	50.85	0.13	0.20%	Roll-a-wheel			OnR
05/31/16	19130	51.50	51.04	0.40	1.37%	Roll-a-wheel			
10/29/16	10002	51.95	51.25	0.70	1.57%	Roll-a-wheel			
10/30/15	10995	51.90	55.00	-1.04	0.46%	Roll-a-wheel			
05/29/16	08402	52.12	51.88	0.24	0.40%	Roll a wheel	PSIVIVV48		
08/31/16	98107	52.19	51.25	0.94	1.83%	Roll a wheel	PSIVIVV 18		
08/28/16	06042	52.35	52.25	0.10	0.19%	Roll a wheel	PSIVIW28		
06/09/16	08075	52.48	52.88	-0.40	0.76%	Koll-a-Wheel	PSMW48	JMT	OnR
06/14/16	27958	52.50	53.17	-0.67	1.26%	Koll-a-wheel	PSMW48	JMT	OnR
06/14/16	23702	52.69	53.25	-0.56	1.05%	Koll-a-wheel	5505E	SH	OnR
07/12/16	18943	53.01	54.17	-1.16	2.14%	Roll-a-wheel	PSMW48	JMT	OnR
07/14/16	18940	53.27	53.17	0.10	0.19%	Roll-a-wheel	PSMW48	JMT	OffR
07/14/16	18940	53.37	53.58	-0.21	0.39%	Roll-a-wheel	PSMW48	JMT	OffR
07/14/16	18940	53.48	53.38	0.10	0.19%	Roll-a-wheel	PSMW48	JMT	OffR
04/29/15	10001	53.79	54	-0.21	0.39%	Roll-a-wheel	PSMW28	PC	OnR
07/12/16	18943	53.84	53.71	0.13	0.24%	Roll-a-wheel	WMP12	ETR	OnR
07/14/16	18940	54.04	54.42	-0.38	0.70%	Roll-a-wheel	PSMW48	JMT	OnR
07/12/16	18943	54.12	54.38	-0.26	0.48%	Roll-a-wheel	PSMW48	JMT	OnR
06/14/16	19952	54.29	54.13	0.16	0.30%	Roll-a-wheel	PSMW48	JMT	OnR
07/12/16	18943	54.39	54.21	0.18	0.33%	Roll-a-wheel	WMP12	ETR	OnR
08/28/16	06042	54.62	54.92	-0.30	0.54%	Roll-a-wheel	PSMW28	PC	СР
	09107	55.01	55.33	-0.32	0.58%	Roll-a-wheel	PSMW18	BJM	СР

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07/12/16	18943	55.52	55.33	0.19	0.34%	Roll-a-wheel	WMP12	ETR	OnR
06/08/16	32821	55.69	55.67	0.02	0.04%	Roll-a-wheel	5505E	JMT	OnR
07/12/16	18943	55.70	55.42	0.28	0.51%	Roll-a-wheel	PSMW48	JMT	OnR
07/12/16	18943	55.80	56.08	-0.28	0.50%	Roll-a-wheel	WMP12	ETR	OnR
06/29/16	ON.L2E	55.81	54.29	1.52	2.80%	Roll-a-wheel	PSMW48	TML	OnR
08/31/16	98107	55.88	54.08	1.80	3.33%	Roll-a-wheel	PSMW18	BJM	СР
06/28/16	12206	55.90	56.17	-0.27	0.48%	Roll-a-wheel	PSMW48	TML	OnR
08/04/10	02883	56.64	50	6.64	13.28%	Roll-a-wheel	PSMW48	PC	OnR
06/13/16	06269	56.79	56.63	0.16	0.28%	Roll-a-wheel	PSMW48	IMT	OnR
06/14/16	23702	56.83	56.67	0.16	0.28%	Roll-a-wheel	5505E	SH	OnR
08/31/16	98107	57.29	57.58	-0.29	0.50%	Roll-a-wheel	PSMW18	BJM	СР
06/13/16	06269	57.35	57.50	-0.15	0.26%	Roll-a-wheel	PSMW48	JMT	OnR
05/29/16	08402	57.98	57.42	0.56	0.98%	Roll-a-wheel	PSMW48	JMT	OnR
08/31/16	98107	57.99	58.58	-0.59	1.01%	Roll-a-wheel	PSMW18	BJM	СР
07/12/16	18943	58.42	58.08	0.34	0.59%	Roll-a-wheel	PSMW48	JMT	OffR
06/14/16	19952	58.47	59.17	-0.70	1.18%	Roll-a-wheel	PSMW48	TML	OnR
08/31/16	98107	58.71	59.08	-0.37	0.63%	Roll-a-wheel	PSMW18	BJM	СР
05/26/16	11788	58.90	59.33	-0.43	0.72%	Roll-a-wheel	PSMW48	ІМТ	OnR
08/28/16	06042	58.93	58.00	0.93	1.60%	Roll-a-wheel	PSMW28	PC	СР
07/14/16	18940	59.06	59	0.06	0.10%	Roll-a-wheel	PSMW48	JMT	OffR
07/14/16	18940	59.13	60.08	-0.95	1.58%	Roll-a-wheel	WMP12	ETR	OffR
07/14/16	18940	59.21	59.83	-0.62	1.04%	Roll-a-wheel	WMP12	ETR	OffR
07/14/16	18940	59.21	59.55	-0.34	0.57%	Roll-a-wheel	PSMW48	JMT	OffR
06/02/16	33126	59.58	59.42	0.16	0.27%	Roll-a-wheel	PSMW48	IMT	OnR
08/31/16	98107	59.61	60	-0.39	0.65%	Roll-a-wheel	PSMW18	BJM	СР
06/09/16	08075	59.77	60.67	-0.90	1.48%	Roll-a-wheel	PSMW48	IMT	OnR
07/12/16	18943	60.00	60.92	-0.92	1 51%	Roll-a-wheel	WMP12	ETR	OnR
06/13/16	01862	60.16	59.46	0.70	1.18%	Roll-a-wheel	PSMW48	IMT	OnR
07/14/16	18940	60.19	59.71	0.48	0.80%	Roll-a-wheel	PSMW48	JMT	OffR
07/20/16	18940	60.34	60.25	0.09	0.15%	Roll-a-wheel	PSMW48	JMT	OnR
06/29/16	ON.L2E	60.38	61.21	-0.83	1.36%	Roll-a-wheel	PSMW48	TML	OnR
07/20/16	18940	60.38	60.33	0.05	0.08%	Roll-a-wheel	PSMW48	JMT	OnR
06/14/16	23702	60.45	62.00	-1.55	2.50%	Roll-a-wheel	5505E	SH	OnR
08/31/16	98107	60.52	60	0.52	0.87%	Roll-a-wheel	PSMW18	BJM	СР
06/14/16	19952	60.54	60.08	0.46	0.77%	Roll-a-wheel	5505E	SH	OnR
06/14/16	21853	60.61	59.38	1.23	2.07%	Roll-a-wheel	PSMW48	SH	OnR
06/14/16	27958	61.26	61.83	-0.57	0.92%	Roll-a-wheel	PSMW48	JMT	OnR
06/02/16	33407	61.45	61.38	0.07	0.11%	Roll-a-wheel	PSMW48	JMT	OnR
06/14/16	27958	61.68	61.13	0.55	0.90%	Roll-a-wheel	PSMW48	JMT	OnR
06/29/16	ON.L2E	62.45	62.17	0.28	0.45%	Roll-a-wheel	PSMW48	JMT	OnR
06/14/16	27958	62.58	63.33	-0.75	1.18%	Roll-a-wheel	PSMW48	JMT	OnR
05/26/16	11788	62.71	62.58	0.13	0.21%	Roll-a-wheel	PSMW48	JMT	OnR
07/12/16	18943	62.87	62.83	0.04	0.06%	Roll-a-wheel	WMP12	ETR	OnR
07/12/16	18943	63.06	63.08	-0.02	0.03%	Roll-a-wheel	PSMW48	JMT	OnR
05/31/16	19150	63.15	62.67	0.48	0.77%	Roll-a-wheel	PSMW48	JMT	OnR
07/12/16	18943	63.42	63.08	0.34	0.54%	Roll-a-wheel	WMP12	ETR	OnR
10/20/15	04090	63.77	63	0.77	1.22%	Roll-a-wheel	PSMW28	PC	OnR
08/28/16	06042	63.95	63.25	0.70	1.11%	Roll-a-wheel	PSMW28	PC	СР
06/14/16	27958	64.23	63.83	0.40	0.63%	Roll-a-wheel	PSMW48	JMT	OnR
07/20/16	18940	64.34	63.08	1.26	2.00%	Roll-a-wheel	PSMW48	JMT	СР
06/14/16	21853	64.37	65.17	-0.80	1.23%	Roll-a-wheel	PSMW48	SH	OnR
06/14/16	27958	64.47	64.17	0.30	0.47%	Roll-a-wheel	PSMW48	JMT	OnR
07/12/16	18943	64.91	64.88	0.03	0.05%	Roll-a-wheel	PSMW48	JMT	OnR
07/12/16	18943	65.35	65.58	-0.23	0.35%	Roll-a-wheel	WMP12	ETR	OnR
06/26/13	12831	65.35	57	8.35	14.65%	Roll-a-wheel	PSMW48	РС	OffR
06/02/16	33407	65.51	65.08	0.43	0.66%	Roll-a-wheel	PSMW48	JMT	OnR
06/07/16	32827	65.60	65.67	-0.07	0.11%	Roll-a-wheel	5505E	JMT	OnR
06/29/16	ON.L2E	65.69	67.83	-2.14	3.15%	Roll-a-wheel	PSMW48	JMT	OnR
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08/31/16	98107	65.77	65.25	0.52	0.80%	Roll-a-wheel	PSMW18	BJM	СР
08/28/16	06042	66.27	66.75	-0.48	0.72%	Roll-a-wheel	PSMW28	PC	СР
06/29/16	ON.L2E	66.69	67.25	-0.56	0.83%	Roll-a-wheel	PSMW18N	SH	СР
06/14/16	19952	67.06	67.58	-0.52	0.77%	Roll-a-wheel	PSMW48	JMT	OnR
06/09/16	08075	67.23	66.46	0.77	1.16%	Roll-a-wheel	PSMW48	JMT	OnR
07/14/16	18940	67.45	67.63	-0.18	0.27%	Roll-a-wheel	PSMW48	JMT	OffR
08/31/16	98107	67.76	67.83	-0.07	0.10%	Roll-a-wheel	PSMW18	BJM	СР
06/28/16	12206	68.01	68.00	0.01	0.01%	Roll-a-wheel	PSMW48	TML	OnR
08/31/16	98107	68.96	69.17	-0.21	0.30%	Roll-a-wheel	PSMW18	BJM	СР
07/13/16	08648	69.27	70.5	-1.23	1.74%	Roll-a-wheel	WMP12	ETR	OnR
07/20/16	18940	69.82	70.42	-0.60	0.85%	Roll-a-wheel	PSMW48	JMT	OnR
07/20/16	18940	70.21	70.30	-0.09	0.13%	Roll-a-wheel	PSMW48	JMT	OnR
07/13/16	08648	70.51	70.04	0.47	0.67%	Roll-a-wheel	WMP12	ETR	OnR
07/12/16	18943	70.80	72.17	-1.37	1.90%	Roll-a-wheel	PSMW48	JMT	OnR
06/28/16	12206	71.04	70.00	1.04	1.49%	Roll-a-wheel	PSMW48	TML	OnR
07/12/16	18943	71.81	71.83	-0.02	0.03%	Roll-a-wheel	WMP12	ETR	OnR
07/12/16	18943	71.88	72.21	-0.33	0.46%	Roll-a-wheel	WMP12	ETR	OnR
06/13/16	06269	72.00	72.88	-0.88	1.21%	Roll-a-wheel	PSMW48	IMT	OnR
06/29/16	ON L2F	72.10	72.5	-0.40	0.55%	Roll-a-wheel	PSMW18N	SH	OnR
10/20/15	04090	72.46	72	0.46	0.64%	Roll-a-wheel	PSMW28	PC	OnR
06/13/16	06269	72.53	72.08	0.45	0.62%	Roll-a-wheel	PSMW48	ІМТ	OnR
06/29/16	14261	72.58	71.50	1.08	1.51%	Roll-a-wheel	PSMW18N	SH	OnR
06/13/16	03060	72.60	71.25	1 35	1.89%	Roll-a-wheel	PSMW48	IMT	OnR
06/13/16	06269	72.69	71.42	1.27	1.78%	Roll-a-wheel	PSMW48	IMT	OffR
06/13/16	06269	72.03	71 33	1.58	2 22%	Roll-a-wheel	PSMW48	IMT	OffR
06/13/16	06269	73.03	72.38	0.65	0.90%	Roll-a-wheel	PSMW48	IMT	OffR
06/14/16	27958	73.08	73 33	-0.25	0.34%	Roll-a-wheel	PSMW48	IMT	OnR
06/29/16	ON 12F	73.14	72.92	0.22	0.30%	Roll-a-wheel	PSMW18N	SH	OnR
06/13/16	06269	73.42	74.00	-0.58	0.38%	Roll-a-wheel	PSMW48	ІМТ	OnR
05/23/16	18925	73.57	74.00	-0.63	0.85%	Roll-a-wheel	PSMW48	SH	OnR
06/13/16	06269	73.65	72 71	0.94	1 29%	Roll-a-wheel	PSMW48	ІМТ	OffR
07/14/16	18940	73.70	74.79	-1 09	1.46%	Roll-a-wheel	WMP12	ETR	OffR
07/14/16	18940	73.89	75.00	-1 11	1.48%	Roll-a-wheel	WMP12	ETR	OffR
06/29/16		73 91	74.25	-0.34	0.46%	Roll-a-wheel	PSMW/18N	SH	OffR
06/13/16	06269	74.02	74.23	-0.40	0.54%	Roll-a-wheel	PSMW48	IMT	OffR
07/12/16	18943	74.87	74.5	0.37	0.54%	Roll-a-wheel	PSMW48	TML	OnR
06/13/16	06269	75.09	74 33	0.76	1.02%	Roll-a-wheel	PSM/W/48	IMT	OffR
02/04/16	12201	75.13	74.5	0.63	0.85%	Roll-a-wheel	PSMW28	PC	OnR
06/29/16	ON 12E	75.45	77.08	-1 63	2 11%	Roll-a-wheel	PSMW28	імт	СР
06/13/16	01862	76.07	76.67	-0.60	0.78%	Roll-a-wheel	PSMW48	IMT	OnR
06/13/16	06269	76.07	76.96	-0.85	1 10%	Roll-a-wheel	PSMW48	IMT	OffR
06/13/16	06269	77.37	76.50	0.83	1.10%	Roll-a-wheel	PSMW48	імт	OffR
06/13/16	01821	78.66	78.29	0.37	0.47%	Roll-a-wheel	PSMW48	IMT	OnR
08/04/10	02883	79.47	79.5	-0.03	0.04%	Roll-a-wheel	PSMW48	PC	OnR
07/20/16	18940	80.08	80.54	-0.46	0.57%	Roll-a-wheel	PSMW48	JMT	OnR
07/20/16	18940	80.16	80.42	-0.26	0.37%	Roll-a-wheel	PSMW48	JMT	OnR
07/20/16	18940	80.58	81.33	-0.75	0.92%	Roll-a-wheel	PSMW48	JMT	СР
07/12/16	18943	80.79	80.83	-0.04	0.05%	Roll-a-wheel	WMP12	ETR	OnR
07/13/16	08648	80.84	81.08	-0.24	0.30%	Roll-a-wheel	WMP12	ETR	OnR
07/12/16	18943	81.08	81.08	0.00	0.00%	Roll-a-wheel	PSMW48	JMT	OnR
06/29/16	ON 12F	81 15	76 33	4.87	6 31%	Roll-a-wheel	PSMW/48	ІМТ	СР
06/13/16	06269	81.27	80.29	0.98	1.22%	Roll-a-wheel	PSMW48	JMT	OnR
07/12/16	18943	81.40	81.29	0.11	0.14%	Roll-a-wheel	WMP12	ETR	OnR
06/13/16	06269	81.83	82.67	-0.84	1.02%	Roll-a-wheel	PSMW/48	ІМТ	OnR
07/20/16	18940	82.03	81.21	0.87	1.02/0	Roll-a-wheel	PSMW48	JMT	OffR
06/29/16	ON 12F	82.16	84 79	-2.63	3 10%	Roll-a-wheel	PSMW/48	ІМТ	OnR
08/04/10	02883	82.66	81	1.66	2.05%	Roll-a-wheel	PSM/W/48	PC	OnR
06/13/16	06269	82.87	81.92	0.95	1.16%	Roll-a-wheel	PSMW48	IMT	OnR
00/10/10	30205	52.07	01.02	0.55	1 1.10/0		1	1 21411	, Sint

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06/14/16	27958	83.17	83.46	-0.29	0.35%	Roll-a-wheel	PSMW48	JMT	OnR
07/12/16	18943	83.37	83.46	-0.09	0.11%	Roll-a-wheel	PSMW48	JMT	OnR
06/13/16	01821	83.90	82.46	1.44	1.75%	Roll-a-wheel	PSMW48	JMT	OnR
08/04/10	02883	83.97	82	1.97	2.40%	Roll-a-wheel	PSMW48	РС	СР
06/13/16	03060	84.01	84.04	-0.03	0.04%	Roll-a-wheel	PSMW48	JMT	OnR
06/14/16	19952	84.25	85.92	-1.67	1.94%	Roll-a-wheel	5505E	SH	OnR
06/29/16	ON.L2E	84.49	86	-1.51	1.76%	Roll-a-wheel	PSMW18N	SH	СР
08/31/16	98107	84.92	85.93	-1.01	1.18%	Roll-a-wheel	PSMW18	BJM/MI	OffR
07/25/16	98103	85.27	84.83	0.44	0.52%	Roll-a-wheel	PSMW18	AJC	OnR
06/13/16	01862	85.31	85.63	-0.32	0.37%	Roll-a-wheel	PSMW48	ІМТ	OnR
06/29/16	ON L2F	85 53	83.67	1.86	2 22%	Roll-a-wheel	PSMW48	IMT	OnR
06/13/16	06269	86.23	85.75	0.48	0.56%	Roll-a-wheel	PSMW48	IMT	OffR
06/07/16	32827	87 74	87.67	0.07	0.08%	Roll-a-wheel	5505F	ІМТ	OnR
06/13/16	01821	87.86	87.42	0.44	0.50%	Roll-a-wheel	PSMW48	ІМТ	OnR
06/14/16	19952	88.42	88.13	0.29	0.33%	Roll-a-wheel	PSMW48	IMT	OnR
06/13/16	01821	88.47	89.75	-1.28	1.43%	Roll-a-wheel	PSMW48	IMT	OnR
07/14/16	18940	88.63	89.92	-1 29	1.43%	Roll-a-wheel	WMP12	ETR	OffR
07/14/16	18940	89.03	89.75	-0.72	0.80%	Roll-a-wheel	WMP12	FTR	OffR
07/14/16	18940	89.10	89.42	-0.72	0.36%	Boll-a-wheel	PSMW/48	імт	Offp
08/04/10	02883	89.36	89	-0.32	0.30%	Roll-a-wheel		PC	
07/12/16	189/3	89.74	90	0.30	0.20%	Roll-a-wheel	V/MP12	FTR	OnP
07/12/16	18940	89.90	88.83	-0.26	1 20%	Roll-a-wheel	PSMW/48		OnR
05/20/15	19407	90.02	90.85	1.07	0.02%	Roll-a-wheel	PSIVIV48		
03/20/15	19407	00.33	00.38	0.02	0.0270	Roll-a-wheel	PSIVIVV48	імт	
07/20/16	18940	90.33	90.38	-0.05	0.06%	Roll-a-wheel	PSI////48		
07/20/16	18940	90.45	90.17	0.28	0.31%	Roll-a-wheel	F31V1VV48		OnR
07/12/16	09649	90.58	01 71	0.25	0.28%	Roll a wheel	W/MP12		Onk
07/13/10	08048	90.07	91.71	-1.04	1.15%	Roll a wheel			
06/29/16	ON.LZE	91.06	93.08	-2.02	2.17%	Roll-a-wheel	PSIVIW48	JIVIT	Onk
06/13/16	06269	91.71	92.17	-0.46	0.50%	Roll-a-wheel	PSMW48	JMT	OnR
06/29/16	ON.L2E	91.95	90.17	1.78	1.97%	Roll-a-wheel	PSMW48	JMT	СР
06/13/16	01821	92.43	93.88	-1.45	1.54%	Roll-a-wheel	PSMW48	JMT	OnR
05/31/16	19150	92.65	91.88	0.77	0.84%	Roll-a-wheel	PSMW48	JMT	OnR
08/28/16	06042	92.92	92.50	0.42	0.45%	Roll-a-wheel	PSMW28	PC	CP
06/14/16	27958	93.26	93.88	-0.62	0.66%	Roll-a-wheel	PSMW48	JMT	OnR
06/07/16	32822	93.27	92.42	0.85	0.92%	Roll-a-wheel	5505E	JMT	OnR
07/12/16	18943	93.35	92.46	0.89	0.96%	Roll-a-wheel	PSIVIVV48	JIVIT	OffR
06/29/16	ON.L2E	93.76	94	-0.24	0.26%	Roll-a-wheel	PSMW18N	SH	OnR
06/14/16	23702	93.76	90.75	3.01	3.32%	Roll-a-wheel	5505E	SH	OnR
06/14/16	19952	95.86	94.33	1.53	1.62%	Roll-a-wheel	5505E	SH	OnR
06/13/16	06269	96.97	95.25	1.72	1.81%	Roll-a-wheel	PSMW48	JMT	OnR
06/29/16	14131	97.74	98.92	-1.18	1.19%	Roll-a-wheel	PSMW48	JMT	OffR
06/13/16	06269	98.29	98.00	0.29	0.30%	Roll-a-wheel	PSMW48	JMT	OnR
06/07/16	32822	98.29	96.08	2.21	2.30%	Roll-a-wheel	5505E	JMT	OnR
06/14/16	23702	98.41	99.83	-1.42	1.42%	Roll-a-wheel	5505E	SH	OnR
07/12/16	18943	98.90	98.88	0.02	0.02%	Roll-a-wheel	WMP12	ETR	OnR
05/20/15	19407	99.09	105	-5.91	5.63%	Roll-a-wheel	PSMW48	РС	СР
06/29/16	ON.L2E	99.38	101.83	-2.45	2.41%	Roll-a-wheel	PSMW48	JMT	OnR
06/14/16	21853	99.46	100.00	-0.54	0.54%	Roll-a-wheel	PSMW48	SH	OnR
05/29/16	08402	99.63	99.00	0.63	0.64%	Roll-a-wheel	PSMW48	JMT	OnR
07/12/16	18943	99.68	99.33	0.35	0.35%	Roll-a-wheel	WMP12	ETR	OnR
07/20/16	18940	99.71	100.42	-0.71	0.71%	Roll-a-wheel	PSMW48	JMT	OnR
07/20/16	18940	100.30	100.08	0.22	0.22%	Roll-a-wheel	PSMW48	JMT	OnR
07/20/16	18940	100.37	100.00	0.37	0.37%	Roll-a-wheel	PSMW48	JMT	OnR
07/14/15	18940	101.12	100.71	0.41	0.41%	Roll-a-wheel	WMP12	JMT	OnR
06/12/16	08402	101.21	100.67	0.54	0.54%	Roll-a-wheel	PSMW48	JMT	OnR
06/13/16	01821	101.71	101.38	0.33	0.33%	Roll-a-wheel	PSMW48	JMT	OnR
06/13/16	01862_	101.80	101.25	0.55	0.54%	Roll-a-wheel	PSMW48	JMT	OnR
06/14/16	27958	102.90	104.00	-1.10	1.06%	Roll-a-wheel	PSMW48	JMT	OnR

07/14/15	18940	103.54	104.67	-1.13	1.08%	Roll-a-wheel	WMP12	ETR	OffR
07/14/15	18940	103.69	104.83	-1.14	1.09%	Roll-a-wheel	WMP12	ETR	OffR
05/29/16	08402	104.49	104.67	-0.18	0.17%	Roll-a-wheel	PSMW48	JMT	OnR
06/13/16	06269	106.58	107.25	-0.67	0.62%	Roll-a-wheel	PSMW48	JMT	OnR
07/14/15	18940	106.67	105.83	0.84	0.79%	Roll-a-wheel	PSMW48	JMT	OffR
06/29/16	ON.L2E	106.73	106.67	0.06	0.06%	Roll-a-wheel	PSMW48	JMT	СР
08/28/16	06042	106.79	106.25	0.54	0.51%	Roll-a-wheel	PSMW28	PC	СР
06/29/16	14261	107.02	104.42	2.60	2.49%	Roll-a-wheel	PSMW18N	SH	СР
07/12/16	18943	107.69	107.96	-0.27	0.25%	Roll-a-wheel	WMP12	ETR	OnR
05/29/16	08402	107.71	107.63	0.08	0.07%	Roll-a-wheel	PSMW48	ІМТ	OnR
07/14/15	18940	107.81	108.13	-0.32	0.30%	Roll-a-wheel	WMP12	ETR	OnR
06/29/16	ON L2F	107.88	109.29	-1.41	1.29%	Roll-a-wheel	PSMW48	IMT	OnR
06/08/16	32821	108 59	108 75	-0.16	0.15%	Roll-a-wheel	5505F	ІМТ	OnR
06/13/16	01862	108 75	110.08	-1 33	1 21%	Roll-a-wheel	PSMW48	IMT	OnR
07/14/15	18940	108.75	109.06	-0.31	0.28%	Roll-a-wheel	WMP12	ETR	OffR
07/14/15	18940	108.75	108.75	0.02	0.02%	Roll-a-wheel	WMP12	ETR	OffR
07/12/16	18943	109.01	108.42	0.59	0.54%	Roll-a-wheel	WMP13	ETR	OnR
06/13/16	03060	109.28	109.13	0.15	0.14%	Roll-a-wheel	PSMW/48	IMT	OnR
06/07/16	32827	109.42	109.53	-0.11	0.10%	Roll-a-wheel	5505F	IMT	OnR
06/01/16	34956	109.44	110 42	-0.98	0.89%	Roll-a-wheel	PSMW/48	IMT	OnR
07/14/15	18940	109.44	109.00	0.33	0.43%	Roll-a-wheel	PSM///48	JMT	OffR
06/29/16	14261	109.47	103.00	6.83	6.63%	Boll-a-wheel	PSM/W48	імт	
07/20/16	18940	110.23	110.00	-0.23	0.0370	Roll-a-wheel	PSMW48	IMT	OnR
06/13/16	01862	110.23	109.71	-0.23	0.21%	Boll-a-wheel	PSM/W/48	імт	OnR
06/11/16	21952	110.05	111.09	0.34	0.36%	Roll-a-wheel			OnR
06/39/16	01125	111.00	112.00	-0.40	0.30%	Roll-a-wheel		о сц	OnR
06/23/16	03060	112.12	111.30	-0.40	0.75%	Roll a wheel			OnR
07/13/16	09649	112.15	112.29	0.84	0.75%	Roll-a-wheel	V/MP12	FTR	OffR
07/13/16	27059	112.25	112.50	-0.55	0.08%	Roll a wheel			
07/12/16	18943	113.09	114.08	-1.11	0.98%	Roll a wheel	PSM/W48	IMT	OnR
06/20/16	01125	112.05	110.12	-0.33	2 809/	Roll-a-wheel			OnR
08/04/10	07883	113.51	10.15	5.10	5 13%	Roll-a-wheel	P 31V1VV48		
06/04/16	21952	114.26	115 20	1.02	0.80%	Roll a wheel	P 31V1VV48	сц	
06/14/16	21055	114.20	113.29	-1.03	0.09%	Roll-a-wheel	P 51V1VV46	<u>сп</u>	OnR
05/14/16	10150	114.54	112.50	-0.33	1.749/	Roll a wheel	P 31V1VV40		OnR
05/51/16	219150	115.12	112.56	0.12	0.10%	Roll-a-wheel	PSIVIV48		OnR
08/28/16	06042	115.15	115.25	-0.12	0.10%	Roll-a-wheel	P 51V1VV46		
08/28/16	22821	115.04	112.08	0.56	1 1 5 0/	Roll a wheel			
00/08/10	08648	115.74	117.12	1.52	0.78%	Roll-a-wheel	3505E		OnR
07/13/16	19042	116.22	117.13	-0.91	0.78%	Roll-a-wheel			OnR
07/12/16	18943	117.10	117.00	-0.31	0.26%	Roll-a-wheel		ETD	OnR
07/20/10	10040	117.20	117.50	-0.40	0.34%				
06/12/16	18940	117.20	117.00	-0.47	0.40%	Roll a wheel			
07/14/15	19040	119.05	110.02	-0.50	0.48%	Roll a wheel	101110 10110 10110		
07/14/15	18940	110.05	110.07	-1.18	0.98%			FTD	
07/14/15	18940	110.05	110.20	-0.42	0.08%	Roll a wheel			
07/20/16	11700	120.02	110.07	-0.43	0.30%				
05/20/16	11/88	120.02	120.20	0.35	0.29%		PSIVIVV48		Onk
07/20/16	19040	120.17	120.29	-0.12	0.10%		P 3IVI VV 48		
07/20/16	18940	120.35	120.46	-0.11	0.09%				
07/20/16	3282/	120.71	120.08	0.03	0.52%	Roll-a-wheel			
06/02/10	37730	120.71	120.35	0.38	0.52%				
06/02/16	33126	121.36	120.54	0.82	0.08%	Roll-a-Wheel			
06/14/16	23702	122.99	120.50	1.49	1.24%	Roll-a-wheel	5505E	SH IN 47	
06/13/16	06269	123.29	122.17	1.12	0.92%	Roll-a-wheel			
06/14/16	27958	123.60	122.96	0.64	0.52%	Koll-a-wheel	PSIVIW48		OnR
07/14/15	18940	123.69	122.96	0.73	0.59%	Roll-a-wheel	PSIVIW48		OffR
06/14/16	27958	123.79	124.83	-1.04	0.83%	Koll-a-wheel			OnR
08/31/16	98107	124.59	126.58	-1.99	1.57%	Roll-a-wheel	PSIVIW18	R1M/MI	OffR

06/14/16	23702	124.62	124.79	-0.17	0.14%	Roll-a-wheel	5505E	SH	OnR
06/08/16	32821	125.67	125.08	0.59	0.47%	Roll-a-wheel	5505E	JMT	OnR
06/07/16	32827	125.71	125.58	0.13	0.10%	Roll-a-wheel	5505E	JMT	OnR
06/07/16	32827	125.85	125.08	0.77	0.62%	Roll-a-wheel	5505E	JMT	OnR
07/14/15	18940	126.31	126.33	-0.02	0.02%	Roll-a-wheel	PSMW48	JMT	OffR
07/12/16	18943	126.34	126.08	0.26	0.21%	Roll-a-wheel	WMP12	ETR	OnR
07/13/16	08648	126.53	127.63	-1.10	0.86%	Roll-a-wheel	WMP12	ETR	OffR
06/14/16	27958	126.67	125.67	1.00	0.80%	Roll-a-wheel	PSMW48	IMT	OnR
06/02/16	33054	127.01	127.63	-0.62	0.49%	Roll-a-wheel	PSMW48	JMT	OnR
06/14/16	27958	127.01	126.75	0.26	0.21%	Roll-a-wheel	PSMW48	IMT	OnR
06/29/16	14261	127.58	127.46	0.12	0.09%	Roll-a-wheel	PSMW18N	SH	СР
06/29/16	14261	127.59	129.83	-2.24	1.73%	Roll-a-wheel	PSMW18N	SH	CP
06/13/16	03060	127.93	127.38	0.55	0.43%	Roll-a-wheel	PSMW48	JMT	OnR
08/28/16	06042	128.27	128.25	0.02	0.02%	Roll-a-wheel	PSMW28	PC	CP
07/20/16	18940	128.64	129.71	-1.07	0.82%	Roll-a-wheel	PSMW48	JMT	СР
08/28/16	06042	128.70	128.00	0.70	0.55%	Roll-a-wheel	PSMW28	PC	CP
07/13/16	08648	128 90	129.58	-0.68	0.52%	Roll-a-wheel	WMP12	ETR	OnR
07/20/16	97756	128.99	129.08	-0.09	0.07%	Roll-a-wheel	PSMW18	BJM	OnR
05/20/15	19407	129.05	132	-2.95	2.23%	Roll-a-wheel	PSMW48	PC	OnR
07/12/16	18943	129.18	129.00	0.18	0.14%	Roll-a-wheel	PSMW48	JMT	СР
07/20/16	97756	129.66	129.38	0.28	0.22%	Roll-a-wheel	PSMW18	BJM	OnR
07/14/15	18940	129 78	129.25	0.53	0.41%	Roll-a-wheel	WMP12	ETR	OnR
07/20/16	18940	130.19	130.54	-0.35	0.27%	Boll-a-wheel	PSMW48	JMT	OnR
06/09/16	08075	131 32	132.38	-1.06	0.80%	Boll-a-wheel	PSMW48	IMT	OnR
07/14/15	18940	131.52	131 50	0.01	0.00%	Boll-a-wheel	PSMW48	JMT	OffR
06/07/16	32827	131.51	131.50	0.01	0.09%	Boll-a-wheel	5505F	IMT	OnR
09/23/11	08857	132.07	132.00	0.07	0.05%	Roll-a-wheel	PSMW48	PC	OnR
07/14/15	18940	132.85	131 58	1.27	0.97%	Boll-a-wheel	PSMW48	JMT	OffR
07/14/15	18940	133 59	134.46	-0.87	0.57%	Boll-a-wheel	WMP12	ETR	OffR
07/14/15	18940	134.03	134.75	-0.72	0.53%	Boll-a-wheel	WMP12	ETR	OffR
06/29/16	14131	134.03	132.58	1.65	1 24%	Boll-a-wheel	PSMW48	ІМТ	OffR
07/12/16	18943	135.22	135.17	0.05	0.04%	Roll-a-wheel	WMP12	ETR	OnR
05/31/16	19150	135.99	135.25	0.74	0.55%	Boll-a-wheel	PSM/W/48	IMT	OnR
06/14/16	19952	136.10	134.42	1.68	1 25%	Boll-a-wheel	5505E	SH	OffR
07/12/16	18943	136.41	136.42	-0.01	0.01%	Boll-a-wheel	PSMW48	TML	CP
07/14/15	18940	136.65	136.38	0.27	0.20%	Roll-a-wheel	PSMW48	JMT	OffR
08/31/16	98107	137.10	137.92	-0.82	0.59%	Boll-a-wheel	PSMW18	BIM	СР
06/13/16	01821	138 14	138 50	-0.32	0.35%	Boll-a-wheel	PSMW/48	імт	OnR
07/12/16	18943	138.21	138.13	0.08	0.06%	Boll-a-wheel	PSMW48	JMT	CP
06/07/16	32827	138.45	137.33	1 12	0.82%	Boll-a-wheel	5505E	ІМТ	OnR
06/07/16	32827	139.18	138.75	0.43	0.31%	Boll-a-wheel	5505E	IMT	OnR
07/20/16	18940	140.10	140.54	-0.44	0.31%	Roll-a-wheel	PSMW48	JMT	OnR
07/20/16	18940	140.24	140.63	-0 39	0.28%	Roll-a-wheel	PSMW48	JMT	OnR
07/25/16	98103	140.53	140.63	-0.09	0.07%	Roll-a-wheel	PSMW18	AJC	OnR
08/31/16	98107	140 76	142.08	-1 32	0.93%	Roll-a-wheel	PSMW18	BJM/MI	OffR
06/29/16	14261	141 36	127.83	13 53	10 58%	Roll-a-wheel	PSMW/48	ІМТ	СР
06/14/16	27958	142.21	140.96	1.25	0.89%	Roll-a-wheel	PSMW/48	IMT	OnR
06/02/16	33407	144 08	144.25	-0.17	0.12%	Roll-a-wheel	PSM/W/48	імт	OnR
06/07/16	32822	144 12	145.00	-0.88	0.61%	Roll-a-wheel	5505F	IMT	OnR
06/28/16	12206	144.15	143.67	0.48	0.33%	Roll-a-wheel	PSMW48	JMT	OnR
07/14/15	18940	144 21	144.88	-0.67	0.46%	Roll-a-wheel	WMP12	ETR	OffR
06/13/16	01821	144 50	144 71	-0.21	0.15%	Roll-a-wheel	PSMW/48	IMT	OnR
07/14/15	18940	144.50	144.71	0.51	0.35%	Roll-a-wheel	WMP12	ETR	OffR
07/12/16	18943	145.64	145.67	-0.03	0.02%	Roll-a-wheel	PSMW48	JMT	CP
07/13/16	08648	146.86	148.83	_1 97	1 37%	Roll-a-wheel	WMP12	ETR	OnR
07/12/16	18943	147.48	147.29	0.10	0.132/0	Roll-a-wheel	PSMW48	JMT	
09/22/11	08857	148 35	148.00	0.13	0.24%	Roll-a-wheel	PSMW48	PC	
07/14/15	18940	1/10.05	1/0/2	-0.35	0.25%	Boll-acwhool	WMP12	FTR	OffP
07/14/13	10340	143.03	143.42	-0.57	0.2370	i i i i i i i i i i i i i i i i i i i			

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07/14/15	18940	149.20	149.58	-0.38	0.25%	Roll-a-wheel	WMP12	ETR	OffR
06/29/16	14261	149.42	150.88	-1.46	0.97%	Roll-a-wheel	PSMW18N	SH	СР
06/13/16	01862_	149.50	148.54	0.96	0.65%	Roll-a-wheel	PSMW48	JMT	OnR
06/07/16	32827_	149.64	149.67	-0.03	0.02%	Roll-a-wheel	5505E	JMT	OnR
07/20/16	18940	149.96	151.04	-1.08	0.72%	Roll-a-wheel	PSMW48	JMT	OnR
06/13/16	03060	150.03	150.42	-0.39	0.26%	Roll-a-wheel	PSMW48	JMT	OnR
06/14/16	23702	151.29	153.25	-1.96	1.28%	Roll-a-wheel	5505E	SH	OnR
06/29/16	ON.L2E	151.63	149.00	2.63	1.77%	Roll-a-wheel	PSMW48	JMT	OnR
06/29/16	ON.L2E	151.86	153.88	-2.02	1.31%	Roll-a-wheel	PSMW48	JMT	OnR
06/14/16	21853	151.90	150.25	1.65	1.10%	Roll-a-wheel	PSMW48	SH	OnR
06/13/16	01821	151.99	153.17	-1.18	0.77%	Roll-a-wheel	PSMW48	JMT	OnR
06/07/16	32827_	152.65	153.42	-0.77	0.50%	Roll-a-wheel	5505E	JMT	OnR
06/14/16	19952	152.87	153.42	-0.55	0.36%	Roll-a-wheel	5505E	SH	OffR
06/07/16	32827	152.98	151.92	1.06	0.70%	Roll-a-wheel	5505E	JMT	OnR
06/13/16	01821	154.66	153.67	0.99	0.64%	Roll-a-wheel	PSMW48	JMT	OnR
07/12/16	18943	155.32	154.58	0.74	0.48%	Roll-a-wheel	PSMW48	JMT	СР
06/29/16	14261	156.02	145.92	10.10	6.92%	Roll-a-wheel	PSMW48	JMT	СР
01/08/15	06798	156.25	155.41	0.84	0.54%	Roll-a-wheel	PSMW48	PC	OnR
07/12/16	18943	156.41	156.33	0.08	0.05%	Roll-a-wheel	PSMW48	JMT	СР
06/29/16	14261	157.14	158.42	-1.28	0.81%	Roll-a-wheel	PSMW48	JMT	OnR
06/29/16	ON.L2E	157.79	159.25	-1.46	0.92%	Roll-a-wheel	PSMW18N	SH	OnR
07/14/15	18940	158.38	159.53	-1.15	0.72%	Roll-a-wheel	WMP12	ETR	OffR
06/29/16	14261	158.89	159.13	-0.24	0.15%	Roll-a-wheel	PSMW48	JMT	OnR
07/14/15	18940	159.02	158.92	0.10	0.06%	Roll-a-wheel	WMP12	ETR	OffR
07/14/15	18940	159.06	158.58	0.48	0.30%	Roll-a-wheel	WMP12	ETR	OffR
06/07/16	32822	159.08	162.76	-3.68	2.26%	Roll-a-wheel	5505E	JMT	OnR
06/07/16	32822	159.08	164.50	-5.42	3.29%	Roll-a-wheel	5505E	JMT	OnR
06/07/16	32822	159.39	158.67	0.72	0.45%	Roll-a-wheel	5505E	JMT	OnR
07/14/15	18940	159.55	159.13	0.42	0.26%	Roll-a-wheel	WMP12	ETR	OffR
06/26/13	12831	159.57	155	157	2 95%	Boll a wheel		DC	0D
		100101	155	4.57	2.5570	Koll-a-wheel	PSIVIVV48	PC PC	Onk
07/14/15	18940	159.62	158.96	0.66	0.42%	Roll-a-wheel	WMP12	ETR	OffR
07/14/15 07/14/15	18940 18940	159.62 159.67	158.96 158.75	0.66	0.42%	Roll-a-wheel Roll-a-wheel	WMP12 WMP12	ETR ETR	OffR OffR
07/14/15 07/14/15 07/14/15	18940 18940 18940	159.62 159.67 159.70	158.96 158.75 159.13	0.66 0.92 0.57	0.42% 0.58% 0.36%	Roll-a-wheel Roll-a-wheel Roll-a-wheel	WMP12 WMP12 WMP12	ETR ETR ETR	OffR OffR OffR
07/14/15 07/14/15 07/14/15 07/14/15	18940 18940 18940 18940	159.62 159.67 159.70 159.72	158.96 158.75 159.13 158.92	0.66 0.92 0.57 0.80	0.42% 0.58% 0.36% 0.50%	Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel	WMP12 WMP12 WMP12 WMP12 WMP12	ETR ETR ETR ETR ETR	OffR OffR OffR OffR
07/14/15 07/14/15 07/14/15 07/14/15 07/14/15	18940 18940 18940 18940 18940	159.62 159.67 159.70 159.72 159.73	158.96 158.75 159.13 158.92 159.29	0.66 0.92 0.57 0.80 0.44	0.42% 0.58% 0.36% 0.50% 0.28%	Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel	WMP12 WMP12 WMP12 WMP12 WMP12 WMP12	ETR ETR ETR ETR ETR	OffR OffR OffR OffR OffR OffR
07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15	18940 18940 18940 18940 18940 18940	159.62 159.67 159.70 159.72 159.73 159.78	158.96 158.75 159.13 158.92 159.29 159.00	0.66 0.92 0.57 0.80 0.44 0.78	0.42% 0.58% 0.36% 0.50% 0.28% 0.49%	Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel	WMP12 WMP12 WMP12 WMP12 WMP12 WMP12 WMP12	ETR ETR ETR ETR ETR ETR ETR	OffR OffR OffR OffR OffR OffR OffR
07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15	18940 18940 18940 18940 18940 18940 18940	159.62 159.67 159.70 159.72 159.73 159.78 159.78	158.96 158.75 159.13 158.92 159.29 159.00 159.00	0.66 0.92 0.57 0.80 0.44 0.78 0.78	0.42% 0.58% 0.36% 0.50% 0.28% 0.49% 0.49%	Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel	WMP12 WMP12 WMP12 WMP12 WMP12 WMP12 WMP12 WMP12	ETR ETR ETR ETR ETR ETR ETR ETR	OffR OffR OffR OffR OffR OffR OffR OffR
07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15	18940 18940 18940 18940 18940 18940 18940 18940	159.62 159.67 159.70 159.72 159.73 159.78 159.78 159.78 159.80	158.96 158.75 159.13 158.92 159.29 159.00 159.00 159.79	4.37 0.66 0.92 0.57 0.80 0.44 0.78 0.78 1.01	0.42% 0.58% 0.36% 0.50% 0.28% 0.49% 0.49% 0.64%	Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel	PSMW48 WMP12	ETR ETR ETR ETR ETR ETR ETR ETR ETR	OffR OffR OffR OffR OffR OffR OffR OffR
07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15	18940 18940 18940 18940 18940 18940 18940 18940 18940	159.62 159.67 159.70 159.72 159.73 159.78 159.78 159.80 159.91	158.96 158.75 159.13 158.92 159.29 159.00 159.00 158.79 159.00	4.37 0.66 0.92 0.57 0.80 0.44 0.78 0.78 1.01 0.91	0.42% 0.58% 0.36% 0.50% 0.28% 0.49% 0.49% 0.64% 0.57%	Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel	PSMW48 WMP12	ETR ETR ETR ETR ETR ETR ETR ETR ETR ETR	OffR OffR OffR OffR OffR OffR OffR OffR
07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15	18940 18940 18940 18940 18940 18940 18940 18940 18940 18940	159.62 159.67 159.70 159.72 159.73 159.78 159.78 159.80 159.91 159.93	155 158.96 158.75 159.13 158.92 159.00 159.00 158.79 159.00 158.67	4.37 0.66 0.92 0.57 0.80 0.44 0.78 1.01 0.91 1.26	0.42% 0.58% 0.36% 0.50% 0.28% 0.49% 0.49% 0.64% 0.57% 0.79%	Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel	PSMW48 WMP12	ETR ETR ETR ETR ETR ETR ETR ETR ETR ETR	OffR OffR OffR OffR OffR OffR OffR OffR
07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15	18940 18940 18940 18940 18940 18940 18940 18940 18940 18940 18940 18940 18940 18940 18940 18940 18940 18940 18940 18940	159.62 159.67 159.70 159.72 159.73 159.78 159.78 159.80 159.91 159.93 159.96	155 158.96 158.75 159.13 159.29 159.00 158.79 159.00 158.79 159.00 158.67	4.37 0.66 0.92 0.57 0.80 0.44 0.78 0.78 1.01 0.91 1.26 1.29	2.33% 0.42% 0.58% 0.36% 0.50% 0.28% 0.49% 0.49% 0.64% 0.57% 0.79% 0.81%	Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel	PSMW48 WMP12	ETR ETR ETR ETR ETR ETR ETR ETR ETR ETR	OffR OffR OffR OffR OffR OffR OffR OffR
07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15	18940 18940 18940 18940 18940 18940 18940 18940 18940 18940 18940 18940	159.62 159.67 159.70 159.72 159.73 159.78 159.78 159.80 159.91 159.93 159.96 159.96	158.96 158.75 159.13 158.92 159.29 159.00 158.79 159.00 158.67 158.67 158.67	4.37 0.66 0.92 0.57 0.80 0.44 0.78 1.01 0.91 1.26 1.29 1.46	0.42% 0.58% 0.36% 0.50% 0.28% 0.49% 0.49% 0.64% 0.57% 0.79% 0.81% 0.92%	Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel	PSMW48 WMP12	ETR ETR ETR ETR ETR ETR ETR ETR ETR ETR	OffR OffR OffR OffR OffR OffR OffR OffR
07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15	18940 18940 18940 18940 18940 18940 18940 18940 18940 18940 18940 18940 18940	159.62 159.67 159.70 159.72 159.73 159.78 159.78 159.80 159.91 159.93 159.96 159.96 159.96	158.96 158.75 159.13 158.92 159.29 159.00 159.00 158.79 159.00 158.67 158.67 158.67 158.50 159.08	4.37 0.66 0.92 0.57 0.80 0.44 0.78 1.01 0.91 1.26 1.29 1.46 0.88	0.42% 0.58% 0.36% 0.50% 0.28% 0.49% 0.49% 0.64% 0.57% 0.79% 0.81% 0.92% 0.55%	Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel	PSMW48 WMP12	ETR ETR ETR ETR ETR ETR ETR ETR ETR ETR	OffR OffR OffR OffR OffR OffR OffR OffR
07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15	18940 18940	159.62 159.67 159.70 159.72 159.73 159.78 159.78 159.91 159.91 159.93 159.96 159.96 159.96 159.96	158.96 158.75 159.13 158.92 159.00 159.00 159.00 159.00 158.79 159.00 158.79 159.00 158.67 158.67 159.08 158.67	4.37 0.66 0.92 0.57 0.80 0.44 0.78 1.01 0.91 1.26 1.29 1.46 0.88 1.30	2.33% 0.42% 0.58% 0.36% 0.50% 0.28% 0.49% 0.49% 0.57% 0.79% 0.81% 0.92% 0.55% 0.82%	Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel	PSMW48 WMP12	ETR ETR ETR ETR ETR ETR ETR ETR ETR ETR	OffR OffR OffR OffR OffR OffR OffR OffR
07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15	18940 18940 18940 18940 18940 18940 18940 18940 18940 18940 18940 18940 18940 18940 18940	159.62 159.67 159.70 159.72 159.73 159.78 159.78 159.80 159.91 159.93 159.96 159.96 159.96 159.96 159.97 160.09	153 158.96 158.75 159.13 159.29 159.00 159.00 158.79 159.00 158.67 158.67 159.08 158.88	4.37 0.66 0.92 0.57 0.80 0.44 0.78 1.01 0.91 1.26 1.29 1.46 0.88 1.30 1.21	2.55% 0.42% 0.58% 0.36% 0.50% 0.28% 0.49% 0.49% 0.64% 0.57% 0.79% 0.81% 0.92% 0.55% 0.82% 0.76%	Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel	PSMW48 WMP12	ETR ETR ETR ETR ETR ETR ETR ETR ETR ETR	OffR OffR OffR OffR OffR OffR OffR OffR
07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15	18940 18940 18940 18940 18940 18940 18940 18940 18940 18940 18940 18940 18940 18940 18940 18940	159.62 159.67 159.70 159.72 159.73 159.78 159.78 159.80 159.91 159.93 159.96 159.96 159.96 159.97 160.09 160.09	158.96 158.75 159.13 159.29 159.00 159.00 159.00 158.79 159.00 158.67 158.67 158.67 158.67 158.67 158.67 158.67 158.67 158.67 158.67 158.67 158.67 158.88 158.63	4.37 0.66 0.92 0.57 0.80 0.44 0.78 1.01 0.91 1.26 1.29 1.46 0.88 1.30 1.21 1.46	2.35% 0.42% 0.58% 0.36% 0.50% 0.49% 0.49% 0.49% 0.57% 0.79% 0.81% 0.92% 0.76% 0.92%	Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel	PSMW48 WMP12	ETR ETR ETR ETR ETR ETR ETR ETR ETR ETR	OffR OffR OffR OffR OffR OffR OffR OffR
07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15	18940 18940	159.62 159.67 159.70 159.72 159.73 159.78 159.78 159.78 159.80 159.91 159.93 159.96 159.96 159.96 159.97 160.09 160.09 160.29	155 158.96 158.75 159.13 159.29 159.00 159.00 158.79 159.00 158.79 159.00 158.67 158.67 158.67 158.63 158.88 158.88 158.88	4.37 0.66 0.92 0.57 0.80 0.44 0.78 1.01 0.91 1.26 1.29 1.46 0.88 1.30 1.21 1.46 1.41	2.33% 0.42% 0.58% 0.36% 0.50% 0.28% 0.49% 0.49% 0.64% 0.57% 0.79% 0.81% 0.92% 0.76% 0.92% 0.89%	Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel Roll-a-wheel	PSMW48 WMP12	ETR ETR ETR ETR ETR ETR ETR ETR ETR ETR	OffR OffR OffR OffR OffR OffR OffR OffR
07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15	18940 18940	159.62 159.67 159.70 159.72 159.73 159.78 159.78 159.80 159.91 159.93 159.96 159.96 159.96 159.97 160.09 160.09 160.29 160.38	158.96 158.75 159.13 159.29 159.00 159.00 159.00 158.79 159.00 158.67 158.67 158.63 158.63 158.63 158.88 158.63	4.37 0.66 0.92 0.57 0.80 0.44 0.78 1.01 0.91 1.26 1.29 1.46 0.88 1.30 1.21 1.46 1.41	2.33% 0.42% 0.58% 0.36% 0.50% 0.28% 0.49% 0.49% 0.64% 0.57% 0.79% 0.81% 0.92% 0.76% 0.92% 0.89%	Roll-a-wheel Roll-a-wheel	PSMW48 WMP12	ETR ETR ETR ETR ETR ETR ETR ETR ETR ETR	OffR OffR OffR OffR OffR OffR OffR OffR
07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15	18940 18940	159.62 159.67 159.70 159.72 159.73 159.78 159.78 159.80 159.91 159.93 159.96 159.96 159.96 159.96 159.97 160.09 160.09 160.29 160.38 160.42	158.96 158.75 159.13 159.29 159.00 159.00 159.00 158.79 159.00 158.67 158.67 158.63 158.88 158.88 158.88 158.88 158.88 158.83	4.37 0.66 0.92 0.57 0.80 0.44 0.78 0.78 1.01 0.91 1.26 1.29 1.46 0.88 1.30 1.21 1.46 1.41 1.42 1.59	2.33% 0.42% 0.58% 0.36% 0.50% 0.28% 0.49% 0.49% 0.57% 0.79% 0.81% 0.92% 0.55% 0.82% 0.76% 0.92% 0.89% 1.00%	Roll-a-wheel Roll-a-wheel	PSMW48 WMP12	ETR ETR ETR ETR ETR ETR ETR ETR ETR ETR	OffR OffR OffR OffR OffR OffR OffR OffR
07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15	18940 18940	159.62 159.67 159.70 159.72 159.73 159.78 159.78 159.80 159.91 159.93 159.96 159.96 159.96 159.96 159.97 160.09 160.09 160.29 160.38 160.42 160.69	158.96 158.75 159.13 159.29 159.00 159.00 159.00 158.79 159.00 158.67 158.67 158.63 158.88 158.88 158.88 158.88 158.88 158.83 158.96 158.83 161.17	4.37 0.66 0.92 0.57 0.80 0.44 0.78 1.01 0.91 1.26 1.29 1.46 0.88 1.30 1.21 1.46 1.41 1.42 1.59 -0.48	2.33% 0.42% 0.58% 0.36% 0.50% 0.28% 0.49% 0.49% 0.49% 0.57% 0.79% 0.81% 0.92% 0.55% 0.82% 0.76% 0.92% 0.89% 1.00% 0.30%	Roll-a-wheel Roll-a-wheel	PSMW48 WMP12 WMP14 WMP14 WMP15 WMP14 WMP15 WMP14 WMP15 WMP14 WMP14 WMP14 WMP14 WMP14 WMP14 WMP14 WMP14 WMP45	ETR ETR ETR ETR ETR ETR ETR ETR ETR ETR	OffR OffR OffR OffR OffR OffR OffR OffR
07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15	18940 18940	159.62 159.67 159.70 159.72 159.73 159.78 159.78 159.80 159.91 159.93 159.96 159.96 159.96 159.96 159.97 160.09 160.29 160.38 160.42 160.69 161.18	158.96 158.75 159.13 159.29 159.00 159.00 159.00 158.79 159.00 158.67 158.67 158.63 158.63 158.88 158.88 158.83 158.83 161.17 162.21	4.37 0.66 0.92 0.57 0.80 0.44 0.78 1.01 0.91 1.26 1.29 1.46 0.88 1.30 1.21 1.46 1.41 1.42 1.59 -0.48 -1.03	2.33% 0.42% 0.58% 0.36% 0.50% 0.28% 0.49% 0.49% 0.49% 0.49% 0.49% 0.49% 0.57% 0.79% 0.81% 0.92% 0.75% 0.76% 0.92% 0.89% 1.00% 0.30% 0.63%	Roll-a-wheel Roll-a-wheel	PSMW48 WMP12 WMP14 WMP15 WMP14 WMP15 WMP14 WMP15 WMP14 WMP14 WMP14 PSMW48 PSMW48	ETR ETR ETR ETR ETR ETR ETR ETR ETR ETR	OffR OffR OffR OffR OffR OffR OffR OffR
07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15 07/14/15	18940 18940	159.62 159.67 159.70 159.72 159.73 159.78 159.78 159.80 159.91 159.93 159.96 159.96 159.96 159.96 159.97 160.09 160.29 160.38 160.42 160.69 161.18 164.05	155 158.96 158.75 159.13 159.29 159.00 159.00 159.00 159.00 158.79 159.00 158.67 158.67 158.67 158.88 158.63 158.88 158.83 158.83 158.83 161.17 162.21 164.50	4.37 0.66 0.92 0.57 0.80 0.44 0.78 1.01 0.91 1.26 1.29 1.46 0.88 1.30 1.21 1.46 1.41 1.42 1.59 -0.48 -1.03 -0.45	2.33% 0.42% 0.58% 0.36% 0.50% 0.28% 0.49% 0.49% 0.49% 0.49% 0.49% 0.49% 0.57% 0.79% 0.81% 0.92% 0.55% 0.82% 0.76% 0.92% 0.89% 1.00% 0.30% 0.63% 0.27%	Roll-a-wheel Roll-a-wheel	PSMW48 WMP12 WMP14 WMP15 WMP14 WMP15 WMP14 WMP15 WMP12 WMP12 WMP12 WMP12 WMP12 PSMW48 WMP12	ETR ETR ETR ETR ETR ETR ETR ETR ETR ETR	OffR OffR OffR OffR OffR OffR OffR OffR
07/14/15 07/14/15	18940 18940	159.62 159.67 159.70 159.72 159.73 159.78 159.78 159.80 159.91 159.93 159.96 159.96 159.96 159.96 159.97 160.09 160.29 160.38 160.42 160.69 161.18 164.05 164.14	155 158.96 158.75 159.13 159.29 159.00 159.00 159.00 159.00 159.00 158.79 159.00 158.67 158.67 158.63 158.63 158.88 158.63 158.83 158.83 161.17 162.21 164.50 164.13	4.37 0.66 0.92 0.57 0.80 0.44 0.78 1.01 0.91 1.26 1.29 1.46 0.88 1.30 1.21 1.46 1.41 1.42 1.59 -0.48 -1.03 -0.45 0.01	2.33% 0.42% 0.58% 0.36% 0.50% 0.28% 0.49% 0.49% 0.49% 0.49% 0.49% 0.49% 0.49% 0.49% 0.49% 0.57% 0.79% 0.81% 0.92% 0.82% 0.76% 0.92% 0.89% 1.00% 0.30% 0.63% 0.27% 0.01%	Roll-a-wheel Roll-a-wheel	PSMW48 WMP12	ETR ETR ETR ETR ETR ETR ETR ETR ETR ETR	OffR OffR OffR OffR OffR OffR OffR OffR
07/14/15 07/14/15	18940 18940	159.62 159.67 159.70 159.72 159.73 159.78 159.78 159.78 159.91 159.93 159.96 159.96 159.96 159.96 159.96 159.97 160.09 160.29 160.38 160.42 160.42 160.69 161.18 164.05 164.14 164.23	155 158.96 158.75 159.13 158.92 159.00 159.00 159.00 159.00 158.67 158.67 158.67 158.63 158.88 158.83 161.17 162.21 164.50 164.58	4.37 0.66 0.92 0.57 0.80 0.44 0.78 1.01 0.91 1.26 1.29 1.46 0.88 1.30 1.21 1.46 1.41 1.42 1.59 -0.48 -1.03 -0.45 0.01 -0.35	2.33% 0.42% 0.58% 0.36% 0.50% 0.28% 0.49% 0.49% 0.49% 0.57% 0.79% 0.81% 0.92% 0.76% 0.92% 0.89% 1.00% 0.30% 0.27% 0.01% 0.21%	Roll-a-wheel Roll-a-wheel <tr td=""></tr>	PSMW48 WMP12	ETR ETR ETR ETR ETR ETR ETR ETR ETR ETR	OffR OffR OffR OffR OffR OffR OffR OffR
07/14/15 07/14/15	18940 18940	159.62 159.62 159.70 159.73 159.73 159.78 159.78 159.78 159.78 159.78 159.78 159.78 159.78 159.78 159.90 159.91 159.93 159.96 159.96 159.97 160.09 160.29 160.38 160.42 160.69 161.18 164.05 164.14 164.23 164.71	155 158.96 158.75 159.13 159.29 159.00 159.00 159.00 158.79 159.00 158.67 158.67 158.67 158.63 158.88 158.63 158.83 158.83 161.17 162.21 164.50 164.58 163.63	4.37 0.66 0.92 0.57 0.80 0.44 0.78 1.01 0.91 1.26 1.29 1.46 0.88 1.30 1.21 1.46 1.41 1.42 1.59 -0.48 -1.03 -0.45 0.01 -0.35	2.33% 0.42% 0.58% 0.36% 0.50% 0.28% 0.49% 0.49% 0.49% 0.57% 0.79% 0.81% 0.92% 0.76% 0.92% 0.89% 0.89% 0.30% 0.27% 0.01% 0.21% 0.66%	Roll-a-wheel Roll-a-wheel <tr td=""></tr>	PSMW48 WMP12 PSMW48 PSMW48 PSMW48 PSMW48 PSMW48 PSMW48	ETR ETR ETR ETR ETR ETR ETR ETR ETR ETR	OffR OffR OffR OffR OffR OffR OffR OffR
07/14/15 07/14/15	18940 18943	159.62 159.62 159.70 159.73 159.78 159.78 159.78 159.78 159.78 159.78 159.79 159.90 159.96 159.96 159.97 160.09 160.29 160.42 160.69 161.18 164.14 164.23 164.71 166.20	155 158.96 158.75 159.13 159.29 159.00 159.00 159.00 158.79 159.00 158.67 158.67 158.63 158.88 158.63 158.83 158.83 161.17 162.21 164.50 164.13 163.63 165.38	4.37 0.66 0.92 0.57 0.80 0.44 0.78 1.01 0.91 1.26 1.29 1.46 0.88 1.30 1.21 1.46 1.41 1.42 1.59 -0.48 -1.03 -0.45 0.01 -0.35 1.08 0.82	2.33% 0.42% 0.58% 0.36% 0.50% 0.28% 0.49% 0.49% 0.49% 0.57% 0.79% 0.81% 0.92% 0.55% 0.82% 0.76% 0.92% 0.89% 1.00% 0.30% 0.63% 0.27% 0.01% 0.21% 0.66% 0.50%	Roll-a-wheel Roll-a-wheel	PSMW48 WMP12 PSMW48	ETR ETR ETR ETR ETR ETR ETR ETR ETR ETR	OffR OffR OffR OffR OffR OffR OffR OffR
07/14/15 07/14/15	18940 18943 18943	159.62 159.62 159.70 159.72 159.73 159.78 159.78 159.78 159.78 159.79 159.91 159.93 159.96 159.96 159.97 160.09 160.29 160.38 160.42 160.69 161.18 164.05 164.71 166.20 166.55	155 158.96 158.75 159.13 159.29 159.00 159.00 159.00 158.79 159.00 158.67 158.67 158.63 158.88 158.63 158.83 158.83 161.17 162.21 164.50 164.58 163.63 165.38 168.75	4.37 0.66 0.92 0.57 0.80 0.44 0.78 1.01 0.91 1.26 1.29 1.46 0.88 1.30 1.21 1.46 1.41 1.42 1.59 -0.48 -1.03 -0.45 0.01 -0.35 1.08 0.82 -2.20	2.33% 0.42% 0.58% 0.36% 0.50% 0.28% 0.49% 0.49% 0.49% 0.57% 0.79% 0.81% 0.92% 0.55% 0.82% 0.76% 0.92% 0.89% 1.00% 0.30% 0.63% 0.27% 0.01% 0.21% 0.66% 0.50% 1.30%	Roll-a-wheel Roll-a-wheel	PSMW48 WMP12 PSMW48 PSMW48	ETR ETR ETR ETR ETR ETR ETR ETR ETR ETR	OffR OffR OffR OffR OffR OffR OffR OffR

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06/28/16	12206	167.85	162.29	5.56	3.43%	Roll-a-wheel	PSMW48	TML	OnR
06/13/16	03060	168.78	167.88	0.90	0.54%	Roll-a-wheel	PSMW48	JMT	OnR
06/14/16	27958	169.18	168.00	1.18	0.70%	Roll-a-wheel	PSMW48	JMT	OnR
07/14/15	18940	170 19	170 21	-0.02	0.01%	Roll-a-wheel	PSMW48	JMT	OnR
07/20/16	18940	170.83	171.29	-0.46	0.27%	Roll-a-wheel	PSMW48	JMT	OnR
06/13/16	01821	171.84	172.83	-0.99	0.57%	Roll-a-wheel	PSMW48	IMT	OnR
06/13/16	01821	172.07	172.00	-0.22	0.13%	Roll-a-wheel	PSMW48	імт	OnR
06/13/16	03060	172.07	172.25	0.13	0.13%	Roll-a-wheel	PSM/W48		OnR
06/13/16	06269	172.42	172.23	-1.06	0.00%	Roll-a-wheel	PSI////48		OffR
06/13/10	06269	172.57	171.00	1.06	0.01%	Roll a wheel			OffR
06/13/16	01821	172.04	171.50	0.15	0.02%	Roll-a-wheel	PSIVIV46		OnR
06/13/16	01021	172.70	174.54	1.10	0.09%	Roll a wheel	P31V1VV40		OnR
06/13/16	14121	172.44	174.54	-1.10	0.05%	Roll-a-wheel	PSIVIV48		Off
06/29/16	14131	173.44	171.13	2.31	1.35%	Roll-a-wheel	PSIVIVV48		
06/07/16	32827_	1/3.51	173.08	0.43	0.25%	Roll-a-wheel	5505E		Onk
06/02/16	33407	1/3.//	174.50	-0.73	0.42%	Roll-a-wheel	PSMW48		OnR
07/12/16	18943	1/4.13	1/4.25	-0.12	0.07%	Roll-a-wheel	PSIVIVV48	JIVI I	СР
06/13/16	06269	174.78	171.83	2.95	1.72%	Roll-a-wheel	PSMW48	JMT	OffR
06/07/16	32827_	175.80	175.50	0.30	0.17%	Roll-a-wheel	5505E	JMT	OnR
06/01/16	34956	175.92	171.08	4.84	2.83%	Roll-a-wheel	PSMW48	JMT	OnR
06/08/16	32821	176.28	175.00	1.28	0.73%	Roll-a-wheel	5505E	JMT	OnR
06/29/16	ON.L2E	176.33	177.75	-1.42	0.80%	Roll-a-wheel	PSMW48	JMT	OnR
06/13/16	01821	176.55	176.42	0.13	0.07%	Roll-a-wheel	PSMW48	JMT	OnR
06/13/16	01821	176.93	175.75	1.18	0.67%	Roll-a-wheel	PSMW48	JMT	OnR
06/13/16	01821	177.54	176.25	1.29	0.73%	Roll-a-wheel	PSMW48	JMT	OnR
06/14/16	27958	178.66	177.58	1.08	0.61%	Roll-a-wheel	PSMW48	JMT	OnR
07/14/15	18940	178.79	179.50	-0.71	0.40%	Roll-a-wheel	WMP12	ETR	OffR
07/14/15	18940	178.93	179.13	-0.20	0.11%	Roll-a-wheel	WMP12	ETR	OffR
06/29/16	ON.L2E	179.15	184.42	-5.27	2.86%	Roll-a-wheel	PSMW48	JMT	СР
06/13/16	03060	179.60	176.58	3.02	1.71%	Roll-a-wheel	5505E	SH	OnR
10/20/15	04090	180.30	177	3.30	1.86%	Roll-a-wheel	PSMW28	PC	СР
07/20/16	18940	180.32	180.67	-0.35	0.19%	Roll-a-wheel	PSMW48	JMT	OnR
06/29/16	14131	180.35	174.04	6.31	3.63%	Roll-a-wheel	PSMW48	JMT	OnR
07/20/16	18940	180.57	181.25	-0.68	0.38%	Roll-a-wheel	PSMW48	JMT	OnR
06/02/16	33054	180.85	180.54	0.31	0.17%	Roll-a-wheel	PSMW48	JMT	OnR
06/29/16	ON.L2E	181.76	183.88	-2.12	1.15%	Roll-a-wheel	PSMW48	JMT	OnR
06/13/16	01821	181.90	180.25	1.65	0.92%	Roll-a-wheel	PSMW48	JMT	OnR
06/13/16	01821	182.70	180.46	2.24	1.24%	Roll-a-wheel	PSMW48	ЈМТ	OnR
07/12/16	18943	183.69	183.38	0.31	0.17%	Roll-a-wheel	PSMW48	JMT	СР
06/29/16	ON.L2E	184.10	183.67	0.43	0.23%	Roll-a-wheel	PSMW18N	SH	OnR
06/14/16	27958	184.40	184.83	-0.43	0.23%	Roll-a-wheel	PSMW48	IMT	OnR
06/09/16	86023	185.50	170.58	14.92	8.75%	Roll-a-wheel	01294L	DM	OnR
06/29/16	14131	185.60	188.67	-3.07	1.63%	Roll-a-wheel	PSMW48	JMT	OnR
05/26/16	11788	187.48	189 17	-1 69	0.89%	Roll-a-wheel	PSMW48	ІМТ	OnR
06/29/16	14261	187.83	169 92	17 91	10 54%	Roll-a-wheel	PSM/W/48	імт	СР
06/14/16	23702	187 9/	187.92	0.11	0.06%	Roll-a-wheel	55055	ςμ	
05/22/16	19025	107.34	107.03	1 1 2	0.00%	Roll a wheel		о сц	OnR
05/23/10	22921	100.10	109.30	-1.12	0.35%	Roll a wheel			OnR
07/20/16	19040	100.75	101.20	0.05	0.54%	Roll a wheel			
07/20/16	18940	190.75	191.29	-0.54	0.28%	Roll-a-wheel			OnR
07/20/16	18940	190.92	190.54	0.38	0.20%	Koll-a-wheel	F 31VI VV 48		
06/07/16	32827_	102.27	190.17	1.21	0.64%	Koll-a-wheel	5505E		
0//12/16	18943	192.27	192.50	-0.23	0.12%	Koll-a-wheel	P 5IVI VV 48		СР
08/28/16	06042	192.46	191.00	1.46	0.76%	Koll-a-wheel	PSMW28		СР
07/20/16	18940	192.76	193.08	-0.32	0.17%	Roll-a-wheel	PSMW48	JMF	СР
07/14/15	18940	194.17	194.33	-0.16	0.08%	Roll-a-wheel	WMP12	ETR	OffR
06/07/16	32827_	197.15	197.33	-0.18	0.09%	Roll-a-wheel	5505E	JMT	OnR
07/20/16	18940	198.57	198.54	0.03	0.02%	Roll-a-wheel	PSMW48	JMT	OnR
06/14/16	19952	198.79	200.25	-1.46	0.73%	Roll-a-wheel	PSMW48	JMT	OnR
06/13/16	03060	198.86	197.42	1.44	0.73%	Roll-a-wheel	PSMW48	JMT	OnR

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06/08/16	32821	199.99	199.33	0.66	0.33%	Roll-a-wheel	5505E	JMT	OnR
07/20/16	18940	200.24	200.71	-0.47	0.23%	Roll-a-wheel	PSMW48	JMT	OnR
06/29/16	14261	200.35	201.54	-1.19	0.59%	Roll-a-wheel	PSMW48	JMT	OnR
06/29/16	14261	200.36	201.38	-1.02	0.51%	Roll-a-wheel	PSMW48	JMT	OnR
07/20/16	18940	200.36	201.38	-1.02	0.51%	Roll-a-wheel	PSMW48	JMT	OnR
07/12/16	18943	201.57	201.58	-0.01	0.00%	Roll-a-wheel	PSMW48	JMT	СР
06/29/16	14261	202.90	188.33	14.57	7.74%	Roll-a-wheel	PSMW48	JMT	СР
06/29/16	ON.L2E	204.78	202.79	1.99	0.98%	Roll-a-wheel	PSMW48	JMT	СР
06/29/16	ON.L2E	205.32	204.88	0.44	0.21%	Roll-a-wheel	PSMW48	JMT	OnR
06/28/16	12206	206.55	203.42	3.13	1.54%	Roll-a-wheel	PSMW48	JMT	OnR
08/28/16	06042	207.94	295.92	-87.98	29.73%	Roll-a-wheel	PSMW28	PC	СР
02/04/16	12201	208.25	213	-4.75	2.23%	Roll-a-wheel	PSMW28	PC	СР
06/14/16	27958	208.58	210.46	-1.88	0.89%	Roll-a-wheel	PSMW48	JMT	OnR
06/13/16	01862_	208.80	208.75	0.05	0.02%	Roll-a-wheel	PSMW48	JMT	OnR
08/31/16	98107	208.88	198.5	10.38	5.23%	Roll-a-wheel	PSMW18	BJM	СР
07/14/15	18940	209.25	209.25	0.00	0.00%	Roll-a-wheel	WMP12	ETR	OffR
07/14/15	18940	209.28	208.71	0.57	0.27%	Roll-a-wheel	WMP12	ETR	OffR
06/07/16	32827	210.47	208.58	1.89	0.91%	Roll-a-wheel	5505E	JMT	OnR
07/20/16	18940	210.48	211.46	-0.98	0.46%	Roll-a-wheel	PSMW48	JMT	OnR
07/12/16	18943	210.56	210.42	0.14	0.07%	Roll-a-wheel	PSMW48	JMT	СР
07/20/16	18940	210.82	210.75	0.07	0.03%	Roll-a-wheel	PSMW48	JMT	OnR
05/31/16	19150	217.98	217.54	0.44	0.20%	Roll-a-wheel	PSMW48	JMT	OnR
07/12/16	18943	219.03	219.50	-0.47	0.21%	Roll-a-wheel	PSMW48	JMT	СР
06/07/16	32827	219.41	219.08	0.33	0.15%	Roll-a-wheel	5505E	JMT	OnR
06/13/16	03060	219.59	220.33	-0.74	0.34%	Roll-a-wheel	PSMW48	JMT	OnR
06/02/16	33407	220.48	220.46	0.02	0.01%	Roll-a-wheel	PSMW48	JMT	OnR
07/20/16	18940	220.57	221.50	-0.93	0.42%	Roll-a-wheel	PSMW48	JMT	OnR
07/20/16	18940	220.77	220.79	-0.02	0.01%	Roll-a-wheel	PSMW48	JMT	OnR
06/14/16	19952	221.74	222.96	-1.22	0.55%	Roll-a-wheel	PSMW48	JMT	OffR
06/14/16	19952	223.34	222.96	0.38	0.17%	Roll-a-wheel	PSMW48	JMT	OnR
07/14/15	18940	223.73	223.67	0.06	0.03%	Roll-a-wheel	WMP12	ETR	OffR
07/12/16	18943	224.00	224.96	-0.96	0.43%	Roll-a-wheel	PSMW48	JMT	СР
07/13/16	08648	224.05	226.25	-2.20	0.97%	Roll-a-wheel	WMP12	ETR	OnR
07/14/15	18940	224.62	224.17	0.45	0.20%	Roll-a-wheel	WMP12	ETR	OffR
06/07/16	32827	225.56	225.67	-0.11	0.05%	Roll-a-wheel	5505E	JMT	OnR
06/26/13	12831	226.06	212.5	13.56	6.38%	Roll-a-wheel	PSMW48	РС	OnR
07/12/16	18943	228.59	228.67	-0.08	0.03%	Roll-a-wheel	PSMW48	JMT	СР
06/13/16	03060	228.70	229.83	-1.13	0.49%	Roll-a-wheel	PSMW48	JMT	OnR
06/13/16	01821	229.99	228.71	1.28	0.56%	Roll-a-wheel	PSMW48	JMT	OnR
07/20/16	18940	230.46	230.92	-0.46	0.20%	Roll-a-wheel	PSMW48	JMT	OnR
07/20/16	18940	231.25	231.54	-0.29	0.13%	Roll-a-wheel	PSMW48	JMT	OnR
06/09/16	08075	232.42	236.46	-4.04	1.71%	Roll-a-wheel	PSMW48	JMT	OnR
05/31/16	19150	234.22	235.08	-0.86	0.37%	Roll-a-wheel	PSMW48	JMT	OnR
07/12/16	18943	234.73	234.00	0.73	0.31%	Roll-a-wheel	PSMW48	JMT	СР
07/12/16	18943	237.98	237.46	0.52	0.22%	Roll-a-wheel	PSMW48	JMT	СР
07/20/16	18940	238.74	239.08	-0.34	0.14%	Roll-a-wheel	PSMW48	JMT	OnR
07/14/15	18940	238.93	239.08	-0.15	0.06%	Roll-a-wheel	WMP12	ETR	OffR
07/14/15	18940	239.01	238.58	0.43	0.18%	Roll-a-wheel	WMP12	ETR	OffR
06/14/16	19952	240.08	230.58	9.50	4.12%	Roll-a-wheel	5505E	SH	OffR
07/20/16	18940	240.64	240.92	-0.28	0.12%	Roll-a-wheel	PSMW48	JMT	OnR
07/20/16	18940	241.13	241.58	-0.45	0.19%	Roll-a-wheel	PSMW48	JMT	OnR
06/07/16	32827	241.88	241.58	0.30	0.12%	Roll-a-wheel	5505E	JMT	OnR
07/13/16	08648	242.00	242.25	-0.25	0.10%	Roll-a-wheel	WMP12	ETR	OffR
06/13/16	84737	242.36	244.25	-1.89	0.77%	Roll-a-wheel	01594L	DM	OnR
07/12/16	18943	246.26	246.63	-0.37	0.15%	Roll-a-wheel	PSMW48	JMT	СР
06/14/16	27958	249.39	248.71	0.68	0.27%	Roll-a-wheel	PSMW48	JMT	OnR
07/20/16	18940	250.40	250.92	-0.52	0.21%	Roll-a-wheel	PSMW48	JMT	OnR
06/29/16	14261	252.44	253.50	-1.06	0.42%	Roll-a-wheel	PSMW18N	SH	СР

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07/14/15	18940	253.95	254.00	-0.05	0.02%	Roll-a-wheel	WMP12	ETR	OffR
07/14/15	18940	254.29	253.42	0.87	0.34%	Roll-a-wheel	WMP12	ETR	OffR
06/29/16	ON.L2E	254.53	252.46	2.07	0.82%	Roll-a-wheel	PSMW48	JMT	OnR
07/12/16	18943	256.66	255.75	0.91	0.36%	Roll-a-wheel	PSMW48	JMT	СР
06/13/16	06269	259.97	257.25	2.72	1.06%	Roll-a-wheel	PSMW48	ТМГ	OffR
07/20/16	18940	260.47	260.88	-0.41	0.16%	Roll-a-wheel	PSMW48	JMT	OnR
06/29/16	14261	260.51	258.54	1.97	0.76%	Roll-a-wheel	PSMW48	JMT	СР
05/29/16	08402	260.55	261.67	-1.12	0.43%	Roll-a-wheel	PSMW48	JMT	OnR
06/14/16	27958	261.79	261.71	0.08	0.03%	Roll-a-wheel	PSMW48	JMT	OnR
07/20/16	18940	263.78	262.58	1.20	0.46%	Roll-a-wheel	PSMW48	IMT	СР
06/13/16	01821	263.95	264 79	-0.84	0.32%	Roll-a-wheel	PSMW48	ІМТ	OnR
07/12/16	18943	264.29	264.5	-0.21	0.08%	Roll-a-wheel	PSMW48	IMT	CP
07/20/16	18940	266.42	267.67	-1 25	0.47%	Roll-a-wheel	PSMW48	ІМТ	CP
05/31/16	19150	267.67	267.63	0.04	0.01%	Roll-a-wheel	PSMW48	ІМТ	OnR
07/14/15	18940	268.99	268.92	0.07	0.03%	Boll-a-wheel	WMP12	FTR	OffR
07/14/15	18940	269.07	268.21	0.86	0.32%	Roll-a-wheel	W/MP12	FTR	OffR
07/20/16	18940	205.07	200.21	-3.21	1 17%	Roll-a-wheel			
06/29/16	14261	271.17	251.04	21.45	8 5/1%	Roll-a-wheel	PSN/W/48		
10/20/15	04090	272.43	231.04	_11.45	4 13%	Roll-a-wheel	P 51010048	PC	
10/20/15	24056	270.07	200.0	-11.95	1 020/	Roll a wheel		ілат	
08/01/16	06042	277.02	202.17	-5.15	1.05%	Roll-a-wheel	P 51V1VV46		
06/28/10	10150	277.25	272.00	5.25	0.00%				
05/31/16	19150	277.31	277.13	0.18	2 70%	Roll-a-wheel	PSIVIVV48		
00/20/15	14121	279.02	230	-10.98	0.120/	Roll-a-wheel	PSIVIVV48		
06/29/16	14131	2/9.5	2/9.17	0.33	0.12%	Roll-a-wheel	PSIVIW48		
10/20/15	04090	282.01	280	2.61	0.95%	Roll-a-wheel	PSIVIW28		CP CP
02/04/16	12201	285.99	278	5.99	2.15%	Roll-a-wheel	PSIVIW28		
07/14/15	18940	284.03	283.75	0.28	0.10%	Roll-a-wheel	WMP12	EIR	OffR
07/14/15	18940	284.12	283.13	0.99	0.35%	Roll-a-wheel		EIR	OffR
06/14/16	23702	290.19	292.42	-2.23	0.76%	Roll-a-wheel	5505E	SH	OnR
06/01/16	34956	291.97	292	-0.03	0.01%	Roll-a-wheel	PSMW48	JMT	OnR
06/13/16	06269	294.05	289.92	4.13	1.42%	Roll-a-wheel	PSMW48	JMT	OffR
06/14/16	27958	294.42	293.08	1.34	0.46%	Roll-a-wheel	PSMW48	JMT	OnR
05/29/16	08402	294.97	296.33	-1.36	0.46%	Roll-a-wheel	PSMW48	JMT	OnR
06/07/16	32827	298.53	296.92	1.61	0.54%	Roll-a-wheel	5505E	JMT	OnR
07/14/15	18940	298.57	297.71	0.86	0.29%	Roll-a-wheel	WMP12	ETR	OffR
07/14/15	18940	299.05	298.67	0.38	0.13%	Roll-a-wheel	WMP12	ETR	OffR
07/20/16	18940	300.48	300.88	-0.40	0.13%	Roll-a-wheel	PSMW48	JMT	OnR
06/14/16	27958	303.41	304.79	-1.38	0.45%	Roll-a-wheel	PSMW48	JMT	OnR
06/14/16	27958	306.27	305.5	0.77	0.25%	Roll-a-wheel	PSMW48	JMT	OnR
07/12/16	18943	306.78	306.08	0.70	0.23%	Roll-a-wheel	PSMW48	JMT	СР
08/28/16	06042	309.99	307.00	2.99	0.97%	Roll-a-wheel	PSMW28	PC	СР
06/29/16	14261	310.08	311.79	-1.71	0.55%	Roll-a-wheel	PSMW18N	SH	СР
07/20/16	18940	310.16	310.83	-0.67	0.22%	Roll-a-wheel	PSMW48	JMT	OnR
01/08/15	06798	311.10	310.5	0.60	0.19%	Roll-a-wheel	PSMW48	PC	СР
06/13/16	06269	312.57	313	-0.43	0.14%	Roll-a-wheel	PSMW48	JMT	OffR
07/14/15	18940	313.92	312.83	1.09	0.35%	Roll-a-wheel	WMP12	ETR	OffR
07/14/15	18940	314.08	313.42	0.66	0.21%	Roll-a-wheel	WMP12	ETR	OffR
07/12/16	18943	316.51	316.46	0.05	0.02%	Roll-a-wheel	PSMW48	JMT	СР
05/31/16	19150	316.79	316.75	0.04	0.01%	Roll-a-wheel	PSMW48	JMT	OnR
07/20/16	18940	318.44	318.63	-0.19	0.06%	Roll-a-wheel	PSMW48	JMT	OnR
07/20/16	18940	320.57	320.92	-0.35	0.11%	Roll-a-wheel	PSMW48	JMT	OnR
07/14/15	18940	326.05	326.75	-0.70	0.21%	Roll-a-wheel	PSMW48	JMT	СР
07/12/16	18943	326.78	326.46	0.32	0.10%	Roll-a-wheel	PSMW48	JMT	СР
07/13/16	08648	327.71	327.83	-0.12	0.04%	Roll-a-wheel	WMP12	ETR	OnR
07/14/15	18940	327.88	329.17	-1.29	0.39%	Roll-a-wheel	WMP12	ETR	OnR
07/14/15	18940	327.92	328.92	-1.00	0.30%	Roll-a-wheel	WMP12	ETR	OnR
07/14/15	18940	327.94	329.21	-1.27	0.39%	Roll-a-wheel	WMP12	ETR	OnR
07/14/15	18940	327.99	328.46	-0.47	0.14%	Roll-a-wheel	WMP12	ETR	OnR

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07/14/15	18940	328.01	328.50	-0.49	0.15%	Roll-a-wheel	WMP12	ETR	OnR
07/14/15	18940	328.08	329.00	-0.92	0.28%	Roll-a-wheel	WMP12	ETR	OnR
07/14/15	18940	328.08	329.00	-0.92	0.28%	Roll-a-wheel	WMP12	ETR	OnR
07/14/15	18940	328.09	328.75	-0.66	0.20%	Roll-a-wheel	WMP12	ETR	OnR
07/14/15	18940	328.11	328.71	-0.60	0.18%	Roll-a-wheel	WMP12	ETR	OnR
07/14/15	18940	328.12	328.42	-0.30	0.09%	Roll-a-wheel	WMP12	ETR	OnR
07/14/15	18940	328.12	328 38	-0.26	0.08%	Roll-a-wheel	WMP12	FTR	OnR
07/14/15	18940	328.15	328.92	-0.77	0.23%	Roll-a-wheel	WMP12	FTR	OnR
07/14/15	18940	328.15	326.42	1 73	0.53%	Roll-a-wheel	PSMW48	ІМТ	CP
07/14/15	18940	328.15	328.75	-0.57	0.17%	Boll-a-wheel	W/MP12	FTR	OnR
07/14/15	18940	328.10	329.04	-0.85	0.26%	Boll-a-wheel	W/MP12	FTR	OnR
07/14/15	18940	328.82	327.83	0.99	0.20%	Boll-a-wheel	WMP12	FTR	OffR
07/14/15	18940	329.02	328.50	0.54	0.16%	Boll-a-wheel	WMP12	FTR	OffR
07/20/16	18940	330.56	330.92	-0.36	0.10%	Boll-a-wheel	PSMW/48	імт	OnR
06/07/16	37877	331.70	330.52	1.62	0.19%	Roll-a-wheel	55055		OnR
08/28/16	06042	333.10	328.00	5 10	1 55%	Roll-a-wheel		PC	CP
06/28/10	27958	333.63	320.00	-0.66	0.20%	Boll-a-wheel	P SIVIV 28	імт	OnR
07/12/16	18943	335.05	335.83	0.12	0.20%	Boll-a-wheel	PSM///48		
07/14/15	18940	336.00	339.00	_1 30	0.38%	Roll-a-wheel	ΡςΝΛ\Λ/ΛΩ	ІМТ	СР
07/14/15	180/0	327 21	338.23	-1.50	0.36%	Roll-a-wheel	Γ 5ΙVI VV 40 DSN/1///0		
07/20/16	18040	337.51	341.04	-0.03	0.20%	Roll-a-wheel	F 31V1VV40		
06/09/16	10340	2/1 07	2/12 20	-0.92	0.27%	Roll a wheel	F 31V1VV40		
07/09/16	98103	341.97	342.50	-0.41	0.12%	Roll-a-wheel	PSIVIVV48		OnR
07/23/16	189/3	244.47	244 59	0.11	0.03%				
07/12/16	18040	247.20	244.30	-0.11	0.05%	Roll-a-wheel	PSIVIVV48		
07/14/15	18940	347.39	348.71	-1.32	0.38%	Roll-a-wheel	PSIVIVV48		
07/14/15	18940	347.00	251.00	-50.92	0.07%	Roll-a-wheel	PSIVIVV48		
07/20/16	18940	350.83	351.08	-0.25	0.07%	Roll-a-wheel	PSIVIVV48		OnR
07/20/16	92528	355.92	355.17	0.75	0.21%	Roll-a-wheel	D1594L	BIM	OnR
07/20/10	37730	257.05	257.13	-0.97	0.27%	Dell a wheel			OnR
06/07/16	32822	357.05	357.42	-0.37	0.10%	Roll-a-wheel	55U5E		OnR
07/20/16	18940	358.48	359.67	-1.19	0.33%	Roll-a-wheel	PSIVIVV48		Onk
07/14/15	18940	358.76	357.67	1.09	0.30%	Roll-a-wheel		EIK	OffR
07/14/15	18940	358.89	359.67	-0.78	0.22%	Roll-a-wheel	PSIVIVV48		
07/14/15	18940	358.95	358.33	0.62	0.17%	Roll-a-wheel		EIK	OffR
07/14/15	18940	359.03	360.04	-1.01	0.28%	Roll-a-wheel	PSIVIVV48		
07/20/16	18940	360.51	361.17	-0.66	0.18%	Roll-a-wheel	PSIVIVV48		OnR
05/26/16	11/88	367.7	371.83	-4.13	1.11%	Roll-a-wheel	PSIVIVV48		Onk
06/29/16	14261	368.63	3/0.67	-2.04	0.55%	Roll-a-wheel	PSIVIW18N	SH	
07/20/16	18940	368.90	368.67	0.23	0.06%	Roll-a-wheel	PSIVIVV48		
05/07/16	32827	369.21	367.08	2.13	0.58%	Roll-a-wheel	5505E		
07/14/15	18940	369.50	370.54	-1.04	0.28%	Roll-a-wheel	PSIVIW48		
07/14/15	18940	369.66	370.54	-0.88	0.24%	Roll-a-wheel	PSIVIW48		
07/20/16	18940	370.51	3/1.21	-0.70	0.19%	Roll-a-wheel	PSIVIW48		OnK
06/14/16	19925	3/1.//	369.42	2.35	0.54%	Koll-a-wheel	PSIVIW48		OnK
06/09/16	08075	3/2.3/	374.5	-2.13	0.57%	Koll-a-wheel	PSIVIW48		OnK
06/13/16	06269	377.75	3/3./5	4.00	1.07%	Koll-a-wheel	PSIVIW48		
07/20/16	18940	379.86	381.00	-1.14	0.30%	Roll-a-wheel	PSMW48	TML	OnR
07/14/15	18940	380.28	381.58	-1.30	0.34%	Roll-a-wheel	PSMW48	JMT	СР
0//14/15	18940	380.66	381.63	-0.97	0.25%	Roll-a-wheel	PSMW48	JMT	CP
06/07/16	32827	381.58	381.42	0.16	0.04%	Roll-a-wheel	5505E	JMT	OnR
06/29/16	ON.L2E	381.99	386.42	-4.43	1.15%	Roll-a-wheel	PSMW48	JMT	CP
08/28/16	06042	382.91	380.00	2.91	0.77%	Koll-a-wheel	PSMW28	PC	CP
06/29/16	14131	387.79	386.5	1.29	0.33%	Roll-a-wheel	PSMW48	JMT	OnR
06/29/16	ON.L2E	388.3	390.67	-2.37	0.61%	Roll-a-wheel	PSMW48	JMT	OffR
06/01/16	34956	390.04	380.75	9.29	2.44%	Roll-a-wheel	PSMW48	JMT	OnR
07/14/15	18940	391.46	392.42	-0.96	0.24%	Roll-a-wheel	PSMW48	JMT	СР
07/14/15	18940	391.64	392.46	-0.82	0.21%	Roll-a-wheel	PSMW48	JMT	СР
06/14/16	89011	392.43	392.42	0.01	0.00%	Roll-a-wheel	01594L	DM	OnR

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06/29/16	ON.L2E	393.12	392.32	0.80	0.20%	Roll-a-wheel	PSMW48	JMT	СР
07/20/16	18940	398.61	399.33	-0.72	0.18%	Roll-a-wheel	PSMW48	JMT	OnR
07/14/15	18940	402.20	403.25	-1.05	0.26%	Roll-a-wheel	PSMW48	JMT	СР
06/29/16	14261	405.51	403.71	1.80	0.45%	Roll-a-wheel	PSMW18N	SH	СР
07/20/16	18940	407.59	409.21	-1.62	0.40%	Roll-a-wheel	PSMW48	JMT	СР
08/31/16	98107	409.31	409.50	-0.19	0.05%	Roll-a-wheel	PSMW18	BJM/MI	OffR
06/29/16	ON.L2E	414.89	413.88	1.01	0.24%	Roll-a-wheel	PSMW48	JMT	СР
07/14/15	18940	417.10	417.58	-0.48	0.11%	Roll-a-wheel	PSMW48	JMT	OffR
06/12/16	08402	421.71	418.88	2.83	0.68%	Roll-a-wheel	PSMW48	JMT	OnR
10/20/15	04090	424.83	426.58	-1.75	0.41%	Roll-a-wheel	PSMW28	PC	СР
06/09/16	08075	425.19	422.13	3.06	0.72%	Roll-a-wheel	PSMW48	JMT	OnR
06/29/16	ON.L2E	434.96	438.42	-3.46	0.79%	Roll-a-wheel	PSMW48	JMT	OffR
06/14/16	19952	437.64	437.29	0.35	0.08%	Roll-a-wheel	PSMW48	JMT	OffR
06/09/16	08075	440.71	440.83	-0.12	0.03%	Roll-a-wheel	PSMW48	JMT	OnR
06/07/16	32827	442.41	443.17	-0.76	0.17%	Roll-a-wheel	5505E	JMT	OnR
06/14/16	23702	443.27	436.46	6.81	1.56%	Roll-a-wheel	5505E	SH	OnR
06/09/16	08075	447.86	448.38	-0.52	0.12%	Roll-a-wheel	PSMW48	JMT	OnR
06/29/16	14261	452.58	455.46	-2.88	0.63%	Roll-a-wheel	PSMW18N	SH	СР
05/31/16	19150	455.53	457.38	-1.85	0.40%	Roll-a-wheel	PSMW48	JMT	OnR
06/13/16	01821	458.13	459.63	-1.50	0.33%	Roll-a-wheel	PSMW48	JMT	OnR
06/14/16	23702	469.76	471.21	-1.45	0.31%	Roll-a-wheel	5505E	SH	OnR
05/31/16	19150	474.92	476.33	-1.41	0.30%	Roll-a-wheel	PSMW48	JMT	OnR
06/29/16	14131	483.43	485.75	-2.32	0.48%	Roll-a-wheel	PSMW48	JMT	OnR
06/14/16	19952	483.78	483.08	0.70	0.14%	Roll-a-wheel	PSMW48	JMT	OnR
06/07/16	32827	492.91	491.25	1.66	0.34%	Roll-a-wheel	5505E	JMT	OnR
07/25/16	98103	496.27	496.54	-0.27	0.05%	Roll-a-wheel	PSMW18	AJC	OnR
07/20/16	18940	497.49	498.83	-1.34	0.27%	Roll-a-wheel	PSMW48	JMT	OnR
05/31/16	19150	501.71	505	-3.29	0.65%	Roll-a-wheel	PSMW48	JMT	OnR
06/29/16	ON.L2E	504.74	505.21	-0.47	0.09%	Roll-a-wheel	PSMW48	JMT	СР
08/28/16	06042	507.84	507.50	0.34	0.07%	Roll-a-wheel	PSMW28	PC	СР
05/31/16	19150	508.38	507.88	0.50	0.10%	Roll-a-wheel	PSMW48	JMT	OnR
07/20/16	18940	508.75	510.00	-1.25	0.25%	Roll-a-wheel	PSMW48	JMT	СР
09/05/16	98133	508.83	500.92	7.91	1.58%	Roll-a-wheel	PSMW18	BJM	OffR
06/07/16	32827_	509.29	508.08	1.21	0.24%	Roll-a-wheel	5505E	JMT	OnR
09/05/16	98199	513.02	531.42	-18.40	3.46%	Roll-a-wheel	PSMW18	BJM	OffR
06/07/16	32827_	513.21	512.25	0.96	0.19%	Roll-a-wheel	5505E	JMT	OnR
08/28/16	06042	517.31	511.00	6.31	1.23%	Roll-a-wheel	PSMW28	PC	СР
06/07/16	32827_	521.73	519.42	2.31	0.44%	Roll-a-wheel	5505E	JMT	OnR
06/07/16	32827	530.94	533.25	-2.31	0.43%	Roll-a-wheel	5505E	JMT	OnR
06/07/16	32827_	532.31	531.08	1.23	0.23%	Roll-a-wheel	5505E	JMT	OnR
06/12/16	08402	535.48	531.92	3.56	0.67%	Roll-a-wheel	PSMW48	JMT	OnR
09/05/16	98103	551.37	551.17	0.20	0.04%	Roll-a-wheel	PSMW18	BJM	OffR
05/26/16	11788	551.92	555	-3.08	0.55%	Roll-a-wheel	PSMW48	JMT	OnR
06/08/16	32821	553.32	550.92	2.40	0.44%	Roll-a-wheel	5505E	JMT	OnR
06/29/16	14261	555.64	557	-1.36	0.24%	Roll-a-wheel	PSMW48	JMT	СР
06/29/16	14131	556.63	555.75	0.88	0.16%	Roll-a-wheel	PSMW48	JMT	OnR
09/09/16	98115	558.29	552	6.29	1.14%	Roll-a-wheel	PSMW18	BJM	OffR
06/29/16	14261	562.43	572.33	-9.90	1.73%	Roll-a-wheel	PSMW48	JMT	СР
07/14/15	18940	564.26	566.67	-2.41	0.43%	Roll-a-wheel	PSMW48	JMT	OnR
06/29/16	14261	568.41	563.75	4.66	0.83%	Roll-a-wheel	PSMW48	JMT	СР
08/31/16	98107	570.5	582.75	-12.25	2.10%	Roll-a-wheel	PSMW18	BJM/MI	OffR
06/29/16	14261	570.59	567.29	3.30	0.58%	Roll-a-wheel	PSMW48	JMT	СР
06/14/16	19952	572.67	571.83	0.84	0.15%	Roll-a-wheel	PSMW48	JMT	OnR
06/09/16	08075	577.43	581.04	-3.61	0.62%	Roll-a-wheel	PSMW48	JMT	OnR
09/09/16	98109	577.56	567.67	9.89	1.74%	Roll-a-wheel	PSMW18	BJM	OffR
08/28/16	06042	583.52	579.00	4.52	0.78%	Roll-a-wheel	PSMW28	PC	СР
09/05/16	98115	589.4	577.42	11.98	2.07%	Roll-a-wheel	PSMW18	BJM	OffR
06/14/16	23702	592.12	590	2.12	0.36%	Roll-a-wheel	5505E	SH	OnR

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08/28/16	06042	593.81	584.00	9.81	1.68%	Roll-a-wheel	PSMW28	PC	СР
06/29/16	14261	593.99	590.88	3.11	0.53%	Roll-a-wheel	PSMW18N	SH	СР
09/09/16	98115	595.5	601	-5.50	0.92%	Roll-a-wheel	PSMW18	BJM	OffR
07/14/15	18940	599.96	601.42	-1.46	0.24%	Roll-a-wheel	PSMW48	JMT	OnR
06/29/16	14131	605.56	606.92	-1.36	0.22%	Roll-a-wheel	PSMW48	JMT	OnR
06/14/16	19952	608.45	613.67	-5.22	0.85%	Roll-a-wheel	PSMW48	JMT	OffR
06/29/16	14261	622.36	621.38	0.98	0.16%	Roll-a-wheel	PSMW18N	SH	СР
06/29/16	14261	631.82	630.08	1.74	0.28%	Roll-a-wheel	PSMW48	JMT	СР
06/29/16	14261	631.97	630,58	1.39	0.22%	Roll-a-wheel	PSMW18N	SH	СР
06/29/16	14261	641.37	640.29	1.08	0.17%	Roll-a-wheel	PSMW18N	SH	СР
06/14/16	23702	643.02	642.71	0.31	0.05%	Roll-a-wheel	5505E	SH	OnR
06/29/16	14261	657.81	660.04	-2.23	0.34%	Roll-a-wheel	PSMW18N	SH	СР
06/14/16	23702	659.1	663.46	-4.36	0.66%	Roll-a-wheel	5505E	SH	OnR
06/14/16	19952	660.28	659.63	0.65	0.10%	Roll-a-wheel	PSMW48	JMT	OffR
06/29/16	14261	664.86	663.46	1.40	0.21%	Roll-a-wheel	PSMW18N	SH	СР
09/09/16	98109	666.75	674.33	-7.58	1.12%	Roll-a-wheel	PSMW18	BJM	OffR
09/05/16	98115	676.71	663.33	13.38	2.02%	Roll-a-wheel	PSMW18	BIM	OffR
07/20/16	18940	677.50	679.25	-1.75	0.26%	Roll-a-wheel	PSMW48	IMT	OnR
06/07/16	32827	697.36	694.17	3.19	0.46%	Roll-a-wheel	5505F	IMT	OnR
06/14/16	23702	723.05	724 13	-1.08	0.15%	Roll-a-wheel	5505E	SH	OnR
09/05/16	98103	727.12	742	-14 88	2 01%	Boll-a-wheel	PSMW18	BIM	OffR
09/05/16	98199	741 15	767.33	-26.18	3 41%	Boll-a-wheel	PSMW18	BIM	OffR
07/20/16	18940	763.98	763 33	0.65	0.09%	Boll-a-wheel	PSMW48	IMT	СР
07/14/15	18940	764.61	765.33	-0.60	0.03%	Roll-a-wheel	PSMW48	імт	OnR
09/05/16	98199	772 52	777 33	-4.81	0.62%	Boll-a-wheel	PSMW18	BIM	OffR
09/05/16	98199	780.3	795.92	-15.62	1.96%	Boll-a-wheel	PSMW18	BIM	OffR
05/05/10	23702	790.5	701 13	-113	0.14%	Roll-a-wheel	55055	SH SH	OnR
06/29/16	0N 12F	790.54	791.15	-1.15	0.14%	Boll-a-wheel			
06/29/16	1/131	817.01	816.38	0.63	0.13%	Boll-a-wheel	PSMW48		OnR
06/01/16	34956	844.96	850.75	-5 79	0.68%	Roll-a-wheel	PSMW48		OnR
06/29/16	14261	8/15 37	846.67	-1 30	0.0070	Roll-a-wheel	PSMW48		
06/09/16	08075	850.8	852.25	-1.50	0.17%	Boll-a-wheel	PSMW48		OnR
06/03/16	08402	852.03	850.5	2 /3	0.1770	Roll-a-wheel	PSM/M/48		OnR
06/12/10	23702	856 /	858 17		0.23%	Roll-a-wheel	5505F	11/11	OnR
09/05/16	98199	858 19	885.5	-27.31	3.08%	Boll-a-wheel	PSM/W/18	BIM	OffR
05/05/10	23702	890.17	888 71	1.46	0.16%	Roll-a-wheel	55055	SH SH	OnR
09/09/16	98109	90/ 13	89/ /2	9.71	1 09%	Boll-a-wheel		BIM	OffR
05/09/10	1/121	020.42	076.09	5.71	0.61%	Roll a wheel			OnR
06/29/16	14131	028.07	020.00	-3.00	0.01%	Roll a wheel			OnR
06/23/10	24056	064.26	067.21	0.80	0.09%	Roll a wheel			OnR
05/01/16	11799	904.30	000.00	-2.65	0.29%	Roll a wheel	P 51V1VV48		OnP
09/09/16	09100	08/ 02	095 12	-2.08	0.27%	Roll-a-wheel			Off
09/09/10	38103	006.06	095 42	-0.30	0.05%	Roll a wheel			OnR
07/20/16	19940	1000.00	1009 12	0.97	0.15%	Roll a wheel			
07/20/16	16940	1009.1	1006.15	0.97	0.10%	Roll-a-wheel	P3IVIV46		
06/07/16	32827_	1025.57	1025.25	0.32	0.03%	Roll-a-wheel			OnR
06/29/16	14131	1040.21	1039.21	1.00	0.10%	Roll-a-wheel			OnR
06/14/16	23702	1045.73	1047.5	-1.//	0.17%	Roll-a-wheel	5505E		OnR
08/21/16	32827_	1056.21	1054.25	1.96	0.19%				
00/00/10	98100	1020.55	1002.00	-0.41	0.04%				
09/09/16	98109	1080.55	1092.08	-11.53	1.06%	Roll a wheel	PSIVIVV18	BIN	
06/29/16	14131	1001.22	1091.46	-1.98	0.18%	Roll-a-wheel			
06/12/16	08402	1091.23	1100.25	4.94	0.45%	Koll-a-wheel			OnK
06/08/16	32821	1108.61	1100.25	8.36	0.76%	Koll-a-wheel	5505E	JMT	UnR
06/29/16	14131	1138.1	1139.08	-0.98	0.09%	Koll-a-wheel	PSMW48		UnR
07/20/16	18940	1147.95	1151.83	-3.88	0.34%	Koll-a-wheel	PSIVIW48	JMT	СР
07/20/16	18940	1155.82	1160.46	-4.64	0.40%	Roll-a-wheel	PSMW48	JMI	СР
09/05/16	98199	1160.52	1193.25	-32./3	2.74%	Koll-a-wheel	PSMW18	BJM	OffR
06/29/16	14131	1187.06	1187.08	-0.02	0.00%	Roll-a-wheel	PSMW48	JMT	OnR

09/05/16	98199	1202.21	1216.25	-14.04	1.15%	Roll-a-wheel	PSMW18	BJM	OffR
05/26/16	11788	1216.33	1222.5	-6.17	0.50%	Roll-a-wheel	PSMW48	JMT	OnR
06/14/16	23702	1229.44	1232.08	-2.64	0.21%	Roll-a-wheel	5505E	SH	OnR
07/20/16	18940	1249.9	1252	-2.10	0.17%	Roll-a-wheel	PSMW48	JMT	СР
06/29/16	14131	1267.71	1268.79	-1.08	0.09%	Roll-a-wheel	PSMW48	JMT	OnR
07/20/16	18940	1288.07	1291.71	-3.64	0.28%	Roll-a-wheel	PSMW48	JMT	СР
06/29/16	14131	1295.49	1298.75	-3.26	0.25%	Roll-a-wheel	PSMW48	JMT	OnR
07/20/16	18940	1296.39	1301.17	-4.78	0.37%	Roll-a-wheel	PSMW48	JMT	СР
07/14/15	18940	1308.01	1311.63	-3.62	0.28%	Roll-a-wheel	WMP12	ETR	СР
06/01/16	34956	1309.98	1313.5	-3.52	0.27%	Roll-a-wheel	PSMW48	JMT	OnR
09/09/16	98109	1314.62	1312.17	2.45	0.19%	Roll-a-wheel	PSMW18	BJM	OffR
06/29/16	14131	1328.75	1334.25	-5.50	0.41%	Roll-a-wheel	PSMW48	JMT	OnR
06/14/16	23702	1330.82	1331.58	-0.76	0.06%	Roll-a-wheel	5505E	SH	OnR
07/20/16	18940	1336.46	1342.88	-6.42	0.48%	Roll-a-wheel	PSMW48	JMT	СР
07/20/16	18940	1390.27	1393.46	-3.19	0.23%	Roll-a-wheel	PSMW48	JMT	СР
07/20/16	18940	1417.13	1421.92	-4.79	0.34%	Roll-a-wheel	PSMW48	JMT	СР
09/05/16	98199	1433.96	1474.58	-40.62	2.75%	Roll-a-wheel	PSMW18	BJM	OffR
06/29/16	14131	1452.55	1452.67	-0.12	0.01%	Roll-a-wheel	PSMW48	JMT	OnR
07/20/16	18940	1455.32	1463	-7.68	0.52%	Roll-a-wheel	PSMW48	JMT	СР
07/20/16	18940	1538.21	1541.79	-3.58	0.23%	Roll-a-wheel	PSMW48	JMT	СР
06/29/16	14131	1541.86	1547.17	-5.31	0.34%	Roll-a-wheel	PSMW48	JMT	OnR
06/01/16	34956	1558.94	1565	-6.06	0.39%	Roll-a-wheel	PSMW48	JMT	OnR
06/29/16	14131	1570.61	1578.92	-8.31	0.53%	Roll-a-wheel	PSMW48	JMT	OnR
06/29/16	14131	1596.32	1598.67	-2.35	0.15%	Roll-a-wheel	PSMW48	JMT	OnR
06/09/16	08075	1608.16	1612.71	-4.55	0.28%	Roll-a-wheel	PSMW48	JMT	OnR
09/09/16	98109	1654.78	1659.75	-4.97	0.30%	Roll-a-wheel	PSMW18	BJM	OffR
07/20/16	18940	1655.6	1660.75	-5.15	0.31%	Roll-a-wheel	PSMW48	JMT	СР
07/20/16	18940	1656.13	1661.58	-5.45	0.33%	Roll-a-wheel	PSMW48	JMT	СР
07/20/16	18940	1673.56	1678.42	-4.86	0.29%	Roll-a-wheel	PSMW48	JMT	СР
07/20/16	18940	1687.79	1692.29	-4.50	0.27%	Roll-a-wheel	PSMW48	JMT	СР
07/20/16	18940	1711.07	1715.21	-4.14	0.24%	Roll-a-wheel	PSMW48	JMT	СР
06/29/16	14131	1744.25	1750.08	-5.83	0.33%	Roll-a-wheel	PSMW48	JMT	OnR
06/01/16	34956	1845.64	1844.88	0.76	0.04%	Roll-a-wheel	PSMW48	JMT	OnR
06/29/16	14131	1943.29	1953.33	-10.04	0.51%	Roll-a-wheel	PSMW48	JMT	OnR
09/09/16	98109	1982.44	1986.5	-4.06	0.20%	Roll-a-wheel	PSMW18	BJM	OffR
06/01/16	34956	2100.76	2094.25	6.51	0.31%	Roll-a-wheel	PSMW48	JMT	OnR
06/29/16	14131	2147.63	2154.75	-7.12	0.33%	Roll-a-wheel	PSMW48	JMT	OnR

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