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The National Surface Transportation Safety Center for Excellence

100-Car Reanalysis:

Summary of Primary and Secondary Driver Characteristics

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Lighting | Technology
Fatigue | Aging

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EXECUTIVE SUMMARY

The 100-Car Naturalistic Driving Study (Dingus et al., 2006) provided a unique and initial opportunity to observe drivers (n=108 primary drivers) in a naturalistic setting over a long period of time (approximately 12 months during 2003 and 2004) by collecting both video and driving performance/kinematic data for drivers in the Northern Virginia/Washington, DC Metro area. In the initial study, a total of 241 drivers were identified, including both primary drivers and other (i.e., secondary) drivers who also drove the primary drivers' vehicles.

There is a great deal of interest in conducting secondary analyses of these data to answer specific research questions. However, one challenge with using these data has been a lack of prior knowledge as to whether a primary or a secondary driver was using the vehicle during any given trip. In addition, the data were missing variables such as whether the driver's seatbelt was fastened.

This project's goal was to build a complete trip file inventory for the 100-Car data set. Each trip file in the 100-Car data set was viewed by data reductionists using the Virginia Tech Transportation Institute's (VTTI) proprietary Data Analysis and Reduction Tool (DART) software package. Data points collected for each file include Driver ID (with new IDs created as new secondary drivers were found), Ambient Lighting, Driver Seatbelt Usage, and an assessment of video operations/quality.

- Driver ID: In the 100-Car Study, each primary driver was assigned an alphanumeric ID ending with the letter A (e.g., #-A). Secondary drivers associated with that primary driver kept the numerical assignment but received unique letters other than A (#-B, #-C, etc.). These Driver IDs were then translated into webids, which are used in this report.
- Ambient Lighting: Files were assigned to one of four categories for ambient lighting: Daylight, Nighttime, Dawn, or Dusk. Statistics reported here combine Daylight, Dawn, and Dusk into a single Daylight category. This measure was necessary because the time stamp was found to not be accurate in some of the files. For example, the time stamp may indicate a late night trip, but the video appeared to be mid-day. Ambient lighting was therefore the best metric to represent time of day across the dataset.
- Seatbelt Usage: Driver seatbelt usage was recorded as Yes (seatbelt worn), No (seatbelt not worn), or Unable to Determine according to observations made at either the beginning of the trip file or the point at which vehicle motion began, whichever was later.

This report summarizes the 156,637 trip files that were identified as having either a primary or secondary driver. In all, 166 new secondary drivers (in addition to those identified by Dingus et al., 2006) were identified for a grand total of 407 primary (n=108) and secondary (n=299) drivers. Appendix A of this report lists summary statistics for primary drivers; Appendix B lists similar statistics for secondary drivers. A brief overall summary is provided in Table 1 below.

Table 1. Overall summary of data collected for primary and secondary drivers in the 100-Car Study.

	Primary Drivers	Secondary Drivers	Total
# of Drivers	108	299	407
Total # of Trip Files	139,367	17,270	156,637
Total # of Driving Days	24,189	4,708	28,897
Total Miles Driven	1,119,202	137,376	1,256,578

SEATBELT USAGE

Primary drivers, on average, were observed wearing seatbelts in 81.5% of the trip files in which they were identified (ranging from 0.0% to 100.0% for individual drivers). Seventy-seven percent (n=83) of primary drivers wore a seatbelt at least 80% of the time. Secondary drivers, on average, were observed wearing seatbelts in 74.3% of the trip files in which they were identified. As with primary drivers, this ranged from 0.0% all the way up to 100.0% for individual drivers.

AMBIENT LIGHTING

Overall, 73.9% of primary driver trips and 71.8% of primary driver mileage occurred during daylight hours (including dusk and dawn). Similarly for secondary drivers, 66.0% of trips and 64.9% of miles occurred during daylight hours.

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LIST OF ABBREVIATIONS

DART	Data Analysis and Reduction Tool
DAS	Data Acquisition System
VTTI	Virginia Tech Transportation Institute

CHAPTER 1. INTRODUCTION & DESCRIPTION OF VARIABLES

The 100-Car Naturalistic Driving Study (Dingus et al., 2006) provided the first ever opportunity to observe drivers in a naturalistic setting over a long period of time by collecting both video and driving performance/kinematic data for 108 primary drivers and their associated secondary drivers over the course of approximately 12 months. These data were collected during 2003 and 2004 in the Northern Virginia/Washington, DC Metro area. As of this writing, the 100-Car data set is still the only data set of its kind. In the report cited above, researchers analyzed these data by identifying critical events (e.g., crashes and near-crashes), analyzing the situational and behavioral characteristics that led to those events, and comparing these characteristics to what was found in a set of baseline driving epochs for the same drivers. In all, 241 drivers were identified during that study, including secondary drivers. The 100-Car data set was originally reported to contain driving data for approximately 2 million vehicle-miles and 43,000 hours of driving. A detailed description of the Data Acquisition System (DAS) and the data collection/analysis procedures used in that study are contained in the above-referenced report.

Since that report was published, numerous other studies have also used these data with a wide variety of objectives. Sampling for these secondary analyses, however, has been challenged by the large amount of data present and the lack of a complete inventory of trip files contained within the data set regarding driver identification, time of day, and video quality. In addition, the data were missing variables such as whether the driver's seatbelt was fastened.

BUILDING A TRIP-LEVEL INVENTORY

In order to facilitate future secondary analyses, this project was undertaken to build a complete trip file inventory. A trip file for the 100-Car data set begins with the ignition turning on (after a booting-up period of about 2-3 minutes) and ends when the ignition is turned off. Each of the 181,935 trip files in the 100-Car data set was viewed by data reductionists using the Virginia Tech Transportation Institute's (VTTI) proprietary Data Analysis and Reduction Tool (DART) software package. Data points collected for each file include Driver ID (with new IDs created as new secondary drivers were found), Ambient Lighting, Driver Seatbelt Usage, and Video Operations for all four video quadrants. These data are summarized in this report along with performance data related to driving speeds observed and distance traveled for each identified driver.

Driver ID

In the 100-Car Study, each primary driver was assigned an alphanumeric ID ending with the letter A (e.g., #-A). Secondary drivers associated with that primary driver kept the numerical assignment but received unique letters other than A (e.g., #-B, #-C, etc.). During this re-analysis, each trip file was assigned the appropriate Driver ID based on reviewing the video and matching it up with a photo from a continuously updated Driver ID library. When new secondary subjects were discovered, they were temporarily assigned an "unknown" Driver ID. All "unknowns" were reviewed by a senior analyst, and new Driver IDs were created as necessary. Certain drivers were not assigned Driver IDs and were eliminated for consideration in further analyses. These drivers included mechanics or valets (which generally only drove the vehicle once or twice) and VTTI staff that shuttled vehicles between the study site and VTTI for DAS work.

Finally, there were files that remained marked as "unknown driver" that were a result of missing, misaligned, or very poor quality video. This Driver ID variable will allow investigators involved in future secondary analyses to easily select files for drivers of interest (e.g., all primary drivers, all drivers of a particular gender or age, or all files of a specific driver).

Ambient Lighting

Files were assigned to one of four categories for ambient lighting: Daylight, Nighttime, Dawn, or Dusk. Dawn and Dusk were distinguishable by a combination of checking the time stamp on the files and by scrolling through a video file to ascertain whether the ambient lighting was getting lighter (dawn) or darker (dusk) as the file progressed. An "indiscernible" option was also available for missing or poor quality video. Statistics reported here combine Daylight, Dawn, and Dusk into a single Daylight category, but Dawn and Dusk categories are maintained in the database. This variable will allow investigators to easily select files with certain ambient lighting conditions or include this global variable in statistical analyses.

Driver Seatbelt Usage

In each file, driver seatbelt usage was recorded according to observations made at either the beginning of the trip file or the point at which vehicle motion began, whichever was later. Seatbelt usage was marked as simply Yes (seatbelt worn) or No (seatbelt not worn). In some cases, the seatbelt was difficult to see due to variations in ambient lighting, clothing worn by the driver, and variations in video alignment and quality. In these cases, if the driver could be seen removing the seatbelt at the end of the file, and no evidence of seatbelt use changes could be observed by scrolling through the file, then it was assumed that the subject was wearing a seatbelt at the beginning as well. An "unable to determine" option was selected when lighting or video conditions were such that the seatbelt area could not be seen. This variable provides a basis for future safety-related behavioral analyses.

Video Operations

The 100-Car video files were comprised of four quadrants, with each quadrant receiving a signal from a different camera. During this inventory, all four quadrants of each video were assessed for proper operation and alignment. Figure 1 illustrates good quality video in all quadrants. Quadrant 1 (upper left) shows the driver's face. Quadrant 2 (upper right) shows the forward roadway. Quadrant 3 (lower left) shows an over-the-shoulder view of the driver's lap and dashboard. Quadrant 4 (lower right) is a split view with the top half being a view out the passenger side of the vehicle and the bottom half being a view out the rear window of the vehicle.

Figure 1. Photo. Example of good quality video that was captured in the 100-Car Study. Driver pictured above is a VTTI employee. Photos of actual subjects are not used in this report in order to maintain confidentiality standards.

The conditions assigned to each video quad were as follows:

- **Present and usable**: The video captures what it was designed to capture, and the quality is good. The driver's face cam shows a complete view of the driver's face, including the eyes and the mouth, plus a partial view out the driver-side window. The forward road view is centered on the forward roadway and angled so that the front of the vehicle can be seen (e.g., not up too high). The over-the-shoulder view is centered on the driver's lap; the entire steering wheel and center stack along with both of the driver's arms are visible. The passenger side view shows the lane directly next to the vehicle on the passenger side. The rear-view cam shows the lane directly behind the vehicle and is angled slightly to the left lane (i.e., lane next to the driver).

- **Present with poor video quality:** The video is present, but the quality of the video is very pixilated or blurry or looks similar to a VCR with bad tracking.

- **Present but intermittent:** The video "blinks." The quality of the video is present for several frames, and not present with a blank screen (usually blue or black) for several frames. This often occurs several times in a row, sometimes throughout the file. This category was also used if video was present for part of the file (e.g., the beginning) and not present for other parts.

- **Present but obscured:** There is something other than video operations preventing viewing of the video quadrant in question. Examples include the brim of a hat obscuring view of the face, a sun visor pulled down blocking the driver's face, very dark ambient lighting so that the driver's face cannot be distinguished, snow or frost covering the rear window, or a very strong sun glare preventing use of the video.

- **Present but misaligned:** The camera is not aligned properly. Note that at times the cameras were bumped and misaligned during the 100-Car Study.

- **Not present:** No video loads, the video appears as a black or blue screen, or the video is frozen at a single frame.

Data Reduction Quality Control

VTTI maintains a staff of part-time data reductionists which were utilized to perform this 100-Car trip file inventory. Data reduction is limited to part-time work in order to avoid reductionist fatigue and fatigue-related drops in accuracy. When new reductionists are hired, recruitment is conducted through email notices on various student listservs on the Virginia Tech campus and by posting a wage position on the Virginia Tech online job board. The data reduction manager interviews, hires, and trains (in conjunction with a senior reductionist) these reductionists. Training includes discussions on proper treatment of human subject video data, obtaining signed confidentiality/non-disclosure agreements, a demonstration of how to access the data from the server, and hands-on training in how to operate the data reduction software. When new project assignments are made, reductionists are provided with a data reduction manual specific to that project which provides steps in operating the software, background about the study, and a detailed description of the steps to take in analyzing each case. After formal training, reductionists practice on their own under the observation of the data reduction manager and the senior reductionist. Questions are encouraged throughout the training process and subsequent reduction. All events reduced by newly assigned reductionists are subject to a 100% review by a senior analyst. Any errors are documented, and the reductionist is required to go back to review those events and make the corrections. These 100% reviews were repeated until a reductionist's error rate dropped below 5%. With this trip file inventory, this generally took only one or two days.

The trip file inventory was performed iteratively, four vehicles at a time, to minimize the number of drivers being identified at the same time. When each set of vehicles was completed, 10% of the trip files for each vehicle were reviewed again by a different analyst. If these reviews revealed potential issues (e.g., two drivers that looked very much alike, a driver that wears a seatbelt in a hard-to-see manner, or a misunderstanding in the reduction protocol), clarifications were made and a full second review of affected files was completed to ensure consistency and accuracy. In preparing this data set for analysis, further cross-checks were performed to ensure that Driver IDs matched up with the Vehicle IDs that they were know to drive and that subject participation dates matched up with the date stamps on the files assigned to each driver .

CHAPTER 2. RESULTS

In all, 181,935 files were viewed in order to complete this inventory. Of these, 25,298 files were recorded as having either a mechanic/valet as the driver, a VTTI employee as the driver, no driver, or an unknown driver. Analyses reported here are therefore limited to the 156,637 trip files identified as having either a primary or secondary driver. During this process, 166 new secondary drivers were identified (in addition to those identified by Dingus et al., 2006) for a grand total of 407 primary and secondary drivers.

- Appendix A of this report lists summary statistics for primary drivers, including age, gender, self-reported average annual mileage, total number of trip files and days of data collection, observed seatbelt usage rates, total miles driven, and a breakdown of trips and mileage into daytime and nighttime categories.

- Appendix B lists similar statistics for secondary drivers. However, as it is assumed that these secondary drivers had access to other vehicles which they drove more often than they drove the instrumented vehicle, the secondary driver summary data is likely only a partial representation of their driving during the study period. As a result, daily averages and duration of data collection were not computed for secondary drivers. Appendix B does list an estimated age (estimated because secondary drivers did not complete questionnaires), gender, total number of trip files, number of unique driving dates, total miles driven, and a breakdown of trips and mileage into daytime and nighttime categories.

DAYS, TRIPS, AND MILEAGE

The 100-Car Study encompassed a total of 108 primary drivers and 299 secondary drivers, as summarized in Table 2 below. Number of trip files, days of data collection, and miles driven per driver are discussed in more detail in the sections below.

Table 2. Overall summary table of data collected for primary and secondary drivers in the 100-Car Study.

	Primary Drivers	Secondary Drivers	Total
# of Drivers	108	299	407
Total # of Trip Files	139,367	17,270	156,637
Total # of Driving Days	24,189	4,708	28,897
Total Miles Driven	1,119,202	137,376	1,256,578*

*Note that the total miles reported here (~1.2 million miles) is less than the approximately 2 million miles reported previously. This difference is due in part to a more accurate accounting of Driver identity during this study than was available previously as well as the exclusion of files where an unknown driver or VTTI shuttle driver was present.

Primary Drivers

Time in Study: Primary drivers participated in the 100-Car Study for approximately 1 year, although a few drivers dropped out shortly after being recruited. In the data set, the total duration of data collection (calculated as the days between the first and last trip files identified for the primary driver in question) ranges from 7 to 540, with an average of 345 days.

Duration of Data Collection (Driving Days): Within the data collection duration, the number of unique dates on which trip files were identified for each primary driver was also determined. This value does not include days during the data collection period on which no trip files were observed for that driver, either due to the driver not taking any trips that day or due to DAS malfunctions. The number of unique trip file dates for primary drivers (Figure 2) ranges from 3 to 406, with an average of 224 days and a median of 233 days (standard deviation = 95). Across all primary drivers, trip files were found on a total of 24,189 driving days.

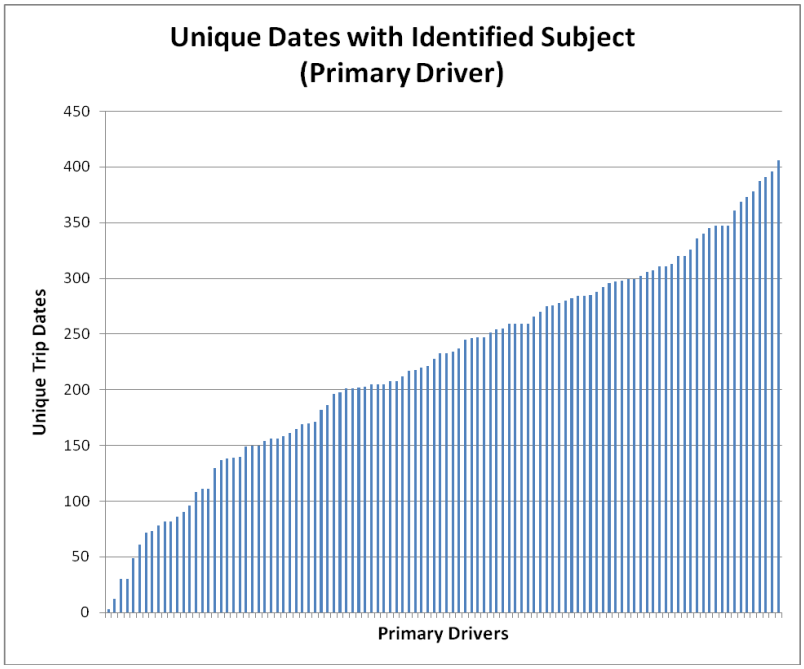

Figure 2. Graph. Number of unique trip file dates for primary drivers in the 100-Car Study in ascending order. Values are listed in Appendix A.

Number of Trip Files and Trip Files per Day: Primary drivers were identified in a total of 139,367 trip files. Per driver, the total number of trip files (Figure 3) ranged from 7 to 2,985, with an average of 1,290 total trip files per driver (median = 1,208, standard deviation = 662). When calculated as an average number of trip files per unique date (Figure 4), values range from 2.3 to 27.8 trips per day with an average of 5.9 trips per day per driver (median = 5.0, standard deviation = 3).

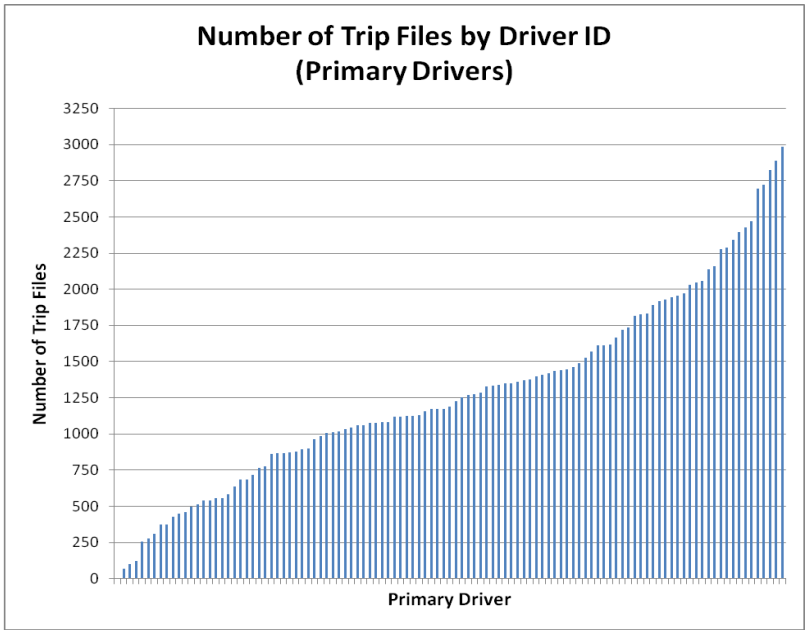

Figure 3. Graph. Number of trip files for primary drivers in the 100-Car Study in ascending order. Values are listed in Appendix A.

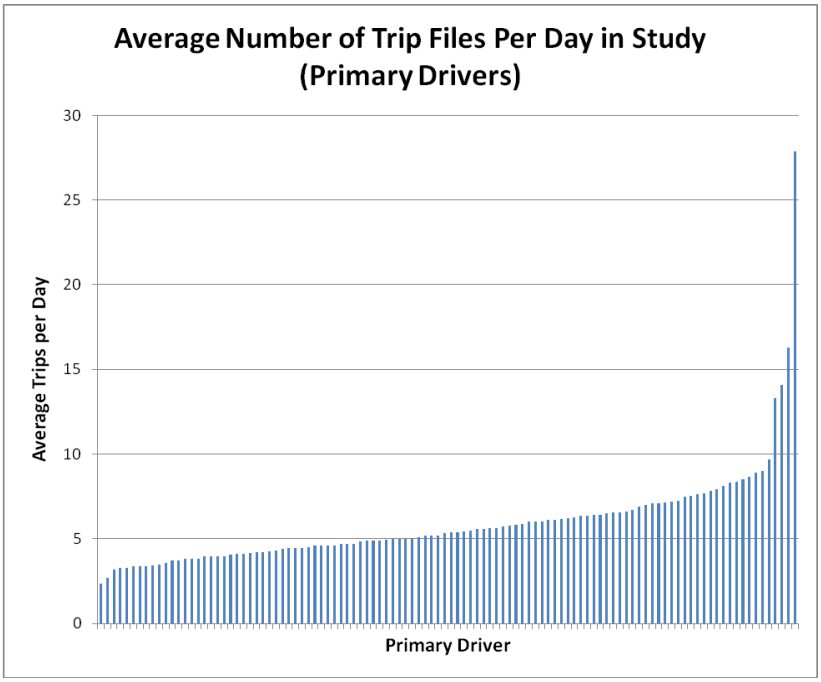

Figure 4. Graph. Number of trip files per unique date for primary drivers in the 100-Car Study in ascending order. Values are listed in Appendix A.

Mileage: Miles driven in each trip file were calculated based on vehicle speed, which was recorded in the parametric data file every tenth of a second. In all, primary drivers drove 1,119,202 miles. Total miles driven per primary driver (Figure 5) ranged from 37 to 24,209 miles, with an average per-driver mileage of 10,762 miles (median = 10,567, standard deviation = 5,724). Two additional average mileages were calculated: average miles per trip per driver,

and average miles per unique date per driver. Average miles driven per trip (Figure 6) range from 3 to 22, with an average of 8.8 miles per trip per driver (median = 7.9, standard deviation = 3.9). Average miles per unique date (Figure 7) range from 9 to 182, with an average of 49.3 miles per driver per day (median = 47.2, standard deviation =25.0).

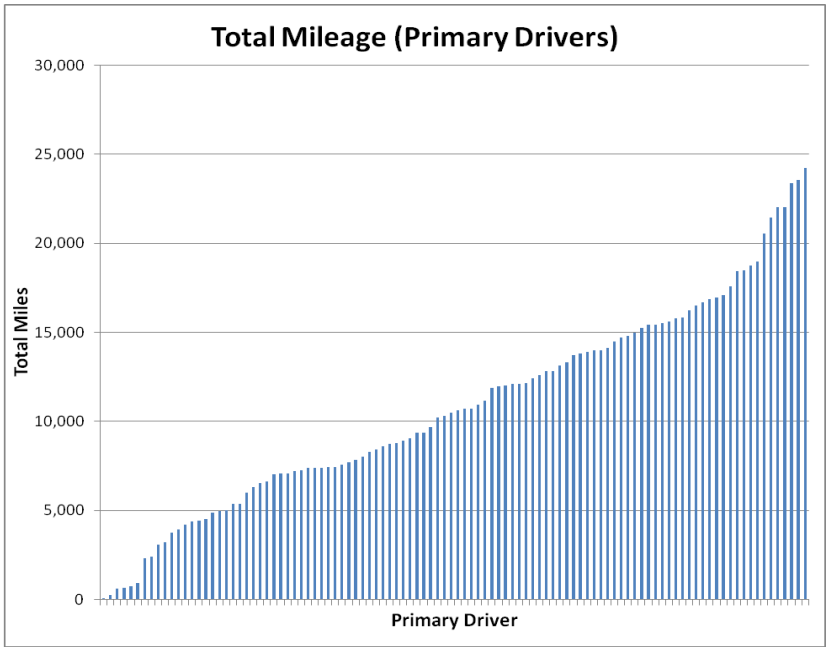

Figure 5. Graph. Total miles driven by primary drivers in the 100-Car Study in ascending order. Values are listed in Appendix A.

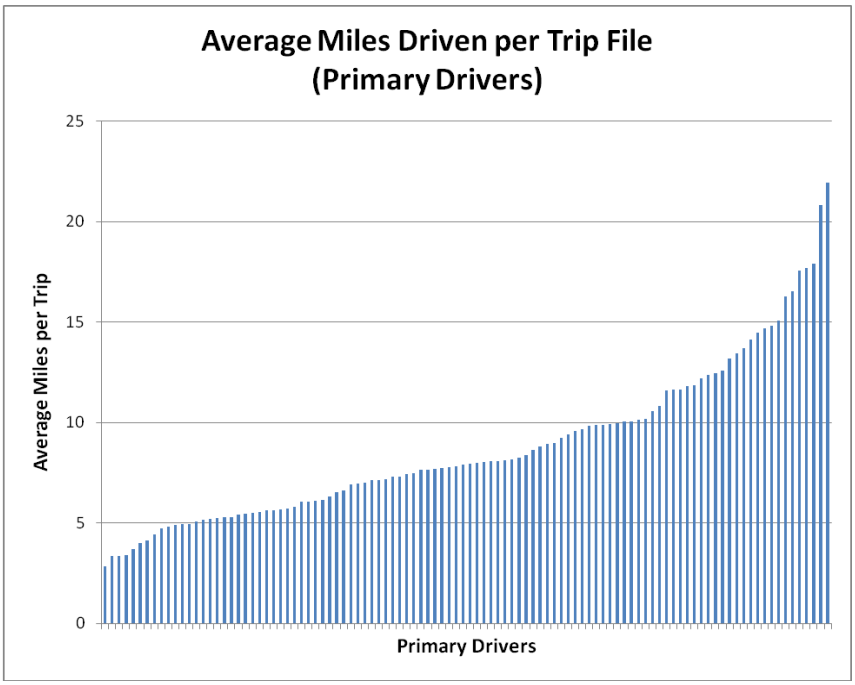

Figure 6. Graph. Average miles driven per trip by primary drivers in the 100-Car Study in ascending order. Values are listed in Appendix A.

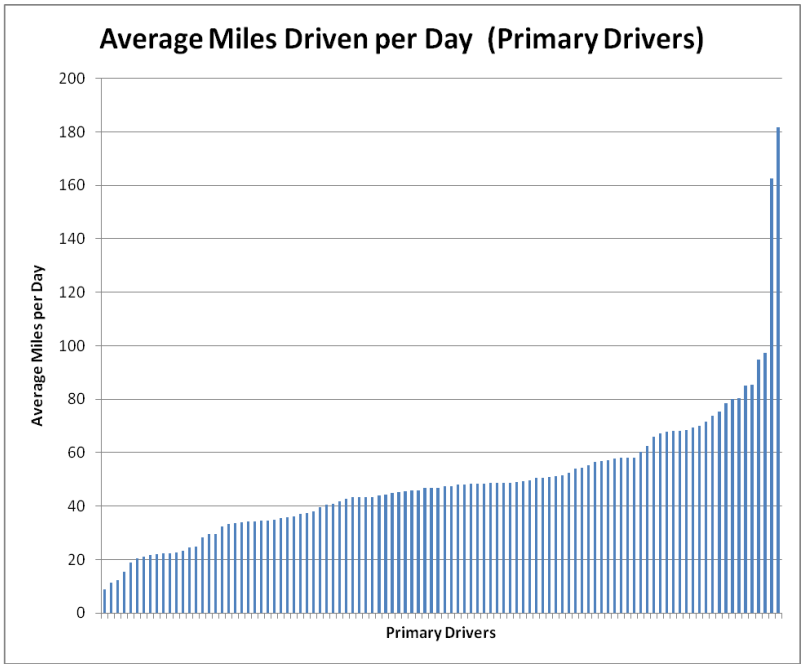

Figure 7. Graph. Average miles driven per day by primary drivers in the 100-Car Study in ascending order. Values are listed in Appendix A.

Outliers: As can be seen in Figures 4 and 7, there are two drivers that appear to be outliers in driving frequency and mileage. Specifically, driver 1077 (a female in the 21-30 years old age category) took an average of 16.3 trips per day and drove an average of 162.5 miles per unique driving day. Driver 1049 (a male in the >60 age category) took an average of 27.8 trips per day and drove an average of 181.7 miles per day. On the pre-study questionnaires, these two drivers reported their average annual driving mileage to be 40,000 miles and 75,000 miles per year, respectively, and both indicated that their occupations required extensive driving. Multiplying out the actual average daily mileage for these two drivers by 365 days results in a prediction of 59,313 miles and 66,320 miles per year, respectively; this coincides with their unusually high self-reported mileage.

Using the demographic data collected on pre-study questionnaires, Figures 8 and 9 illustrate the average number of trips taken and miles driven throughout the study by drivers of different ages. Note that only four drivers from the oldest age group (>60 years old) participated, and the averages for that age group on both charts are greatly skewed by one of those drivers being the highest mileage driver in the study, as described with the outliers above.

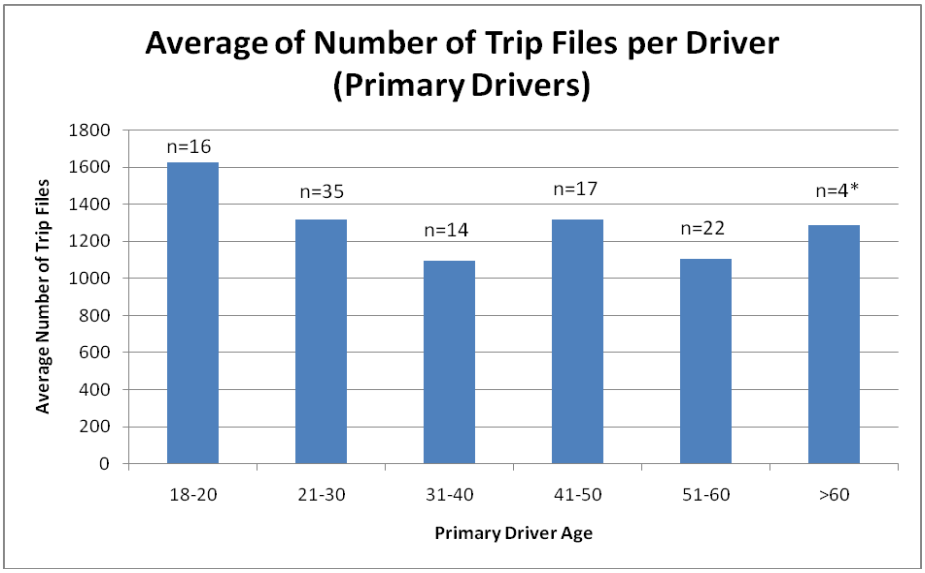

Figure 8. Graph. Average number of trip files collected per driver per age group for 100-Car primary drivers.

*Note that the oldest age group had only four drivers, one of which was the highest mileage driver in the study, as described in the "Outliers" section above.

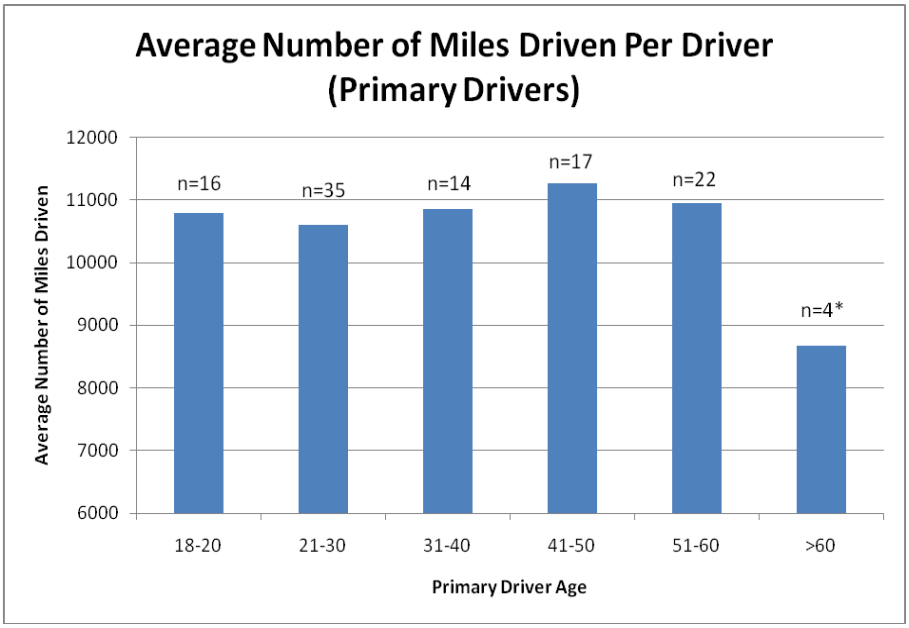

Figure 9. Graph. Average number of miles driven per driver per age group for 100-Car primary drivers.

*Note that the oldest age group had only four drivers, one of which was the highest mileage driver in the study, as described in the "Outliers" section above.

Secondary Drivers

The secondary driver data is summarized in Appendix B, with ranges and averages discussed here. There is a great deal of variance in these statistics due to the variety of secondary driver types observed, which included spouses, friends, roommates, and other family members. Some

of these secondary drivers were observed driving the 100-Car vehicle frequently (sometimes as often as—or even more often than—the primary driver, as with drivers 1065 and 1398) while others were seen very rarely or very sporadically (e.g., perhaps while visiting from out of town, while home from college on break, while the secondary driver's personal vehicle was being repaired, or while serving in a designated driver capacity). All secondary driver statistics should be interpreted with this consideration in mind.

The number of unique trip dates for secondary drivers ranges from 1 to 272, with an average of 16 unique days (median = 3, standard deviation = 33). In all, 17,270 trip files were identified as having a secondary driver. Individual secondary drivers were seen in a minimum of 1 to a maximum of 1,521 trips, with an average of 58 total trips per secondary driver. The median number of trips per secondary driver is only 8 trips (standard deviation = 156), which illustrates the skewed distribution. Secondary drivers drove a total of 137,377 miles in all. Per driver, the total number of miles driven ranges from 0.03 miles to 17,326 miles, with an average of 472 total miles per secondary driver (median = 60 miles, standard deviation = 1401). The average number of miles driven by secondary drivers per trip ranges from 0.03 to 126 miles, with an average of 9 miles (median = 6.1 miles, standard deviation = 11.4). Figures 10 and 11 illustrate the distribution of secondary driver trips and mileage.

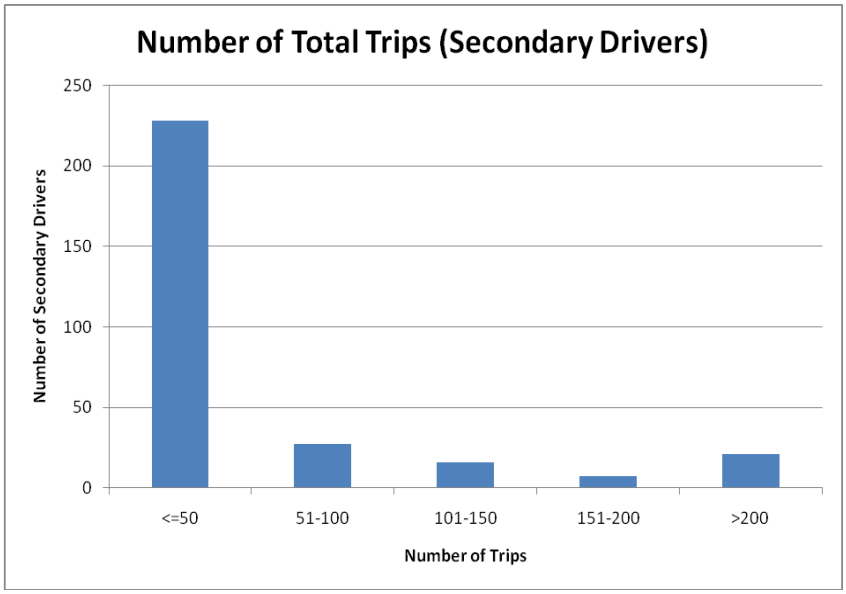

Figure 10. Graph. Number of trips per secondary driver in the 100-Car database, divided into categories. Most secondary drivers took very few trips (<50), but a considerable number were frequent drivers of 100-Car vehicles, with 21 drivers seen in more than 200 trips (median = 8 trips, average = 58 trips).

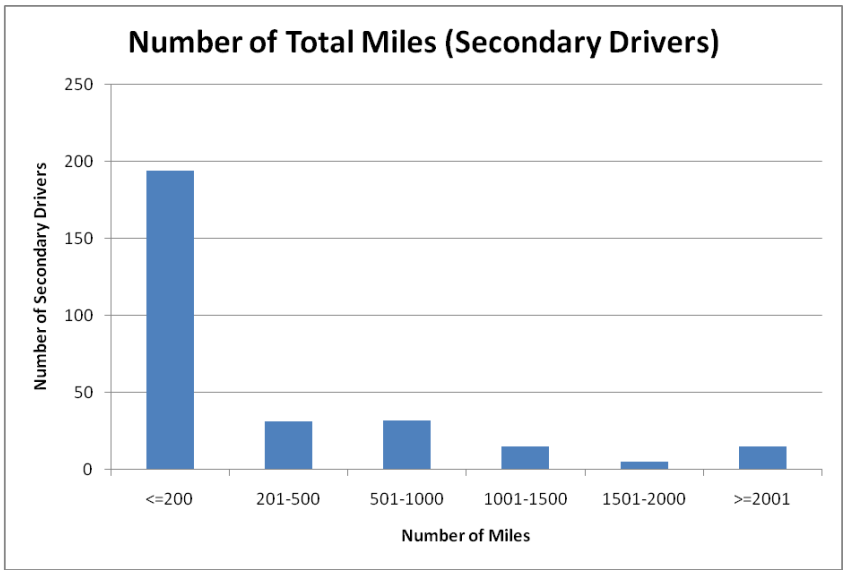

Figure 11. Graph. Number of miles driver per secondary driver in the 100-Car database, divided into categories. Most secondary drivers drove very few miles (<200), but 15 drivers drove more than 2,000 miles in the 100-Car vehicles (median = 60 miles, average = 472 miles).

SEATBELT USAGE

Primary Drivers

Overall, primary drivers were observed wearing their seatbelt in 79.1% of all trips. On a per-driver basis, primary drivers, on average, were observed wearing seatbelts in 81.5% (median, 95.5%, standard deviation = 28.9%) of the trip files in which they were identified. This ranged from 0.0% all the way up to 100% for individual drivers. These figures exclude files for which seatbelt usage could not be determined, which occurred in 6.7% of all trip files identified as having a primary driver.

Figure 12 shows seatbelt usage by driver, in ascending order, starting with drivers that were never observed wearing a seatbelt and ending with drivers that were always observed wearing a seatbelt. Drivers were also assigned to one of three seatbelt usage categories. Infrequent seatbelt users (red) were defined as those drivers seen wearing a seatbelt in <20% of trip files. This group includes 11 primary drivers, or 10% of all 100-Car primary drivers. Occasional seatbelt users (green) were defined as those observed wearing a seatbelt in 20% to 80% of their trips. Fourteen (13%) of the 100-Car primary drivers belong to this category. Finally, consistent seatbelt wearers (blue), making up the remaining 83 drivers (77%), were defined as those observed wearing a seatbelt more than 80% of the time. Two key areas for future research that are currently being considered are to look into the behavioral and situational characteristics involved in seatbelt usage decisions among the occasional and reluctant seatbelt users and to investigate the relationship between seatbelt usage frequency and the presence of other risky driving behaviors.

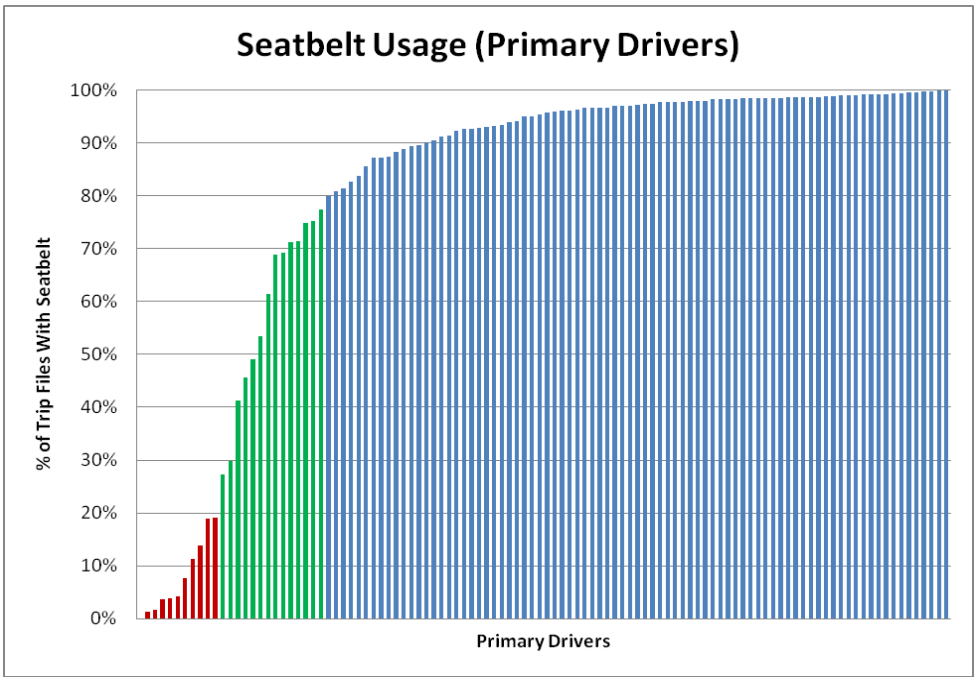

Figure 12. Graph. Percentage of 100-Car trip files in which primary drivers were observed wearing a seatbelt, broken down into infrequent (x<20%, red), occasional (20%<=x<=80%, green), and consistent (>80%, blue) seatbelt wearer groups. Values are listed in Appendix A.

Secondary Drivers

Overall, secondary drivers were observed wearing their seatbelts in 81.4% of their trip files. On a per driver basis, secondary drivers, on average, were observed wearing seatbelts in 74.3% of the trip files in which they were identified (median = 94.2%, standard deviation = 34.7%). As with primary drivers, this ranged from 0.0% all the way up to 100% for individual drivers, with 11.3% of all secondary driver trip files having unknown seatbelt usage. Due to the incomplete nature of these drivers' data sets, further analysis was not performed on this group. However, future studies may choose to include a subset of the secondary drivers who were observed in a significant number of trip files (e.g., over 200 trip files) or who drove a significant number of miles (e.g., over 2,000 miles).

AMBIENT LIGHTING

Primary Drivers

Overall, 73.9% of primary driver trips and 71.8% of primary driver mileage occurred during daylight hours (including dusk and dawn). On a per driver basis, the percentage of trip files occurring during the day ranges from 43.1% to 100%, and averages 76.3% (median = 78.0, standard deviation = 12.1%). Similarly, the percentage of miles driven during the day by primary drivers (Figure 13) ranges from 43.0% to 100% and averages 75.1% (median = 76.9%, standard deviation =12.9%).

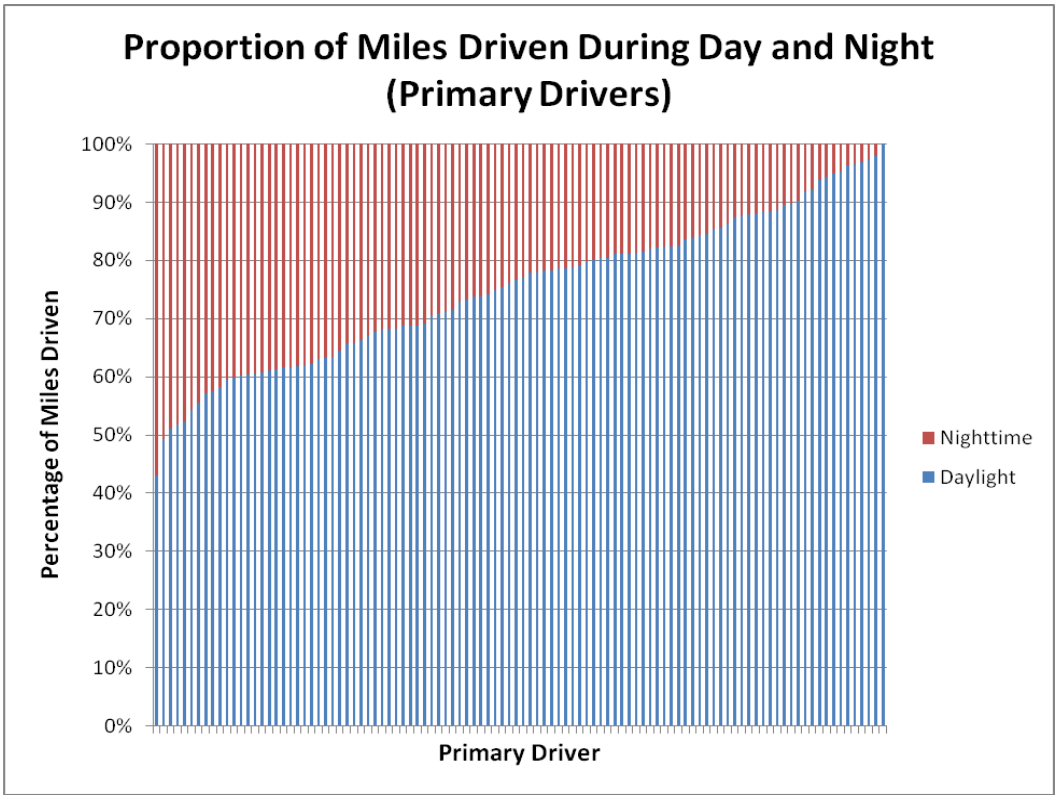

Figure 13. Graph. Percentage of miles driven during the day versus at night by primary drivers in the 100-Car Study in ascending order. Values are listed in Appendix A.

Secondary Drivers

Like primary drivers, most driving by secondary drivers occurred during the day. The percentage of trip files taken during the day by secondary drivers ranges from 0.0% to 100%, and averages 66.0% (median = 75.9%, standard deviation =35.7%). The percentage of miles driven during the day by secondary drivers ranges from 0.0% to 100% and averages 64.9% (median = 78.2%, standard deviation =37.1%).

CHAPTER 3. SUMMARY

The cataloged 100-Car data set contains 156,637 trip files encompassing over 1.2 million miles of driving by 108 primary and 299 secondary drivers in the Northern Virginia/Washington, DC Metro area. An additional 25,298 files have been removed from the data set due to the presence of a mechanic/valet or VTTI employee as the driver, no driver, or an unknown driver. Secondary drivers make up 11% of all trip files collected during the 100-Car Study, and 10.9% of all miles driven. Approximately three-quarters of all trips took place during daylight hours, and drivers were observed wearing seatbelts in approximately 80% of all trips.

This completed file inventory provides a solid foundation for additional secondary analyses that seek to sample trips from specific drivers, trips from either nighttime or daytime, and trips with or without a seatbelt. In addition, the completed inventory provides additional time savings to secondary analyses by cataloging video quality for each trip so that trips can be filtered out that do not meet the project-specific video quality requirements (e.g., well-aligned face views for eyeglance, good over-the-shoulder views for distraction analyses, or good rear camera views for following-vehicle conflict analyses). This data set, with the completed Driver ID and Seatbelt Usage parameters can now also provide an important starting point for additional analyses, including driver exposure and risk assessments, and situational and behavioral components of seatbelt usage.

APPENDIX A: PRIMARY DRIVER SUMMARY TABLE

Duration of data collection is the time period between the first trip file identified for the primary driver and the last file identified for the primary driver. Actual time-in-study may have been longer. All other summary statistics are based on actual trips identified for the primary driver and unique dates of those confirmed trip files. All mileage calculations are based on trip files identified for the primary driver that also had valid vehicle speed data available from the vehicle network box (approximately 95% of primary driver trips). Files not meeting both criteria were excluded from distance calculations. Cells in the table below marked as "NA" were drivers for whom the number of trip files with unreliable speed signals was too high to report accurate mileage summaries.

Table 3. Demographics and summary statistics for primary drivers in the 100-Car Study.

		Demographics			Days versus Trips			Seatbelt Use			Time of Day		Miles Driven			Mileage versus Time of Day	
Subject webid	Duration of Data Collection (days)*	Age Group	Gender	Self-Reported Average Annual Mileage	# of Trip Files with Identified Subject	Unique Dates with Identified Subject	Average Trips per Day	% of Trips with Seatbelt Worn (if Known)	% of Trips with No Seatbelt Worn (if Known)	% of Trips with Unknown Seatbelt Use	% of Trips Taken During Daylight	% of Trips Taken During Nighttime	Total Mileage	Average Mileage per Trip	Average Mileage per Day	% of Miles Driven During Daylight	% of Miles Driven During Nighttime
1061	187	21-30	F	25,000	765	108	7.1	96.1%	3.9%	3.4%	66.5%	33.5%	7,395.8	9.7	68.5	63.1%	36.9%
1099	157	21-30	F	26,000	372	111	3.4	99.2%	0.8%	3.0%	64.7%	35.3%	3,767.3	10.1	33.9	68.0%	32.0%
1009	410	21-30	M	20,000	1,439	387	3.7	96.6%	3.4%	5.4%	66.7%	33.3%	23,397.7	16.3	60.5	65.8%	34.2%
1091	401	18-20	M	28,000	2,339	280	8.4	94.9%	5.1%	1.8%	59.5%	40.5%	16,255.1	6.9	58.1	51.0%	49.0%
1093	399	21-30	M	14,000	2,045	313	6.5	92.9%	7.1%	3.6%	64.3%	35.7%	15,832.7	7.7	50.6	60.7%	39.3%
1066	396	18-20	F	15,000	1,286	247	5.2	3.8%	96.2%	0.5%	76.6%	23.4%	9,366.7	7.3	37.9	71.5%	28.5%
1020	328	18-20	M	20,000	1,132	169	6.7	92.8%	7.2%	1.2%	58.3%	41.7%	6,289.3	5.6	37.2	49.4%	50.6%
1065	281	21-30	M	18,000	516	73	7.1	96.6%	3.4%	3.1%	79.2%	20.8%	4,219.5	8.2	57.8	81.1%	18.9%
1077	356	21-30	F	40,000	2,429	149	16.3	92.4%	7.6%	6.0%	88.9%	11.1%	24,208.6	10.0	162.5	90.2%	9.8%
1071	370	18-20	M	20,000	584	72	8.1	27.3%	72.7%	0.9%	84.7%	15.3%	3,191.9	5.5	44.3	71.0%	29.0%
1048	377	18-20	M	15,000	1,953	307	6.4	87.3%	12.7%	12.6%	63.7%	36.3%	10,200.0	5.2	33.2	55.6%	44.4%
1043	364	21-30	M	28,000	1,411	196	7.2	99.6%	0.4%	3.0%	78.0%	22.0%	14,004.3	9.9	71.5	77.8%	22.2%
1083	423	18-20	F	12,000	2,138	396	5.4	97.3%	2.7%	15.6%	61.4%	38.6%	21,452.5	10.0	54.2	63.2%	36.8%
1032	278	18-20	F	15,000	1,276	171	7.5	90.2%	9.8%	1.3%	64.8%	35.2%	7,398.7	5.8	43.3	73.8%	26.2%
1058	420	21-30	M	18,000	2,890	406	7.1	49.1%	50.9%	0.3%	63.1%	36.9%	17,598.4	6.1	43.3	57.6%	42.4%
1100	317	18-20	M	12,000	1,825	205	8.9	75.2%	24.8%	0.4%	67.5%	32.5%	8,598.7	4.7	41.9	66.2%	33.8%
1085	400	18-20	M	20,000	2,985	212	14.1	98.5%	1.5%	0.3%	43.3%	56.7%	12,007.7	4.0	56.6	51.8%	48.2%
1097	7	21-30	F	15,000	7	3	2.3	80.0%	20.0%	28.6%	100.0%	0.0%	36.9	5.3	12.3	100.0%	0.0%
1031	485	21-30	M	10,000	1,969	251	7.8	90.4%	9.6%	12.5%	86.6%	13.4%	10,697.4	5.4	42.6	80.5%	19.5%

		Demographics			Days versus Trips			Seatbelt Use			Time of Day		Miles Driven			Mileage versus Time of Day	
Subject webid	Duration of Data Collection (days)*	Age Group	Gender	Self-Reported Average Annual Mileage	# of Trip Files with Identified Subject	Unique Dates with Identified Subject	Average Trips per Day	% of Trips with Seatbelt Worn (if Known)	% of Trips with No Seatbelt Worn (if Known)	% of Trips with Unknown Seatbelt Use	% of Trips Taken During Daylight	% of Trips Taken During Nighttime	Total Mileage	Average Mileage per Trip	Average Mileage per Day	% of Miles Driven During Daylight	% of Miles Driven During Nighttime
1106	272	21-30	M	10,000	1,081	130	8.3	91.4%	8.6%	0.3%	98.5%	1.5%	9,035.1	8.4	69.5	94.9%	5.1%
1087	441	18-20	M	13,000	1,079	165	6.5	88.8%	11.2%	9.2%	60.6%	39.4%	8,032.1	7.4	48.7	58.3%	41.7%
1002	339	21-30	F	18,000	1,489	259	5.7	88.2%	11.8%	0.1%	65.8%	34.2%	9,382.6	6.3	36.2	60.1%	39.9%
1050	442	21-30	M	15,000	879	156	5.6	11.3%	88.7%	1.6%	66.2%	33.8%	5,343.2	6.1	34.3	60.5%	39.5%
1008	264	21-30	F	24,000	1,063	161	6.6	95.4%	4.6%	2.6%	65.1%	34.9%	6,013.5	5.7	37.4	67.8%	32.2%
1044	273	21-30	F	15,000	1,119	208	5.4	97.7%	2.3%	9.0%	73.2%	26.8%	12,096.0	10.8	58.2	72.9%	27.1%
1108	341	21-30	M	12,000	1,612	233	6.9	69.2%	30.8%	8.1%	67.5%	32.5%	18,760.9	11.6	80.5	69.1%	30.9%
1027	540	21-30	F	15,000	280	61	4.6	69.0%	31.0%	6.8%	88.0%	12.0%	939.5	3.4	15.4	88.5%	11.5%
1049	312	<60	M	75,000	2,395	86	27.8	1.7%	98.3%	24.3%	84.4%	15.6%	15,622.2	6.5	181.7	79.1%	20.9%
1075	345	21-30	F	20,000	1,046	228	4.6	96.3%	3.7%	9.1%	84.8%	15.2%	5,022.0	4.8	22.0	82.5%	17.5%
1021	302	41-50	M	20,000	1,398	182	7.7	99.1%	0.9%	7.1%	73.9%	26.1%	13,720.3	9.8	75.4	68.3%	31.7%
1022	184	21-30	M	30,000	311	49	6.3	98.4%	1.6%	0.0%	81.6%	18.4%	2,396.8	7.7	48.9	77.1%	22.9%
1015	382	41-50	M	18,000	1,082	282	3.8	97.7%	2.3%	0.5%	85.0%	15.0%	8,298.0	7.7	29.4	81.1%	18.9%
1001	417	51-60	M	25,000	1,171	255	4.6	4.2%	95.8%	0.7%	69.4%	30.6%	14,481.9	12.4	56.8	60.6%	39.4%
1036	378	41-50	M	30,000	1,619	270	6.0	94.0%	6.0%	0.2%	93.6%	6.4%	12,614.5	7.8	46.7	93.8%	6.2%
1104	389	21-30	F	20,000	1,665	284	5.9	98.0%	2.0%	27.9%	75.9%	24.1%	13,294.8	8.0	46.8	73.8%	26.2%
1063	403	21-30	M	40,000	1,815	259	7.0	97.9%	2.1%	1.3%	43.1%	56.9%	NA*	NA*	NA*	NA*	NA*
1098	379	21-30	F	15,000	1,017	284	3.6	99.8%	0.2%	7.1%	82.2%	17.8%	7,057.4	6.9	24.8	81.3%	18.7%
1076	399	21-30	M	15,000	1,254	299	4.2	71.4%	28.6%	1.0%	59.8%	40.2%	22,021.2	17.6	73.6	61.2%	38.8%
1017	267	51-60	F	20,000	259	82	3.2	98.4%	1.6%	3.1%	93.4%	6.6%	733.6	2.8	8.9	95.2%	4.8%
1039	422	31-40	M	17,000	1,331	217	6.1	98.6%	1.4%	0.5%	78.9%	21.1%	10,496.3	7.9	48.4	67.0%	33.0%
1033	386	51-60	F	15,000	2,028	326	6.2	77.4%	22.6%	13.6%	82.3%	17.7%	15,515.9	7.7	47.6	89.5%	10.5%
1069	230	51-60	M	20,000	374	138	2.7	0.0%	100.0%	0.3%	86.6%	13.4%	3,079.4	8.2	22.3	84.6%	15.4%
1006	389	<60	M	25,000	1,370	345	4.0	85.6%	14.4%	13.4%	62.9%	37.1%	7,273.9	5.3	21.1	54.2%	45.8%
1102	385	21-30	F	25,000	1,121	221	5.1	87.2%	12.8%	22.2%	82.0%	18.0%	8,780.1	7.8	39.7	81.1%	18.9%
1078	490	18-20	F	18,000	2,055	378	5.4	97.7%	2.3%	4.2%	61.5%	38.5%	15,406.5	7.5	40.8	59.5%	40.5%
1016	393	18-20	F	14,000	1,890	247	7.7	19.0%	81.0%	0.8%	59.0%	41.0%	16,865.8	8.9	68.3	59.8%	40.2%
1005	467	21-30	M	17,000	1,334	285	4.7	98.9%	1.1%	0.4%	73.0%	27.0%	15,791.8	11.8	55.4	73.2%	26.8%
1092	404	18-20	F	15,000	1,172	347	3.4	7.7%	92.3%	1.5%	61.7%	38.3%	3,938.8	3.4	11.4	61.9%	38.1%

		Demographics			Days versus Trips			Seatbelt Use			Time of Day		Miles Driven			Mileage versus Time of Day	
Subject webid	Duration of Data Collection (days)*	Age Group	Gender	Self-Reported Average Annual Mileage	# of Trip Files with Identified Subject	Unique Dates with Identified Subject	Average Trips per Day	% of Trips with Seatbelt Worn (if Known)	% of Trips with No Seatbelt Worn (if Known)	% of Trips with Unknown Seatbelt Use	% of Trips Taken During Daylight	% of Trips Taken During Nighttime	Total Mileage	Average Mileage per Trip	Average Mileage per Day	% of Miles Driven During Daylight	% of Miles Driven During Nighttime
1082	192	41-50	F	25,000	458	82	5.6	98.4%	1.6%	15.7%	81.3%	18.7%	2,315.5	5.1	28.2	78.3%	21.7%
1056	372	21-30	F	30,000	1,076	201	5.4	74.9%	25.1%	36.8%	84.5%	15.5%	10,937.7	10.2	54.4	85.7%	14.3%
1037	398	41-50	F	20,000	1,438	298	4.8	81.3%	18.7%	17.2%	79.3%	20.7%	10,290.4	7.2	34.5	80.0%	20.0%
1047	396	31-40	M	25,000	543	111	4.9	89.7%	10.3%	30.6%	71.4%	28.6%	5,370.3	9.9	48.4	68.7%	31.3%
1035	389	31-40	M	20,000	871	233	3.7	98.3%	1.7%	0.3%	85.9%	14.1%	10,638.5	12.2	45.7	82.2%	17.8%
1013	189	51-60	M	40,000	683	154	4.4	94.1%	5.9%	1.2%	80.4%	19.6%	14,977.4	21.9	97.3	65.8%	34.2%
1068	158	18-20	F	25,000	543	90	6.0	71.2%	28.8%	1.5%	78.0%	22.0%	4,381.9	8.1	48.7	70.5%	29.5%
1059	385	31-40	M	20,000	1,918	369	5.2	99.7%	0.3%	0.1%	63.3%	36.7%	18,985.5	9.9	51.5	63.4%	36.6%
1026	377	41-50	M	20,000	2,275	373	6.1	100.0%	0.0%	0.5%	70.5%	29.5%	18,421.9	8.1	49.4	62.0%	38.0%
1095	354	21-30	F	18,000	1,447	259	5.6	96.7%	3.3%	12.2%	75.4%	24.6%	17,071.0	11.8	65.9	78.7%	21.3%
1070	210	21-30	M	20,000	2,472	186	13.3	3.9%	96.1%	0.7%	49.8%	50.2%	8,428.2	3.4	45.3	43.0%	57.0%
1007	11	41-50	F	25,000	70	12	5.8	98.6%	1.4%	0.0%	85.7%	14.3%	260.2	3.7	21.7	75.4%	24.6%
1107	197	51-60	M	22,000	1,188	140	8.5	87.4%	12.6%	69.3%	73.3%	26.7%	6,552.7	5.5	46.8	74.2%	25.8%
1081	361	41-50	M	30,000	987	158	6.2	93.3%	6.7%	2.1%	68.5%	31.5%	12,398.9	12.6	78.5	68.2%	31.8%
1028	253	31-40	F	25,000	870	198	4.4	97.9%	2.1%	2.3%	76.4%	23.6%	8,728.8	10.0	44.1	74.9%	25.1%
1079	485	18-20	F	16,000	2,160	336	6.4	19.0%	81.0%	2.5%	60.6%	39.4%	15,428.0	7.1	45.9	57.1%	42.9%
1096	416	18-20	F	12,000	1,612	320	5.0	98.6%	1.4%	1.4%	65.3%	34.7%	13,916.9	8.6	43.5	68.8%	31.2%
1086	451	51-60	F	25,000	450	137	3.3	97.8%	2.2%	0.0%	77.1%	22.9%	6,601.7	14.7	48.2	82.3%	17.7%
1025	477	41-50	F	25,000	1,833	297	6.2	83.8%	16.2%	46.7%	88.7%	11.3%	16,948.0	9.2	57.1	89.7%	10.3%
1109	403	21-30	F	25,000	1,348	276	4.9	92.9%	7.1%	17.4%	56.3%	43.7%	NA*	NA*	NA*	NA*	NA*
1003	379	51-60	M	24,000	715	170	4.2	29.9%	70.1%	0.3%	95.9%	4.1%	8,912.4	12.5	52.4	96.5%	3.5%
1054	363	51-60	M	20,000	1,156	245	4.7	99.2%	0.8%	0.1%	79.8%	20.2%	16,705.8	14.5	68.2	87.8%	12.2%
1024	350	31-40	M	20,000	1,124	205	5.5	98.3%	1.7%	9.3%	82.5%	17.5%	11,885.7	10.6	58.0	86.2%	13.8%
1045	299	51-60	M	40,000	861	218	3.9	89.5%	10.5%	7.4%	73.1%	26.9%	15,235.8	17.7	69.9	76.7%	23.3%
1014	316	41-50	M	20,000	901	237	3.8	96.1%	3.9%	2.2%	70.2%	29.8%	12,119.2	13.5	51.1	64.5%	35.5%
1040	32	<60	F	17,000	124	30	4.1	97.5%	2.5%	4.8%	97.6%	2.4%	610.5	4.9	20.4	97.3%	2.7%
1019	394	51-60	M	25,000	686	201	3.4	95.0%	5.0%	17.6%	93.9%	6.1%	9,696.7	14.1	48.2	96.9%	3.1%
1011	203	51-60	M	22,000	776	150	5.2	98.6%	1.4%	0.4%	81.4%	18.6%	12,810.4	16.5	85.4	83.7%	16.3%
1072	398	41-50	F	20,000	1,337	311	4.3	98.6%	1.4%	1.6%	86.6%	13.4%	10,726.0	8.0	34.5	92.2%	7.8%

		Demographics			Days versus Trips			Seatbelt Use			Time of Day		Miles Driven			Mileage versus Time of Day	
Subject webid	Duration of Data Collection (days)*	Age Group	Gender	Self-Reported Average Annual Mileage	# of Trip Files with Identified Subject	Unique Dates with Identified Subject	Average Trips per Day	% of Trips with Seatbelt Worn (if Known)	% of Trips with No Seatbelt Worn (if Known)	% of Trips with Unknown Seatbelt Use	% of Trips Taken During Daylight	% of Trips Taken During Nighttime	Total Mileage	Average Mileage per Trip	Average Mileage per Day	% of Miles Driven During Daylight	% of Miles Driven During Nighttime
1103	369	51-60	F	20,000	2,724	361	7.5	92.7%	7.3%	24.8%	68.2%	31.8%	12,127.4	4.5	33.6	68.8%	31.2%
1067	405	41-50	M	25,000	1,122	340	3.3	98.9%	1.1%	0.0%	80.4%	19.6%	14,791.3	13.2	43.5	82.0%	18.0%
1046	364	51-60	M	25,000	1,363	306	4.5	99.4%	0.6%	17.4%	76.8%	23.2%	20,555.1	15.1	67.2	78.8%	21.2%
1041	375	51-60	M	25,000	1,736	288	6.0	97.1%	2.9%	1.1%	85.4%	14.6%	13,831.2	8.0	48.0	79.7%	20.3%
1051	277	31-40	M	35,000	498	78	6.4	99.0%	1.0%	0.0%	86.5%	13.5%	7,385.7	14.8	94.7	76.1%	23.9%
1080	379	21-30	F	20,000	893	234	3.8	98.7%	1.3%	16.1%	79.5%	20.5%	4,415.9	4.9	18.9	78.3%	21.7%
1030	383	51-60	F	30,000	962	205	4.7	96.7%	3.3%	15.5%	85.1%	14.9%	7,027.8	7.3	34.3	80.4%	19.6%
1094	396	51-60	M	30,000	1,059	259	4.1	91.3%	8.7%	12.2%	86.2%	13.8%	22,048.2	20.8	85.1	84.3%	15.7%
1062	412	41-50	M	25,000	1,931	296	6.5	98.6%	1.4%	1.7%	82.2%	17.8%	18,481.5	9.6	62.4	78.5%	21.5%
1004	388	41-50	M	25,000	2,694	278	9.7	99.2%	0.8%	0.3%	82.1%	17.9%	14,116.9	5.2	50.8	87.4%	12.6%
1042	357	51-60	F	15,000	1,009	202	5.0	80.9%	19.1%	0.2%	97.0%	3.0%	7,080.1	7.0	35.0	96.4%	3.6%
1052	318	41-50	M	15,000	1,010	203	5.0	41.2%	58.8%	4.4%	73.7%	26.3%	7,209.3	7.1	35.5	71.0%	29.0%
1053	376	21-30	M	22,000	1,422	347	4.1	95.7%	4.3%	0.1%	67.4%	32.6%	16,498.5	11.6	47.5	61.6%	38.4%
1105	377	41-50	M	25,000	1,035	299	3.5	99.1%	0.9%	1.1%	80.1%	19.9%	NA*	NA*	NA*	NA*	NA*
1088	377	51-60	F	20,000	1,350	156	8.7	45.7%	54.3%	7.0%	98.4%	1.6%	7,577.6	5.6	48.6	97.9%	2.1%
1010	324	51-60	M	25,000	639	150	4.3	82.6%	17.4%	0.0%	87.8%	12.2%	7,423.1	11.6	49.5	83.9%	16.1%
1023	42	31-40	M	25,000	101	30	3.4	97.0%	3.0%	0.0%	61.4%	38.6%	669.4	6.6	22.3	52.3%	47.7%
1060	426	31-40	M	25,000	1,461	292	5.0	99.9%	0.1%	0.1%	88.5%	11.5%	13,142.4	9.0	45.0	88.7%	11.3%
1038	454	21-30	M	22,000	2,823	391	7.2	53.4%	46.6%	2.4%	63.8%	36.2%	13,988.2	5.0	35.8	61.7%	38.3%
1074	407	21-30	M	15,000	1,174	208	5.6	98.6%	1.4%	0.4%	71.0%	29.0%	4,871.3	4.1	23.4	62.3%	37.7%
1057	385	31-40	M	20,000	1,569	320	4.9	95.9%	4.1%	0.2%	89.4%	10.6%	14,725.3	9.4	46.0	91.9%	8.1%
1084	437	51-60	M	20,000	2,285	254	9.0	99.4%	0.6%	0.5%	77.4%	22.6%	12,824.0	5.6	50.5	82.3%	17.7%
1034	374	41-50	F	20,000	1,228	302	4.1	99.5%	0.5%	5.0%	86.4%	13.6%	7,418.6	6.0	24.6	85.4%	14.6%
1055	405	31-40	M	25,000	1,377	311	4.4	98.2%	1.8%	4.9%	79.6%	20.4%	NA*	NA*	NA*	NA*	NA*
1029	398	31-40	M	28,000	1,717	347	4.9	13.8%	86.2%	0.2%	80.0%	20.0%	23,550.8	13.7	67.9	77.9%	22.1%
1012	326	31-40	M	17,000	1,524	266	5.7	61.4%	38.6%	7.6%	88.7%	11.3%	7,846.8	5.1	29.5	88.4%	11.6%
1064	327	31-40	F	25,000	430	96	4.5	93.3%	6.7%	9.5%	95.8%	4.2%	7,701.3	17.9	80.2	94.4%	5.6%
1090	350	51-60	F	16,000	870	220	4.0	97.0%	3.0%	0.9%	75.6%	24.4%	4,978.1	5.7	22.6	81.5%	18.5%
1073	373	21-30	M	20,000	1,947	246	7.9	1.3%	98.7%	0.8%	87.3%	12.7%	11,961.6	6.1	48.6	88.0%	12.0%

Subject webid	Duration of Data Collection (days)*	Demographics			Days versus Trips			Seatbelt Use			Time of Day		Miles Driven			Mileage versus Time of Day	
		Age Group	Gender	Self-Reported Average Annual Mileage	# of Trip Files with Identified Subject	Unique Dates with Identified Subject	Average Trips per Day	% of Trips with Seatbelt Worn (if Known)	% of Trips with No Seatbelt Worn (if Known)	% of Trips with Unknown Seatbelt Use	% of Trips Taken During Daylight	% of Trips Taken During Nighttime	Total Mileage	Average Mileage per Trip	Average Mileage per Day	% of Miles Driven During Daylight	% of Miles Driven During Nighttime
1101	312	<60	M	17,000	1,268	275	4.6	97.2%	2.8%	2.1%	87.8%	12.2%	11,165.6	8.8	40.6	88.0%	12.0%
1089	141	21-30	M	15,000	554	139	4.0	99.3%	0.7%	0.4%	58.3%	41.7%	4,499.3	8.1	32.4	61.3%	38.7%
				Total Overall	139,367	24,189	5.8	79.2%	20.8%	6.7%	73.9%	26.1%	1,119,202	8.0	46.3	71.8%	28.2%
				Minimum	7	3	2.3	0.0%	0.0%	0.0%	43.1%	0.0%	37	2.8	8.9	43.0%	0.0%
				Maximum	2,985	406	27.8	100.0%	100.0%	69.3%	100.0%	56.9%	24,209	21.9	181.7	100.0%	57.0%
				Average per Driver	1,290	224	5.9	81.5%	18.5%	6.7%	76.3%	23.7%	10,762	8.8	49.3	75.1%	24.9%
				Median	1,208	233	5	95.5%	4.5%	2.1%	78.0%	22.0%	10,567	7.9	47.2	76.9%	23.1%
				Standard Deviation	662	95	3	28.9%	28.9%	10.6%	12.1%	12.1%	5,724	3.9	25.0	12.9%	12.9%

APPENDIX B: SECONDARY DRIVER SUMMARY TABLE

It is assumed that these drivers were not the primary drivers of the 100-Car vehicle (e.g., most of their driving is in an alternate vehicle). As a result, certain statistics such as duration of data collection, daily trip and mileage averages, and average maximum speed are not included. All other summary statistics are based on actual trips identified as the secondary driver and unique dates of those confirmed trip files. All mileage calculations are based on trip files identified for the secondary driver that also had valid vehicle speed data available from the vehicle network box. Files not meeting both criteria were excluded from distance calculations. Cells in the table below marked as "NA" were drivers for whom the number of trip files with unreliable speed signals (in relation to the total number of trip files for that driver) was too high to report accurate summaries.

Table 4. Demographics (estimated) and summary statistics for secondary drivers in the 100-Car Study.

	Demographics		Days versus Trips		Seatbelt Use (excludes "Unable to determine")			Time of Day		Miles Driven		Mileage versus Time of Day	
Subject webid	Estimated Age	Gender	# of Trip Files with Identified Subject	Unique Dates with Identified Subject	% of Trips with Seatbelt Worn (if Known)	% of Trips with No Seatbelt Worn (if Known)	% of Trips with Unknown Seatbelt Use	% of Trips Taken During Daylight	% of Trips Taken During Nighttime	Total Mileage	Average Mileage per Trip	% of Miles Driven During Daylight	% of Miles Driven During Nighttime
1280	18-20	F	46	15	97.4%	2.6%	15.2%	54.3%	45.7%	609.6	13.3	37.1%	62.9%
1386	20-39	F	51	15	14.0%	86.0%	2.0%	70.6%	30.0%	682.8	13.4	46.1%	53.9%
1139	20-39	M	46	9	97.8%	2.2%	0.0%	80.4%	19.6%	532.1	11.6	73.0%	27.0%
1375	20-39	F	39	17	91.2%	8.8%	12.8%	73.7%	26.3%	130.7	3.4	78.7%	21.3%
1378	20-39	M	2	1	100.0%	0.0%	0.0%	100.0%	0.0%	4.8	2.4	100.0%	0.0%
1296	20-39	F	16	7	78.6%	21.4%	12.5%	50.0%	50.0%	214.2	13.4	75.4%	24.6%
1176	40-59	F	19	4	94.7%	5.3%	0.0%	68.4%	31.6%	134.0	7.1	68.2%	31.8%
1290	40-59	M	5	2	100.0%	0.0%	0.0%	80.0%	33.3%	116.5	23.3	77.0%	23.0%
1331	20-39	M	4	1	100.0%	0.0%	0.0%	0.0%	100.0%	15.1	3.8	0.0%	100.0%
1310	18-20	M	2	1	100.0%	0.0%	0.0%	0.0%	100.0%	32.9	16.5	0.0%	100.0%
1240	18-20	M	6	1	100.0%	0.0%	16.7%	100.0%	0.0%	1.5	0.2	100.0%	0.0%
1227	18-20	M	2	2	100.0%	0.0%	0.0%	0.0%	100.0%	34.0	17.0	0.0%	100.0%
1361	20-39	F	68	26	22.2%	77.8%	7.4%	85.3%	14.7%	340.2	5.0	79.7%	20.3%
1197	20-39	F	100	41	82.5%	17.5%	3.0%	75.8%	24.2%	621.3	6.2	75.5%	24.5%
1268	40-59	M	15	4	100.0%	0.0%	0.0%	6.7%	93.3%	NA	NA	NA	NA
1387	20-39	F	24	9	40.0%	60.0%	16.7%	37.5%	62.5%	129.9	5.4	18.6%	81.4%
1363	18-20	M	3	3	100.0%	0.0%	0.0%	33.3%	66.7%	6.9	2.3	38.8%	61.2%
1383	20-39	M	1	1	0.0%	100.0%	0.0%	0.0%	100.0%	21.6	21.6	0.0%	100.0%
1193	18-20	F	2	1	100.0%	0.0%	0.0%	100.0%	0.0%	10.2	5.1	100.0%	0.0%

	Demographics		Days versus Trips		Seatbelt Use (excludes "Unable to determine")			Time of Day		Miles Driven		Mileage versus Time of Day	
Subject webid	Estimated Age	Gender	# of Trip Files with Identified Subject	Unique Dates with Identified Subject	% of Trips with Seatbelt Worn (if Known)	% of Trips with No Seatbelt Worn (if Known)	% of Trips with Unknown Seatbelt Use	% of Trips Taken During Daylight	% of Trips Taken During Nighttime	Total Mileage	Average Mileage per Trip	% of Miles Driven During Daylight	% of Miles Driven During Nighttime
1398	40-59	F	1,521	272	53.7%	46.3%	49.1%	86.2%	13.8%	17,326.4	11.4	85.5%	14.5%
1366	20-39	M	189	39	29.5%	70.5%	8.5%	79.4%	20.6%	1,687.4	8.9	83.3%	16.7%
1117	40-59	M	7	2	0.0%	100.0%	0.0%	57.1%	42.9%	60.4	8.6	42.3%	57.7%
1245	>60	M	66	19	100.0%	0.0%	4.5%	74.2%	25.8%	256.0	3.9	79.8%	20.2%
1138	20-39	F	7	2	100.0%	0.0%	71.4%	71.4%	28.6%	72.0	10.3	75.3%	24.7%
1235	>60	M	8	4	100.0%	0.0%	50.0%	87.5%	12.5%	148.9	18.6	34.7%	65.3%
1405	20-39	M	29	5	96.4%	3.6%	3.4%	48.3%	51.7%	52.5	1.8	40.5%	59.5%
1187	40-59	M	1	1	0.0%	100.0%	0.0%	100.0%	0.0%	0.2	0.2	100.0%	0.0%
1242	18-20	F	3	2	100.0%	0.0%	0.0%	66.7%	33.3%	2.1	0.7	97.5%	2.5%
1323	18-20	F	65	8	98.4%	1.6%	4.6%	90.8%	9.2%	23.8	0.4	63.7%	36.3%
1178	20-39	F	126	27	93.5%	6.5%	2.4%	91.3%	8.8%	805.2	6.4	79.6%	20.4%
1180	40-59	M	63	8	98.4%	1.6%	1.6%	66.1%	33.9%	357.6	5.7	56.6%	43.4%
1170	20-39	M	12	3	66.7%	33.3%	0.0%	8.3%	91.7%	71.4	6.0	2.5%	97.5%
1114	40-59	M	15	2	55.6%	44.4%	40.0%	80.0%	23.1%	316.6	21.1	97.9%	2.1%
1205	20-39	M	22	10	100.0%	0.0%	9.1%	27.3%	72.7%	95.1	4.3	9.2%	90.8%
1393	18-20	F	33	16	85.7%	14.3%	57.6%	60.6%	39.4%	92.4	2.8	62.2%	37.8%
1282	20-39	M	1	1	100.0%	0.0%	0.0%	100.0%	0.0%	9.4	9.4	100.0%	0.0%
1384	20-39	M	120	22	34.7%	65.3%	1.7%	52.5%	48.7%	1,839.6	15.3	54.2%	45.8%
1328	18-20	F	4	2	100.0%	0.0%	25.0%	50.0%	50.0%	67.6	16.9	1.9%	98.1%
1172	20-39	M	17	7	57.1%	42.9%	58.8%	11.8%	88.2%	155.7	9.2	5.6%	94.4%
1215	18-20	F	1	1	100.0%	0.0%	0.0%	0.0%	100.0%	20.9	20.9	0.0%	100.0%
1199	18-20	M	13	7	100.0%	0.0%	15.4%	15.4%	84.6%	212.3	16.3	5.3%	94.7%
1306	18-20	M	2	1	0.0%	100.0%	0.0%	0.0%	100.0%	3.8	1.9	0.0%	100.0%
1127	20-39	M	1	1	100.0%	0.0%	0.0%	0.0%	100.0%	0.1	0.1	0.0%	100.0%
1389	40-59	M	2	1	100.0%	0.0%	0.0%	100.0%	0.0%	3.9	2.0	100.0%	0.0%
1343	18-20	M	1	1	100.0%	0.0%	0.0%	0.0%	100.0%	9.0	9.0	0.0%	100.0%
1171	20-39	F	1	1	100.0%	0.0%	0.0%	0.0%	100.0%	11.4	11.4	0.0%	100.0%
1123	20-39	F	1	1	100.0%	0.0%	0.0%	0.0%	100.0%	1.3	1.3	0.0%	100.0%
1173	20-39	F	2	1	100.0%	0.0%	50.0%	0.0%	100.0%	5.5	2.8	0.0%	100.0%
1376	18-20	F	4	3	75.0%	25.0%	0.0%	75.0%	25.0%	7.8	1.9	86.2%	13.8%
1349	20-39	F	3	2	100.0%	0.0%	66.7%	100.0%	0.0%	3.9	1.3	100.0%	0.0%
1264	20-39	M	7	2	100.0%	0.0%	14.3%	0.0%	100.0%	88.6	12.7	0.0%	100.0%
1209	20-39	M	26	3	92.3%	7.7%	0.0%	96.2%	3.8%	207.4	8.0	98.8%	1.2%

	Demographics		Days versus Trips		Seatbelt Use (excludes "Unable to determine")			Time of Day		Miles Driven		Mileage versus Time of Day	
Subject webid	Estimated Age	Gender	# of Trip Files with Identified Subject	Unique Dates with Identified Subject	% of Trips with Seatbelt Worn (if Known)	% of Trips with No Seatbelt Worn (if Known)	% of Trips with Unknown Seatbelt Use	% of Trips Taken During Daylight	% of Trips Taken During Nighttime	Total Mileage	Average Mileage per Trip	% of Miles Driven During Daylight	% of Miles Driven During Nighttime
1239	40-59	F	45	10	95.3%	4.7%	4.4%	97.8%	2.2%	307.1	6.8	99.9%	0.1%
1203	40-59	M	19	5	75.0%	25.0%	36.8%	36.8%	66.7%	579.3	30.5	32.9%	67.1%
1154	20-39	M	94	42	95.3%	4.7%	8.5%	38.3%	61.7%	699.9	7.4	53.2%	46.8%
1305	20-39	M	5	2	60.0%	40.0%	0.0%	60.0%	40.0%	36.9	7.4	29.4%	70.6%
1275	18-20	F	2	1	100.0%	0.0%	0.0%	100.0%	0.0%	4.9	2.5	100.0%	0.0%
1186	18-20	M	239	34	92.8%	7.2%	6.7%	82.8%	17.2%	1,070.6	4.5	81.8%	18.2%
1381	20-39	M	4	3	25.0%	75.0%	0.0%	75.0%	25.0%	31.9	8.0	46.2%	53.8%
1307	20-39	F	4	3	100.0%	0.0%	25.0%	25.0%	75.0%	26.3	6.6	46.6%	53.4%
1137	20-39	M	1	1	100.0%	0.0%	0.0%	100.0%	0.0%	4.7	4.7	100.0%	0.0%
1404	20-39	F	2	1	100.0%	0.0%	0.0%	100.0%	0.0%	3.7	1.8	100.0%	0.0%
1347	20-39	M	2	1	100.0%	0.0%	0.0%	100.0%	0.0%	4.2	2.1	100.0%	0.0%
1188	20-39	F	1	1	100.0%	0.0%	0.0%	100.0%	0.0%	2.1	2.1	100.0%	0.0%
1344	18-20	M	1	1	100.0%	0.0%	0.0%	0.0%	100.0%	11.7	11.7	0.0%	100.0%
1382	20-39	F	3	3	33.3%	66.7%	0.0%	0.0%	100.0%	36.0	12.0	0.0%	100.0%
1365	20-39	M	9	5	33.3%	66.7%	0.0%	11.1%	88.9%	77.3	8.6	7.2%	92.8%
1185	18-20	F	2	1	50.0%	50.0%	0.0%	0.0%	100.0%	4.4	2.2	0.0%	100.0%
1406	40-59	F	1	1	N/A	N/A	100.0%	0.0%	100.0%	4.6	4.6	0.0%	100.0%
1119	20-39	M	1	1	0.0%	100.0%	0.0%	100.0%	0.0%	0.5	0.5	100.0%	0.0%
1257	20-39	M	175	11	94.9%	5.1%	0.0%	68.6%	31.8%	758.9	4.3	62.7%	37.3%
1182	20-39	M	30	10	96.7%	3.3%	0.0%	33.3%	69.0%	277.3	9.2	23.5%	76.5%
1236	20-39	M	28	21	92.3%	7.7%	7.1%	14.3%	85.7%	573.6	20.5	29.6%	70.4%
1162	40-59	F	11	1	50.0%	50.0%	45.5%	63.6%	36.4%	33.8	3.1	50.3%	49.7%
1216	20-39	F	3	2	100.0%	0.0%	33.3%	0.0%	100.0%	39.6	13.2	0.0%	100.0%
1174	20-39	F	14	2	71.4%	28.6%	0.0%	64.3%	35.7%	33.0	2.4	54.4%	45.6%
1150	18-20	M	3	2	100.0%	0.0%	0.0%	0.0%	100.0%	56.6	18.9	0.0%	100.0%
1315	18-20	M	3	2	66.7%	33.3%	0.0%	0.0%	100.0%	5.0	1.7	0.0%	100.0%
1392	20-39	F	4	3	25.0%	75.0%	0.0%	100.0%	0.0%	2.8	0.7	100.0%	0.0%
1301	40-59	F	4	3	100.0%	0.0%	25.0%	75.0%	25.0%	24.6	6.2	81.3%	18.7%
1238	20-39	M	5	1	40.0%	60.0%	0.0%	100.0%	0.0%	14.7	2.9	100.0%	0.0%
1218	18-20	F	3	2	100.0%	0.0%	33.3%	33.3%	66.7%	3.7	1.2	50.0%	50.0%
1251	18-20	F	10	3	85.7%	14.3%	30.0%	100.0%	0.0%	95.5	9.6	100.0%	0.0%
1346	18-20	F	16	4	73.3%	26.7%	6.3%	43.8%	56.3%	75.7	4.7	46.9%	53.1%
1192	18-20	M	1	1	100.0%	0.0%	0.0%	100.0%	0.0%	6.4	6.4	100.0%	0.0%

	Demographics		Days versus Trips		Seatbelt Use (excludes "Unable to determine")			Time of Day		Miles Driven		Mileage versus Time of Day	
Subject webid	Estimated Age	Gender	# of Trip Files with Identified Subject	Unique Dates with Identified Subject	% of Trips with Seatbelt Worn (if Known)	% of Trips with No Seatbelt Worn (if Known)	% of Trips with Unknown Seatbelt Use	% of Trips Taken During Daylight	% of Trips Taken During Nighttime	Total Mileage	Average Mileage per Trip	% of Miles Driven During Daylight	% of Miles Driven During Nighttime
1379	20-39	M	3	2	100.0%	0.0%	0.0%	0.0%	100.0%	1.5	0.5	0.0%	100.0%
1281	18-20	M	2	2	100.0%	0.0%	0.0%	0.0%	100.0%	12.0	6.0	0.0%	100.0%
1120	20-39	M	24	12	95.2%	4.8%	12.5%	0.0%	100.0%	162.8	6.8	0.0%	100.0%
1226	20-39	M	2	1	50.0%	50.0%	0.0%	100.0%	0.0%	252.0	126.0	100.0%	0.0%
1253	40-59	M	1	1	0.0%	100.0%	0.0%	100.0%	0.0%	0.0	0.0	100.0%	0.0%
1255	40-59	M	4	4	25.0%	75.0%	0.0%	0.0%	100.0%	0.2	0.0	0.0%	100.0%
1395	20-39	M	1	1	100.0%	0.0%	0.0%	0.0%	100.0%	1.6	1.6	0.0%	100.0%
1370	18-20	M	6	5	83.3%	16.7%	0.0%	16.7%	83.3%	37.2	6.2	40.6%	59.4%
1141	20-39	M	6	2	50.0%	50.0%	0.0%	83.3%	16.7%	50.5	8.4	77.2%	22.8%
1181	40-59	F	16	7	100.0%	0.0%	0.0%	62.5%	37.5%	91.6	5.7	60.2%	39.8%
1279	20-39	F	7	2	85.7%	14.3%	0.0%	85.7%	14.3%	31.7	4.5	95.7%	4.3%
1212	40-59	F	9	1	100.0%	0.0%	0.0%	100.0%	0.0%	32.6	3.6	100.0%	0.0%
1321	40-59	F	60	6	91.1%	8.9%	6.7%	85.0%	15.0%	924.4	15.4	85.8%	14.2%
1267	40-59	M	662	142	71.6%	28.4%	0.6%	49.5%	50.5%	2,748.7	4.2	52.9%	47.1%
1362	20-39	M	145	70	100.0%	0.0%	0.7%	75.9%	24.1%	810.8	5.6	67.0%	33.0%
1201	>60	F	401	104	99.0%	1.0%	1.0%	98.0%	2.0%	2,598.5	6.5	96.6%	3.4%
1263	>60	F	1	1	0.0%	100.0%	0.0%	100.0%	0.0%	9.2	9.2	100.0%	0.0%
1191	40-59	F	3	2	100.0%	0.0%	0.0%	33.3%	66.7%	39.4	13.1	1.9%	98.1%
1153	40-59	F	5	4	60.0%	40.0%	0.0%	100.0%	0.0%	21.4	4.3	100.0%	0.0%
1287	20-39	M	6	2	100.0%	0.0%	0.0%	0.0%	100.0%	59.6	9.9	0.0%	100.0%
1372	20-39	F	19	5	64.3%	35.7%	26.3%	83.3%	16.7%	121.8	6.4	50.3%	49.7%
1317	40-59	M	1	1	100.0%	0.0%	0.0%	100.0%	0.0%	32.9	32.9	100.0%	0.0%
1388	20-39	M	22	7	5.0%	95.0%	9.1%	100.0%	0.0%	181.4	8.2	100.0%	0.0%
1371	20-39	F	27	5	87.5%	12.5%	11.1%	70.4%	29.6%	416.3	15.4	85.0%	15.0%
1163	20-39	F	2	1	100.0%	0.0%	0.0%	50.0%	50.0%	24.5	12.2	49.3%	50.7%
1369	20-39	M	119	41	94.5%	5.5%	23.5%	75.6%	24.4%	737.7	6.2	60.8%	39.2%
1207	40-59	M	2	1	0.0%	100.0%	0.0%	100.0%	0.0%	11.1	5.5	100.0%	0.0%
1155	20-39	F	2	1	N/A	N/A	100.0%	0.0%	100.0%	7.5	3.8	0.0%	100.0%
1345	20-39	F	4	2	100.0%	0.0%	25.0%	75.0%	25.0%	5.7	1.4	75.0%	25.0%
1224	18-20	F	1	1	100.0%	0.0%	0.0%	100.0%	0.0%	41.6	41.6	100.0%	0.0%
1194	20-39	M	517	113	99.4%	0.6%	2.5%	86.3%	13.7%	4,305.2	8.3	82.7%	17.3%
1116	20-39	F	13	5	100.0%	0.0%	7.7%	84.6%	15.4%	76.1	5.9	84.3%	15.7%
1334	40-59	F	24	8	100.0%	0.0%	0.0%	100.0%	0.0%	129.7	5.4	100.0%	0.0%

	Demographics		Days versus Trips		Seatbelt Use (excludes "Unable to determine")			Time of Day		Miles Driven		Mileage versus Time of Day	
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1143	40-59	M	1	1	100.0%	0.0%	0.0%	100.0%	0.0%	8.5	8.5	100.0%	0.0%
1210	20-39	M	31	11	86.7%	13.3%	51.6%	61.3%	38.7%	102.8	3.3	29.7%	70.3%
1407	40-59	M	10	3	100.0%	0.0%	0.0%	70.0%	30.0%	187.5	18.7	86.0%	14.0%
1145	18-20	M	1	1	0.0%	100.0%	0.0%	100.0%	0.0%	0.9	0.9	100.0%	0.0%
1368	40-59	M	1	1	0.0%	100.0%	0.0%	100.0%	0.0%	4.4	4.4	100.0%	0.0%
1318	>60	M	35	19	100.0%	0.0%	11.4%	100.0%	0.0%	82.7	2.4	100.0%	0.0%
1276	20-39	F	12	5	83.3%	16.7%	0.0%	75.0%	25.0%	66.3	5.5	67.0%	33.0%
1135	18-20	M	30	6	100.0%	0.0%	0.0%	80.0%	20.0%	NA	NA	NA	NA
1337	20-39	F	236	94	97.8%	2.2%	2.5%	92.8%	7.2%	1,444.8	6.1	92.0%	8.0%
1270	20-39	M	64	18	5.4%	94.6%	12.5%	15.6%	90.0%	1,228.0	19.2	16.9%	83.1%
1144	20-39	M	5	1	100.0%	0.0%	0.0%	100.0%	0.0%	73.0	14.6	100.0%	0.0%
1221	40-59	M	15	6	100.0%	0.0%	0.0%	93.3%	6.7%	49.3	3.3	85.1%	14.9%
1304	40-59	M	2	1	100.0%	0.0%	0.0%	100.0%	0.0%	4.1	2.0	100.0%	0.0%
1360	40-59	M	14	5	100.0%	0.0%	21.4%	100.0%	0.0%	112.8	8.1	100.0%	0.0%
1352	18-20	M	11	4	9.1%	90.9%	0.0%	45.5%	54.5%	185.2	16.8	43.2%	56.8%
1357	20-39	M	85	24	98.8%	1.3%	5.9%	82.4%	18.3%	780.1	9.2	73.3%	26.7%
1148	20-39	M	60	20	95.9%	4.1%	18.3%	60.0%	41.4%	1,283.8	21.4	57.5%	42.5%
1286	20-39	F	115	34	100.0%	0.0%	3.5%	95.7%	4.3%	906.8	7.9	97.6%	2.4%
1284	20-39	M	14	6	87.5%	12.5%	42.9%	71.4%	28.6%	87.8	6.3	86.5%	13.5%
1265	20-39	M	5	4	66.7%	33.3%	40.0%	100.0%	0.0%	9.5	1.9	100.0%	0.0%
1222	20-39	M	8	1	12.5%	87.5%	0.0%	87.5%	12.5%	23.7	3.0	94.7%	5.3%
1156	20-39	M	23	6	57.1%	42.9%	8.7%	87.0%	13.0%	601.2	26.1	94.6%	5.4%
1229	20-39	M	1	1	100.0%	0.0%	0.0%	0.0%	100.0%	4.2	4.2	0.0%	100.0%
1183	20-39	M	1	1	0.0%	100.0%	0.0%	0.0%	100.0%	0.9	0.9	0.0%	100.0%
1167	20-39	M	2	1	100.0%	0.0%	0.0%	0.0%	100.0%	31.1	15.5	0.0%	100.0%
1198	20-39	F	1	1	100.0%	0.0%	0.0%	0.0%	100.0%	7.7	7.7	0.0%	100.0%
1293	20-39	M	38	19	5.3%	94.7%	0.0%	44.7%	55.3%	561.5	14.8	55.7%	44.3%
1348	18-20	F	5	2	0.0%	100.0%	0.0%	100.0%	0.0%	53.8	10.8	100.0%	0.0%
1311	20-39	F	1	1	0.0%	100.0%	0.0%	100.0%	0.0%	0.1	0.1	100.0%	0.0%
1390	20-39	F	4	4	66.7%	33.3%	25.0%	0.0%	100.0%	64.7	16.2	0.0%	100.0%
1322	20-39	M	3	2	0.0%	100.0%	0.0%	66.7%	33.3%	NA	NA	NA	NA
1285	20-39	M	7	1	85.7%	14.3%	0.0%	0.0%	100.0%	21.9	3.1	0.0%	100.0%
1018	20-39	F	1,219	251	96.5%	3.5%	2.7%	76.6%	23.4%	10,348.5	8.5	78.4%	21.6%

	Demographics		Days versus Trips		Seatbelt Use (excludes "Unable to determine")			Time of Day		Miles Driven		Mileage versus Time of Day	
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1110	20-39	M	30	7	23.3%	76.7%	0.0%	46.7%	53.3%	99.3	3.3	24.7%	75.3%
1394	20-39	F	27	8	8.0%	92.0%	7.4%	88.9%	11.1%	47.0	1.7	83.2%	16.8%
1380	40-59	M	20	12	5.0%	95.0%	0.0%	55.0%	45.0%	65.6	3.3	66.1%	33.9%
1358	20-39	M	88	12	90.5%	9.5%	4.5%	97.7%	2.3%	449.0	5.1	64.9%	35.1%
1195	20-39	M	4	2	100.0%	0.0%	0.0%	100.0%	0.0%	7.1	1.8	100.0%	0.0%
1157	20-39	M	1	1	0.0%	100.0%	0.0%	100.0%	0.0%	NA	NA	NA	NA
1353	40-59	M	23	8	95.5%	4.5%	4.3%	78.3%	21.7%	277.4	12.1	87.1%	12.9%
1316	20-39	M	1	1	0.0%	100.0%	0.0%	100.0%	0.0%	0.4	0.4	100.0%	0.0%
1247	40-59	M	1,173	183	87.5%	12.5%	6.2%	68.9%	31.2%	6,984.5	6.0	74.9%	25.1%
1175	20-39	F	118	27	69.3%	30.7%	25.4%	83.9%	16.5%	575.5	4.9	76.1%	23.9%
1273	18-20	F	105	15	100.0%	0.0%	31.4%	96.2%	3.8%	318.0	3.0	96.0%	4.0%
1168	20-39	M	2	1	100.0%	0.0%	0.0%	100.0%	0.0%	11.7	5.8	100.0%	0.0%
1269	40-59	F	7	2	66.7%	33.3%	14.3%	100.0%	0.0%	25.0	3.6	100.0%	0.0%
1302	40-59	M	1	1	100.0%	0.0%	0.0%	100.0%	0.0%	1.8	1.8	100.0%	0.0%
1126	40-59	M	5	1	25.0%	75.0%	20.0%	100.0%	0.0%	5.1	1.0	100.0%	0.0%
1131	40-59	F	391	83	94.2%	5.8%	42.2%	93.8%	6.2%	1,731.6	4.4	92.1%	7.9%
1213	20-39	F	2	1	100.0%	0.0%	0.0%	100.0%	0.0%	4.6	2.3	100.0%	0.0%
1219	40-59	F	203	81	100.0%	0.0%	0.5%	90.1%	9.9%	897.4	4.4	89.7%	10.3%
1313	40-59	F	4	1	100.0%	0.0%	25.0%	100.0%	0.0%	5.6	1.4	100.0%	0.0%
1118	18-20	M	1	1	0.0%	100.0%	0.0%	0.0%	100.0%	0.2	0.2	0.0%	100.0%
1179	18-20	F	15	9	100.0%	0.0%	13.3%	53.3%	46.7%	333.3	22.2	46.2%	53.8%
1294	20-39	F	31	6	100.0%	0.0%	54.8%	87.1%	12.9%	185.4	6.0	58.1%	41.9%
1246	20-39	M	7	2	100.0%	0.0%	0.0%	100.0%	0.0%	46.9	6.7	100.0%	0.0%
1159	20-39	F	97	25	30.0%	70.0%	69.1%	82.3%	17.9%	219.1	2.3	79.8%	20.2%
1149	20-39	M	62	15	8.8%	91.2%	8.1%	54.8%	45.2%	418.3	6.7	52.5%	47.5%
1397	20-39	M	14	5	8.3%	91.7%	14.3%	71.4%	30.8%	30.2	2.2	64.6%	35.4%
1161	20-39	M	1	1	0.0%	100.0%	0.0%	100.0%	0.0%	30.9	30.9	100.0%	0.0%
1266	20-39	F	10	4	75.0%	25.0%	60.0%	50.0%	50.0%	111.5	11.2	44.3%	55.7%
1330	18-20	M	3	1	100.0%	0.0%	0.0%	0.0%	100.0%	12.2	4.1	0.0%	100.0%
1364	20-39	M	1	1	0.0%	100.0%	0.0%	100.0%	0.0%	0.1	0.1	100.0%	0.0%
1217	40-59	M	4	4	75.0%	25.0%	0.0%	100.0%	0.0%	2.2	0.5	100.0%	0.0%
1121	20-39	M	1	1	0.0%	100.0%	0.0%	100.0%	0.0%	0.4	0.4	100.0%	0.0%
1166	20-39	M	1	1	100.0%	0.0%	0.0%	100.0%	0.0%	0.3	0.3	100.0%	0.0%

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1196	20-39	F	1	1	N/A	N/A	100.0%	100.0%	0.0%	0.0	0.0	100.0%	0.0%
1249	20-39	M	87	16	67.9%	32.1%	6.9%	58.6%	42.9%	1,003.0	11.5	70.1%	29.9%
1333	20-39	M	24	7	75.0%	25.0%	0.0%	95.8%	4.2%	64.0	2.7	89.0%	11.0%
1134	20-39	M	100	17	89.0%	11.0%	0.0%	64.0%	36.0%	1,347.7	13.5	67.1%	32.9%
1248	20-39	F	2	1	100.0%	0.0%	0.0%	100.0%	0.0%	14.2	7.1	100.0%	0.0%
1151	40-59	M	128	55	21.8%	78.2%	7.0%	61.7%	38.6%	659.1	5.1	67.4%	32.6%
1354	>60	F	3	2	100.0%	0.0%	66.7%	33.3%	66.7%	17.4	5.8	8.4%	91.6%
1250	18-20	F	108	47	15.1%	84.9%	13.9%	53.7%	46.7%	940.0	8.7	62.6%	37.4%
1274	18-20	F	5	3	25.0%	75.0%	20.0%	0.0%	100.0%	39.6	7.9	0.0%	100.0%
1204	20-39	M	3	2	100.0%	0.0%	0.0%	0.0%	100.0%	10.4	3.5	0.0%	100.0%
1231	18-20	M	5	3	100.0%	0.0%	0.0%	40.0%	60.0%	56.0	11.2	17.6%	82.4%
1241	20-39	F	2	2	50.0%	50.0%	0.0%	0.0%	100.0%	16.8	8.4	0.0%	100.0%
1300	20-39	M	2	1	100.0%	0.0%	0.0%	0.0%	100.0%	7.1	3.6	0.0%	100.0%
1223	18-20	M	1	1	100.0%	0.0%	0.0%	0.0%	100.0%	2.0	2.0	0.0%	100.0%
1402	20-39	F	17	7	78.6%	21.4%	17.6%	70.6%	29.4%	123.5	7.3	64.6%	35.4%
1283	40-59	M	187	46	98.9%	1.1%	0.0%	89.2%	11.2%	2,535.9	13.6	89.5%	10.5%
1202	40-59	F	111	35	85.5%	14.5%	31.5%	80.2%	20.2%	1,332.3	12.0	91.7%	8.3%
1112	20-39	M	10	3	100.0%	0.0%	0.0%	100.0%	0.0%	55.7	5.6	100.0%	0.0%
1277	18-20	M	4	2	100.0%	0.0%	0.0%	0.0%	100.0%	22.3	5.6	0.0%	100.0%
1146	20-39	F	1	1	100.0%	0.0%	0.0%	0.0%	100.0%	10.9	10.9	0.0%	100.0%
1351	20-39	M	15	8	57.1%	42.9%	6.7%	6.7%	93.3%	52.5	3.5	17.1%	82.9%
1252	18-20	M	366	54	58.5%	41.5%	0.5%	48.1%	52.2%	1,708.6	4.7	40.3%	59.7%
1319	40-59	M	6	2	100.0%	0.0%	0.0%	100.0%	0.0%	203.0	33.8	100.0%	0.0%
1228	20-39	M	3	2	0.0%	100.0%	0.0%	100.0%	0.0%	18.1	6.0	100.0%	0.0%
1314	20-39	M	190	75	68.3%	31.7%	0.5%	40.5%	59.8%	NA	NA	NA	NA
1140	40-59	M	6	3	60.0%	40.0%	16.7%	66.7%	33.3%	NA	NA	NA	NA
1234	40-59	F	205	79	96.5%	3.5%	2.9%	97.1%	3.0%	1,252.5	6.1	98.0%	2.0%
1324	20-39	F	197	67	81.9%	18.1%	2.0%	43.1%	57.1%	1,036.5	5.3	40.9%	59.1%
1244	20-39	M	31	24	58.1%	41.9%	0.0%	80.0%	20.0%	108.7	3.5	89.8%	10.2%
1385	40-59	F	457	139	83.8%	16.2%	2.6%	75.3%	24.7%	3,325.8	7.3	76.2%	23.8%
1367	20-39	M	62	18	91.9%	8.1%	0.0%	54.8%	45.2%	453.0	7.3	68.6%	31.4%
1260	40-59	F	2	1	100.0%	0.0%	0.0%	100.0%	0.0%	59.2	29.6	100.0%	0.0%
1350	18-20	F	262	62	99.2%	0.8%	0.4%	77.1%	22.9%	2,521.5	9.6	83.9%	16.1%

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1233	18-20	F	95	47	98.9%	1.1%	1.1%	88.4%	11.6%	1,274.6	13.4	89.8%	10.2%
1113	40-59	F	3	2	100.0%	0.0%	0.0%	100.0%	0.0%	134.2	44.7	100.0%	0.0%
1128	18-20	F	102	34	95.7%	4.3%	7.8%	71.6%	28.4%	934.9	9.2	71.8%	28.2%
1111	40-59	F	58	21	88.0%	12.0%	13.8%	78.9%	21.1%	732.9	12.6	65.4%	34.6%
1130	40-59	M	3	3	33.3%	66.7%	0.0%	66.7%	33.3%	40.2	13.4	12.1%	87.9%
1303	20-39	F	13	5	72.7%	27.3%	15.4%	92.3%	7.7%	32.7	2.5	89.2%	10.8%
1399	20-39	M	3	2	66.7%	33.3%	0.0%	100.0%	0.0%	18.0	6.0	100.0%	0.0%
1295	40-59	M	8	2	100.0%	0.0%	0.0%	87.5%	12.5%	94.8	11.8	93.4%	6.6%
1339	20-39	F	7	4	100.0%	0.0%	0.0%	100.0%	0.0%	10.2	1.5	100.0%	0.0%
1340	>60	M	8	3	87.5%	12.5%	0.0%	100.0%	0.0%	42.4	5.3	100.0%	0.0%
1356	20-39	F	14	6	100.0%	0.0%	7.1%	85.7%	14.3%	187.9	13.4	83.5%	16.5%
1374	40-59	F	46	15	3.6%	96.4%	39.1%	82.6%	17.4%	476.5	10.4	95.1%	4.9%
1133	18-20	F	2	1	100.0%	0.0%	0.0%	0.0%	100.0%	43.0	21.5	0.0%	100.0%
1342	20-39	M	55	25	85.5%	14.5%	0.0%	47.3%	52.7%	301.2	5.5	68.0%	32.0%
1122	40-59	M	348	108	73.7%	26.3%	1.7%	74.1%	25.9%	2,493.2	7.2	81.6%	18.4%
1189	20-39	F	7	3	71.4%	28.6%	0.0%	100.0%	0.0%	13.7	2.0	100.0%	0.0%
1400	20-39	M	5	3	80.0%	20.0%	0.0%	100.0%	0.0%	15.5	3.1	100.0%	0.0%
1373	20-39	F	18	2	100.0%	0.0%	0.0%	100.0%	0.0%	103.9	5.8	100.0%	0.0%
1329	>60	M	1	1	0.0%	100.0%	0.0%	100.0%	0.0%	2.2	2.2	100.0%	0.0%
1312	40-59	F	182	54	97.1%	2.9%	3.8%	82.4%	17.9%	4,919.9	27.0	76.0%	24.0%
1297	20-39	M	1	1	100.0%	0.0%	0.0%	0.0%	100.0%	64.0	64.0	0.0%	100.0%
1262	20-39	F	1	1	100.0%	0.0%	0.0%	100.0%	0.0%	66.8	66.8	100.0%	0.0%
1232	20-39	M	1	1	100.0%	0.0%	0.0%	100.0%	0.0%	10.4	10.4	100.0%	0.0%
1158	20-39	F	2	2	100.0%	0.0%	50.0%	0.0%	100.0%	91.8	45.9	0.0%	100.0%
1165	40-59	F	6	2	100.0%	0.0%	0.0%	100.0%	0.0%	107.7	18.0	100.0%	0.0%
1308	18-20	F	226	61	100.0%	0.0%	0.4%	78.3%	21.8%	2,305.1	10.2	66.9%	33.1%
1338	40-59	M	579	183	97.7%	2.3%	0.5%	63.1%	37.0%	3,862.5	6.7	62.3%	37.7%
1208	>60	M	12	5	100.0%	0.0%	33.3%	58.3%	41.7%	230.5	19.2	7.9%	92.1%
1124	20-39	F	3	2	100.0%	0.0%	0.0%	100.0%	0.0%	9.4	3.1	100.0%	0.0%
1261	40-59	M	226	87	98.2%	1.8%	4.0%	59.1%	41.3%	2,339.0	10.3	55.9%	44.1%
1160	40-59	F	139	50	93.0%	7.0%	18.0%	65.0%	35.6%	902.6	6.5	63.4%	36.6%
1359	40-59	M	5	2	60.0%	40.0%	0.0%	100.0%	0.0%	3.1	0.6	100.0%	0.0%
1214	40-59	F	103	30	57.5%	42.5%	22.3%	100.0%	0.0%	1,045.6	10.2	100.0%	0.0%

	Demographics		Days versus Trips		Seatbelt Use (excludes "Unable to determine")			Time of Day		Miles Driven		Mileage versus Time of Day	
Subject webid	Estimated Age	Gender	# of Trip Files with Identified Subject	Unique Dates with Identified Subject	% of Trips with Seatbelt Worn (if Known)	% of Trips with No Seatbelt Worn (if Known)	% of Trips with Unknown Seatbelt Use	% of Trips Taken During Daylight	% of Trips Taken During Nighttime	Total Mileage	Average Mileage per Trip	% of Miles Driven During Daylight	% of Miles Driven During Nighttime
1401	20-39	F	46	10	66.7%	33.3%	21.7%	76.1%	23.9%	654.4	14.2	78.2%	21.8%
1325	20-39	M	6	4	20.0%	80.0%	16.7%	100.0%	0.0%	24.9	4.2	100.0%	0.0%
1341	40-59	F	8	4	87.5%	12.5%	0.0%	100.0%	0.0%	201.7	25.2	100.0%	0.0%
1256	40-59	M	9	5	100.0%	0.0%	11.1%	55.6%	44.4%	17.1	1.9	41.3%	58.7%
1327	20-39	M	1	1	0.0%	100.0%	0.0%	100.0%	0.0%	12.6	12.6	100.0%	0.0%
1396	40-59	M	1	1	0.0%	100.0%	0.0%	100.0%	0.0%	1.4	1.4	100.0%	0.0%
1391	40-59	F	1	1	0.0%	100.0%	0.0%	100.0%	0.0%	NA	NA	NA	NA
1291	18-20	F	37	9	73.0%	27.0%	0.0%	48.6%	51.4%	234.5	6.3	57.3%	42.7%
1254	20-39	M	109	23	56.5%	43.5%	0.9%	58.7%	41.3%	962.0	8.8	87.7%	12.3%
1258	40-59	M	19	9	63.2%	36.8%	0.0%	57.9%	42.1%	251.5	13.2	49.8%	50.2%
1272	20-39	M	5	2	80.0%	20.0%	0.0%	100.0%	0.0%	29.1	5.8	100.0%	0.0%
1309	20-39	M	3	1	100.0%	0.0%	0.0%	100.0%	0.0%	20.9	7.0	100.0%	0.0%
1288	20-39	F	3	2	50.0%	50.0%	33.3%	100.0%	0.0%	2.4	0.8	100.0%	0.0%
1377	20-39	F	50	26	91.5%	8.5%	6.0%	75.0%	25.0%	158.1	3.2	70.3%	29.7%
1292	20-39	M	1	1	100.0%	0.0%	0.0%	100.0%	0.0%	5.0	5.0	100.0%	0.0%
1298	20-39	F	160	55	91.0%	9.0%	23.8%	73.8%	26.3%	592.6	3.7	79.4%	20.6%
1220	40-59	M	31	13	87.1%	12.9%	0.0%	61.3%	38.7%	204.6	6.6	60.5%	39.5%
1200	20-39	F	27	15	90.0%	10.0%	25.9%	74.1%	25.9%	217.0	8.0	68.9%	31.1%
1177	40-59	M	47	7	91.5%	8.5%	0.0%	95.7%	4.3%	668.1	14.2	98.8%	1.2%
1237	20-39	M	53	9	92.5%	7.5%	0.0%	69.8%	30.2%	1,281.1	24.2	67.8%	32.2%
1115	40-59	F	12	4	80.0%	20.0%	16.7%	100.0%	0.0%	22.1	1.8	100.0%	0.0%
1184	>60	M	26	7	96.0%	4.0%	3.8%	84.6%	16.0%	211.5	8.1	87.4%	12.6%
1125	20-39	F	86	30	97.0%	3.0%	22.1%	97.7%	2.4%	591.8	6.9	94.2%	5.8%
1169	20-39	F	7	2	83.3%	16.7%	14.3%	85.7%	14.3%	34.3	4.9	79.6%	20.4%
1326	20-39	M	2	1	0.0%	100.0%	0.0%	50.0%	50.0%	0.9	0.4	60.7%	39.3%
1243	20-39	M	1	1	100.0%	0.0%	0.0%	100.0%	0.0%	1.2	1.2	100.0%	0.0%
1211	40-59	M	2	1	50.0%	50.0%	0.0%	100.0%	0.0%	5.2	2.6	100.0%	0.0%
1132	40-59	F	271	80	94.4%	5.6%	0.4%	87.8%	12.2%	1,251.2	4.6	93.6%	6.4%
1190	>60	F	252	59	96.1%	3.9%	7.5%	87.3%	12.7%	1,260.4	5.0	86.7%	13.3%
1278	40-59	F	7	3	100.0%	0.0%	28.6%	57.1%	42.9%	4.4	0.6	79.3%	20.7%
1332	20-39	M	2	1	100.0%	0.0%	0.0%	50.0%	50.0%	1.4	0.7	48.2%	51.8%
1129	20-39	F	98	35	97.7%	2.3%	10.2%	83.7%	16.5%	NA	NA	NA	NA
1206	20-39	M	1	1	N/A	N/A	100.0%	0.0%	100.0%	0.4	0.4	0.0%	100.0%

Subject webid	Demographics		Days versus Trips		Seatbelt Use (excludes "Unable to determine")			Time of Day		Miles Driven		Mileage versus Time of Day	
	Estimated Age	Gender	# of Trip Files with Identified Subject	Unique Dates with Identified Subject	% of Trips with Seatbelt Worn (if Known)	% of Trips with No Seatbelt Worn (if Known)	% of Trips with Unknown Seatbelt Use	% of Trips Taken During Daylight	% of Trips Taken During Nighttime	Total Mileage	Average Mileage per Trip	% of Miles Driven During Daylight	% of Miles Driven During Nighttime
1289	20-39	M	53	19	3.8%	96.2%	0.0%	75.5%	24.5%	708.2	13.4	91.3%	8.7%
1136	20-39	F	78	34	9.7%	90.3%	20.5%	74.4%	25.6%	1,066.5	13.7	86.7%	13.3%
1271	20-39	F	10	3	62.5%	37.5%	20.0%	90.0%	10.0%	30.4	3.0	84.0%	16.0%
1403	20-39	M	220	45	8.5%	91.5%	14.1%	95.4%	4.6%	2,727.0	12.4	96.1%	3.9%
1355	20-39	M	18	3	100.0%	0.0%	11.1%	83.3%	16.7%	231.3	12.8	74.0%	26.0%
1164	40-59	M	68	22	92.3%	7.7%	4.4%	54.4%	45.6%	420.8	6.2	70.8%	29.2%
1147	20-39	M	101	37	100.0%	0.0%	1.0%	58.4%	41.6%	417.6	4.1	49.9%	50.1%
1336	18-20	F	39	12	97.1%	2.9%	10.3%	74.4%	25.6%	538.1	13.8	66.4%	33.6%
1299	>60	F	3	1	100.0%	0.0%	0.0%	100.0%	0.0%	6.3	2.1	100.0%	0.0%
1230	20-39	F	75	29	68.0%	32.0%	66.7%	96.0%	4.0%	678.0	9.0	92.1%	7.9%
1335	40-59	M	2	2	100.0%	0.0%	50.0%	50.0%	50.0%	1.4	0.7	90.5%	9.5%
1152	>60	F	108	50	97.8%	2.2%	15.7%	89.8%	10.2%	1,745.3	16.2	95.8%	4.2%
1142	20-39	M	18	8	66.7%	33.3%	0.0%	44.4%	55.6%	112.5	6.2	33.6%	66.4%
1320	20-39	M	6	3	83.3%	16.7%	0.0%	50.0%	50.0%	33.8	5.6	76.8%	23.2%
1225	20-39	F	2	1	100.0%	0.0%	0.0%	0.0%	100.0%	10.7	5.4	0.0%	100.0%
1259	20-39	F	1	1	100.0%	0.0%	0.0%	100.0%	0.0%	43.1	43.1	100.0%	0.0%
Total Across all Drivers			17,270	4,708	81.5%	18.5%	11.3	74.5%	25.5%	137,377	8.0	74.0%	26.0%
Minimum per Driver			1	1	0.0%	0.0%	0.0%	0.0%	0.0%	0.03	0.03	0.0%	0.0%
Maximum per Driver			1,521	272	100.0%	100.0%	100.0%	100.0%	100.0%	17,326	126.02	100.0%	100.0%
Average per Driver			58	16	74.4%	25.6%	9.8%	66.0%	34.1%	472	8.9	64.9%	35.1%
Median			8	3	94.2%	5.8%	0.0%	75.9%	24.4%	60	6.0	78.2%	21.8%
Standard Deviation			155	33	34.7%	34.7%	18.4%	35.7%	35.7%	1401	11.4	37.1%	37.1

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