

Findings and Recommendations from Cognitive Testing for the Vehicle inventory and Use Survey for Light Trucks (9501)

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Research Objectives

The Vehicle Inventory and Use Survey (VIUS) for Light Trucks (form number 9501) was originally collected every 5 years since 1963, for years ending in "2" and "7," along with the Economic Census. However, the 9501 VIUS was not been collected since 2002. Since the 9501 VIUS is the only resource available to policymakers about the physical and operational characteristics of the nation's light truck population, the survey is being updated for collection in 2022. The survey will be conducted for the Bureau of Transportation Statistics by the Census Bureau in accordance with an agreement between the two agencies. Results will be used to inform decisions about investments in new roads and technology, to examine vehicle performance and fuel economy, and will be a part of the framework for the national investment and personal consumption expenditures component of the Gross Domestic Product.

The purpose of the cognitive interviewing is to evaluate any changes in the content that may warrant modifications needed to maximize respondent participation and data quality produced by the 2022 VIUS. Paper and web-based questionnaires will be generated based on the 2002 questionnaires, with the addition of some new response categories as requested by BTS. This pretest will investigate the suitability of the proposed questions.

In addition, the research objectives included learning how respondents:

- understand and interpret the data requests;
- understand the terminology used throughout the questions;
- keep records related to the data requested; and,
- perceive the burden that would be associated with answering the questions.

The round one 9501 VIUS draft can be found in appendix A. The round one protocol can be found in appendix B. The round two 9501 VIUS draft can be found in appendix C. The round two protocol can be found in appendix D.

Note: The two rounds of testing were conducted in close proximity, time-wise, from each other. Between the rounds of testing, some changes were made to the draft materials. This report will attempt to summarize findings from all interviews, but the primary focus will be on the findings from Round 2 of the interviews, and provides recommendations based on those draft questions.

Research Methodology

Between September 2019 and May 2020, Aryn Hernandez, Krysten Mesner, and Melissa Cidade from the U.S. Census Bureau's Data Collection and Methodology Research Branch (DCRMB) conducted 23 cognitive interviews over two rounds of testing, regarding proposed new questions. A few interviews were conducted in-person at the beginning of round one; however, due to difficulty in reaching the target population and the developing global coronavirus pandemic, the majority of interviews were conducted via telephone.

In general, cognitive interviews are used to, '(a) understand the thought processes used to answer survey items, and (b) to use this knowledge to find better ways of constructing, formulating, and asking survey questions' (Forsyth and Lessler, 1991).¹ Cognitive interviews traditionally focus on the four steps of Tourangeau's (1984) cognitive response model: comprehension, retrieval, judgment, and communication/reporting.² Comprehension refers to the respondent's interpretation and understanding of the question's language, structure, and grammar. In order to answer the question, a respondent must understand what information is being requested on the survey. Retrieval is the step where relevant information is obtained, either from records or from memory. The next step, judgment, describes the respondent's evaluation of the completeness or relevance of the data obtained. It is here that estimates are made based on partial or incomplete data. The last step, communication or reporting, deals with mapping the response to the answer space provided and possibly altering the answer.

While Tourangeau's model is suitable for household and social surveys, the establishment survey setting presents additional factors that must be considered. First, instead of or in addition to a reliance on memory, establishment surveys rely heavily on records and the information contained within them. Second, organizations tend to have distributed knowledge. Some people are experts in one type of information, while others keep information about something else. Third, competing priorities, both for the organization and the individual(s) completing the questionnaire, mean that the survey sometimes does not receive the amount of attention that researchers and data collectors would like. Finally, organizations regularly authorize only a few individuals to release data. If the data provider is not authorized to release the data, an additional step must be added to the response process. Tourangeau's model was expanded by Sudman *et al* (2000) to account for these factors.³

¹ Forsyth, B.H. and Lessler, J.T. (1991). 'Cognitive Laboratory Methods: A Taxonomy.' In Measurement Errors in Surveys, P.P. Biemer, R.M. Groves, L.E. Lyberg, N.A. Mathiowitz, S. Sudman (eds). New York: John Wiley & Sons, Inc.

² Tourangeau, R. (1984). 'Cognitive Sciences and Survey Methods.' In Cognitive Aspects of Survey Methodology, T.B. Jabine, M.L. Straf, J.M. Tanur, and R. Tourangeau (eds). Washington, DC: National Academy Press.

³ Sudman, S., Willimack, D.K., Nichols, E., and Mesenbourg, T.L. (2000). 'Exploratory Research at the U.S. Census Bureau on the Survey Response Process in Large Companies.' Paper prepared for presentation at the Second International Conference on Establishment Surveys, Buffalo, NY.

Participants and Recruiting

The 2022 VIUS will be a probability sample of truck registrations stratified by geography and truck type. This includes private and commercial trucks registered (or licensed) in the United States as of the reference year of the survey. The survey excludes vehicles owned by Federal, state, or local governments; ambulances; buses; motor homes; farm tractors; unpowered trailer units; and trucks reported to have been sold, junked, or wrecked prior to July 1 of the year preceding the survey. Specifically, the 9501VIUS targets trucks below 10,000 pounds, which can include pickup trucks, sport utility vehicles, minivans, smaller commercial vans, and other small trucks.

Prior to March 11, 2020, recruiting was from the general Washington DC metropolitan area. At this time we were conducting in-person interviews. As such we focused on physical recruiting methods – mainly, BOC Broadcast messages, flyers and word of mouth, along with our more traditional means of phone and email contact, despite not having contact information that we usually have for respondents obtained from survey responses or the Business Register.

We posted recruitment flyers at home improvement stores, truck stops, and other locations in the Washington DC area, though these were generally not effective in recruitment efforts. Staff made 175 call or email attempts to contact cases from the various lists provided by ERD and others. These 175 contact attempts were primarily to different companies/persons/VINs. Approximately 20% of these contact attempts were disconnected phones or entities that were no longer in business. For those numbers not disconnected, we left messages; most did not return our calls, or replied that they were too busy actually working to participate.

Due to COVID-19, cognitive interviewing methodologies were restricted to phone and Web modes. From March 16, 2020 onward, we had to work on administrative and methodological adaptations. These included:

- Ensured that adapted procedures are in compliance with Title 13 and Title 26 data handling policies, particularly with respect to Paperwork Reduction Act and Privacy Act requirements.
- Developed procedures for compliant consent forms providing respondents with functionality for digitally encrypted signatures, thus are paper free.
- Obtained licenses for Skype for Business Conference Lines, the only currently available teleconference-enabled communication platform that meets Title 13 data handling requirements, along with using DCMRB's Conference Number.
- Created operating procedures for dispersing cash incentives post-interview, using the USPS's certified mail and insurance programs to create another layer of security and another form of paper trail for auditing purposes.
- Added a survey methodologist dedicated solely to recruiting, devoting 50% of her time until the required number of cognitive interviews was reached.
- Shifted recruitment efforts to more digital means, by posting recruitment messages online as follows:
 - Trucking-related Facebook groups,
 - Higher profile trucking Twitter handles, and on
 - Several trucking message boards.

- Craigslist.org platforms for cities selected for their high proportion of truckers in the workforce and their relative accessibility, with preference for cities that were “locked down,” figuring we may get more people to respond that way. The text of the ad can be found in Appendix E.
- We also reached out to professional trucking organizations in an attempt to gain leads.

There were a total of 23 participants interviewed for the 9501 VIUS; 9 participants in round 1 and 14 participants in round 2.

Findings and Recommendations

General Findings and Recommendations

Finding #1: Estimated time to complete averaged approximately one to two hours.

After reviewing the draft survey, most respondents gave a time estimate to complete the module between 1 to 2 hours. A few respondents gave an estimate that exceeded 2 hours. Respondents that gave the lower time tended to be less concerned with accuracy. Those that gave higher estimates cited the need to reach out to others within their companies to obtain data.

Recommendation(s):

- No recommendations needed.

Finding #2: Most respondents seemed likely to receive survey requests

Most respondents' vehicles were registered at the same address where they regularly received mail. As survey requests will be sent to the address at which a vehicle is registered, most respondents should receive them.

Recommendation(s):

- No recommendations needed.

Finding #3: Web instrument preferred

All respondents stated that they would complete the survey online. Respondents also believed that a spreadsheet template would make responding for multiple vehicles easier.

Recommendation(s):

- No recommendations needed.

Question Specific Findings and Recommendations

Two rounds of testing were conducted in close proximity, time-wise, from each other. Between the rounds of testing, some changes were made to the draft materials. The primary focus of these findings and recommendations will be from Round 2 of the interviews. Round 1 and round 2 versions of the questions have been included for reference. As the Light Truck Form shares many questions with the Heavy truck instrument some recommendations are due to findings from the Heavy Truck form. All attempts were made to keep both forms consistent with one another where appropriate.

Section A: Registration Information

After round 1, it was found that some respondents passed over the term 'your' and read the question as 'Is the vehicle identified above still in your company's possession?' As such, these respondents were confused if they were not part of a company. For round 2, the question was revised to clarify the phrase 'in your possession OR your company's possession.' After this revision, there were no more issues with this question.

Recommendation(s):

- No recommendations needed.

Section B: Disposal

No changes were made between rounds 1 and 2. No issues were found with this section. It should be noted that none of the interviewed respondents had disposed of their vehicles.

Recommendation(s):

- No recommendations needed.

Section C: Acquisition

No changes were made between rounds 1 and 2. No issues were found with this section.

Recommendation(s):

- No recommendations needed.

Section D: Leasing

The round 1 phrasing was confusing to respondents as the question attempted to ask two questions at once. As such, the question was split into two for round 2. In round 2, some respondents stated that the phrase 'someone else' could be confusing to those that lease to or from a company, not an individual. The phrase 'someone else' seemed to imply an individual and seemed to preclude companies to these respondents.

Recommendation(s):

- Consider changing 'someone else' to 'another person or company' in both D1 and D2.

Section E: Type of Vehicle

Between rounds 1 and 2, questions E2 regarding cabin height was moved to section F. As such, the findings for that question will be discussed in that section. As for question E1, it was not clear to respondents how to classify Jeeps. One respondent stated that they would choose 'Other' and write-in 'Jeep.' Some respondents also noted that 'vehicle' should be added to the 'Sport utility' option.

Recommendation(s):

- We can resolve the Jeep issue in the editing process. BTS should determine in which category Jeeps belong: pickup or SUV.
- Add 'Vehicle' to 'Sport Utility' category.

Section F: Physical Characteristics

After round 1 it was found that some respondents were confused by the reference year in these questions. These respondents believed that the questions were asking about the physical characteristics of a specific model year for the vehicle. As these characteristics are unlikely to change from year-to-year, the reference year was removed. Question F4 was also confusing to some respondents. It was determined that the answers choices were unnecessarily detailed. For round 2, the answer categories were simplified. Question F5 was removed after round 1 as almost none of the respondents were capable of answering it accurately. In round 2 question F6 regarding permanent equipment was broken up into 4 questions (F5 – F8). The sponsors of VIUS were interested in adding more types of equipment, thus necessitating the need for multiple questions. Round 1's F7 (towing capacity) was moved to F9 for round 2. The cabin height question from round 1 (E2), became question F10 in round 2. The word 'exterior' was added to this question to help alleviate some ambiguity.

In round 2, some respondents were unclear on what an axle was, how to find out how many axles their vehicles had, and how to determine if the axles were powered. Some of these respondents stated that they would look up the answer online. Question F4's issues were resolved in round 2.

For question F5 regarding standard features, respondents were not sure which way the driver camera would be directed (outward or inward). One respondent pointed out that this type of camera did not belong on the light truck form. Another respondent stated that inward facing drivers cameras may also be known as 'event recorders.' One respondent said he would only select equipment that was integrated into the vehicle. Some respondents thought that a GPS was the same thing as a navigation system.

For question F7, some respondents pointed out that this list is not relevant to light trucks. Many respondents asked if a fuel tank cover was the same thing as a gas cap. One respondent asked, 'who decides what is aerodynamic?'

For question F8, one respondent asked if an Electronic Vehicle identification was the same thing as a toll pass. In addition, 'Bobtail' is not equipment or a feature, it is the lack of a trailer or trailer mounted equipment. Including bobtail on this list confused all respondents.

For question F9, a couple of respondents pointed out that this was information was likely printed on the inside of the vehicle door. One R stated that they checked their manual, but that the towing capacity was listed in a chart, which made it confusing to figure out. A couple of respondents that did not know the

answer said they would skip this question. Some respondents that did not tow anything felt that this question was irrelevant to them and did not feel the need to answer it.

For question F10, It was not clear to respondents what portion of the vehicle they should be measuring. Some respondents said they would actually measure the vehicle with a tape measurer. A couple of respondents that did not know the answer said they would skip this question.

Recommendation(s):

- Include definition and description of an axle and powered axle in help text.
- In regards to questions F5 – F8:
 - BTS should provide associated help text for each response.
 - BTS should determine if all of these features are relevant to light trucks.
 - Add 'None of the above' answer choice.
 - Remove 'bobtail' from question F8.
- In regards to question F9:
 - Consider providing help text suggesting to check the manual, search online, or to check the inside of the door.
 - Include instructions that an answer is required even if the person does not tow anything.
- In regards to question F10:
 - Revise question text:
 - "What was the exterior height of this vehicle's cabin from the ground to the top of the roof?"
 - Add a line of instructions about including additional equipment above the roof if desired. For example: "Include and equipment that extends above the roof of the cabin such as..."
 - BTS should provide a few example of equipment that may possibly extend above the cabin roof.

Section G: Time Operated

After round 1, the order of questions G1 and G2 was swapped. This would allow respondents to skip question G2 if respondents answer '12 months' in G1. No other issues were found.

Recommendation(s):

- No recommendations needed.

Section H: Home Base

After round 1, question H1 was eliminated to reduce redundancy. Question H3 was moved to H1 and a 'No home base' answer choice was added. Question H3 (previously H4) was clarified for round 2. The phrase 'In addition to this vehicle' was added to try to prevent respondents from including the subject vehicle in their answers.

In round 2, for question H1, one respondent stated they parked 'on the site of the contract.' Which was a

spot on the street in a residential area. This respondent stated that they would write-in their answer.

For question H3, one respondent that did not park at headquarters was not sure how to answer this. One respondent said they had a dolly, but was likely confused about the type of dolly the question was actually asking for. A couple of respondents thought the rest of the survey was referring to all of the vehicles they listed in this question, instead of the original vehicle being asked about.

Recommendation(s):

- Questions H1 and H2: no recommendations needed.
- For question H3:
 - BTS should provide associated help text for each response. If possible, providing a photo of some features may help.
 - Consider changing 'Tractors (power units only)' to whatever phrase is used in question E1 on 9502.
 - Add 'No other vehicles at this home base' check box.

Section I: Miles

Between rounds 1 and 2, question I2 was moved down to question I5. Question I7 (from round 1), now question I6 in round 2 had some answer choices removed. In round 2 I6 only retained the 'Within 50 miles,' '51 to 100 miles,' and '101 miles or more'. Round 1's questions I8 and I9 were removed from the 9501 VIUS form as these questions did not apply to light trucks.

In round 2, question I1, some respondents were unsure whether this question was asking about all miles driven or only miles driven for commercial purposes. For question I3, some respondents are not going to calculate their MPG and will likely report the listed MPG, from their manuals or online, for their vehicle. For question I5, most respondents stated that it would be very difficult to estimate the answers to this question.

Question I6 was problematic in both rounds 1 and 2. Respondents did not agree on the definition of a trip, some definitions included:

- Time from when the vehicle is turned on to when it is turned off
- From the time the job started to when it ended not including getting to the job or leaving after finishing the job (only when on the clock).
- Round trip from and to home base
- One way for passengers, round trip for goods

One respondent stated that they routed several jobs into one 'trip' but was unsure if each job should be counted as a separate trip, which would drastically change their answer.

Recommendation(s):

- For question I1:
 - Revise question: "How many total miles was this vehicle driven in 202X?"
- For questions I2 and I4 change 'Gas Receipts' to Gas or Fuel Receipts.'
- For question I6:
 - We are aware that BTS has revised this question since testing began.

- BTS will provide final wording for the new question/questions.
- If 'off-the-road' is added back, provide a definition.

Section J: Fuel and Maintenance

Section J tested fairly well in round 1. The only change made for round 2 was adding 'or overhauled' to the ends of questions J8 and J9.

In round 2, for question J5, not all respondents could agree upon the meaning of the word 'extensive.' One respondent stated that the repair would need to cost over \$500 for them to consider it extensive. Another respondent noted that all of the examples listed in the question were related to transmission, so they answered 'no' as they had no transmission issues. According to this respondent, the driveline, transmission, and differential were all the same thing.

Recommendation(s):

- BTS should provide help text to define what "extensive" means.
- BTS should revise the examples listed in question J5 if the current ones do not meet the criteria for "extensive" repairs.

Section K: Vehicle Configuration

From round 1 to round 2, question K2 was moved down to become K5 (now the last question in the section). Question K3 from round 1 was removed for round 2 as it was not relevant to light trucks. From round 1, K5 became K2, K4 became K3, and K6 became K4.

In round 2, question K1 was a confusing question for some respondents. Specifically, the phrase 'most common configuration' was confusing to many respondents and often overlooked. One respondent pointed out that it would be difficult to answer questions about the features of a trailer if they were given different trailers for different jobs. Some respondents had difficulty answering question K5 as they did not know the length of their vehicles off the tops of their heads.

Findings.

Recommendation(s):

- Consider including a screener question at the beginning of section K and replacing question K1 with a yes/no question.
 - For example: K1 "In 202X, was this vehicle used to pull a trailer? *Trailer mounted equipment should be treated as a trailer. Yes/No*"
 - K2 (if yes to K1) "In 202X, did this vehicle pull a trailer for more than half of all miles driven? *Trailer mounted equipment should be treated as a trailer.*"
 - Yes, this vehicle pulled a trailer for more than 50% of all miles driven.
 - No, this vehicle pulled a trailer for less than 50% of all miles driven.
 - Answering no could allow respondents to skip past certain questions, or would allow them to view versions of questions without the phrase 'most common configuration' in the electronic version.

- For K4, BTS should provide associated help text. If possible, providing a photo of some features may help.

Section L: Weight

For round 2, questions L2 and L5 were removed as they were not relevant to light trucks. In both rounds 1 and 2, many respondents did not know the answer to question L1.

For round 2, question L2, a respondent that primarily transported passengers gave what they thought was the weight of their passengers. In addition, one respondent that did not use their vehicle for commercial activities answered this question incorrectly. Technically, nothing they carried would be considered ‘payload.’ This respondent was considering the weight of things like their personal groceries and pets.

All respondents that did not pull a trailer stated that they would give the same answer for L3 that they gave for L2. Respondents make no distinction between cargo and payload. Some respondents were not sure if they should include the weight of passengers.

Recommendation(s):

- Define cargo and payload, include definitions in help text.
- Include instructions on whether to include passengers or not.
- If payload is meant strictly to measure the weight of commercial goods, consider moving the payload question to the products section, and explicitly state that the weight of commercial goods is what is wanted. Tools could then be a separate weight category.
- If a respondent does haul a trailer more than 50% of their miles, remove question L2 in the electronic form and ask for the weight of that payload in section K.
 - For example, “In 202X, what was the average weight, in pounds, of cargo transported in the most commonly pulled trailer? Exclude any cargo within the vehicle.”
 - Note that cargo would include goods for sale, as well as tools for a business; respondents do not make the distinction between payload and cargo.
- If questions L2 and L3 remain unchanged, check write-ins in paradata to determine if respondents are entering the same answer for both questions.

Section M: Kind of Business

From round 1 to round 2, section M received major revisions. Question M1 became a yes/no question to determine if the respondent is using the vehicle for commercial purposes. The answer choices for M2 were arranged alphabetically. Additionally, the answer choice ‘HVAC, plumbing, electrician’ was added, and ‘For-hire transportation or warehousing’ was changed to ‘For-hire transportation (of goods and people).’ Questions M3 and M4 were added to determine the type of commercial business the vehicle is being used for.

In round 2, the revised question M1 tested well with no issues. For M2, one respondent that carried aggregate was not sure which answer to choose, but eventually settled on construction, which would be the correct choice. Some respondents stated that they pull advertising signs and were not sure how to answer. They ultimately chose ‘Retail.’

In regards to question M3, a respondent that transported paying passengers asked if luggage was considered 'other peoples' good.' When attempting to answer question M4, one respondent stated that they always kept tools in their truck for work, even when they were using the truck for personal transportation, so this respondent wasn't sure if they were supposed to enter 100% for tools. This respondent suggested that the total for question M4 should not sum to 100%. Other respondents were concerned about being able to answer M4 as they do not track this data.

Recommendation(s):

- Consider changing instances of 'your business' to 'this business.'
- Add advertising to 'Other services,' which is the NAICS industry it would fall into.
- For question M4, remove instructions about summing to 100%.

Section N: Product, Equipment, or Materials

Question N1 was completely changed from round 1 to round 2. N1 now asks respondents to account for their mileage by how full their vehicles are. Question N2 remained the same, however, the method of answering was updated. The product categories were put into a table to allow respondents to look through the product categories without flipping to the end of the survey.

In question N1, some respondents were confused about how to track partial loads. Most of the respondents did not have either a full or empty vehicle 100% of the time.

Overall, the round 2 version of question N2 tested much better than the previous version. One respondent was confused by 'loaded' miles. Since they left their tools in their truck all the time, all of their miles were loaded and that would be very difficult to estimate. This same respondent would not have even included the tools in their answer to this question. Some respondents still thought their answers should sum to 100%. Some respondents that pulled advertisements were not sure what to choose. These respondents ended up choosing Misc (99).

Recommendation(s):

- For question N1, split this question into multiple questions.
 - N1: "What was the approximate percent of this vehicle's 2020 mileage for each of the following categories?"
 - Empty – NOT CARRYING any products, tools, equipment, or materials: _____%
(If you report 100% empty, go to Section O – Contact Information)
 - Loaded – CARRYING products, tools, equipment, or materials: _____%
 - N2: "What was the approximate percent of this vehicle's 202X mileage that this vehicle was filled to physical capacity (cubed out)? Round to the nearest whole percent."
 - Vehicle was filled to physical capacity (cubed out): _____%
 - N3: "What was the approximate percent of this vehicle's 202X mileage that this vehicle was filled to weight limit (weighed out)? Round to the nearest whole percent."
 - Vehicle was filled to weight limit (weighed out): _____%
- For N2, consider revised question text:

- “In 202X, for the miles driven during commercial activities only, which of the following products, tools, equipment, or materials were carried and what percentage of this mileage were they carried? *Percentages can add to more than 100% if more than one type of tool or product was carried at the same time. Round to the nearest whole percent.*”
- In the table, change ‘Percentage of loaded miles’ to ‘Percentage of commercial miles.’
- Check totals in the paradata to determine if Rs are reaching a total of 100% or if they are skipping this question.

Section O: Contact Information

No changes were made between rounds 1 and 2. Respondents had no issue with this section.

Recommendation(s):

- No recommendations needed.

Appendix A: Draft Questions, Round 1

Vehicle Inventory and Use Survey (VIUS)

Form 9501-2018 VIUS Light Trucks

The due date for the **2018 VIUS** is **Month dd, yyyy**.

- If you have any questions, please call us at **1-800-###-####**, weekdays between 8:00 a.m. and 5:00 p.m., Eastern Time.
- **YOUR RESPONSE IS REQUIRED BY LAW.** Title 13, United States Code (U.S.C.), Sections 131 and 182 authorizes this collection. Sections 224 and 225 require your response. The U.S. Census Bureau is required by Section 9 of the same law to keep your information **CONFIDENTIAL** and can use your responses only to produce statistics. The Census Bureau is not permitted to publicly release your responses in a way that could identify your business, organization, or institution. Per the Federal Cybersecurity Enhancement Act of 2015, your data are protected from cybersecurity risks through screening of the systems that transmit your data.
- This collection has been approved by the Office of Management and Budget (OMB). The eight-digit OMB approval number is **####-####** and appears at the upper right of this screen. Without this approval we could not conduct this survey.

A - REGISTRATION INFORMATION

All questions on this form refer to the vehicle identified by the following registration information:

Vehicle Make	Model Year	State	License Plate	Vehicle Identification Number (VIN)

1. Is the vehicle identified above still in your or your company's possession?
 - Yes (*Go to section C – Acquisition on page 3*)
 - No (*Go to section B – Disposal on page 2*)

B - DISPOSAL

1. Did you dispose of this vehicle prior to January 1, 2018?
 - Yes (*Go to section O – Contact Information on page 25*)
 - No (*Continue with question 2 below*)

2. When did you dispose of this vehicle?
Enter 2-digit month and 4-digit year.
Month ____ ____ / Year ____ ____ ____ ____

3. How did you dispose of this vehicle?
Select ONE only.
 - Sold or gave it away
 - Traded it in
 - Junked, scrapped, or otherwise destroyed it
 - Returned it to leasing company
 - Repossessed

NOTE: If you disposed of this vehicle after January 1, 2018, answer all of the remaining applicable questions according to how you used the vehicle during 2018. If you disposed of this vehicle prior to January 1, 2018, skip to section O – Contact Information on page 25.

C – Acquisition

1. When did you obtain this vehicle?
*If purchased after lease, report the date you **originally** took possession of this vehicle. Enter 2-digit month and 4-digit year.*
Month ____ ____ / Year ____ ____ ____ ____

2. Was this vehicle new when you obtained it?

Select ONE only.

- Yes
- No

D – LEASING

NOTE: This section pertains to ownership leasing. Rental agreements are NOT covered.

1. Was this vehicle leased during 2018?

Select ONE only.

- No
- Yes, leased this vehicle FROM someone else)
- Yes, leased this vehicle TO someone else)

E – TYPE OF VEHICLE

1. In 2018, which body type most closely resembled this vehicle?

Select ONE only.

- Pickup
- Minivan
- Van other than minivan
- Sport Utility
- Other not elsewhere specified: _____

2. In 2018, what was the height of this vehicle's cabin?

Feet: _____ Inches: _____

F – PHYSICAL CHARACTERISTICS

1. In 2018, what was the total number of axles on this vehicle?
Include front and rear axles, but do NOT include axles on any trailers pulled.
 - Two
 - Three or more

2. How many tires are on the rear axle?
 - Two
 - Four

3. From question 1 above, how many axles were driving (powered) axles?
 - One axle
 - Two axles
 - Other – please specify: _____

4. What type of transmission did this vehicle have?
Select ONE only.
 - Automatic
 - Manual
 - Semi-automated manual (driver shifts with an electronic module)
 - Automated manual (no driver shifting – done electronically)

5. How many gears did this vehicle have?
Number of gears: _____

6. Did this vehicle have any of the following permanent equipment?

Mark ALL that apply.

- Aerial work platform/bucket
- Air bag(s) (safety device only)
- Air-conditioning
- Anti-lock brake system
- Automatic engine shutoff technology
- Automatic tire inflation system
- Computerized drive train control unit
- Front-wheel drive
- Low rolling resistance tires on the drive wheels
- Low rolling resistance tires on the steering wheels
- Mounting bar for snowplow
- Radial tires
- Route guidance technology
- Single-wide tires
- Tire pressure monitoring system
- Toolbox
- Trip recorder or on-board computer WITH remote communication capabilities
- Trip recorder or on-board computer WITHOUT remote communication capabilities
- Vehicle control aids for handicapped drivers
- Wheelchair lift
- Winch

7. What was this vehicle's towing capacity in pounds?

_____ pounds

G – TIME OPERATED

1. During 2018, what reasons (if any) was this vehicle NOT in use for periods of 90 consecutive days or more?

Select ALL that apply.

- Not applicable
 - Seasonal
 - Not needed/idle (excluding seasonal)
 - Under repair
 - Other – please specify:
-

2. During 2018, how many months was this vehicle used?

Round to the nearest whole month. Select ONE only.

- 12 months
- 7-11 months
- 2-6 months
- 1 month or less
- Vehicle not used (no miles driven) (*Go to section O – CONTACT INFORMATION on page 25*)

H – HOME BASE

1. Did this vehicle operate from a home base location during 2018?

Home base refers to the location where the vehicle was usually parked when it was not on the road, such as a home, farm, terminal, etc. Vehicles that might NOT operate from a home base are typically consumer one-way rentals or some over-the-road truck tractors. If this vehicle is on lease to someone else, answer ALL home base questions as they pertain to the lessee. Select ONE only.

- Yes (*Continue with question 2 below*)
- No (*Go to section I – MILES on page 11*)

2. Where was the home base of this vehicle on July 1, 2018?
If this vehicle was put into service after July 1, 2018, enter current home base.

City: _____
County/Parish/Borough (or equivalent): _____
State: _____
ZIP Code: _____

3. What was the type of home base from which this vehicle operated?

Select ONE only.

- Private residence (home, farm, etc.)
- Company office/headquarters
- Terminal
- Distribution center
- Manufacturing plant
- Fuel distributor
- Liquefaction plant
- Other – please specify: _____

4. Of the following, how many trucks/trailers do you or your company operate from the home base location indicated above?

Pickups, small vans (including minivans), and sport utility vehicles: _____
Tractors (power units only): _____
All other trucks: _____
Trailers (including trailer mounted equipment): _____
Converter dollies: _____

I – MILES

1. How many miles was this vehicle driven in 2018?

Round to the nearest whole mile.

Miles: _____

2. What was the approximate percent of this vehicle's 2018 mileage for each of the following jurisdictions?

Round to the nearest whole percent.

Operated in Canada: _____%

Operated in Mexico: _____%

Operated within the home base state: _____%

Operated in states other than the home base state (or has no home base):
_____%

3. How was the annual mileage calculated?

- Odometer readings
- Gas receipts
- Trip meter
- GPS
- Other: _____

4. How many miles has this vehicle been driven since it was manufactured?

If the odometer has turned over, please enter the figure for the total amount. If the vehicle is no longer in your possession, enter the figure when you last operated the vehicle. Round to the nearest whole mile.

Miles: _____

5. How many miles-per-gallon (mpg) did this vehicle average during 2018?

If compressed natural gas (CNG) is used, give miles per gasoline gallon equivalent (GGE). 1 GGE = 123 cubic feet CNG. Report to the nearest tenth.

MPG: _____

6. How was miles-per-gallon (mpg) calculated?

- Odometer readings
- Gas receipts
- Trip meter
- GPS

o Other:

7. What was the approximate percent of this vehicle's 2018 mileage accounted for by the type of trips listed below?

If this vehicle does not operate from a home base, report the average range of operation. Round to the nearest whole percent.

Trips off-the-road: _____

Trips on public/private roads within

- 50 miles or less from vehicle's home base: _____
- 51 to 100 miles from vehicle's home base: _____
- 101 to 200 miles from vehicle's home base: _____
- 201 to 500 miles from vehicle's home base: _____
- 501 miles or more from vehicle's home base: _____

8. What was the approximate percent of this vehicle's 2018 mileage accounted for by the type of trips listed below?

Round to the nearest whole percent.

Vehicle was cubed out: _____%

Vehicle was weighed out: _____%

Vehicle was empty: _____%

9. On average, in 2018, how many hours per week did this vehicle spend:

Round to the nearest hour.

Operating: _____ hours

Idling: _____ hours

Using auxiliary power: _____ hours

J – FUEL AND MAINTAINANCE

1. During 2018, what type of fuel or fuel combination was most often used in this vehicle?

Select ALL that apply.

- Gasoline (including gasohol)
 - Diesel (including biodiesel)
 - Natural gas (compressed or liquid)
 - Propane (liquefied petroleum gas)
 - Alcohol fuels (ethanol or methanol)
 - Electricity
 - Other – please specify:
-

2. During 2018, at what type of location was this vehicle typically refueled or recharged?

Select ONE only.

- Gas station
 - Truck stop
 - Your own facility (including home, farm, ranch, on-site by mobile supplier, etc.)
 - Other company's/contractor's facility not open to the public
 - Other – please specify:
-

3. During 2018, who performed any GENERAL maintenance (oil change, brake change, headlight replacement, etc.) on this vehicle?

Select ALL that apply.

- None performed (*Skip question 4, proceed to question 5*)
- Company-owned maintenance facility
- General repair business or private mechanic (includes gas stations, truck stops, parts stores, etc.)
- Dealership service department
- Leasing company
- Yourself, spouse, friend, etc. while not employed/paid by any maintenance type facility
- Other – please specify:

4. What was the total cost of all GENERAL maintenance in 2018?

Round to the nearest whole dollar.

\$_____.

5. During 2018, were any EXTENSIVE repairs (driveline repair, engine repair/rebuild, transmission repair/rebuild, differential repair/rebuild, etc.) performed on this vehicle?

Select ONE only.

- Yes (*Continue with question 6 below*)
- No (*Skip questions 6 and 7, proceed to question 8 on page 16*)

6. What was the total cost of all EXTENSIVE repairs in 2018?

Round to the nearest whole dollar.

\$_____.

7. Who performed these EXTENSIVE repairs?

Select ALL that apply.

- Company-owned maintenance facility
- General repair business or private mechanic (includes gas stations, truck stops, parts stores, etc.)
- Dealership service department
- Leasing company
- Yourself, spouse, friend, etc. while not employed/paid by any maintenance type facility
- Other – please specify:

8. Has this vehicle's engine EVER been rebuilt?

Select ONE only.

- Yes (*Continue with question 9 below*)
- No (*Go to section K – Vehicle Configuration on page 17*)

9. In what year was this vehicle's engine LAST rebuilt?

Year (4 digit): ____ ____ ____ ____

K – VEHICLE CONFIGURATION

1. In 2018, what percent of the miles driven by this vehicle were in each of the following configurations?

Trailer mounted equipment should be treated as a trailer.

No trailer pulled: _____%

Trailer pulled: _____%

2. Referring to the most common configuration indicated in question 1 (no trailer or trailer pulled), what was the total length of this vehicle or vehicle/trailer combination?

Report distance, in feet, from front bumper to rear of vehicle or trailer(s). Select ONE only.

- Less than 16.0 feet (*Go to section L – WEIGHT on page 20*)
- 16.0 to 19.9 feet (*Go to section L – WEIGHT on page 20*)
- 20.0 to 27.9 feet (*Go to section L – WEIGHT on page 20*)
- 28.0 to 35.9 feet (*Go to section L – WEIGHT on page 20*)
- 36.0 to 40.9 feet (*Go to section L – WEIGHT on page 20*)
- 41.0 to 44.9 feet (*Go to section L – WEIGHT on page 20*)
- 45.0 to 49.9 feet (*Go to section L – WEIGHT on page 20*)
- More than 50 feet (*Continue with question 3 on page 18*)

3. Which type of trailer resembles that most often attached to this vehicle?

Select ONE only.

- Automobile carrier (excluding curtain, van, or flatbed)
- Beverage
- Curtainside
- Dump (including belly or bottom dump)
- Flatbed, platform, etc.
- Livestock (including livestock drop frame)
- Low boy (platform with depressed center)
- Mobile home toter
- Open top (including vans, low-side grain, fruit, etc.)
- Pole, logging, pulpwood, or pipe
- Refrigerated trailer
- Tank, dry bulk
- Tank, liquids or gases
- Trailer mounted equipment
- Van, basic enclosed (dry cargo)
- Van, drop frame (excluding livestock)
- Van, insulated non-refrigerated
- Van, insulated refrigerated
- Other not elsewhere classified – please specify:

4. What was the length, in feet, of the trailer unit most often pulled by this vehicle?
Round to the nearest whole number.

_____ feet

5. How many axles were on the trailer unit most often pulled by this vehicle?
Select ONE only.

- One axle on trailer
- Two axles on trailer
- Three or more axles on trailer

6. Does the trailer have any of the following add-on equipment?
Select ALL that apply.

- Aluminum wheels
- Front faring
- Lightweight landing gear
- Rear faring
- Side skirts
- Undercarriage aerodynamic devices
- None of the above

L – WEIGHT

1. What was the empty weight of this vehicle or vehicle/trailer combination?
Select ONE only.

- Less than 6,001 pounds
- 6,001 to 8,500 pounds
- 8,501 to 10,000 pounds
- More than 10,000 pounds

2. What was the average weight (vehicle weight plus cargo weight) of this vehicle or vehicle/trailer combination as it was most often operated when carrying a typical payload during 2018?

Select ONE only.

- Less than 6,001 pounds
- 6,001 to 8,500 pounds
- 8,501 to 10,000 pounds
- 10,001 to 14,000 pounds
- 14,001 to 16,000 pounds
- 16,001 to 19,500 pounds
- More than 19,500 pounds

3. What was the average payload, in pounds, transported by this vehicle or vehicle/trailer combination during 2018?

_____ pounds

4. What was the average weight, in pounds, of non-trailer cargo?

_____ pounds

5. What were the average hours per week that the trailer(s) was permitted over weight?

_____ hours

M – KIND OF BUSINESS

1. Approximately, what percent of this vehicle's 2018 mileage was from each of the following operator classifications?

Round to the nearest whole percent.

Personal transportation (operated as a personal-use vehicle for travel to work, carpooling, pleasure driving, etc.): _____%

Rental (daily and other short term): _____%

Business use: Private (carry own goods, or use truck for internal company business only): _____%

Business use: Motor carrier (company owned trucks hired to carry other people's goods): _____%

Business use: Owner operator (independent truckers hired to carry other people's goods): _____%

NOTE: If your highest percentage occurs for personal transportation or rental, go to section O - CONTACT INFORMATION on page 25. Otherwise, continue to question 2 on page 22.

2. Which of the following best describes your business (or part of your business) in which this vehicle was most often used during 2018?

If vehicle was leased, indicate business of lessee. Select ONE only.

- Vehicle leasing or rental (includes short-term rentals)
- Agriculture, forestry, fishing, or hunting
- Mining (includes quarrying, well operations, and beneficiating)
- Utilities (includes electric power, natural gas, steam supply, water supply, and sewage removal)
- Fuel wholesale or distribution
- Construction (includes land subdivision and development, as well as construction activity by special trade contractors)
- Manufacturing
- Wholesale trade
- Retail Trade
- Information services (includes telephone and television)
- Waste management, landscaping, or administrative/support services
- Arts, entertainment, or recreation services
- Accommodation or food services (for immediate consumption)
- Other services, including real estate, nonvehicle leasing or rental, educational, health care, social assistance, finance, insurance, professional, scientific, or technical services
- For-hire transportation or warehousing
- Other – please specify:

N – PRODUCT, EQUIPMENT, OR MATERIALS

1. What was the approximate percent of this vehicle’s 2018 mileage for each of the following categories?

Empty – NOT CARRYING any products, tools, equipment, or materials): _____%

Loaded – CARRYING products, tools, equipment, or materials): _____%

NOTE: If you reported 100% for empty mileage, go to section O - CONTACT INFORMATION on page 25. Otherwise, continue to question 2 on page 24.

2. During 2018, what products, tools, equipment, or materials did this vehicle carry, and what approximate percent of LOADED mileage were they carried?

Categorize your products, tools, equipment, or materials carried into the groupings provided on pages 26 - 27. Each applicable grouping code should be entered only once. Each item carried should be categorized into ONLY ONE GROUP. Include any backhauls, trip leasing, etc. Round to the nearest whole percent.

Example: If the vehicle carried landscaping tools and hauled debris away, your response might be similar to this:

Product Code <i>(with example description)</i>	Percent of Loaded Miles <i>(with example scenarios)</i>
22 <i>(For items such as rakes, shovels, handsaws, etc.)</i>	100% <i>(When carried for all of the loaded miles)</i>
23 <i>(For items such as leaf blowers, chainsaws, etc.)</i>	100% <i>(When carried for all of the loaded miles)</i>
18 <i>(For tree limbs, wood chips, etc.)</i>	50% <i>(When carried for half of the loaded miles)</i>
44 <i>(For grass clippings or other waste)</i>	25% <i>(When carried for one quarter of the loaded)</i>

Product Code	Percent of Loaded Miles
	%
	%
	%
	%
	%

O – CONTACT INFORMATION

Last Name: _____
First Name: _____
Middle Initial: _____
Street Address: _____
Street Address 2: _____
City (or city equivalent): _____
State: _____
Zip Code: _____
Phone Number (10 digit): _____
Extension: _____
Email: _____
Date of Filing (MM/DD): ____ __/ ____ __

Product Codes

Agricultural and animal products

Animals and fish, live (01)

Animal feed and products of animal origin (eggs, hides, etc.) (02)

Grains, cereal (wheat, corn, rye, etc.) (03)

All other agricultural products (crops, live plants, bulbs, flowers, etc.) (04)

Chemicals and chemical products

Basic chemicals (hydrogen, oxygen, hydrochloric acid, chlorine, sodium hydroxide etc.) (05)

Fertilizers and fertilizer materials (06)

Pharmaceutical products (including blood, organ, gauze, etc. (07)

All other chemical products and preparations (08)

Food products, alcohol, and tobacco

Alcoholic beverages (09)

Bakery and milled grain products (baked snack good, pasta, cereal, etc.) (10)

Meat, seafood, and their preparations (11)

Tobacco products (cigarettes, cigars, chewing tobacco, etc.) (12)

All other prepared foodstuffs (dairy products, fats, food oils, sauces, spices, etc.) (13)

Forestry, wood, and paper products

Logs and other wood in the rough (logs for lumber, pulping, fuel, etc.) (14)

Paper or paperboard articles (toilet paper, paper towels, wallpaper, envelopes, etc.) (15)

Printed products (books, brochures, newspapers, etc.) (16)

Pulp, newsprint, paper, and paperboard (newsprint in large rolls, napkin stock, etc.) (17)

Wood products (wood chips, plywood, doors, windows, etc.) (18)

Manufactured metal and mineral products

Articles of base metal (pipes, nails, screws, tubes, fittings, locks, etc.) (19)

Base metal in primary or semifinished forms (bars and rods of steel or iron, etc.) (20)

Nonmetallic mineral products (cement, bricks, glass, concrete products, mirrors, etc.) (21)

Other manufactured products or equipment

Tools, non-powered (22)

Tools, powered (23)

(Continued on next page)

Electronic and other electrical equipment (telephones, VCRs, computer equipment,

etc.) (24)
Furniture, mattresses, lamps, etc. (25)
Machinery (motors, turbines, air conditioning equipment, fans, dishwashers, etc.) (26)
Miscellaneous manufactured products (toys, sports equipment, jewelry, clocks, etc.) (27)
Precision instruments and apparatus (cameras, eyewear, measuring instruments, etc.) (28)
Textile, leather, and related articles (footwear, yarns, threads, comforters, etc.) (29)
Vehicles, including parts (cars, motorcycles, trailers, etc.) (30)
All other transportation equipment (aircraft, boats, locomotives, etc.) (31)

Mining materials (raw form)

Coal (non-agglomerated and agglomerated) (32)
Crude petroleum (33)
Gravel or crushed stone (34)
Metallic ores and concentrates (35)
Monumental or building stone (marble, limestone, granite, sandstone, etc.) (36)
Natural sands (37)
All other nonmetallic minerals (salt, table salt, clays, asbestos, dolomite, etc.) (38)

Petroleum products (refined)

Fuel oils (diesel, Bunker C, etc.) (39)
Gasoline and aviation turbine fuel (40)
Plastics and rubber (tires, blinds, articles made of plastics or rubber, mud flaps, etc.) (41)
Natural Gas (42)
All other coal and refined petroleum products (greases, propane, etc.) (43)

Waste, refuse, and recycling

Hazardous waste (EPA manifest) (44)
All other waste and scrap (including trash, yard waste, biosludge, non-EPA manifested hazardous materials, etc.) (45)
Recyclable products (46)

Miscellaneous

Mail and courier parcels (47)
Empty shipping containers (48)
Passengers (49)
Mixed freight (for-hire carriers that haul multiple commodities on the same load) (50)
Products, equipment, or materials not elsewhere classified (99)

Appendix B: Interview Protocol, Round 1

Cognitive Interviewing Protocol: Vehicle Inventory and Use Survey (VIUS) Form 9501-2022 VIUS Light Trucks

Interviewer notes are in red.

Introduction:

- Explain purpose of meeting: to obtain feedback on VIUS content, to understand the process of answering questions, and to evaluate how questions work or don't work.
- Some questions may seem odd and/or obvious, but we don't want to assume we know what you are thinking.
- Explain that we are *not* testing the respondent – we only want to evaluate the questionnaire
- Structure of meeting: Understand your business and your role in it, then review the questionnaire and ask you questions as you complete it.
- Permission to record discussion for note taking purposes? This study is being conducted under the authority of Title 13 USC. We plan to use your feedback to improve the form for future data collections. Only staff involved in this design research will have access to the recording. **Have R sign consent form.**

Research Questions to Address:

- Are respondents able to answer the questions as intended?
- Are there any items that cause the respondents problems?
 - What can be done to fix those problems?
- Are there any order/context effects?

Before the Questionnaire:

- What types of goods or services does this business provide?
- What is your role in the company? What kind of responsibilities do you have?
- Have you received other surveys from the Census Bureau or other agencies? If so, which ones? Did you complete those surveys?
- Do you have any experience with this questionnaire?
- What types of records do you typically keep on your vehicles
 - *(If part of a larger organization)*: Do you have access to all of the records related to vehicles in your company?

Provide VIUS 9501 Light Truck form to participant.

I'd like for you to go through the survey question by question. As you're going through it, I'd like you to tell me your thought process for answering the questions and how easy or difficult the question is to answer.

Survey Introduction

- What do you consider to be the most important pieces of information in this section?
- Is there any information missing?

A – Registration Information

- How would you answer this question?
- Is this all of the information you need to identify the correct vehicle?
 - If not, what other information could we provide?
- Is this information available in your records?
- How easy or difficult is this information to obtain?

B – Disposal

- For each question:
 - How would you answer this question?
 - Is this information available in your records?
 - How easy or difficult is this information to obtain?
- Question 3 (if applicable):
 - Can you think of any other methods of disposal not listed here?
- **Note if respondent reads and understands 'NOTE'**

C – Acquisition

- For each question:
 - How would you answer this question?
 - Is this information available in your records?
 - How easy or difficult is this information to obtain?

D – Leasing

- Question 1:
 - How would you answer this question?
 - Is this information available in your records?
 - How easy or difficult is this information to obtain?
 - *(If respondent answered 'yes')* When did you lease the vehicle?
 - How would you proceed through the survey?
- When answering these questions, did you include rental agreements?

E – Type of Vehicle

- For each question:
 - How would you answer this question?
 - Is this information available in your records?
 - How easy or difficult is this information to obtain?
- Question 1:
 - Are these categories clear or unclear?
 - *(If respondent answers 'other'):* How would you describe your vehicle?

F – Physical Characteristics

- For each question:
 - How would you answer this question?
 - Is this information available in your records?
 - How easy or difficult is this information to obtain?
- Question 4, 6:
 - Are these categories clear or unclear?

G – Time Operated

- For each question:
 - How would you answer this question?
 - Is this information available in your records?
 - How easy or difficult is this information to obtain?
- Question 1:
 - *(If respondent answers 'other'):* What would you enter for other?
- Question 2:
 - *(If respondent answers 'Vehicle not used'):* Why was the vehicle not used?

H – Home Base

- For each question:
 - How would you answer this question?
 - Is this information available in your records?
 - How easy or difficult is this information to obtain?
- Question 1:
 - How would you define 'home base' in your own words?
 - *(If respondent is the Lessor):* If this information you would have?
- Question 3:
 - Are these categories clear or unclear?
 - *(If respondent answers 'other'):* What would you enter for other?
- Question 4:
 - When answering this question, were you only considering vehicles used for commercial purposes, or did you also include vehicles that are strictly for personal use?

I – Miles

- For each question:
 - How would you answer this question?
 - Is this information available in your records?
 - How easy or difficult is this information to obtain?
- Question 3:
 - *(If respondent answers 'other')*: What would you enter for other?
 - Why did you choose this method of estimation?
- Question 6:
 - Why did you choose this/these methods of estimation?
- Question 8:
 - What does 'cubed out' mean to you?
 - What does 'weighed out' mean to you?
- Question 9:
 - What does 'operating' mean to you?

J – Fuel and Maintenance

- For each question:
 - How would you answer this question?
 - Is this information available in your records?
 - How easy or difficult is this information to obtain?
- Question 1, 2, 3:
 - Are the categories clear or unclear?
- Question 5:
 - How would you describe extensive repairs in your own words?
- What is the difference between maintenance and repairs in your own words?

K – Vehicle Configuration

- For each question:
 - How would you answer this question?
 - Is this information available in your records?
 - How easy or difficult is this information to obtain?
- Question 1:
 - *(If applicable)*: What other mounted equipment do you have?
- Question 2:
 - Note whether respondent is answering for the most common configuration from question 1.
- Question 3:
 - Are the categories clear or unclear?
 - *(If respondent answers 'other')*: What would you enter for other?
- Question 6:
 - Are the categories clear or unclear?

L – Weight

- For each question:
 - How would you answer this question?
 - Is this information available in your records?
 - How easy or difficult is this information to obtain?
- If respondent is a lessor:
 - How easy or difficult is it for you to answer based on how your lessee uses the vehicle?
 - Would you reach out to the lessee to obtain this information?
- Question 5:
 - What does ‘permitted over weight’ mean to you?

M – Kind of Business

- For each question:
 - How would you answer this question?
 - Is this information available in your records?
 - How easy or difficult is this information to obtain?
- Question 1:
 - Are the categories clear or unclear?
- Question 2:
 - Are the categories clear or unclear?
 - *(If respondent answers ‘other’):* What would you enter for other?

N – Product, Equipment, or Materials

- Question 1:
 - How would you answer this question?
 - Is this information available in your records?
 - How easy or difficult is this information to obtain?
- Question 2:
 - **Note if respondent looks at the product code list.**
 - How would you answer this question?
 - Are the instructions clear or unclear?
 - Is the example helpful or unhelpful?
 - Is this information available in your records?
 - How easy or difficult is this information to obtain?
 - **If respondent does not look at the product code list, ask them to do so before moving to next question.**
 - Are the categories clear?
 - Can you find the product codes that are applicable to your business?

O – Contact Information

- For each question:

- How would you answer this question?

Wrap Up

- In general, are the questions we covered today something that you document or have available in records?
- Throughout the survey, we refer to the year 2018. When answering the questions were you thinking about the calendar year 2018?
 - Are your records organized by calendar year?
 - If not, how are they organized? How easy or difficult is it to answer these questions based on the calendar year instead?
- *(If applicable)*: Would you need to reach out to others in your company for information?
 - If so, what other areas/positions would you reach out to?
- *(If the respondent is the lessor)*: How easy or difficult are these questions to answer as a lessor?
 - Would you contact the lessee to obtain any information?
- *(If the respondent is the lessee)*: How easy or difficult are these questions to answer as a lessee?
 - Would you contact the lessor to obtain any information?
- About how long do you think it would take you to complete this survey?
- We plan to include some vehicle information in the request letter so that you will be able to identify the vehicle of interest in advance. What information would be most important to you in the letter?
- What would be the best way to contact you about completing the survey?
 - Mail, email, phone, etc...
- This survey will be available to answer online. Would this be your preferred method to answer?
 - What device would you use to complete the survey?
- Do you have any other comments or suggestions about anything we have discussed today?

THANK YOU FOR YOUR TIME!

Appendix C: Draft Questions, Round 2

Light Truck Survey

The due date for the **202X Survey** is **Month dd, yyyy**.

A - REGISTRATION INFORMATION

All questions on this form refer to the vehicle identified by the following registration information:

Vehicle Make	Model Year	State	License Plate	Vehicle Identification Number (VIN)

1. Is the vehicle identified above still in your possession OR your company's possession?
 - Yes (*Go to section C – Acquisition*)
 - No (*Go to section B – Disposal*)

B - DISPOSAL

1. Did you dispose of this vehicle prior to January 1, 202X?
 - Yes (*Go to section O – Contact Information*)
 - No (*Continue with question 2*)
2. When did you dispose of this vehicle?
Enter 2-digit month and 4-digit year.
Month ____ / Year ____

3. How did you dispose of this vehicle?

NOTE: If you disposed of this vehicle after January 1, 202X, answer all of the remaining applicable questions according to how you used the vehicle during 202X. If you disposed of this vehicle prior to January 1, 202X, skip to section O – Contact Information on page 21.

Select ONE only.

- Sold or gave it away
- Traded it in
- Junked, scrapped, or otherwise destroyed it
- Returned it to leasing company
- Repossessed

C – Acquisition

3. When did you originally take physical possession of this vehicle?

Enter 2-digit month and 4-digit year.

Month ____ ____ / Year ____ ____ ____ ____

4. Was this vehicle new when you took physical possession of it?

Select ONE only.

- Yes
- No

D – LEASING

NOTE: This section pertains to ownership leasing. Rental agreements are NOT covered.

2. Did you lease this vehicle FROM someone else during 202X?

Select ONE only.

- Yes (Go to Section E – Type of Vehicle)
- No

3. Did you lease this vehicle TO someone else during 202X?
Select ONE only.

- Yes
- No

E – TYPE OF VEHICLE

3. Which body type most closely resembles this vehicle?
Select ONE only.

- Pickup
- Minivan
- Van other than minivan
- Sport Utility
- Other not elsewhere specified: _____

F – PHYSICAL CHARACTERISTICS

8. What was the total number of axles on this vehicle?
Include front and rear axles, but do NOT include axles on any trailers pulled.
Select ONE only.

- Two
- Three or more

9. How many tires were on the rear axle?
Select ONE only.

- Two
- Four

10. How many of this vehicle's axles were powered?

Select ONE only.

- One axle
- Two axles
- Other – please specify: _____

11. What type of transmission did this vehicle have?

Select ONE only.

- Automatic
- Manual
- Both
- Other – please specify: _____

12. In 202X, did this vehicle have any of the following **standard features**?

Select all that apply.

- Air bags
- Anti-lock brake system
- Cruise control
- Driver camera
- Global Positioning System (GPS)
- Internet access
- Navigation system
- Rollover protection

13. In 202X, did this vehicle have any of the following **driver assistance features**?

Select all that apply.

- Adaptive Cruise Control
- Automated Driving System (ADS – full or partial)
- Automatic Emergency Steering
- Blind Spot Warning
- Forward Automatic Emergency Braking
- Forward Collision Warning
- Lane Departure Warning
- Lane Keeping Assistance
- Parking Assistance
- Parking Obstruction Warning
- Pedestrian Detection
- Rear Cross Traffic Warning
- Reverse Automatic Emergency Braking

14. In 202X, did this vehicle have any of the following **fuel economy features**?

Select all that apply.

- Aerodynamic bumper
- Aerodynamic hood
- Aerodynamic mirrors
- Automatic engine shutoff technology
- Automatic tire inflation system
- Fuel tank covers
- Gap reducers
- Idle-reducing technologies (portable auxiliary pack, electrification, etc.)
- Low rolling resistance tires

15. In 202X, did this vehicle have any of the following **other features**?

Select all that apply.

- Aerial work platform/bucket
- Air compressor (except for air brakes)
- Air springs
- Bobtail
- Christmas tree (chip box)
- Crane
- Electronic vehicle identification (transponder, etc.)
- Engine retarder/brake
- Hoist
- Lift gate
- Mounting bar for snowplow
- Multi-hazmat
- Power take-off
- Toolbox
- Winch

16. What was this vehicle's towing capacity in pounds?

_____ pounds

17. What was the exterior height of this vehicle's cabin?

Feet: _____ Inches: _____

G – TIME OPERATED

3. In 202X, how many months was this vehicle used?

Round to the nearest whole month. Select ONE only.

- 12 months (Go to Section H – Home Base)
- 7-11 months
- 2-6 months
- 1 month or less
- Vehicle not used (no miles driven) (*Go to section O – CONTACT INFORMATION on page 21*)

4. In 202X, what reasons (if any) was this vehicle NOT in use for periods of 90 consecutive days or more?

Select ALL that apply.

- Not applicable
- Seasonal
- Not needed/idle (excluding seasonal)
- Under repair
- Other – please specify:

H – HOME BASE

5. What was the primary function of home base from which this vehicle operated?
Home base refers to the location where the vehicle was usually parked when it was not on the road. Select ONE only.

- Private residence
- Company office/headquarters
- Terminal
- Distribution center
- Manufacturing plant
- Farm/Agricultural Production
- Mining or other Energy Production Site
- Truck leasing company
- Other – please specify: _____
- No home base (Go to Section I - Miles)

6. Where was the home base of this vehicle on July 1, 202X?
If this vehicle was put into service after July 1, 202X, enter current home base.

City: _____
County/Parish/Borough (or equivalent): _____
State: _____
ZIP Code: _____

7. In addition to this vehicle, how many other vehicles/trailers were operated from the home base location?

Pickups, small vans (including minivans), and sport utility vehicles: _____
Tractors (power units only): _____
Any other trucks or vans: _____
Trailers (including trailer mounted equipment): _____
Converter dollies: _____

I – MILES

10. How many miles was this vehicle driven in 202X?

Round to the nearest whole mile.

Miles: _____

11. How was the annual mileage calculated?

Select all that apply.

- Odometer readings
- Gas receipts
- Trip meter
- GPS
- Other: _____

12. How many miles-per-gallon (mpg) did this vehicle average during 202X?

If compressed natural gas (CNG) is used, give miles per gasoline gallon equivalent (GGE). 1 GGE = 123 cubic feet CNG. Report to the nearest tenth.

MPG: _____

13. How was miles-per-gallon (mpg) calculated?

Select all that apply.

- Odometer readings
- Gas receipts
- Trip meter
- GPS
- Other: _____

14. What was the approximate percent of this vehicle's 202X mileage for each of the following jurisdictions?

Round to the nearest whole percent. Total should sum to 100%.

Operated within the home base state: _____%

Operated in states other than the home base state (or has no home base):
_____%

Operated in Canada: _____%

Operated in Mexico: _____%

15. What was the approximate percent of this vehicle's 202X mileage accounted for by the type of trips listed below?

If this vehicle does not operate from a home base, report the average range of operation. Round to the nearest whole percent. Total should sum to 100%.

- Within 50 miles: _____%
- 51 to 100 miles: _____%
- 101 miles or more: _____%

16. How many miles has this vehicle been driven since it was manufactured?

If the odometer has turned over, please enter the figure for the total amount. If the vehicle is no longer in your possession, enter the figure when you last operated the vehicle. Round to the nearest whole mile.

Miles: _____

J – FUEL AND MAINTAINANCE

10. In 202X, what type of fuel or fuel combination was most often used in this vehicle?

If a fuel combination was used, select all that make up the combination.

Otherwise, select one only.

- Gasoline (including gasohol)
- Diesel (including biodiesel)
- Natural gas (compressed or liquid)
- Propane (liquefied petroleum gas)
- Alcohol fuels (ethanol or methanol)
- Electricity
- Other – please specify:

11. In 202X, at what type of location was this vehicle typically refueled?

Select ONE only.

- Gas station
- Truck stop
- Your own facility (including home, farm, ranch, on-site by mobile supplier, etc.)
- Other company's/contractor's facility not open to the public
- Other – please specify:

12. In 202X, who performed any GENERAL maintenance (oil change, brake change, headlight replacement, etc.) on this vehicle?

Select ALL that apply.

- General repair business or private mechanic (includes gas stations, truck stops, parts stores, etc.)
 - Dealership service department
 - Leasing company
 - Yourself, spouse, friend, etc. while not employed/paid by any maintenance type facility
 - Company-owned maintenance facility
 - None performed (*Skip question 4, proceed to question 5*)
 - Other – please specify:
-

13. What was the total cost of all GENERAL maintenance in 202X?

Round to the nearest whole dollar.

\$_____00

14. In 202X, were any EXTENSIVE repairs (driveline repair, engine repair/rebuild, transmission repair/rebuild, differential repair/rebuild, etc.) performed on this vehicle?

Select ONE only.

- Yes (*Continue with question 6 below*)
- No (*Skip questions 6 and 7, proceed to question 8 on page 13*)

15. Who performed these EXTENSIVE repairs?

Select ALL that apply.

- General repair business or private mechanic (includes gas stations, truck stops, parts stores, etc.)
- Dealership service department
- Leasing company
- Yourself, spouse, friend, etc. while not employed/paid by any maintenance type facility
- Company-owned maintenance facility
- Other – please specify: _____

16. What was the total cost of all EXTENSIVE repairs in 202X?

Round to the nearest whole dollar.

\$_____ .00

17. Has this vehicle's engine EVER been rebuilt or overhauled?

Select ONE only.

- Yes
- No (*Go to section K – Vehicle Configuration on page 14*)
- Don't know (*Go to section K – Vehicle Configuration on page 14*)

18. In what year was this vehicle's engine LAST rebuilt or overhauled?

Year (4 digit): ____ ____ ____ ____

K – VEHICLE CONFIGURATION

7. In 202X, what percent of the miles driven by this vehicle were in each of the following configurations?

Trailer mounted equipment should be treated as a trailer. Total should sum to 100%.

No trailer pulled: _____% (If no trailer pulled is more than 50%, go to Question 5)
Trailer pulled: _____%

8. How many axles were on the trailer unit most often pulled by this vehicle?

Select ONE only.

- One axle on trailer
- Two axles on trailer
- Three or more axles on trailer

9. What was the length, in feet, of the trailer unit most often pulled by this vehicle?

Round to the nearest whole number.

_____ feet

10. Does the trailer have any of the following add-on equipment?

Select ALL that apply.

- Aluminum wheels
- Front faring
- Lightweight landing gear
- Rear faring
- Side skirts
- Undercarriage aerodynamic devices
- None of the above
- Other – Please specify: _____

11. Referring to the most common configuration indicated in question 1 (no trailer or trailer pulled), what was the total length of this vehicle or vehicle/trailer combination?
Report distance, in feet, from front bumper to rear of vehicle or trailer(s). Select ONE only.

- Less than 16.0 feet
- 16.0 to 19.9 feet
- 20.0 to 27.9 feet
- 28.0 to 35.9 feet
- 36.0 to 40.9 feet
- 41.0 to 44.9 feet
- 45.0 to 49.9 feet
- Other – Please specify: _____

L – WEIGHT

6. What was the empty weight of this vehicle or vehicle/trailer combination?
Select ONE only.

- Less than 6,001 pounds
- 6,001 to 8,500 pounds
- 8,501 to 10,000 pounds
- More than 10,000 pounds

7. What was the average payload, in pounds, transported by this vehicle or vehicle/trailer combination during 202X?
Round to the nearest whole pound.

_____ pounds

8. What was the average weight, in pounds, of non-trailer cargo?
Round to the nearest whole pound.

_____ pounds

M – KIND OF BUSINESS

3. In 202X, was this vehicle used, at least partially, for any commercial or business-related activities?
- Yes, this vehicle was used at least part time for commercial activities
(Continue with Question 2)
 - No, this vehicle was strictly used for personal transportation *(Go to Section O – Contact Information)*

4. Which of the following best describes your business (or part of your business) in which this vehicle was most often used during 202X?

If vehicle was leased, indicate business of lessee. Select ONE only.

- Accommodation or food services (for immediate consumption)
- Agriculture, forestry, fishing, or hunting
- Arts, entertainment, or recreation services
- Construction (includes land subdivision and development, as well as construction activity by special trade contractors)
- For-hire transportation (of goods or people)
- Fuel wholesale or distribution
- HVAC, plumbing, electrician
- Information services (includes telephone and television)
- Manufacturing
- Mining (includes quarrying, well operations, and beneficiating)
- Retail Trade
- Utilities (includes electric power, natural gas, steam supply, water supply, and sewage removal)
- Vehicle leasing or rental (includes short-term rentals)
- Warehousing
- Waste management, landscaping, or administrative/support services
- Wholesale trade
- Other services, including real estate, nonvehicle leasing or rental, educational, health care, social assistance, finance, insurance, professional, scientific, or technical services
- Other – please specify: _____

5. In 202X, was this vehicle used for any of the following commercial activities?

Select all that apply.

- Transporting goods belonging to you or your company
- Transporting goods belonging to another person or company
- Transporting tools related to your business
- Transporting paying passengers
- Used as a daily or short term rental
- Other – please specify: _____

6. What was the approximate percent of this vehicle's 202X for each if the following commercial activities?

Total should sum to 100%.

- Transporting goods belonging to you or your company: _____%
- Transporting goods belonging to another person or company: _____%
- Transporting tools related to your business: _____%
- Transporting paying passengers: _____%
- Used as a daily or short term rental: _____%
- Other – please specify: _____: _____%

NOTE: If your highest percentage occurs for transporting tools related to your business, transporting paying passengers, used as a daily or short term rental, or other, go to section O - CONTACT INFORMATION on page 25. Otherwise, continue to question 2 on page 21.

N – PRODUCT, EQUIPMENT, OR MATERIALS

1. What was the approximate percent of this vehicle's 202X mileage accounted for by the type of trips listed below?

Round to the nearest whole percent. Total should sum to 100%.

- Vehicle was filled to physical capacity (cubed out): _____%
- Vehicle was filled to weight limit (weighted out): _____%
- Vehicle was empty: _____% *(If you report 100% empty, go to Section O – Contact Information)*

2. In 202X, what products, tools, equipment, or materials did this vehicle carry, and what approximate percent of LOADED mileage were they carried?

Round to the nearest whole percent. Percentages can add to more than 100% if more than one type of tool or product was carried at the same time.

Products	Percentage of loaded miles
Agricultural and animal products	
Animals and fish, live (01)	%
Animal feed and products of animal origin (eggs, hides, etc.) (02)	%
Grains, cereal (wheat, corn, rye, etc.) (03)	%
All other agricultural products (crops, live plants, bulbs, flowers, etc.) (04)	%
Chemicals and chemical products	
Basic chemicals (hydrogen, oxygen, hydrochloric acid, chlorine, sodium hydroxide etc.) (05)	%
Fertilizers and fertilizer materials (06)	%
Pharmaceutical products (including blood, organ, gauze, etc.) (07)	%
All other chemical products and preparations (08)	%
Food products, alcohol, and tobacco	
Alcoholic beverages (09)	%
Bakery and milled grain products (baked snack good, pasta, cereal, etc.) (10)	%
Meat, seafood, and their preparations (11)	%
Tobacco products (cigarettes, cigars, chewing tobacco, etc.) (12)	%
All other prepared foodstuffs (dairy products, fats, food oils, sauces, spices, etc.) (13)	%
Forestry, wood, and paper products	
Logs and other wood in the rough (logs for lumber, pulping, fuel, etc.) (14)	%
Paper or paperboard articles (toilet paper, paper towels, wallpaper, envelopes, etc.) (15)	%
Printed products (books, brochures, newspapers, etc.) (16)	%
Pulp, newsprint, paper, and paperboard (newsprint in large rolls, napkin stock, etc.) (17)	%
Wood products (wood chips, plywood, doors, windows, etc.) (18)	%
Manufactured metal and mineral products	

Articles of base metal (pipes, nails, screws, tubes, fittings, locks, etc.) (19)	%
Base metal in primary or semifinished forms (bars and rods of steel or iron, etc.) (20)	%
Nonmetallic mineral products (cement, bricks, glass, concrete products, mirrors, etc.) (21)	%
Other manufactured products or equipment	
Tools, non-powered (22)	%
Tools, powered (23)	%
Electronic and other electrical equipment (telephones, VCRs, computer equipment, etc.) (24)	%
Furniture, mattresses, lamps, etc. (25)	%
Machinery (motors, turbines, air conditioning equipment, fans, dishwashers, etc.) (26)	%
Miscellaneous manufactured products (toys, sports equipment, jewelry, clocks, etc.) (27)	%
Precision instruments and apparatus (cameras, eyewear, measuring instruments, etc.) (28)	%
Textile, leather, and related articles (footwear, yarns, threads, comforters, etc.) (29)	%
Vehicles, including parts (cars, motorcycles, trailers, etc.) (30)	%
All other transportation equipment (aircraft, boats, locomotives, etc.) (31)	%
Mining materials (raw form)	
Coal (non-agglomerated and agglomerated) (32)	%
Crude petroleum (33)	%
Gravel or crushed stone (34)	%
Metallic ores and concentrates (35)	%
Monumental or building stone (marble, limestone, granite, sandstone, etc.) (36)	%
Natural sands (37)	%
All other nonmetallic minerals (salt, table salt, clays, asbestos, dolomite, etc.) (38)	%
Petroleum products (refined)	
Fuel oils (diesel, Bunker C, etc.) (39)	%
Gasoline and aviation turbine fuel (40)	%
Plastics and rubber (tires, blinds, articles made of plastics or rubber, mud flaps, etc.) (41)	%
Natural Gas (42)	%
All other coal and refined petroleum products (greases, propane, etc.) (43)	%
Waste, refuse, and recycling	
Hazardous waste (EPA manifest) (44)	%

(45) All other waste and scrap (including trash, yard waste, bio sludge, non-EPA manifested hazardous materials, etc.)	%
Recyclable products (46)	%
Miscellaneous	
Mail and courier parcels (47)	%
Empty shipping containers (48)	%
Passengers (49)	%
Mixed freight (for-hire carriers that haul multiple commodities on the same load) (50)	%
Products, equipment, or materials not elsewhere classified (99)	%

O – CONTACT INFORMATION

Last Name: _____
 First Name: _____
 Middle Initial: _____
 Street Address: _____
 Street Address 2: _____
 City (or city equivalent): _____
 State: _____
 Zip Code: _____
 Phone Number (10 digit): _____
 Extension: _____
 Email: _____
 Date of Filing (MM/DD): ____ / ____ / ____

Appendix D: Interview Protocol, Round 2

Cognitive Interviewing Protocol: Vehicle Inventory and Use Survey (VIUS) Form 9501 VIUS Light Trucks

Interviewer notes are in red.

Introduction:

- Explain purpose of meeting: to obtain feedback on VIUS content, to understand the process of answering questions, and to evaluate how questions work or don't work.
- Some questions may seem odd and/or obvious, but we don't want to assume we know what you are thinking.
- Explain that we are *not* testing the respondent – we only want to evaluate the questionnaire
- Structure of meeting: Understand your business and your role in it, then review the questionnaire and ask you questions as you complete it.
- Permission to record discussion for note taking purposes? This study is being conducted under the authority of Title 13 USC. We plan to use your feedback to improve the form for future data collections. Only staff involved in this design research will have access to the recording. **Have R sign consent form.**

Research Questions to Address:

- Are respondents able to answer the questions as intended?
- Are there any items that cause the respondents problems?
 - What can be done to fix those problems?
- Are there any order/context effects?

Before the Questionnaire:

- What types of goods or services does this business provide?
- Can you tell me about your vehicle or your company's vehicle?
- What is your role in the company? What kind of responsibilities do you have?
- Have you received other surveys from the Census Bureau or other agencies? If so, which ones? Did you complete those surveys?
- What types of records do you typically keep on your vehicles?
 - *(If part of a larger organization)*: Do you have access to all of the records related to vehicles in your company?

I'd like for you to go through the survey question by question. As you're going through it, I'd like you to tell me your thought process for answering the questions and how easy or difficult the question is to answer.

The table in the Registration Information section would be prefilled with information about your vehicle.

- Is this the information you would need to identify which vehicle you should answer this survey for?
 - If not, what information would you need?

A – Registration Information

- How would you answer this question?

B – Disposal

- For each question:
 - How would you answer this question?
 - Is this information available in your records?
 - How easy or difficult is this information to obtain?
- Question 3 (if applicable):
 - Can you think of any other methods of disposal not listed here?

C – Acquisition

- For each question:
 - How would you answer this question?
 - Is this information available in your records?
 - How easy or difficult is this information to obtain?

D – Leasing

- Question 1 and 2:
 - How would you answer this question?
 - *(If respondent answered 'yes' to either)* When did you lease the vehicle?
 - How would you proceed through the survey?
 - Who is the vehicle registered to? You or the lessee/lessor?
 - When answering these questions, did you include or exclude rental agreements?

E – Type of Vehicle

- Question 1:
 - How would you answer this question?
 - Are these categories clear or unclear?
 - *(If respondent answers 'other')*: How would you describe your vehicle?

F – Physical Characteristics

- For each question:
 - How would you answer this question?
 - If this information available in your records?
 - How easy or difficult is this information to obtain?
- Question 5:
 - Are these categories clear or unclear?
 - How would you define 'navigational system?'
 - Would you consider a 'navigational system' the same as or different to 'GPS?'
- Question 6, 7, and 8:
 - Are these categories clear or unclear?

G – Time Operated

- For each question:
 - How would you answer this question?
 - If this information available in your records?
 - How easy or difficult is this information to obtain?
- Question 1:
 - *(If respondent answers 'Vehicle not used')*: Why was the vehicle not used?
- Question 2:
 - *(If respondent answers 'other')*: What would you enter for other?

H – Home Base

- For each question:
 - How would you answer this question?
 - If this information available in your records?
 - How easy or difficult is this information to obtain?
- Question 1:
 - How would you define 'home base' in your own words?
 - *(If respondent is the Lessor)*: If this information you would have?
 - Are these categories clear or unclear?
 - *(If respondent answers 'other')*: What would you enter for other?
- Question 3:
 - When answering this question, were you only considering vehicles used for commercial purposes, or did you also include vehicles that are strictly for personal use?

I – Miles

- For each question:
 - How would you answer this question?
 - If this information available in your records?
 - How easy or difficult is this information to obtain?
- Question 2:
 - (*If respondent answers 'other'*): What would you enter for other?
 - Why did you choose this method of estimation?
- Question 4:
 - Why did you choose this/these methods of estimation?

J – Fuel and Maintenance

- For each question:
 - How would you answer this question?
 - If this information available in your records?
 - How easy or difficult is this information to obtain?
- Question 1, 3:
 - Are the categories clear or unclear?
- Question 5:
 - How would you describe extensive repairs in your own words?
- What is the difference between maintenance and repairs in your own words?

K – Vehicle Configuration

- For each question:
 - How would you answer this question?
 - If this information available in your records?
 - How easy or difficult is this information to obtain?

L – Weight

- For each question:
 - How would you answer this question?
 - If this information available in your records?
 - How easy or difficult is this information to obtain?
- If respondent is a lessor:
 - How easy or difficult is it for you to answer based on how your lessee uses the vehicle?
 - Would you reach out to the lessee to obtain this information?

M – Kind of Business

- For each question:
 - How would you answer this question?
 - If this information available in your records?
 - How easy or difficult is this information to obtain?
- Question 2 and 3:
 - Are the categories clear or unclear?
 - *(If respondent answers other):* What would you enter for other?

N – Product, Equipment, or Materials

- For each question:
 - How would you answer this question?
 - If this information available in your records?
 - How easy or difficult is this information to obtain?
- Question 1:
 - Are the categories clear or unclear?
- Question 2:
 - How would you answer this question?
 - Are the instructions clear or unclear?
 - Can you find the product codes that are applicable to your business?
 - If this information available in your records?
 - How easy or difficult is this information to obtain?

Wrap Up

- In general, are the questions we covered today something that you document or have available in records?
- Are your records organized by calendar year?
 - If not, how are they organized? How easy or difficult is it to answer these questions based on the calendar year instead?
- *(If applicable):* Would you need to reach out to others in your company for information?
 - If so, what other areas/positions would you reach out to?
- *(If the respondent is the lessor):* How easy or difficult are these questions to answer as a lessor?
 - Would you contact the lessee to obtain any information?
- *(If the respondent is the lessee):* How easy or difficult are these questions to answer as a lessee?
 - Would you contact the lessor to obtain any information?

- About how long do you think it would take you to complete this survey?
- We plan to include some vehicle information in the request letter so that you will be able to identify the vehicle of interest in advance. What information would be most important to you in the letter?

- What would be the best way to contact you about completing the survey?
 - Mail, email, phone, etc...

- This survey will be available to answer online. Would this be your preferred method to answer?
 - What device would you use to complete the survey?

- If you were asked to complete this survey for more than one vehicle, would it be easier or more difficult to fill in a spreadsheet template? (Vehicles as rows, questions as columns)

- Do you have any other comments or suggestions about anything we have discussed today?

THANK YOU FOR YOUR TIME!

Appendix E: Online Ad Text

Hello!

The Economic Statistical Methods Division of the US Census Bureau is looking for commercial truck drivers to participate in an hour long interview about their vehicles. If you qualify and complete the interview, we will give you \$40 as a thank you!

Qualifications:

Must currently be or have been in the last three weeks responsible for a commercial truck or trucking fleet;

Must be knowledgeable about the truck(s)' uses, maintenance, and other information;

Must have access to a telephone and an internet connected computer;

Must be 18 years old or older to participate.

This is your opportunity to make sure that we "get it right" when we ask for feedback on your vehicle(s)! Please consider helping us out! All interviews will be conducted remotely, using either the telephone or web conferencing depending on your capabilities. Thank you!