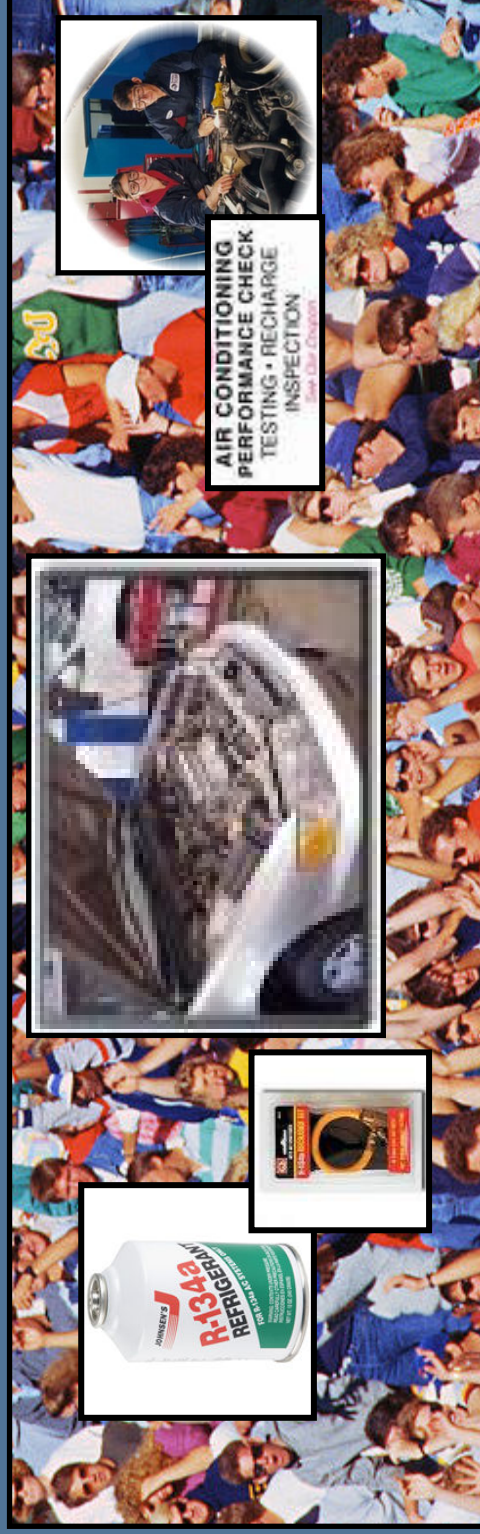


Automotive Refrigeration Products Institute

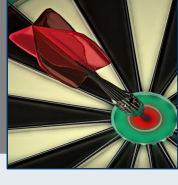


U.S. Consumer Buying Behaviors of R-134a Refrigerant for Light Vehicle Applications

September, 2006

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Background

Background

In 1995 vehicle manufacturers switched from using R-12 to R-134a as the refrigerant used in light vehicle applications for cabin cooling. The change was the result of legislation that deemed R-134a to be a more environmentally friendly substance than R-12. The result was the introduction of R-134a however, R134a when leaked into the environment contributes to rising CO2 and global warming.

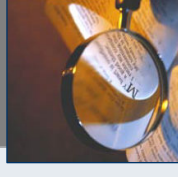
In 2005, approximately 23 million pounds of R-134a vehicle refrigerant were purchased by consumers in cans 12oz to 20oz in size for personal use in recharging light vehicle air conditioning systems.

In December 2005, the California Air Resources Board (CARB) released documentation relating to initiatives to reduce global warming. A recommendation is the removal of retail size cans of R-134a used for recharging vehicle air conditioning systems from the market.

R-134a manufacturers and distributors joined together to form ARPI and have gone on record as protesting this move. It is a right of the consumer to repair their own vehicle and the removal of this product from the marketplace penalizes those who can least afford costly air conditioning system repairs.

Research Objectives

The primary objectives of this study are to measure the demand for retail packaged R-134a, to establish the potential impact (i.e., financial and lifestyle burdens) caused by the unavailability of this product, and to examine the potential for improving product usage as an alternative to a product ban.



Methodology

- Frost & Sullivan completed a multi-method study to explore the issues associated with the potential retail sales ban of R-134a products. The present report contains the data and findings from an end-user analysis (i.e., do-it-yourselfers who use R-134a products) and a repair market analysis.

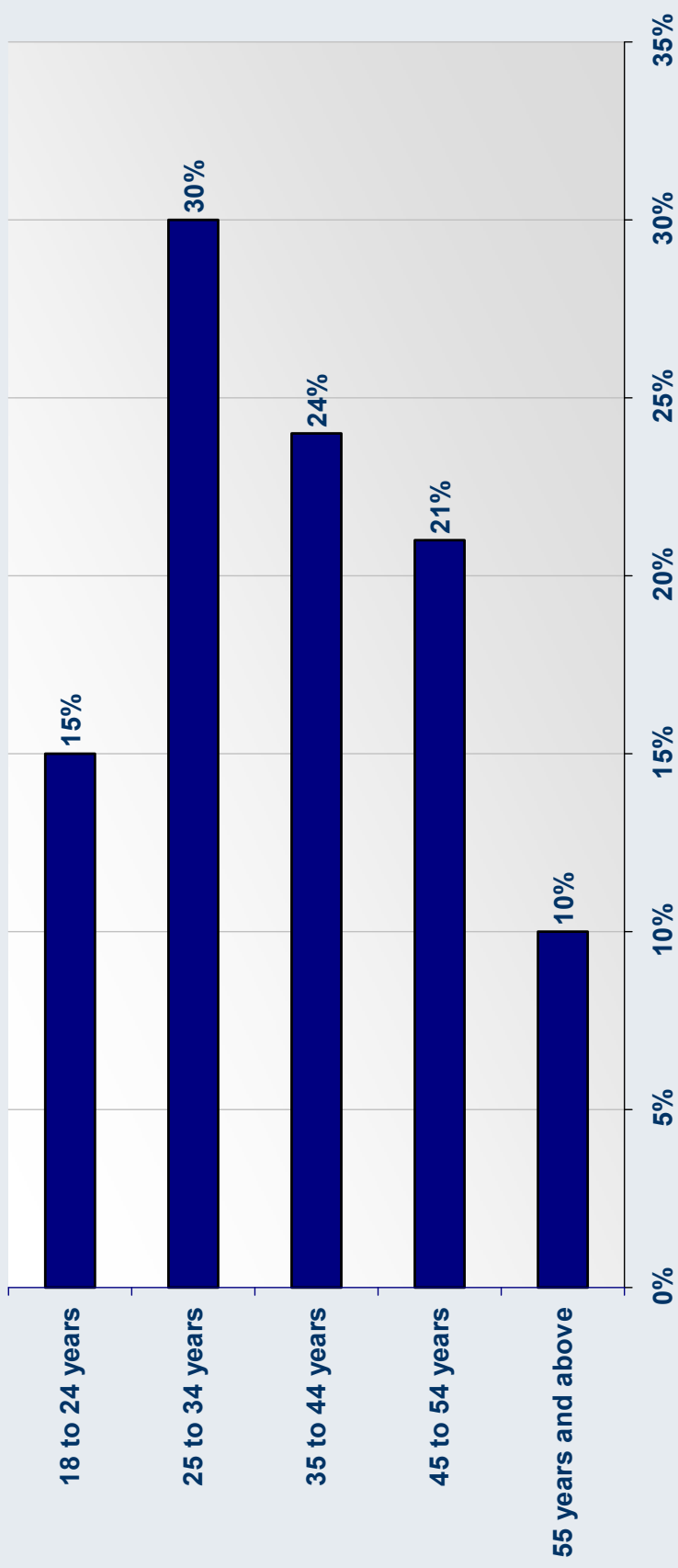
End-User Analysis:

- Eligibility was based on the following criteria:
 - U.S. residency;
 - Must own and be a decision-maker for the maintenance and repair of a light passenger vehicle;
 - Vehicle model years 1995-2005;
 - Must have personally performed refrigerant “recharge” on personal vehicle in the 12 months.
- The survey involved:
 - 400 end-users from California;
 - 600 end-users from a ‘National’ sample that included 150 respondents from each major geographic region (i.e., Northeast, South, Midwest, and West) and excluded respondents from California.
- Thus, the survey involved a total sample of 1,000 end-users.
- The sample was panel-based using equal-opportunity recruitment on the basis of the eligibility criteria detailed above.

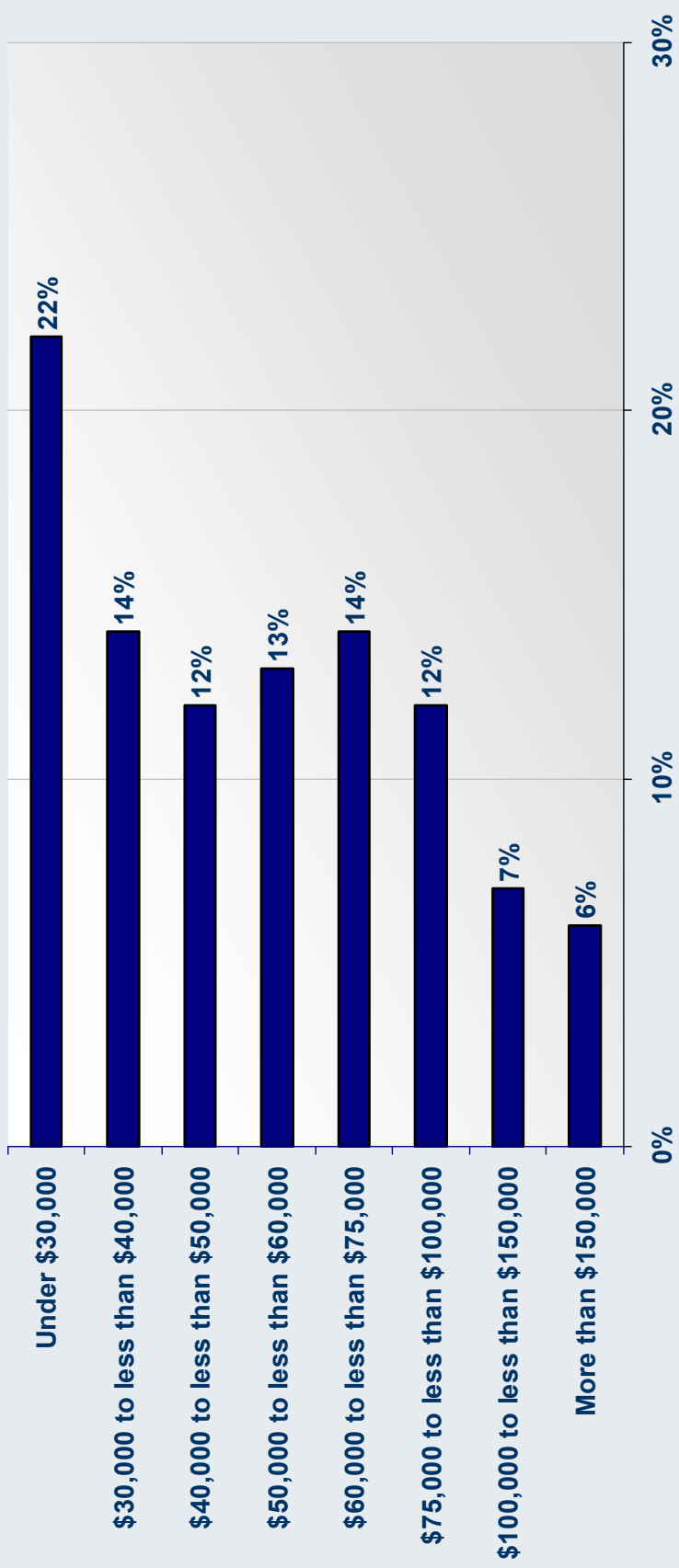
The Online Panel

- The online panel used for this survey was systematically constructed to mirror the composition of the general U.S. population.
- This online panel includes about 5 million individuals with an equal mix of males and females (57% married/common-law, 70% employed).
- Invitations to participate in this survey were sent in batches that were structured proportional to the composition of the online panel.
- That is to say, we let the composition of the online panel, which was designed to mirror the US population overall, guide the recruitment process.
- No attempt was made to over-represent individuals from low-incomes or other minority groups.
- In this manner, each member of the panel who has completed an R-134a recharge should have had an equal opportunity to be recruited.
- However, the observed composition of the present survey is therefore driven not only by the composition of R-134a product users but also survey completion rates in response to our invitation...which would also be true of a CATI survey or postage mail survey.

Panel Profile: Age



Panel Profile: Personal Income





Methodology

Repair Market Analysis:

- The second research module investigates the size of the A/C repair market and the costs of alternative solutions to DIY refrigerant recharge. This investigation attempted to identify and evaluate the economic impact of all possible alternatives including...

• **Mobile Air Conditioning Service Demand Factors:**

- *Demand for comfort;*
- *Rising vehicles in operation.*

• **Retail Analysis:**

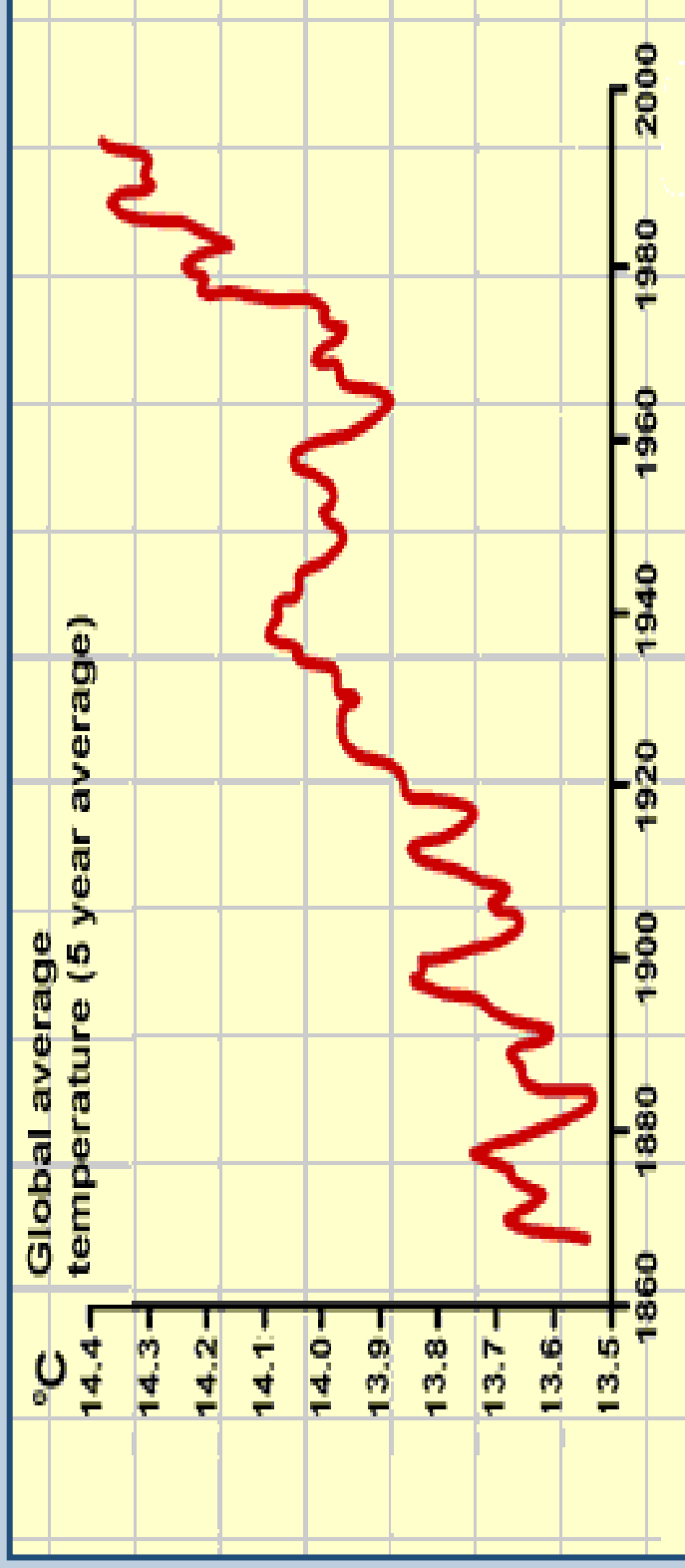
- *DIFM shop administered air conditioning refrigerant recharge;*
- *DIY R-134a refrigerant recharge average retail pricing;*
- *Consumer burden of legislation.*

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Consumer Demand For Comfort Features: High Temperatures

- Over the past 140 years, average global temperatures have increased by almost 0.9 degrees Celsius.
- With a large proportion of North America's population being in the Southern U.S., and with much of that southern geography experiencing temperatures above 16 degrees Celsius (60.8 Fahrenheit) throughout the year, consumers are looking for a comfort solution.



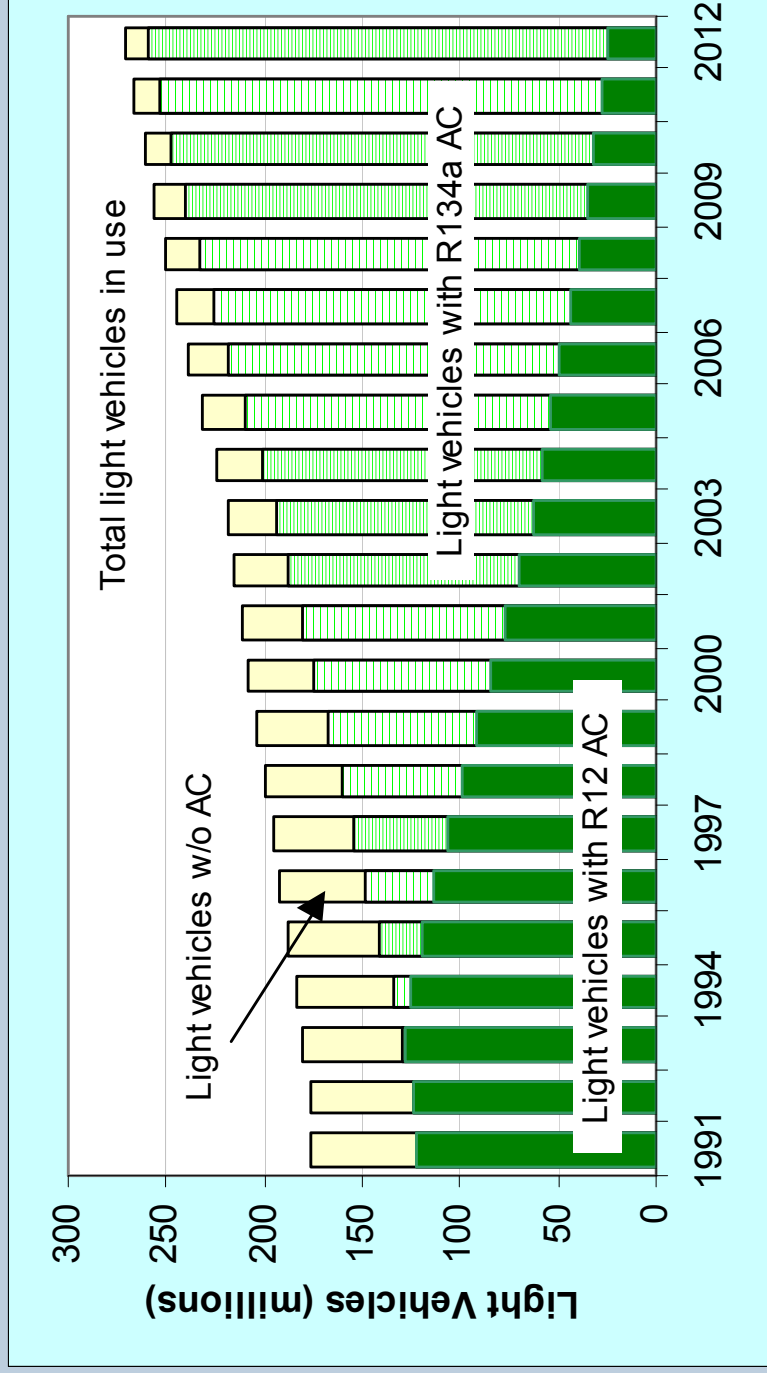
Consumer Demand For Comfort Features: Increased Vehicle Use

- Between 2002 and 2005, average mile usage of personal light vehicles rose at a average rate of 0.72% annually
- Between 2006 and 2012, average miles traveled is forecast to rise by a compound annual growth rate (CAGR) of 0.15%. The longer consumers spend in their vehicles and on commuter highways, the more inclined they are to seek out comfort features.



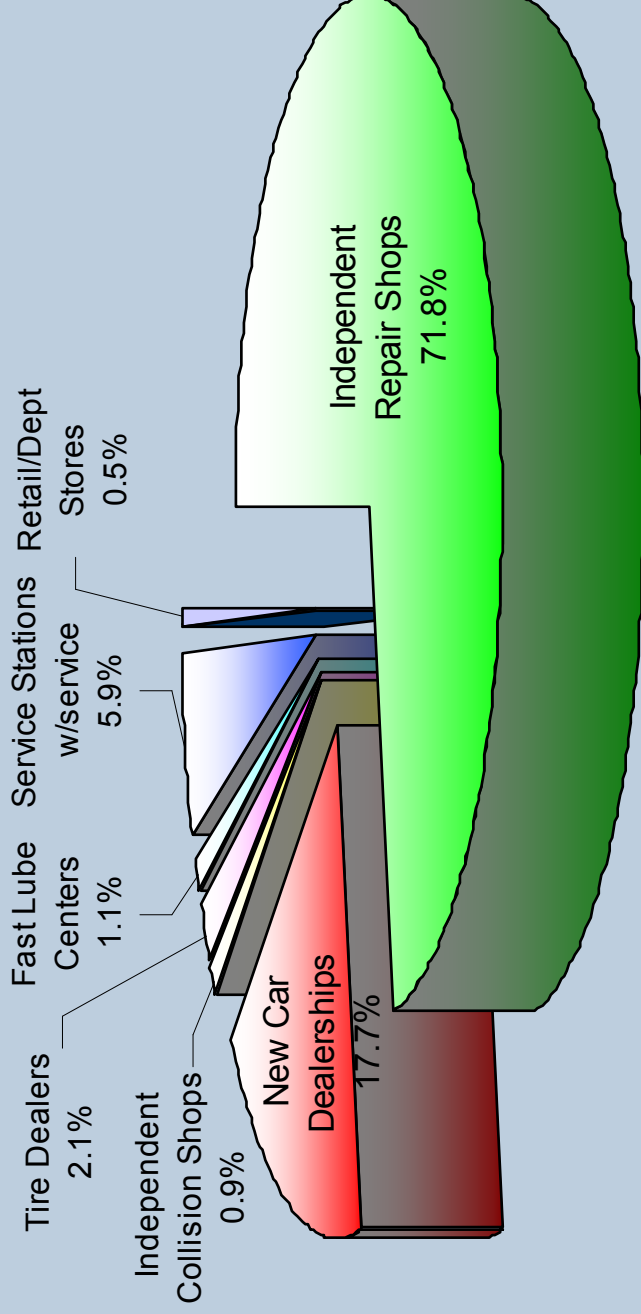
Consumer Demand For Comfort Features: A/C Equipped Vehicles

- In 2006, North America has approximately 238.4 million light vehicles in use with 91.6% (218.4 million) equipped with OE installed air conditioning and 77.6% (185 million) equipped with R-134a
- Both VIU and installation rates are anticipated to rise across the forecast period.



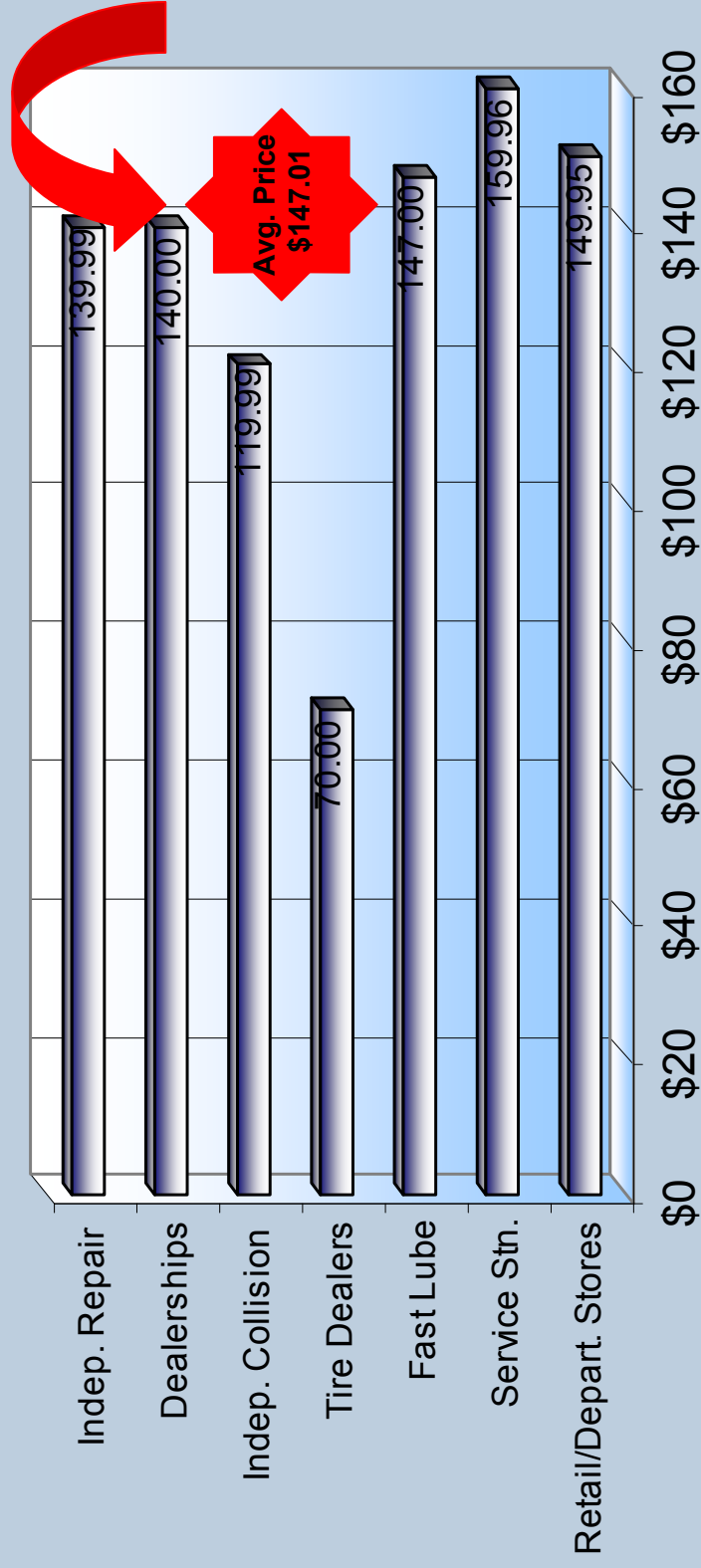
A/C Service Repair: Repair Locations

- In 2005, there were approximately 352,000 automotive service locations in North America with 48.6% of locations offering A/C service. The chart below demonstrates the percentage of revenues generated from A/C services by location type.



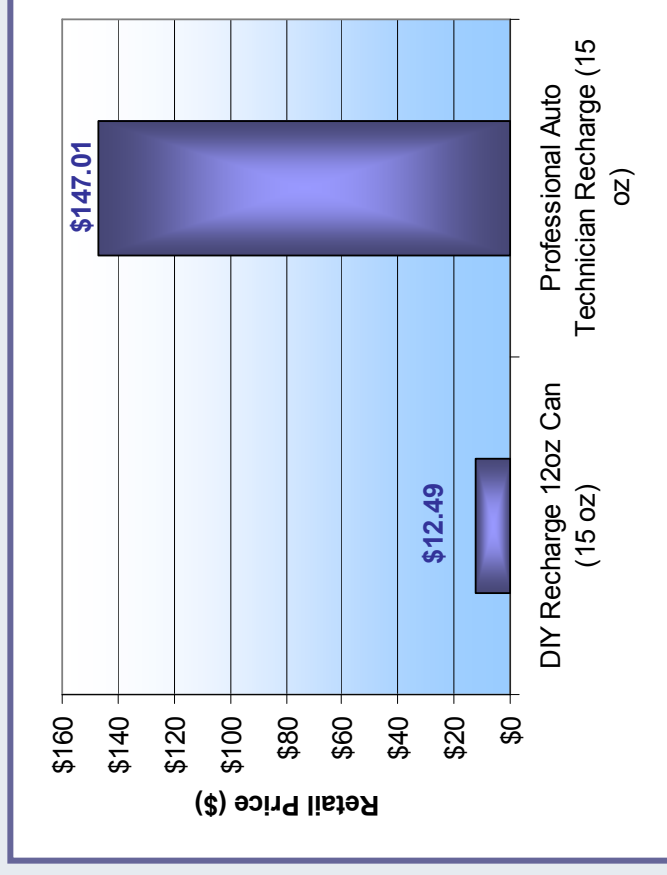
A/C Refrigerant Recharge: Average Weighted Cost per Recharge Job by Service Location

- Most locations perform a preliminary inspection. Some locations include the inspection as part of the service while others bill inspections separately. The retail price for inspection services range \$30 to \$49
- The weighted average cost of an A/C refrigerant recharge job in 2006 is \$147.01. Recharge services are available for as little as \$70 to as much as \$200. Prices vary by location type, geographical region, vehicle type, and the amount of refrigerant required



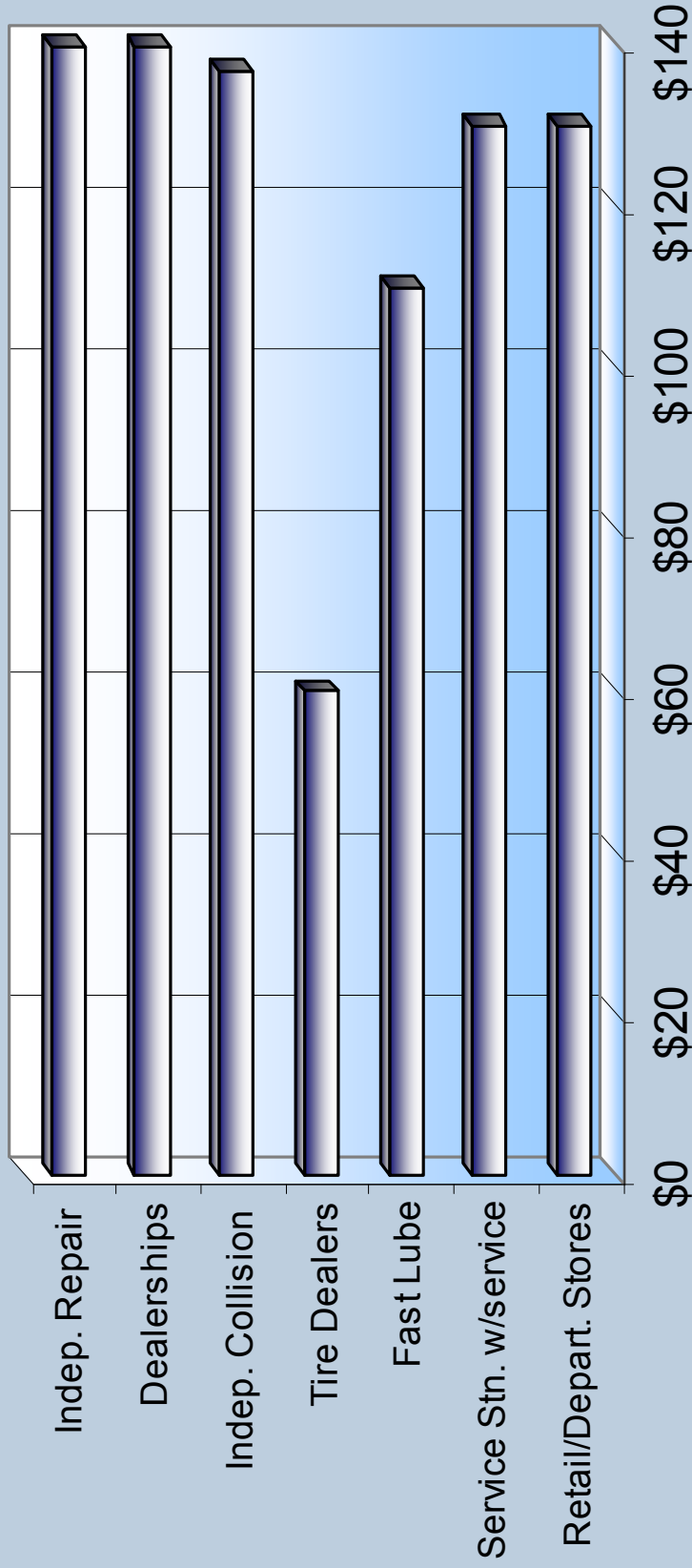
A/C Refrigerant Recharge: Cost Differential DIY versus DIFM

- Research indicated that the average amount of refrigerant added during a recharge is 15oz
- Consumers most common packaging choice for refrigerant is the 12oz can which had an average retail price of US \$9.99 in 2006
- The average retail price for recharge service through a Professional Auto Technician was \$147.01 in 2006. This price includes system inspection, recharge service and the cost of the refrigerant.
- The Do-It-Yourself consumer dollar outlay would increase by 1,177% for retail 12oz can purchasers should they be forced to obtain this service through the professional automotive repair channel
- Recharge kits are increasing in popularity. Each market participant's kit varies in content. Commonly included in kits are refrigerant (packaged in cans sized 6oz to 19oz), pag oil, stop leak, and fittings. More elaborate kits may include thermometers and gauges.



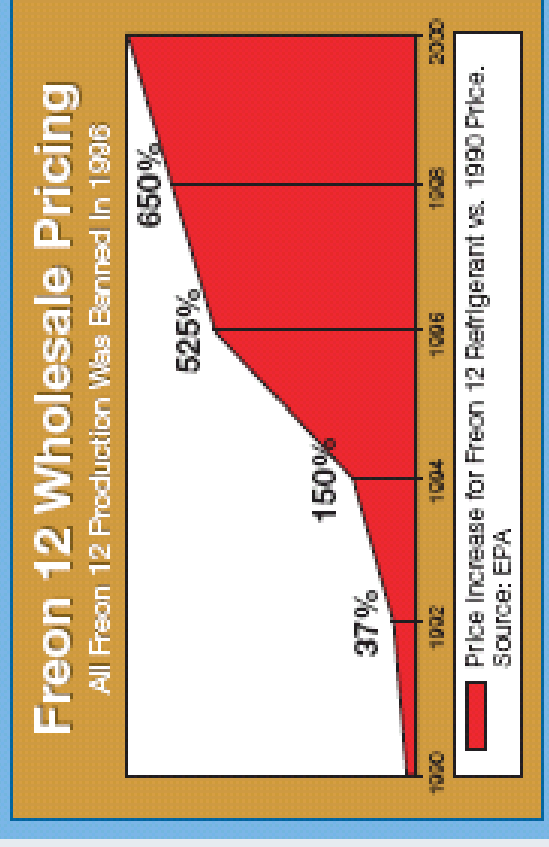
A/C Refrigerant Recharge: Consumer Burden Cost

- Should the legislation be enacted limiting consumer access to R-134a, consumers would bear additional cost burdens as outlined below.



A/C Refrigerant Recharge: Learning from the R-12 Experience

- Freon 12, the predecessor to R-134a for light vehicle cabin air conditioning refrigerant was discontinued in the U.S. in 1995 for its high ozone depletion potential
- Under Section 609 of the 1990 Clean Air Act Amendments, regulatory requirements were implemented for personnel and facilities servicing automobile A/C units. Penalties of up to \$25,000/day per violation can be levied and prison terms can be given to anyone who knowingly vents CFC-12 or HCFCs into the atmosphere
- Prices for R-12 rose so dramatically it soon became more economical for consumers to convert the vehicle to an R-134a system at an average cost of \$800 rather than recharge the system with R-12



Chlorofluorocarbons have become second only to narcotics as the biggest smuggling problem at some U.S. entry points since the United Nations' ban on manufacture in industrialized countries.

Source: Louisiana Department of Environmental Quality

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Impact Analysis: Introduction

- There are three key factors driving demand for R-134a refrigerant for light vehicle mobile air conditioning systems:
 - North American consumers have high demand for comfort features in vehicles;
 - Rising vehicle population equipped with R-134a based air conditioning systems;
 - High cost of professional recharge prompts less costly DIY alternatives.
- One of the primary objectives of this research is to examine the potential impact that banning the sale of R-134a from retail outlets might have on individuals who use this product.

Impact Analysis: Key Findings

California End-Users:

- The most important motivating reason to complete a DIY recharge was because it is less expensive than paying a professional.
 - DIYers appear to be highly motivated to eliminate unnecessary expenses as 6 in 10 respondents rated 'it is less expensive' as a 'very important' reason for completing this job themselves.
 - Providing convergent evidence to this effect, one-third of respondents indicated that the cost of professional work was the most important reason that they decided to start doing the job themselves.
- About two-thirds (68%) of respondents suggest that there is a price at which they would consider paying a professional to service their vehicle's AC system.
 - However, the mean reported acceptable price was about \$32, whereas the average market price is estimated to be just under \$150.
- About 1 in 10 respondents (12%) reported that they would likely have to go without a fully functional AC system if the retail sale of R-134a was banned.
 - Moreover, because only about one-quarter of respondents (26%) estimated the current market price for a professional service to be \$80 or more, we suspect that an even greater proportion of DIYers would not be able to afford or justify the cost of professional work.
- About 4 in 10 respondents (39%) suggested that they would look into other ways of obtaining R-134a.

Impact Analysis: Key Findings

Considering the most vulnerable end-users from California (i.e., those reporting personal incomes less than \$30,000):

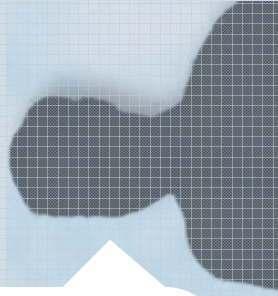
- Almost three-quarters of these respondents reported that saving money was a ‘very important’ motivating reason for completing the job themselves.
- About one-third (32%) voiced testimonials expressing concern or displeasure with the notion of a retail sales ban of R-134a.
- About one-quarter (24%) voiced testimonials specifically expressing concern about the financial burden that the added expense of paying a professional would impose upon them.
- A greater proportion of these respondents suggested that they would look for other ways of obtaining R-134a (49%) than pay a professional (41%).

As we shall see, oftentimes the respondents speak best for themselves....

Testimonials* from those Affected...

*Testimonials presented verbatim and unedited in any way. Testimonials were recorded in response to Q29, see slide 31.

“Freaking ridiculous. A lot of people don’t have the money to pay for shops to fix their cars. Dealerships already overcharge and hold a monopoly on vehicles for close to 2 years it’s hard enough for people now you don’t need to make things worse by lining your pockets.”



Ethnicity: **Caucasian**

Gender: **Male**

Age: **18 to 29 years**

Marital Status: **Single**

Employment Status: **Unemployed**

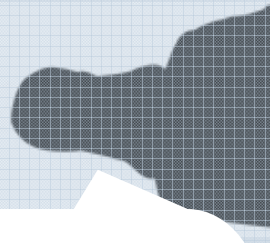
Education: **Some college/university**

Personal Income: **Under \$20,000**

Household Income: **NA**

Reaction to Product Ban: **I would likely go without a fully functional air-conditioning system**

I would be very upset. Its cheaper for me to do it myself. My husband is the one that taught me how to recharge it. It has only needed it once and it gets really hot here in california and i'm pregnant with my first child and as everyone knows babies are expensive and they need to stay in a cooler temperature. I don't know if we'd be able to afford to take it to a professional every time and its important to me to keep my baby safe. So hopefully it wont be discontinued.



Ethnicity: **Hispanic**

Gender: **Female**

Age: **18 to 29 years**

Marital Status: **Married/Common-law**

Employment Status: **Homemaker**

Education: **Some college/university**

Personal Income: **Under \$20,000**

Household Income: **Under \$30,000**

Reaction to Product Ban: **I would pay a professional automotive technician to service my air-conditioning system**

Testimonials* from those Affected...

*Testimonials presented verbatim and unedited in any way. Testimonials were recorded in response to Q29, see slide 31.

“It would make me do something that is agence the law just because some that don’t know wht he is doing gets in trouble working the product and or storing it. If someone know what he his doing and is capable of doing the work with this product the he or she should beabled to do so without the government getting involved.”

Ethnicity: **Caucasian**

Gender: **Male**

Age: **40 to 49 years**

Marital Status: **Divorced/Separated/Widowed**

Employment Status: **Unemployed**

Education: **Some college/university**

Personal Income: **Under \$20,000**

Household Income: **NA**

Reaction to Product Ban: **I would look into other ways of obtaining R-134a**

“It would mean I would be FORCED to go to a dealer or service station and that would cost twice as much than me doing it myself. Again my rights would be taken away.”

Ethnicity: **Some other ethnicity – ‘Mixed’**

Gender: **Female**

Age: **30 to 30 years**

Marital Status: **Divorced/Separated/Widowed**

Employment Status: **Homemaker**

Education: **Post graduate or professional degree**

Personal Income: **\$20,000 to less than \$30,000**

Household Income: **NA**

Reaction to Product Ban: **I would look into other ways of obtaining R-134a**

Testimonials* from those Affected...

*Testimonials presented verbatim and unedited in any way. Testimonials were recorded in response to Q29, see slide 31.

"IT WILL MEANS THAT I WILL STRUGGLE AND SPEND MORE MONEY FINDING THE PRODUCT WHICH IS THE MAIN REASON I PERFORMED THE JOB MYSELF. A PROFESSIONAL TECHNICIAN TAKES MANY HOURS TO COMPLETE THE JOB AND CHARGES SO MUCH."

Ethnicity: **Hispanic**

Gender: **Male**

Age: **18 to 29 years**

Marital Status: **Single**

Employment Status: **Student**

Education: **Some college/university**

Personal Income: **Under \$20,000**

Household Income: **NA**

Reaction to Product Ban: **I would look into other ways of obtaining R-134a**

"I am not sure why it would discontinue the sale of r-134 for people who has low income, some of them can install by themselves since most of them couldnt afford the full price at dealer since its ripped off the price."

Ethnicity: **Caucasian**

Gender: **Female**

Age: **30 to 39 years**

Marital Status: **Married/Common-law**

Employment Status: **Employed part-time**

Education: **Completed college/university**

Personal Income: **\$20,000 to less than \$30,000**

Household Income: **\$40,000 to less than \$50,000**

Reaction to Product Ban: **I would look into other ways of obtaining R-134a**

Testimonials* from those Affected...

*Testimonials presented verbatim and unedited in any way. Testimonials were recorded in response to Q29, see slide 31.

"I would cause that professionals that do this service increase dramatically their all ready high prices since people will pay anything for the comfort of having air-conditioning in their cars. people who cant afford to hire a professional to do this service done for them would suffer the most. they would have to go about without air-conditioning!"

Ethnicity: **Caucasian**

Gender: **Male**

Age: **18 to 29 years**

Marital Status: **Single**

Employment Status: **Student**

Education: **Some college/university**

Personal Income: **Under \$20,000**

Household Income: **NA**

Reaction to Product Ban: **I would look into other ways of obtaining R-134a**

"If I couldn't get the r134a refrigerant I would have to go without air conditioning or trade my vehicle in for something with working air conditioning."

Ethnicity: **Caucasian**

Gender: **Male**

Age: **30 to 39 years**

Marital Status: **Single**

Employment Status: **Homemaker**

Education: **Some high school**

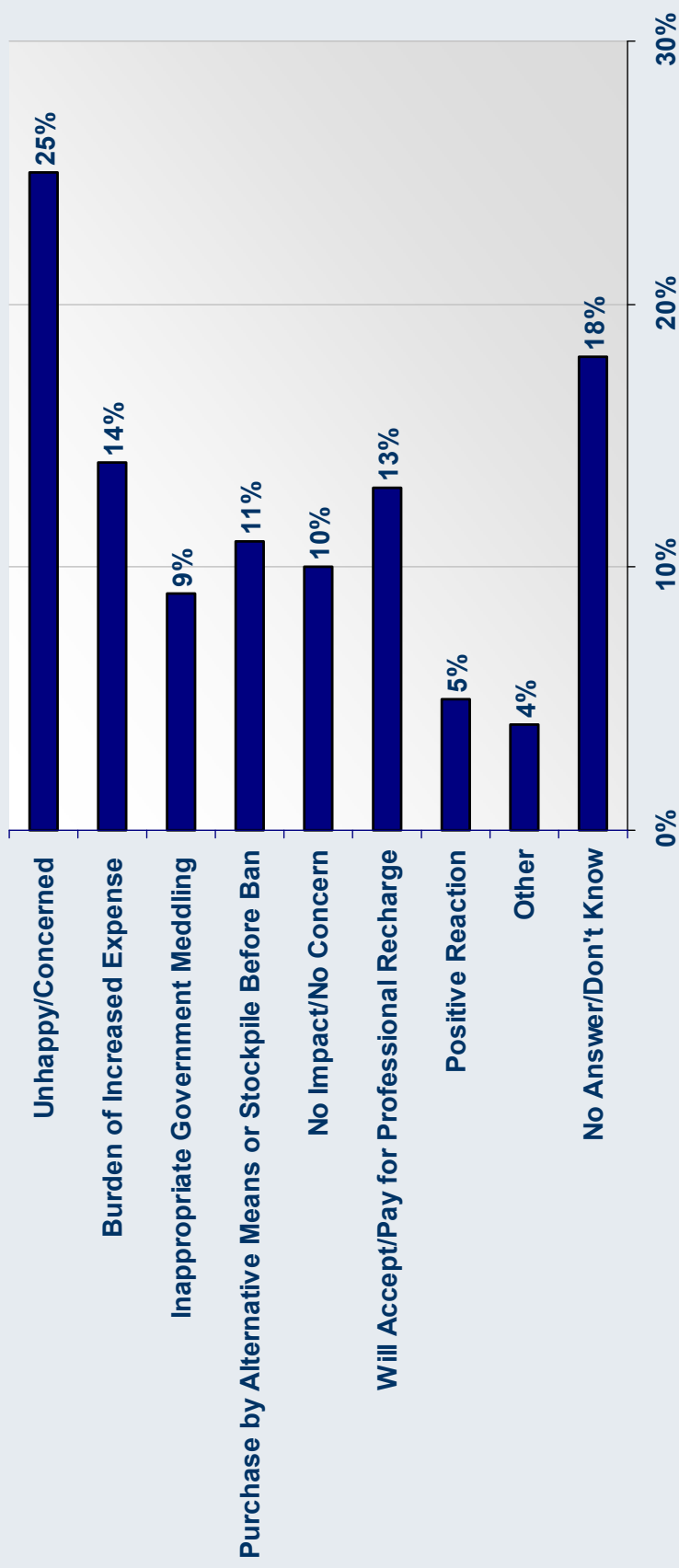
Personal Income: **Under \$20,000**

Household Income: **NA**

Reaction to Product Ban: **I would look into other ways of obtaining R-134a**

Testimonials* Coded by Response Category

Overall, a quarter of respondents voiced that they would be unhappy or concerned if the sale of R-134a was discontinued. Fourteen percent cited issues related to the potential financial burden caused by the increased expense of paying a professional. About 1 in 10 respondents (9%) mentioned issues related to inappropriate government meddling and a similar proportion (11%) suggested that they would consider alternative means to acquire R-134a. Note: Verbatim responses were coded by a third-party, blind to the specific purpose of the research.



Q29. We would like to better understand your opinions on the potential impact that discontinuing the sale of R-134a might have. What would this mean to you? Please be as specific as possible. CA respondents n=400.

Testimonials Coded by Response Category

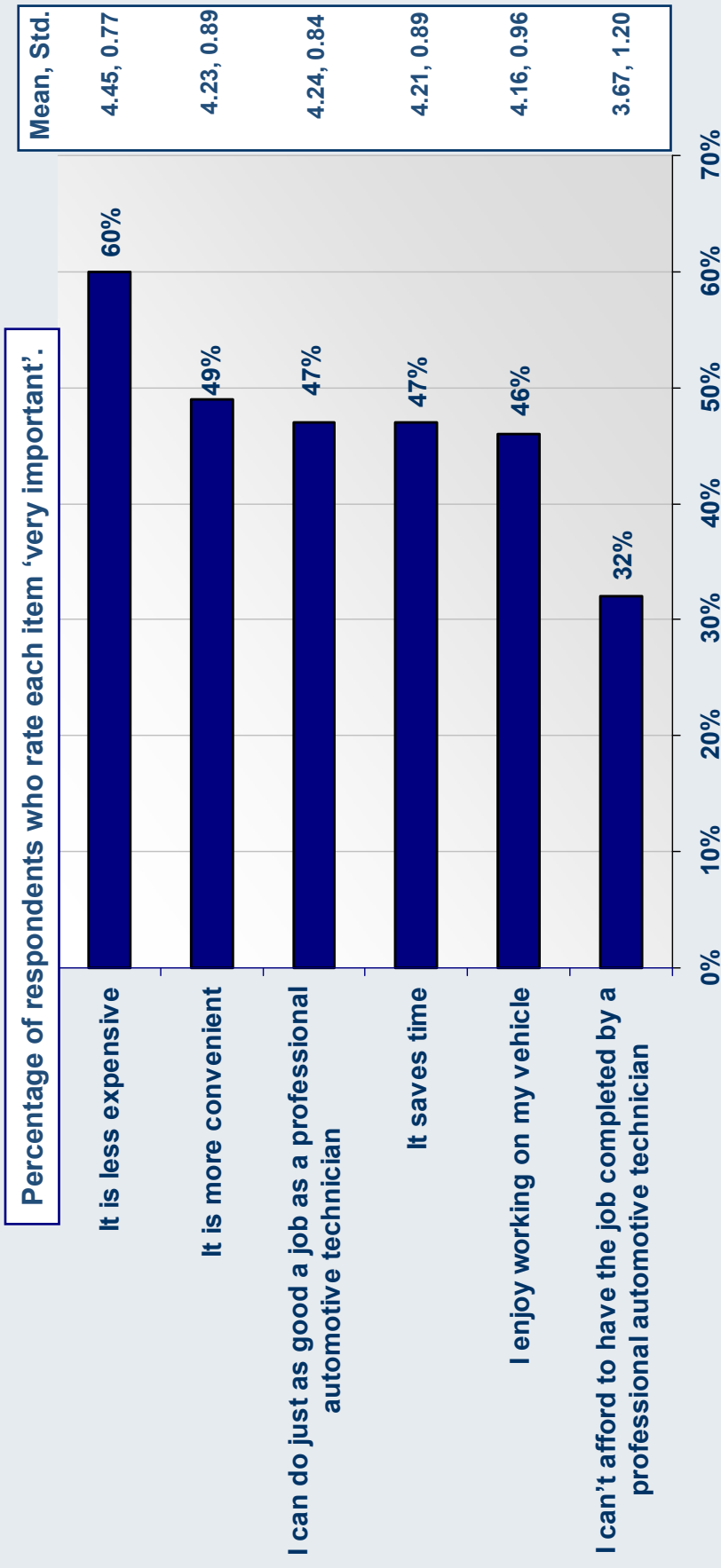
Examined by personal income, two trends emerge. Highlighting the heightened importance of this issue to lower income consumers, respondents who earn less than \$30,000 were slightly more likely to voice unhappiness or concern and mention issues directly related to the financial burden of the increased expense of paying a professional compared to respondents with higher incomes. Note: Verbatim responses were coded by a third-party blind to the specific purpose of the research.

	Total	Personal Income		Motivated to Save Money			
		Less than \$30,000	\$30,000 to less than \$50,000	Most Important Reason	One of Most Important Reasons	Not an Important Reason	
Base:	400	88	96	216	136	144	120
	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Unhappy/Concerned	25	32	23	22	25	25	25
Burden of Increased Expense	14	24	7	13	21	13	8
Inappropriate Government Meddling	9	10	9	9	7	12	8
Purchase by Alternative Means or Stockpile	11	7	13	13	10	10	14
No Impact/No Concern	10	9	11	10	4	11	16
Will Accept/Pay for Professional Recharge	13	11	11	15	12	13	16
Positive Reaction	5	3	6	6	6	6	3
Other	4	2	3	6	3	3	8
No Answer/Don't Know	18	18	20	17	21	19	14

Q29. We would like to better understand your opinions on the potential impact that discontinuing the sale of R-134a might have. What would this mean to you? Please be as specific as possible. CA respondents n=400.

Motivation for DIY Recharge

DIYers appear to be highly motivated to reduce expenses as 6 in 10 respondents rated 'It is less expensive' as a 'very important' reason for completing this job themselves. Statistical analyses confirmed that the importance of 'It is less expensive' was rated significantly higher than all other motivating factors.



Q11. We will show you a list of reasons that could be used to indicate why some people like you choose to complete this job themselves. How important is each of these reasons is to you? CA respondents n=400.

Motivation for DIY Recharge

Examined by personal income, we observe a significant directional trend with respondents with incomes less than \$30,000 more frequently citing 'it is less expensive' as a 'very important' motivating factor than respondents with incomes greater than \$50,000 (73% vs. 56%, respectively). There is also a marginal directional trend that suggests that respondents with incomes less than \$30,000 more frequently cite 'I can't afford to have the job completed by a professional automotive technician as a 'very important' motivating factor than respondents with incomes greater than \$50,000 (42% vs. 29%, respectively).

	Total	Personal Income	
		Less than \$30,000	\$30,000 to less than \$50,000
Percentage of respondents who rate each item 'very important'.			
<i>Base:</i>	400	88	96
	(%)	(%)	(%)
It is less expensive	60	73	57
It is more convenient	49	56	38
I can do just as good a job as a professional automotive technician	47	51	34
It saves time	47	50	40
I enjoy working on my vehicle	46	47	38
I can't afford to have the job completed by a professional automotive technician	32	42	29

Q11. We will show you a list of reasons that could be used to indicate why some people like you choose to complete this job themselves. How important is each of these reasons is to you? CA respondents n=400.

Motivation for DIY Recharge

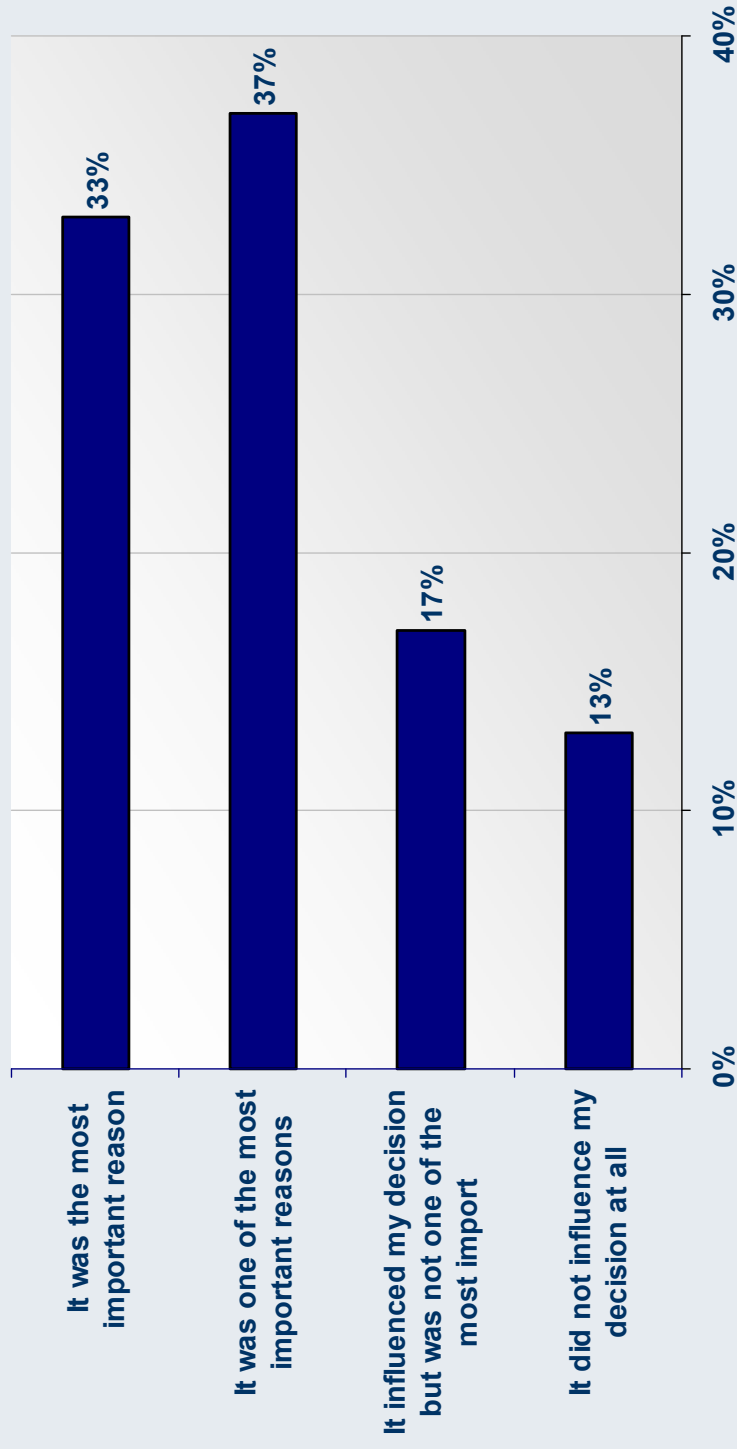
Analyses confirm that respondents with incomes less than \$30,000 rated 'It is less expensive' and 'I can't afford to have the job completed by a professional automotive technician' to be of higher importance than respondents from higher incomes (i.e., those with incomes greater than \$50,000).

	Total	Personal Income		
		Less than \$30,000	\$30,000 to less than \$50,000	More than \$50,000
Mean importance ratings. Std provided in parenthesis.				
<i>Base:</i>	400	88	96	216
	(%)	(%)	(%)	(%)
It is less expensive	4.45	4.64	4.44	4.38
	(0.77)	(0.68)	(0.74)	(0.82)
I can't afford to have the job completed by a professional automotive technician	3.67	3.93	3.72	3.53
	(1.20)	(1.18)	(1.07)	(1.25)

Q11. We will show you a list of reasons that could be used to indicate why some people like you choose to complete this job themselves. How important is each of these reasons is to you? CA respondents n=400.

Motivation for DIY Recharge: Cost of Professional Work

One-third of respondents indicated that the cost of professional work was the most important reason that they decided to start doing the job themselves. Moreover, the cost of professional service influenced approximately 9 in 10 respondents' (87%) decision.



Q17. To what extent did the cost of having this work completed by a professional automotive technician influence your decision to start doing this type of work yourself? CA respondents n=375.

Motivation for DIY Recharge: Cost of Professional Work

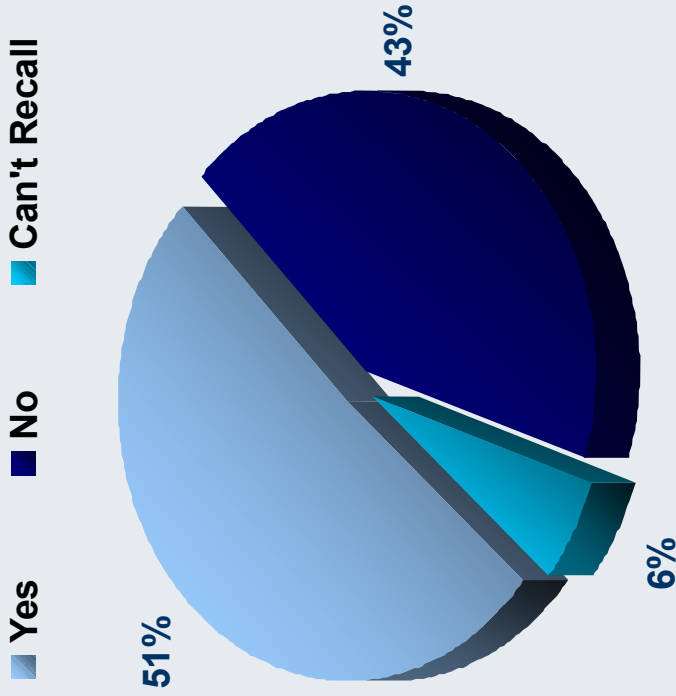
The pattern of responses did not vary by personal income level. However, respondents who indicated that they would likely have to go without a fully functional AC system or find alternative means to acquire R-134a were significantly more likely to state that cost was the most important reason to start doing this job themselves compared to respondents who suggested that they would likely pay a professional if R-134a was banned.

	Total	Reaction to Product Removal	
		Likely Pay Professional	Likely Go Without/ Find Alternatives
<i>Base:</i>	375	184	191
	(%)	(%)	(%)
It was the most important reason	33	24	41
It was one of the most important reasons	37	39	35
It influenced my decision but was not one of the most important reasons	17	22	12
It did not influence my decision at all	13	15	12

Q17. To what extent did the cost of having this work completed by a professional automotive technician influence your decision to start doing this type of work yourself? CA respondents n=375.

Incidence of Past Professional Recharge Among Current DIYers

Only about half the respondents (51%) reported they had ever paid for a professional recharge in the past. This proportion was slightly lower (i.e., 43%) among respondents who earn less than \$30,000.

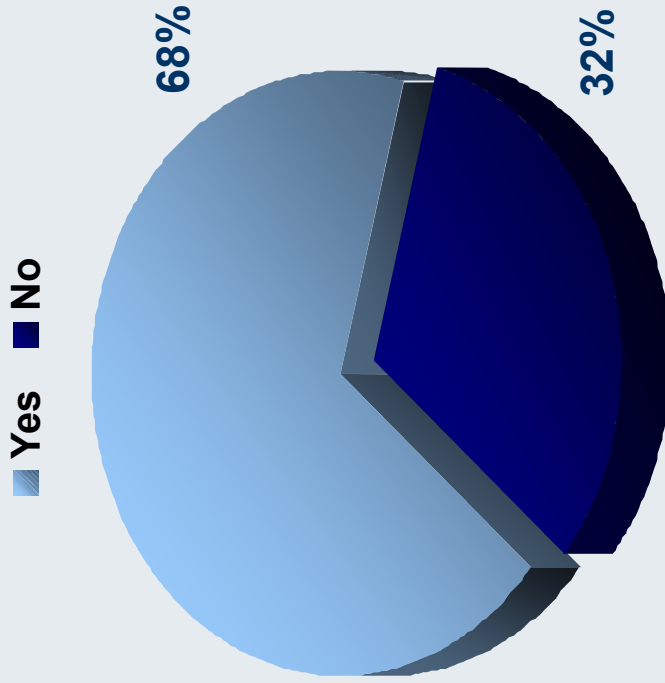


	Total	Personal Income		
		Less than \$30,000	\$30,000 to less than \$50,000	More than \$50,000
Base:	400	88	96	216
	(%)	(%)	(%)	(%)
Yes	51	43	55	52
No	43	48	42	42
Can't recall	6	9	3	6

Q16. Have you ever had your current vehicle's or a previous vehicle's air conditioning system recharged by a professional automotive technician (e.g., at your dealer or an automotive service center)? CA respondents n=400.

Acceptable Price for Professional Recharge

About one-third of respondents (32%) reported that there is no price at which they would consider having their AC system professionally recharged. This proportion increases to about 4 in 10 (41%) among respondents who earn less than \$30,000.

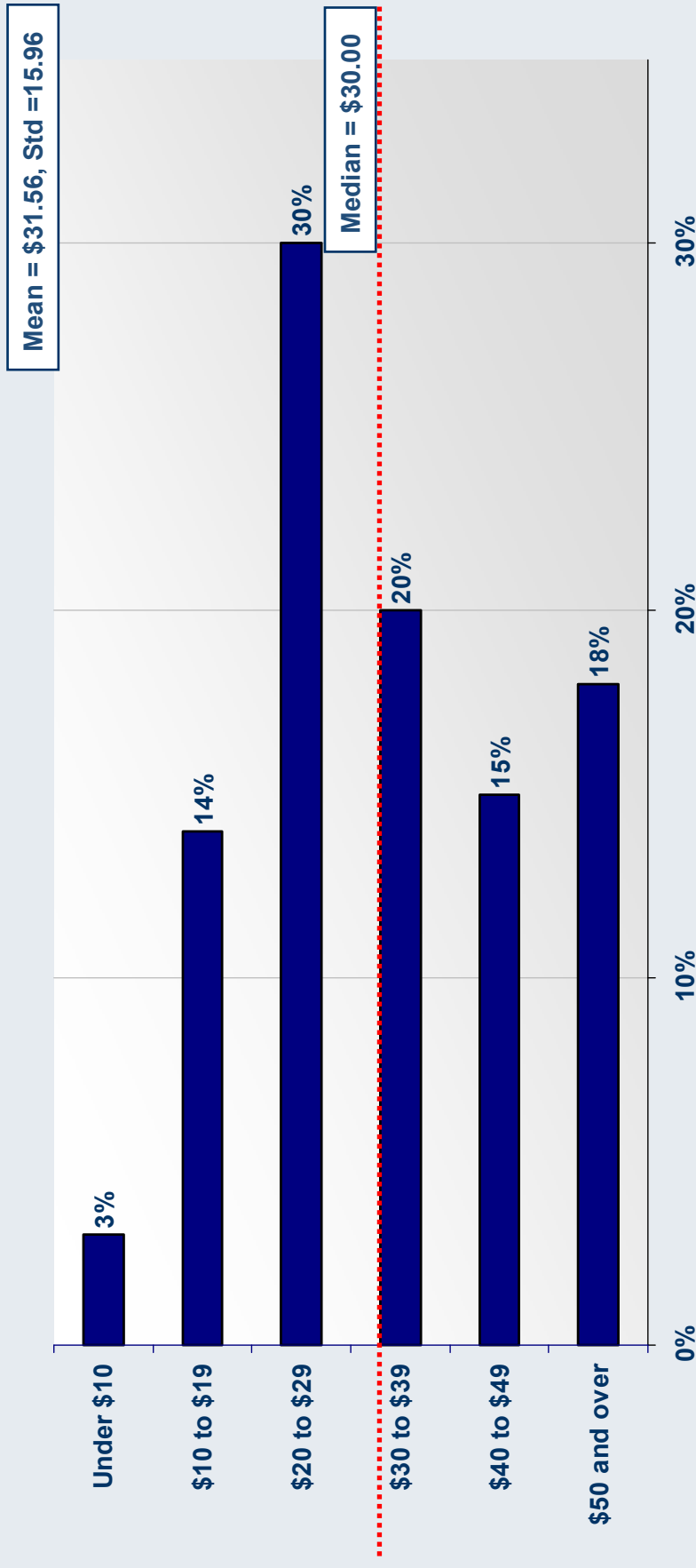


	Total	Personal Income		
		Less than \$30,000	\$30,000 to less than \$50,000	More than \$50,000
Base:	400	88	96	216
	(%)	(%)	(%)	(%)
Yes	68	59	68	71
No	32	41	32	29

Q19. Is there a price at which you would consider having your air conditioning refrigerant recharged by a professional automotive technician? CA respondents n=400.

Willingness to Pay for Professional Work

Among respondents who would consider paying for a professional recharge for a professional technician, the mean price of entry appears to be about \$30 (\$31.56). Research on market prices for professional services revealed that prices range from \$70.00 to \$200.00 depending on location, vehicle type, and amount of refrigerant required (weighted mean = \$147.01). There is a great divide, therefore, between willingness to pay and market price (i.e., \$32.56 vs. \$147.01).



Q19b. Ok, at what price would you consider having this job completed by a professional automotive technician? CA respondents n=269.

Willingness to Pay for Professional Work

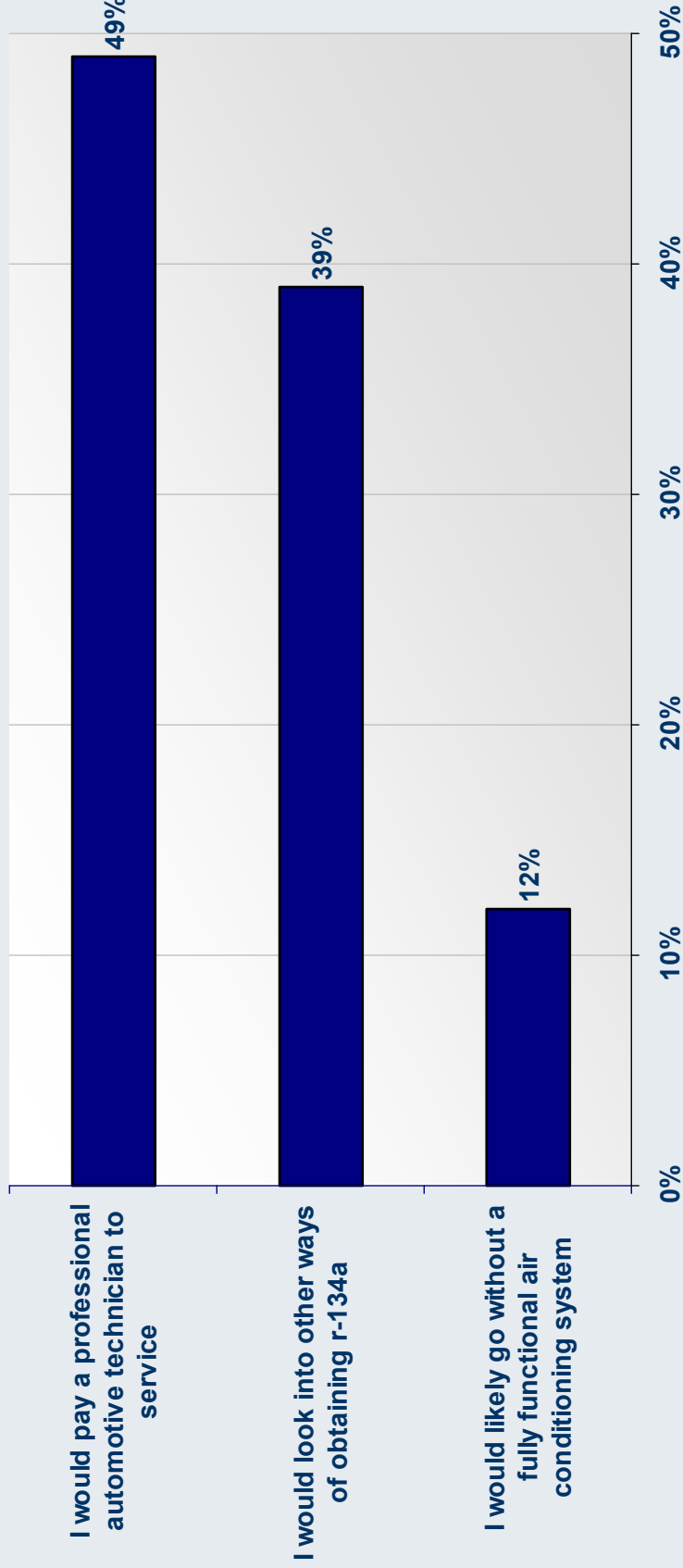
Examined by income, a directional trend emerges with respondents with incomes less than \$30,000 reporting lower acceptable price points than respondents with higher incomes.

	Total	Personal Income		
		Less than \$30,000	\$30,000 to less than \$50,000	More than \$50,000
<i>Base:</i>	269	51	65	153
	(%)	(%)	(%)	(%)
Under \$20	17	25	11	17
\$20 to \$29	30	35	28	30
\$30 to \$39	20	12	23	21
\$40 to \$49	15	10	15	16
\$50 and over	18	18	23	16
<i>Mean</i>	31.44	27.74	34.78	31.47
<i>Std.</i>	15.96	15.13	16.25	15.73

Q19b. Ok, at what price would you consider having this job completed by a professional automotive technician? CA respondents n=269.

Possible Outcomes to R-134a Retail Sales Ban

About half the respondents (51%) suggested that they would not pay for professional work. About 4 in 10 respondents (39%) suggested that they would look into other ways of obtaining R-134a and about 1 in 10 (12%) suggested they would have to go without a fully functional AC system.



Q28a. If for some reason it became illegal in your state to sell cans of R-134a to do-it-yourselfers like you, how would you choose to maintain your vehicle's air conditioning system assuming this was required? CA respondents n=400.

Possible Outcomes to R-134a Retail Sales Ban

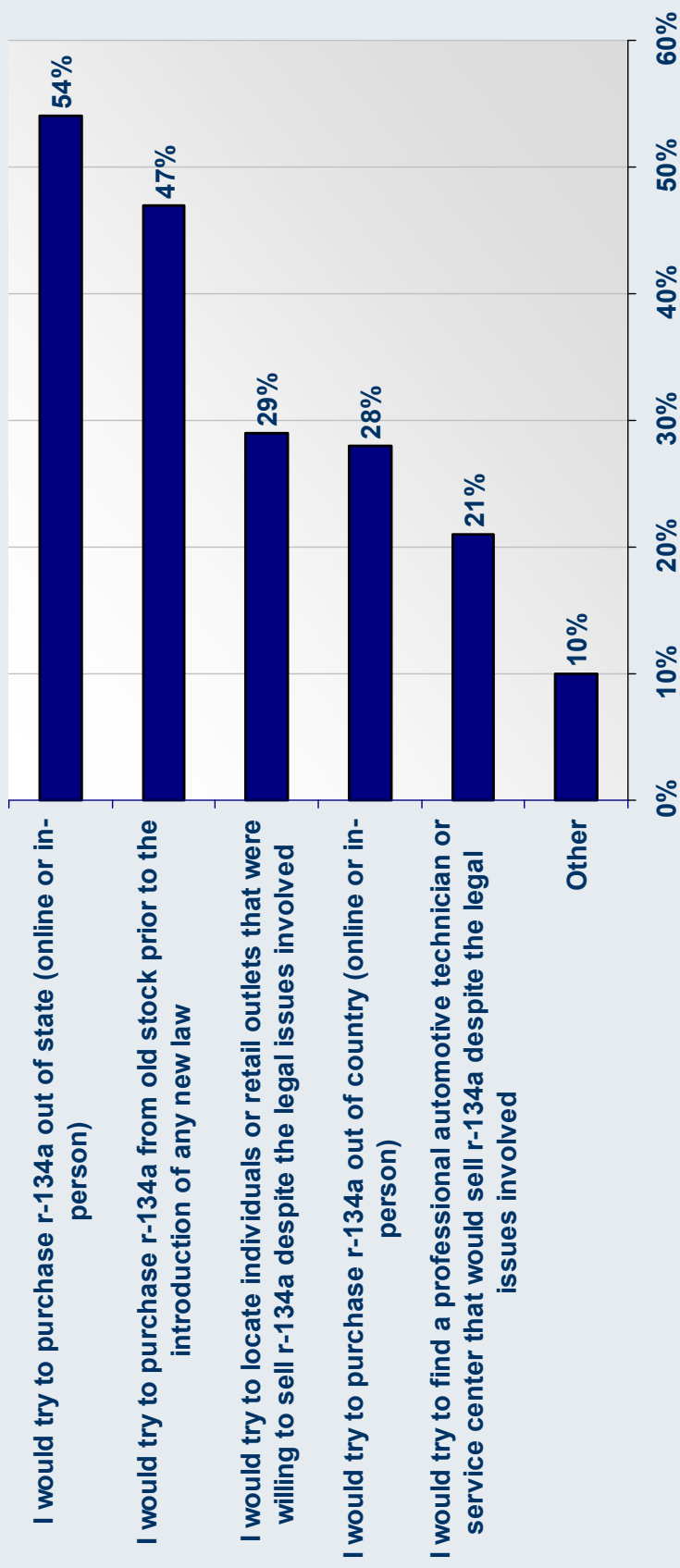
Examined by personal income, respondents who earn less than \$30,000 appear to be more likely to look into other ways of obtaining R-134a (and less likely to pay for professional work than respondents with higher personal incomes. Particularly striking, when examined by the importance of saving money as a motivating factor for completing DIY recharges, almost half the respondents who indicated that saving money was the most important reason (46%) indicated that they would likely go without a fully functional AC system.

	Total	Personal Income		Motivated to Save Money		
		Less than \$30,000	\$30,000 to less than \$50,000	Most Important Reason	One of Most Important Reasons	Not an Important Reason
<i>Base:</i>	400	88	96	136	144	120
	(%)	(%)	(%)	(%)	(%)	(%)
I would pay a professional automotive technician to service	49	41	51	36	53	58
I would likely go without a fully functional air conditioning system	12	10	10	46	36	35
I would look into other ways of obtaining R-134a	39	49	39	18	11	7

Q28a. If for some reason it became illegal in your state to sell cans of R-134a to do-it-yourselfers like you, how would you choose to maintain your vehicle's air conditioning system assuming this was required? CA respondents n=400.

Reported Alternative Ways of Obtaining R-134a

Among respondents who suggested that they would look for alternative ways to obtain R-134a, slightly more than half (54%) stated they would try to purchase the product out of state and nearly a similar proportion (47%) suggested they would attempt to stockpile R-134a prior to a sales ban.



Q28b. You mentioned that you would look into other ways of obtaining R-134a if do-it-yourselfers like you were unable to purchase it in your state. Which of the following would you most likely try to do? Select all that apply. CA respondents n=156.

Reported Alternative Ways of Obtaining R-134a

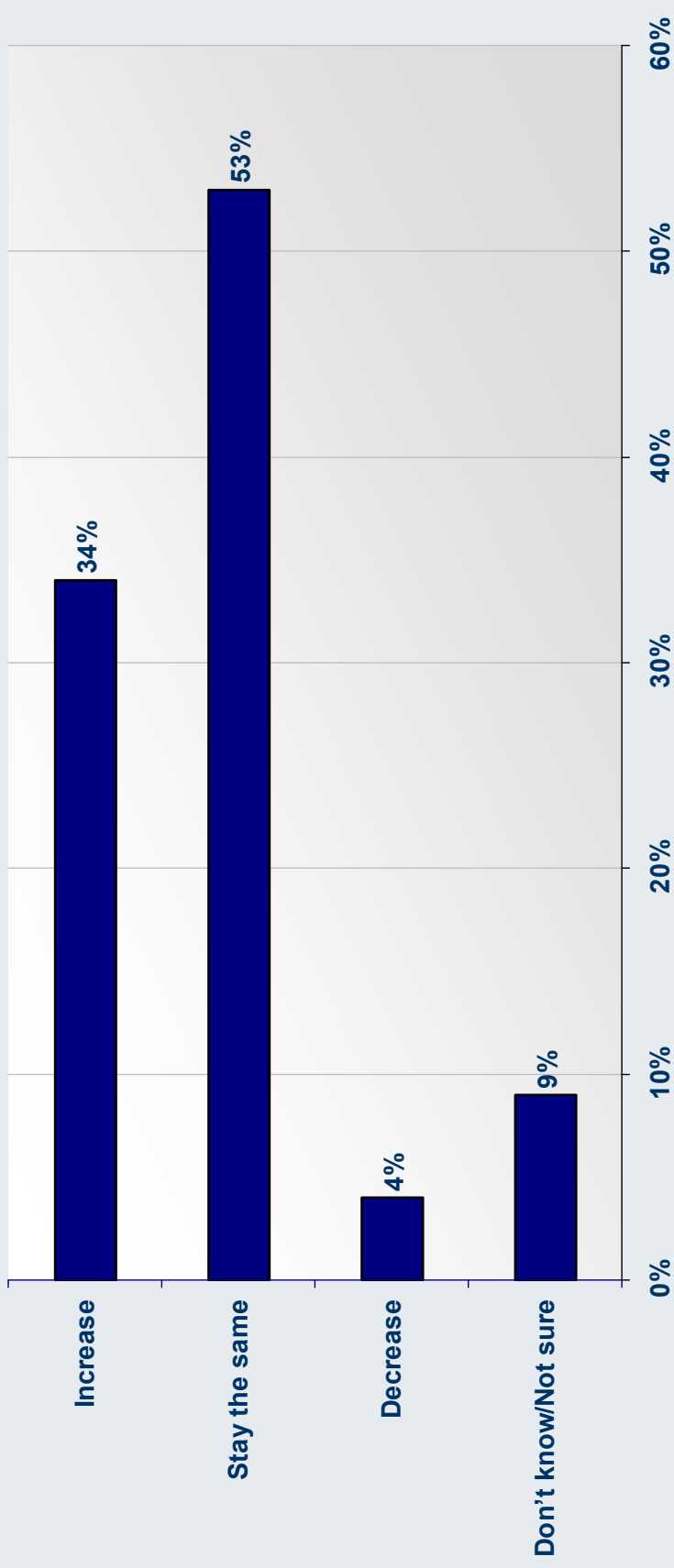
Examined by personal income, slightly higher proportions of respondents with incomes less than \$30,000 suggest that they would try to purchase R-134a out of state or try to stockpile the product prior to a sales ban compared to respondents with higher incomes.

	Total	Personal Income	
		Less than \$30,000	More than \$30,000
Base:	156	43	37
	(%)	(%)	(%)
I would try to purchase R-134a out of state	54	63	46
I would try to purchase R-134a from old stock prior to the introduction of any new law	47	53	43
I would try to locate individuals or retail outlets that were willing to sell R-134a despite the legal issues involved	29	30	24
I would try to purchase R-134a out of country	28	30	35
I would try to find a professional automotive technician or service center that would sell R-134a despite the legal issues involved	21	28	16
Other	10	5	8
			13

Q28b. You mentioned that you would look into other ways of obtaining R-134a if DIYers like you were unable to purchase it in your state. Which of the following would you most likely try to do? Select all that apply. CA respondents n=156.

Negative Impact on Product Usage

Among respondents who suggested that they would look for alternative ways to obtain R-134a, one-third report that they think obtaining R-134a by such alternative means is likely to increase the misuse of the product.



Q28c. In your opinion, do you think that having to purchase R-134a by these means would contribute to problems using the product (i.e., misapplication or improper use)? I think the number of problems would likely ... CA respondents n=156.

Respondent Profile: DIY Behavior

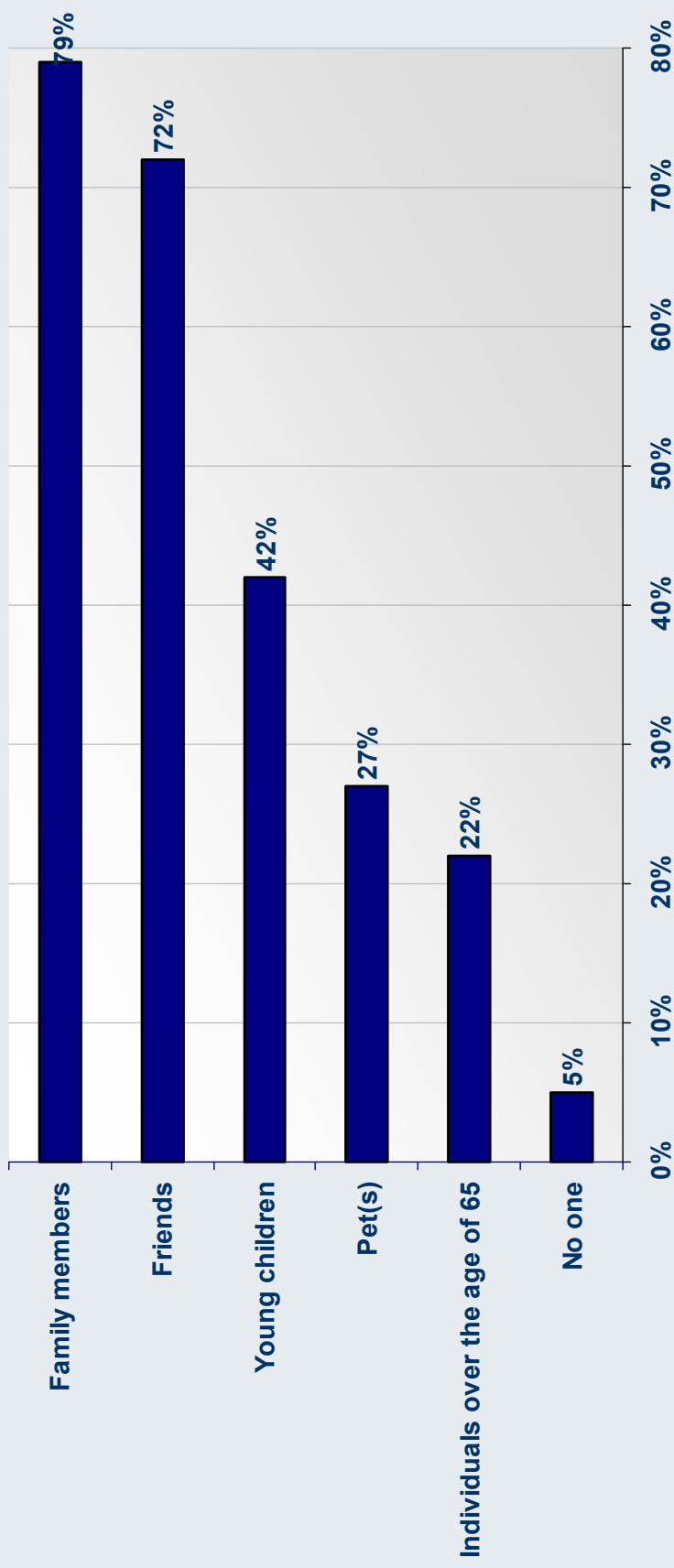
Just over half the respondents (55%) indicate that they complete the majority of the maintenance services and repairs for their vehicle themselves. This proportion increases to about 6 in 10 (61%) among respondents who stated that the motivation to save money was the most important reason they decided to service their vehicle’s AC system themselves and among respondents who suggested that they would likely go without a fully functional AC system or look for other ways to find R-134a if the product was banned.

	Total	Motivated to Save Money		Reaction to Product Removal	
		Most Important Reason	One of Most Important Reasons	Likely Pay Professional	Likely Go Without/ Find Alternatives
Base:	400	136	144	195	205
	(%)	(%)	(%)	(%)	(%)
I complete the majority of the basic maintenance services and repairs	55	61	50	47	61
I complete some basic maintenance services and/or some repairs	45	39	50	53	39

Q4. Which of the following best describes the way you go about servicing and maintaining your vehicle? CA respondents n=400.

Respondent Profile: Vehicle Passengers

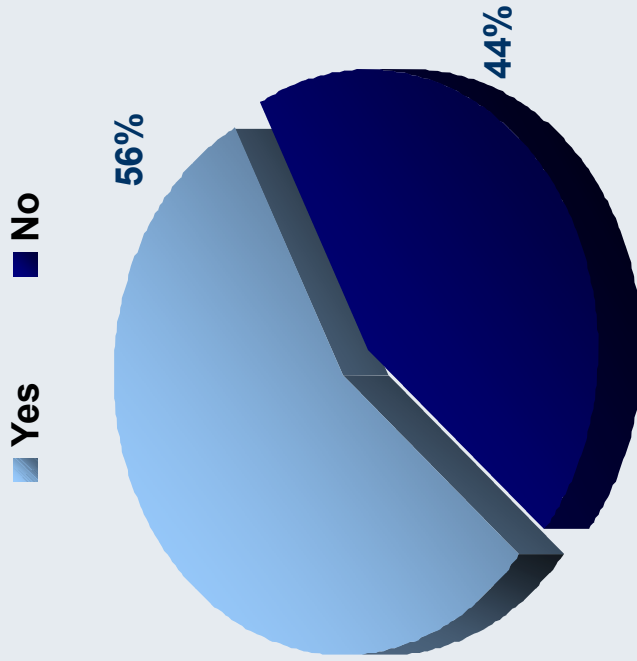
The pattern of responses indicates that many other individuals other than the respondent (i.e., vehicle driver) could be affected by having to use a vehicle without a fully functional AC system. Individuals who are most vulnerable to extreme heat such as young children and seniors are frequently cited as vehicle passengers (42% and 22% respectively).



Q32. Do other individuals occasionally ride in your vehicle with you? Select all that apply. CA respondents n=400.

Awareness of Potential R-134a Retail Sales Ban

Participation in this survey was likely to raise the level of awareness or suspicion of a potential ban of the retail sale of R-134a. For this reason, it is likely that more than 44 percent of respondents were unaware of a potential sales ban. Therefore, 44 percent represents a very conservative estimate of the proportion of product users who are not aware of the potential sales ban. Interestingly, respondents with incomes less than \$30,000 were the only respondent group to be more likely to report that they are unaware of the potential product ban than aware of it (56% vs. 44%, respectively). It is particularly interesting that the most vulnerable end-user group may be the least informed of a potential product ban.



	Total	Personal Income	
		Less than \$30,000	\$30,000 to More than \$50,000
Base:	400	88	96
	(%)	(%)	(%)
Yes	56	44	58
No	44	56	42

Q39. Are you aware that some state governments within the US are considering banning the sale of automotive air conditioning refrigerant R-134a? CA respondents n=400.

Examining End-Users by Age and Personal Income

Examined by age, the majority of low income respondents (65%) are between 18 and 29 years old.

	Total	Personal Income		
		Less than \$30,000	\$30,000 to less than \$50,000	More than \$50,000
<i>Base:</i>	400	88	96	216
	(%)	(%)	(%)	(%)
18 to 29 years	44	65	52	32
30 to 39 years	32	24	29	36
40 to 49 years	16	7	15	20
50 to 59 years	8	3	4	12
60 to 65 years	0	1	0	0

Q1. In which of these groups does your age fall? CA respondents n=400.

Examining End-Users by Employment Status and Personal Income

Examined by employment status, low income respondents were less likely to be employed full time (41% compared to 72% and 82%). About one-quarter of low income respondents are students while an additional 16 percent are employed part-time.

	Total	Personal Income	
		Less than \$30,000	\$30,000 to less than \$50,000
Base:	400	88	96
	(%)	(%)	(%)
Employed full time	71	41	72
Employed part time	9	16	13
Homemaker	4	6	4
Student	10	24	9
Retired	3	5	1
Unemployed	3	9	1
			216
			(%)
			82
			5
			4
			5
			3
			1

Q36. Which of the following best describes your current employment status? CA respondents n=400.

Examining End-Users by Education and Personal Income

Examined by highest level of education completed, low income respondents are the least likely to have completed college or university (17% compared to 36% and 42%).

	Total	Personal Income		
		Less than \$30,000	\$30,000 to less than \$50,000	More than \$50,000
Base:	400	88	96	216
	(%)	(%)	(%)	(%)
Some high school	2	5	1	1
Completed high school	8	7	13	6
Some college/university	38	61	31	32
Completed college/university	35	17	36	42
Post graduate or professional degree	16	8	18	19
Other	1	2	1	0

Q37. What is the highest level of education that you have completed? CA respondents n=400.

Examining End-Users by Marital Status and Personal Income

Examined by marital status, about two-thirds of low income respondents (64%) are single.

	Total	Personal Income		
		Less than \$30,000	\$30,000 to less than \$50,000	More than \$50,000
Base:	400	88	96	216
	(%)	(%)	(%)	(%)
Single	40	64	52	25
Married/Common-law	55	30	43	71
Divorced/Separated/Widowed	5	7	5	5

Q34a. What is your marital status? CA respondents n=400.

Examining End-Users by Vehicle Segment and Personal Income

Examined by vehicle segment, low income respondents are more likely to own small cars (34%) than respondents from the highest income level (17%). Conversely, respondents from the highest income level are more likely to own luxury cars (17%) compared to respondents from the lowest income levels (2%).

	Total	Personal Income	
		Less than \$30,000	\$30,000 to less than \$50,000
Base:	400	88	96
	(%)	(%)	(%)
Small Car	24	34	28
Med & Large Car	23	18	21
Luxury Car	9	2	6
Specialty Car	10	10	10
SUV/CUV	13	7	16
Luxury SUV/CUV	6	5	5
Pickup Truck	9	10	5
Van	5	7	4
Other	4	7	4
			216
			(%)
			17
			25
			13
			9
			13
			6
			9
			5
			2

Q7. You indicated that you recharged your vehicle's air conditioning refrigerant within the past 12 months. What is the make, model and year of this vehicle? CA respondents n=400.

Examining End-Users by Ethnicity and Personal Income

No trends emerged on the basis of ethnicity and personal income.

	Total	Personal Income	
		Less than \$30,000	\$30,000 to less than \$50,000
Base:	400	88	96
	(%)	(%)	(%)
Caucasian	53	48	50
Hispanic	15	18	17
Asian	21	18	24
African American	4	3	1
Some other ethnicity	4	7	4
Decline to respond	4	6	4
			216
			(%)
			57
			12
			21
			5
			3
			2

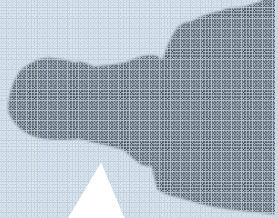
Q38. And are you... CA respondents n=400.

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Opportunities for Improved Usage

- One of the primary objectives of this research was to explore the opportunities for improved product usage and customer education.
- To this end, we investigated the extent to which users of R-134a products search out and use various sources of information.
 - **The data strongly suggest that DIYers are highly motivated to learn how to complete automotive repairs and services correctly and more specifically, make great efforts to take the necessary actions to avoid product misuse.**
 - **For these reasons Frost & Sullivan concludes that any efforts made by the ARPI to improve current R-134a product instructions or to increase the exposure or availability of product instructions will have an impact on product usage.**



“If people are going to misuse a product they will find ways to do so regardless of what the law says. In the mean time the "laws" are making criminals out of people who have every intention of using it properly.”

Ethnicity: Caucasian

Gender: Female

Age: 40 to 49 years

Marital Status: Married/Common-law

Employment Status: Employed full-time

Education: Other (technical school)

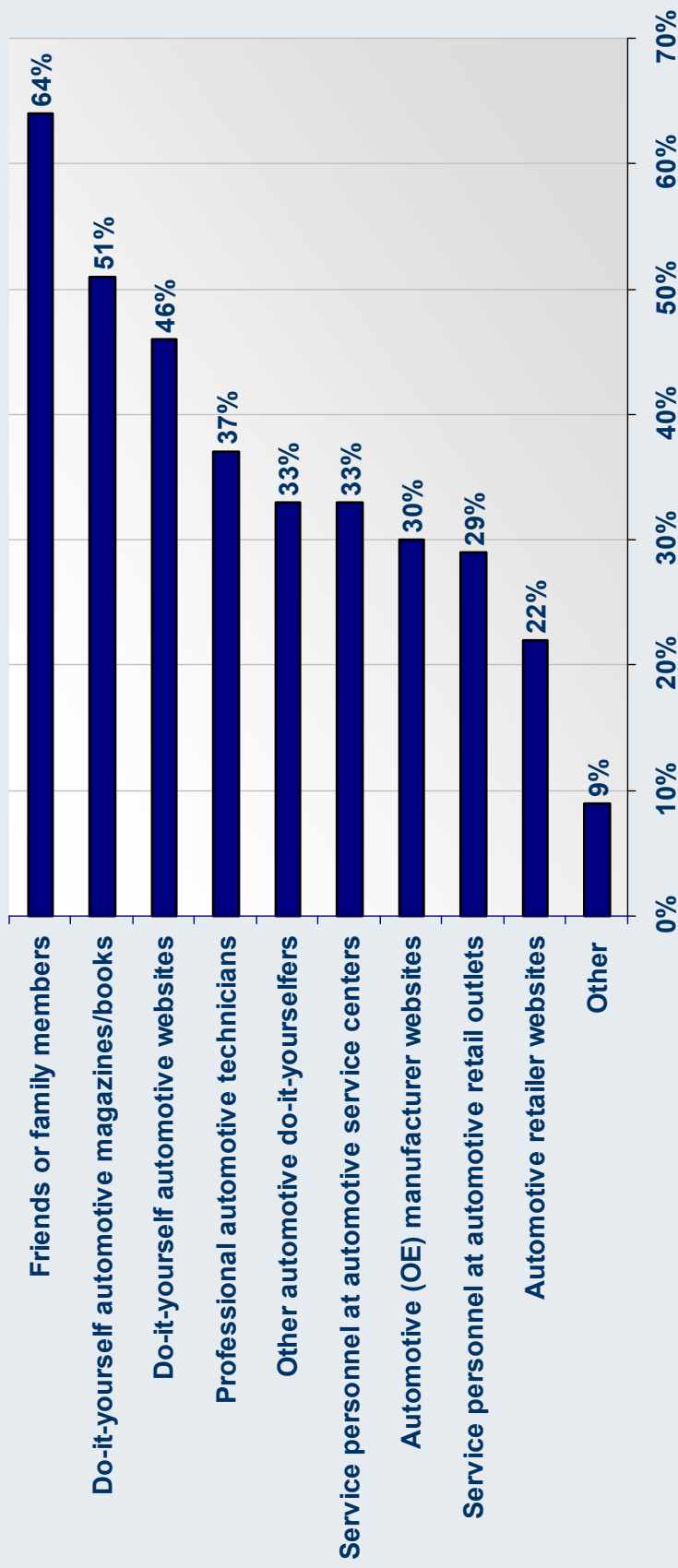
Personal Income: \$50,000 to less than \$75,000

Household Income: \$50,000 to less than \$75,000

Region: South

DIYer Educational Sources Used

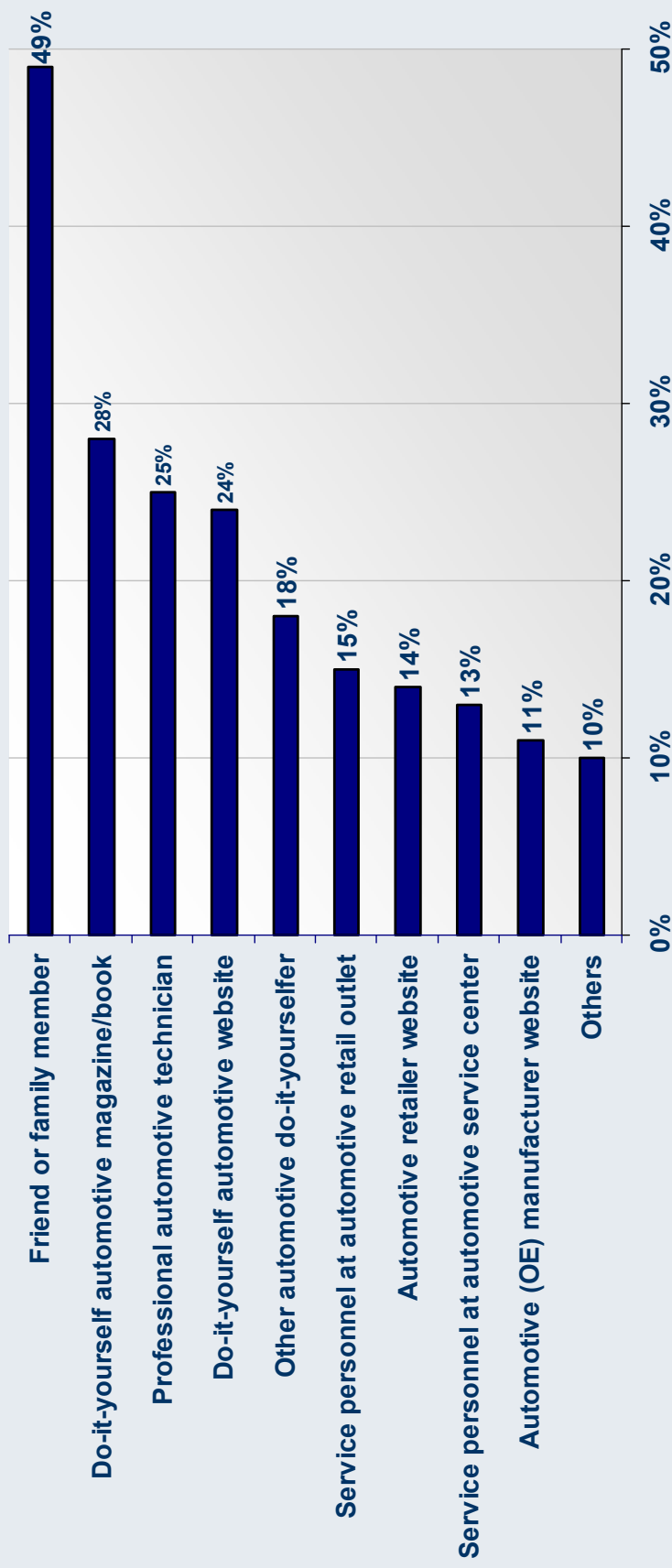
The respondents appear to be particularly motivated to learn about DIYer behaviors and report the use of many diverse sources of educational materials and sources. Friends or family members and do-it-yourself automotive magazines and books are among the most frequently resources cited.



Q10. We are interested in better understanding how people like you learn to complete various vehicle maintenance services and repairs. Which of the following sources of information have you used? Select all that apply. CA respondents n=400.

Source of First Information on DIYer Recharge

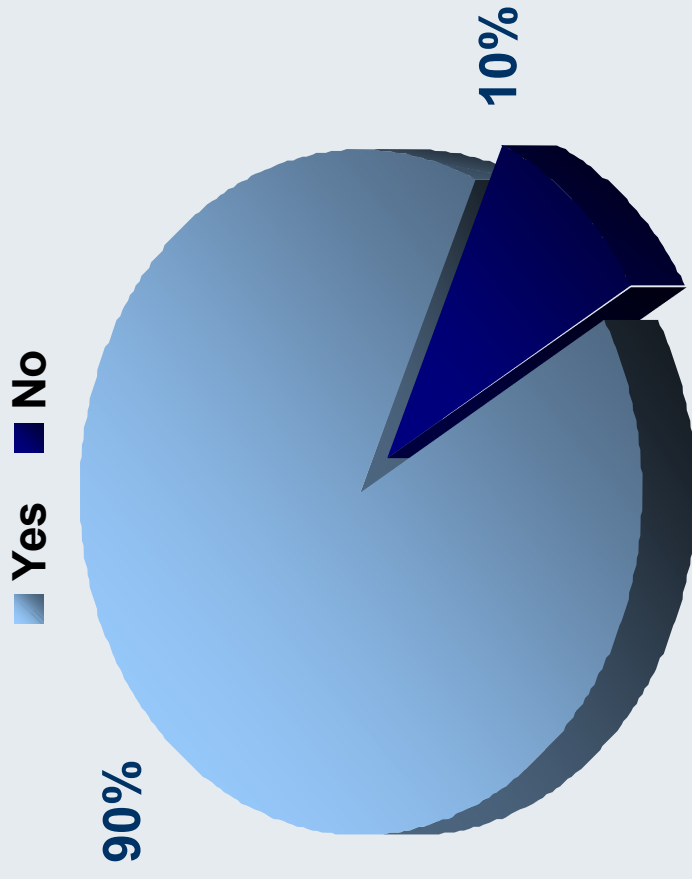
Half (50%) of all respondents indicated that they relied on friends / family for information on DIYer recharge. After friends and family, professional sources of information received the somewhat higher mentions.



Q20. How did you first learn that you could purchase R-134a products and recharge your vehicle's air conditioning system yourself? Did you learn from a(n)...? CA respondents n=400.

Use of Product Instructions

The vast majority (90%) of respondents indicated that they followed instructions provided with R-134a products.



Q21. Do you follow the instructions provided with R-134a products when you recharge your vehicle's air conditioning system? CA respondents n=400.

Awareness of Potential Consequences to Product Misuse

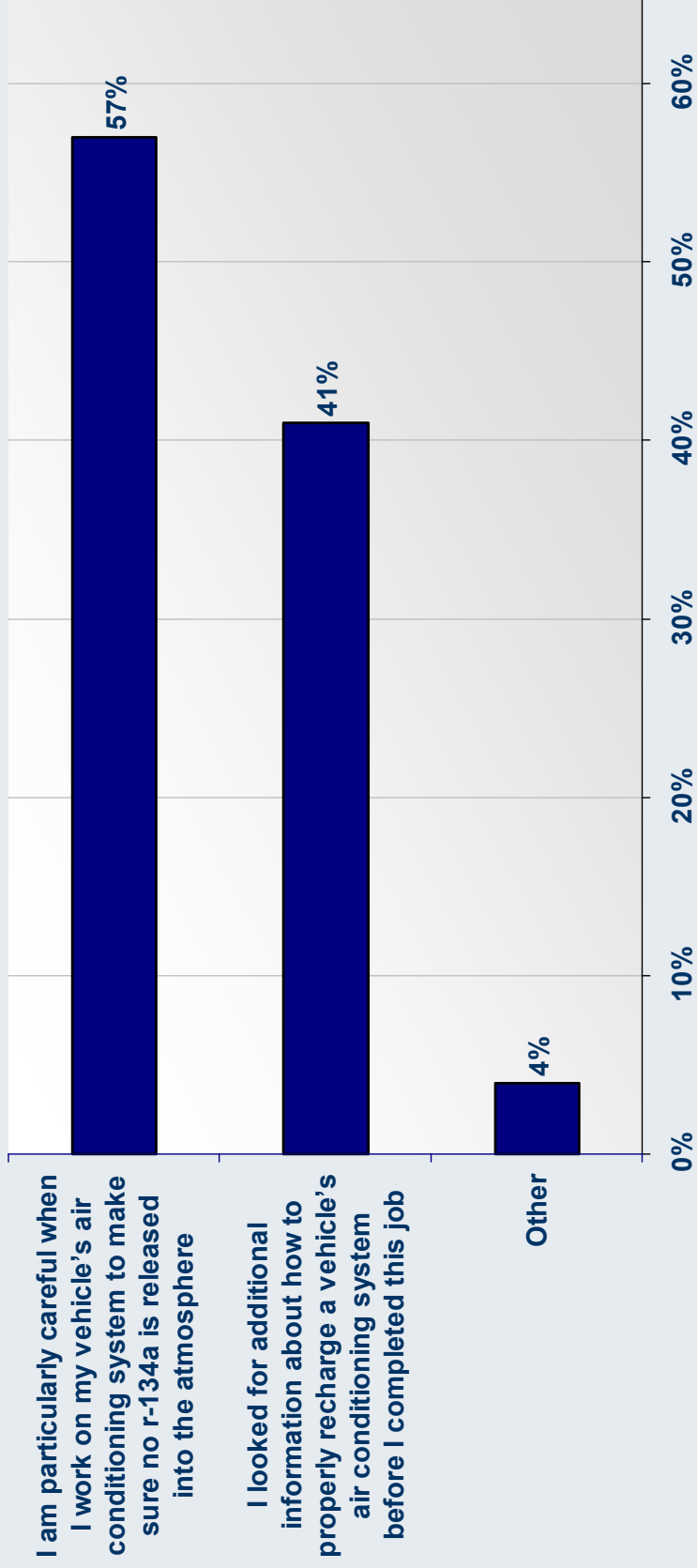
Just over half the respondents (56%) were aware of the potential negative consequences of releasing R-134a into the atmosphere. This suggests there is an enormous potential to better inform end-users regarding the consequences of product misuse.



Q30a. Are you aware of any potentially negative consequences that can result from releasing R-134a into the atmosphere? CA respondents n=400.

Precautions Against Misuse

The vast majority of respondents undertake additional precautions against misuse: Almost 6 in 10 respondents (57%) mentioned additional care while handling their vehicle's air conditioning system while 4 in 10 respondents (41%) reported completing additional research regarding how to properly recharge the R-134a in their vehicle's air conditioning system. This provides convergent evidence for the enormous potential to better inform end-users regarding the potential consequences of product misuse.



Q30b. When you work on your vehicle's air conditioning system, which of the following precautions do you take to reduce the likelihood of releasing R-134a into the atmosphere? Select all that apply. CA respondents n=223.

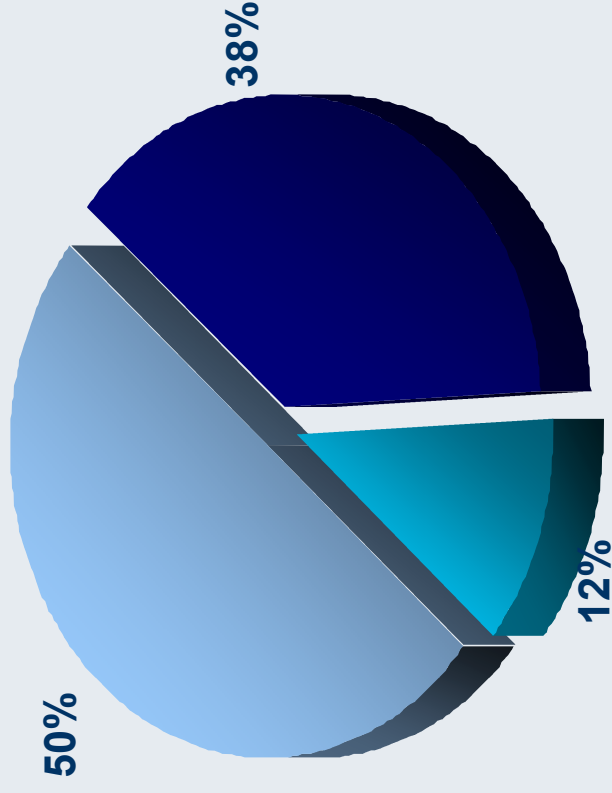
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Most Recent Refrigerant Products Purchased

Half (50%) of all respondents indicated that they purchased the entire pre-packaged refrigerant recharging kit on their most recent purchase, while 4 in 10 (38%) reported purchasing just the R-134a can.

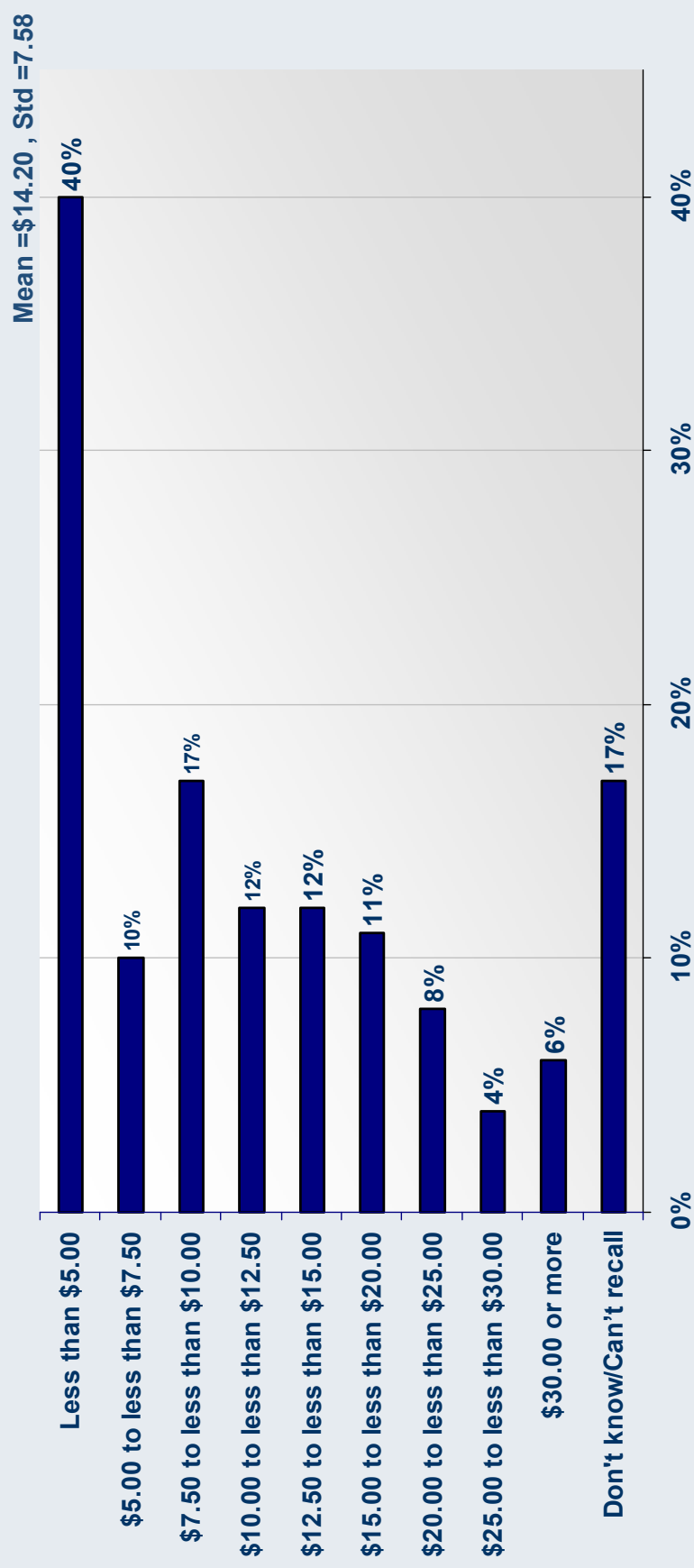
■ Recharging Kit ■ R-134a ■ Don't Know /Can't Recall



Q12. On the most recent occasion that you purchased air conditioning refrigerant products, did you purchase a pre-packaged refrigerant recharging kit (e.g., contents may include refrigerant, oil, stop leak, fittings, recharge hose and pressure gauge) or separate products including R-134a? CA respondents n=400.

Reported Price per Can

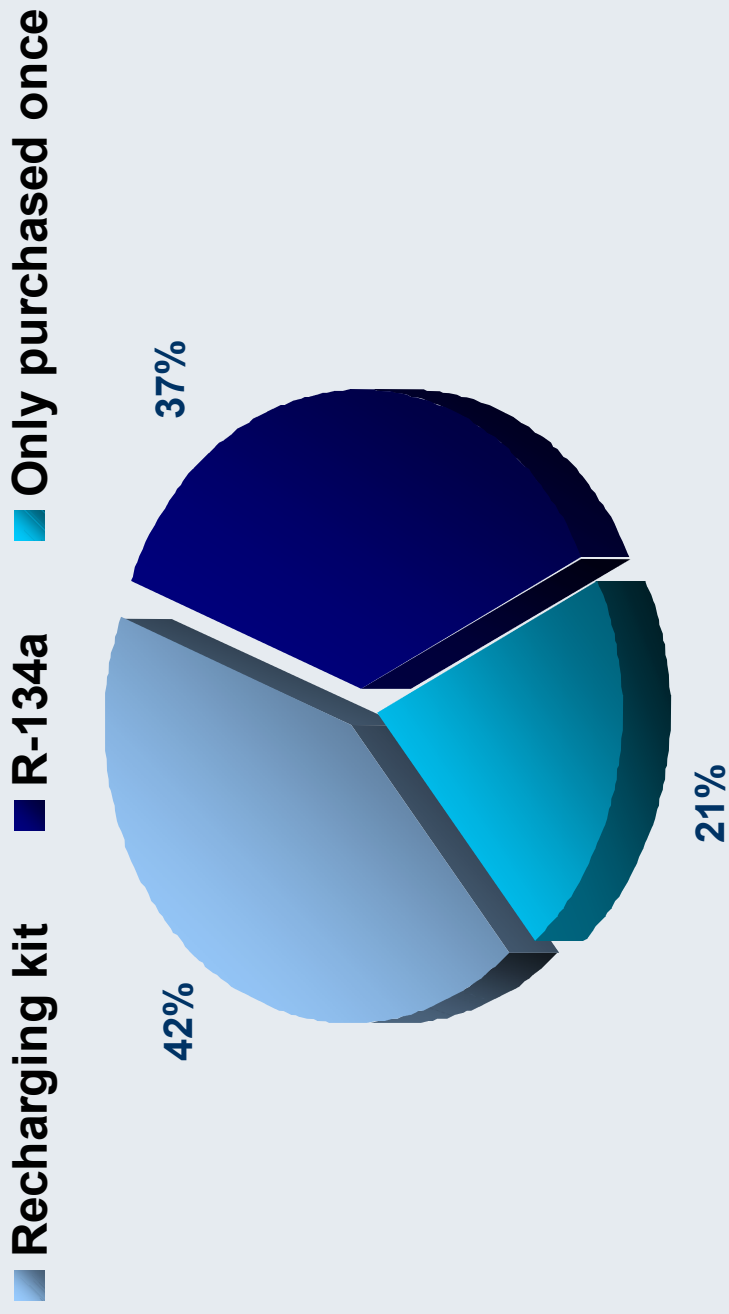
Four of ten respondents reported spends of up to \$5.00 for the purchase of a R-134a can.



Q14. Approximately how much did you pay for each can of R-134a? CA respondents n=199.

Typical Purchase

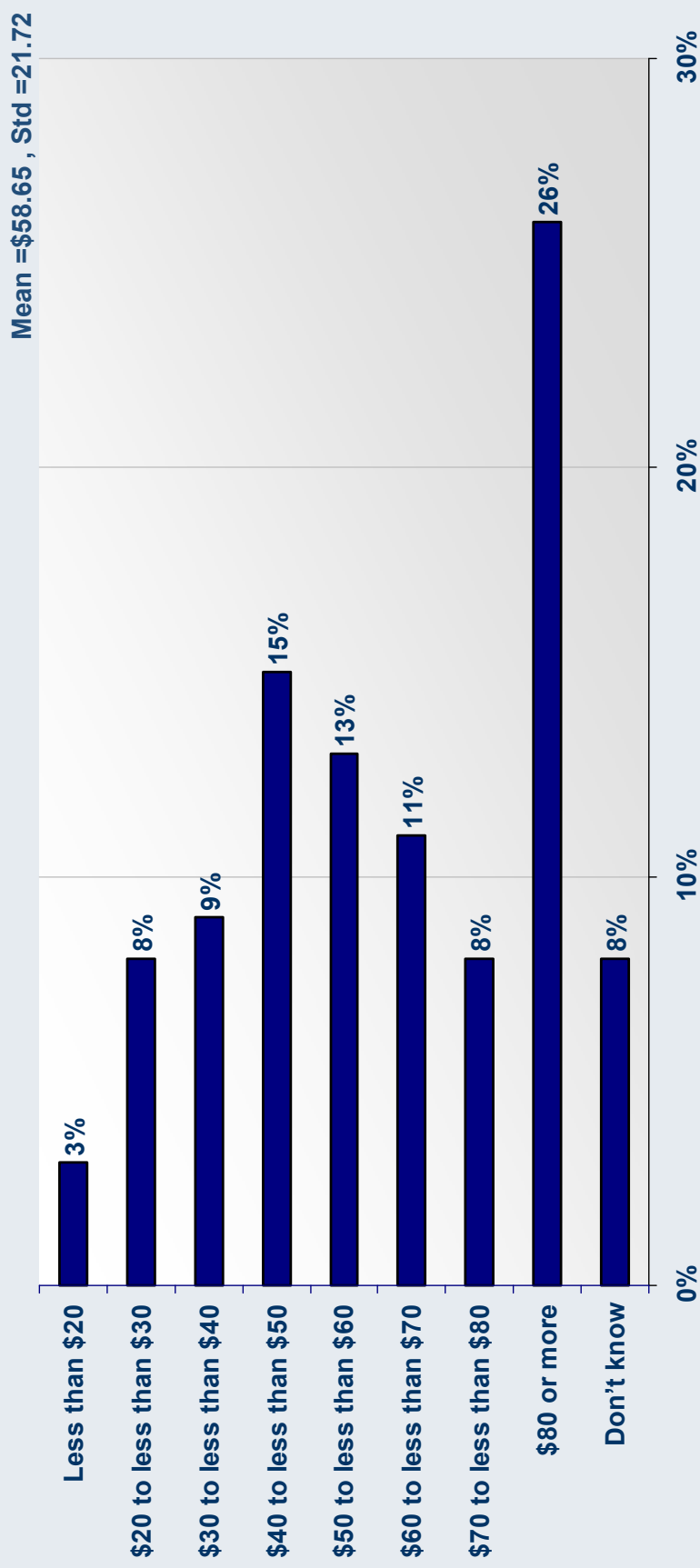
When questioned about their typical purchase, 42 percent indicated that they typically purchased the recharging kit only while 37 percent purchased the R-134a can only.



Q15. When you purchase air conditioning refrigerant products do you usually purchase a recharging kit or separate products including R-134a? CA respondents n=400.

Perceived Market Price for Professional Recharge

A broad range of prices were mentioned by respondents, with a quarter indicating a market price of over \$80 for professional recharge. Many end-users will, therefore, experience stick shock in response to actual market prices (\$150).



Q18. Approximately how much would you expect to pay to have your air conditioning refrigerant recharged by a professional automotive technician? CA respondents n=400.

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Testimonials* from those Affected...

*Testimonials presented verbatim and unedited in any way. Testimonials were recorded in response to Q29, see slide 70.

“Just another law to screw the average middle class of trying to save some money. Last time I took it to “PepBoys” for a charge the price was 180.00. Never again will I pay that it only prompted me on asking friends (one of which is a mechanic) on how to do it myself. Unbelievable on just how easy it is!!”

Ethnicity: **Caucasian**

Gender: **Male**

Age: **30 to 39 years**

Marital Status: **Married/Common-law**

Employment Status: **Employed part-time**

Education: **Some college/university**

Personal Income: **\$20,000 to less than \$30,000**

Household Income: **\$30,000 to less than \$40,000**

Reaction to Product Ban: **I would look into other ways of obtaining R-134a**

Region: **Northeast**

“this would mean that i would have to spend more money that i probably wouldn’t be able to afford to maintain my air conditioning system.”

Ethnicity: **Caucasian**

Gender: **Female**

Age: **18 to 29 years**

Marital Status: **Married/Common-law**

Employment Status: **Employed part-time**

Education: **Completed some college/university**

Personal Income: **Less than \$20,000**

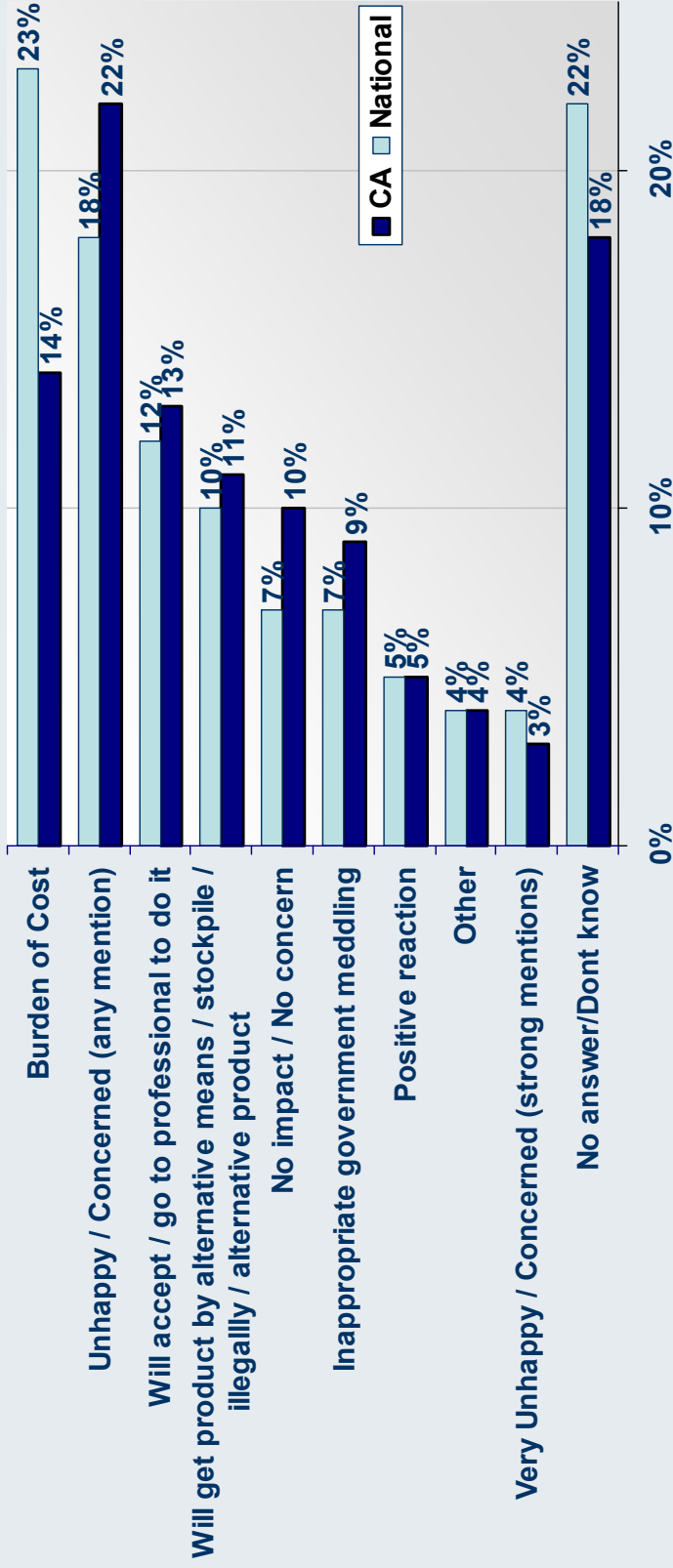
Household Income: **\$30,000 to less than \$40,000**

Reaction to Product Ban: **I would pay a professional automotive technician to service**

Region: **Northeast**

Testimonials* Coded by Response Category

Nationally, attributes related to burden of cost received the highest mentions. Additionally, one in five respondents expressed either unhappiness or concern about the possible discontinuation of sale of R-134a.



Q29. We would like to better understand your opinions on the potential impact that discontinuing the sale of R-134a might have. What would this mean to you? Please be as specific as possible. National respondents n=600.

Statement about Product Ban: By Topic Category

	Total	Sub-Samples		National by Region			
		California	National	Northeast	South	Midwest	West
Base:	1000	400	600	150	150	150	150
	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Unhappy/Concerned	23	25	22	17	29	21	20
No answer/Don't know	20	18	22	33	21	17	17
Burden of Cost	19	14	23	18	27	25	20
Will accept/go to professional to do it	12	13	12	12	7	11	16
Will get the product by alternative means or stockpile	10	11	10	8	9	16	5
No impact/No concern	8	10	7	5	6	7	11
Inappropriate government meddling	8	9	7	6	7	8	8
Positive reaction	5	5	5	6	3	2	9
Other	4	4	4	4	3	5	5

Q29. We would like to better understand your opinions on the potential impact that discontinuing the sale of R-134a might have. What would this National Mean to you? Please be as specific as possible. National respondents n=600.

Testimonials Coded by Response Category

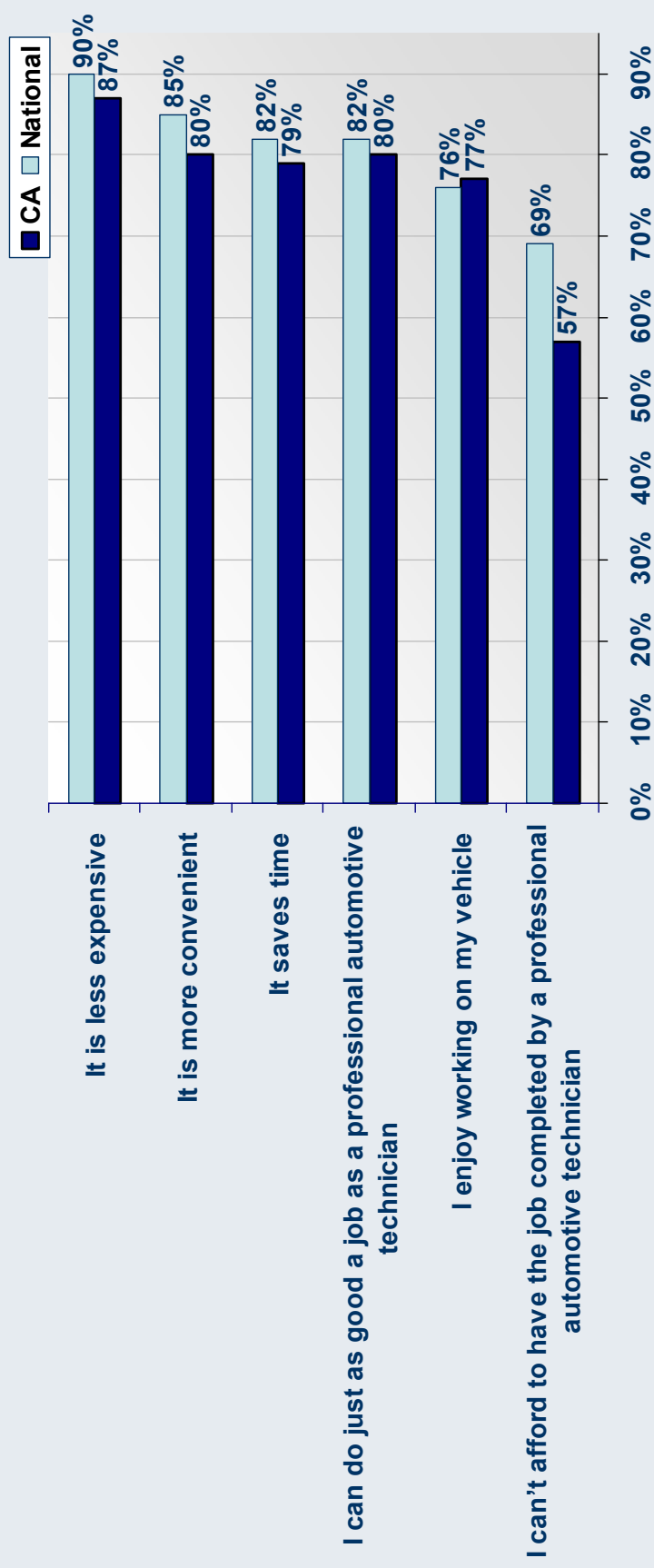
Respondents with incomes less than \$30,000 were more likely to mention issues related to the increased financial burden of having to pay for professional services.

	Total	Personal Income		
		Less than \$30,000	\$30,000 to less than \$50,000	More than \$50,000
Base:	600	124	209	267
	(%)	(%)	(%)	(%)
Burden of Cost	23	35	22	16
Unhappy/Concerned (any mention)	22	21	22	22
Will accept/go to professional to do it	12	10	11	12
Will get the product by alternative means or stockpile	10	10	11	9
Inappropriate government meddling	7	6	10	6
No impact/No concern	7	8	6	7
Positive reaction	5	2	5	6
Other	4	6	6	2
No answer/Don't know	22	14	19	28

Q29. We would like to better understand your opinions on the potential impact that discontinuing the sale of R-134a might have. What would this mean to you? Please be as specific as possible. National respondents n=600.

Motivation for DIY Recharge

Potential cost savings (90%) appear to be the primary motivation for DIY recharges.



Q11. We will show you a list of reasons that could be used to indicate why some people like you choose to complete this job themselves. How important is each of these reasons is to you? National respondents n=600.

Motivation for DIY Recharge

Compared to their counterparts in California, respondents from the National sample were more likely to rate cost savings as 'very important' reason to complete the job themselves (69% vs. 60%).

Percentage of respondents who rate each item 'very important'.	Total	Sub-Samples		National by Region			
		California	National	Northeast	South	Midwest	West
Base:	1000	400	600	150	150	150	150
	(%)	(%)	(%)	(%)	(%)	(%)	(%)
It is less expensive	66	60	69	62	73	75	67
It is more convenient	52	49	54	50	61	54	49
It saves time	50	47	52	53	58	50	47
I can do just as good a job as a professional automotive technician	50	47	51	51	51	53	50
I enjoy working on my vehicle	46	46	46	49	48	41	43
I can't afford to have the job completed by a professional automotive technician	40	32	45	47	47	45	41

Q11. We will show you a list of reasons that could be used to indicate why some people like you choose to complete this job themselves. How important is each of these reasons is to you? CA respondents n=400.

Motivation for DIY Recharge

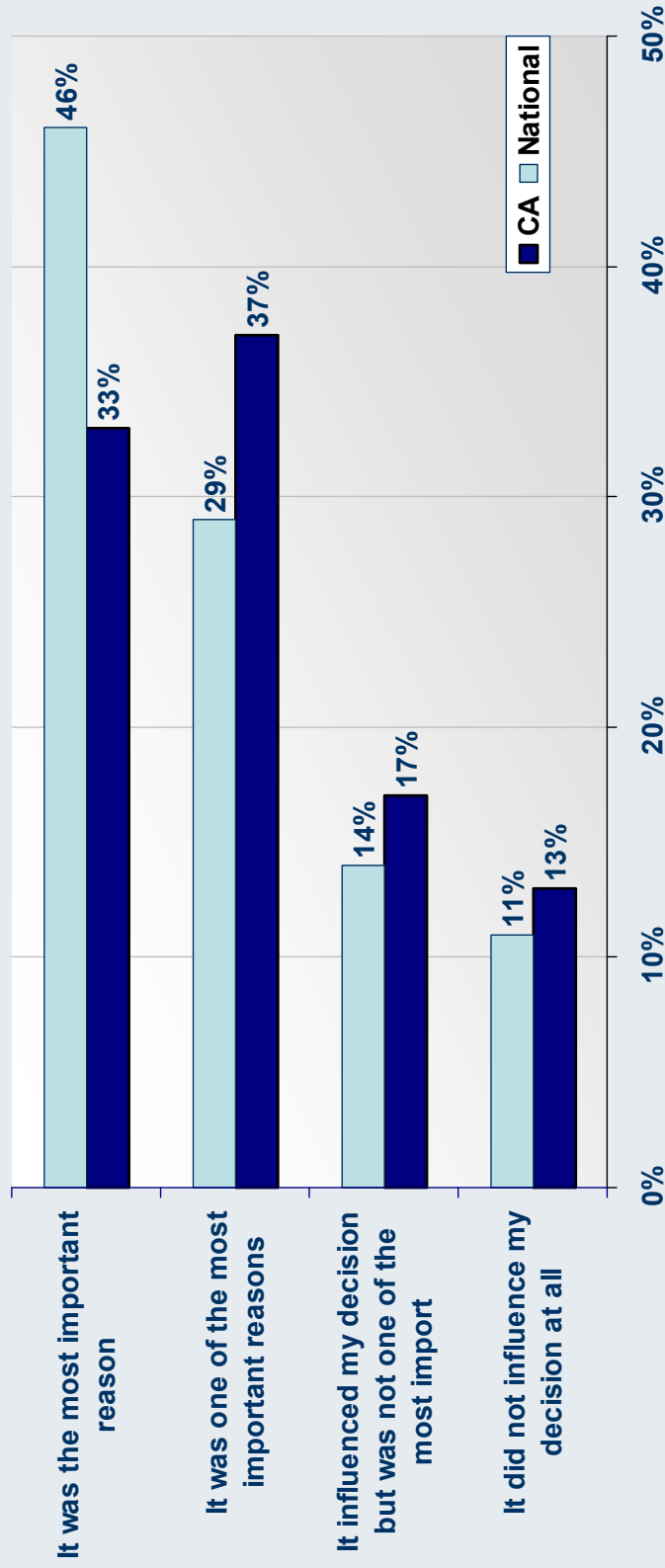
Examined by income level, a directional trend emerged with respondents reporting incomes less than \$30,000 being the most likely to rate cost savings as a 'very important' reason for completing the job themselves. Moreover, over half the respondents from the low income group (56%) reported that they could not afford to have the job completed by a professional automotive technician.

	Total	Personal Income	
		Less than \$30,000	\$30,000 to less than \$50,000
Percentage of respondents who rate each item 'very important'.	600	124	267
<i>Base:</i>	(%)	(%)	(%)
It is less expensive	69	85	71
It is more convenient	54	61	53
It saves time	52	57	51
I can do just as good a job as a professional automotive technician	51	52	51
I enjoy working on my vehicle	46	44	48
I can't afford to have the job completed by a professional automotive technician	45	56	49
			60
			51
			50
			51
			45
			36

Q11. We will show you a list of reasons that could be used to indicate why some people like you choose to complete this job themselves. How important is each of these reasons is to you? National respondents n=600.

Motivation for DIY Recharge: Cost of Professional Work

Nationally, nearly half (46%) of the respondents indicated that the cost of professional work was the most important motivation for doing it themselves. An additional 3 in 10 respondents (29%) mentioned that this was one of the most important reasons for doing so.



Q17. To what extent did the cost of having this work completed by a professional automotive technician influence your decision to start doing this type of work yourself? National respondents n=600.

Motivation for DIY Recharge: Cost of Professional Work

	Total	Sub-Samples		National by Region			
		California	National	Northeast	South	Midwest	West
Base:	957	375	582	148	145	146	143
	(%)	(%)	(%)	(%)	(%)	(%)	(%)
It was the most important reason	41	33	46	45	52	49	38
It was one of the most important reasons	32	37	29	30	24	29	34
It influenced my decision but was not one of the most important	15	17	14	12	14	10	18
It did not influence my decision at all	12	13	11	13	10	12	10

Q17. To what extent did the cost of having this work completed by a professional automotive technician influence your decision to start doing this type of work yourself? National respondents n=600.

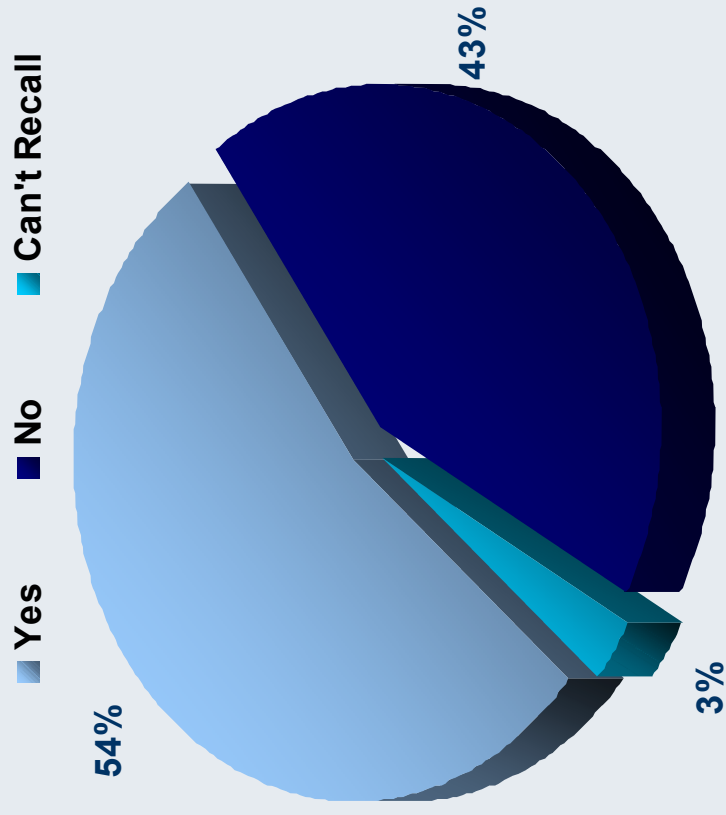
Motivation for DIY Recharge: Cost of Professional Work

	Total	Personal Income		
		Less than \$30,000	\$30,000 to less than \$50,000	More than \$50,000
<i>Base:</i>	582	117	201	264
	(%)	(%)	(%)	(%)
It was the most important reason	46	49	48	44
It was one of the most important reasons	29	26	30	30
It influenced my decision but was not one of the most important reasons	14	14	12	15
It did not influence my decision at all	11	11	10	12

Q17. To what extent did the cost of having this work completed by a professional automotive technician influence your decision to start doing this type of work yourself? National respondents n=375.

Incidence of Past Professional Recharge Among Current DIYers

Four of ten (43%) respondents had never had their vehicle's air conditioning recharged by a professional.



Q16. Have you ever had your current vehicle's or a previous vehicle's air conditioning system recharged by a professional automotive technician (e.g., at your dealer or an automotive service center)? National respondents n=600.

Automotive Refrigerant Products Institute (ARPI). Prepared for ARPI by Frost & Sullivan, September 2006

Incidence of Past Professional Recharge Among Current DIYers

	Total	Sub-Samples		National by Region			
		California	National	Northeast	South	Midwest	West
Base:	1000	400	600	150	150	150	150
	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Yes	53	51	54	59	57	42	59
No	43	43	43	40	40	55	36
Can't recall	4	6	3	1	3	3	5

Q16. Have you ever had your current vehicle's or a previous vehicle's air conditioning system recharged by a professional automotive technician (e.g., at your dealer or an automotive service center)? National respondents n=600.

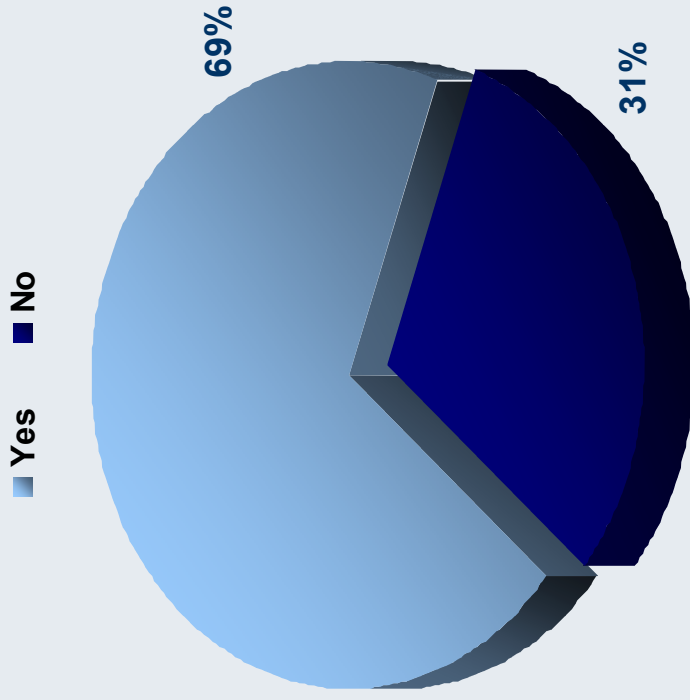
Incidence of Past Professional Recharge Among Current DIYers

	Total	Personal Income		
		Less than \$30,000	\$30,000 to less than \$50,000	More than \$50,000
Base:	600	124	209	267
	(%)	(%)	(%)	(%)
Yes	54	48	52	59
No	43	46	44	40
Can't recall	3	6	4	1

Q16. Have you ever had your current vehicle's or a previous vehicle's air conditioning system recharged by a professional automotive technician (e.g., at your dealer or an automotive service center)? National respondents n=600.

Acceptable Price for Professional Recharge

Seven of ten (69%) respondents were willing to have their car air conditioning refrigerant recharged by a professional at some price.



Q19. Is there a price at which you would consider having your air conditioning refrigerant recharged by a professional automotive technician? National respondents n=600.

Acceptable Price for Professional Recharge

	Total	Sub-Samples		National by Region			
		California	National	Northeast	South	Midwest	West
Base:	1000	400	600	150	150	150	150
	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Yes	69	68	70	66	69	66	77
No	31	32	31	34	31	34	23

Q19. Is there a price at which you would consider having your air conditioning refrigerant recharged by a professional automotive technician? National respondents n=600.

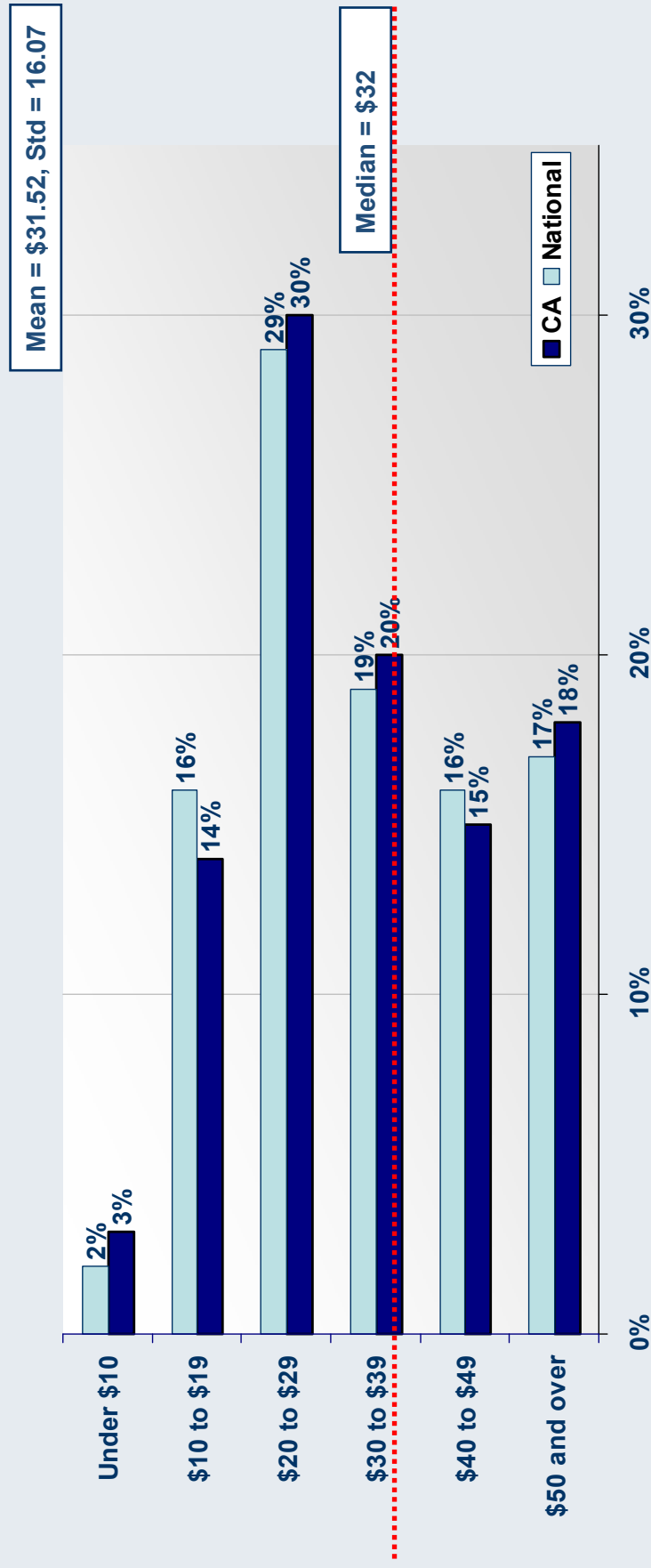
Acceptable Price for Professional Recharge

	Total	Personal Income		
		Less than \$30,000	\$30,000 to less than \$50,000	More than \$50,000
<i>Base:</i>	600	124	209	267
	(%)	(%)	(%)	(%)
Yes	70	67	68	72
No	31	33	32	28

Q19. Is there a price at which you would consider having your air conditioning refrigerant recharged by a professional automotive technician? National respondents n=600.

Willingness to Pay for Professional Work

Nationally, respondents were willing to pay an average of \$32 for a professional service .



Q19b. Ok, at what price would you consider having this job completed by a professional automotive technician? National respondents n=417.

Willingness to Pay for Professional Work

	Total	Sub-Samples		National by Region			
		California	National	Northeast	South	Midwest	West
Base:	687	270	417	99	104	99	115
	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Under \$10	3	3	2	2	3	0	4
\$10 to \$19	15	14	16	11	22	17	14
\$20 to \$29	30	30	29	28	34	25	30
\$30 to \$39	20	20	19	20	13	21	23
\$40 to \$49	16	15	16	18	13	22	12
\$50 and over	17	18	17	20	14	14	17

National Mean = \$31.52 , Std =16.07

Q19b. Ok, at what price would you consider having this job completed by a professional automotive technician? National respondents n=687.

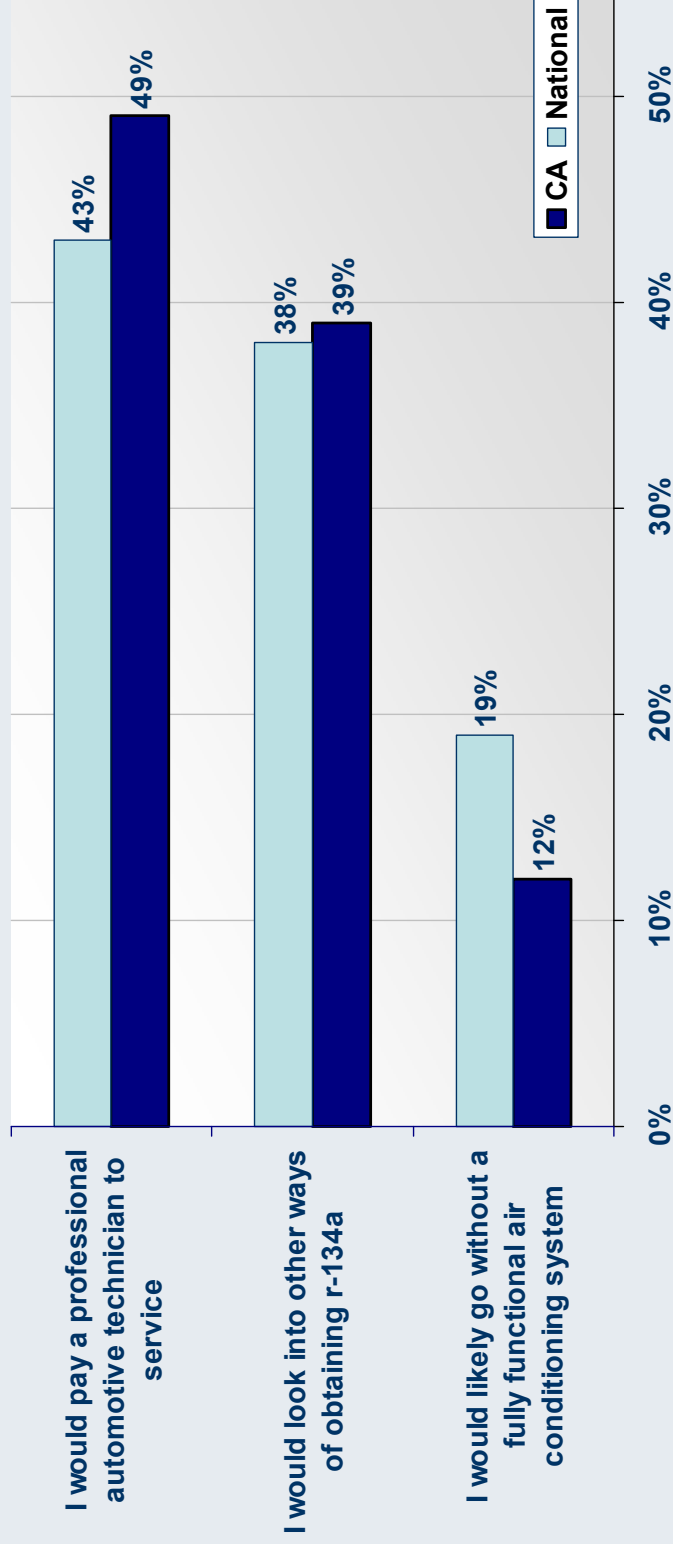
Willingness to Pay for Professional Work

		Personal Income		
		Less than \$30,000	\$30,000 to less than \$50,000	More than \$50,000
<i>Base:</i>	417	83	143	191
	(%)	(%)	(%)	(%)
Under \$20	18	22	21	15
\$20 to \$29	29	33	25	31
\$30 to \$39	19	17	26	16
\$40 to \$49	16	13	17	17
\$50 and over	17	14	10	22
<i>Mean</i>	\$31.8	\$29.7	\$30.6	\$33.6
<i>Std.</i>	\$16.0	\$16.6	\$15.1	\$16.3

Q19b. Ok, at what price would you consider having this job completed by a professional automotive technician? National respondents n=600.

Possible Outcomes to R-134a Retail Sales Ban

Nationally, 1 in 5 respondents (19%) reported they would likely go without a fully functional air conditioning system in their vehicle. An additional 4 in 10 respondents (38%) were willing to look for other ways of obtaining R-134a.



Q28a. If for some reason it became illegal in your state to sell cans of R-134a to do-it-yourselfers like you, how would you choose to maintain your vehicle's air conditioning system assuming this was required? National respondents n=600.

General Reaction to R-134a Retail Sales Ban

	Total	Sub-Samples		National by Region			
		California	National	Northeast	South	Midwest	West
Base:	1000	400	600	150	150	150	150
	(%)	(%)	(%)	(%)	(%)	(%)	(%)
I would pay a professional automotive technician to service	45	49	43	45	42	33	51
I would look into other ways of obtaining R-134a	38	39	38	32	40	41	39
I would likely go without a fully functional air conditioning	17	12	19	23	18	25	11

Q28a. If for some reason it became illegal in your state to sell cans of R-134a to do-it-yourselfers like you, how would you choose to maintain your vehicle's air conditioning system assuming this was required? National respondents n=600.

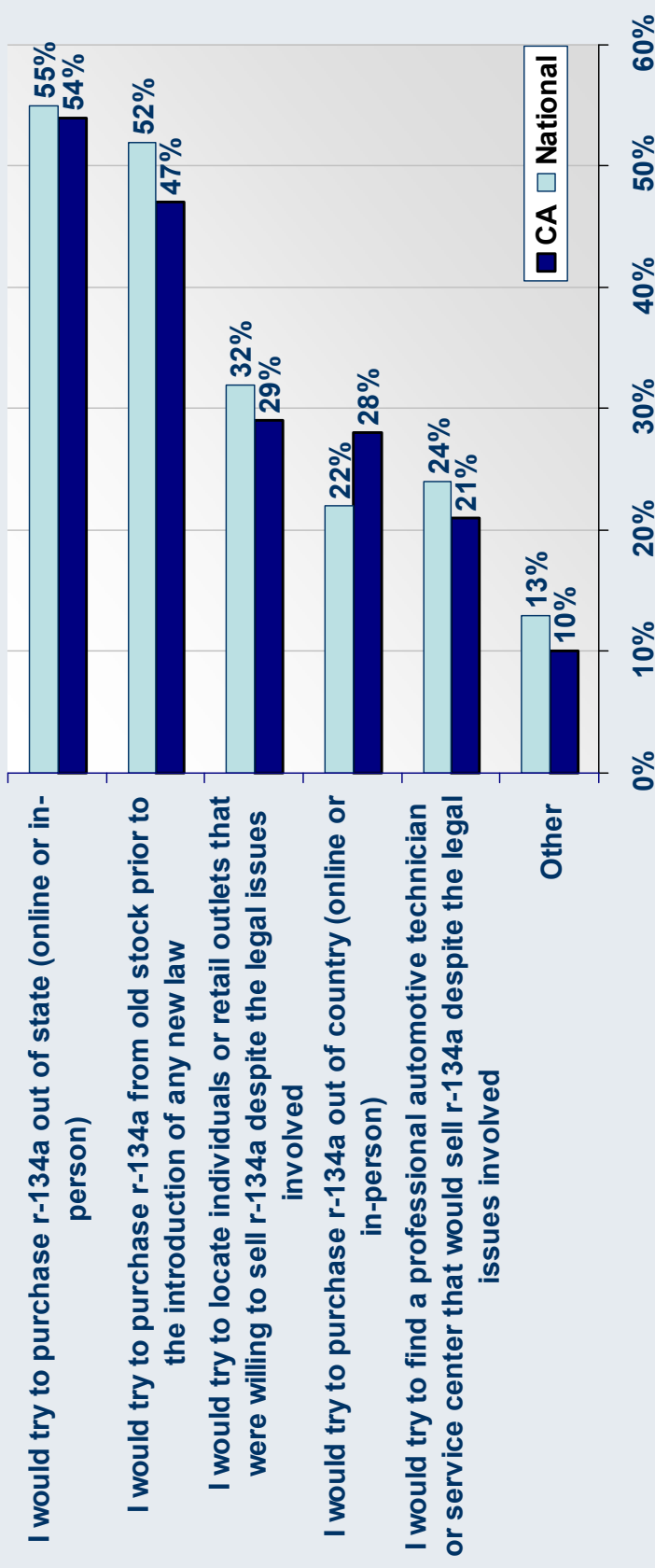
Possible Outcomes to R-134a Retail Sales Ban

	Total	Personal Income	
		Less than \$30,000	More than \$50,000
<i>Base:</i>	600	124	267
	(%)	(%)	(%)
I would pay a professional automotive technician to service	43	39	41
I would likely go without a fully functional air conditioning system	38	23	21
I would look into other ways of obtaining R-134a	19	39	38

Q28a. If for some reason it became illegal in your state to sell cans of R-134a to do-it-yourselfers like you, how would you choose to maintain your vehicle's air conditioning system assuming this was required? National respondents n=600.

Reported Alternative Ways of Obtaining R-134a

Among respondents who indicated that they would look into other ways of obtaining R-134a, over half (55%) mentioned that they would purchase R-134a out of state. Another half (52%) mentioned that they would purchase the R-134a from an old stock.



Q28b. You mentioned that you would look into other ways of obtaining R-134a if do-it-yourselfers like you were unable to purchase it in your state. Which of the following would you most likely try to do? Select all that apply. All respondents n=384.

Reported Alternative Ways of Obtaining R-134a

	Total	Sub-Samples		National by Region			
		California	National	Northeast	South	Midwest	West
Base:	384	156	228	48	60	62	58
	(%)	(%)	(%)	(%)	(%)	(%)	(%)
I would try to purchase R-134a out of state (online or in-person)	55	54	55	56	58	55	52
I would try to purchase R-134a from old stock prior to the introduction of any new law	50	47	52	50	52	48	59
I would try to locate individuals or retail outlets that were willing to sell R-134a despite the legal issues involved	31	29	32	42	27	26	38
I would try to purchase R-134a out of country (online or in-person)	24	28	22	27	17	18	28
I would try to find a professional automotive technician or service center that would sell R-134a	23	21	24	31	22	18	28
Other	12	10	13	8	13	13	17

Q28b. You mentioned that you would look into other ways of obtaining R-134a if do-it-yourselfers like you were unable to purchase it in your state. Which of the following would you most likely try to do? Select all that apply. National respondents n=228.

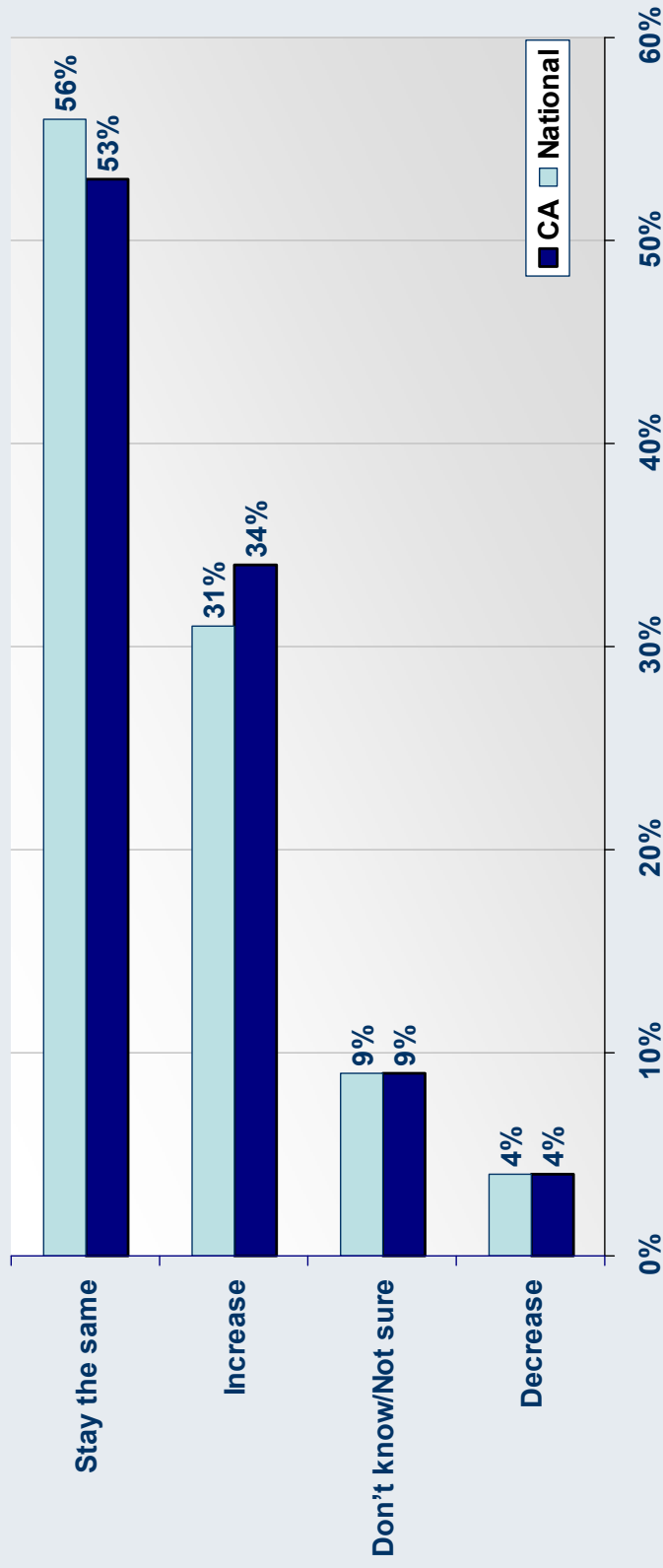
Reported Alternative Ways of Obtaining R-134a

	Total	Personal Income		
		Less than \$30,000	\$30,000 to less than \$50,000	More than \$50,000
Base:	228	48	79	101
	(%)	(%)	(%)	(%)
I would try to purchase R-134a out of state	55	60	56	52
I would try to purchase R-134a from old stock prior to the introduction of any new law	52	63	48	50
I would try to locate individuals or retail outlets that were willing to sell R-134a despite the legal issues involved	32	38	28	34
I would try to purchase R-134a out of country	22	21	22	23
I would try to find a professional automotive technician or service center that would sell R-134a despite the legal issues involved	24	25	23	25
Other	13	15	14	12

Q28b. You mentioned that you would look into other ways of obtaining R-134a if DIYers like you were unable to purchase it in your state. Which of the following would you most likely try to do? Select all that apply. National respondents n=228.

Negative Impact on Product Usage

About one-third of respondents (31%) who were likely to purchase R-134a through alternative means mentioned that in doing so the potential product misuse would likely increase.



Q28c. In your opinion, do you think that having to purchase R-134a by these means would contribute to problems using the product (i.e., misapplication or improper use)? I think the number of problems would likely ... National respondents n=384.

Negative Impact on Product Usage

	Total	Sub-Samples		National by Region			
		California	National	Northeast	South	Midwest	West
Base:	384	156	228	48	60	62	58
	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Stay the same	55	53	56	56	57	53	59
Increase	32	34	31	35	30	32	26
Don't know/Not sure	9	9	9	8	12	10	7
Decrease	4	4	4	0	2	5	9

Q28c. In your opinion, do you think that having to purchase R-134a by these means would contribute to problems using the product (i.e., misapplication or improper use)? I think the number of problems would likely ... All respondents n=384.

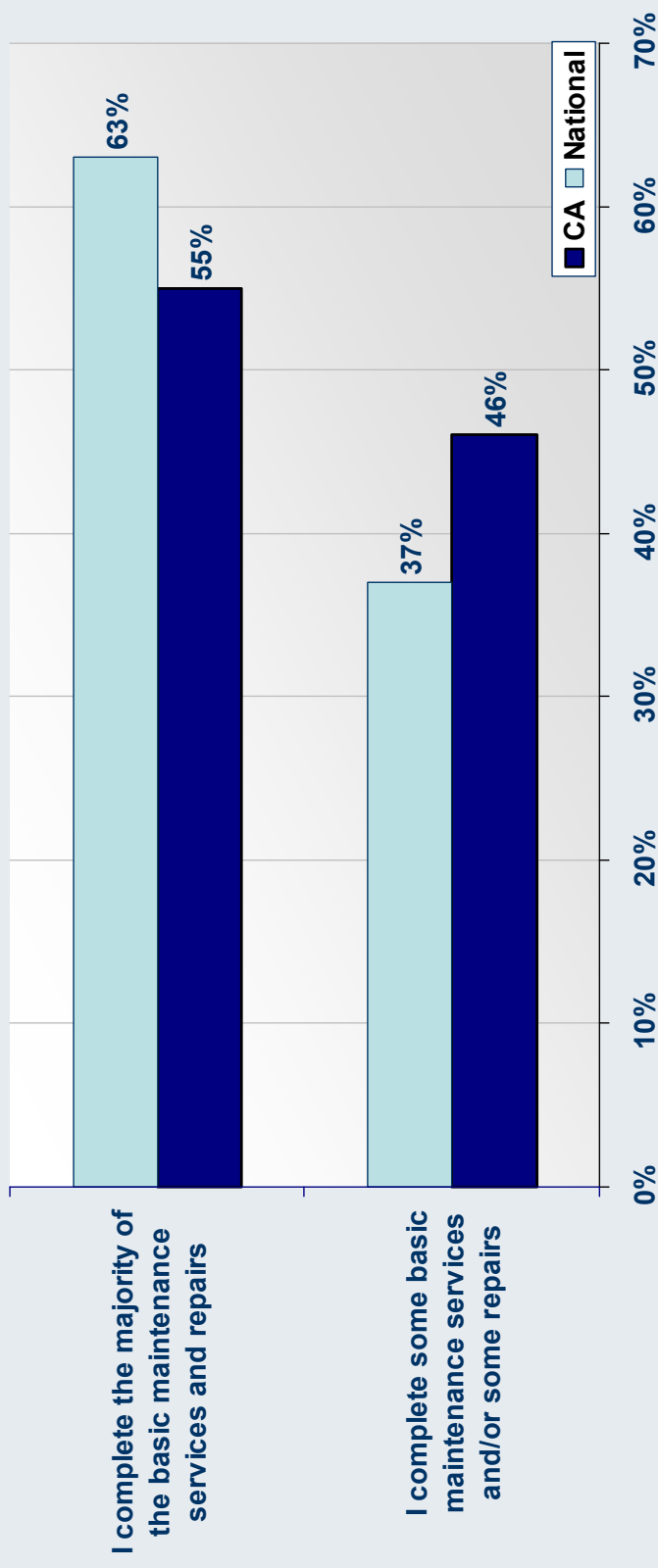
Negative Impact on Product Usage

	Total	Personal Income	
		Less than \$30,000	More than \$50,000
<i>Base:</i>	228	48	101
	(%)	(%)	(%)
Stay the same	56	57	52
Increase	31	33	29
Don't know / Not sure	9	15	10
Decrease	4	0	4

Q28c. In your opinion, do you think that having to purchase R-134a by these means would contribute to problems using the product (i.e., misapplication or improper use)? I think the number of problems would likely ... National respondents n=228.

Respondent Profile: DIY Behavior

Nationally, nearly two thirds (63%) of respondents mentioned that they completed the basic maintenance services and repairs themselves.



Q4. Which of the following best describes the way you go about servicing and maintaining your vehicle? National respondents n=600.

Respondent Profile: DIY Behavior

	Total	Sub-Samples		National by Region			
		California	National	Northeast	South	Midwest	West
Base:	1000	400	600	150	150	150	150
I complete the majority of the basic maintenance services and repairs	(%) 60	(%) 55	(%) 63	(%) 67	(%) 63	(%) 66	(%) 57
I complete some basic maintenance services and/or some repairs	40	46	37	33	37	34	43

Q4. Which of the following best describes the way you go about servicing and maintaining your vehicle? National respondents n=600.

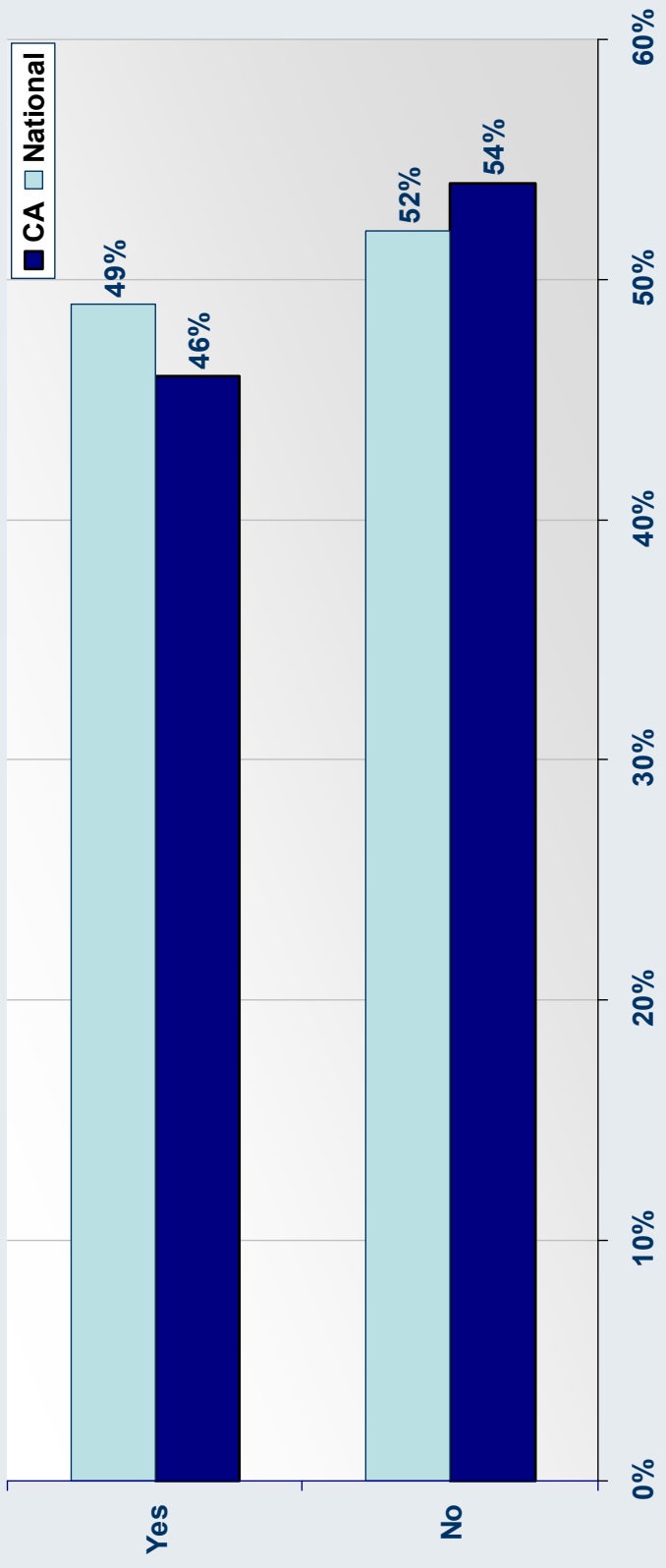
Respondent Profile: DIY Behavior

	Total	Personal Income		
		Less than \$30,000	\$30,000 to less than \$50,000	More than \$50,000
<i>Base:</i>	600	124	209	267
	(%)	(%)	(%)	(%)
I complete the majority of the basic maintenance services and repairs	63	65	66	61
I complete some basic maintenance services and/or some repairs	37	35	34	39

Q4. Which of the following best describes the way you go about servicing and maintaining your vehicle? National respondents n=600.

Awareness of Potential R-134a Retail Sales Ban

Nationally, half (49%) of respondents were aware of the fact that some state governments in the U.S. were considering banning the sale of R-134a.



Q37. Are you aware that some state governments within the US are considering banning the sale of automotive air conditioning refrigerant R-134a? National respondents n=600.

Awareness of Potential R-134a Retail Sales Ban

	Total	Sub-Samples		National by Region			
		California	National	Northeast	South	Midwest	West
Base:	1000	400	600	150	150	150	150
	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Yes	47	46	49	55	52	49	39
No	53	54	52	45	48	51	61

Q37. Are you aware that some state governments within the US are considering banning the sale of automotive air conditioning refrigerant R-134a? National respondents n=600.

Awareness of Potential R-134a Retail Sales Ban

	Total	Personal Income		
		Less than \$30,000	\$30,000 to less than \$50,000	More than \$50,000
<i>Base:</i>	600	124	209	267
	(%)	(%)	(%)	(%)
Yes	49	41	50	51
No	52	59	50	49

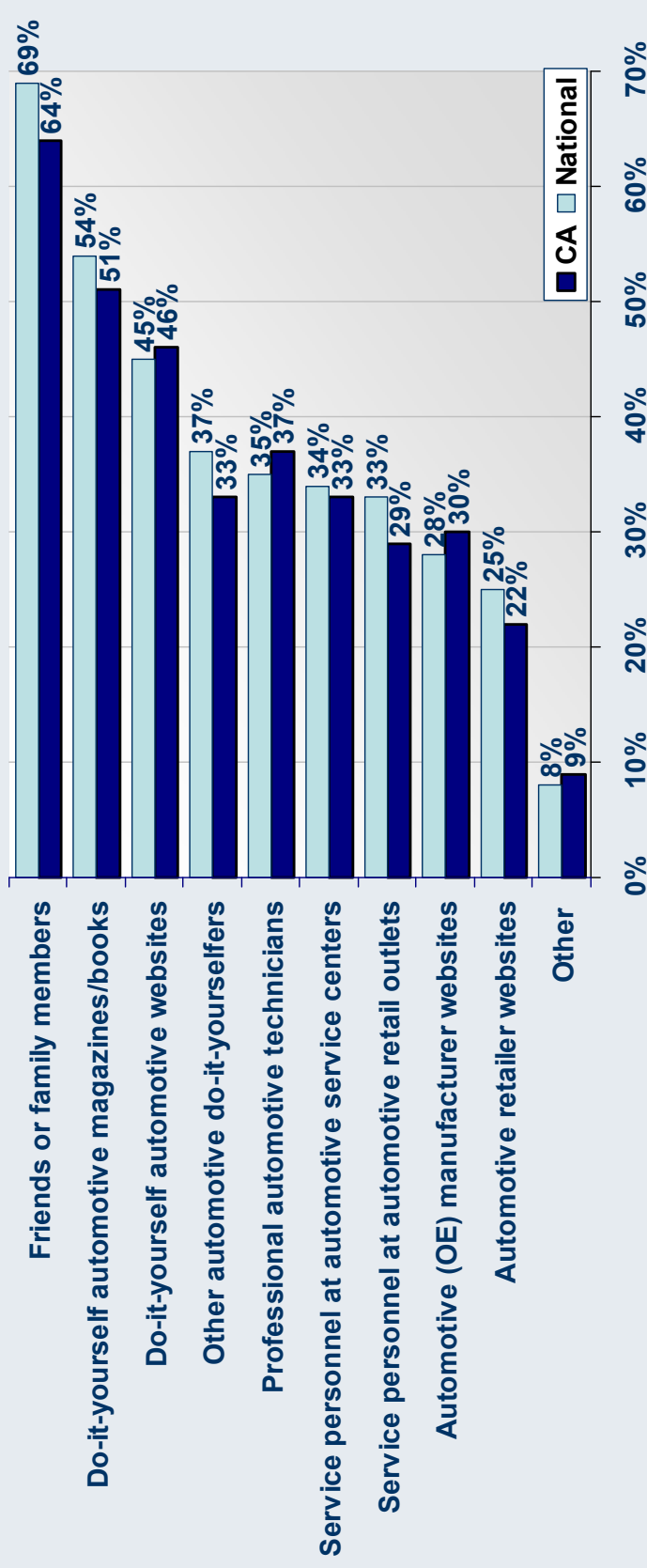
Q37. Are you aware that some state governments within the US are considering banning the sale of automotive air conditioning refrigerant R-134a? National respondents n=600.

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DIYer Educational Sources Used

Nationally, 7 of 10 respondents mentioned word of mouth through friends and family as a DIY educational source. Other prominent educational sources include DIYer automotive magazines or books and DIY automotive websites.



Q10. We are interested in better understanding how people like you learned to complete various vehicle maintenance services and repairs. Which of the following sources of information have you used? Select all that apply. National respondents n=600.

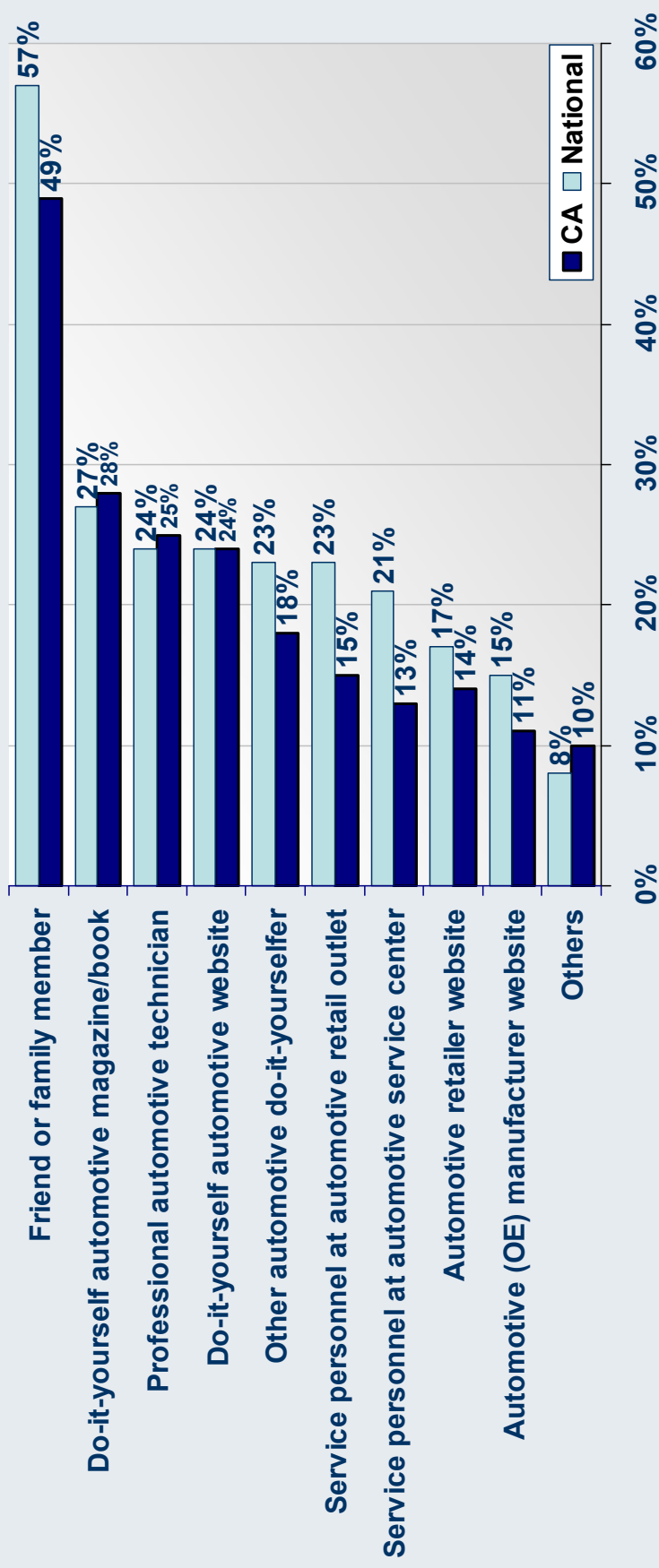
DIYer Educational Sources Used

	Total	Sub-Samples		National by Region			
		California	National	Northeast	South	Midwest	West
Base:	1,000	400	600	150	150	150	150
	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Friends or family members	67	64	69	71	67	73	65
Do-it-yourself automotive magazines/books	52	51	54	60	49	45	60
Do-it-yourself automotive websites	45	46	45	52	39	42	47
Professional automotive technicians	36	37	35	44	31	27	39
Other automotive do-it-yourselfers	36	33	37	45	41	32	31
Service personnel at automotive service centers	34	33	34	45	31	23	39
Service personnel at automotive retail outlets	32	29	33	39	32	29	34
Automotive (OE) manufacturer websites	29	30	28	32	29	19	31
Automotive retailer websites	24	22	25	39	26	17	19
Other	8	9	8	6	6	11	11

Q10. We are interested in better understanding how people like you learn to complete various vehicle maintenance services and repairs. Which of the following sources of information have you used? Select all that apply. National respondents n=600.

Source of First Information on DIYer Recharge

Nationally, over half (57%) of the respondents indicated that a friend or family member was the source of first information on DIYer recharge.



Q20. How did you first learn that you could purchase R-134a products and recharge your vehicle's air conditioning system yourself? Did you learn from a(n)...? National respondents n=600.

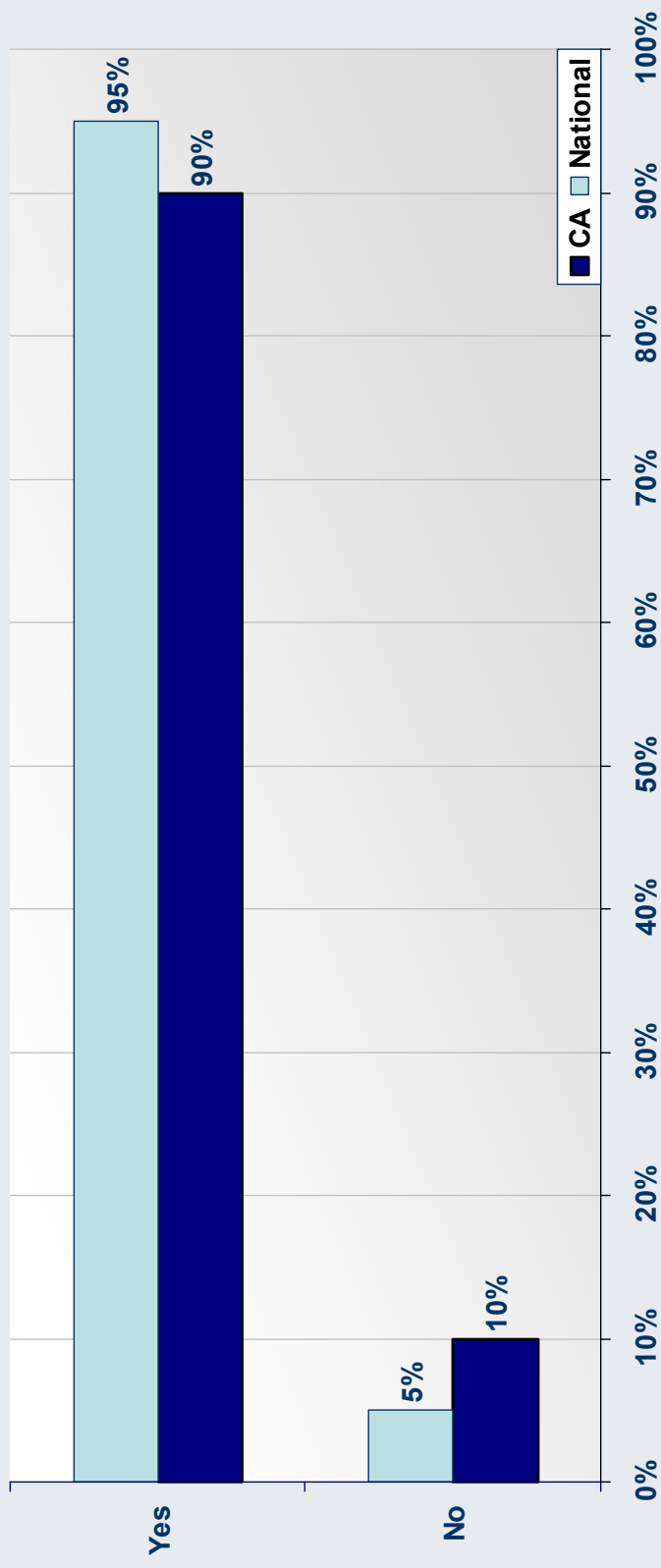
Source of First Information on DIYer Recharge

	Total	Sub-Samples		National by Region			
		California	National	Northeast	South	Midwest	West
Base:	1000	400	600	150	150	150	150
	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Friend or family member	54	49	57	53	61	63	52
Do-it-yourself automotive magazine/book	27	28	27	35	30	17	25
Professional automotive technician	24	25	24	32	21	19	23
Do-it-yourself automotive website	24	24	23	31	23	16	23
Other automotive do-it-yourselfer	21	18	23	29	22	17	23
Service personnel at automotive retail outlet	20	15	24	31	21	23	20
Service personnel at automotive service center	18	13	21	27	22	13	20
Automotive retailer website	15	14	17	26	19	8	13
Automotive (OE) manufacturer website	14	11	15	24	13	8	15
Others	9	10	8	5	7	7	13

Q20. How did you first learn that you could purchase R-134a products and recharge your vehicle's air conditioning system yourself? Did you learn from a(n)...? National respondents n=600.

Use of Product Instructions

Nearly all (95%) of respondents claim to follow product instructions provided with R-134a products.



Q21. Do you follow the instructions provided with R-134a products when you recharge your vehicle's air conditioning system? National respondents n=600.

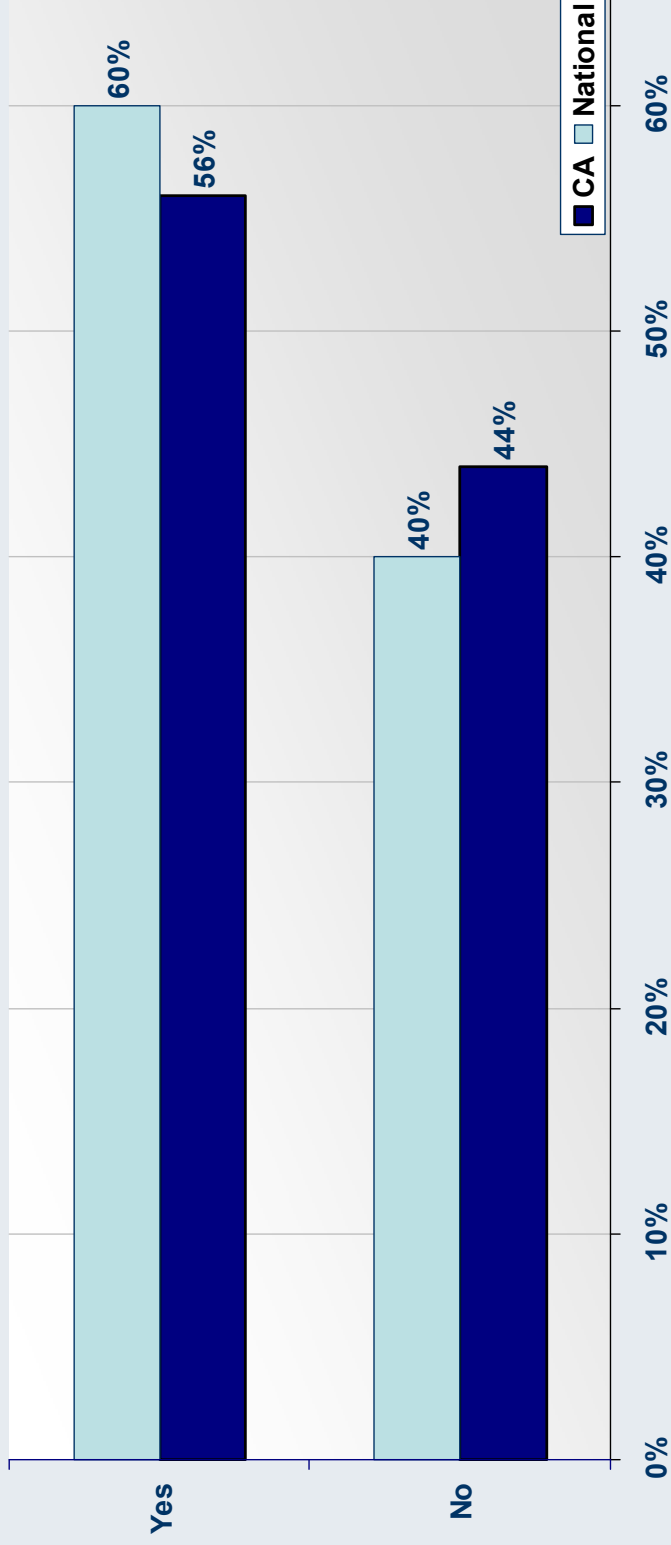
Use of Product Instructions

	Total	Sub-Samples		National by Region			
		California	National	Northeast	South	Midwest	West
Base:	1000	400	600	150	150	150	150
	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Yes	93	90	95	93	95	93	97
No	7	10	5	7	5	7	3

Q21. Do you follow the instructions provided with R-134a products when you recharge your vehicle's air conditioning system? National respondents n=600.

Awareness of Potential Consequences to Product Misuse

Nationally, 6 in 10 respondents claim to be aware of the potential consequences of product misuse.



**Q30a. Are you aware of any potentially negative consequences that can result from releasing R-134a into the atmosphere?
National respondents n=600.**

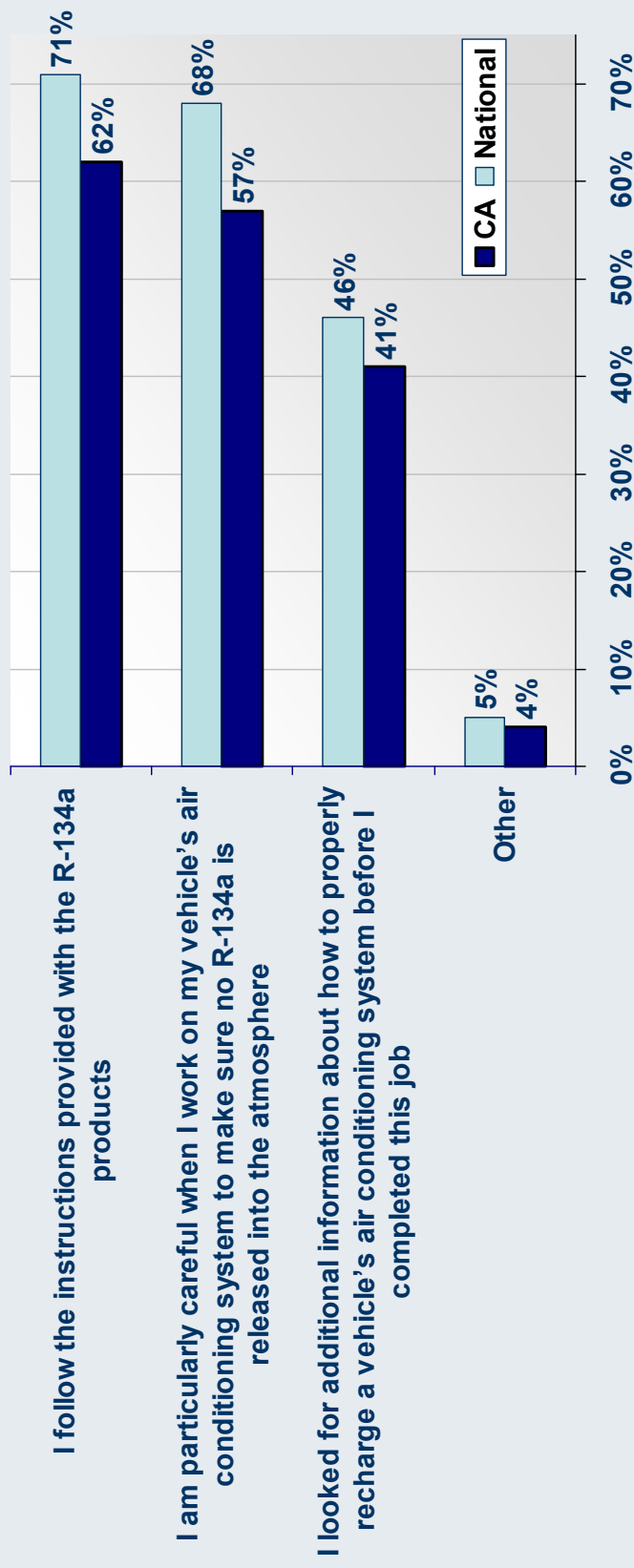
Awareness of Potential Consequences to Product Misuse

	Total	Sub-Samples		National by Region			
		California	National	Northeast	South	Midwest	West
Base:	1000	400	600	150	150	150	150
	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Yes	59	56	60	65	62	57	57
No	42	44	40	35	38	43	43

Q30a. Are you aware of any potentially negative consequences that can result from releasing R-134a into the atmosphere? National respondents n=600.

Precautions Against Misuse

The majority of respondents (71%) claim to follow product instructions provided with R-134a products. An equal proportion indicate that they are particularly careful when working with their vehicle's air conditioning system, so as to prevent any leakage of R-134a into the atmosphere.



Q30b. When you work on your vehicle's air conditioning system, which of the following precautions do you take to reduce the likelihood of releasing R-134a into the atmosphere? Select all that apply. National respondents n=600.

Precautions Against Misuse

	Total	Sub-Samples		National by Region			
		California	National	Northeast	South	Midwest	West
<i>Base:</i>	585	223	362	98	93	85	86
	(%)	(%)	(%)	(%)	(%)	(%)	(%)
I follow the instructions provided with the R-134a products	68	62	71	71	65	74	76
I am particularly careful when I work on my vehicle's air conditioning system to make sure no R-134a is released into the atmosphere	63	57	68	69	67	71	64
I looked for additional information about how to properly recharge a vehicle's air conditioning system before I completed this job	44	41	46	51	49	35	49
Other	5	4	5	3	5	5	7

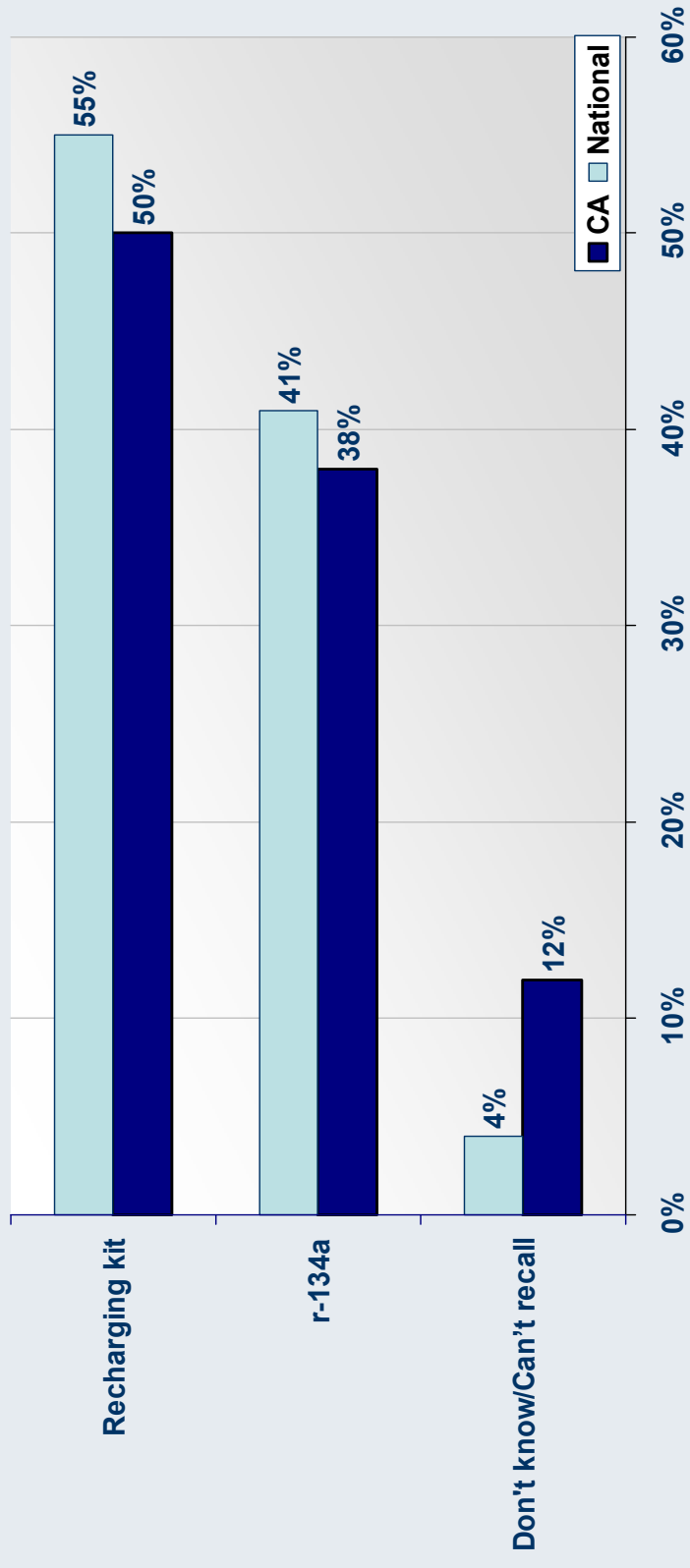
Q30b. When you work on your vehicle's air conditioning system, which of the following precautions do you take to reduce the likelihood of releasing R-134a into the atmosphere? Select all that apply. National respondents n=600.

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Most Recent Refrigerant Products Purchased

Nationally, over half (55%) the respondents mentioned that they purchased the entire recharging kit. Four of 10 respondents (41%) purchased just the R-134a canister.



Q12. On the most recent occasion that you purchased air conditioning refrigerant products, did you purchase a pre-packaged refrigerant recharging kit (e.g., contents may include refrigerant, oil, stop leak, fittings, recharge hose and pressure gauge) or separate products including R-134a? National respondents n=600.

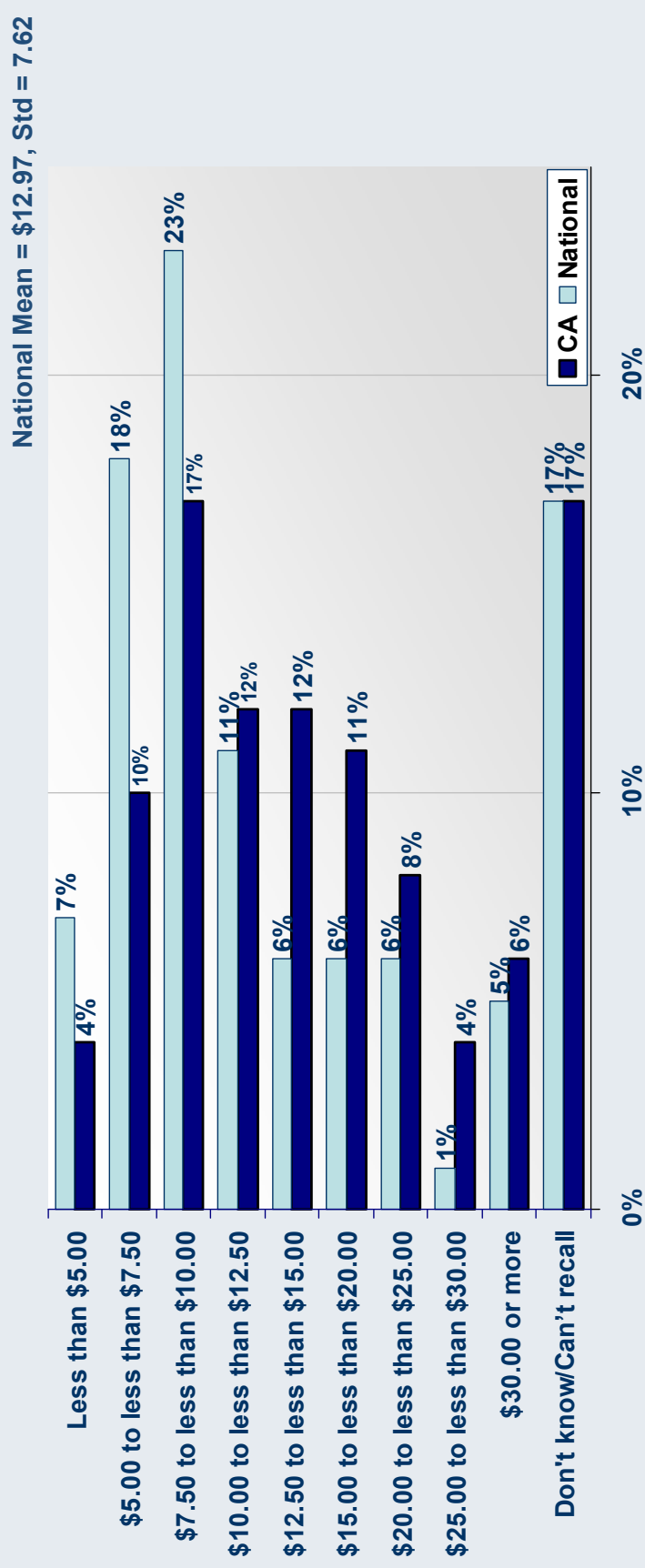
Most Recent Refrigerant Products Purchased

	Total	Sub-Samples		National by Region			
		California	National	Northeast	South	Midwest	West
Base:	1000	400	600	150	150	150	150
	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Recharging kit	53	50	55	61	57	43	57
R-134a	40	38	41	35	40	52	38
Don't know/Can't recall	7	12	4	4	3	5	5

Q12. On the most recent occasion that you purchased air conditioning refrigerant products, did you purchase a pre-packaged refrigerant recharging kit (e.g., contents may include refrigerant, oil, stop leak, fittings, recharge hose and pressure gauge) or separate products including R-134a? National respondents n=600.

Reported Price per Can

Nearly half (48%) of respondents reported prices of up to \$10 for the can of R-134a.



Q14. Approximately how much did you pay for each can of R-134a? National respondents n=XX.

Reported Price per Can

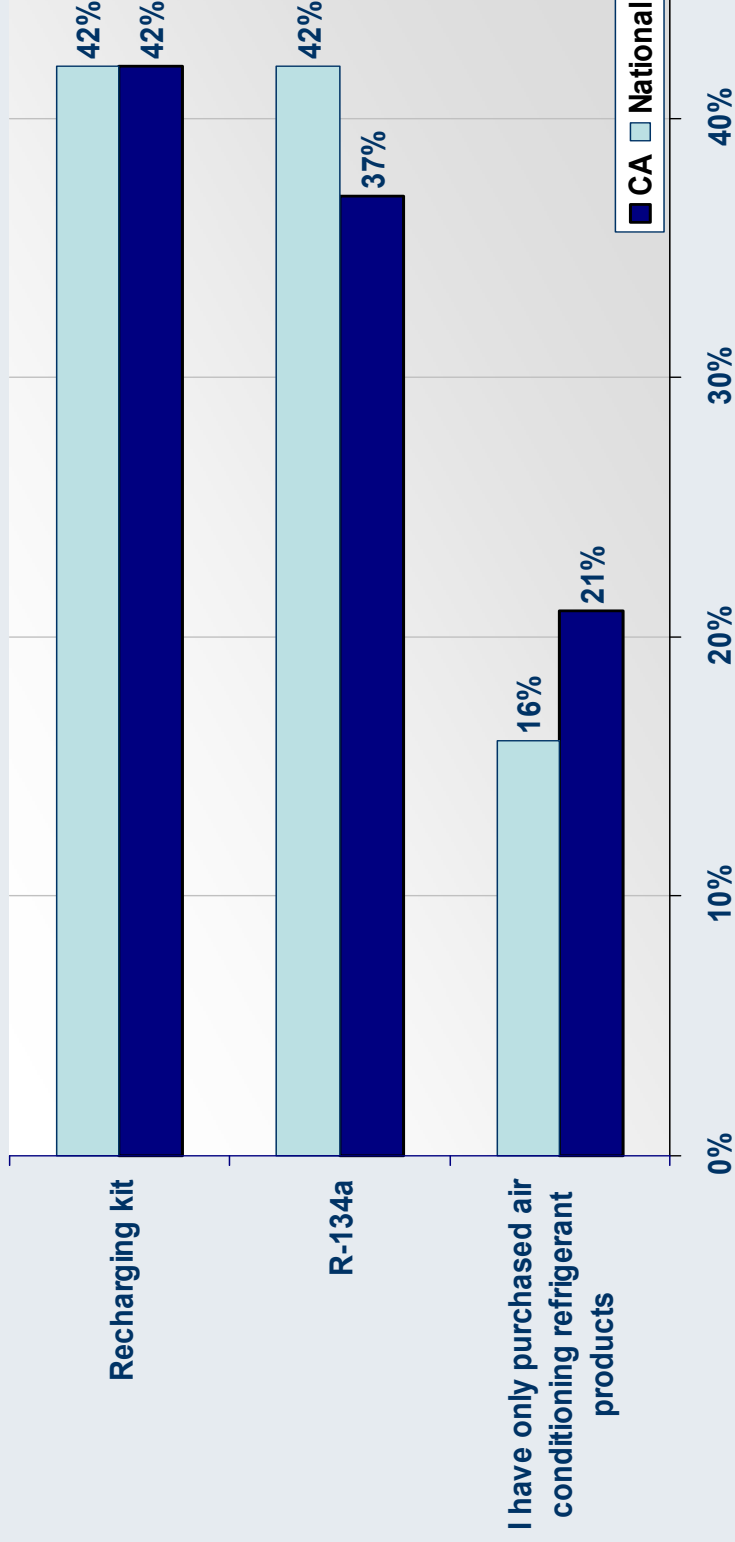
National Mean = \$12.97, Std = 7.62

	Total	Sub-Samples		National by Region			
		California	National	Northeast	South	Midwest	West
Base:	472	199	273	58	65	85	65
Less than \$5.00	(%)	(%)	(%)	(%)	(%)	(%)	(%)
\$5.00 to less than \$7.50	6	4	7	9	5	8	6
\$7.50 to less than \$10.00	15	10	18	9	32	19	11
\$10.00 to less than \$12.50	20	17	23	21	25	27	17
\$12.50 to less than \$15.00	11	12	11	17	8	6	14
\$15.00 to less than \$20.00	8	12	6	5	6	4	9
\$20.00 to less than \$25.00	8	11	6	5	5	5	9
\$25.00 to less than \$30.00	7	8	6	14	5	5	2
\$30.00 or more	2	4	1	0	0	5	0
Don't know/Can't recall	6	6	5	3	6	7	5
	17	17	17	17	9	15	28

Q14. Approximately how much did you pay for each can of R-134a? National respondents n=273.

Typical Purchase

Four of ten respondents indicated that they typically purchase the entire recharging kit, while an equal proportion purchase the R-134a can only.



Q15. When you purchase air conditioning refrigerant products do you usually purchase a recharging kit or separate products including R-134a? National respondents n=600.

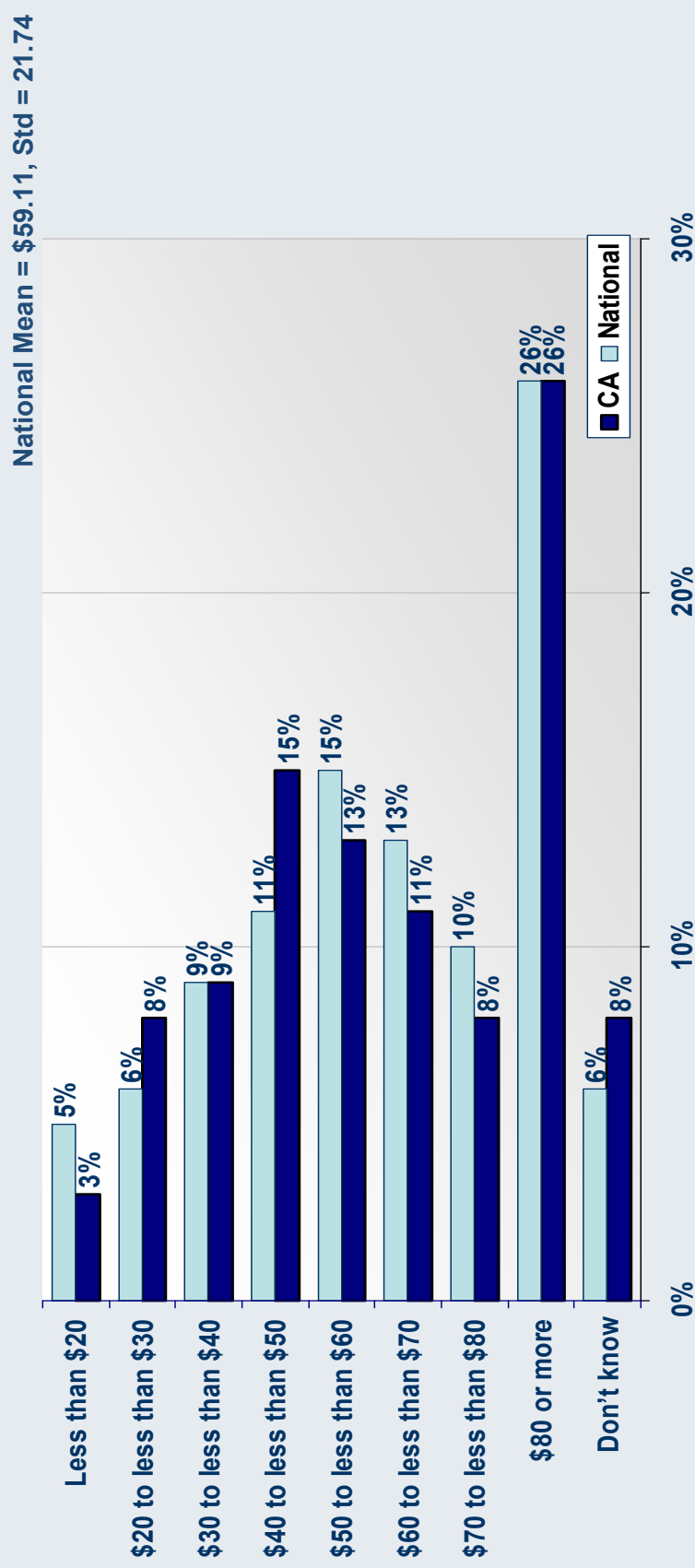
Typical Purchase

	Total	Sub-Samples		National by Region			
		California	National	Northeast	South	Midwest	West
Base:	1000	400	600	150	150	150	150
	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Recharging kit	42	42	42	49	50	29	41
R-134a	40	37	42	37	39	51	41
I have only purchased air conditioning refrigerant products	18	21	16	15	11	19	17

Q15. When you purchase air conditioning refrigerant products do you usually purchase a recharging kit or separate products including R-134a? National respondents n=600.

Perceived Market Price for Professional Recharge

The perceived market price for professional recharge varied widely. However, the average price reported was \$59.



Q18. Approximately how much would you expect to pay to have your air conditioning refrigerant recharged by a professional automotive technician? National respondents $n=600$.

Perceived Market Price for Professional Recharge

National Mean = \$59.11, Std = 21.74

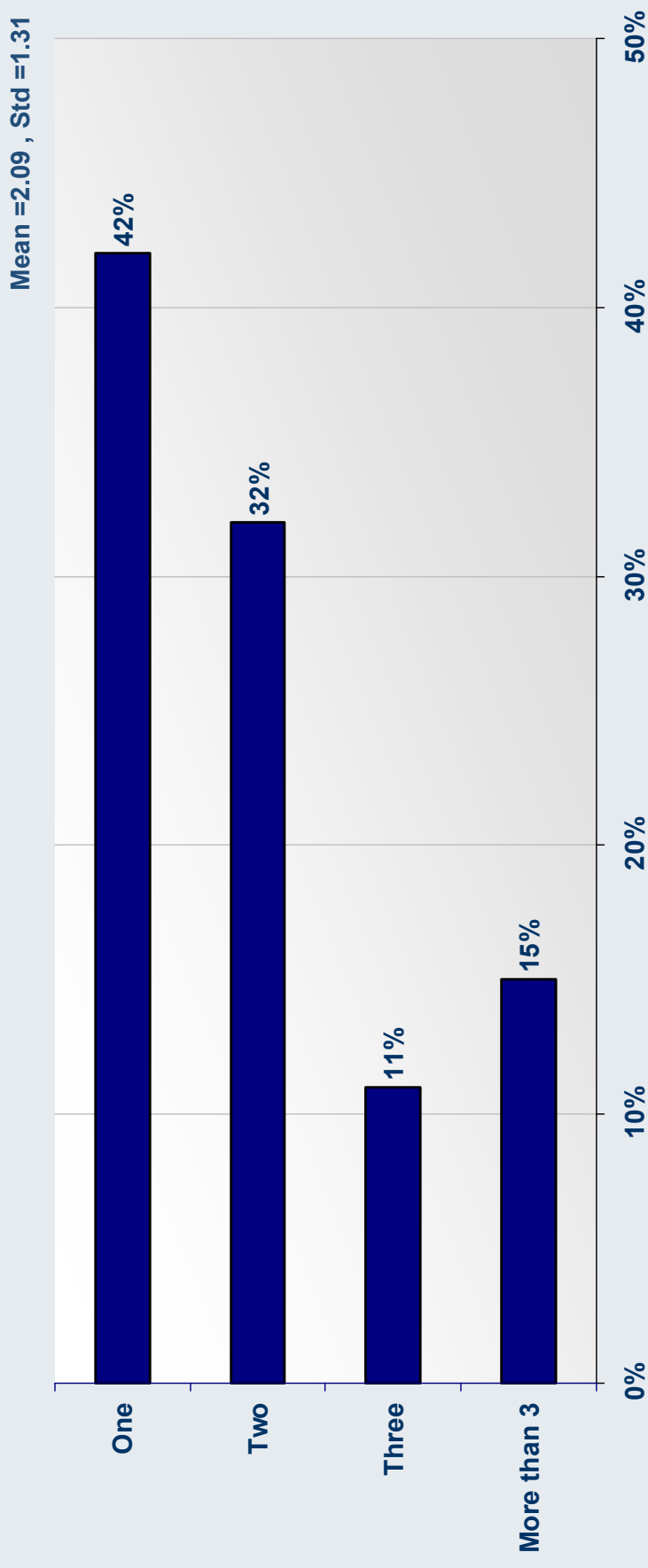
	Total	Sub-Samples		National by Region			
		California	National	Northeast	South	Midwest	West
Base:	1000	400	600	150	150	150	150
	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Less than \$20	4	3	5	2	6	3	9
\$20 to less than \$30	7	8	6	6	11	3	4
\$30 to less than \$40	9	9	9	12	6	12	7
\$40 to less than \$50	13	15	11	13	15	7	11
\$50 to less than \$60	14	13	15	11	16	15	16
\$60 to less than \$70	12	11	13	17	13	8	12
\$70 to less than \$80	9	8	10	11	9	9	9
\$80 or more	26	26	26	22	21	32	27
Don't know	7	8	6	7	3	10	5

Q18. Approximately how much would you expect to pay to have your air conditioning refrigerant recharged by a professional automotive technician? National respondents n=600.

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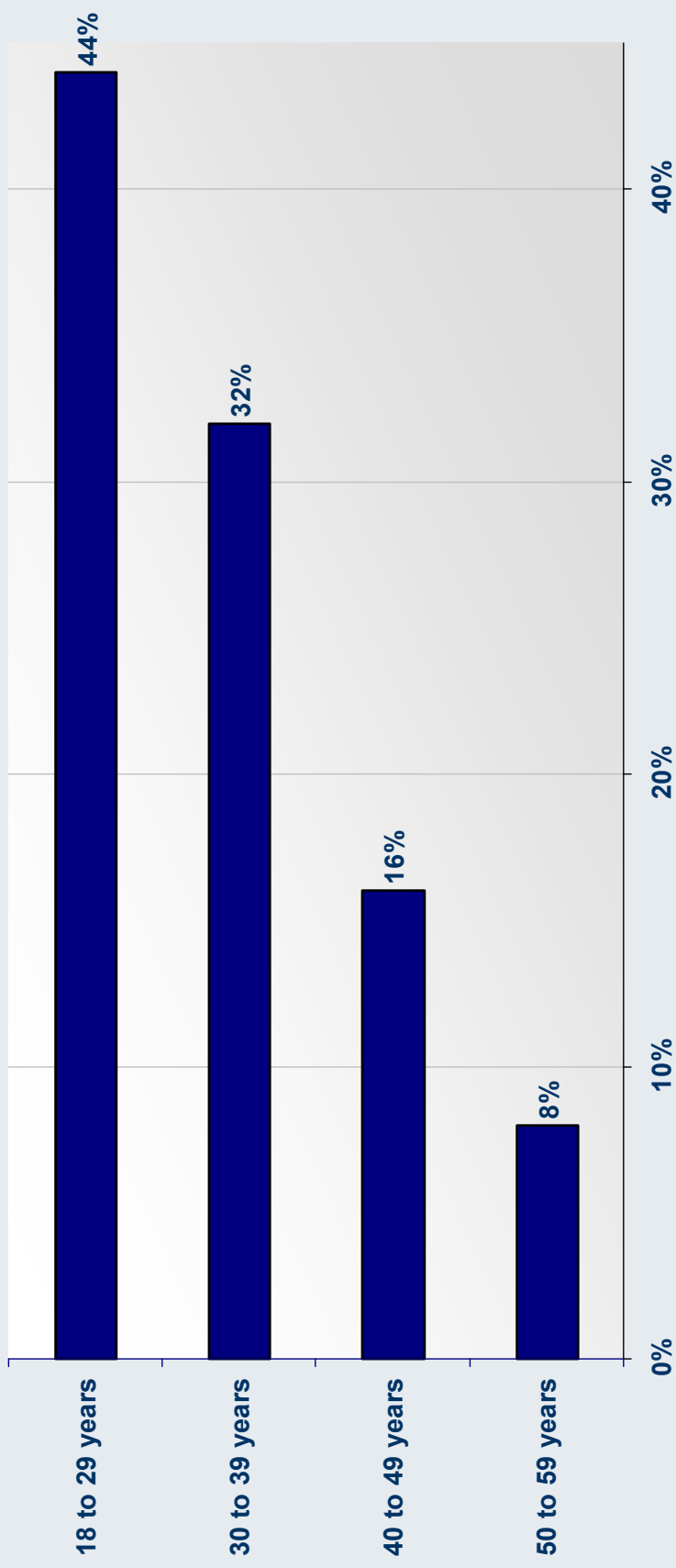
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Number of Recharges



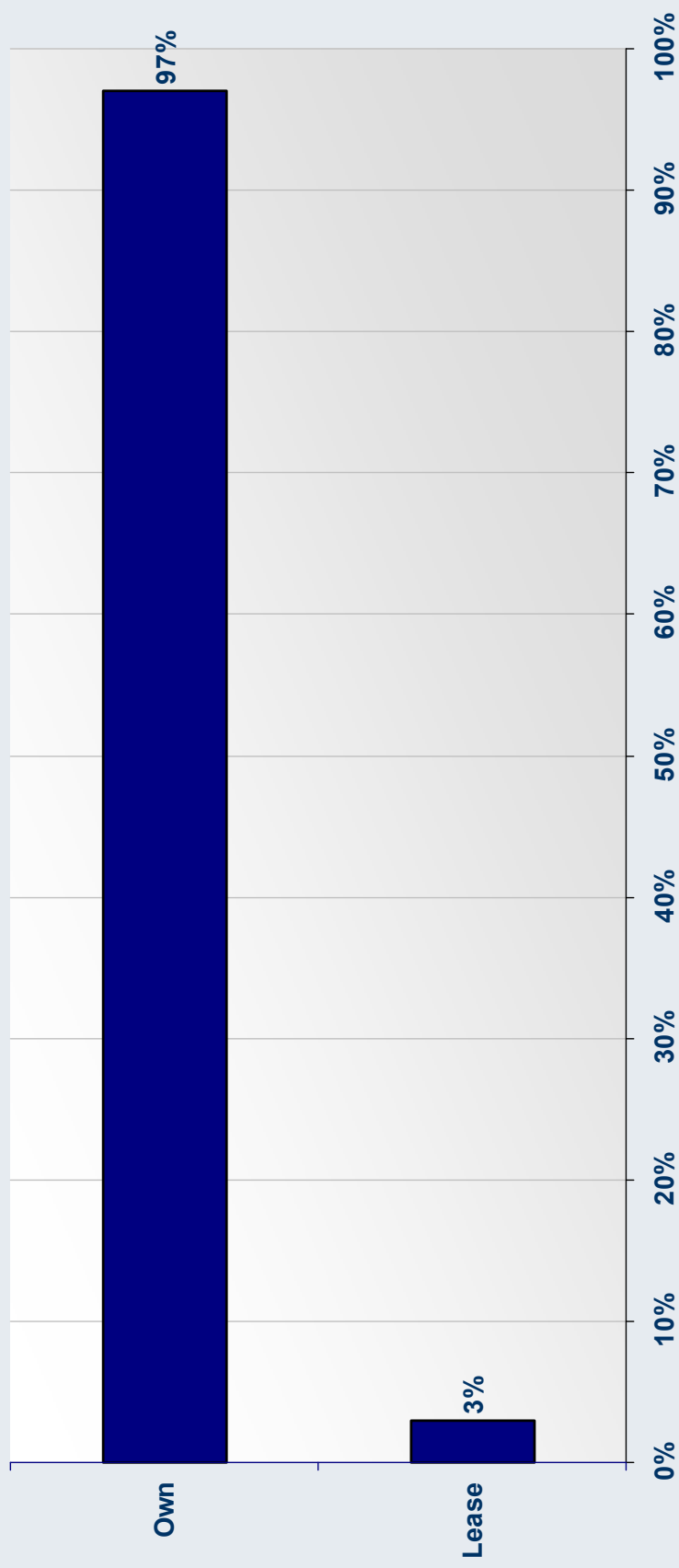
Q9. Including past and present vehicles, approximately how many times have you recharged your vehicle's R-134a refrigerant? CA respondents n=348.

Respondent Profile: Age



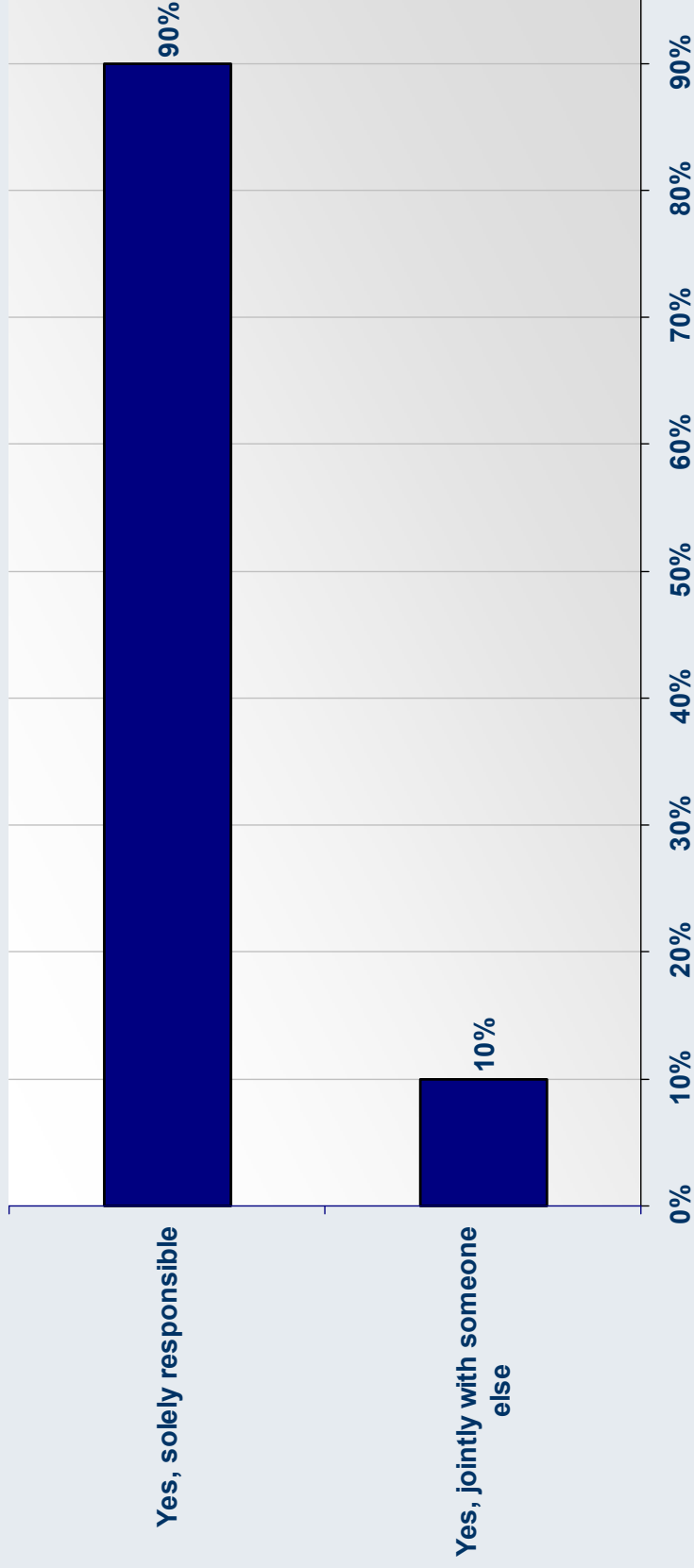
Q1. In which of these groups does your age fall? CA respondents n=400.

Respondent Profile: Vehicle Ownership



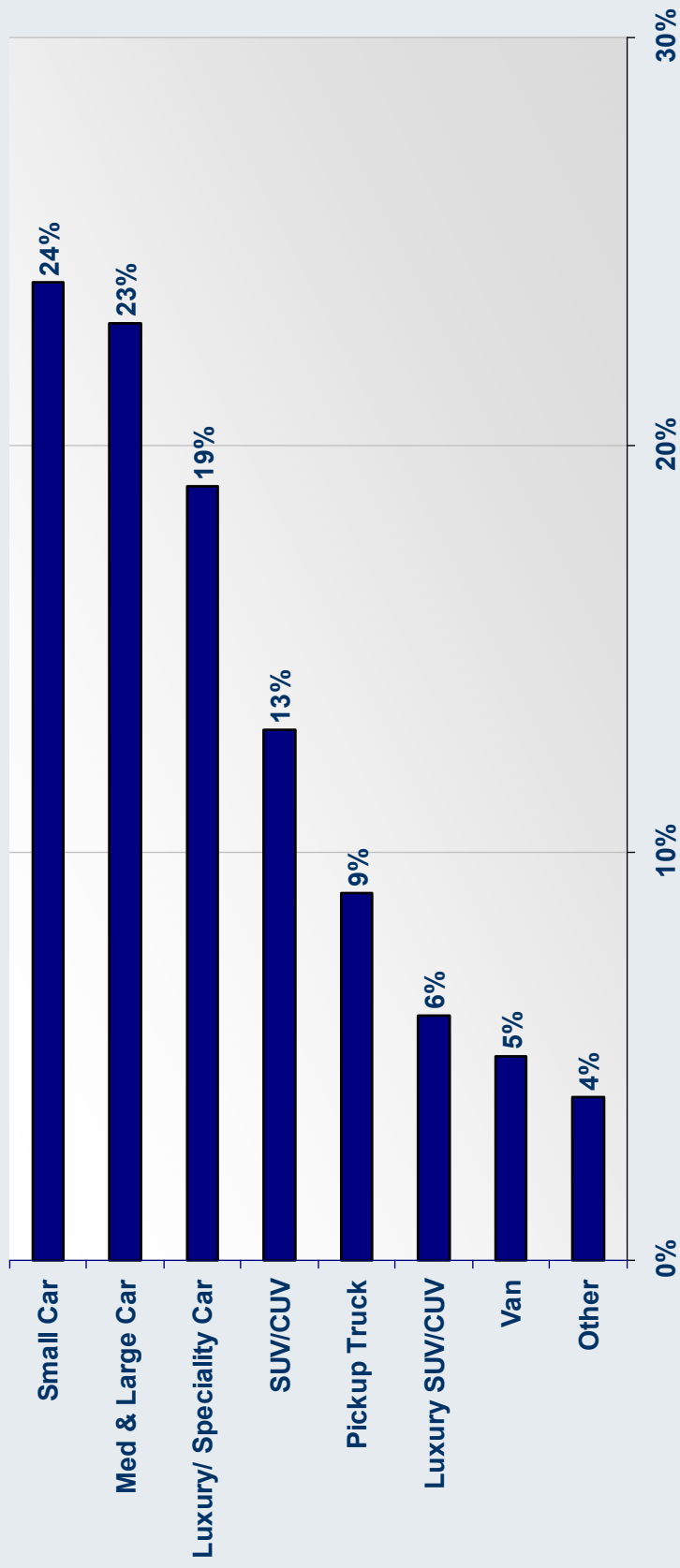
Q2. Do you own or lease a car? CA respondents n=400.

Respondent Profile: Responsibility for Vehicle



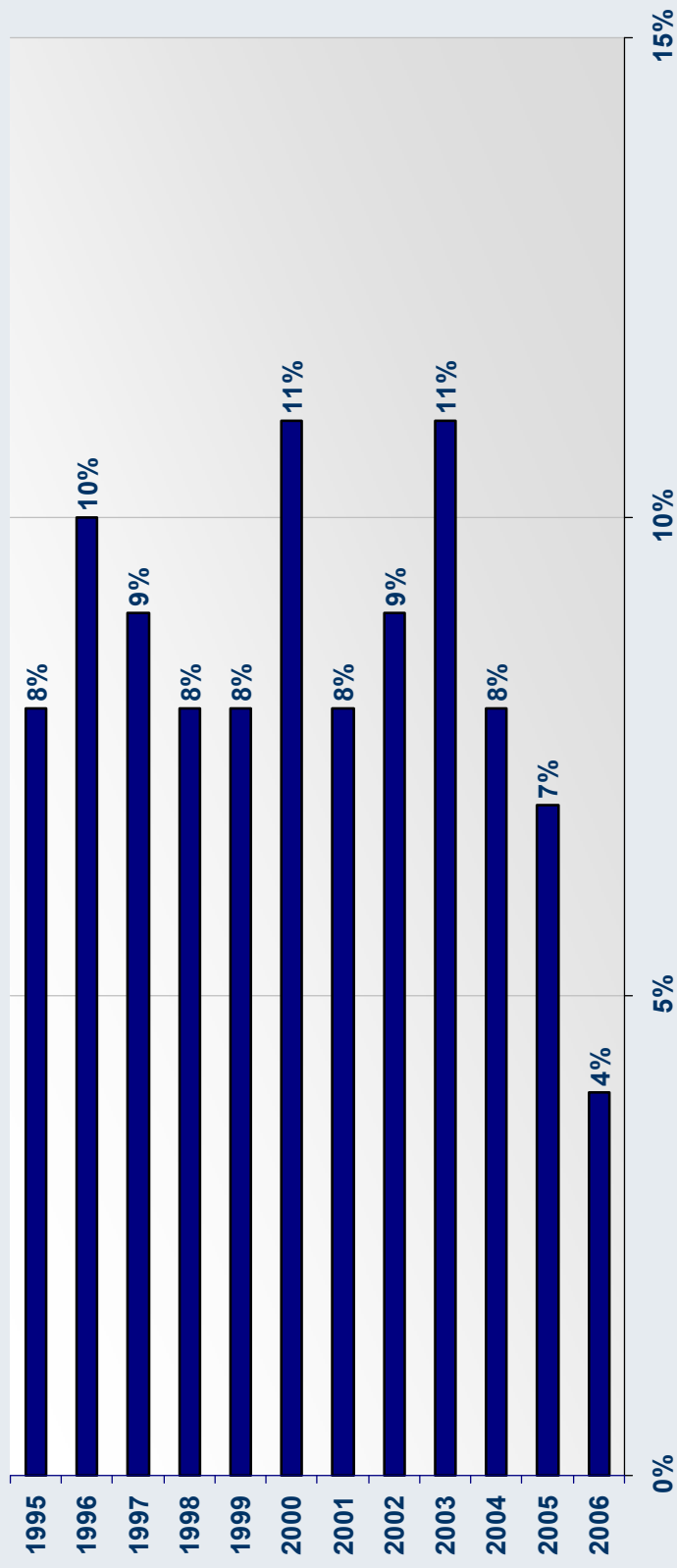
Q3. Are you responsible for making decisions about the maintenance and repairs for this vehicle? CA respondents n=400.

Respondent Profile: Vehicle Segment



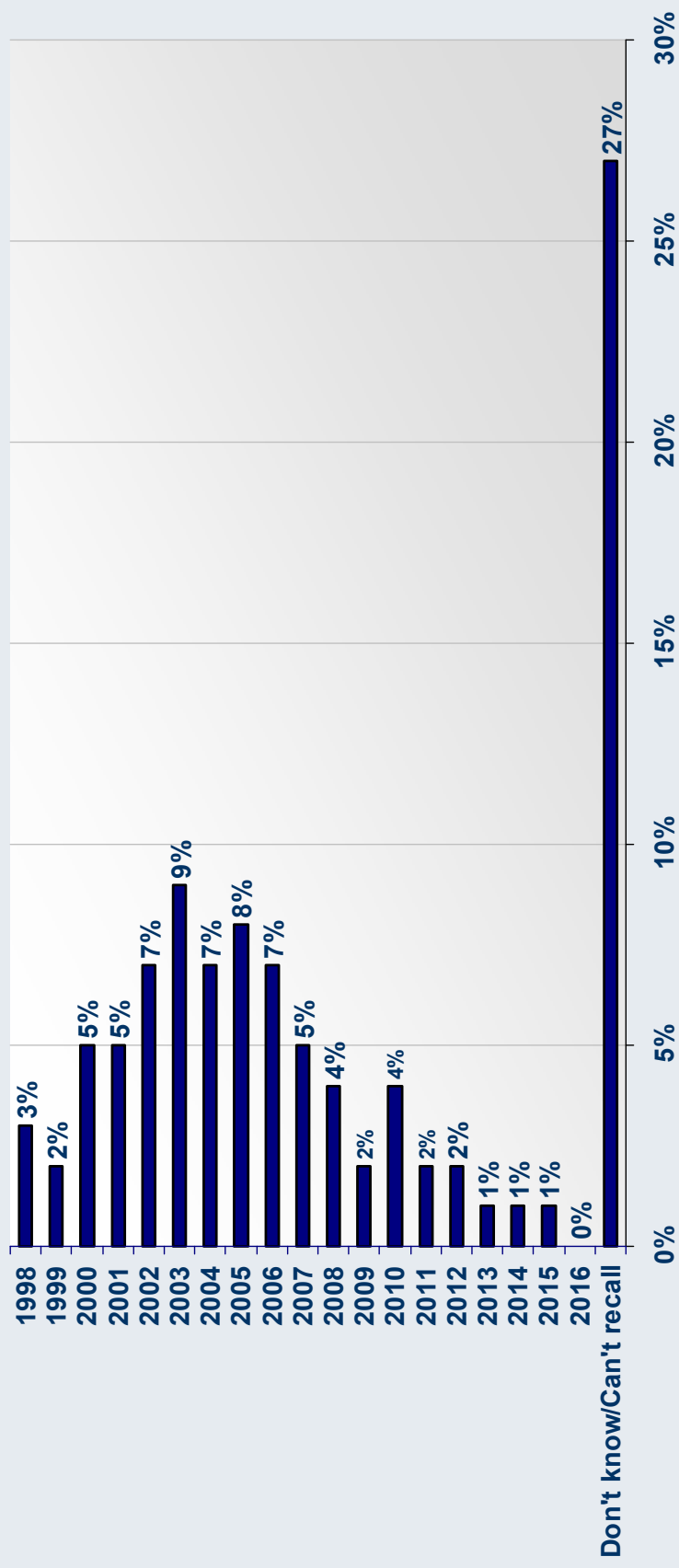
From Q7. You indicated that you recharged your vehicle's air conditioning refrigerant within in the past 12 months. What is the make, model and year of this vehicle? CA respondents n=400.

Respondent Profile: Vehicle Model Year



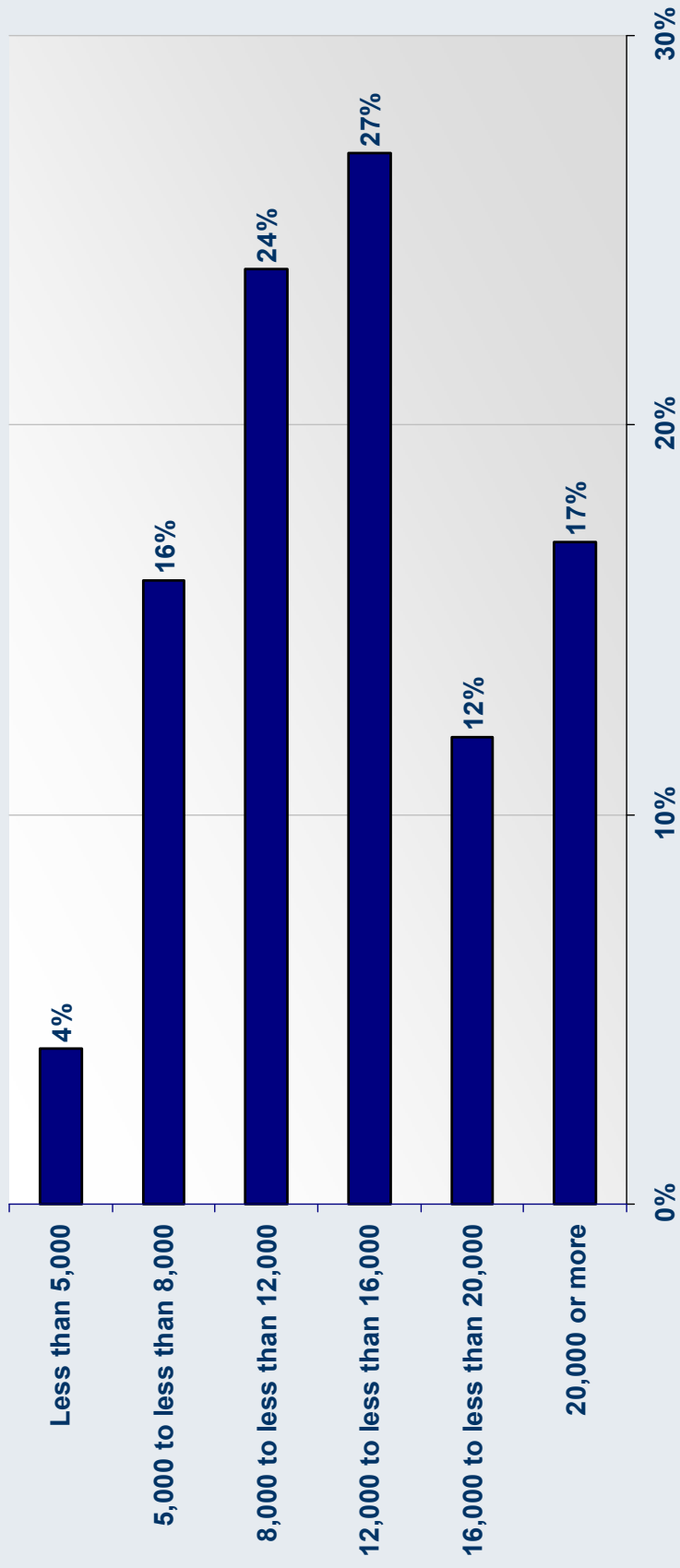
From Q7. You indicated that you recharged your vehicle's air conditioning refrigerant within in the past 12 months. What is the make, model and year of this vehicle? CA respondents n=400.

Respondent Profile: Warranty Expiration



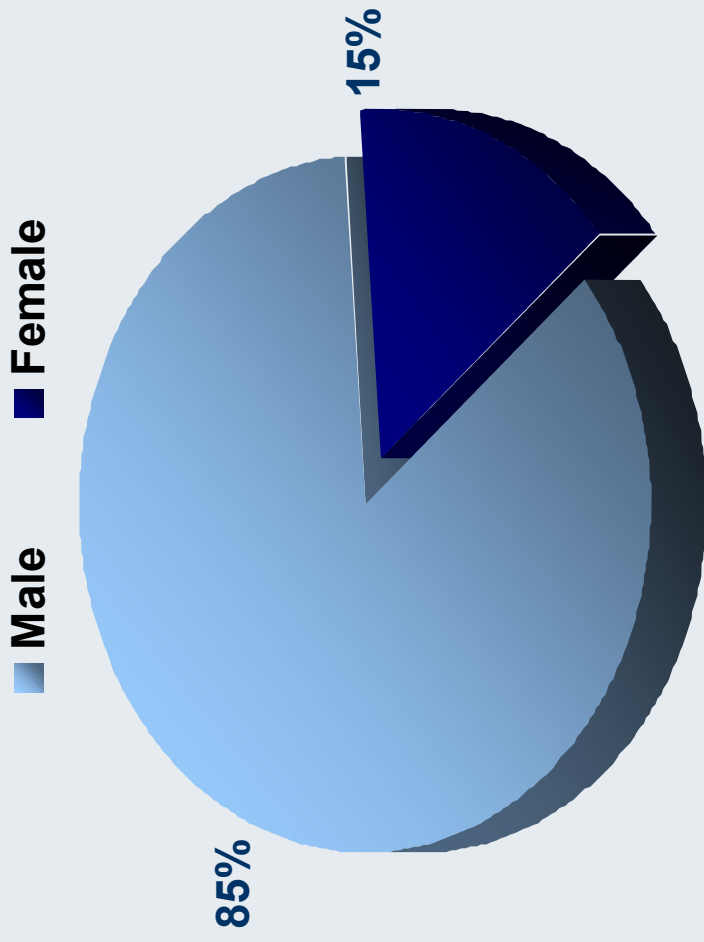
Q8a. For this vehicle, in which year did (or will) the manufacturer's warranty end? CA respondents n=400.

Respondent Profile: Annual Mileage



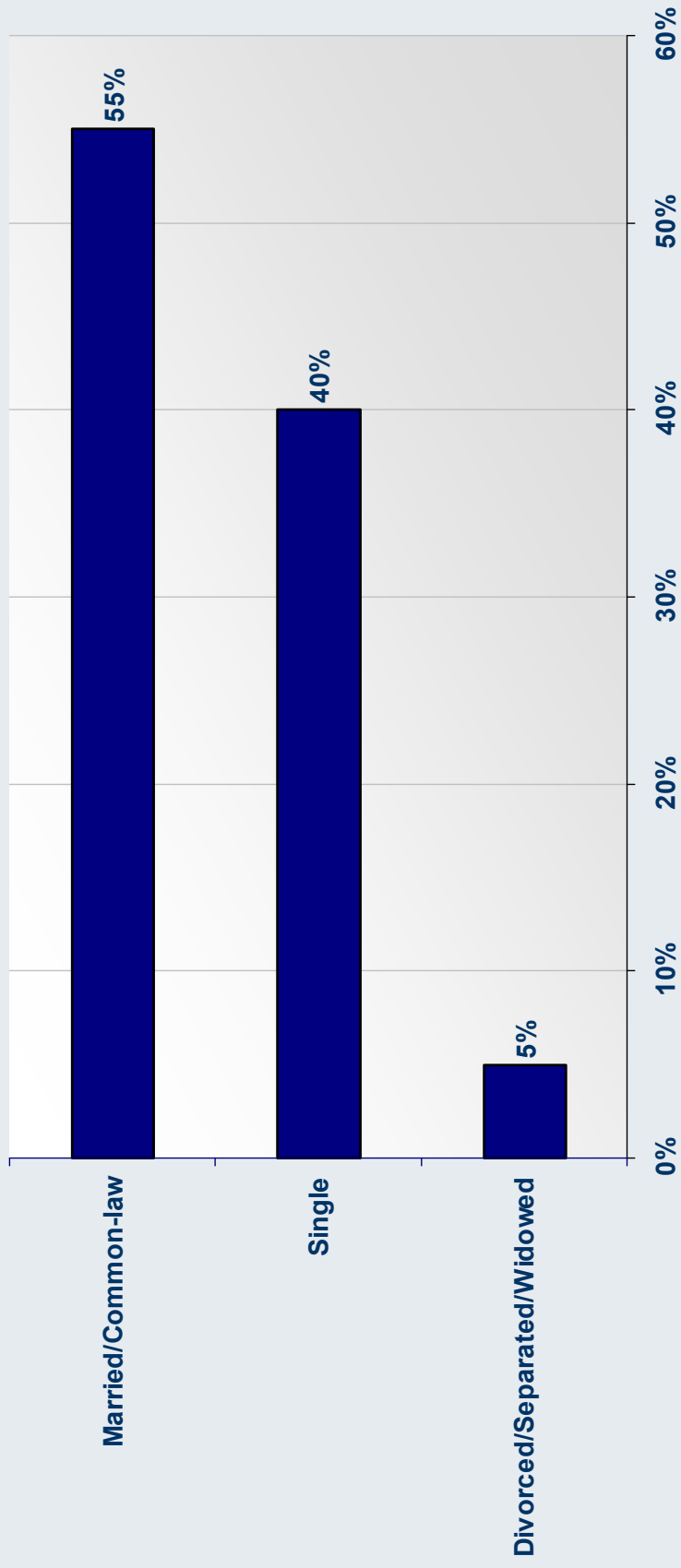
Q31. On average, how many miles do you drive in a year? CA respondents n=400.

Respondent Profile: Gender



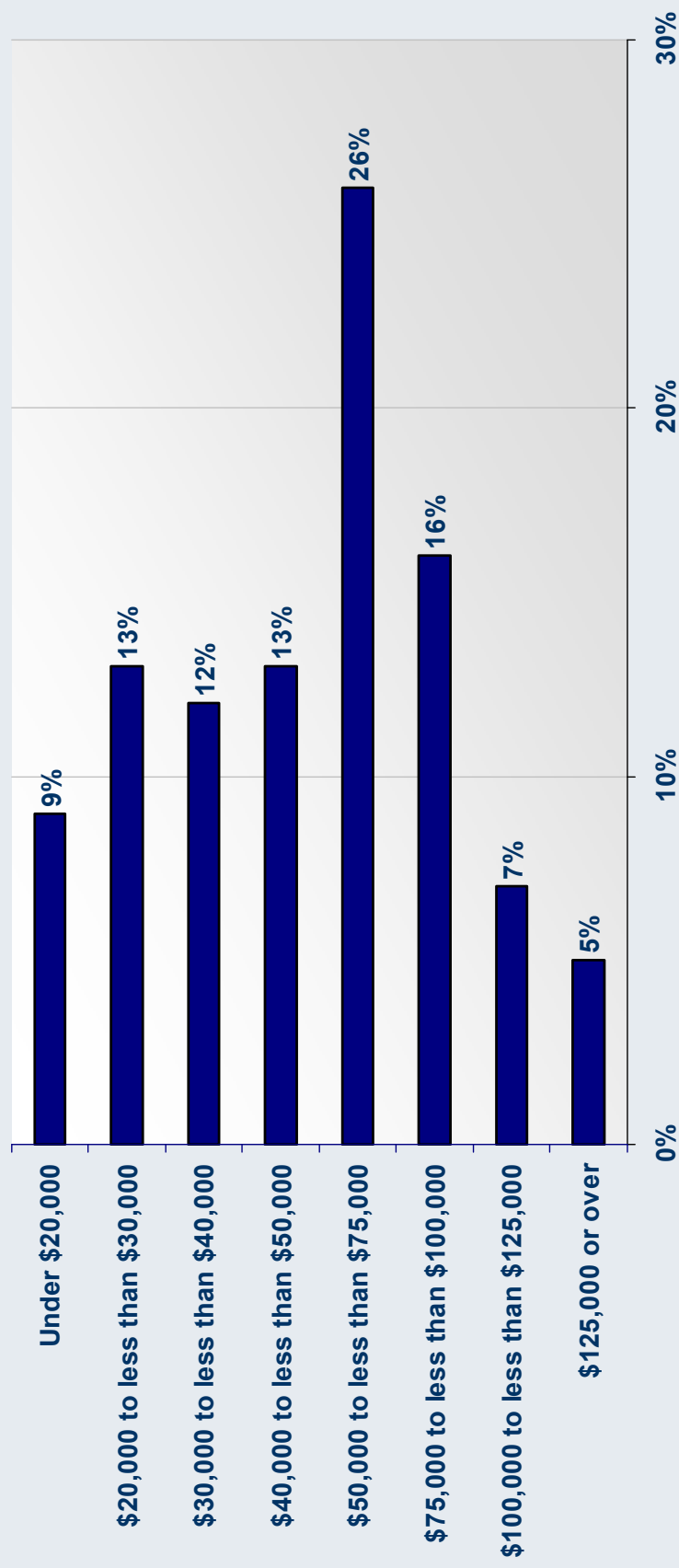
Q33. What is your gender? CA respondents n=400.

Respondent Profile: Marital Status



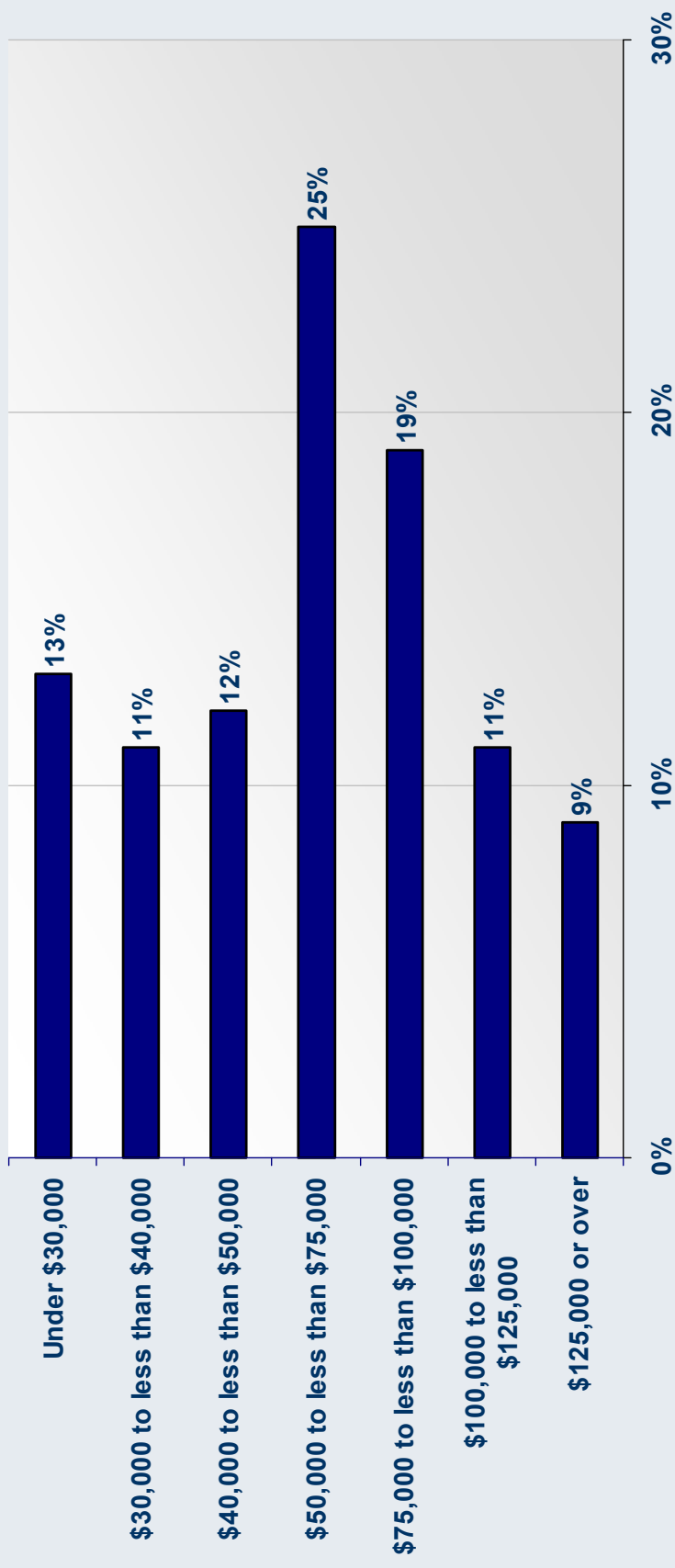
Q34a. What is your marital status? CA respondents n=400.

Respondent Profile: Personal Income 2005



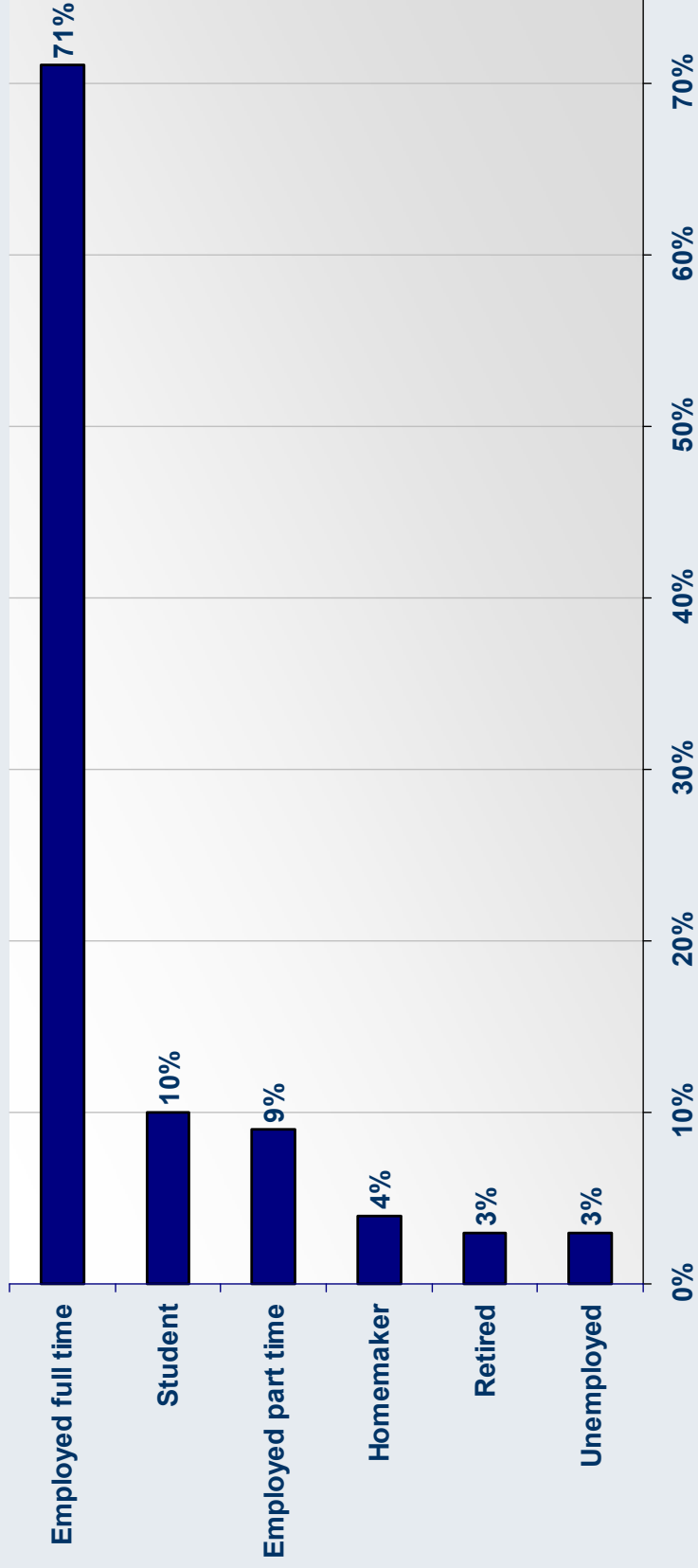
Q35a. Into which of the following categories did your personal income, before taxes, fall in 2005? CA respondents n=400.

Respondent Profile: Household Income 2005



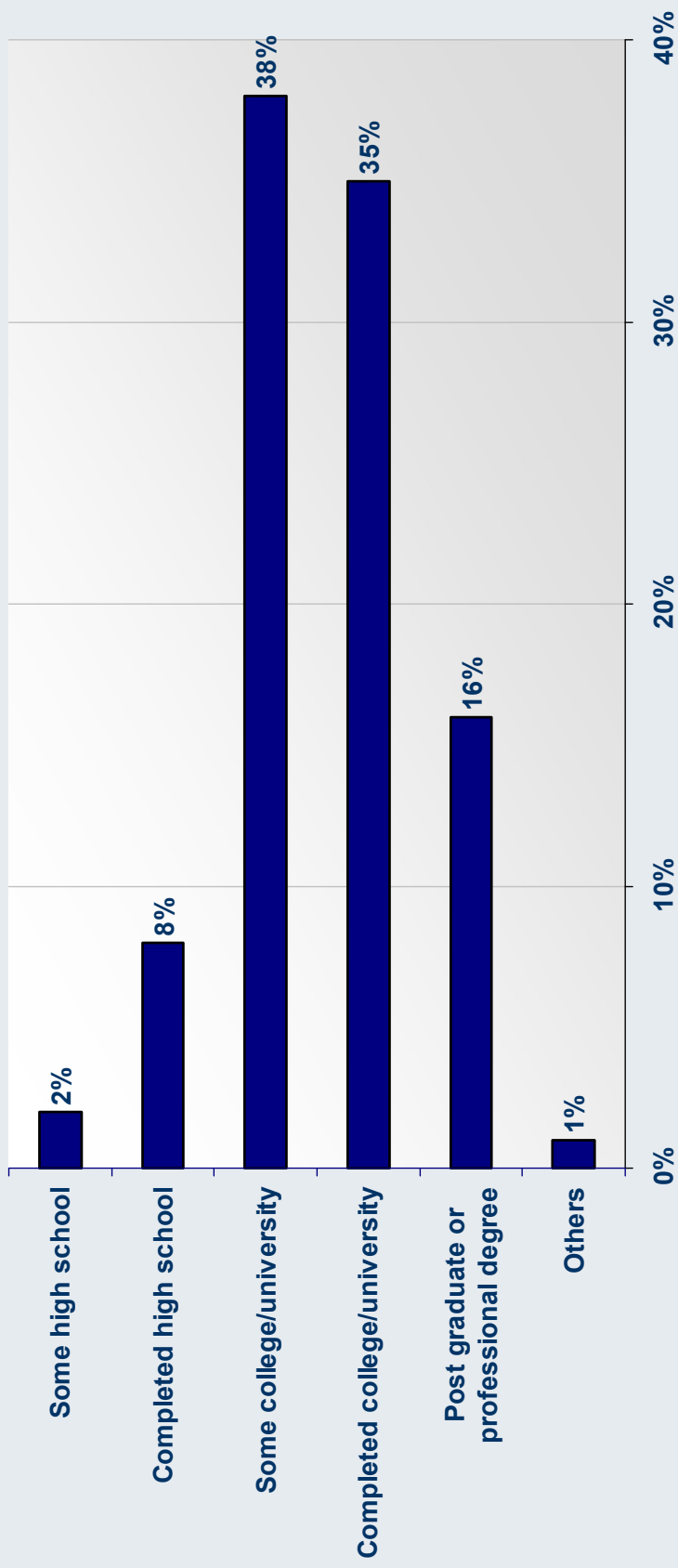
Q35b. Into which of the following categories did your household income, before taxes, fall in 2005? CA respondents n=400.

Respondent Profile: Employment Status



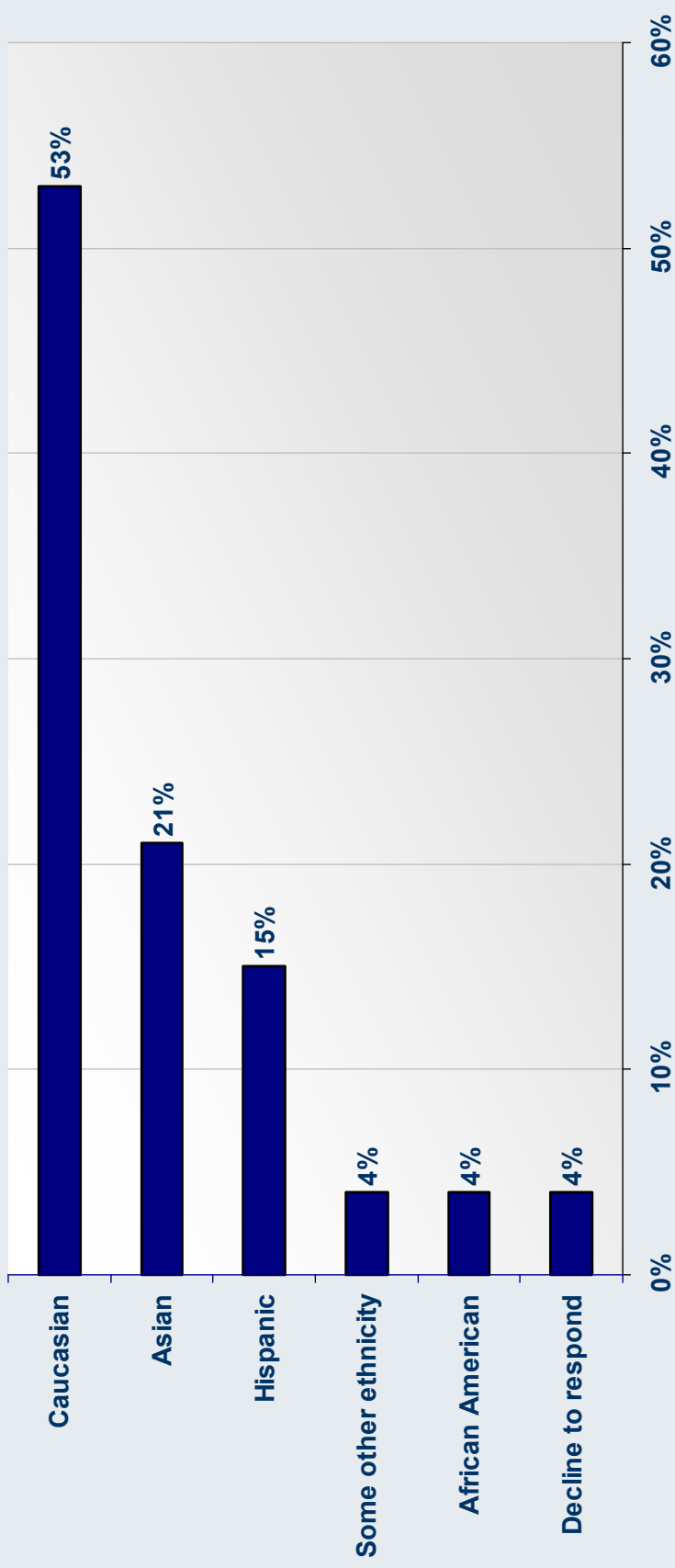
Q36. Which of the following best describes your current employment status? CA respondents n=400.

Respondent Profile: Education



Q37. What is the highest level of education that you have completed? CA respondents n=400.

Respondent Profile: Ethnicity

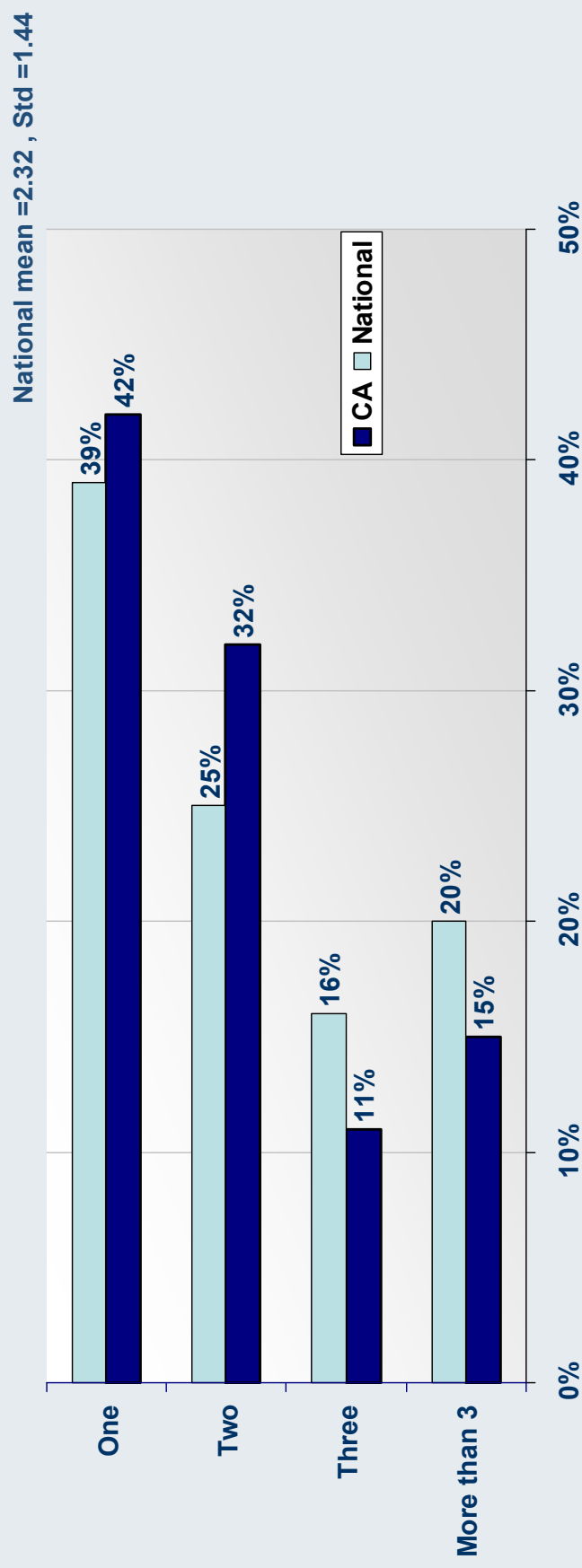


Q38. And are you ... ? CA respondents *n*=400.

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Number of Recharges



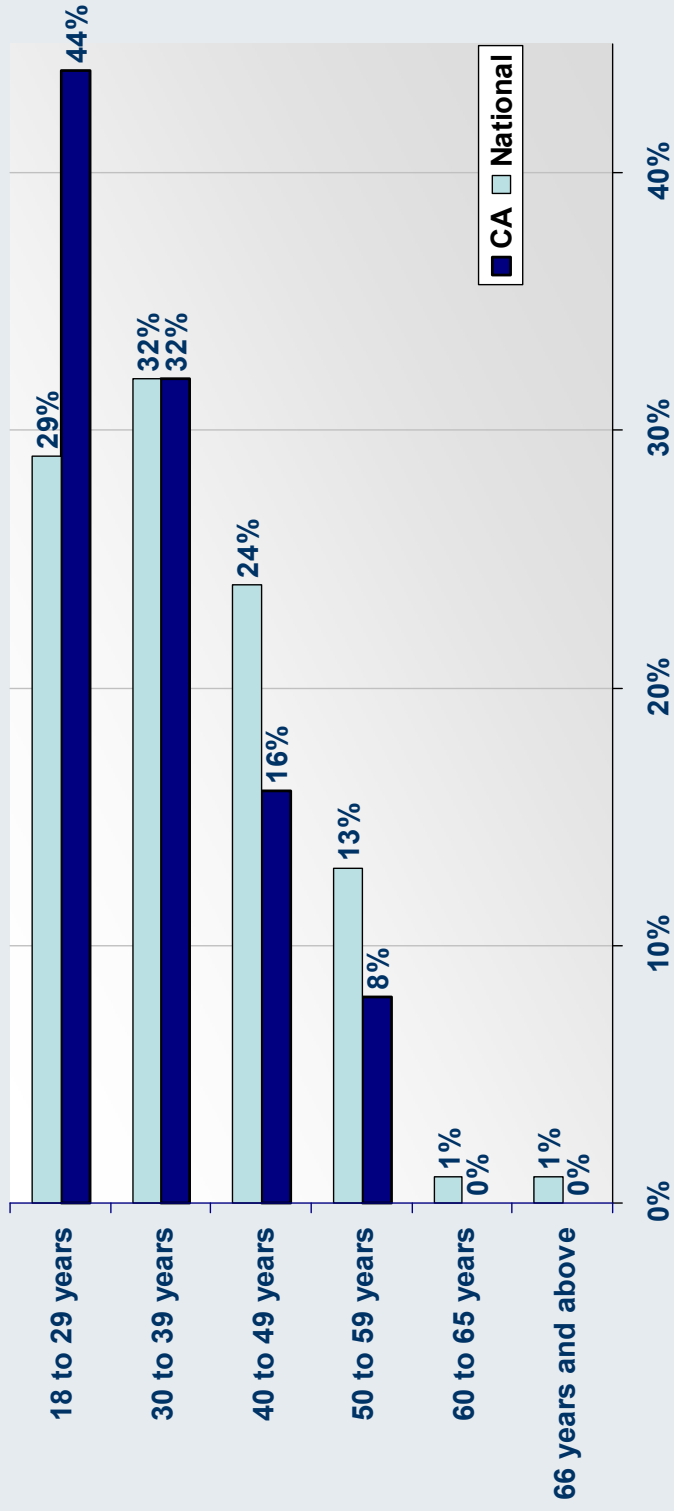
Q9. Including past and present vehicles, approximately how many times have you recharged your vehicle's R-134a refrigerant? National respondents n=475.

Number of Recharges

	Total	Sub-Samples		National by Region			
		California	National	Northeast	South	Midwest	West
Base:	1000	400	600	150	150	150	150
	(%)	(%)	(%)	(%)	(%)	(%)	(%)
One	33	37	31	29	27	36	32
Two	23	28	20	19	17	23	21
Three	11	10	13	13	11	11	15
More than 3	32	26	37	39	45	30	32

Q9. Including past and present vehicles, approximately how many times have you recharged your vehicle's R-134a (i.e., topped up the air conditioning refrigerant)? National respondents n=600.

Respondent Profile: Age



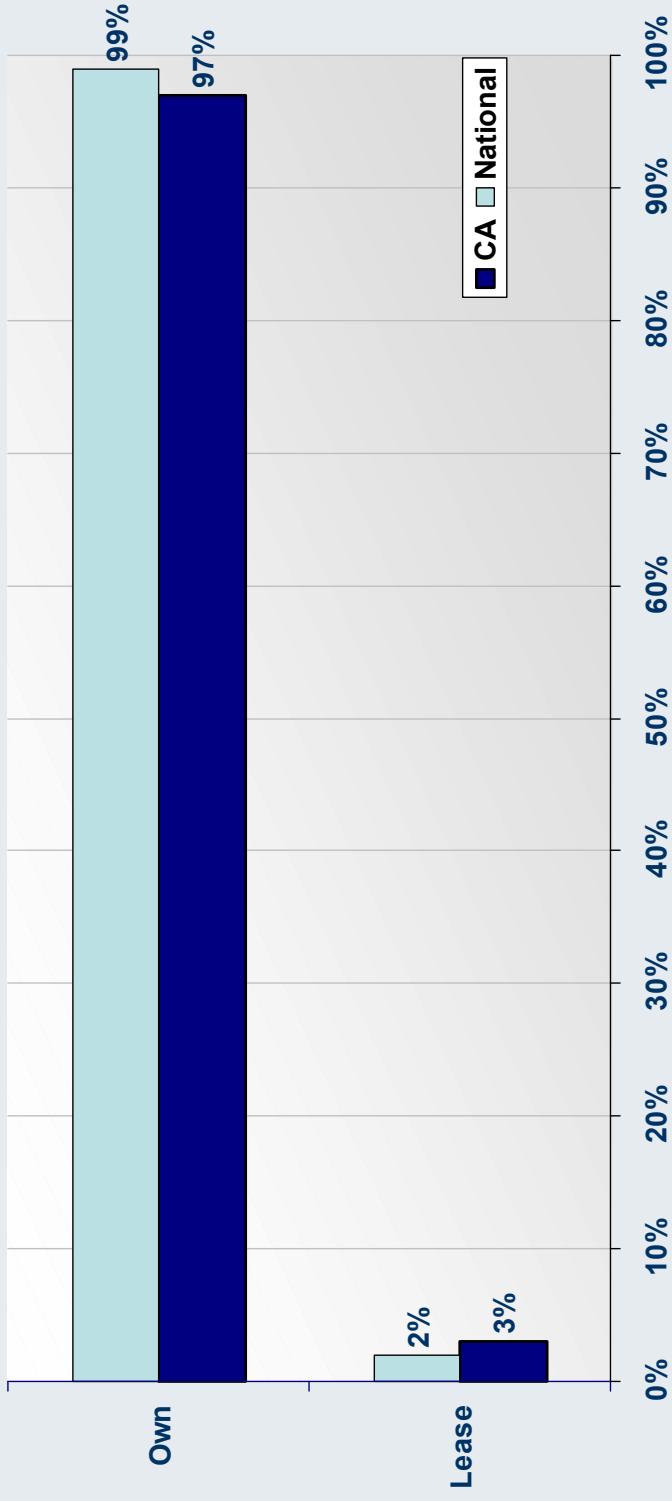
Q1. In which of these groups does your age fall? National respondents n=600.

Respondent Profile: Age

	Total	Sub-Samples		National by Region			
		California	National	Northeast	South	Midwest	West
Base:	1000	400	600	150	150	150	150
	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Under 18 years	0	0	0	0	0	0	0
18 to 29 years	35	44	29	30	28	25	32
30 to 39 years	32	32	32	30	32	31	33
40 to 49 years	21	16	24	19	27	27	25
50 to 59 years	11	8	13	21	9	15	8
60 to 65 years	1	0	1	1	1	2	2
66 years and above	1	0	1	0	3	1	0

Q1. In which of these groups does your age fall? National respondents n=600.

Respondent Profile: Vehicle Ownership



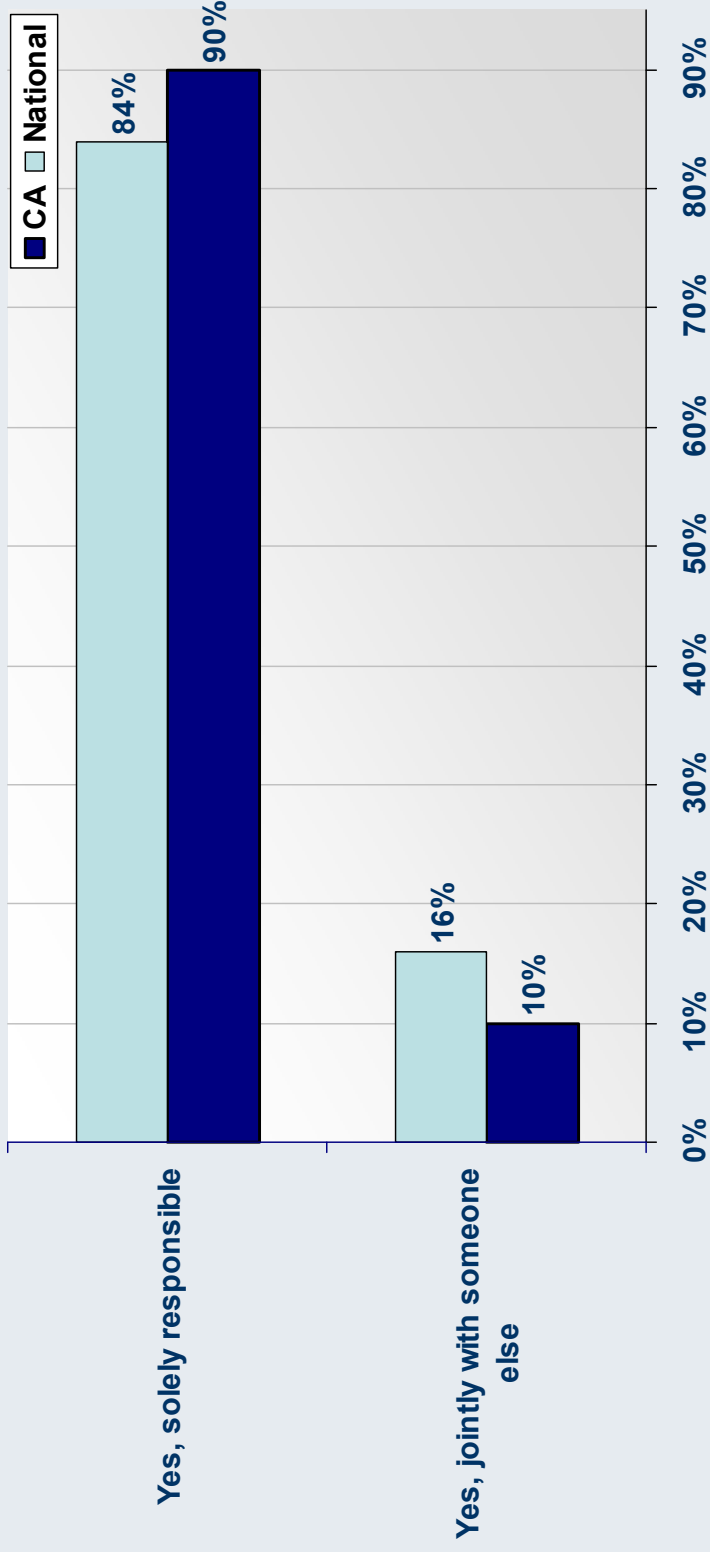
Q2. Do you own or lease a car? National respondents n=600.

Respondent Profile: Vehicle Ownership

	Total	Sub-Samples		National by Region			
		California	National	Northeast	South	Midwest	West
Base:	1000	400	600	150	150	150	150
	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Own	98	97	99	99	99	98	99
Lease	2	3	2	1	1	2	1

Q2. Do you own or lease a car? National respondents n=600.

Respondent Profile: Responsibility for Vehicle



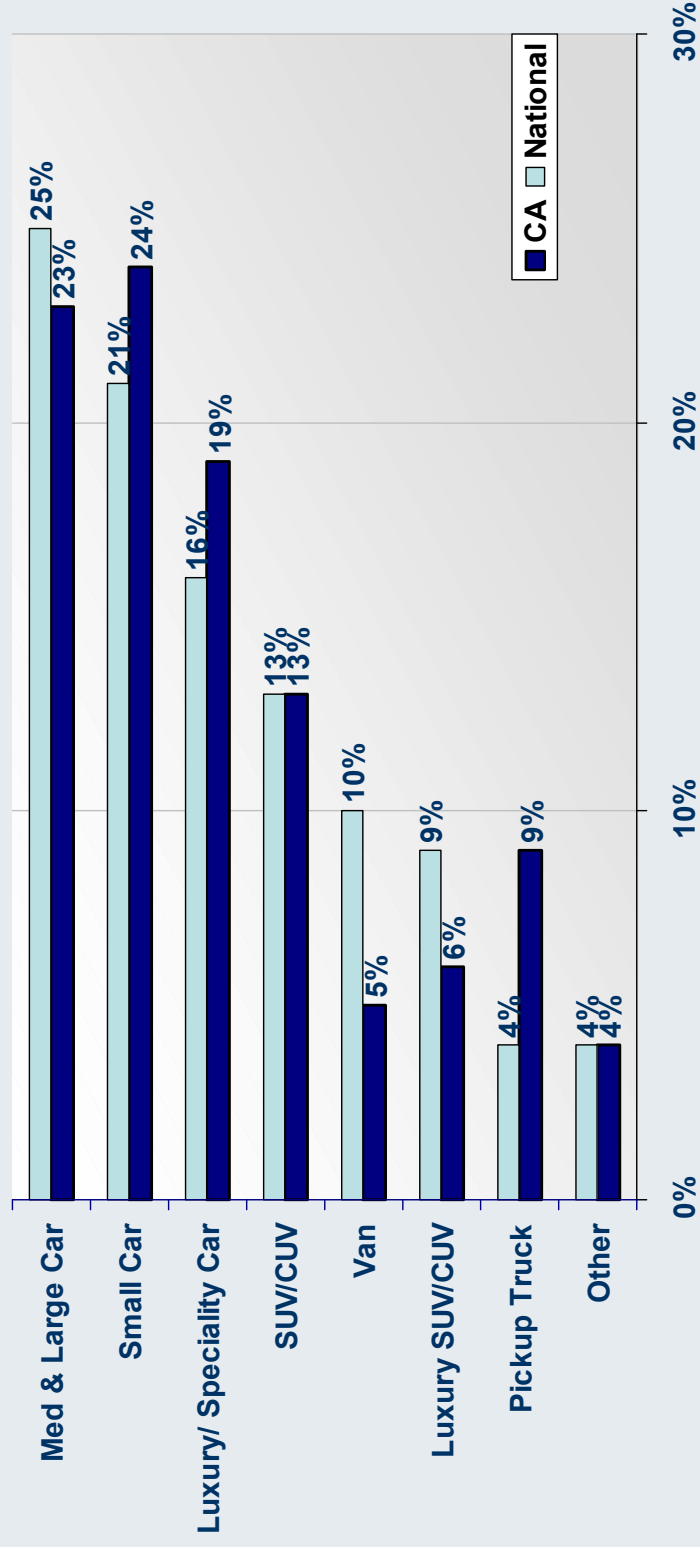
Q3. Are you responsible for making decisions about the maintenance and repairs for this vehicle? National respondents n=600.

Respondent Profile: Responsibility for Vehicle

	Total	Sub-Samples		National by Region			
		California	National	Northeast	South	Midwest	West
Base:	1000	400	600	150	150	150	150
	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Yes, solely responsible	86	90	84	90	83	77	86
Yes, jointly with someone else	14	10	16	10	17	23	14

Q3. Are you responsible for making decisions about the maintenance and repairs for this vehicle? National respondents n=600.

Respondent Profile: Vehicle Segment



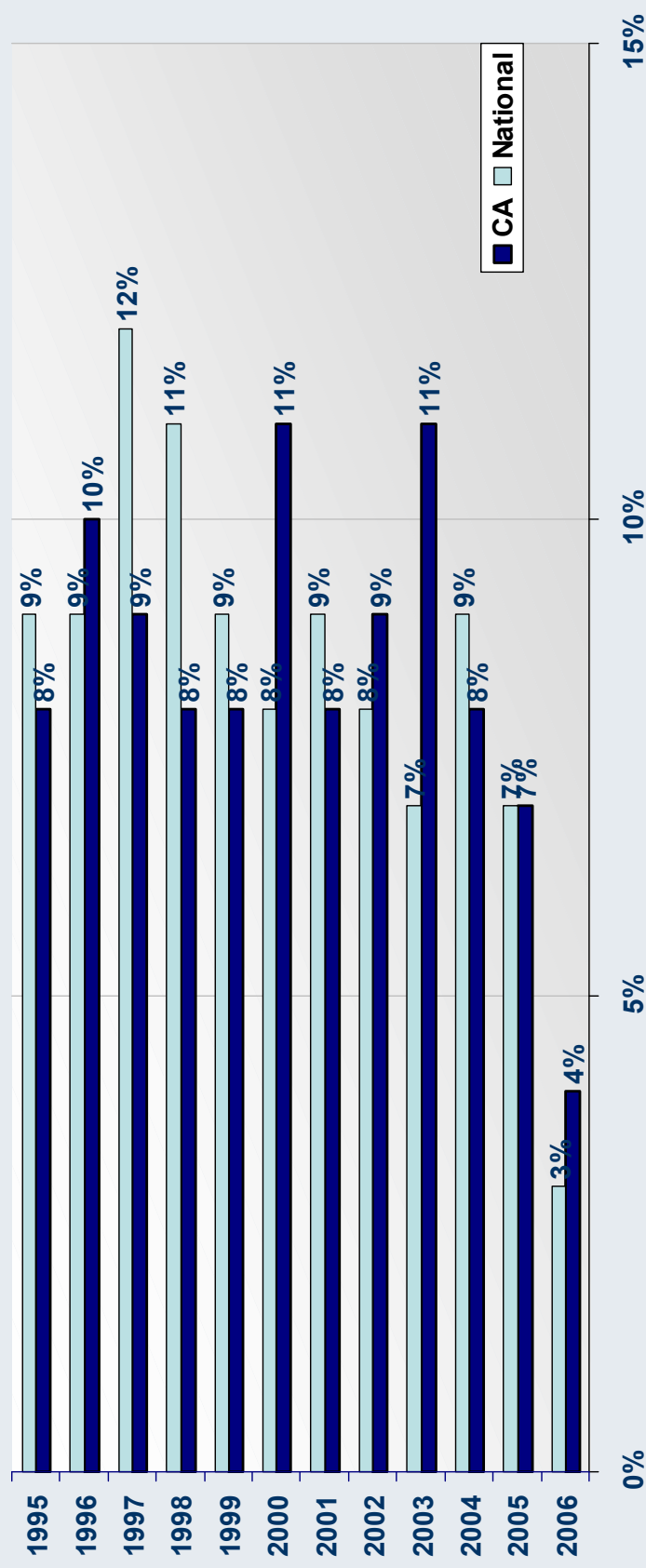
From Q7. You indicated that you recharged your vehicle's air conditioning refrigerant within in the past 12 months. What is the make, model and year of this vehicle? National respondents n=600.

Respondent Profile: Vehicle Segment

	Total	Sub-Samples		National by Region			
		California	National	Northeast	South	Midwest	West
Base:	1000	400	600	150	150	150	150
	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Med & Large Car	24	23	25	27	23	25	24
Small Car	22	24	21	19	21	19	23
Luxury / Specialty Car	17	19	16	24	18	8	12
SUV/CUV	13	13	13	10	11	16	15
Van	8	5	10	8	7	13	10
Pickup Truck	9	9	9	6	14	10	7
Luxury SUV/CUV	5	6	4	5	2	5	4
Other	4	4	4	1	4	4	5

From Q7. You indicated that you recharged your vehicle's air conditioning refrigerant within in the past 12 months. What is the make, model and year of this vehicle? National respondents n=600.

Respondent Profile: Vehicle Model Year



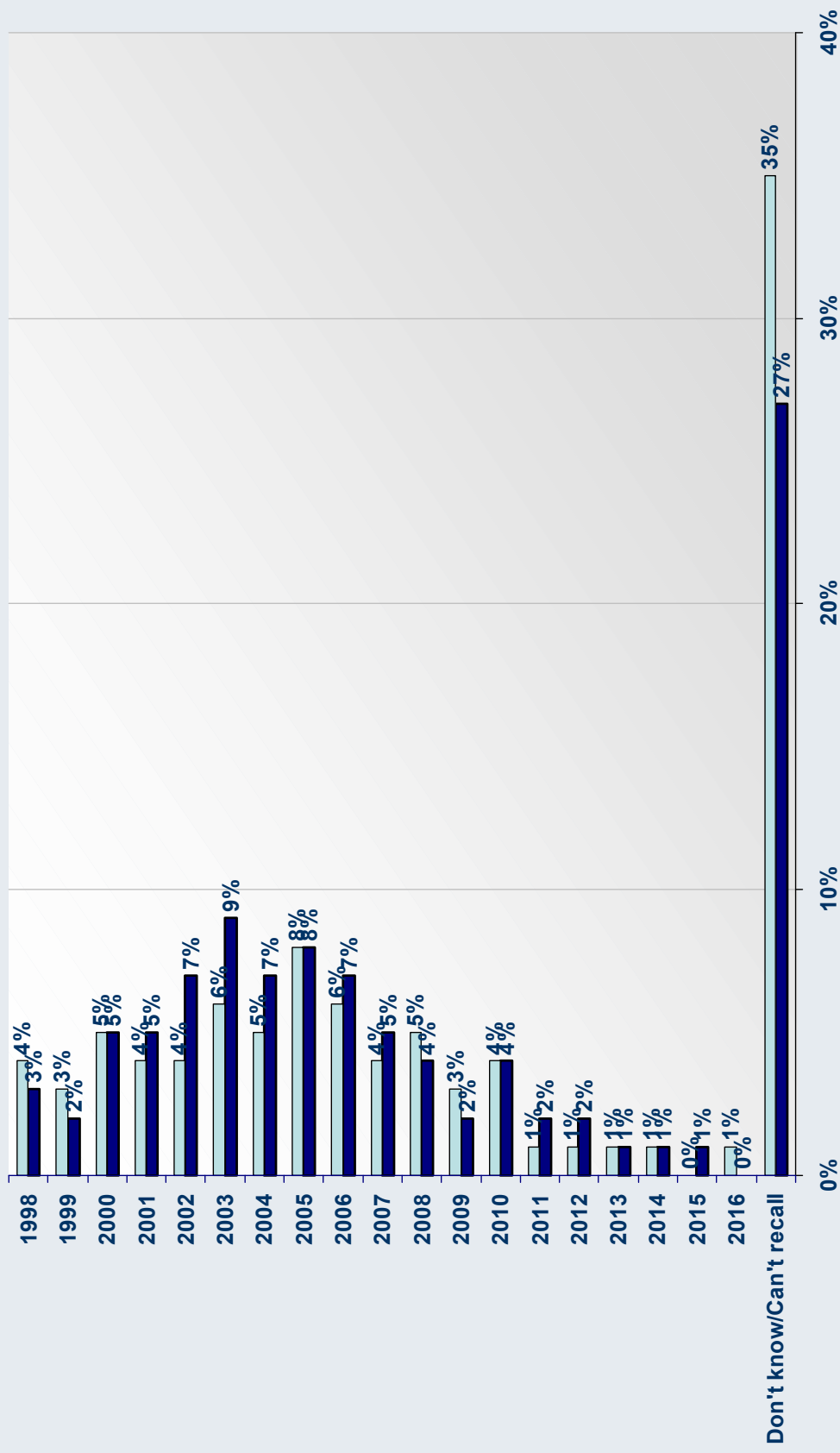
From Q7. You indicated that you recharged your vehicle's air conditioning refrigerant within in the past 12 months. What is the make, model and year of this vehicle? National respondents n=600.

Respondent Profile: Vehicle Model Year

	Total	Sub-Samples		National by Region			
		California	National	Northeast	South	Midwest	West
Base:	1000	400	600	150	150	150	150
	(%)	(%)	(%)	(%)	(%)	(%)	(%)
1995	9	8	9	7	12	11	7
1996	9	10	9	5	11	9	13
1997	11	9	12	6	13	13	15
1998	10	8	11	10	11	11	11
1999	8	8	9	6	7	11	9
2000	9	11	8	7	7	11	7
2001	8	8	9	5	11	9	9
2002	9	9	8	9	10	7	8
2003	9	11	7	13	5	6	4
2004	9	8	9	16	7	7	8
2005	7	7	7	14	3	5	6
2006	3	4	3	3	3	2	3

From Q7. You indicated that you recharged your vehicle's air conditioning refrigerant within in the past 12 months. What is the make, model and year of this vehicle? National respondents n=600.

Respondent Profile: Warranty Expiration



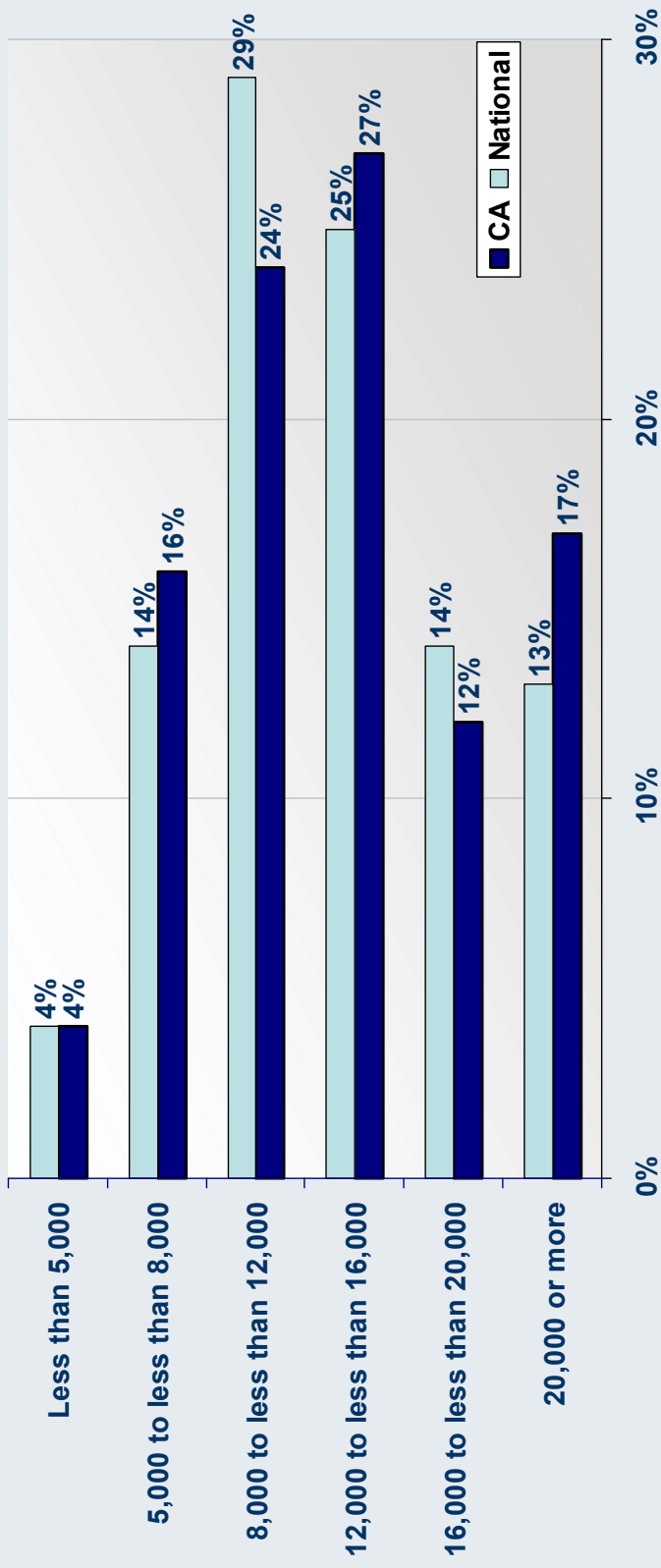
Q8a. For this vehicle, in which year did (or will) the manufacturer's warranty end? National respondents n=600.

Respondent Profile: Warranty Expiration

	Total	Sub-Samples		National by Region			
		California	National	Northeast	South	Midwest	West
Base:	1000	400	600	150	150	150	150
	(%)	(%)	(%)	(%)	(%)	(%)	(%)
1998	4	3	4	2	4	4	7
1999	2	2	3	3	5	1	2
2000	5	5	5	4	6	4	6
2001	4	5	4	3	3	6	2
2002	6	7	4	3	5	5	4
2003	7	9	6	7	5	5	6
2004	6	7	5	3	7	5	5
2005	8	8	8	7	10	5	9
2006	7	7	6	5	9	6	5
2007	5	5	4	7	1	5	5
2008	5	4	5	6	3	5	7
2009	3	2	3	5	3	2	4
2010	4	4	4	7	3	3	1
2011	1	2	1	3	0	0	0
2012	1	2	1	2	0	0	0
2013	1	1	1	1	2	0	1
2014	1	1	1	1	0	1	1
2015	0	1	0	1	0	0	0
2016	1	0	1	1	1	1	0
Don't know/Can't recall	32	27	35	31	31	43	35

Q8a. For this vehicle, in which year did (or will) the manufacturer's warranty end? National respondents n=600.

Respondent Profile: Annual Mileage



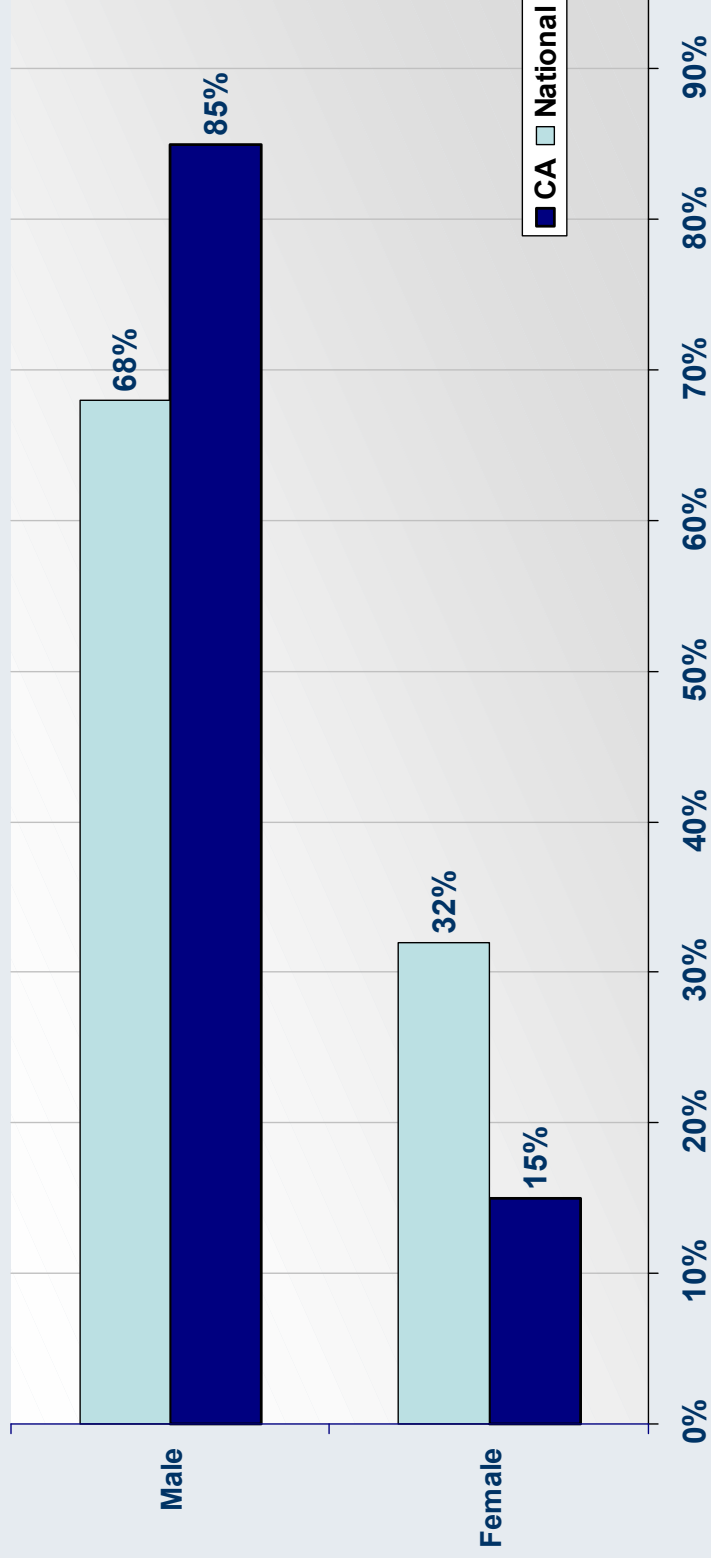
Q31. On average, how many miles do you drive in a year? National respondents n=600.

Respondent Profile: Annual Mileage

	Total	Sub-Samples		National by Region			
		California	National	Northeast	South	Midwest	West
Base:	1000	400	600	150	150	150	150
	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Less than 5,000	4	4	4	5	6	2	3
5,000 to less than 8,000	15	16	14	9	16	16	16
8,000 to less than 12,000	27	24	29	34	25	31	26
12,000 to less than 16,000	26	27	25	33	22	21	24
16,000 to less than 20,000	13	12	14	11	12	13	20
20,000 or more	15	17	13	7	19	17	11

Q31. On average, how many miles do you drive in a year? National respondents n=600.

Respondent Profile: Gender



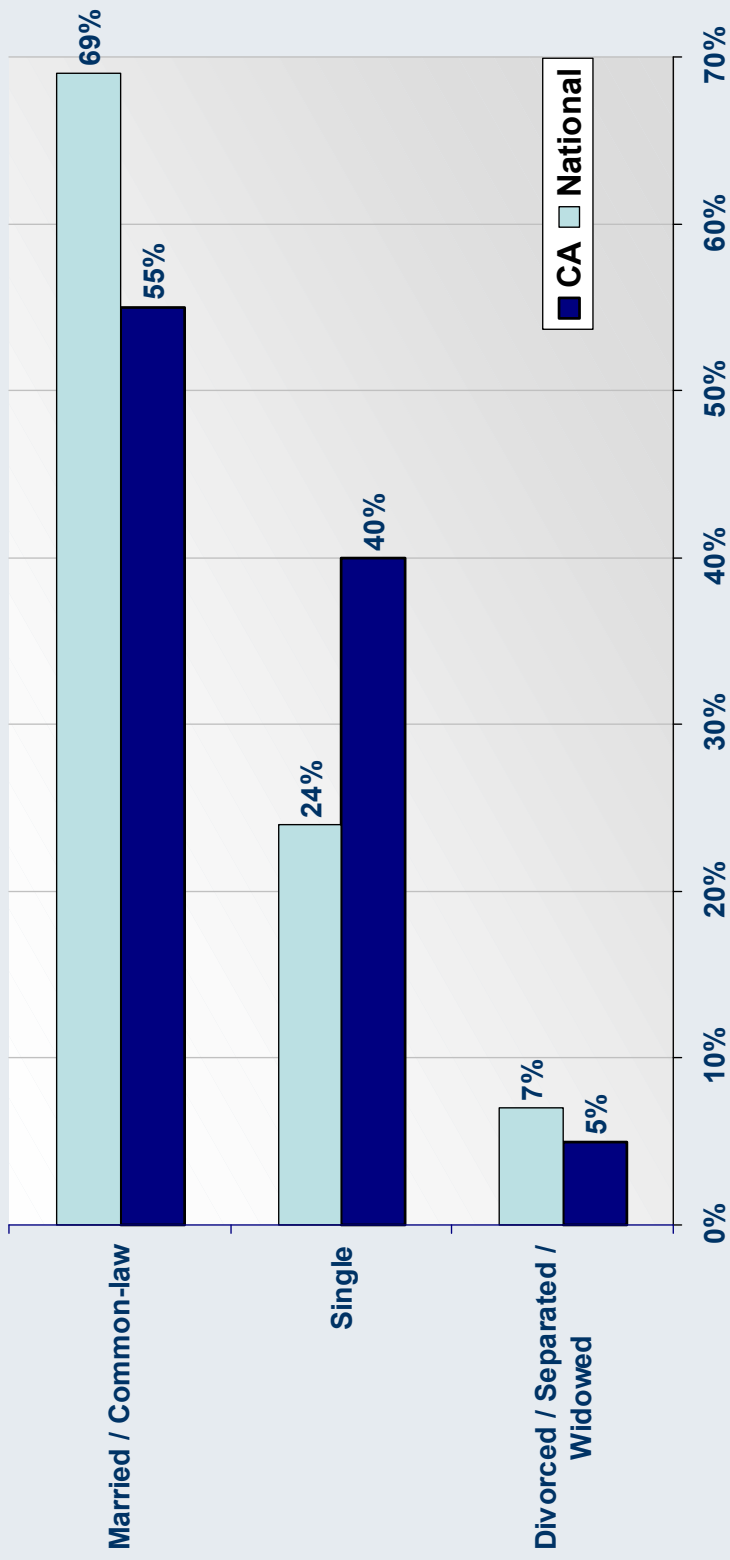
Q33. What is your gender? National respondents n=600.

Respondent Profile: Gender

	Total	Sub-Samples		National by Region			
		California	National	Northeast	South	Midwest	West
Base:	1000	400	600	150	150	150	150
	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Male	75	85	68	64	59	61	86
Female	25	15	32	36	41	39	14

Q33. What is your gender? National respondents n=600.

Respondent Profile: Marital Status



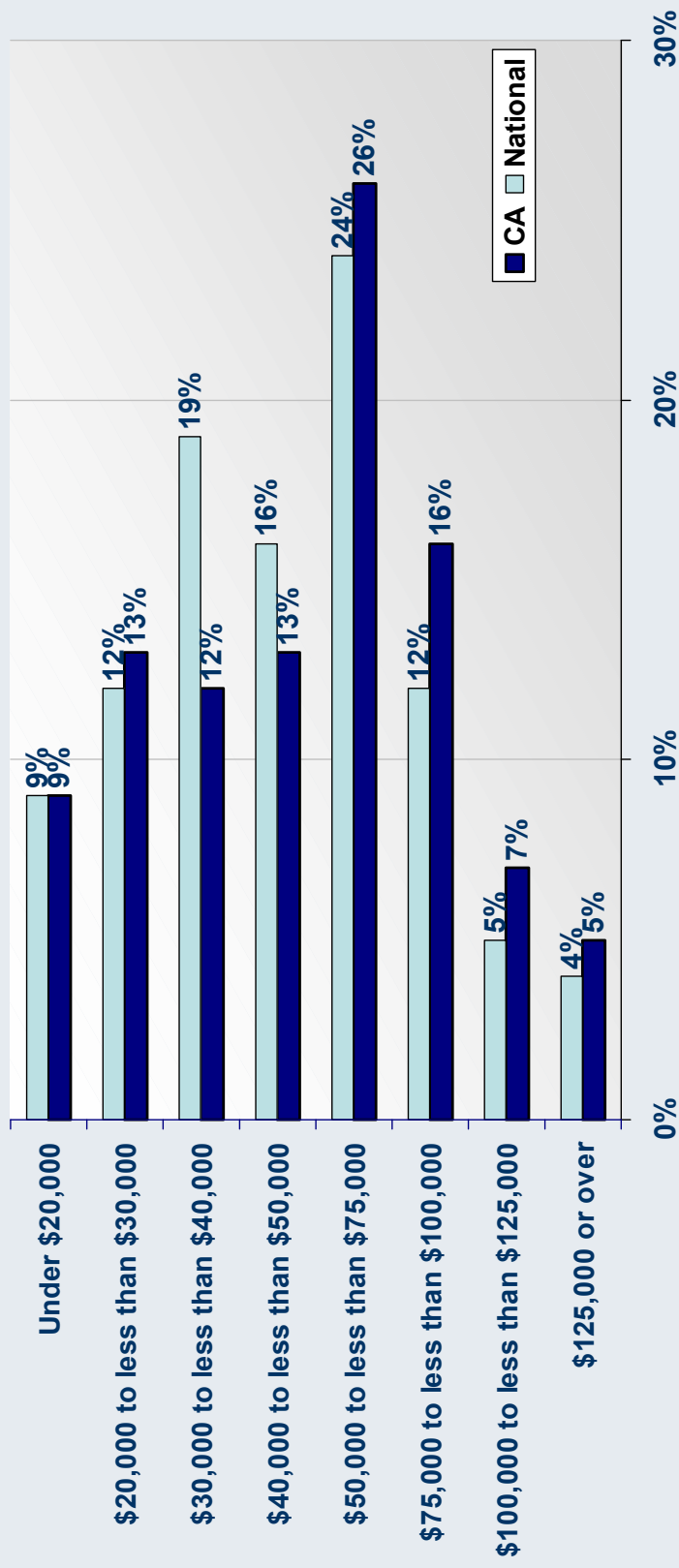
Q34a. What is your marital status? National respondents n=600.

Respondent Profile: Marital Status

	Total	Sub-Samples		National by Region			
		California	National	Northeast	South	Midwest	West
Base:	1000	400	600	150	150	150	150
	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Married/Common-law	64	55	69	72	68	63	73
Single	30	40	24	23	24	26	21
Divorced/Separated/Widowed	6	5	7	5	8	11	5

Q34a. What is your marital status? National respondents n=600.

Respondent Profile: Personal Income 2005



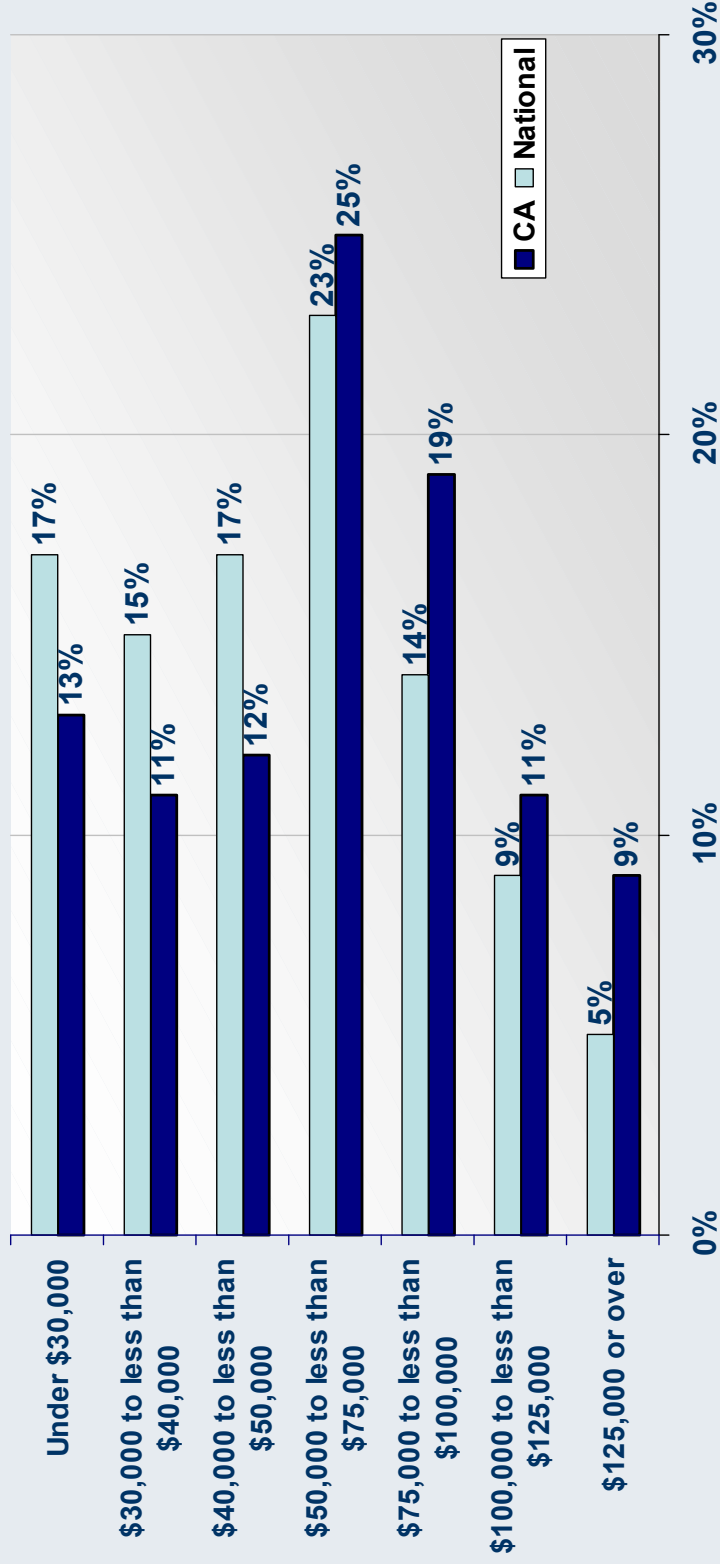
Q35a. Into which of the following categories did your personal income, before taxes, fall in 2005? National respondents n=600.

Respondent Profile: Personal Income 2005

	Total	Sub-Samples		National by Region			
		California	National	Northeast	South	Midwest	West
Base:	1000	400	600	150	150	150	150
	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Under \$20,000	9	9	9	5	11	11	7
\$20,000 to less than \$30,000	12	13	12	8	9	18	13
\$30,000 to less than \$40,000	16	12	19	16	19	21	21
\$40,000 to less than \$50,000	14	13	16	15	18	13	17
\$50,000 to less than \$75,000	25	26	24	25	27	19	26
\$75,000 to less than \$100,000	13	16	12	19	9	10	8
\$100,000 to less than \$125,000	6	7	5	5	5	3	6
\$125,000 or over	5	5	4	7	2	5	3

Q35a. Into which of the following categories did your personal income, before taxes, fall in 2005? National respondents n=600.

Respondent Profile: Household Income 2005



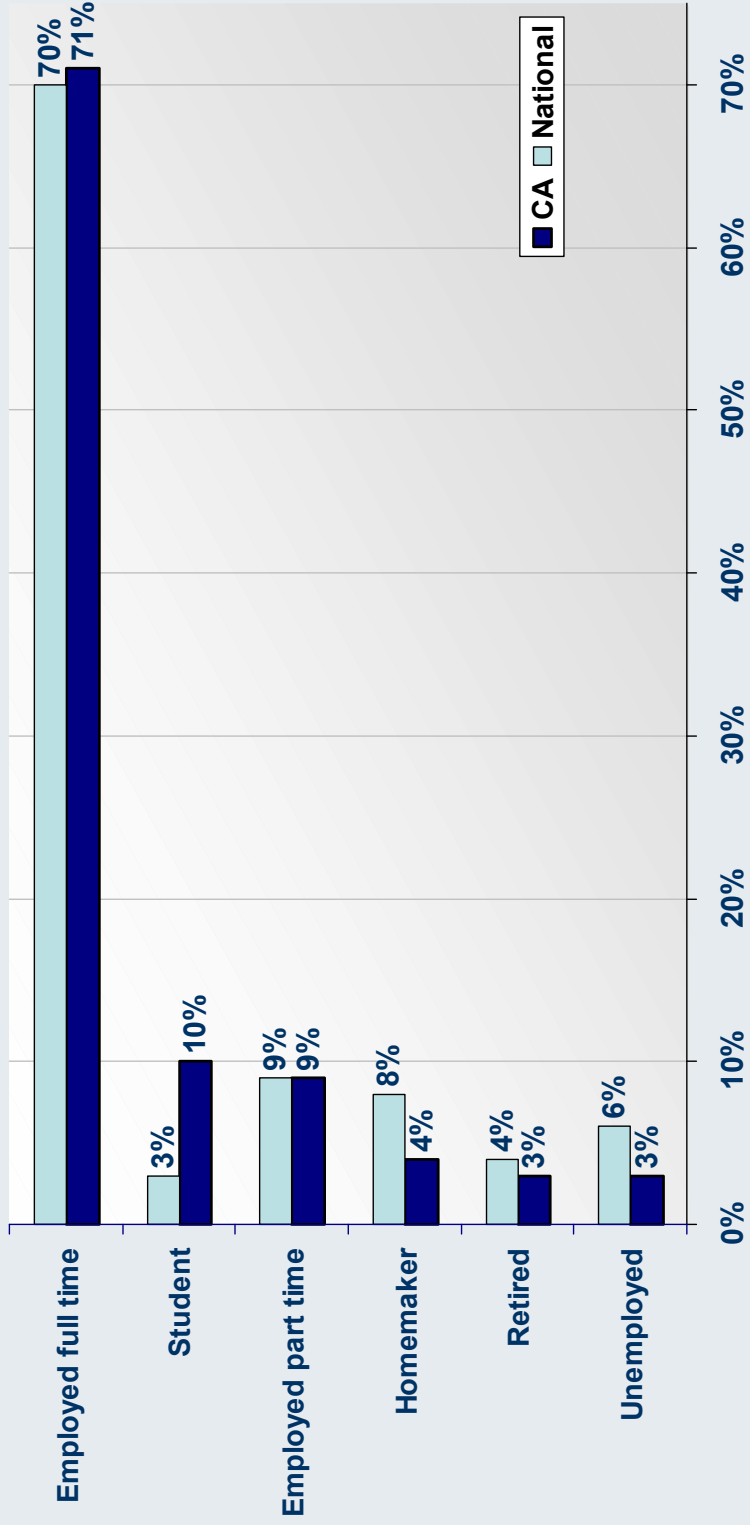
Q35b. Into which of the following categories did your household income, before taxes, fall in 2005? National respondents n=600.

Respondent Profile: Household Income 2005

	Total	Sub-Samples		National by Region			
		California	National	Northeast	South	Midwest	West
<i>Base:</i>	1000	400	600	150	150	150	150
	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Under \$30,000	15	13	17	10	19	25	15
\$30,000 to less than \$40,000	14	11	15	12	16	17	17
\$40,000 to less than \$50,000	15	12	17	15	19	15	17
\$50,000 to less than \$75,000	24	25	23	19	21	20	31
\$75,000 to less than \$100,000	16	19	14	19	15	13	9
\$100,000 to less than \$125,000	10	11	9	15	8	5	7
\$125,000 or over	7	9	5	9	2	5	3

Q35b. Into which of the following categories did your household income, before taxes, fall in 2005? National respondents n=600.

Respondent Profile: Employment Status



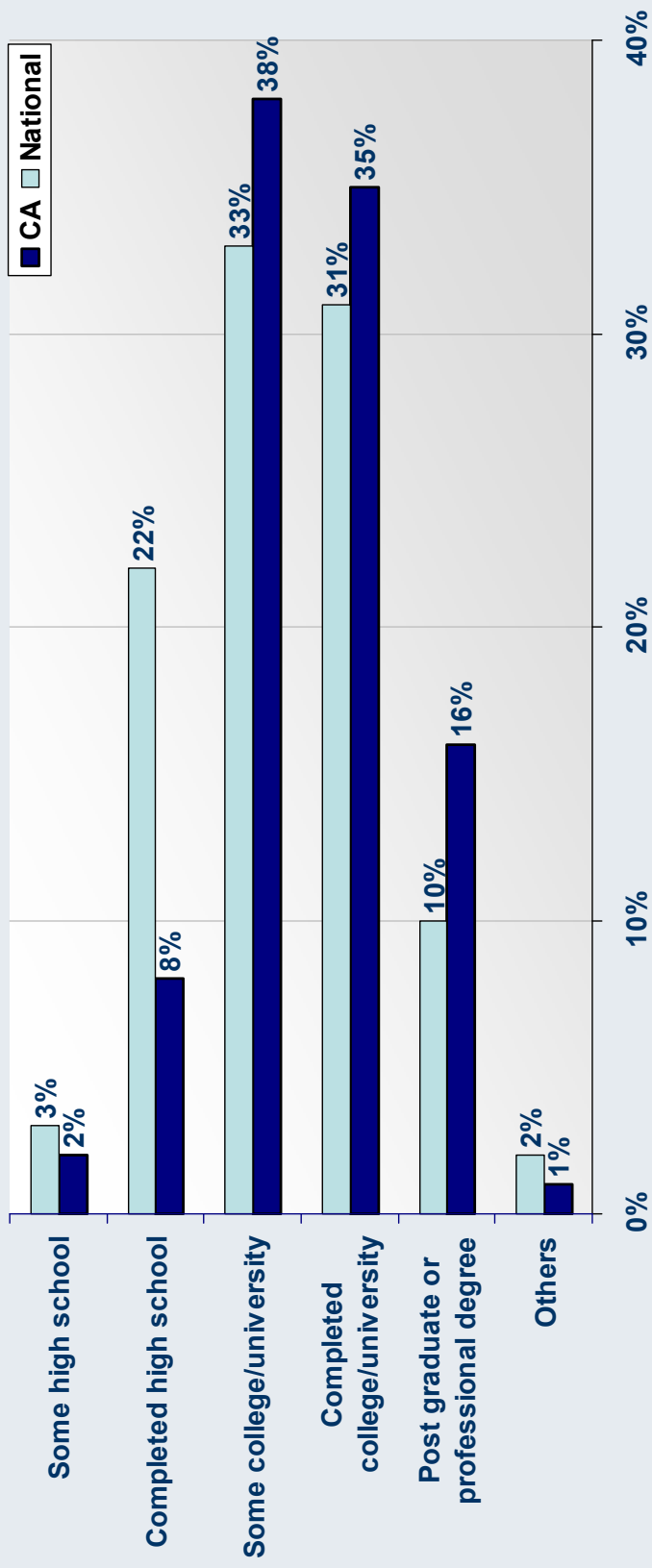
Q36. Which of the following best describes your current employment status? National respondents n=600.

Respondent Profile: Employment Status

	Total	Sub-Samples		National by Region			
		California	National	Northeast	South	Midwest	West
Base:	1000	400	600	150	150	150	150
	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Employed full time	70	71	70	77	65	63	75
Employed part time	9	9	9	7	14	9	7
Homemaker	7	4	8	7	9	10	6
Student	6	10	3	2	2	3	4
Retired	4	3	4	3	4	6	4
Unemployed	5	3	6	5	5	9	4

Q36. Which of the following best describes your current employment status? National respondents n=600.

Respondent Profile: Education



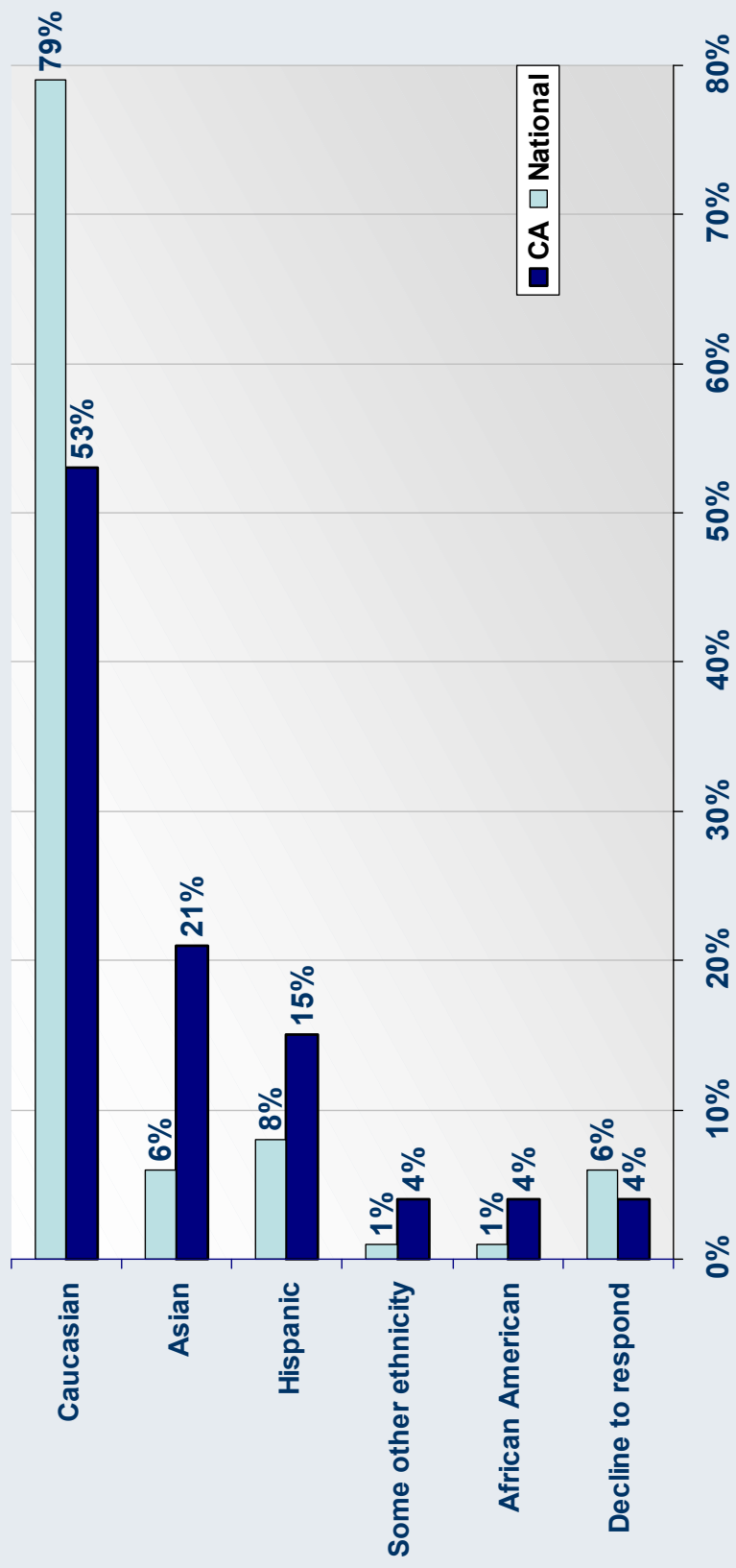
Q37. What is the highest level of education that you have completed? National respondents n=600.

Respondent Profile: Education

	Total	Sub-Samples		National by Region			
		California	National	Northeast	South	Midwest	West
<i>Base:</i>	1000	400	600	150	150	150	150
	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Some high school	3	2	3	5	5	1	1
Completed high school	16	8	22	16	25	25	22
Some college/university	35	38	33	23	33	35	41
Completed college/university	33	35	31	41	24	29	29
Post graduate or professional degree	12	16	10	12	10	9	7
Other	1	1	2	3	2	1	1

Q37. What is the highest level of education that you have completed? National respondents n=600.

Respondent Profile: Ethnicity



Q38. And are you ... ? National respondents n=600.

Respondent Profile: Ethnicity

	Total	Sub-Samples		National by Region			
		California	National	Northeast	South	Midwest	West
Base:	1000	400	600	150	150	150	150
Caucasian	(%) 69	(%) 53	(%) 79	(%) 71	(%) 79	(%) 85	(%) 80
Hispanic	11	15	8	11	8	5	9
Asian	12	21	6	8	6	3	5
African American	5	4	6	8	6	7	4
Some other ethnicity (Please specify) :	2	4	1	1	1	1	1
Decline to respond	2	4	1	1	0	0	1

Q38. And are you ... ? National respondents n=600.

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Guide to Reading Tabular Data

Topic Line
Key findings

Motivation for DIY Recharge: Cost of Professional Recharge

The pattern of responses did not vary by personal income level. However, respondents who indicated that they would likely have to go without a fully functional AC system or find alternative means to acquire r-134a were significantly more likely to state that cost was the most important reason to start doing this job themselves compared to respondents who suggested that they would likely pay a professional if r-134a was banned.

	Reaction to Product Removal	
	Likely Pay Professional	Likely Go Without/ Find Alternatives
Total	184	191
	(%)	(%)
Base:	33	41
It was the most important reason	37	35
It was one of the most important reasons	17	12
It influenced my decision but was not one of the most important reasons	13	12
It did not influence my decision at all		

Q17. To what extent did the cost of having this work completed by a professional automotive technician influence your decision to start doing this type of work yourself? CA respondents n=375.

Relevant sample sizes

Response items

Profile / segmentation variables of interest. Group size (count) appears below.

Read: Respondents who indicated that they would likely have to go without a fully functional AC system or find alternative means to acquire R-134a were significantly more likely to state that cost was the most important reason to start doing this job themselves (41%) compared to respondents who suggested that they would likely pay a professional if R-134a was banned (24%).

Additional notes

Question